

# UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification							DATE:	
							February 2003	
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE			
RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-4					PE0603721N / Environmental Protection			
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Total PE Cost	44.944	43.985	30.127	31.815	25.638	25.927	26.567	26.987
Shipboard Waste Management / S0401	29.223	28.163	25.283	24.171	17.010	15.464	15.888	16.366
Environmental Compliance / W2210	4.451	2.896	0.767	0.894	0.934	1.153	1.197	0.960
Aviation Depot Maintenance Technology / W2623*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pollution Abatement / Y0817	9.341	10.286	4.077	6.750	7.694	9.310	9.482	9.661
Navy Environmental Compliance Operations / H9046*	1.929	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Marine Mammal Detection & Mitigation / S9204*	0.000	0.977	0.000	0.000	0.000	0.000	0.000	0.000
Field Demonstration of Containment Tech / S9203*	0.000	1.663	0.000	0.000	0.000	0.000	0.000	0.000
<b>A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</b> (U) Many environmental laws, regulations, and policies impose restrictions on Navy vessels, aircraft, and facilities that interfere with operations and/or increase the cost of operations. The Navy must be able to conduct its national security mission in compliance with applicable environmental requirements in the U.S. and abroad without compromising performance, safety, or health, while simultaneously minimizing the cost of compliance. This program develops processes, prototype hardware, systems, and operational procedures that will allow the Navy to operate in U.S., foreign, and international waters, air, space, and land areas while complying with environmental U.S. statutes and international agreements. Projects support the Navy's compliance with: OPNAVINST 5090.1B CH-2 of 9 September 1999 and other Navy environmental-related policies; the Clean Water Act, Clean Air Act, Act to Prevent Pollution from Ships, National Environmental Policy Act, Marine Plastic Pollution Research and Control Act, Endangered Species Act, Marine Mammal Protection Act, Resource Conservation and Recovery Act, Toxic Substances Control Act, U.S. Public Vessel Medical Waste Anti-Dumping Act, and Federal Facility Compliance Act; and Executive Orders 12088, 12114, 12843, 13089, 13101, 13112, 13148, and 13158. Project S0401 supports RDT&E efforts that allow Navy ships and submarines to comply with existing laws, regulations, and policies in four major areas: ozone depleting substances, liquid wastes, solid wastes, and hazardous and other wastes. Project W2210 funds RDT&E requirements that allow Navy compliance with laws, regulations and policies impacting the basing, re-alignment, operation, repair and replacement of Naval aircraft in four major areas: engine emissions, air vehicle hazardous materials and wastes, ozone depleting substances, and aviation shipboard emissions. Project Y0817 funds RDT&E requirements that allow Navy to develop and validate technologies to enable Navy facilities to comply with environmental laws, regulations, and policies in a cost-effective manner. * Projects W2623, Y2402, Y2403, Y2837, H9046, S9203, and S9204 are Congressional adds.								

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Exhibit R-2, RDTEN Budget Item Justification  
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## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: <b>February 2003</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>	PROGRAM ELEMENT NUMBER AND NAME PE0603721N / Environmental Protection				PROJECT NUMBER AND NAME S0401 / Shipboard Waste Management			
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost	29.223	28.163	25.283	24.171	17.010	15.464	15.888	16.366
RDT&E Articles Qty								

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

(U) Navy ships and submarines must routinely operate in U.S., international, and foreign waters, and visit numerous U.S. and foreign ports. No body of water is without environmental restrictions that impact the movements and operations of Navy vessels. Environmental requirements tend to be most restrictive in port and in coastal waters, where the Navy's increasing littoral presence places ships and submarines in discharge-restricted waters for longer periods of time. Growing international cooperation in addressing global environmental concerns is resulting in expanding areas of ocean designated as environmentally sensitive, where special prohibitions on ship discharges are imposed. Navy vessels must comply with applicable environmental legal requirements while ensuring continued access to all waters for operations, exercises, training, and port access. The large crews and limited onboard space of Navy ships and submarines severely constrain their ability to hold wastes for return to port for shoreside disposal. This project develops and evaluates shipboard waste processing equipment and systems to enable ships and submarines to manage their wastes in an environmentally-compliant, safe, and operationally-compatible manner. It also addresses afloat environmental issues other than shipboard wastes, e.g., protected marine animals and hull antifouling, that pose significant operational and port entry threats to the Navy Fleet.

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Exhibit R-2a, RDTEN Project Justification  
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## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2003</b>		
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>	PROGRAM ELEMENT NUMBER AND NAME PE0603721N / Environmental Protection	PROJECT NUMBER AND NAME S0401 / Shipboard Waste Management		
<b>B. Accomplishments/Planned Program</b>				
	FY 02	FY 03	FY 04	FY 05
Ozone Depleting Substances	3.100	3.591	1.000	1.000
RDT&E Articles Quantity				
<p><b>FY 02:</b> (U) Completed Integrated Logistics Support (ILS) documentation for CFC-114 air-conditioning plant conversion designs. Continued development of shipboard alternative (non-vapor-compression) cooling concepts. Continued evaluation of non-ozone depleting substance (non-ODS) fire protection concepts and systems for future surface ships.</p> <p><b>FY 03:</b> (U) Continue development of shipboard alternative (non-vapor-compression) cooling concepts. Complete evaluation of non-ozone depleting substance (non-ODS) fire protection concepts and systems for future surface ships.</p> <p><b>FY 04:</b> (U) Complete development of shipboard alternative (non-vapor-compression) cooling concepts. Initiate development of solutions for lubrication and engineering design problems in surface ship CFC-114 air-conditioning plant conversion designs.</p> <p><b>FY 05:</b> (U) Continue development of solutions for lubrication and engineering design problems in surface ship CFC-114 air-conditioning plant conversion designs.</p>				

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Exhibit R-2a, RDTEN Project Justification  
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## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2003</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>	PROGRAM ELEMENT NUMBER AND NAME PE0603721N / Environmental Protection	PROJECT NUMBER AND NAME S0401 / Shipboard Waste Management		
<b>B. Accomplishments/Planned Program</b>				
	FY 02	FY 03	FY 04	FY 05
Integrated Liquid Wastes	11.263	9.772	5.500	7.600
RDT&E Articles Quantity				
<p><b>FY 02:</b> (U) Continued support of rulemaking process with Environmental Protection Agency (EPA) in development of Uniform National Discharge Standards (UNDS) for liquid waste discharges from Navy vessels: continued discharge analyses and setting of Marine Pollution Control Device (MPCD) performance standards. Continued development of integrated liquid waste treatment system: completed development of 10-gpm Oil/Water Separator (OWS-10) Polisher and continued ILS documentation, completed development of 50-gpm Oil/Water Separator (OWS-50) Polisher and continued ILS documentation, and completed development of 5-gpm Oil/Water Separator (OWS-5) Polisher and continued ILS documentation; completed development of advanced Oil Content Monitor (OCM); continued development of Engineering Development Model (EDM) non-oily wastewater treatment system; and completed development of advanced thermal destruction system for concentrated ship liquid wastes. Completed development of design fixes for compensated fuel ballast systems.</p> <p><b>FY 03:</b> (U) Continue support of rulemaking process with Environmental Protection Agency (EPA) in development of Uniform National Discharge Standards (UNDS) for liquid waste discharges from Navy vessels: continue discharge analyses and setting of Marine Pollution Control Device (MPCD) performance standards. Continue development of integrated liquid waste treatment system: complete 10-gpm Oil/Water Separator (OWS-10) Polisher ILS documentation, complete 50-gpm Oil/Water Separator (OWS-50) Polisher ILS documentation, and complete 5-gpm Oil/Water Separator (OWS-5) Polisher ILS documentation; continue development of Engineering Development Model (EDM) non-oily wastewater treatment system.</p> <p><b>FY 04:</b> (U) Continue support of rulemaking process with Environmental Protection Agency (EPA) in development of Uniform National Discharge Standards (UNDS) for liquid waste discharges from Navy vessels: continue discharge analyses and setting of Marine Pollution Control Device (MPCD) performance standards. Continue development of integrated liquid waste treatment system: continue development of Engineering Development Model (EDM) non-oily wastewater treatment system and MPCD treatment systems; and initiate development of shipboard Oil Pollution Abatement Systems improvements.</p> <p><b>FY 05:</b> (U) Continue support of rulemaking process with Environmental Protection Agency (EPA) in development of Uniform National Discharge Standards (UNDS) for liquid waste discharges from Navy vessels: continue discharge analyses and setting of Marine Pollution Control Device (MPCD) performance standards. Continue development of integrated liquid waste treatment system: continue development of Engineering Development Model (EDM) non-oily wastewater treatment system and MPCD treatment systems; and continue development of shipboard Oil Pollution Abatement Systems improvements.</p>				

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## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2003</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>	PROGRAM ELEMENT NUMBER AND NAME PE0603721N / Environmental Protection	PROJECT NUMBER AND NAME S0401 / Shipboard Waste Management		
<b>B. Accomplishments/Planned Program (Cont.)</b>				
	FY 02	FY 03	FY 04	FY 05
Solid Wastes	6.260	6.500	6.968	3.600
RDT&E Articles Quantity				
<p><b>FY 02:</b> (U) Continued development of management processes and systems for plastics for submarine application: initiated SSN-21 Class submarine at-sea evaluation; and continued investigation of onboard storage techniques and locations for SSN-774 Class submarines. Continued development of advanced thermal destruction system for processing shipboard solid wastes.</p> <p><b>FY 03:</b> (U) Complete development of management processes and systems for plastics for submarine application: complete transition of SSN-21 Class and SSN-774 Class submarine design solutions. Continue development of advanced thermal destruction system for processing shipboard solid wastes.</p> <p><b>FY 04:</b> (U) Continue development of advanced thermal destruction for processing shipboard solid wastes.</p> <p><b>FY 05:</b> (U) Continue development of advanced thermal destruction for processing shipboard solid wastes.</p>				
	FY 02	FY 03	FY 04	FY 05
Hazardous and Other Major Ship Wastes	8.600	8.300	11.815	11.971
RDT&E Articles Quantity				
<p><b>FY 02:</b> (U) Continued shipboard hazardous materials substitution and elimination process and continued test and evaluation of pollution-prevention equipment aboard ship. Continued quality assurance testing on reformulated commercial paints. Completed development of oil spill response capabilities. Continued development of marine mammals ship database tracking system: continued demonstration. Continued development and testing of new low-copper underwater hull antifouling coatings. Continued development of underwater hull cleaning system.</p> <p><b>FY 03:</b> (U) Continue shipboard hazardous materials substitution and elimination process and continue test and evaluation of pollution-prevention equipment aboard ship. Complete quality assurance testing on reformulated commercial paints. Continue development of marine mammals ship database tracking system: continue demonstration. Continue development and testing of new low-copper underwater hull antifouling coatings. Continue development of underwater hull cleaning system. Initiate development of Environmental Information Management System (EIMS).</p> <p><b>FY 04:</b> (U) Continue shipboard hazardous materials substitution and elimination process and continue test and evaluation of pollution-prevention equipment aboard ship. Continue development of marine mammals ship database tracking system: continue demonstration. Continue development and testing of new low-copper underwater hull antifouling coatings. Continue development of underwater hull cleaning system. Continue development of Environmental Information Management System (EIMS).</p> <p><b>FY 05:</b> (U) Continue shipboard hazardous materials substitution and elimination process and continue test and evaluation of pollution-prevention equipment aboard ship. Continue development of marine mammals ship database tracking system: continue demonstration. Continue development and testing of new low-copper underwater hull antifouling coatings. Continue development of underwater hull cleaning system. Continue development of Environmental Information Management System (EIMS).</p>				

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Exhibit R-2a, RDTEN Project Justification  
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## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2003</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>	PROGRAM ELEMENT NUMBER AND NAME PE0603721N / Environmental Protection	PROJECT NUMBER AND NAME S0401 / Shipboard Waste Management		

**C. PROGRAM CHANGE SUMMARY:**

	FY 2002	FY 2003	FY 2004	FY 2005
Funding:				
Previous President's Budget: (FY 03 Pres Controls)	31.559	28.798	28.403	26.536
Current BES/President's Budget: (FY04/05 OSD/OMB Controls)	29.223	28.163	25.283	24.171
Total Adjustments	-2.336	-0.635	-3.120	-2.365
Summary of Adjustments				
Congressional program reductions				
Congressional undistributed reductions				
Congressional rescissions				
SBIR/STTR Transfer	-0.288			
Economic Assumptions	-0.308	-0.635	-1.102	-1.035
Reprogrammings	-1.740		-2.018	-1.330
Congressional increases				
Subtotal	-2.336	-0.635	-3.120	-2.365

Schedule:

Not applicable.

  
  
  

Technical:

Not applicable.

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Exhibit R-2a, RD TEN Project Justification  
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## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: <b>February 2003</b>		
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>			PROGRAM ELEMENT NUMBER AND NAME PE0603721N / Environmental Protection			PROJECT NUMBER AND NAME S0401 / Shipboard Waste Management			

**D. OTHER PROGRAM FUNDING SUMMARY:**

Line Item No. & Name	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Complete	Total Cost
(U) Demonstrated and validated technologies are transitioned to various SCN, OPN, and O&MN budget accounts for implementation as part of a Fleet modernization program or new ship construction.										
(U) Related RDT&E: (U) Defense Research Sciences/Shipboard Processes (PE 61153N/R3162)										
(U) Readiness, Training, and Environmental Quality/Logistics and Environmental Quality (PE 62233N)										
(U) Environmental Quality and Logistics Advanced Technology/Environmental Requirements Advanced Technology (PE 63712N/R2206)										

**E. ACQUISITION STRATEGY:**

(U) RDT&E Contracts are Competitive Procurements.

**F. MAJOR PERFORMERS:**

(U) NSWCCD, Bethesda, MD: Test and evaluates prototype and preproduction shipboard environmental systems and equipment in the laboratory and onboard ship.

(U) York International Corp, York, PA: Design and build prototype and preproduction shipboard air-conditioning and refrigeration systems that operate with new, environmentally-acceptable refrigerants.

(U) Geo-Centers, Inc., Boston, MA: Design and fabricate prototype shipboard waste treatment systems and equipment for test and evaluation.

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## CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)									DATE: February 2003			
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-4			PE0603721N / Environmental Protection			S0401 / Shipboard Waste Management						
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	C/CPFF	WMTD, Pitts, PA	14.580								14.580	14.580
Primary Hardware Development	C/CPFF	Geo-Centers, Inc,Bos.,MA	23.250	2.000	01/03	2.000	01/04	2.000	01/05	Cont	Cont	N/A
Primary Hardware Development	SS/CPFF	York Internat'l Corp,York,PA	2.700							N/A	2.700	2.700
Primary Hardware Development	SS/CPFF	York Internat'l Corp,York,PA	11.850							10.150	25.000	25.000
Primary Hardware Development	SS/CPFF	N. Res & Eng Corp,Wab.,MA	1.200							N/A	1.200	1.200
Primary Hardware Development	C/CPFF	M. Rosenblatt & Son, NY,NY	10.363	1.000	01/03	0.500		0.500		Cont	Cont	N/A
Ancillary Hardware Development	Various	Misc. Contracts	16.884	1.500	Var	1.500		1.000		N/A	N/A	N/A
Component Development											0.000	
Ship Integration											0.000	
Ship Suitability											0.000	
Systems Engineering	C/CPFF	John J. McMullen & Son	4.487	0.600	12/02	0.200		0.200		Cont	Cont	N/A
Training Development											0.000	
Licenses											0.000	
Tooling											0.000	
GFE											0.000	
Award Fees											0.000	
Subtotal Product Development			85.314	5.100		4.200		3.700		Cont	Cont	N/A
Remarks: (1) Hardware Development and Systems Engineering Tasks use CPFF Delivery Contracts for Continuing Development of Pollution Abatement Hardware and Ship Systems Engineering Analysis.												
Development Support											0.000	
Software Development	Various	Misc. Contracts	0.000	0.000						0.000	0.000	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	
Remarks:												

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Exhibit R-3, Project Cost Analysis  
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## CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)								DATE: <b>February 2003</b>				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
<b>RD&amp;E, N / BA-4</b>			PE0603721N / Environmental Protection			S0401 / Shipboard Waste Management						
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	WR	NSWCCD, Bethesda, MD	122.524	12.000		12.000		12.000		Cont	Cont	N/A
Developmental Test & Evaluation	WR	NRL,Wash,DC	25.082	2.200		2.000		2.000		Cont	Cont	N/A
Developmental Test & Evaluation	WR	SPAWARSYSCEN,SD,CA	7.810	2.000		1.500		1.000		Cont	Cont	N/A
Process Control Engineering	C/CPFF	GSA/BAH, Arlington, VA	5.322	4.000		3.000		3.000		Cont	Cont	N/A
Developmental Test & Evaluation	WR	Misc. Govt Labs	22.232	0.500		0.500		0.500		Cont	Cont	N/A
Developmental Test & Evaluation	C/CPFF	Geo-Centers, Inc,Bos.,MA	12.151	1.000	01/03	1.000	01/04	1.000	01/05	Cont	Cont	N/A
Developmental Test & Evaluation	C/CPFF	York Internat'l Corp,York,PA	12.000							0.000	12.000	12.000
Developmental Test & Evaluation	C/CPFF	Misc. Contracts	10.791	1.313	Var	1.033	Var	0.921	Var	Cont	Cont	N/A
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	N/A
Subtotal T&E			217.912	23.013		21.033		20.421		0.000	Cont	N/A
Remarks:												
Contractor Engineering Support											0.000	
Government Engineering Support											0.000	
Program Management Support											0.000	
Travel			0.150	0.050		0.050		0.050			Cont	
Labor (Research Personnel)											0.000	
SBIR Assessment											0.000	
Subtotal Management			0.150	0.050		0.050		0.050		0.000	Cont	
Remarks:												
Total Cost			303.376	28.163		25.283		24.171		Cont	Cont	Cont
Remarks:												

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Exhibit R-3, Project Cost Analysis  
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EXHIBIT R4, Schedule Profile																								DATE: February 2003								
APPROPRIATION/BUDGET ACTIVITY												PROGRAM ELEMENT NUMBER AND NAME												PROJECT NUMBER AND NAME								
RDT&E, N / BA-4												PE0603721N / Environmental Protection												S0401 / Shipboard Waste Management								
Fiscal Year	2002				2003				2004				2005				2006				2007				2008				2009			
	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				
Ozone Depleting Substances																																
HFC-236fa Backfit Kits for CFC-114 Air-Conditioning Plants																																
Alternative (Non-Vapor-Compression) Cooling Concepts																																
Non-ODS Fire Protection Systems																																
Lubrication and Engineering Problems for HFC-236fa Air-Conditioning Plants																																
Integrated Liquid Wastes																																
Uniform National Discharge Standards (UNDS ) Rulemaking																																
10-gpm Oil/Water Separator Polisher (OWS-10)																																
50-gpm Oil/Water Separator Polisher (OWS-50)																																
5-gpm Oil/Water Separator Polisher (OWS-5)																																
Advanced Oil Content Monitor (OCM)																																
Non-Oily Wastewater Treatment System / MPCD Treatment Systems																																
Advanced Thermal Destruction System																																
Design Fixes for Compensated Fuel/Ballast Systems																																
Oil Pollution Abatement (OPA) System Improvements																																
Solid Wastes																																
Submarine Plastics Waste Management																																
Advanced Thermal Destruction System																																
Hazardous and Other Major Ship Wastes																																
Hazardous Materials Substitution/Elimination																																
Pollution Prevention Equipment																																
Test Reformulated Commercial Paints																																
Oil Spill Response Capabilities																																
Protected Marine Animals																																
Low-Copper Hull Antifouling Coatings																																
Underwater Hull Cleaning System																																
Environmental Information Management System (EIMS)																																

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R-1 SHOPPING LIST - Item No. 67-11 of 67-26

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**Exhibit R-4a, Schedule Detail**  
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APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>	PROGRAM ELEMENT NUMBER AND NAME PE0603721N / Environmental Protection				PROJECT NUMBER AND NAME W2210 / Environmental Compliance			
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost	4.451	2.896	0.767	0.894	0.934	1.153	1.197	0.960
RDT&E Articles Qty								

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

A. (U) Mission Description and Budget Item Justification: This project supports development and implementation of technologies which will lead to environmentally safe naval aviation operations and support; compliance with international, federal, state, and local regulations and policies; reduction of increasing compliance costs and personal liability; and enhancement of naval aviation mission readiness and effectiveness. This project will support aviation compliance and pollution prevention technologies as well as additional operational and shipboard aviation requirements previously unsupported. Specific regulatory requirements include Executive Orders 12856 (Pollution Prevention) and 12873 (Recycling & Waste Prevention), and 13148, the National Environmental Policy Act (NEPA), Clean Air Act (CAA) Title I, National Ambient Air Quality Standards (NAAQS), relating to pollutants aircraft contribute to base air emission limits (volatile organic compounds (VOCs), particulate matter (PM), oxides of nitrogen (NOx), oxides of sulfur (SOx), and unburned hydrocarbons (UHCs)), the National Emission Standards for Hazardous Air Pollutants (NESHAPs), the Clean Water Act (CWA), the Resource Conservation and Recovery Act (RCRA), as well as Occupational, Safety and Health Administration (OSHA) standards.

W2210 legacy aircraft maintenance facility requirements were rebaselined to Project Y0817, Pollution Abatement Ashore, beginning in FY 04.

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**Exhibit R-2a, RDTE Project Justification**  
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APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>	PROGRAM ELEMENT NUMBER AND NAME PE0603721N / Environmental Protection	PROJECT NUMBER AND NAME W2210 / Environmental Compliance																	
<b>B. Accomplishments/Planned Program</b>																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"></td> <td style="width: 15%; text-align: center;">FY 02</td> <td style="width: 15%; text-align: center;">FY 03</td> <td style="width: 15%; text-align: center;">FY 04</td> <td style="width: 15%; text-align: center;">FY 05</td> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td style="text-align: center;">2.037</td> <td style="text-align: center;">1.086</td> <td style="text-align: center;">0.000</td> <td style="text-align: center;">0.000</td> </tr> <tr> <td>RDT&amp;E Articles Quantity</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>						FY 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	2.037	1.086	0.000	0.000	RDT&E Articles Quantity				
	FY 02	FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost	2.037	1.086	0.000	0.000															
RDT&E Articles Quantity																			
<div style="border: 1px solid black; padding: 5px;"> <b>Alternative Maintenance Processes:</b> Research, develop, and test alternatives to aircraft and propulsion systems maintenance processes that use toxic heavy metals, hazardous air pollutants (HAPs) and Volatile Organic Compounds (VOCs). Objectives include formulation and certification of newly developed aircraft coatings including paint primers, topcoats, cadmium and chromium electroplating replacements, high velocity oxy-fuel (HVOF), pre- and post-treatments, and anodize coatings. Additional objectives include; maintaining expertise in and execution of flight test and evaluation of low-VOC bonding, petroleum distillate (PD) solvent, conversion coatings, aluminum manganese (Al/Mn) coatings and alternative weapons materials and processes.         </div>																			
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RDT&E Articles Quantity																			
<div style="border: 1px solid black; padding: 5px;"> <b>Aircraft Launch and Recovery Equipment (ALRE) Technologies:</b> Develop and demonstrate environmentally acceptable aircraft launch and recovery equipment (ALRE) technologies. Objectives include the validation of a redesigned ALRE piston and lubrication system.         </div>																			
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<div style="border: 1px solid black; padding: 5px;"> <b>Engine Emissions Technology:</b> Research, develop and test low emissions technology for gas turbine engines. Objectives include test, demonstrate and validate jet fuel additives for pollution prevention and compliance, gas turbine engine particulate matter measurement and testing technology, and low emissions combustor technology.         </div>																			

R-1 SHOPPING LIST - Item No. 67-13 of 67-26

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Exhibit R-2a, RDTEN Project Justification  
(Exhibit R-2a, page 13 of 26)

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## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2003</b>																
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>	PROGRAM ELEMENT NUMBER AND NAME PE0603721N / Environmental Protection	PROJECT NUMBER AND NAME W2210 / Environmental Compliance																	
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RDT&E Articles Quantity																			
<div style="border: 1px solid black; padding: 5px;"><b>Aircraft Hazardous Materials and Shipboard Waste Reduction:</b> Research, develop and test alternatives to aircraft and propulsion and power systems manufacture, finishing and repair processes that generate toxic heavy metals, hazardous air pollutants (HAPs) and volatile organic compounds (VOCs). Objectives include the test, demonstration and validation of aircraft structural stainless steels, long life lead and cadmium free aircraft batteries and shipboard validation of corrosion repair kits.</div>																			
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R-1 SHOPPING LIST - Item No. 67-14 of 67-26

UNCLASSIFIED

# UNCLASSIFIED

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<p><b>C. PROGRAM CHANGE SUMMARY:</b></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"></th> <th style="text-align: right;">FY 2002</th> <th style="text-align: right;">FY 2003</th> <th style="text-align: right;">FY 2004</th> <th style="text-align: right;">FY 2005</th> </tr> </thead> <tbody> <tr> <td>Funding:</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Previous President's Budget:</td> <td style="text-align: right;">4.571</td> <td style="text-align: right;">4.890</td> <td style="text-align: right;">4.962</td> <td style="text-align: right;">5.157</td> </tr> <tr> <td>Current BES/President's Budget</td> <td style="text-align: right;">4.451</td> <td style="text-align: right;">2.896</td> <td style="text-align: right;">0.767</td> <td style="text-align: right;">0.894</td> </tr> <tr> <td>Total Adjustments</td> <td style="text-align: right; border-top: 1px solid black;">-0.120</td> <td style="text-align: right; border-top: 1px solid black;">-1.994</td> <td style="text-align: right; border-top: 1px solid black;">-4.195</td> <td style="text-align: right; border-top: 1px solid black;">-4.263</td> </tr> <tr> <td colspan="5" style="padding-top: 10px;">Summary of Adjustments</td> </tr> <tr> <td>    Congressional program reductions</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>    Congressional undistributed reductions</td> <td></td> <td style="text-align: right;">-0.017</td> <td></td> <td></td> </tr> <tr> <td>    Congressional rescissions</td> <td style="text-align: right;">-0.010</td> <td></td> <td></td> <td></td> </tr> <tr> <td>    SBIR/STTR Transfer</td> <td style="text-align: right;">-0.001</td> <td></td> <td></td> <td></td> </tr> <tr> <td>    Economic Assumptions</td> <td style="text-align: right;">-0.013</td> <td style="text-align: right;">-0.058</td> <td style="text-align: right;">-0.023</td> <td style="text-align: right;">-0.020</td> </tr> <tr> <td>    Reprogrammings</td> <td style="text-align: right;">-0.096</td> <td></td> <td></td> <td></td> </tr> <tr> <td>    Other program adjustments</td> <td></td> <td style="text-align: right;">-1.919</td> <td style="text-align: right;">-4.172</td> <td style="text-align: right;">-4.243</td> </tr> <tr> <td>    Congressional increases</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>    Subtotal</td> <td style="text-align: right; border-top: 1px solid black; border-bottom: 1px solid black;">-0.120</td> <td style="text-align: right; border-top: 1px solid black; border-bottom: 1px solid black;">-1.994</td> <td style="text-align: right; border-top: 1px solid black; border-bottom: 1px solid black;">-4.195</td> <td style="text-align: right; border-top: 1px solid black; border-bottom: 1px solid black;">-4.263</td> </tr> </tbody> </table> <p style="margin-top: 20px;">Schedule:</p> <p style="margin-left: 20px;">Not applicable</p>   <p>Technical:</p> <p style="margin-left: 20px;">Not applicable</p>						FY 2002	FY 2003	FY 2004	FY 2005	Funding:					Previous President's Budget:	4.571	4.890	4.962	5.157	Current BES/President's Budget	4.451	2.896	0.767	0.894	Total Adjustments	-0.120	-1.994	-4.195	-4.263	Summary of Adjustments					Congressional program reductions					Congressional undistributed reductions		-0.017			Congressional rescissions	-0.010				SBIR/STTR Transfer	-0.001				Economic Assumptions	-0.013	-0.058	-0.023	-0.020	Reprogrammings	-0.096				Other program adjustments		-1.919	-4.172	-4.243	Congressional increases					Subtotal	-0.120	-1.994	-4.195	-4.263
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R-1 SHOPPING LIST - Item No. 67-15 of 67-26

UNCLASSIFIED

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE: <b>February 2003</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>			PROGRAM ELEMENT NUMBER AND NAME PE0603721N / Environmental Protection			PROJECT NUMBER AND NAME W2210 / Environmental Compliance			

  

**D. OTHER PROGRAM FUNDING SUMMARY:**

<u>Line Item No. &amp; 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>
Related RDT&E:										
PE0603851D (Environmental Security Technolog	0.900	0.750	0.950	0.750						
Certification Program)										
PE0602121N (Ship, Submarine and Logistics	0.150									
Technology)										
PE060223N (Readiness/Training/Environmental Quality)										
PE0603716D (Strategic Environmental R&D Program)										

  

**E. ACQUISITION STRATEGY:**

Technologies developed under this project are demonstrated and validated primarily through competitive procurements. Validated technology is transitioned to users through new or revised performance specifications, technical manuals or competitive procurements of subsystems, materials or processes.

  

**F. MAJOR PERFORMERS:**

<u>Major Performer</u>	<u>Location</u>	<u>Description of Work</u>	<u>FY03 Amount &amp; Award Date</u>	<u>FY04 Amount &amp; Award Date</u>	<u>FY05 Amount &amp; Award Date</u>
NAWC AD PAX RIVER	MD	Project management, research, development and evaluation.	1.270 10/02	.400 10/03	.500 10/04
GE	Lynn, MA	Aircraft engine research, development and test	1.500 9/03	.350 9/04	.350 9/05

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## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: <b>February 2003</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>	PROGRAM ELEMENT NUMBER AND NAME PE0603721N / Environmental Protection				PROJECT NUMBER AND NAME Y0817 / Pollution Abatement			
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost	9.341	10.286	4.077	6.750	7.694	9.310	9.482	9.661
RDT&E Articles Qty								

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

(U) This project develops and validates new technologies needed to address pervasive Navy shoreside environmental requirements imposed on Naval shore activities by the need to comply with environmental laws, regulations, orders, and policies. The goal of the program is to minimize personnel liabilities, operational costs, and regulatory oversight while preserving or enhancing the ability of Naval shore activities to accomplish their required missions and functions. Each project task addresses one or more of the requirements from the Navy Environmental Quality RDT&E Requirements of January 2001. Project investment is made in eight thrust areas. Thrust areas were changed in FY01 to better align the tasks with technical area needs resulting from shoreside requirements and two thrust areas were added in FY04.

#### (U) SHIP MAINTENANCE/REPAIR/DEACTIVATION

(U) Thus far, tasks in this thrust area have addressed environmental requirements originating at Naval shipyards. As the Navy pursues a strategy to reduce ship maintenance costs by shifting work to Ship Intermediate Maintenance Activities (SIMAs), new requirements are emerging as these processes and resulting hazardous waste streams become more decentralized. SIMAs will require technologies that are cost-effective when operated less frequently and with lower throughput. SIMA tasks have been selected based on compliance and pollution prevention studies conducted for the Naval Station Mayport SIMA as part of the Navy Environmental Leadership Program (NELP).

#### (U) ORDNANCE TESTING/MANUFACTURE/DISPOSAL

(U) Current tasks in this thrust address specific compliance-driven environmental requirements of Navy ordnance activities. With respect to disposal, the thrust addresses requirements for disposal of quantities typical of testing and manufacturing operations, not of the much larger quantities associated with demilitarization. Future tasks will shift much of the investment in this area to pollution prevention requirements, particularly where they also reduce compliance impacts and costs. These tasks will be selected based on the ordnance environmental requirements study conducted in partnership with the Navy's Ordnance Environmental Specialty Office (OESO).

#### (U) INDUSTRIAL OPERATIONS AND MAINTENANCE

(U) Tasks in this thrust address compliance and pollution prevention environmental requirements originating from the industrial operations of Navy Public Works Centers and Naval Stations. As part of an overall Navy strategy, future tasks will shift more of the investment from compliance technologies to pollution prevention technologies that are cost-effective solutions to compliance requirements. It is also expected that there will be new requirements driven by the trend towards stricter federal, state, and local air emission and wastewater regulations.

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**Exhibit R-2a, RDTE Project Justification**  
(Exhibit R-2a, page 17 of 26)

# UNCLASSIFIED

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## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2003</b>
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>	PROGRAM ELEMENT NUMBER AND NAME PE0603721N / Environmental Protection	PROJECT NUMBER AND NAME Y0817 / Pollution Abatement
<p>(U) INSTALLATION RESTORATION</p> <p>(U) Tasks in this thrust address requirements to reduce the Navy's cost and liabilities associated with the cleanup of contaminated sites at Naval activities. Tasks evaluate alternative site characterization, remediation, and monitoring technologies for the over 1000 Navy sites requiring cleanup and restoration under Comprehensive Environmental Response, Compensation, &amp; Liability Act (CERCLA). Due to funding reduction, investment in this thrust area will be eliminated in FY04 with the exception of outyear tasks to reduce long term monitoring costs. The Navy will rely on demonstrations conducted by other Federal agencies, such as EPA, as well as academia to validate innovative technologies for terrestrial site cleanup.</p> <p>(U) ENVIRONMENTAL EFFECTS OF UNDERWATER UXO</p> <p>(U) The thrust is new for FY04 based on results of the Initiation Decision Report (IDR) completed on Environmental Effects of Underwater UXO in FY02. The tasks in this thrust support the requirements for addressing the transport, fate, and effects of underwater UXO needed to support scientifically valid decisions.</p> <p>(U) AVIATION MAINTENANCE AND SUPPORT</p> <p>(U) This thrust is new for FY04. The tasks in this thrust will reduce the shoreside environmental impacts of aviation operations and maintenance at air bases and depots. Specific tasks will be from transfer of shoreside efforts under Project W2210 based on a review to occur in FY03.</p> <p>(U) COASTAL CONTAMINATION AND CONTAMINATED SEDIMENTS</p> <p>(U) This thrust area was created in FY02. Tasks within this area address requirements for reducing the cost of environmental compliance and cleanup for coastal contamination and contaminated sediments. Navy compliance with all of the laws and regulations dealing with marine and coastal environments is complex and costly. Tasks will develop and evaluate technologies for sediment characterization and monitoring, sediment management and remediation, and marine environmental risk assessment.</p> <p>(U) EMISSIONS DETECTION AND MONITORING</p> <p>(U) This thrust area was created in FY02. Tasks under this thrust will address legal and policy requirements for monitoring and detection of wastewater discharges and air emissions. The detection and monitoring devices and procedures demonstrated under this thrust will improve process performance, provide mission-compatible compliance with provisions of the Clean Water Act (CWA), Clean Air Act (CAA), Resource Conservation &amp; Recovery Act (RCRA), Toxic Substance Control Act (TSCA), State, and local regulations and reduce costs for environmental sampling analysis. In addition, Navy operational air pollution modeling capability will be developed and including hardware, software, system administration processes, and guidelines. Due to funding reduction in FY04, new tasks will be delayed to outyears.</p>		

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Exhibit R-2a, RDTEN Project Justification  
(Exhibit R-2a, page 18 of 26)

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## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2003</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>	PROGRAM ELEMENT NUMBER AND NAME PE0603721N / Environmental Protection	PROJECT NUMBER AND NAME Y0817 / Pollution Abatement		
<b>B. Accomplishments/Planned Program</b>				
	FY 02	FY 03	FY 04	FY 05
Ship Maintenance/Repair/Pierside	2.309	0.945	0.132	0.550
RDT&E Articles Quantity				
<p>FY 02: Completed development of Automated Paint Application with Overspray Capture and Treatment. Completed development of Air Emission Reduction from Shipyard Cutting and Arc-Gouging Operations. Completed development and demonstration of Collection and Treatment of Compwater. Completed evaluation of Advanced Oil Spill Response Equipment. Initiated tasks addressing painting operations at Ship Intermediate Maintenance Activity (SIMA) requirements identified during compliance and pollution prevention studies conducted on Naval Station Mayport (SIMA) as part of Navy Environmental Leadership Program (NELP).</p> <p>FY 03: Complete demonstration of Coating Removal from Delicate Substrates. Continue SIMA tasks for improved painting operations.</p> <p>FY 04: Complete SIMA tasks for improved painting operations.</p> <p>FY 05: Initiate task to evaluate fouling resistant permanent booms.</p>				
	FY 02	FY 03	FY 04	FY 05
Ordnance Testing/Manufacture/Disposal	1.583	1.674	0.285	0.481
RDT&E Articles Quantity				
<p>FY 02: Completed testing of pilot Exhaust Scrubber for Static Testing of Small Rocket Motors. Continued development of Confined Burn Facility (CBF): completed design of 80lb CBF pilot facility.</p> <p>FY 03: Complete development of Exhaust Scrubber for Static Testing of Small Rocket Motors. Continue development of Confined Burn Facility (CBF) to Replace Open Burning of Ordnance and Energetics: complete construction of 80lb CBF facility. Initiate task to evaluate Navy Training Lands Sustainability and prepare Initiation Decision Report (IDR).</p> <p>FY 04: Continue development of Confined Burn Facility (CBF): Complete construction and checkout and develop documentation for transition to other funding sources. Task will not be funded under Y0817 after FY04 due to funding reductions. Initiate Navy Training Lands Sustainability tasks based on IDR.</p> <p>FY 05: Continue Navy Training Lands Sustainability tasks. Initiate Enhanced Recycle of Range Scrap Ordnance.</p>				

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Exhibit R-2a, RDTEN Project Justification  
(Exhibit R-2a, page 19 of 26)

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2003</b>																															
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>	PROGRAM ELEMENT NUMBER AND NAME PE0603721N / Environmental Protection	PROJECT NUMBER AND NAME Y0817 / Pollution Abatement																																
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R-1 SHOPPING LIST - Item No. 67-20 of 67-26

UNCLASSIFIED

**Exhibit R-2a, RDTEN Project Justification**  
(Exhibit R-2a, page 20 of 26)

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2003</b>																															
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>	PROGRAM ELEMENT NUMBER AND NAME PE0603721N / Environmental Protection	PROJECT NUMBER AND NAME Y0817 / Pollution Abatement																																
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R-1 SHOPPING LIST - Item No. 67-21 of 67-26

UNCLASSIFIED

Exhibit R-2a, RDTEN Project Justification  
(Exhibit R-2a, page 21 of 26)

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2003</b>																
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>	PROGRAM ELEMENT NUMBER AND NAME PE0603721N / Environmental Protection	PROJECT NUMBER AND NAME Y0817 / Pollution Abatement																	
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	FY 02	FY 03	FY 04	FY 05															
Aviation Maintenance & Support	0.000	0.000	1.302	1.209															
RDT&E Articles Quantity																			

R-1 SHOPPING LIST - Item No. 67-22 of 67-26

UNCLASSIFIED

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2003</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>	PROGRAM ELEMENT NUMBER AND NAME PE0603721N / Environmental Protection	PROJECT NUMBER AND NAME Y0817 / Pollution Abatement		

**C. PROGRAM CHANGE SUMMARY:**

	FY 2002	FY 2003	FY 2004	FY 2005
Funding:				
Previous President's Budget: (FY 03 Pres Controls)	9.580	10.518	10.720	10.628
Current BES/President's Budget:	9.341	10.286	4.077	6.750
Total Adjustments	-0.239	-0.232	-6.643	-3.878
Summary of Adjustments				
Congressional program reductions			-3.644	-2.161
Congressional rescissions				
SBIR				
Economic assumptions	-0.047	-0.059		
Other program adjustments	-0.192	-0.173	-2.999	-1.717
Subtotal	-0.239	-0.232	-6.643	-3.878

Schedule:  
Not applicable.

Technical:  
Not applicable.

R-1 SHOPPING LIST - Item No. 67-23 of 67-26

UNCLASSIFIED

Exhibit R-2a, RDTE Project Justification  
(Exhibit R-2a, page 23 of 26)

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: <b>February 2003</b>		
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>			PROGRAM ELEMENT NUMBER AND NAME PE0603721N / Environmental Protection			PROJECT NUMBER AND NAME Y0817 / Pollution Abatement			

**D. OTHER PROGRAM FUNDING SUMMARY:**

Line Item No. & Name	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Complete	Total Cost
<p>P-1 Procurement Line Item No. &amp; Name. Not Applicable.</p> <p>C-1 MILCON Project No. &amp; Name. Not Applicable.</p> <p>(U) RELATED RDT&amp;E: This project transitions shoreside pollution abatement technologies from two Navy Science and Technology programs and the Strategic Environmental Research and Development Program (SERDP). Project funding is leveraged by transitioning technologies to the Environmental Security Technology Certification Program (ESTCP) for final certification and by providing funding for Navy participation in ESTCP projects. Execution of this project is coordinated with related Army and Air Force programs by the Tri-Service Environmental Quality R&amp;D Strategic Plan developed under the leadership of the Joint Engineers Management Panel (JEMP).</p> <p>(U) PE 0602233N, Readiness, Training, and Environmental Quality Technology Development</p> <p>(U) PE 0603712N, Environmental Quality, Logistics Advanced Technology Demonstrations</p> <p>(U) PE 0603716D, Strategic Environmental Research &amp; Development Program (SERDP)</p> <p>(U) PE 0603851D, Environmental Security Technology Certification Program (ESTCP)</p>										

**E. ACQUISITION STRATEGY: \***

(U) This project is categorized as Non-ACAT (Non Acquisition). The project delivers a broad spectrum of products that require a variety of acquisition processes to implement. Equipment products for Naval stations and other mission funded activities costing over 100K are often procured centrally through the Navy Pollution Prevention Equipment Program (PPEP) where as equipment products for Shipyards and other Navy Working Capital Fund (NWCFF) activities costing over 100K are procured through their Capital Purchases Program (CPP). For both types of activities, equipment products costing less than 100K, and process changes not requiring the purchase of new equipment such as consumable material or product substitutions, are funded through the activity's operating budgets. Occasionally there is a technology that must be implemented as a specialized facility. These are acquired through the Military Construction (MCON)

**F. MAJOR PERFORMERS: \*\***

Major performers include Naval Facilities Engineering Service Center, Port Hueneme, CA; SPAWAR Systems Center, San Diego, CA; Naval Surface Warfare Center, Carderock Division, MD; Naval Surface Warfare Center, Indian Head Division, MD; and Naval Air Warfare Center, Aircraft Division, Patuxant River, MD.

\* Not required for Budget Activities 1,2,3, and 6  
 \*\* Required for DON and OSD submit only.

R-1 SHOPPING LIST - Item No. 67-24 of 67-26

UNCLASSIFIED



# UNCLASSIFIED

## CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)								DATE: February 2003				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-4			PE0603721N / Environmental Protection			Y0817 / Pollution Abatement						
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
Ship Maint/Repair&Pierside Support	WR/PO	NSWC/CD	9.841	0.741	varies	0.050	varies	0.135	varies	Continuing	Continuing	N/A
Ship Maint/Repair&Pierside Support	WR/PO	NFESC	4.836	0.204	varies	0.082	varies	0.415	varies	Continuing	Continuing	N/A
Ordnance Testing/Manufact/Disp	WR/PO	NSWC/IH	14.506	1.160	varies	0.285	varies	0.000	varies	Continuing	Continuing	N/A
Ordnance Testing/Manufact/Disp	WR/PO	NFESC		0.514				0.481				
Industrial Operations & Maintenance	WR/PO	NFESC	13.960	2.643	varies	0.903	varies	1.805	varies	Continuing	Continuing	N/A
Industrial Operations & Maintenance	WR/PO	SSC/SD	7.576	0.000	varies	0.000	varies	0.000	varies	Continuing	Continuing	N/A
Installation Restoration	WR/PO	NFESC		1.013	varies	0.000	varies	0.000	varies	Continuing	Continuing	N/A
Coastal Contam/Contaminated Sed	WR/PO	SSC/SD		1.160	varies	0.403	varies	1.003	varies	Continuing	Continuing	N/A
Coastal Contam/Contaminated Sed	WR/PO	NFESC		1.599	varies	0.000	varies	0.000	varies	Continuing	Continuing	N/A
Emissions Detection/Monitoring	WR/PO	SSC/SD		0.705	varies	0.207	varies	0.000	varies	Continuing	Continuing	N/A
Emissions Detection/Monitoring	WR/PO	NFESC		0.547	varies	0.000	varies	0.630	varies	Continuing	Continuing	N/A
Env. Effects of Underwater UXO	WR/PO	NFESC				0.645	varies	0.722	varies	Continuing	Continuing	N/A
Env. Effects of Underwater UXO	WR/PO	SSC/SD				0.200	varies	0.350	varies	Continuing	Continuing	N/A
Aviation Maintenance and Support	WR/PO	NSWC PAX				0.845	varies	1.209	varies	Continuing	Continuing	N/A
Aviation Maintenance and Support	WR/PO	NFESC				0.457	varies	0.000	varies	Continuing	Continuing	N/A
Subtotal Product Development			50.719	10.286		4.077		6.750		0.000	71.832	
Remarks: Performing Activities: Naval Surface Warfare Center, Carderock Division (NSWC/CD), Naval Facilities Engineering Service Center (NFESC), Naval Surface Warfare Center, Indian Head Division (NSWC/IH), Space and Warfare Systems Center, San Diego (SSC/SC), Naval Research Laboratory (NRL). Total Prior Years Cost: Summation starts with FY80. Subtotal does not include performing activities from prior years that are no longer performing activities. Award Dates: About 55% of the project is executed via contracts awarded by the performing activities.												
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	
Remarks: Included in Product Development costs.												

R-1 SHOPPING LIST - Item No. 67-25 of 67-26

UNCLASSIFIED

Exhibit R-3, Project Cost Analysis  
(Exhibit R-3, page 25 of 26)

UNCLASSIFIED

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)									DATE: February 2003			
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-4			PE0603721N / Environmental Protection			Y0817 / Pollution Abatement						
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											0.000	
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			0.000	0.000		0.000		0.000		0.000	0.000	
Remarks:												
Contractor Engineering Support											0.000	
Government Engineering Support											0.000	
Program Management Support											0.000	
Travel											0.000	
Labor (Research Personnel)											0.000	
SBIR Assessment											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	
Remarks: Not applicable.												
Total Cost			50.719	10.286		4.077		6.750		0.000	71.832	
Remarks:												

R-1 SHOPPING LIST - Item No. 67-26 of 67-26

UNCLASSIFIED