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FY 2000 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

Date: February 1999

BUDGET ACTIVITY: 3

PROGRAM ELEMENT: 0603712N

PROGRAM ELEMENT TITLE: Environmental Quality & Logistics Advanced Technology

(U) COST: (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1998 ACTUAL	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	FY 2004 ESTIMATE	FY 2005 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
R1910 Logistics Engineering Advanced Demonstrations (LEAD)	14,661	17,026	18,513	17,815	19,790	20,279	21,385	22,059	CONT.	CONT.
R2206 Environmental Requirements Advanced Technology (ERAT)	3,160	4,254	5,222	4,698	6,209	6,353	6,506	6,662	CONT.	CONT.
R2337 Smart Base	5,931	0	0	0	0	0	0	0	0	24,586
R2380 Proton Exchange Membrane Fuel Cell	1,676	0	0	0	0	0	0	0	0	1,676
R2384 Visualization of Technical Information	1,899	98	74	0	0	0	0	0	0	2,071
R2498 Visualization of Technical Information	0	1,995	0	0	0	0	0	0	0	1,995
TOTAL	27,327	23,373	23,809	22,513	25,999	26,632	27,891	28,721	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This Program Element funds the Navy's advanced technology development core efforts in environmental quality and logistics. The focus is on Navy-unique aspects of these technologies. The Logistics Engineering Advanced Demonstrations (LEAD) project supports, maintains and upgrades Navy systems and processes. It extends systems life cycles and streamlines processes to increase reliability and reduce operations. In FY 1995, an environmental quality project (Environmental Requirements Advanced Technology (ERAT)) began, that is aimed at demonstrating ways to reduce shipboard pollution, remediation of harbors and shore facilities, and improve industrial treatment processes. Ongoing environmental quality efforts funded under LEAD transitioned to this project. Program response to affordability requirements includes research and development on antifouling hull coatings, waterfront structures, amphibious logistics,

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maintenance, electronics logistics and replenishment. The FY 1998 Congressional plus up, the Visualization of Technical Information project develops an automated process for converting page-oriented technical manuals into a revisable database format.

(U) The Navy S&T program includes projects that focus and have attributes that enhance the affordability of warfighting systems.

(U) JUSTIFICATION FOR BUDGET ACTIVITY: This program is budgeted within the ADVANCED TECHNOLOGY DEVELOPMENT Budget Activity because it encompasses design, development, simulation, or experimental testing of prototype hardware to validate technological feasibility and concept of operations and reduce technological risk prior to initiation of a new acquisition program or transition to an ongoing acquisition program.

(U) PROGRAM CHANGE SUMMARY:

	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>
(U) FY 1999 President's Budget:	25,462	20,919	26,008
(U) Appropriated Value:	-	22,919	-
(U) Adjustments from FY 1999 PRESBUDG:	+1,865	+2,454	-2,199
(U) FY 2000 President's Budget Submission:	27,327	23,373	23,809

(U) CHANGE SUMMARY EXPLANATION:

(U) Funding: FY 1998 change reflects actual update adjustments (+\$2,062) and Small Business Innovative Research reduction (-\$197). FY 1999 changes reflect actual update adjustment (+\$552), Congressional undistributed reductions (-\$98), and Congressional Plus-up for Visualization of Technical Information (+\$2,000). FY 2000 changes reflect

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program balance adjustments (-\$2,392). Navy Working Capital Fund rate adjustments (+\$355), non pay inflation adjustment (-\$344) and civilian pay rate adjustments (+\$182).

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PROGRAM ELEMENT TITLE: Environmental Quality & Logistics Advanced Technology

(U) COST: (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1998 ACTUAL	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	FY 2004 ESTIMATE	FY 2005 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
R1910 Logistics Engineering Advanced Demonstrations (LEAD)	14,661	17,026	18,513	17,815	19,790	20,279	21,385	22,059	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project develops technologies to support vital and integral logistics aspects of Joint Mission Areas, specifically in Support & Infrastructure and Readiness. Science and Technology investment in logistics assures affordable technologies that provide rapid deployment, replenishment, and sustainment of Naval and other combat forces in peacetime and wartime operations. Other needs addressed include reducing life cycle and maintenance costs while increasing system capability and readiness. This project also responds to several Defense Technology Area Plan (DTAP) goals, including Materials & Process and Ground & Sea Vehicles. This project responds to Defense Science & Technology Strategy Areas including: Affordability, Dual Use, and Strong Technology Base. The LEAD project improves weapon system readiness and supportability through development of advanced logistics technology. Tasks in this project typically fall into the following categories per the Defense Logistics Agency: Supply, Maintenance, Transportation, and Engineering. This project facilitates transition of concepts from Applied Research to higher development categories or directly to the fleet.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1998 ACCOMPLISHMENTS:

- (U) (\$2,000) Condition Based Maintenance (CBM):
 - (U) Continued advanced development of material for CBM oil analysis and machinery diagnostics.

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Date: February 1999

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PROGRAM ELEMENT: 0603712N

PROJECT NUMBER: R1910

PROGRAM ELEMENT TITLE: Environmental Quality
& Logistics Advanced Technology

PROJECT TITLE: Logistics Engineering Advanced
Demonstration (LEAD)

- (U) (\$2,200) Affordability:
 - (U) Affordable High Lethality Green Energetic Materials will demonstrate propellents and explosives which can lower the life-cycle cost of ordnance systems by reducing the waste and pollution created during manufacture and loading of the materials and by reducing the waste and pollution associated during the demilitarization of the propellants and explosives at the end of the useful life of ordnance.
- (U) (\$292) Commander in Chief (CINC) Support:
 - (U) Obtained evaluations and feedback from Fleet/Force CINC Commands on selected "mature" technologies.
- (U) (\$2,661) Sustainable Hardware and Affordable Readiness Practices (SHARP):
 - (U) Demonstrated advanced electronic packaging cooling and interconnect techniques for support of high performance electronics. Tasks include high temperature packaging, advanced thermal interconnects, advanced convection cooling, dual use advanced photonics technology and high throughput interconnects.
 - (U) Continued development/technology insertion and demonstration of "AA" low magnetic signature lithium thionyl chloride cells into existing sea mine systems.
 - (U) Developed/evaluated commercial and/or military photonics components and processes for application in advanced avionics systems.
 - (U) Continued to demonstrate improved repairability and logistics support in cost efficient and timely, transportable techniques and processes for replacing nonprocurable/unreliable electronic circuit assemblies.
 - (U) Evaluated the benefit of inserting a different battery chemistry or a removal battery into the performance specification for sonobuoys.
- (U) (\$100) Next Generation Test Generator (NGTG):

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PROGRAM ELEMENT: 0603712N

PROJECT NUMBER: R1910

PROGRAM ELEMENT TITLE: Environmental Quality & Logistics Advanced Technology

PROJECT TITLE: Logistics Engineering Advanced Demonstration (LEAD)

- (U) Developed and demonstrated the capability to perform fault diagnostics using neural network technology to develop test program set software for electronic systems.
- (U) (\$1,280) Advanced Lighterage for High Sea State Operations:
 - (U) Continued effort to demonstrate and evaluate improved lighterage platforms and connector systems.
- (U) (\$1,048) Waterfront Structures Repair and Upgrading:
 - (U) Continued effort to demonstrate improved performance of new technology for waterfront structures.
- (U) (\$900) Real Time Infrared (RTIR):
 - (U) Continued optics upgrade fabrication, and performed system integration for Real Time Infrared Test Set.
- (U) (\$1,078) Battery Charger/Analyzer:
 - (U) Developed battery diagnostics and charge technology that will reduce maintenance and extend the service life of the batteries.
- (U) (\$70) Water Mitigators for Ordnance Facilities:
 - (U) Developed design criteria for water mitigators in ordnance facilities. Reduced exposure of personnel and property to unacceptable risk of injury and damage from accidental explosions.
- (U) (\$1,087) D-Day Mobile Fuel Distribution:
 - (U) Developed and demonstrated light weight, high strength, collapsible, fluid containers and rapid fluid transfer mechanisms to provide the capability for expeditious ship-to-shore movement of fuel and other liquids during the initial stages of an amphibious assault.

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PROGRAM ELEMENT: 0603712N

PROJECT NUMBER: R1910

PROGRAM ELEMENT TITLE: Environmental Quality
& Logistics Advanced Technology

PROJECT TITLE: Logistics Engineering Advanced
Demonstration (LEAD)

- (U) (\$895) Low Cost Radio Frequency (RF) Power Measurement Devices:
 - (U) Produced RF power measurements devices to achieve improved affordability by reducing initial acquisition cost, reducing logistics manpower, minimizing life-cycle cost of power measurement equipment, improving maintenance techniques and processes, and reducing personnel injury/material damage.
 - (U) (\$600) Naval Total Asset Visibility (NTAV):
 - (U) Demonstrated the concepts of wide-area asset visibility using radio frequency identification (RFID) technology and interoperability with logistics command and control systems.
 - (U) (\$450) Laser Weld:
 - (U) Completed demonstration of a laser repair cell utilizing a 3-dimensional telerobotic manipulator.
2. (U) FY 1999 PLAN:
- (U) (\$2,000) CBM:
 - (U) Continue advanced development of material for CBM oil analysis and machinery diagnostics.
 - (U) (\$1,212) RTIR:
 - (U) Continue optics upgrade fabrication, and performed system integration for RTIR Test Set.
 - (U) (\$1,099) Battery Charger/Analyzer:

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PROGRAM ELEMENT: 0603712N

PROJECT NUMBER: R1910

PROGRAM ELEMENT TITLE: Environmental Quality
& Logistics Advanced Technology

PROJECT TITLE: Logistics Engineering Advanced
Demonstration (LEAD)

- (U) Develop battery diagnostics and charge technology that will reduce maintenance and extend the service life of the batteries.
- (U) (\$1,236) D-Day Mobile Fuel Distribution:
 - (U) Develop and demonstrate light weight, high strength, collapsible, fluid containers and rapid fluid transfer mechanisms to provide the capability for expeditious ship-to-shore movement of fuel and other liquids during the initial stages of an amphibious assault.
- (U) (\$1,400) Low Cost RF Power Measurement Devices:
 - (U) Produce RF power measurements devices to achieve improved affordability by reducing initial acquisition cost, reducing logistics manpower, minimizing life-cycle cost of power measurement equipment, improving maintenance techniques and processes, and reducing personnel injury/material damage.
- (U) (\$1,206) NTAV:
 - (U) Continue to demonstrate the concepts of wide-area asset visibility using (RFID) technology and interoperability with logistics command and control systems.
- (U) (\$400) Water Mitigators for Ordnance Facilities:
 - (U) Continue design criteria for water mitigators in ordnance facilities.
- (U) (\$900) Advanced Logistics Configuration Management System:
 - (U) Demonstrate advanced mission-specific and uniquely-tailored capabilities for cost effective, real-time capture and display of 3D space configuration for use in design, alteration, modernization and logistics.

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PROGRAM ELEMENT: 0603712N

PROJECT NUMBER: R1910

PROGRAM ELEMENT TITLE: Environmental Quality & Logistics Advanced Technology

PROJECT TITLE: Logistics Engineering Advanced Demonstration (LEAD)

- (U) (\$3,600) Affordability:
 - (U) Affordable High Lethality Green Energetic Materials will demonstrate propellents and explosives which can lower the life-cycle cost of ordnance systems by reducing the waste and pollution created during manufacture and loading of the materials and by reducing the waste and pollution associated created during the demilitarization of the propellants and explosives at the end of the useful life of ordnance.
- (U) (\$1,100) Technology Assessment Management Tool
 - (U) Develop a comprehensive capability to proactively manage all aspects of support and sustainment of military systems whether the system or support is government derived or commercial. (This task was formerly under the "SHARP" heading in the previous submission.
- (U) (\$405) Arc Fault Wire Protection
 - (U) Develop the ability to detect a 400Hz power wire insulation failure which could ignite a fire on the ground or in the air. This affordable arc fault detection would reduce the maintenance time to find the damaged wire to be repaired by 35%. This tasks was under the "SHARP listing in the previous submission.
- (U) (\$600) Autonomous Marine Booster Pump
 - (U) Develop a reliable, automated pressure boosting mechanism to permit ship-to-shore transfer of bulk liquids from extended standoff distances during the assault phase of an amphibious operation.
- (U) (\$600) Pier Lateral Stability
 - (U) Develop non-destructive diagnostic techniques coupled with computer modeling to rapidly assess pier capacity to resist lateral loads imposed by berthing impact, wind, and current on berthed vessels, or by earthquakes.

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PROGRAM ELEMENT: 0603712N

PROJECT NUMBER: R1910

PROGRAM ELEMENT TITLE: Environmental Quality & Logistics Advanced Technology

PROJECT TITLE: Logistics Engineering Advanced Demonstration (LEAD)

- (U) (\$1,000) High Sea State Shipboard Crane Technology
 - (U) Develop enhanced capabilities and reduced training requirements for advanced shipboard crane to facilitate loading/unloading operations in sea states 3 and above.
 - (U) (\$174) Waterfront Structures Repairs and Upgrades
 - (U) Complete demonstration of improved performance of new technology for waterfront structures.
 - (U) (\$94) Portion of extramural program reserved for Small Business Innovative Research assessment in accordance with 15 U.S.C. 638.
2. (U) FY 2000 PLAN:
- (U) (\$2,000) CBM:
 - (U) Continued advanced development of material for CBM oil analysis and machinery diagnostics.
 - (U) (\$1,100) Technology Assessment Management Tool
 - (U) Develop a comprehensive capability to proactively manage all aspects of support and sustainment of military systems whether the system or support is government derived or commercial.
 - (U) (\$800) Arc Fault Wire Protection
 - (U) Develop the ability to detect a 400Hz power wire insulation failure which could ignite a fire on the ground or in the air. This affordable arc fault detection would reduce the maintenance time to find the damaged wire to be repaired by 35%.

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PROJECT NUMBER: R1910

PROGRAM ELEMENT TITLE: Environmental Quality & Logistics Advanced Technology

PROJECT TITLE: Logistics Engineering Advanced Demonstration (LEAD)

- (U) (\$800) Battery Charger/Analyzer:
 - (U) Develop battery diagnostics and charge technology that will reduce maintenance and extend the service life of the batteries.
- (U) (\$400) D-Day Mobile Fuel Distribution:
 - (U) Develop and demonstrate light weight, high strength, collapsible, fluid containers and rapid fluid transfer mechanisms to provide the capability for expeditious ship-to-shore movement of fuel and other liquids during the initial stages of an amphibious assault.
- (U) (\$500) Water Mitigators for Ordnance Facilities:
 - (U) Complete design criteria for water mitigators in ordnance facilities.
- (U) (\$650) Low Cost RF Power Measurement Devices:
 - (U) Produce RF power measurements devices to achieve improved affordability by reducing initial acquisition cost, reducing logistics manpower, minimizing life-cycle cost of power measurement equipment, improving maintenance techniques and processes, and reducing personnel injury/material damage.
- (U) (\$1,708) Collaborative Infrastructure Assessment Tool:
 - (U) Develop technology to determine the applicability of artificial intelligence blackboard systems with multiple expert agents to assist human decision-makers in the preparation of plans, budgets, and facilities capabilities assessments to support present and projected CINC mobilization requirements.
- (U) (\$2,055) Electroset Desktop Manufacturing of Spare Parts:

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PROGRAM ELEMENT: 0603712N

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PROGRAM ELEMENT TITLE: Environmental Quality
& Logistics Advanced Technology

PROJECT TITLE: Logistics Engineering Advanced
Demonstration (LEAD)

- (U) Develop electroset technology with a desktop computer to inexpensively manufacture spare and replacement polymeric parts on demand at sea.
- (U) (\$2,000) Built-In Calibration (BIC) for Micro Electro Mechanical Systems (MEMS) Sensors:
 - (U) Develop and demonstrate BIC technology for MEMS sensors.
- (U) (\$850) Advanced Logistics Configuration Management System:
 - (U) Demonstrate advanced mission-specific and uniquely-tailored capabilities for cost effective, real-time capture and display of 3D space configuration for use in design, alteration, modernization and logistics.
- (U) (\$1,850) Advanced Shipboard Crane Technology:
 - (U) Develop technology to enhance ship-mounted crane control technology in order to increase crane performance capabilities in higher sea states and reduce overall life cycle costs.
- (U) (\$1,300) Autonomous Marine Booster Pump:
 - (U) Develop technology for a reliable, automated pressure boosting mechanism to permit the ship-to-shore transfer of bulk liquids from extended stand-off distances during the assault phase of an amphibious operation.
- (U) (\$1,100) Seabased Logistics Modeling & Simulation:
 - (U) Develop a sea-based logistics technology assessment tool with intelligence.
- (U) (\$1,400) Submersible Cache:

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PROGRAM ELEMENT: 0603712N

PROJECT NUMBER: R1910

PROGRAM ELEMENT TITLE: Environmental Quality & Logistics Advanced Technology
PROJECT TITLE: Logistics Engineering Advanced Demonstration (LEAD)

- (U) Develop a near shore submersible fuel and dry cargo cache to provide immediate moveable logistics facility, extend range of Sea Base transporters, and provide uninterrupted supply for troops ashore.

B. (U) PROGRAM CHANGE SUMMARY: See total program change summary for P.E.

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not applicable.

(U) RELATED RDT&E:

(U) PE 0601153N (Defense Research Sciences)

(U) PE 0602233N (Human Systems Technology)

(U) PE 0602234N (Materials, Electronics, and Computer Technology)

(U) PE 0603792N (Advanced Technology Transition)

D. (U) SCHEDULE PROFILE: Not applicable.

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PROGRAM ELEMENT: 0603712N

PROGRAM ELEMENT TITLE: Environmental Quality & Logistics Advanced Technology

(U) COST (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1998 ACTUAL	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	FY 2004 ESTIMATE	FY 2005 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
R2206 Environmental Requirements Advanced Technology (ERAT)	3,160	4,254	5,222	4,698	6,209	6,353	6,506	6,662	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project develops enabling technologies to support vital and integral Joint Mission Areas, specifically in Support & Infrastructure and Readiness for environmental protection. Science and Technology (S&T) investment in environmental technologies assures lowering operational costs, minimizing future adverse environmental impacts, enhancing deployment capabilities and attaining acceptable environmental standards in the production and use of platforms. Only by reducing or eliminating hazardous materials and those processes that generate hazardous by-products can the Department of Defense begin to lower overall compliance and cleanup costs. This project also addresses Defense Technology Area Plan (DTAP) concerns relating to restriction on peacetime Naval operations and the cost of complying with environmental protection laws. This project is essential to fulfilling the DTAP goals including: reducing the volume of shipboard and facility hazardous waste disposal by 50 percent by the year 2000; demonstrating advanced biological treatment of organic waste to reduce costs by 50 percent and accurately monitoring and predicting noise impacts on marine species by the year 2002; and eliminating all polluted waste water discharges from ships and exceeding Marine Pollution (MARPOL) criteria worldwide by the year 2005.

(U) This project supports near-term advances in support of the four Project Reliance environmental quality pillars: Pollution Prevention, Clean-up, Conservation, and Compliance. Primary focus will be on minimizing shipboard pollution, remediation of harbors and shore facilities, and improved methods of industrial waste treatment.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1998 ACCOMPLISHMENTS:

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PROGRAM ELEMENT: 0603712N

PROJECT NUMBER: R2206

PROGRAM ELEMENT TITLE: Environmental Quality &
Logistics Advanced Technology

PROJECT TITLE: Environmental Requirements
Advanced Technology

- (U) (\$700) Aerated Non-Oily Wastewater Membrane Treatment System Demonstration:
 - (U) Continued development of multi-national program for full scale pierside treatment demonstration of shipboard generated blackwater and graywater by advanced combined aeration and membrane technologies.
 - (U) (\$766) Marine Mammal Mitigation:
 - (U) Continued development of mitigation technologies for minimizing the impact of Navy acoustic operations on protected marine mammals and begin development of safety criteria for the impact of environmental sound on marine mammals.
 - (U) (\$962) Automated Underwater Hull Maintenance/Monitoring System:
 - (U) Continued development and integration of hull sensors, cleaning tools and toxic paint capture and treatment technologies to automated underwater vehicle.
 - (U) (\$732) Thermoacoustic Cooling:
 - (U) Continued development and demonstration of a three-ton capacity thermoacoustic refrigeration unit for shipboard application.
2. (U) FY 1999 PLAN:
- (U) (\$843) Aerated Non-Oily Wastewater Membrane Treatment System Demonstration:
 - (U) Demonstrate multi-national program for full scale pierside demonstration of shipboard generated blackwater and graywater by advanced combined aeration and membrane technologies.
 - (U) (\$735) Marine Mammal Mitigation:

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PROGRAM ELEMENT: 0603712N

PROJECT NUMBER: R2206

PROGRAM ELEMENT TITLE: Environmental Quality &
Logistics Advanced Technology

PROJECT TITLE: Environmental Requirements
Advanced Technology

- (U) Demonstrate mitigation technologies for minimizing impact of Navy acoustic operations on protected marine mammals and begin development of safety criteria for the impact of environmental sound on marine mammals.
 - (U) (\$843) Automated Underwater Hull Maintenance/Monitoring System:
 - (U) Continue development and integration of hull sensors, cleaning tools and toxic paint capture and treatment technologies to automated underwater vehicle.
 - (U) (\$1,105) Thermoacoustic Cooling:
 - (U) Demonstrate a three-ton capacity thermoacoustic refrigeration unit for shipboard application.
 - (U) (\$728) Innovative Coatings Husbandry Technologies:
 - (U) Demonstrate a new generation of minimally adhesive, toxicant free, self-cleaning hull coating technology.
3. (U) FY 2000 PLAN:
- (U) (\$500) Aerated Non-Oily Wastewater Membrane Treatment System Demonstration:
 - (U) Demonstrate multi-national program for full scale pierside demonstration of shipboard generated blackwater and graywater by advanced combined aeration and membrane technologies.
 - (U) (\$1,965) Marine Mammal Mitigation:
 - (U) Demonstrate mitigation technologies for minimizing impact of Navy acoustic operations on protected marine mammals and begin development of safety criteria for the impact of environmental sound on marine mammals.
 - (U) (\$880) Automated Underwater Hull Maintenance/Monitoring System:

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BUDGET ACTIVITY: 3 PROGRAM ELEMENT: 0603712N PROJECT NUMBER: R2206
PROGRAM ELEMENT TITLE: Environmental Quality & PROJECT TITLE: Environmental Requirements
Logistics Advanced Technology Advanced Technology

- (U) Continue development and integration of hull sensors, cleaning tools and toxic paint capture and treatment technologies to automated underwater vehicle.
- (U) (\$638) Thermoacoustic Cooling:
 - (U) Demonstrate a three-ton capacity thermoacoustic refrigeration unit for shipboard application.
- (U) (\$1,239) Innovative Coatings Husbandry Technologies:
 - (U) Demonstrate a new generation of minimally adhesive, toxicant free, self-cleaning hull coating technology.

B. (U) PROGRAM CHANGE SUMMARY: See total program change summary for P.E.

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not applicable.

(U) RELATED RDT&E:

- (U) PE 0601153N (Defense Research Sciences)
- (U) PE 0602121N (Surface Ship Technology)
- (U) PE 0602233N (Human Systems Technology)
- (U) PE 0602234N (Materials, Electronics, and Computer Technology)
- (U) PE 0603792N (Advanced Technology Transition)

D. (U) SCHEDULE PROFILE: Not applicable.

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BUDGET ACTIVITY: 3 PROGRAM ELEMENT: 0603712N
PROGRAM ELEMENT TITLE: Environmental Quality & Logistics Advanced Technology

(U) COST (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1998 ACTUAL	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	FY 2004 ESTIMATE	FY 2005 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
R2384 Visualization of Technical Information	1,899	98	74	0	0	0	0	0	0	2,071

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: Develop a cost-effective automated system to convert existing page-oriented (digital and paper) technical manuals into a revisable data base format. This technology is a component of the Computer Aided Acquisition and Logistic Support (CALS) program, which is a joint Department of Defense-Industry initiative for making cost-effective use of computer technology and interoperability.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1998 ACCOMPLISHMENTS: (Congressional Plus-up)

- (U) (1,899) Developed recognition and decomposition techniques to analyze and categorize technical information contained in Navy technical manuals in order that it may be used to populate the Interactive Electronic Technical Manual data base in accordance with the Content Data Model (CDM) specified in Military Specification MIL-D-87269.

2. (U) FY 1999 PLAN:

- (U) (98) Conduct a large scale demonstration of a cost-effective, production-capable prototype which can be transitioned to a production system to be used to convert an entire weapon system's suite of technical manuals.

3. (U) FY 2000 PLAN:

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Budget Item Justification
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FY 2000 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

Date: February 1999

BUDGET ACTIVITY: 3 PROGRAM ELEMENT: 0603712N PROJECT NUMBER: R2384
PROGRAM ELEMENT TITLE: Environmental Quality & PROJECT TITLE: Visualization of Technical
Logistics Advanced Technology Information

- (U) (74) Complete a large scale demonstration of a cost-effective, production-capable prototype which can be transitioned to a production system to be used to convert an entire weapon system's suite of technical manuals.
- B. (U) PROGRAM CHANGE SUMMARY: See total program change summary for P.E.
- C. (U) OTHER PROGRAM FUNDING SUMMARY: Not applicable.
- D. (U) SCHEDULE PROFILE: Not applicable.

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Budget Item Justification
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UNCLASSIFIED

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FY 2000 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

Date: February 1999

BUDGET ACTIVITY: 3

PROGRAM ELEMENT: 0603712N

PROJECT NUMBER: R2384

PROGRAM ELEMENT TITLE: Environmental Quality &
Logistics Advanced Technology

PROJECT TITLE: Visualization of Technical
Information

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Budget Item Justification
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