DEPARTMENT OF THE NAVY
FY 1997 BUDGET ESTIMATES

JUSTIFICATION OF ESTIMATES
MARCH 1996

DEFENSE BUSINESS OPERATIONS FUND

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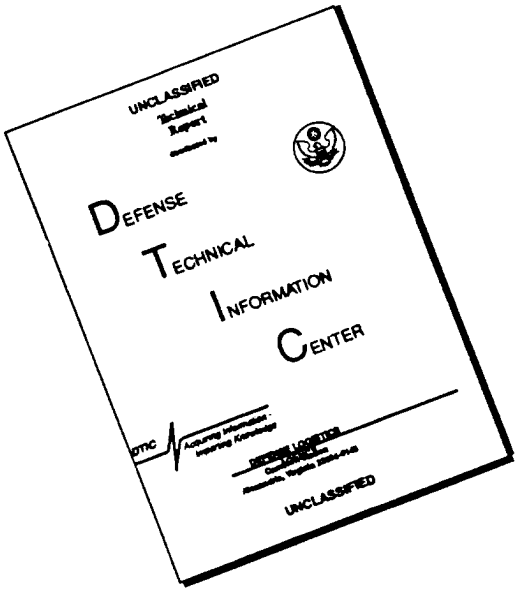

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Defense Business Operations Fund

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DEPARTMENT OF THE NAVY
DEFENSE BUSINESS OPERATIONS FUND
FY 1997 BUDGET ESTIMATES

The Department of the Navy (DON) has long operated a significant number of organic commercial and industrial facilities under revolving fund concepts to encourage these activities to function in a business-like and efficient manner and to provide the flexibility needed to manage these functions under changing workload conditions. The Department of the Navy comprises the largest military component of the Defense Business Operations Fund (DBOF), with over half of its civilian personnel employed in DBOF activities which currently operate within seven business areas of the DBOF. However, the Printing and Publications business area (Defense Printing Service) will be transferred to the Defense Logistics Agency (DLA) at the beginning of FY 1997.

The remaining Department of Navy DBOF activities are structured to execute assigned programs at reduced cost to the Department of Defense. As the result of Base Closure and other streamlining initiatives, industrial overhead and supply operating costs at DBOF activities decline by $936 million between FY 1995 and FY 1997. For the industrial business areas, which make up two thirds of the DON's volume of business in DBOF, this represents a ratio of overhead to direct cost of 27 percent in FY 1997. It should be noted that to achieve these efficiencies, a reduction of 8,474 civilian personnel will be required via a combination of early retirements, separation incentives, and when necessary, reductions in force. All costs for personnel reductions/relocations have been included in budget estimates.

A major factor in achieving better economies in DBOF operations has been the base closure process. Over this budget period, four of the eight shipyards and three of the six aviation depots cease their industrial missions. In addition, four of the ten supply centers close, several R&D activities are closed, restructured or consolidated and two public works centers downsize (one in preparation for closure, one for workload). The overall result of BRAC's II through IV is the elimination of inefficiencies associated with excess infrastructure; the DBOF budget submission reflects this improved cost profile.

Defense Management Review Decision 926 directed the transfer of Service managed consumable items to the Defense Logistics Agency (DLA). In compliance with this decision, the Department has transferred approximately 258,000 line items of consumable inventory since FY 1992. This is 98% of the original Phase I plan scheduled to be completed in FY 1996. Continuing the Phase II transfer would result in an additional 34,000 line items moving from Navy to DLA management by the close of FY 1997.

The DON DBOF budget reflects a concerted effort to limit funded carryover at the end of each year. It should be noted, however, that "carry-out orders" as reflected in the "source of revenue" exhibit are somewhat misleading in that the estimates include contractual liabilities for work or services being provided through commercial contracts. The contracts have been signed and much of the work may be completed, but delivery and billing to the DBOF activity has not yet occurred. Contractual liabilities included in carry-out orders are estimated to be $1.5 billion, or 31 percent of the total carry-out for FY 1997. Excluding contractual liabilities, carry-out orders in FY 1997 are at reasonable levels.

Where prudent, capital investment has been slightly increased in FY 1997 over the FY 1996 level. Capital investments equal a modest 1.5 percent of total business volume for FY 1997, and is considered the minimum level of investment to ensure mission capability and cost-effective operations. Capital investments in FY 1996 for Naval Shipyards and Naval Aviation Depots have been increased from the President's Budget, within the same Navy DBOF totals. Capital

investment for these depot activities was not at a sufficient level to support modernization and efficiencies desired by the Navy and assumed in the current budget submission.

Department of the Navy DBOF activities include:

Supply Operations: Consists of three business areas. The Supply Management business area performs inventory management functions for shipboard and aviation repairable and consumables. Distribution Depots provide management of overseas Fleet Industrial Supply Centers. Logistic Support Activities perform miscellaneous support functions for ashore and fleet commanders. The Distribution Depot business area merges with Supply Management in FY 1996 and Logistics Support Activities merges in FY 1997.

Depot Maintenance:

Shipyards: Consists of eight shipyards, four of which are in a closing status as a result of Base Realignment and Closure Decisions. Workload declines by 32 percent from FY 1995 to FY 1996 and by 13 percent from FY 1996 to FY 1997 while personnel staffing levels decline by 9,900 from FY 1995 to FY 1997.

Aviation Depots: Consists of six aviation depots, of which three are in a closing status. Workload declines by nearly 5 percent from FY 1995 to FY 1996 and by 14 percent from FY 1996 to FY 1997 while personnel staffing levels decline by nearly 3,300 over this same period.

Weapons Stations: Consists of five weapons stations. Current estimates for FY 1996 and FY 1997 include the cost of underutilized capacity, which was funded in FY 1995 by a direct subsidy from the Operations and Maintenance, Navy account.

Marine Corps Depots: Consists of one east coast and one west coast depot facility.

Transportation: Military Sealift Command (MSC) operates service unique vessels under DBOF as Naval Fleet Auxiliary Force (NFAF) vessels, Special Mission Ships (SMS), and Afloat Prepositioning Force (APF) ships. MSC manages these vessels from five area and three sub-area commands around the world.

Research and Development: Consists of four Warfare Centers and two stand-alone laboratories that perform a wide range of research, development, test, evaluation, and engineering support functions. Civilian personnel decline over eight percent from FY 1995 through FY 1997 consistent with the declining workload base.

Information Services: Consists of nine computer and telecommunications activities which provide regional automated information systems services and design support plus the Fleet Material Support Office which provides central design services for supply systems.

Base Support: Consists of ten Public Works Centers supporting operating forces and other activities throughout the world. Workload and civilian personnel decrease slightly from FY 1995 through FY 1997.

Defense Printing Service (DPS): DPS is a consolidated business area managing DoD worldwide printing, duplicating, and document automation production and procurement. DPS continues to decrease manpower as it right-sizes to core capacity of approximately 1875 civilians at 220 locations around the world. In FY 1997 DPS transfers to the Defense Logistics Agency (DLA).

Financial Profile:

Cost:

Total obligations for Supply functions and the cost of goods and services sold for industrial functions are as follows:

	(dollars in millions)		
	FY 1995	FY 1996	FY 1997
Supply - Supply Management	5,384.9	5,272.2	4,924.5
Supply - Distribution Depots	44.7	-	-
Supply - Logistics Support	251.5	100.0	-
Depot Maintenance - Ships	2,788.4	2,359.4	2,017.2
Depot Maintenance - Aircraft	1,140.8	2,114.7	1,447.1
Depot Maintenance - Ordnance	606.6	597.6	575.7
Depot Maintenance - Other	182.9	162.3	160.8
R&D - Air Warfare Center	2,810.2	2,494.4	2,361.8
R&D - Surface Warfare Center	2,414.1	2,594.9	2,588.8
R&D - Undersea Warfare Center	1,029.6	915.8	856.4
R&D - NCCOSC	1,300.8	1,156.1	1,060.3
R&D - Naval Research Laboratory	502.7	568.4	592.4
R&D - NFESC	49.3	51.4	52.5
Transportation	1,069.4	1,191.9	1,179.2
Information Services - NCTC	280.8	224.2	169.6
Information Services - FMSO	84.8	67.4	79.9
Defense Printing Service	402.1	400.0	-
Base Support	1,969.5	1,941.6	1,904.5
Totals	22,312.9	22,212.4	19.970.9

Net Operating Results:

Revenue, excluding surcharge collections, less the cost of goods and services sold to customers is as follows. The FY 1996 data includes $595.1 million in passthrough funding appropriated by Congress to alleviate prior year AOR losses at closing Shipyards and Aviation Depots.

	(dollars in millions)		
	FY 1995	FY 1996	FY 1997
Supply - Supply Management	264.7	-317.0	-69.4
Supply - Distribution Depots	0	-	-
Supply - Logistics Support	0	0	-
Depot Maintenance - Ships	121.9	453.4	30.8
Depot Maintenance - Aircraft	-17.7	169.3	-10.3
Depot Maintenance - Ordnance	-9.6	65.1	49.0
Depot Maintenance - Other	25.8	2.5	5.7
R&D - Air Warfare Center	-13.0	-10.6	15.8
R&D - Surface Warfare Center	72.8	67.1	-12.0
R&D - Undersea Warfare Center	14.2	15.9	-4.5
R&D - NCCOSC	4.5	5.9	.1
R&D - Naval Research Laboratory	7.6	-18.5	-17.7
R&D - NFESC	-.3	-1.5	-.1
Transportation	-9.0	46.3	-32.6
Information Services - NCTC	-4.0	0	-13.8
Information Services - FMSO	1.2	-2.0	-.9
Defense Printing Service	15.8	-6.3	-
Base Support	20.3	-17.7	-6.7
Totals	495.2	451.9	-66.6

Accumulated Operating Results:	(dollars in millions)		
	FY 1995	FY 1996	FY 1997
Supply - Supply Management	834.1	99.8	0
Supply - Distribution Depots	0	-	-
Supply - Logistics Support	0	0	-
Depot Maintenance - Ships	-632.2	-30.8	0
Depot Maintenance - Aircraft	-370.3	10.3	0
Depot Maintenance - Ordnance	-217.1	-49.0	0
Depot Maintenance - Other	-7.0	-4.4	0
R&D - Air Warfare Center	-5.2	-15.8	0
R&D - Surface Warfare Center	-55.1	11.9	0
R&D - Undersea Warfare Center	-11.4	4.5	0
R&D - NCCOSC	-6.1	-.1	0
R&D - Naval Research Laboratory	33.3	15.6	0
R&D - NFESC	1.6	.1	0
Transportation	-13.6	32.6	0
Information Services - NCTC	13.8	13.8	0
Information Services - FMSO	2.9	.9	0
Defense Printing Service	-21.4	-27.7	0
Base Support	26.9	8.2	0
Totals	-426.6	70.0	0

Workload:

Workload projections for Navy DBOF activities reflect the decline in Navy force structure and attendant support levels. The table below displays year to year percentage changes in direct labor hours, transportation ship days, and measured output printing for the industrial business areas. For the supply business area, workload changes are indicated by net sales.

	(percent change)	
	FY 1996	FY 1997
Supply Management	-3.8%	-5.6%
Depot Maintenance - Ships	-32.1%	-13.0%
Depot Maintenance - Aircraft	-4.1%	-13.8%
Depot Maintenance - Ordnance	9.7%	3.9%
Depot Maintenance - Other	-19.6%	-7.2%
Transportation (ship perdiem days)	6.2%	-2.0%
R&D - Air Warfare Center	-1.3%	1.3%
R&D - Surface Warfare Center	.4%	-3.5%
R&D - Undersea Warfare Center	-3.8%	-9.5%
R&D - NCCOSC	1.9%	-1.5%
R&D - Naval Research Laboratory	4.4%	-4.0%
R&D - NFESC	7.5%	7.9%
Info Services - NCTC	-3.4%	-2.9%
Info Services - FMSO	4.6%	2.1%
Defense Printing Service	9.2%	na
Base Support	2.2%	-5.8%

Customer Rate Changes

Composite rate changes previously approved from FY 1995 to FY 1996 and proposed rated changes from FY 1996 to FY 1997 designed to achieve an accumulated operating result of zero at the end of FY 1997 are as follows:

(percent change)

	FY 1996	FY 1997
Supply Management (wholesale)	-22.5%	8.6%
Depot Maintenance:		
Shipyards	0.0%	14.5%
Aircraft (composite)	-17.5%	11.3%
Ordnance	13.7%	-11.9%
Other (Marine Corps)	-10.2%	11.1%
Transportation:		
Fleet Auxiliary	3.6%	-7.5%
Special Mission	-.9%	-28.0%
Afloat Prepositioning Ships	17.8%	-4.0%
Research and Development:		
Naval Research Lab	1.6%	5.3%
Naval Facilities Engineering Service Center	3.5%	-6.5%
NCCOSC	2.4%	2.6%
Undersea Warfare Centers	5.9%	-.2%
Surface Warfare Centers	2.8%	-2.5%
Air Warfare Centers	1.2%	.1%
Information Services:		
NCTC	.5%	-7.3%
Fleet Material Support Office	.1%	19.0%
Printing Services	-6.8%	n/a
Base Support:		
East Coast - utilities	-3.0%	-2.0%
East Coast - other	-2.9%	2.5%
West Coast - utilities	-11.3%	2.2%
West Coast - other	1.0%	4.3%

Unit Costs:

Unit Cost is the method established in the DBOF to authorize and control costs. Unit cost goals allow activities to respond to work load changes in execution encouraging reduced costs when work load declines and allowing increased costs when additional services are requested by their customers.

Business Area	Unit Cost Goal	Unit Cost FY 1996	Unit cost FY 1997
Supply Management	Oblig/$ Whls Sale	.87	.75
	Oblig/$ Retail Sale	.99	1.00
	Other Outputs (OA, $ in millions):		
	Centrally Managed Programs	106.28	109.38
	Service Wide Transportation	85.96	81.81
	Real Property Maintenance	14.24	16.62
	Pubs Mngt/Reactor Parts	1.88	1.90

	Milpers (LSA)		7.22
	Environmental		1.61
	Support to Others		12.37
Logistics Support Activity	(OA, $ in millions):		
	Environmental Funding	1.63	na
	RPM Reserve	1.93	na
	MILPERS	7.42	na
	G&A Support to Others	7.91	
Depot Maint-Ships	$ per Direct Labor Hour	75.83	82.34
Depot Maint-Aircraft	$ per Direct Labor Hour	126.90	113.11
Depot Maint-Ordnance	$ per Direct Labor Hour	95.14	88.23
Depot Maint-Other	$ per Direct Labor Hour	70.33	75.08
Base Support	PY Cost PWC Services	various	various
R&D			
Air Warfare Center	$ per Direct Labor Hour*	80.04	75.95
Surface Warfare Center	$ per Direct Labor Hour*	60.71	61.69
Undersea Warfare Ctr	$ per Direct Labor Hour*	71.66	74.54
NCCOSC	$ per Direct Labor Hour*	74.02	75.82
Naval Research Lab	$ per Direct Labor Hour*	76.92	82.91
NFESC	$ per Direct Labor Hour*	76.59	73.11
	* includes direct labor plus all overhead costs		
Information Services			
NCTC	$ per Direct Labor Hour*	52.27	52.74
FMSO	$ per Direct Labor Hour*	45.58	51.19
	* includes direct labor plus all overhead costs		
Printing Services	Overall Cost Per Production Unit	various	na
Transportation	NFAF cost per day $	45,623	43,424
	SMS cost per day $	24,290	28,823
	APF cost per day $	68,138	70,882

Staffing:

Total personnel (both civilian and military) employed at Navy DBOF activities are as follows:

	(strength in thousands)		
Civilian End Strength	FY 1995	FY 1996	FY 1997
Supply - Supply Management	5.8	7.1	6.7
Supply - Distribution Depots	1.3	-	-
Supply - Logistics Support	2.1	.1	-
Depot Maintenance - Ships	32.4	25.8	22.5
Depot Maintenance - Aircraft	15.0	13.0	11.9
Depot Maintenance - Ordnance	4.7	5.2	5.1
Depot Maintenance - Other	2.1	1.9	1.7
R&D - Air Warfare Center	17.6	16.5	15.8
R&D - Surface Warfare Center	18.4	17.9	17.1
R&D - Undersea Warfare Center	6.1	5.6	5.0

R&D - NCCOSC	5.3	5.3	5.2
R&D - Naval Research Laboratory	3.4	3.5	3.4
R&D - NFESC	.3	.3	.3
Transportation	4.5	4.8	4.8
Information Services - NCTC	1.2	1.3	1.2
Information Services - FMSO	.9	.9	.9
Defense Printing Service	2.1	2.1	-
Base Support	14.5	14.4	13.4
Totals	137.6	125.6	115.0

Civilian Workyears	FY 1995	FY 1996	FY 1997
Supply - Supply Management	6.3	7.1	6.6
Supply - Distribution Depots	1.2	-	-
Supply - Logistics Support	2.3	.1	-
Depot Maintenance - Ships	38.5	27.4	23.2
Depot Maintenance - Aircraft	15.7	14.2	11.9
Depot Maintenance - Ordnance	5.2	5.4	5.2
Depot Maintenance - Other	2.0	1.9	1.7
R&D - Air Warfare Center	17.7	16.9	15.9
R&D - Surface Warfare Center	18.7	18.4	17.6
R&D - Undersea Warfare Center	6.3	5.8	5.3
R&D - NCCOSC	5.2	5.3	5.2
R&D - Naval Research Laboratory	3.4	3.5	3.4
R&D - NFESC	.3	.3	.3
Transportation	6.0	5.0	5.1
Information Services - NCTC	1.3	1.2	1.2
Information Services - FMSO	.9	.9	.9
Defense Printing Service	2.3	2.2	-
Base Support	14.2	14.5	13.5
Totals	147.4	130.0	116.9

Military Personnel End Strength	FY 1995	FY 1996	FY 1997
Supply - Supply Management	.1	.4	.5
Supply - Distribution Depots	.0	.0	.0
Supply - Logistics Support	.5	.2	.0
Depot Maintenance - Ships	.4	.3	.2
Depot Maintenance - Aircraft	.2	.1	.1
Depot Maintenance - Ordnance	.8	.8	.7
Depot Maintenance - Other	.0	.0	.0
R&D - Air Warfare Center	1.6	.3	.4
R&D - Surface Warfare Center	.4	.4	.4
R&D - Undersea Warfare Center	.2	.1	.1
R&D - NCCOSC	.1	.1	.1
R&D - Naval Research Laboratory	.1	.1	.1
R&D - NFESC	.0	.0	.0
Transportation	1.0	1.2	1.2
Information Services - NCTC	.1	.1	.1
Information Services - FMSO	.0	.0	.0
Defense Printing Service	.0	.0	.0
Base Support	.1	.1	.1
Totals	5.7	4.1	4.0

Military Workyears	FY 1995	FY 1996	FY 1997
Supply - Supply Management	.1	.4	.5
Supply - Distribution Depots	.0	.0	.0
Supply - Logistics Support	.5	.2	.0
Depot Maintenance - Ships	.6	.3	.3
Depot Maintenance - Aircraft	.2	.2	.1
Depot Maintenance - Ordnance	.4	.9	.8
Depot Maintenance - Other	.0	.0	.0
R&D - Air Warfare Center	.5	.3	.3
R&D - Surface Warfare Center	.4	.4	.4
R&D - Undersea Warfare Center	.2	.1	.1
R&D - NCCOSC	.1	.1	.1
R&D - Naval Research Laboratory	.1	.1	.1
R&D - NFESC	.0	.0	.0
Transportation	1.0	1.2	1.2
Information Services - NCTC	.1	.1	.0
Information Services - FMSO	.0	.0	.0
Defense Printing Service	.0	.0	.0
Base Support	.1	.1	.1
Totals	4.4	4.3	4.1

Capital Budget:

The FY 1997 request includes $35.7 million for Reliability, Maintainability and Supportability (RM&S) Modifications to weapons systems to increase their reliability and thereby reduce maintenance costs. These investments will be financed from Operations and Maintenance, Defense Agencies in FY 1997. The following table depicts capital investment levels for the Navy DBOF business areas:

	(dollars in millions)		
	FY 1995	FY 1996	FY 1997
Supply - Supply Management	2.9	18.0	37.1
Supply - Distribution Depots	.5	-	-
Supply - Logistics Support	14.4	20.2	-
Depot Maintenance - Ships	29.6	43.3	76.8
Depot Maintenance - Aircraft	8.3	34.3	51.2
Depot Maintenance - Ordnance	11.8	11.9	9.8
Depot Maintenance - Other	3.1	4.2	9.5
R&D - Air Warfare Center	29.8	31.2	35.8
R&D - Surface Warfare Center	18.5	26.8	30.5
R&D - Undersea Warfare Center	17.3	20.7	22.2
R&D - NCCOSC	5.8	10.3	10.0
R&D - Naval Research Laboratory	11.6	14.0	13.7
R&D - NFESC	.3	.9	.7
Transportation	4.8	6.0	2.8
Information Services - NCTC	.6	-	.3
Information Services - FMSO	.5	.5	.5
Defense Printing Service	7.6	8.4	-
Base Support	19.3	15.2	18.2
Totals	186.7	265.8	319.1

The above capital investment program by major category is as follows:

Equipment (Non-ADPE/Telecom)	83.4	120.6	138.8
ADPE and Telecommunications Equipment	69.6	100.1	97.4
Software Development	13.6	13.9	11.6
Minor Construction	20.1	31.2	35.6
RM&S Mods	-	-	35.7
Totals	186.7	265.8	319.1

TOTAL DEPARTMENT OF THE NAVY DBOF
REVENUE AND EXPENSES
(Dollars in Millions)

	FY 1995	FY 1996	FY 1997
Revenue:			
Gross Sales	23,122.5	22,091.6	20,121.2
Operations			
Capital Surcharge	91.3	155.8	97.5
Depreciation except Maj Const	305.7	318.1	290.4
Major Construction Depreciation	0.0	0.0	0.0
Other Income	425.9	171.4	159.0
Refunds/Discounts	-10.9	0.0	0.0
Total Income	**23,934.5**	**22,736.9**	**20,668.1**
Expenses:			
Cost of Materiel Sold from Inventory	5,166.0	4,919.6	4,639.6
Negotiated Purchases from Customers			
Transportation	127.5	148.5	104.3
Salaries and Wages:			
Military Personnel	181.9	164.6	163.6
Civilian Personnel	7,943.7	7,337.6	6,729.8
Materials, Supplies and			
Parts used in Operations	2,479.7	2,373.1	2,167.5
Facility Repair Charge	775.1	804.6	776.8
Depreciation - Capital	305.7	318.1	290.4
Contracted Engineering Services	637.2	673.8	646.9
Lease Costs	262.2	437.1	431.2
Purchased Utilities	607.3	560.3	524.2
Purchased Communications	187.8	97.5	88.3
Equipment Maintenance	117.9	119.2	82.5
Fuel	137.2	149.7	150.0
Other Expenses (including change in WIP)	4,420.2	4,642.0	3,841.6
Total Expenses	**23,349.2**	**22,745.9**	**20,636.5**
Operating Result	585.3	-9.0	31.6
Less Capital Surchg Reservation	94.8	155.8	97.5
Plus Appropriations Affecting NOR/AOR		673.8	
Other Changes Affecting NOR/AOR	55.0	-12.4	-4.1
Net Result	545.4	496.6	-70.0
Prior Year AOR	-972.0	-426.6	70.0
Accumulated Operating Result	**-426.6**	**70.0**	**0.0**

TOTAL DEPARTMENT OF THE NAVY DBOF
SOURCE OF REVENUE
(Dollars in Millions)

	FY 1995	FY 1996	FY 1997
1. New Orders	24,149.7	21,894.7	19,651.9
a. Orders from DoD Components	19,154.0	17,475.9	15,872.8
Department of the Navy	16,693.1	15,173.7	14,173.9
Operations and Maintenance, Navy	9,625.9	8,372.9	8,136.2
Operations and Maintenance, Marine Corps	363.3	310.2	232.1
O&M, Navy Reserve	89.9	88.3	84.1
O&M, Marine Corps Reserve	6.2	4.7	4.7
Aircraft Procurement, Navy	1,275.7	1,410.1	1,168.4
Weapons Procurement, Navy	391.6	353.3	328.1
Shipbuilding & Conversion, Navy	701.8	738.1	532.3
Other Procurement, Navy	1,186.7	1,121.2	1,123.4
Procurement, Marine Corps	50.9	57.4	65.6
Family Housing, Navy and Marine Corps	368.7	292.5	279.3
Research, Development, Test & Eval, Navy	2,404.1	2,221.3	1,999.3
Military Construction, Navy	11.9	9.6	8.8
Other Navy Appropriations	172.5	158.1	144.0
Other Marine Corps Appropriations	43.9	36.2	67.6
Department of the Army	241.6	238.4	132.6
Army Operation & Maintenance Accounts	150.3	136.8	45.4
Army Res, Dev, Test & Eval Accounts	17.8	31.4	27.6
Army Procurement Accounts	15.9	25.5	22.1
Army Other	57.7	44.7	37.4
Department of the Air Force	328.7	365.1	271.6
Air Force Operation & Maintenance Accounts	143.8	141.1	78.7
Air Force Res, Dev, Test & Eval Accounts	49.4	108.9	97.4
Air Force Procurement Accounts	58.3	83.4	69.3
Air Force Other	77.2	31.6	26.2
DoD Appropriated Accounts	1,890.5	1,698.7	1,294.7
Base Closure and Realignment	656.1	593.2	203.9
Operation & Maintenance Accounts	633.2	534.4	518.9
Res, Dev, Test & Eval Accounts	244.3	361.9	380.0
Procurement Accounts	94.8	68.2	52.5
DoD Other	262.3	141.1	139.5
b. Orders from DBOF Business Areas	4,119.3	3,476.2	2,846.9
c. Total DoD	23,273.3	20,952.1	18,719.8
d. Other Orders	876.4	942.5	932.2
Other Federal Agencies	267.3	242.8	232.9
Foreign Military Sales	326.1	474.8	449.0
Non Federal Agencies	283.0	225.0	250.2
2. Carry-In Orders	7,118.2	7,378.3	6,168.2
3. Total Gross Orders (available funding)	31,267.9	29,273.0	25,820.1
4. Carry-Out Orders	7,378.3	6,168.2	4,840.3
Change in Backlog (carry-out less carry-in)	260.1	(1,210.1)	(1,327.9)
5. Total Gross Sales	23,889.6	23,104.8	20,979.8

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DEPARTMENT OF THE NAVY
DEFENSE BUSINESS OPERATIONS FUND
DEPOT MAINTENANCE - NAVAL SHIPYARDS

Activity Group Function:

Naval Shipyards provide logistic support for assigned ships and service craft; perform authorized work in connection with construction, overhaul, repair, alteration, drydocking and outfitting of ships and craft as assigned; perform design, manufacturing, refit and restoration, research, development and test work, and provide services and material to other activities and units as directed by competent authority.

Activity Group Composition:

There are eight naval shipyards operating under the Defense Business Operations Fund (DBOF). These activities and their locations are:

Charleston Naval Shipyard	Charleston, SC
Long Beach Naval Shipyard	Long Beach, CA
Mare Island Naval Shipyard	Vallejo, CA
Norfolk Naval Shipyard	Portsmouth, VA
Pearl Harbor Naval Shipyard	Pearl Harbor, HI
Philadelphia Naval Shipyard	Philadelphia, PA
Portsmouth Naval Shipyard	Kittery, ME
Puget Sound Naval Shipyard	Bremerton, WA

Overview for Naval Shipyards:

This budget is designed to segregate the costs of the continuing and closing yards so as to prevent the distortion of the ongoing efforts of the yards remaining open. The issues facing these yards are very different. The closing yards face the task of completing their remaining mission work as efficiently as possible, while at the same time phasing down toward closure. The continuing yards face the challenge of reducing the workforce in response to the further decline in the Navy maintenance program, while at the same time continuing a strong commitment to productivity improvement and cost efficiency.

The mission cease and operational closure dates for the four closing yards are:

	Mission Cease	Operational Closure
Mare Island	Apr 95	Apr 96
Charleston	Aug 95	Apr 96
Philadelphia	Sep 95	Sep 96
Long Beach	July 96	Sep 97

Mare Island, Charleston and Philadelphia missions ceased in FY 1995 and closure operations are funded by Base Realignment and Closure (BRAC) funds in FY 1996. All FY 1996 closing yard figures shown in this submission reflect only Long Beach operations , and Accumulated Operating Results (AOR) passthroughs of the three shipyards reaching operational closure in FY 1996.

Financial Profile:

	(Dollars in Millions) FY 1995	FY 1996	FY 1997
Total All Yards			
Cost of Goods Sold	$ 2,788.4	$ 2,359.4	$ 2,017.2
Net Operating Results (NOR)	121.9	453.4	30.8
Accumulated Operating Results (AOR)	(632.2)	(30.8)	0.0
Continuing Yards			
Cost of Goods Sold	$ 1,867.3	$ 2,096.2	$ 2,017.2
Net Operating Results (NOR)	326.4	94.6	30.8
Accumulated Operating Results (AOR)	(169.5)	(30.8)	0.0
Closing Yards			
Cost of Goods Sold	$ 921.1	$ 263.2	0
Net Operating Results (NOR)	(204.5)	(358.8)	0
Accumulated Operating Results (AOR)	(462.7)	0	0

For continuing shipyards the apparent increase in Cost of Goods Sold from FY 1995 to FY 1996 is due to a change in the recognition of revenue and cost of "work in process" by the Defense Finance and Accounting Service. The decrease from FY 1996 to FY 1997 is consistent with the reduction in workload and also reflects initiatives to improve work processes to increase performance and productivity. The Net Operating Result for FY 1997 reflects recovery of projected FY 1996 AOR.

For closing shipyards, the reduction from FY 1995 to FY 1996 in Cost of Goods Sold and Net Operating Results reflects mission cease at Mare Island, Charleston and Philadelphia in FY 1995. The three shipyards reach operational closure in FY 1996 and are funded with Base Realignment and Closure Funds until their operational closure dates. The budget reflects mission cease of Naval Shipyard Long Beach as a DBOF activity in FY 1996, with operational closure in FY 1997. The FY 1996 NOR shown above for closing activities includes $383.8 million in FY 1996 as a passthrough to alleviate prior year accumulated operating losses.

Workload: (Direct Labor Hours)	FY 1995	FY 1996	FY 1997
Total All Yards	45,829,805	31,115,160	24,497,304
Continuing Yards	30,139,172	28,567,968	24,497,304
Closing Yards	15,690,633	2,547,192	0

Direct labor hours reflect funded fleet maintenance requirements, reflect shipyard process improvements and the closure of four of eight shipyards over the budget period. Direct labor hours include 5,132,816 in FY 1995, 843,360 in FY 1996 and 0 in FY 1997 funded by the Base Realignment and Closure (BRAC) account.

Workload Indicators:	FY 1995	FY 1996	FY 1997
Regular Overhaul/Complex Overhaul/ Refueling Overhaul	6	5	5
Depot Modernization Period	1		
Other Starts: (Selected Restricted Availability, Extended Refit Period, Inactivation, Phased Maintenance Availability, Post Shakedown Availability)	42	43	47
TOTAL	49	48	52

Performance Indicators	FY 1996	FY 1997
Net Operating Result ($ millions)	453.4	30.8

The Net Operating Result is the principal indicator of current year financial performance as compared to the budget plan. The above includes $383.8 million in FY 1996 as a passthrough to alleviate prior year accumulated operating losses at closing shipyards. The FY 1997 estimate is the amount necessary to achieve zero accumulated operating result by the end of FY 1997.

Customer Rate Changes:	FY 1996	FY 1997
	0.0	14.5%

The FY 1997 rate change largely represents a costing policy change rather than a change in the cost of performing shipyard work. On a comparable basis, the total cost of performing a specific task will increase approximately 4.2 percent from FY 1996 to FY 1997. The increase exceeds the rate of inflation, primarily due to the inclusion of the AOR recovery factor in the rates.

Unit Costs:	FY 1995	FY 1996	FY 1997
Total All Yards	$ 76.72	$ 71.68	$ 82.34
Continuing Yards	$ 75.12	$ 73.38	$ 82.34
Closing Yards	$ 77.86	$ 52.66	-

The unit cost represents total costs per direct labor hour incurred by Naval Shipyards in the applicable fiscal year. The FY 1997 increase in cost per hour is primarily attributable to a costing policy change where all supervisors are considered to be overhead labor in FY 1997. The cost per hour at continuing yards would have increased approximately 1.5 percent over FY 1996 without the costing change.

Staffing:

	FY 1995	FY 1996	FY 1997
Total All Yards			
Civilian End Strength	32,369	25,767	22,543
Civilian Work Years	38,447	27,352	23,127
Military End Strength	496	253	231
Military Work Years	636	277	255
Continuing Yards			
Civilian End Strength	24,890	24,466	22,543
Civilian Work Years	26,108	25,217	23,127
Military End Strength	293	233	231
Military Work Years	379	257	255
Closing Yards			
Civilian End Strength	7,420	1,301	0
Civilian Work Years	12,339	2,135	0
Military End Strength	203	20	
Military Work Years	257	20	

Reductions in civilian end strength and work years reflect continued streamlining of shipyard processes and increased productivity along with overall Department of Defense downsizing efforts. The military personnel reduction from FY 1995 to FY 1996 at continuing shipyards is attributed to changing the service craft operations and maintenance responsibility from enlisted personnel to contract/civilian personnel. The reduction from FY 1996 to FY 1997 reflects the reduced workload.

	(Dollars in Millions)		
Headquarters Cost:	FY 1995	FY 1996	FY 1997
Cost of Management Headquarters	$ 11.8	$ 8.2	$ 7.5

Management Headquarters costs decrease slightly in line with the Department's overall downsizing efforts.

Capital Budget Authority:	FY 1995	FY 1996	FY 1997
Equipment-Non-ADPE/TELECOM	$ 15.8	$ 21.0	$ 26.1
ADPE/Telecommunications Equipment	13.0	17.9	18.8
Software Development	0.0	0.0	0.0
Minor Construction	.8	4.4	2.7
Reliability, Maintainability, and Support-ability Modifications	0.0	0.0	29.2
TOTAL	29.6	43.3	76.8

The FY 1997 capital budget request includes $29.2 million for Reliability, Maintainability, and Supportability (RM&S) Modifications to weapons systems to increase their reliability and thereby reduce maintenance costs. The increase in other equipment is critical to sustaining shipyard operations, improving productivity, meeting health, safety and environmental requirements and lowering production costs.

Economies and Efficiencies:

Continuous efforts are underway to improve and streamline work processes in order to accomplish the planned levels of performance and productivity. The budget reflects savings in FY 1997 of $92.0 million as a result of anticipated productivity and efficiency initiatives. Advanced Industrial Management (AIM) is a major productivity effort affecting most functional areas of the shipyard. It is an engineering process for industrial operations at naval shipyards and will improve performance by:

- Providing disciplined work planning, estimating and scheduling functions.
- Delivering simplified and complete work documents to the mechanic.
- Applying group and zone technology.
- Promoting data management and integration.
- Reshaping and downsizing the organizational structure to take advantage of the improved process.

To achieve these performance improvements, the AIM Program focuses on three major components:

- Process. The process standardizes planning and work procedures and the products produced by these procedures so they can be accessed and reused by all shipyards. The process also allows flexible packaging of work (by zone, trade skill, resource, system, etc.) to promote efficient resource management.

- Organization. The shipyard organizational and management structure has been changed to reflect the project orientation of the improved process.

- Information Technology. New automated tools are developed to support the portions of the process that cannot be satisfied with existing systems. All automated systems (new and old) are integrated to provide a single point of entry for each user, a common man-machine interface, and standard software that can be easily maintained.

DEPOT MAINTENANCE/NAVAL SHIPYARDS
REVENUE AND EXPENSES
(Dollars in Millions)

	FY 1995	FY 1996	FY 1997
Revenue:			
Gross Sales			
Operations	2,843.2	2,375.8	1,992.2
Capital Surcharge	28.1	29.6	30.4
Depreciation except Maj Const	65.3	53.2	55.8
Major Construction Depreciation	0.0	0.0	0.0
Other Income			
Total Income	2,936.6	2,458.6	2,078.4
Expenses:			
Cost of Materiel Sold from Inventory			
Negotiated Purchases from Customers			
Transportation	11.8	25.6	5.2
Salaries and Wages:			
Military Personnel	7.4	14.6	14.3
Civilian Personnel	2,126.5	1,572.5	1,343.5
Materials, Supplies and			
Parts used in Operations	322.2	237.5	218.8
Facility Repair Charge	64.9	62.6	56.9
Depreciation - Capital	65.3	53.2	55.8
Contracted Engineering Services	12.2	10.9	9.7
Lease Costs	12.5	7.6	6.9
Purchased Utilities	56.3	45.7	42.9
Purchased Communications	14.2	10.5	9.0
Equipment Maintenance	14.6	13.1	11.1
Fuel	5.7	4.7	4.1
Other Expenses (includes change in WIP)	74.9	300.9	239.0
Total Expenses	2,788.4	2,359.4	2,017.2
Operating Result	148.2	99.2	61.2
Less Capital Surchg Reservation	28.1	29.6	30.4
Plus Appropriations Affecting NOR/AOR		383.8	
Other Changes Affecting NOR/AOR	11.1	148.0	
Net Result	131.2	601.4	30.8
Prior Year AOR	(763.4)	(632.2)	(30.8)
Accumulated Operating Result	(632.2)	(30.8)	0.0

DEPOT MAINTENANCE - NAVAL SHIPYARDS
SOURCE OF REVENUE
(Dollars in Millions)

	FY 1995	FY 1996	FY 1997
1. New Orders	3,273.3	2,714.2	2,109.9
a. Orders from DoD Components	2,979.9	2,627.7	2,030.2
Department of the Navy	2,600.5	2,501.1	1,989.6
Operations and Maintenance, Navy	2,061.6	1,965.0	1,586.1
Operations and Maintenance, Marine Corps	0.7	0.4	0.3
O&M, Navy Reserve	1.8	2.2	1.5
O&M, Marine Corps Reserve	0.3	0.0	0.0
Aircraft Procurement, Navy	0.1	0.1	0.1
Weapons Procurement, Navy	0.8	1.1	2.0
Shipbuilding & Conversion, Navy	72.4	62.4	11.2
Other Procurement, Navy	337.0	373.6	294.9
Procurement, Marine Corps	0.0	0.0	0.0
Family Housing, Navy and Marine Corps	17.6	7.8	7.8
Research, Development, Test & Eval, Navy	57.7	51.0	49.0
Military Construction, Navy	3.2	1.5	1.5
Other Navy Appropriations	47.3	36.1	35.2
Other Marine Corps Appropriations	0.0	0.0	0.0
Department of the Army	0.7	0.1	0.1
Army Operation & Maintenance Accounts	0.1	0.0	0.0
Army Res, Dev, Test & Eval Accounts	0.0	0.0	0.0
Army Procurement Accounts	0.1	0.0	0.0
Army Other	0.5	0.1	0.1
Department of the Air Force	1.6	0.0	0.0
Air Force Operation & Maintenance Accounts	1.5	0.0	0.0
Air Force Res, Dev, Test & Eval Accounts	0.0	0.0	0.0
Air Force Procurement Accounts	0.0	0.0	0.0
Air Force Other	0.1	0.0	0.0
DoD Appropriated Accounts	377.2	126.5	40.5
Base Closure and Realignment	338.2	112.6	26.8
Operation & Maintenance Accounts	20.7	1.0	1.0
Res, Dev, Test & Eval Accounts	0.6	0.3	0.2
Procurement Accounts	3.1	0.2	0.2
DoD Other	14.7	12.5	12.3
b. Orders from DBOF Business Areas	235.1	77.1	71.0
c. Total DoD	3,215.0	2,704.8	2,101.2
d. Other Orders	58.2	9.5	8.7
Other Federal Agencies	10.1	1.7	1.5
Foreign Military Sales	38.7	0.7	0.5
Non Federal Agencies	9.4	7.1	6.7
2. Carry-In Orders	350.2	686.9	942.5
3. Total Gross Orders (available funding)	3,623.5	3,401.1	3,052.4
4. Carry-Out Orders	686.9	942.5	974.0
Change in Backlog (carry-out less carry-in)	336.7	255.6	31.5
5. Total Gross Sales	2,936.6	2,458.6	2,078.4

CHANGES IN THE COST OF OPERATIONS
DEPOT MAINTENANCE - NAVAL SHIPYARDS
($millions)

		Costs
FY 1995 Actual		3,501.3
FY 1996 President's Budget		2,442.0
Productivity Initiatives:		(56.7)
a. Streamlining	(49.8)	
b. Workload efficiencies	(3.2)	
c. Non-labor	(3.6)	
Program Changes:		(94.6)
a Workload		
Mandays of ship repair	(124.1)	
Mandays of alteration workload	(54.1)	
Mandays of SCN funded workload	1.0	
Mandays of NAVSEA funded work	(56.2)	
Restricted & Technical Availabilites	58.8	
Mandays of other miscellaneous work	10.6	
b Other Direct		
Labor	39.9	
Non-Labor	28.6	
c Other Overhead		
Labor	(0.1)	
Non-Labor	0.9	
Other Changes		68.6
a Depreciation Expense	(4.1)	
b Pricing Corrections	11.8	
c SIP/VERA/PCS	56.9	
d Accounting	0.5	
e All Other	3.5	
FY 1996 Current Estimate		2,359.4
Pricing Adjustments:		63.0
a Pay Raise		
Prior Year Annualization	15.49	
FY 1996 Raise	31.8	
b Stock Fund - Fuel	0.1	
c Stock Fund - Nonfuel	2.8	
d Purchases from other than IF	3.0	
e General Inflation	9.0	
f MiPay	0.0	
g Other	0.8	

Productivity Initiatives:		(92.0)
a. Streamlining	(92.0)	
Program Changes:		(302.3)
a Close Naval Shipyard Long Beach, CA	(263.2)	
b Workload		
Mandays of ship repair	(20.0)	
Mandays of alteration workload	(7.0)	
Mandays of SCN funded workload	(2.3)	
Mandays of NAVSEA funded work	11.2	
Restricted & Technical Availabilites	0.3	
Mandays of other miscellaneous work	(20.7)	
c Other Direct		
Labor	(0.6)	
Non-Labor		
Other Changes		(11.0)
a Depreciation Expense	2.8	
b SIP/RIF	(10.9)	
c WESTPAC Transfer	(2.9)	
FY 1997 Current Estimate		2,017.2

DEFENSE BUSINESS OPERATIONS FUND
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - NAVAL SHIPYARDS

MATERIAL INVENTORY DATA
(Dollars in Millions))
FISCAL YEAR 1995

			-------- Peacetime --------	
	Total	Mobilization	Operating	Other
Materiel Inventory BOP	310.7	0.0	310.7	0.0
BOP Reclassification Changes	0.0	0.0	0.0	0.0
Price Changes	0.0	0.0	0.0	0.0
Receipts from Commercial Sources	261.1	0.0	261.1	0.0
Negotiated Purchase from Customers	0.0	0.0	0.0	0.0
Gross Sales	327.9	0.0	327.9	0.0
Materiel Inventory Adjustments				
CAPITALIZATIONS + OR (-)	0.0	0.0	0.0	0.0
RETURNS TO SUPPLIERS (-)	0.0	0.0	0.0	0.0
TRANSFERS TO PROP. DISP.(-)	0.0	0.0	0.0	0.0
ISSUES/RECEIPTS WITHOUT REIMBURSEMENT + or (-)	0.0	0.0	0.0	0.0
OTHER (list)	0.0	0.0	0.0	0.0
TOTAL ADJUSTMENTS	0.0	0.0	0.0	0.0
Materiel Inventory EOP	243.9	0.0	243.9	0.0
ECONOMIC RETENTION (memo)	0.0			
POLICY RETENTION (memo)	0.0			
POTENTIAL EXCESS (memo)	0.0			
Materiel Inventory on Order EOP (memo)	61.0	0.0	61.0	0.0

DEFENSE BUSINESS OPERATIONS FUND
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - NAVAL SHIPYARDS

MATERIAL INVENTORY DATA
(Dollars in Millions))
FISCAL YEAR 1996

			-------- Peacetime --------	
	Total	Mobilization	Operating	Other
Materiel Inventory BOP	243.9	0.0	243.9	0.0
BOP Reclassification Changes	0.0	0.0	0.0	0.0
Price Changes	0.0	0.0	0.0	0.0
Receipts from Commercial Sources	139.3	0.0	139.3	0.0
Negotiated Purchase from Customers	0.0	0.0	0.0	0.0
Gross Sales	242.2	0.0	242.2	0.0
Materiel Inventory Adjustments				
CAPITALIZATIONS + OR (-)	0.0	0.0	0.0	0.0
RETURNS TO SUPPLIERS (-)	0.0	0.0	0.0	0.0
TRANSFERS TO PROP. DISP.(-)	0.0	0.0	0.0	0.0
ISSUES/RECEIPTS WITHOUT REIMBURSEMENT + or (-)	0.0	0.0	0.0	0.0
OTHER (list)	0.0	0.0	0.0	0.0
TOTAL ADJUSTMENTS	0.0	0.0	0.0	0.0
Materiel Inventory EOP	141.0	0.0	141.0	0.0
ECONOMIC RETENTION (memo)	0.0			
POLICY RETENTION (memo)	0.0			
POTENTIAL EXCESS (memo)	0.0			
Materiel Inventory on Order EOP (memo)	35.2	0.0	35.2	0.0

DEFENSE BUSINESS OPERATIONS FUND
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - NAVAL SHIPYARDS

MATERIAL INVENTORY DATA
(Dollars in Millions))
FISCAL YEAR 1997

			-------- Peacetime --------	
	Total	Mobilization	Operating	Other
Materiel Inventory BOP	140.9	0.0	140.9	0.0
BOP Reclassification Changes	0.0	0.0	0.0	0.0
Price Changes	0.0	0.0	0.0	0.0
Receipts from Commercial Sources	220.1	0.0	220.1	0.0
Negotiated Purchase from Customers	0.0	0.0	0.0	0.0
Gross Sales	222.9	0.0	222.9	0.0
Materiel Inventory Adjustments				
CAPITALIZATIONS + OR (-)	0.0	0.0	0.0	0.0
RETURNS TO SUPPLIERS (-)	0.0	0.0	0.0	0.0
TRANSFERS TO PROP. DISP.(-)	0.0	0.0	0.0	0.0
ISSUES/RECEIPTS WITHOUT REIMBURSEMENT + or (-)	0.0	0.0	0.0	0.0
OTHER (list)	0.0	0.0	0.0	0.0
TOTAL ADJUSTMENTS	0.0	0.0	0.0	0.0
Materiel Inventory EOP	138.1	0.0	138.1	0.0
ECONOMIC RETENTION (memo)	0.0			
POLICY RETENTION (memo)	0.0			
POTENTIAL EXCESS (memo)	0.0			
Materiel Inventory on Order EOP (memo)	34.5	0.0	34.5	0.0

FY 1997 Presidents Budget
Business Area Capital Investment Summary
Component: Department of the Navy
Business Area: Naval Shipyards
Date: March 27, 1996
($In Thousands)

LINE #	DESCRIPTION	FY 95		FY 96		FY 97	
		QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST
	NON ADP EQUIPMENT						
1	60 TON PORTAL CRANE-Portsmouth (Replacement)	1	5,050				
2	TURNMILL CENTER REPLACEMENT-Norfolk (Replacement)	1	960				
3	TRANSFORMER, PORTABLE, 20MVA-Puget Sound (Replacement)			1	850		
4	BRIDGE CRANE - STRUCTURAL SHOP-Pearl Harbor (Replacement)			2	648		
5	FY-97 EQUIPMENT DESIGN COSTS-Puget Sound (Replacement)			VAR	500		
6	CRANE, 60 TON PORTAL-Puget Sound (Replacement)					1	7,000
7	BLAST BOOTH FOR BLDG 285-Portsmouth (Replacement)					2	1,500
8	CRANE, 50 TON MOBILE HYDRAULIC-Puget Sound (Replacement)					2	1,500
9	CRANE, LOCOMOTIVE-Puget Sound (Replacement)					1	800
10	WEIDEMANN PUNCH PRESS-Norfolk (Replacement)					1	650
11	RETROFIT HORIZ. BORING MILL-Portsmouth (Replacement)					1	600
12	CRANE, BRIDGE, 10 TON, CAB, B76-Portsmouth (Replacement)					1	500
13	MISCELLANEOUS NON ADP< $500K (Replacement)			VAR	1,890	VAR	2,992
14	60 TON PORTAL CRANE-Portsmouth (Productivity)			1	5,001		
15	PAINT BOOTH WITH STATIONARY LIFT, BUILDING 1499-Norfolk (Productivity)			1	518		
16	REBUILD FLOOR TYPE HORIZ BORING MILL-Norfolk (Productivity)					1	3,000
17	MISCELLANEOUS NON ADP< $500K (Productivity)			VAR	1,737	VAR	1,245
18	CRANE CONTRACT SETTLEMENT-Puget Sound (New Mission)		3,608				
19	COLLATERAL SUPPORT EQUIP MCON P622-Puget Sound (New Mission)	VAR	2,782				
20	BORING MACHINE, HORIZONTAL, CNC-Puget Sound (New Mission)	1	1,830				
21	DRY DOCK 3 DEFUELING COMPLEX (WC 201095)-Portsmouth (New Mission)	1	915				

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FY 1997 Presidents Budget
Business Area Capital Investment Summary
Component: Department of the Navy
Business Area: Naval Shipyards
Date: March 27, 1996
($In Thousands)

LINE #	DESCRIPTION	FY 95		FY 96		FY 97	
		QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST
22	RADIOACTIVE LIQUID WASTE (P622)-Puget Sound (New Mission)			VAR	3,000		
23	RELOCATION, LONGBED, SHAFT LATHE-Portsmouth (New Mission)			1	600		
24	HIGH PRESSURE AIR COMPRESSORS-Pearl Harbor (New Mission)			1	600		
25	VORTEX FREEZE SEAL ENCLOSURE-Norfolk (New Mission)			1	200	2	400
26	FY-98 EQUIPMENT DESIGN COSTS-Puget Sound (New Mission)					VAR	1,993
27	60 TON BRIDGE CRANE FOR BLDG 129-Pearl Harbor (New Mission)					1	1,050
28	ONBOARD DISCHARGE TANKS (0DT'S) BLASTING EQUIPMENT-Norfolk (New Mission)					1	750
29	PIPE BENDER, SEMI-AUTOMATIC, 6" NPS-Norfolk (New Mission)					1	700
30	EMERGENCY RADIO COMMUNICATIONS SYSTEM-Norfolk (New Mission)					1	527
31	MISCELLANEOUS NON ADP< $500K (New Mission)	VAR	200	VAR	963	VAR	735
32	CLOSED LOOP HP WATER JET-Norfolk (Environmental)			2	2,756		
33	OILY WATER WASTE TREATMENT SYSTEM-Puget Sound (Environmental)			1	600		
34	MISCELLANEOUS NON ADP< $500K (Environmental)	VAR	445	VAR	1,127	VAR	170
	TOTAL NON ADP		15,790		20,990		26,112
	ADP/TELECOMMUNICATIONS						
35	AIM SYSTEM- (Computer Software)			1	5,000	1	3,000
36	DMRD-924 - HONEYWELL CONVERSION-Puget Sound (Computer Hardware)	1	11,540	1	6,910		
37	DEPOT MAINTENANCE STANDARD SYSTEM (JLSC)- (Computer Hardware)			VAR	3,176	VAR	12,570
38	RADIOLOGICAL CONTROLS COMPUTER (NF)-Norfolk (Computer Hardware)	1	365				

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FY 1997 Presidents Budget
Business Area Capital Investment Summary
Component: Department of the Navy
Business Area: Naval Shipyards
Date: March 27, 1996
($In Thousands)

LINE #	DESCRIPTION	FY 95		FY 96		FY 97	
		QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST
39	RADIOLOGICAL CONTROLS COMPUTER (PR)-Pearl Harbor (Computer Hardware)	1	365				
40	RADIOLOGICAL CONTROLS COMPUTER (PS)-Puget Sound (Computer Hardware)		365				
41	RADIOLOGICAL CONTROLS COMPUTER (PT)-Portsmouth (Computer Hardware)	1	365				
42	UPS SYSTEM FOR MAIN COMPUTER ROOM-Portsmouth (Computer Hardware)					1	500
43	SUN 2000 COMPUTER SYSTEM-Portsmouth (Computer Hardware)					1	290
44	SUN SERVER-Norfolk (Computer Hardware)						245
45	REPLACE SHIPYARD LAN SERVERS-Puget Sound (Computer Hardware)					VAR	200
46	TELESWITCHING EQUIPMENT-Norfolk (Telecommunications)			1	2,867		
47	TELEPHONE SWITCHING EQUIPMENT-Puget Sound (Telecommunications)					VAR	2,000
	TOTAL ADP/TELECOMMUNICATIONS		13,000		17,953		18,805
	SOFTWARE DEVELOPMENT		0		0		0
	MINOR CONSTRUCTION						
48	FY 96/97 CONSTRUCTION DESIGN COSTS-Puget Sound				434		
49	SANDBLASTING ENCLOSURE FOR SANDPIT-Pearl Harbor				300		
50	CRANE DIVSION CONSOLIDATION BLDG 58-Pearl Harbor				300		
51	CONSTRUCT OFFICE FOR CRANE ENGINEERING BLDG. 236-Norfolk				300		
52	COVERED STORAGE FOR SAND GRIT-Pearl Harbor				280		

FY 1997 Presidents Budget
Business Area Capital Investment Summary
Component: Department of the Navy
Business Area: Naval Shipyards
Date: March 27, 1996
($In Thousands)

LINE #	DESCRIPTION	FY 95		FY 96		FY 97	
		QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST
53	SECURITY LIGHTING IMPROVEMENTS IN CIA-Portsmouth				265		
54	RAD HEALTH RELOCATION, BLDG 1505-Norfolk				252		
55	CORRECT DISCREPANCIES B-883 STORAGE-Puget Sound				220		
56	MATERIAL CONTROL STATION DRY DOCK 5-Puget Sound				220		
57	MATERIAL CONTROL STATION PIER 6-Puget Sound				220		
58	FY 97/98 CONSTRUCTION DESIGN COSTS-Puget Sound						328
59	CONSTRUCT ADDITION FOR RLT DEWATERING BLDG 1475-Norfolk						300
60	INSTALL HAZARDOUS WASTE LINES TO B-871-Puget Sound						289
61	RELOCATE CRANE TRACK CONNECTION DD 1-Puget Sound						242
62	PROVIDE VEHICLE WASHDOWN AREA-Puget Sound						222
63	MODIFY BUILDING 311 FOR PURE WATER PRODUCTION-Portsmouth						200
64	MISCELLANEOUS MINOR CONSTRUCTION< $200K	VAR	800	VAR	1,602		1,125
	TOTAL MINOR CONSTRUCTION		800		4,393		2,706
	R&MS						
1	INTEGRATED CONDITION ASSESSMENT SYSTEM (ICAS)					34	17,647
2	ENGINEERING FOR REDUCED MAINTENANCE						11,515
	TOTAL RM&S						29,162
	GRAND TOTAL		29,590		43,336		76,785

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 3/TRANSFORMER, PORTABLE, 20MVA-Puget Sound (Replacement)			D. Activity Identification Naval Shipyard, Puget Sound					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Non ADP							1	775	775			
INSTALL COST									75			
TOTAL									850			

Narrative Justification:

This project will replace an existing portable 20 MVA transformer that is unreliable, and worn beyond economical refurbishment.

The Shipyard has two existing 4160V, 20 MVA transformers and a third under procurement. This project is to replace one of the existing units which is unreliable, and recently failed causing delay in hot operations tests on the Nimitz. Analysis of the transformer oil in the unit shows signs of overheating, meaning long term deterioration of insulation and eventual catastrophic failure. Additionally, the unit has poor voltage regulation from no load to full load, requiring that the voltage at the Shipyard's main substation be manually raised prior to starting certain tests. This creates potential for error, and is unsatisfactory. Three transformers are required for support of concurrent availability's on two CVN 68 Class aircraft carriers.

To ensure that the required substation is in place prior to the next occurrence of concurrent CVN 68 Class carrier availability, the procurement must be accomplished in 1996. Therefore, FY 96 CPP funding is critical.

920026

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 4/BRIDGE CRANE - STRUCTURAL SHOP-Pearl Harbor (Replacement)			D. Activity Identification Naval Shipyard, Pearl Harbor					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Non ADP							2	324	648			

Narrative Justification:

This project will replace the two 15 ton single hoist bridge cranes in the first bay of Bldg. 155 (Structural and Welding Shop) with cranes of the same capacity. The cranes operate in an indoor/outdoor environment, serving the outside plate storage yard through the final fabrication area in the building. The arrangement and features of the crane will be similar to that of the existing units, but will be of modern design, enhancing safety and reliability.

The existing cranes are aged and prone to frequent breakdowns. Repair parts are not readily available, and must often be custom made. The original manufacturer is no longer in business. Modernization overhaul is not cost effective. The cost of overhaul is projected to exceed the cost of purchasing new.

The cranes are well beyond economical repair. Repair parts are not longer available, cranes are repaired by temporary means. If the cranes do not get replaced, the shop will continue to experience production slowdowns due to crane breakdowns, which will increase cost to our customers. The loss of one crane would require that the "sister" crane serve both the plate yard and cutting area, along with the fabrication area. Loss of both cranes, which is frequent, precludes retrieval of plate from the plate yard, which is too small to be served by truck crane.

220027

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 5/FY-97 EQUIPMENT DESIGN COSTS-Puget Sound (Replacement)			D. Activity Identification Naval Shipyard, Puget Sound					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Non ADP							VAR		500			

Narrative Justification:

Advanced engineering support for various FY 97 CPP projects.

Proposed FY 97 Equipment Projects:

1. Truck, Haz Mat Emerg Response
2. Forklift, 15 Ton
3. Dust Collector
4. Cable Reeling Machine
5. Automated Material Cutting System
6. Crane Trolly, Bridge
7. Manlift, 60 Ton
8. Crane, 40 Ton Mobile
9. Forklift, 10 Ton
10. Crane, 110 Ton Mobile

Delay in funding this project will jeopardize the Shipyard's ability to obligate FY 97 projects within the fiscal year funded.

000078

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 6/CRANE, 60 TON PORTAL-Puget Sound (Replacement)			D. Activity Identification Naval Shipyard, Puget Sound					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Non ADP										1	7000	7000

Narrative Justification:

This project will replace an exiting portal crane which is worn such that maintenance and repair costs are excessive, and has insufficient capacity to support waterfront work.

Several of this Shipyard's portal cranes are not capable of making their maximum lift at the 90 foot centerline of the dry-docks. Currently, all but two 50 ton plus cranes are SPS cranes. SPS cranes are moved from job-to-job or are held in reserve at SPS work sites for pending lifts. This results in significant delays and lost production time. The Submarine Recycling Program has increased the number of heavy lifts required. The existing crane requires extensive structural, electrical and mechanical overhaul to allow use at rated capacity. However, the overhaul will extend its service life by only 5 years.

The new crane will provide a significant improvement to waterfront support by assuring the availability of modern, reliable equipment of adequate lift and reach capacity to meet present and projected workloads.

Delay in funding for this project will require continued use of the existing crane, with frequent costly repairs.

620029

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 7/BLAST BOOTH FOR BLDG. 285-Portsmouth (Replacement)			D. Activity Identification Naval Shipyard, Portsmouth					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Non ADP										2	750	1500

Narrative Justification:

Shop 71 currently has two large blast booths located in Bldg. 285, Sandblast Facility, to support blasting of large shipboard components. They are used to prepare various parts and components for painting that are associated with the refit and overhaul of naval vessels. The maintenance shop has evaluated the condition of the blast booths and dust collection systems. They have determined that the blast booths are worn beyond economical repair. The enclosures and operational systems have deteriorated to the point that continuous patching and parts replacement is the norm. The blast booth dust collection system does not meet Maine Dept. of Environmental Protection (DEP) regulations requiring that existing emission sources be controlled to a level of Best Practical Treatment (BPT). The DEP and PNS meeting minutes, dtd 3 Oct. 1991 and Best Practical Treatment (BPT) analysis for Portsmouth Naval Shipyard performed by ENSR both recommended replacement of this dust collection system. In order for the Blast Facility. to meet Portsmouth's minimum blasting requirements, it must have two large reliable blast booths in Bldg. 285. They will reduce downtime and require minimal maintenance to support blasting operations. The dust collection and make up air systems shall be designed to meet all environmental requirements to ensure clean air emissions to the environment are met. An economic analysis has not been prepared for this mandatory, Category "MG" replacement of a regulatory controlled hazardous material handling facility. The inherent life cycle economics of these blast booths and dust collection systems make this replacement the appropriate remedy to an existing deficiency

000030

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 8/CRANE, 50 TON MOBILE HYDRAULIC-Puget Sound (Replacement)			D. Activity Identification Naval Shipyard, Puget Sound					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Non ADP										2	1460	1460
INSTALL COST												40
TOTAL												1500

Narrative Justification:

This project provides replacement for two goose neck cruiser cranes (#4 and #17) which were 40 years old and recently surveyed as beyond repair.

This project will replace the "Osgood" cruiser cranes, used for propeller change out/repairs. The Shipyard is in dire need for cranes in the 50 to 55 ton range to support recycling and other Shipyard programs. Presently the Shipyard is renting a 55 ton and a 65 ton hydraulic boom mobile crane to support the projects.

Delay in funding will necessitate the continued long term rental of cranes to support the "known" and forecast Shipyard workload.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 9/CRANE, LOCOMOTIVE-Puget Sound (Replacement)			D. Activity Identification Naval Shipyard, Puget Sound					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Non ADP										1	800	800

Narrative Justification:

This project will provide a locomotive crane to replace an existing unit (USN-02489) that is 40 years old and worn beyond economical repair.

A Weight Handling Equipment (WHE) allowance was developed jointly by Naval Facility Engineering Command and the Shipyard. The requested crane is required to maintain minimum base capability represented by this allowance and is considered mandatory. Replacement is made on a one-for-one basis and is consistent with the established allowance. Management of Transportation, P-300, recommends replacement when equipment exceeds its projected life expectancy in years and/or miles.

The existing crane is 40 years old (13 years past its normal service life), and is worn beyond economical repair. To be serviceable within its capacity, the crane would require complete rebuild or replacement of the structural, mechanical and electrical components. This is not a viable option due to its age. Many replacement components are no longer available, which would require costly rework of existing components or special manufacture of new ones.

Delay in funding this project will necessitate the continued use of the existing locomotive crane, with associated delays each time the unit is down for repair.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 10/WEIDEMANN PUNCH PRESS-Norfolk (Replacement)				D. Activity Identification Naval Shipyard, Norfolk				
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Non ADP										1	640	640
INSTALL COST												10
TOTAL												650

Narrative Justification:

The machine shall have a capacity of 45 ton and be CNC controlled. It shall be capable of punching material up to 3/8" thick with an accuracy of .005". It shall handle sheets up to 72" x 60". It shall have 460 V, three phase electrical power.

Shop 17 fabricates strainer baskets and screens and miscellaneousother punching and burning operations to support nuclear and non-nuclear work. The existing machine breaks down frequently and is costly to repair. When the machine is down it takes numerous men instead of just one machine operator. Some operations take up to ten times longer to do manually. It is to costly to repair the old machine therefore we need to purchase the up-to-date machine.

The replacement of the 23 year old Weidematic is considered mandatory to support the shipyard mission for sheet metal repair

work. The existing machine breaks down frequently and is costly to repair.

000033

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 11/RETROFIT HORIZ. BORING MILL-Portsmouth (Replacement)			D. Activity Identification Naval Shipyard, Portsmouth					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Non ADP										1	600	600

Narrative Justification:

The 5 inch Horizontal Boring Mill, was manufactured in 1970. It's current configuration is limited in function and can not perform to its original design capability. The NC controller is inoperable and so technologically outdated that repair parts are unavailable. Repair would be impractical as this first generation controller would not be compatible with today's Computer Numerical Control (CNC) Network Systems. As such, the machine is operated strictly in a manual mode limiting the complexity of work that can be performed. Due to the excessive wear in the machine spindle and machine ways manual operation is performed at approximately 50% of the machines rated capacity. This situation limits metal removal rate, impacts surface finishes, and makes it extremely difficult to maintain tolerances. Only our most experienced machinists, who have learned techniques to compensate for a machine's deficiencies, can create a usable part. Since 1978, over 75 trouble calls have been addressed averaging approximately 5 per year. Problems include, but are limited to, oil leaks, transmission, electronics, lubrication, and hydraulic cooling. Each problem results in significant downtime and the cost of material and labor to repair. Several of these problems have created other problems. Oil leaks are responsible for housekeeping problems, safety concerns, and the cost of waste materials required to clean up. In addition, the chiller unit for cooling the hydraulics plants uses freon which is documented as environmentally unsafe. Maintenance problems are increasing which would lead an analyst to predict major component failure in the near future. An economic was not performed as this project is a Mandatory Replacement through rebuild.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 12/CRANE, BRIDGE, 10 TON, CAB, B76-Portsmouth (Replacement)			D. Activity Identification Naval Shipyard, Portsmouth					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Non ADP										1	500	500

Narrative Justification:

The Bridge Crane will be a 10 Ton, moderate service, cab controlled, with adjustable frequency controls, and designed to operate in a non-hazardous indoor environment on 460 VAC, 3-phase, 60-Hertz power.

The forging shops existing crane (USN 102-400116) is 55 years old and is the only means of handling the receiving, storage, and processing of mission support components directed through building 76. This crane supports our forging and heat-treating operations and services the structural shop lead storage and manufacturing area. Due to the age of this crane, we are experiencing significant delays caused by frequent maintenance requirements and slow replacement part availability's. Procurement of a new bridge crane will ensure continued support of the mission-essential operations in the Forge Shop and lead working area.

The bridge crane being replaced is 55 years old and is unreliable to support the forging and lead manufacturing operations located in building 76. Installation of this new crane will insure reliable crane service with adequate lifting capacity required to support the mission-essential operations.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 13/MISCELLANEOUS NON ADP< $500K (Replacement)			D. Activity Identification Naval Shipyard					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Non ADP							VAR		1,890	VAR		2,992

Narrative Justification:

000036

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996					
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 14/60 TON PORTAL CRANE-Portsmouth (Productivity)			D. Activity Identification Naval Shipyard, Portsmouth					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Non ADP							1	5001	5001			

Narrative Justification:

The replacement crane will be a 60 ton special purpose category one portal which will increase the flexibility of crane service, and improve present reach and capacity.

Dry Dock #2 is our primary overhaul area, and must be as efficient as possible. The existing 25 ton portal crane, PC-29, being replaced is not capable of making many of the required lifts due to its capacity and limited reach. PC-29 can not even reach the centerline of the dry dock. The single 60 ton crane in this area has conflicts with concurrent lift request. PC-29 is 37 years old and the maintenance cost are high.

If this project is not funded we will continue to operate inefficiently with cranes that are not properly configured for ALL our weight lifting requirements. The age and maintainability of the 25 ton crane will eventually be a factor if the replacement is delayed.

000037

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 15/PAINT BOOTH WITH STATIONARY LIFT, BUILDING 1499-Norfolk (Productivity)			D. Activity Identification Naval Shipyard, Norfolk					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Non ADP							1	518	518			

Narrative Justification:

Construction of one Dry Filter Paint Spray Booth within Building 1499 with a stationary 35 Ton Crane suspended from the roof.

The existing facility is made up of two large blast booths and one smaller paint booth. The paint booth is frequently tied up with items being blasted from the two blast booths as painting requires cure times and multiple paint coats. Current crane safety restrictions reduce the allowable weight capacities of items entering the paint booth. Additionally, items that are too large to fit through the door of the booth must be painted at an alternative location. The inability to paint large heavy items results in: cost increases for labor and transportation, costs associated with weather delays, rework associated with inadequate environmental controls, and cleanup costs at alternate sites.

A new larger paint booth with an increased crane capacity would: eliminate the need to paint items at alternate sites, eliminate rework due to transportation and weather, eliminate delays due to transportation, and allow painting to be completed in one operation.

The results of not having an adequate facility for painting have been documented to cause delays in over 1100 items per year. On the average, 6 items per year are over sized or over weight and must be painted at alternate sites. Rework, transportation, and cleanup all contribute to excessive cost increases. The resulting delays, cost overruns, and rework ultimately are passed on to the customer which in turn jeopardizes this activities ability to secure new work.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 16/REBUILD FLOOR TYPE HORIZ BORING MILL-Norfolk (Productivity)				D. Activity Identification Naval Shipyard, Norfolk				
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Non ADP										1	2980	2980
INSTALL COST												20
TOTAL												3000

Narrative Justification:

Rebuild the entire electrical system along with all electric motors, controls, hydraulics, and mechanical systems. The machine shall be a 4-axis floor type horizontal boring mill CNC-MDI, CRT display, with rotary table, right angle milling attachment, and slotting head. Equipment, tooling, training, shipping costs, and installation.

The existing floor type horizontal boring mill (181-037414) is past its normal service life and is obsolete. Frequent maintenance leads to many hours of downtime which is costly to the shipyard's production effort.

Rebuild the existing machine to a modern 4-axis floor type horizontal machining center, computer numerical control-manual data input (CNC-MDI) capable of multiple machining functions.

The existing controls are obsolete and can no longer be maintained. This machine has unique capability and is required to support US Navy ships for such items as weapons and aircraft elevator platforms, doors, rails, etc. It also has a large capacity rotary table which is the only way to ensure proper bore alignment on many parts such as large pumps and turbines, hatch covers, and weapons handling devices.

000039

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996					
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 17/MISCELLANEOUS NON ADP< $500K (Productivity)			D. Activity Identification Naval Shipyard					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Non ADP							VAR		1707	VAR		1,195
INSTALL COST									30			
TOTAL									1737			

Narrative Justification:

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 22/RADIOACTIVE LIQUID WASTE (P622)-Puget Sound (New Mission)			D. Activity Identification Naval Shipyard, Puget Sound					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Non ADP							VAR		3000			

Narrative Justification:

This project installs tanks, pumps, filters, demineralizers, etc. that make up the radioactive liquid waste (RLW) processing system. Once the components are in place, pipe, fittings, valves, and pipe hangers will be welded in place. Manpower to install and assemble the system will be provided by the Shipyard. The RLW system will be installed in the new CIRF (B-938) being constructed on MILCON P622. Components are being purchased under collateral equipment projects P062-92, P049-93, and P023-94.

The existing system is inadequate to process the quantities for RLW resulting from advanced carrier overhauls in conjunction with quantities generated by submarine and other ship overhauls. The new system must be operational before the existing system can be dismantled. Therefore, it will not be possible to use any of the existing components in the new system. Design, fabrication and installation of the new system will be accomplished by Shipyard forces.

Delay in funding will delay activation of MILCON P622.

000041

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 23/RELOCATION, LONGBED, SHAFT LATHE-Portsmouth (New Mission)			D. Activity Identification Naval Shipyard, Portsmouth					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Non ADP							1	600	600			

Narrative Justification:

This project consist of relocating a 1990 extra-heavy duty longbed manual shaft lathe from mare island naval shipyard to the Portsmouth Naval Shipyard. Nominal size is 60" diameter x 85 ' long. Lathe is equipped with milling machine attachment and power operated tailstock. The lathe shall be disassembled, shipped, and installed on a contractor furnished foundation. Navy identification number for the lathe is 221-065358.

Naval Shipyard Portsmouth has one premier shaft lathe (USN 165-310693) capable of doing all required work on SSN 688 class and similar size propulsion shafts. The shaft lathe was built in 1943 and rebuilt with computer numerical controls (CNC) in 1983. The potential workload for FY95 and subsequent years is as follows:

COMPONENT	QUANTITY	MACHINE TIME
SSN 688 Class Shaft	6	640 hrs/shaft
Trident Class Shaft	2 (4 pieces) 7	50 hrs/shaft
SSN 688 Composite Shaft	2	1322 hrs/shaft
SSN 688 Composite Prototype	1	660 hrs/shaft
Backlog (Assigned FY93 & 94)	8	640 hrs/shaft
Misc: (i.e. Rescue chamber transition rings),		200 hrs/yr

Based on history and the fleets needs, the predicted workload maximizes utilization of our current equipment. There is no margin for equipment failures or adequate time for preventive maintenance, without jeopardizing workload schedules. The relocation and installation of an existing shaft lathe will insure that Portsmouth meets all of it's current and predicted workloads and also the entire fleet's if necessary.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 24/HIGH PRESSURE AIR COMPRESSORS-Pearl Harbor (New Mission)			D. Activity Identification Naval Shipyard, Pearl Harbor					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Non ADP							1	600	600			

Narrative Justification:

Portable 5000 psi high pressure air compressors, capacity: 38 cfh/264 cfm.

Required for off-hull charging and high pressure air system/component testing of submarines and surface ships. Required equipment for all submarine availability's.

Our current fleet of compressors are all 20 years and older. Some are 30 and 40 years old. They are beyond economical repair. Repair parts are not stocked by the manufacturers and must be manufactured as the need arises and shipped to us. This results in extended down time and high repair costs.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 25/VORTEX FREEZE SEAL ENCLOSURE-Norfolk (New Mission)			D. Activity Identification Naval Shipyard, Norfolk					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Non ADP							1	200	200	2	400	400

Narrative Justification:

Vortex Freeze Seal Enclosure designed to deliver 300 SCFM dry air at 150 PSIG with an atmospheric dew point of -70 degrees. Enclosure shall include two compressors, two desiccant type dryers, a dew point meter, and other necessary mechanical and electrical equipment to make it operational. All equipment will be mounted in an 8' W X 8' H X 40' L conec box that is easily transported across public roads.

Freeze seal support of off-yard emergent F/S work requests is required. There is no compressed air available at NOB piers and other docking locations along the east coast and overseas. Assembly of a system (port. air compressors, air receiver, air dryers, and other equipment) is required each time a F/S job is performed off-yard. Manhours are expended to gather, prepare, transport, assemble, operate, and disassemble the equipment.

Propose to fabricate self-contained portable freeze seal enclosure of required system components capable of providing reliable dry compressed air service for off-yard emergent F/S work requests.

The need for the units will exist as early as April 1996. Delay of the project will cost the Nuclear Regional Maintenance Department (NRMD) substantially in terms of logistics and economically. The proposed enclosures were specifically mentioned by NRMD as a solution to prior problems encountered during pilot repair of valves on SSN 714. The anticipated annual savings associated with the F/S enclosures if $4,160 per work request (65) or $270,400 per year.

000044

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 26/FY-98 EQUIPMENT DESIGN COSTS-Puget Sound (New Mission)			D. Activity Identification Naval Shipyard, Puget Sound					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Non ADP										VAR		1993

Narrative Justification:

Advanced engineering support for various FY 98 CPP projects.

The Shipyard has been advised verbally by NAVSEA (Ed Masters) that, beginning in FY 96, engineering costs for CPP projects must be charged to CPP. This project is required for advanced engineering support for the FY 98 Program, and is essential to the effort to obligate FY 98 CPP funds within that fiscal year.

The project amount should be 10% of the anticipated FY 98 Program total.

Delay in funding this project will jeopardize the Shipyard's ability to obligate FY 98 projects within the fiscal year funded.

000045

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996					
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 27/60 TON BRIDGE CRANE FOR BLDG. 129-Pearl Harbor (New Mission)			D. Activity Identification Naval Shipyard, Pearl Harbor					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Non ADP										1	1000	1000
INSTALL COST												50
TOTAL												1050

Narrative Justification:

This project replaces the antiquated 1918 bridge crane with a new unit having the design capabilities and features to support conversion of the building into a consolidated nuclear support equipment facility.

The existing crane is over age and prone to frequent malfunction. Repair parts are not available, and must be custom made. The manufacturer is no longer in business. Modernization overhaul is not practical or cost effective. The existing crane does not have the capacity (60 tons) to fully support the intended use of the facility.

Bldg. 129's new mission as a nuclear equipment support facility requires its bridge crane to have a 60 ton capacity. The existing aged crane has a capacity of only 40 tons. The loss of crane service to the building would require Special Purpose Service truck cranes be used. However this alternative is not always feasible since the truck cranes require much floor space to maneuver, and certain critical equipment or operations may be too heavy for current truck cranes. There is therefore, a total reliance on the bridge crane for very heavy objects (above 25 tons).

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 28/ONBOARD DISCHARGE TANKS (0DT'S) BLASTING EQUIPMENT-Norfolk (New Mission)				D. Activity Identification Naval Shipyard, Norfolk				
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Non ADP										1	750	750

Narrative Justification:

Upgrade existing blasting system by adding additional equipment and making required changes to provide the capability of operating effectively with a minimum of 60 foot of vertical lift and 170 foot of horizontal run including a grit reclamation system with in line cleaning, dust collector and High Efficiency Particulate Air (HEPA) Filter.

Naval Sea Systems Command Detachment (PERA CV) has assigned Norfolk Naval Shipyard the task of refurbishing radiological contaminated Onboard Discharge Tanks (OTD'S) as part of the CVN Incremental Maintenance Plan (IMP). Our present equipment will not support this operation. The proposed equipment will accomplish the work and will be in compliance with NAVSEA 098-026-1000 revision 344 and MR: Number 17-M-R-2 nuclear requirements.

Norfolk Naval Shipyard has a Mandatory Requirement from Naval Sea Systems Command Detachment (PERA CV) as part of the CVN Planned Incremental Maintenance (IMP) the Onboard Discharge Tanks shall be refurbished. The equipment specify in this project is essential for accomplishing this work. Without this equipment Norfolk Naval Shipyard will be unable to perform this assigned task.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 29/PIPE BENDER, SEMI-AUTOMATIC, 6" NPS-Norfolk (New Mission)			D. Activity Identification Naval Shipyard, Norfolk					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Non ADP INSTALL COST TOTAL										1	695	695 5 700

Narrative Justification:

Proposed semi-automatic pipe bender capacity: bends 3" (schedule 40) - 6" (schedule 120) NPS pipe; is arranged for clockwise & counterclockwise rotation with max. 12" radius; has carriage to position pipe with multi-bend configurations, hydraulic mandrel extractor, heavy duty mandrel lubricator clamp & pressure die holders; & auto-slide lubricator. Hydraulics, valves, piping, & cylinders to perform complete bending operations are self contained in machine base; unit powered with one 20 HP motor. Must bend copper, copper-nickel, carbon & stainless steel pipe.

In the next six years, mix of work at Norfolk Naval Shipyard will require Shop 56 to bend a much greater quantity of large diameter pipe (3"-6" NPS) than it has in the past. Examples of large diameter pipe bending jobs scheduled in the future include: (1) Fuel oil piping (6" NPS) on LPD and LPG class ships, (2) sea water piping (4" and 6" NPS) on LHA class ships, and (3) fire main piping on all classes on non-nuclear surface craft. Large diameter pipe spools require very precise bending and fabrication equipment in order to accomplish accurate shipboard fit up. Existing bender (NID 181-042130) is nearing the end of its useful service life and is unable to meet quality, precision tolerances required. A new 6" semi-automatic bender must be procured in order to accomplish the demands of workload currently assigned and projected in the future. New bender will ensure large diameter production bends will be in accordance with applicable tech requirements of Industrial Process Instruction 0056-454.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 30/EMERGENCY RADIO COMMUNICATIONS SYSTEM-Norfolk (New Mission)				D. Activity Identification Naval Shipyard, Norfolk				
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Non ADP										1	460	460
INSTALL COST												67
TOTAL												527

Narrative Justification:

The Emergency Radio Communications System shall include secure two-way radio communications capability from field locations (mobile and portable units) to base units located in the shipyard and controlled from a central unit in the ECC. The system will provide trunked radio communications capability using five repeater nodes within the shipyard and will be interoperable with the other communications systems at Norfolk Naval Shipyard (security, fire department, medical, production, etc.) and the Norfolk Naval Base.

NAVSEA S9211-05-MMA-000/(C) mandates the existence of the Norfolk Naval Shipyard emergency response organization and establishes the functional requirements, including radio communications capability. Radio communications equipment must be compatible with communications systems in use throughout the shipyard. The existing system was purchased in the 1970's and has not been upgraded since. Replacement parts can no longer be obtained because of the age of the unit. Equipment failure could lead to a major loss of radio communications, which is unacceptable for an emergency radio communications system. Accordingly, the system is considered obsolete and needs to be replaced

This project will have a significant impact on the efficiency of operational processes in the Emergency Control Center. Our frequency allocation in the VHF band has become severely restricted over the years due to widespread use of this frequency band by other commands in the geographical area. To resolve this dilemma, trunked radio technology will be used to dynamically allocate the radio frequencies that are available just for the duration of the conversation, increasing the bandwidth available and increasing the reliability of data being transferred.

000049

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 31/MISCELLANEOUS NON ADP< $500K (New Mission)			D. Activity Identification Naval Shipyard					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Non ADP				VAR		90	VAR		963	VAR		735

Narrative Justification:

000030

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996					
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 32/CLOSED LOOP HP WATER JET-Norfolk (Environmental)			D. Activity Identification Naval Shipyard, Norfolk					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Non ADP							2	1378	2756			

Narrative Justification:

A complete Closed Loop Ultra High Pressure Water Jet System ,consists of the following subsystems: mobile recovery unit manipulator, transporter, pump, and end effector. The intent is to provide Norfolk Naval Shipyard a more economical and environmental safe method of removing paint and rust. Presently coal slag abrasives are propelled by air to remove the paint and rust. This creates work stoppages for other crafts, and requires removal of large amounts of waste abrasives and paint to be disposed of. With the new water jet equipment the removal rates exceed the conventional abrasive blasting method. The residual paint debris and water is capture and separated into 55 gallon drums. This eliminates costly containment's and cleanup process. This project is justified by cost savings expected over the present method. Acquisition of 2 units will allow Norfolk Naval Shipyard to blast outer hull surfaces of submarines and surface ships with 100% capture of blasting debris at the nozzle. Use of these units will eliminate $1.3 million per year in blast media, cleanup, and containment.

000051

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 33/OILY WATER WASTE TREATMENT SYSTEM-Puget Sound (Environmental)			D. Activity Identification Naval Shipyard, Puget Sound					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Non ADP							1	575	575			
INSTALL COST									25			
TOTAL									600			

Narrative Justification:

This project will replace use of YSR's (Donuts), and reduce the Shipyard's hazardous waste stream by removing oily solids, free and emulsified oil, and heavy metals from oily water (e.g., bilge water) for separate disposal.

The Shipyard is aggressively pursuing total compliance with all current environmental regulations. Per CNO directive, all naval shipyards are to, as soon as possible, discontinue the use of YSR's (Donuts) for the processing of oily water from shipboard tanks and bilge's. The oily water treatment system will replace the YSR's at a ratio of one to three. The potential for a Cease and Desist Order prohibiting YSR use remains high. If their use is prohibited, overhaul schedule delays are a certainty. Oily water transport and treatment, which is not now a "critical path" item, would become one. The oily water would be transferred to portable tanks and transported to storage or treatment facilities for treatment or eventual disposal as hazardous waste.

Delay of this project could result in a Cease and Desist Order prohibiting use of YSR's. Potential also exists for civil and criminal charges against Shipyard management officials. ___

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 34/MISCELLANEOUS NON ADP< $500K (Environmental)			D. Activity Identification Naval Shipyard					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Non ADP				VAR		445	VAR		1127	VAR		170

Narrative Justification:

000053

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996					
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 35/AIM SYSTEM- (Computer Software)			D. Activity Identification Naval Shipyard,					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP							1	5000	5000	1		3000

Narrative Justification:

The Naval Shipyard Development and Integration Test Site (NSYDITS) provides management and systems maintenance support for the Navy's Advanced Industrial Management (AIM) initiative. The initial implementation of AIM, called Baseline AIM (BAIM), is in use in all Naval Shipyards. Funds are necessary for enhancements to existing BAIM software and the purchase of equipment to significantly increase storage capacity and processing for Navy BAIM acceptable system performance. Enhancements involved development, test and implementation of enhanced functionality in existing software. Interfacing BAIM with existing industrial management and fleet systems involves evaluating existing software and developing and installing interfaces between those systems and BAIM. Hardware purchases are necessary to provide storage for the growing volume of archived planning, scheduling and work packages and to increase processor capacity to support performance improvements. Failure to fund software development will result in the project management tools needed to realize maintenance savings not being provided to the shipyards and the fleet. Failure to fund hardware purchase will result in inadequate system performance and inability to retain shipyard work instructions, and records for reuse on future projects (a fundamental concept of AIM) and unacceptable system response time.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 36/DMRD-924 - HONEYWELL CONVERSION-Puget Sound (Computer Hardware)			D. Activity Identification Naval Shipyard, Puget Sound					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP				1		11540	1	6910	6910			

Narrative Justification:

Computer system - open system environment

This is a GSA mandated project, authorized by OSD and NAVSEA, to accomplish the following:

- - Migrate from vendor dependent sole source and other proprietary environments to a standards based open system environment (OSE).
- - Reduce the cost of Shipyard IT environment.
- - Position shipyards to more efficiently and effectively support organizational restructuring and downsizing.
- - Achieve standardized automated system(s) supporting core ship overhaul business processes and information systems.
- - Provide integrated ADP solutions; focus ADP on support of direct mission related business process and organization improvements.

Delay in funding of this project will delay achievement of the goals stated in the project justification.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 37/DEPOT MAINTENANCE STANDARD SYSTEM (JLSC)- (Computer Hardware)			D. Activity Identification Naval Shipyard,					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP				VAR		6700	VAR		3176	VAR		12,570

Narrative Justification:

JLSC FY95 funding was not obligated in FY95. Carryover from FY95 of 6.7 million for JLSC is authorized and will be obligated in FY96.

These funds were transferred to Navy as a result of Program Budget Division 401 (PBD 401), transfer of capital authority from the Joint Logistics Systems Center (JLSC) to NAVSEA. These funds are specifically earmarked for acquisition of hardware for the naval shipyards to support the roll-out of Depot Maintenance standard automated information systems. The Depot Maintenance standard automated information systems are managed by the JLSC, the DOD designated Corporate Information Management (CIM) agent for depot level logistics systems. The depot standard systems include Depot Maintenance Management Information System - Repairables (DMMIS-R), Baseline Advanced Industrial Management - Project Management (BAIM-PM), Laboratory Information Management System (LIMS), Hazardous Substance Management System (HSMS-formerly Hazardous Material Management System (HMMS), Facilities and Equipment Management (FEM), Tool Inventory Management Application (TIMA), Interservice Material Accounting and Control Systems (IMACS), Executive Information System (EIS), and the full, integrated Depot Maintenance Standard System (DMSS). These systems will be rolled out of all depot level activities in all Services over the next three years. The FY 95 funding was specifically earmarked for initial roll-out of the depot standard systems to the Norfolk Naval Shipyard, the designated NAVSEA Initial Operating Site (IOS) for receiving these systems. The FY 96-97 funding supports roll-out to the remainder of the naval shipyards.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 42/UPS SYSTEM FOR MAIN COMPUTER ROOM-Portsmouth (Computer Hardware)				D. Activity Identification Naval Shipyard, Portsmouth				
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP										1	500	500

Narrative Justification:

An Uninterrupted Power Supply (UPS) system is required to support the main computer room. It will support the Honeywell, replacement servers and handle all current and future networking systems. The UPS system shall protect the computer systems from electrical spikes or power loss.

000057

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 43/SUN 2000 COMPUTER SYSTEM-Portsmouth (Computer Hardware)			D. Activity Identification Naval Shipyard, Portsmouth					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP										1	290	290

Narrative Justification:

The Sun 2000 is mandated to replace the existing Honeywell computer system and the Sun 690. NAVSEA is mandating that the Honeywell will be disposed of by 30 Sept 1996.

000058

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 44/SUN SERVER-Norfolk (Computer Hardware)			D. Activity Identification Naval Shipyard, Norfolk					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP												245

Narrative Justification:

It is proposed that NEPD purchase a SUN System large server with Oracle Database and other software support sufficient to meet the Nuclear Integrated Information Management System (NIIMS) functional requirements for unclassified applications. The server will be connected to the Shipyard Classified Local Area Network (SYCLAN). The acquisition strategy will be to purchase from requirements contracts that meet the stated characteristics, otherwise purchased from GSA schedules or competitively bid on the open market. Maintaining the status quo will seriously hamper the duties of +600 full time personnel across the Nuclear community. There is no benefit to this alternative.

000059

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 45/REPLACE SHIPYARD LAN SERVERS-Puget Sound (Computer Hardware)			D. Activity Identification Naval Shipyard, Puget Sound					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP										VAR		200

Narrative Justification:

This project provides replacement for a portion of the Shipyard LAN Servers, which are under sized and obsolete.

This project is required to fund replacement of Shipyard LAN Servers which are under sized and obsolete.

Delay or reduction of funding will require continued use of application/LAN servers which are sized too small for effective support of the current load requirement.

000020

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 46/TELESWITCHING EQUIPMENT-Norfolk (Telecommunications)			D. Activity Identification Naval Shipyard, Norfolk					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP							1	2867	2867			

Narrative Justification:

Procurement of switch(es) for the shipyard and St. Juliens Creek Annex

Shipyard telephone system are leased from the Bell Atlantic Telephone Company. The existing contract will expire on 30 March 1996. CNO directed that all DON users remove all customers premise equipment prior to the expiration date.

The proposed solution is to procure a Digital switch(es) telecommunication service for the shipyard and St. Juliens Creek Annex.

Shipyard will be without telephone service after lease expiration date of March 1996.

000061

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 47/TELEPHONE SWITCHING EQUIPMENT-Puget Sound (Telecommunications)			D. Activity Identification Naval Shipyard, Puget Sound					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP										VAR		2000

Narrative Justification:

The purpose of this project is to purchase telephone switching equipment for the Shipyard central exchange, thereby eliminating dependence on leased equipment.

This is a mandatory project for the Shipyard to eliminate dependency on leased telephone equipment, as directed by NAVSEA.

Delay in the funding of this project will necessitate continued dependence on equipment leased from US West Communications.

000062

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 48/FY 96/97 CONSTRUCTION DESIGN COSTS-Puget Sound			D. Activity Identification Naval Shipyard, Puget Sound					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction									434			

Narrative Justification:

This project will fund design efforts for FY 96 programmed projects. Based on 12% of FY 96 budget.

The Shipyard has been advised verbally by NAVSEA that engineering costs for CPP projects must be charged to CPP. This project is required for FY 96 engineering costs and advanced engineering support for the FY 97 program. This is essential to obligate FY 96 CPP funds within that fiscal year.

PROPOSED FY96 CPP CONSTRUCTION PROJECTS:

1. Install Steam Vent And Muffler,2. Upgrade Electrical Services B-513, 3. Provide 440v, 3ph Power B-58, 4. Install Tank Level Indicator At B-871, 5. Correct Discrepancies B-883 Storage, 6. Enclose North Breezeway, 7. Material Control Station Pier 6, 8. Material Control Station Dry Dock 5, 9. Install Electrical Services Quay Wall

PROPOSED FY97 CPP CONSTRUCTION PROJECTS

1. Provide Truck Containment/Sump, 2. Extend Portal Crane Rails DD6, 3. Provide Vehicle Washdown Area, 4. Install New Track West End, 5. Install 10 Motor Operated Valves DD6, 6. Install 15 Motor Operated Valves DD5, 7. Install 13 Motor Operated Valves DD4, 8. Install 8 Motor Operated Valves DD3, 9. Install 12 Motor Operated Valves DD1, 10. Install 8 Motor Operated Valves SP Caisson, 11. Provide Hazardous Waste Storage Area, 12. Install Security Lights/Poles CIA Fence.

Failure to fund this project will jeopardize the Shipyard's ability to obligate FY 96/97 projects within the fiscal years funded.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 49/SANDBLASTING ENCLOSURE FOR SANDPIT-Pearl Harbor			D. Activity Identification Naval Shipyard, Pearl Harbor					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction									300			

Narrative Justification:

Project will provide a containment enclosure for sandblasting operations at Bldg. 1420. The enclosure will enable the sandblasters to contain dust and spent grit. It will also facilitate cleanup.

Open air sandblasting violates Hawaii State air pollution laws for visible fugitive dust emissions. The present sandblasting area is uncovered and exposed to rain. Large quantities of spent grit cover the ground at the Bldg. 1420 facility. Rainwater runoff coming in contact with the spent grit may leach out contaminants an release the contaminants to the Harbor and the ground which is a violation of the Storm Water Pollution Control laws and the Clean Water Act.

Temporary measures in place to contain painting operations will not satisfy state environmental requirements for the long term. This project is required for the shipyard to be in compliance with environmental requirements and will prevent action and penalties against the shipyard.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 50/CRANE DIVISION CONSOLIDATION BLDG. 58-Pearl Harbor			D. Activity Identification Naval Shipyard, Pearl Harbor					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction									300			

Narrative Justification:

This project will provide office space for the consolidation of the Crane Division.

The Crane Division is presently scattered over 6 locations. This project will help to consolidate their operations into 2 locations, Bldg. 1670 and Bldg. 58.

If this project is not executed the Crane Division consolidation cannot be implemented and efficiencies cannot be realized.

000065

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 51/CONSTRUCT OFFICE FOR CRANE ENGINEERING BLDG. 236-Norfolk			D. Activity Identification Naval Shipyard, Norfolk					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction									300			

Narrative Justification:

Construct offices for crane engineering.

With the increased emphasis on engineering in the Crane program, additional resources were assigned to the Crane Division and collocated in leased relocatable trailers. This project will allow the lease to be terminated and the Crane engineers to be relocated in Bldg. 236 with the Crane Division.

000066

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 52/COVERED STORAGE FOR SAND GRIT-Pearl Harbor				D. Activity Identification Naval Shipyard, Pearl Harbor				
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction									280			

Narrative Justification:

This project will provide a covered facility to store new sand grit. New grit is bagged in poly and burlap bags and exposure to the sun and elements causes the bags to deteriorate and burst.

Bags damaged by exposure to the sun create a dust nuisance in present storage areas. Exposure to the elements also causes the new grit to become wet or moist, which decreases the efficiency of the sandblasting operations.

If this project is not executed, the shipyard will continue to have insufficient storage capabilities for new sandblast grit. Most of the bags are stored outside exposed to sun and rain. Deteriorated bags break and cause a dust problem to the nearby elementary school and creates an environmental and health problem.

000067

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 53/SECURITY LIGHTING IMPROVEMENTS IN CIA-Portsmouth			D. Activity Identification Naval Shipyard, Portsmouth					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction									265			

Narrative Justification:

This project will increase and improve the security lighting for all CIA boundaries, both land and sea.

The existing lighting is unsatisfactory in that it does not provide adequate illumination and does not cover all required areas. These deficiencies are identified for correction in the NAVSEA Security Audit of May 1990.

f this project is not funded this year the security lighting deficiencies will continue as outstanding audit items.

000088

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 54/RAD HEALTH RELOCATION, BLDG. 1505-Norfolk				D. Activity Identification Naval Shipyard, Norfolk				
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction									252			

Narrative Justification:

Installation of a radiation health lab, Bldg. 1505. This project will provide for the installation of all required radiation lab test equipment into Bldg. 1505. It includes work stations, laser readers, scanners, ovens and furnaces, multi-channel analyzers, amplifiers, gamma counters and other environmentally sensitive equipment. This space will include a health physics lab, a certification lab, and support office. The project will provide 10,050 sf of environmentally controlled space which will allow the lab test equipment to function properly.

The mission of this shipyard is the overhaul, conversion, repair, and outfitting of all classes of all surface ships and submarines. The Radiation Health Division administers the Health Physics Program, the Environmental Surveillance Program (including samples and testing), and personnel internal monitoring for radioactivity. Also, the Division must provide Radiation Safety Certification for personnel who work under the Shipyard's Radiological Support Program (RASP), and maintain the capability to respond to the unique demands of radiological emergencies. An adequate radiation health laboratory is required to effectively meet the mission of this shipyard in support of nuclear work.

000069

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 55/CORRECT DISCREPANCIES B-883 STORAGE-Puget Sound			D. Activity Identification Naval Shipyard, Puget Sound					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction									220			

Narrative Justification:

This project provides a replacement for the inadequate facilities currently storing radiological material generated outside the naval nuclear propulsion program.

The current facility is inadequate. Material is being handled, sorted and stored in this unheated facility. The facility has a deteriorating fiberglass roof, no berm to trap contaminated liquid spills, and insufficient fire protection system. Material sorting operations have overflowed to a shed area partially open to weather. Occasionally, excess materials have inappropriately been stored in B-25 containers. The volume of material is steadily increasing due to added assigned tasks and inactivation of ships. New requirements have increased the required storage time.

Delay in funding could result in termination of the building's functions, due to radiological safety considerations causing cutoff of the flow of electronic gear from inactivation's and a backup of radiological material to be relocated throughout the Shipyard. In case of fire, mechanical damage, major storm or natural disaster, it is possible that radioactive contamination would spread to Puget Sound.

020070

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 56/MATERIAL CONTROL STATION DRY DOCK 5-Puget Sound				D. Activity Identification Naval Shipyard, Puget Sound				
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction									220			

Narrative Justification:

This project constructs a covered and secure Material Control Station at Dry Dock 5. Its function is to store project material and equipment at the project site until used/installed.

The Shipyard does not have adequate shipping/storage facilities at Dry Docks and Piers for Nuclear/Non-Nuclear material for waterfront projects. This results in damaged or lost material. Will reduce clutter and congestion of laydown areas around the pier and dry docks. Material will be effectively protected from the weather, easily retrieved, and protected from pilferage.

Task team recommendation was to provide covered/secured MCS at Dry Dock 5 which the Shipyard committed to the Naval Reactors Representative. These are commitment projects to NAVSEA 08.

000071

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 57/MATERIAL CONTROL STATION PIER 6-Puget Sound				D. Activity Identification Naval Shipyard, Puget Sound				
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction									220			

Narrative Justification:

This project constructs a covered and secured Material Control Station at Pier 6. Its function is to store project material and equipment at the project site until used.

The Shipyard does not have adequate shipping/storage facilities at Dry Docks and Piers for Nuclear/Non-Nuclear material for waterfront projects. This results in damaged or lost material. Will reduce clutter and congestion of laydown areas around the pier and dry docks. Material will be effectively protected from the weather, easily retrieved, and protected from pilferage.

Task team recommendation was to provide covered/secured MCS at Pier 6 which the Shipyard committed to the Naval Reactors Representative. These are commitment projects to NAVSEA 08.

240000

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 58/FY 97/98 CONSTRUCTION DESIGN COSTS-Puget Sound			D. Activity Identification Naval Shipyard, Puget Sound					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction												328

Narrative Justification:

This project will fund design efforts for FY 97 programmed projects.

The Shipyard has been advised verbally by NAVSEA that engineering costs for CPP projects must be charged to CPP. This project is required for FY97 engineering costs, and is essential to obligate FY97 CPP funds within that fiscal year.

Delay in funding this project will jeopardize the Shipyard's ability to obligate FY97 projects within the fiscal year funded.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 59/CONSTRUCT ADDITION FOR RLT DEWATERING BLDG. 1475-Norfolk				D. Activity Identification Naval Shipyard, Norfolk				
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST		Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction												500

Narrative Justification:

Constructs an addition for RLT dewatering, Bldg. 1475.

To construct an addition, meeting all requirements of N/S 389-0288 for a radiological work area, to support dewatering of RLT tanks at Bldg. 1475.

000074

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 60/INSTALL HAZARDOUS WASTE LINES TO B-871-Puget Sound			D. Activity Identification Naval Shipyard, Puget Sound					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction												289

Narrative Justification:

This project installs hazardous waste piping from B-857 photo etch process to B-871.

Currently, portable tanks are being utilized. Hard piping will decrease the potential for spills and decrease disposal costs.

Delay in funding will necessitate the continued use of portable tanks for hazardous waste.

000275

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996					
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 61/RELOCATE CRANE TRACK CONNECTION DD 1-Puget Sound			D. Activity Identification Naval Shipyard, Puget Sound					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction												242

Narrative Justification:

This project will correct restructured use of connecting crane trackage between Dry Dock 1 and Dry Dock 2.

This area has been working under restrictions for several years.

Delay in funding will perpetuate restricted crane operations between Drydock 1 and Drydock 2.

920000

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996					
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 62/PROVIDE VEHICLE WASHDOWN AREA-Puget Sound			D. Activity Identification Naval Shipyard, Puget Sound					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction												222

Narrative Justification:

This project provides a vehicle washdown area for large heavy transportation equipment.

Currently, cleaning is being done in an existing parking area. This obstructs traffic flow and other activities. Also generates uncontrolled run-off from the cleaning operations creating an unsafe environmental situation.

Often times, the shops vehicle operators and mechanics are injured because they are working in and around the soiled and muddy equipment.

Vehicle washdown operations as they are today will probably be shut down because of environmental and safety issues. Production will decrease and injuries will continue to occur.

220000

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 63/MODIFY BUILDING 311 FOR PURE WATER PRODUCTION-Portsmouth			D. Activity Identification Naval Shipyard, Portsmouth					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction												200

Narrative Justification:

This project will modify building 311 to install pure water production equipment.

Pure water production is a critical shipyard function. This project will allow relocation of pure water production equipment out of building 277 into building 311. Building 277 is beyond economical repair and has serious asbestos and lead paint contamination. It is poorly suited for pure water production because cleanliness standards are very hard to maintain. It is scheduled for demolition as soon as the pure water equipment is relocated. All other functions performed in this building have been discontinued.

This project will remove inefficiencies and impediments to pure water production.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 PRESIDENT'S BUDGET, MARCH 1996								
B. Component/Business Area/Date DON/NAVAL SHIPYARDS/				C. Line. No & Description 64/MISCELLANEOUS MINOR CONSTRUCTION< $200K				D. Activity Identification Naval Shipyard				
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction						800			1602			1125

Narrative Justification:

000679

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)	A. Budget Submission FY 1997 President's Budget

B. Component/Business Area/Date	C. Line No. & Item Description	D. Activity Identification
Department of the Navy Depot Maintenance-Shipyards/March 1996	RM&S-#1 Non-ADP Equipment > $100,000 Integrated Condition Assessment System (ICAS)	Naval Shipyards

	FY 1995			FY 1996			FY 1997					
Element of Cost				Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
Communication Networking Support System							34		17,647			

Narrative Justification:

Purpose/Use: To provide a computer-based, condition assessment and logistics delivery system designed to provide maintenance planning and equipment health monitoring. This system, called the Integrated Condition Assessment System (ICAS), will be installed on 201 ships to monitor the condition of shipboard weapon systems and equipment. Status Quo: Currently, maintenance planning is conducted more on a maintenance schedule basis instead of a basis of need. Paper engineering logs are used, whereas with ICAS, this function will be more digital since the condition of the system will be monitored electronically. Alternative/Justification: ICAS will be highly correlated to predicting future functional failures. This will reduce the cost of maintenance material and labor (both shipboard and shore facilities), will reduce the generation of work requests, will reduce corrective maintenance, and will introduce the use of electronic technical manuals.

000063

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 President's Budget					
B. Component/Business Area/Date Department of the Navy Depot Maintenance-Shipyards/March 1996	C. Line No. & Item Description RM&S-#3 N0n-ADP Equipment > $100,000 Engineering for Reduced Maintenance						D. Activity Identification Naval Shipyards					
	FY 1995			FY 1996			FY 1997					
Element of Cost				Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
Engineering for Reduced Maintenance									11,515			

Narrative Justification:

Purpose/Use: Provides improvements to the reliability of preservation and corrosion control systems. This will provide existing state-of-the-art surface preparation tools, microblasters, shrouded needle guns, and preservation compounds designed to reduce maintenance and manpower costs. The new system will be applied to all interior spaces, exterior structures, habitability spaces, machinery spaces, and underwater bodies of most ships. Status Quo: Current preservation techniques last an average of seven years. Approximately 25% of a Fleet's maintenance expense goes, to some degree, towards this problem. Alternative/Justification: The project reduces very manpower intensive maintenance efforts. Savings are calculated on the difference between the life of current preservation techniques and materials (sever years) versus the 20 years for the new system.

Department of the Navy - Defense Business Operations Fund
Depot Maintenance/Naval Shipyards
CAPITAL BUDGET EXECUTION
FY 1996
($In Thousands)

NON ADP EQUIPMENT

FY	PROJECT TITLE	ORIGINAL REQUEST	CHANGE	REVISED REQUEST	EXPLANATION
96	60 Ton Portal Crane	6.300		5.001	Decrease in project scope
96	Miscellaneous	1.800	4.079	5.717	Increase in project scopes
96	Bridge Crane Struct. Shop			.648	Emergent FY 96 requirement
96	Paint Booth w/ Station. Lift			.518	Emergent FY 96 requirement
96	Radioactive Liquid Waste			3.000	Emergent FY 96 requirement
96	High Press. Air Compressors			.600	Emergent FY 96 requirement
96	Relocation, Shaft Lathe			.600	Emergent FY 96 requirement
96	Closed Loop HP Water Jet			2.756	Emergent FY 96 requirement
96	Transformer, Port., 20Mva			.850	Emergent FY 96 requirement
96	FY-97 Equip Design Costs			.500	Emergent FY 96 requirement
96	Vortex Freeze Seal Encl			.200	Emergent FY 96 requirement
96	Oily Water Waste Treat.			.600	Emergent FY 96 requirement
	NON ADP EQP SUBT.	**8.000**	**4.079**	**20.990**	

000082

Department of the Navy - Defense Business Operations Fund
Depot Maintenance/Naval Shipyards
CAPITAL BUDGET EXECUTION
FY 1996
($In Thousands)

ADP AND TELECOM EQUIPMENT

FY	PROJECT TITLE	ORIGINAL REQUEST	CHANGE	REVISED REQUEST	
96	JLSC DMSS IOS Hardware	8.200		3.176	Decrease in JLSC funding
96	DMRD-924 Honeywell Conv.			6.910	Emergent FY 96 requirement
96	AIM System			5.000	Emergent FY 96 requirement
96	Teleswitching Equipment			2.867	Emergent FY 96 requirement
96	Miscellaneous	0		0	
ADP/TELECOM EQP SUBT		**8.200**	**.000**	**17.953**	

000083

Department of the Navy - Defense Business Operations Fund
Depot Maintenance/Naval Shipyards
CAPITAL BUDGET EXECUTION
FY 1996
($In Thousands)

MINOR CONSTRUCTION

FY	PROJECT TITLE	ORIGINAL REQUEST	CHANGE	REVISED REQUEST	EXPLANATION
96	Miscellaneous	1.000	.602	1.602	Increase in project costs
96	Crane Div. Consolidation			.300	Emegent FY 97 requirement
96	Sec. Lighting Improv. in CIA			.265	Emegent FY 97 requirement
96	Construct Office for Crane				
	Engineering Bldg 236			.300	Emegent FY 97 requirement
96	Correct Discrepancies B-883				
	Storage			.220	Emegent FY 97 requirement
96	FY 96/97 Construct Design				
	Costs			.434	Emegent FY 97 requirement
96	Mat. Control Station Dry				
	Dock 5			.220	Emegent FY 97 requirement
96	Mat. Control Station Pier 6			.220	Emegent FY 97 requirement
	Bldg. 1505				
96	Covered Stor. for Sand Grit			.280	Emegent FY 97 requirement
96	Sandblasting Encl./Sandpit			.300	Emegent FY 97 requirement
96	RAD Health Relocation			.252	Emegent FY 97 requirement
	MINOR CONSTRUC SUBT.	**1.000**	**.602**	**4.393**	

		ORIGINAL REQUEST	CHANGE	REVISED REQUEST	
	FY96 TOTALS	**17.200**	**4.681**	**43.336**	

000084

DEPARTMENT OF THE NAVY

DEFENSE BUSINESS OPERATIONS FUND
NAVAL AVIATION DEPOTS

ACTIVITY GROUP FUNCTION

To provide responsive worldwide maintenance, engineering, and logistics support to the Fleet and ensure a core industrial resource base essential for mobilization; repair aircraft, engines and components, and manufacture parts and assemblies; provide engineering services in the development of hardware design changes, and furnish technical and other professional services on maintenance and logistics problems.

ACTIVITY GROUP COMPOSITION

Activities	Location
NAVAVNDEPOT, Alameda	Alameda, CA
NAVAVNDEPOT, Cherry Point	Cherry Point, NC
NAVAVNDEPOT, Jacksonville	Jacksonville, FL
NAVAVNDEPOT, North Island	San Diego, CA
NAVAVNDEPOT, Norfolk	Norfolk, VA
NAVAVNDEPOT, Pensacola	Pensacola, FL
NAVAVNDEPOT, North Island Detachment	Pensacola, FL

BUDGET HIGHLIGHTS

GENERAL. This budget segregates the costs of the Remaining and Closing depots. This will allow us to highlight the ongoing efforts of the depots remaining open. The issues facing these depots are very different. The closing depots face the task of completing their remaining mission work as efficiently as possible, while at the same time phasing down toward closure. The remaining depots face the task of gearing up for additional workload transferring from the closing depots, while at the same time continuing their strong commitment to productivity improvement and cost efficiency.

BRAC Decisions. This budget incorporates the Congressional approval for the closure of NADEPs Alameda, Norfolk, and Pensacola (BRAC III) and the NADEP North Island Detachment at Pensacola (BRAC IV). The Cease Primary Mission Operations (CPMO) date for NADEP Pensacola was 30 September 1995 and Closure Implementation (CI) date is scheduled for March 1996. The CPMO and CI dates for NADEPs Norfolk and Alameda are September 1996 and March 1997, respectively. The CPMO and CI dates for the Detachment are June 1997 and September 1997, respectively. The following table summarizes FYs 1996 and 1997 BRAC costs reflected in this budget (Dollars in Millions):

	FY 1996	FY 1997
BRAC III	$163.5	$ 5.3
BRAC IV	9.4	12.0
Total BRAC	$172.9	$17.3

Total BRAC		$172.9	$17.3
Financial Profile:	**FY 1995**	**FY 1996**	**FY 1997**
Cost of Good Sold ($ Millions)	$1,140.8	$2,114.7	$1,447.1
Net Operating Results	-17.7	169.3	-10.3
Accumulated Operating Results	$-370.3	$ 10.3	$ 0.0

The increase in cost from FY 1995 to FY 1996 is due mainly to the change in revenue recognition policy implemented in April 1995. This policy change allows the NADEPs to recognize revenue based on the completed order method vice the percentage of completion method. This resulted in a one-time increase to work-in-process and a decrease to cost in FY 1995. The large decrease in cost from FY 1996 to FY 1997 is due to the operational closure of NADEPs Alameda and Norfolk in FY 1996 and reduced BRAC funding of $155.6 million.

The net operating results increase from FY 1995 to FY 1996 is due primarily to a passthrough of $211.3 million to offset prior year losses at closing activities. This is offset somewhat by underapplied overhead at the closing NADEPs due to reduced direct labor hours and operating losses associated with FY 1994 workload which will be completed in FY 1996. The net operating results decrease from FY 1996 to FY 1997 is due to FY 1997 break-even rates.

The significant improvement to accumulated operating results from FY 1995 to FY 1996 is due mainly to the Passthrough of $211.3 million and Redistribution of $245.0 million. The slight decrease from FY 1996 to FY 1997 reflects FY 1997 break-even rates.

Workload:	**FY 1995**	**FY 1996**	**FY 1997**
Direct Labor Hours (in Thousands)	15,680	15,034	12,963

The Direct Labor Hours decrease from FY 1995 to FY 1997 is due to the closure of NADEP Pensacola in FY 1995 and NADEPs Alameda and Norfolk in FY 1996 and reduced workload.

Performance Indicators:	**FY 1995**	**FY 1996**	**FY 1997**
Schedule Conformance			
Aircraft	50%	50%	50%
Components	95%	95%	95%
Engine	97%	97%	97%
Inventory Turnover Ratio	10.2	24.6	19.8
Inventory Turnover Days	36	15	18
Quality Deficiency Reports	1.2%	0%	0%
Net Operating Results	-$17.7	380.6	-$10.3

Customer Rate Changes:	**FY 1996**	**FY 1997**
Percent Change in Composite Customer Rate	-17.5%	11.3%

The FY 1997 composite stabilized rate is $122.88 or a increase of 11.3% when compared with the FY 1996 composite rate of $ 0.42. The FY 1997 composite rate includes a positive recoupment and a Joint Logist yster Center Surcharge.

Unit Cost:	FY 1995	FY 1996	FY 1997
	$121.86	$126.90	$113.11

The decrease from FY 1996 to FY 1997 reflects the efficiencies of downsizing from six to three NADEPs and reduced BRAC costs ($155.6 million).

Staffing:	FY 1995	FY 1996	FY 1997
Civilian End Strength	15,049	12,994	11,850
Civilian Work Years	15,713	14,184	11,928
Military End Strength	159	110	110
Military Work Years	219	163	110

The decrease in staffing from FY 1995 to FY 1997 is due mainly to the closing of NADEP Pensacola in FY 1995 and the closure of NADEPs Alameda and Norfolk in FY 1996. The number of people and dollar associated with Reduction-in-Force/Separation Incentive Pay is as follow (Dollars in Millions):

	People	Dollars
FY 1995	1,641	$32.7
FY 1996	1,726	45.5
FY 1997	126	4.1

Headquarters Cost:	FY 1995	FY 1996	FY 1997
($ in Millions)	$16.982	$16.768	$17.123

The decrease in Headquarters Cost from FY 1995 to FY 1996 is due to a reduction in travel and contractual services associated with BRAC planning. The increase from FY 1996 to FY 1997 is due to inflation. Headquarters cost is scheduled to decrease after FY 1997 with the movement of NAVAIR to Patuxent River and the closure of NADEPs Pensacola, Alameda, and Norfolk.

Capital Budget Authority:	FY 1995	FY 1996	FY 1997
Equipment-Non ADPE/TELECOM	$ 4.096	$14.915	$33.854
ADPE/TELECOM Equip	2.626	6.351	10.562
Software Development			
Minor Construction	1.606	2.985	3.126
Reliability, Maintainability, Supportability Modifications			3.667
Total ($ millions)	$8.328	$34.251	$51.209

The proposed level for FY 1996 includes purchases approved by the JLSC for use at the NADEPs. Consolidated Automated Support System stations requested in FY 1996 and FY 1997

Economies and Efficiencies:

The NADEPs have planned several cost saving initiatives to reduce overhead costs (e.g., travel, training, utilities, ADP, and maintenance) in this budget compared to the FY 1996 President's Budget. Total overhead for FY 1995 through FY 1997 is $68.7 million less than overhead budgeted for the same years in last year President's Budget. FY 1997 also includes direct savings of $5.7 million associated with the updating of material and labor standards.

Cost of Depot Level Reparables:	FY 1995	FY 1996	FY 1997
($ in Millions)	$69.0	$74.0	$88.8

NAVAL AIR DEPOTS
REVENUE AND EXPENSES
(Dollars in Millions)

	FY 1995	FY 1996	FY 1997
Revenue:			
Gross Sales			
Operations	1,078.0	1,993.8	1,406.3
Capital Surcharge	16.5	25.5	26.2
Depreciation except Maj Const	48.6	45.2	30.5
Major Construction Depreciation			
Other Income			
Total Income	**1,143.1**	**2,064.5**	**1,463.0**
Expenses:			
Cost of Materiel Sold from Inventory			
Negotiated Purchases from Customers			
Transportation	4.7	1.5	1.2
Salaries and Wages:			
Military Personnel	9.0	8.6	5.7
Civilian Personnel	786.8	740.1	595.1
Materials, Supplies and			
Parts used in Operations	633.6	653.4	589.4
Facility Repair Charge	51.7	46.0	26.9
Depreciation - Capital	48.6	45.2	30.5
Contracted Engineering Services	25.3	22.8	14.5
Lease Costs	0.8	0.9	0.7
Purchased Utilities	51.8	43.0	26.3
Purchased Communications	3.0	1.6	0.9
Equipment Maintenance	7.2	8.0	7.1
Fuel	2.7	3.2	2.3
Other Expenses	-484.4	540.4	146.5
Total Expenses	**1,140.8**	**2,114.7**	**1,447.1**
Operating Result	2.3	-50.2	15.9
Less Capital Surchg Reservation	20.0	25.5	26.2
Plus Appropriations Affecting NOR/AOR		211.3	
Other Changes Affecting NOR/AOR	0.0	245.0	
Net Result	-17.7	380.6	-10.3
Prior Year AOR	-352.6	-370.3	10.3
Accumulated Operating Result	**-370.3**	**10.3**	**-0.0**

NAVAL AIR DEPOT - TOTAL
SOURCE OF REVENUE
(Dollars in Millions)

	FY 1995	FY 1996	FY 1997
1. New Orders	1,574.4	1,770.5	1,253.8
a. Orders from DoD Components	910.9	1,068.7	794.8
Department of the Navy	747.8	872.5	755.3
Operations and Maintenance, Navy	573.2	674.1	565.1
Operations and Maintenance, Marine Corps	0.0	0.0	0.0
O&M, Navy Reserve	18.4	25.6	27.8
O&M, Marine Corps Reserve	0.0	0.0	0.0
Aircraft Procurement, Navy	143.4	122.6	123.4
Weapons Procurement, Navy	-3.8	0.1	0.1
Shipbuilding & Conversion, Navy	-0.2	0.4	0.5
Other Procurement, Navy	4.4	8.1	7.4
Procurement, Marine Corps	0.0	0.0	0.0
Family Housing, Navy and Marine Corps	0.0	0.0	0.0
Research, Development, Test & Eval, Navy	13.6	33.6	22.0
Military Construction, Navy	-2.8	0.0	0.0
Other Navy Appropriations	1.6	8.0	9.0
Other Marine Corps Appropriations	0.0	0.0	0.0
Department of the Army	-16.7	0.1	0.0
Army Operation & Maintenance Accounts	-16.7	0.0	0.0
Army Res, Dev, Test & Eval Accounts	0.0	0.0	0.0
Army Procurement Accounts	-0.2	0.0	0.0
Army Other	0.2	0.1	0.0
Department of the Air Force	10.2	10.8	9.4
Air Force Operation & Maintenance Accounts	-4.0	0.3	0.0
Air Force Res, Dev, Test & Eval Accounts	0.1	3.0	3.0
Air Force Procurement Accounts	10.6	6.0	4.9
Air Force Other	3.5	1.5	1.5
DoD Appropriated Accounts	169.6	185.3	30.1
Base Closure and Realignment	154.6	172.9	17.3
Operation & Maintenance Accounts	-1.1	0.6	0.6
Res, Dev, Test & Eval Accounts	4.3	7.3	7.5
Procurement Accounts	13.1	3.7	3.8
DoD Other	-1.3	0.8	0.9
b. Orders from DBOF Business Areas	640.7	654.6	428.9
c. Total DoD	1,551.6	1,723.3	1,223.7
d. Other Orders	22.8	47.2	30.1
Other Federal Agencies	-2.9	8.8	3.8
Foreign Military Sales	27.5	38.3	26.2
Non Federal Agencies	-1.8	0.1	0.1
2. Carry-In Orders	607.7	1,039.0	745.0
3. Total Gross Orders (available funding)	2,182.1	2,809.5	1,998.8
4. Carry-Out Orders	1,039.0	745.0	535.8
Change in Backlog (carry-out less carry-in)	431.3	-294.0	-209.2
5. Total Gross Sales	1,143.1	2,064.5	1,463.0

DEFENSE BUSINESS OPERATIONS FUND
NAVAL AVIATION DEPOTS - TOTAL
CHANGES IN OPERATION
(DOLLARS IN MILLIONS)

	TOTAL COST
1. FY 1996 CONGRESSIONAL	$1,866.7
2. PRICING ADJUSTMENT	-$3.8
A. PAY RAISE	$0.0
B. STOCK FUND - FUEL	$0.0
C. STOCK FUND - NONFUEL	$0.0
D. IF PURCHASES	$0.0
E. GENERAL PURCHASE INFLATION	-$3.8
F. FUNDED MILITARY PERSONNEL	$0.0
3. PROGRAM CHANGES:	$10.6
A. AIRFRAMES	$26.8
B. ENGINES	-$1.6
C. MODIFICATIONS	-$20.0
D. COMPONENTS	$11.5
E. PSD	$13.2
F. OTHER	-$19.3
4. OTHER CHANGES IN:	$34.3
A. BRAC COST	39.7
C. NORFOLK FUNCTIONAL TRANSFER	-5.4
5. FY 1996 CURRENT ESTIMATE	$1,907.8

DEFENSE BUSINESS OPERATION FUND
NAVAL AVIATION DEPOTS - TOTAL
CHANGES IN OPERATION
(DOLLARS IN MILLIONS)

	TOTAL COST
1. FY 1996 CURRENT SUBMIT	$1,907.8
2. PRICING ADJUSTMENT	$60.4
A. PAY RAISE	$19.7
B. STOCK FUND - FUEL	$0.0
C. STOCK FUND - NONFUEL	$31.1
D. IF PURCHASES	$0.7
E. GENERAL PURCHASE INFLATION	$8.7
F. FUNDED MILITARY PERSONNEL	$0.2
3. PRODUCTIVITY INITIATIVES	-$5.6
4. PROGRAM CHANGES:	-$173.8
A. AIRFRAMES	-$15.3
B. ENGINES	-$37.3
C. MODIFICATIONS	-$4.5
D. COMPONENTS	-$77.0
E. NORTH ISLAND DETACHMENT	-$17.2
E. PSD	-$8.2
F. OTHER	-$14.3
5. OTHER CHANGES IN:	-$322.6
A. BRAC COSTS	-169.3
C. ELIMINATION OF OVERHEAD COSTS AT CLOSING ACTIVITIES	-153.3
6. FY 1997 CURRENT ESTIMATE	$1,466.2

DEFENSE BUSINESS OPERATIONS FUND

NAVAL AVIATION DEPOTS - REMAINING DEPOTS

CHANGES IN OPERATION

(DOLLARS IN MILLIONS)

	TOTAL COST
1. FY 1996 CONGRESSIONAL	$1,444.3
2. PRICING ADJUSTMENT	-$2.5
A. PAY RAISE	0.0
B. STOCK FUND - FUEL	0.0
C. STOCK FUND - NONFUEL	0.0
D. IF PURCHASES	0.0
E. GENERAL PURCHASE INFLATION	-2.5
F. FUNDED MILITARY PERSONNEL	0.0
3. PROGRAM CHANGES:	$64.5
A. AIRFRAMES	27.9
B. ENGINES	-1.6
C. MODIFICATIONS	-14.8
D. COMPONENTS	57.8
E. PSD	13.6
F. OTHER	-18.4
4. OTHER CHANGES IN:	$13.2
A. BRAC COSTS	13.2
5. FY 1996 CURRENT ESTIMATE	$1,519.5

DEFENSE BUSINESS OPERATION FUND
NAVAL AVIATION DEPOTS - REMAINING DEPOTS
CHANGES IN OPERATION
(DOLLARS IN MILLIONS)

	TOTAL COST
1. FY 1996 CURRENT SUBMIT	$1,519.5
2. PRICING ADJUSTMENT	$51.5
A. PAY RAISE	15.6
B. STOCK FUND - FUEL	0.0
C. STOCK FUND - NONFUEL	29.5
D. IF PURCHASES	0.3
E. GENERAL PURCHASE INFLATION	6.0
F. FUNDED MILITARY PERSONNEL	0.1
3. PRODUCTIVITY INITIATIVES	-$5.6
4. PROGRAM CHANGES:	-$62.2
A. AIRFRAMES	4.8
B. ENGINES	-37.3
C. MODIFICATIONS	3.0
D. COMPONENTS	-35.1
E. NORTH ISLAND DETACHMENT	-17.2
E. PSD	11.7
F. OTHER	7.9
5. OTHER CHANGES IN:	-$37.0
A. BRAC COSTS	-37.0
6. FY 1997 CURRENT ESTIMATE	$1,466.2

DEFENSE BUSINESS OPERATIONS FUND

NAVAL AVIATION DEPOTS - CLOSING DEPOTS

CHANGES IN OPERATION

(DOLLARS IN MILLIONS)

	TOTAL COST
1. FY 1996 CONGRESSIONAL	$422.4
2. PRICING ADJUSTMENT	-$1.3
A. PAY RAISE	0.0
B. STOCK FUND - FUEL	0.0
C. STOCK FUND - NONFUEL	0.0
D. IF PURCHASES	0.0
E. GENERAL PURCHASE INFLATION	-1.3
F. FUNDED MILITARY PERSONNEL	0.0
3. PROGRAM CHANGES:	-$53.9
A. AIRFRAMES	-1.1
B. ENGINES	0.0
C. MODIFICATIONS	-5.2
D. COMPONENTS	-46.3
E. PSD	-0.4
F. OTHER	-0.9
4. OTHER CHANGES IN:	$21.1
A. BRAC COST	26.5
C. NORFOLK FUNCTIONAL TRANSFER	-5.4
5. FY 1996 CURRENT ESTIMATE	$388.3

DEFENSE BUSINESS OPERATION FUND

NAVAL AVIATION DEPOTS - CLOSING DEPOTS

CHANGES IN OPERATION

(DOLLARS IN MILLIONS)

	TOTAL COST
1. FY 1996 CURRENT SUBMIT	$388.3
2. PRICING ADJUSTMENT	$8.9
A. PAY RAISE	4.1
B. STOCK FUND - FUEL	0.0
C. STOCK FUND - NONFUEL	1.6
D. IF PURCHASES	0.4
E. GENERAL PURCHASE INFLATION	2.7
F. FUNDED MILITARY PERSONNEL	0.1
3. PRODUCTIVITY INITIATIVES (DMRD 908/971)	$0.0
4. PROGRAM CHANGES:	-$111.6
A. AIRFRAMES	-20.1
B. ENGINES	0.0
C. MODIFICATIONS	-7.5
D. COMPONENTS	-41.9
E. PSD	-19.9
F. OTHER	-22.2
5. OTHER CHANGES IN:	-$285.6
A. BRAC COSTS	-132.3
B. ELIMINATION OF OVERHEAD COSTS AT CLOSING ACTIVITIES	-$153.3
6. FY 1997 CURRENT ESTIMATE	$0.0

DEFENSE BUSINESS OPERATIONS FUND
DEPARTMENT OF THE NAVY
NAVAL AIR DEPOTS

MATERIAL INVENTORY DATA
(Dollars in Millions))
FISCAL YEAR 1995

			-------- Peacetime --------	
	Total	Mobilization	Operating	Other
Materiel Inventory BOP	152.2	0.0	152.2	0.0
BOP Reclassification Changes	0.0	0.0	0.0	0.0
Price Changes	0.0	0.0	0.0	0.0
Receipts from Commercial Sources	592.5	0.0	592.5	0.0
Negotiated Purchase from Customers	0.0	0.0	0.0	0.0
Gross Sales	636.2	0.0	636.2	0.0
Materiel Inventory Adjustments				
CAPITALIZATIONS + OR (-)	0.0	0.0	0.0	0.0
RETURNS TO SUPPLIERS (-)	0.0	0.0	0.0	0.0
TRANSFERS TO PROP. DISP.(-)	0.0	0.0	0.0	0.0
ISSUES/RECEIPTS WITHOUT REIMBURSEMENT + or (-)	0.0	0.0	0.0	0.0
OTHER (list)	0.0	0.0	0.0	0.0
TOTAL ADJUSTMENTS	0.0	0.0	0.0	0.0
Materiel Inventory EOP	108.5	0.0	108.5	0.0
ECONOMIC RETENTION (memo)	0.0			
POLICY RETENTION (memo)	0.0			
POTENTIAL EXCESS (memo)	0.0			
Materiel Inventory on Order EOP (memo)	27.1	0.0	27.1	0.0

DEFENSE BUSINESS OPERATIONS FUND
DEPARTMENT OF THE NAVY
NAVAL AIR DEPOTS

MATERIAL INVENTORY DATA
(Dollars in Millions))
FISCAL YEAR 1996

			-------- Peacetime --------	
	Total	Mobilization	Operating	Other
Materiel Inventory BOP	108.5	0.0	108.5	0.0
BOP Reclassification Changes	0.0	0.0	0.0	0.0
Price Changes	0.0	0.0	0.0	0.0
Receipts from Commercial Sources	635.3	0.0	635.3	0.0
Negotiated Purchase from Customers	0.0	0.0	0.0	0.0
Gross Sales	656.6	0.0	656.6	0.0
Materiel Inventory Adjustments				
CAPITALIZATIONS + OR (-)	0.0	0.0	0.0	0.0
RETURNS TO SUPPLIERS (-)	0.0	0.0	0.0	0.0
TRANSFERS TO PROP. DISP.(-)	0.0	0.0	0.0	0.0
ISSUES/RECEIPTS WITHOUT REIMBURSEMENT + or (-)	0.0	0.0	0.0	0.0
OTHER (list)	0.0	0.0	0.0	0.0
TOTAL ADJUSTMENTS	0.0	0.0	0.0	0.0
Materiel Inventory EOP	87.2	0.0	87.2	0.0
ECONOMIC RETENTION (memo)	0.0			
POLICY RETENTION (memo)	0.0			
POTENTIAL EXCESS (memo)	0.0			
Materiel Inventory on Order EOP (memo)	21.8	0.0	21.8	0.0

DEFENSE BUSINESS OPERATIONS FUND
DEPARTMENT OF THE NAVY
NAVAL AIR DEPOTS

MATERIAL INVENTORY DATA
(Dollars in Millions))
FISCAL YEAR 1997

			-------- Peacetime --------	
	Total	Mobilization	Operating	Other
Materiel Inventory BOP	87.2	0.0	87.2	0.0
BOP Reclassification Changes	0.0	0.0	0.0	0.0
Price Changes	0.0	0.0	0.0	0.0
Receipts from Commercial Sources	583.0	0.0	583.0	0.0
Negotiated Purchase from Customers	0.0	0.0	0.0	0.0
Gross Sales	588.1	0.0	588.1	0.0
Materiel Inventory Adjustments				
CAPITALIZATIONS + OR (-)	0.0	0.0	0.0	0.0
RETURNS TO SUPPLIERS (-)	0.0	0.0	0.0	0.0
TRANSFERS TO PROP. DISP.(-)	0.0	0.0	0.0	0.0
ISSUES/RECEIPTS WITHOUT REIMBURSEMENT + or (-)	0.0	0.0	0.0	0.0
OTHER (list)	0.0	0.0	0.0	0.0
TOTAL ADJUSTMENTS	0.0	0.0	0.0	0.0
Materiel Inventory EOP	82.1	0.0	82.1	0.0
ECONOMIC RETENTION (memo)	0.0			
POLICY RETENTION (memo)	0.0			
POTENTIAL EXCESS (memo)	0.0			
Materiel Inventory on Order EOP (memo)	20.5	0.0	20.5	0.0

CAPITAL INVESTMENT SUMMARY
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - AVIATION DEPOTS
($ In Millions)

ITEM LINE #	ITEM DESCRIPTION	FY 1995		FY 1996		FY 1997	
		Qty	Actual Obligns	Qty	Total Cost	Qty	Total Cost
	GRAND TOTAL NON-ADP CAPITAL PURCHASES PROGRAM		5.702		17.900		40.647
	GRAND TOTAL ADP CAPITAL PURCHASES PROGRAM		2.626		16.351		10.562
	GRAND TOTAL CAPITAL PURCHASES PROGRAM		8.328		34.251		51.209

CAPITAL INVESTMENT SUMMARY
NON-ADP PROGRAM-SUBMIT
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - AVIATION DEPOTS
($ In Millions)

ITEM LINE #	ITEM DESCRIPTION	FY 1995 Qty	FY 1995 Actual Obligns	FY 1996 Qty	FY 1996 Total Cost	FY 1997 Qty	FY 1997 Total Cost
	1a. EQUIPMENT, OTHER THAN ADPE & TELECOM (>$500K)						
	Replacement						
N EL 00000A R	CORPORATE ASKARS UPGRADE	1	1.492	2	2.941		
E EL 00024A R	TEST COMPUTER AND INSTRUMENTATION			1	1.000		
E EL 00016A R	5-AXIS MACHINING CENTER			1	0.825	1	0.825
C EL 00289A R	VERTICAL MACHINING CENTER VMC 200			1	0.500		
F EL 00001A R	FUEL METERING UNIT TEST STAND					1	1.000
C EL 00304A R	LARGE VERTICAL GRINDER					1	0.637
	Productivity						
F EL 00004B P	HIGH PRESSURE COMPRESSED AIR STORAGE SYSTEM	1	1.112				
	New Mission						
N EL 00000X N	CASS STATION EQUIPMENT			4	5.090	14	27.773
	SUBTOTAL EQUIPMENT, OTHER THAN ADPE & TELECOM (>$500K)		2.604		10.356		30.235
N ES 000000	**1b. EQUIPMENT, OTHER THAN ADPE & TELECOM (<$500K)**		1.492		4.559		3.619
	2. GRAND TOTAL EQUIPMENT, OTHER THAN ADPE & TELECOM		4.096		14.915		33.854
N MC 000000	**3. MINOR CONSTRUCTION (<$300K)**		1.606		2.985		3.126
	4a. RMS MODs (>$500K)						
N RL 000000	H-46 ROTOR BLADE MODERNIZATION						3.500
	SUBTOTAL RMS MODs (>$500K)						3.500
N RS 000000	**4b. RMS MODs (<$500K)**						0.167
	5. GRAND TOTAL RMS MODs						3.667
	GRAND TOTAL NON-ADP CAPITAL PURCHASES PROGRAM		5.702		17.900		40.647

000101

CAPITAL INVESTMENT SUMMARY
ADP PROGRAM-SUBMIT
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - AVIATION DEPOTS
($ In Millions)

ITEM LINE #			ITEM DESCRIPTION	FY 1995		FY 1996		FY 1997	
				Qty	Actual Obligns	Qty	Total Cost	Qty	Total Cost
			1a. ADPE & TELECOMMUNICATIONS (>$100K)						
			Computer Hardware (Production)						
F KL	00013A	R	TELEPHONE SYSTEM UPGRADE	1	[illegible]				
[illegible] KL	00228B	P	CAD II		[illegible]	1	0.135	1	0.475
		P	DEPOT MAINTENANCE SYSTEM (DMS)	3	0.380	3	12.988	3	6.657
E KL	05001C	N	EDMICS			1	1.458		
E KL	04001B	P	ENGINEERING CAD/CAM SYSTEM PHASE II			1	0.500	1	0.440
C KL	00253B	P	DESKTOP PUBLISHING SYSTEM			1	0.490		
C KL	00333B	P	UNIX OPEN SERVER			1	0.475		
E KL	[illegible]02A	R	DIGITAL VAX UPGRADE			1	0.105		
F KL	00006A	R	NALCCOIS 80286 BASED PROCESSOR REPLACEMENTS					1	1.000
[illegible] KL	00001B	P	LAN UPGRADE AND ENHANCEMENT					1	0.800
F KL	00012A	R	E-MAIL SERVER SYSTEM REPLACEMENT					1	0.500
C KL	00352B	P	OPEN SYSTEM TRANSITION					1	0.490
E KL	00013C	N	COMPUTER SYSTEM UPGRADE					1	0.200
			Telecommunications						
E TL	05003B	P	LAN FIBER OPTIC NETWORK			1	0.200		
N KS	000000		**SUBTOTAL ADPE & TELECOMMUNICATIONS (>$100K)**		2.531		16.351		10.562
			1b. ADPE & TELECOMMUNICATIONS (<$100K)		0.095				
			2. GRAND TOTAL ADPE & TELECOMMUNICATIONS		2.626		16.351		10.562
			GRAND TOTAL ADP CAPITAL PURCHASES PROGRAM		2.626		16.351		10.562

000102

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Depot Maintenance/Aviation Depot				C. NEL00000AR CORPORATE ASKARS UPGRADE			D.		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
EEL04001AR JACKSONVILLE	1	1,492	1,492	1	900	900			
FEL00003AR CHERRY POINT				1	2,041	2,041			
TOTAL	1	1,492	1,492	2	2,941	2,941			

Narrative Justification:

This project is part of the NADEP Corporate ASKARS Upgrade project which proposes to purchase and install upgraded hardware, software, and material handling systems with respect to storage, kitting, and retrieval of Ready For Issue (RFI) aircraft parts and F/E components for the purpose of preventing a long term production work stoppage caused by the failure of nonavailable obsolete parts which is no longer supported by the manufacturers. The ASKARS system is utilized to provide a Just In Time (JIT) management and delivery system for aircraft parts concurrently removed and reworked during standard depot level maintenance (SDLM), Airframe change kit incorporation during SDLM and aircraft parts manufactured to support modifications. The ASKARS is critical to minimize production floor space requirements and reduce cycle time. The ASKARS upgrade, in addition to being required to resolve serious ASKARS reliability and maintainability problems, is necessary to support DoD mandated integration of modern business practices into depot production. The ASKARS is part of the NADEP long range strategic plan to incorporate manufacturing resource planning 2 critical path modeling, just in time delivery into the production process. It is essential to the success of the changing production processes, reductions in turn around time and costs; and to accommodate an increase in the variety of airframes undergoing SDLM and a significant increase in manufacturing and modification workload.

Anticipated benefits from the execution of this project are an increase in depot productivity by decreasing system downtime due to maintenance and increased reliability in inventory levels. The ASKARS Project Managers Office has estimated that system support costs will increase to $1,500,000 per year should the Corporate Upgrade not be executed.

A Cost Benefit Analysis has been performed for the review of economic indicators. Expecting to be operational in FY 1996 and FY 1997.

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Depot Maintenance/Aviation Depot				C. EEL00024AR TEST COMPUTER AND INSTRUMENTATION			D. Jacksonville		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
				1	1,000	1,000			
TOTAL				1	1,000	1,000			

Narrative Justification:

The present system located in the NADEP Engine Test Shop, 96105, is no longer produced and is decreasingly supported by the manufacturer (Hewlett Packard). Parts for the system now have to be purchased as used parts from a third party vendor.

The system is used for data acquisition and control during jet engine testing. A modern system using the newest technology will enable NADEP to support the test cell in the future. The benefits are reliability, supportability and readily available replacement parts which will minimize test cell downtime and maximize test cell availability for production operations. A new system will also improve the process of troubleshooting engines by providing more detailed information to engine program engineers.

A Cost Benefit Analysis was performed with an: Average Annual Savings: $108,662 starting in Sep 1997 Pay Back Period: 8.7 years Rate of return: 10.9%

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Depot Maintenance/Aviation Depot				C. EEL00016AR 5-AXIS MACHINING CENTER			D. Jacksonville		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
				1	825	825	1	825	825
TOTAL				1	825	825	1	825	825

Narrative Justification:

The existing machines assigned to the NADEP JAX Mills and CNC (Computer Numerical Control) Machine Shop, 96412, were manufactured in 1982 and will be 14 years old in FY 1996. They are both producing parts continuously on first shift with some second shift work. The machines are nearing their anticipated useful life and many of the electronic and computer components have already exceeded the anticipated useful life of ten years. Vendors do not store parts for systems this old. The 5 Axis Machining Center, in addition to resolving serious reliability and maintainability problems, is necessary to support long range high technology electronic data interchange initiatives. It is part of NADEP Jacksonville long range strategic plan to incorporate manufacturing modernization into the production processes. It is essential to reductions in turn around time and costs; and to accommodate a significant increase in manufacturing and weapons systems component repair.

When replacement parts are needed, they have to be manufactured. Mechanical parts are also showing signs of major wear. If replacement is not considered, the machines will be subject to major downtime, need major repairs and replacement of most electronic/computer systems. The new 5-axis machining centers would have state-of-the-art microprocessors and all new electronic and mechanical components, thereby eliminating machine downtime while replacement parts are being manufactured. The higher spindle speeds and more equipment horsepower will result in slightly faster production operations.

A Cost Benefit Analysis was performed with an: Average Annual Savings: $40,918 starting in Oct 97 Pay Back Period: +10 years Rate of return: 2.5%

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Depot Maintenance/Aviation Depot				C. CEL00289AR VERTICAL MACHINING CENTER VMC-200			D. North Island		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
				1	500	500			
TOTAL				1	500	500			

Narrative Justification:

The VMC 200 is a Vertical Machining Center with CNC control of 3 machining axis. X-axis travel of 110", y-axis travel of 30", and z-axis travel of 10". This equipment provides the capability of machining long and narrow parts in a vertical position.

The Monarch VMC-200 was installed in 1976 and is showing increased signs of deterioration both mechanically and electronically. It is the opinion of the maintenance division that due to the age of this asset its down time will continue to increase to a point that it will be totally unreliable for production where a schedule must be met. The VMC-200 is a Vertical Machining Center with 110" of travel in "X" axis and 30" of travel in the "Y" axis. This asset is the only VMC with these capacities. This asset is not operated to full capacities but is very important to the manufacturing program because of its unique capabilities and capacities. Without this asset the manufacturing program would be forced into contracting out this work load which would be expensive and time consuming and would create delays that would effect aircraft program schedules. This machine is utilized two shifts per day in support of H-46, F-18, F-14, and E-2 manufacturing.

This equipment already has a large amount of workload assigned for production and provides a unique capability because of its long bed.

The impact if not required would be slippage of production schedules. Because of the configuration of this machine, (the long X-axis travel of 110") we are very limited to alternate equipment to handle this work load.

A Cost Benefit Analysis has been performed with an: Average Annual Savings: $116,532 starting in Sept 96 Payback Period: 3.2 Years Rate of return: 23.3%

000106

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Depot Maintenance/Aviation Depot				C. FEL00001AR FUEL METERING UNIT TEST STAND			D. Cherry Point		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
							1	1,000	1,000
TOTAL							1	1,000	1,000

Narrative Justification:

The Fuel Metering Unit (FMU) Test Stand is necessary to support conversion of the existing AV-8B Harrier F-406 engines to F-408 engines. The FMU on each engine is substantially different, and requires specialized facilitization. The AV-8B is a core weapon system, and Naval Aviation Depot (NADEP) Cherry Point has it as an element of its strategic plan, to continue and improve its depot level support.

NADEP Cherry Point is the U.S. NAVY Designated Overhaul Point (DOP) for the overhaul and testing of F402-406/408 engine accessories, one of which is the FMU. To perform this workload, a test stand capable of performing the required tests will have to be procured.

The test stand will be procured to provide test capability for the 408 FMU in particular, since the depot currently has no capability to perform the test. Also, the test stand will augment the depot's capability to test the 406 FMU, which can be tested on an existing test stand. However, that test stand is very unreliable. It requires a great deal of engineering and maintenance support to keep the stand running. The problems are complicated by the fact that Dowty, a United Kingdom company, provided the stands, and therefore the stands are in an unfamiliar British configuration. By procuring a new stand, the depot will have the capability to test the 408 FMU and lessen the burden on the current 406 FMU, which should also reduce the amount of maintenance expended on the 406 FMU test stand.

The purpose of this project is to provide the Accessories Branch with the capability to test the 408 FMU, to enhance and increase the productivity of the existing 406 FMU testing process, and to reduce direct and indirect labor and material costs associated with testing of hydraulic components and accessories.

The Cost Benefit Analysis has been performed with an: Average annual savings: $326,553 starting in FY 98 Payback period: 2.3 years Rate of Return: 33%

000107

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Depot Maintenance/Aviation Depot				C. CEL00304AR LARGE VERTICAL GRINDER			D. North Island		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
							1	637	637
TOTAL							1	637	637

Narrative Justification:

Vertical grinding center with 48" table, 20" nominal ground hole depth & 24" grinding stroke. CNC controlled positioning, spindle speed, feed rate, wheel dressing & part probing. This machine will be state of the art for vertical grinders. Purpose of this grinder is to grind the inside diameter and outside diameter of parts of irregular shapes or too large for the Universal Grinders (stroke length and diameter).

Our current vertical grinders are 40 years old and are requiring an increasing amount of maintenance to keep operational. Repair parts are becoming harder to acquire due to the age of our equipment. At the present time we do a large number of small quantity jobs which require a great amount of set up time. We need a piece of equipment that is more versatile to support this type of workload. The grinder being replaced was manufactured in 1957. At the present time this is the only machine capable of grinding the H-46 Pitch Housing due to the size and depth of the housing. This machine was acquired from DIPEC as a stop-gap effort for reworking H-46 Rotor Heads in October 1989.

Lower turn-around-time, lower workload standards, lower cost and state of the art capability.

The impact if not acquired would be workload would have to be contracted out if machine went down for an extended period of time.

A Cost Benefit Analysis has been performed with an: Average Annual Savings: $95,333 starting in Jan 98 Payback Period: 5.5 years Rate of return: 15.0%

000108

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Depot Maintenance/Aviation Depot				C. NEL00000XN CASS STATION EQUIPMENT			D.		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
FEL00000XN CHERRY POINT				1	1,101	1,101	4	VAR	8,518
EEL00000XN JACKSONVILLE							2	VAR	5,602
CEL00000XN NORTH ISLAND				3	VAR	3,989	8	VAR	13,653
TOTAL				4	VAR	5,090	14	VAR	27,773

Narrative Justification:

This request results from the design and development of modularly constructed Automated Test Equipment (ATE). The development program was executed in response to fleet concerns regarding serious deficiencies in existing ATE and recommendations of an extensive 1976 SECNAV study on test equipment. The CASS program is part of the Navy's long range plan to replace existing aging testers. Depot Level support for the F/A-18, F-14, S-3B, and P-3, as well as core avionics, is planned for NADEPs utilizing CASS. Many of the avionics systems scheduled for CASS are new development programs sets developed only for CASS. There are no alternative means of support. Without CASS stations at the NADEPs avionics component workload and aircraft SDLM concurrent repair will not be executable significantly impacting readiness and pipeline assets. The Consolidated Automated Support System (CASS) design incorporate easily reconfigurable modules which can address varying test requirements (e.g. electro-optical, radio frequency, laser, infrared, inertial guidance, etc.) and will also allow modification to meet the demands of future technologies.

CASS is the Navy's latest state-of-the-art avionics automated test equipment to be used to test present and future complex weapons system. CASS will eventually replace the existing testers which includes both common and peculiar ATE. Common ATE has the capability to test electronic assemblies from many different weapon systems, while peculiar ATE tests only one weapon system. CASS represents an approach to testing which consolidates the numbers and types of testers used to implement electronics support. CASS has a standard, yet open-ended system architecture that uses a set of standard test modules from which different configurations are composed to meet specific user test requirements. Only the number of test modules and their collective packaging change to adapt to different user needs. Utilizing the CASS architecture, low-level modules, and a distributed computing systems, it is possible to produce CASS configurations optimized to the particular application. These can range from multiple rack-mounted configurations. All share common assets and software and allow Test Program Set transportability. The four rack-mount configurations include a hybrid tester, RF configuration, Electro Optic configuration and communication/navigation/identification (CNI) configuration.

The CASS program will increase weapon system material readiness, reduce life cycle costs through standardization, improve tester sustainability at depot and intermediate maintenance levels, and provide Navy-wide test capability for existing and future avionics systems. CASS will increase repair facility throughput capability, reduce spare parts and personnel training requirements, and significantly reduce the space required for avionics testing aboard space critical aircraft carriers.

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Depot Maintenance/Aviation Depot				C. NRL00000 RELIABILITY, MAINTAINABILITY, SUPPORTABILITY MODIFICATIONS/ H-46 Rotor Blade Modernization			D. Naval Aviation Depot		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
							324		3,500
TOTAL							324		3,500

Narrative Justification:

Development of vibration-reduction modifications to minimize the ground lateral vibration effect of the aircraft. This effort will complement existing track and balance hardware and software. Rotor blades will be modified to allow for weight adjustments. Status Quo: The H-46 helicopter suffers from ground vibration problems which reduce reliability of component systems and parts through the aircraft. Prolonged exposure to high ground vibration levels are degrading the life of both the airframe, and many on-board systems. Alternative/Justification: Fully one-third of aircraft returned to depot for repair are showing damage in the 410 splice area as a result of excessive rotor blade vibration. An alternative to this initiative is to provide effected systems with expensive, weighty, and cumbersome means of additional isolation from the effects of vibration.

000110

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Depot Maintenance/Aviation Depot				C. NRS000000 RELIABILITY, MAINTAINABILITY, SUPPORTABILITY MODIFICATIONS/Integrated Drive Generator (IDG) Air/Oil Heat Exchanger			D. Naval Aviation Depot		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
							337		167
TOTAL							337		167

Narrative Justification:

This project modifies the inlet and outlet seals and the cowl structure to prevent leakage of cooling air around the heat exchanger of the F110-GD-400 engines; used on the F-14. Status Quo: A widened inlet axial sealing surface, and new seal material, is needed to eliminate current airframe inlet damage and to reduce cooler maintenance costs. This project is also a fix to the axial sealing surface on the inlet seal catching on the cowl door doubler due to relative motion between the engine and airframe. Alternative/Justification: This project changes both material (from Teflon to Nomex) and processes (from bolts to rivets). The effect of this project will be to reduce cooler maintenance costs and airframe inlet damage. Savings are projected to be $350 thousand per year for every year after 1999.

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Depot Maintenance/Aviation Depot				C. CKL00228BP CAD II			D. North Island		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
	1	651	651	1	135	135	1	475	475
TOTAL	1	651	651	1	135	135	1	475	475

Narrative Justification:

The Computer Aided Design/Computer Aided Manufacturing/Computer Aided Engineering (CAD/CAM/CAE) hardware and software will be an integrated system of various devices utilized to provide engineering personnel with the necessary equipment to perform their unique engineering disciplines. These tools shall provide the Naval Aviation Depot with the CAD/CAM/CAE capability to accomplish design, modification, and manufacturing by modeling an entire aircraft, aircraft systems, supporting subsystems, and components as well as the capability to create 2-D drawings, 3-D drawings, 3-D wireframes, shaded surface, solid models, and schematics, and to perform analysis and simulation, design verification and validation. This is the first year of a 3 year plan.

Benefits is to transition the NADEP engineering codes from an essentially manual, paper intensive system to state-of-the-art commercially available CAD/CAM/CAE system. The engineering requirements of the NADEP are also related to the design, modification, repair, manufacturing, testing, and analysis of aeronautical weapon systems, associated subsystems, and support systems. This includes aircraft, aircraft weapons systems, life support, propulsion and power, mission support, aviation support, photographic and reconnaissance equipment, and metrology equipment. These systems will increase productivity, improve operations, reduce errors, improve quality, reduce backlog, provide additional capability, reduce manual drafting boards and reduce the unit cost of most operations reduced design, maintenance, and modification times. Accomplishment of this major objective will place North Island in a position to readily accept and implement technological advancements in the future.

A Cost Benefit Analysis has been performed with an: Average annual savings: $483,025 starting Jun-97 Payback: 1.7 Years Rate of return: 43.9%

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Depot Maintenance/Aviation Depot				C. NKL00000JP DEPOT MAINTENANCE SYSTEM (DMS)			D.		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
FKL00000JP CHERRY POINT	1	VAR	226	1	VAR	3,660	1	VAR	2,832
EKL00000JP JACKSONVILLE				1	VAR	5,668	1	VAR	416
CKL00000JP NORTH ISLAND	1	VAR	154	1	VAR	3,660	1	VAR	3,409
TOTAL	1	VAR	380	1	VAR	12,988	1	VAR	6,657

Narrative Justification:

These funds are to support the fielding of the Depot Maintenance System (DMS) suite of migration applications being developed by the Joint Logistics Systems Center to NADEP maintenance depots. During the recent budget review, the responsibility for acquisition of hardware was transferred from the JLSC to the Military Services.

The Depot Maintenance System (DMS) is using an evolutionary program strategy to deliver the enterprise functionality to support improved business processes required for effective depot maintenance operations across the Department of Defense. This functionality will be provided through the development of a suite of applications with critical interfaces to legacy and other major systems. These applications address major end item management, commodities repair, and specialized support (tool management, hazardous material management, enterprise information management, and interservice workload tracking). The objective is to provide to the user a suite of service specific migration applications with basic interfaces to the legacy environment.

DMS will provide the Services a revolutionary step forward in functional capability and automation, including a systems infrastructure upon which to make significant strides in business process improvement. Benefits will be realized in two primary areas: business performance and information systems costs. Business performance will be enhanced through the process improvements delivered by DMS applications to support the Depot Maintenance Improved Functional Baseline (IFB). These improvements include:reducing cycle times to make more assets available to support the war fighter, providing accurate delivery schedules to support mission planning, reducing expenses and inventory to lower the cost to the war fighter, improving readiness, sustainment, and interoperability for the war fighter, reducing labor through better resource and work planning, reducing overhead through elimination of non value-added activity, and improving schedule performance through more complete asset visibility; once implementation is complete and legacy applications are reduced or eliminated, ADP costs will come down markedly.

Without this investment, needed improvements to the depot business process and infrastructure will not be achieved. Implementing enhanced repair and overhaul capabilities is a critical contribution toward improving mission readiness in a downsizing environment. As the DoD weapon systems continue to age, reductions to the workforce continue and the number of depots are reduced, efficient and effective organic repair capability is of increasingly growing importance to DoD in maintaining weapon systems combat readiness. In order to meet this demand, the depot community needs to dramatically strengthen its business processes and the associated information infrastructure (hardware).

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Depot Maintenance/Aviation Depot				C. EKL05001CN EDMICS			D. Jacksonville		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
				1	1,458	1,458			
TOTAL				1	1,458	1,458			

Narrative Ju

The Engineering Data Management Information and Control System (EDMICS) is an automated, state-of-the-art engineering drawing repository utilizing digital imaging techniques, optical/digital mass storage, conventional (ADPE/MIS) computer resources and Local Area Network (LAN) technologies. EDMICS is a DoN Computer Aided Logistics Support (CALS) initiative and part of the NAVAIR Infrastructure Modernization effort.

The purpose of this project is to provide the NADEPs with the ability of storing large amounts of technical data in the CALS compliant digital format and to implement the EDMICS compatible automated Engineering Drawing Support Activity.

EDMICS will improve repository management by reducing or eliminating labor intensive functions associated with the receipt, storage, retrieval and distribution of drawing images. The system will permit authorized users the ability to add, delete, or change data as required. There will be increased efficiency in the processing of drawing requests and improved accuracy by providing the user with the latest drawing revision. Aperture card production costs will also be reduced.

A Cost benefit analysis has been performed for the review of economic indicators.

Average annual savings: starting FY 97 $630,477 Payback period: 2.5 years Rate of return: 31.5%

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Depot Maintenance/Aviation Depot				C. EKL04001BP ENGINEERING CAD/CAM SYSTEM, PHASE II			D. Jacksonville		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
				1	500	500	1	440	440
TOTAL				1	500	500	1	440	440

Narrative Justification:

This project is a two year effort to enhance and expend the computer aided design (CAD), computer aided manufacturing (CAM), and computer aided engineering (CAE) throughout the NADEP. Additionally, the introduction of the new system will assist the NADEP in linking CAD/CAE to computer aided manufacturing (CAM). The new system will be state-of-the-art engineering workstations networked together with file/database servers. Software will be provided to support design, analysis, drafting, technical publications, and manufacturing efforts in mechanical aerospace electrical, and electronic applications.

This project will provide the NADEP with an integrated CAD/CAM/CAE system and support the NAVAIR effort to modernize the engineering and manufacturing efforts at the field activities. The primary objective of the equipment is to implement the Computer Aided Logistics Support (CALS) initiative and transfer NAVAIR from a paper based, manually operated system to a state-of-the-art digital system. The system will greatly enhance productivity by reducing the time required for designs and modifications of aircraft and components.

Average annual savings: Phase 2 starting FY 97 $396,087 Payback period: 1.7 years Rate of return: 42.2%

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Depot Maintenance/Aviation Depot				C. CKL00253BP DESKTOP PUBLISHING SYSTEM			D. North Island		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
				1	490	490			
TOTAL				1	490	490			

Narrative Justification:

The system is a network for SUN workstations and peripherals consisting of: SPARC station 10 File Server-CPU, Operating System Window Manager, Monitor, and Mouse and Keyboard. The software and hardware will be used for desktop publishing of technical manuals. The capability afforded by this proposed system will be the complete automation of technical publications allowing for faster, more timely access and modification of data with higher accuracy. This system is to replace a DEC Rainbow system which is mostly unusable.

Benefits will be reduction in publication turn-around-time of about 50% at full capability of the new system. Our data integrity will increase to around 95% vice our present 40%. Our productivity should increase dramatically with full implementation.

If the purchase is not made we will continue to use some automation mixed with cut and paste of reproducible copy. Printing will continue to require negatives.

A Cost Benefit Analysis has been performed with an: Average annual savings: $261,915 starting in FY 96 Payback period 1.0 years Rate of return: 69.8%

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Depot Maintenance/Aviation Depot				C. CKL00333BP UNIX OPEN SERVER			D. North Island		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
				1	475	475			
TOTAL				1	475	475			

Narrative Justification:

Two existing Digital Equipment Corporation (DEC) VAX 11/780 computer systems are obsolete and can no longer adequately meet current user requirements. The systems cannot provide adequate system resources for advances in application software and they cannot meet increased demand for Open System capability. They represent obsolete technology and are extremely slow. Application speeds are virtually unusable. Because of the age of the systems, hardware maintenance is becoming increasingly more difficult and costly and downtimes are increasing. Also, because of the old technology, facilities costs are high. The DEC 7000 AXP server has the capability to run several different operating systems including the UNIX open system. Its memory and CPU performance can be increased "modularly" as NADEP computing demands increase. This provides investment protection as well as excellent performance. The DEC 7000 hardware can have as many as 6 processor boards and a huge data input/output (I/O) capability. This allows it to service all of the existing applications as well as any future applications.

A Cost Benefit Analysis has been performed with an: Average annual savings: $129,869 starting Oct 97 Payback: 3.4 Years Rate of return: 27.3%

000117

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Depot Maintenance/Aviation Depot				C. EKL05002AR DIGITAL VAX UPGRADE			D. Jacksonville		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
				1	105	105			
TOTAL				1	105	105			

Narrative Justification:

This project is for expansion of the NADEP VAX disk and memory space to support new workload and software development. The data storage space upgrade will be attached to the NADEP VAX LAN System to allow programs to be created, modified, and run at lower cost and greater efficiency.

A Cost Benefit Analysis has been performed with an: Average annual savings: $98,161 starting in FY 96 Payback period: .8 years Rate of return: 93.5%

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Depot Maintenance/Aviation Depot				C. FKL00006AR NALCCOIS 80286 BASED PROCESSOR REPLACEMENTS			D. Cherry Point		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
							1	VAR	1,000
TOTAL							1	VAR	1,000

Narrative Justification:

These funds are to support replacement of 80286 based processor personal computers (PCs) purchased and capitalized under the Naval Aviation Logistics Center Communication and Office Information System (NALCCOIS). The subject PCs were installed in 1987 and since that time technology and the business needs of the depot have changed.

Of all the existing PCs at the depot, approximately 1,300 are basic 80286 based microprocessor based PCs provided under the NALCCOIS project. Most of these assets have long since exceeded their useful life expectancy of five (5) years, and all have been superseded by technology. Current technology requires greater processing power and memory not capable by an 80286 based microprocessor. Most of the available software packages currently used by the NAVAIR Team cannot be loaded or run on the old obsolete machines.

In addition to technical obsolescence, many of the assets are in poor physical condition due to exposure to an industrial (i.e. depot) environment. Monitors, keyboards, internal circuit boards, hard drives, floppy drives, etc. Are in need of repair or replacement. To add to this problem is the difficulty in obtaining replacement parts for machines that are almost ten (10) years beyond their date of manufacture.

The intended solution is to purchase direct replacements for the existing 80286 based microprocessor PCs, to include replacement of the LAN card where required. Due to the large number of PCs which need replacement, and the limitations on funding and execution resources, implementation of the replacements will be phased. This project will focus on replacing one third of the existing PCs each fiscal year for three consecutive years. 664 PCs will be replaced in this year, the first of three years.

A Cost Benefit Analysis has been performed with an: Average annual savings of $771,723 starting JAN 98; a Payback Period: 3.9 years; and a Rate of Return of 26%.

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Depot Maintenance/Aviation Depot				C. FKL00001BP LOCAL AREA NETWORK UPGRADE AND ENHANCEMENT			D. Cherry Point		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
							1	800	800
TOTAL							1	800	800

Narrative Justification:

These funds are to support upgrade of existing Broadband Local Area Network (LAN) engineered and installed in 1987. The upgrade will provide a network backbone architecture based on Asynchronous Transfer Mode (ATM) technology, along with ATM connections for existing servers, and provides baseband connectivity via a Smart Hub (for small groups in isolated areas), or a 5-slot enclosure system (for a larger group). This solution will provide the increased bandwidth necessary to transport graphical images, as well as data, rapidly within and outside the depot. The Upgrade will reduce existing non-productive time currently resulting from limited LAN accessibility. The existing ten year old technology LAN affords a throughput of 5 Mbit, while ATM affords a throughput of 155 Mbits. This Upgrade will also reduce maintenance costs for areas using Network Interface Units (NIUs), will provide LAN accessibility for areas not currently connected, and reduce network traffic by allowing segmentation of resource groups. Implementation of ATM as the backbone of the depot LAN will position the depot to leverage this investment for future convergence of voice, data, and full motion video needs into a single network.

A Cost Benefit Analysis has been performed with an: Average annual savings of $323,230 starting JAN 98; a Payback Period: 1.7 years; and a Rate of Return of 40%.

000120

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Depot Maintenance/Aviation Depot				C. FKL00012AR E-MAIL SERVER SYSTEM REPLACEMENT			D. Cherry Point		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
							1	500	500
TOTAL							1	500	500

Narrative Justification:

These funds are to support the replacement of an existing Digital Equipment Company (DEC) VAX 8530 mainframe processor (plant account number N65923-036409), and mirror image backup, that is in excess of ten (10) years old, obsolete and costly to maintain. The processor is primarily used to support depot and Team wide electronic mail (e-mail) functions. Due to the age and technical obsolescence of the system, maintenance for both the hardware and software has become excessively expensive as well as difficult to obtain. The depot currently experiences failure of at least one component every two weeks. These failures result in system downtimes, which create difficulties and delays for users of the e-mail system. The technical solution is to replace the existing hardware and software with current technology, engineered to suit the depot requirement.

A Cost Benefit Analysis has been performed with an: Average annual savings of $58,848 starting JAN 98; a Payback Period: 7.8 years; and a Rate of Return of 12%.

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Depot Maintenance/Aviation Depot				C. CKL00352BP OPEN SYSTEM TRANSITION			D. North Island		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
							1	490	490
TOTAL							1	490	490

Narrative Justification:

NADEP employees need fast, integrated access to large amounts of information. We currently rely almost entirely on our mainframe systems to fulfill corporate-applications and data access needs. However, mainframe systems cannot be responsive enough to most of our adhoc business scenarios; and we must pay every year in processing costs to program and store data. Personnel currently take plant data from hard-copy reports and download files onto floppy disks, making spreadsheets for reporting and analysis. This has created two problems: 1) the promulgation of stand alone data collection sites which are not properly safeguarded in the event of data loss and cannot be fully supported by technical staff; and 2) the existence of proprietary [illegible] which are not available to the NADEP as a whole, duplicating effort by NADEP employees in many cases. Not all personnel have access to state of the art workstations which will allow them to access and manipulate data.

By enhancing present communications capabilities to the HP/9000-UNIX open systems environment, and augmenting disk space and processor power, the NADEP can use ORACLE7 and SQL*NET server software to warehouse legacy system data and make it available across all competencies for adhoc and up-line reporting. Augmentation of existing equipment continues to keep in compliance with the Technical Architectural Framework for Information Management. By having information readily available at the work area, employees will be empowered to make better business decisions which will improve productivity and have favorable impact on right-sizing initiatives. The purchase of programming tools with interoperability to ORACLE7 will allow designers and users to quickly develop the application environment which will best benefit the business processes.

If this purchase is not acquired, existing methods are subject to escalating costs and cannot provide the fast, easy access to data required by the customer to produce the product. Inaccuracy, inadequacy, and delays in up-line reporting will continue to be a problem. Poor performance and inflexibility could jeopardize the NADEP's ability to provide the best product at the best price.

A Cost Benefit Analysis has been performed with an: Average annual savings: $159,633 starting Feb 98 Payback: 2.4 Years Rate of return: 32.6%

000122

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Depot Maintenance/Aviation Depot				C. EKL00013CN COMPUTER SYSTEM UPGRADE			D. Jacksonville		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
							1	114	114
TOTAL							1	114	114

Narrative Justification:

This NADEP uses five host computer systems to provide services over the ethernet based network to more than 500 users located throughout the NADEP and remote areas. The host computer systems are presently being replaced by a single computer system. The new system will serve the existing 500 users and provide for network growth up to 1000 users. It is projected, however, that by FY 96 the network growth will exceed 1000 users. A hardware upgrade is required to maintain capabilities.

This system upgrade includes one additional central processing unit (CPU) allowing multiple processors operating simultaneously in a symmetrical configuration; an additional 20 Gigabytes of disk storage with on-line cache to support increased workload and provide optimum performance to users; and an addition of 256 Megabytes of computer memory that will allow the system to internally process more data without having to swap out to slower external devices.

This project will maintain network capabilities by providing the forthcoming host computer system with sufficient resources to serve 1000 network users and allow for growth up to 1500 users. The present system will not provide adequate computer resources for the increasing workload and network growth.

A Cost Benefit Analysis has been performed with an: Average annual savings: $73,067 starting in FY 97 Payback period: 1.2 years Rate of return: 64.1%

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Depot Maintenance/Aviation Depot				C. ETL05003BP LAN FIBER-OPTIC NETWORK SYSTEM			D. Jacksonville		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
				1	200	200			
TOTAL				1	200	200			

Narrative Justification:

The LAN fiber-optic system is a Fiber Distributed Data Interface (FDDI) ring, consisting of fiber-optic cabling and concentrators, which will connect all areas of the NADEP with a throughput of 100 MBIT/S, ten times greater throughput than at present. Connections between the FDDI ring and particular work areas are made by Bridge/Routers (BROUTERS) over the existing 10 MBIT/S Ethernet LAN.

The proposed fiber-optic network will provide high speed connectivity among the VAX, Novel and other servers. It will also make high speed file transfers possible to LAN intensive applications such as EDMICS and CALS, as well as providing a compatible interface with the base FDDI network.

Direct connection to the VAX 7000 will be made via the FDDI Controller, which will provide the fastest and most efficient connectivity between the LAN and VAX server.

The LAN fiber-Optic System will provide the NADEP with a state-of-the-art Network backbone that will ensure supportability for the full life of the network and beyond.

A Cost Benefit Analysis has been performed with an: Average annual savings: $193,683 starting in FY 96 Payback period: .8 years Rate of return: 96.8%

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Depot Maintenance/Aviation Depot				C. EKL00013CN COMPUTER SYSTEM UPGRADE			D. Jacksonville		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
							1	200	200
TOTAL							1	200	200

Narrative Justification:

This NADEP uses five host computer systems to provide services over the ethernet based network to more than 500 users located throughout the NADEP and remote areas. The host computer systems are presently being replaced by a single computer system. The new system will serve the existing 500 users and provide for network growth up to 1000 users. It is projected, however, that by FY 96 the network growth will exceed 1000 users. A hardware upgrade is required to maintain capabilities.

This system upgrade includes one additional central processing unit (CPU) allowing multiple processors operating simultaneously in a symmetrical configuration; an additional 20 Gigabytes of disk storage with on-line cache to support increased workload and provide optimum performance to users; and an addition of 256 Megabytes of computer memory that will allow the system to internally process more data without having to swap out to slower external devices.

This project will maintain network capabilities by providing the forthcoming host computer system with sufficient resources to serve 1000 network users and allow for growth up to 1500 users. The present system will not provide adequate computer resources for the increasing workload and network growth.

A Cost Benefit Analysis has been performed with an: Average annual savings: $73,067 starting in FY 97 Payback period: 1.2 years Rate of return: 64.1%

DEPARTMENT OF THE NAVY - DEFENSE BUSINESS OPERATIONS FUND
DEPOT MAINTENANCE - AVIATION DEPOTS
CAPITAL BUDGET EXECUTION
(DOLLARS IN MILLIONS)
FY 1996

ITEM LINE #			ITEM DESCRIPTION	Original Request	Change	Revised Request	Explanation/Reason for Change
			1a. EQUIPMENT, OTHER THAN ADPE & TELECOM (>$500K)				
			Replacement				
N EL	00000A	R	CORPORATE ASKARS UPGRADE	2.140	0.801	2.941	Price Increase due to replacement of Large Item Stacker vice repair and additional contractual costs (LANTNAVFACENGCOM site inspection and project management fees) that were not disclosed initally. Some authority came from various line items.
E EL	0001		MING CENTER	1.650	(0.825)	0.825	Project was split into two fiscal years to accomodate ADP projects required in FY 1996. The other $.825 is included in FY 1997.
E EL	00024A	R	TEST COMPUTER AND INSTRUMENTATION	1.000	0.000	1.000	
C EL	00289A	R	VERTICAL MACHINE CENTER VMC 200	0.000	0.500	0.500	This project was in the under $500K category last Congressional Budget. This project increased in cost due to current manufacturers pricing information and inflation projection. Add'l Funding came from line item CES00291A Equipment Installations.
			New Mission				
N EL	00000X	N	CASS STATION EQUIPMENT	5.090	0.000	5.090	
			SUBTOTAL EQUIPMENT, OTHER THAN ADPE & TELECOM (>$500K)	9.880	0.476	10.356	
N ES	000000		**1b. EQUIPMENT, OTHER THAN ADPE & TELECOM (<$500K)**	5.762	(1.203)	4.559	
			2. GRAND TOTAL EQUIPMENT, OTHER THAN ADPE & TELECOM	15.642	(0.727)	14.915	
N MC	000000		**3. MINOR CONSTRUCTION (<$300K)**	3.839	(0.854)	2.985	
			GRAND TOTAL NON-ADP CAPITAL PURCHASES PROGRAM	19.481	(1.581)	17.900	

000126

DEPARTMENT OF THE NAVY - DEFENSE BUSINESS OPERATIONS FUND
DEPOT MAINTENANCE - AVIATION DEPOTS
CAPITAL BUDGET EXECUTION
(DOLLARS IN MILLIONS)
FY 1996

ITEM LINE #	ITEM DESCRIPTION	Original Request	Change	Revised Request	Explanation/Reason for Change
	1a. ADPE & TELECOMMUNICATIONS (>$100K) **Computer Hardware (Production)**				
E KL 05002A	R DIGITAL VAX UPGRADE	0.000	0.105	0.105	Substitution. This project was originally planned in FY 1995. Congressional reduction to DBOF capital program postponed project.
N KL 00000J	P DEPOT MAINTENANCE SYSTEM (DMS)	0.834	12.154	12.988	Additional dollars are required to support deployment of JLSC managed applications and the BAIM portion for Jacksonville. These procurements such as Material Resource Planning and Commercial off the Shelf Software were not envisioned.
C KL 00285B	P SDAE/ASKARS UPGRADE	0.700	(0.700)	0.000	Project canceled due to initiative to rightsize all TANDEM systems. Funding reprogrammed in FY 1996 to fund prior year projects..
C KL 00284B	P VAX1 REPLACEMENT	0.450	(0.450)	0.000	Cancellation. Previously installed computer system will be utilized to meet project objectives. Funding reprogrammed in FY 1996 to fund prior year projects.
C SL 00292B	P RELATION DATABASE SOFTWARE	0.250	(0.250)	0.000	Deferral. Going forward with project too labor intensive w/limited success in achieving potential benefits. Funding reprogrammed in FY 1996 to fund prior year projects.

000127

DEPARTMENT OF THE NAVY - DEFENSE BUSINESS OPERATIONS FUND
DEPOT MAINTENANCE - AVIATION DEPOTS
CAPITAL BUDGET EXECUTION
(DOLLARS IN MILLIONS)
FY 1996

ITEM LINE #	ITEM DESCRIPTION	Original Request	Change	Revised Request	Explanation/Reason for Change
C KL 00228B	P CAD II	0.000	0.135	0.135	This project has moved from FY 1994 and split into three years; FY 1995 ($.651) FY 1996 ($.135) and FY 1997 ($.475). During FY 1994 JLSC did not release funding for this project until late in the fiscal vear. We were unable to guarantee JLSC obligation of these funds so the funding document was returned to JLSC as unaccepted. When carryover authority for FY 1994 was not authorized. the decision was made to spread over three years; therefore not risking the authority to complete this project.
C KL 00253B	P DESKTOP PUBLISHING SYSTEM	0.000	0.490	0.490	Moved. This project was moved from FY 1995 to FY 1996 in order to fund prior year projects in FY 1995.
C KL 00333B	P UNIX OPEN SERVER	0.000	0.475	0.475	Moved. This project was moved forward from FY 1997.
E KL 04001B	P ENGINEERING CAD/CAM SYSTEM, PHASE II	0.000	0.500	0.500	Moved. This project was originally budgeted under JLSC and transfer to NAVY did not take place. This project was moved from FY 1994 and split into FY 1996 ($.500) and FY 1997 ($.440).

000128

DEPARTMENT OF THE NAVY - DEFENSE BUSINESS OPERATIONS FUND
DEPOT MAINTENANCE - AVIATION DEPOTS
CAPITAL BUDGET EXECUTION
(DOLLARS IN MILLIONS)
FY 1996

ITEM LINE #	ITEM DESCRIPTION	Original Request	Change	Revised Request	Explanation/Reason for Change
E KL 05001C	N EDMICS	0.717	0.741	1.458	Moved. This project was originally budgeted under JLSC and transfer to NAVY did not take place. This project was moved from FY 1994 and split into FY 1996 ($1.458) and FY 1997($.717). The FY 1997 amount will be funded with OPN Appropriation.
C KL 00288C	N DEFENSE MESSAGE SYSTEM UPGRADE	0.200	(0.200)	0.000	Cancellation. Decision to cancel based on critically of requirement and future plans for DMS. Funding reprogrammed in FY 1996 to fund delayed prior year projects.
E KL 00013C	N COMPUTER SYSTEM UPGRADE	0.114	(0.114)	0.000	Deferral. Project moved to FY 1997. Funding reprogrammed in FY 1996 to fund delayed prior year projects.
E TL 05003B	Telecommunications P LAN FIBER OPTIC NETWORK	0.000	0.200	0.200	Substitution. This project was originally planned in FY 1995. Congressional reduction to DBOF capital program postponed project.
	SUBTOTAL ADPE & TELECOMMUNICATIONS (>$100K)	3.265	13.086	16.351	
N KS 000000	**1b. ADPE & TELECOMMUNICATIONS (<$100K)**	0.099	(0.099)	0.000	
	2. GRAND TOTAL ADPE & TELECOMMUNICATIONS	3.364	12.987	16.351	
	GRAND TOTAL ADP CAPITAL PURCHASES PROGRAM	3.364	12.987	16.351	
	GRAND TOTAL CAPITAL PURCHASES PROGRAM	22.845	11.406	34.251	

000129

DEPARTMENT OF THE NAVY
DEFENSE BUSINESS OPERATIONS FUND
NAVAL ORDNANCE CENTER
NAVAL WEAPONS STATIONS

Activity Group Function:

The Naval Ordnance Center (NAVORDCEN) and the Naval Weapons Stations (NWS) provide all services for explosive out-loading of combat logistic force ships, amphibious ships, combatants, submarines and commercial vessels. The stations also provide retail ammunition management services including receipt, segregation, storage, issue and maintenance of ammunition. Other functions include intermediate and depot level maintenance assignments for air, surface and subsurface weapons, prototype and pilot production services, quality evaluation services, acquisition engineering-agent functions, support of non-tactical fleet data systems, and ordnance packaging, handling, storage and transportation. All five stations are host activities with significant military/tenant support responsibilities. Four of the stations provide complete homeporting services for naval combat logistic force ships. The activity group also includes the Naval Warfare Assessment Division which is responsible for the assessment of weapons performance by all Fleet units. This responsibility involves gauging the war fighting capacity of ships and aircraft, from unit to battle group level, by assessing the suitability of design, the performance of equipment and weapons, and the adequacy of training.

Activity Group Composition:

Activities	Location
NAVORDCEN Headquarters	Indian Head, Maryland
NAVORDCEN Atlantic Division	Yorktown, Virginia
Naval Weapons Station	Charleston, South Carolina
Naval Weapons Station	Earle, Colts Neck, New Jersey
Naval Weapons Station	Yorktown, Virginia
NAVORDCEN Pacific Division	Seal Beach, California
Naval Weapons Station	Concord, California
Naval Weapons Station	Seal Beach, California
NAVORDCEN PACDIV Detachment	Fallbrook, California
NAVORDCEN PACDIV Detachment	Port Hadlock, Washington
Naval Warfare Assessment	Corona, California Division
Inventory Management and Systems Division	Mechanicsburg, Pennsylvania

Financial Profile:

($ millions)

1996	FY 1997	FY 1995	FY
Cost of Goods Sold	606.6	597.6	575.7
Net Operating Results (NOR)	-9.6	65.1	49.0
Accumulated Operating Results (AOR)	-217.1	-49.0	0

The FY 1996 ending AOR estimate assumes posting of the approved FY 1994 passthrough of $78.7 million and a transfer from the Supply business area of $24.3 million.

Workload:	FY 1995	FY 1996	FY 1997
Estimated New Orders Received ($millions)	612.9	631.7	608.3
Direct Labor Hours (in thousands)	5,725	6,281	6,525

From FY 1995 to FY 1997 the NAVORDCEN's direct labor hours increase by 14 percent. The primary program increases are due to BRAC-93 and BRAC-95 actions, RSS&I support, Army and Air Force Prepositioning ship support and the NAVORDCEN cost restructuring. The cost restructuring involves realignment of 52.5 thousand hours and associated cost from overhead to direct charge based upon findings that some functions were being performed in response to direct tasking from specific program managers. This realignment results in a more equitable distribution of costs to benefitting programs.

Performance Indicators:	FY 1995	FY 1996	FY 1997
Productive Ratio	59%	60%	66%
Indirect Costs ($millions)	272.2	309.7	266.9
-UPC Subsidy	48.0	0.0	0.0
-UPC in Overhead	0.0	41.7	41.4

DBOF overhead costs increase in FY 1996 as compared to FY 1997 because costs associated with Underutilized Plant Capacity (UPC) were directly funded by a subsidy from the Operations and Maintenance, Navy account in FY 1995. In FY 1996 and FY 1997, these costs are funded as DBOF as overhead costs which are recovered from all customers as part of the hourly rate paid for work accomplished at the Weapons Stations. The budget anticipates significant reductions in indirect costs from both consolidation and flattening of the NAVORDCEN infrastructure via reduction and elimination of unnecessary and redundant functions.

Customer Rate Change:	FY 1995	FY 1996	FY 1997
Composite Unit Rate	$93.76	$106.59	$93.95
% Change		13.7%	-11.9%

Approved and proposed customer composite unit and billing rates (Composite unit rates include all direct non-labor costs in addition to direct labor, production and G&A expenses:

Unit Cost:	FY 1995	FY 1996	FY 1997
Cost Per Direct Labor Hour	$109.08	$95.14	$88.23
% Change in Unit Cost		-12.8%	-7.3%

The NAVORDCEN's ability to reduce costs through consolidation, downsizing of its infrastructure and process improvements is critical in keeping its year-to-year changes in unit cost rates below inflation and fluctuations in direct workload.

Staffing:	FY 1995	FY 1996	FY 1997
Civilian End Strength	4,669	5,197	5,076
Civilian Workyears	5,193	5,399	5,151
Active Military Personnel			
End Strength	840	758	715
Workyears	438	785	708
Reserve Military Personnel			
Workyears	66	90	133

The NAVORDCEN is managing the general downward trend through attrition and implementation of voluntary and involuntary separations. Building a flexible work force for the future (short term temporaries, long term non-permanent personnel, multi-skilled wage grade) should alleviate the need for future RIFs.

As a result of BRAC-93 and BRAC-95 actions and fall out from BRAC actions, the NWS at Charleston, Concord and Seal Beach have been scheduled to receive host responsibility for remaining tenants beginning in FY 1996. This support of tenant organizations requires an additional 173 and 235 workyears in FY 1996 and FY 1997 respectively. This budget includes only minimum requirements based on negotiations with those respective tenant organizations.

Naval Reserve Contributory Support. Even though the NAVORDCEN remains committed to achieving the original goal of 500 annual workyears of reserve contributory support, this budget reflects what is considered executable given the existing reserve support structure. Future budgets will be adjusted once the necessary fundamental changes to the reserve support system are implemented and it is clear the goal is achievable in the appropriate time frames.

Headquarters Cost:	FY 1995	FY 1996	FY 1997
Cost in $millions	11.8	11.9	12.0

Capital Budget Authority:		($ millions) FY 1995	FY
1996	FY 1997		
Non ADP Equipment	2.5	2.4	3.1
ADP/Telcom	7.8	5.4	2.0

Minor Construction	1.6	2.3	3.3
Software Development	0.0	1.9	1.4
Total Capital Authority	11.8	11.9	9.8

The Capital program allows for improvement in readiness, sustainability and mobilization for mission support through replacement of existing over-aged facilities and equipment and investment in new productivity enhancing projects. In addition, these capital investments contribute to resolving environmental and safety compliance related requirements. Capital investment requirements reflect the NAVORDCEN's commitment to reduce its infrastructure costs and associated investments.

Economies and Efficiencies:

Since its establishment on 1 Oct 1993, the NAVORDCEN has implemented the following: a) Established and staffed NAVORDCEN Headquarters located at Indian Head, Maryland; b) Established and staffed the NAVORDCEN ammunition organizations located at the Atlantic and Pacific Divisions; c) Established and currently completing staffing of the remaining vacancies in the NAVORDCEN Atlantic and Pacific Divisions; d) Coordination with the Fleet to resolve issues related to air launched missile recovery and foam packaging hazards; e) Centralized ordnance inventory control at the NAVORDCEN Inventory Management and Systems Division for NAVAIR 2E and 8E Cog (LOE and air missile) items, NAVSEA 2T and 8T Cog (bullets and surface missile) items, sonobuoys and mines; f) Established and implemented a uniform stabilized rate structure effective FY 95; g) Concluded memoranda of agreement (MOA) with PEO(T), PEO(A), PEO(CU), PMS-422, PM-4, COMINEWARCOM, COMOMAG, NAWC-WD; h) Established additional duty responsibilities with the Fleet Sustaining Stock Point organizations; i) Completed a FY 94 baseline assessment; j) Conducted and completed Logistics 2003, Ordnance and Total Force war games; k) Received SECNAV reinvention laboratory approval on 1 Mar 95; and, l) Commenced efforts to implement the following management improvement initiatives: centralized ordnance maintenance requirements generation model; activity based costing; inventory accuracy; magazine custodian; consolidation of ordnance management information systems; and, activity land and facility assessment.

Additionally, the NAVORDCEN is implementing the following cost reduction initiatives to standardize and improve our business practices and processes resulting in improved efficiency, effectiveness and performance:

a. Work force Balancing. Institutionalize workload validation reviews with customers to ensure the work force is properly balanced with funded workload. Resolve the variances using temporary employment, overtime, direct hires, outsourcing, attrition, cross training, or voluntary/involuntary separations as necessary.

b. NWS Cost Performance Reviews. Review and highlight the cost imbalances to perform like work between two or more weapons stations. Investigate the causes and recommend actions necessary to standardize processes leading to reduced corporate costs.

c. Receipt, Segregation and Issue (RSI) of Ammunition Re-Engineering. Standardize the methods and processes for providing accountability and asset control in the areas of receipt, storage, issue and inventory that directly support Fleet units. Streamline the RSI process and transition to a multi-skilled work force.

d. Infrastructure Quality Management Board (QMB). The infrastructure QMB was established to ensure and oversee corporate efforts to right-size the physical infrastructure in support of Defense Planning Guidance. The QMB and associated tiger teams are using NAVFAC management tools (such as Activity Land and Facility Assessment (ALFA) and Automated Plant Management Module (APMM)) to more effectively review and utilize the physical infrastructure.

e. NWS Baseline Infrastructure Requirements Review (NAVORDCEN Cost Restructuring Initiative). Review NAVORDCEN cost allocation methodology to ensure core infrastructure requirements are properly identified to benefitting customers. The goal is to implement cost restructuring/allocation necessary to ensure all personnel, facilities and equipment are properly identified with a benefitting customer/workload.

f. Activity Based Costing. Review of personnel and functional processes resulting in streamlining and standardization of processes to remove non-value added requirements.

DEPOT MAINTENANCE - NAVAL ORDNANCE CENTER
REVENUE AND EXPENSES
(Dollars in Millions)

	FY 1995	FY 1996	FY 1997
Revenue:			
Gross Sales			
Operations	582.4	645.5	607.7
Capital Surcharge	0.0	0.0	0.0
Depreciation except Maj Const	14.6	17.2	17.0
Major Construction Depreciation	0.0	0.0	0.0
Other Income	0.0	0.0	0.0
Total Income	**597.0**	**662.7**	**624.7**
Expenses:			
Cost of Materiel Sold from Inventory			
Negotiated Purchases from Customers			
Transportation	0.3	0.0	0.0
Salaries and Wages:			
Military Personnel	26.2	26.3	23.8
Civilian Personnel	277.3	293.1	280.6
Materials, Supplies and			
Parts used in Operations	56.9	59.0	50.5
Facility Repair Charge	39.5	50.0	50.8
Depreciation - Capital	14.6	17.2	17.0
Contracted Engineering Services	6.7	4.5	4.2
Lease Costs	1.6	2.6	2.6
Purchased Utilities	13.3	12.8	12.3
Purchased Communications	5.2	5.2	5.1
Equipment Maintenance	3.6	4.4	4.3
Fuel	3.2	3.2	3.3
Other Expenses	158.2	119.3	121.2
Total Expenses	**606.6**	**597.6**	**575.7**
Operating Result	(9.6)	65.1	49.0
Less Capital Surchg Reservation	0.0	0.0	0.0
Plus Appropriations Affecting NOR/AOR	0.0	78.7	0.0
Other Changes Affecting NOR/AOR	0.2	24.3	0.0
Net Result	(9.4)	168.1	49.0
Prior Year AOR	(207.7)	(217.1)	(49.0)
Accumulated Operating Result	**(217.1)**	**(49.0)**	**0.0**

DEPOT MAINTENANCE - NAVAL ORDNANCE CENTER
SOURCE OF REVENUE
(Dollars in Millions)

	FY 1995	FY 1996	FY 1997
1. New Orders	612.9	631.7	608.3
a. Orders from DoD Components	534.9	536.7	536.3
Department of the Navy	494.2	463.8	463.8
Operations and Maintenance, Navy	346.9	261.5	308.6
Operations and Maintenance, Marine Corps	4.6	5.7	6.9
O&M, Navy Reserve	1.2	1.6	1.4
O&M, Marine Corps Reserve	0.0	0.0	0.0
Aircraft Procurement, Navy	7.1	6.0	5.0
Weapons Procurement, Navy	38.9	29.1	23.8
Shipbuilding & Conversion, Navy	28.1	42.7	19.5
Other Procurement, Navy	23.4	42.8	33.3
Procurement, Marine Corps	1.2	13.1	13.3
Family Housing, Navy and Marine Corps	27.8	34.0	34.3
Research, Development, Test & Eval, Navy	15.0	6.8	6.7
Military Construction, Navy	0.0	0.0	0.0
Other Navy Appropriations	0.0	20.4	11.1
Other Marine Corps Appropriations	0.0	0.0	0.0
Department of the Army	11.6	25.0	24.2
Army Operation & Maintenance Accounts	5.6	2.9	2.7
Army Res, Dev, Test & Eval Accounts	0.0	0.7	0.8
Army Procurement Accounts	0.0	11.6	11.5
Army Other	6.0	9.8	9.1
Department of the Air Force	23.4	25.9	19.2
Air Force Operation & Maintenance Accounts	21.4	24.8	17.4
Air Force Res, Dev, Test & Eval Accounts	0.0	0.1	0.1
Air Force Procurement Accounts	0.2	0.2	0.9
Air Force Other	1.7	0.7	0.8
DoD Appropriated Accounts	5.8	22.0	29.2
Base Closure and Realignment	0.0	20.4	27.6
Operation & Maintenance Accounts	0.0	0.0	0.0
Res, Dev, Test & Eval Accounts	1.0	0.7	0.7
Procurement Accounts	0.2	0.2	0.2
DoD Other	4.5	0.6	0.6
b. Orders from DBOF Business Areas	74.6	66.1	46.1
c. Total DoD	609.5	602.7	582.4
d. Other Orders	3.4	29.0	25.9
Other Federal Agencies	0.9	1.5	0.9
Foreign Military Sales	0.0	24.6	22.0
Non Federal Agencies	2.5	2.9	3.1
2. Carry-In Orders	170.2	186.1	155.1
3. Total Gross Orders (available funding)	783.1	817.9	763.4
4. Carry-Out Orders	186.1	155.1	138.7
Change in Backlog (carry-out less carry-in)	15.9	(31.0)	(16.4)
5. Total Gross Sales	597.0	662.7	624.7

DEFENSE BUSINESS OPERATIONS FUND (DBOF)
DEPOT MAINTENANCE - NAVAL ORDNANCE CENTER
SUMMARY OF CHANGES IN OPERATIONS
($ MILLIONS)

	COSTS
FY 1995 Actual	624.5
FY 1996 Presidents Budget for FY 1996	551.0
Estimated Impact in FY 1996 of Actual FY 1995 Experience	
Labor Repricing	1.0
Program Changes:	
1. Direct Workyear changes (labor costs):	
a. Receipt, Segregation, Storage & Issue	5.3
b. Standard Missile maintenance support	1.6
c. Funded workload at NWAD Corona	1.5
d. Army/Air Force funded prepositioning workload at NWS Concord	3.4
e. Army funded 2.75" Rocket Motor work at NWS Concord/SBeach/Yorktown	1.1
f. Increased tenant support at NWS Charleston (BRAC-93)	5.7
g. Increased tenant support at NWS Concord (BRAC-93)	0.9
h. Special Weapons at NWS Yorktown	0.2
i. Fiber Optic Integrated Voice Communications System (FOIVCS)	(0.9)
j. Aviation Support Equipment Maintenance	(1.3)
k. Other direct workload reductions	(3.7)
2. Other Direct Cost Changes:	
a. Direct Material cost changes :	
1. Transferring FFT1052 and LST1186 to foreign governments and	7.8
2. modernization of GPETE.	
3. Weapons Impact Scoring System (WISS)	8.7
4. Prepositioned Ships Program	1.7
b. Direct Other cost changes associated with direct workload changes	(2.2)
c. Direct Contract cost changes associated with direct workload changes	(2.3)
d. Direct Transfer cost changes	(4.3)
3. Overhead Workyear Changes:	
a. Production Expense (labor costs):	
1. Reclassification of train crew and riggers from G&A to PE	0.5
2. Overtime Reduction	(0.1)
3. Public Works function transfer to Production (Waterfront Ops)	0.1
4. FECA reidentified to labor vice other cost	3.3
5. Production overhead workload affected by direct workload changes	1.5
6. Reclassification of Public Works support from PE to G&A at NWS Charleston	(5.5)
7. Receipt, Segregation, Storage and Issue	1.3
8. Army/Air Force Prepositioning	0.7
9. Packaging Handling Storage & Transportation (PHS&T) Fleet Services at NWS Earle	1.1
10. Direct workload support at Naval Warfare Assessment	0.2
11. Division (NWAD) at Corona, CA	
12. Military changes related to program changes, and redistribution from PE to G&A	(3.7)
b. General and Administrative Expense (labor costs):	
1. Change in planned overtime usage	1.6

2. Reclassification of train crew and riggers from G&A to PE	(0.5)
3. Transfer of Public Works function to NWAD	0.6
4. Increased Fire Management & Safety	0.8
5. Increased Public Works Facilities maintenance	0.2
6. Transfer Public ks function to Waterfront Ops	(0.1)
7. Environmental ort	0.1
8. Reclassificatior ublic Works support from PE to G&A at NWS Charlest	5.5
9. Inventory Management Systems Division	1.8
10. General & Admin workload affected by direct workload changes	6.2
11. FECA reidentified to labor vice other cost	3.5
12. Military change related to program changes from PE	3.7
4. Other Overhead Cost Changes:	
a. Production Expense (PE) (nonlabor costs):	
1. Reduced transfer costs	(7.0)
2. Decrease in materials and contracts for Systems Engineering department at NWS Yorktown.	(0.3)
3. Increase in ADP equipment; non-ADP/Telecon equipment; and minor construction purchases with production expense due to CPP threshold change ($50K to $100K)	0.7
4. Reclassification of Public Wor support from PE to G&A at NWS Charleston	(5.4)
5. Other miscellaneous reductions	(1.9)
6 FECA reidentified to labor	(3.3)
7. Depreciation	(3.8)
b. General & Administra e (G&A) contractual expenses:	
1. Environmental and Safety projects at NWS Yorktown, NWS Earle and NWS Yorktown	1.0
2. Reclassification of Public Works support from PE to G&A at NWS Charleston	5.4
3. Tresle installation at NWS Earle	2.9
4. Replacement of water tanks at NWS Yorktown	1.4
5. Miscellaneous contractual support reductions	(0.7)
c. General & Administrative material expenses:	
1. Other than CPP threshold change items	(1.0)
2. Increase in ADP equipment; non-ADP/Telecon equipment; and minor construction purchases with G&A expense due to CPP threshold change ($50K to $100K)	1.1
d. General & Administrative trav transfers/depreciation/other expenses:	
1. FECA reidentified to labo	(3.5)
2. Increased depreciation	2.2
3. Change in transfers due to realignment of Public Works at NWS Charleston	11.3
4. Other miscellaneous increases	0.5
FY 1996 Current Estimate	597.6
Pricing Adjustments:	
1. FY 1997 Payraise	
a. Civilian Personnel	5.8
b. Military Personnel	0.8
2. Annualization of prior year payraise	2.4
3. Stock Fund - Fuel	0.0
4. Stock Fund - Non-Fuel	0.2

5. Non Stock Fund Material/Equipment	0.7
6. DBOF Price Changes	1.0
7. General Purchase Inflation	3.3
8. Travel/Transportation/Other	0.1
Program Changes:	
1. Direct Workyear Changes (labor costs):	
a. Overhead to Direct realignment for explosive safety, nuclear security, ordnance handling, sensitive ordnance security, Conventional Ammunition Information Mgmt System (CAIMS), fleet ammunition requisitioning services and in-service ordnance logistics management support functions	14.6
b. Family Housing Administration, NAVCOMPT Issue 27967 at NWSs Charleston, Yorktown, and Earle (FY97 only)	(1.4)
c. BRAC95 Tenant Support at NWS Seal Beach	2.9
d. Other direct workload adjustments	(8.6)
2. Direct Military Labor cost change associated with increased reserve contributory support	1.2
3. Direct Material cost changes associated with: General Purpose Test Equipment Weapons Impact Scoring Sets (WISS) instrumentation System Replacement Program Modernization (SHRAM)	(7.5)
4. Direct Contract cost changes:	
a. Overhead to Direct realignment for explosive safety, nuclear security, ordnance handling, sensitive ordnance security, Conventional Ammunition Information Mgmt System (CAIMS), fleet ammunition requisitioning services and in-service ordnance logistics management support functions	16.8
b. Direct contractual support reductions	(2.8)
5. Overhead (G&A + PE) Civilian labor cost changes for: Overhead to direct realignment for explosive safety, nuclear security, ordnance handling, sensitive ordnance security, Conventional Ammunition Information Mgmt System (CAIMS), fleet ammunition requisitioning services and in-service ordnance logistics management support functions	(14.6)
6. Overhead (G&A + PE) Civilian Labor cost changes associated with reductions in overhead FTE workyears and reduced overhead overtime	(13.6)
7. Overhead (G&A + PE) Military Labor cost changes associated with the civilianization of the Standard Missile function, and pricing variances resulting for changing mix of ranks from year to year.	(4.6)
8. Overhead (G&A + PE) Material cost changes associated with:	
a. Other than CPP threshold change items (equipment and supplies)	(2.9)
b. Increase in ADP equipment; non-ADP/Telecon equipment; and minor construction purchases with G&A expense due to CPP threshold change ($50K to $100K)	1.1
9. Overhead (G&A) contractual services changes associated with overhead to direct realignment for explosive safety, nuclear security, ordnance handling, sensitive ordnance security, Conventional Ammunition Information Mgmt System (CAIMS), fleet ammunition requisitioning services and in-service ordnance logistics management support functions	(16.8)
FY 1997 Current Estimate	575.7

DEFENSE BUSINESS OPERATIONS FUND
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - NAVAL ORDNANCE CENTER

MATERIAL INVENTORY DATA
(Dollars in Millions))
FISCAL YEAR 1995

			-------- Peacetime --------	
	Total	Mobilization	Operating	Other
Materiel Inventory BOP	12.5	0.0	12.5	0.0
BOP Reclassification Changes	0.0	0.0	0.0	0.0
Price Changes	0.0	0.0	0.0	0.0
Receipts from Commercial Sources	59.4	0.0	59.4	0.0
Negotiated Purchase from Customers	0.0	0.0	0.0	0.0
Gross Sales	60.2	0.0	60.2	0.0
Materiel Inventory Adjustments				
CAPITALIZATIONS + OR (-)	0.0	0.0	0.0	0.0
RETURNS TO SUPPLIERS (-)	0.0	0.0	0.0	0.0
TRANSFERS TO PROP. DISP.(-)	0.0	0.0	0.0	0.0
ISSUES/RECEIPTS WITHOUT REIMBURSEMENT + or (-)	0.0	0.0	0.0	0.0
OTHER (list)	0.0	0.0	0.0	0.0
TOTAL ADJUSTMENTS	0.0	0.0	0.0	0.0
Materiel Inventory EOP	11.7	0.0	11.7	0.0
ECONOMIC RETENTION (memo)	0.0			
POLICY RETENTION (memo)	0.0			
POTENTIAL EXCESS (memo)	0.0			
Materiel Inventory on Order EOP (memo)	3.0	0.0	3.0	0.0

DEFENSE BUSINESS OPERATIONS FUND
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - NAVAL ORDNANCE CENTER

MATERIAL INVENTORY DATA
(Dollars in Millions))
FISCAL YEAR 1996

			-------- Peacetime --------	
	Total	Mobilization	Operating	Other
Materiel Inventory BOP	11.8	0.0	11.8	0.0
BOP Reclassification Changes	0.0	0.0	0.0	0.0
Price Changes	0.0	0.0	0.0	0.0
Receipts from Commercial Sources	66.7	0.0	66.7	0.0
Negotiated Purchase from Customers	0.0	0.0	0.0	0.0
Gross Sales	62.2	0.0	62.2	0.0
Materiel Inventory Adjustments				
CAPITALIZATIONS + OR (-)	0.0	0.0	0.0	0.0
RETURNS TO SUPPLIERS (-)	0.0	0.0	0.0	0.0
TRANSFERS TO PROP. DISP.(-)	0.0	0.0	0.0	0.0
ISSUES/RECEIPTS WITHOUT REIMBURSEMENT + or (-)	0.0	0.0	0.0	0.0
OTHER (list)	0.0	0.0	0.0	0.0
TOTAL ADJUSTMENTS	0.0	0.0	0.0	0.0
Materiel Inventory EOP	16.3	0.0	16.3	0.0
ECONOMIC RETENTION (memo)	0.0			
POLICY RETENTION (memo)	0.0			
POTENTIAL EXCESS (memo)	0.0			
Materiel Inventory on Order EOP (memo)	4.1	0.0	4.1	0.0

DEFENSE BUSINESS OPERATIONS FUND
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - NAVAL ORDNANCE CENTER

MATERIAL INVENTORY DATA
(Dollars in Millions))
FISCAL YEAR 1997

			-------- Peacetime --------	
	Total	Mobilization	Operating	Other
Materiel Inventory BOP	16.3	0.0	16.3	0.0
BOP Reclassification Changes	0.0	0.0	0.0	0.0
Price Changes	0.0	0.0	0.0	0.0
Receipts from Commercial Sources	55.6	0.0	55.6	0.0
Negotiated Purchase from Customers	0.0	0.0	0.0	0.0
Gross Sales	53.8	0.0	53.8	0.0
Materiel Inventory Adjustments				
CAPITALIZATIONS + OR (-)	0.0	0.0	0.0	0.0
RETURNS TO SUPPLIERS (-)	0.0	0.0	0.0	0.0
TRANSFERS TO PROP. DISP.(-)	0.0	0.0	0.0	0.0
ISSUES/RECEIPTS WITHOUT REIMBURSEMENT + or (-)	0.0	0.0	0.0	0.0
OTHER (list)	0.0	0.0	0.0	0.0
TOTAL ADJUSTMENTS	0.0	0.0	0.0	0.0
Materiel Inventory EOP	18.1	0.0	18.1	0.0
ECONOMIC RETENTION (memo)	0.0			
POLICY RETENTION (memo)	0.0			
POTENTIAL EXCESS (memo)	0.0			
Materiel Inventory on Order EOP (memo)	4.5	0.0	4.5	0.0

Business Area Capital Budget Summary
Component: Department of the Navy
Depot Maintenance/Weapons Station
FY 1997 President's Budget March 1996
($In Millions)

LINE #	DESCRIPTION	FY 94		FY 95		FY 96		FY 97	
		QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST
1	EXTERNAL DATA COMMS AND DISPLAY/DEBRIEF-NWAD (Replacement)					1	0.230	1	0.325
2	MISCELLANEOUS NON ADP<$500K (Replacement)			VAR	1.481	VAR	1.312	VAR	0.899
3	MISCELLANEOUS NON ADP< $500K (Productivity)			VAR	0.117				
4	MISCELLANEOUS NON ADP< $500K (New Mission)			VAR	0.536			VAR	0.547
5	MISCELLANEOUS NON ADP< $500K (Environmental)			VAR	0.329	VAR	0.836	VAR	1.357
	TOTAL NON ADP				2.463		2.378		3.128
6	B&L OPEN SYS NETWRK 96/97 S-Seal Beach (Computer Software)					1	0.190	1	0.106
7	DMRD 924 MIGRATION TO OSE-C-Concord (Computer Hardware)			VAR	5.932	VAR	3.863		
8	P-171 ADP EQUIP W-NWAD (Computer Hardware)			1	0.593	1	0.420		
9	DNC SYSTEM NETWORK (FCIM) PHASE I/II-Earle (Computer Hardware)			1	0.073	1	0.075		
10	HIGH SPEED DOC RETRIEVAL SYS (DIV)-Yorktown (Computer Hardware)							1	0.181
11	MASS STORAGE & CENTRAL PROCESSOR (DIV)-Yorktown (Computer Hardware)							1	0.140

Business Area Capital Budget Summary
Component: Department of the Navy
Depot Maintenance/Weapons Station
FY 1997 President's Budget March 1996
($In Millions)

LINE #	DESCRIPTION	FY 94 QTY	FY 94 TOTAL COST	FY 95 QTY	FY 95 TOTAL COST	FY 96 QTY	FY 96 TOTAL COST	FY 97 QTY	FY 97 TOTAL COST
12	SPARC FILE SERVER (DIV)-Earlc (Computer Hardware)							1	0.140
13	TELEPHONE SYSTEM REPLACEMENT-Yorktown (Telecommunications)			1	0.799				
14	DATA COMMUNICATIONS W-NWAD (Telecommunications)			1	0.364			1	0.448
15	DISTR INFO SYS-OPEN W-NWAD (Telecommunications)					1	0.320	1	0.062
16	FIBER OPTICS COMM SYS 96/97/98 C-Concord (Telecommunications)					1	0.314	1	0.359
17	BROADBAND EXPANSION L-Port Hadlock (Telecommunications)					1	0.185		
18	VIDEO TELECON SYS SB/PAC S-Seal Beach (Telecommunications)							1	0.289
19	UPGRD COMM NETWRK HADLOCK L-Port Hadlock (Telecommunications)							1	0.210
	TOTAL ADP/TELECOMMUNICATIONS				7.761		5.367		1.935
20	NAVORDCEN EXECUTIVE INFORMATION SYSTEM (EIS)-NOC Headquarters					VAR	1.500	VAR	0.900
21	STOCKPILE ANALYSIS SOFTWARE-NOC Headquarters					VAR	0.360	VAR	0.373
22	B&L OPEN SYS 96 S-Seal Beach							1	0.156

Business Area Capital Budget Summary
Component: Department of the Navy
Depot Maintenance/Weapons Station
FY 1997 President's Budget March 1996
($In Millions)

LINE #	DESCRIPTION	FY 94		FY 95		FY 96		FY 97	
		QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST
	TOTAL SOFTWARE DEVELOPMENT						1.860		1.429
23	MISCELLANEOUS MINOR CONSTRUCTION< $200K			VAR	1.137	VAR	1.444	VAR	1.818
24	RENOVATE BLDG. C-15 FOR FLEET SERVICES-Earle			VAR	0.230				
25	INSTALL PAVED ROADS IN MAGAZINE AREAS-Yorktown			VAR	0.200			VAR	0.200
26	PROVIDE SECONDARY GROUNDING - PIER 3-Earle					VAR	0.280		
27	EXPAND R-5, W/F SECURITY-Earle					VAR	0.280		
28	RENOVATE BLDG 530 FOR HAZ MART-Yorktown					VAR	0.250		
29	GENERATOR FOR BLDG C-50-Earle							VAR	0.220
30	EXPAND C-1 FOR SECURITY DEPARTMENT-Earle							VAR	0.250
31	REPAIR ORDNANCE DEPARTMENT CARPENTRY SHOP-Earle							VAR	0.280
32	PRIMARY GROUNDING - PIER 3-Earle							VAR	0.280
33	REMODEL BLDG 848 L-Port Hadlock							VAR	0.275
	TOTAL MINOR CONSTRUCTION				1.567		2.254		3.323
	TOTAL RM&S								
	Grand Total				11.791		11.859		9.815

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 President's Budget								
B. Component/Business Area/Date DON/DEPOT MAINT/WPNSTA				C. Line. No & Description 1/EXTERNAL DATA COMMS AND DISPLAY/DEBRIEF-NWAD (Replacement)			D. Activity Identification Naval Ordnance Center, NWAD					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Non ADP							1	230	230	1	325	325

Narrative Justification:

DESCRIPTION

Provide upgrade external direct networking interfacing and processing equipment between Warfare Assessment Laboratory (WAL) and Pacific Missile Range Facility (PMRF) test site in Hawaii. New advance information data processing equipment to upgrade NWAD's five megabytes per assessment (Mbps) telemetry data rates in-line with the test site twenty Mbps. New processing equipment with upgraded software will directly link received test site data through electronic computerized distribution versus transferring information from magnetic tapes. This also will provide immediate feedback to ship and sites. New technology processing equipment provides continued support of advanced weapon systems and telemetry data performance assessment.

JUSTIFICATION

In the last several years, the DoD weapon system community has expanded the number and scope of instrumented data points that are sampled in weapons systems and missile rounds expended during test and training exercise events. Besides increasing the sample rate of weapon function parameters, their number has grown dramatically and now includes various forms of video (e.g. FLIR, and visual spectrum) never before instrumented in Fleet production rounds. In addition, NWAD has a continuing responsibility for interoperability with new range areas that require new data formats and interfaces.

IMPACT STATEMENT

Without this equipment, NWAD will not be able to service the needs of the Fleet for instrumented weapon firings on land-based ranges and will not be able to provide rapid feed back of results and trends to the Fleet and weapon system community.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 President's Budget								
B. Component/Business Area/Date DON/DEPOT MAINT/WPNSTA				C. Line. No & Description 6/B&L OPEN SYS NETWRK 96/97 S-Seal Beach (Computer Software)			D. Activity Identification Naval Ordnance Center, Seal Beach					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP							1	190	190	1	106	106

Narrative Justification:

DESCRIPTION

Replace old technology at NAVORDCEN, PACDIV sites (WPNSTA, Seal Beach and Fallbrook Detachment) with fiber optic terminal equipment, including enterprise hubs, bridges, routers, gateways, associated infrastructure management software, and test equipment.

JUSTIFICATION

NAVSEA is creating an interactivity high-speed infrastructure to support Navy and DoD consolidation initiatives. NAVORDCEN, PACDIV must modernize internal infrastructure at all sites and interconnectivity between sites to support the consolidation. Current local infrastructure and intersite connectivity only supports relatively low data rates and serial connections associated with proprietary business systems being replaced with open systems and client/server architectures. In FY 93 and 94, Seal Beach and Fallbrook are replacing local infrastructure with high-speed, fiberoptic and unshielded twisted pair 10MB or better technology to meet the new requirements for business and mission support systems. FY 96 and 97 will add components to complete full intra/inter-site connectivity with the entire NAVORDCEN, PACDIV community.

IMPACT STATEMENT

Without the equipment in place when DoD implements their Centralized Corporate Information Management (CIM) package, NAVORDCEN, PACDIV sites will be unable to communicate with important DoD offices. This will have a strong negative impact on the mission and workload of all West Coast Ordnance, and the Pacific Fleet.

000142

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 President's Budget								
B. Component/Business Area/Date DON/DEPOT MAINT/WPNSTA				C. Line. No & Description 7/DMRD 924 MIGRATION TO OSE-C Concord (Computer Hardware)				D. Activity Identification Naval Ordnance Center, Concord				
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP				VAR		5,932	VAR		3,863			

Narrative Justification:

DESCRIPTION/JUSTIFICATION

NIMIP/DMRD 924 IMPLEMENTATION: NAVSEA Information Management Improvement Program (NIMIP) was approved by ASN (RD&A) in 1992. NIMIP addresses information management improvements in NAVSEA Headquarters, field organizations, and affiliated PEO and DRPM organizations. The Naval Ordnance Center (NOC) Information Management Improvement Program (NOCIMIP) project is one of five NAVSEA NIMIP activity group projects. NOCIMIP is to migrate selected applications from aging proprietary mainframe computer systems (Bull (Honeywell), UNISYS, and Data General) to open systems environment (OSE) and terminate the existing mainframe operations. The NOC application general categories are: applications in support of direct customers; applications covered by standard initiatives (only deployment costs are planned for the Corporate Naval Ordnance Management Information System (NOMIS) Financial, Integrated Logistics Support Management Information System (ILSMIS) and Standard Labor Data Collection and Distribution Applications (SLDCADA) applications); common NOC mission applications and common NOC support applications. A "Best of Breed" process will be done to select the common NOC applications. NOCIMIP is an application migration program (from proprietary to OSE) and is not intended to enhance the applications. The result is to release the mainframe computer systems (downsizing) and provide common applications for the NOC activities on OSE platforms.

IMPACT STATEMENT

The funding includes the cost of the new OSE hardware platforms and the cost of migrating the selected applications to the OSE environment. The NOC savings for the NIMIP are identified in the FEAM (functional economic analysis model).

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 President's Budget								
B. Component/Business Area/Date DON/DEPOT MAINT/WPNSTA				C. Line. No & Description 8/P-171 ADP EQUIP W-NWAD (Computer Hardware)			D. Activity Identification Naval Ordnance Center, NWAD					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP				1	593	593	1	420	420			

Narrative Justification:

DESCRIPTION

This is the ADP outfitting of NWAD MILCON P-171 to provide real-time, near real-time (1-2 hours) and off-line analysis and reporting with Fleet exercises. Performance of support to enhance proficiency training during Fleet exercises requires graphics workstations running the Navy's TAC-3 software on shipboard compatible computers and the necessary networking equipment. The ADP supports AEGIS Combat Systems (11), Missile firings (50 to 1,200 firings annually). Combat systems assessment is made for AEGIS and new threat upgrade. Battle group assessment evaluates Fleet proficiency against AAW, ASUW, and ASW threats and the effectiveness of STW power projection.

JUSTIFICATION

In the last two decades, the Navy's focus on engineering development, training and operations has shifted from individual weapon/weapon system to the entire battlegroup. Enormous increases in complexity and capability of individual weapons and systems have also occurred. This equipment will allow timely assessment and feedback to the Fleet Command, OPNAV, the System Commands, and supporting Engineering Activities.

IMPACT STATEMENT

Without this equipment, NWAD will not be able to service the needs of the Fleet for training/readiness assessment and provide rapid feedback of results during Fleet exercises.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 President's Budget								
B. Component/Business Area/Date DON/DEPOT MAINT/WPNSTA				C. Line. No & Description 9/DNC SYSTEM NETWORK (FCIM) PHASE I/II-Earle (Computer Hardware)			D. Activity Identification Naval Ordnance Center, Earle					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP				1	73	73	1	75	75			

Narrative Justification:

DESCRIPTION: This project is for the Production Division of the Fleet Services Department. The expected [illegible]hat this project will be operational is projected to be 1997. The Distributed Numeric Control (DNC) system shall connect six (6) existing CNC machine tools together for the purpose of part-program download, part-program edit and upload, status collection, and the ability to display graphics to include part drawings layout and tooling details. This is a phased CPP project. Cost and time savings can be achieved by a reduction of process, rework steps, inspection tasks and reduction of cross-organizational handling actions. It also allows interface with Computer Aided Acquisition and Logistics Support (CALs) and perform Electronic Commerce using the Internet Highway.

JUSTIFICATION: The DNC system shall provide the capability to download all files for a particular part to include, at a minimum; machine setup, fixturing, part drawing, tool data, process sheet, and part program download capability to six each CNC machine tools. Downloading of a tape file to a machine control shall be performed through behind-the-tape reader interface, via software or through a direct serial interface, depending on the CNC. The DNC system shall also provide program upload from capable CNCs. Monitoring of the CNC controllers shall provide for the collection of status elements. Select floor status shall be collected related to the CNC status. The system shall display the graphics of part drawings, setup sheets and fixtures on the terminals at each of the stations, using the latest configuration available. The system shall maintain program charge orders status. Phase I will consist of the basic network which will hook up people into the system. This will allow each user to become familiar with the network and allow us to use on-the-job training before the complete system is in place.

IMPACT STATEMENT: Without this system the Station will not be able to meet our Long-Range Business Plan Goals for the implementation of Flexible Computer Integration Manufacturing (FCIM) within NWS Earle. If not procured, workload from our customers advocating FCIM may be in jeopardy because of our inability to provide Electronic Data Interchange (EDI), and sufficiently rapid product turnaround times.

000150

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 President's Budget					
B. Component/Business Area/Date DON/DEPOT MAINT/WPNSTA				C. Line. No & Description 10/HIGH SPEED DOC RETRIEVAL SYS (DIV)-Yorktown (Computer Hardware)			D. Activity Identification Naval Ordnance Center, Yorktown					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP										1	181	181

Narrative Justification:

DESCRIPTION

An additional storage disk is required for the high speed on line document retrieval system (Project No. 195013). This disk will provide additional document storage and retrieval memory. The document retrieval system will be used in the technical library that will serve the NOCLANTDIV. All documents for the division will be entered into the system using a laser scanner. Retrievability of files and documents will be achieved at the user's PC level.

JUSTIFICATION

This additional disk will drastically increase storage space and the operational speed. This is required due to the anticipated decreased response time as more documents are loaded. This is a continuation of a modernization of the document retrieval system used at this activity and the NOCLANTDIV.

IMPACT STATEMENT

If this disk is not added, then the document storage space allocation will be severely hampered. This is the last portion of an effort to modernize document retrieval at this activity and the LANTDIV.

000151

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 President's Budget								
B. Component/Business Area/Date DON/DEPOT MAINT/WPNSTA				C. Line. No & Description 11/MASS STORAGE & CENTRAL PROCESSOR (DIV)-Yorktown (Computer Hardware)			D. Activity Identification Naval Ordnance Center, Yorktown					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP										1	140	140

Narrative Justification:

DESCRIPTION

Upgrade to provide on-line disk storage capacity of 20 GIGABYTES and up to 20 processors. It will have connectivity to existing Government owned operating systems and FIRMWARE without additional cost. All items in this system should be purchased with the system because they are interdependant.

JUSTIFICATION

Disk requirements increase at an average of 5 GIGABYTES per year. This growth equates to the capability provided by these new disks. Sufficient disk capacity is essential to prevent reduced user service levels which will equate to longer access and retrieval times. The overloaded inefficient system will cause a real dollar loss due to waiting times for users and maintenance.

IMPACT STATEMENT

The lack of sufficient disk capacity results in reduced user service levels which would equate to longer access and retrieval times. The system will be inefficient, requiring more maintenance and increased access time per user.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 President's Budget								
B. Component/Business Area/Date DON/DEPOT MAINT/WPNSTA				C. Line. No & Description 12/SPARC FILE SERVER (DIV)-Earle (Computer Hardware)				D. Activity Identification Naval Ordnance Center, Earle				
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP										1	140	140

Narrative Justification:

DESCRIPTION

The Resources and Planning Department requires a SPARC File Server to run a variety of applications. This system will be complete with a quad-pentium processor, minimum 50 gb of storage and minimum 32 mb of memory. The expected year that this project will be operational is projected to be 1999.

JUSTIFICATION

The server will be used for Windows applications such as the Microsoft Office Package. In addition, many NAVSEA software applications will reside on this server. Due to the processing power required to run Graphical User Interface (GUI) applications, a system of this size and performance is required.

IMPACT STATEMENT

Without this system, many critical financial and budget applications will not be easily accessible to all users on base. In addition, transferring files and data will not be possible. This system is required for access to a wide variety of software applications. In addition, NAVSEA and NOC has required us to standardize on a system capable of running different software applications. Without this system, many financial and budget applications would require manual calculating.

000153

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 President's Budget								
B. Component/Business Area/Date DON/DEPOT MAINT/WPNSTA				C. Line. No & Description 14/DATA COMMUNICATIONS W-NWAD (Telecommunications)			D. Activity Identification Naval Ordnance Center, NWAD					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP				1	364	364				1	448	448

Narrative Justification:

DESCRIPTION

Data communications upgrades and continues expansion of NWAD Data Communication network to twenty (20) buildings throughout the NWAD Corona installation. Unshielded Twisted Pair (UTP) category five cables to each building in conjunction with twenty enterprise network hubs are required. The central hub will be centrally located in Building 509 and act as the switching hub for both unclassified and secure networks.

JUSTIFICATION

Upgrade and expand the NWAD Data Communications network. Required to standardize interior wiring infrastructure and networking equipment in 20 NWAD bldgs. As more of the data transmission requirements on the network require higher bandwidth, the need to upgrade the network to handle higher transmission data rates becomes imperative. It also supports the transfer of information received from Fleet and test sites within NWAD to support the real-time communication effort.

IMPACT STATEMENT

1. If infrastructure not upgraded, the cabling in 20 NWAD bldgs will become a bottleneck to data throughput.
2. Current cabling in these bldgs. non-standardized, resulting in additional troubleshooting effort.
3. Current network equipment in 20 bldgs unable to support applications that demand higher bandwidth such as client-server applications. This will create a network bottleneck resulting in longer wait times to run applications and lost productivity.
4. If the second phase isn't done, third phase can't proceed.

0001154

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 President's Budget								
B. Component/Business Area/Date DON/DEPOT MAINT/WPNSTA				C. Line. No & Description 15/DISTR INFO SYS-OPEN W-NWAD (Telecommunications)			D. Activity Identification Naval Ordnance Center, NWAD					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP							1	320	320	1	62	62

Narrative Justification:

DESCRIPTION

Additional mass storage required for the completion of migration to a vendor independent distribution information system. It provides the shared access mass storage to tie all the NWAD Corona buildings together.

JUSTIFICATION

Enhancement to accommodate anticipated increases computer processing, and data storage loads. Will help reduce operating costs to make NWAD more cost effective.

IMPACT STATEMENT

1. Inability to accommodate increasing/emerging requirements.
2. Office Automation response time expected to degrade to unacceptable levels due to CPU, and memory saturation.
3. In-place equipment will reach the end of it's useful life cycle.

000155

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 President's Budget								
B. Component/Business Area/Date DON/DEPOT MAINT/WPNSTA				C. Line. No & Description 16/FIBER OPTICS COMM SYS 96/97/98 C-Concord (Telecommunications)			D. Activity Identification Naval Ordnance Center, Concord					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP							1	314	314	1	359	359

Narrative Justification:

DESCRIPTION

Replace all existing coaxial cable backbone with fiber optic media backbone at the WPNSTA, Concord. This replacement will extend throughout the entire activity from Inland to Tidelands, and the piers. Includes terminal equipment such as enterprise hubs, routers, bridges, and other gateways allowing communication internally and externally with NAVSEA, NAVORDCEN, PACDIV community, and other DoD agencies.

JUSTIFICATION

NAVSEA is creating an interactivity high-speed infrastructure to support Navy and DoD consolidation initiatives. WPNSTA, Concord, part of the NAVORDCEN, PACDIV community must modernize it's media backbone to support the consolidations. Outfit activity with Fiber Optic Cabling. Superior data handling, lower maintenance costs, and superior security characteristics are justifications for project, as well as compatibility to the NAVSEA infrastructure.

IMPACT STATEMENT

Without the fiber optic backbone and terminal equipment in place when the DoD implements their Centralized Corporate Information Management (CIM) package, the WPNSTA, Concord and NAVORDCEN, PACDIV will be unable to communicate with important DoD offices. This will have a strong impact on the mission and workload of the West Coast Ordnance community and the Pacific Fleet.

000156

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 President's Budget								
B. Component/Business Area/Date DON/DEPOT MAINT/WPNSTA				C. Line. No & Description 17/BROADBAND EXPANSION L-Port Hadlock (Telecommunications)			D. Activity Identification Naval Ordnance Center, Port Hadlock					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP							1	185	185			

Narrative Justification:

DESCRIPTION

Provide Fiber Optic media backbone at the Port Hadlock detachment from bldg 69 to bldg 833 located at the ammunition pier. Includes terminal equipment for the fiber optics, such as enterprise hubs, routers, bridges, and other gateways allowing communication internally and externally with NAVSEA, NAVORDCEN, PACDIV community, and other DoD agencies.

JUSTIFICATION

Provide ADP support to pier facilities. Current network capability terminates one mile from the ammunition pier. Extending the network allows greatly improved support for ship loadouts, ordnance management support (OMS) and others working at the pier. It will also provide access to network facilities. This project creates an interactivity high-speed infrastructure to support NAVY and DoD consolidation initiatives. Port Hadlock Detachment must modernize it's media backbone to support the consolidations by installing fiber optic cabling. Superior data handling, lower maintenance costs, and superior security characteristics are justifications for the project, as well as compatibility to the NAVSEA infrastructure.

IMPACT STATEMENT

Without fiber optic backbone and equipment, when DoD implements the Centralized Corporate Information Management (CIM) package, Port Hadlock, NAVORDCEN, and PACDIV will be unable to communicate with important DoD offices. This will have a strong impact on mission and workload at Port Hadlock, the West Coast Ordnance community, and the Pacific Fleet. Also, personnel will be forced to continue manual input and processing methods, duplicating existing information, and moving information by hand and vehicle.

000157

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 President's Budget								
B. Component/Business Area/Date DON/DEPOT MAINT/WPNSTA				C. Line. No & Description 18/VIDEO TELECON SYS SB/PAC S-Seal Beach (Telecommunications)			D. Activity Identification Naval Ordnance Center, Seal Beach					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP										1	289	289

Narrative Justification:

DESCRIPTION

Videoconference system will provide NAVORDCEN, PACDIV sites (Concord, Seal Beach, Fallbrook, Port Hadlock, and San Diego) with auto-focus cameras, 27" monitors, audio system, codecs, multipoint controllers, graphics interfaces, touchpanels, etc. for the purpose of conducting meetings, conferences, symposiums, etc. remotely with other sites and activities.

JUSTIFICATION

Video communications will allow NAVORDCEN, PACDIV sites to communicate effectively with other sites and commands without travel. Problems can be addressed more quickly and effectively. More frequent meetings can take place making all parties involved more productive. More people will be able to participate in the decision making process. This VTC will be able to interoperate with both existing and future standards-based desktop video systems.

IMPACT STATEMENT

Problem resolution will remain expensive and time consuming because of extensive travel, and communication of goals and objectives will not be as effective.

000158

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 President's Budget								
B. Component/Business Area/Date DON/DEPOT MAINT/WPNSTA				C. Line. No & Description 19/UPGRD COMM NETWRK HADLOCK L-Port Hadlock (Telecommunications)			D. Activity Identification Naval Ordnance Center, Port Hadlock					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP										1	210	210

Narrative Justification:

DESCRIPTION

Replace all existing coaxial cable backbone with Fiber Optic media backbone at the Port Hadlock detachment. This replacement includes the installing of fiber optic cabling throughout the activity. Includes terminal equipment for the fiber optics, such as enterprise hubs, routers, bridges, and other gateways allowing communication internally and externally with NAVSEA. NAVORDCEN, PACDIV community, and other DoD agencies.

JUSTIFICATION

NAVSEA is creating an interactivity high-speed infrastructure to support NAVY and DoD consolidation initiatives. The Port Hadlock Detachment, part of the NAVORDCEN, PACDIV community, must modernize it's media backbone to support the consolidations by installing fiber optic cabling. Superior data handling, lower maintenance costs, and superior security characteristics are justifications for the project, as well as compatibility to the NAVSEA infrastructure.

IMPACT STATEMENT

Without the fiber optic backbone and terminal equipment in place when the DoD implements their Centralized Corporate Information Management (CIM) package, the Port Hadlock Detachment, and NAVORDCEN, PACDIV will be unable to communicate with important DoD offices. This will have a strong impact on the mission and workload at Port Hadlock activity, which will triple in FY 96, the West Coast Ordnance community, and the Pacific Fleet.

0001159

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 President's Budget								
B. Component/Business Area/Date DON/DEPOT MAINT/WPNSTA				C. Line. No & Description 20/NAVORDCEN EXECUTIVE INFORMATION SYSTEM (EIS)-NOC Headquarters			D. Activity Identification Naval Ordnance Center, NOC Headquarters					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Software Development							VAR		1,500	VAR		900

Narrative Justification:

DESCRIPTION/JUSTIFICATION

The NAVORDCEN EIS will provide NAVORDCEN Management with the ability to pull key information from the host of existing supporting automated management information systems. Currently the information exists in virtual islands. Collection, comparison, analysis and projection must be done manually. The EIS will overlay the existing systems and access selected data by which the critical performance of the NAVORDCEN corporate and division processes can be monitored and analyzed. The EIS will routinely and automatically collect and display HQ NAVORDCEN process indicators and highlight non-conforming processes for management attention. The EIS will also give management the ability to tailor or design special reports for comparisons in order to perform specific or additional analysis. This is a phased project.

IMPACT STATEMENT

Impact if not funded: Management data required by the NAVORDCEN currently resides on a group of fragmented, independent management information systems. Without development of the EIS, the NAVORDCEN will be severely hampered in performing its mission. In this era of infrastructure downsizing, we must be proactive in identifying ways to provide top level managers with automated information tools. The EIS is vital to the NAVORDCEN mission and if not developed will have the NAVORDCEN in a manual mode of assimilating the vast amount of decision making information.

000160

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 President's Budget								
B. Component/Business Area/Date DON/DEPOT MAINT/WPNSTA				C. Line. No & Description 21/STOCKPILE ANALYSIS SOFTWARE-NOC Headquarters			D. Activity Identification Naval Ordnance Center, NOC Headquarters					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Software Development							VAR		360	VAR		373

Narrative Justification:

DESCRIPTION/JUSTIFICATION

With the establishment of the NAVORDCEN as the single focal point for in-service management of the Navy's conventional ordnance, the Stockpile Analysis Group has the task of assessing the adequacy of the worldwide asset stockpile. Since the function of stockpile analysis is new, none of the processes exist to look at the total stockpile from this new perspective. A number of applications will have to be developed to combine, accumulate, assimilate, display and manipulate the plethora of data and data elements. Trends will be established and projections will be made based on "what if" scenarios to provide managers the appropriate and necessary information on which to base current and outyear stockpile decisions. This is a phased project.

IMPACT STATEMENT

Impact if not funded: Without use of this system, the NAVORDCEN would not be able to efficiently and effectively perform the research, review and analysis of the total stockpile. In this era of downsizing and reduced budgets, it is imperative that Navy make the most cost effective choices while still maintaining optimum Fleet readiness. This system would provide managers with a vital tool in performing that analysis across the entire spectrum of ordnance items. Without an automated tool, this function could not be thoroughly performed and incorrect management decisions could be initiated.

0001161

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 President's Budget								
B. Component/Business Area/Date DON/DEPOT MAINT/WPNSTA				C. Line. No & Description 22/B&L OPEN SYS 96 S-Seal Beach				D. Activity Identification Naval Ordnance Center, Seal Beach				
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Software Development										1	156	156

Narrative Justification:

DESCRIPTION

Off-the-shelf information manipulation software, storage, network connectivities, and associated data base software to implement NAVORDCEN, PACDIV, and PACDIV sites (Concord, Seal Beach, Fallbrook, and Port Hadlock) information manipulation capability for utilization of diverse business information residing on POSIX/GOSIP compliant servers running on an open systems network.

JUSTIFICATION

DoD, Navy, and/or NAVSEA are consolidating major business applications to large sites for batch processing. Managers within the NAVORDCEN, PACDIV community will need the capability to extract and manipulate data from many different systems located at various sites for creating data views necessary to make timely, high quality business decisions, and manage Fleet support operations effectively. The most efficient architecture is to provide, on local servers at each site, software that has the capability to assemble data from many locations into the data views required for decision making, and to do this transparently. Off-the-shelf software and associated hardware components must be compatible with the local environment as well as the larger NAVSEA, Navy, and DoD environment. The software will also reduce the training curve for business information manipulation.

IMPACT STATEMENT

If the software is not procured, NAVORDCEN, PACDIV, and PACDIV site managers and their support staff will spend inordinate amounts of time extracting and manipulating data from separate applications that may not be compatible or consistent. Quality and efficiency of Fleet support will suffer.

0001692

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 President's Budget					
B. Component/Business Area/Date DON/DEPOT MAINT/WPNSTA				C. Line. No & Description 25/INSTALL PAVED ROADS IN MAGAZINE AREAS-Yorktown			D. Activity Identification Naval Ordnance Center, Yorktown					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction				VAR		200				VAR		200

Narrative Justification:

DESCRIPTION

Install bituminous pavement on all earth covered roads in magazine areas.

JUSTIFICATION

Existing roads are earth covered and during severe weather

suffer excessive damage. Roads washout, form ruts and potholes and become impassable. As a result the transportation of ordnance explosive materials becomes hazardous. Earth roads were written as a safety deficiency by the NAVSEA Explosive Safety Inspection (ESI). The roads should be paved to prevent potholes, ruts, and washouts. Paragraph 1 of NAVSEA OP-5 states that good roads shall be provided for the safe transportation of ammunition and explosives.

IMPACT STATEMENT

Installation of an asphalt bituminous surface would eliminate such problems and also reduce annual maintenance costs to keep roads in a safe condition. This Activity will continue to operate without correcting the deficiencies identified by the NAVSEA Explosive Safety Inspection (ESI).

0001163

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 President's Budget								
B. Component/Business Area/Date DON/DEPOT MAINT/WPNSTA				C. Line. No & Description 26/PROVIDE SECONDARY GROUNDING - PIER 3-Earle			D. Activity Identification Naval Ordnance Center, Earle					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction							VAR		280			

Narrative Justification:

DESCRIPTION

The project provides for a secondary grounding system to protect existing Pier 3 the project includes providing ordnance, static, and building grounds. A secondary girdle and grounding plates will also be provided.

JUSTIFICATION

Pier 3 has been identified as having an inadequate secondary grounding system. This project will provide adequate secondary grounding protection for Pier 3 operations. Pier 3 is an ordnance loading/off-loading pier and requires an adequate grounding system to provide safe operations. This project will cancel the Production Buildings portion of CNO Waiver WPNSTA Earle 1-90. The expected year that this project will be operational is projected to be 1997.

IMPACT STATEMENT

The project will improve safety by providing an up-to-date secondary grounding system on Pier 3.

000164

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 President's Budget								
B. Component/Business Area/Date DON/DEPOT MAINT/WPNSTA				C. Line. No & Description 27/EXPAND R-5, W/F SECURITY-Earle			D. Activity Identification Naval Ordnance Center, Earle					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction							VAR		280			

Narrative Justification:

DESCRIPTION

The addition will have an area of 700 SF which will provide additional office space for six master of arms, expand the squad room for additional lockers and provide storage space. The addition will be constructed of concrete masonry blocks with a red brick face and a concrete slab foundation.

JUSTIFICATION

Building R-5, which has an area of 740 SF, was constructed in 1944 and has never expanded. The waterfront area of NWS Earle has increased in activity since 1990 when a new pier was built and two additional ships were homeported here. The number of security personnel assigned to the waterfront has also increased. The original size of the security building is no longer adequate.

Savings would be calculated because there are 3 to 4 trips to the waterfront per night with security personnel responding to incidents at the waterfront. The expected year that this project will be operational is projected to be 1997.

IMPACT STATEMENT

The project will relieve overcrowded conditions in the waterfront security building. It will improve the efficiency and response time of the security department.

000165

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 President's Budget								
B. Component/Business Area/Date DON/DEPOT MAINT/WPNSTA				C. Line. No & Description 28/RENOVATE BLDG 530 FOR HAZ MART-Yorktown			D. Activity Identification Naval Ordnance Center, Yorktown					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction							VAR		250			

Narrative Justification:

DESCRIPTION

Renovate building 530 for the purpose of managing, controlling and dispensing hazardous material on station. OPNAV 5090.1B regulations require this control and disbursing point.

JUSTIFICATION

OPNAV 5090.1B mandates procedures to control, track and reduce variety and quantity of hazardous material in use on station.

IMPACT STATEMENT

Without the proper storage facilities the station will be in violation of requirements for management and control of hazardous material coming aboard the station. This will be a violation of OPNAV 5090.1B.

GUC166

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 President's Budget					
B. Component/Business Area/Date DON/DEPOT MAINT/NAVORDCEN				C. Line. No & Description 29/GENERATOR FOR BLDG C-50-Earle			D. Activity Identification Naval Ordnance Center, Earle					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction										VAR		220

Narrative Justification:

DESCRIPTION

The proposed project provides for installing an emergency generator in existing Building C-50. The generator will be fueled by natural gas and will provide power during utility outages.

JUSTIFICATION

Building C-50 is the railroad/locomotive maintenance shop and is considered a mission essential facility. The station has experienced power outages during past storms and a backup system is required in building C-50 to provide continuous, safe operations. Insures safe operation in the event of power interruption. The expected year that this project will be operational is projected to be 1997.

IMPACT STATEMENT

By providing a natural gas fired emergency generator in building C-50, the facility can continue to be in operation during power failures. This will insure operation readiness and will better enable Earle to perform it's mission and it will also be in compliance with existing NJ Department of Environmental Protection Agency (EPA) guidelines. The project complies with the NJDEPE and EPA effort to eliminate the use of underground fuel oil storage tanks.

000167

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 President's Budget								
B. Component/Business Area/Date DON/DEPOT MAINT/NAVORDCEN				C. Line. No & Description 30/EXPAND C-1 FOR SECURITY DEPARTMENT-Earle			D. Activity Identification Naval Ordnance Center, Earle					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction										VAR		250

Narrative Justification:

DESCRIPTION

The project is the construction of a 880 SF addition to Building C-1. The existing Building is a 2,507 SF one story, concrete masonry block structure with red brick face. The facility is used by the Security Department. The construction will enlarge the Pass and ID office, provide additional office space and a conference room.

JUSTIFICATION

The number of security personnel required at NWS Earle has increased over the years and security billets have been added. As a result, the space allocated to these personnel is deficient, currently two personnel work in a trailer next to C-1. There currently exists a basic facilities requirement (BFR) deficiency of 443 sf for this category code. Also, there is 437 sf of unusable space in the partial basement which brings the total space deficiency to 880 sf. This addition will correct the space deficiency and ease the overcrowded condition at this facility. This addition will allow for consolidation of operations, and department meetings to update personnel. The expected year that this project will be operational is projected to be 1998.

IMPACT STATEMENT

The construction of the addition will eliminate the overcrowded conditions in building C-1, thereby increasing the efficiency and response time of the Security Department. It will also improve morale and increase public perception of NWS Earle. Without the addition, overcrowded conditions will persist decreasing efficiency and response time.

000168

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 President's Budget								
B. Component/Business Area/Date DON/DEPOT MAINT/WPNSTA				C. Line. No & Description 31/REPAIR ORDNANCE DEPARTMENT CARPENTRY SHOP-Earle			D. Activity Identification Naval Ordnance Center, Earle					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction										VAR		280

Narrative Justification:

DESCRIPTION

Building S-35 is an approximately 60 ft long x 48 ft wide Ordnance Department Operations building. The Ordnance function conducted in S-35 is the construction of all blocking and bracing for all railcar, truck, and ship load/off-load operations. In addition, the Carpentry Shop manufactures containers, adapters and required packaging items for explosive ordnance and component parts. Constructed in 1944, the existing Ordnance Department carpentry building has been modified and expanded until it is now a poorly configured work space for its current use. Due to its rectangular shape, handling/construction large wooden items is complicated because of the number of floor mounted tools (+\-12).

JUSTIFICATION

The repair option was chosen over the replace option due to the proximity to the Ordnance Department Lumber Storage Building, S-36. The list of deficiencies include; inadequate industrial ventilation system for sawdust removal, inadequate heating system subject to frequent failures, antiquated electrical distribution system, and a failing foundation system supporting the loading dock. The repair of Bldg. S-35 will include the installation of a properly sized and balanced industrial ventilation, upgraded heating and electrical systems and replacement of the loading dock and supporting foundation. The design phase of the repair project will include complete reconfiguration of Bldg. S-35, including the construction of a 1,500 SF addition. The addition will maximize the efficiency of available space allowing larger sized items to be worked on. The overall project will improve worker safety. The expected year that this project will be operational is projected to be 1998.

IMPACT STATEMENT

This project is part of the Station effort to carry out the Station mission with modern, efficient facilities. Failure to implement this project could result in the loss or suspension of this function at Earle due to the inadequate industrial ventilation and deteriorating utilities support and structural integrity.

000169

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 President's Budget								
B. Component/Business Area/Date DON/DEPOT MAINT/WPNSTA				C. Line. No & Description 32/PRIMARY GROUNDING - PIER 3-Earle			D. Activity Identification Naval Ordnance Center. Earle					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction										VAR		280

Narrative Justification:

DESCRIPTION

The project provides for providing a primary grounding system to protect existing Pier 3. The project will provide for the installation of lightning protection masts, primary girdle, and grounding plates. The primary system will be tied to the secondary system.

JUSTIFICATION

Presently, Pier 3 does not have an adequate primary grounding system. Pier 3 currently does not have lightning protection masts and does not provide adequate protection for safe ordnance operations (Pier 3 is the ordnance loading/off-loading pier). This project will cancel the Production Buildings portion of CNO Waiver WPNSTA Earle 1-90. The expected year that this project will be operational is projected to be 1998.

IMPACT STATEMENT

Completion of the project will provide adequate protection against lightning strikes on Pier 3. Without the primary grounding system, ordnance operations on Pier 3 would continue at great risk and in violation of OP-5 criteria.

000170

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 President's Budget								
B. Component/Business Area/Date DON/DEPOT MAINT/WPNSTA				C. Line. No & Description 33/REMODEL BLDG 848 L-Port Hadlock			D. Activity Identification Naval Ordnance Center, Port Hadlock					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction										VAR		275

Narrative Justification:

DESCRIPTION

This project is to remodel building 848, which was a fire house, into administration space. This is a concrete block building approximately 2800 sq. ft. Windows and incandescent fixtures are to be removed and replaced with insulated windows and fluorescent fixtures. Carpets, suspended acoustical ceiling, sheet rocking, painting and the removal of the fire engine roll-up doors and replace with concrete block is all included.

JUSTIFICATION

This building was constructed in 1988 and is in excellent condition. Port Hadlock now has people using this building with poor heat, lighting, etc. which was great for the fire trucks that were once parked there but not so great for the people that are now using the area as administration offices. Port Hadlock's present administration building (849) has nearly twice the occupancy it was designed for and the remodeling of building 848 would absorb the additional people now in the administration building.

IMPACT STATEMENT

The building as it is now is not living up to it's square foot potential. This remodeling will utilize the area to it's full capacity while giving the administration building back it's full capacity and alleviating the overcrowding it is now experiencing.

000171

Department of the Navy - Defense Business Operations Fund
Business Area: Depot Maintenance/Activity Group: Naval Ordnance Center
CAPITAL BUDGET EXECUTION
(dollars in millions)
FY 1996

Title/Description	Original Request	Change	Revised Request	Explanation/Reason for Change
Equipment (Non-ADPE/TEL):				
P-171 Non ADP Equipment	0.079	-0.079	0	Originally deferred to FY 97. Currently dropped due to change in threshold.
External Data Comms and Display/Debrief	0	0.23	0.23	Emergent requirement
Misc. Replacement Projects	3.125	-1.813	1.312	* See Note
Misc. Productivity Projects	0.14	-0.14	0	* See Note
Misc. New Mission Projects	0.078	-0.078	0	Falls out due to change in threshold
Misc. Env/Safety	1.218	-0.382	0.836	* See Note
Subtotal - Equipment	4.64	-2.262	2.378	
ADPE and Telecomm Equip				
B&L Open Sys Network 96/97	0.19	0	0.19	No change
Broadband Expansion	0.185	0	0.185	No change
Engineering Devel Support Sys	0.165	-0.165	0	Workload went away
High Speed OnLine Doc Retrv System	0.2	-0.2	0	Deferred to FY 97
OnLine Mass Storage & Central Processor	0.15	-0.15	0	Originally decrease in authority which changed cost to 0.086. Currently falls. out due to change in authority.
DMRD 924 Migration to OSE	2.037	1.83	3.863	* See Note
Applications Server	0.15	-0.15	0	Workload decreased

*** Note: Congressionally mandated reduction in FY 95 CPP program authority resulted in a reprioritization of the FY 95/96/97 CPP program by NAVORDCEN HQTRS. The reprioritization resulted in a deferral of some projects in order to fully fund higher priority projects. Additionally, some changes are due to change in threshold.**

000172

Department of the Navy - De[redacted] Business Operations Fund
Business Area: Depot Maintenance/A[redacted]vity Group: Naval Ordnance Center
CAPITAL BUDGET EXECUTION
(dollars in millions)
FY 1996

Title/Description	Original Request	Change	Revised Request	Explanation/Reason for Change
ADPE and Telecomm Equip				
P-171 ADP Equipment	0.34	0.08	0.42	Revised cost estimate
Data Communications	0.506	-0.506	0	Deferred to FY 97
Distr Info Sys -Open	0	0.32	0.32	Emergent requirement
Fiber Optics Comm Sys 96/97	0	0.314	0.314	Emergent requirement
TLM Quick TDP	0.101	-0.101	0	Deferred
B&L Open System 96	0.156	-0.156	0	Deferred to FY 97
DNC System Network (FCIM) Phase I/II	0.09	-0.015	0.075	Phase II of project, originally identified in miscellaneous ADPE category.
Subtotal - ADPE/Telecomm	4.27	1.097	5.367	
Software Development				
NAVORDCEN Exec Info Sys	1.5	0	1.5	No change
Stockpile Analysis Software	0.36	0	0.36	No change
Subtotal - Software Devel	1.86	0	1.86	
Minor Construction				
Expand R-5, W/F Security	0.26	0.02	0.28	Revised cost estimate
Install Pvd Roads in Mag Area	0.2	-0.2	0	Completed in FY 95

*** Note: Congressionally mandated reduction in FY 95 CPP program authority resulted in a reprioritization of the FY 95/96/97 CPP program by NAVORDCEN HQTRS. The reprioritization resulted in a deferral of some projects in order to fully fund higher priority projects. Additionally, some changes are due to change in threshold.**

Capital Budget Execution

00173

DEPARTMENT OF THE NAVY
DEFENSE BUSINESS OPERATIONS FUND
MARINE CORPS DEPOT MAINTENANCE

Activity Group Function:

The mission of the Marine Corps Depot Maintenance (MCDM) is to provide quality and responsive maintenance and maintenance support services and to maintain a core industrial base to support mobilization and surge requirements. The maintenance functions performed by the MCDM Activity Group include repair, rebuild, modification, and Inspect and Repair Only as Necessary (IROAN) for all types of ground combat and combat support equipment used by the Marine Corps and other Department of Defense (DoD) military services under interservice support agreements. Other functions include performance of related services such as preservation, testing, technical evaluation, calibration and fabrication of automated test equipment.

Activity Group Composition:

The Marine Corps Depot Maintenance Activity Group is comprised of two depots, one located at Albany, Georgia, and the other at Barstow, California. The Marine Corps depots maintain virtually identical capabilities in order to provide support for Marine Corps operational units, depending on unit location.

Financial Profile

	FY 1995	FY 1996	FY 1997
Cost of Goods Sold	182.9	162.3	160.8
Net Operations Result (NOR)	25.8	2.5	5.7
Accum Operating Results (AOR)	-6.9	-4.4	0

Direct costs, primarily associated with personnel and material, decrease in FY 1996 and FY 1997 concurrent with a reduction in requirements. Overhead costs also decline in FY 1996; overhead increases somewhat in FY 1997 due to increases in environmental, safety and base support costs.

Workload:

	FY 1995	FY 1996	FY 1997
Direct Labor Hours	2,870,943	2,308,037	2,142,289

Direct Labor Hours decline from FY 1995 through FY 1997 in accordance with reduced requirements. The overtime ratio is 24 percent in FY 1995, 13 percent in FY 1996 and 18 percent in FY 1997.

Performance Indicators:

	FY 1995	FY 1996	FY 1997
Schedule Conformance	97.5%	97.5%	97.5%
Quality Deficiency Reports	.4%	.4%	.4%
Inventory Turnover Ratio	8.6%	9.2%	9.4%
Net Operating Results ($ millions)	$22.3	$2.6	$4.4

Customer Rate Changes:

	FY 1996	FY 1997
	-10.2%	11.1%

The decrease in the FY 1996 rate comes after a large increase in the previous year's rate to reduce a negative AOR balance. The increase in FY 1997 is due to inflation and recovery of prior year losses.

Unit Costs:

	FY 1995	FY 1996	FY 1997
Total Cost per DLH	$63.72	$70.32	$75.07

Unit cost increases throughout the budget years. This is the result of a decrease in the direct effort (direct labor hours) while fixed costs remain relatively stable.

Staffing:

	FY 1995	FY 1996	FY 1997
Civilian End Strength	2,131	1,858	1,717
Civilian Work Years	2,090	1,858	1,717
Military End Strength	35	20	20
Military Work Years	14	20	20

Personnel levels decline from FY 1995 through FY 1997 in accordance with reduced requirements.

Headquarters Cost:

	FY 1995	FY 1996	FY 1997
Cost of Mgmt Headquarters	.880	1.146	1.183

The Marine Corps Depot Maintenance Business Plan identified functions that were historically performed by both depots that could best be done at the corporate level. Coordination of the Master Work Schedule with a single point of contact by commodity, uniform control and direction of Financial Issues, coordination of JLSC initiatives and systems implementation as well as development of comparable Process Standards for both depots are examples of these functions. Growth in the Maintenance Directorate reflects the effect of these function transfers.

Maintenance Directorate reflects the effect of these function transfers.

Capital Budget Authority:

	FY 1995	FY 1996	FY 1997
Equip Non ADPE/TELCOM	2.4	2.1	4.8
ADPE/Telecommunications Equip	0	.4	1.2
Software Development	0	0	0
Minor Construction	.7	1.7	1.6
Reliability, Maintainability, and Supportability Modifications			1.9
TOTAL	3.1	4.2	9.5

The MCDM capital budget estimate for equipment purchases increases in FY 1997 due to the planned purchase of a Terr-Aqua Environmental System. The Marine Corps Logistics Bases Strategic Plan calls for improved industrial and performance processes to achieve maximum reduction of hazardous materials and exploit all opportunities for pollution prevention. The Terr-Aqua System must be procured in FY 1997 to meet this goal. This system requires from 12 to 18 months to install and must be operational by FY 1999 in order to comply with maximum available control technology required by law.

Information Management Equipment Purchases support the fielding of the Depot Maintenance Standard Systems being developed by the Joint Logistics System Center (JLSC) for Marine Corps Maintenance Depots. Without this investment, needed improvements to the Depot's business process and infrastructure will not be achieved.

Economies and Efficiencies:

The FY 1997 MCDM Budget includes cost saving for FY 1996 of $2.0 million and FY 1997 of $3.0 million. These cost savings are directly due to enhanced and improved business practices, as well as purchases made aimed at increasing productivity and reducing cost. Some of the major initiatives are listed below:

Implementation of DOD Standard Depot Maintenance Systems
Purchase of Televideo Conference Center
Refurbish/Enhance/Repair vice new acquisition of plant property

Other managerial and productivity initiatives aimed at cost savings include: standardizing operations processes including undercoating painting which should reduce cost approximately 25%; reducing hazardous waste and associated disposal costs; automating material production processes; and installing a new Time and Attendance System capable of adapting to DOD Standard System implementation.

MARINE CORPS DEPOT MAINTENANCE
REVENUE AND EXPENSES
(Dollars in Millions)

	FY 1995	FY 1996	FY 1997
Revenue:			
Gross Sales			
Operations	202.2	161.1	161.1
Capital Surcharge	2.2	1.1	1.2
Depreciation except Maj Const	4.3	3.8	4.1
Major Construction Depreciation	0.0	0.0	0.0
Other Income	0.0	0.0	0.0
Total Income	**208.7**	**166.0**	**166.4**
Expenses:			
Cost of Materiel Sold from Inventory	0.0	0.0	0.0
Negotiated Purchases from Customers	0.0	0.0	0.0
Transportation	0.0	0.0	0.0
Salaries and Wages:			
Military Personnel	1.1	1.0	1.1
Civilian Personnel	99.7	85.7	84.1
Materials, Supplies and			
Parts used in Operations	46.9	43.8	40.6
Facility Repair Charge	1.6	1.9	2.1
Depreciation - Capital	4.3	3.8	4.1
Contracted Engineering Services	1.6	1.3	1.3
Lease Costs	0.0	0.0	0.0
Purchased Utilities	4.5	3.9	4.0
Purchased Communications	0.3	0.2	0.2
Equipment Maintenance	1.9	1.7	1.7
Fuel	0.2	0.4	0.3
Other Expenses	20.8	18.6	21.3
Total Expenses	**182.9**	**162.3**	**160.8**
Operating Result	25.8	3.7	5.6
Less Capital Surchg Reservation	2.2	1.1	1.2
Plus Appropriations Affecting NOR/AOR	0.0	0.0	0.0
Other Changes Affecting NOR/AOR	-1.3	0.0	0.0
Net Result	22.3	2.6	4.4
Prior Year AOR	-29.3	-7.0	-4.4
Accumulated Operating Result	**-7.0**	**-4.4**	**0.0**

MARINE CORPS DEPOT MAINTENANCE
SOURCE OF REVENUE
(Dollars in Millions)

	FY 1995	FY 1996	FY 1997
1. New Orders	149.9	150.0	159.4
a. Orders from DoD Components	138.1	135.1	139.7
Department of the Navy	134.6	134.9	138.4
Operations and Maintenance, Navy	0.3	0.2	0.8
Operations and Maintenance, Marine Corps	124.5	130.0	125.8
O&M, Navy Reserve	0.0	0.0	0.0
O&M, Marine Corps Reserve	2.9	2.1	2.8
Aircraft Procurement, Navy	0.0	0.0	0.0
Weapons Procurement, Navy	0.0	0.0	0.0
Shipbuilding & Conversion, Navy	0.0	0.0	0.0
Other Procurement, Navy	0.0	0.0	0.0
Procurement, Marine Corps	6.3	2.5	8.7
Family Housing, Navy and Marine Corps	0.0	0.0	0.0
Research, Development, Test & Eval, Navy	0.6	0.1	0.3
Military Construction, Navy	0.0	0.0	0.0
Other Navy Appropriations	0.0	0.0	0.0
Other Marine Corps Appropriations	0.0	0.0	0.0
Department of the Army	3.3	0.0	0.0
Army Operation & Maintenance Accounts	2.6	0.0	0.0
Army Res, Dev, Test & Eval Accounts	0.0	0.0	0.0
Army Procurement Accounts	0.0	0.0	0.0
Army Other	0.7	0.0	0.0
Department of the Air Force	0.2	0.2	1.3
Air Force Operation & Maintenance Accounts	0.1	0.2	0.1
Air Force Res, Dev, Test & Eval Accounts	0.0	0.0	0.0
Air Force Procurement Accounts	0.0	0.0	0.0
Air Force Other	0.1	0.0	1.2
DoD Appropriated Accounts	0.0	0.0	0.0
Base Closure and Realignment	0.0	0.0	0.0
Operation & Maintenance Accounts	0.0	0.0	0.0
Res, Dev, Test & Eval Accounts	0.0	0.0	0.0
Procurement Accounts	0.0	0.0	0.0
DoD Other	0.0	0.0	0.0
b. Orders from DBOF Business Areas	10.2	14.5	18.6
c. Total DoD	148.3	149.6	158.3
d. Other Orders	1.6	0.4	1.1
Other Federal Agencies	1.6	0.4	1.1
Foreign Military Sales	0.0	0.0	0.0
Non Federal Agencies	0.0	0.0	0.0
2. Carry-In Orders	126.9	68.0	52.0
3. Total Gross Orders (available funding)	276.8	218.0	211.4
4. Carry-Out Orders	68.0	52.0	45.0
Change in Backlog (carry-out less carry-in)	-58.9	-16.0	-7.0
5. Total Gross Sales	208.8	166.0	166.4

DEFENSE BUSINESS OPERATIONS FUND
MARINE CORPS DEPOT MAINTENANCE
CHANGES IN OPERATION
(DOLLARS IN MILLIONS)

	Total Cost
1. FY 1996 President's Budget	142.1
2. Pricing Adjustments	0.3
A. Civilian Pay Raise	
B. Military Pay Raise	
C. Materials/Supplies, DBOF	
D. Industrial DBOF Purchases	
E. General Purchase Inflation	0.3
3. Program Changes	19.9
A. Civilian Personnel	9.6
B. Military Personnel	0.0
C. Materials/Supplies, DBOF	5.4
D. Industrial DBOF Purchases	0.0
E. Other Purchases	4.9
4. FY 1996 Current Estimate	162.3
5. Pricing Adjustments	3.9
A. Civilian Pay Raise	2.3
B. Military Pay Raise	0.0
C. Materials/Supplies, DBOF	0.5
D. Industrial DBOF Purchases	0.3
E. General Purchase Inflation	0.8
6. Productivity and Other Efficiencies	-1.0
7. Program Changes	-4.4
A. Civilian Personnel	-3.6
B. Military Personnel	0.1
C. Materials/Supplies, DBOF	-2.6
D. Industrial DBOF Purchases	-0.1
E. Other Purchases	1.8
8. FY 1997 President's Budget	160.8

DEFENSE BUSINESS OPERATIONS FUND
DEPARTMENT OF THE NAVY
MARINE CORPS DEPOT MAINTENANCE

MATERIAL INVENTORY DATA
(Dollars in Millions))
FISCAL YEAR 1995

			-------- Peacetime --------	
	Total	Mobilization	Operating	Other
Materiel Inventory BOP	12.6	0.0	12.6	0.0
BOP Reclassification Changes	0.0	0.0	0.0	0.0
Price Changes	0.0	0.0	0.0	0.0
Receipts from Commercial Sources	43.9	0.0	43.9	0.0
Negotiated Purchase from Customers	0.0	0.0	0.0	0.0
Gross Sales	40.3	0.0	40.3	0.0
Materiel Inventory Adjustments				
CAPITALIZATIONS + OR (-)	0.0	0.0	0.0	0.0
RETURNS TO SUPPLIERS (-)	0.0	0.0	0.0	0.0
TRANSFERS TO PROP. DISP.(-)	-1.0	0.0	-1.0	0.0
ISSUES/RECEIPTS WITHOUT REIMBURSEMENT + or (-)	0.0	0.0	0.0	0.0
OTHER (list)	0.0	0.0	0.0	0.0
TOTAL ADJUSTMENTS	-1.0	0.0	-1.0	0.0
Materiel Inventory EOP	15.2	0.0	15.2	0.0
ECONOMIC RETENTION (memo)	0.0			
POLICY RETENTION (memo)	0.0			
POTENTIAL EXCESS (memo)	0.0			
Materiel Inventory on Order EOP (memo)	3.8	0.0	3.8	0.0

DEFENSE BUSINESS OPERATIONS FUND
DEPARTMENT OF THE NAVY
MARINE CORPS DEPOT MAINTENANCE

MATERIAL INVENTORY DATA
(Dollars in Millions))
FISCAL YEAR 1996

			-------- Peacetime --------	
	Total	Mobilization	Operating	Other
Materiel Inventory BOP	15.2	0.0	15.2	0.0
BOP Reclassification Changes	0.0	0.0	0.0	0.0
Price Changes	0.0	0.0	0.0	0.0
Receipts from Commercial Sources	32.8	0.0	32.8	0.0
Negotiated Purchase from Customers	0.0	0.0	0.0	0.0
Gross Sales	37.0	0.0	37.0	0.0
Materiel Inventory Adjustments				
CAPITALIZATIONS + OR (-)	0.0	0.0	0.0	0.0
RETURNS TO SUPPLIERS (-)	0.0	0.0	0.0	0.0
TRANSFERS TO PROP. DISP.(-)	0.0	0.0	0.0	0.0
ISSUES/RECEIPTS WITHOUT REIMBURSEMENT + or (-)	0.0	0.0	0.0	0.0
OTHER (list)	0.0	0.0	0.0	0.0
TOTAL ADJUSTMENTS	0.0	0.0	0.0	0.0
Materiel Inventory EOP	11.0	0.0	11.0	0.0
ECONOMIC RETENTION (memo)	0.0			
POLICY RETENTION (memo)	0.0			
POTENTIAL EXCESS (memo)	0.0			
Materiel Inventory on Order EOP (memo)	2.8	0.0	2.8	0.0

D FENSE BUSINESS OPERATIONS FUND
DEPARTMENT OF THE NAVY
MARINE CORPS DEPOT MAINTENANCE

MATERIAL INVENTORY DATA
(Dollars in Millions))
FISCAL YEAR 1997

			-------- Peacetime --------	
	Total	Mobilization	Operating	Other
Materiel Inventory BOP	11.0	0.0	11.0	0.0
BOP Reclassification Changes	0.0	0.0	0.0	0.0
Price Changes	0.0	0.0	0.0	0.0
Receipts from Commercial Sources	32.6	0.0	32.6	0.0
Negotiated Purchase from Customers	0.0	0.0	0.0	0.0
Gross Sales	33.3	0.0	33.3	0.0
Materiel Inventory Adjustments				
CAPITALIZATIONS + OR (-)	0.0	0.0	0.0	0.0
RETURNS TO SUPPLIERS (-)	0.0	0.0	0.0	0.0
TRANSFERS TO PROP. DISP.(-)	0.0	0.0	0.0	0.0
ISSUES/RECEIPTS WITHOUT REIMBURSEMENT + or (-)	0.0	0.0	0.0	0.0
OTHER (list)	0.0	0.0	0.0	0.0
TOTAL ADJUSTMENTS	0.0	0.0	0.0	0.0
Materiel Inventory EOP	10.3	0.0	10.3	0.0
ECONOMIC RETENTION (memo)	0.0			
POLICY RETENTION (memo)	0.0			
POTENTIAL EXCESS (memo)	0.0			
Materiel Inventory on Order EOP (memo)	2.6	0.0	2.6	0.0

DEFENSE BUSINESS OPERATIONS FUND
MARINE CORPS DEPOT MAINTENANCE
SUMMARY OF CAPITAL PURCHASES

(DOLLARS IN THOUSANDS)

LINE NUMBER	ITEM DESCRIPTION	FY 1995 ACTUALS QUANTITY	FY 1995 ACTUALS TOTAL COST	FY 1996 ESTIMATE QUANTITY	FY 1996 ESTIMATE TOTAL COST	FY 1997 ESTIMATE QUANTITY	FY 1997 ESTIMATE TOTAL COST
	EQUIPMENT >500K						
1	REPLACEMENT	0	0.0	0	0.0	0	0.0
2	PRODUCTIVITY	1	0.8	0	0.0	0	0.0
3	NEW MISSION	0	0.0	0	0.0	0	0.0
4	ENVIRONMENTAL COMPLIANCE	0	0.0	0	0.0	2	3.2
	Subtotal	1	0.8	0	0.0	2	3.2
	EQUIPMENT >100K<500K						
5	REPLACEMENT	4	0.6	5	1.4	5	1.2
6	PRODUCTIVITY	9	0.9	0	0.0	0	0.0
7	NEW MISSION	2	0.1	3	0.7	2	0.4
8	ENVIRONMENTAL COMPLIANCE	0	0.0	0	0.0	0	0.0
	Subtotal	15	1.6	8	2.1	7	1.6
	ADPE & TELECOM >500K						
9	COMPUTER HARDWARE (PRODUCTION)	1	2.4	0	0.0	1	1.2
10	COMPUTER SOFTWARE (OPERATING SYS)	0	0.0	0	0.0	0	0.0
11	TELECOMMUNICATIONS	0	0.0	0	0.0	0	0.0
12	OTHER COMMUNICATIONS	0	0.0	0	0.0	0	0.0
	Subtotal	1	2.4	0.0	0.0	1	1.2

	ADPE & TELECOM >100K<500K						
13	COMPUTER HARDWARE (PRODUCTION)	0	0.0	1	0.2	0	0.0
14	COMPUTER SOFTWARE (OPERATING SYS)	0	0.0	0	0.0	0	0.0
15	TELECOMMUNICATIONS	0	0.0	0	0.0	0	0.0
16	OTHER COMMUNICATIONS	0	0.0	1	0.2	0	0.0
	Subtotal	0	0.0	2	0.4	0	0.0
17	**MINOR CONSTRUCTION >500K**	0	0.0	0	0.0	0	0.0
18	**MINOR CONSTRUCTION >100K<500K**	13	0.7	8	1.7	7	1.6
19	**SOFTWARE >500K**	0	0.0	0	0.0	0	0.0
20	**SOFTWARE >100K <500K**	0	0.0	0	0.0	0	0.0
21	**RM&S MODS**	0	0.0	0	0.0	331	1.9
	TOTAL	30	5.5	18	4.2	348	9.5

000184

DEFENSE BUSINESS OPERATIONS FUND
MARINE CORPS DEPOT MAINTENANCE
MARINE CORPS CAPITAL PURCHASES PROGRAM
JUSTIFICATION SHEET
(DOLLARS IN THOUSANDS)

A. BUDGET SUBMISSION	
B. INDUSTRIAL FUND/ACTIVITY GROUP/ACTIVITY MARINE CORPS INDUSTRIAL FUND/DEPOT MAINTI	EQUIPMENT PURCHASES

	FY 1994 ACTUALS			FY 1995 ESTIMATE			FY 1996 ESTIMATE			FY 1997 ESTIMATE		
	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
PLASTIC MEDIA EQUIPMENT										1	749	749

NARRATIVE JUSTIFICATION:

THE BLAST ROOM WILL PROVIDE A PLASTIC MEDIA BLASTING FACILITY. PLASTIC MEDIA BLAST (PMB) TECHNOLOGY PROVIDES FOR RAPID AND COST EFFECTIVE REMOVAL OF COATING FROM ALMOST ANY SUBSTANCE WITHOUT THE USE OF TOXIC CHEMICAL STRIPPERS, OR DAMAGE TO THE SUBSTANCE. THIS PROCESS DOES NOT CREATE VOLATILE ORGANIC COMPOUNDS (VOC), AND GENERATES ONLY A SMALL AMOUNT OF DRY RESIDUE. THE BLAST ROOM IS DESIGNED TO BE CONSTRUCTED INSIDE A BUILDING, MUCH LIKE THE PAINT BOOTHS WHICH ARE NOW IN PLACE.

DEFENSE BUSINESS OPERATIONS FUND
MARINE CORPS DEPOT MAINTENANCE

MARINE CORPS CAPITAL INVESTMENT JUSTIFICATIONS ($ IN THOUSANDS)				A. FY97 PRESIDENT'S BUDGET					
B. DEFENSE BUSINESS OPERATIONS FUNDS MARINE CORPS DEPOT MAINTENANCE				C. EQUIPMENT PURCHASE >$500K			D. LINE NO. 4 ENVIRONMENTAL COMPLIANCE		
	FY95 ESTIMATE			FY96 ESTIMATE			FY97 ESTIMATE		
ELEMENT OF COST	QUANTITY	UNIT COST	TOTAL COST	QUANTITY	UNIT COST	TOTAL COST	QUANTITY	UNIT COST	TOTAL COST
TERR-AQUA	0		0	0	0	0	1		2.5

000186

NARRATIVE JUSTICATION:
MARCOROLOGBASES STRATEGIC PLAN CALLS FOR IMPROVED INDUSTRIAL AND PERFORMANCE PROCESSES TO ACHIEVE MAXINUM REDUCTION OF HAZARDOUS MATERIALS AND EXPLOIT ALL OPPORTUNITIES FOR POLLUTION PREVENTION. THE TERR-AQUA SYSTEM MUST BE PROCURED BY FY97 TO MEET THIS GOAL. THIS SYSTEM REQUIRES FROM 12 TO 18 MONTHS TO INSTALL AND MUS T BE OPEATIONAL BY FY 99 TO COMPLY WITH AIR CONTROL ACT AMENDMENTS.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION
($ in Thousands)

A. Budget Submission
FY 1997 OSD/OMB Submission

B. Component/Business Area/Date
Marine Corps/Depot Maintenance
Sep-95

C. Line No. & Item Description
Depot Maintenance Standard System (DMSS)
ADP Equipment

D. Activity Identification
Joint Logistics Systems Center

	FY 1995			FY 1996			FY 1997		
Element of Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
Hardware			$2,414			$360			$1,120
TOTAL			$2,414			$360			$1,120

Narrative Justification:

These funds are to support the fielding of the Depot Maintenance Standard System (DMSS) being developed by the Joint Logistics System Center to Marine Corps maintenance depots. During the recent budget review, the responsibility for acquisition of hardware was transferred from the JLSC to the Military Services.

The Depot Maintenance Standard System (DMSS) was created in response to the DoD initiative to standardize logistics systems across DoD and the Military Services' related need for a more capable information systems technical infrastructure in their depots. Over the past two years, the Joint Logistics Systems Center (JLSC), working with the Services, has evaluated the business processes of the depots, investigated alternative maintenance management concepts and reviewed the Services' legacy environment, depot AIS development efforts and commercially available systems. These efforts have sustained the need to modernize the platforms and hardware represented by this submittal.

DMSS will provide the Services a revolutionary step forward in functional capability and automation, including a systems infrastructure upon which to make significant strides in business process improvement. Benefits will be realized in two primary areas: business performance and information systems costs. Business performance will be enhanced through the process improvements delivered by DMSS applications to support the Depot Maintenance Improved Functional Baseline (IFB). These improvements include:

Reduced inventories through improved planning and tracking
Reduced labor through better resource and work planning

000187

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)		A. Budget Submission FY 1997 OSD/OMB Budget Submission
B. Component/Business Area/Date Marine Corps/Depot Maintenance Sep-95	C. Line No. & Item Description Depot Maintenance Standard System (DMSS) ADP Equipment	D. Activity Identification Joint Logistics Systems Center

Narrative Justification (Continuation):

Reduced overhead through automation and the elimination of non value-added activity
Shorter cycle times through better planning and management information to control operations
Improved schedule performance through more complete asset visibility
Once implementation is complete and legacy applications are reduced or eliminated, ADP costs will come down markedly.

Without this investment, needed improvements to the depot/shipyard business process and infrastructure will not be achieved. Implementing enhanced repair and overhaul capabilities is a critical contribution toward improving mission readiness in a downsizing environment. As the DoD weapon systems continue to age, reductions to the workforce continue and the number of depots/shipyards are reduced, efficient and effective organic repair capability is of increasingly growing importance to DoD in maintaining weapon systems combat readiness. In order to meet this demand, the depot/shipyard community needs to dramatically strengthen its business processes and the associated information infrastructure (hardware).

Based upon the current MM Economic Analysis (EA), DOD will realize substantial savings from MMSS. The estimated gross savings of the executable program are $6.4B and the ROI is 2.7 : 1.

000188

DEFENSE BUSINESS OPERATIONS FUND
MARINE CORPS DEPOT MAINTENANCE

MARINE CORPS CAPITAL INVESTMENT JUSTIFICATION ($ IN THOUSANDS)						A. FY97 PRESIDENT'S BUDGET			
B. DEFENSE BUSINESS OPERATIONS FUNDS MARINE CORPS DEPOT MAINTENANCE			C. RM&S Mods			D. 21. Equipment > $500 Thousand			
	FY1995 ACTUAL			FY1996 ESTIMATE			FY1997 ESTIMATE		
ELEMENT OF COST	QUANTITY	UNIT COST	TOTAL COST	QUANTITY	UNIT COST	TOTAL COST	QUANTITY	UNIT COST	TOTAL COST
Transmission End Cap									
Testing Costs	0		0	0		0	N/A		75K
Procurement and Installation	0		0	0		0	0		1125K
Total									1200K

NARRATIVE JUSTIFICATION:

This modification changes the material on the end caps of the transmission from Aluminum to Cast Iron. Excessive wear has been noted during testing on multiple transmissions at the Amphibious Vehicle Testing Branch. The failure mode occurs when the oil ring seal on the clutch pack shafts wears into the Aluminum end caps allowing pressure loss to occur. This failure mode has been occuring roughly every 100 hours of operation.

Currently, there has been some difficulty in obtaining spare parts through the supply channels. This has caused the Depot to rework the Aluminum end caps. The Testing funding is used to test and validate the end caps. Installation of the end caps would occur beginning in FY 98 at a rate of 370 Transmissions per year.

000185

DEFENSE BUSINESS OPERATIONS FUND
MARINE CORPS DEPOT MAINTENANCE

MARINE CORPS CAPITAL INVESTMENT JUSTIFICATIONS ($ IN THOUSANDS)				A. FY97 PRESIDENT'S BUDGET					
B. DEFENSE BUSINESS OPERATIONS FUNDS MARINE CORPS DEPOT MAINTENANCE				C. RM&S Mods					
	FY95 ACTUAL			FY96 ESTIMATE			FY97 ESTIMATE		
ELEMENT OF COST	QUANTITY	UNIT COST	TOTAL COST	QUANTITY	UNIT COST	TOTAL COST	QUANTITY	UNIT COST	TOTAL COST
Improved Radiator	0	0	0	0	0	0	331		663

NARRATIVE JUSTICATION:
This modification entails a material change from brass to stainless steel. Currently,the MC3s are exchanging the cores and rebuilding the radiators at a rate of 791 per year. At a cost of $1832.00 per radiator, this equates to a cost of $1.45M annually. By procuring the stainless steel radiators, a considerable cost avoidance can be realized. A fielding schedule of 331 radiators per year beginning in FY97 is proposed.

000190

Department of the Navy - Defense Business Operations Fund
Marine Corps Depot Maintenance
CAPITAL BUDGET EXECUTION
(dollars in millions)
FY 1996

Title/Description	Original Request	Change	Revised Request	Explanation/Reason for Change
Equipment (non-ADPE/TEL)				
CNC Punch Press	0.370	0.010	0.380	Updated price estimate
Sub-total Equipment	0.370	0.010	0.380	
ADPE and Telecom Equip				
JLSC Hardware Items	0.000	0.360	0.360	Funding required to support Joint Logistics Systems Center-managed application
Sub-total - ADPE/TEL Equip	0.000	0.360	0.360	
Minor Construction				
Construct Ordnance Maintenance Building	0.300	(0.020)	0.280	Updated price estimate
Sub-total - Minor Construction	0.300	(0.020)	0.280	
TOTAL CAPITAL INVESTMENT	0.670	0.350	1.020	

000194

DEPARTMENT OF THE NAVY
DEFENSE BUSINESS OPERATIONS FUND
NAVAL AIR WARFARE CENTER

Activity Group Function

To provide full spectrum research, development, test and evaluation, engineering, and fleet support for air platforms, autonomous air vehicles, missiles and missile subsystems, weapon systems associated with air warfare, avionics systems, and sensor systems used to conduct anti-submarine warfare from air platforms. As one of the four Navy Warfare Centers in the Research, Development, Test, and Evaluation (RDT&E) DBOF Business Area, the Naval Air Warfare Center (NAWC) supports a broad range of Navy and Department of Defense (DOD) programs in various phases of life cycle acquisition management. Additionally, the activity supports a broad base of tenant, foreign military sales, and private party customers. Consequently, the activity has a diverse sponsor and appropriation base. This budget also incorporates workload and mission changes associated with Base Realignment and Closure Commission (BRAC) II, III and IV. The Navy also has initiated a study which will consider the possibility of privatizing the Indianapolis site, scheduled to close as part of BRAC IV.

Activity Group Composition

Activity Name	Location
Naval Air Warfare Center, Aircraft Division	Patuxent River, MD
Naval Air Warfare Center, Aircraft Division	Lakehurst, NJ
Naval Air Warfare Center, Aircraft Division	Indianapolis, IN
Naval Air Warfare Center, Aircraft Division	Warminster, PA
Naval Air Warfare Center, Aircraft Division	Trenton, NJ
Naval Air Warfare Center, Weapons Division	China Lake, CA
Naval Air Warfare Center, Weapons Division	Point Mugu, CA

Financial Profile:	FY 1995	FY 1996	FY 1997
Cost of Good Sold ($ Millions)	$2,810.2	$2,494.4	$2,361.8
Net Operating Results	-$13.0	-$10.6	15.8
Accumulated Operating Results	-$5.2	-$15.8	$0

The decrease in cost from FY 1995 to FY 1996 is primarily due to the closure of Warminster in FY 1996 and subsequent consolidation of personnel at Patuxent River. The decrease in cost from FY 1996 to FY 1997 is due to the Reduction-In-Force (RIF) at the end of FY 1996 at Weapons Division.

NOR losses are down slightly in FY 96. The primary cause for operating losses in FY 1996 is costs associated with the reduction-in-force at Weapons Division at the end of the fiscal year.

The significant improvement to accumulated operating results from FY 1996 to FY 1997 is due to

break-even rates, reduction in costs due to closure of Warminster and the FY 1996 Reduction in Force at Weapons Division.

Workload:	**FY 1995**	**FY 1996**	**FY 1997**
Direct Labor Hours (in Thousands)	17,796	17,559	17,796

The Direct Labor Hours remain flat from FY 1995 to FY 1997 due to the offsetting effects of decreasing the total workforce while converting overhead personnel to direct. The NAWC is also implementing various management initiatives to increase productivity.

Performance Indicators:	**FY 1995**	**FY 1996**	**FY 1997**
Cost per Direct Labor Hour (Unit Cost)	$79.38/hr.	$80.04/hr.	$75.95/hr.

The cost consists of direct labor plus overhead. The decrease from FY 1996 to FY 1997 is due to the efficiencies of downsizing from seven to six NAWC sites while slightly increasing direct labor hours.

Customer Rate Changes:	**FY 1996**	**FY 1997**
Stabilized Customer Rate	$73.66	$70.55
Stabilized Rate Change	1.2%	-4.2%
Composite Rate Change	1.2%	.14%

The stabilized billing rate consists of direct labor and applied overhead. All remaining direct costs are billed on a 100% reimbursable basis. The composite rate change shown above incorporates both the stabilized and non-stabilized parts of the budget.

Unit Cost:	**FY 1995**	**FY 1996**	**FY 1997**
	$79.38/hr.	$80.04/hr.	$75.95/hr.

Staffing:	FY 1995	FY 1996	FY 1997
Civilian End Strength	17,568	16,528	15,802
Civilian Work Years	17,708	16,854	15,882
Military End Strength	1633	314	382
Military Work Years	486	314	382

Military End Strength in FY 1995 consists of Major Range Test Facility Base (MRTFB) and DBOF assigned personnel. FY 1996 and 1997 reflects only DBOF. The decrease in staffing from FY 1995 to FY 1997 is due to the closing of NAWCAD Warminster in FY 1996, the Reduction-in-Force at Weapons Division in FY 1996, and the re-sizing of the NAWC. The number of people and dollars associated with Reduction-in-Force/Separation Incentive Pay is as follows (Dollars in Millions):

	People	**Dollars**
FY 1995	416	$11.4
FY 1996	1,153	$29.6
FY 1997	189	$3.4

Headquarters Cost:	**FY 1995**	**FY 1996**	**FY 1997**
($ in Millions)	$2.533	$1.700	$1.800

The decrease in Headquarters Cost from FY 1995 to FY 1996 is due to a reduction of 11 billets and support for those billets. The increase from FY 1996 to FY 1997 is due to inflation.

Capital Budget Authority:	**FY 1995**	**FY 1996**	**FY 1997**
Equipment-Non ADPE/TELECOM	$11.375	$18.670	$13.781
ADPE/TELECOM Equipment	$14.136	$8.486	$18.535
Software	$.506	$.495	$.545
Minor Construction	$3.801	$3.597	$2.924
Reliability, Maintainability, & Supportability Modifications	0	0	0
Total ($ millions)	$29.818	$31.248	$35.785

The successful utilization of capital resources is critical as the NAWC reduces personnel. The current submission reflects a relatively low level of procurement, about 1.5 percent of operating costs in FY 1997. Changes in procurement levels for replacement ADP equipment and non-ADP equipment less than $500 thousand account for most of the variability in cost from FY 1995 through FY 1997. Management has taken action to properly plan long term investment items and associated cost in order to properly position NAWC for the outyears.

Economies and Efficiencies:

The NAWC has taken numerous cost reduction initiatives to reduce overhead costs (e.g., travel, salaries, training, utilities, ADP, and maintenance) in this budget compared to the FY 1996 President's Budget. Cumulative overhead reduction since the President's Budget for FY 1995 through FY 1997 is $30.7 million.

Cost of Depot Level Reparables:	**FY 1995**	**FY 1996**	**FY 1997**
	34.370	21.795	18.914

The NAWC Aviation Depot Level Reparables consist of "black boxes" and avionics components which are used in test and evaluation and other range activities.

NAVAL AIR WARFARE CANTER
REVENUE AND EXPENSES
(Dollars in Millions)

	FY 1995	FY 1996	FY 1997
Revenue:			
Gross Sales			
Operations	2,759.3	2,438.8	2,334.5
Capital Surcharge	0.0	0.0	0.0
Depreciation except Maj Const	37.8	44.9	43.1
Major Construction Depreciation	0.0	0.0	0.0
Other Income	0.0	0.0	0.0
Total Income	**2,797.1**	**2,483.7**	**2,377.6**
Expenses:			
Cost of Materiel Sold from Inventory	0.0	0.0	0.0
Negotiated Purchases from Customers	0.0	0.0	0.0
Transportation	2.5	7.7	1.5
Salaries and Wages:			
Military Personnel	27.3	14.7	17.5
Civilian Personnel	1,054.3	1,065.2	996.6
Materials, Supplies and			
Parts used in Operations	349.9	380.0	371.6
Facility Repair Charge	62.6	61.6	64.2
Depreciation - Capital	37.8	44.9	43.1
Contracted Engineering Services	126.3	141.1	143.8
Lease Costs	6.3	5.6	5.4
Purchased Utilities	37.1	40.9	39.7
Purchased Communications	50.5	31.0	23.7
Equipment Maintenance	16.1	19.4	15.4
Fuel	17.9	19.1	19.3
Other Expenses	1,021.6	663.1	620.0
Total Expenses	**2,810.2**	**2,494.3**	**2,361.8**
Operating Result	-13.1	-10.6	15.8
Less Capital Surchg Reservation	0.0	0.0	0.0
Plus Appropriations Affecting NOR/AOR	0.0	0.0	0.0
Other Changes Affecting NOR/AOR	19.7	0.0	0.0
Net Result	6.6	-10.6	15.8
Prior Year AOR	-11.8	-5.2	-15.8
Accumulated Operating Result	**-5.2**	**-15.8**	**0.0**

NAVAL AIR WARFARE CENTER
SOURCE OF REVENUE
(Dollars in Millions)

	FY 1995	FY 1996	FY 1997
1. New Orders	2,434.8	2,322.6	2,046.8
a. Orders from DoD Components	2,180.5	2,078.3	1,797.1
Department of the Navy	1,904.3	1,827.0	1,564.7
Operations and Maintenance, Navy	460.3	342.0	360.5
Operations and Maintenance, Marine Corps	1.8	0.9	1.4
O&M, Navy Reserve	0.7	0.9	1.0
O&M, Marine Corps Reserve	0.0	0.0	0.0
Aircraft Procurement, Navy	303.3	361.1	268.5
Weapons Procurement, Navy	86.0	114.4	114.3
Shipbuilding & Conversion, Navy	52.1	70.8	44.7
Other Procurement, Navy	92.4	94.2	90.8
Procurement, Marine Corps	14.8	4.2	3.1
Family Housing, Navy and Marine Corps	22.3	22.2	22.4
Research, Development, Test & Eval, Navy	847.5	809.6	650.9
Military Construction, Navy	0.0	0.0	0.0
Other Navy Appropriations	23.1	6.7	7.1
Other Marine Corps Appropriations	0.0	0.0	0.0
Department of the Army	17.0	14.8	14.7
Army Operation & Maintenance Accounts	4.7	0.5	0.6
Army Res, Dev, Test & Eval Accounts	5.5	7.0	7.0
Army Procurement Accounts	3.9	1.3	1.4
Army Other	2.9	6.0	5.7
Department of the Air Force	46.1	42.7	44.6
Air Force Operation & Maintenance Accounts	3.2	2.7	3.0
Air Force Res, Dev, Test & Eval Accounts	18.2	18.1	18.2
Air Force Procurement Accounts	22.0	18.5	19.6
Air Force Other	2.7	3.4	3.8
DoD Appropriated Accounts	213.1	193.8	173.1
Base Closure and Realignment	77.1	69.0	31.9
Operation & Maintenance Accounts	13.1	10.0	10.5
Res, Dev, Test & Eval Accounts	58.3	62.6	72.4
Procurement Accounts	14.4	17.6	17.1
DoD Other	50.2	34.6	41.2
b. Orders from DBOF Business Areas	210.3	131.1	130.3
c. Total DoD	2,390.8	2,209.4	1,927.4
d. Other Orders	44.0	113.2	119.4
Other Federal Agencies	21.5	18.1	19.1
Foreign Military Sales	11.0	87.9	92.6
Non Federal Agencies	11.5	7.2	7.7
2. Carry-In Orders	1,530.8	1,168.5	1,007.4
3. Total Gross Orders (available funding)	3,965.6	3,491.1	3,054.2
4. Carry-Out Orders	1,168.5	1,007.4	676.6
Change in Backlog (carry-out less carry-in)	-362.3	-161.1	-330.8
5. Total Gross Sales	2,797.1	2,483.7	2,377.6

CHANGES IN THE COSTS OF OPERATION
NAVAL AIR WARFARE CENTER
(DOLLARS IN MILLIONS)

	Total Cost
1. FY 1996 President's Budget	2,647.5
2. Pricing Adjustments	-8.9
a. Annualization of Prior Year Pay Raises	0.0
b. FY 1996 Pay Raise	0.0
(1) Civilian Personnel	0.0
(2) Military Personnel	0.0
c. Stock Fund - Fuel	0.0
d. Stock Fund - Nonfuel	0.0
e. Industrial Fund Purchases	0.0
f. General Purchases Inflation	-8.9
3. Productivity Initiatives & Other Efficiencies	-11.6
a. Management Systems Consolidation	-11.6
4. Program Changes (Workload Changes)	-106.8
a. Test and Evaluation Support	-7.7
b. Major T&E Investment	-1.7
c. Base Operating Support	-0.4
d. F/A-18 Hornet	-14.5
e. Common Ground Equipment	-9.8
f. P-3 Series Modification	8.9
g. E-6A Series Mod	-3.4
h. Tomahawk	2.1
i. A/C Landing Systems Cert	-0.3
j. H-3 Series Mod	-1.3
k. SH-60 Program	-6.8
l. S-3 Series Mod	-1.9
m. H-1 Series Mod	-6.2
n. F-14 Program	-3.7
o. EA-6 Prowler	-3.7
p. Various Program Incr/Decr	-24.7
q. F/A-18	-2.0
r. Air Launched Missiles/Ordnance Rework	-1.2
s. AV-8B Aircraft	-1.5
t. Cruise Missile	-1.2
u. Joint Standoff Weapons	-1.2
v. Tomahawk	-1.2
w. Aircraft Support	-1.9
x. Harpoon/SLAM	-0.3
y. Standard Missile	-1.9
z. Airborne Sea Targets	-2.7
aa. Gun Systems	-2.7
ab. Sidewinder	-2.5
ac. Insensitive Munitions	-0.3
ad. EA-6B/CIWS	-1.2
ae. Various FMS	-2.0

CHANGES IN THE COSTS OF OPERATION
NAVAL AIR WARFARE CENTER
(DOLLARS IN MILLIONS)

	Total Cost
af. Avionics	-1.9
ag. Launchers	-2.2
ah. Electronic Counter Measures	-1.2
ai. Global Positioning System	-0.7
aj. Land Range White Sands	-1.2
ak. Parachutes	-0.7
5. Other Changes in:	-15.8
a. Realign AIR-536 Power and Propulsion	4.0
b. Realign Aircraft Custodian	0.1
c. BRAC revised non-labor cost estimates	-32.8
d. VSIP/VERA - Severance/SIP payouts	20.7
e. Revised overtime estimate	3.7
f. New hire NAVAIR Engineering & Scientific Development Programs	1.7
g. Depreciation	-2.7
h. Travel	1.5
i. Purchased Utilities	-5.4
j. Training	-0.2
k. Real Property Maint	-6.4
6. FY 1996 Current Estimate	2,504.4
7. Pricing Adjustments	64.8
a. Annualization of Prior Year Pay Raises	6.4
b. FY 1997 Pay Raise	23.6
(1) Civilian Personnel	23.3
(2) Military Personnel	0.3
c. Stock Fund - Fuel	0.3
d. Stock Fund - Nonfuel	12.9
e. Industrial Fund Purchases	2.0
f. General Purchases Inflation	19.6
8. Productivity Initiatives & Other Efficiencies	-19.6
a. CPP Productivity	-15.8
b. Management Systems Consolidation	-3.8
9. Program Changes (Workload Changes)	53.9
a. Test and Evaluation Support	-0.6
b. Major T&E Investment	0.5
c. Base Operating Support	3.0
d. P-3 Series Mod	0.9
e. Executive Helo Mod	0.6
f. CVN-72 SAMMS	2.8
g. DDG-51 (FF)	-7.7
h. Aviation Improvements	1.7

CHANGES IN THE COSTS OF OPERATION
NAVAL AIR WARFARE CENTER
(DOLLARS IN MILLIONS)

	Total Cost
i. Carrier Systems Development	2.1
j. Mat'l, Electronics, & Computer Tech	2.3
k. Fleet Air Training	4.4
l. Centralized T&E Investment Program	4.4
m. Airborne Antisub Warfare Support	4.6
n. Various Program Incr/Decr	2.2
o. F/A-18	9.2
p. AV-8B	12.0
q. Sparrow	4.6
r. Energy Programs	4.1
s. EA-6B	0.4
t. Electronic Warfare	1.3
u. Tomahawk	0.7
v. Microwave Research & Test	0.2
w. Chemistry Research & Test	0.2
10. Other Changes in:	-50.4
a. Warminster mission cease	-21.7
b. Military Labor	2.2
c. Decreased BRAC expenses	-19.2
d. BRAC Transition Team termination	-1.8
e. VSIP/VERA - Severance/SIP Payout	-5.2
f. St. Inigoes downsizing	-1.1
g. Decreased overtime	-1.4
h. Depreciation	1.0
j. Purchased Utilities	-0.3
k. Real Property Maint	-0.2
l. Communications	-2.7
11. FY 1997 Current Estimate	2,553.1

CAPITAL INVESTMENT SUMMARY
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL AIR WARFARE CENTER
($ in Millions)

ITEM LINE #	ITEM DESCRIPTION	FY 1995 QTY	FY 1995 ACTUAL OBLIGNS	FY 1996 QTY	FY 1996 TOTAL COST	FY 1997 QTY	FY 1997 TOTAL COST
	GRAND TOTAL NON-ADP CAPITAL PURCHASES PROGRAM		15.177		22.267		16.705
	GRAND TOTAL ADP CAPITAL PURCHASES PROGRAM		14.642		8.981		19.080
	GRAND TOTAL CAPITAL PURCHASES PROGRAM		29.819		31.248		35.785

000200

CAPITAL INVESTMENT SUMMARY
NON-ADP PROGRAM-SUBMIT
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL AIR WARFARE CENTER
($ in Millions)

ITEM LINE #	ITEM DESCRIPTION	FY 1995 QTY	FY 1995 ACTUAL OBLIGNS	FY 1996 QTY	FY 1996 TOTAL COST	FY 1997 QTY	FY 1997 TOTAL COST
	1a. EQUIPMENT, OTHER THAN ADPE & TELECOM (>$500,000)						
	Replacement						
6 A L 5 EL 0001 R	CNC VERTICAL TURRET LATHE	1	1.300				
4 W C 3 EL 0006 R	WEPTAC PHASE II PRODUCTION SYSTEM	1	1.247	1	1.930	1	2.123
4 W C 5 EL 0500 R	HIGH OFF-BORESIGHT ANGLE TABLE	1	1.195	1	0.450		
4 W C 3 EL 0007 R	MISSION PLANNING/DIGITAL IMAGING W/S	1	0.945	1	1.000	1	1.000
4 W C 3 EL 0005 R	P-369 MILCON COLLATERAL EQUIPMENT	1	0.805	1	0.525	1	0.300
A A 5 ES 0445 R	ACOUSTIC SIGNAL GENERATOR SYSTEM	1	0.454				
A W 4 EL 5008 R	ELF PROJECTOR	1	0.024				
6 A C 6 EL 5701 R	PWB DIRECT LASER IMAGING SYSTEM			1	0.765		
4 A C 6 EL 7402 R	VIBRATION / SHOCK SHAKER SYSTEM			1	0.600		
4 A B 6 EL 0001 R	EYE-SAFE LASER TRACKER			1	0.560		
4 W P 3 EL 4002 R	AMES II THREAT SIMULATOR					1	1.235
4 W C 6 EL 0502 R	INSTRUMENTATION UPGRADE (WSL)					1	0.565
	Productivity						
4 W C 3 EL 0010 P	CONCURRENT ENGINEERING WORKGROUP	1	1.347	1	1.236		
4 A A 6 EL 0411 P	AEGIS COMBAT COMPUTER SYSTEM					1	0.980
	New Mission						
4 W P 3 EL 4001 N	BI-STATIC CHAMBER EQUIPMENT	1	0.820				
4 A A 6 EL 0014 N	ELECT SYSTEM DEPT/ENVIRONMENTAL TEST UPGRADES			1	0.674	1	0.533
	SUBTOTAL EQUIPMENT, OTHER THAN ADPE & TELECOM (>$500,000)		8.137		7.740		6.736
N ES 0000	**1b. EQUIPMENT, OTHER THAN ADPE & TELECOM (<$500,000)**		3.238		10.930		7.045
	2. GRAND TOTAL EQUIPMENT, OTHER THAN ADPE & TELECOM		11.375		18.670		13.781
N MC 0000	**3. MINOR CONSTRUCTION (<$300,000)**		3.802		3.597		2.924
	GRAND TOTAL NON-ADP CAPITAL PURCHASES PROGRAM		15.177		22.267		16.705

000201

CAPITAL INVESTMENT SUMMARY
ADP PROGRAM-SUBMIT
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL AIR WARFARE CENTER
($ in Millions)

ITEM LINE #		ITEM DESCRIPTION	FY 1995 QTY	FY 1995 ACTUAL OBLIGNS	FY 1996 QTY	FY 1996 TOTAL COST	FY 1997 QTY	FY 1997 TOTAL COST
		1a. ADPE & TELECOMMUNICATIONS (>$100,000)						
		Computer Hardware (Production)						
7 W C 5 KL 0506	R	IMAGE SYSTEM	1	1.103				
4 A W 5 KL 1301	R	COTS SIMULATION SYSTEM	1	0.795				
7 A B 3 KL 0001	R	LOCAL AREA NETWORK	1	0.725	1	1.000		
A W 5 KL 4551	R	ADVANCED MULTIBAND POLARIMERIC	1	0.717				
4 W C 5 KL 0507	R	TECHNICAL INFORMATION SUPPORT SYSTEM	1	0.664				
7 W C 5 KL 0508	R	COMMON PROPERTY SYSTEM	1	0.606				
4 A W 5 KL 6205	R	RECONFIGURE CREWSTATION UPGRADE	1	0.567				
5 A W 4 KL 6006	R	COMPUTER AIDED GRAPHICS WORKSTATIONS	1	0.559				
4 A W 5 KL 7501	R	AIRCREW PROTOTYPING STATION	1	0.391				
4 W C 5 KL 0515	R	ATR REAL-TIME TECHNOLOGY DEVELOPMENT	1	0.377				
4 W C 5 KL 6007	R	HIGH PERFORMANCE COMPUTING	1	0.351			1	0.285
7 A A 5 KL 0001	R	UNIX CORPORATE SERVER ENVIRONMENT EXPANSION	1	0.291	1	0.250		
7 A W 5 KL C502	R	GENERAL PURPOSE UNIX COMPUTER	2	0.279				
A A 5 KL 0814	N	SECURITY PASS OFFICE EQUIPMENT	1	0.251				
8 A A 5 KL 0010	R	ADP EQUIPMENT UPGRADES	1	0.240	1	0.200	1	0.300
4 W C 5 KL 0516	R	SIMULATION NETWORK DEBRIEF SYSTEM	1	0.212				
8 A X 5 KL 0008	N	RESOURCE AUTOMATED MGMT SYSTEM	1	0.210			1	0.161
4 W C 4 KL 0401	R	COMPETITIVE ENGINEERING ENVIRONMENT	1	0.201	1	0.647	1	0.850
7 W P 5 KL 5001	R	PM MARS EXPANSION WAREHOUSE	1	0.190				
8 A A 5 KL 0009	R	BLUE HOSE INSTALLATION FOR NAS	1	0.186	1	0.250	1	0.250
7 W C 5 KL 0510	R	NAWCWD DBOF SYSTEM	1	0.179				
4 W C 5 KL 0513	R	SOFTWARE WORKSTATION UPGRADE	1	0.150				
4 A W 5 KL 1302	R	COTS FACILITY H/W ASQ-212	1	0.145				
4 A W 5 KL 6608	R	X-RAY DIFFRACTION UPGRADE	1	0.141				
4 A W 5 KL 6604	R	CONFOCAL MICROSCOPY SYSTEM	1	0.131				
4 A W 5 KL 1103	R	MAINTENANCE CONTROL PANEL	1	0.106				
7 W C 5 KL 0511	R	NAWCWD CORPORATE BUDGET SYSTEM	1	0.103				
7 A X 5 KL 0006	R	CLASSIFIED DATA PROCESSING	1	0.100				

202000

CAPITAL INVESTMENT SUMMARY
ADP PROGRAM-SUBMIT
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL AIR WARFARE CENTER
($ in Millions)

ITEM LINE #	ITEM DESCRIPTION	FY 1995 QTY	FY 1995 ACTUAL OBLIGNS	FY 1996 QTY	FY 1996 TOTAL COST	FY 1997 QTY	FY 1997 TOTAL COST
7 A X 5 KL 0005 R	64-BIT MULTI-PROCESSING	1	0.097				
A W 4 KL 5002 R	DATA ACQUISITION FOR I WARP	1	0.062				
4 A A 6 KL 5304 R	SIGNAL PROCESSING WORKSTATION			1	0.360		
4 A A 6 KL 7908 R	ADV CAPABILITY ARITHMETIC PROCESSOR			1	0.200		
8 W C 4 KL 0517 R	GEOGRAPHIC INFORMATION SYSTEM			1	0.168		
7 A C 5 KL 6102 R	OPTICAL DISK ARCHIVING SYSTEM			1	0.167	1	0.225
7 A C 6 KL 6104 R	PROCESSOR EXPANSION			1	0.157		
4 A A 5 KL 7E03 R	TAC 4 AND AFMSS MISSION PLANNING SYSTEM			1	0.150		
4 A A 6 KL 7902 R	NEXT GENERATION HOST SYSTEM			1	0.150		
4 A A 6 KL 7906 R	TAC-4			1	0.150		
7 A A 6 KL C501 R	HELP DESK SOFTWARE			1	0.149		
7 A B 6 KL 0003 R	PROCESSOR FOR INTER-SYSTEMS COMMUNICATION			1	0.135		
4 W C 6 KL 6152 R	SIGNAL PROCESSING SYSTEM					1	2.017
7 A A 6 KL 0011 R	ELECTRONIC ARCHIVING					1	0.990
4 A I 4 KL 3701 R	CAD II WORKSTATIONS					1	0.950
4 W P 6 KL 6014 R	SURVIVABILITY DIV COMPUTER SYSTEM					1	0.551
4 A A 6 KL 0751 R	OPEN ARCHITECTURE AVIONICS					1	0.550
4 A A 7 KL 0411 P	VIPER SYSTEM					1	0.520
7 A A 6 KL 0740 R	CLASSIFIED MATERIAL TRACKING SYSTEM					1	0.498
4 A A 7 KL 0433 R	STRUCTURAL ANALYSIS LABORATORY					1	0.490
4 A A 7 KL 0750 R	OPEN ARCHITECTURE SENSOR INTERCONNECT					1	0.475
4 A A 6 KL 0503 R	DATA ACQUISITION AND RECORDING					1	0.450
4 A A 7 KL 0412 P	AUTO PHOTO TARGET DRIVE					1	0.300
4 A A 6 KL 0410 R	CAEP WARFARE ANALYSIS GAMING					1	0.293
3 A A 6 KL 1100 P	LSA PROCESS					1	0.230
4 A A 7 KL 5306 R	SONAR DATA ACQUISITION					1	0.223
4 A A 6 KL 0433 P	NAALDAS SYSTEM II					1	0.178
4 A A 6 KL 0432 P	CFD SHIP AIRWAKE MODELING SYSTEM					1	0.150
7 A B 6 KL 0002 R	VIDEO TELECONFERENCING SYSTEM					1	0.135
3 A B 6 KL 0100 P	LSA SOFTWARE					1	0.135

CAPITAL INVESTMENT SUMMARY
ADP PROGRAM-SUBMIT
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL AIR WARFARE CENTER
($ in Millions)

ITEM LINE #	ITEM DESCRIPTION	FY 1995 QTY	FY 1995 ACTUAL OBLIGNS	FY 1996 QTY	FY 1996 TOTAL COST	FY 1997 QTY	FY 1997 TOTAL COST
4 A A 6 KL 0432 R	REAL TIME STATION FOR SAFCS					1	0.120
4 A A 7 KL 7510 R	SILICON GRAPHICS UPGRADES					1	0.115
	Telecommunications						
7 W C 3 TL 0084 R	COMMUNICATIONS SYSTEM UPGRADE	1	1.960	1	4.250	1	4.000
7 W P 4 TL 4003 R	REPLACEMENT ITEMS FOR C-LAN	1	0.365				
2 W C 4 TL 0403 R	COMMUNICATION GEAR	1	0.145				
7 W P 4 TL 4034 R	FIBER EQUIPMENT/INSTALL B33-B761	1	0.052				
7 W C 5 TL 0512 R	SECURE NETWORK			1	0.103		
7 A A 6 TL 0723 R	FIBER OPTIC TRANSMISSION EQUIPMENT					1	2.449
8 W P 6 TL 6013 R	MOBILE FM TRUNKING COMMUNICATION SYSTEM					1	0.645
	SUBTOTAL ADPE & TELECOMMUNICATIONS (>$100,000)		12.651		8.486		18.535
N KT 0000	**1b. ADPE & TELECOMMUNICATIONS (<$100,000)**		1.485				
	2. GRAND TOTAL ADPE & TELECOMMUNICATIONS		14.136		8.486		18.535
	3a. SOFTWARE DEVELOPMENT (>$100,000)						
4 W C 4 DL 0097 R	Analyst Workbench	1	0.506	1	0.495	1	0.545
	GRAND TOTAL SOFTWARE DEVELOPMENT		0.506		0.495		0.545
	GRAND TOTAL ADP CAPITAL PURCHASES PROGRAM		14.642		8.981		19.080

000204

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. WEPTAC Phase II Replacement LINE #4WC3EL0006R			D. NAWC-WD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE	1	90	90	1	100	100	1	446	446
SOFTWARE	1	1157	1157	1	1,830	1,830	1	1,677	1,677
INSTALLATION									
OTHER									
TOTAL		1247	1247		1,930	1,930		2,123	2,123

Narrative Justification:

Operational Date: The FY96 module will be operational December 1996
Project Initiation Date: FY93
COST BENEFIT ANALYSIS HAS BEEN PERFORMED FOR THE FY96 MODULE WITH:
Payback Period = 2.4 years
Return on Investment (ROI) = 30%
Average Annual Savings = $574K
Saving to Investment Ratio = 3.0

DESCRIPTION: The Weapons and Tactics Analysis Center (WEPTAC) is an interactive wargaming facility developed by the Naval Air Warfare Center Weapons Division (NAWCWD) to aid in the evaluation and development of fleet tactics and conceptual weapon systems in the areas of anti-air, anti-surface, and strike warfare. The current system was developed using hardware architecture and software technology of the late 1970's. Although the current system plays a key role in Navy planning and system development, there are times that the system cannot address some project requirements. Some examples of the limitations are simulation run-time, model detail, and ease of use (user friendliness). Since the software is tightly integrated to the production hardware, and the current hardware cannot be modified to address state-of-the-art software, the system must upgrade its hardware to maintain real-time capability and to meet the more complicated demands of the current warfare environment.

The proposed method will provide the ADA software development and state-of-the-art hardware, to identify, design and implement the real-time system requirements for a modern simulation capability. The new system will continue to provide an increase in the productivity of WEPTAC personnel and the quality of the analytical capabilities available to center management and off-center sponsors. With the current system, the run-time of any given project is one-fourth real time. With the proposed system upgrade the run-time will be significantly improved. In addition, the time spent performing data reduction and the time spent performing analyses should be reduced by half. This time savings allows for more extensive analyses on projects. The result will be an increase in the quantity and quality of projects.

If the WEPTEC Phase II project is not funded, the following limitations will continue to impact the quality of WEPTAC analysis: the existing system will not meet the requirements to run in real-time, it will not be flexible enough to model current and conceptual weapons and platforms because of obsolete hardware, and it will not have sufficient compute power to allow for any further model/software upgrade or development. Therefore, with the status quo system, the assumption must be made that critical analysis issues would be performed with intensive and extensive manual labor.

000205

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. High Off-Boresight Angle Table Replacement LINE # 4WC5EL0500R			D. NAWC-WD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE	1	1175	1175	1	300	300			
SOFTWARE									
INSTALLATION	1	20	20	1	150	150			
OTHER									
TOTAL		1195	1195		450	450			

Narrative Justification:

Operational Date: November 1996
Project Initiation Date: FY95
Payback Period = 3.9 years
Return on Investment (ROI) = 19%
Average Annual Savings = $265K
Saving to Investment Ratio = 1.9

DESCRIPTION: The High Off-Boresight Angle Table (HOBAL) provides the capability to present infrared targets, backgrounds, and countermeasures to the seeker/guidance system being tested. The device consists of a five-axis flight table and an infrared scene projection system. This type of a system provides the capability to test the seeker/guidance system under most conditions experienced in the real world. The system does not require signal injection to generate synthetic line of sight rates.

Having such a test capability together with the technical expertise in hardware-in-the-loop simulation testing, will help ensure NAWCWD will remain fully capable of testing the advanced guidance systems currently being developed, or which are in the planning stages.

Without this advanced test capability the Naval Air Warfare Center will lose many opportunities to test advanced systems and, over time, will lose the personnel who have the expertise to test guidance systems in a simulation hardware-in-the-loop environment. NAWCWD will no longer have the capability to perform tests required by a full spectrum weapons development center.

000206

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. Mission Planning Equipment Replacement LINE # 4WC3EL0007R			D. NAWC-WD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE	1	495	495	1	495	495	1	545	545
SOFTWARE	1	440	440	1	495	495	1	445	445
INSTALLATION	1	10	10		10	10	1	10	10
OTHER									
TOTAL		945	945		1,000	1,000		1,000	1,000

Narrative Justification:

Operational Date: December 1998
Project Initiation Date: FY93
Payback Period = 3.3 years
Return on Investment (ROI) = 22%
Average Annual Savings = $1,075K
Saving to Investment Ratio = 2.2

DESCRIPTION: Mission Planning is important to the development, design, and utilization of modern weapons systems, and is a significant driver of the design of future weapons systems. Major programs are currently underway to control, improve, simplify and coordinate mission planning. Emerging new technologies and weapons systems will have to be integrated into these systems. NAWCWPNS programs such as the Joint Stand Off Weapon (JSOW), Standoff Land Attack Missile (SLAM), Highspeed Antiradiation Missile (HARM), the Harpoon Weapon System, the Joint Direct Attack Munition (JDAM), the emerging Tomahawk Baseline IV, and others, must develop systems unique mission planning capabilities to integrate into this complex mission planning environment. Mission planning encompasses a broad spectrum of activities. For a particular weapon and delivery platform, mission planning involves accessing imagery of a specific target, preparing a reference scene of the target from this imagery, locating the target precisely, determining weaponeering details associated with the target structure and kill mechanism, developing the route of access of the weapon and delivery platform to access the target area which includes consideration of various threats to the success of the mission, and calculating the number of weapons that will be required to neutralize the target and insure survival of the delivery platform. In addition, the individually planned missions must be coordinated with the overall operational plan being prosecuted.

These funds are to upgrade the mission planning resources required to support the broad spectrum of mission planning development activities. The mission planning laboratory is able to mimic all the mission planning activities performed aboard an aircraft carrier in the Command Intelligence Center. To accommodate these capabilities, the funds are being used to upgrade the Tactical Aircraft Mission Planning System (TAMPS) with automated weaponeering and knowledge engineering tools as well as facility computer hardware. The laboratory makes available to the technical development team of NAWCWPNS the resources required to perform mission planning development tasks essential to NAWCWPNS programs. Failure to upgrade the Mission Planning Development and Support Laboratory will seriously compromise our efforts to maintain the significant role of NAWCWPNS in the mission planning arena.

002007

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. P-369 MILCON Collateral Equip. (MESA) Replacement LINE # 4WC3EL0005R			D. NAWC-WD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE	1	359	359	1	225	225	1	75	75
SOFTWARE	1	388	388	1	300	300	1	225	225
INSTALLATION	1	58	58						
OTHER									
TOTAL		805	805		525	525		300	300

Narrative Justification:

Operational Date: January 1999
Payback Period = 8.5
Return on Investment (ROI) = 11%
Average Annual Savings = $997K
Saving to Investment Ratio = 1.1

DESCRIPTION: These procurements will provide the collateral equipment required to make the Missile Engagement Simulation Arena (MESA) (MILCON P-369) complete and usable. Construction of the facility has begun and limited operational capability is expected by May 1995. This equipment will measure the performance of advanced fuse and missile technologies while still in the design and prototype phases and assess the effectiveness of improvements in current weapon systems to counter the advanced threats. It will also provide an effective capability to assess the performance of foreign military systems against U.S. reduced observable aircraft and missiles. Currently there is a lack of accurate, up-to-date threats for the overall testing of Navy tactical aircraft and there is a lack of a target calibration system

MESA will support the development and improvement of the anti-air weapons critical to the defense of the Navy and other military services and their ability to project force. Without MESA, the United States would be severely handicapped in its ability to develop missile fuses needed to counter advanced threats, such as the reduced observable airframe. Without MESA, the Naval Air Warfare Center, Weapons Division, the Navy's primary Center for the development of anti-air weapons, would be limited in its capabilities to develop the weapons needed to counter these threats.

Cost reductions associated with the acquisition of the collateral equipment are significant but not the most important reasons for justifying its acquisition. Appropriate outfitting of the MESA is essential to provide the critical and unique fuse testing capabilities that are required. Alternate method is estimated at 12 contract manyears. However, government furnished equipment of the technical facility would not be cost effective.

002008

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. PWB Direct Laser Imaging System Replacement LINE # 6AC6EL5701R			D. NAWC-AD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE				1	765	765			
SOFTWARE									
INSTALLATION									
OTHER									
TOTAL					765	765			

Narrative Justification:

OPERATIONAL DATE: April 1996
Payback Period = 2.7 years
Return on Investment (ROI) = 27%
Average Annual Savings = $208K
Saving to Investment Ratio = 2.7

DESCRIPTION:

This project will reduce the fabrication time for printed wiring board (PWB) manufacturing of prototype and production boards. The Direct Laser Imaging System (DLIS will support our business plan objectives of providing rapid response manufacturing by eliminating several manufacturing steps, thus reducing cycle time. The DLIS will enhance the capability of NAWC-AD to meet current and future customer needs for fine line and surface mount printed wiring boards. This project will support the TRIS SMQ-11, and AWW-13 programs.

The current method uses the CAD/CAM data to plot a silver halide master film. The silver halide is inspected and used to produce working diazo films. The diazo films are inspected and hand registered to the PWB panels. The panels are then exposed and developed. During this process the films are susceptilbe to handling damage which, if unnoticed, could result in the reduced process yields. When the PWBs are complete they are hand stamped with serial numbers. This process requires individual characters to be hand stamped one at a time. The ink must then be allowed to dry and then cured by baking in an oven. The stamping operation and the filmprep operation are very labor intensive. The two operations require two to four days of cycle time and an estimated 15% of the labor required to produce a PWB. The proposed DLIS would eliminate the film plotting, filmprep, and hand stamping operations. The DLIS would also reduce scrap by improving registration, eliminating photo tool defects, reducing cycle time, and improving line width capability. This is accomplished by imaging the panel directly from the CAD/CAM data files. Design changes can be implemented without the material cost or time loss required to produce new photo tools. The registration errors and the associated yield loss due to film movement are elimanated by the DLIS. The DLIS also permits the image to be modified to compensate for material movement during the manufacturing process. This will improve process yields. The proposed DLIS will provide NAWC-AD PWB manufacturing with the capability to image .5 mil lines. The current process is capable of 5 mil lines at reduced yeild. The DLIS is capable of real time serialization of each PWB including bar codes. This would eliminate the need to hand stamp serial numbers on each board. Individual serialization of PWBs is required by proposed "high reliability" specifications like MIL-P-R. NAWC-AD does not currently have this capability and would be unable to meet the proposed "high reliability" specification requirements. Estimated yield improvement would be 1% or approximately 300 boards per year. Workload will be decreased by 16% or 630 hours.

000209

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. Vibration/Shock Shaker System Replacement LINE # 4AC6EL7402R			D. NAWC-AD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE				1	600	600			
SOFTWARE									
INSTALLATION									
OTHER									
TOTAL					600	600			

Narrative Justification:

OPERATIONAL DATE: May 1996
Payback Period = 0.7 years
Return on Investment (ROI) = 91%
Average Annual Savings = $545K
Saving to Investment Ratio = 9.1

DESCRIPTION:

This equipment will replace a thirty-seven year old mechanical shaker system. A new system is needed to maintain current capabilities, expand shock capabilities, and increase energy efficiency. This project will affect all programs requiring vibration testing or environmental stress screening at NAWC-AD and many of the team's outsid customers. Programs include TRSS, AWW-13, SMQ-11, V/STOL OLS, Walleye, FEWSG, GPS, and Bomb Racks. NSWC, Crane, NOSL, Louisville and NSWC, Panama City are some of the external customers.

Currently, there are three types of vibration/shock testing needed at NAWC-AD: sinusoidal, bomb rack, and slip table. The present L.A.B. model RVH-72-3000 mechanical shaker system is used for sinusoidal vibration testing from 5 to 60 HZ. This machine can only do sine vibration not random, cannot perform any shock testing, and requires constant operator monitoring. The machine is becoming obsolete with the slip table being only 4' X 4', force pounds are at 17,000 and displacement is 1". The shaker system is used for vibrating large shipboard systems weighing up to 3000 lbs. Set-up and operation of this system typically requires 40 hours of labor per test. There is no system in the Aircraft Division capable of shock testing bomb racks. All bomb rack testing is contracted to Dayton T. Brown a test lab in New York. Contracts for this testing total $ 1,500,000 per year.

Current program vibration/shock workload is very high. In 1993, operating figures show that 45% of the vibration workload was in need of a slip table equipped system. This workload is expected to increase. A slip-table enables multidirectional vibration testing of equipment. Currently, only two Unholtz-Dickie systems are equipped wit slip tables at NAWC-ADI. These systems are used heavily and they are often only available during off hours thus requiring personnel to work overtime in order to meet production schedules. The present two slip table systems can perform sine and random testing but do not have enough capacity to handle large pieces of equipment.

If this vibration/shock shaker system is not purchased NAWC-AD will not have the capability to do bomb rack testing. Current vibration/shock systems will continue to be used heavily and more overtime will be required to complete many projects. Such high usage rates will inevitably create system failures. This will only add to the alre[illegible]acklogged list of programs waiting to test their equipment.

000210

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. Eye Safe Laser Tracker Replacement LINE # 4AB6EL0001R			D. NAWC-AD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE				1	525	525			
SOFTWARE									
INSTALLATION				1	30	30			
OTHER				1	5	5			
TOTAL					560	560			

Narrative Justification:

Operational Date: April 1997
Payback Period = 2.7 years
Return on Investment (ROI) = 27.6%
Average Annual Savings = $154K
Saving to Investment Ratio = 2.75

DESCRIPTION:

The Eye Safe Laser Tracker will be used to dynamically measure the 3-D position of the aircraft during simulated aircraft recovery approaches at NAWC. It will accurately measure range and position information during Aircraft Platform Interface (API) system testing and evaluation. This system will operate like a radar system.

The procurement of the Eye Safe Laser Tracker will greatly enhance operations at NAWCAD Runway Arrested Landing Site (RALS). The laser tracker will provide the capability to dynamically track and measure the 3-D position and range of an aircraft during any tests involving catapults, arresting gear, and visual landing aids occurring at the RALS site. This information is currently not available. This laser tracker will provide a method of baselining current flight performance using the existing Visual Landing System equipment and will provide a means to quantitatively define the improvement of flight performance due to future Visual Landing Aids designs/systems.

Currently, systems capable of providing an aircraft's 3-D position and range were rented or the VLA system under test was taken to where the rented equipment was available. Both options were expensive and time consuming. Based on renting equipment which meets the above description, the rental fee would be approximately $5K per day. Based on a use of 45 days per year, this would amount to $225K per year in hardware cost alone. Also, on some occasions the unavailability of the equipment meant that this valuable information was simply not collected. Not having the laser tracker can and has restricted past, present and future in-house data collection and analysis capabilities and could conceivably impact the development of advanced/improved landing guidance systems. In summary, not procuring the subject instrument would severely hinder the Center's ability to support its API mission and customers.

000211

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. AMES II Threat Simulator Replacement LINE #4WP3EL4002R			D. NAWC-WD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE							1	1,197	1,197
SOFTWARE									
INSTALLATION							1	31	31
OTHER							1	7	7
TOTAL								1,235	1,235

Narrative Justification:

Operational Date: October 1999
Project Initiation date: FY93
Payback Period = 2.2 years
Return on Investment (ROI) = 32%
Average Annual Savings = $500K
Saving to Investment Ratio = 3.2

212000

DESCRIPTION: The Advanced Multiple Environment Simulator (AMES II) provides the capability to generate up to 2048 complex emitters with a pulse density of up to 4 million pulses per second. Dynamic signal simulation capability shall allow the user to generate various combinations of static and/or dynamic platforms containing pulse radars (PR), pulse doppler radars (PD), and continuous wave (CW) radars. The AMES II simulator consists of two seven-foot standard equipment racks. One contains the radar frequency (RF) components and the other contains the computer control equipment. These components in both racks require upgrading.

The Electronic Warfare Integrated Lab (EWIL) at NAWCWD, China Lake, does direct follow-on integration testing to the developmental testing done at NAWCWD, Point Mugu, on the ALR-67 V(2) and ALR-67 V(3) ASR radar warning receivers in support of the F/A 18 C/D & E/F, AV8 B F14 D, A/B, and the A6E aircraft. This work is primarily performed on AMES II and Micro AMES threat simulators. For integration compatibility reasons, the same hardware and software must be used for some of the integration testing.

Differences resulting from incompatible simulation modeling become time-consuming integration debugging problems. Identifying abnormalities in the ALR-67 V(2) and V(3) radar warning receivers would be very difficult and complex without the upgrade. Solving these problems without the upgrade extends schedules and increases costs.

The AMES II (and the Micro-AMES) are competitively priced for the performance they provide when compared to the competition.

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. Instrumentation Upgrade Replacement LINE #4WC6EL0502R			D. NAWC-WD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE							1	565	565
SOFTWARE									
INSTALLATION									
OTHER									
TOTAL								565	565

Narrative Justification:

Operational Date: October 1999
Project Initiation Date: FY97
Payback Period = 2.6 years
Return on Investment (ROI) = 27%
Average Annual Savings = $286K beginning October 1999
Saving to Investment Ratio = 2.7

DESCRIPTION: The Weapons Survivability Lab (WSL) is the premiere test site for aircraft survivability and related testing. Past tests have looked at survivability of the F-4 Phantom, the F-14 Tomcat, the A-6 Intruder, the F/A-18 Hornet, the canceled P-3 and A-12, and Air Force airplanes including the F-15 Eagle and the F-22. Current test subjects include the F/A-18 E/F upgrade, the AX and the V-22 Osprey. The capability of the High Velocity Airflow System (HIVAS) to generate 500 kt airflow over test specimens makes WSL invaluable.

This procurement will purchase modern test support equipment for the WSL and service or replace existing equipment including instrumentation amplifiers, instrumentation tape recorders, instrumentation equipment rooms, event sequencer, digital oscilloscopes, pulse code modulated (PCM) equipment, and landlines to test pads. It includes upgrading or replacing existing control room equipment such as switches, control panels, and digital meters.

Currently one of the two instrumentation bays at the main test site is no longer operational. This has prevented the use of valuable time to setup instrumentation for one test program while another program is testing which has resulted in increased costs and few projects tested per year. The remaining equipment has repeatedly malfunctioned. It has been responsible for lost data, lost high speed photo coverage, and erratic gun firings.

WSL is an example of leading-edge technology in aircraft survivability testing, vulnerability assessment, gunfire and ordnance damage assessment, etc. The integrity of WSL will quickly deteriorate if its technology is allowed to become obsolete. Failure to provide funding for this effort will result in a continued decline in the control and instrumentation capabilities of WSL, resulting in lost data, lost test opportunities, and customer dissatisfaction.

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. Concurrent Engineering Workgroup Productivity LINE # 4WC3EL0010P			D. NAWC-WD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE	1	1,047	1,047	1	936	936			
SOFTWARE	1	300	300	1	300	300			
INSTALLATION									
OTHER									
TOTAL		1,347	1,347		1,236	1,236			

Narrative Justification:

Operational Date: May 1999
Project Initiation Date: FY93
Payback Period = 2.2 years
Return on Investment (ROI) = 33%
Average Annual Savings = $2,285K
Saving to Investment Ratio = 3.3

DESCRIPTION: This procurement consists of an integrated system which is being developed in several phases. In Phase I the objective was to begin meeting current obligations of the Microprocessor Design Center, the Electronic Design and Simulation Facility, the Airframe Division Computer Aided Engineering (CAE) System, Weapon Systems Analysis System and to establish a prototype Concurrent Engineering Workgroup (CEW) system. The objective of Phase II is to complete the obligations of each division and to expand the capabilities established in Phase I of the CEW system and migrate these technologies into the other Divisions. The Phase III objective is to expand the networking environment of the Department to provide access to the key elements of the CE system. These key elements consist of: 1) a shared information model that captures complete descriptions of the product and all associated process activities and organizational resources; 2) a global object framework, utilities, and services that enable the use of the shared information model by a network of cooperating, computer-based clients; and 3) methods, tools and advisors that assist in concept evaluation, analysis, and decision making.

The Naval Air Warfare Center is actively pursuing CE projects throughout the Center. However, the technical aspects of CE are not being addressed. The three phased approach presented above will provide the foundation for CE technologies to be exploited. A key aspect of the CE technologies is the CALS initiative. The envisioned system will enable developed products to be CALS compliant and insure that the data transfer between multiple organizations, multiple disciplines, and multiple facilities will be seamless and understandable. Much of the system consists of design and analysis equipment and software. By focusing on an enterprise-wide development of tools such as CAD, CAE, CAM, and CAPP, more design iterations will occur (better quality), productivity will be enhanced (less time), and schedules will be compressed (less cost).

The National Institute for Standards sponsored an IDA report to investigate the benefits of concurrence in product development. This report stated that CE can reduce development time 30-50%, engineering changes 65-90%, time to market 20-90%, and increase overall quality 200-600%. It further stated that the productivity in organizations that adopted CE practices was up 20-110%. Industry leaders such as General Electric, Texas Instruments, Westinghouse, and Boeing are all claiming profound success by using CE technologies. This system will address the key technical issues associated with CE.
If this system is not procured the initial investment in Phase I will be nullified. Follow-on phases must be implemented in order to maintain and increase our competitive advantage. The current equipment and software is outdated, inadequate and unable to execute the state-of-the-art applications that NAWCWD needs to maintain the fundamental foundations to utilize CE and CALS technologies.

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. AEGIS Combat Computer Systems Productivity LINE # 4AA6EL0411P			D. NAWC-AD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE							1	980	980
SOFTWARE									
INSTALLATION									
OTHER									
TOTAL								980	980

Narrative Justification:

Operational Date: June 1998
Payback Period = 6 years
Return on Investment (ROI) = 14%
Average Annual Savings = $138K
Saving to Investment Ratio = 1.41

DESCRIPTION:

The Ship Ground Station (SGS) at the Naval Air Warfare Center Aircraft Division (NAWCAD) is the Navy's only laboratory dedicated to test and evaluation of the ship/air interface. This $34 million facility is based around the Combat Direction System (CDS) for the FFG-7 and DD-963 class ships which host the LAMPS MK III helicopter weapons system and has the entire shipboard equipment suite for LAMPS SH-60B support. Additional equipment in the SGS facility supports the LAMPS MK I helicopter, Electronic Warfare tests, TACNAV and LINK 11 data link communications and Unmanned Aerial Vehicle system evaluations. The SGS also supports Distributed Interactive Simulation (DIS) wargaming with ACETEF and other DoD players and will be a key component of the congressionally-mandated Air Interoperability Center (AIC) now under construction at NAWCAD Patuxent River (P-481).

This request is for funds to procure two state-of-the-art AEGIS Combat Computer Systems. The Navy will be phasing out FFG-7 and DD-963 class ships over the next few years in favor of the DDG-51 and CG-47 class AEGIS warships. The existing complement of older AN/UYK-7 and AN/UYK-20 computers at the SGS are not AEGIS compatible and must be replaced with AN/UYK-44 computer systems for the SGS to conduct ship/air interface testing of the LAMPS/AEGIS weapons system, support UAV development work, and remain a player in upcoming DIS scenarios. The requested computer systems are available from NAVSEA inventory with a simple funding transfer.

These upgrades will support numerous current and potential customers and will make the SGS the location of choice for all future RDT&E ship/air interface work due to its siting and co-location with the many other major Patuxent River test assets. Upgrading the processing and computational assets is one of the highest investment priorities for support of Sea Combat initiatives.

Because the Navy is phasing out FFG-7 and DD-963 class ships, the existing AN/UYK-7 and AN/UYK-20 computers at the SGS are not AEGIS compatible and must be replaced with AN/UYK computer systems for the SGS to conduct ship/air interface testing of the LAMPS/AEGIS weapons system, support UAV development work, and remain a player in upcoming DIS scenarios. Failure to fund this planned upgrade will result in a detrimental impact to testing capabilities. It will also significantly affect our ability to support testing of the upcoming SH-60R helicopter ship/air interface, and will result in a rapid technical obsolescence of SGS. This will seriously affect our ability to market technical services to potential customers desiring access to a modern ship combat system co-located at a major airborne mission systems test facility.

000215

CAPITAL PURCHASES JUSTIFICATION									A. FY 1996/1997 APPORTIONMENT BUDGET
B. Department of the Navy/Research & Development				C. Elect Systems Dept/Envir Test Upgrade New Mission LINE # 4AA6EL0014N					D. NAWC-AD
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE				1	674	674	1	533	533
SOFTWARE									
INSTALLATION									
OTHER									
TOTAL					674	674		533	533

Narrative Justification:

Operational Date: December 1998
Payback Period = 9.2 years
Return on Investment (ROI) = 11%
Average Annual Savings = $159K
Saving to Investment Ratio = 1.05

DESCRIPTION:

This submission is to upgrade the walk-in temperature/altitude chamber, and replace one 300 HP drivestand. The walk-in chamber will provide ultra low temperature for testing aircraft power generators and associated components. The new system will provide advanced automated controls and safety interlocks, and will be environmentally "safe" by using non ozone depleting refrigerants. A 500HP drivestand will provide a new capability to test the next generation aircraft generator at loads up to 540KVA. The drivestand will consist of a 500HP motor, controls and instrumentation, load bank, and gearbox assembly.

The upgrade to the walk-in temperature/altitude chamber will replace an aging refrigeration system which uses ozone depleting chloroflorocarbon refrigerants and has no automated shutdown capability. Failure to replace the refrigeration system will result in work stoppage if a replacement refrigerant is not available. In addition, lack of automated shutdown when the chamber refrigeration system is operating outside of limits could result in catastrophic failure and loss of test capability. The Electrical Power Systems Division is the only DOD test and evaluation activity with the capability to conduct full qualification testing of aircraft electrical power systems. Without the 500 HP drivestand there will be no capability to test the increased capacity generators proposed for new aircraft designs.

Without the aforementioned upgrades and replacements the Electrical Power Systems Division facility will become obsolete and its usefulness will deteriorate.

000216

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. Local Area Network (LAN) Replacement LINE # 7AB3KL0001R			D. NAWC-AD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE	1	725	725	1	1,000	1,000			
SOFTWARE									
INSTALLATION									
OTHER									
TOTAL		725	725		1,000	1,000			

Narrative Justification:

Operational Date: September 1996
Project Initiation Date: FY93
Payback Period = 1.5 years
Return on Investment (ROI) = 57%
Average Annual Savings = $1,695K
Saving to Investment Ratio = 2.8

DESCRIPTION: This system is a broad fiber backbone cabling architecture for data, voice, security, and graphics for the entire Command. The system will provide wide communications, resource sharing, office automation productivity tools, and standard application software. The Command's ability to meet customer needs requires the ability to receive and process information and to utilize the benefits derived from the LAN. These benefits include time saved in communicating and transmitting documents, standard productivity tools for personnel, and the ability to share and transfer data. With the current (and continuing) environment of downsizing, this system will offer the required capability to share resources such as laser printers, plotters, and mass storage devices. This will mean fewer fully equipped individual workstations, reduced personnel rework, and improved data transmission. The work can be accomplished with fewer personnel resources only if work processes are automated and streamlined.

The communication links are required because the site utilizes Cognizant Field Activity (CFA) and serves as a focal point for the Hierarchal Integrated Test Simulator (HITS) system software. The support systems and database management systems include the Operational Management System, System Synthesis Model, the Tailored Outfitting List, CASS Tracking System (CASSTRAC), Standards Acquisition Tracking System (STATS), etc. The user community for these systems are quite broad and are increasing in numbers which will require the capability to connect with optimized performance.

IMPACT: To halt the installation, leaving partially installed local organization networks, incomplete equipment configuration, and insufficient software risks will cripple the way we do business and it will cause us to backtrack and recoup with stand alone systems and islands of information. The cost of the effort invested thus far will be wasted, equipment purchased will not be fully utilized, and the rework involved in returning to the old ways of information flow (orally, hand carried or floppy disks) has not yet been quantified. Because the LAN is a system its effect on the Command is dependent upon its completion. Anticipated total savings will be unattainable unless we complete the implementation of this information system. Delays endanger our ability to pickup where we left off because technological changes and advancements increase the possibility of incompatibility or inter-operability with previously procured and installed systems. This will cause additional and unplanned expenses to shoe-horn fit dissimilar systems into our current configuration.

000217

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. High-Performance Computing Replacement LINE # 4WC5KL6007R			D. NAWC-WD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE	1	351	351				1	285	285
SOFTWARE									
INSTALLATION									
OTHER									
TOTAL		351	351					285	285

Narrative Justification:

Operational Date: April 1997
Project Initiation Date: FY95
Payback Period = 4.1
Return on Investment (ROI) = 23%
Average Annual Savings = $139K
Saving to Investment Ratio = 1.2

DESCRIPTION: This procurement will include add-on process boards with two TFP processors per board, gigabytes of super-hi density add-on memory, add-on external SCSE-2 disks and cabinets, power channel-2 board, read/write optical platters for the archive system, and 8mm cartridges.

The upgrade to the multiprocessor Silicon Graphics Challenge XL is based on emerging requirements to support additional users as well as the computational requirements of recently captured projects. This upgrade will increase the number of processors from 4 to 8, and the available memory from 512 MB to 1024 MB. Our experience with the machine has shown that the top three users of the machine routinely use 75% of the theoretically available CPU cycles of the machine and that the remaining users are now beginning to experience significant latency issues. In the first quarter of FY95 approximately 90% of all available CPU cycles were used. In deciding to upgrade the existing machine, which was purchased as a replacement for the corporately supported CRAY Y/MP, we re-examined the initial requirements and found that while we correctly sized the processor/memory ratio we underestimated the number of users. We considered purchasing a second machine identical to the first, upgrading the existing machine by increasing processors and memory, and taking no action. Purchase of a second machine was found to be $60K more expensive than upgrading the existing machine. Taking no action was found to be unsatisfactory in that it does not address our existing or projected requirements for computational capability. With the increase in the number of users, additional disk drives for storage are required. Upgrades to the communication channel are required in order to retain performance.

The additional processors will provide greater utilization of the high performance machine. The memory board and memory upgrades are needed to account for the processor upgrade and to allow for larger jobs. The external SCSE drives will provide needed on-line storage. The power channel-2 boards will increase the "I/O throughput" of the current and add-on storage. The Archival system is needed to allow access to users outside the airframe branch.

000218

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. Unix Corporate Server Env Expansion Replacement LINE # 7AA5KL0001R			D. NAWC-AD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE	1	291	291	1	250	250			
SOFTWARE									
INSTALLATION									
OTHER									
TOTAL		291	291		250	250			

Narrative Justification:

Operational Date: March 1995
Project Initiation Date: FY95
Payback Period = 1.9 years
Return on Investment (ROI) = 47%
Average Annual Savings = $324K
Saving to Investment Ratio = 2.3

DESCRIPTION: The purchase will consist of a 32-bit Reduced Instruction Set Computing (RISC) based Portable Operating Systems Information Exchange (POSIX) compliant Unix computer processing system to expand FTEG's corporate data server capabilities to a distributed, controlled environment. This additional hardware and software would allow individual servers to be installed at the directorates and activities as local application or file servers. The systems will comply with open system standards and will allow fiber network connectivity. The minimum hardware and software requirements include a uni-processor computer platform, local tape backup, optical and magnetic disk storage, POSIX compliant operating system, and Ethernet and FDDI network connectivity. In addition, there will be a requirement for off-the-shelf database and business analysis software. The UNIX Corporate Server Environment Expansion will be procured over a period of three years, beginning in FY 1995.

The most significant unquantifiable benefit will be the high availability and timeliness of information for engineers and managers. With distributed application servers, personnel can access one system or a network of systems to gather general information or aviation specific information.

With the anticipated growth of the Patuxent River aviation community, it is evident that not only will the Computer Sciences Directorate be impacted by not investing in an open, distributed processing environment, but all FTEG activities will be impacted. The current system can support up to 64 users. With the influx of personnel to Patuxent River, the best solution is to distribute the application processing across the base and take advantage of the large communications network currently in place. Without additional servers, the current servers will become so bogged down that customers will have slow response time and turnaround when trying to meet project deadlines.

000219

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. ADP Equipment Upgrades Replacement LINE # 8AA5KL0010R			D. NAWC-AD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE	1	126	126	1	196	196	1	296	296
SOFTWARE	1	110	110						
INSTALLATION	1	4	4	1	4	4	1	4	4
OTHER									
TOTAL		240	240		200	200		300	300

Narrative Justification:

Operational Date: October 1995
Payback Period = 2.5 years
Return on Investment (ROI) = 35.71%
Average Annual Savings = $265K
Saving to Investment Ratio = 1.79

DESCRIPTION: This procurement involves the purchase of DOS based and Macintosh workstations to be dispersed among the Naval Air Station activities. The procurement includes monitors, central processing units, keyboards, and laser printers. The purchase of this equipment will work in conjunction with the installation of local area networks.

The current Naval Air Station workforce includes approximately 2200 people. A large percentage of the workforce have personal computers (Pcs), however, many of these PCs are substandard. Existing computer equipment is not compatible with the new network operating system that is currently being installed at Patuxent River. The upgrade of existing equipment is mandatory in order to allow compatibility with existing systems.

Many Naval Air Station functions such as calculations, inventories, project tracking and reports are still manually maintained. The purchase of this equipment will allow current operations to become automated and will improve the speed and efficiency of data retrieval and storage required to perform many of the services by the Naval Air Station.

The lack of growth in administrative and technical Naval Air Station staffing requires existing workforce to become more productive. This can be accomplished through the purchase of new computer equipment and upgrades to existing equipment. With the addition of advanced computer technology and equipment, functions would be performed quickly and with more precision, saving the government both time and money.

022000

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. Resource Automated Mgmt System New Mission LINE # 8AX5KL0008N			D. NAWC-AD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE	1	129	129				1	95	95
SOFTWARE	1	81	81				1	66	66
INSTALLATION									
OTHER									
TOTAL		210	210					161	161

Narrative Justification:

Operational Date: December 1997
Payback Period = 3.2 years
Return on Investment (ROI) = 29%
Average Annual Savings = $106K
Savings to Investment Ratio = 1.43

DESCRIPTION: The Resources Automated Management System (RAMS) was developed for the Naval Air Warfare Center Aircraft Division (NAVAIRWARCENACDIV) to manage resources data for all NAVAIRWARCENACDIV sites and mission support activities. RAMS currently maintains data on the Special Use Airspace (SUA) areas utilized by NAVAIRWARCENACDIV missions on the East Cost. The list of components required includes both hardware and software to support the system. The automated tools employed by RAMS includes the ARC/Info geographic information system (GIS) software and the Oracle relational database manager which are used to integrate the RAMS data layers. The ARC/View software is also used as a tool for end users since it is available on personal computer workstations. ARC/View provides an easy-to-use interface for the display and query of RAMS data and allows users to generate maps to meet their individual needs.

RAMS is being developed to support on-line data for NEPA analysis, range safety management, base realignment and closure planning, human resources management, real estate management, facility assets management, facility master planning, maintenance planning, natural and cultural resources management, physical security management, aviation safety, and the full gambit of environmental compliance management.

NEPA specialists and resource managers need a variety of data to properly evaluate the potential environmental impact of a mission action. RAMS allows this data to be stored and displayed in one geographical information system. All historical mission data can be retrieved through one system which directly affects the timeliness and accuracy achieved by management decisions. If this system is not developed to its full potential, severe limitations exist in supporting the Informational needs of resource managers due to the unavailability of a cohesive geographical information system.

122000

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. Competitive Engineering Environment Replacement LINE # 4WC4KL0401R			D. NAWC-WD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE	1	90	90	1	464	464	1	609	609
SOFTWARE	1	94	94	1	131	131	1	173	173
INSTALLATION	1	17	17	1	52	52	1	68	68
OTHER									
TOTAL		201	201		647	647		850	850

Narrative Justification:

Project Initiation Date: FY94
Payback Period = 3.9 years
Return on Investment (ROI) = 24%
Average Annual Savings = $521K
Saving to Investment Ratio = 1.2

DESCRIPTION: The Competitive Engineering Environment consists of numerous workstations, personal computers, file servers, computer peripherals, software, and data bases connected via a network infrastructure and scattered organizationally throughout the Department. This procurement will begin in FY 1994. The goal of this procurement is to continue to increase the availability of this working environment to department personnel so that tasks can be accomplished in a more cost effective manner with improved accuracy. The use of this environment has already resulted in better communication, increased savings, and improved product quality. The plan for FY 1995 is to enhance the Competitive Engineering Environment by performing the following specific items: (1) network expansion to include outlying buildings not yet networked; (2)an electronic library; (3) user documentation for use of the network and network capabilities; (4) upgrading of obsolete equipment; (5) implementation of a shared application program & server; (6) upgrading Network Management hardware and software tools.

The enhancement of the Competitive Engineering Environment will provide better communications both inside and outside the department and will provide new, more efficient tools for personnel. These tools will provide the capability for such things as Department wide inventories, databases and eventually real-time data gathering. These tools will become increasingly important as we address the increased emphasis on safety and the protection of our environment. The goal is for this environment to eventually provide the capability for Department wide databases such as explosive inventories, Material Safety Data Sheets, hazardous waste accumulation tracking, and Standard Operating Procedures (SOP). Another goal is the eventual ability to provide computer control to energetic material processing and evaluation. The addition of network monitoring software and hardware will reduce the workload of the network administrator, allowing more time to be devoted to other aspects of the network. The addition of the modeling software and hydrocodes will enable engineers and technicians to use state-of-the-art tools to visualize concepts, determine critical design and performance parameters, simplify the development process by reducing trial and error testing, and reduce the cost of prototype hardware. The addition of the specifications and standards on line will permit personnel to have access to current specifications in a timely manner without having to travel to other locations.

These enhanced capabilities will provide continuous improvement in mission areas and will ultimately lower administrative and project costs and increase the efficiency of the department's personnel. With today's military environment, it has become increasingly important to improve our ability to deliver Ordnance and Propulsion System using fewer personnel resources, fewer funds, and shorter schedules. The Competitive Engineering Environment provides modern and sophisticated tools with which to accomplish this.

This is based on the concept that planning for the future is better than crisis management and that continuous improvement is critical. The Competitive Engineering Environment exists and is in use. Expanding this engineering environment to include additional features and capabilities will provide more capability for NAWCWPNS personnel. If not expanded, this capability will be postponed causing the system to become obsolete and its usefulness to deteriorate. NAWCWPNS may be left in a position where compliance to increasingly difficult requirements will not be possible; NAWCWPNS will lose its ability to be leaders in the development and testing of systems using energetic materials.

22000

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. Blue Hose Installation for NAS Replacement LINE # 8AA5KL0009R			D. NAWC-AD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE	1	116	116	1	175	175	1	175	175
SOFTWARE									
INSTALLATION	1	70	70	1	75	75	1	75	75
OTHER									
TOTAL		186	186		250	250		250	250

Narrative Justification:

Operational Date: September 1996
Payback Period = 2.5 years
Return on Investment (ROI) = 36%
Average Annual Savings = $272K
Saving to Investment Ratio = 1.78

DESCRIPTION: This procurement involves the installation of the blue hose to various buildings within the Naval Air Station who currently do not have any networking, video or high speed data transmission capability. The components required for this procurement include coaxial cabling, computer hubs, drops, networks cards, and associated computer equipment. This project is a continuation of the previously funded fiscal year 1995 Capital Purchase Program (CPP) project.

Many Naval Air Station functions are currently performed manually or with stand alone personal computers. Several functions are interrelated; a networking atmosphere will give the Naval Air Station the flexibility to accommodate fast response times and produce accurate results. With the downsizing of the workforce, other areas of maintaining the current standards of working levels need to be pursued. The installation of local area networking will be the largest provider for performing more work with less people.

If the Naval Air Station does not move forward in the area of advanced computer technology, many programs and functions will suffer. The lack of growth in administrative and technical Naval Air Station staffing levels requires the existing workforce to become more productive. If a networking atmosphere is not developed, many current Naval Air Station functions and services will have to be cut. The addition of more advanced computer technology allows the Naval Air Station to be better prepared for what the future will bring.

000223

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. Signal Processing Workstation Replacement LINE # 4AA6KL5304R			D. NAWC-AD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE				1	350	350			
SOFTWARE									
INSTALLATION				1	10	10			
OTHER									
TOTAL					360	360			

Narrative Justification:

Operational Date: September 1996
Payback Period = 1.9 years
Return on Investment (ROI) = 45%
Average Annual Savings = $161K
Saving s to Investment Ratio = 2.2

DESCRIPTION: A self-contained roll-on/roll-off acoustic operator's workstation suitable for use on P-3 aircraft. The system will be ruggedized and be flight certified. It shall make maximum use of Commercial-Off-The-Shelf (COTS) technology and shall be easily programmable in a high order language to enable rapid prototyping of next generation signal processing algorithms. Major system components shall consist of the Signal Processing Computer, Display, and Operator Interface.

This acquisition allows investigators to rapidly prototype and test experimental signal processing techniques to achieve fast turn around for sponsors and prospective customers. This will also result in more advanced levels of in-house experience for scientists and engineers. This acquisition will provide a high capability processing platform to evaluate advanced signal processing algorithms, both in the lab and in-flight. The ability to easily transition between a laboratory and flight environment will enable developers to take advantage of more at-sea test opportunities at lower cost. This system eliminates the need for a separate "hardened" prototype processing system, in addition to the laboratory development system.

If this system is not purchased this fiscal year, we will be unable to investigate prototype and experimental signal processing techniques, which would adversely affect current and future projects.

000224

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. Adv Capability Arithmetic Processor Replacement LINE # 4AA6KL7908R			D. NAWC-AD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE				1	200	200			
SOFTWARE									
INSTALLATION									
OTHER									
TOTAL					200	200			

Narrative Justification:

Operational Date: September 1996
Payback Period = 3.5 years
Return on Investment (ROI) = 27%
Average Annual Savings = $53K
Saving s to Investment Ratio = 1.3

DESCRIPTION: The Advanced Capability Arithmetic Processor is a state of the art, commercial off-the-shelf (COTS) signal processor system. It will be used to evaluate new techniques, both hardware and software, with the goal being to integrate these new technologies into our present and future signal processors. The exact components and configuration of this system varies widely, depending on what type of system and which vender supplies it. Because of the continuing advances being made in this area, the research into the type and vender of the system is ongoing and will continue until the selection is made, immediately prior to purchase.

The state of the art in signal processing is advancing both in the software and hardware area. To stay current in this rapidly progressing technology area, we need to move forward with it. A commercial state-of-the-art COTS unit will enable us to evaluate these new technologies and incorporate parts of it into existing signal processing systems. Purchasing a COTS unit will result in a 25% savings over the present methods. If this equipment is not purchased in FY96 it will lessen the ability of NAWCAD to properly support the UYS/2 product line as our sponsor expects.

000225

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. Geographic Information System Replacement LINE # 8WC4KL0517R			D. NAWC-WD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE				1	76	76			
SOFTWARE				1	20	20			
INSTALLATION					0	0			
OTHER				1	72	72			
TOTAL					168	168			

Narrative Justification:

Project Initiation Date: FY94
Payback Period = 0.3 years
Return on Investment (ROI) = 232%
Average Annual Savings = $390K
Saving to Investment Ratio = 11.6

000226

DESCRIPTION: This is an archival/retrieval system that focuses on relating facilities/real property textual data to mapping and design graphical data. Various databases will be incorporated into the GIS including mapping, utilities, real estate, capital improvements, and environmental data. The Geographic Information System (GIS) will be compatible with Tri-Service Computer Aided Digital Design (CADD)/GIS technology. The system will allow for the transfer of spatial data between all Departments within the Tri-Service community as well as the adjacent local, state and federal agencies.

This system allows comprehensive planning (master planning); real estate management; hazardous waste management; natural and cultural resources management and other environmental program management; utilities management; training and testing operations; land and air space use compatibility; and installation restoration/closure.

Disapproval of this request will have an initial detrimental impact on Public Works and the Environmental Project Office who will be the prime users of the initial phases of the GIS system. Disapproval will also have a negative effect on other potential users throughout the Station. As the expanded capabilities of the system are implemented, more impact will take place because the present system is antiquated and time consuming to use.

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. Optical Disk Archiving System Replacement LINE # 7AC5KL6102R			D. NAWC-AD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE				1	167	167	1	125	125
SOFTWARE							1	100	100
INSTALLATION									
OTHER									
TOTAL					167	167		225	225

Narrative Justification:

OPERATIONAL DATE: September 1997
Payback Period = 2.6 years
Return on Investment (ROI) = 35%
Average Annual Savings = $136K
Saving to Investment Ratio = 1.7

DESCRIPTION:
The Epoch Optical Disk Archival System upgrade will provide automatic management to a user/group who has several gigabytes of data. Data is first placed onto magnetic disk by the user. The Epoch migrates this data from magnetic disk to optical disk for storage. This is called near-line storage. Data backup is a critical elemen for this system and can be executed in a timely manner. The components of the proposed system are listed on the attached continuation page.

PRESENT METHOD: The projects are presently supported by two Epoch systems, the Epoch1a and the Epoch1d. Performance of machines has degradated because of the number of machines that attach to the Epochs and the size of the data files. The Epoch1a is at 85-100% capacity and serves 50 machines. The Epoch1d is at 50% capacity and serves 10 machines. File size beyond 300 MB cannot be placed on the Epoch. Some user requests have been rejected because their data is beyond the capacity of the Epoch1 server. To date, five projects haye been turned away because of the file limitations. In order for these users to store and backup data, they would each have to buy a jukebox ($20,000ea) . To man and maintain their own system would be another $15,000 per system. With each project buying their own equipment, no consideration would be made for compatibility. During FY96, the Epoch 1a will be replaced by an up-to-date data storage system capable of storing 180 GB of data. This acquisition will increase data storage to 400 GB.

The current system cannot perform data backups in a timely manner due to a limited memory, the tape drive, and limited magnetic disk space. In process the files are firs placed on magnetic and later migrated to optical disk. Files are returned to magnetic each time they are accessed. During backup the system has to constantly migrate dat to/from magnetic in order to do the backup. At the same time the system must migrate any data that the user accesses which is on optical. This is a time consuming process (approx. 18 hrs per 2 GB tape). The cost of floppy disks, tapes, and magnetic tapes are estimated at a cost of $125,000 per year. The erasable optical disk storage will be increased by 200% allowing sizeable amounts of new data to utilize the proposed system which would have been turned away. I the proposed method is not implemented, users would then be forced to maintain their own system to support the project without regard to compatibility, which is neither economical nor efficient use of computer resources.

000227

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. Processor Expansion Replacement LINE # 7AC6KL6104R			D. NAWC-AD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE				1	157	157			
SOFTWARE									
INSTALLATION									
OTHER									
TOTAL					157	157			

Narrative Justification:

Operational Date: April 1996
Payback Period = 2.5 years
Return on Investment (ROI) = 36%
Average Annual Savings = $56K

DESCRIPTION: This project is to expand the Material Management System Tandem Computer from six central processing units (CPUs) to eight. This is required to support the use of Oracle database software on the Material Management Information System (MMIS). This will permit the Tandem system and the Distributed Corporate Computing Facility (DCCF) VAX to transfer files without imposing severe constraints on the type and structure of the data.

The procurement of the Processor Expansion will enable the Tandem computer to support the use of Oracle database software. The use of standardized database software such as Oracle for computer software development reduces NAWCAD Indianapolis dependence on proprietary software systems. For this reason, Oracle has been selected as the standard database software on the DCCF VAX computers. Using Oracle on the Tandem computer would enable software running on either the DCCF or the Tandem to access data on either machine, without regard to the actual physical locations of the data. This eliminates the necessity of training personnel on proprietary software and the special-purpose programs to restructure data into an FTP compatible format. The use of Oracle is expected to provide a 10% decrease in the time spent manipulating the current proprietary software. The team will have 1400 hours (10% of the teams annual labor hours) per year to dedicate towards backlogs or development in other applications.

Oracle requires substantial amounts of central processor time. If the expansion is not funded, installing Oracle on the Tandem computer will degrade the systems performance to unacceptable levels. Failure to install and use Oracle for software development will result in the loss of benefits described and continue reliance on costly proprietary operating systems.

000228

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. TAC-4 and AFMSS Mission Planning Sys Replacement LINE # 4AA5KL7E03R			D. NAWC-AD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE				1	150	150			
SOFTWARE									
INSTALLATION									
OTHER									
TOTAL					150	150			

Narrative Justification:
Operational Date: May 1995
Project Initiation Date: FY95
Payback Period = 3.8 years
Return on Investment (ROI) = 25%
Average Annual Savings = $125K
Saving to Investment Ratio = 1.3

DESCRIPTION: The Tactical Advanced Computer-4 (TAC-4) and Air Force Mission Support System (AFMSS) will be procured beginning in FY 1995. The TAC-4 represents the 4th generation of the Navy's program for use of commercial computers to fulfill many of the requirements for shipboard and shorebased computing. In addition to the TAC-4 system, the TAMPS project plans to acquire an AFMSS computer. The TAMPS project personnel will perform the mission planning capabilities comparison between TAMPS and AFMSS to determine whether either system will provide the capabilities required for both the Navy and Air Force.

The TAC-4 system will provide significantly increased processing power. The AFMSS system will provide the means to evaluate the Air Force Mission Planning capabilities which requires different hardware than the current TAMPS hardware.

Non-procurement of this system will result in failure to perform the future work assignment as the System Software Design Activity (SSDA) for the TAMPS project. These TAC computers are used in the Fleet and it is imperative that the labs be equipped with the same computers.

022000

CAPITAL PURCHASES JUSTIFICATION										A. FY 1996/1997 APPORTIONMENT BUDGET
B. Department of the Navy/Research & Development				C. Next Generation Host System Replacement LINE # 4AA6KL7902R						D. NAWC-AD
	FY 1995			FY 1996			FY 1997			
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	
HARDWARE				1	150	150				
SOFTWARE										
INSTALLATION										
OTHER										
TOTAL					150	150				

Narrative Justification:

Operational Date: September 1996
Payback Period = 2.2 years
Return on Investment (ROI) = 40%
Average Annual Savings = $61K
Saving to Investment Ratio = 2.0

DESCRIPTION: The Next Generation Host System will eventually replace the Sun 670 systems we now have in the UYS/2 lab as the host of choice, just as the Suns have replaced the VAX 11/780 series at present. An exact description of the components of this system is impossible at this time, due to the nature of the computer industry, and the rapid development cycle of new host systems. However, it is clear that the system must consist of some type of processor, display, input, and storage device. In addition, it must support all of the interfaces needed by UYS/2 and possible other signal processors as they come along.

Using commercial, off-the-shelf (COTS) host systems has advantages and disadvantages. One of the disadvantages is the short commercial availability of the systems, usually about 2-3 years. To continue to attract new users and platforms to UYS/2, we must continually move to newer and more powerful host systems as the older systems become obsolete. In addition, computer performance is increasing exponentially over time. We expect the next generation of host systems, within 2 years, to be faster and more powerful than systems in use today, with a corresponding increase in productivity of 30%, reducing the manpower requirements from 2 workyears to 1.5 workyears per year. The equipment will support the UYS/2 project, and other projects which employ UYS/2 as part of their architecture. This equipment is necessary for NAWCAD to properly support the UYS/2 product line.

000230

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. TAC-4 Replacement LINE # 4AA6KL7906R			D. NAWC-AD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE				1	150	150			
SOFTWARE									
INSTALLATION									
OTHER									
TOTAL					150	150			

Narrative Justification:

Operational Date: July 1996
Payback Period = 3 years
Return on Investment (ROI) = 30%
Average Annual Savings = $45K
Saving to Investment Ratio = 1.5

DESCRIPTION: The TAC-4 is the name of the next standard host computer for DOD. The system will be employed as one of the new host systems for the UYS/2 software development system. The exact system has not yet been selected by the TAC-4 program, however it can be assumed that it will be some type of Posix compliant, Unix based processor with a high resolution display, with the capability of supporting most of the standard military interfaces.

All of the current host systems for the UYS/2 are currently commercial, off-the-shelf systems. Because the TAC-4 represents a standard host machine, widely used, it is important for our program to demonstrate compatibility and portability to this host. There will be a 30% increase in productivity, reducing the manpower requirement from 1.5 workyears to 1.0 workyear due to the increased processing capability.

The standard nature of the TAC-4 makes it an ideal candidate as one of the future host machines for UYS/2. For UYS/2 customers within the Navy it will be a better choice than any of the COTS host systems which will be available in the 1996 timeframe because of increased availability and longer lifecycle. The equipment will support the UYS/2 project, and thus other projects which employ UYS/2 as part of their architecture. This equipment is necessary for NAWCAD to properly support the UYS/2 product line as the sponsor expects.

000231

CAPITAL PURCHASES JUSTIFICATION									A. FY 1996/1997 APPORTIONMENT BUDGET
B. Department of the Navy/Research & Development				C. Help Desk Software Replacement LINE # 7AA6KLC501R					D. NAWC-AD
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE				1	75	75			
SOFTWARE				1	74	74			
INSTALLATION									
OTHER									
TOTAL					149	149			

Narrative Justification:

Operational Date: July 1996
Payback Period = 0.9 years
Return on Investment (ROI) = 109%
Average Annual Savings = $163K
Savings to Investment Ratio = 5.5

DESCRIPTION: Procure Help Desk hardware and software to be used across the Aircraft Division to capture, track, and manage the customer requests for assistance from the Information Management Department. (This equipment may be consolidated at one site or decentralized among several sites depending on the performance across the network.) The software will provide the means to ensure requests are responded to in a timely manner and capture the action taken to resolve the problem. It will provide metrics to determine the effectiveness and efficiency of IMD that it is providing to the Aircraft Division customers service.

This would increase the customer's level of productivity and would increase the level of customer satisfaction.

If the Help Desk software is not purchased, each site would continue to try to provide adequate customer service without a reliable system to ensure service in a timely manner. We would continue to have resources performing duplicate functions across the sites.

000232

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. Processor for Intersystems Comm Replacement LINE # 7AB6KL0003R			D. NAWC-AD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE				1	90	90			
SOFTWARE				1	45	45			
INSTALLATION									
OTHER									
TOTAL					135	135			

Narrative Justification:

Operational Date: September 1996
Payback Period = 1.8 years
Return on Investment (ROI) = 48%
Average Annual Savings = $65K
Savings to Investment Ratio = 2.39

DESCRIPTION: This processor will handle wide area communications and inter-system communications. The capability of this processor must include network job entry, remote job entry, communications, LAN connectivity, and local terminal/work station connectivity.

With on-going efforts to downsize and decentralize a large portion of the information technology area it is essential that we retain the capabilities that currently exist while reducing costs and recovering much needed physical space. Remote processing of support equipment data bases and other critical applications must not be impacted by efforts to eliminate older and more costly computing platforms. There must be replacement for the current computing platform that will assure reliable state-of-the-art intersystem communications while providing a substantial cost savings for Lakehurst.

All users communicating across systems, especially remote users, will be severely impacted in performing their jobs if this is not procured. Also, the capability to route job output to our facility would be severely reduced or eliminated.

000233

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. Signal Processing System Replacement LINE #4WC6KL6152R			D. NAWC-WD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE							1	1,827	1,827
SOFTWARE							1	150	150
INSTALLATION							1	40	40
OTHER									
TOTAL								2,017	2,017

Narrative Justification:

Operational Date: April 1998
Project Initiation Date: FY97
Payback Period = 1.5 years
Return on Investment (ROI) = 55%
Average Annual Savings = $1,110K
Saving to Investment Ratio = 2.8

DESCRIPTION: This system is to complete the signal processing capability which is integrated into four separate facilities. Phase I: The initial phase is to store, process and analyze imagery. Equipment will be purchased for the Data Collection (DCF) and Image Processing Facility (IPF) as well as initial acquisitions for the Sensor Characterization (SCF) and Signal Processing Evaluation Facilities (SPEF) -- (3/96 to 9/96). Phase II: The DCF will be completed by the end of Phase II. The IPF will have all the computing power available to conduct high-speed simulations with the data provided by the DCF -- (1/97 to 9/97). Phase III: The last phase in FY98 is the Sensor Characterization Facility (SCF), which will evaluate the sensors performance -- (3/98 to 9/98).

Future weapon systems are using multiple spectrums to do target and background discrimination. Current data acquisition and digital storage methods have been found to be inadequate to support modern image processing needs. Much of the current storage media is analog, which converts to digital with far fewer bits of accuracy than needed. Upgrading a two-color imager will make it compatible with the digital recording media. An interface is required to connect a suite of sensors in an F-18 aircraft pod to the digital recorder. To process this large volume of data and execute complex algorithms, high-speed computing power is required. The SCF will be used to accurately determine the characteristics of the sensors that are crucial in developing algorithms. The SPEF will take the algorithm developed in the IPF and partition them into the hardware and software architecture. This process will decrease development time significantly. Software tools will be used to develop a detailed simulation of the seeker and guidance section to evaluate the algorithms performance against the collected and simulated data streams. A special purpose instrumentation van will be required to house and transport the equipment to the test site, which may be on the local ranges or at a remote site. External communication requirements have not been met. A high-speed network is required for remote sites to access the high-end workstation and to provide the needed linkage to external agencies. Improved signal processing can have a direct impact on weapon performance. Without a commitment to a significant upgrade to the signal processing capability, there will be a rapid loss in ability to meet the processing needs of weapons seekers dependent on focal plan arrays, LADAR systems, passive MMW imaging, and high resolution radar systems. Cost avoidance was based on current methods of contracting for services to perform these functions, and the alternative method was evaluated on the basis of leasing some of the equipment.

000234

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. Electronic Archiving Replacement LINE # 7AA6KL0011R			D. NAWC-AD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE							1	990	990
SOFTWARE									
INSTALLATION									
OTHER									
TOTAL								990	990

Narrative Justification:

Operational Date: June 1997
Payback Period = 2.7 years
Return on Investment (ROI) = 34%
Average Annual Savings = $334K
Savings to Investment Ratio = 1.68

DESCRIPTION: This system is an on-line reporting, archiving and retrieval system for NAWCAD technical information using architectures established with the NAWCAD Infolink project. The system will expedite test planning and reporting processes, provide ready access to historical documents, prevent repetitive typing, improve test safety. This system will allow engineers and scientists to store their research, test, and evaluation results electronically, and access information from their desktop computers.

If such a system is not installed, engineers and scientists will continue to maintain separate information collections that are not readily accessible to their peers in the NAWCAD technical community, and store those collections largely in paper form. Funding will continue to be expended for redundant information warehouses. If technical information continues to be difficult to locate and assemble, engineers and scientists will not perform thorough search because of time and funding constraints. This will ultimately impact personnel safety and cause RDT&E work to be duplicated in certain situations.

Currently, technical reports are archived in paper form. A data base is used to access information, but this system is not full test. The ERAP team concluded that an on-line reporting, archiving, and retrieval system was technologically feasible. The initial implementation costs could vary based on the system/technology chosen, but cost recovery/savings could be realized within several years based on the elimination or consolidation of the large number of localized archives that are maintained throughout NAWCADPAX. It would be expected that the resources used to maintain these collections would not be needed if the information was centrally stored and accessible. Using existing and planned Pax River networks, project personnel will be able to browse, view print, and extract archived documents (plans, reports, etc.) from either their desktop or from a designated terminal within their workspace. Long term, this system should be capable of expansion to accommodate the growing information needs of the NAWCADPAX technical community.

000235

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. CADS II Workstations Replacement LINE # 4AC4KL3701R			D. NAWC-AD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE							1	950	950
SOFTWARE									
INSTALLATION									
OTHER									
TOTAL								950	950

Narrative Justification:

OPERATIONAL DATE: June 1997
Payback Period = 0.5 years
Return on Investment (ROI) = 183%
Average Annual Savings = $1,734K
Saving to Investment Ratio = 9.1

DESCRIPTION:

CADS II is a NAVAIR contract for procurement of Engineering workstations to standardize the workstations under NAVAIR control. The primary purpose of this contract will be to increase the productivity of design engineers and improve the quality of electronic systems and documentation produced by the Navy. This capability will allow NAWC-AD to be compatible with other NAVAIR facilities thus allowing for concurrent engineering of systems. Also, these workstations will improve productivity of the NAWCAD design engineers by replacing existing systems with new tools which will greatly reduce the cost of micro-electronics devices.

There will be 60 CADS II workstations procured to replace older systems. Forty (40) of these workstations will be utilized for electrical design and twenty (20) will be used for mechanical design

NAWC-AD has been utilizing computer aided engineering (CAE) and computer-aided design (CAD) systems for several years and has thus become dependent upon the use of CAD/CAM (computer aided manufacturing) equipment for the design, analysis, documentation, acquisition, and logistics support of electronic aviation and ship-board systems to accomplish its mission. NAWC-AD has also been developing digital data transfer processes for evolving CAM and computer integrated manufacturing (CIM) methodologies to better accomplish its mission.
Currently the workstations being used for electrical design are the DAISY 80286 workstations while the BRAVO systems are being utilized for mechanical design.

If the CADS II design workstations are not procured, NAWC-AD will continue using their existing, outdated DAISEY 80286 and BRAVO workstations. A labor savings of just under 1.3 million dollars will not be realized. NAWC-AD will not be able to perform to the new standards being set in the industry and the potential for losing valuable programs will exist.

000236

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. Survivability Div Computer System Replacement LINE #4WP6KL6014R			D. NAWC-WD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE							1	541	541
SOFTWARE							1	5	5
INSTALLATION							1	5	5
OTHER									
TOTAL								551	551

Narrative Justification:

Operational Date: April 1998
Project Initiation Date: FY97
Payback Period = 0.7 year
Return on Investment (ROI) = 115%
Average Annual Savings = $1,042K
Saving to Investment Ratio = 5.7

DESCRIPTION: The Survivability Division has four six-year old computer networks. The primary use of the networks is the running of complex missile/target of gun/target models to determine aircraft survivability. These networks address a broad spectrum of requirements, which are (1) unclassified network used for project management, local and national data exchange, pre/post-processing of analytical data, report writing, and provides access to international unclassified networks; (2) classified (SECRET) network to run the sophisticated simulations and models needed to evaluate system survivability; (3) TOP SECRET network isolated to run models and simulations at this classification level; (4) classified network for evaluating advanced projects. The four networks are considered to be at least two generations behind the current computing technology capability, and require upgrading.

This is a two-phased project. Phase I (FY96) will start upgrades of the four systems (10/1/95 to 4/1/96). Phase II completes the upgrades (10/1/96 to 4/1/97). The limited ability to respond to additional processing and graphics, the Air Force Studies and Analysis Agency is currently performing survivability analyses of Navy aircraft. The upgrade will meet the increased demand for more accurate analysis, as well as graphical analyses, the examination of more contingencies, simultaneous examination of missile, gun and directed energy threats. The deliverable product is a probability of kill (Pk) envelope that provides the customer with a graphic summary of the survivability of a given airborne weapon system, as a function of the position of that system with respect to a given ground-based threat. It is estimated survivability analysts will be able to perform at least twice as many analyses with the proposed upgrade. An alternative based on the use of contractor support and leased computer equipment is not cost effective.

The existing system has a marginal capability to meet the current needs of the Survivability tasking. It is anticipated that the demand for Pk envelopes and associated analyses will be greater than NAWCWD can meet without the system upgrade. Since this is the primary source for such data for Navy aircraft weapon system acquisition programs, the inability to supply this data would require Navy customers to find alternative sources.

000237

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. Open Architecture Avionics Replacement LINE # 4AA6KL0751R			D. NAWC-AD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE							1	550	550
SOFTWARE									
INSTALLATION									
OTHER									
TOTAL								550	550

Narrative Justification:

OPERATIONAL DATE: May 1997
Payback Period = 3.2 years
Return on Investment (ROI) = 29%
Average Annual Savings = $159K
Saving to Investment Ratio = 1.4

DESCRIPTION: This system will provide a prototype open architecture alternative to current closed proprietary designed avionics systems. The system will use an open commercial off-the-shelf (COTS) approach to construct a prototype avionics package for fixed and vertical wing surveillance platforms. The system will interface with existing on aircraft sensors, navigation and communication systems. The system will include three components: (a) a set of display heads for operator viewing of sensor and tactical data, (b) a processor and interface component to format data for the displays and interface with other avionics systems, and (c) a set of operator entry components which will provide the air crew with the ability to enter data and respond to system processing.

This system will demonstrate the performance, cost and power savings over traditional closed architecture systems. The performance improvements will be 4 fold, power savings 3 fold, and cost savings 4 fold over existing designs. The reduction in power and cooling is 50% annually and the maintenance savings will be 75% annually. The 40% increased productivity will reduce the manpower requirement from 4 workyears to 2.5 workyears annually.

000238

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. Viper System Productivity LINE # 4AA7KL0411P			D. NAWC-AD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE							1	320	320
SOFTWARE							1	200	200
INSTALLATION									
OTHER									
TOTAL								520	520

Narrative Justification:

Operational Date: April 1997
Payback Period = 3 years
Return on Investment (ROI) = 30%
Average Annual Savings = $157K
Saving s to Investment Ratio = 1.5

DESCRIPTION: This procurement will provide the required software and hardware to achieve a virtual Air-to-Ground (A/G) simulation capability in the TSDF and MAVRC facilities. This procurement incorporates an SGI Crimson Reality Engine (RE) and Raster Manager (RM) plug-in board to achieve the required A/G virtual presentation. In addition, commercial off-the-shelf Synthetic Aperture Radar (SAR), Forward Looking Infrared (FLIR), and moving map virtual processors will be procured and integrated into the existing simulation software for both TSDF and MAVRC.

The NAWCAD System Simulation and Verifying Branch has produced a comprehensive TACAIR Man-in-the-loop (MITL) virtual systems prototyping facility. The facility is composed of two elements, the TACAIR Systems Development Facility (TSDF) which is a high fidelity, two-place, hardware in the loop representation of the F-14D and F-14A/B, and the Man-in-the-loop Virtual Avionics Rapid-prototyping Center (MAVRC) which is a two-place rapid prototyping facility that can be configured to represent any existing notional aircraft. Both TSDF and MAVRC are linked to a common core of Silicon Graphics, Inc. (SGI) computing assets. They also share simulation software which was developed for TSDF and largely supports the simulation of air-to-air (A/A) type engagements.

To keep in step with current sponsor requirements, additional computer resources must be procured. Because of the multirole requirement of today's Navy strike and attack aircraft, the facility's F-14 and JAST sponsors have significant interest in the air-to-ground (A/G) mission. The F-14 is currently being upgraded with a yet undefined A/G capability which may include Synthetic Aperture Radar (SAR) and/or Forward Looking Infra-red (FLIR). JAST is being designed from the start to support both the A/A and A/G missions. To simulate an A/G engagement in a virtual context, significantly more visual fidelity is required compared to an A/A engagement. The A/A engagement is typically performed at high altitude with targets at distant range. The visual representation of the ground and distant targets can therefore be simplistic while achieving the desired results.

000239

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. Classified Material Tracking System Replacement LINE # 7AA6KL0740R			D. NAWC-AD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE							1	300	300
SOFTWARE							1	125	125
INSTALLATION									
OTHER							1	73	73
TOTAL								498	498

Narrative Justification:

Operational Date: September 1997
Payback Period = 2.3 years
Return on Investment (ROI) = 38%
Average Annual Savings = $190K
Savings to Investment Ratio = 1.9

DESCRIPTION: Classified Material Tracking System provides automated record keeping for unclassified titles of classified documents together with information on custodian and subcustodian, safe location, login/logout, destruction, declassification, etc. It automates the inventory and transfer process and provides for reports and queries. It will print custody cards and receipts.

The primary function of NAWCAD is the test and evaluation of all types of naval aircraft systems. As such it has a requirement to process and hold a large number of classified documents. These must be accessed by many different engineers in their work, and OPNAVINST 5510.1H mandates that classified material be accounted for and controlled. The CMTS will allow this to happen at a NAWCAD level and ensure accountability and control for the document's entire life at NAWCAD.

As mandated by OPNAV INST 5510.1H, an audit trail must be generated for all transfers of custody and for any access to these classified documents. The CMTS will provide accurate information on the container and audit trail of controlled documents. This information will prove to be invaluable in the case of a compromise of the material and audit discrepancies.

If not procured, NAWCAD will continue to track classified material in a non-centralized function which demands that classified information be captured as many as nine times for a single document. Additionally, a significant amount of data entry time will continue to be incurred until this system is adopted. Having one system throughout NAWCAD allows for sharing of material at other sites. Certain users of the system will be able to query on the documents at other sites in order to request needed documents.

000240

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. Structural Analysis Laboratory Replacement LINE # 4AA7KL0433R			D. NAWC-AD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE							1	250	250
SOFTWARE							1	240	240
INSTALLATION									
OTHER									
TOTAL								490	490

Narrative Justification:

Operational Date: January 1997
Payback Period = 0.82 years
Return on Investment (ROI) = 101%
Average Annual Savings = $493K
Saving s to Investment Ratio = 5.03

DESCRIPTION: The Structural Analysis Laboratory will consist of several Silicon Graphic Workstations and peripherals, and PC servers networked with desktop PC's for users within the Structures Division containing software programs such as MSC NASTRAN, MSC PATRAN, and PRO ENGINEER which are needed to perform the missions of the Structures Competency.

The purchase of this system will provide the Air Vehicle Structures Division with state-of-the-art capability for the performance of structural analyses. This capability is essential for our mission and supports all division activities in research, development, acquisition and in-service engineering.

If this proposed system is not purchased, the Structures Division will be extremely limited in meeting its customers requirements. The existing workstations are outdated and will be obsolete by 1997. The current costs for hardware maintenance and software upgrade/leases are approximately $150,000 per year and are increasing. Processing speeds on the order of 20 times over the existing capability are required to remain competitive.

000241

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. Open Architecture Sensor Interconnect Replacement LINE # 4AA7KL0750R			D. NAWC-AD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE							1	475	475
SOFTWARE									
INSTALLATION									
OTHER									
TOTAL								475	475

Narrative Justification:

Operational Date: January 1998
Payback Period = 2.5 years
Return on Investment (ROI) = 36%
Average Annual Savings = $171K
Saving s to Investment Ratio = 1.8

DESCRIPTION: This interconnect network will expand the system coverage of the open architecture initiative to include multiplexing sensor inputs into the open architecture processing core. The network will consist of three components: (a) sensor data input/conditioning component which will interface with platform sensors and perform voltage/data conditioning for each of the inputs to the network, (b) a high speed/high bandwidth switching component which will provide the multiplexing/routing capability, and (c) an output/buss component which will provide message/data handling to the core processing avionics which are to receive the data outputs from this interconnect network.

This system will demonstrate the performance, cost and power savings over traditional closed architecture systems. The performance improvements will be 4 fold, power savings 3 fold and cost savings 4 fold over existing designs. The system will use an open commercial off-the-shelf (COTS) approach to construct a prototype avionics package for fixed and vertical wing surveillance platforms. This item will provide a prototype open architecture alternative to current closed proprietary designed avionics systems. The system will multiplex existing aircraft sensors. This open architecture prototype will offer increased opportunity for insertion of sensor fusion and AI systems and offer a broader competitive procurement opportunity for future avionics upgrades. The reduction in power and cooling is 50% annually and the maintenance savings will be 75% annually.

Failure to purchase this equipment will create inefficiency in future work assignments and in the development of rapid design and evaluation of flight crew avionics. An increase in cost throughout the Navy and Air Force to build and integrate new interfaces into multiple equipment will occur.

000242

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. Data Acquisition and Recording Replacement LINE # 4AA6KL0503R			D. NAWC-AD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE							1	374	374
SOFTWARE							1	50	50
INSTALLATION									
OTHER							1	26	26
TOTAL								450	450

Narrative Justification:

Operational Date: January 1997
Payback Period = 0.7 years
Return on Investment (ROI) = 117.1%
Average Annual Savings = $527K
Saving to Investment Ratio = 5.86

DESCRIPTION: The Data Acquisition and Recording System combines high performance Analog to Digital(A/D) conversion and high channel density with integral large capacity mass data storage and full networking capability. The system will be in 19 inch rack mount format.

This acquisition allows investigators to utilize a single input system to filter, digitize and transport data at an accelerated rate to achieve fast turn around for sponsors and prospective customers. This will also result in reduced individual component identification, calibration, localization and integration.

Present array systems contain greater than 48 channels of simultaneous data. To achieve the required data throughput, multiple passes through the same data segment is required. The time sample alignment of these composite data segments is manpower intensive and not capable of real-time analysis. It provides decrease productivity, requires additional processing tools, and significantly increases possible signal processing errors. It also delays responsiveness to sponsor and restricts equipment availability for extended periods of time.

000243

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. Auto Photo Target Drive Productivity LINE # 4AA7KL0412P			D. NAWC-AD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE							1	200	200
SOFTWARE							1	100	100
INSTALLATION									
OTHER									
TOTAL								300	300

Narrative Justification:

Operational Date: May 1997
Project Initiation Date: FY97
Payback Period = 4 years
Return on Investment (ROI) = 24%
Average Annual Savings = $72K
Saving to Investment Ratio = 1.2

DESCRIPTION: The Naval Air Warfare Center Aircraft Division is responsible for the certification of weapons released from U. S. Navy and Marine Corp aircraft. This is done by photographing the weapon releases with high speed motion picture cameras. Quantitative analysis is conducted using close-range photogrammetry techniques to determine the six degree of freedom trajectory of the weapon during release from the aircraft. To perform this analysis, the weapon must have photogrammetric targets applied to them. The accurate measurement of the position of these targets on the weapons, currently done manually with a surveying transit, is critical to the accuracy of the photogrammetric analysis. The manual measurement process currently used takes at least one hour per weapon. The current F/A-18E/F flight test program is expecting to release over 1000 weapons per year for the first several years. The purpose of this effort is to procure an automated image-based measurement device to more efficiently determine the three spatial coordinates of multiple photogrammetric targets affixed to air-launched weapons.

Approximately 2 workyears worth of labor will be expended per year to perform this task using current methods. Advancement in 20 year old photogrammetric analysis techniques will be hindered if automated target measurement will not be possible.

The manual measurement process currently used takes at least one hour per weapon. The current F/A-18E/F flight test program is expecting to release over 1000 weapons per year for the first several years. In addition, every program weapon separation program to be conducted by NAWCAD in the future will use this system (such as JDAM). As a result, several workyears of labor per year will be required to satisfy the surveying requirements for these tests if an automated system is not procured.

000244

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. CAEP Warfare Analysis Gaming Replacement LINE # 4AA6KL0410R			D. NAWC-AD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE							1	293	293
SOFTWARE									
INSTALLATION									
OTHER									
TOTAL								293	293

Narrative Justification:

Operational Date: September 1997
Project Initiation Date: FY97
Payback Period = 1.4 years
Return on Investment (ROI) = 60%
Average Annual Savings = $174K
Saving to Investment Ratio = 3.0

DESCRIPTION: The Warfare Analysis Gaming Network (WAGN) is the core of the Modeling & Simulation capability for Maritime Surveillance aircraft in the Aircraft Division. It compliments the TACAIR/WEPTAC wargaming facility of Weapons Division located at NAWC China Lake which is being networked on the West Coast. This network will connect the East Coast including Patuxent River, Norfolk, NSWC-DL, etc. and will them link to the West Coast. WAGN is a powerful workstation-based, digital simulation network which can support a wide variety of warfare areas. WAGN can be used to derive the military worth of a system, to establish the need and requirements for a new system, or to develop strategies that optimize the outcome of campaigns. A critical feature of this laboratory will be the ability to participate in the DIS (DOD mandated Distributed Interactive System) network in accordance with draft DOD M&S policy (N. Slatkin 12/29/94 to the PEO Acquisition Coordination Team) This request will provide the funds to purchase (1) ONYX work station, (1) SUN work station, (1) SUN NOTEBOOK and (1) DEC IV's workstations and peripherals (printers, disks, CD-ROMs, etc.) which will be needed to upgrade the WAGN capability.

WAGN provides a competitive advantage for NAWCAD and NAWCHQ. The primary competition today are the study houses both large and small. The large houses (e.g., SAIC) have DIS and models such as WAGN and this procurement will put Aircraft Division in a competitive/equal position since we can combine WAGN with technology experts at Aircraft Division which the large study houses do not have. The small houses have neither DIS nor technology experts and this will put Aircraft Division in a competitive/superior position to them.

The primary impact of not procuring this is the inability to provide COEA support to NAWCADWAR aircraft R&D programs. Such support must be provided for funding to continue at each DOD Milestone. Further, ASNRD&A has drafted a policy directive requiring that all COEA work be done utilizing the DOD implemented DIS (Distributed Interactive System). WAGN is the mechanism to achieve DIS compatibility for COEA work on surveillance/support aircraft at NAWCADWAR. Combined with the financial competitive advantage and the ability to produce COEA's to justify our programs, the final network will raise the productivity ratio of both Aircraft Division and Weapons Division and further will serve to integrate Aircraft Division and Weapons Division with other centers and the Doctrinal Command.

000245

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. LSA Process Productivity LINE # 3AA6KL1100P			D. NAWC-AD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE							1	90	90
SOFTWARE							1	140	140
INSTALLATION									
OTHER									
TOTAL								230	230

Narrative Justification:

Operational Date: June 1997
Payback Period = 5 years
Return on Investment (ROI) = 19.9%
Average Annual Savings = $46K
Savings to Investment Ratio = 1.0

DESCRIPTION: The Logistic Support Analysis (LSA) process, specifically in the areas of Logistic Support Analysis Record (LSAR) is currently supported amongst the Naval Air Warfare Centers (NAWC) in fragmented data base environments, uses of multiple versions of software, no standardization, no automated connectivity, etc. -- all very costly to the government. As a result of the competency Aligned Organization (CAO), it is critical to gain management control of this process by developing standardization and centralization, interactivity and data sharing, etc. in line with the goals of the Continuous Acquisition and Logistic Support (CALS) initiatives, Configuration Management Information System (CMIS), etc.

Recommend that the LSAR process be centralized and networked allowing for on-line access of LSAR Data Base Files. It will allow interface to other mandated programs such as CMIS, NALDA, etc. Not only will it increase cost avoidances but it will provide increased accurate and validated information in a real-time, interactive environment critical during the acquisition cycle.

If this request is not approved for procurement, the NAWC community will continue in the existing fragmented environment which is very costly to the government. Additionally NAWC Logistic program managers will continue utilizing old and antiquated hardware and software tools. If this procurement is approved, the NAWC community will be able to continue in the leadership role through the development of consolidated LSA and LSAR acquisitions and modification programs.

000246

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. Sonar Data Acquisition Replacement LINE # 4AA7KL5306R			D. NAWC-AD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE							1	197	197
SOFTWARE							1	23	23
INSTALLATION							1	3	3
OTHER									
TOTAL								223	223

Narrative Justification:

Operational Date: January 1997
Payback Period = 1.1 years
Return on Investment (ROI) = 74%
Average Annual Savings = $165K
Savings to Investment Ratio = 3.7

DESCRIPTION: The ICS SYSTEM 1000 is a 64 channel sonar processing system. Features include: analog to digital conversion, beamforming, digital filtering, and digital recorder interface. The system is based on a number of 6U VME boards enclosed in a 21 slot chassis. Each A/D board handles 32 simultaneous channels sampled at 100KHz. The beamformer/filter boards are based on a Sharp DSP which operates at sustained computing rates of up to 640 MOPS. Output can be sent to a digital recorder, array processor, or host computer.

This acquisition allows investigators to utilize and test updated techniques at an accelerated rate to achieve fast turn around for sponsors and prospective customers. This will also result in more advanced levels of in-house experience for scientists and engineers.

If this system is not acquired during this fiscal year, analysis will have to be continued on the present systems. Since the present systems do not contain the increased input channels, labor costs will rise by at least $192k to efficiently process data for our sponsors.

000247

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. NAALDAS System II Productivity LINE # 4AA6KL0433P			D. NAWC-AD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE							1	74	74
SOFTWARE							1	102	102
INSTALLATION							1	2	2
OTHER									
TOTAL								178	178

Narrative Justification:

Operational Date: April 1997
Payback Period = 4.1 years
Return on Investment (ROI) = 23.4%
Average Annual Savings = $42K
Saving s to Investment Ratio = 1.17

DESCRIPTION: The Naval Aircraft Approach and Landing Data Acquisition System (NAALDAS) is a unique system designed by the Navy to measure aircraft flight parameters during landings. NAALDAS consists of two systems, the data acquisition system(SYSTEM I) used to record aircraft landings and the data analysis system (SYSTEM II) used to translate the recorded images into individual flight parameters during the landing phase of the aircraft.

This request is for an additional Analysis System(SYSTEM II). System II consist of a UNIX workstation, Internal Disk (32MBytes of RAM), 150 Mbytes 1/4" Tape Cartridge, Image Processing Subsystem, Automated Feature Tracking, Data Reduction Software, Attitude Estimation Software and License.

System II is controlled by a system operator, trained to reduce data from each aircraft landing. The operator is limited to analyzing 4 aircraft landings per hour or 32 landings a day. A typical landing load survey has about 2,000 aircraft landings. This equates to 12.5 weeks to reduce data from one survey. Sponsors are requiring 2 to 3 surveys a year generating a back log of data reduction requirements and putting high usage on a one of a kind system with no backup equipment available. Purchase of a second System II will enable us to increase our date reduction capability and provide a back up system to prevent shut down of the NAALDAS program because of equipment failure. In addition a second System II will improve response time to our sponsors, improve turn-around time for final report, and increase future work load capabilities.

To meet present and future sponsor work load requirements, System II is required to double our data reduction capability and provide a backup system for a unique and one of a kind system. Without this procurement, our program work load will be limited to present levels with delays in reporting data results and or stoppage of data reduction during system failures. A a result, failure to provide our product in a timely manner would affect present and future program goals.

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. CFD Ship Airwake Modeling System Productivity LINE # 4AA6KL0432P			D. NAWC-AD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE							1	140	140
SOFTWARE							1	10	10
INSTALLATION									
OTHER									
TOTAL								150	150

Narrative Justification:

Operational Date: July 1997
Payback Period = 0.2 years
Return on Investment (ROI) = 370%
Average Annual Savings = $555K
Saving s to Investment Ratio = 18.50

DESCRIPTION: This purchase is for a Digital Equipment Corp. Sable chassis Alpha computer. The specific configuration has 2 gigabytes (GB) of random access memory, four processors, 4mm 4 GB tape drive, seven 2.1 GB disk drives, and system software. It is intended to use this computer system to playback ship airwake velocity data generated at the Naval Research Lab (NRL) from Computational Fluid Dynamics (CFD) code. CFD airwake data isn't currently integrated with man-in-the-loop simulation because of hardware limitations at simulator sites. CFD facilities and man-in-the-loop facilities are not collocated and networks have not advanced to the point where they can be used for transferring data real time. The computer specified herein will bridge these facilities and allow man-in-the-loop simulation to be used in support of Dynamic Interface (DI) testing. By using CFD airwake data with validated airframe simulations, DI engineers will be able to reduce the scope of flight testing by using the simulation to interpolate between validated test conditions.

Operational readiness of the fleet will be improved by having expanded flight launch and recovery envelopes. It is also anticipated that this technology will also be used to improve ship design to reduce ship airwakes and their impact on aircraft.

If this program doesn't proceed forward, it will result in status quo dynamic interface testing of ships and aircraft. This has resulted in limited launch and recovery envelopes for air operations off ships, improving operational readiness.

000249

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. Video Teleconferencing System Replacement LINE # 7AB6KL0002R			D. NAWC-AD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE							1	125	125
SOFTWARE									
INSTALLATION									
OTHER							1	10	10
TOTAL								135	135

Narrative Justification:

Operational Date: March 1997
Payback Period = 2.6 years
Return on Investment (ROI) = 35%
Average Annual Savings = $47K
Savings to Investment Ratio = 1.7

DESCRIPTION: This is a second VTC room at Lakehurst. The Video Teleconferencing Equipment requested includes: Video Cameras, VCR, FAX, Monitors, Control Console, Microphones, Speakers, and Furniture.

The existing VTC room is experiencing heavy usage in excess of 96% monthly. This meets the criteria for justification for a second VTC. 40% of the usage is for NAWC wide meetings. Lakehurst averages two after-hours meetings per week (three hours overtime) due to non-availability of the VTC during regular hours.

Patuxent River is in the process of acquiring a second VTC. Given this information, they will be able to schedule more NAWC meetings than Lakehurst can handle. As a result, either Patuxent River will delay meetings to after-hours or to another day to accommodate the Lakehurst VTC schedule. This will defeat the advantage of their second VTC as well as being less productive. To meet the need, Lakehurst will have to conduct some portion of NAWC meetings over the phone while the other sites are using VTC. This is a much less effective means of doing business and makes it impossible to participate when visual aids are used.

At VIP NAWC meetings where Patuxent River will have VTC time available and Lakehurst will not, labor intensive rescheduling will be necessary to preclude the Lakehurst VIPs from being restricted to phone contact only.

000250

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. LSA Software Productivity LINE # 3AB6KL0100P			D. NAWC-AD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE									
SOFTWARE							1	135	135
INSTALLATION									
OTHER									
TOTAL								135	135

Narrative Justification:

Operational Date: March 1997
Payback Period = 0.9 years
Return on Investment (ROI) = 89.5%
Average Annual Savings = $121K
Savings to Investment Ratio = 4.47

DESCRIPTION: LSA Software Package which is fully CALS compliant designed to operate as an integrated system in multiple computer environment and provide on-line capability to all site personnel.

The Logistics Support Analysis Record (LSAR) is the repository for data produced by Logistics Support Analysis (LSA) performed during the acquisition life cycle. MIL-STD-1388-2B established the first relational database version of the LSAR. Therefore the current LSAR software is not compatible with any previous MIL-STD-1388-2 System.

Until recently, the number of acquisition programs using the new LSAR was limited. A site license of a PC based MIL-STD-1388-2B (hereafter referred to as -2B) with a limited number of access "keys" satisfied the user requirement for the software. However, the number of users is expected to increase significantly over the next 12 months making the PC based -2B less economical than a LAN based version with unlimited user access. These users most often are not located near each other, in most cases they are spread out in several buildings over multiple floors. The increased number of 2B Programs combined with the physical separation of users justifies investment in a LAN license for -2B software. Access to the LSAR when and where it is needed will improve efficiency in reviewing and analyzing data and ensure adequate access is allowed the user to meet contractual requirements.

000251

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. Real Time Station for SAFCS Replacement LINE # 4AA6KL0432R			D. NAWC-AD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE							1	120	120
SOFTWARE									
INSTALLATION									
OTHER									
TOTAL								120	120

Narrative Justification:

Operational Date: November 1998
Payback Period = 2.1 years
Return on Investment (ROI) = 41.1%
Average Annual Savings = $49K
Saving s to Investment Ratio = 2.05

DESCRIPTION: The Real Time Station (RTS) provides processing power and I/O systems for real time hardware-in-the-loop interfacing requirements. The RTS is capable of hosting the high fidelity actuators, computing the models at 400 Hz, and providing the necessary I/O to the SAFCS and the SAFCS ETS. The RTS is capable of hosting up to 25 actuator models. The RTS is also capable of simulating the behavior of valves, sensors, transducers, and other I/O components.

The SAFCS Engineering Test Station (ETS), in conjunction with existing Manned Flight Simulator assets including aerodynamic simulations and cockpits, is currently capable of providing life cycle support for all SAFCS programs. This support includes control law analysis capability, open-loop, closed-loop and real time pilot-in-the-loop testing, development of software changes, verification and validation of software, flight test support, and investigation of fleet incidents, mishaps, and potential software-related problems. The SAFCS ETS hosts low fidelity models of actuators for various platforms which execute at a rate of 400 Hz. There is not enough processing power available, existing or via upgrade, in the SAFCS ETS to support the incorporation of high fidelity actuator models executing at 400 Hz.

High fidelity actuator models are required in order to ensure accurate, precise test results. These test results will be used to determine whether or not the SAFCS may be cleared for flight on various platforms. The most cost effective means of incorporating high fidelity actuator models into the Manned Flight Simulator SAFCS hardware-in-the-loop facility is by hosting the high fidelity actuator models on an RTS and integrating the RTS into the existing facility. Once the capability of executing high fidelity actuator models as part of the SAFCS hardware-in-the-loop facility is established, lab test results will be much more commensurate with actual aircraft test results; more software deficiencies will be discovered in the lab, resulting in less risky flight test programs and substantial cost savings to the customer.

The development of these capabilities are required in that they would allow the test and evaluation of the SAFCS on various platforms in the laboratory under controlled environmental conditions which, if performed during aircraft flight, could be hazardous, limited in scope and subject to unpredictable atmospheric conditions. Impact of deferral of funding this facility would force the test and evaluation of new technology systems not to be conducted or, if conducted, will only partially evaluate the operational capabilities of these systems. The tests that cannot be performed on the ground will have to be performed in a high risk, high cost flight test evaluation. If these tests are performed during actual aircraft flight, they could be hazardous, limited in scope and subject to unpredictable atmospheric conditions. The ability to accurately interface with the SAFCS and control simulated aircraft conditions allows for precise replication of flight conditions which will reduce risk to the aircrew.

000252

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. Silicon Graphics Upgrades Replacement LINE # 4AA7KL7510R			D. NAWC-AD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE							1	100	100
SOFTWARE									
INSTALLATION									
OTHER							1	15	15
TOTAL								115	115

Narrative Justification:

Operational Date: September 1997
Payback Period = 2.8 years
Return on Investment (ROI) = 32%
Average Annual Savings = $37K
Saving s to Investment Ratio = 1.6

DESCRIPTION: This equipment will provide the required technology upgrades to existing silicon graphics workstations. These upgrades will consist of two types of components: (a) processor/bus updates to increase speed of control and data processing and (b) display/video upgrades to provide wide band data display/compression and formatting.

These upgrades will bring older technology up to current levels of capability and performance. They will offer 30% productivity improvements in laboratory utilization. The reduction in power and cooling is 15% annually and the maintenance savings will be 35% annually.

000253

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. Communications System Upgrade Replacement LINE # 7WC3TL0084R			D. NAWC-WD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE	1	1,690	1,690	1	3,200	3,200	1	3,000	3,000
SOFTWARE	1	100	100	1	250	250	1	200	200
INSTALLATION	1	170	170	1	800	800	1	800	800
OTHER									
TOTAL		1,960	1,960		4,250	4,250		4,000	4,000

Narrative Justification:

Project Initiation Date: FY93

COST BENEFIT ANALYSIS HAS BEEN PERFORMED FOR THE FY96 MODULE WITH:

Payback Period = 1.1

Return on Investment (ROI) = 78%

Average Annual Savings = $3,317K

Saving to Investment Ratio = 3.9

DESCRIPTION: This procurement will provide upgraded hardware for use system wide and for addition of capabilities in certain portions of NAWCWD corporate communication system. The hardware is typically in the form of bridges, gateways, routers and network management systems. These are used to replace failed and obsolete units in the existing system, to extend the system to buildings not currently served, or to upgrade the capabilities of existing service. The upgrades are needed to make the system compatible with user computer and communication requirements or with network management requirements. Currently upgrades are needed to provide additional bandwidth and data speeds to allow the science and engineering community to utilize high performance networked workstations, to downsize from mainframes to distributed high power workstations, to distribute video, and to comply with project directives mandating the use of an engineering data distribution, storage and processing. All of these processing modes assume the existence of a robust communications foundation and architecture with high speed links to other sites nationwide.

The communications systems supported by this project are essential elements to the productivity requirements of doing more scientific and engineering work with fewer personnel who need to work in an integrated fashion but who are geographically spread around this site and the country as a whole.

If the network is not upgraded, NAWCWD will be plagued by operating in an environment of outdated technology which spawns inefficiencies and inadequate performance. Productivity will be severely impacted. The network has already begun to show signs of inadequacy, slow response times, failing applications from lack of memory, and denial of services. Repairs and trouble calls have increased. If the bridge to isolate a segment of the ethernet is not purchased, congestion will occur as more computers are added to the network.

000254

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. Secure Network Replacement LINE #7WC5TL0512R			D. NAWC-WD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE				1	95	95			
SOFTWARE				1	8	8			
INSTALLATION									
OTHER									
TOTAL					103	103			

Narrative Justification:

Operational Date: August 1996
Project Initiation Date: FY95
Payback Period = 3.9 years
Return on Investment (ROI) =24%
Average Annual Savings = $52K
Saving to Investment Ratio = 1.2

DESCRIPTION: Acquisition of file server/host to be situated in the Advanced Technology Support Program Office, building 31598, connected via secure data devices and phone lines to satellite offices on and off the center. Also required is a mass storage backup unit and software (C2 Unix operating system) to go with the acquisition of file server/host. The secure network will link 30-60 facilities that perform classified work. Currently each space, at most, processes in a stand alone mode of operation. This network will allow communication from the corporate office to each satellite, as well as allow communication between satellites on a need-to-know basis.

If not approved, continued use of at least one, often two, cleared personnel to hand-carry double wrapped classified information will be necessary. Security risks will continue to exist when classified information is taken outside an approved facility. Manhours lost due to personnel having to courier material is an expense which can be mitigated by the incorporation and funding of this secure network project.

000255

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. Fiber Optic Transmission Equipment Replacement LINE # 7AA6TL0723R			D. NAWC-AD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE							1	2,449	2,449
SOFTWARE									
INSTALLATION									
OTHER									
TOTAL								2,449	2,449

Narrative Justification:

Operational Date: January 1999
Payback Period = 1.9 years
Return on Investment (ROI) = 45%
Average Annual Savings = $1,137K
Savings to Investment Ratio = 2.3

DESCRIPTION: This submission is for a multi-year project to provide a fiber optic system throughout Pax River. With the current data, video, and voice cable plants at the end of their life cycle and no room for expansion, it is essential to replace those existing plants with an integrated, state of the art, fiber optic system. BRAC II and III has funded a major portion of the backbone; this submission is for the transmission equipment for buildings/areas not covered by BRAC. The emerging high bandwidth information transfer technologies supporting both project and business requirements will only run on fiber and is essential in positioning NAWCAD at a competitive advantage in terms of attracting declining DOD and RDT&E project dollars.

Information transfer technologies are critical to the successful operation of the competency aligned, multi-site organization and to the continued high quality of support to our sponsors.

If this program is not approved, non-BRAC users will not benefit from the fiber plant. They will be forced to operate on the existing, obsolete coaxial and copper plants. The base will continue to shoulder the burden of maintaining several cable plants of different technologies instead of an integrated fiber optic system.

000256

CAPITAL PURCHASES JUSTIFICATION							A. FY 1996/1997 APPORTIONMENT BUDGET		
B. Department of the Navy/Research & Development				C. Mobile FM Trunking Communication Sys Replacement LINE #8WP6TL6013R			D. NAWC-WD		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE							1	645	645
SOFTWARE									
INSTALLATION									
OTHER									
TOTAL								645	645

Narrative Justification:

Operational Date: October 1998
Project Initiation Date: FY98
Payback Period = 4.6 years
Return on Investment (ROI) = 21%
Average Annual Savings = $138K
Saving to Investment Ratio = 1.1

DESCRIPTION: The RM Trunking System will consist of controller equipment, repeater equipment, consoles interface equipment, antennas, telephone interconnect equipment and miscellaneous connecting hardware. this equipment will trunk Point Mugu, San Nicolas Island and Laguna Peak. This equipment will provide a 6 transmit/16 receive system at Point Mugu and a 6 transmit/8 receive system at San Nicolas Island with a repeater station at Laguna Peak.

Trunking is the sharing of a small number of communication channels by a large number of users. Each time a call is placed in a trunked radio system, each group of users has access to multiple radio channels in a common pool. A clear channel is automatically assigned for the duration of a message. Other users can access any of the remaining channels in the pool. The vacated channel is returned to the common pool at the conclusion of each message for access by other users of the system. Although the trunked system is shared by many users, each group operates independently as if the system were their own NET.

The current FM Mobile Communications systems have reached their limitations for growth. The FCC has reallocated the FM Mobile frequency band to limit the number of frequencies available to the military. This limitation along with increased demand for single use frequency allotments on Point Mugu FM Mobile have exceeded the current system capabilities. Currently the Point Mugu FM Mobile system is a single use frequency system for various users, (one frequency for each user, sometimes shared between users, which can cause interference). Users of the FM Mobile System include: Security, Medical, Public Works, Fire Department, Air Traffic Control, Maytag Fuels, and all Tenant Commands.

The costs shown provide a backbone system that can be used by all users without buying new radios at the start. The cost of new radios can be phased over a period of years as the radios reach their useful life.

Budget calculations are based upon an unsolicited proposal by Motorola, dated 1 June 1994, using contract GSA 009ags06801/ps01.

0002527

CAPITAL PURCHASES JUSTIFICATION									A. FY 1996/1997 APPORTIONMENT BUDGET
B. Department of the Navy/Research & Development				C. Analyst Workbench (AWB) Replacement LINE # 4WC4DL0097R					D. NAWC-WD
	FY 1995			FY 1996			FY 1997		
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
HARDWARE	1	80	80	1	70	70	1	70	70
SOFTWARE	1	426	426	1	415	415	1	465	465
INSTALLATION					0	0		0	0
OTHER				1	10	10	1	10	10
TOTAL		506	506		495	495		545	545

Narrative Justification:

Project Initiation Date: FY94
Payback Period = 1.3 years
Return on Investment (ROI) = 63%
Average Annual Savings = $1,175K
Saving to Investment Ratio = 3.1

DESCRIPTION: The Analyst's Workbench (AWB) is a framework for the interactive application of computer models and analysis tools. It allows the analyst to step through complex scenarios, pausing at times, or events, to utilize a variety of analysis tools and models. The AWB provides the user the capability to document analyses to presentations or documents. It is currently aimed at the Strike, War at Sea, and Air-to-Air warfare areas. Although the AWB was originally developed for use by analysts in NAWCWPNS Weapons Planning Group, there are requests from several other potential AWB users and model developers for a wide spectrum of applications.

For FY 1995 the following tasks are to be completed:
The primary task will be to cross platform the AWB onto several UNIX based engineering workstations. Software required to do this is being released by third party vendors in early FY94. With this software we will be able to host the AWB on the following platforms: Sun Sparc Station, IBM Power PC, HP, Silicon Graphics Indigo.

We will also implement access to various standard data bases in the AWB. This will include Digital Chart of the World produced by the Defense Mapping Agency (DMA) available on CD ROM.

The impact of not continuing the funding of AWB will be that capabilities to the AWB will not be added which will allow flexibility of the system. Additionally, there will be several levels of productivity enhancements that will be bypassed.

000258

DEPARTMENT OF THE NAVY - DEFENSE BUSINESS OPERATIONS FUND
RESEARCH & DEVELOPMENT - NAVAL AIR WARFARE CENTER
CAPITAL BUDGET EXECUTION
(Dollars in Millions)
FY 1996

LINE #			DESCRIPTION	Original Request	Change	Current CON	Classification	Explanation/Reason for Change
			1a. Equipment, Other than ADPE & TELECOM (>$500,000)					
WC 3 EL	0006	R	WEPTAC PHASE II PRODUCTION SYSTEM	0.800	1.130	1.930	TRANSFER	PARTIAL PROJECT REPROGRAMMED DUE TO LIMITATIONS IN FY95 AUTHORITY. DEVELOPMENT OF FY95 MODULE(S) BEHIND SCHEDULE. REPROGRAMMING RECEIVED FROM FIRE PROTECTION SYSTEM, VIBRATION SYSTEM, W-BAND NETWORK ANALYZER, & SELECTIVE LASER SINTERING.
WC 5 EL	0500	R	HIGH OFF-BORESIGHT ANGLE TABLE	0.000	0.450	0.450	SUBSTITUTION	BEGUN IN FY95. ADDITIONAL GURNEY REQUIRED TO MOUNT/TEST SEEKER/GUIDANCE SYSTEM. REPROGRAMMING RECEIVED FROM CNC LATHE.
WC 3 EL	0007	R	MISSION PLANNING/DIGITAL IMAGING W/S	1.000	0.000	1.000		
WC 3 EL	0005	R	P-369 MILCON COLLATERAL EQUIPMENT	0.300	0.225	0.525	PRICE INC.	COLLATERAL EQUIPMENT TO COMPLETE MESA. EQUIPMENT TO MEASURE PERFORMANCE OF ADVANCED FUSE AND MISSILE TECHNOLOGIES IN DESIGN AND PROTOTYPE STAGE. REPROGRAMMING RECEIVED FROM CESE/MHE & IMAGE SYSTEM.
A C 6 EL	5701	R	PWB DIRECT LASER IMAGING SYSTEM	0.765	0.000	0.765		
A C 6 EL	7402	R	VIBRATION/SHOCK SHAKER SYSTEM	0.600	0.000	0.600		
A B 6 EL	0001	R	EYE SAFE LASER TRACKER	0.560	0.000	0.560		
WC 3 EL	0010	P	CONCURRENT ENGINEERING WORKGROUP	1.450	-0.214	1.236	PRICE DEC.	RESOURCES UPGRADED SUFFICIENTLY IN FY95 TO DOWNSIZE FY96 REQUIREMENTS. REPROGRAMMED TO IMAGING SEEKER SYSTEM.
A A 6 EL	0014	N	ELECT SYSTEM DEPT/ENVIRONMENTAL TEST	0.674	0.000	0.674		
A A 6 EL	7501	R	OPEN ARCHITECTURE AVIONICS DISPLAY SYS	0.550	-0.550	0.000	CANCELLATION	REPROGRAMMED TO AEGIS COMPUTER SYSTEM.
WC 4 ES	6000	R	CESE/MHE	0.893	-0.893	0.000	TRANSFER & SUBSTITUTION	REQUIREMENT DOWNSIZED. REPROGRAMMED TO AMES II SIMULATOR, INSTRUMENTATION UPGRADE, AND P-369 MILCON COLLATERAL.
WC 4 ES	0000	R	CORPORATE NETWORK EMERGENCY POWER SYSTEM	0.700	-0.700	0.000	DEFERRAL	REQUIREMENT MOVED TO OUT YEARS. REPROGRAMMED TO AMES II THREAT SIMULATOR.
			Subtotal Equipment, Other than ADPE & TELECOM (>$500,000)	8.292	-0.552	7.740		
N	ES	0000	**1b. Equipment, Other than ADPE & TELECOM (<$500,000)**	11.257	-0.327	10.930		DECREASE DUE TO BRAC IV PROPOSAL & TO REPROGRAMMING TO SUPPORT NON-ADP ITEMS >$500K & ADP ITEMS. WILL SUPPORT VARIOUS TYPES OF REQUIRED TESTING & SIMULATIONS.

000259

DEPARTMENT OF THE NAVY - DEFENSE BUSINESS OPERATIONS FUND
RESEARCH & DEVELOPMENT - NAVAL AIR WARFARE CENTER
CAPITAL BUDGET EXECUTION
(Dollars in Millions)
FY 1996

LINE #		DESCRIPTION	Original Request	Change	Current CON	Classification	Explanation/Reason for Change
		2. Grand Total Equipment, Other than ADPE & TELECOM	19.549	-0.879	18.670		
N	MC 0000	**3. Minor Construction (<$300,000)**	5.012	-1.415	3.597		DECREASE DUE TO BRAC IV PROPOSAL & TO REPROGRAMMING TO SUPPORT NON-ADP ITEMS (INFRARED SCENE PROJECTOR & CNC OPTICAL GENERATOR SYSTEM). REPROGRAMMING WITHIN THE MINCON CATEGORY TO SUPPORT FUNCTIONS SUCH AS PROVIDING PARKING NEAR HANGARS, SUPPORTING CONTROL CENTER REQ'MTS, SUPPORTING ALRE FUNCTIONS, EXTENDING NATURAL GAS LINES, PROVIDING TRAINING CENTER, ETC.
		Grand Total Non-ADP Capital Purchases Program	24.561	-2.294	22.267		

092000

DEPARTMENT OF THE NAVY - DEFENSE BUSINESS OPERATIONS FUND
RESEARCH & DEVELOPMENT - NAVAL AIR WARFARE CENTER
CAPITAL BUDGET EXECUTION
(Dollars in Millions)
FY 1996

LINE #	DESCRIPTION	Original Request	Change	Current CON	Classification	Explanation/Reason for Change
	1a. ADPE & Telecommunications (>$100,000)					
A B 3 KL 0001 R	LOCAL AREA NETWORK	1.000	0.000	1.000		
A A 5 KL 0001 R	UNIX CORPORATE SERVER ENVIRONMENT EXPANSION	0.250	0.000	0.250		
A A 5 KL 0010 R	ADP EQUIPMENT UPGRADES	0.000	0.200	0.200	SUBSTITUTION (NEW)	REQUIRED IN ORDER TO UPDATE WORKSTATIONS SO THAT THEY WILL BE COMPATIBLE WITH THE NEW NETWORK OPERATING SYSTEM. REPROGRAMMING RECEIVED FROM OTHER ADP ITEMS.
WC 4 KL 0401 R	COMPETITIVE ENGINEERING ENVIRONMENT	0.187	0.460	0.647	TRANSFER	INCREASING TECHNICAL CAPABILITY, IN DOWNSIZING HUMAN RESOURCE ENVIRONMENT. WILL ENABLE COMPLIANCE WITH GROWING EXTERNAL DEMANDS FOR RAPID PROBLEM SOLVING. (SEE ECONOMIC ANALYSIS) REPROGRAMMING RECEIVED FROM IMAGE SYSTEM.
A A 5 KL 0009 R	BLUE HOSE FOR NAS	0.000	0.250	0.250	SUBSTITUTION (NEW)	INSTALLATION OF THE BLUE HOSE TO VARIOUS BUILDINGS WITHIN THE NAS WHO DO NOT CURRENTLY HAVE ANY NETWORKING, VIDEO, OR HIGH SPEED DATA TRANSMISSION CAPABILITY. REPROGRAMMING RECEIVED FROM OTHER ADP ITEMS.
A A 6 KL 5304 R	SIGNAL PROCESSING WORKSTATION	0.350	0.010	0.360	PRICE INC.	INCREASE IN ESTIMATE FOR INSTALLATION. REPROGRAMMING RECEIVED FROM OTHER ADP ITEMS.
A A 6 KL 7908 R	ADV CAPABILITY ARTHIMETIC PROCESSOR	0.200	0.000	0.200		
WC 4 KL 0517 R	GEOGRAPHIC INFORMATION SYSTEM	0.206	-0.038	0.168	PRICE DEC.	PHASE I IMPLEMENTED BASIC SYSTEM. PHASE II WILL NOT BE AS EXTENSIVE AS ANTICIPATED. REPROGRAMMED TO CABLE TO NEW CONSTRUCTION, HR LAN, AND TO BADGING SYSTEM.
A C 5 KL 6102 R	OPTICAL DISK ARCHIVING SYSTEM	0.167	0.000	0.167		
A C 6 KL 6104 R	PROCESSOR EXPANSION	0.157	0.000	0.157		
A A 5 KL 7000 R	TAC 4 AND AFMSS MISSION PLANNING SYS	0.150	0.000	0.150		
A A 6 KL 7902 R	NEXT GENERATION HOST SYSTEM	0.150	0.000	0.150		
A A 6 KL 7906 R	TAC-4	0.150	0.000	0.150		
A A 6 KL C501 R	HELP DESK SOFTWARE	0.149	0.000	0.149		
A B 6 KL 0003 R	PROCESSOR FOR INTER-SYSTEMS COMMUNICATION	0.135	0.000	0.135		

000261

DEPARTMENT OF THE NAVY - DEFENSE BUSINESS OPERATIONS FUND
RESEARCH & DEVELOPMENT - NAVAL AIR WARFARE CENTER
CAPITAL BUDGET EXECUTION
(Dollars in Millions)
FY 1996

LINE #			DESCRIPTION	Original Request	Change	Current CON	Classification	Explanation/Reason for Change
W C 3 TL	0084	R	COMMUNICATIONS SYSTEM UPGRADE	1.920	2.330	4.250	TRANSFER	EXTENSIVE HARDWARE REPLACEMENT TO UPDATE THE OUTDATED TECHNOLOGY FOR THE NAWCWD NETWORK. REPROGRAMMING RECEIVED FROM OTHER ADP ITEMS.
W C 5 TL	0512	R	SECURE NETWORK	0.145	-0.042	0.103	PRICE DEC.	BASIC SYSTEM ESTABLISHED IN FY95. ANTICIPATE COMPLETION OF PROJECT WILL COST LESS. REPROGRAMMED TO CABLE TO NEW CONSTRUCTION.
A C 4 KL	3701	R	CADS II WORKSTATION SYSTEMS	3.000	-3.000	0.000	CANCELLATION	DUE TO BRAC IV PROPOSAL.
A A 5 KL	6205	R	RECONFIGURATION CREWSTATION UPGRADE	0.254	-0.254	0.000	CANCELLATION & SUBSTITUTION	REPROGRAMMED TO OTHER ADP > CATEGORY ITEMS.
A C 6 KL	7203	R	JCALS SUITES	2.775	-2.775	0.000	CANCELLATION & SUBSTITUTION	DUE TO BRAC IV PROPOSAL. REPROGRAMMED TO OTHER ADP > CATEGORY ITEMS.
A A 6 KL	0050	R	GOULD RSX COMPUTER/INTERFACE	0.500	-0.500	0.000	CANCELLATION & SUBSTITUTION	REPROGRAMMED TO OTHER ADP > CATEGORY ITEMS.
A A 6 KL	0017	R	LAN AND COMPUTER-AIDED ACQUISITION & LOGISTICS	0.407	-0.407	0.000	CANCELLATION & SUBSTITUTION	REPROGRAMMED TO OTHER ADP > CATEGORY ITEMS.
A A 6 KL	0013	R	VISUAL DISPLAY TEST AND SIMULATION SYS	0.380	-0.380	0.000	CANCELLATION & SUBSTITUTION	REPROGRAMMED TO OTHER ADP > CATEGORY ITEMS.
A B 6 KL	0002	R	SUN LAB NETWORK	0.290	-0.290	0.000	CANCELLATION & SUBSTITUTION	DUE TO BRAC IV PROPOSAL. REPROGRAMMED TO OTHER ADP > CATEGORY ITEMS.
A A 6 KL	5405	R	AAP-400 PROCESSOR	0.250	-0.250	0.000	CANCELLATION & SUBSTITUTION	REPROGRAMMED TO OTHER ADP > CATEGORY ITEMS.
A A 6 KL	1201	R	SYSTEMS ENGR. FACILITY UPDATE	0.250	-0.250	0.000	CANCELLATION & SUBSTITUTION	REPROGRAMMED TO OTHER ADP > CATEGORY ITEMS.
A A 6 KL	1202	R	H-3 VARIANTS SIMULATION SYSTEM	0.250	-0.250	0.000	CANCELLATION & SUBSTITUTION	REPROGRAMMED TO OTHER ADP > CATEGORY ITEMS.
A A 6 KL	5306	R	CLIENT SERVER SPARC SYSTEM	0.211	-0.211	0.000	CANCELLATION & SUBSTITUTION	REPROGRAMMED TO OTHER ADP > CATEGORY ITEMS.
A A 6 KL	6506	R	VISUAL SYSTEM UPGRADE	0.200	-0.200	0.000	CANCELLATION & SUBSTITUTION	REPROGRAMMED TO OTHER ADP > CATEGORY ITEMS.
A A 6 KL	0085	R	MINI CREW STATION	0.200	-0.200	0.000	CANCELLATION & SUBSTITUTION	REPROGRAMMED TO OTHER ADP > CATEGORY ITEMS.
A C 6 KL	6105	R	DISK STORAGE UPGRADE	0.131	-0.131	0.000	CANCELLATION	DUE TO BRAC IV PROPOSAL.
A C 6 KL	5906	R	DATA COLLECTION SYSTEM	0.125	-0.125	0.000	CANCELLATION	DUE TO BRAC IV PROPOSAL.
A C 6 KL	5507	R	PADS LOGIC ENG. DESIGN SYS	0.123	-0.123	0.000	CANCELLATION	DUE TO BRAC IV PROPOSAL.

2.92000

DEPARTMENT OF THE NAVY - DEFENSE BUSINESS OPERATIONS FUND
RESEARCH & DEVELOPMENT - NAVAL AIR WARFARE CENTER
CAPITAL BUDGET EXECUTION
(Dollars in Millions)
FY 1996

LINE #	DESCRIPTION	Original Request	Change	Current CON	Classification	Explanation/Reason for Change
A B 6 KL 0001 R	CASE TOOL SOFTWARE	0.116	-0.116	0.000	CANCELLATION & SUBSTITUTION	DUE TO BRAC IV PROPOSAL. REPROGRAMMED TO OTHER ADP > CATEGORY ITEMS.
A B 6 KL 0004 R	AUTOMATED DOCUMENT MGMT & PUBLISHING SYS UPDATES	0.100	-0.100	0.000	CANCELLATION	DUE TO BRAC IV PROPOSAL.
A A 6 KL 0004 R	CLASSIFIED DATA PROCESSING SYSTEM EXPANSION	0.100	-0.100	0.000	CANCELLATION & SUBSTITUTION	REPROGRAMMED TO OTHER ADP > CATEGORY ITEMS.
A A 6 KL 0011 P	ELECTRONIC SYSTEMS DEPARTMENT	0.400	-0.400	0.000	CANCELLATION & SUBSTITUTION	REPROGRAMMED TO OTHER ADP > CATEGORY ITEMS.
W P 4 TL 4003 R	REPLACEMENT ITEMS FOR C-LAN	0.175	-0.175	0.000	TRANSFER & SUBSTITUTION	REPROGRAMMED TO COMMUNICATION SYSTEM UPGRADES WHICH WILL INCORPORATE REPLACEMENT ITEMS FOR C-LAN.
W C 5 KL 0506 R	IMAGE SYSTEM	1.200	-1.200	0.000	DEFERRAL & SUBSTITUTION	BASIC SYSTEM IS EXPECTED TO BE IN PLACE FY95. FURTHER EXTENSION NOT ANTICIPATED AT THIS TIME. REPROGRAMMING RECEIVED FROM OTHER ADP ITEMS.
W C 5 KL 0511 R	NAWC CORPORATE BUDGET SYSTEM	0.050	-0.050	0.000	CANCELLATION & SUBSTITUTION	SYSTEM WILL BE COMPLETED IN FY95. REPROGRAMMED TO COMMUNICATIONS SYSTEM UPGRADE.
W P 6 KL 4002 R	EDMICS	2.925	-2.925	0.000	DEFERRAL & SUBSTITUTION	DEFERRED TO FY97. THIS IS TO IMPLEMENT THE DESIGN PHASE NOT YET COMPLETED BY ANOTHER NAVY ACTIVITY. REPROGRAMMED TO SIGNAL PROCESSING SYSTEM AND TO CABLE TO NEW CONSTRUCTION PROJECT.
W P 6 KL 4000 R	CAD II	1.410	-1.410	0.000	DEFERRAL & SUBSTITUTION	DEFERRED TO FY97. DELAY DUE TO FUNCTION MOVES WITHIN COMPETENCY ALIGNED ORGANIZATION--NOT READY TO IMPLEMENT. REPROGRAMMED TO OTHER ADP ITEMS.
W P 6 KL 4001 R	MODULE INTEG ELECTR TECH MANUAL/PUBS	1.045	-1.045	0.000	DEFERRAL & SUBSTITUTION	DEFERRED TO FY97. DELAY DUE TO FUNCTION MOVES WITHIN COMPETENCY ALIGNED ORGANIZATION--NOT READY TO IMPLEMENT. REPROGRAMMED TO COMMUNICATIONS SYSTEM UPGRADE.
W P 6 TL 5004 R	VTC UPGRADES	0.370	-0.370	0.000	DEFERRAL & SUBSTITUTION	MOVED TO OUT YEARS. REPROGRAMMED TO COMMUNICATIONS SYSTEM UPGRADE.
W C 5 KL 0509 R	CONTINUING TECH. ADVANCEMENT - PHASE II	0.250	-0.250	0.000	CANCELLATION & SUBSTITUTION	HARDWARE REQUIREMENT MET IN FY94. SOFTWARE/NETWORK UPGRADE BEING MET BY PROCUREMENT SYSTEM SOFTWARE UPGRADES. REPROGRAMMED TO COMMUNICATIONS SYSTEM UPGRADE.
W P 6 TL 5005 R	CONNECTIVITY / HR LAN	0.177	-0.177	0.000	CANCELLATION & SUBSTITUTION	NO CURRENT REQUIREMENT. REPROGRAMMED TO OTHER ADP ITEMS.

0002963

DEPARTMENT OF THE NAVY - DEFENSE BUSINESS OPERATIONS FUND
RESEARCH & DEVELOPMENT - NAVAL AIR WARFARE CENTER
CAPITAL BUDGET EXECUTION
(Dollars in Millions)
FY 1996

LINE #	DESCRIPTION	Original Request	Change	Current CON	Classification	Explanation/Reason for Change
W C 6 KL 0519 R	AIR-TO-SURFACE IMAGE PROCESSING C28	0.155	-0.155	0.000	CANCELLATION & SUBSTITUTION	REPROGRAMMED TO PROCUREMENT SYSTEM SOFTWARE.
	Subtotal ADPE & Telecommunications (>$100,000)	23.135	-14.649	8.486		
N KS 0000	**1b. ADPE & Telecommunications (<$100,000)**	3.020	-3.020	0.000		DECREASE DUE TO BRAC IV PROPOSAL.
	2. Grand Total ADPE & Telecommunications	26.155	-17.669	8.486		
	3a Software Development (>$100,000)					
A A 5 DL 0032 P	SMS 3RD/4TH PLATFORM	0.050	-0.050	0.000	CANCELLATION & SUBSTITUTION	REPROGRAMMED TO OTHER ADP < CATEGORY ITEMS.
W C 4 DL 0097 R	ANALYST WORKBENCH	0.495	0.000	0.495		
	Grand Total Software Development	0.545	-0.050	0.495		
	Grand Total ADP Capital Purchases Program	26.700	-17.719	8.981		
	Grand Total Capital Purchases Program	51.261	-20.013	31.248		

000264

DEPARTMENT OF THE NAVY
DEFENSE BUSINESS OPERATIONS FUND
R&D - NAVAL SURFACE WARFARE CENTER
SUMMARY OF ACTIVITY GROUP OPERATIONS

Activity Group Function:

The Naval Surface Warfare Center was established on 2 January 1992 with the following mission: "To operate the Navy's full spectrum research, development, test and evaluation, engineering and fleet support center for ship hull, mechanical, and electrical systems, surface combat systems, coastal warfare systems, and other offensive and defensive systems associated with surface warfare."

Activity Group Composition:

The Center is comprised of five operating divisions whose operations and locations are described briefly below.

CARDEROCK DIVISION, Bethesda, MD. This division provides research, development, test and evaluation, fleet support and in-service engineering for surface and undersea vehicle hull, mechanical and electrical (HM&E) systems and propulsors including logistics R&D. The division has major operating sites at Bethesda (Carderock site), MD., Philadelphia, PA., and Annapolis, MD., with smaller operating sites at Ft. Lauderdale, FL., Memphis TN., Norfolk, VA., White Oak, MD., Bremerton, WA., and Bayview, IN. The operations at White Oak and Annapolis are scheduled for termination in FY 1997 and FY 1998 respectively in accordance with BRAC plans.

CRANE DIVISION, Crane, IN. This division provides engineering and industrial support of weapons systems, subsystems, equipment and components. The primary product areas of expertise include electronic warfare, gun and gunfire control systems, microelectronics components, electronic module test and repair, microwave components, electro-mechanical power systems, acoustic sensors, small arms, conventional ammunition, raiders, and pyrotechnics. The division has two primary operating sites, Crane and Louisville, KY. The Louisville site is scheduled to be closed or privatized as part of Base Realignment and Closures (BRAC) 95.

DAHLGREN DIVISION, Dahlgren, VA. This division provides research, development, test and evaluation, engineering and fleet support for surface warfare systems, surface ship combat systems, ordnance, mines and mine counter measures, amphibious warfare systems, special warfare systems, strategic warfare systems, and diving. The division has three primary operating sites; Dahlgren, Panama City, FL., and White Oak, MD. The White Oak operation will be terminated in FY 1997 as a BRAC action.

INDIAN HEAD DIVISION, Indian Head, MD. This division provides technical capabilities in energetics for all warfare centers and to provide special weapons, explosive safety and ordnance

environmental support to all warfare centers, the military departments and ordnance industry. Indian Head is the primary operating site, with smaller operations at Yorktown, Mcalester, OK., and White Oak. The White Oak operation will be terminated in FY 1997.

PORT HUENEME DIVISION, Port Hueneme, California. This division provides test and evaluation, in-service engineering and integrated support for surface warfare systems, weapons systems and subsystems, unique equipments, and related expendable ordnance of the surface fleet. The primary operating sites are Port Hueneme, CA; San Diego, CA; and Dam Neck, VA.

Financial Profile

	($ millions)		
	FY 1995	FY 1996	FY 1997
Cost of Goods Sold	2,414	2,595	2,589
Net Operating Results (NOR)	73	67	-12
Accumulated Operating Results (AOR)	-55	12	0

In FY 1997, reductions in cost more than offset cost growth due to inflation. The FY 1996 NOR is estimated to be $76 million which is $31 million better than projected in the FY 1996 President's Budget. The increase over the President's budget is a result of an increase in projected direct labor hours, resulting in added income and improved operating results. The FY 1997 NOR of -$12 million will result in a zero AOR.

Workload:	FY 1995	FY 1996	FY 1997
Direct Labor Hours (hours in millions)	22,933	23,019	22,208

Direct labor hours reflect the current estimate of funded workload. NSWC continues to downsize as new orders decrease.

New orders of $2.2 billion in FY 1996 and $2.1 billion in FY 1997 reflect the gradual decrease of customer budgets after reaching a peak of $2.9 billion in FY 1993. The current FY 1996 estimate is above the comparable figure in the FY 1996 President's Budget by $78 million.

The consolidations required by BRAC II and BRAC III are continuing and included in this budget. Certain actions recommended by DOD to the FY 1995 Base Realignment and Closure Commission have also been reflected in this budget. Specifically, the closures of Louisville, White Oak, and Annapolis are assumed. Privatization of Louisville, which is currently being studied as an alternative to closure, is not reflected in the cost and workload hours portion of this budget.

Performance Indicators:

The primary performance indicator is the Unit Cost measure discussed below. Secondary indicators are the overhead workyear reductions, the productivity ratio and the manpower reductions. The manpower discussion is included in the staffing section.

	FY 1995	FY 1996	FY 1997
Overhead workyears	5,753	5,530	5,094
Percent workyear change		-3.9%	- 7.9%
Overhead costs ($ millions)	$599	$625	$598
less depreciation	49	54	46
Net overhead	$550	$571	$552
Productive Ratio	68.4%	69.3%	70.3%

Overhead workyears and cost: Both workyears and cost, after inflation, continue to decline over the budget period. The apparent increase from FY 1995 to FY 1996 overhead cost is the result of significant, one-time accounting adjustments in FY 1995 to close out dormant accounts payable and adjustments related to leave accruals.

Productive Ratio: The productivity ratios are calculated by dividing the direct straight time workyears by total straight time workyears minus service cost center workyears. These are slightly higher than the President's Budget levels and are an indicator that overhead workyears are declining at a faster rate than direct workyears.

Customer Rate Changes:	FY 1996	FY 1997
Stabilized Customer Rate	$65.87	$60.60
Stabilized Rate Change	3.5%	7.9%
Composite Rate Change	2.8%	-2.5%

The Stabilized billing rate consists of direct labor and applied overhead. All remaining direct costs are billed on a 100% reimbursable basis. The composite rate change shown above incorporates both the stabilized and non-stabilized parts of the budget. The increase in FY 1996 over FY 1995 is due to direct labor and production expense increases. In addition, the JLSC surcharge of $1.53 per direct labor hour contributed to the rate increase. From FY 1996 to FY 1997 the change is due to a significant decrease in the AOR recoupment factor and, the elimination of the JLSC surcharge.

Unit Cost:	FY 1995	FY 1996	FY 1997
Total Cost less Direct Non Labor divided by direct labor hours	$59.29	$60.71	$61.69

The Unit Cost is defined as the sum of direct labor cost plus overhead cost divided by total direct labor hours. The unit cost is holding relatively constant even though direct hours are decreasing. The ratio trend reflects overhead reductions commensurate with the direct labor hour decline.

Staffing:	FY 1995	FY 1996	FY 1997
Civilian End Strength	18,420	17,935	17,118
Civilian Work Years	18,696	18,408	17,636
Military End Strength	417	396	361
Military Work Years	440	396	361

Civilian manpower levels will continue to drop in response to workload reductions, consolidations and closures, but at a slower rate than anticipated in the FY 96 President's Budget. Since the Center was established in FY 1992, manpower has declined approximately 23 percent. Total manpower reductions, by the end of FY 1999 (from FY 1992,) are expected to reach 33 percent.

In order to manage manpower in accordance with projected workload and BRAC requirements, Separation Incentive Pay (SIP) and Voluntary Early Retirement Act (VERA) separations are budgeted through FY 1997. In FY 1995 there were 602 incentive separations and 104 reduction in force separations. FY 1996 and FY 1997 budgeted incentive and reduction in force separations are 679 and 604 respectively.

Headquarters Cost: ($ millions)	FY 1995	FY 1996	FY 1997
Cost of Management Headquarters	$3.5	$3.6	$3.6

Capital Budget Authority:	($ millions)		
	FY 1995	FY 1996	FY 1997
Equipment-Non ADPE/TELECOM	4.8	9.9	11.2
ADPE/Telecommunication Equipment	5.7	10.6	12.2
Software Development	5.4	2.0	.9
Minor Construction	2.6	4.3	5.6
Reliability, Maintainability, and Supportability	0	0	0
TOTAL ($ Millions)	18.5	26.8	29.8

Investment levels are being constrained by the Divisions to reduce depreciation costs in future years. Program changes have been made by reevaluating the benefits of the planned investments and finding lower cost alternatives. Additionally, all programs impacted by the BRAC 95 decision were removed from the budget.

Economies, And Efficiencies.

Projected FY 1997 overhead is 15% below FY 1994 actuals after adjusting for the impact of inflation. Stabilized rate levels and overhead targets have mandated reductions across the spectrum. The following paragraphs are some examples of initiative being implemented in the divisions.

Carderock Division management has focused on reducing overhead cost and increasing production efficiencies; the unit cost containment in this budget reflects that effort. An Executive Financial Committee has been established to work directly with the Commander and Director to focus continuous management attention and oversight on budget development and execution. Efficiency of operations is being accomplished in a variety of labor and non-labor areas. Video teleconferencing across the division's major sites is considered a cost avoidance for additional travel costs and labor time lost to travel. Test facilities are being consolidated and buildings are being excessed at the Philadelphia site. Automation of processes is being accomplished (electronic timekeeping) and pursued (travel orders and ticketing). Delegation of procurement authority through credit card use and micro purchasing authority to the technical organizations is reducing the need for centralized procurement staff. Direct access to automated databases is reducing the need for library space and staff. The technical organizations continue to consolidate and integrate their personnel and test facility resources to achieve the most efficient operating organization.

The Crane Division continues to reap the savings of consolidation. In FY 1995 new savings were realized when an additional mainframe computer was eliminated at Louisville. Mechanical production work was consolidated into one building providing savings due to reduced building operation and maintenance costs. The page printing system was eliminated at Louisville with the function being consolidated at the Crane site. Dedicated long haul communications between the two sites have been replaced a scrambler phone connection. In addition, Crane has identified several direct cost avoidance measures.

Overhead has been one of the major areas of concern for the Dahlgren Division over the last three years. Based on this concern the division command has initiated and directed various efforts to reduce overhead expenditures to appropriate levels to support the infrastructure and maintain stable rates. Some of the productivity initiatives implemented in the last three years include the Get Well and Stay Well Plan, the Zero-Based Budget Review of G&A and the proposed Service Cost Center for Procurement services.

The Indian Head Division's initiatives have included the establishment of a FECA Working Group. This group is made up of Indian Head employees working with local physicians. The local physicians visited the station, got a "first hand" view of operations, and were briefed on light duty availability. To deal with downsizing the Division recognized the need to have a "multiple skills" workforce. Plant operations is the "multiple skill" focus in order to promote greater flexibility and efficiency. Water plant operators have been cross trained to fill critical positions in the Power House. Innovative approaches to training have also created efficiencies. The creation of an eight station training center in the Supply Department permits the conduct of

open systems training at lunch time. Greater use of video training tapes is an additional example in training efficiencies.

In addition to numerous direct work productivity measures, the Port Hueneme Division (PHD) has four major initiatives internal to the division that are anticipated to generate significant productivity savings. First, the Logistics Directorate recently reorganized into product teams to streamline the organization, better serve customer requirements, and to reduce unnecessary management oversight. The reorganization resulted in the elimination of 36% of the management positions in the directorate and the supervisory span of control ratio was increased from 1:9 to 1:13. Second, the Paperless Office Project has recently been established with a goal of providing a paperless environment across the division in three years. Through representation across the workforce, the project is addressing the following requirements: network upgrade, computer security/intrusion, E-mail stabilization, server architecture, document management, reports/data retrieval, ATM switching, and mainframe downsizing. Third, a new contracting strategy is being developed that is consistent with the direction of the Federal Acquisition Streamlining Act initiatives and will result in both reduced cost to the government and industry and reduced administrative lead time. Specifically, the division will be streamlining the evaluation process with oral technical evaluations and a limited basis for negotiations, as well as the use of broader contract vehicles. Fourth, PHD has initiated a local "Silly Rules" contest on an on-going basis to eliminate unnecessary requirements and streamline local processes.

R&D - NAVAL SURFACE WARFARE CENTER
REVENUE AND EXPENSES
(Dollars in Millions)

	FY 1995	FY 1996	FY 1997
Revenue:			
Gross Sales			
Operations	2,437.9	2,608.3	2,530.5
Capital Surcharge	0.0	33.5	0.0
Depreciation except Maj Const	49.0	53.6	46.4
Major Construction Depreciation	0.0	0.0	0.0
Other Income	0.0	0.0	0.0
Total Income	**2,486.9**	**2,695.4**	**2,576.9**
Expenses:			
Cost of Materiel Sold from Inventory			
Negotiated Purchases from Customers			
Transportation	22.8	28.5	19.0
Salaries and Wages:			
Military Personnel	17.0	16.4	16.1
Civilian Personnel	1,107.0	1,130.5	1,113.8
Materials, Supplies and			
Parts used in Operations	314.6	295.9	283.3
Facility Repair Charge	43.4	35.8	37.5
Depreciation - Capital	49.0	53.6	46.4
Contracted Engineering Services	186.8	252.6	265.9
Lease Costs	3.2	3.8	4.1
Purchased Utilities	24.8	27.6	28.2
Purchased Communications	13.0	13.1	12.7
Equipment Maintenance	15.9	15.5	16.3
Fuel	4.7	4.3	4.3
Other Expenses	611.8	717.3	741.2
Total Expenses	**2,414.1**	**2,594.9**	**2,588.8**
Operating Result	72.8	100.5	(11.9)
Less Capital Surchg Reservation	0.0	33.5	0.0
Plus Appropriations Affecting NOR/AOR	0.0	0.0	0.0
Other Changes Affecting NOR/AOR	19.6	0.0	0.0
Net Result	92.4	67.0	(11.9)
Prior Year AOR	(147.5)	(55.1)	11.9
Accumulated Operating Result	**(55.1)**	**11.9**	**(0.0)**

R&D - NAVAL SURFACE WARFARE CENTER
SOURCE OF REVENUE
(Dollars in Millions)

	FY 1995	FY 1996	FY 1997
1. New Orders	2,357.8	2,200.8	2,138.6
a. Orders from DoD Components	2,039.0	1,924.6	1,866.6
Department of the Navy	1,821.0	1,597.2	1,619.3
Operations and Maintenance, Navy	505.8	392.4	394.8
Operations and Maintenance, Marine Corps	9.8	0.0	0.0
O&M, Navy Reserve	11.7	5.4	5.0
O&M, Marine Corps Reserve	0.0	0.0	0.0
Aircraft Procurement, Navy	31.0	10.4	10.5
Weapons Procurement, Navy	115.7	115.7	115.5
Shipbuilding & Conversion, Navy	262.6	226.6	197.7
Other Procurement, Navy	190.6	226.9	289.5
Procurement, Marine Corps	2.9	0.0	0.0
Family Housing, Navy and Marine Corps	7.4	7.6	10.3
Research, Development, Test & Eval, Navy	641.8	584.0	564.8
Military Construction, Navy	0.0	0.0	
Other Navy Appropriations	40.2	25.9	27.2
Other Marine Corps Appropriations	1.6	2.3	4.2
Department of the Army	28.9	35.9	38.0
Army Operation & Maintenance Accounts	1.8	7.3	11.5
Army Res, Dev, Test & Eval Accounts	2.9	6.0	6.4
Army Procurement Accounts	4.5	7.7	5.9
Army Other	19.6	14.8	14.1
Department of the Air Force	13.9	54.1	29.2
Air Force Operation & Maintenance Accounts	0.8	1.4	1.3
Air Force Res, Dev, Test & Eval Accounts	3.2	2.7	3.4
Air Force Procurement Accounts	1.3	38.6	13.4
Air Force Other	8.6	11.5	11.2
DoD Appropriated Accounts	175.2	237.4	180.1
Base Closure and Realignment	18.7	96.8	32.3
Operation & Maintenance Accounts	8.0	4.6	6.7
Res, Dev, Test & Eval Accounts	74.8	94.7	99.0
Procurement Accounts	28.7	23.9	17.2
DoD Other	45.0	17.4	24.8
b. Orders from DBOF Business Areas	201.7	92.8	93.4
c. Total DoD	2,240.7	2,017.4	1,960.0
d. Other Orders	117.1	183.4	178.5
Other Federal Agencies	20.4	9.2	18.8
Foreign Military Sales	86.7	165.0	150.1
Non Federal Agencies	10.1	9.2	9.6
2. Carry-In Orders	1,722.4	1,593.2	1,098.7
3. Total Gross Orders (available funding)	4,080.2	3,794.1	3,237.2
4. Carry-Out Orders	1,593.2	1,098.7	660.3
Change in Backlog (carry-out less carry-in)	(129.2)	(494.6)	(438.3)
5. Total Gross Sales	2,486.9	2,695.4	2,576.9

CHANGES IN THE COST OF OPERATIONS
R&D - NAVAL SURFACE WARFARE CENTER
(Dollars in Millions)

	Total Expenses
FY 1995 Actual	$ 2,453.5
FY 1996 Estimate in President's Budget	$ 2,363.5
Impact in FY 1996 of Actual FY 1995 Experience	1.9
Pricing Adjustments	
a. General purchase inflation	(11.1)
Productivity Initiatives	
a. Consolidation/Efficiencies	(12.9)
b. BRAC Savings - Annapolis	(1.6)
Program Changes	
a. Workload	224.3
b. BRAC	41.7
c. Philadelphia Public Works Transfer	(9.7)
Other Changes	
a. Labor Repricing	(6.0)
b. Separation costs (SIP/VERA/RIF)	4.7
c. $80 Benefit Tax	0.1
d. Accounting Adjustments	0.5
e. ADP Support	3.8
f. Depreciation (General)	(4.5)
g. Utilities	(0.5)
h. FECA	0.1
i. DFAS (accounting support) Costs	(1.3)
j. Maintenance and Repair Program	0.8
k. Capital Investment Threshold Change	2.4
l. Other	(1.3)
FY 1996 Current Estimate	$ 2,594.9

Pricing Adjustments		
a.	Annualization of FY 1995 pay raise	
	1. civilian personnel	6.2
b.	FY 1996 pay raises	
	1. civilian personnel	23.7
	2. military personnel	0.3
c.	Stock fund - fuel	0.1
d.	Stock fund - non-fuel	6.9
e.	DBOF price changes	2.8
f.	General purchase inflation	24.9
Productivity Initiatives		
a.	Consolidation/Efficiencies	(2.1)
b.	Savings from CPP	(0.6)
c.	Savings from Information Technology	(0.1)
d.	Other (Carderock Div, Pax River Closure)	(1.0)
e.	BRAC Savings- Annapolis	(1.1)
f.	BRAC Savings - Louisville	(4.1)
Program Changes		
a.	Workload perfomed In-House	(41.3)
b.	Workload - Direct Material and Contractual Suppot	71.9
c.	BRAC	(64.4)
Other Changes		
a.	SIP/VERA/RIF	(3.3)
b.	Military	(0.2)
c.	Accounting Adjustments	(0.5)
d.	ADP support	(1.8)
e.	Depreciation (GENERAL)	(5.3)
f.	Family Housing	(0.4)
g.	Amortization of Leave Liability	(2.3)
h.	Equipment Maintenance	1.0
i.	Real Property Mainenance	0.7
j.	Purchased Utilities	0.2
k.	Other Contracts	0.5
l.	FECA	(0.1)
m.	Capital Investment Threshold Change	0.2
n.	Military Pricing Adjustment	0.9
o.	All other miscellaneous changes	(17.8)
FY 1997 Current Estimate		$ 2,588.8

Business Area Capital Budget Summary
Component: Department of the Navy
Business Area: DON/R&D
1997 Presidents Budget, March 1996
($In Millions)

LINE #	DESCRIPTION	FY 95		FY 96		FY 97	
		QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST
1	MISCELLANEOUS NON ADP< $500K (Replacement)	VAR	1.372	VAR	4.902	VAR	5.387
2	BATTERY TEST SYSTEM (Productivity)			1	.230	1	.370
3	RAPID PROTOTYPING SYSTEM (Productivity)					1	.614
4	MISCELLANEOUS NON ADP< $500K (Productivity)	VAR	.530	VAR	.949	VAR	.978
5	LARGE SCALE STRUCTURAL MODEL TEST SYSTEM (New Mission)	1	.494	1	.300	1	.200
6	MAGNETIC PHYSICAL MODELING FACILITY (New Mission)	1	.316	1	.610		
7	CONTROLLABLE PITCH PROP SYSTEM (New Mission)					1	.700
8	MISCELLANEOUS NON ADP< $500K (New Mission)	VAR	1.559	VAR	2.317	VAR	1.949
9	VOC LOVA MIXER (Environmental)	VAR	.178	VAR	.150		
10	MISCELLANEOUS NON ADP< $500K (Environmental)	VAR	.379	VAR	.490	VAR	1.010
	TOTAL NON ADP		4.828		9.948		11.208
11	MISC ADP > $49K < $100K FY95 (Computer Hardware)		.997				
12	SCIENTIFIC VISUALIZATION AND VR LAB EQUIPMENT (Computer Hardware)	VAR	.370	VAR	.525	VAR	.540
13	VAX 8810 REPLACEMENT (Computer Hardware)		.300				
14	LEARNING RESOURCES CENTER (Computer Hardware)		.275				
15	ADAC VAX LAB UPGRADE (Computer Hardware)		.210				
16	OPTICAL DISK STORAGE (Computer Hardware)	1	.208	1	.150	1	.100
17	ADPT: SCI FACILITY (Computer Hardware)		.172				
18	ALGORITHM DEVELOPMENT FACILITY: SGI ONYX COMPUTER (Computer Hardware)	VAR	.154	VAR	.240	VAR	.200
19	COMBAT DIRECTION SYS UPGRADE (Computer Hardware)		.151				

002275

Business Area Capital Budget Summary
Component: Department of the Navy
Business Area: DON/R&D
1997 Presidents Budget, March 1996
($In Millions)

LINE #	DESCRIPTION	FY 95		FY 96		FY 97	
		QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST
20	MODELING AND SIMULATION CENTER EQUIPMENT (Computer Hardware)	VAR	.147	VAR	.700	VAR	.555
21	COMMUNICATION ROUTERS (Computer Hardware)		.119				
22	SOFTWARE QUALITY ASSURANCE FAC UPGRADE (Computer Hardware)	1	.102			1	.085
23	LINKS HARDWARE (Computer Hardware)		.099				
24	WIDE AREA NETWORK UPGRADE (Computer Hardware)	1	.089				
25	IPE WORKSTATIONS (Computer Hardware)	1	.065			5	.250
26	SERVER ARCHITECTURE (Computer Hardware)	1	.054	1	.470	1	.103
27	NIMIP EQUIPMENT (Computer Hardware)	1	.700	1	3.000	1	.726
28	ADVANCED WEAPONS CONTROL SYSTEM (Computer Hardware)			VAR	.455	VAR	.475
29	EQUIP FOR JLSC (Computer Hardware)			VAR	.400		
30	ADPT: GENERAL FACILITY UPGRADE (Computer Hardware)			VAR	.320	VAR	.365
31	CONTRACTS FILING SYSTEM (Computer Hardware)			1	.295		
32	LAN OPEN SYSTEMS DATABASE SERVER (Computer Hardware)			1	.250		
33	CME 3D GRAPHICS DISPLAY SYSTEM (Computer Hardware)			1	.250		
34	DIGITAL TECHNOLOGY VAX UPGRADE (Computer Hardware)			1	.249		
35	ENGINEERING LIBRARY (Computer Hardware)			1	.220		
36	CSACT: HI PERFORMANCE GRAPHICS PROCESSOR SYS (Computer Hardware)			1	.210		
37	ENGINEERING ENVIRONMENT (Computer Hardware)			1	.164	VAR	.220
38	CORPORATE DATABASE UPGRADE (Computer Hardware)			VAR	.150		
39	TACTICAL ADVANCED COMPUTER NETWORK (Computer Hardware)			1	.100		

Business Area Capital Budget Summary
Component: Department of the Navy
Business Area: DON/R&D
1997 Presidents Budget, March 1996
($In Millions)

LINE #	DESCRIPTION	FY 95		FY 96		FY 97	
		QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST
40	HIGH PERFORMANCE VISUALIZATION NETWORK (Computer Hardware)			1	.060	1	.050
41	COMBAT SYSTEMS ADV CONCEPTS AND TECH (CSACT) LAB (Computer Hardware)					VAR	.476
42	AUTOMATED CONTROL SYSTEM (ACS) (Computer Hardware)					VAR	.450
43	REPORTS/DATA RETRIEVAL (Computer Hardware)					1	.390
44	DAAS CPU REPLACEMENT (Computer Hardware)					1	.336
45	CDS INTEGRATION UPGRADE (Computer Hardware)					1	.322
46	UNCLASSIFIED SYSTEM (Computer Hardware)					1	.300
47	ADVANCED COMPUTER AIDED ENG SYS (Computer Hardware)					1	.272
48	VMEBASED SIMULATION CHASSIS (Computer Hardware)					1	.250
49	ENGINEERING OF COMPLEX SYSTEMS (Computer Hardware)					VAR	.175
50	ENG & TECH WORKSTATIONS (Computer Hardware)					1	.155
51	DOWNSIZING OF MAINFRAMES (Computer Hardware)					1	.125
52	DESKTOP PUBLISHING UPGRADE (Computer Hardware)					1	.120
53	LIGHTS OUT PGC (Computer Hardware)					1	.118
54	SPARC/ASSESSMENT SYSTEM (Computer Hardware)					1	.110
55	DIGITAL TECHNOLOGY SIMD PROCESSOR (Software)					1	.400
56	DOCUMENT MANAGEMENT SYSTEM (Computer Software)			1	.300	1	.300
57	INTEGRATED SOFTWARE ENGINEERING ENVIRON (Computer Software)					1	.360
58	TTSP: DATA FUSION TEST BED (Software)					VAR	.300
59	NETWORK UPGRADE (Telecommunications)	1	.908	1	.240	1	.200
60	LAN COMMUNICATIONS MILCON P-266 (Telecommunications)		.180				
61	LAN PLANT EXPANSION (Telecommunications)		.155				

000277

Business Area Capital Budget Summary
Component: Department of the Navy
Business Area: DON/R&D
1997 Presidents Budget, March 1996
($In Millions)

LINE #	DESCRIPTION	FY 95 QTY	FY 95 TOTAL COST	FY 96 QTY	FY 96 TOTAL COST	FY 97 QTY	FY 97 TOTAL COST
62	FIBER OPTIC SYSTEM (Telecommunications)		.121				
63	NETWORKS (Telecommunications)			VAR	.400	VAR	.600
64	ECO NETWORK UPGRADE (Telecommunications)			1	.400		
65	LAN FIBER BACKBONE (Telecommunications)			1	.300	1	.300
66	FIBER OPTIC TRUNK/NODAL EQUIP (Telecommunications)			VAR	.242		
67	TEST & EVAL: FIBER OPTICS REPLACEMENT (Telecommunications)			VAR	.150		
68	DTNET EXTENSIONS (Telecommunications)	VAR	.100	VAR	.100	VAR	.600
69	ATM SWITCHING NETWORK (Telecommunications)					1	.485
70	VIDEO NETWORK (Telecommunications)					1	.200
71	SECURE DATA LINK BUILDING 94 TO BUILDING 470 (Telecommunications)					1	.150
72	ENGINEERING NETWORK (Telecommunications)					1	.115
73	SATELLITE DATA NETWORK INTERFACE (Telecommunications)					1	.100
74	COMPUTER SECURITY/INTRUSION (Other)			1	.235	1	.440
75	TRUSTED LAN HUB (Other)					1	.175
76	SECURITY COMMUNICATIONS EQUIPMENT (Other)					1	.173
	TOTAL ADP/TELECOMMUNICATIONS		5.676		10.575		12.166
77	NIMIP SOFTWARE		5.435	1	1.754		.726
78	EMAIL STABILIZATION			1	.060		
79	CORPORATE DATABASE UPGRADE			VAR	.150		
80	ENGINEERING INFORMATION SYSTEM					1	.146

842000

Business Area Capital Budget Summary
Component: Department of the Navy
Business Area: DON/R&D
1997 Presidents Budget, March 1996
($In Millions)

LINE #	DESCRIPTION	FY 95 QTY	FY 95 TOTAL COST	FY 96 QTY	FY 96 TOTAL COST	FY 97 QTY	FY 97 TOTAL COST
	TOTAL SOFTWARE DEVELOPMENT		5.435		1.964		.872
81	ADDITION TO BLDG 452	VAR	.042	VAR	.300		
82	RIMS OPERATIONS BUILDING			VAR	.300		
83	HAZARDOUS MATERIAL WAREHOUSE (C)			VAR	.299		
84	ABRASIVE BLAST FACILITY			VAR	.290		
85	FIAL MODIFICATIONS			VAR	.285		
86	INTEGRATED SITE ALARM SYSTEM			VAR	.277		
87	TTSP FACILITY			VAR	.273		
88	TRAFFIC IMPROVEMENTS DL ROAD			VAR	.240		
89	RENO MOD & 8023 PROD ENGR			VAR	.200		
90	EXTEND STEAM DISTRIBUTION			VAR	.155		.060
91	SUPPLY WAREHOUSE BLDG			VAR	.030		.300
92	B1200 RENOVATIONS						.300
93	DIVING INSERVICE ENGINEERING & DEVELOPMENT BLDG						.300
94	CONSTRUCT WETLANDS AT SEWAGE TREATMENT PLANT						.300
95	WEAPONS O/H AREA B2521						.299
96	AIR EMISSIONS, THREE BOILERS PHILADELPHIA						.287
97	PUBLIC WORKS ADDITION CARDEROCK						.275
98	B.9 WELDING SHOP ADDITION CARDEROCK						.275
99	LSMB PIER						.274
100	RENO SECURITY COMMUNICATIONS ROOM B10						.250
101	RENOVATE B2084						.240
102	ROAD CONSTRUCTION						.240
103	STORMWATER SYSTEM						.229

0002279

Business Area Capital Budget Summary
Component: Department of the Navy
Business Area: DON/R&D
1997 Presidents Budget, March 1996
($In Millions)

LINE #	DESCRIPTION	FY 95 QTY	FY 95 TOTAL COST	FY 96 QTY	FY 96 TOTAL COST	FY 97 QTY	FY 97 TOTAL COST
104	REPLACE FLASH XRAY TEST FACILITY						.200
105	RENOVATE B218						.200
106	B152 RENOVATION						.200
107	MISCELLANEOUS MINOR CONSTRUCTION< $200K	VAR	2.544	VAR	1.619		1.331
	TOTAL MINOR CONSTRUCTION		2.586		4.268		5.560
108	RM&S-4 COMMON SUPPORT EQUPMENT (CSE) BATTERY SYSTEM						.698
	TOTAL RM&S		.000		.000		.698
	GRAND TOTAL		18.525		26.755		30,504

000280

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 2 BATTERY TEST SYSTEM-Crane (Productivity)			D. Activity Identification Naval Warfare Center, Crane					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Non ADP							1	230	230	1	370	370

Narrative Justification:

DESCRIPTION

A Rechargeable Battery Evaluation System consisting of two 27 cubic ft temperature-humidity chambers (capable of temperature range of -40 degrees to +350 degrees F) and a digital Data Acquisition and Control System, which will include a Hewlett Packard (HP) 100 computer (Automated Data Processing (ADP) end item exempt), HP-3582 scanner, HP-3465 digital voltmeter, 32 solid state load banks ranging in size from 100 amp/600 volt to 7000 amp /10 volt, and four 100 amp /600 volt DC power supplies.

JUSTIFICATION

This equipment is needed to upgrade, improve reliability and provide a more efficient system with greater accuracy and lower maintenance cost. The solid state loads will allow retirement of water cooled load systems (corrosion problems on cooling systems) that have been in operation for over 20 years and will eliminate the unstable open power resistive loads that results I added safety concerns for personnel. The test system, including chambers, will provide precision temperature control with enhanced data acquisition timing and accuracy of test data, which in turn will provide more reliable service and data to several sponsors.

IMPACT STATEMENT

If this equipment is not procured - Mission Impact: NSWC, Crane Division's ability to directly support mission critical battery programs for Seal Delivery Vehicle, Deep Submergence Rescue Vehicle, SEAWOLF, New Attack Submarine, Ships Parts Control Center and Defense General Supply Center will be impacted. Tests include Lot Acceptance Tests, Qualification Tests and Engineering Tests on contracts could involve several million dollars and depend on accurate test results for Navy to accept or reject, which would impact fleet readiness.

Sponsor Impact: Increased satisfaction and confidence gained by accurate and precise test results, resulting from on-time testing with decreased interruptions.

000281

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 3 RAPID PROTOTYPING SYSTEM-Crane (Productivity)				D. Activity Identification Naval Warfare Center, Crane				
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Non ADP										1	614	614

000282

Narrative Justification:

DESCRIPTION

A Rapid Prototyping System uses three-dimensional Computer Aided Design models to create 3D prototype parts. The stereolithography system at Naval Air Warfare Center (NAWC) has provided much needed prototype parts over the past year, the quality of which has been excellent. Crane will continue to request support, however, the NAWC system does not have the capability to scan an existing part and create a 3D computer file of that part.

JUSTIFICATION

Rapid Prototyping (RP) reduces costs by verifying designs without the expense of creating detailed drawings or machined parts. It allows multiple design concepts to be explored using 3D in the same or less time as conventional prototyping efforts. The results will be improved designs with fewer manufacturing iterations. RP also allows sponsors to review design concepts/modifications by viewing/handling plastic parts early in the design process. Inexpensive RP parts can then be provided to bidders and can also be used as masters for die casting, sand casting, investment casting and spray metal tooling and rubber and epoxy molding.

The stereolithography process has been used to support Special Warfare projects, Trident SP projects, BSY-1, SQQ-89 and various private small business projects through the Tech Transfer program.

IMPACT STATEMENT

Relocating the stereolithography machine when NAWC closes would meet short term needs, although a scanner would still need to be acquired. The use of a contractor to provide these services is anticipated to be prohibitively expensive as a delivery order would need to be written each time an iteration is needed. Because of the "first-come/first-served" environment of private industry, priority of service could not be guaranteed. The process available at the Louisville site is not owned by the Navy and it utilizes selective laser sintering technology which does not achieve the same tolerances as the NAWC equipment.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 5 LARGE SCALE STRUCTURAL MODEL TEST SYSTEM-Carderock (New Mission)			D. Activity Identification Naval Warfare Center, Carderock					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Non ADP				1		494	1	300	300	1	200	200

Narrative Justification:

DESCRIPTION

This project will enhance the naval structural analysis research and development capabilities of the Materials and Structures Directorate, Naval Surface Warfare Center, Carderock Division by constructing a Large Scale Structural Model Test System. The Large Scale Structural Model Test System is a system for evaluating the strength and performance of full-size or large scale 3-Dimensional structural models.

JUSTIFICATION

In addition to the existing Grillage Test Fixture, this system will allow customer requested tests to be run on full or large scale models of structures composed of orthogonally stiffened ship hull plate for the purpose of investigating primary hull strength. It will support programs in double hull/double deck tankers, composite ship structures, ship survivability, etcetera. Specifically it will investigate compressive buckling mode interaction, strength sensitivity to structural geometry and initial imperfections, reserve strength remaining after initial buckling, and repeated tension and compression loading.

IMPACT STATEMENT

Failure to fund this project will result in the inability to meet customer requirements.

000283

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 Presidents Budget					
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 6 MAGNETIC PHYSICAL MODELING FACILITY-Carderock (New Mission)			D. Activity Identification Naval Warfare Center, Carderock					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Non ADP				1		316	1	610	610			

Narrative Justification:

DESCRIPTION

The Magnetic Physical Modeling Facility is designed to measure the 3-dimensional magnetic field around large scale (circa 20-ft) models in order to evaluate magnetic silencing efforts.

JUSTIFICATION

Full scale sea trials can be time consuming and costly. The ability to test systems and demonstrate feasibility in the laboratory will be a significant cost saving. Proper laboratory testing will result in fewer and more effective full scale trials. A physical model facility will result in additional work in the Submarine and Surface Ship Electromagnetic Silencing Program. The physical model work represents 8% of the Submarine Block Program, or $1.25M and about 30% of the Surface Ship Program, or $700K of direct funding annually.

IMPACT STATEMENT

Failure to fund this project will result in the inability to meet customer requirements.

000284

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 7 CONTROLLABLE PITCH PROP SYSTEM-Carderock (New Mission)				D. Activity Identification Naval Warfare Center, Carderock				
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Non ADP										1	700	700

Narrative Justification:

DESCRIPTION

This project will enhance the capability of the DDG-51 Land Based Engineering Site (LBES) located at the Philadelphia Detachment, Naval Surface Warfare Center, Carderock Division (NAVSSES) by adding the hydraulic components necessary for the control of controllable pitch propellers (CPP).

JUSTIFICATION

Controllable Pitch Propellers are a necessary component of gas turbine powered ships such as the FFG 7, DD 963, CG 47, and DDG 51 classes. As the number of gas turbine powered ships has increased in the fleet, problems associated with controllable pitch propellers have also increased. NAVSSES is the In-Service Engineering Agent and performs the technical functions of the Life Cycle Management Program for CPPs. Currently, there is no CPP control system installed on any gas turbine LBES where problems or modifications to controllable pitch propeller systems can be evaluated in laboratory conditions on dry land. By adding a CPP control system to the existing DDG-51 LBES, problems or modifications to CPP systems can be evaluated in a much more accurate, controlled, and timely manner.

IMPACT STATEMENT

Failure to fund this project will result in the inability to adequately deal with the problems associated with controllable pitch propeller systems.

882000

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 Presidents Budget					
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 9 VOC LOVA MIXER- (Environmental)			D. Activity Identification Naval Warfare Center,					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Non ADP				VAR		178	VAR		150			

Narrative Justification:

DESCRIPTION

Installation of Thermal/Catalytic Incineration Systems (TCIS) to control Volatile Organic Compounds (VOCs) at Buildings 1024 and 1026. These buildings support the manufacture of Low Vulnerability Ammunition (LOVA) propellants.

JUSTIFICATION

The Code of Maryland Regulations (COMAR) 26.11.19.25 requires that by May 1996, the Activity reduce VOC emissions by 50%. The installation of TCIS to control VOC emissions with a control efficiency in excess of 99%. The resulting VOC emissions will be reduced from 27 lbs/hr to approximately 0.27 lbs/hr over a 24 hour period.

IMPACT STATEMENT

Without the installation of TCIS at Buildings 1024 and 1026, the Activity will not be able to reduce VOC emissions generated at these buildings and therefore, will be unable to meet COMAR 26.11.19.25.

000286

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)										A. Budget Submission FY 1997 Presidents Budget		
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 12 SCIENTIFIC VISUALIZATION AND VR LAB EQUIPMENT-Dahlgren (Computer Hardware)						D. Activity Identification Naval Warfare Center, Dahlgren		
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP				VAR		370	VAR		525	VAR		540

Narrative Justification:

DESCRIPTION

This investment provides high performance computing capability for the Dahlgren Division Scientific Visualization and Virtual Reality Laboratory. Specifically, three commercial-off-the-shelf (COTS) SGI Reality Engines with associated display, computation, and sound 3D input devices will be purchased, one each in FY95, FY96, and FY97 (configurations will differ based on funding availability in each year).

JUSTIFICATION

Currently, available equipment to perform this analysis operates at various levels of efficiency, depending on the complexity and quantity of the data. This equipment now supports many programs, but is inadequate to meet requirements (some data sets now require days to process). The need for this type of analysis is rapidly increasing and is expected to continue to grow in the future. Programs supported include TOMAHAWK, AEGIS, Ship Self Defense, Close In Weapons System, and STANDARD Missile.

IMPACT STATEMENT

This equipment is required to support current customer needs as well as projected needs.

000287

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 16 OPTICAL DISK STORAGE-Port Hueneme (Computer Hardware)			D. Activity Identification Naval Warfare Center, Port Hueneme					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP				1		208	1	150	150	1	100	100

Narrative Justification:

DESCRIPTION

UNIX Servers, UNIX Server upgrades, UNIX Server Disk Arrays, Relational Data Base Programs and interfacing hardware and software to support a replicated data base infrastructure.

JUSTIFICATION

The project has been retitled from Optical Disk Storage to Remote Database Servers to more adequately reflect the requirement of the station to provide on line access to multiple data bases. The station has many data bases that contain weapons system configuration data. Access to this data has been through a terminal server which results in slow data retrieval and limited ability to mix data from different data base to ensure engineers and logisticians view the correct data. This project will allow access to the data through a client server method which uses the already installed PHD infrastructure (LAN and Desktop PC). This will require that Data Base Servers be placed in the various buildings within PHD to ensure that users are provided quick access to data and also limit the amount of data transferred long distances over the station LAN. Placing servers in the various building and replicating the data to them from a central data base requires that each server have a relational data base program and that the central data base servers be upgraded.

IMPACT STATEMENT

Failure to establish a remote data base server capability will result in increased traffic on the station LAN, maintenance of outmoded terminal server equipment and programs, and users accessing multiple data bases to retrieve necessary information. Working with the outmoded equipment will result in higher maintenance cost. Slow data access causes time delay in our response to ship request for information which could impact ship schedules.

ALTERNATIVES: Purchase is the only economically feasible alternative. An economic analysis has been prepared and is included.

000288

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 18 ALGORITHM DEVELOPMENT FACILITY: SGI ONYX COMPUTER-Dahlgren (Computer Hardware)			D. Activity Identification Naval Warfare Center, Dahlgren					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP				VAR		154	VAR		240	VAR		200

Narrative Justification:

DESCRIPTION

The Algorithm Development Facility supports a new approach to near real time operations with parallel processing and high speed visualization. The FY95 procurement will provide the basic two-processor parallel computing engine (Onyx computer) that will be expanded with additional processors in FY96 and FY97, providing near real-time simulation support.

JUSTIFICATION

The complexity of large strike warfare systems (from detect systems to control and engagement systems) coupled with reduced DOD funding for hardware prototyping and test is forcing increased dependence on simulation and visualization. In order to meet future strike warfare needs, NSWCDD must be able to (a) develop, demonstrate, and test future strike warfare concepts using complex (near-real time) simulations, and (b) provide near-real time visualization support for complex simulations. These purchases support high speed visualization, high speed simulation, and image processing/satellite multispectral technology. This equipment will support new strike warfare and upper tier anti-tactical ballistic missile simulation and analysis studies.

IMPACT STATEMENT

High speed algorithms that can operate in parallel are essential for support of strike warfare (particularly counter battery fire). Driven by the need to respond against highly mobile (time critical) targets in near-real time, the mission planning and weapon control systems can no longer sustain serial operations that take minutes to hours. Strike operations with the next generation of weapons (ballistic missiles) must take place in a total engagement time budget measured in seconds.

682000

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 20 MODELING AND SIMULATION CENTER EQUIPMENT-Dahlgren (Computer Hardware)			D. Activity Identification Naval Warfare Center, Dahlgren					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP				VAR		147	VAR		700	VAR		555

Narrative Justification:

DESCRIPTION

This procurement continues the acquisition of high performance computing equipment to support multi-warfare, force-level simulations and model development. The SGI Reality Engine purchased in FY94 will be enhanced and supported by the following investments: acquisition of two Indigo Graphics workstations in FY95, a second SGI Reality Engine and large screen displays in FY96, and upgrading previously purchased SGI equipment to 4CPU Reality Engines in FY97.

JUSTIFICATION

The Defense Modeling and Simulation Initiative (DMSI) was begun in 1991 to strengthen Modeling and Simulation (M&S) applications within DOD. To achieve expected contributions requires widespread, highly capable, and integrated M&S environments based on common DOD-wide architectures, methodologies, and interoperability standards. DMSI supports those aspects of the overall environment that tie together DOD components as broadening the warfighting effectiveness. Data is no longer only text and numeric; representation of video and graphic images, and compression techniques to enhance storage and transmission must be addressed within database contexts to support display and processing environments. The speed and capacities of these processors are the cornerstones of multimedia and synthetic environments. It was discovered during WAR BREAKER "Zen Regard" exercises that 4CPU Onyx machines are required to handle the communication and processing loads in large exercises.

IMPACT STATEMENT

The M&S community recognizes the need for interoperability at different levels of aggregation, operating at varying levels of resolution, with a diverse treatment of time. The synthetic environments of the future must permit the interconnection of simulations operating at the Theater level with those operating at the system level. Without the capacities of these large screen displays and processors, NSWCDD will not be able to continue to effectively interoperate with Air Force, Army, and ARPA in Advanced Distributed Simulation exercises.

000290

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 22 SOFTWARE QUALITY ASSURANCE FAC UPGRADE-Dahlgren (Computer Hardware)			D. Activity Identification Naval Warfare Center, Dahlgren					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP				1		102				1	85	85

Narrative Justification:

DESCRIPTION

The Software Quality Assurance Facility provides quality assurance of NSWCDD scientific and engineering development programs including: computer Program Management/quality Assurance; providing product assurance for all Navy Integrated Diagnostic Support System (IDSS) software; testing/acceptance software; and certifying/distributing system software and documentation. This procurement incrementally upgrades the processor acquired in FY93.

JUSTIFICATION

As quality assurance tasks have grown significantly in recent years, the capability of the existing processor needs to be enhanced to accomplish the workload in a timely and efficient manner. Major programs supported by this facility are: AEGIS, TOMAHAWK, Vertical Launch System (VLS), Ocean Surveillance Information System (OSIS), Computer-Aided Acquisitions and Logistic Support (CALS), and the Assistant SECNAV Information Resources Management Program.

IMPACT STATEMENT

This procurement is required to avoid additional costly contractual effort and to eliminate existing backlogs.

Y2000

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 25 IPE WORKSTATIONS-Dahlgren (Computer Hardware)			D. Activity Identification Naval Warfare Center, Dahlgren					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP				1		65				5	50	250

Narrative Justification:

DESCRIPTION

The Integrated Programming Environment (IPE) is a continuing effort to support software development by integrating the capabilities of graphics desktop computers with existing computer systems. Development tasks are right-sized to the lowest cost part of the integrated environment through partitioning and functionalization. This investment will provide additional graphical workstations.

JUSTIFICATION

The IPE initiative is not simply a replacement or upgrade of current capabilities, it represents a method to significantly enhance the software development process by adding functionality currently available only in a very limited sense. For example, with the current small set of hardware and software available, only a small number of developers can access the system so that a contention for resources inhibits productivity. The IPE provides a method whereby more people can simultaneously access both graphical development environments and test software systems through the interconnection with other computing systems.

IMPACT STATEMENT

Currently, there is no low-cost IPE that supports proof of concept research and development addressing proposed future system capabilities such as rapid re-targeting or accurate re-entry systems.

262000

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 26 SERVER ARCHITECTURE-Port Hueneme (Computer Hardware)			D. Activity Identification Naval Warfare Center, Port Hueneme					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP				1		54	1		470	1	103	103

Narrative Justification:

DESCRIPTION

This is a multi year project which provides for open systems equipment such as network/file servers, print servers, removable media servers, communications servers, client/server software, and network interface software.

JUSTIFICATION

This is a multi year project which allows users to share electronic information while protecting data from loss and unauthorized access. This project directly supports the paperless environment initiative.

IMPACT STATEMENT

The command will be unable to migrate from the current mainframe environment to the required downsized distributed environment by NAVSEA and transition to a full functioning "paperless office" environment. This project also supports and falls in-line with the NIMIP projects.

ALTERNATIVES: The current system is incapable of meeting the demands of increased usage requirements. No other option is available. An economic analysis has been completed and is included.

000283

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 27 NIMIP EQUIPMENT-Crane (Computer Hardware)			D. Activity Identification Naval Warfare Center, Crane					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP				1		2112	1	3000		1	726	726

NIMIP IMPLEMENTATION: The current hardware computing capability is based upon aging, proprietary environments. These configurations are utilized to process applications implemented at multiple sites as well as NSWC Division unique applications. Investment benefits to be realized include: (1) replacement of proprietary hardware, (2) competitive contracting for open system environments, (3) lowering maintenance cost from release of near-obsolete equipment, (4) portability of information through seamless communication of different size platforms across devices in multiple environments, and (5) supporting peace and war-time requirements through CALS/NAVSEA IRSP standards based computing.

This program is part of the NAVSEA Business Case which analyzed solutions for improving the IRM Business Function; it was approved by NISMC as the MNS for the NIMIP. NSWC performed a program economic analysis as part of their business case.

The impact of not making the investment is to: (1) remain in the sole source closed environment and (2) not be able to achieve budgeted savings.

000294

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 Presidents Budget					
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 28 ADVANCED WEAPONS CONTROL SYSTEM-Dahlgren (Computer Hardware)			D. Activity Identification Naval Warfare Center, Dahlgren					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP							VAR		455	VAR		475

Narrative Justification:

DESCRIPTION

The Advanced Weapon Control System will provide a real-time, far-term weapon control simulation/development tool for demonstration, validation, and assessment of technological improvements in control elements, processing, interfaces, and display environments.

JUSTIFICATION

This equipment upgrades and expands capabilities for the development of automated, quick reaction control systems dealing with ship self-defense. It is essential to effectively validate, assess and demonstrate technological improvements in control elements, processing, interfaces, and display environments. These efforts support the Ship Self Defense Program, Close-In Weapons Systems (CIWS), and Warfighting Improvement Project (WIP).

IMPACT STATEMENT

Failure to procure this equipment will unduly impact efficiency and productivity of systems development and thereby impact the deployment of new systems.

000295

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 29 EQUIP FOR JLSC-Crane (Computer Hardware)			D. Activity Identification Naval Warfare Center, Crane					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP							VAR		400			

Narrative Justification:

The Joint Logistics Systems Center has specifically earmarked Crane Division for the acquisition of hardware to support Depot Maintenance functions as specified under the depot standard system. The depot maintenance standard system includes Depot Maintenance Management Information System - Repairable (DIMMS-R), Baseline Advance Industrial Management - Project Management (BAIM-PM), Laboratory Information Management System (LIMS), Hazardous Material Management Systems (HMMS), Facilities and Equipment (FEM), Tool Inventory Management Applications (TIMA), Interservice Material Accounting and Control Systems (IMACS), Executive Information Systems (EIS), and the full level Depot Maintenance Standard System(DMSS). These system standards will be rolled from the depot level activities and will be implemented in all Service groups over the next few years.

002096

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 30 ADPT: GENERAL FACILITY UPGRADE-Dahlgren (Computer Hardware)			D. Activity Identification Naval Warfare Center, Dahlgren					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP							VAR		320	VAR		365

Narrative Justification:

DESCRIPTION

The Advanced Distributed Processing System (ADPS) provides an environment for software development and analysis and the capability to process both unclassified and classified data. These analyses utilize a distributed parallel paradigm enabling parallel and concurrent execution of software. This procurement consists of memory, disk, and graphics upgrades as well as file server and workstation upgrades for previously purchased equipment.

JUSTIFICATION

Users of ADPS utilize this distributed parallel processing paradigm to increase their processing power. Upgrading the file servers on the ADPS will increase the processing throughput of the system by increasing the speed at which network services are performed by the servers. Upgrading the workstations on the ADPS will allow users to analyze larger, more complex problems, decrease turn around time for analysis and improve productivity by increasing the performance of individual workstations. Purchasing memory for workstations will also increase the performance of individual workstations by decreasing the network and hard disk access associated with virtual memory. Purchasing graphics boards and graphics accelerators will allow users to utilize graphic tools increasing their productivity as well as supplying graphics products to sponsors. Purchasing faster and larger capacity disks will increase the throughput of computing on the ADPS and allow the storage of large capacity databases.

IMPACT STATEMENT

The ADPS supports multiple programs including AEGIS, Artificial Neural Networks (ANN), Tri-Service Strike ATD, ASTER, Navy Tactical Ballistic Missile Defense (Navy TBMD), Distributed Wargaming, and Global Positioning Satellite (GPS) Relative Positioning Research. The ability to perform software development and analysis will be severely hampered without this investment. Productivity improvements will not be accomplished.

000297

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 31 CONTRACTS FILING SYSTEM- Dahlgren (Computer Hardware)			D. Activity Identification Naval Warfare Center, Dahlgren					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP							1	295	295			

Narrative Justification:

DESCRIPTION

Laser disk filing system to replace current manual filing system for Station contracts.

JUSTIFICATION

The Contracts Filing System is a laser disk optical filing system that takes advantage of the latest technology for storing and retrieving large files. Considerable manpower is currently being expended inefficiently developing, maintaining, and retrieving information from hardcopy files in the Station's contracting offices. Additionally, valuable space is being taken up by the bulky files, particularly by files that are closed but must be retained. There is also the constant problem of degradation of the paper files as they are researched or examined during audits and IGs. The proposed equipment will provide an economical means of storage, search, and retrieval from each individual's workstation or from other Station offices, thereby saving time of employee travel to the current file areas.

IMPACT STATEMENT

If this procurement is not completed, the current wasteful situation will continue to exist and the advantages of optical storage capability networked to computers in other offices via a local area network will be ignored.

000298

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 Presidents Budget					
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 32 LAN OPEN SYSTEMS DATABASE SERVER-Dahlgren (Computer Hardware)			D. Activity Identification Naval Warfare Center, Dahlgren					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP							1	250	250			

Narrative Justification:

DESCRIPTION

Open systems (i.e., POSIX or UNIX) database server providing high-performance database creation, update, and search and retrieval hardware resources for relational, binary large object, and object-oriented database management systems.

JUSTIFICATION

This acquisition is based on projected changes in DOD, DON, and especially NAVSEA system architectures. NAVSEA's Information Resources Strategic Plan mandates transition to standards-based computing and most applications are moving toward distributed database concepts. By FY96, the Coastal Systems Station expects to support new data warehousing applications allowing local manipulation of corporate data supporting executive information and decision-making on local processors. This server will provide the database "backend" for the executive support system.

IMPACT STATEMENT

If this request is not funded, the Coastal Systems Station will be unable to conduct data warehousing and executive support on-site requiring remote processing at Dahlgren. This would generate requirements for wide-area networking in addition to the basic system requirements. These additional costs can be avoided by this procurement.

000299

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 33 CME 3-D GRAPHICS DISPLAY SYSTEM-Dahlgren (Computer Hardware)			D. Activity Identification Naval Warfare Center, Dahlgren					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP							1	250	250			

Narrative Justification:

DESCRIPTION

Purchase of a high-fidelity graphics display system. The system will be used to display real-time simulation scenarios in both 2-dimensional and 3-dimensional forms.

JUSTIFICATION

The current countermeasures simulator display system is limited to 2-dimensional displays. This has been adequate in the past, but as the simulation effort continues to progress toward a combination of high-level physics and force level, display needs increase. Requirements to provide detailed 3-dimensional scenario displays produces a need for a system capable of high-end graphics computations. The proposed investment will fulfill this requirement for high-end graphical computations and provide the display drivers needed.

IMPACT STATEMENT

Not replacing the current display system in the countermeasures simulator would result in lost system development capabilities in the Navy's Mine Warfare mission area.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 Presidents Budget					
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 34 DIGITAL TECHNOLOGY VAX UPGRADE-Dahlgren (Computer Hardware)			D. Activity Identification Naval Warfare Center, Dahlgren					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP							1	249	249			

Narrative Justification:

DESCRIPTION

Upgrading the existing VAX 6310 will provide multiple processor and massive on-line storage capability to support computer performance data reduction and analysis. This investment was budgeted for FY95 but was delayed in order to implement mandated budget reductions.

JUSTIFICATION

This computing environment supports many programs fielding ship-based systems. These systems must have the capability to collect, reduce, and analyze computer performance data in order to make timely, accurate decisions. The VAX 6310 computing and resources environment does not provide sufficient computing power for efficient data collection, reduction, and analysis. Both quantity and complexity of data analyses are limited. At times, customers must wait days and/or weeks for complex analyses results. The upgraded computing resources environment will render timely analyses without additional manpower costs.

IMPACT STATEMENT

Without this investment, Dahlgren Division will not be able to provide current customers (i.e. AEGIS, TOMAHAWK, Engineering of Complex Systems Block) with data collection, reduction, and analysis in a timely manner.

DTIC QUALITY INSPECTED 2

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 Presidents Budget					
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 35 ENGINEERING LIBRARY-Dahlgren (Computer Hardware)			D. Activity Identification Naval Warfare Center, Dahlgren					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP							1	220	220			

Narrative Justification:

DESCRIPTION

Expand/upgrade the capability for on-line engineering and related engineering library services. The upgrade will provide scanner input stations, optical character recognition capability, hard copy output devices and associated servers that will connect to the LAN/Ethernet communications network to distribute the services to users.

JUSTIFICATION

Currently the Mine and Mine Countermeasures Engineering Library maintains engineering drawings, technical documents and reference materials on microfilm, microfiche and hard copy. Engineers, technicians and other users desiring access to this information must visit the Engineering Library and manually search for and copy from single copy media on file. Additionally, access to CD-ROM services is limited to a single PC which frequently leaves engineers waiting to gain access due to high demand. A limited pilot system has been installed to test and assess the advantages of accessing Engineering Library services from the desktop. The results have indicated the need to expand the capability to all users.

IMPACT STATEMENT

Failure to complete this project would prevent achievement of faster and less costly response to Fleet inquiries and problems by avoiding significant and costly wait time by scarce engineering talent.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 Presidents Budget					
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 36 CSACT: HI PERFORMANCE GRAPHICS PROCESSOR SYS- Dahlgren (Computer Hardware)			D. Activity Identification Naval Warfare Center, Dahlgren					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP							1	205	205			
INSTALL COST									5			
TOTAL									210			

Narrative Justification:

DESCRIPTION

This graphics processor is part of a network of workstations and high-resolution, large-screen displays supporting Combat Systems Advanced Development and Technology (CSACT) Laboratory. The interconnection of this graphics processor with workstations and multiprocessors provides a network which enables the evaluation of new architectures, display technologies, algorithms, and implementation strategies. This procurement was originally budgeted for FY95 (IRIS R&D WS), but was delayed to implement mandated budget reductions. .

JUSTIFICATION

The CSACT has a representative physical architecture to evaluate the individual man-machine interface, the work area allocations for war-fighting teams, and the interactions for mission performance at the ship, force, and theater levels. The CSACT also encompasses the methods, the host development environments, target HW/SW candidates, integration, and performance analysis at the processor, bus, interface, network and system levels necessary to adopt the COTS HW/SW environment. This environment will provide virtually unlimited flexibility for computing capacity and interconnectivity. The maintainability and reliability is dependent upon discipline in the development process and a stable, well-defined host environment. Various configurations and implementation strategies for future combatants can be hypothesized, but without the supporting hardware and software environment the required experimentation, demonstration, and evaluation cannot be accomplished.

IMPACT STATEMENT

The NSWC megacenter has lead responsibilities in guiding and developing the appropriate technologies in the construction of all ship combat systems, such as Surface Combatant 21st Century (SC21). Advanced feasibility demonstration through analysis and prototyping are critical in the pursuit of suitable technologies. Without this equipment, the core technical competency will not be developed, and worse yet, will not be maintained as required for NSWC to

be the true leader for surface ship.

000304

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 Presidents Budget					
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 37 ENGINEERING ENVIRONMENT- Dahlgren (Computer Hardware)			D. Activity Identification Naval Warfare Center, Dahlgren					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP							1	164	164	VAR		220

Narrative Justification:

DESCRIPTION

This investment will replace several workstations and PCs, currently functioning as file servers, software license server, and CAE workstations. These varied equipment will be replaced by a single SGI Onyx computer in FY96 that will be upgraded in FY97. In addition, central processing units will be procured in FY97. This capability provides the necessary environment for design, documentation, and analysis, as well as modeling and simulation, of weapons systems.

JUSTIFICATION

Several of the workstations have reached the end of their supported life. All of the equipment to be replaced is much slower and less capable than the Onyx (i.e., peripherals and future operating system releases will no longer be available for the existing equipment). The Onyx is the industry standard and is a powerful/expandable platform that will support the multifaceted requirements. This computer is indispensable to the future of the Engineering Environment which supports STANDARD Missile, ATBM SRAW, SMAW, and MARS among many other programs.

IMPACT STATEMENT

If this system is not replaced, systems level prototyping capability will be greatly reduced and operational costs will continue to increase. Additional labor will be required and some tasks will be much more difficult, if not impossible, to perform.

000305

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 38 CORPORATE DATABASE UPGRADE-Dahlgren (Computer Hardware)				D. Activity Identification Naval Warfare Center, Dahlgren				
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP							VAR		150			

Narrative Justification:

DESCRIPTION

This investment will expand the capabilities of a Division-wide database providing program management and project information to scientists, engineers, program and line managers. This database is constructed with an open system architecture (compliant with FIPS 151) and supported by relational database management systems (compliant with FIPS 127). The Corporate Database currently provides multi-year, integrated management information (financial, personnel, and procurement) to users at all sites. The FY96 procurement provides a database server.

JUSTIFICATION

The Corporate database is necessary to host a repository of information. This acquisition will improve productivity in the following ways: (a) eliminate the need for each technical program to maintain separate, duplicative automated systems for maintaining and tracking program, project and management information; (b) improve productivity of technical personnel by requiring less time for compiling, analyzing and reporting information, thus allowing more time for technical work; (c) reduce reliance on hardcopy reports and replace them with electronic query; and (d) reduce printing distribution costs by allowing distributed printing "on-location" for the reports that are necessary. This database server will provide the computing capacity to add additional areas of business information and support additional multi-year history requirements.

IMPACT STATEMENT

This investment will reduce direct program and overhead cost in a time of declining resources and sponsor funds. Otherwise, NSWCDD sponsors will be impacted through (1) higher man-hour rates charged for technical work and (2) more direct labor charged for program management activities. Also, productivity gains relative to managing and reporting information in the technical programs cannot be achieved.

000306

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 Presidents Budget					
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 39 TACTICAL ADVANCED COMPUTER NETWORK-Crane (Computer Hardware)			D. Activity Identification Naval Warfare Center, Crane					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP							1	100	100			

Narrative Justification:

DESCRIPTION

The Tactical Advanced Computer system will consist of the hardware and software tools necessary to integrate Computer Aided Design (CAD) tools and existing hardware simulation tools. Through the use of these tools, system and circuit board assembly specifications may be modeled and validated more efficiently to ensure specification compliance.

JUSTIFICATION

This system will provide users with productivity increase due to faster comprehension of module designs and therefore speedier turn around time for design analysis and technical assessments to the program office. It will provide a greater variety of design tools which will supply the user with the proper tool for the design being reviewed. This will increase the accuracy of the design verification. Circuit boards and systems have traditionally been specified on paper. The Tactical Advanced Computer will allow these systems to be specified by computer automation techniques thus decreasing the dependency on paper copies. The system will also be able to support existing government software/simulation standards such as VHDL (Very High Speed Integrated Circuit Hardware Descriptive Language) and POSIX (Portable Operating System Interface). Test program development time will be significantly decreased with this system. The processing power of this new system will be 100 to 200 times faster than existing computer systems. This will be very important when performing test development and testability analysis for newer Navy projects such as the Cooperative Engagement Capability (CEC) and the New Attack Submarine programs.

IMPACT STATEMENT

This system will allow the development of test program sets and design analysis projects to be performed more efficiently. An average test engineer can develop 3 test programs per year. with the use of this system, a test engineer could now perform 6 test program sets per year, resulting in a cost savings. In addition to the inherent speed improvement of this system, there will be the additional ease of data transportability between different networks. This system

000307

will allow us to use electronic design data from contractors directly for evaluation and development which eliminates costly data transfer errors.

000308

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 Presidents Budget					
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 40 HIGH PERFORMANCE VISUALIZATION NETWORK- Carderock (Computer Hardware)			D. Activity Identification Naval Warfare Center, Carderock					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP							1	60	60	1	50	50

Narrative Justification:

DESCRIPTION

This project will procure a high performance multi-processor visualization system and peripheral/supporting equipment consisting of a network server, video editing system, and a medium performance graphics/multi-media workstation to replace an older obsolete system.

JUSTIFICATION

Carderock Division, Naval Surface Warfare Center is heavily involved in physics-based modeling and simulation visualization in support of such programs as Signature and Silencing Systems, Vulnerability and Survivability, Machinery Systems, Hull Forms and Propulsors, Structures and Materials, and Environmental Quality Systems. The new system is urgently needed to support the increasingly complex computational models produced as a result of these programs.

IMPACT STATEMENT

Failure to fund this project will result in continued high maintenance costs and component down time with corresponding loss of productivity, and the inability to support the current and future generations of highly complex visualization programs necessary to support customer requirements.

000309

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 41 COMBAT SYSTEMS ADV CONCEPTS AND TECH (CSACT) LAB-Dahlgren (Computer Hardware)				D. Activity Identification Naval Warfare Center, Dahlgren				
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP										VAR		476

Narrative Justification:

DESCRIPTION

Establishment of the Combat Systems Advanced Concepts and Technology (CSACT) Laboratory has combined several related yet independent thrusts into one cohesive whole, providing an integrated software development environment. The CSACT Laboratory is comprised of two primary emphasis areas, the Combat Information Center (CIC) and the Computing Resource Center (CRC). This investment supports these efforts with the acquisition of a high-performance graphics workstation and associated peripherals and TAC-IV workstations.

JUSTIFICATION

The Dahlgren Division lead in exploring concepts, technologies, and configurations (including manning and associated duties) with a focus on Surface Combatant 21st Century (SC21) has made more urgent the requirement for a high resolution graphics capability. This capability is required to host CIC display technology already developed, develop and demonstrate additional concepts on information presentation and man-machine interaction, and be an active participant in Simulation Based Design (SBD). The TAC-IV workstations will be components of a network of Unix-based workstations, high-resolution graphic processors, high-resolution and large-screen displays. The interconnection of these workstations and multiprocessors provides a network which enables the evaluation of new architectures, algorithms, and implementation strategies.

IMPACT STATEMENT

The NSWC megacenter has lead responsibilities in guiding and developing the appropriate technologies required in the construction of all ship combat systems, such as SC21. Advanced

feasibility demonstration through analysis and prototyping are critical in the pursuit of suitable technologies. Without this equipment, the core technical competency will not be developed and worse yet, will not be maintained as required for NSWC to be the true leader for surface ship.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 Presidents Budget					
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 42 AUTOMATED CONTROL SYSTEM (ACS)-Dahlgren (Computer Hardware)			D. Activity Identification Naval Warfare Center, Dahlgren					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP										VAR		450

Narrative Justification:

DESCRIPTION

This investment is for various advanced, high-speed processors and related computer communication and networking equipment. The processor boards will have combinations of specialized neural network, fuzzy logic and digital signal processing elements. A graphics processor will have hardware texture mapping, capable of supporting distributed interactive processing and of providing real-time, high-fidelity 3-D visualization.

JUSTIFICATION

Advanced ships will require more automated control of various operational, weapons, and defense systems to be distributed at various on-board locations. Reduced ship manning levels mean fewer humans will be available to perform system control functions; thereby driving an increased need for automated control. Advances in computer technology (including computer communications) have improved capabilities significantly and are making it possible for computers to perform system control functions previously performed by humans. This investment will provide the capability to develop and test the effectiveness of Artificial Intelligence techniques/processing and advanced human-computer interfaces to ensure the highest level of overall system and ship performance.

IMPACT STATEMENT

This investment will enable the Navy to utilize advances in computer technology to offset reductions to shipboard manning. Advanced computer processing and communications capabilities can be very effective tools to evaluate and control the independent (and inter-dependent) functions of various systems. The alternative is to attempt to meet the growing need for increased automation and reduced manpower with existing equipment which is less capable and much slower.

000311

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 43 REPORTS/DATA RETRIEVAL-Port Hueneme (Computer Hardware)			D. Activity Identification Naval Warfare Center, Port Hueneme					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP										1	390	390

Narrative Justification:

DESCRIPTION

This project supports the paperless environment initiative by providing for open systems equipment such as network/file servers, database servers, print servers, removable media servers, relational database software, client/server software, and network interface software.

JUSTIFICATION

This project is required for implementation of the Paperless Environment Initiative. It will provide command users the capability to access information electronically on-demand, electronically archive/retrieve information, download information for local application, creation of ad-hoc reports, and access data via user-friendly tools.

IMPACT STATEMENT

If procurement is not made in the fiscal year requested the command will be unable to transition to a full functioning "paperless office" environment.

ALTERNATIVES: No other alternatives are available. Replacement of the current systems is critical to the success of the initiative. An economic analysis has been completed and is included.

000312

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)										A. Budget Submission FY 1997 Presidents Budget		
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 44 DAAS CPU REPLACEMENT- Carderock (Computer Hardware)						D. Activity Identification Naval Warfare Center, Carderock		
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP										1	336	336

Narrative Justification:

DESCRIPTION

This project will replace and upgrade the Data Acquisition and Analysis System (DAAS) at the Large Cavitation Channel (LCC) located at the Memphis Detachment, Naval Surface Warfare Center, Carderock Division.

JUSTIFICATION

The DAAS system collects and processes all the acoustic, hydrodynamic, and channel condition data at the LCC. The current system was installed as the LCC was being constructed and is now old enough that manufacturer support is becoming a problem. Maintenance requirements and down time are increasing. Furthermore, as the LCC is tasked by its customers to evaluate complex acoustic and hydrodynamic phenomena, the processing capacity of the current system is rapidly being overwhelmed. The new system will have manufacturer support, require much less maintenance (800 labor hours and $45K less in associated maintenance and materiel costs annually), and will have the additional processing capacity to do complex analyses in a more accurate and timely fashion.

IMPACT STATEMENT

Failure to fund this project will result in increasing maintenance costs, and component down time with corresponding loss of productivity and the inability to perform the current and future generations of complex hydrodynamic and acoustic data analyses.

000313

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 45 CDS INTEGRATION UPGRADE-Port Hueneme (Computer Hardware)			D. Activity Identification Naval Warfare Center, Port Hueneme					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP										1	322	322

Narrative Justification:

DESCRIPTION

Technical design engineering support and associated materials to expand and upgrade the integration Combat Direction System (CDS) network throughout the complex.

JUSTIFICATION

Continued technology upgrades to display systems, system processors and networks has required personnel to interface with numerous co-shared equipment suites throughout the complex. The currently installed system is unable to support the technology of the present and future. This expansion upgrade will support software development and the In Service Engineering Agent (ISEA) roles located at NSWC PHD 6000 and Combat Direction System Agents.

IMPACT STATEMENT

This CDS integration upgrade supports tactical program development by allowing live integration testing. The foundation LAN & hardware is budgeted during FY95 and FY96. Once this happens, the CDS Integration Upgrade must be obtained to avoid a loss of service. The inability to test systems under the live sensor capabilities installed will result in repeated re-test efforts at another location which we share with the Fleet Combat Training Center Atlantic (FCTCL). The FCTCL is a training system for USACOM (DIS NODE) and provides an opportunity to integrate data both to and from various sites into the PHD site.

ALTERNATIVES: Repair or lease are not available option. An economic analysis has been completed and is included.

000314

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 46 UNCLASSIFIED SYSTEM-Dahlgren (Computer Hardware)			D. Activity Identification Naval Warfare Center, Dahlgren					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP										1	300	300

Narrative Justification:

DESCRIPTION

The Unclassified System provides a cost-effective, large-scale distributed computing system for the unclassified performance computational requirements of Dahlgren Division programs. A CRAY Y-MP and associated peripherals were purchased in FY92/FY93 to replace two obsolete CDCs (approximately 10 years old) used for centralized top secret computing. A smaller CRAY Y-MP was procured in FY94 to replace a third obsolete CDC used for unclassified computing. This investment will provide a file server to act as a file archive for the Unclassified System.

JUSTIFICATION

The Unclassified Computing System is limited in the amount of on-line mass storage. As users are added to the system, additional mass storage will be required to provide a level of service the customers require. Expansion of the centralized unclassified computing, thus providing economical capability, will eliminate the need for users to provide their own individual storage capabilities.

IMPACT STATEMENT

This procurement is necessary for the system to meet the S&E computing needs of NSWCDD R&D programs such as STANDARD Missile, TOMAHAWK, and the AEGIS Combat System, as well as numerous smaller programs in the Center Technology Base areas. Individual users will create duplicative capabilities if additional centralized archival capabilities are not provided, thus increasing operating costs.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 47 ADVANCED COMPUTER AIDED ENG SYS-Crane (Computer Hardware)				D. Activity Identification Naval Warfare Center, Crane				
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP										1	270	270
INSTALL COST												2
TOTAL												272

Narrative Justification:

DESCRIPTION

The Advanced Computer Aided Engineering System will integrate the design and analysis processes for engineering small arms weapons, mounts and ammunition. The system will consist of Unix workstations, design software such as Pro/ENGINEER and analysis software for modeling thermal and mechanical stress and strain, fatigue, etc.

JUSTIFICATION

We are using Hewlett Packard workstations, server and plotters to perform Computer Aided Drafting. We are performing finite element analysis using Algor on IBM-compatible personal computers. Other engineering analyses are also performed on PCs. These programs are not integrated. In order to perform finite element mechanical or thermal stress analyses on a part designed on the hp system, it is necessary to "redesign" the part on PCs with Algor before proceeding. This process adds unnecessary duplication and is prone to errors. Without the analysis software, the designers rely upon experience and trial-and-error. This results in the need to both redesign and reprototype hardware.

The Navy Small Arms Program Manager (SEA-91WE) has recommended the use of Pro/Engineer software for Computer Aided Design and Analysis. The Army Research Development and Engineering Center, the Army's center for small arms engineering, is also using this software. This software would enable the Army and Navy to efficiently share technical information in digital format. Moreover, Pro/Engineer interfaces readily with third party analysis software and forms an effective basis for an Advanced Computer Aided Engineering System.

IMPACT STATEMENT

The Hewlett-Packard hardware is showing signs of aging. It has failed at least once over the last twelve months. It is anticipated that repair parts will not be available in the future. Lacking the capabilities of this advanced engineering system, we will pass the unnecessary costs of redesign and reprototyping to

our customers and ultimately, the taxpayer.

000317

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 48 VME-BASED SIMULATION CHASSIS-Dahlgren (Computer Hardware)				D. Activity Identification Naval Warfare Center, Dahlgren				
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP										1	250	250

Narrative Justification:

DESCRIPTION

A VME-based, single-board computer simulation system replacing the current Scientific Engineering Laboratories bus simulation hardware located in the Coastal Systems Station countermeasures simulator.

JUSTIFICATION

This single-board-computer upgrade will replace several obsolete, non-industry standard computers and interfaces that have very high maintenance and power costs. Advantages to be gained: 1) Upgrade computational ability, 2) Decrease maintenance and support requirements/costs, 3) Increase support from vendors and third party suppliers, 4) Increase the portability of data, both input and output, 5) Standardize the operating system, and 6) Standardize development environment platforms.

IMPACT STATEMENT

Failure to make this proposed investment would result in limited future expandability of the countermeasures simulator, thereby limiting support available to the Mine Warfare community.

000318

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 Presidents Budget					
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 49 ENGINEERING OF COMPLEX SYSTEMS-Dahlgren (Computer Hardware)			D. Activity Identification Naval Warfare Center, Dahlgren					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP										VAR		175

Narrative Justification:

DESCRIPTION

This workstation and distributed prototype development environment will support the development, review, and integration of prototypes of computer-aided design tools for complex system (i.e., combat system) development.

JUSTIFICATION

This investment is required to provide an environment for applied research programs (Engineering of Complex Systems (ECS), Next Generation Computer Resources (NGCR), and indirectly, HiPer-D and CS2003). It will be used to refine and transition smart, integrated system development tools to current and future weapons and control systems programs. These resources will provide a common computing framework for the development and demonstration of such capabilities. The need for this common resource is the recent result of the identification of prototypes of such tools and the need for additional capabilities, and the need for the integration of such capabilities.

IMPACT STATEMENT

Lack of proper resources to carry out the described effort will force those working on the programs to attempt to have the evaluation of prototypes carried out by others, and the integration of the prototypes carried out by often-competing developers. The impact would be little or no success for the programs, and no in-house expertise in the system development technology or the prototypes which represent it.

000319

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 50 ENG & TECH WORKSTATIONS- Crane (Computer Hardware)				D. Activity Identification Naval Warfare Center, Crane				
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP										1	155	155

Narrative Justification:

DESCRIPTION

Computer Aided Design (CAD-2) Engineering and Technical Documentation Workstations.

JUSTIFICATION

The equipment is to support the Mine Countermeasures Systems Department efforts in the development and maintenance of engineering drawings and technical documentation in direct support of the MCM-1 Avenger and MHC-51 Osprey class. Electronic and mechanical engineering analysis tools will be provided allowing increased capability in the design of the combat systems and in the analysis of failures in these equipments. These CAD systems will replace outdated CAD workstations as well as manual methods used by the In-Service Engineering Agents to accomplish this work. The use of this equipment will allow for increased reliability, maintainability and functionality of the MCM and MHC combat suites.

IMPACT STATEMENT

If this or similar equipment is nor purchased, the supportability of the MCM and MHC combat equipments will be negatively affected. The outdated methods of engineering analysis and development/ maintenance of technical documentation are too labor intensive to allow adequate support for these combat equipments given the current reductions in O&MN funding.

000320

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 Presidents Budget					
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 51 DOWNSIZING OF MAINFRAMES- Port Hueneme (Computer Hardware)			D. Activity Identification Naval Warfare Center, Port Hueneme					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP										1	125	125

Narrative Justification:

DESCRIPTION

This project is phased over three years beginning in FY 97. It includes open systems equipment such as network/file servers, print servers, client/server software, and network interface software.

JUSTIFICATION

The project is needed to meet the command's requirement to downsize mainframes and correctly size computing cost to the need in response to the requirement to transition to an electronic communication environment. This is required to implement the paperless environment initiative. This project will replace most of the vax systems currently in use.

IMPACT STATEMENT

The command will be unable to migrate from a mainframe environment to the required downsized distributed environment and transition to a full functioning "paperless office" environment.

Without this procurement the Division will be unable to communicate via electronic means as requested by higher authority.

ALTERNATIVES: Purchase is the only alternative available. An economic analysis has been completed and is included.

000321

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 52 DESKTOP PUBLISHING UPGRADE- Dahlgren (Computer Hardware)				D. Activity Identification Naval Warfare Center, Dahlgren				
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP										1	120	120

Narrative Justification:

DESCRIPTION

Upgrade to state-of-the-art workstations and advanced (SGML format) page definition software with advanced graphics capabilities.

JUSTIFICATION

This project provides state-of-the-art hardware and software that is CALS (DOD's Continuous Acquisition and Life-Cycle Support process) compliant for the production of engineering technical manuals. Currently DOS-based machines using INTEL 1486 chip technology and Ventura Publisher software are utilized. This technology has been pushed to its limit and is not always compatible with industry contractors and CALS standards for direct interchange of data. The proposed equipment would provide this capability.

IMPACT STATEMENT

Without this purchase full integration of CALS-compliant software is not possible. This purchase is needed to comply with CALS initiatives.

000322

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 53 LIGHTS OUT PGC-Port Hueneme (Computer Hardware)				D. Activity Identification Naval Warfare Center, Port Hueneme				
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP										1	118	118

Narrative Justification:

DESCRIPTION

Workstation, memory, disk, software.

JUSTIFICATION

Currently our Program Generation Center (PGC) provides all major support for building Advanced Combat Direction System programs for fleet delivery. PGC is comprised of 14 main frame computer systems and is staffed 24 hours a day. Seventy five percent of the current staffing is military personnel. Recent directives project a 50% cut in our military manning. The lights out project provides central system monitoring failure alerting, and automated back up capabilities, totally eliminating the need for operator support on the midnight shift.

IMPACT STATEMENT

The PGC absolutely must operate 24 hours a day. Without this equipment we will have to hire contractors to provide PHD support for Advanced Combat Direction System (ACDS) program production. This approach will most certainly increase production costs because all after-hours support is currently provided by military personnel.

ALTERNATIVES: The most cost effective way to replace military personnel lost due to downsizing efforts is to automate the functions. This approach will save four workyears of military labor and the associated costs, (After hours contractor support is not an option at this time.) An economic analysis has been completed and is included.

000323

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 54 SPARC/ASSESSMENT SYSTEM-Carderock (Computer Hardware)				D. Activity Identification Naval Warfare Center, Carderock				
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP										1	110	110

Narrative Justification:

DESCRIPTION

This project will procure an additional UNIX-based 100 million instructions per second (mips) workstation, enhancement upgrade of three existing workstations from 50 mips to 80 mips, and a multiprocessor batch mode-compute-server, with each processor of at least 200 mips capability.

JUSTIFICATION

The Simulation Planning & Analysis Research Center (SPARC) at the Carderock Division, Naval Surface Warfare Center performs simulations and assessments of naval systems. SPARC is presently capable of performing 440 mips. Current simulations, including simulation based design, of interest to the Department of Defense are mathematical models exceeding 500,000 lines of computer code. An increase in processing speed to at least 1200 mips is necessary in order to maintain reasonable turnaround times. This project will boost SPARC to 1700 mips. Without this increase sponsor schedules cannot be met, jeopardizing about $4.5M in direct funding.

IMPACT STATEMENT

Failure to fund this project will result in the inability to perform the new generation of customer requested simulations and an increasing backlog of customer requests with the loss of additional direct revenue from the inability to support any additional work with this facility.

000324

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 Presidents Budget					
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 55 DIGITAL TECHNOLOGY SIM-D PROCESSOR-Dahlgren (Computer Software)			D. Activity Identification Naval Warfare Center, Dahlgren					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP										1	400	400

Narrative Justification:

DESCRIPTION

This investment provides a parallel processing computer in a Single Instruction Multiple Data (SIM-D) configuration allowing the investigation and demonstration of computationally-intensive combat system functional requirements in real time.

JUSTIFICATION

This procurement provides the capability to investigate the SIM-D parallel/associative processing impact on certain combat systems functions and investigate the incorporation of this type of parallel computer into a distributed computing environment. Target correlation and tracking and other combat system functions match the SIM-D parallel computer architecture with the associative memory capability. Significant throughput increases are expected as well as the sustenance of much heavier track loads in real time.

IMPACT STATEMENT

Without this investment, Dahlgren Division will not be able to support combat systems prototyping efforts in the most beneficial, cost effective manner.

000325

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 Presidents Budget					
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 56 DOCUMENT MANAGEMENT SYSTEM-Port Hueneme (Computer Software)			D. Activity Identification Naval Warfare Center, Port Hueneme					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP							1		300	1	300	300

Narrative Justification:

DESCRIPTION

Phased over two years, it consists of document management hardware/software such as a storage/retrieval system, tracking/maintenance system, distribution/routing system, and an on-line viewing/red lining system.

JUSTIFICATION

The purpose of this project is to provide command users the capability to store and retrieve technical and administrative documentation, distribute documentation electronically, route documents through review and approval processes electronically, view and markup documents on-line. This project is a subset of the paperless environment initiative.

IMPACT STATEMENT

The command will be unable to transition to a full functioning "paperless office" environment and lose the capability for Engineering and Logistics expedient response in resolving U.S. Navy Fleet issues if procurements are not made in the fiscal years requested. Paper copying will continue to be used as a duplicate system of moving information and providing technical information to PHD employees. Interface with Department of Defense Messaging Projects will be at risk.

ALTERNATIVES: No other options are available. An economic analysis has been completed and is included.

000326

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 Presidents Budget					
B. Component/Business Area/Date DON/R&D				C. Line. No & Description -57 INTEGRATED SOFTWARE ENGINEERING ENVIRON-Port Hueneme (Computer Software)			D. Activity Identification Naval Warfare Center, Port Hueneme					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP										1	360	360

Narrative Justification:

DESCRIPTION

This project is to procure hardware to increase the effectiveness of the software engineering process.

JUSTIFICATION

This system will consolidate and redefine our Software Engineering Environment (SEE) to support all functional areas of the software engineering process. In addition to enhancing our mission capabilities we will be better able to support our customers due to improved project planning, tracking and oversight.

IMPACT STATEMENT

Failure to create and maintain a SEE utilizing progressive technology will greatly impact our ability to provide timely support to rapidly evolving fleet requirements. The current fragmented SEE is labor intensive and potentially error prone. Inefficiencies within the current system, coupled with the continuing labor force reduction, will cause late deliveries and adversely affect our ability to serve our customers during the "OUT" years.

ALTERNATIVES: The current system is inefficient and costly. Repair or lease options are not available. An economic analysis has been completed and is included.

000327

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 58 TTSP: DATA FUSION TEST BED-Dahlgren (Computer Software)				D. Activity Identification Naval Warfare Center, Dahlgren				
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP										VAR		300

Narrative Justification:

DESCRIPTION

Acquisition of the Data Fusion Test Bed architecture will accommodate local processing units with the ability to evaluate real time computations required by weapons systems integration processing. The test bed will connect these units with a network that can evaluate the message traffic associated with the integration of multiple weapons systems.

JUSTIFICATION

The Data Fusion Test Bed is needed for the development of a comprehensive weapons systems integration processor for improving the warfighting capabilities of expeditionary forces.

IMPACT STATEMENT

Without this system, the ability to adequately develop an architecture and a system concept that integrates a varying suite of expeditionary force weapons systems will be severely hampered.

000328

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)										A. Budget Submission FY 1997 Presidents Budget		
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 59 NETWORK UPGRADE-Port Hueneme (Telecommunications)					D. Activity Identification Naval Warfare Center, Port Hueneme			
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP				1		908	1		240	1	200	200

Narrative Justification:

DESCRIPTION

This project is a subset of the paperless office. Ethernet devices such as high-speed network, Local Area Network (LAN) bridges, network gateways, Micron Optical Data Cable and multiport node concentrators/upgrades.

JUSTIFICATION

This project is a phased project in FY 95, 96 and 97. It provides for the replacement of obsolete/broken Local Area Network devices in support of exchange/networking ability of engineering functions among the various engineering and logistics departments within the Port Hueneme site of PHD. Failure to replace equipment that is no longer functional will result in total collapse of the data network. The functions supported on the network are in direct support of testing and certifying weapon systems software to support the fleet. Continue manpower reductions will provide an even more urgent requirement to ensure efficient electronic data exchange in response to increasing customer demand.

IMPACT STATEMENT

Failure to procure replacement of network devices will result in continued downtime and inefficient processing of critical engineering technical documentation. It will cause a critical detrimental impact on the ability to make use of, and share data electronically which is imperative to fulfilling mission requirements and providing quality customer support.

ALTERNATIVES: An upgrade to the existing LAN is considered the most economical alternative. An economic analysis has been completed and is included.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 63 NETWORKS-Dahlgren (Telecommunications)				D. Activity Identification Naval Warfare Center, Dahlgren				
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP							VAR		400	VAR		600

Narrative Justification:

DESCRIPTION

NSWCDD is continuing to upgrade its communications infrastructure. A multi-year effort to install a high-speed media trunking system was completed at Dahlgren in FY93. These networks primarily serve the scientific and engineering staff, providing access to scientific computing resources and permitting local area networking of research workstations. They allow the integration of distributed ADP resources, both secure and unclassified. This investment is for the routers, bridges, and control systems needed to upgrade the Dahlgren network backbone.

JUSTIFICATION

Benefits include better use of existing resources through interconnection, widespread access to tools and computer resources, and effective access to external activities. Expanded and enhanced networks will allow scientists and engineers to work more effectively due to data sharing capability and to save time and money due to higher speed, more reliable communications. This investment is a continuation of ongoing efforts to maintain and enhance network capability to standards. Efforts budgeted in FY95 were delayed to implement mandated budget reductions.

IMPACT STATEMENT

The NSWCDD network backbone is the primary means for data communication at the Dahlgren site and with off-site locations (other Dahlgren Division sites, Headquarters, sponsors, etc.). Insufficient capability to transmit data at adequate quantities and speed will delay operations and increase costs significantly.

000330

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 64 ECO NETWORK UPGRADE-Port Hueneme (Telecommunications)			D. Activity Identification Naval Warfare Center, Port Hueneme					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP							1	400	400			

Narrative Justification:

DESCRIPTION

Data Communications Devices such as: high density terminal servers, Fiber Optics, Ethernet Hubs, High Speed Network Bridges, Multiport concentrators, and associated Network Management Hardware.

JUSTIFICATION

This project was retitled from "Network Upgrade" to avoid confusion with projects related to the paperless environment. The current thicknet Ethernet backbone has become saturated as a result of new requirements and growth. The number of workstations that are being supported has grown beyond the capability of the existing network communication devices. Additionally, the network needs to support new graphics software, image processing, distributed video for briefs and training and increased number of users.

IMPACT STATEMENT

In order to support the additional requirements listed above, the

network backbone needs to be upgraded to a higher band width. Otherwise additional networks will have to be added which will necessitate buying existing software again and would allow no file sharing across the manpower levels needed to achieve attrition and downsizing target levels. Also an upgrade will grant use of reengineering processes which are presently becoming cost prohibitive.

ALTERNATIVES: Repair or lease are not available options. An economic analysis has been completed and is included.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 65 LAN FIBER BACKBONE-Dahlgren (Telecommunications)			D. Activity Identification Naval Warfare Center, Dahlgren					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP							1	300	300	1	300	300

Narrative Justification:

DESCRIPTION

Replacement in FY96 of a high-traffic, copper-based portion of the mixed fiber and copper Coastal Systems Station local area network (LAN) with fiber optics. Includes fiber, conduit, and equipment necessary to support the upgraded portion.

JUSTIFICATION

The existing copper-based portions of the local area network will not support multi-media, server-based applications, and X-Terminal technology. Use of fiber on high density segments will support increasingly-used, high-bandwith technologies and provide growth potential not available with the copper-based plant .

IMPACT STATEMENT

Without this project, demands to share or transfer ever-increasing amounts of information will saturate the existing copper-based LAN backbone. Users will experience increasing delays in transferring data and information, until the backbone saturates and throughput falls close to zero in this contention-based network.

000332

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 Presidents Budget					
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 66 FIBER OPTIC TRUNK/NODAL EQUIP-Crane (Telecommunications)			D. Activity Identification Naval Warfare Center, Crane					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP							VAR		242			

Narrative Justification:

DESCRIPTION

The purpose of this project is to acquire nodal devices for a base-wide fiber optic data communications network, and to interconnect those devices with single mode fiber to form a communications backbone. The nodal devices are essentially communications hubs which will be installed at strategic locations on base to concentrate data from all buildings in the surrounding area. These devices will support a variety of interfaces and will couple traffic coming from individual buildings onto high speed communications back bone.

JUSTIFICATION

The existing communications network supporting the Crane site is 450Mhz, mid-split, coaxial cable system referred to as CENTERnet. CENTERnet does not meet the present day or future communications requirements of Crane division for several reasons. The reliability of the existing network is very low, with aborted connections and denial of service occurring on a frequent basis. This can be attributed to the large number of active components (nearly 500 amplifiers) and the fact that the trunk system is almost 100% aerial and exposed to the elements. A second limitation associated with CENTERnet is speed. Given the technology used (broadband CATV), the maximum speed and throughput (capacity) that can be supported is 10Mbps. This is insufficient for a network supporting the number of users at Crane.

IMPACT STATEMENT

The current network cannot adequately handle the growing requirements for data transmission brought on by client server and multi-media applications. The CENTERnet is fast approaching saturation of it's frequency spectrum. Due to the large number of video channels supported for training, news and security monitoring, the spectrum is already 75% occupied. As saturation occurs connection abortions and denial of service will increase dramatically and communication through this network will become nearly impossible.

0003333

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 67 TEST & EVAL: FIBER OPTICS REPLACEMENT-Dahlgren (Telecommunications)			D. Activity Identification Naval Warfare Center, Dahlgren					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP							VAR		150			

Narrative Justification:

DESCRIPTION

A fiber optic system for the Range was installed approximately six years ago. The system is used primarily for video and data transmission from range sites to data processing and control sites. Typical data transmitted includes remote cameras for range surveillance, surface search radar images, Doppler radar signals fuze scoring images, and Global Positioning Satellite (GPS) data. This investment will replace three multi-channel video/data multiplexer/drivers.

JUSTIFICATION

These systems will replace electronics that have been in use 24 hours a day for the past six years and are now failing. They will be used on links where there is a high volume of data required. Real-time transfer of data is crucial to providing radar and video surveillance of the range for safe operation. Real-time data is also required for most tests requiring target tracking, e.g., Doppler radar data, video of test events, fuze test video, etc. This effort was originally budgeted for FY96 but was eliminated from the President's budget to implement mandated budget reductions. Subsequent review has indicated that should be accomplished in FY96 to reduce safety hazards and minimize operational costs.

IMPACT STATEMENT

Without this investment, test costs will continue to increase due to frequent electronic failures and higher labor costs for maintenance and reconfiguration. If these replacements are not made, the links will probably be beyond repair within two years.

0003334

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 68 DTNET EXTENSIONS-Carderock (Telecommunications)			D. Activity Identification Naval Warfare Center, Carderock					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP				VAR		100	1	100	100	VAR		600

Narrative Justification:

DESCRIPTION

The Carderock Network (DTNET) is an integrated data/audio/video Division-wide network serving the Carderock Division, Naval Surface Warfare Center (CARDEROCKDIV, NSWC).

JUSTIFICATION

Funding is required annually to extend DTNET to areas of the Division which do not have service. The funding is used to install cabling and terminal drops in new and existing buildings where there is no service. The addition of the Naval Ship Systems Engineering Station (NAVSSES), Philadelphia, Pennsylvania, and the activity at Fort Lauderdale, Florida, to CARDEROCKDIV has altered the requirements for DTNET service from what was initially envisioned. Service must be provided where it does not currently exist. Furthermore, the current net uses copper wire lines. This technology is too limited to meet future needs. All new extensions of DTNET will use fiber optic technology. Beginning in Fiscal Year 1997, the core of DTNET will also be converted to fiber optic.

IMPACT STATEMENT

Failure to fund this project will result in the inability to meet current and future communications requirements.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 Presidents Budget					
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 69 ATM SWITCHING NETWORK-Port Hueneme (Telecommunications)			D. Activity Identification Naval Warfare Center, Port Hueneme					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP										1	485	485

Narrative Justification:

DESCRIPTION

Networking devices such as ATM switch, router manager, ATM-to-FDDI devices, ATM-to-Ethernet devices, fiber optic transmission equipment/material, and telecommunication devices.

JUSTIFICATION

With the growing number of sophisticated engineering and logistics projects such as the joint Pt. Hueneme/Pt. Mugu remote control of ships, fire/launch systems and JCALS/JEDMICS which require at least 100mbs bandwidth. The command will need to provide the required bandwidth and be capable of growing with the projects. In the paperless environment initiative, video conference to the desktop will require the same amount of bandwidth as high-speed high-density graphics and technical documents transmissions that the JCALS/JEDMICS requires.

IMPACT STATEMENT

The command will be incapable of completing such engineering projects as the remote control of ships and weapons, future paperless office projects such as video conference to the desktop, and the growing number of JCALS/JEDMICS users.

000336

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 Presidents Budget					
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 70 VIDEO NETWORK-Port Hueneme (Telecommunications)			D. Activity Identification Naval Warfare Center, Port Hueneme					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP										1	200	200

Narrative Justification:

DESCRIPTION

This is a subset of the paperless environment initiative and is phased over three years beginning in FY 97. It includes networking devices such as FDDI-to-FDDI routers, bridges, and/or gateways, FDDI-to-Ethernet routers, bridges, and/or gateways, optical fiber transmission equipment/material, and video telecommunication devices.

JUSTIFICATION

This project is required to implement the Paperless Environment Initiative (PEI) for video teleconferencing to the desktop. This project will enable command users the capability of holding discussions and meetings while at their desk and interactively working on documents in electronic media. It will allow command briefings to the desktop and eventually be capable of video conference with remote sites. This is an effort to comply with the Department of Defense (DOD) and Naval Sea Systems Command (NAVSEA) Defense Messaging System (DMS). The DMS & PEI are designed to improve the competitive position for PHD in today's intensely competitive business world. It will provide command-wide use of video technology.

IMPACT STATEMENT

If not procured in the fiscal years planned the command will be unable to fulfill it's requirements for providing video technology throughout the station.

ALTERNATIVES: Purchase is the only available option. An economic analysis has been completed and is included.

000337

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 71 SECURE DATA LINK BUILDING 94 TO BUILDING 470-Dahlgren (Telecommunications)			D. Activity Identification Naval Warfare Center, Dahlgren					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP										1	150	150

Narrative Justification:

DESCRIPTION

Installed cabling and interface hardware to provide a secure data link for transmission of classified data between computers in Buildings 94 and 470 at the Coastal Systems Station.

JUSTIFICATION

Current and future mine warfare studies require integration of the real-time, hardware-in-the-loop capabilities of the Coastal System Station's countermeasure simulator with the Force Level simulation capabilities of the Compass/Mars systems in a separate building. The proposed secure data link will allow this integration.

IMPACT STATEMENT

The integration of the countermeasures simulator and Compass/Mars simulators revolves around the existence of a secure data link between them. If this link is not procured, considerable potential capability for simulation studies in the Mine Warfare mission area will be lost and considerable time and manpower will be expended finding work-around.

000338

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 72 ENGINEERING NETWORK-Dahlgren (Telecommunications)				D. Activity Identification Naval Warfare Center, Dahlgren				
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP										1	115	115

Narrative Justification:

DESCRIPTION

This project will increase speed and bandwidth to engineering personnel by bringing FDDI (Fiber-Optic Distributed Data Interface) to their desktop to support network-intensive applications such as imaging of engineering drawings and related CAD/CAM (Computer Aided Design/Computer Aided Manufacturing).

JUSTIFICATION

The mine and mine countermeasures In-Service Engineering Activity (ISEA) function must routinely examine and analyze drawings and other configuration documents when resolving Fleet problems and responding to inquiries. Recent procurement of Alpha high-speed computers to perform ISEA tasks requires augmentation of networking communications to take full advantage of their increased capability. This project will bring the drawings, configuration documents, and other resource materials to the engineer's desktop in an efficient and effective manner where he/she will be able to use them in conjunction with other installed workstation tools/software.

IMPACT STATEMENT

Without this upgrade, engineers must spend more time accessing and updating drawing information resulting in slower and more costly responses to Fleet problems and inquiries.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 Presidents Budget					
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 73 SATELLITE DATA NETWORK INTERFACE-Port Hueneme (Telecommunications)			D. Activity Identification Naval Warfare Center, Port Hueneme					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP										1	100	100

Narrative Justification:

DESCRIPTION

This is a multi-year project to procure satellite dish/interface, communication interface, data processor, network interface and applications, disk storage, and connecting hardware.

JUSTIFICATION

At present, logistics products such as technical manual updates, drawing updates, training data, and weapon system data base updates are sent to ships at sea via mail or courier in paper form which is time consuming and costly. The majority of this data is available in digital format at the shore activity and the tools exist to provide access from the Local Area Network(LAN). This project provides an electronic link to the fleet anywhere in the world, whether at sea or dockside. It will allow technical data and drawings to be sent to the ship using satellite communications at any time and allow continual updating of the weapon systems database.

IMPACT STATEMENT

The logistics products on board ships will continue to be sent to ships via mail or courier if procurement is not made. The risk will increase for out-of-date products from PHD as other activities move forward to provide data electronically. This product will also provide a method for ships to access Interactive Electronic Technical Manuals (IETMs) which are currently under development. The project will be developed in conjunction with effort currently underway, on station, to develop and implement this technology. Continued use of a non-electronic system will perpetuate the problem. Procurement is the most feasible alternative. An economic analysis has been completed and is included.

00340

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 Presidents Budget					
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 74 COMPUTER SECURITY/INTRUSION-Port Hueneme (Other)			D. Activity Identification Naval Warfare Center, Port Hueneme					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP							1		235	1	440	440

Narrative Justification:

DESCRIPTION

Project supports security/firewall hardware and associated software, high-speed encryption devices, and secure telecommunications devices.

JUSTIFICATION

This multi-year project supports security/firewall hardware and software, high-speed encryption devices, and secure telecommunications devices to protect the command's network from intrusion and implement a global system security architecture that reduces the threat of unauthorized user access and satisfies C-2 security requirements. Implements initial electronic Naval Messaging System capability (DOD) as part of the paperless environment initiative.

IMPACT STATEMENT

The command is currently vulnerable to intrusion and security attacks which could lead to the compromise of sensitive data and can result in hundreds of man-hours and thousands of dollars to recover.

ALTERNATIVE: Continue with current unsecured system which does not meet projected need. Leasing is not available, making purchase the only feasible alternative. An economic analysis has been completed and is included.

000341

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 75 TRUSTED LAN HUB-Port Hueneme (Other)				D. Activity Identification Naval Warfare Center, Port Hueneme				
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP										1	175	175

Narrative Justification:

DESCRIPTION

The trusted Local Area Network (LAN) hub consists of the hardware and operating software to connect several heterogeneous LANs of various classifications. The resultant Local Area Network will comply with B2 multi-level requirements of the National Security Center. This project is phased over multiple years beginning in FY97.

JUSTIFICATION

The proposed equipment has been evaluated and rated by NSC and is approved as a trusted multi level secure hub. The NAVSEA Information Management Improvement Program mandates the establishment of on-line network access for message traffic and other NAVSEA organization management activities. In order to implement these requirements, a trusted hub is needed to connect networks of various classifications and architectures while still complying with NAVSEA 5239.1B.

IMPACT STATEMENT

Lack of funds will force continued isolation of existing networks. File transfer will continue to be done manually. The Message Distribution System (MDS) will force the Office Automation Local Area Network to be isolated from administrative support system. The tactical support Local Area Network will continue to be isolated from our management information system. It will not be possible to have a truly integrated synergistic software engineering environment without some type of trusted hub to connect the various tactical support systems currently used to produce fleet programs. Lack of such a system will impact the command's efforts to standardize our processes and improve our software Maturity Capability level.

ALTERNATIVES: Procurement is the only economically feasible alternative. An economic analysis has been completed and is included.

0003342

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 Presidents Budget					
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 76 SECURITY COMMUNICATIONS EQUIPMENT-Crane (Other)			D. Activity Identification Naval Warfare Center, Crane					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP										1	173	173

Narrative Justification:

DESCRIPTION

A base-station radio with trunking (multiple channel capabilities, including encryption) and a console to encase the radio hardware and equipment which is integral to the communications system.

JUSTIFICATION

The Division has been advised that there will be a change in the FCC's radio frequency assignments in the near future which will change operation standards from VHF to UHF frequencies. The present radio system operates only in the VHF frequency. The replacement equipment would operate in both frequencies to provide uninterrupted police, fire, EMT response and communications with the Division explosive production field crews as well as interface with the surrounding local law enforcement agencies. The base-station radio/console was designed for Security Communications purposes 20 years ago, for one operator and is not capable of expansion. It is not designed to allow simultaneous radio and/or computer access to two operators in either normal or emergency situations. Additional frequencies have been added to the system over the years but cannot be prioritized or "talked around" in the event of an emergency. Trunking, Dynamic Regrouping and Securenet would correct this problem with enhanced security features.

IMPACT STATEMENT

Without the capability of sharing the VHF and UHF frequency assignments, the entire Division will have to purchase UHF base-stations and portable radios at one time. "Trunking" would provide the capability of communicating on the lower VHF band with UHF equipment. This would facilitate a gradual changeover and would also allow continued communications with local law enforcement agencies regardless of whether their equipment has been changed to the UHF frequency or not.

000343

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 77 NIMIP SOFTWARE-Crane					D. Activity Identification Naval Warfare Center, Crane			
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Software Development				VAR		4023	VAR		1754	VAR		726

Narrative Justification:

JUSTIFICATION

The current software computing capability is based upon proprietary database environments with associated high application maintenance costs. Several of the applications have been patched to the point of needing a new architecture design based on information needs.

he software migration will be based upon downsizing hardware platforms, distributed data and applications. Investment benefits to be realized include: (1) ability to address constant change and unpredictable requirements based upon flexible technology platforms, (2) sharing of application software and data across platforms and therefore activity groups, (3) reusable application software reducing redundant application maintenance functions, (4) potential for common functional processes, and (5) user friendly access to data providing information in the format and time desired.

This program is part of the NAVSEA Business Case which analyzed solutions for improving the IRM Business Function; it was approved by NISMC as the MNS for the NIMIP. NSWC has performed a program economic analysis as part of their business case.

The impact of not making the investment is to: (1) remain in the proprietary database environment and (2) not be able to achieve budgeted savings.

000344

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 78 EMAIL STABILIZATION-Port Hueneme			D. Activity Identification Naval Warfare Center, Port Hueneme					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Software Development							1	60	60			

Narrative Justification:

DESCRIPTION

This project is a subset of the Paperless Environment Initiative. It includes Email gateway software and directory synchronization software. Specific license fees are not applicable to this OTS procurement.

JUSTIFICATION

The Paperless Environment Initiative (PEI) is a key element in PHD'S effective and aggressive implementation of the Department of Defense (DOD) & Naval Sea Systems Command (NAVSEA) Defense Messaging Systems (DMS) and JCALS/JEDMICS. The E-mail stabilization is paramount to stabilizing & increasing the reliability of E-mail. The objective of this project is to link the numerous E-mail systems in use at PHD and to allow efficient administration and maintenance of this complex system. Currently multiple electronic mail systems are in use within the PHD such as cc:Mail, E-Mail, etc. This problem results from Multiple Directives & varying implementation times in the past. Unfortunately, it is difficult for these systems to "talk" to each other. The E-Mail stabilization project will link these numerous systems into an efficient unit.

IMPACT STATEMENT

Failure to procure this OTS will result in continued fragmented E-mail systems and inefficiencies of integrating these systems manually. Timely implementation of the PEI will be compromised and the ability to interface with the localized DOD & NAVSEA DMS objectives will be at risk.

ALTERNATIVES: Continued use of the existing systems is cumbersome & unreliable. Leasing is not available. Purchase is the most economically sound alternative. An economic analysis has been completed and is included.

000345

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 Presidents Budget					
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 79 CORPORATE DATABASE UPGRADE-Dahlgren			D. Activity Identification Naval Warfare Center, Dahlgren					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Software Development							VAR		150			

Narrative Justification:

DESCRIPTION

This investment will expand the capabilities of a Division-wide database providing program management and project information to scientists, engineers, program and line managers. This database is constructed with an open system architecture (compliant with FIPS 151) and supported by relational database management systems (compliant with FIPS 127). The FY96 procurement provides database software for the server also purchased in FY96.

JUSTIFICATION

The Corporate database is necessary to host a repository of information. This acquisition will improve productivity in the following ways: (a) eliminate the need for each technical program to maintain separate, duplicative automated systems for maintaining and tracking program, project and management information; (b) improve productivity of technical personnel by requiring less time for compiling, analyzing and reporting information, thus allowing more time for technical work; (c) reduce reliance on hardcopy reports and replace them with electronic query; and (d) reduce printing distribution costs by allowing distributed printing "on-location" for the reports that are necessary.

IMPACT STATEMENT

This investment will reduce direct program and overhead cost in a time of declining resources and sponsor funds. Otherwise, NSWCDD sponsors will be impacted through (1) higher man-hour rates charged for technical work and (2) more direct labor charged for program management activities. Also, productivity gains relative to managing and reporting information in the technical programs cannot be achieved.

000346

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 80 ENGINEERING INFORMATION SYSTEM-Dahlgren				D. Activity Identification Naval Warfare Center, Dahlgren				
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Software Development										1	146	146

Narrative Justification:

DESCRIPTION

A reference library for engineering and procurement personnel to provide instant access to engineering data including military specifications, military standards, industry standards, and electronics component data, by means of CD-ROM subscription service on the local area network.

JUSTIFICATION

This project will replace 5 small stand-alone data libraries with varying subscription services that are scattered throughout the station. Station productivity among technical and procurement personnel will increase as a direct result of providing more complete, accurate, and up-to-date information to employees' desktops. These reference services at the desktop will be more widely used, resulting in better technical products to sponsors. The indexing/cross-referencing features provided by digital format will shorten research time and provide a valuable asset to this station during the momentous DOD transition from military specifications to industry standards.

IMPACT STATEMENT

The impact of non-implementation would be lost potential productivity gains and increased cost to sponsors caused by the improper introduction or misinterpretation of applied standards/specifications.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 81 ADDITION TO BLDG 452-Port Hueneme			D. Activity Identification Naval Warfare Center, Port Hueneme					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction						42			300			

Narrative Justification:

DESCRIPTION

This is a multi year minor construction project (FY 95 & FY 96) to incorporate the addition of 4,000 square feet of office space to Logistics Building #452. FY95 includes the A&E costs; construction costs are budgeted in FY96.

JUSTIFICATION

There are currently 125 people housed in this building, exceeding the recommended rate of 97. Additional maintenance management personnel are currently housed in a large trailer complex. Thirty employees and equipment will be displaced when the trailer complex is removed. Space is not available elsewhere on the compound to house these people. This project will provide suitable workspace for the displaced personnel and relieve overcrowding in the rest of the building. The project was previously unfunded; however, the urgency to relieve overcrowded conditions warrants a request to reprogram funds from ADPE to minor construction in FY 96.

IMPACT STATEMENT

Failure to provide additional work space to accommodate these employees will severely limit this department's ability to function. The PEO Cruise Missiles & Joint Unmanned Aerial Vehicles/PEOTAD Project teams cannot be focused when housed in separate locations. Fragmentation and less than ideal customer support interface will result. Additional personnel to support these growing programs cannot be housed. While no savings is realized from new over current, there is significant savings over leasing comparable facilities. Since demolition will displace personnel & further overcrowd the current facility, status quo is not a suitable option.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)										A. Budget Submission FY 1997 Presidents Budget		
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 82 RIMS OPERATIONS BUILDING-Carderock						D. Activity Identification Naval Warfare Center, Carderock		
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction									300			

Narrative Justification:

DESCRIPTION

This project will construct a module adjacent to Building 18 at the Carderock Division, Naval Surface Warfare Center, to provide a protected, environmentally controlled work and storage area to support the Radar Image Modeling System (RIMS) and the Deployable Signature Measurement System (DSMS).

JUSTIFICATION

The RIMS and DSMS, multi-million dollar investments by the Navy in state-of-the-art electronics and instrumentation, are the heart of Navy radar signature reduction efforts. At present, these systems are housed in trailers which expose them to the deteriorating effects of extremes of temperature and humidity. The RIMS Operations Building will provide a dedicated temperature and humidity controlled environment in which these systems can be housed, maintained and prepared for test operations.

IMPACT STATEMENT

Failure to fund this project will result in the continued deterioration of trailer housed RIMS and DSMS equipment.

000349

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 83 HAZARDOUS MATERIAL WAREHOUSE (C)-Crane			D. Activity Identification Naval Warfare Center, Crane					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction									299			

Narrative Justification:

DESCRIPTION

This project will provide for a centralized hazardous material storage and issue facility for the Crane site hazardous materials.

JUSTIFICATION

Currently, there are excess hazardous materials on site as each using Activity controls their own ordering, storage and disposal. CNO is preparing a mandate to require centralized control of these materials. This project will be the first step in compliance with the mandate and will significantly reduce the amount of hazardous material ordered by the Crane site.

IMPACT STATEMENT

If not provided, the Crane site will continue to remain in non-compliance with the CNO mandate and will experience a continuing increase in hazardous waste and a continuing risk of spills.

000350

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)										A. Budget Submission FY 1997 Presidents Budget		
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 84 ABRASIVE BLAST FACILITY-Carderock					D. Activity Identification Naval Warfare Center, Carderock			
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction									290			

Narrative Justification:

DESCRIPTION

This project will construct a new Abrasive Blast Facility to replace the existing facility which is old and environmentally unsafe.

JUSTIFICATION

The current Abrasive Blast Facility at the Carderock Division, Naval Surface Warfare Center (CARDEROCKDIV, NAVSURFWARCEN) is located adjacent to a wetlands area and presents the danger of contamination. In addition to the environmental concerns, the current facility is inadequate in size and worn out.

IMPACT STATEMENT

Failure to fund this project will result in the perpetuation of an existing and potentially hazardous environmental/safety hazard.

000351

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 85 FIAL MODIFICATIONS-Carderock			D. Activity Identification Naval Warfare Center, Carderock					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction									285			

Narrative Justification:

DESCRIPTION

This project will convert laboratory space to offices; erect modular structures to house equipment; upgrade electrical, security, and telephone systems; resize heating, ventilation, and air conditioning (HVAC) systems; and enlarge the capacities of the potable water and septic systems in order to support increased occupancy at the Fox Island Acoustic Laboratory (FIAL) at the Bremerton Detachment, Carderock Division, Naval Surface Warfare Center (CARDEROCKDIV, NAVSURFWARCEN).

JUSTIFICATION

CARDEROCKDIV has been repeatedly asked by the Puget Sound Naval Warfare Center to vacate tenant spaces. This will require the relocation of the Bremerton Detachment. In order to better utilize Division assets and reduce the need for commercial lease space, some personnel will be relocated to the Acoustic Research Detachment (ARD), Bayview, Idaho and the remainder to FIAL.

IMPACT STATEMENT

Failure to fund this project will result in the inability to meet customer requirements.

000352

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 86 INTEGRATED SITE ALARM SYSTEM-Carderock				D. Activity Identification Naval Warfare Center, Carderock				
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction									277			

Narrative Justification:

DESCRIPTION

This project will install an integrated alarm system which will provide fire, security and operational alarms as well as perform energy monitoring at the Memphis Detachment, Carderock Division, Naval Surface Warfare Center (CARDEROCKDIV, NAVSURFWARCEN).

JUSTIFICATION

The National Fire Code (NFPA 101) mandates fire alarm systems for industrial and office buildings. Presently, the Memphis Detachment of CARDEROCKDIV does not have a site fire alarm system. Additionally, the Large Cavitation Channel (LCC) located at the Memphis Detachment requires a security alarm system to maximize security and accommodate classified and sensitive projects, and operational alarms to ensure safe and efficient operation. The large size, periodic high energy requirement, and low staffing level of the Memphis Detachment makes the installation of an energy monitoring system a necessity.

IMPACT STATEMENT

Failure to fund this project will result in the perpetuation of an existing and potentially dangerous environmental/safety hazard.

000353

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 87 TTSP FACILITY-Dahlgren				D. Activity Identification Naval Warfare Center, Dahlgren				
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction									273			

Narrative Justification:

DESCRIPTION

The Target Tracking and Signal Processing (TTSP) Facility project will renovate an existing facility to house equipment used to develop and test techniques for multi-sensor data fusion, single and/or multi-sensor state estimation, signal processing associated with single and/or multi-sensor, optimal resource scheduling, and multiple simultaneous beam-forming phased arrays.

JUSTIFICATION

This additional space is required to house planned CPP equipment (both ADP and Non-ADP). This building will also provide adequate space to conduct briefings and to host working level meetings related to laboratory operations or technology development in proximity to the development activities. These efforts receive approximately $1M annually in direct funding and anticipate additional sponsors and funding since the project is still in the early stages of development.

IMPACT STATEMENT

Without this investment, semi-permanent (relocatables) must continue to house this function. Semi-permanent facilities are cost intensive and conflicts with Dahlgren Division's Capital Investment Plan (CIP).

000354

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 88 TRAFFIC IMPROVEMENTS - DL ROAD-Dahlgren			D. Activity Identification Naval Warfare Center, Dahlgren					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction									240			

Narrative Justification:

DESCRIPTION

This project will make geometric improvements to the Dahlgren Road/Bronson Road area to better handle current traffic requirements.

JUSTIFICATION

The Dahlgren Road is the main entrance into NSWCDD. Dahlgren Road is the primary traffic route for employees, visitors, residents, etc. This project will add a turn lane from Dahlgren Road to Bronson Road. There will also be a right turn lane from Bronson to Dahlgren Road. These improvements will allow the elimination of several stop signs and improve traffic flow in that area. This project is necessary to route traffic in an efficient and safe manner.

IMPACT STATEMENT

Traffic congestion and safety concerns will continue to exist if this project is not completed.

000355

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 89 RENO MOD & 8023 PROD ENGR-Crane				D. Activity Identification Naval Warfare Center, Crane				
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction									200			

Narrative Justification:

DESCRIPTION

This project renovates two existing modular rooms and the Code 8023 Production Engineering room within Bldg 41N to eliminate the safety/fire/environmental hazards.

JUSTIFICATION

There is not a fire escape from modular rooms and there also needs to be a fire wall built which connects to the second story fire escape. Additionally, the existing modular rooms do not permit proper production work flow which reduces efficiency.

IMPACT STATEMENT

Potential for safety incidents and industrial hygiene code violations. Good chance of personnel being injured during a fire.

000356

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 90 EXTEND STEAM DISTRIBUTION-Dahlgren			D. Activity Identification Naval Warfare Center, Dahlgren					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction									155			60

Narrative Justification:

DESCRIPTION

The existing steam generation system at NSWCDD (Dahlgren) has excess capacity and can provide steam to additional facilities. In order to fully utilize the system, the system will be extended to provide service to various buildings such as B183, B411, and B180.

JUSTIFICATION

Steam heat is more cost effective than the current heating methods in those buildings. Since NSWCDD has additional steam heating capability, it will be relatively inexpensive to extend the steam distribution system to additional buildings and to thus decrease overall heating costs.

IMPACT STATEMENT

Without this investment, less cost-effective heating methods will continue to be used. Consequently, utility efficiency savings will not be realized.

000352

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 91 SUPPLY WAREHOUSE BLDG-Port Hueneme			D. Activity Identification Naval Warfare Center, Port Hueneme					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction									30			300

Narrative Justification:

DESCRIPTION

Minor Construction: Construction of 8,000 square feet pre-engineered building (Includes Supervision, Inspection and overhead (SIOH)). The A&E portion in FY 96 and construction in FY 97.

JUSTIFICATION

This construction project was retitled to include requirements for support of warehousing demands. Building for the supply department is critically needed to provide space for project material as stored at PHD. Projects that do not have adequate storage areas are the Passive Counter Measures Systems and efforts for Terrier/Tartar phaseout, Harpoon and AEGIS War Reserve Assets SEATASKS.

IMPACT STATEMENT

New seatasks will have to be canceled and project support cannot be provided to the fleet without additional warehouse space. This project will increase the ability to accept project work without the current concerns of space availability. Leasing space is more costly than procurement and impedes access to materials. An economic analysis addressing all options has been completed and is included.

000358

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 92 B1200 RENOVATIONS-Dahlgren			D. Activity Identification Naval Warfare Center, Dahlgren					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction												300

Narrative Justification:

DESCRIPTION

Building 1200 is a 124,000 gross square foot Computation and Analysis facility built in 1964. This project will alter existing spaces within the facility and upgrade existing HVAC and piping systems.

JUSTIFICATION

These alterations, in conjunction with significant maintenance and repair, will provide a more efficient workspace for a large number of people. By improving the existing large facilities, NSWCDD will be able to consolidate location of people and work; consequently, smaller, less efficient facilities will be demolished.

IMPACT STATEMENT

The renovation of large, permanent facilities will be completed in order to reduce small, cost-intensive facilities, as discussed in the NSWCDD Capital Investment Plan (CIP). If this building is not renovated, smaller facilities and trailers will continue to be used for offices and laboratories, resulting in increased maintenance and utility costs.

000359

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 93 DIVING IN-SERVICE ENGINEERING & DEVELOPMENT BLDG-Dahlgren			D. Activity Identification Naval Warfare Center, Dahlgren					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction												300

Narrative Justification:

DESCRIPTION

A 3500-square-foot engineering facility consisting of a 50 by 70-foot building with a 12-foot eave height. The building will contain a project staging area with a 12-foot high bay rollup door, a clean assembly area and a conference area.

JUSTIFICATION

This project is needed to replace one permanent and three temporary deteriorating structures housing personnel doing in-service engineering and development work on Navy diving systems. Current funding of 6 million dollars per year is expected to grow if current facilities can be made more efficient

and adequate work space provided for the additional work.

IMPACT STATEMENT

Without new facilities, project work will continue to be disjointed and delays will occur due to the non-availability of sufficient work areas. Projected efficiencies resulting from better working conditions will not be achieved.

000360

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)													A. Budget Submission FY 1997 Presidents Budget
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 94 CONSTRUCT WETLANDS AT SEWAGE TREATMENT PLANT-						D. Activity Identification Naval Warfare Center,			
	FY 1994			FY 1995			FY 1996			FY 1997			
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	
Minor Construction												300	

Narrative Justification:

DESCRIPTION

Create/construct wetlands by the Sewage Treatment Plant.

JUSTIFICATION

The creation of wetlands at the proposed site is required as a measure to control or minimize flooding upstream the sewage Treatment Plant. The wetlands will support the Wastewater Treatment Plant by absorbing nutrients found in the wastewater effluents that are discharged into the Potomac River.

IMPACT STATEMENT

This project will improve the Chesapeake Bay by reducing and/or eliminating non-desirable nutrients currently released into the Potomac River. In addition, the project will support the Activity's commitment to improve the water fowl habitat as outlined on the North American Water Fowl Management Plan/Program signed between the Activity and the State of Maryland.

000361

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 95 WEAPONS O/H AREA B-2521-Crane				D. Activity Identification Naval Warfare Center, Crane				
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction												299

Narrative Justification:

DESCRIPTION

This project will provide new lighting (to produce 100 foot candles 30" above the floor), suspended ceiling, noise reduction construction and a new HVAC system with humidity controls.

JUSTIFICATION

The existing lighting is provided by mercury vapor warehouse type lighting at light levels of 40 foot candles at a 30" height causing eye strain problems with the employees. Noise levels are approaching unacceptable levels and are multiplied due to the open design of the area. In addition, in the summer months, the temperature averages 95 degrees with 60% plus humidity levels.

The total of these conditions has a severe impact on the work being performed in the area. High humidity has an adverse affect on the corrosion protection process being performed on unprocessed gun parts. The combination of high humidity and high temperature also produces an atmosphere very disruptive to personnel performance. This, with the low light level problems, results in a substantial reduction in real work performed.

IMPACT STATEMENT

Continued less than optimum work performance. Long term increase in personnel health problems associated with eye strain and heat induced stress.

0003362

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 Presidents Budget					
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 96 AIR EMISSIONS, THREE BOILERS - PHILADELPHIA-Carderock			D. Activity Identification Naval Warfare Center, Carderock					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction												287

Narrative Justification:

DESCRIPTION

This project will install emissions control systems on the existing boiler stacks at the Philadelphia Detachment, Carderock Division, Naval Surface Warfare Center (CARDEROCKDIV, NAVSURFWARCEN).

JUSTIFICATION

The Clean Air Act (Federal Regulation 55620 paragraph 57) regulates ozone emissions. Philadelphia is in a non-attainment area for this pollutant and will be subject to limits on emissions. To attain compliance, a combination of burner control technology and/or stack precipitators or scrubbers will be required.

IMPACT STATEMENT

Failure to fund this project will result in the perpetuation of an existing and potentially dangerous environmental/safety hazard.

000363

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 97 PUBLIC WORKS ADDITION - CARDEROCK-Carderock				D. Activity Identification Naval Warfare Center, Carderock				
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction												275

Narrative Justification:

DESCRIPTION

This project will construct an office addition for the Industrial Codes at Carderock Division, Naval Surface Warfare Center (CARDEROCKDIV, NAVSURFWARCEN).

JUSTIFICATION

The Industrial Shops Department has assumed responsibility for environmental concerns at CARDEROCKDIV. This has resulted in an increase in the environmental staff. Additionally, as CARDEROCKDIV down sizes, the industrial model making shops will be co-located at the Carderock campus. This addition will provide needed office space to accommodate the additional environmental staff and industrial management and administration personnel relocated from the Annapolis Detachment.

IMPACT STATEMENT

Failure to fund this project will result in the inability to meet customer requirements.

000364

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 Presidents Budget					
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 98 B.9 WELDING SHOP ADDITION - CARDEROCK-Carderock			D. Activity Identification Naval Warfare Center, Carderock					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction												275

Narrative Justification:

DESCRIPTION

This project will construct an addition to the Welding Shop at the Naval Surface Warfare Center, Carderock Division. The addition will be serviced by an overhead crane.

JUSTIFICATION

The welding shop currently consists of two sections connected by a small door. It specializes in the weldment of large structural test models often weighing over two tons. Model parts must be moved between sections of the building during the construction process requiring a mobile crane to move the parts around the outside of the building to get from one side to the other. This causes delays to an already heavy workload, subjects the models to risk of damage, and the weld shop personnel to risk of injury. The addition, serviced by an extension of the existing overhead crane, will allow the models to be constructed in only one side of the building eliminating the need for a mobile crane, thus protecting personnel and models from the risk of injury or damage and speeding production.

IMPACT STATEMENT

Failure to fund this project will result in the inability to meet customer requirements.

000365

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 Presidents Budget					
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 99 LSMB PIER-Carderock			D. Activity Identification Naval Warfare Center, Carderock					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction												274

Narrative Justification:

DESCRIPTION

This project will construct a 12-foot wide, 100-foot long, driven piling supported, material/personnel access pier from the lake shore to the Large Scale Model Barge (LSMB) at the Acoustic Research Center (ARD), Carderock Division, Naval Surface Warfare Center.

JUSTIFICATION

The LSMB and Model Support Platform (MSP) are moored approximately 100 feet off shore in Lake Pend Orielle at ARD, Bayview, Idaho. These facilities support a growing number of acoustic silencing research programs involving large scale submarine models. At present, access to these facilities is by an unsupported personnel access gangway. This gangway is too narrow and unsteady for the transfer of large, heavy, or bulky material from the shore to the facilities. Such material transfers must now be accomplished using small watercraft with the attendant risk of loss of material and/or personnel injury. The new pier will provide safe and ready access from the shore to the facilities for both personnel and material.

IMPACT STATEMENT

Failure to fund this project will result in the perpetuation of an existing and potentially dangerous environmental/safety hazard.

000366

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 100 RENO SECURITY COMMUNICATIONS ROOM B-10-Crane			D. Activity Identification Naval Warfare Center, Crane					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction												250

Narrative Justification:

DESCRIPTION

This project provides for the improvement of the Center's Security Communication Facility. As a result of the continued addition of responsibilities, functions and equipment, the facility is no longer adequate for the missions which must be performed. The proposed solution is to relocate the communications room to another area within the 06 Directorate, which would also require major renovations. Included in this are the installation of a raised floor and adequate lighting.

JUSTIFICATION

The current facility was built for Security communications purposes 20 years ago. At the time, very little equipment was required to operate this facility. Basic equipment was the Gamewell System for fire alarms and base radio for communications with fire and guard personnel. Since the construction, numerous changes have occurred in the required equipment and there is not adequate space to house it.

IMPACT STATEMENT

Due to a change in radio frequency assignments, new equipment (which will require additional space) will have to be purchased or our communications ability will be greatly impaired. Also the existing facility does not have adequate air exchanges for proper air quality and poorly located CCTV monitors cause the operators to turn off normal light switches which causes eye strain for normal reading tasks. Also, equipment cables now clutter the floor resulting in a hazard for electrical shock for the operators and maintenance workers.

000367

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 101 RENOVATE B-2084-Crane					D. Activity Identification Naval Warfare Center, Crane			
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction												240

Narrative Justification:

DESCRIPTION

This project provides an area to do missile effectiveness work in two 60 foot long semi-trailers with associated tracking mounts. The trailers will be located inside B-2084.

JUSTIFICATION

The missile effectiveness trailers and mounts are now stored and operated outside. Since the trailers contain a large quantity of electronic equipment, the internal trailer heat and air conditioning have to be run full time to maintain the proper environment. This equipment was not designed for a 24 hours a day, 365 days a year operation. Utilizing it in this way will shorten its life considerably. Inclement weather causes the trailers and mounts to not be used most effectively. Work can only be performed when conditions are suitable.

IMPACT STATEMENT

The air conditioning and heat in the trailers will have to be replaced at frequent intervals or the electronics will have to be replaced.

000368

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 Presidents Budget					
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 102 ROAD CONSTRUCTION-Dahlgren			D. Activity Identification Naval Warfare Center, Dahlgren					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction												240

Narrative Justification:

DESCRIPTION

This project will develop an intersection from Marple Road to Bronson Road. Currently, there is a four-way intersection in which none of the roads line up across from one another. This project will improve the intersection by developing Bronson Road and creating a legitimate geometric intersection for Bronson Road and Marple Road.

JUSTIFICATION

This project is necessary because of the increasing flow of traffic in this area. This project will build an intersection which will give definition to the area to decrease the safety concerns in this area. This area is a high growth area and this project is necessary to properly route traffic. This intersection is a direct route to two of the major tenants at the Dahlgren site: AEGIS Training Center (ATC) and Naval Space Command (NAVSPACOM).

IMPACT STATEMENT

This project has been reviewed by the NSWCDD Traffic Safety Committee. The Committee has agreed that this project is a high priority and the work should be completed. If this project isn't completed, a safety concern will continue to exist.

000369

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 103 STORMWATER SYSTEM-Dahlgren			D. Activity Identification Naval Warfare Center, Dahlgren					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction												229

Narrative Justification:

DESCRIPTION

The investment will install stormwater distribution lines to better control direct stormwater run-off at Dahlgren.

JUSTIFICATION

This project is necessary in order to reduce/control the amount of direct stormwater runoff from NSWCDD. Lines will be built to collect and route the stormwater to the sewage treatment plant for processing. This will decrease the amount of direct water run-off into the Potomac River.

IMPACT STATEMENT

If this project is not completed, NSWCDD will be unable to control additional stormwater runoff associated with the construction on-site.

000370

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 Presidents Budget					
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 104 REPLACE FLASH X-RAY TEST FACILITY-Dahlgren			D. Activity Identification Naval Warfare Center, Dahlgren					
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction												200

Narrative Justification:

DESCRIPTION

Construct a Flash X-Ray Test Facility building approximately 440 sq. ft. in size to replace the existing facility that is inadequate for current requirements. This facility must be constructed to withstand 100 lb. explosive detonation as part of the testing needs.

JUSTIFICATION

Flash X-Ray testing is an integral component of the Dahlgren Division's Warhead Development Program, supporting programs like STANDARD Missile and Insensitive Munitions Advanced Development (IMAD).

IMPACT STATEMENT

The current facility will not be able to support testing much longer unless major renovations are made. As shown in the economic analysis, it will be more costly to repair the existing facility than to construct a new building. Without this facility, the complete spectrum of warhead development will be severely hampered.

000371

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 105 RENOVATE B218-Dahlgren				D. Activity Identification Naval Warfare Center, Dahlgren				
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction												200

Narrative Justification:

DESCRIPTION

Building 218 is a 44,000 gross square foot Research Development Test & Evaluation (RDT&E) facility built in 1942. This building will be altered so that more personnel can be collocated in the building. The project will eliminate many single offices and build generic space that can be used more efficiently.

JUSTIFICATION

These alterations will provide a more efficient workspace for a large number of people. By improving the existing large facilities, NSWCDD will be able to consolidate location of people and work; consequently, smaller, less efficient facilities will be demolished.

IMPACT STATEMENT

As discussed in the NSWCDD Capital Investment Plan (CIP), alterations and renovations will be made to large permanent facilities in order to relocate personnel and functions from small, cost-intensive facilities. This will reduce maintenance and repair costs as well as energy costs. Without this investment, functions and personnel will remain in small, cost-intensive facilities must and efficiency savings will not be realized.

000372

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 106 B152 RENOVATION-Dahlgren				D. Activity Identification Naval Warfare Center, Dahlgren				
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction												200

Narrative Justification:

DESCRIPTION

This project will renovate B152 into office and light laboratory space. This building is currently used as a materials laboratory.

JUSTIFICATION

This project will renovate a large, permanent facility so that research and technology can be accomplished in support of NSWCDD's mission. This renovation is required to enable NSWCDD to perform work in the areas of scientific visualization, virtual reality and computational statistics. This facility will enable scientists and engineers to pool their resources to prevent unnecessary duplication.

IMPACT STATEMENT

Without this project, duplicative efforts and resource purchases will continue to limit the Division's efforts.

000373

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 Presidents Budget								
B. Component/Business Area/Date DON/R&D				C. Line. No & Description - 108 RM&S - 4 >$100,000 Common Support Equipment (CSE) Battery Sytem				D. Activity Identification Naval Warfare Center				
	FY 1994			FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
RM&S										6,583		698

Narrative Justification:
Purpose/Use: This program replaces sealed, lead-acid batteries with main batteries of advanced configurations and purchased from commercial vendors. There are 6,583 battery applications throughout Navy. These include tow tractors, dollies, cranes, power plants air conditioners, hydraulic generators, and floodlights. Status Quo: Current battery technology is less powerful, more difficult to dispose of (acid electrolyes), and is a source of leakage and corrosion. Alternative/Justification: New battery technology will require less maintenance, less need for shipyard battery space, and fewer man-hous to repair corrosions damage and to dispose.

Capital Budget Execution
Department of the Navy
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FY 1997 Presidents Budget, March 1996
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NON ADP EQUIPMENT

PROJECT TITLE	January 1995	Reprogram	March 1996	EXPLANATION
CR-CNC PORTAL-TYPE MACH CTR	1.722	-1.722	0.000	Cut due to BRAC
CR-CNC 4-AXIS MACHING CENTER	0.535	-0.535	0.000	Cut due to BRAC
MISC REPLACEMENT	4.529	0.373	4.902	Scope decreased due to budget cuts - 2429 added due to OSD plus-up of controls
CR - BATTERY TEST SYSTEM	0.000	0.230	0.230	High priority - part of scope moved from FY 97
MISC PRODUCTIVITY	1.303	-0.354	0.949	Scope decreased due to budget cuts and Investment/Expense Threshold
DT-MAGNETIC PHYSICAL MODELING FAC	0.610	0.000	0.610	No change
DT-LARGE SCALE STRUCTURAL MOD TEST	0.300	0.000	0.300	No change
DT-SFDF HIGH PRESSURE AIR SYS UPGRADE	0.300	-0.300	0.000	Cut due to BRAC
MISC NEW MISSION	2.939	-0.622	2.317	Scope decreased due to budget cuts and Investment/Expense Threshold
DA-SPY-1 RF ENVIRONMENTAL SIM	0.190	-0.190	0.000	No change
IH-VOC LAVA MIXER	0.000	0.150	0.150	Emergent environment scrubber project to comply with Maryland Code
MISC ENVIRONMENTAL/SAFETY	1.080	-0.590	0.490	Scope decreased due to budget cuts and Investment/Expense Threshold
NON ADP EQUIP SUBTOTAL	**13.508**	**-3.560**	**9.948**	

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Capital Budget Execution
Department of the Navy
Business Area Research and Development, Naval Surface Warfare Centers
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In Millions

ADP AND TELECOM EQUIPMENT

PROJECT TITLE	January 1995	Reprogram	March 1996	EXPLANATION
DA-ENG. ENV. CAE WS.	0.069	-0.069	0.000	Combined w/ Engineering Environment
DT-HIGH PERFORMANCE VISUALIZATION NET	0.060	0.000	0.060	No change - Multi year project
PH-INTEGRATED SOFTWARE ENG ENVIR	0.360	-0.360	0.000	Deferred until FY 97 to include projects cut from the FY95 program
PH-NETWORK UPGRADE	0.400	-0.160	0.240	Scope of work decreased and reprogrammed into the PHD Paperless Office
DA-NETWORKS	0.000	0.400	0.400	Include in FY 96 budget - project was cut in FY 95
PH-OPTICAL DISK STORAGE-CALS	0.350	-0.200	0.150	Scope of work decreased and reprogrammed into the PHD Paperless Office
PH-REMOTE COMPUTER SYSTEM - CALS	0.300	-0.300	0.000	Deleted and reprogrammed into thePHD Paperless Office Initiative
PH-TRUSTED LAN HUB	0.250	-0.250	0.000	Multi-year project moved to outyears to accommodate PHD Paperless Office
NIMIP EQUIPMENT	3.000	0.000	3.000	No Change
DA-SCIENTIFIC VIS. & VR LAB EQUIP	0.525	0.000	0.525	No Change
DA-ADPT: GEN FAC UPGRADE	0.400	-0.080	0.320	Scope decreased in order to include FY 95 projects
DA-ASW FAC: PERIPHERAL SWITCHES	0.100	-0.100	0.000	Originally moved to Misc - subsequently dropped due to Investment/Expense
CR-CAM SYSTEM	0.125	-0.125	0.000	Cut due to BRAC
DA-CME RSX PROCESSOR UPGRADE	0.175	-0.175	0.000	Deferred until FY 97 to include higher priority projects from FY 95
DA-CORPORATE DATABASE UPGRADE	0.326	-0.176	0.150	Scope decreased in order to include FY 95 projects
DA-CONTRACTS FILING SYSTEM	0.295	0.000	0.295	No change
CR-ENG & TECH WORKSTATIONS	0.155	-0.155	0.000	Deferred until FY 97 to include projects cut from the FY95 program
DA-ENGINEERING ENVIRONMENT	0.060	0.104	0.164	Combined w/Eng Env CAE WS, entire project scope increased
DA-FRONT-END SYSTEMS UPGRADE	0.126	-0.126	0.000	Deferred to outyears to include higher priority projects from FY 95
PH-LIGHTS OUT PGC	0.100	-0.100	0.000	Deferred until FY 97 to include projects cut from the FY95 program
DA-LINKS HARDWARE	0.100	-0.100	0.000	Multi-year project moved to outyears to accommodate higher priority projects
DA-REENTRY SYSTEM SIMULATOR UPGRADE	0.200	-0.200	0.000	Scope decreased, project moved to Misc.<100K
CR-TACTICAL ADVANCED COMPUTER	0.100	0.000	0.100	No change
PH-UNIX WORKSTATIONS	0.107	-0.107	0.000	Deleted and reprogrammed into thePHD Paperless Office Initiative
DA-MODELING & SIMULATION CENTER EQUIP	0.700	0.000	0.700	No change
DA-ADVANCED WEAPONS CONTROL SYS	0.385	0.070	0.455	High priority project, scope of work increased
DA-ALGORITHM DEV. FAC; SGI ONYX COM	0.120	0.120	0.240	High priority project, scope of work increased
DT-CADD II SYSTEMS - DIRECTORATE 90	0.062	-0.062	0.000	Originally moved to Misc - subsequently dropped due to Investment/Expense
PH-CLASSIFIED NETWORK	0.158	-0.158	0.000	Deleted and reprogrammed into thePHD Paperless Office Initiative
DA-CME 3-D GRAPHICS DISPLAY SYSTEM	0.160	0.090	0.250	High priority project, scope of work increased

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DA-CME WORKSTATIONS	0.150	-0.150	0.000	Deleted and partially funded Networks
DA-LAN FIBER BACKBONE	0.200	0.100	0.300	Increased scope for FY 96 - Multi-year High Priority Project
DT-DTNET EXTENSION	0.100	0.000	0.100	No change
DA-LAN OPEN SYSTEMS DATABASE SERVER	0.250	0.000	0.250	No change
DA-LAN PLANT EXPANSION	0.050	-0.050	0.000	Originally moved to Misc - subsequently dropped due to Investment/Expense
PH-SATELLITE DATA NETWORK INTERFACE	0.100	-0.100	0.000	Deferred until FY 97 to include Paperless Office Projects
PH-COMPUTER SECURITY/INTRUSION		0.235	0.235	PHD Paperless Office Initiative Project
PH-DOCUMENT MANAGEMENT SYS		0.300	0.300	PHD Paperless Office Initiative Project
PH-ECO NETWORK UPGRADE		0.400	0.400	PHD Paperless Office Initiative Project
CR-FIBER OPTIC TRUNK/NODAL EQUIP		0.242	0.242	New Project instated out of deleted funds - supports base wide demands
PH-SERVER ARCHITECTURE		0.470	0.470	PHD Paperless Office Initiative Project
DA-TEST&EVAL:FIBER OPTICS REPL.		0.150	0.150	Originally an FY 95 Project - Moved to FY 96 due to Marks in 1995
DA-ENGINEERING LIBRARY		0.220	0.220	Moved from FY97 - Required to meet Fleet demands
DA-CSACT: HI PERFORMANCE GRAPHIC		0.210	0.210	Originally an FY 95 Project - Moved to FY 96 due to Marks in 1995
DA-DIGITAL TECH VAX UPGRADE		0.249	0.249	Originally an FY 95 Project - Moved to FY 96 due to Marks in 1995
CR-EQUIPMENT FOR JLSC		0.400	0.400	Moved from Misc
MISC PRIOR TO EXPENSE THRESHOLD CHANGE	1.084			
SUBTOTAL MISC ADP AND TELECOM EQUIP	11.202	**0.457**	**10.575**	

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SOFTWARE DEVELOPMENT

PROJECT TITLE	January 1995	Reprogram	March 1996	EXPLANATION
DA-CORPORATE DATABASE UPGRADE	0.324	-0.174	0.150	Scope decreased after BRAC cuts
DA-FRONT-END SYS UPGRADE	0.124	-0.124	0.000	Deleted after BRAC cuts
DA-ADMINISTRATIVE COMM	0.050	-0.050	0.000	Originally moved to FY 97 - Subsequently fell out due to Investment/Expense
NIMIP (SOFTWARE)	1.754	0.000	1.754	No change
PH-EMAIL STABILIZATION	0.000	0.060	0.060	Moved from miscellaneous
SUBTOTAL SOFTWARE DEVELOPMENT	**2.252**	**-0.288**	**1.964**	

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MINOR CONSTRUCTION

PROJECT TITLE	January 1995	Reprogram	March 1996	EXPLANATION
CR-2500 KVA SUBSTATION IN A	0.250	-0.250	0.000	Cut due to BRAC
DA-B152 RENOVATIONS	0.200	-0.200	0.000	Scope moved FY 97 to fund emergent requirements
PH-MISSILE DATA SYSTEM LAB BUILDING	0.030	-0.030	0.000	Scope moved FY 97 to fund emergent requirements
PH-PORTABLE ACQUISITION SYS LAB	0.030	-0.030	0.000	Scope moved FY 97 to fund emergent requirements
DA-EXTEND STEAM DISTRIBUTION	0.215	-0.060	0.155	Decreased to fund higher priority projects, additional scope added to FY 97
DA-RENOVATE B218	0.300	-0.300	0.000	Scope moved FY 97 to fund emergent requirements
DA-TTSP FACILITY	0.290	-0.017	0.273	Original scope of work was reduced
IH-CONSTRUCT ADDITION TO B.521	0.250	-0.250	0.000	Deleted to fund higher priority emergent requirements
DT-FIAL MODIFICATIONS	0.285	0.000	0.285	No change
DT-FUEL CELL R&D LABORATORY	0.226	-0.226	0.000	Cut due to BRAC
DT-RIMS OPERATIONS BUILDING	0.300	0.000	0.300	No change
DT-ABRASIVE BLAST FACILITY	0.290	0.000	0.290	No change
DT-FIRE PROTECTION	0.250	-0.250	0.000	Deleted to fund higher priority emergent requirements
DT-INTEGRATED SITE ALARM SYS	0.277	0.000	0.277	No change
CR-OFFICES FOR ENGR MISSILE BRANCH	0.260	-0.260	0.000	Reprogrammed to partially fund the Hazardous Material Warehouse
CR-RENO MOD & 8023 PROD ENGR	0.200	0.000	0.200	No change
DA-STORMWATER SYS	0.100	-0.100	0.000	Moved to FY 98 after BRAC cuts to fund higher priority projects
DA-TRAFFIC IMPROVEMENTS - DL ROAD		0.240	0.240	Required to route traffic safely
PH-ADDITION TO BLDG 452		0.300	0.300	Emergent project to consolidate from mobile office space
PH-SUPPLY WAREHOUSE BLDG A&E		0.030	0.030	A&E costs for NSWCDD efforts to consolidate into more efficient facilities
CR-HAZARDOUS MATERIAL WAREHOUSE		0.299	0.299	Emergent requirement cited by CNO
Miscellaneous minor construction	1.685		1.619	Pprojects fell out due to Investment/Expense
SUBTOTAL MINOR CONSTRUCTION	**5.438**	**-1.104**	**4.268**	

	January 1995	Reprogram	March 1996
FY96 TOTALS	**32.400**	**-4.495**	**26.755**

0003?3

DEPARTMENT OF THE NAVY
DEFENSE BUSINESS OPERATIONS FUND
NAVAL UNDERSEA WARFARE CENTER

Activity Group Function:

The mission of the Naval Undersea Warfare Center (NUWC) is to be the full spectrum research, development, test and evaluation, engineering and fleet support center for submarines, autonomous underwater systems, submarine offensive and defensive weapon systems associated with submarine warfare.

Activity Group Composition:

The Naval Undersea Warfare Center was established in January 1992, and is comprised of two divisions located in Newport, RI and Keyport, WA and several detachments of these organizations. The Center Management organization is located at Newport RI. All NUWC organizations are included in the Defense Business Operations Fund (DBOF).

Financial Profile:	FY 1995	FY 1996	FY 1997
Costs of Goods Sold	$1,029.6	$915.8	$856.4
Net Operating Results	$14.2	$15.9	-$4.5
Accumulated Operating Results	-$11.4	$4.5	0

Costs have been decreasing commensurate with workload. Net Operating Results reflect revenue less expense plus the AOR recoupment factor.

Workload:	FY 1995	FY 1996	FY 1997
Direct Workyears (including Overtime)	4,150	3,922	3,543
Total Workyears (less Overtime)	6,279	5,809	5,266
Customer Orders ($ thousands)	$974.6	$802.5	$715.9

NUWC's resource management policy is centered on workload. A firm workload baseline is established during the budget process. Actual funding as reflected in the appropriation budgets (OP-32 and P-32 exhibits) and POM data was used to develop workyear and funding data portrayed in this budget submission.

Consistent with the overall reductions in the Department of Defense, NUWC will continue to see a general decline in workload and continue to downsize. The volatility of the current environment with regard to realignments, consolidations, strategy and program changes introduces a significant degree of change. The fiscal realities have resulted in our adapting and restructuring to balance resources with productive work and maintain competitive costs. For example, the center will have downsized 2,731 people as of 30 September 1997 compared to FY 1992's beginning on board count of 7,753 people - a controlled 35 percent reduction.

Performance Indicators:	FY 1995	FY 1996	FY 1997
Productive Ratio	68.8	70.8	70.4
Overhead Rate ($ per direct labor hour)	$38.66	$37.70	$39.24
Total cost per direct labor workyear ($thousands)	$164.5	$166.1	$171.7

Above are a sample of the performance indicators used by NUWC. The increase in overhead cost reflected in the overhead rate declines from FY 1995 to FY 1996 and increases less than inflation from FY 1996 to FY 1997. The cost per direct labor workyear is total cost less direct contract expenses divided by total direct workyears.

Customer Rate Changes:	FY 1996	FY 1997
Stabilzed Customer Rate	$70.00	$67.88
Stabilized Rate Change	8.0%	-3.1%
Composite Rate Change	5.9%	-.2%

The stabilized billing rate consists of direct labor and applied overhead. All remaining direct costs are billed on a 100% reimbursable basis. The composite rate shown above incorporates both the stabilized and non-stabilized parts of the budget. In FY 1996, a surcharge for the Joint Logistics Systems Center (JLSC) and a AOR recovery factor were included in the stabilized rates. Costs alone increased only 1.6 percent. The FY 1997 rate does not include a JLSC surcharge and costs alone increase by 2.4 percent in FY 1997.

Unit Costs:	FY 1995	FY 1996	FY 1997
$ per direct labor hour	$72.04	$71.66	$74.54

The unit cost per direct labor hour includes direct labor plus production and general overhead.

Staffing:	FY 1995	FY 1996	FY 1997
Civilian End Strength	6,115	5,579	5,022
Civilian Work Years	6,279	5,808	5,265
Military End Strength	149	105	54
Military Work Years	232	105	59

Civilian staffing reductions of -1.8%, -7.5% and 9.3% in FY 1995, FY 1996 and FY 1997 respectively reflect NUWC efforts to balance staffing to workload. Military staffing reductions reflect civilianization of the support areas. Nearly all range craft operations at NUWC Keyport will be run by contractor personnel by the end of FY 1997.

Headquarters Cost:	FY 1995	FY 1996	FY 1997
Cost of Management Headquarters ($ millions)	3.0	2.9	2.8

Headquarters management staff is right sized in proportion to the rest of the warfare center.

Capital Budget Authority:	FY 1995	FY 1996	FY 1997
Equipment-Non ADPE/TELECOM	8.3	12.2	9.7
ADPE/Telecommunications Equipment	7.4	6.7	9.8
Software Development	0	0	0
Minor Construction	1.6	1.8	2.7
Reliability, Maintainability, and Supportability Modifications	0	0	0
Total ($millions)	17.3	20.7	22.2

All NUWC projects including new requests fall within the Center's mission areas. Several projects (i.e., Littoral Undersea Warfare Complex) are requested so that the center can address new emerging mission requirements. Other projects (Submarine Sensor Test Platform (SSTP) are requested to address environmental requirements. The NUWC overhead budget reflects the depreciation cost of these projects. All projects are cost effective and economically feasible.

Economies and Efficiencies:

Since FY 92, NUWC funding and staffing reductions meet or exceed Navy averages and this has been accomplished while preserving our core capability and while continuing to satisfy customer requirements. Among the specific actions to lower costs and promote efficiencies are:

- Reduction of overhead staff as a percentage of total workforce,
- Managing direct workyear performance by setting productivity goals. NUWC's productive ratio has improved each year since establishment of the Warfare Center,
- Participation in the DoD Travel Re-engineering program in order to accomplish mission at less cost,
- Outsourcing those tasks that provide best value for Navy customers, and
- Participating in the D0D reinvention laboratory program (designated in FY 96) and actively pursuing waivers to effect significant savings.

R&D - NAVAL UNDERSEA WARFARE CENTER
REVENUE AND EXPENSES
(Dollars in Millions)

	FY 1995	FY 1996	FY 1997
Revenue:			
Gross Sales			
Operations	1,028.4	914.5	834.8
Capital Surcharge	0.0	12.8	0.0
Depreciation except Maj Const	15.1	17.2	17.1
Major Construction Depreciation	0.0	0.0	0.0
Other Income	0.0	0.0	0.0
Total Income	**1,043.5**	**944.5**	**851.9**
Expenses:			
Cost of Materiel Sold from Inventory			
Negotiated Purchases from Customers			
Transportation	1.5	1.6	1.6
Salaries and Wages:			
Military Personnel	6.7	4.0	2.9
Civilian Personnel	374.9	364.5	344.9
Materials, Supplies and			
Parts used in Operations	106.4	86.7	80.6
Facility Repair Charge	8.5	23.5	10.1
Depreciation - Capital	15.1	17.2	17.1
Contracted Engineering Services	80.6	75.5	73.2
Lease Costs	8.8	8.4	8.5
Purchased Utilities	17.5	17.5	17.1
Purchased Communications	9.1	9.4	8.9
Equipment Maintenance	11.7	11.0	10.1
Fuel	2.9	2.5	2.6
Other Expenses	386.0	294.0	278.7
Total Expenses	**1,029.6**	**915.8**	**856.4**
Operating Result	13.9	28.7	(4.5)
Less Capital Surchg Reservation	0.0	12.8	0.0
Plus Appropriations Affecting NOR/AOR	0.0	0.0	0.0
Other Changes Affecting NOR/AOR	1.9	0.0	0.0
Net Result	15.8	15.9	(4.5)
Prior Year AOR	(27.2)	(11.4)	4.5
Accumulated Operating Result	**(11.4)**	**4.5**	**0.0**

R&D - NAVAL UNDERSEA WARFARE CENTER
SOURCE OF REVENUE
(Dollars in Millions)

	FY 1995	FY 1996	FY 1997
1. New Orders	974.6	802.5	715.9
a. Orders from DoD Components	874.6	710.3	623.1
Department of the Navy	853.9	652.6	608.7
Operations and Maintenance, Navy	185.4	146.5	151.0
Operations and Maintenance, Marine Corps	0.0	0.1	0.1
O&M, Navy Reserve	0.7	0.2	0.2
O&M, Marine Corps Reserve	0.0	0.0	0.0
Aircraft Procurement, Navy	25.7	3.8	4.7
Weapons Procurement, Navy	146.0	89.3	67.9
Shipbuilding & Conversion, Navy	68.5	49.7	45.7
Other Procurement, Navy	122.4	108.0	108.7
Procurement, Marine Corps	0.5	0.5	0.4
Family Housing, Navy and Marine Corps	0.0	0.0	0.0
Research, Development, Test & Eval, Navy	304.6	254.6	230.0
Military Construction, Navy	0.0	0.0	0.0
Other Navy Appropriations	0.1	0.0	0.0
Other Marine Corps Appropriations	0.0	0.0	0.0
Department of the Army	4.9	4.0	3.6
Army Operation & Maintenance Accounts	4.3	3.0	2.7
Army Res, Dev, Test & Eval Accounts	0.6	1.0	0.9
Army Procurement Accounts	0.0	0.0	0.0
Army Other	0.0	0.0	0.0
Department of the Air Force	0.5	0.6	0.6
Air Force Operation & Maintenance Accounts	0.1	0.0	0.0
Air Force Res, Dev, Test & Eval Accounts	0.4	0.5	0.4
Air Force Procurement Accounts	0.1	0.1	0.1
Air Force Other	0.0	0.0	0.0
DoD Appropriated Accounts	15.3	53.2	10.2
Base Closure and Realignment	11.3	49.6	6.8
Operation & Maintenance Accounts	1.0	0.5	0.4
Res, Dev, Test & Eval Accounts	2.8	2.7	2.5
Procurement Accounts	0.1	0.5	0.4
DoD Other	0.0	0.0	0.0
b. Orders from DBOF Business Areas	58.5	48.7	47.0
c. Total DoD	933.1	759.1	670.2
d. Other Orders	41.5	43.4	45.8
Other Federal Agencies	1.6	1.9	1.8
Foreign Military Sales	33.8	38.2	41.3
Non Federal Agencies	6.1	3.2	2.7
2. Carry-In Orders	635.6	566.6	424.5
3. Total Gross Orders (available funding)	1,610.1	1,369.0	1,140.4
4. Carry-Out Orders	566.6	424.5	288.5
Change in Backlog (carry-out less carry-in)	(69.0)	(142.1)	(136.0)
5. Total Gross Sales	1,043.6	944.5	851.9

R&D - Naval Undersea Warfare Center
Changes in the Costs of Operations
(Dollars in Millions)

	Costs
FY 1995 Actual	1,039.5
FY 1996 President's Budget	897.2
Pricing Adjustments	
a. Decline in Escalation	(3.2)
Other Changes	
a. Depreciation	(3.0)
b. BRAC IV	23.8
c. Refined Labor re-pricing	0.9
FY 1996 Revised Estimate	915.8
Pricing Adjustments	
a. Civilian Labor	
1. Annualization of Payraise	2.3
2. Current Payraise	8.1
b. Materials and Supplies	2.7
c. DBOF Purchases	0.4
d. Other Purchases	8.0
e. Military Labor	0.1
Program Changes	
a. Workload	
1. Direct Workyear Changes	(16.6)
2. Overhead Workyear Changes	(4.0)
b. Direct Program Changes	
1. Contracts	1.6
2. Civilianization of Military	(1.2)
Other Program Changes	
a. Depreciation	(0.2)
b. CPP Efficiencies	(6.1)
c. Overhead Efficiencies	(9.6)
d. BRAC related cost	(43.0)
e. Separation Incentive Pay	0.4
f. Deferred Maintenance	(2.4)
FY 1997 Current Estimate	856.4

R&D CAPITAL BUDGET SUMMARY
Department of the Navy
R&D/NAVAL UNDERSEA WARFARE CENTER
March 1996
($ in Millions)

LINE #	ITEM DESCRIPTION	FY 1995 QUAN	FY 1995 TOTAL COST	FY 1996 QUAN	FY 1996 TOTAL COST	FY 1997 UAN	FY 1997 TOTAL COST
	1. Non ADP Equipment						
	a. Productivity (Major)						
L002	Intrusion Detection System (IDS) (Productivity)	1	.055	1	.200	1	.200
L198	High-bandwidth Test Data Transmission (Productivity)					1	.700
L082	Tow Body Sled (Productivity)	1	.500				
	Productivity Non ADP Equipment (Minor)	9	1.598	7	.991	9	1.652
	b. Replacement (Major)						
L005	Submarine Sonar Advanced Concept Evaluator (Replacement)	1	.452				
	Replacement Non ADP Equipment (Minor)	2	.791	5	.644	4	1.055
	c. Environmental (Major)						
L181	SSTP Track Installation (Environmental)	1	.495	1	.500	1	.500
L086	Transducer & Hull Array Lab Upgrade (Environmental)	1	.097	1	.440	1	.480
	Environmental Non ADP Equipment (Minor)	7	.859	5	.760	3	.425
	d. New Mission (Major)						
L182	P105 Tapered Anechoic Chamber (New Mission)			1	.950		
L183	Littoral Undersea Warfare Complex Improvements (New Mission)			1	3.530	1	1.800
L087	Towed and Deployed Sensor Lab Upgrade (New Mission)	1	.155	1	.625	1	.505
L013	Small Launcher Test Facility (New Mission)	1	.485	1	.200		
L088	Standard Submarine Radio Room (SSRR) Integration Fac (New Mi	1	.394	1	.310	1	.350

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R&D CAPITAL BUDGET SUMMARY
Department of the Navy
R&D/NAVAL UNDERSEA WARFARE CENTER
March 1996
($ in Millions)

LINE #	ITEM DESCRIPTION	FY 1995 QUAN	FY 1995 TOTAL COST	FY 1996 QUAN	FY 1996 TOTAL COST	FY 1997 UAN	FY 1997 TOTAL COST
L090	Submarine Sail Measurement Platform (New Mission)	1	.149	1	.500	1	1.000
L089	Submarine Image Transmission Laboratory (New Mission)	1	.200	1	.450		
L091	Deep Depth Large Diameter Pressure Vessel (New Mission)	1	1.064				
	New Mission Non ADP Equipment (Minor)	5	.990	7	2.101	3	1.009
	Total Non ADP Equipment	**34**	**8.284**	**34**	**12.201**	**27**	**9.676**
	2. ADP & Telecommunications Equipment						
	a. Other Computer & Telecommunications Support Equip (Major)						
L056	CASS Support Test Program Sets (Productivity)		.325				
L069	Material Inventory Management System (Productivity)	1	.202	1	.173		
L073	Digital Test Program Sets Development HW/SW (Productivity)	1	.200				
L077	Network Equipment Upgrade (Productivity)	1	.343				
L018	Acoustic Measurement/Underwater Range Proofing Sys (Productivi	1	.650				
L094	Central Archival System (Productivity)	1	.098				
L123	Computer Aided Process Planning (Productivity)			1	.250		
L124	Interactive Electronic Technical Manuals (Productivity)			1	.200		
L125	Hydrographic Dynamic Simulator (Productivity)			1	.150		
L129	Upgrade Test Data Analysis Platforms (Productivity)					1	.500
L186	Simulation Based Design (Productivity)					1	.225
L187	Sub Sonar Dev. & Evaluation (SSDEC) (Productivity)			1	.800	1	.800
L130	Range Data Consolidation/Collection System (Productivity)					1	.300
L061	Undersea Synthetic Environments Concept (Productivity)	1	.305	1	.450	1	.130
L204	Data Systems Integration (Productivity)			1	.840	1	.520
L205	Centralized Real-time Test Data Processing System (Productivity)			1	.400	1	.500

000387

R&D CAPITAL BUDGET SUMMARY
Department of the Navy
R&D/NAVAL UNDERSEA WARFARE CENTER
March 1996
($ in Millions)

LINE #	ITEM DESCRIPTION	FY 1995 QUAN	FY 1995 TOTAL COST	FY 1996 QUAN	FY 1996 TOTAL COST	FY 1997 UAN	FY 1997 TOTAL COST
L206	COTS Supportability Planning Tools (Productivity)					1	.175
L190	Financial MIS (Productivity)					1	.330
L207	RIDC Upgrades (Productivity)					1	.500
L191	Automated Purchasing Process (Productivity)					1	.110
L208	On-line Databases for Technical Test Data (Productivity)					1	.200
L209	Depot Test Equip. Software & Interface Hardware (Productivity)					1	.445
L193	Advanced Attack Center Test Bed (Productivity)					1	.460
L210	COTS Obsolescence Management Tools (Productivity)					1	.150
L211	Building Fiber Optic Cable Plants (Productivity)					1	.180
L212	Tracking Receiver Equipment (DSP) (Productivity)					1	.490
L213	CAE System Upgrades (Productivity)					1	.400
L214	Coordinate Measuring Machine Upgrade (Productivity)					1	.130
L215	CAD/CAM/CAE (Productivity)					1	.200
L216	Project Enterprise (Productivity)					1	.500
L218	OMS Re-engineering Project (Productivity)					1	.500
L219	Comp. Aided Proc. Plan (CAPP)/EDI Enhance Sys. (Productivity)					1	.300
L220	CAD/CAE Workstations (Productivity)					1	.329
L064	NUWC Information Technology Improvement Program (Replacem	1	2.130	1	.520		
L030	Replacement of Central Scientific and Engineering Computers (Rep	1	.323	4	.882	1	.181
L096	Integrated Library System Expansion (Replacement)	1	.056				
L097	Antenna Range Modernization (Replacement)	1	.413	1	.291	1	.555
L072	Computer Aided Manufacture and Design (Replacement)			1	.190		
L075	ATE System Upgrade (Replacement)			1	.190		
L129	T&E Support Anomaly Correction (Replacement)			1	.120		
L147	Material Control System Replacement (Replacement)			1	.490		
L023	Undersea Warfare Systems Analysis Project (UWSAP) (New Missi	1	.751	1	.770	1	.675

000388

R&D CAPITAL BUDGET SUMMARY
Department of the Navy
R&D/NAVAL UNDERSEA WARFARE CENTER
March 1996
($ in Millions)

LINE #	ITEM DESCRIPTION	FY 1995 QUAN	FY 1995 TOTAL COST	FY 1996 QUAN	FY 1996 TOTAL COST	FY 1997 UAN	FY 1997 TOTAL COST
L046	Submarine Sonar Performance Analysis Laboratory (New Mission)	1	.250				
L099	Iris Workstations (New Mission)	1	.155				
L100	Secure Network Management Center (New Mission)	1	.039				
L102	ESM Test Bed (New Mission)	1	.353				
L103	Worldwide Portable Satellite Communications System (New Missio	1	.230				
L104	Simulation Server Project (New Mission)	1	.170				
L105	Multi-Weapon Real Time Recording Project (New Mission)	1	.113				
	Other Computer & Telecommunications Support Equip (Minor	5	.283				
	Total ADP & Telecommunication Equipment	**57**	**7.389**	**53**	**6.716**	**54**	**9.785**
	3. Off The Shelf Software						
	a. Off The Shelf Software (Major)						
	b. Off The Shelf Software (Minor)						
	Total Off The Shelf Software						
	4. Minor Construction						
	a. Productivity						
	b. Replacement						
	c. Environment			1	.300		

UC DBOF EXHIBIT 9A

000389

R&D CAPITAL BUDGET SUMMARY
Department of the Navy
R&D/NAVAL UNDERSEA WARFARE CENTER
March 1996
($ in Millions)

LINE #	ITEM DESCRIPTION	FY 1995 QUAN	FY 1995 TOTAL COST	FY 1996 QUAN	FY 1996 TOTAL COST	FY 1997 UAN	FY 1997 TOTAL COST
	Minor Construction (Minor)		1.635	13	1.514		2.755
	Total Minor Construction		**1.635**	**14**	**1.814**		**2.755**
	Grand Total Capital Purchase Program		**17.308**		**20.731**		**22.216**
	9. Major Construction (MILCON)						
	Major Construction (MILCON) Total						

UC DBOF EXHIBIT 9A

Note: The existing categories for Capital Purchases are Productivity, Replacement, Environment, and New Mission. There is no existing category that describes assets being acquired strictly to support R&D within our existing mission areas. It is critical for NUWC, a Research and Development Activity, to acquire and develop assets that fully exploit new technology. Some projects listed on our exhibit have been categorized as "New Mission".

000390

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996				C. Line No. & Item Description L002 INTRUSION DETECTION SYSTEM				D. Activity Identification NUWC Division, Newport	
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Intrusion Detection System			45			200			200

Narrative Justification:

The Intrusion Detection System (IDS) is an integrated security management system which is being installed throughout the Naval Undersea Warfare Center (NUWC) Division, Newport. The system is a computerized, menu driven alarm and access control monitoring system which will reduce/ replace the contractor guard force personnel and meet the minimum physical security requirements specified in OPNAVINST 5530.14B. The system is capable of handling 258 card readers, 21,000 cardholders, and 64 access groups to provide superior protection of restricted areas. The system can also be used to monitor over 2,000 alarms or environmental sensors for building management control. In addition, closed circuit televisions will be installed to monitor activity at strategic locations throughout the Division.

Without the Intrusion Detection System (IDS), NUWC Division, Newport can not attain an improved security posture and make significant reductions in overhead costs. This system will provide improved access control, intrusion detection, surveillance and record keeping that is essential to the protection of NUWC resources. After hours security inspections by contractor guards would continue to be totally reliant on on-site personnel rather that IDS support.

If not installed, NUWCDIVNPT will maintain two different types of Intrusion Detection Systems. One being totally antiquated requiring continuous maintenance and adjustments by IDS maintenance personnel; and the other a state-of-the-art Intrusion Detection/Access control system requiring little maintenance.

The installation of the IDS will result in substantial cost savings to NUWC by dramatically reducing the need for guard for services at remote locations.

An economic analysis was performed on this project indicating a net present value of $1,529 thousand after 10 years, a payback period of 1.73 years, and a benefit/investment ratio of 3.82.

000391

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996				C. Line No. & Item Description L198 HIGH-BANDWIDTH TEST DATA TRANSMISSION			D. Activity Identification NUWC Division, Keyport		
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
High-bandwidth Test Data Transmission							1	700	700

Narrative Justification:

Provide high-bandwidth data transmission capabilities between Northwest range sites and centralized data processing and analysis systems at Keyport to support "same day" processing of all range/test data. This will be done by (a) increasing existing data link capacity from Pacific Northwest fixed range/test sites to support real-time and/or immediate post-test transfer of acoustic, target, weapon internal, and all other test data acquired; and (b) employing satellite link technology to provide comparable capabilities from remote range/test sites. A real-time capability to produce processed test results will eliminate two to five days of waiting by test engineers and allow them to proceed on further work. Need for increased productivity is also driven by a combination of increasing technical complexity of weapon performance assessments and decreasing numbers of units tested.

000392

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996				C. Line No. & Item Description L181 SSTP TRACK INSTALLATION			D. Activity Identification NUWC Division, Newport		
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
SSTP Track Installation	1		495	1		500	1		500

Narrative Justification:

The Submarine Sensor Test Platform (SSTP) provides a unique, over-water test range to support design, test and evaluation of existing and new electromagnetic and electro-optical submarine sensors. Leadership in this area of research and development is unique to the Naval Undersea Warfare Center Division Newport. The facility is vital for the development of new submarine sensors operating at or above the ocean surface. For future submarines, the SSTP will be used for development and testing of antenna systems, periscope systems, and electro-optical sensors. Specific programs which will utilize the SSTP facility include: the OE-XXX program which is the replacement to the AN/BRA-34 multifunction antenna, the Radar Cross Section Reduction program, the IEM program which is the replacement program for the AN/BRD-7 and AN/BLD-1, and the High Data Rate Antenna System. These programs are under development for use on the SEAWOLF and the NSSN submarines. Without the SSTP, systems can only be tested aboard operational submarines. Using the SSTP provides the facility to gather critical open ocean test data while avoiding costly submarine alterations and sea testing. This saves the Navy over $640 thousand annually. The SSTP currently requires modifications to eliminate a major environmental problem. The dragging of the SSTP skid onto the beach has created shoreline erosion. The erosion problem has stopped the use of the SSTP facility. Division Newport has invested over $4 million into the SSTP facility. The additional FY95 and FY96 CPP will allow the Division to install a track system to correct the erosion problem and to resume SSTP test operations. NUWC Division Newport must continue to be a source for world class undersea warfare engineering facilities to assure organizational viability and quality Navy products. The SSTP facility provides a critical element for maintaining our leadership in the area of submarine electro-optic systems and electromagnetic systems.

The SSTP Track Installation project is necessary to comply with environmental regulations, so an economic analysis is not an effective measure for CPP funding.

000393

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996				C. Line No. & Item Description L086 TRANSDUCER & HULL ARRAY LAB UPGRADE			D. Activity Identification NUWC Division, Newport		
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Transducer & Hull Array Upgrade			97			440			480

Narrative Justification:

The Naval Undersea Warfare Center is responsible for work under its leadership areas of submarine combat systems and submarine sonar systems. To fulfill our mission, Newport Division has become preeminent in many key disciplines. These Navy unique scientific and technical areas constitute the Division Spheres of Excellence. One of the Division areas of expertise under the Spheres of Excellence is Acoustic Sensors, Transducers, and Arrays. To continue to work and to fulfill the NUWC missions, the existing laboratory must be updated.

NUWC must maintain its transducer technology expertise in order to provide the most advanced, compatible, efficient, and cost effective sensors for submarine systems of the future. The Transducer and Hull Array Lab is used for the design and development of transducers and arrays for future sonar systems. The lab is a totally integrated transduction research, development and engineering operation. The operation supports theoretical modeling, design, prototyping, test and analysis of sonar transducers and arrays. One part of this facility is a chemistry lab. Certification for hazardous materials and hazardous waste is required for the operation of the lab. Currently, to comply with state pollution requirements, this certification is performed by outside contractors. The upgrade to this lab will position NUWC as a site which can perform state certification for hazardous materials. The laboratory instruments used for certification are calibrated, and will be used for environmental analysis as well as on-going R&D tasks.

This project is being pursued for new mission reasons for NUWC Division Newport, and for compliance with environmental reasons to continue work on this new technology.

000394

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996				C. Line No. & Item Description L182 P105 TAPERED ANECHOIC CHAMBER			D. Activity Identification NUWC Division, Newport		
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
P105 Anechoic Chamber				1		950			

Narrative Justification:

The Submarine Electromagnetic Systems Department will be moving from New London, Connecticut to Newport, Rhode Island in FY96 as a result of BRAC decisions. Building P105 is a Newport MILCON to house the transferring department. As part of the MILCON a state-of-the-art Anechoic Chamber is being constructed to provide the Department with a facility to allow performance of radiation pattern, gain, impedance, and radar cross section measurements. These measurements are critical to the design and development of antenna systems for the Navy submarine force. This project will be used to procure the internal and external instrumentation necessary to fully utilize the new anechoic chamber. The anechoic chamber instrumentation will provide a data collection system which will store and analyze antenna parameters for design of current and future systems. At the current site in New London, an anechoic chamber is being used. However, the new anechoic chamber requires new, advanced instrumentation to fulfill the requirements for fully utilizing the new facility. The new anechoic chamber is designed to cover a wide frequency range to accommodate the development of antenna systems of the future. The new instrumentation will cover this range, but also be standardized so that measurement information can be ported to other analysis systems and facilities.

At sea testing does not provide a cost effective platform for antenna development. Frequent physical changes to the antenna construction during the design phase would be impractical aboard a submarine because of the logistics involved in removing the antenna from its radome in the sail. The anechoic chamber will provide a controlled environment where design changes can be easily implemented.

The availability of a measurement facility where speedy evaluation of antenna candidates can be performed is critical to the development of high data rate communications for submarines, insuring the submarines interoperability with the battle groups.

An economic justification for this project is invalid due to the new mission requirements of future submarine communication systems which this project will fulfill.

000395

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996				C. Line No. & Item Description L183 LITTORAL UNDERSEA WARFARE COMPLEX IMPROVEMENTS			D. Activity Identification NUWC Division, Newport		
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Littoral Undersea Warfare Complex						3530			1800

Narrative Justification:

The Naval Undersea Warfare Center (NUWC) Division, Newport assumes responsibility for leadership in the area of tactical undersea ranges. The Littoral Undersea Warfare Complex project will be an integral part of a system to test and evaluate weapon, and Unmanned Undersea Vehicles (UUV) in a littoral environment close to Division Newport and East Coast submarine ports. The unmanned remote control land station will provide transmission of test data from littoral sensors to Division Newport laboratories for analysis.

During the design, development and testing of weapons systems, and UUVs, in-water tests must be performed to verify and confirm design modifications. Currently, these tests must be conducted at littoral range sites which are located far from the Division laboratories. This involves days of travel times for scientists and engineers, as well as vehicle shipping, with risk of damage to the million dollar systems. This also involves the use of expensive range personnel and resources. The Littoral Undersea Warfare Complex will provide an unmanned remote data collection site which can be utilized for littoral in-water tests of NUWC Division Newport weapon systems. The location of the littoral complex is such that transportation of the test system to the test area can be quickly accomplished by utilizing the Groton Submarine Base.

CPP funding of this project will save on travel time and expenses for NUWC Division Newport personnel. Without this project, personnel will continue to travel to perform necessary littoral in-water testing, thereby adding cost to system development, as well as possible delays in systems development.

An economic analysis was performed on this project indicating a net present value of $17,985 thousand in ten years. The payback on this project is 1.97 years with a benefit/investment ratio of 3.37. This project is expected to save NUWC and the Navy over $2.5 million annually due to 24 hour/day remote operators (Personnel/contractor salaries and equipment leasing savings) and travel expenses.

000396

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996				C. Line No. & Item Description L087 TOWED & DEPLOYED SENSOR LAB UPGRADE				D. Activity Identification NUWC Division, Newport	
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Towed & Deployed Sensor Laboratory Upgrade			155			625			505

Narrative Justification:

The future of the Navy has shifted directions in the recent past, and the research being conducted at NUWC Division Newport in submarine sensors is shifting to stay abreast with the new Navy direction. The future Naval missions are expected to be conducted in shallow littoral waters. This will require that new sensors be developed to meet the new challenges of this mission. Not only is the mission changing, but the budget is decreasing. This also adds to the challenges in sensor research.

The Towed and Deployed Sensor Lab Upgrade will help position NUWC to meet these new challenges. The lab will provide the capabilities necessary for designing ultra-thin, ultra compact acoustic arrays. These special size requirement must be met for shallow water missions. New sensors and arrays must be low cost, and expendable. This lab will enable researchers to guarantee that the future of submarine sensors will be low cost, as well as adaptable and common across platforms and missions. Finally, this lab upgrade will provide NUWC with the capability to conduct towed array laboratory testing while avoiding costly at-sea testing.

Although this project will provide NUWC Division Newport with a new capability, it will result in savings for the Navy by providing a test facility for towed systems which were previously tested for the first time when they went to sea for use. The economic analysis performed on this project indicates a net present value of $8,591 thousand after 10 years with a payback in less than a year.

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996				C. Line No. & Item Description L013 SMALL LAUNCHER TEST FACILITY				D. Activity Identification NUWC Division, Newport	
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Small Launcher Test Facility			485			200			

Narrative Justification:

The Launcher and Missile System Department of NUWC Division, Newport is responsible for the research and development of advanced submarine and surface ship weapon handling, launcher and missile technology. A major objective is to reduce the size and weight of launchers, while realizing maximum efficiency and safety.

The small launcher test facility will be developed to design, procure and install a facility for conducting test and evaluation of internal or external small launcher prototypes. The facility will be capable of providing either actual device or simulated launches at submergence depths. The facility will provide the means to compare performance of prototype systems, including acoustic signature.

A dedicated small launcher R&D facility is needed to support expanding work scope in both internal and external small launcher development. Utilizing the present Internal Auxiliary Launcher (IAL) facility, procured with FY86 Asset Capitalization Program funds, as a base, modifications will be made to enable the upgraded facility to provide the means to support testing of other internal type small launcher prototypes, as well as external small launcher prototypes. Included in the upgrade will be improved capabilities both from a facility standpoint and a data gathering standpoint.

This unique facility is the key element to conducting the required research and development regarding new small launchers for internal and external submarine applications. Additionally, this facility is an ideal size for conducting scale model tests of full size launchers. The present IAL facility provides a good start in adding the required small launcher testing capability at NUWC. The upgrade is required to add the capability of testing external small launcher prototypes and to improve the facility as an acoustic data gathering test bed. Without upgrading our present facility, future endeavors in support of internal small launchers will be severely hampered.

This project will provide NUWC Division Newport with a required new capability; however, an economic analysis was performed indicating a net present value of $1,213 thousand after 10 years, with investment payback of 1.08 year, and a benefit/ investment ratio of 6.06.

000398

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996				C. Line No. & Item Description L088 STANDARD SUB RADIO ROOM (SSRR) INTEGRATION FACILITY				D. Activity Identification NUWC Division, Newport	
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
SSRR			394			310			350

Narrative Justification:

The Naval Undersea Warfare Center assumes leadership in the area of Submarine Onboard Communication Systems and Nodes. This project will help to fulfill NUWC's responsibilities in this area. The Standard Submarine Radio Room (SSRR) Integration Facility will enable NUWC to perform Platform Integration System Engineering (PISE) for the submarine force and the Navy. PISE consists of the physical design and layout of the SSRR, the integration of the SSRR with other systems (e.g. Combat, Navigation, Antennas), and the Development of submarine communication system unique hardware and software. The SSRR is based on the Navy's Copernicus Communication Support System. Similar existing facilities can not be modified to handle future communication systems hardware and software requirements. The SSRR will benefit the submarine force and the Navy in terms of increased operational effectiveness and reduced procurement and life cycle cost for submarine communications.

NUWC leadership responsibilities for Submarine Communication are to ensure the Submarine Communication Support System meets submarine mission requirements and platform constraints. The SSRR will provide, as outlined in the master plan, NUWC with the needed facility to accomplish its mission for communication systems for future submarines. As part of the Submarine Communication Support System, NUWC Division Newport is working with NRAD on the submarine communication system. This facility will support the efforts being performed at both labs.

The SSRR will provide NUWC and the Navy with a new capability for the design, development and testing of future submarine radio rooms. An economic analysis is therefore not appropriate for this project.

000399

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996				C. Line No. & Item Description L090 SUBMARINE SAIL MEASUREMENT PLATFORM			D. Activity Identification NUWC Division, Newport		
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Sub Sail Measurement Platform			149			500			1000

Narrative Justification:

The Submarine Electromagnetic Systems Department at the Naval Undersea Warfare Center Division, Newport is developing the submarine sail measurement platform to measure antenna performance and radar cross section of full-scale, sail new designs with communications and Electronic warfare Support Measures (ESM) sensors, and stealth coatings.

This project enables the development of innovative, stealth sails for submarines which allows more effective connectivity and surveillance capability with reduced vulnerability in littoral waters. The measurement of antenna performance, satellite communications throughput, and radar cross section will all be achieved by this platform.

An economic analysis on this project could not be performed due to the new capability purpose of this project for NUWC and the Navy.

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996				C. Line No. & Item Description L089 SUBMARINE IMAGE TRANSMISSION LAB				D. Activity Identification NUWC Division, Newport	
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Sub Image Transmission Lab			200			450			

Narrative Justification:

The Naval Undersea Warfare Center provides leadership to the Navy in the area of Submarine Electro-Optics. The submarine image transmission laboratory will ensure that the Naval Undersea Warfare Center Newport Division is able to provide timely imagery data that is necessary to support submarine strike and surveillance missions. Current technology advances will be incorporated into the designs of the future submarine surveillance systems.

This laboratory will provide a unique imagery capability for submarine electro-optics research and development. Specifically, this lab will provide the Electromagnetic Systems Department with the capabilities to develop and support future advanced imagery acquisition, processing, display and transmission. It will also provide the needed resources for conducting research and development in advanced imagery bandwidth compression techniques, imagery enhancement techniques, usable motion video, techniques for automating document imaging and archiving, and advanced imagery database development and distribution capability.

This project will provide NUWC with a new capability, and as such, an economic justification is not valid.

000401

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996				C. Line No. & Item Description L069 MATERIAL INVENTORY MANAGEMENT SYSTEMS				D. Activity Identification NUWC Division, Keyport	
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Material Inventory and Management Systems (MIMS)	1	202	202	1	173	173			

Narrative Justification:
Consolidates management of non-DBOF materials into one database. Enhances physical inventory and material tracking capabilities of part numbered and National Stock Numbered Items. MIMS is an enhancement of existing systems and the provisions for interface with existing material management systems to provide a standard interface for system users. MIMS was initiated as a cost savings measure for MILCON P-295, and will expand to other storerooms. MIMS will be implemented into a single storeroom in FY94 and expand to two additional areas during FY95.

000402

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996				C. Line No. & Item Description L123 COMPUTER AIDED PROCESS PLANNING			D. Activity Identification NUWC Division, Keyport		
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Computer Aided Process Planning				1	250	250			

Narrative Justification:
On-line development of operation process orders for Keyport shops. Provide on-line review of proposed procedures and standards by outside groups. Maintain historical records of all proposed and implemented procedural changes. Interface to other Flexible Computer Integrated Manufacturing (FCIM) modules on-line or being developed.

000403

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996				C. Line No. & Item Description L124 INTERACTIVE ELECTRONIC TECHNICAL MANUALS			D. Activity Identification NUWC Division, Keyport		
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Interactive Electronic Technical Manuals				1	200	200			

Narrative Justification:
Equipment will provide us the capability to handle interactive electronic technical manuals for sonar and combat systems. As Technical Manual Management Activity for a variety of systems we are responsible for development, distribution and reproduction of technical manuals for systems installed in SSNs, SSBNs, shore sites, and trainers. Automation of these functions will reduce the cost per page and will allow NAVSEA to more move documentation workload from OEMs to NUWC.

000404

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996				C. Line No. & Item Description L125 HYDROGRAPHICS DYNAMIC SIMULATION SYSTEM			D. Activity Identification NUWC Division, Keyport		
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Hydrographics Dynamic Simulation System				1	150	150			

Narrative Justification:
Enables Keyport to plan cable runs, hydrophone placement and buoy anchoring using computer-aided technology. Underwater cable runs can be displayed three-dimensionally for calculating total cable length and electrical resistance. Hydrophone towers can be relocated by computer to avoid local seafloor anomalies that may cause signal shadowing.

000405

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)	A. Budget Submission FY97 President's Budget	
B. Component/Business Area/Date NUWC / R&D / March 1996	C. Line No. & Item Description L129 UPGRADE TEST DATA ANALYSIS PLATFORMS	D. Activity Identification NUWC Division, Keyport

	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Upgrade Test Data Analysis Platforms							1	500	500

Narrative Justification:
Consolidate and upgrade existing test data analysis software/hardware platforms to improve technical productivity, reduce operation and maintenance costs, and improve data inter connectivity. Existing facilities for weapon performance analysis, acoustic and magnetic analysis, and ASW exercise reconstruction will be consolidated. Project will entail procurement and implementation of interactive analysis workstations and integration of existing analysis functionalities. Need driven by a combination of increasing technical complexity of weapon performance assessments and decreasing numbers of units tested. Productivity must be increased and parallel operations with any redundancy consolidated. Common hardware and software systems are needed to improve workload leveling and achieve reduced staff sizes.

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996				C. Line No. & Item Description L186 SIMULATION BASED DESIGN				D. Activity Identification NUWC Division, Newport	
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Simulation Based Design (SBD)							1		225

Narrative Justification:

With the reduction in defense spending, the development cycle for submarine and weapon systems has been consolidated. No longer is there money to build initial prototypes for in-water testing. More and more emphasis is being placed on the simulation of systems prior to production. To afford a better, more cost effective, efficient simulation suite for weapon systems, the Simulation Based Design (SBD) project will integrate capabilities that exist within the departments of the Weapon Systems Directorate at the Naval Undersea Warfare Center Division Newport. Currently SBD is being pursued at several levels in the US Navy. The Naval Undersea Warfare Center Division Newport will enhance systems design and development efforts by implementing an SBD which will support recent Navy-wide mandate for enhanced modeling and simulation capabilities. The capabilities which will be achieved by this project will accelerate the design process and assist with identification of optimum solutions. The project will standardize input/ output generation of SBD tools for submarine/ weapon systems with integrated menu-driven graphical user interface of pre/ post-processing. The standardization and centralization of SBD multi-tasking will improve product development and minimize in-house labor. The SBD will combine tools for analysis of fluids, structures, acoustics, trajectory, and systems performance in order to optimize and standardize submarine and weapon system design and development.

The SBD system will allow the integration and standardization of design ideas across the NUWC Division Newport mission areas. This includes torpedoes, UUV's, and launchers. The system is also being developed with data interface considerations being given to other Navy SBD facilities including the Hydrodynamic/ Hydroacoustic Technology Center at the Naval Surface Warfare Center Carderock Division. The establishment of this multi-tasking data base will reduce the duplication of effort currently encountered in weapon systems design and development.

An economic analysis was conducted on this project indicating a net present value at $545 thousand in 5 years with a benefit/investment ration of 2.42 and project payback in 1.8 years.

000407

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)	A. Budget Submission FY97 President's Budget		
B. Component/Business Area/Date NUWC / R&D / March 1996	C. Line No. & Item Description L187 SUB SONAR DEV. & EVALUATION (SSDEC)		D. Activity Identification NUWC Division, Newport

	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
SSDEC						800			800

Narrative Justification:

Division Newport assumes leadership responsibility in the area of USW modeling and analysis.
The Submarine Sonar Development and Evaluation Complex (SSDEC) is a collection of sonar simulation, research and development, processing, and display technology laboratories for the Submarine Sonar Department at NUWC Division Newport. With this CPP funding, SSDEC will provide, over a secure network, a cost effective configurable high fidelity stimulation capability to support acoustic undersea warfare research, acquisition, test & evaluation, analysis, war gaming, and training. It will provide an environment to develop, evaluate, and promulgate acoustic models, techniques and software. It will provide a system flexible enough to stimulate a variety of acoustic environments and systems including fixed surveillance sensors, mobile undersea sensors (submarines), mobile surface sensors (surface ships), and air dropped sensors (sonobouys). This simulated acoustic environment will then be used over the secure network to stimulate simulation activities occurring throughout the Division and elsewhere on the Defense Simulation Internet (DSI) network.

Currently, the simulation components exist in different locations. Combat system simulation occurs in the Combat System Department. To provide the necessary realistic sonar inputs for the combat system simulation, equipment and personnel are physically relocated to the same lab area so tests and analysis can occur. The CPP funding will correct this shortcoming of the system by providing the required secure network for SSDEC integration. In addition, testing and evaluation of Submarine Sonar projects currently can only be done at-sea. The integration of the acoustic simulation and stimulation labs to the sonar processing labs via the SSDEC network will provide the ability to test the projects with real and simulated data in the lab. This can cut at-sea test time and costs by 50%. Without CPP funding, Combat System simulation will require development and analysis personnel to move equipment with risk of damage. Submarine Sonar in lab pre-testing will not be conducted prior to at-sea tests, and NUWC will fall behind technology and capability in the Modeling and Simulation arena.

An economic analysis was performed on this project indicating a net present value of $1,612 thousand after 5 years. Payback is expected in 4.38 years, with a benefit/investment ratio of 1.01.

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996				C. Line No. & Item Description L130 RANGE DATA CONSOLIDATION/COLLECTION SYSTEM			D. Activity Identification NUWC Division, Keyport		
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Range Data Consolidation/Collection System							1	300	300

Narrative Justification:
Provide data collection systems at the Northwest Range sites that integrate data from multiple measurement systems into a data set compatible for real-time transmission or immediately post-test to the data center at Keyport. Specifically, acoustic, target, environmental, and torpedo internal data are to be collected and prepared for transmission. The objective of this project is to significantly reduce the delivery time for high-bandwidth data from range sites to the data processing center at Keyport. Improved timeliness of data will, in turn, allow faster and better decision making concerning weapon tear down and preparation of follow-on units. Real-time or immediate post-test will eliminate two to five days of waiting by test engineers.

000409

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996				C. Line No. & Item Description L061 UNDERSEA SYNTHETIC ENVIRONMENTS CONCEPT EVALUATION			D. Activity Identification NUWC Division, Newport		
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Synthetic Environment Concept Evaluation			305			450			130

Narrative Justification:

This facility will provide the Naval Undersea Warfare Center with a test-bed simulator used for advanced submarine combat control systems studies in human factors, operability, performance, evaluation and attack center configurations. This hardware test-bed provides a state-of-the-art facility for rapid prototyping and dynamic evolution of innovative algorithms, information displays and operational concepts related to submarine attack center functions. The associated software environment incorporates sophisticated models of the ocean, ship and weapons kinematics and sensor systems so as to provide a realistic dynamically reconfigurable means of stimulation for the algorithms, information display and concepts under investigation.

Comprehensive specification of the next combat control system, requires that the capability be proven viable in an engineering sense prior to it being specified for performance proposed in a production contract. This test-bed will provide for rapid prototyping and dynamic evaluation of concepts as well as a mechanism for packaging and transfer of prototypes for at-sea evaluation. An economic analysis performed on this project indicates a savings/investment ratio of 2.01 with an annual cost savings of $243 thousand.

This project will have a net present value of $1,169 thousand after 5 years.

000410

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996				C. Line No. & Item Description L204 DATA SYSTEMS INTEGRATION			D. Activity Identification NUWC Division, Keyport		
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Data Systems Integration				1	840	840	1	520	520

Narrative Justification:
Data Systems Integration will improve our ability to create, link, process, and transmit digital data and perform data manipulation and upgrades as required to support Fleet customers. The focus of this investment will be on process automation, digital data process commonality, system interfaces, and providing integrated data capability to the Fleet. Establish a Hardware/Software environment that applies integrated data systems technologies to the technical data community that will provide direct, productivity benefit to fleet support initiatives.

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)	A. Budget Submission FY97 President's Budget	
B. Component/Business Area/Date NUWC / R&D / March 1996	C. Line No. & Item Description L205 CENTRALIZED REAL-TIME TEST DATA PROCESSING SYSTEMS	D. Activity Identification NUWC Division, Keyport

	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Centralized Real-time Test Data Processing Systems				1	400	400	1	500	500

Narrative Justification:

Implement an integrated real-time test data processing/reduction system to make selected vehicle performance data available immediately following conduct of tests. Individual acoustic, weapon, range, and ASW test data processing and reduction systems will be replaced with a single integrated test data processing system. The need for increased productivity is driven by a combination of increasing technical complexity of weapon performance assessments and decreasing numbers of units tested. Productivity must be increased and parallel operations with any redundancy consolidated. Common hardware and software systems are needed to improve workload leveling and achieve reduced staff sizes.

000412

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996				C. Line No. & Item Description L206 COTS SUPPORTABILITY PLANNING TOOLS			D. Activity Identification NUWC Division, Keyport		
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
COTS Supportability Planning Tools							1	175	175

Narrative Justification:
Provide hardware and software tools to establish new, more versatile supply system supportability analysis methods for Commercial Off-the-Shelf (COTS) and COTS/MIL Spec Hybrid In-Service systems. The objective of this project is to reduce the time required and increase the flexibility of the decision making process needed to optimize the supply support structure including spares and supply chain optimization and cost reduction, and repair. The requirement for this project is driven by the increasing application of COTS hardware into fleet systems which requires much greater flexibility and cost effectiveness in Supply Support approaches.

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996				C. Line No. & Item Description L190 FINANCIAL MIS				D. Activity Identification NUWC Division, Newport	
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Financial MIS							1		330

Narrative Justification:

The Naval Undersea Warfare Center (NUWC) Division Newport Financial Management Department is building on technology procured through the NUWC Information Technology Improvement Program (NITIP) to develop and initiate a standard financial management system. This system will preserve existing capabilities while taking advantage of advancements in new available technologies. As a result, paper hard copies will be reduced, operational costs will be reduced, and data integrity, security, and reliability will be improved. This system will integrate with current platforms throughout Division Newport to provide base-wide support to all technical and business codes. By implementing this project, current MIS redundancies throughout the Division will also by reduced.

The Financial MIS will result in an annual cost savings of $215 thousand for NUWC. Performing an economic analysis indicated a net present value of $888 thousand in 5 years and a benefit/investment ration of 2.69. Payback form automating the purchasing process is expected in 1.53 years.

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)	A. Budget Submission FY97 President's Budget	
B. Component/Business Area/Date NUWC / R&D / March 1996	C. Line No. & Item Description L207 RIDC UPGRADE	D. Activity Identification NUWC Division, Keyport

	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
RIDC Upgrade							1	500	500

Narrative Justification:
Enhance data display capabilities of Range Information Display Center (RIDC) systems, employing interactive multimedia and virtual display technologies, to support user definable displays of test data. All test data are to be fused into consolidated, standardized data network for display and analysis. Also develop communications and data display systems to support remote displays of selected RIDC data. The objective is to provide immediate quantitative display of test conduct and results to range personnel and customers to reduce travel to range sites and to reduce waiting time for test results. This need is driven by a combination of increasing technical complexity of weapon performance assessments and decreasing numbers of units tested.

000415

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996				C. Line No. & Item Description L191 AUTOMATED PURCHASING PROCESS			D. Activity Identification NUWC Division, Newport		
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Automated Purchasing Process				-			1		110

Narrative Justification:

The Automated Purchasing Process will provide the Naval Undersea Warfare Center Division Newport with a paper less system for processing purchase requests. It will provide routing capabilities, and archiving while eliminating paper copies. It will centralize purchasing data and reduce the redundancies that currently exist with individual department procurement data bases.

This system will save over $500 thousand annually by improving on computer efficiency, and reducing the labor required for processing purchase requests. This project has a net present value of $2,051 thousand and a payback of 0.21 year.

000416

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996				C. Line No. & Item Description L208 ON-LINE DATABASE FOR TECHNICAL TEST DATA			D. Activity Identification NUWC Division, Keyport		
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
On-line Database for Technical Test Data							1	200	200

Narrative Justification:
Implement an integrated technical test database to facilitate class performance assessments and comparisons. Individual acoustic, weapon, range, and ASW test databases will be replaced with a single database. The objective is to reduce the present hardware and software infrastructure of individual databases and to improve access to all range and test data for enhanced comparative, statistical, and trend analysis productivity. Need for increased productivity also driven by a combination of increasing technical complexity of weapon performance assessments. Productivity must be increased and parallel operations with any redundancy consolidated. Common hardware and software systems are needed to improve workload leveling and achieve reduced staff sizes.

000417

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996				C. Line No. & Item Description L209 DEPOT TEST EQUIP. SOFTWARE AND INTERFACE HARDWARE			D. Activity Identification NUWC Division, Keyport		
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Depot Test Equip. Software and Interface Hardware							1	445	445

Narrative Justification:

Develop Depot test capability using Navy standard test platform. Requires procuring hardware interfaces, and developing software testing interface, for each Functional Item Repair (FIR) item. Each FIR item interface is developed separately. A high priority is MK 48 Torpedo FIR items which currently rely on HP 9500 based test equipment. Depot test equipment for many inservice weapons systems are in use beyond their designed life cycle. They are becoming obsolete and repair components are no longer available by the original vendor, or alternate sources. Repairs increasingly require expensive design changes to integrate available instrumentation and subcomponents. This project would develop interfaces to supportable Navy standard Depot test equipment.

000418

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996				C. Line No. & Item Description L193 ADVANCED ATTACK CENTER TESTBED				D. Activity Identification NUWC Division, Newport	
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Advanced Attack Center Testbed							1		400

Narrative Justification:

The Advanced Attack Center Testbed will be used to transition state-of-the-art hardware, software, display, and communications technology into an integrated combat system-level testbed. Current efforts do not reach the same level of integration capabilities or leverage high risk technologies which would have a high pay-off for the Navy. Utilizing new technologies and concepts utilizing Commercial Off The Shelf (COTS) equipment will create a high quality simulation for cost effective validation of concepts.

The Naval Undersea Warfare Center (NUWC) Division, Newport is responsible for research, development, test and evaluation of submarine combat systems. In designing and developing for submarines of the future, it is a requirements to consider the newest technology available which is COTS. This project will provide the necessary testbed for developing and testing combat system concepts utilizing state-of-the-art COTS equipment.

The ongoing evolution of submarine platforms promises significant differences in the attack center size, layout, automation and staffing. The Advanced Attack Center Test Bed will provide an integration site for high risk/ high pay-off technologies for the purpose of advanced concept demonstrations and evaluation. This will provide a path for transition of these technologies into the Division from other organizations and industry. The integrated demonstrations and evaluations will support transitioning from existing combat system designs to advanced next generation designs.

By integrating and demonstrating advanced technology-based concepts of operation which leverage high-risk hardware, software, display, communication, and automation technologies, the Advanced Attack Center Test Bed will create a vision for the future that can serve to support and validate long-term system evolution goals. This will reduce future transition risks and costs while ensuring that program decision makers and engineers share a common vision of long term next generation system upgrades and capabilities.

An economic analysis performed on this project indicates a net present value of $696 thousand in 5 years with a benefit/investment ration of 1.74.

000419

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)	A. Budget Submission FY97 President's Budget	
B. Component/Business Area/Date NUWC / R&D / March 1996	C. Line No. & Item Description L210 COTS OBSOLESCENCE MANAGEMENT TOOLS	D. Activity Identification NUWC Division, Keyport

	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
COTS Obsolescence Management Tools							1	150	150

Narrative Justification:
The COTS tools will enhance existing obsolescence management through adding Commercial Off-the-Shelf (COTS) capability and an automated parts substitution process, including expanded external access capability. COTS Tools will provide COTS obsolescence analysis capability with using existing DMSMS obsolescence tools and enhance the component substitution process in support of maintaining tactical fleet systems. COTS Tools will include expanding external interface capability to allow all external users access to the COTS Planning Tools.

000420

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996				C. Line No. & Item Description L211 BUILDING FIBER OPTIC CABLE PLANTS				D. Activity Identification NUWC Division, Keyport	
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Building Fiber Optic Cable Plants							1	180	180

Narrative Justification:
This project addresses the modernization of NUWC Keyport's Network Infrastructure Backbone, by replacing the existing Broadband Network with a state-of-the-art Fiber Distributed Data Interface (FDDI) and fiber optic cable. This will increase the speed of the network communication across the Center and will substantially reduce user downtime due to interrupted network service. The project installs the FDDI between the major buildings at Keyport and connects the existing Local Area Networks in individual buildings to the FDDI. The objective of this project is to increase the communication speed and the reliability of the network across Keyport. This project will greatly increase the performance of the network and is needed to take advantage of the technologies being implemented across the Center which require higher speed communication (i.e. Video linking, large document and drawing transfer, Client-Server applications, greater reliance on reliable e-mail, etc.) This effort, in addition, will significantly reduce the corrective and preventive maintenance support that is currently necessary on the error-prone Broadband network.

CCA-1

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996				C. Line No. & Item Description L212 TRACKING RECEIVER EQUIPMENT (DSP)				D. Activity Identification NUWC Division, Keyport	
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Tracking Receiver Equipment (DSP)							1	490	490

Narrative Justification:

Procure and install Digital Signal Processing (DSP) based tracking receivers at the Nanoose range site and implement tracking DSP algorithms previously developed. Replaces existing analog Phase-Shift-Keyed receivers and switching networks used to allocate a limited number of receivers to the tracking arrays. There are several drivers for this upgrade. First, the proposed receiver system will support advanced DSP algorithms which have been shown to increase signal-to-noise by 5 to 10 dB, thereby reducing the risk of lost track which can result in failure to accomplish test objectives. Secondly, this system, being software based, provides flexibility to accommodate redesigned tracking signals to satisfy particular test requirements. Finally, the new receivers will result in lower operational and maintenance costs as switching networks are eliminated and because the newer technology hardware is less costly to maintain.

000422

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996				C. Line No. & Item Description L213 CAE SYSTEM UPGRADES			D. Activity Identification NUWC Division, Keyport		
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
CAE System Upgrades							1	400	400

Narrative Justification:
Upgrade existing Intergraph CAD environment to provide enhanced capabilities and productivity in the following fields: engineering analysis, mechanical and electrical design, logistics support and drafting. The current software and hardware platforms are accessible to a small subset of the engineers and technicians. The capacity of these systems is falling behind the increasing volume of digital technical data that must be managed. In order to maintain a CALS compliant facility and provide Engineering and Life Cycle Support of Weapons Systems, upgrades need to be made now.

000423

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)	A. Budget Submission FY97 President's Budget	
B. Component/Business Area/Date NUWC / R&D / March 1996	C. Line No. & Item Description L214 COORDINATE MEASURING MACHINE UPGRADE	D. Activity Identification NUWC Division, Keyport

	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Coordinate Measuring Machine Upgrade							1	130	130

Narrative Justification:

This project provides a controller upgrade to the Federal Coordinate Measuring Machine (CMM) to facilitate programming and inspection of precision mechanical parts. The controller upgrade will significantly reduce programming time and provide the capability to interface to Computer Aided Manufacturing (CAM) systems. The current controller is exceedingly difficult to program and does not provide an off-line programming or networking capability. Therefore, the CMM equipment in its present configuration is not used to full potential. The CMM upgrade provided by this project will provide new required capabilities which will greatly augment quality inspection processes for mechanical parts.

000424

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996				C. Line No. & Item Description L215 CAD/CAM/CAE				D. Activity Identification NUWC Division, Keyport	
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
CAD/CAM/CAE							1	200	200

Narrative Justification:
This project will modernize the use of computer resources for design, analysis, and depot support manufacturing. It will provide for the transition from using high cost UNIX workstations to the newer technology, lower cost Windows NT CAD/CAM/CAE resources available on the NAVSEA CAD2 contract. The current CAD/CAM/CAE resources from the CAD2 contract consist of Intergraph UNIX workstations. The high cost and steep learning curve for these workstations has limited the availability of CAD resources thereby reducing training availability for users. The CAD 2 contract is migrating to CAD/CAM/CAE applications on low cost Windows NT based personal computers. Acquisition of these resources will increase the utilization and distribution of digital product data - reducing engineering and manufacturing costs. These resources will also provide the capability for NUWC to use the Standard for digital Product (STEP) neutral file format for data exchange with other DoD facilities. The STEP format is rapidly being recognized as the future product data format to be used commercially and within the DoD.

000425

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)	A. Budget Submission FY97 President's Budget

B. Component/Business Area/Date	C. Line No. & Item Description	D. Activity Identification
NUWC / R&D / March 1996	L216 PROJECT ENTERPRISE	NUWC Division, Keyport

	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Project Enterprise							1	500	500

Narrative Justification:

This project addresses Keyport-wide standardization of automated desk-tops; change management; software upgrades; software version control; desk-top software and application systems integration; remote end-user help; and remote performance monitoring. The objective of this project is to significantly reduce desk-top support related costs. Current methods for maintaining roughly 1500 electronic desk-tops is time consuming, expensive, and near impossible to keep current. This project will reduce the number of government work years, and service contract dollars by doing most support activities electronically and remotely.

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996				C. Line No. & Item Description L218 OMS RE-ENGINEERING PROJECT				D. Activity Identification NUWC Division, Keyport	
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
OMS Re-engineering Project							1	500	500

Narrative Justification:

Standardize and replace current Navy wide inventory reporting systems for all accountable conventional ammunition that is tailorable to each activity. Initial acquisition of Ordnance Management System (OMS) hardware was supported by the Central Design Agency (NSWC Div Crane), in 1988. Most terminals, printers and associated hardware are aging and won't be compatible with the new system standardization project. By replacing the host computer with a new Hewlett Packard (HP) 9000/800-I60, workstation replacement with X.11 "Windows" client/server capability and DOS Windows, line printer and bar code reader/decoder replacement and enhancing the communications capability through internet, LAN and remote dial-up (cellular/wireless modem) will provide one standardized system for all users. Additionally, this will bring activities in compliance with the DoD Open Systems and Corporate Information Management strategic plans.

000427

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996				C. Line No. & Item Description L219 COMP. AIDED PROC. PLAN (CAPP)/EDI ENHANCE SYSTEM			D. Activity Identification NUWC Division, Keyport		
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
CAPP/EDI							1	300	300

Narrative Justification:

Implement a system for semi-automated development of process plans and exchange of process information throughout the department. The project will significantly reduce process plan development costs by providing database query and Group Technology (GT) retrieval of existing process plan operations for similar parts. Process plans are now largely manually generated with little use of historical data or instructional graphics. This system will semi-automate the process by utilizing data from previous process plans stored in a central database and distribute the plans to process sites.

000428

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996				C. Line No. & Item Description L220 CAD/CAE WORKSTATIONS			D. Activity Identification NUWC Division, Keyport		
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
CAD/CAE Workstations							1	329	329

Narrative Justification:
Provide Computer Aided Design/Computer Aided Engineering workstations for design and engineering of range systems used at Northwest Range Sites. The workstations will be used to design and verify circuits used on computers prior to any hardware or lab development efforts being expended. Objective is to reduce costs and time associated with prototyping and manufacturer of range system components. Reduce rework and speed up design evaluations, and verify feasibility before hardware and labor has been expended.

000429

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996				C. Line No. & Item Description L064 NUWC INFORMATION TECHNOLOGY IMPROVEMENT PROGRAM				D. Activity Identification NUWC Division, NPT/KEY	
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
NITIP			2,130			520			

Narrative Justification:

The NUWC Information Technology Improvement Program (NITIP) is one of five programs comprising the NAVSEA Information Management Improvement program. The NITIP has the following objectives:

- Migrate from vendor-dependent sole source and other similar environments to Open Systems Environment (OSE)
- Provide increased capability for network-based computing solutions for the RDT&E community
- Lower the cost of NUWC's information technology environment
- Position NUWC IRM to support organizational restructuring and downsizing
- Standardize, where feasible and cost effective, in conjunction with Corporate Information Management (CIM) initiatives

The NITIP consists of five projects:

- Terminate Keyport Unisys mainframe operations
- Terminate Keyport NCR system operations
- Terminate Newport Unisys mainframe operations
- Terminate Keyport Bull/Honeywell Mainframe operations
- Upgrade RDT&E computing/upgrade network capabilities

The first four projects outline a plan to migrate current applications from aging proprietary platforms to Open Systems Environment (OSE) and terminate existing mainframe operations. Applications that are unique to each NUWC division will be moved by that division into the OSE. Initially, to speed migration, applications that apply to functions common to the NUWC divisions will be moved into the OSE by the local division. Later, these applications will be evaluated for mutual use.

The fifth project addresses the need for the RDT&E community to take advantage of the price/performance improvements being offered by commercial hardware manufacturers, and complete the phase out of the mainframe computers by downsizing to powerful workstations supported by high speed file servers and networks that support higher speeds (e.g. Fiber Distributed Data Interface (FDDI)). Additionally, sufficient processing power on the users desktop computers also means that applications that once were the exclusive domain of the mainframe or departmental minicomputer can exist in a client/server environment. A key to successful implementation of this environment will be the migration of RDT&E capabilities to the open systems environment (OSE).

000430

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996	C. Line No. & Item Description L030 REPLACEMENT OF CENTRAL SCIENTIFIC & ENGINEERING COMPUTERS						D. Activity Identification NUWC Division, Newport		
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Replacement Computers			323			882			181

Narrative Justification:

The Computer and Information Services Department of the Naval Undersea Warfare Center (NUWC) Division Newport provides central scientific and engineering computational services for the Newport laboratories. By FY96, the current general purpose scientific and engineering computers will have an average installed age of 11 years. This places the equipment past its anticipated 8-10 year life cycle. It is expected that as the equipment ages system reliability will decrease, system maintenance costs will increase, and system software will have reduced compatibility as newer versions fail to operate on the older equipment. Historically equipment maintenance costs increase rapidly during the final phases of the life cycle. Replacement of the obsolete computer equipment will provide the activity with more reliable and cost effective computer resources as well as ensuring that the department can provide adequate computational resources to meet the research and development computational requirements of the Division's scientific and engineering community.

If the equipment is not replaced, the Division can expect to incur rapidly escalating maintenance costs, loss of system productivity as system reliability decreases, loss of personnel productivity as new software productivity enhancements are available but are unable to function on the existing equipment, reduced services to the user community and technical obsolescence. Consequently, the Division will be unable to provide the necessary corporate computer resources necessary to meet the future research and development computational requirements of the scientific and engineering community.

An economic analysis performed for this project indicates a net present value of $1,280 thousand after 5 years with investment payback in 3.45 years, and a benefit/investment ratio of 1.20.

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996				C. Line No. & Item Description L097 ANTENNA RANGE MODERNIZATION				D. Activity Identification NUWC Division, Newport	
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Antenna Range Modernization			413			291			555

Narrative Justification:

The Communication Systems of future submarines depends on the research and development being performed at the Naval Undersea Warfare Center (NUWC) Division, Newport by the Submarine Electromagnetic system Department. The Antenna Range Modernization project will provide the Department with the up-to-date facility for conducting this R&D as well as performing the testing required for these future systems.

The existing antenna range provides measurement capabilities including both free-space and seawater environments to support submarine antenna developments. The modernization of this range will provide the ability to test antennas over an increased portion of the spectrum required to support new submarine communication development.

Specifically, as enhancements to the existing system, Radio Frequency (RF) instrumentation and positioning equipment which is antiquated will be replaced in order to improve the measurement speed and accuracy of the data. Improved frequency and calibration capabilities to the Submarine Sensor Test Platform (SSTP) on Fisher's Island will be implemented. Additionally, this project will upgrade Fisher's Island site link in frequency range and automated data collection capabilities. Finally, the existing overwater arch elevation axis quickly failing mechanical components will be replaced. All of these improvements to the antenna range will enable NUWC Division, Newport to maintain its high standards of RDT&E for the design and development of submarine communication systems of the future.

The replacement of equipment for the Antenna Range is necessary for upgrading outdated computer resource this is necessary for the facility to remain functional. No cost savings are expected, so an economic justification is invalid.

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996				C. Line No. & Item Description L072 COMPUTER AIDED MANUFACTURING AND DESIGN			D. Activity Identification NUWC Division, Keyport		
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Computer Aided Manufacturing and Design				1	190	190			

Narrative Justification:
CAD 2 CAD/CAM workstations in Engineering, Tool Design, and Numeric Control programming areas will allow an automated means of creating product and fixture tooling design along with the improvement of manufacture. Project includes additional networking and system support to establish a link to four numeric controlled machines via a Direct Numeric Control (DNC) system. The system will also connect to the Coordinate Measuring Machine (CAM) for inspection of products. Provides a unique and efficient communication environment for integrating several work areas in the manufacture of NUWC products. Benefits include reduced design-to-manufacture time and reduced setup times for machine tools.

000433

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)	A. Budget Submission FY97 President's Budget	
B. Component/Business Area/Date NUWC / R&D / March 1996	C. Line No. & Item Description L075 ATE SYSTEM UPGRADE	D. Activity Identification NUWC Division, Keyport

	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ATE System Upgrade				1	190	190			

Narrative Justification:
Replacement of low-reliability components for several depot Automated Test Equipment (ATE). These test systems support the MK 46 Torpedo, MK 48 Torpedo, MK 48 ADCAP, and various Combat Systems and Target programs. This will reduce our troubleshooting time from 9 hours/failure to 3 hours/failure. These delays affect our depot workloading and repair turnaround times.

000434

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996				C. Line No. & Item Description L129 REPLACE TEST & EVALUATION SUPPORT AND ANOMALY CORRECTION SYSTEM			D. Activity Identification NUWC Division, Keyport		
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Replace T&E Support & Anomaly Correction System				1	120	120			

Narrative Justification:
The proofing analysis system provides engineers and analysis with the capability to interrogate data files containing run configuration and defect data. To maintain these capabilities, the current system requires modernization. Existing system is over 10 years and system (hardware and software) support is difficult to obtain.

000435

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996				C. Line No. & Item Description L147 MATERIAL CONTROL SYSTEM (MCS) REPLACEMENT			D. Activity Identification NUWC Division, Keyport		
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Material Control System (MCS) Replacement				1	490	490			

Narrative Justification:

This project will replace the current production planning and control system with a more efficient, capable, and integrable system. Our current system the Material Control System (MCS) was created in the 1970's. It goes down often, spare parts are hard to find, takes up a lot of space and requires a great deal of support. At our current workload level it takes a level of effort of approximately 140 contractor and civil service work years to operate, maintain and use MCS. We estimate the level of effort for the same workload to be 45 work years after implementation of the replacement system. The new system will also allow us to eventually integrate the production planning and control system with other information systems (i.e. the work-in-process inventory in the Automated Material Handling Facility, AMHF P-295, B.1002) and FCIM projects (i.e. Manufacturing Execution and Electronic Data Interchange).

000436

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996				C. Line No. & Item Description L023 UNDERSEA WARFARE SYSTEMS ANALYSIS PROJECT (UWSAP)				D. Activity Identification NUWC Division, Newport	
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
UWSAP			751			770			675

Narrative Justification:

The research, development, and acquisition of naval warfare force ships and ship systems is being increasingly focused on their ability to support an effective U.S. maritime strategy. The rapidly changing world has dramatically changed the nature of the threat and the most likely types of conflicts. System acquisition and technology investment decision must be carefully assessed in terms of theses changes as well as in declining assets, the complex contribution of coordinated joint assets, and the commitment to maintain technological superiority. The Defense Planning Guidance for FY94-99 states that the acquisition process will use advanced technology demonstrations and prototypes to demonstrate and validate technologies' and systems' operational performance, producibility, and associated doctrine. It further states ... we will use newly available simulation technologies continuously through the systems acquisition process to evaluate how system prototypes meet these criteria and contribute across warfare areas. The Navy Research Advisory Council (NRAC) outlined a Distributed Simulation Based Acquisition System using both distributed interactive simulation between live, virtual and constructive models as well as a seamless linkage of physics based modeling and simulation for virtual system prototyping.

Current capabilities of the Undersea Warfare Analysis Laboratory (USWAL) have been integrated with equipment previously obtained under the Integrated Warfare Analysis Laboratory (IWAL) project to provide a distributed parallel processing environment supporting efficient batch processing of Monte Carlo computer (constructive) simulations for Cost and Operational Effectiveness Analyses (COEAs) and Joint Mission Assessments (JMAs); the development of campaign level simulations and enhancements to existing platform level simulations; the demonstration of advanced visualization and linkage with other virtual and constructive simulations in recent Synthetic Theater of War (STOW) exercises and the networking and storage capabilities to archive large data files and study outputs for the Undersea Warfare Systems Analysis Project (UWSAP).

Current CPP funding will provide:

- expanded graphics and virtual reality with more complex images and interactivity at the higher frame rates necessary to support the synthetic environments displays

0004317

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY97 President's Budget					
B. Component/Business Area/Date NUWC / R&D / March 1996				C. Line No. & Item Description L023 UNDERSEA WARFARE SYSTEMS ANALYSIS PROJECT (UWSAP)			D. Activity Identification NUWC Division, Newport		
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
UWSAP			751			770			675

Narrative Justification:

Undersea Warfare Systems Analysis Project (UWSAP) (continued)

- more capable workstations and enhanced networking equipment to provide a more robust distributed parallel computer capability to meet the evolving challenges of studies requiring batch processing as well as the demands of distributed analyses using more physics models and realistic environmental representations
- computer aided software engineering tools to support object technology

Failure to obtain the hardware and software will jeopardize the ability to sustain a leadership role or to participate in the rapidly evolving Distributed Simulation Based Acquisition environment envisioned by DoD, NRAC and NUWCDIVNPT initiatives.

This system continues to provide NUWC Division Newport with new capabilities, but cost savings can also be realized due to faster processors, and evaluation time. The net present value of this project in 5 years is $2,301 thousand.

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)	A. Budget Submission FY97 President's Budget	
B. Component/Business Area/Date NUWC / R&D / March 1996	C. Line No. & Item Description ——— FY96 MINOR CONSTRUCTION ENVIRONMENTAL	D. Activity Identification NUWC Division, NPT/KEY

	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Fy96 Minor Construction Environmental				1		300			

Narrative Justification:
Building 76 Fire Protection

000439

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)	A. Budget Submission FY97 President's Budget	
B. Component/Business Area/Date NUWC / R&D / March 1996	C. Line No. & Item Description FY96 MINOR CONSTRUCTION PRODUCTIVITY	D. Activity Identification NUWC Division, NPT/KEY

	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
FY96 Minor Constuction Productivity				9		1380			

Narrative Justification:

Building 165/1258 LAN In-Ground Carrying Plant.
Building 108/159 LAN In-Ground Carrying Plant.
Electrical Distributation Upgrade - Alterations to building electrical system.
Technology Development Center - Industrial technology productivity.
Building 820 & 950 Alterations - Security and safety alterations for USW programs.
T&E Function Consolidation - Alterations for Test & Evaluation function productivity.
Littoral Undersea Warfare Complex.
Fishers Island Non-Ferrous Remote Signal Processing Facility.
Building 123-expand Cruise Missile Assembly & Support Area.

000440

Department of the Navy - Defense Business Operations Fund
Naval Undersea Warfare Center
CAPITAL BUDGET EXECUTION

(Dollars in Millions)
FY 1996

Approved Project	Original Request	Change	Revised Request	Explanation
ADP and TELCOM				
Undersea Synthetic Environ. Concept	0.450	0.000	0.450	
Material Inventory Management System	0.173	0.000	0.173	
Shop Process Automation Sys Depot	0.185	-0.185	0.000	Replaced by projects with higher productivit
Computer Aided Process Planning	0.250	0.000	0.250	
Interactive Elect. Tech. Manuals	0.200	0.000	0.200	
Hydrographic Dynamic Simulator	0.150	0.000	0.150	
Manufacturing Eng. Tooling Sys	0.500	-0.500	0.000	Replaced by projects with higher productivit
SSDEC	0.000	0.800	0.800	New sonar simulation requirement
Data Systems Integration	0.000	0.840	0.840	New Fleet efficient data integration require
Centralized Real-Time Test	0.000	0.400	0.400	New requirement on T&E systems producti
Replace. Central Scientific & Engineering Co	0.362	0.520	0.882	Growth in scope from minor category
NUWC Info Tech Improvement Prog	0.520	0.000	0.520	
Computer Aided Manuf & Design	0.190	0.000	0.190	
ATE System Upgrade	0.150	0.040	0.190	Workload changes
Antenna Range Modernization	0.125	0.166	0.291	Additional necessary for project completion
T&E Support Anomaly Correct	0.120	0.000	0.120	
Material Control Sys Repl.	0.490	0.000	0.490	
UWSAP	0.725	0.045	0.770	Additional requirements
Other Computer & Telecom. Support Equipm	0.190	-0.190	0.000	Removal of minor projects
ADP and TELCOM Subtotal	4.780	1.936	6.716	

000441

Department of the Navy - Defense Business Operations Fund
Naval Undersea Warfare Center
CAPITAL BUDGET EXECUTION

(Dollars in Millions)
FY 1996

Approved Project	Original Request	Change	Revised Request	Explanation
Non-ADP Equipment				
Intrusion Detection System	0.363	-0.163	0.200	BRAC change in requirements
CASS Electro-Optical Station	2.286	-2.286	0.000	
Misc Non-ADP Equipment (>$50K<$500K)	5.209	-0.713	4.496	New requirements required reprogramming
Electrodischarge Machine	0.250	-0.250	0.000	
Transducer & Hull Array Lab	0.440	0.000	0.440	
Cooling System for Envir Test Facility	0.220	-0.220	0.000	
SSTP Track Installation	0.000	0.500	0.500	New environmental requirement
Small Launcher Test Facility	0.200	0.000	0.200	
Towed and Deployed Sensor Lab	0.275	0.350	0.625	New mission requirements require project m
Standard Sub Radio Room	0.375	-0.065	0.310	Change in requirements
Sub Image Transmission Lab	0.450	0.000	0.450	
Sub Sail Measurement Platform	0.752	-0.252	0.500	Down scope of project
P-105 Tapered Anechoic Chamber	0.000	0.950	0.950	New BRAC MILCON requirement
Littoral Undersea Warfare Complex	0.000	3.530	3.530	New Navy/fleet requirement (littoral testing
Non-ADP Equipment Subtotal	10.820	1.381	12.201	

000442

Department of the Navy - Defense Business Operations Fund
Naval Undersea Warfare Center
CAPITAL BUDGET EXECUTION

(Dollars in Millions)
FY 1996

Approved Project	Original Request	Change	Revised Request	Explanation
Minor Construction				
Bldg 123 Expand Cruise Missile	0.220	-0.220	0.000	No longer a requirement
Bldg 489 Fire Protection	0.290	-0.290	0.000	Workload changes
Bldg 83 Fire Protection	0.275	-0.275	0.000	Workload changes
Bldg 94 Substation and Service	0.230	-0.230	0.000	Replaced by projects with higher productivit
Bldg 234 Electrical Modifications	0.240	-0.240	0.000	Workload changes
Fact of Life Demolition	0.500	-0.500	0.000	Workload changes
Bldg 38 Electrical Modifications	0.300	-0.300	0.000	Workload changes
Bldg 76 Fire Protection	0.300	0.000	0.300	
Misc Minor Construction	2.720	-1.206	1.514	
Minor Construction Subtotal	5.075	-3.261	1.814	
Off the Shelf Software				
Misc Minor Off the Shelf Software	0.170	-0.170	0.000	No longer a requirement
Off the Shelf Software Subtotal	0.170	-0.170	0.000	
Total NUWC FY96	20.845	-0.114	20.731	

000443

DEPARTMENT OF THE NAVY
DEFENSE BUSINESS OPERATIONS FUND
BUSINESS AREA: RESEARCH AND DEVELOPMENT
ACTIVITY GROUP: NCCOSC

Activity Group Function: The Naval Command, Control and Ocean Surveillance Center (NCCOSC) is the Navy's full spectrum research, development, test and evaluation, engineering and fleet support center for command, control and communication systems and ocean surveillance and the integration of those systems which overarch multiplatforms. NCCOSC supports the Fleet in mission and capability by providing the most capable and ready command and control systems for the Navy. NCCOSC provides innovative scientific and technical expertise, facilities, and understanding of defense requirements necessary to ensure that the Navy can develop, acquire, and maintain the warfare systems needed to meet requirements at an acceptable price. NCCOSC also provides engineering and fleet support for assigned systems to maintain the Fleet's warfighting capability. NCCOSC:

1. Provides warfare systems analysis.
2. Plans and conducts effective technology programs.
3. Provides cost conscious systems engineering and technical support to program managers in all phases of systems development and acquisition.
4. Provides test and evaluation support including the development and operation of major RDT&E and measurement facilities.
5. Provides technical input to the development of operational tactics.
6. Provides electronics material support (technical and management) for systems and equipment under the cognizance of SPAWAR.
7. Provides specialized technical support to the Fleet for quick-reaction requirements.

Activity Group Composition: NCCOSC is composed of a Research, Development, Test and Evaluation Division and two In-Service Engineering Divisions, one on the East Coast and one on the West Coast. This organizational structure best facilitates the entire cycle of systems engineering from research and development through to waterfront support.

The NCCOSC RDT&E Division (or NRaD) is located in San Diego, CA with a detachment in Warminster, PA.

The NCCOSC In-Service Engineering West Coast Division (or NISE West) is located in San Diego, CA with detachments in Pearl Harbor, HI; Guam; and Japan.

The NCCOSC In-Service Engineering East Coast Division (or NISE East) is headquartered in Charleston, SC with detachments in Washington, DC; St. Inigoes, MD; and Norfolk, VA. In addition to the base realignment and closure actions described below, the budget also reflects the FY 1995 functional transfer of designated programs at the Naval Underwater Warfare Center (NUWC), Norfolk detachment to NCCOSC (this transfer was accelerated to FY 1995 vice the FY 1996 transfer date in the FY 1996 President's Budget).

Summary of Base Closure and Realignment (BRAC) impacts:

NCCOSC has undergone and will undergo further significant BRAC actions as a result of the BRAC 1991 and 1993 processes. NCCOSC BRAC 1991 and 1993 efforts include:

- Closure of NRaD Detachment Kaneohe, HI (effective FY 1993) with functions relocating to San Diego, CA and Pearl Harbor, HI
- Closure of NRaD Detachment Los Angeles, CA (effective FY 1993), with all functions relocating to NRaD San Diego, CA
- Closure of NISE West Detachment Vallejo, CA (effective FY 1995) with all functions relocating to NISE West San Diego, CA
- Closure of NISE East Detachment Washington, DC (effective FY 1995), with all functions relocating to Charleston, SC
- Functional transfer of the Modular Maintenance Facility from the Charleston Naval Shipyard to NISE East effective FY 1995
- Functional transfer of 70% of NISE East detachment St. Inigoes, MD functions to the Naval Air Warfare Center effective FY 1995
- Closure of all remaining NISE East Detachment St. Inigoes, MD functions (effective FY 1997), with all functions relocating to Charleston, SC
- Realignment of NISE East Detachment Norfolk, VA (effective FY 1998), with a small detachment remaining in place to support local Fleet ships and all other functions relocating to Charleston, SC

This budget also reflects the impact of the following proposed BRAC 1995 recommendations directly affecting NCCOSC:

- Closure of NRaD Detachment Warminster, PA (effective FY 1996), with functions relocating to NRaD San Diego, CA and Bay St. Louis, MS. The NRaD Detachment Philadelphia, PA which was scheduled to relocate to Warminster, will also relocate to San Diego under the BRAC 1995 recommendation.
- Consolidation of NISE West and NRaD (starting in FY 1996)

Additionally, the BRAC 1995 recommendation to collocate NCCOSC's parent command, the Space and Naval Warfare Systems Command (SPAWAR), with the combined NRaD/NISE West organization effective FY 1998 will result in a significant impact on NCCOSC.

Financial Profile:

	(Millions $)		
	FY 1995	FY 1996	FY 1997
Costs of Goods Sold	1,300.8	1,156.1	1,060.3
Net Operating Results	4.5	6.0	0.1
Accumulated Operating Results	-6.1	-0.1	0.0

000445

Costs of Goods Sold

Net cost decreases from FY 1995 to FY 1996 are partly due to inclusion of prior year costs in FY 1995, while projected FY 1996 costs are for that year only. During their first year of DBOF operations in FY 1994, the NCCOSC In-Service Engineering Centers experienced problems in recording costs; these problems were corrected and costs were recorded in FY 1995. Additional cost decreases reflect declining DoD workload/budgets, particularly for hardware/equipment acquisitions in support of customer procurement accounts; the acquisition volume has disproportionate savings not directly correlated to the amount of associated in-house labor. Further reductions are the result of savings from Base Relocation and Closure (BRAC) actions and efforts to reduce overhead costs. These decreases are partially offset by increases due to pricing adjustments, additional direct labor hours, an increase in support costs for the Defense Finance and Accounting Service (DFAS), and a full year's impact of the functional transfer of 56 procurement personnel from the Fleet Industrial Supply Center to the East Coast ISE Division in September 1995.

Net cost decreases from FY 1996 to FY 1997 represent further reductions in customer workload, reduced BRAC implementation costs, and savings from BRAC actions and Capital Purchases Program (CPP) acquisitions. The decreases are partially offset by increases due to pricing adjustments.

Operating Results

The changes in Net Operating Results (NOR) from year to year are primarily due to differences in the level of prior year loss to be made up by each year's rates. FY 1995 rates were set to recover the -$3.0 million prior year loss projected in the FY 1995 President's Budget, FY 1996 rates were set to recover a projected -$7.2 million prior year loss in the FY 1996 President's Budget, and FY 1997 rates will be set based on the -$0.1 million loss projected for the end of FY 1996 in the current submission. FY 1995 and FY 1996 NOR also reflect changes in direct labor hours, direct labor costs, and overhead costs from the budgets on which stabilized rates for these years were set.

The FY 1995 AOR is the result of the positive NOR ($4.5 million) for the year and prior year adjustments which partially offset the negative AOR of -$13.7 million as of the end of FY 1994. The positive FY 1996 NOR of $6.0 million will further improve AOR to $0.1 million by the end of FY 1996. FY 1997 revenue and rates are budgeted at the level necessary to break even ($0.0 AOR) by the end of FY 1997.

Workload:

	FY 1995	FY 1996	FY 1997
Direct Labor Hours	5,882,114	5,992,243	5,904,327

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	(Millions $)		
	FY 1995	FY 1996	FY 1997
Reimbursable Orders	1,270.6	947.3	964.4
Direct Cite Funds	377.4	367.2	361.6
TOTAL NEW FUNDS	1,648.0	1,314.5	1,326.0

Direct Labor Hours

The increase in direct labor hours (DLHs) from FY 1995 to FY 1996 (+1.9%) represents increases in overall NCCOSC work year levels in order to accomplish customer requirements. DLHs decrease by 1.5% from FY 1996 to FY 1997 due to anticipated decline in customer workload.

Orders Received

Approximately 85% of the services provided by NCCOSC are to Navy or DBOF (primarily Navy) customers, with the balance provided mostly to other DoD and Federal customers. The projected funding levels in FY 1996-97 are based on NCCOSC program managers' discussions and planning efforts with major customers, as well as from input received from other Navy Budget Submitting Offices (BSO) for budget estimates that BSOs include in the RD-3, OP-32, and P-32 exhibits projecting their planned purchases from NCCOSC. The funding profile is probably conservative as customers tend to understate during the budgeting process their support required from DBOF activities. A significant portion of the projected funding reductions between FY 1995 and FY 1996 are due to reduced hardware acquisitions/installations in the procurement appropriation that, while reducing the overall business base, have minimal impacts on the level of the in-house workforce. Instead, direct cite funding and reimbursable direct contracts and equipment purchases will be lower.

Performance Indicators:

NCCOSC outputs are scientific and engineering designs, developments, tests, evaluations, analyses, installations and fleet support for systems in the assigned NCCOSC mission areas. The measure of this output is the direct labor worked for a customer. Customers are charged a predetermined stabilized billing rate per employee hour worked. The rate includes the salary and benefits costs of the performing employee (direct labor costs) and a share of the overhead costs of NCCOSC, both general base operating support and unique production overhead costs of the performing employee's cost center. Non-labor, non-overhead costs, such as customer-required material and equipment purchases, travel expenses, and contractual services, are charged to the customer on an actual cost reimbursable basis, and thus are not part of the NCCOSC stabilized pricing structure. As discussed in the March 1993 Milestone II Report to Congress, definitive performance measures for the Research and Development (R&D) Business Area have not yet been developed. However, per the October 1994 DoD Guidance on Form and Content of Financial Statements, the financial performance measure for the R&D Business Area is total costs less direct non-labor costs per direct hour. Annual Cost Authority reports unit cost

measures based on a similar calculation. NCCOSC therefore uses total stabilized cost per hour as its performance criterion.

The composite stabilized rate and the average total stabilized cost per direct labor hour (DLH) (unit cost) for NCCOSC are discussed below.

Customer Rate Changes:

	FY 1996	FY 1997
Stabilized Customer Rate	$73.37	$75.68
Stabilized Rate Change	2.8%	3.1%
Percent Change in Composite Rate	2.4%	2.6%

The stabilized billing rate consists of direct laboe and applied overhead. All remaining costs are billed on a 100% reimbursable basis. The composite rate change shown above incorporates both the stabilized and non-stabilized parts of the budget.

Unit Costs:

	FY 1995	FY 1996	FY 1997
Unit Cost (per DLH)	$71.10	$74.02	$75.82

Staffing:

	FY 1995	FY 1996	FY 1997
Civilian End Strength	5,285	5,284	5,170
Civilian Work Years	5,176	5,319	5,159
Military End Strength	111	111	110
Military Work Years	119	113	111

Civilian Personnel

The FY 1995 civilian end strength level was 68 lower than the President's Budget. However, this included an increase of 66 employees functionally transferred from the Naval Undersea Warfare Center (NUWC) to the East Coast ISE Division; the transfer was budgeted to occur in FY 1996, but was effected in February 1995 for program continuity. Also, a functional transfer of 56 procurement personnel from the Fleet Industrial Supply Center, Charleston to the East Coast ISE Division was not in the President's Budget but was effected in August 1995. The lower on-board levels in FY 1995 are primarily at the West Coast ISE Division, which experienced higher attrition partially due to the closure of its Vallejo, CA detachment. Replacement hiring to attain the targeted workforce level did not occur fast enough to offset the attrition. While the FY 1996 plan is to partially restore particular skill and geographical employment areas of the civilian workforce in order to perform customer workload requirements, these increases will be offset by additional attrition so that there will be an overall decline of only one end strength from FY 1995

to FY 1996. FY 1996 end strength will still be 157 below the President's Budget level, including an additional reduction of 105 end strength for BRAC actions not reflected in the President's Budget. The civilian workforce reductions between FY 1996 and FY 1997 reflect additional BRAC savings (-25), personnel efficiencies from capital investments (-7), functional transfers from the East Coast ISE Division to USACOM and from NCCOSC to the Naval Air Station, North Island (-3), and other workload reductions/ efficiencies (-79) reflecting reduced customer workload funding projections.

Military Personnel

The FY 1995 through FY 1997 end strengths represent projected on-board levels based on the most recent military authorizations. Military labor costs reimbursements have been reflected in the budget based on civilian equivalent rates. FY 1995 and FY 1996 are fixed based on prior President's Budgets; FY 1997 has been repriced based on the manning level included in this budget submission and revised civilian equivalency rates. Work years are phased to reflect the timing of expected accessions and separations during the year.

Headquarters Cost:

	(Millions $)		
	FY 1995	FY 1996	FY 1997
Cost of Management Headquarters	4.9	5.0	5.1

Changes from year to year are due to inflation.

Capital Budget Authority:

	(Millions $)		
	FY 1995	FY 1996	FY 1997
Equipment-Non ADPE/Telecom	0.356	3.970	3.323
ADPE/Telecom Equipment	5.252	5.753	5.173
Software Development	0.221	0.100	0.100
Minor Construction	0.000	0.519	1.355
Reliability, Maintainability, and Supportability Modifications	0.000	0.000	0.000
TOTAL	5.829	10.342	9.949

NCCOSC spends less than one percent of revenues on capital investments. This represents a modest investment to maintain a technically efficient organization to support the Fleet and other Navy and Defense customers in their requirements.

FY 1995 authority levels were unusually low due to a general reduction by Congress to FY 1995 DBOF capital authority, and to OSD direction to not proceed with capital investments at sites impacted by BRAC 1995 recommendations. The increase between FY 1995 and

FY 1996 restores most of these reductions, better enabling NCCOSC to meet its mission requirements, while also reflecting an 8% decrease in real terms from the FY 1994 level. The slight decrease between FY 1996 and FY 1997 is mainly due to reduced requirements for general purpose non-ADP equipment items.

While not the primary reason for these capital investments, it should be noted that these CPP investments will result in cumulative savings of $0.7 million in FY 1995, increasing to $1.0 million in FY 1996 and $2.7 million in FY 1997. These savings result from: (1) replacement of deteriorated general purpose technical equipment items; (2) replacement of contractor security guards at the NCCOSC RDT&E Division with a computer operated access control system; and (3) replacement of an obsolete ADP system at the NISE West Japan site. The majority of NCCOSC CPP investments are purchased to provide technical capabilities so that NCCOSC can meet its customer requirements. These CPP investments also allow NCCOSC to perform its assigned mission at a lower cost to customers than would otherwise be possible, but the driving reason for buying these items is for NCCOSC to have the ability to meet its technical customer requirements.

Economies and Efficiencies:
Cost estimates include budgeted savings from Base Relocation and Consolidation (BRAC) initiatives and from productivity improvements expected from several Capital Purchases Program (CPP) projects. The table below summarizes the additional savings to be achieved each year which are included in the budget from these initiatives. Additional savings are also expected from efficiencies in overhead operations.

	FY 1995			FY 1996			FY 1997		
	E/S	W/Y	$M	E/S	W/Y	$M	E/S	W/Y	$M
BRAC 1991	28	25	3.0	0	14	1.4	0	0	0.0
BRAC 1993	10	10	0.7	12	12	1.0	2	2	0.1
BRAC 1995	0	0	0.0	98	18	1.0	23	92	6.2
CPP	2	2	0.5	2	2	0.5	7	7	1.7
Total	40	37	4.2	112	48	3.9	32	101	8.0

R&D - NAVAL COMMAND, CONTROL AND OCEAN SURVEILLANCE CENTER

REVENUE AND EXPENSES

(Dollars in Millions)

	FY 1995	FY 1996	FY 1997
Revenue:			
Gross Sales			
Operations	1,297.3	1,152.0	1,050.3
Capital Surcharge	0.0	0.0	0.0
Depreciation except Maj Const	8.0	10.0	10.1
Major Construction Depreciation	0.0	0.0	0.0
Other Income	0.0	0.0	0.0
Total Income	**1,305.3**	**1,162.0**	**1,060.4**
Expenses:			
Cost of Materiel Sold from Inventory			
Negotiated Purchases from Customers			
Transportation	0.9	9.7	8.4
Salaries and Wages:			
Military Personnel	6.7	6.6	6.4
Civilian Personnel	343.4	366.7	363.6
Materials, Supplies and			
Parts used in Operations	152.6	138.3	122.5
Facility Repair Charge	32.4	27.6	28.5
Depreciation - Capital	8.0	10.0	10.1
Contracted Engineering Services	176.5	149.8	123.7
Lease Costs	3.2	3.0	3.4
Purchased Utilities	13.0	10.4	10.7
Purchased Communications	2.3	2.6	2.6
Equipment Maintenance	7.6	9.8	9.6
Fuel	0.1	0.1	0.2
Other Expenses	563.2	421.4	370.7
Total Expenses	**1,300.8**	**1,156.1**	**1,060.3**
Operating Result	4.5	6.0	0.1
Less Capital Surchg Reservation	0.0	0.0	0.0
Plus Appropriations Affecting NOR/AOR	0.0	0.0	0.0
Other Changes Affecting NOR/AOR	3.1	0.0	0.0
Net Result	7.6	6.0	0.1
Prior Year AOR	(13.7)	(6.0)	(0.1)
Accumulated Operating Result	**(6.0)**	**(0.1)**	**0.0**

R&D - NAVAL COMMAND, CONTROL AND OCEAN SURVEILLANCE CENTER
SOURCE OF REVENUE
(Dollars in Millions)

	FY 1995	FY 1996	FY 1997
1. New Orders	1,270.7	947.3	964.4
a. Orders from DoD Components	1,104.5	782.6	798.1
Department of the Navy	894.1	607.7	632.4
Operations and Maintenance, Navy	277.6	188.0	202.8
Operations and Maintenance, Marine Corps	11.0	4.4	3.3
O&M, Navy Reserve	2.4	1.1	1.2
O&M, Marine Corps Reserve	0.0	0.0	0.0
Aircraft Procurement, Navy	5.0	4.4	4.1
Weapons Procurement, Navy	9.2	3.1	4.3
Shipbuilding & Conversion, Navy	63.2	50.8	44.9
Other Procurement, Navy	295.9	174.3	202.8
Procurement, Marine Corps	5.7	1.8	1.3
Family Housing, Navy and Marine Corps	0.1	0.0	0.0
Research, Development, Test & Eval, Navy	220.5	177.2	165.3
Military Construction, Navy	3.2	2.3	2.1
Other Navy Appropriations	0.2	0.2	0.2
Other Marine Corps Appropriations	0.0	0.0	0.0
Department of the Army	5.5	7.8	6.9
Army Operation & Maintenance Accounts	2.7	2.5	1.8
Army Res, Dev, Test & Eval Accounts	2.0	4.4	4.4
Army Procurement Accounts	0.7	0.9	0.7
Army Other	0.1	0.0	0.0
Department of the Air Force	50.6	28.5	32.0
Air Force Operation & Maintenance Accounts	11.6	5.7	8.4
Air Force Res, Dev, Test & Eval Accounts	17.3	19.3	20.6
Air Force Procurement Accounts	21.7	3.5	3.0
Air Force Other	0.0	0.0	0.0
DoD Appropriated Accounts	154.3	138.6	126.9
Base Closure and Realignment	24.0	31.1	17.1
Operation & Maintenance Accounts	21.9	4.8	4.5
Res, Dev, Test & Eval Accounts	93.9	98.8	102.9
Procurement Accounts	9.1	3.9	2.4
DoD Other	5.3	0.0	0.0
b. Orders from DBOF Business Areas	99.1	80.3	76.3
c. Total DoD	1,203.6	863.0	874.4
d. Other Orders	67.0	84.3	90.1
Other Federal Agencies	51.5	66.9	76.4
Foreign Military Sales	13.5	14.5	10.6
Non Federal Agencies	2.1	2.9	3.1
2. Carry-In Orders	861.3	826.6	611.9
3. Total Gross Orders (available funding)	2,132.0	1,773.9	1,576.3
4. Carry-Out Orders	826.6	611.9	516.0
Change in Backlog (carry-out less carry-in)	(34.7)	(214.7)	(95.9)
5. Total Gross Sales	1,305.4	1,162.0	1,060.4

DEFENSE BUSINESS OPERATIONS FUND
CHANGES IN THE COST OF OPERATIONS
COMPONENT: SPAWARSYSCOM/NAVAL COMMAND, CONTROL AND OCEAN SURVEILLANCE CENTER (NCCOSC)
BUSINESS AREA: RESEARCH AND DEVELOPMENT
(Dollars in Millions)

	EXPENSES (DBC 4970)
FY 1995 Actual	**1,309.8**
FY 1996 Estimate in President's Budget	**1,097.8**
Estimated Impact in FY 1996 of Actual FY 1995 Experience:	
Labor Repricing	3.6
Pricing Changes	
Change in General Purchases Inflation Guidance (PBD 604)	-5.8
Productivity Initiatives and Other Efficiencies:	
CPP Savings	-0.1
BRAC III Savings	-0.4
BRAC IV Savings	-1.0
Other Overhead Reductions	-4.2
Program Changes:	
Reduced Civilian Direct Work Years	-4.4
Revised Non-BRAC VERA/SIP Costs	-3.5
Additional BRAC Implementation Costs	10.8
Functional Transfers:	
Fleet Industrial Supply Center (FISC) to NISE-East	3.3
NISE-East to USACOM	-0.1
NCCOSC to Naval Air Station, North Island	-0.1
Customer Material, Contract & Other Costs	59.8
Change in CPP Threshold	2.0
Depreciation	-1.6
FY 1996 Current Estimate	**1,156.1**
Pricing Adjustments:	
Civilian Personnel	10.3
Military Personnel	0.5
Materials and Supplies	
Fuel	0.0
All Other	4.8
DBOF Price Changes	3.5
Other Purchases	11.5
Productivity Initiatives and Other Efficiencies:	
CPP Savings	-1.6
BRAC III Savings	-0.1
BRAC IV Savings	-6.2
Program Changes:	
Reduced BRAC Implementation Costs	-15.5
Reduced Customer Workload	-101.3
Reduced Non-BRAC VERA/SIP Costs	-0.6
Military Pay Reimbursement	-0.8
DFAS Support Costs	-0.4
Depreciation	0.1
FY 1997 Estimate:	**1,060.3**

BUSINESS AREA CAPITAL BUDGET SUMMARY
Department of the Navy
R&D/NCCOSC
Date: March 1996
($ in Millions)

Line #	Item Description	FY 1995 Quant	FY 1995 Total Cost	FY 1996 Quant	FY 1996 Total Cost	FY 1997 Quant	FY 1997 Total Cost
	1. Non-ADP Equipment						
L0001	Non-ADP Equipment > $.050M and < $.250M	VAR	0.356	VAR	3.275	VAR	3.323
L0002	Ten Channel Simulator - New Mission			1	0.429		
L0003	Super High Frequency Quality Assurance System - New Mission			1	0.266		
	Subtotal Non-ADP Equipment	VAR	0.356	VAR	3.970	VAR	3.323
	2. ADPE and telecommunications resources						
	(a). Computer Hardware (Production)						
	(b). Computer Software (Operating System)						
	(c). Telecommunications						
L0004	Videoteleconferencing System - New Mission	1	0.871	1	0.399	1	0.179
L0005	Automated Multipoint Control Unit - New Mission	1	0.190				
	Subtotal Telecommunications	2	1.061	1	0.399	1	0.179
	(d). Other Computer and Telecommunications Support Equipment						
L0006	Computer hardware > $.050M and < $.1M	VAR	1.738				
L0007	Computer Systems Upgrade - New Mission			1	0.352	1	0.150
L0008	Disk Expansion for NFAS - New Mission					1	0.352
L0009	Computer Upgrade for NFAS - New Mission			1	0.352		
L0010	Service and Information Request Network Server - New Mission					1	0.150
L0011	Database Engine Upgrade - New Mission	1	0.165	1	0.260	1	0.380
L0012	Supercomputer - New Mission	1	0.258	1	1.500	1	2.155
L0013	SIR Corporate Servers - New Mission			1	0.180		
L0014	Microfiche System - Replacement					1	0.150
L0015	Strapdown Naval Sys Evaluation Lab Upgrade - Replacement	1	0.086				
L001[illegible]	Command and Control Advanced Research Network - New Mission	1	0.455	1	0.430	1	0.435

000454

BUSINESS AREA CAPITAL BUDGET SUMMARY
Department of the Navy
R&D/NCCOSC
Date: March 1996
($ in Millions)

Line #	Item Description	FY 1995 Quant	FY 1995 Total Cost	FY 1996 Quant	FY 1996 Total Cost	FY 1997 Quant	FY 1997 Total Cost
L0017	Time Domain Measurement Range Upgrade - Replacement			1	0.100		
L0018	Corporate Desktop Server - Replacement	1	0.246				
L0019	Security System, San Diego - New Mission			1	1.400		
L0020	GPS Simulator Computer - New Mission			1	0.140		
L0021	Barcoding System - New Mission					1	1.000
L0022	Computer software > $.050M and < $.1M	VAR	0.636				
L0023	Database License for Cluster - New Mission			1	0.100	1	0.220
L0024	Executive Information System - New Mission			1	0.100		
L0025	Multi-User License for Data Access Tools - New Mission			1	0.190		
L0026	Multi-User License for Employee Access Tools - New Mission	1	0.280				
L0027	Multi-User License for SIR Systems - New Mission			1	0.150		
L0028	Data Warehouse - New Mission	1	0.327	1	0.100	___	___
	Subtotal Other Computer and Telecommunication Support Equipment	VAR	4.191	VAR	5.354	VAR	4.992
	3. Software Development						
	Software Development > $.050M and < $.1M						
L0029	Modification of Command Local System - New Mission	1	0.027	1	0.100	1	0.100
L0030	Timekeeping Source Data Automation - New Mission	1	0.194				
	Subtotal Software Development	2	0.221	1	0.100	1	0.100
	4. Minor Construction						
L0031	Minor Construction > $.050M and < $.2M			VAR	0.244	VAR	1.355
L0032	Warehousing Facilities, Hawaii - New Mission			1	0.275		
	Subtotal Minor Construction			VAR	0.519	VAR	1.355
	Grand Total Capital Purchases Program	VAR	5.829	VAR	10.342	VAR	9.949
	10. Major Construction (MILCON) non-add						

000455

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)										A. FY 1997 President's Budget		
B. **DoN/R&D**				C. L0001 - Non-ADP Equipment >= $100K < $250K						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment Installation Testing	VAR		1,228	VAR		356	VAR		3,275	VAR		3,323
TOTAL												

Justification:
This category provides NCCOSC means to procure technical items used for multiple projects. Examples of NCCOSC non-ADP equipment requirements are as follows:

Lightwave Signal Analysis Equipment (FY 97 185K). This equipment will provide a basic lightwave measurement/test/evaluation capability needed to accomplish planned development and evaluation efforts related to the use of optical systems and components for internal and external aircraft communication systems.

Network Analyzer (FY 96 155K). This equipment will be used to characterize the performance of both passive and active devices at frequencies from 10 MHz to 20 GHz. It will be used to characterize fiber optic links, radomes, antennas, amplifiers, and a plethora of devices found in Navy systems. It will be utilized in various projects, such as to build a composite mast utilizing frequency selective radomes, a passive fiber optic monitoring project, novel antenna projects, and various other antenna design projects.

Closed Circuit Television (CCTV) (FY 95 55K). This project extends the upgrade commenced in FY94.

Wide Area Augmentation System (WAAS) Satellite Simulators (FY 96 195K, FY 97 190K). Acquisition of these simulators will allow the Global Positioning Station (GPS) laboratory to replicate the evolving WAAS signal environment, or synthesize "what if" environments. The simulators are capable of simulating one of the following: a geostationary satellite broadcasting WAAS augmentation data, a pseudolite (ground based satellite which enhances local system accuracies) or an interference source.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)										A. FY 1997 President's Budget		
B. **DoN/R&D**				C. L0001 - Non-ADP Equipment >= $100K < $250K (Page 2)						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment												
Installation (CFAR)												
Testing												
Software												
TOTAL												

Justification:

Ship Motion Simulator (SMS) Controller (FY 96 195K). This controller will allow for the collection of synchronized digitalized data from the inertial systems under test as well as the SMS. This capability will improve the decision making process, relative to the test conduct and objectives. The controller will allow the utilization of actual at-sea digitized ship attitude/attitude rate data to control the SMS and emulate the actual shipboard dynamic environment. This will significantly improve the capability to support investigations and resolution of fleet supported programs.

Other Scientific/Technical Equipment (FY 95 301K; FY 96 326K; FY 97 260K). Data monitoring/recording systems, spectrum analyzers, radar components/receivers, a wave form recorder, lathes and other equipment for making tools and machine shop equipment, testing equipment, and oscilloscopes.

Tension membrane buildings (FY 97 650K). These relocatable facilities will be placed on concrete slabs to provide dry storage/warehouse space to replace current leased commercial space, and to allow the consolidation of NISE East Charleston dry storage/warehouse space at the Weapons Station South Annex, thereby reducing personnel travel time. Each building will cost approximately $130K.

0004457

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)										A. FY 1997 President's Budget		
B. **DoN/R&D**				C. L0002 - Ten Channel Simulator New Mission						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment							1		374			
Installation									20			
Testing									35			
Software												
TOTAL									429			

Justification:

The Naval Command, Control and Ocean Surveillance Center, RDTE Division's (NRaD) Global Positioning Station (GPS) laboratory is the primary test facility supporting research, development, test, and evaluation of the GPS and GPS related products for all DoD services, other government agencies and commercial organizations. NRaD is currently the primary participating test organization for the GPS Joint Test Agency (JTA). The JTA is a Joint Service Organization, established by the GPS Joint Program Office (SMC/CZTU) at HQ Space and Missile Systems Center (AFMC) Los Angeles Air Force Base. The primary purpose of the JTA is to operate as a world renowned GPS Center of Expertise (COE) which is used by both government and civilian activities as well as foreign governments for the testing and development of GPS related equipment. It is imperative that the existing capability of NRaD to test GPS equipment and to perform related studies be expanded.

The purchase of the 10 channel Stel 7200 GPS Satellite Signal Simulator with the Selective Availability/Anti-Spoofing, Rubidium Oscillator and User Motion Generator Options will greatly enhance the long term capability of the GPS laboratory. The existing simulation capability is currently one of the most heavily utilized features of NRaD's GPS laboratory; currently several shifts are required to accommodate the simulation demand. The additional simulator will greatly improve the timeliness of the response to customer's testing and development tasking requirements by increasing the amount of available simulation time. The additional simulator will also allow unequaled spoofing and jamming test capability. This expanded capability will more easily allow the

000458

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)										A. FY 1997 President's Budget		
B. DoN/R&D				C. L0002 - Ten Channel Simulator New Mission (Page 2)						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment Installation (CFAR) Testing Software												
TOTAL												

Justification:

testing of next generation all-in-view receivers as well as various other integrity assurance algorithms which is becoming of greater and greater importance with the ever expanding role that GPS plays in government and commercial operations. Other GPS equipment which simultaneously require a large number of simulated satellites and an extensive array of jamming/spoofing or faulty satellites could also easily be accommodated.

There is no feasible alternative to the purchase of this equipment. There is no other commercially available simulation capability which is compatible with NRaD's existing simulation control software programs and/or could not be integrated in a cost effective and efficient manner.

000459

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)							A. FY 1997 President's Budget					
B. DoN/R&D				C. L0003 - Super High Frequency Quality Assurance Test System (SQATS) (Page 1) - New Mission					D. NCCOSC			
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment Installation (CFAR) Testing Software							1	266	266			
TOTAL												

Justification:
The Super High Frequency (SHF) Quality Assurance Test System (SQATS) consists of two synthesized signal generators, a microwave counter/power meter with two radio frequency probes, one X-band test translator, one noise base test generator, and two bit error rate testers. Current test equipment at the SHF Satellite Communications (SATCOM) test facility are inadequate or obsolete; i.e. cannot generate the precise signals, nor measure with the required accuracy, nor meet the required high data rates. Obsolete test equipment must be replaced with modern automated test equipment to minimize manpower requirements. SQATS will test and assure the radio frequency (RF) performance of the transmit and receive systems for the two earth terminals in the SHF SATCOM Test Facility. The synthesized signal generators will provide spectrally pure signals for testing uplink and downlink amplifiers and frequency converters. The tracking generator will be used with an existing spectrum analyzer for swept intermodulation-distortion measurements. The microwave counter/power meter and RF probes will measure the stability of both signal frequency and level. The X-band test translator will provide an emulation of the satellite frequency translation from uplink to downlink for RF testing without an actual satellite. The noise-base test generator will provide testing of receiver sensitivity under controlled noisy conditions. The bit error rate testers will measure actual bit errors detected over predetermined intervals for data rates up to 1.544 MBps.

The NRaD SHF SATCOM Program Office will benefit from this acquisition by developing hands-on expertise in characterizing the RF performance of the SHF terminals. SPAWAR PMW 176-2 will benefit by having a field activity with the equipment and expertise for certification and characterization testing of follow-on SHF terminals.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)										A. FY 1997 President's Budget		
B. DoN/R&D				C. L0003 - Super High Frequency Quality Assurance Test System (Page 2)								
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment Installation (CFAR) Testing Software												
TOTAL												

Justification:

The SQATS is required for periodic testing and occasional fault isolation to ensure proper operation of all systems, subsystems and components that constitute the two earth terminals. The SQATS will provide the capability to quantify system performance and then facilitate detection/correlation of degraded performance to specific components. Alternatives investigated included "doing nothing," loan of equipment from other codes and lease/rent of required equipment. Suitable test equipment are not available for loan from other NRaD codes. Monthly lease/rent costs are typically 10% of the hardware acquisition costs, and therefore are not cost effective for leasing beyond 10 months.

000461

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)										A. FY 1997 President's Budget		
B. DoN/R&D				C. L0004 - Videoteleconferencing System - New Mission						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment				VAR		871	VAR		399	VAR		179
Installation												
Testing												
TOTAL						871			399			179

Justification:

The expansion of current Video/Electronic Boardroom capabilities planned for the NCCOSC In-Service Engineering East Coast Division (NISE East) Headquarters will directly support the Command as it executes the BRAC ordered transition from four separate work sites to the consolidated facility in Charleston, S.C. by allowing the organization to remain productive through avoidance of per diem and other travel costs and lost worker time while travelling. Without this system, the cost of managing the BRAC established NISE East organization will be significantly higher than budgeted.

NISE East began in FY 95 to establish a Video Teleconferencing (VTC) Network along with an Electronic Boardroom Facility. The network will support NISE East Charleston and its detachments at Norfolk, VA; St. Inigoes, MD; and Washington DC. The network will eliminate time-consuming cross reference of available air time facilities. The network will also allow audio/video connections as a network node located in Charleston. The advantages of the network will be realized in travel and per diem cost avoidances. Productivity savings will be result from minimizing travel due to numerous simultaneous "on the air" meetings.

The system will consist of the following items:
Digital Access Control System
Multi Control Unit
Video projection capabilities
Front/rear projection screens

000462

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)										A. FY 1997 President's Budget		
B. DoN/R&D				C. L0004 - Videoteleconferencing System - New Mission (Page 2)						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment												
Installation												
Testing												
TOTAL												

Justification (continued):

The current Video Teleconferencing Facility will receieve additional equipment to incorporate greater system configurations. The NISE East studios will receive full studio audio/video/data setups. All sites, including the elctronic boardroom, will be monitored by a video editing console. Remote VTC capabilities will expand the "on site" effect as "live" training, demonstrations and meetings take place.

The Digital Access Control System (DACS) will be used in the current Charleston studio to enable the configuration of the calls, and will also be used for network control with the additional studios and equipment. The network would be inflexible without this vital piece of equipment. The DACS will be used to allow network connections to be made at variable bandwidths to various sites on an on-demand basis. This will provide the best possible use of the network trunks and allow connections to various sites operating at various bandwidths.

The network will be controlled from the Charleston site. This control will be managed via the DACS and a Multipoint Control Unit (MCU). This equipment allows the configuration of all VTC calls and can functionally carry out the setup of several meetings at once. This equipment is essential to the operation of the network. It is the main focal point for multipoint conferences and studio scheduling. Its purchase is vital, for without it the network cannot meet it's requirements. The MCU will allow the elimination of time-consuming schedule cross-referencing and allow all NISE East personnel to increase their productivity by reducing travel time while also reducing travel and per diem costs.

000463

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)										A. FY 1997 President's Budget		
B. DoN/R&D				C. L0004 - Videoteleconferencing System - New Mission (Page 3)						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment												
Installation												
Testing												
TOTAL												

Justification (continued):

NISE East currently has a video studio in which the analog and video signals are digitized and compressed. This signal is sent thru a T-1 circuit to the network hub. The Codec is the single most vital piece of equipment because it converts the analog video and audio signals into a digital data stream which can then be transmitted via digital circuits. The Codec has features built in such as picture in picture and stacked screen. There are also ports built in to allow other data to be embedded in the data stream and transmitted concurrently with the audio and video signals. This equipment is essential to the operation of any cart type video system.

The Databeam is a high resolution graphics system that allows graphics (such as a brief or report) to be viewed and manipulated during a video conference. This system allows for viewing of graphics during a conference. An additional feature of the Databeam is the ability to transfer hardcopy or disk files during a conference. This function is carried out transparently to the attendees. The databeam scanner allows documents to be scanned and hardcopy files to be transferred to another studio which also has a databeam.

NISE East will be establishing several audio systems. The equipment will vary by site based on their requirements. Stabilizers, equalizers, speakers, microphone systems, mixing consoles, and amplifying equipment will be the basis of the audio system installations. This equipment will support the VTC/Electronic boardrooms and any additional remote requirements.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)										A. FY 1997 President's Budget		
B. DoN/R&D				C. L0004 - Videoteleconferencing System - New Mission (Page 4)						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment												
Installation												
Testing												
TOTAL												

Justification (continued):

Front/Rear projection screens allow a clearer resolution of the intended materials to be viewed. In-wall electrical screens create the best presentation abilities. These screens allow advantages such as eliminating projector noise and not having a projector beam, therefore eliminating the fuzzy appearance on the screen while also increasing VTC seating capacity.

Video projectors allow high resolution computer graphics and data to be displayed via the front/rear projection screens. This product is a necessity, as it is compatible with most currently available computers. By recognizing the frequencies of an input signal, precise images can be displayed. Another advantage is the wide screen coverage on the front/rear screens that the projector provides. Fan noise is not heard if the projector is mounted on the ceiling and manipulated by remote control. This gives a presentation a flawless quality and allows viewers to concentrate solely on the presentation materials.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)										A. FY 1997 President's Budget		
B. DoN/R&D				C. L0007 - Computer Systems Upgrade New Mission						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment Installation (CFAR) Testing Software							1	352	352	1	150	150
TOTAL												

Justification: The Naval Command, Control and Ocean Surveillance Center, RDT&E Division (NRaD) Business System "legacy" applications reside on VMS computers. Older, more costly VAX/VMS Production computers have been replaced with newer, more cost effective ALPHA/VMS computers. This upgrade is required to support the maintenance and re-engineering environment for Business Systems Production applications on Alpha class computers, necessitated by mandated and required software changes to existing application systems. This support environment must also be compatible with existing VAX/VMS production and maintenance support computers.

The current Business Systems consist of multiple computers running in a cluster environment. The proposed buy is a system building block upgrade to current computer systems including mass storage. This system will replace existing processors, mass storage, and magnetic tape backup systems. Business Service providers in the areas of Personnel, Acquisition, Security, and Tasking and Planning require the use of this computers as a "production backup" resource, as needed.

Benefits include increased processing capability due to increase speeds available with the newer technology, higher capacity and faster access to mass storage for usage that consistently shows I/O processing bottlenecks, and current technology backup systems, either DAT or 8MM, on a faster I/O bus.

This procurement will result in reduced costs for: manpower, power consumption, air conditioning, and hardware maintenance. Due to the considerable costs associated with software conversion, no other platforms will provide the required capability at comparable cost. The FY 94 procurement replaced some of the VAXs in the cluster. The FY 96 and FY 97 procurements will replace the remaining three VAXs with the current technology.

000466

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)										A. FY 1997 President's Budget		
B. DoN/R&D				C. L0008 - Disk Expansion for NFAS New Mission						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment										1	1	352
Installation												
Testing												
TOTAL												

Justification:

The Naval Command, Control and Ocean Surveillance Center (NCCOSC), RDT&E Division (NRaD) has entered a partnership with the Defense Accounting and Finance Service to continue the operations and maintenance of NCCOSC Finance and Accounting System (NFAS) until an interim/migratory DBOF financial system is selected, at which time NCCOSC will use the standard system. Current indications are that the time for a standard system has been extended, and that there is currently no estimated implementation date for such a system.

Due to the FY 1994 conversion of large components of NCCOSC to DBOF, the current processing workload and data volume have increased significantly, and are expected to increase as more and more corporate financial transactions and historical data are required. Benefits include increased processing capability due to increase speeds available with newer technology, higher capacity and faster access to mass storage for usage that consistently shows I/O processing bottlenecks, and current technology backup systems, either DAT, DLT or 8MM.

This procurement will result in reduced costs for: manpower, power consumption, air conditioning, and hardware and software maintenance. Due to the considerable costs associated with software conversion, no other platforms will provide the required capability at comparable cost. The FY 1997 procurement will replace the VAX system with the currently available technology.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)										A. FY 1997 President's Budget		
B. DoN/R&D				C. L0009 - Computer Upgrade for NFAS - New Mission						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment Installation Testing							1	352	352			
TOTAL												

Justification: The Naval Command, Control and Ocean Surveillance Center (NCCOSC), RDT&E Division (NRaD) has entered a partnership with the Defense Accounting and Finance Service to continue the operations and maintenance of NCCOSC Finance and Accounting System (NFAS) until an interim/migratory DBOF financial system is selected, at which time NCCOSC will use the standard system. Current indications are that the time for a standard system has been extended, and that there is currently no estimated implementation date for such a system.

The NFAS "legacy" applications reside on a VAX/VMS computers. Older, more costly VAX/VMS computers can be replaced with newer, more cost effective ALPHA/VMS computers. This upgrade is required to support increased production requirements for NFAS. The upgrade will be to current state-of-the-art processors utilizing existing mass storage and will provide additional mass storage as required by mandated and required software changes to existing application systems. This support environment must also be compatible with existing NRaD VMS production and maintenance support computers.

The current processing workload and data volume have increased significantly, and are expected to increase as more and more corporate financial transactions and historical data are required. Benefits include increased processing capability due to increase speeds available with newer technology, higher capacity and faster access to mass storage for usage that consistently shows I/O processing bottlenecks, and current technology backup systems, either DAT, DLT or 8MM.

This procurement will result in reduced costs for: manpower, power consumption, air conditioning, and hardware and software maintenance. Due to the considerable costs associated with software conversion, no other platforms will provide the required capability at comparable cost. The FY96 procurement will replace the VAX system with the currently available technology.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)										A. FY 1997 President's Budget		
B. DoN/R&D				C. L0010 - Service & Information Request (SIR) Network Server - New Mission						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment Installation (CFAR) Testing Software										1	150	150
TOTAL												

Justification:

The Naval Command, Control and Ocean Surveillance Center, RDT&E Division (NRaD) is building a corporate information system. The current system is many years old. It is an outdated design based on mainframe computers. The information provided is not timely enough to meet today's requirements and in a form suitable for the use with the world of high quality inexpensive computer tools that the Personal Computer (PC) revolution has provided.

The corporate information system is based on a layered model from the individual to the entire enterprise, where each layer has a distinct separation of responsibilities and powers. This approach is invoked to provide for the maximum local initiative and control while at the same time have an enterprise wide, and worldwide, capability to communicate, collaborate, and manipulate information. The layered model parallels the physical architecture for the Local Area Networks (LANs), Wide Area Networks (WANs), and client/server environment. This approach is described in a local planning document titled "CIM Governance."

The development of the new corporate information system is in process. The first user applications are now coming on-line but many of the beneficiaries of this new technology, while already in possession of desktop computer systems, are not networked according to NRaD's layered-network model. This server will be used by the Service and Information Request (SIR) system to support NRaD employees and line managers in support of data models and applications according to the "CIM Governance" plan. Also to be purchased will be the network operating server licenses, data storage, tape backup, and user application licenses.

000469

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)										A. FY 1997 President's Budget		
B. DoN/R&D				C. L0010 - SIR Network Server (Page 2) New Mission						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment Installation (CFAR) Testing Software												
TOTAL												

Justification:

The SIR systems are computer software and applications that provide an electronic interface to NRaD's business systems. The purpose of this procurement is to purchase PCs that run on a Novell local area network and allow hosting (placing software on a single computer) applications that can then be file served or made available to numberous users without actually putting the software on individual computers. The PCs will be used to host SIR systems that use commercial off-the-shelf software.

The existing corporate architecture for local area networks is Novell. A PC based server is appropriate for a Novell network environment. This approach meets the requirements for a system that supports users needs and is compatible with the existing corporate architecture.

Currently the only way to provide SIR systems to employees is to install software on individual computers. The SIR network server will host a multi-user license. When changes to software are made, instead of updating over 3,000 computers every time there is a change, only the multi-user license be updated.

The SIR network server will provide file-served applications to NRaD's employees. The commercially available software include Forms Flow, Oracle Forms, SequelNet, Brio Query, and related applications files. The software provides on-line electronic forms for processing travel orders, training requests, purchase requests, and timekeeping to name a few. The software also provides a user friendly interface to the Corporate database where the Corporation's data resides (e.g. financial, personnel, security, planning, facilities, etc.).

000420

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)										A. FY 1997 President's Budget		
B. DoN/R&D				C. L0010 - SIR Network Server (Page 3) New Mission						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment Installation (CFAR) Testing Software												
TOTAL												

Justification:

The SIR network server is needed to provide a computer platform to host the above mentioned commercial applications and software. Without a centralized host, updates to the commercial applications and software will need to be individually installed on over 3,000 PCs at NRaD and will provide no guarantee that employees are using the current version of software.

000471

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)							A. FY 1997 President's Budget					
B. DoN/R&D				C. L0011 - Database Engine Upgrade New Mission						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment Installation (CFAR) Testing Software	1	160	160	1	165	165	1	260	260	1	380	380
TOTAL												

Justification:

The Naval Command, Control and Ocean Surveillance Center, RDT&E Division has been tasked to develop, deploy, and maintain a centralized NCCOSC Corporate Database (NCDB) to support the business information needs of the Command. NRaD has also been tasked to consolidate data across the Command to populate the NCCOSC Corporate Database (NCDB). The NCCOSC Corporate Database (NCDB) is currently hosted on a Sequent computer, which has the capacity for multiple computing processors, and is supported by an Oracle Relational Database Management System (RDBMS).

The data stored in the Corporate Database will include financial data, personnel data, contracts and procurement data, physical security data, and other operational data as directed by NCCOSC management. The NCDB is a centralized data repository for on-line and batch mode business information systems and queries and reporting requirements. It is anticipated that within the next fiscal year there will be approximately 300+ concurrent users accessing the NCCOSC Corporate Database via NCCOSC business applications and various commercial data access and query software tools. It is also anticipated that the size of the Corporate Database will grow considerably over the next several years as data is consolidated and migrated from legacy system data files to this centralized database.

In order to support the increased number of users and growth in data storage, it is necessary to purchase additional computing capability and disk storage capacity for the Sequent computer. The Sequent computer has expansion capability. Therefore, it is far more cost effective to upgrade the current computing environment than purchase additional computers and operating system software to

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)										A. FY 1997 President's Budget		
B. **DoN/R&D**				C. L0011 - Database Engine Upgrade (Page 2) - New Mission						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment Installation (CFAR) Testing Software												
TOTAL												

Justification:

meet these requirements. FY95 and FY96 purchases include procurement of several pentium processors, additional memory boards, a disk controller and disk drives, tape drives, and other peripherals required to provide a secure environment for NCCOSC corporate data. FY97 purchase is for an additional Sequent computer.

Without the upgrade to the Sequent platform, NCCOSC RDT&E Division will be unable to meet the demands of NCCOSC management to consolidate and centralize corporate data and provide access to the NCCOSC Corporate Database.

000473

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)				A. FY 1997 President's Budget								
B. DoN/R&D				C. L0012 - Supercomputer System New Mission						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment Installation (CFAR) Testing Software	VAR		1,026	VAR		258	VAR		1,500	VAR		2,155
TOTAL												

Justification:

The Supercomputer system is an integral part of a secure signal processing facility. Naval Command, Control and Ocean Surveillance Center RDT&E Division (NRaD) received $1.0 million in FY94 to purchase an Intel PARAGON XP/S and Convex SPP-1000 parallel supercomputer systems, Silicon Graphics scientific visualization systems, and ATM/SONET high speed networking systems and peripherals. The PARAGON has 25 Gigaflops (billion floating point operations per second) minimum peak performance; the SPP-1000 has 1.6 Gigaflops. The systems are used primarily for solving classified scientific problems, investigations and experimental development of embedded system applications (real time, databases, simulations, signal and image processing and Communications Command and Control functions). Scientists and engineers at over 40 different RDTE activities of all branches of DOD have access to the PARAGON via the Defense Research and Engineering Network. High Performance Computing (HPC) and communications are vital, essential base technologies that will drive or limit the conduct of virtually all science and engineering for the foreseeable future. Increased HPC capability in DOD is needed to raise performance levels in advanced, embedded military computing systems, to pioneer cost reductions in these systems, and to enhance the opprotunity for commercialization of computational products by other sectors. This is an initiative by the Office of the Director of Defense Research and Engineering summarized by the "Invitation for Proposals, DOD High Performance Computing Mod Plan (HPC-MP)" of 11 September 1992. In it, specific functions and applications fundamental to progress in scientific and technologic areas of interest to the DOD were assessed. The requirements were found to far exceed current DOD capabilities. The initial NCCOSC RDTE Division response to this initiative was the PARAGON, which was selected based on the following criteria: contribution to DOD mission, synergism with science and technology R&D, technical merit, organizational commitment to HPC, cost efficiency, complement of DOD long-range goals, readiness, and track record. The subsequent response of NRaD to these requirements was the Convex SPP-1000 system, which is a

000474

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)										A. FY 1997 President's Budget		
B. **DoN/R&D**				C. L0012 - Supercomputer System (Page 2), New Mission						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment Installation (CFAR) Testing Software												
TOTAL												

Justification:

parallel supercomputing extension to the Tactical Advanced Computer (TAC-4). It will support development of parallel tactical information integration and display technology software via using the TAC-4 processors. Other commercial parallel and sequential computers were also considered. However, the SPP-1 meets the current and projected requirements, its computing power cannot be obtained elsewhere for the comparable price and existing and planned TAC-4 installations in the Fleet are candidates for upgrades to such parallel processing capability.

In FY95 through FY97, funds will be used to increase the current capability of the DOD PARAGON system placed at NRaD in FY93 and FY94 acquisitions (the SPP-1000 system, visualization systems and ATM networking). In addition, the network access to that system and other DOD systems nationwide will be facilitated for NRaD scientists and engineers. In FY95 the Center will purchase additional disks, memory, and processing nodes for the PARAGON and the SPP-1000; visualization workstation upgrades and an archival storage system. In FY96 and FY97 parallel processor upgrades, visualization peripherals, high speed networks, and other system enhancements will be acquired. Effectiveness of NRaD's HPC systems, such as the Convex Exemplar SPP-1000, increases dramatically as these machines are upgraded with additional new processors, memory, and auxiliary storage. The Exemplar is now becoming an integral component of ongoing NRaD R&D programs across our C4I mission area. Systems will be upgraded to permit the broad scientific and engineering work across the laboratory to attain increased productivity. Recent inclusion of the new Exemplar in the DOD HPC Modernization Program Distributed Center at NRaD will lead to broad use of this facility by researchers DOD wide and make it imperative that our own capability represented by this HPC system be expanded commensurate with

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)										A. FY 1997 President's Budget		
B. **DoN/R&D**				C. L0012 - Supercomputer System (Page 3), New Mission						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment Installation (CFAR) Testing Software												
TOTAL												

Justification:

growing programmatic demand. The existing Convex C3240 will thus be upgraded to provide a second Exemplar model, with archival storage capability, for general Laboratory-wide use allowing a natural migration of all of our HPC users and their computing tasks to a scalable, parallel machine offering dramatically improved capability and corresponding efficiencies in the performance of our mission area tasking.

The alternative to increasing the capability of these systems, scientific visualization systems, and ATM networks at NRaD is to purchase new computer systems, visualization systems and networks to support NRaD projects. This solution would be far more expensive than leveraging the substantial NRaD and DOD investments already made by making additions to the capability of existing systems.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)							A. FY 1997 President's Budget					
B. **DoN/R&D**				C. L0013 - Service & Information Request (SIR) Corporate Servers - New Mission					D. NCCOSC			
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment Installation (CFAR) Testing Software	1	200	200				1	180	180			
TOTAL												

Justification:

The Naval Command, Control and Ocean Surveillance Center, RDT&E Division (NRaD) is building a corporate information system. The current system is many years old. It is an outdated design based on mainframe computers. The information provided is not timely enough to meet today's requirements and in a form suitable for the use with the world of high quality inexpensive computer tools that the Personal Computer (PC) revolution has provided.

The corporate information system is based on a layered model from the individual to the entire enterprise, where each layer has a distinct separation of responsibilities and powers. This approach is invoked to provide for the maximum local initiative and control while at the same time have an enterprise wide, and worldwide, capability to communicate, collaborate, and manipulate information. The layered model parallels the physical architecture for the Local Area Networks (LANs), Wide Area Networks (WANs), and client/server environment. This approach is described in a local planning document titled "CIM Governance."

The development of the new corporate information system is in process. The first user applications are now coming on-line but many of the beneficiaries of this new technology, while already in possession of desktop computer systems, are not networked according to NRaD's layered-network model. This server will be used by the Service and Information Request (SIR) system to support NRaD employees and line managers in support of data models and applications according to the "CIM Governance" plan. Also to be purchased will be the network operating server licenses, data storage, tape backup, and user application licenses.

000427

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)							A. FY 1997 President's Budget					
B. DoN/R&D				C. L0013 - SIR Corporate Servers (Page 2) - New Mission					D. NCCOSC			
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment												
Installation (CFAR)												
Testing												
Software												
TOTAL												

Justification:

The SIR systems are computer software and applications that provide an electronic interface to NRaD's business systems. The purpose of this procurement is to purchase PCs that run on a Novell local area network and allow hosting (placing software on a single computer) applications that can then be file served or made available to numberous users without actually putting the software on individual computers. The PCs will be used to host SIR systems that use commercial off-the-shelf software.

The existing corporate architecture for local area networks is Novell. A PC based server is appropriate for a Novell network environment. This approach meets the requirements for a system that supports users needs and is compatible with the existing corporate architecture.

Currently the only way to provide SIR systems to employees is to install software on individual computers. The SIR network server will host a multi-user license. When changes to software are made, instead of updating over 3,000 computers every time there is a change, only the multi-user license be updated.

The SIR network server will provide file-served applications to NRaD's employees. The commercially available software include Forms Flow, Oracle Forms, SequelNet, Brio Query, and related applications files. The software provides on-line electronic forms for processing travel orders, training requests, purchase requests, and timekeeping to name a few. The software also provides a user friendly interface to the Corporate database where the Corporation's data resides (e.g. financial, personnel, security, planning, facilities, etc.).

000478

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)										A. FY 1997 President's Budget		
B. **DoN/R&D**				C. L0013 - SIR Corporate Servers (Page 3) - New Mission						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment Installation (CFAR) Testing Software												
TOTAL												

Justification:

The SIR network server is needed to provide a computer platform to host the above mentioned commercial applications and software. Without a centralized host, updates to the commercial applications and software will need to be individually installed on over 3,000 PCs at NRaD and will provide no guarantee that employees are using the current version of software.

000479

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)										A. FY 1997 President's Budget		
B. DoN/R&D				C. L0014 - Microfiche System - Replacement						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment Installation (CFAR) Testing Software										1	150	150
TOTAL												

Justification:

The ANACOMP XL500 microfiche output system provides a fully automated high quality microfiche master and duplicate, dry developed, and on-line processing. The present system has deteriorated due to heavy production demands and age. The on-line system is controlled by a personal computer with increased software enhancements. The proposed system will be able to handle increased production requirements due to increased workload controlled by a personal computer. The new personal computer driven microfiche system will be operated by a Computer Operator, not a manager type person.

The existing microfiche system was purchased and installed in 1993. This system produces microfiche masters and multiple copies for business customers, i.e. finance and accounting, plant property, security, personnel, and supply. The demand for microfiche over paper is the reduction of necessary storage area, capability to produce copies, and longevity for retention.

The existing Anacompt XL500 is a superior microfiche system and meets current production requirements. However, three million microfiche masters and copies are produced each month. At this rate of usage, the life cycle is estimated to be three to five years. With the current system producing close to its capacity, this does not provide for additional growth. With planned consolidations, it is anticipated that this system will not support necessary processing requirements. Additionally, utilizing the system at close to full capacity will require replacing major components earlier than expected.

000480

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)										A. FY 1997 President's Budget		
B. DoN/R&D				C. L0014 - Microfiche System (Page 2) - Replacement						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment Installation (CFAR) Testing Software												
TOTAL												

Justification:

The microfiche system produces microfiche copies of NCCOSC Financial and Accounting System, Management Information Reports, Human Resources System, Security System, and Supply Information System reports. Over three million copies are made per month, and most are retained for a minimum of one to five years.

This procurement will replace the existing microfiche system. The useful life of the existing system will soon be exhausted. With newer technology, we will benefit by reduced downtime, additional output processing capability, reduced maintenance costs, and growth capability to support additional user requirements.

Cost comparisons were completed for the last microfiche system procurement. In addition to other competitive systems, contracting out microfiche processing was considered. The cost was greater, and a contractor could not comply with the turn-around time requirement of one day.

This system meets the requirements for a system that will support our user needs, allow timely turn around for reports, is priced competitively, and allows flexibility and growth.

000481

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)										A. FY 1997 President's Budget		
B. **DoN/R&D**				C. L0016 - Command and Control Advanced Research Network (CCARnet) - New Mission						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment			205			305			310			335
Installation (CFAR)			110			150			120			100
Testing												
Software												
			315			455			430			435
TOTAL												

Justification:
The "Command and Control Advanced Research Network," CCARnet, will be a backbone network service for classified (up to SECRET) and unclassified, high bandwidth, high speed, multi-media (digital, voice, video) internetworking between Naval Command, Control and Ocean Surveillance Center, RDT&E Division (NRaD) Command and Control Department Lab spaces located throughout NRaD facilities in Point Loma.

Connectivity to other NCCOSC or tenant activity laboratories are made via the NRaD Secure Wide Area Network (SWAN). Wide area connections to other networks are made through DREN, DSInet, DSNET, MILnet, NFSnet, and the Internet. Classified information is protected via appropriate encryption or protected distribution devices.

This facility will consist of a fiber optic cable plant (multiple strands of singlemode and multimode fibers), fiber optic patch panels, LAN bridges/routers, ATM switches, net management stations, information security (INFOSEC) encryption devices, LAN interfaces and other LAN hardware and software. The fiber plant provides the capability to run point-to-point connectivity, FDDI, Ethernet, ATM, and will accommodate various network protocols. The Seaside Internet, an existing Command and Control Complex fiber network, will be integrated into this network.

The CCARnet costs by fiscal years are as follows:

(a) Cost for Activity Retention (CFAR) will be used to pay for labor for network design, procurement and integration of devices. (FY95-97, $370K)

000482

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)										A. FY 1997 President's Budget		
B. DoN/R&D				C. L0016 - Command and Control Advanced Research Network (CCARnet) - New Mission (Page 2)						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment Installation (CFAR) Testing Software												
TOTAL												

Justification:

(b) ATM switches will be used to connect current Command and Control ethernet and FDDI networks, as well as high speed Supercomputers and Servers to the NRaD corporate ATM network. They will also be used to create a testbed to evaluate ATM suitability for use as a Command and Control network technology. (FY95, $60K)

(c) Network Interfaces will be used to connect workstations, computers, ethernet networks, FDDI networks and ATM devices to this network. (FY95-97, $110K)

(d) Fiber Optic Plant will provide fiber connectivity (fiber cable, patch panels, etc.) between laboratories. (FY95-97, $170K)

(e) Data Comm Simulator will allow for variable delay to be placed on a testbed network circuit to simulate ATM long-haul and/or SATCOM links. This device will be used in technology research to support communication between command control ashore and afloat applications. (FY95, $20K)

(f) Protocol testers will support high speed network technology and protocol research on ATM and FDDI networks. (FY95-97, $100K)

(g) Network Management encompasses the hardware and software to create a consolidated Classified/Unclassified network management capability for LANs and Wide Area Networks (WANs). This will be important for joint demonstrations. (FY95-97, $70K)

000483

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)										A. FY 1997 President's Budget		
B. **DoN/R&D**				C. L0016 - Command and Control Advanced Research Network (CCARnet) - New Mission (Page 3)						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment Installation (CFAR) Testing Software												
TOTAL												

Justification:

(h) INFOSEC equipment will be NSA-approved devices to protect high speed FDDI and ATM networks. (FY95-97, $200K)

(i) Multimedia/Teleconferencing capabilities over command control networks and systems. (FY95-97, $70K)

(j) High Performance Workstations will be new technology workstations such as TAC-4 or high performance computers, used to evaluate network and communications performance using command control applications and technology. (FY95-97, $150K)

The alternative to this network is to continue using current communications which rely on point-to-point wiring. Point-to-point wiring provides limited communication capability because a computer can only talk to the one central computer to which it is hard-wired. The current system requires constant rewiring and reconfiguration in order to link computers. When the system cannot be reconfigured, information must be transferred manually or in some cases, is not transferred at all. This process wastes time and money. The continued operation of the current system is also expensive both in terms of equipment required (hardware interfaces for each interconnecting system) and labor to interconnect a constantly changing system configuration.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)										A. FY 1997 President's Budget		
B. **DoN/R&D**				C. L0017 - Time Domain Measurement Range Upgrade - Replacement						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment Installation (CFAR) Testing Software							1	100	100			
TOTAL												

Justification:

The Bounded Wave Simulator (BWS) of the Time Domain Measurement Range (TDMR) is used to do radar cross section measurements in the resonant frequency range, and to calculate the response of shipboard high frequency antenna systems to the electromagnetic pulse (EMF). It is also used to make antenna parameter measurements which include VSWR, antenna transfer functions, antenna to antenna coupling over large dynamic ranges, antenna impedances, cable coupling using antenna parameters, and antenna effective height measurements.

The current condition of the Bounded Wave Simulator (BWS) of the Time Domain Measurement Range (TDMR) is not optimal for performing measurements. The present structure has severe wood dry rot problems. Metallic components on the topside of the BWS cause high clutter to target ratios and interactions which make range calibration and measurements more difficult and time consuming. Moreover, the present feedpoint on the BWS has deteriorated with time, and needs to be replaced with a newer design which would provide a better impedance match to the rest of the BWS. These changes would provide a better measurement capability for electromagnetic pulse/electromagnetic compatibility (EMF/EMC) evaluations on ship models and resonant radar cross section measurements being used in impulse radar technology.

The present structure has deteriorated to the point where replacement is necessary. The upgrade (flanges in the holding mechanisms and clamps) will make the BWS resistant to the environmental effects. The transfer of the software from the outdated computer to the personal computer will eliminate the need to maintain the obsolete computer.

000485

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)										A. FY 1997 President's Budget		
B. DoN/R&D				C. L0017 - Time Domain Measurement Range Upgrade - Replacement (Page 2)						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment Installation (CFAR) Testing Software												
TOTAL												

Justification:

The upgrade will include: (1) fiberglass brackets, frames, and holding mechanisms; kevlar (or equivalent) rope and turnbuckles; design and installation of holding mechanisms; and metal/fiberglass laminated active member of the BWS, (2) the transfer to software used to make the above measurements from an outdated LSI 11/23 to a personal computer.

Purchase plans for FY96 are as follows:

(a) Replace wires and turnbuckles on top of BWS with nonconductive materials ($40K).
(b) Replace feedpoint on the BWS ($10K).
(c) New software to transfer EMF/EMC programs from the LSI 11/23 to a personal computer ($50K).

Alternatives considered were replacing the present structure, or continue operating the present system until the computer fails, and then try to located someone who can repair the obsolete computer. Because this equipment is obsolete, parts are nearly impossible to locate. The existing BWS structure has severe dry rot and the cost to upgrade is less than to repair it.

000486

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)							A. FY 1997 President's Budget					
B. **DoN/R&D**				C. L0019 - Security System - New Mission						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment							1	1020	1020			
Installation (CFAR)								380	380			
Testing												
Software												
TOTAL								1400	1400			

Justification:
The Naval Command, Control, and Ocean Surveillance Center, Research, Development, Test and Evaluation Division (NRaD), requires an integrated security system to protect against threats to its assets. To perform this function, in addition to roving guards, NRaD requires an integrated security system which combines: (1) card-based access control to general buildings and spaces bearing national security, export controlled, and contractor proprietary information; (2) an alarm system which will indicate when the integrity of said buildings or spaces has been breached; (3) sensors which detect when waterborne intrusions occur around the marine mammal pens; and (4) a closed circuit television (CCTV) system that provides a visual assessment capability for some alarmed or sensored areas, for selective general areas or fence lines, and for automated pedestrian and vehicular entry points. The anticipated merger of security operations of the Naval Command, Control and Ocean Surveillance Center In-Service Engineering West Coast Division makes the integrated security system requirement more critical. NISE West recently assumed responsibility for a former U.S. Air Force installation and must establish a security system to minimize its guard force expenses. Although NISE West has received some Base Realignment and Closure Commission funding for security enhancements, the security system being installed provides no more integrated capability than the separate systems located at NRaD. The proposed system will support the combined electronic security system requirements of both commands while using a single monitoring point.

CURRENT SYSTEM LIMITATIONS: The next three paragraphs detail the limitations of the current security systems. The command currently has a variety of different access control systems in specific project areas, a separate non-integrated alarm system that protects selected spaces, and several CCTV cameras

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)													A. FY 1997 President's Budget
B. DoN/R&D				C. L0019 - Security System (Page 2) - New Mission									D. NCCOSC
	FY 1994			FY 1995			FY 1996			FY 1997			
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	
Equipment Installation (CFAR) Testing Software													
TOTAL													

which continuously feed images of a limited number of areas to a bank of CCTV monitors in a central alarm monitoring and guard dispatch control center. The various badges for these multiple access control systems are not compatible, requiring employees who require access to different spaces to carry several such badges in addition to their primary identification badge. Production and production support personnel expend approximately two man-years of additional effort in issuing these badges and managing access lists over the effort which would be required by a single-badge system. Even in those areas using a common badge, individual workstations must be managed separately, adding to the administration effort. Since NISE West is installing a system to NRaD's, the administration effort will increase if the systems are not combined.

NRaD's alarm system is not integrated with any access control system or CCTV cameras. Alarms from access control portals are not integrated into the alarm display, resulting in the assignment of one additional security monitoring person to handle these responsibilities. Additionally, a separate alarm system requires that NRaD maintain an additional standalone computer system and its associated microprocessor-based local wall panels. The current alarms also do not provide for communications line encryption of alarm reports for Sensitive Compartmented Information Facilities (SCIFs). This has resulted in NRaD having two separate alarm systems to protect these extremely sensitive areas. The alarm system uses computer network protocols that are not supported by the NRaD's general communications network. As a result, the alarm system must use expensive dedicated circuits.

NRaD's CCTV cameras are also not integrated with either of the other two types of security systems. Security personnel must manually direct cameras to view areas of concern vice having the image automatically appear on screen. Camera monitors are not automatically switched-on based on an alarm condition; if they were, security guards would more readily notice the display and take appropriate

000488

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)				A. FY 1997 President's Budget								
B. **DoN/R&D**				C. L0019 - Security System (Page 3) - New Mission						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment												
Installation (CFAR)												
Testing												
Software												
TOTAL												

condition; if they were, security guards would more readily notice the display and take appropriate action. Finally, the existing CCTV system is inadequate to cover additional areas which require monitoring. An additional 54 marine mammals from NRaD's former detachment in Hawaii were recently moved into new waterborne pens along the waterfront, but no security system is available to provide surveillance to the area. The combination of three non-integrated systems requires two full-time security officers to monitor; a fully integrated system should only require one officer. The CCTV being installed at NISE West will not be integrated with their alarms or access control system.

PROPOSED SYSTEM: The proposed integrated security system is a series of card readers, numbered keypads, alarm sensors, and CCTV cameras connected to microprocessor-based distributed wall panels and redundant Personal Computers in a control center which will combine multiple functions (controlling access to spaces based on access lists, reporting alarm conditions, and automatically activating CCTV cameras in alarmed areas) into a single easily monitored and managed console. The resultant system would provide security for both NRaD and NISE West yet be easily managed by a single security guard. The proposed system will replace the plethora of incompatible badges with a single identification badge encoded to the latest Department of Defense standard for magnetic stripe badges. This will ensure that a single badge technology can be economically used for both permanent and temporary badges issued at both commands. it will also achieve maximum interoperability by permitting the use of existing NRaD badges at other sites such as the Pentagon.

The access control portion of the system uses card readers to read information encoded on the magnetic stripes of employees and authorized visitors. Similar to Automated Teller Machines, when a badge authorized for entry to a particular area is swiped through the respective card reader,

000489

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)										A. FY 1997 President's Budget		
B. DoN/R&D				C. L0019 - Security System (Page 4) - New Mission						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment Installation (CFAR) Testing Software												
TOTAL												

the microprocessor in a local wall panel controlling several readers in that area sends a signal to release the area locking mechanism, allowing that person to enter the space, building, or gate without other human direct involvement. This type of access control eliminates the need for an individual to visually control access to the area in question while providing an automated record of who accessed areas and when.

The alarm system portion of the system will use standard commercial alarm sensors in an encryption protected network running over the existing communications infrastructure. The use of government-approved encryption will ensure that a single system can monitor both the general areas and the extremely sensitive SCIFs without a duplicate control center.

The CCTV portion of the system will use alarm conditions and motion sensing software to trigger monitors to display the images captured by the cameras. Since motion sensing software is not effective in a water environment, portable radar units will also be used to trigger cameras around the NRaD waterfront. This will give guards an immediate assessment capability of the cause of an alarm and provide additional information to the roving guards dispatched to the area in question.

ALTERNATIVES: Alternatives considered include: (1) using an alternate integrated security system which encodes badges using an encoding format that is not compatible with the DoD specifications; or (2) continuing to use the existing separate security systems or expand them as necessary to cover the additional areas and assets.

Using an alternate integrated security system (option one) which does not use magnetic stripe badges

000490

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)										A. FY 1997 President's Budget		
B. DoN/R&D				C. L0019 - Security System (Page 5) - New Mission						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment Installation (CFAR) Testing Software												
TOTAL												

or which encodes to other than DoD specifications would be incompatible with the badges issued at NRaD San Diego and other DoD sites. The lack of DoD encoding compatibility would result in additional work for administrative personnel to prepare additional badges specifically for visitors to this site and would needlessly delay our scientists and engineers when they visit other sites which conform to the DoD encoding spec. While option one would provide most of the integration desired between the access control, alarm, and CCTV components, saving one man-year of effort in contract guards and two man-years of effort of technical or technician support personnel, it would result in additional work to ensure that personnel can gain access at other facilities which use the DoD encoding specification.

Continuing to use separate security systems (option two) will result in a less-integrated approach which does not save the three man-years of effort and which will make maintenance more difficult.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)										A. FY 1997 President's Budget		
B. **DoN/R&D**				C. L0020 - GPS Simulator Computer - New Mission						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment							1	130	130			
Installation (CFAR)								10	10			
Testing												
Software												
TOTAL									140			

Justification:
The Naval Command, Control and Ocean Surveillance Center, RDTE Division's (NRaD) Global Positioning Station (GPS) laboratory is the primary test facility supporting research, development, test, and evaluation of the GPS and GPS related products for all DoD services, other government agencies and commercial organizations. NRaD is currently the primary participating test organization for the GPS Joint Test Agency (JTA). The JTA is a Joint Service Organization, established by the GPS Joint Program Office (SMC/CZTU) at HQ Space and Missile Systems Center (AFMC) Los Angeles Air Force Base. The primary purpose of the JTA is to operate as a world renowned GPS Center of Expertise (COE) which is used by both government and civilian activities as well as foreign governments for the testing and development of GPS related equipment.

The VAX Systems 6410 and 4505 along with ancillary hardware and software are the primary controllers for NRaD's GPS Satellite Signal Generator which utilizes the 10 channel Stel 7200 Satellite Signal Generator. Trajectory scenarios and other control and scheduling functions required for operation of the simulator are already in existence and were coded on the specified computer systems. The specified computer system is required to maintain NRaD's current simulation capability which is seen by industry and government as the standard to which other systems are compared to for certification of acceptable performance.

The purchase of VAX Computer Systems, with ancillary hardware and software, will greatly enhance the long term capability of the GPS laboratory. The existing simulation capability is currently one of the most heavily utilized features of NRaD's GPS Laboratory; currently several shifts are required to accommodate the simulation demand. The additional simulator will greatly improve the timeliness of

000492

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)										A. FY 1997 President's Budget		
B. DoN/R&D				C. L0020 - GPS Simulator Computer - New Mission (Page 2)						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment Installation (CFAR) Testing Software												
TOTAL												

Justification continued):

the response to customer's testing and development tasking requirements by increasing the amount of available simulation time. The additional simulator will also allow unequaled spoofing and jamming test capability. This expanded capability will more easily allow the testing of next generation all-in-view receiver as well as various other integrity assurance algorithms which is becoming of greater and greater importance with the ever expanding role that GPS plays in government and commercial operations. Other GPS equipment which simultaneously require a large number of simulated satellites and an extensive array of jamming/spoofing or faulty satellites could also be easily accommodated.

There is no feasible alternative to the purchase of this equipment. There is no other commercially available simulation capability which is compatible with NRaD's existing simulation control software programs and/or could not be integrated in a cost effective and efficient manner.

000493

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)										A. FY 1997 President's Budget		
B. DoN/R&D				C. L0021 - Electronic Bar Coding System - New Mission						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment Installation Testing										VAR		1.000
TOTAL												

Justification:

This proposed system will automate the equipment tracking process through the use of software and hardware (scanners, readers, printers, and other associated bar coding equipment) to eliminate the requirement for 15 contractor workyears each year after the system becomes fully operational.

NISE East is responsible for over $224 million of sponsor technical equipment items. NISE East warehouses receive and issue over 8,000 items each month. In addition, NISE East has over $46 million of internal items, and is required to conduct a triennial inventory for these items. Currently, accountability for all equipment items are done by manual paper inventories at the NISE East sites. This manual process is inefficient and results in incorrect and incomplete records. This project will result in more accurate and complete equipment tracking information at a significantly lower cost. The system will pay for itself in less than three years, and within five years will have saved twice as much as the investment cost.

000494

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)										A. FY 1997 President's Budget		
B. DoN/R&D				C. L0023 - Database License for Cluster New Mission						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment Installation (CFAR) Testing Software							1	100	100	1	220	220
TOTAL												

Justification:

The Naval Command, Control and Ocean Surveillance Center, RDT&E Division (NRaD) has been tasked to develop, deploy, and maintain a centralized NCCOSC Corporate Database (NCDB) to support the business information needs of the Command. NRaD has also been tasked to consolidate data across the Command to populate the NCCOSC Corporate Database (NCDB). The NCCOSC Corporate Database (NCDB) is currently hosted on a Sequent computer, which has the capacity for multiple computing processors, and is supported by an Oracle Relational Database Management System (RDBMS).

The NCDB includes financial data, personnel data, contracts and procurement data, physical security data, and other operational data required by NCCOSC management. The NCDB is a centralized data repository for on-line and batch mode business information systems and queries and reporting functions performed by end-users. It is anticipated that within the next fiscal year there will be approximately 300+ concurrent users accessing the NCCOSC Corporate Database via NCCOSC business applications and various commercial data access and query software tools, and the number will continue to grow in the outyears.

NRaD needs to purchase an additional 300 concurrent licenses to support the required number of users. Currently, NRaD is only licensed to allow 64 simultaneous users. Without a 300-user license, NRaD will not be able to provide access to the NCDB for more than 64 users at any point in time. The lack of appropriate number of user licenses would jeopardize the schedules of production business

000495

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)										A. FY 1997 President's Budget		
B. DoN/R&D				C. L0023 - Database License for Cluster (Page 2) - New Mission						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment Installation (CFAR) Testing Software												
TOTAL												

Justification:

information systems processes and the productivity of individuals who rely on accessing the NCDB to successfully complete their work assignments.

The purchase of additional user licenses for FY95, FY96, and FY97 is necessary to meet the demands of more users requiring access to corporate data (i.e. NCDB).

000496

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)							A. FY 1997 President's Budget					
B. DoN/R&D				C. L0024 - Executive Information System (EIS), New Mission					D. NCCOSC			
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment Installation (CFAR) Testing Software							1	100	100			
TOTAL												

Justification:

An Executive Information System (EIS) will provide Naval Command, Control and Ocean Surveillance Center, RDT&E Division (NRaD) management with access to summarized, historical, and detailed information derived from the corporate data warehouse. The corporate data warehouse is a database that is optimized for decision support and populated by the corporate operational database. The EIS tool allows management to analyze the contents of the data warehouse via graphical and tabular reports and will support ad hoc analytical functionality and drill down multi-dimensional pivoting. Whenever a user requests an analysis, the EIS will perform the necessary transformations into a relational query, and then convert a relational result back into a multi-dimensional report. The EIS provides upper management a tool to predict and analyze in an ad hoc manner, post corporate trends and plan for the future.

Currently, management's analytical inquiries are submitted to analysts who manually derive the data from existing reports and legacy databases. The turn around time for management to receive proper responses to its analytical queries can be extremely time consuming and as a result quite limiting in value as well as limiting management's ability to identify trends.

The EIS is designed to provide management with a powerful, intuitive, graphical tool for analyzing corporate data and navigating the data warehouse. Interactive decision support against the data warehouse by means of "drill-down" will allow the user to select subsets of information in the analysis results and view its constituent elements.

000497

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)										A. FY 1997 President's Budget		
B. DoN/R&D				C. L0024 - Executive Information System (EIS), Page 2, New Mission						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment												
Installation (CFAR)												
Testing												
Software												
TOTAL												

Justification:

When management requires information outside the scope of the regular business reports, it must submit a request to an analyst for an ad hoc report that may not be produced for several days or weeks. The delay in receiving critical information not only delays decision making on the part of management but calls into question the accuracy of decisions. The EIS tool will allow management immediate and direct access to report on current business information. Management can query without any knowledge of special query languages and utilize the EIS built-in tools to produce final reports.

There are two alternatives to the EIS approach. One is to maintain the status quo which will continue to erode management's credibility in the accuracy of its decision making. The second approach is to develop an EIS capability within the corporation. This approach will cost considerably more than the proposed off-the-shelf EIS tool. An EIS tool is very complex in nature since it is accomplishing within one shrink-wrapped package the same functionality of up to half a dozen stand-alone programs. An in-house development will require significant resources which could in turn delay on-going efforts.

This approach will provide NRaD management with a capability to perform ad hoc queries including business forecasting and tend analysis at a minimal cost to the corporation.

000498

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)													A. FY 1997 President's Budget
B. DoN/R&D				C. L0025 - Multi-User License for Data Access Tools - New Mission									D. NCCOSC
	FY 1994			FY 1995			FY 1996			FY 1997			
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	
Equipment Installation Testing							1		190				
TOTAL													

Justification:

Data reporting tools provide a mechanism for on-line access to corporate databases. Licenses are required for each user accessing the database. The license will provide NCCOSC with software tools which allow users to define and execute reports, thus obtaining information that is required to perform the task at hand. NCCOSC needs to provide employees with this capability to allow them access to corporate data. The tool will give employees on-line access to the NCCOSC Corporate Database (NCDB) for report generation purposes and remove the requirement from Information Systems (IS) groups to generate reports for users. The tool will increase the effectiveness of the NCCOSC decision making process.

000439

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)							A. FY 1997 President's Budget					
B. DoN/R&D				C. L0027 - Multiuser License for Service & Information Request (SIR) Systems - New Mission					D. NCCOSC			
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment Installation (CFAR) Testing Software							1	150	150			
TOTAL												

Justification:

Tne Service and Information Request (SIR) System is a system designed for employees and line managers to provide services and information from the Corporate Database. NCCOSC is shifting from a transaction centered way of doing business to a data centered approach. This is consistent with the state of change of most major corporations and consistent with trends in information engineering. NCCOSC is placing all corporate data in its Corporate Database providing employees in all the Division direct access to Corporate data, and providing the necessary tools to query and report the corporate data. All employees will be able to request services and information from the corporate database in a timely manner by eliminating the need to have the employee first request the information from the Information System (IS) division, and to wait for the requested information. Information available from the Corporate Database includes financial updates from NCCOSC Financial and Accounting System (NFAS), Human Resources, Management Information System, and Security programs.

The purpose of this procurement is the purchase of commercial off-the-shelf software for the corporation to support the SIR, specifically software licensed for the entire corporation (either site-licensed software or concurrent usage software). These licenses are required to support this data-centered corporate effort and will reduce the reliance on labor intensive software development and maintenance efforts that is required by traditional legacy information systems. These tools will allow strong employee and customer involvement in leveraging that use of corporate data to maximize its quality, use, and effectiveness.

000500

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)							A. FY 1997 President's Budget					
B. DoN/R&D				C.L0027 - Multi-User License for SIR Systems (Page 2) - New Mission					D. NCCOSC			
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment Installation (CFAR) Testing Software												
TOTAL												

Justification:

Currently, individual NCCOSC organizations have been buying software with the required Service and Information Request Systems (SIR) commercial software. Without a corporate buy, the magnitude of support of various versions becomes large and unmanageable.

The procurement provides a consistent and uniform software environment across the command to host the Service and Information Request Systems (SIR) applications. These applications are directed at all employees. In addition to less costly maintenance, installation is uniform across the center and hence support less costly.

Under the current methods of providing Corporate Information, employees are required to request the information from the Information Systems Division and to wait for the information to be provided. The multi-user licenses will allow the employees to request their own services and information from the corporate database in a timely manner. The procurement is needed to provide a more uniform and cost effective purchase of Service and Information Request Systems (SIR) commercial software.

Purchasing the commercial software on a group basis was considered, but it creates a number of maintenance, installation, and support problems, adding greatly to the overall life-cycle cost.

000501

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)										A. FY 1997 President's Budget		
B. DoN/R&D				C. L0028 - Data Warehouse New Mission						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment				1	327	327	1	100	100			
Installation												
Testing												
Software												
TOTAL												

Justification:

The Data Warehouse is a tool designed to help mnagment make Corporate business decisions. A Warehouse Manager and Directory Manager will be purchased to begin the development of a Data Warehouse. To manually design, build, and implement a Data Warehouse would require years of programming effort. Additionally, necessary modifications to the Warehouse due to naturally evolving systems would require additional months of labor intensive work. The Warehouse Manager software would accelerate this process by automatically generating code to extract operational data from the corporate database and perform the transformations needed to turn this data into integrate Data Warehouse information. With the Warehouse Manager, the building of a Data Warehouse could take less than four months and save up to 90% of future maintenance costs.

The Data Warehouse is designed to serve the decision making community. The expectation is that the decision maker is a business person and as such, he/she will require more help navigating around the system than the average computer user. For this reason, the formal establishment "data about data" becomes important in the Data Warehouse environment. The decision maker needs to know what data is available and where it is in the Data Warehouse. Additionally, it provides information about the nature of the data (i.e. data source, point of contact, when summaries were created, what queries and other help is available, what changes have occurred in business definitions and terms, and business assumptions that have been made in the past regarding the data). To this end, a Directory Manager is to be provided.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)										A. FY 1997 President's Budget		
B. DoN/R&D				C. L0028 - Data Warehouse (Page 2) New Mission						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment Installation Testing Software												
TOTAL												

Justification:

Currently, there is no existing system to provide Center Senior Planners and Decision Makers with a consolidated view of who our customers are, or what services and/or products are correlated across the customer base. Long term forecasting and trend analysis are tedious, time-consuming and labor intensive.

Currently, information of importance to the corporation is distributed throughout the corporate database and is extremely difficult for the decision maker to obtain. The Data Warehouse is specifically designed for analytical processing such as decision support. The resultant subject oriented database is designed with the end-user in mind.

The Data Warehouse is designed to serve the information needs of the entire Center. Specifically it will provide:
(a) Enhanced customer service (all customer information is correlated via a single Data Warehouse).
(b) Provides management with a capability to ascertain the big picture.

An alternative is to manually design, build, and implement a Data Warehouse. Such an undertaking would take years of programming effort with a resulting system that would require costly maintenance due to the natural evolution of business as corporate requirements change. The cost to manually develop this capability would be at least ten times the cost of purchasing these tools.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)				A. FY 1997 President's Budget								
B. DoN/R&D				C. L0029 - Modification of Command Local System - New Mission						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment Installation Testing	1		150	1		27	1		100	1		100
TOTAL												

Justification:

This line item is for modifications to the existing NCCOSC In-Service Engineering East Coast Division (NISE East) Management Accounting System (MAS) computer system software, as a result of NISE East's conversion to DBOF in FY 1994.

The 1991 BRAC process established NCCOSC. NCCOSC has a critical business requirement for its subordinate activities to adopt unified platforms suitable to interface with the NCCOSC Finance and Accounting System (NFAS). The adoption of an Open System compliant platform is required to allow NCCOSC financial applications performed at the corporate headquarters to coexist on the same computer system and for its operating divisions to be able to report their existing business functions to NCCOSC as the cognizant accounting organization. Requirements have emerged as the legacy systems were transitioned to the DBOF accounting methodology, and these obsolete systems were found to be deficient in properly executing necessary business transactions and interworking capabilities. NCCOSC currently obtains operating financial information as the Authorized Accouting Activity paying office for all NCCOSC operating divisions. Each division is in turn interconnected by the NCCOSC Command Internet. Separate interfaces report management data to NFAS. Management information for internal use is collected at each site and integrated.

The specific rationale for this line item is to provide conversion of the existing financial data and applications to an open system platform. Without this conversion, reliable data retrieval from prior years cannot be assured. In addition, this conversion will result in significant cost avoidance since all prior year data will not have to be manually keyed into the replacement system.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)										A. FY 1997 President's Budget		
B. DoN/R&D				C. L0031 - Minor Construction < $200,000 - New Mission						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment Installation Testing	VAR		659				VAR		244	VAR		1,355
TOTAL												

Justification:

Minor Construction is used by the NCCOSC research, development, and engineering centers to accommodate new requirements, modernize, and replace obsolete facilities. The centers are located in 18 sites throughout the nation and have 4.01 million square feet of laboratory and office space. Minor construction is used at NCCOSC activities to:

- modify existing spaces to provide suitable space to test and design new equipment (often in a protected environment) for the forces afloat
- construct new facilities to provide suitable space to test and design new equipment, frequently in physically secure areas
- upgrade hazardous waste facilities to ensure compliance with applicable laws/regulations
- improve existing security measures
- reduce operating expenses by building government-owned space so that leased space may be vacated

000505

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)				A. FY 1997 Budget OSD Submission								
B. **Navy/Research and Development/NCCOSC**				C. L0032 - Warehousing Facilities, Hawaii - New Mission						D. NCCOSC		
	FY 1994			FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment							1		275			
Installation												
Testing												
TOTAL									275			

Justification:

NISE West Hawaii, located at the Pearl Harbor Naval Shipyard, requires 20,000 to 40,000 sq. ft. storage area. During FY 96 or FY 97 the shipyard plans to relocate the current warehousing functions to another site on the shipyard, located far away from other NISE West facilities.

A PEB type of warehouse structure built on the property close to our new facility will be cost effective and direct productive time spent traveling to and from Pearl Harbor will be eliminated and result in more time spend work directly on projects. Having a warehouse at Pearl City Peninsula would also alleviate the problem of storing the Integrated Undersea Surveillance System Operation (IUSSOP) array module reels (6 ft in diameter and 6 ft wide) which are now taking up valuable space in our new building. At this time the new cost to NISE WEST Hawaii by the shipyard on the new location is unknown. Cost of leasing of commercial warehousing in Pearl City area is $528,000 per year.

If additional warehouse space is not provided, needs may have to stored outside, exposing them to the elements which will cause accelerated deterioration. Lost of productivity of engineers, and technicians in travel time to and from Pearl Harbor Shipyard.

Department of the Navy -Defense Business Operations Fund
R&D/NCCOSC
CAPITAL BUDGET EXECUTION
(dollars in millions)
FY 1996

Title/Description	Original Request	Change	Revised Request	Explanation/Reason for Change
Equipment (non-ADPE/TEL)				
Non-ADP Equipment > $.050M and < $.250M	2.704	0.571	3.275	
Ten Channel Simulator		0.429	0.429	This item was in the FY96 President's Budget in the less than $500K category. With the threshold decrease to less than $250K, this item was made visible.
Super High Frequency Quality Assurance System	____	0.266	0.266	This item was in the FY96 President's Budget in the less than $500K category. With the threshold decrease to less than $250K, this item was made visible.
Subtotal Non-ADPE/TEL	2.704	1.266	3.970	
ADPE and Telecom Equip				
Computer hardware > $.050M and < $.1M	1.743	-1.743		Impact of change in CPP Threshold
Computer Systems Upgrade	0.352		0.352	
File and Archive Server	0.051	-0.051		This item was cancelled because the function is no longer being performed.
Computer Upgrade for NFAS	0.352		0.352	
Service and Information Request Network Server	0.180		0.180	
Database Engine Upgrade	0.260		0.260	
Supercomputer	1.000	0.500	1.500	Funds will be used to increase the current capability of the DoD PARAGON system placed at NRaD. In addition, the network access to that system and other DoD systems nationwide will be facilitated for NRaD scientists and engineers. Parallel processor upgrades, visualization peripherals, high speed networks, and other system enhancements will be acquired. Costs were based on a best estimate available at that time. Increased costs are due to more accurate estimates.
Fiber Optics Local Area Network	0.430		0.430	
Virtual Reality System	0.127	-0.127		This item was the second part of a FY 95 procurement which was cancelled due to Congressional general CPP reductions.
Time Domain Measurement Range Upgrade	0.100		0.100	
Security System, San Diego		1.400	1.400	NRaD requires an integrated system to protect against threats to its assets. To do this, in addition to roving guards, NRaD requires an integrated security system combining: (1) a card-based access control to general buildings and spaces bearing

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				national security, export controlled, and contractor proprietary information; (2) an alarm system which will indicate when the integrity of said buildings or spaces has been breached; sensor which detect when waterborne intrusions occur around marine mammal pens; and (4) a closed circuit television (CCTV) syster that provides a visual assessment capability for some alarmed sensored areas.
GPS Simulator Computer		0.140	0.140	Growing workload in the GPA area has put ever increasing stress on the current simulation capability; currently, several are required to accommodate the demand. The additional simulator will greatly improve timeliness to customers' requirements, will allow unequaled spoofing and jamming test capability, which will more easily allow the testing of next next generation items.
Document Imaging System	0.114	-0.114		This item was cancelled when alternate actions were taken to solve the problem that drove the original request for CPP funds
Access Control System, Warminster	0.200	-0.200		This project was cancelled because of the BRAC 4 recommendation to close Warminster and relocate most of its functions to San Diego.
Document Management System	0.135	-0.135		This item was cancelled due to efforts to reduce overhead cost: as a result of the BRAC merger of NISE West and NRaD.
Software > $.050M and < $.1M	0.829	-0.829		Impact of change in CPP Threshold
Database License for Cluster	0.100		0.100	
Executive Information System		0.100	0.100	This is a new requirement due to a refined understanding and evolution of the software requirements of a data warehouse environment and data warehouse support/interface. Executive Information Systems have become more user friendly, flexible, and offer more executive support over the past year.
Multi-User License for Data Access Tools		0.190	0.190	This is a new requirement due to a refined understanding and evolution of the NCCOSC corporate data environment.
Multi-User License for SIR Systems		0.150	0.150	This system is designed for employees and line managers to provide services and information from a corporate database. NCCOSC is shifting from a transaction centered way of doing business to a data centered approach. This procurement provides a consistent software environment across NCCOSC to host the SIR applications. Without a corporate buy, the magnitude of support of various versions becomes large and unmanageable.
Data Warehouse	0.100		0.100	
Telecommunications > $.050M and < $.1M	0.285	-0.285		Impact of change in CPP Threshold
Videoteleconferencing System	0.399		0.399	
Subtotal - ADPE/TEL Equip	6.757	-1.004	5.753	
Software Development				
Modification of Command Local System		0.100	0.100	NISE East is currently using a Wang computer system to

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				process all MIS data. Since declaring bankruptcy, Wang has discontinued production and support for the majority of their mainframe line of components. This requires NISE East to transport their existing MIS to non-Wang equipment, requring some software modifications to maintain functionality.
Subtotal - Software Development	0.000	0.100	0.100	
Minor Construction				
Minor Construction > $.050M and < $.2M	0.600	-0.356	0.244	Impact of change in CPP Threshold
Warehousing Facilities, Hawaii		0.275	0.275	The requirement for construction of a Warehouse at our Pearl City facility has been added due to the Pearl Harbor Naval Shipyard's recent plan to relocate the present facility, which would create an inefficient operation for NISE West
Radio Frequency Sensor Laboratory	0.280	-0.280	———	In the current environment of base closures and DoD cutbacks in budget and personnel, minor construction projects became a very low priority.
Subtotal - Minor Construction	0.880	-0.361	0.519	
Grand Total Capital Purchases Program	10.341	0.001	10.342	

000509

DEPARTMENT OF THE NAVY
DEFENSE BUSINESS OPERATIONS FUND
RESEARCH AND DEVELOPMENT - NAVAL RESEARCH LABORATORY
FY 1997 PRESIDENT'S BUDGET

Activity Group Function:

The Naval Research Laboratory (NRL), the Department of the Navy's corporate laboratory, is under the command of the Chief of Naval Research (CNR). As the corporate laboratory, NRL is an important component in the Office of Naval Research's effort to meet its science and technology responsibilities.

For its basic research effort, the Laboratory receives guidance from the CNR that establishes the level of effort and trend direction. The Laboratory then develops a comprehensive research proposal package that is submitted to the CNR for consideration for Navy basic research support. The total Navy basic research program ultimately is evaluated by Congress.

In addition to internal critical review and the evaluation by the CNR and others, the research at NRL is published in referred journals and/or reported at national and international scientific conferences. In an aggressive policy of scientific interaction, scientists from around the world visit NRL and are visited by NRL scientists. In this way, NRL research is subject not only to management review but also to peer evaluation.

NRL has had a long and fruitful relationship with industry as a collaborator, most recently in Cooperative Research and Development Agreements (CRADA). NRL values this linkage and intends for it to continue to develop.

NRL is an important link in the Navy research and development chain. Through NRL, the Navy has direct ties with sources of fundamental ideas in industry and the academic community throughout the world and provides an effective coupling point to the research and development chain for the Office of Naval Research (ONR).

The mission of the NRL is to conduct a broadly based multi-disciplinary program of scientific research and advanced technological development directed toward maritime applications of new and improved materials, techniques, equipment, systems, and ocean, atmospheric, and space sciences and related technologies. The NRL provides:

- Primary in-house scientific research and development for the physical, engineering, space, and environmental sciences.
- Broadly based exploratory and advanced development programs in response to identified and anticipated Navy needs.
- Broad multi-disciplinary support to the Naval Warfare Centers.
- Space and space systems technology development and support.

Major NRL customers include the Office of Naval Research, the Naval Sea Systems Command, the Naval Air Systems Command, the Space and Naval Warfare Systems Command, the Ballistic Missile Defense Office, the Advanced Research Projects Agency, Naval Warfare Centers, the Army, the Air Force, other Navy and Department of Defense customers, the

Department of Energy, and the National Aeronautics and Space Administration.

Activity Group Composition:

In addition to its Washington, D.C. campus of about 130 acres and 102 main buildings, NRL maintains 13 other research sites, including a vessel for fire research and a Flight Support Detachment. The many diverse scientific and technological research and support facilities include the large facility located at the Stennis Space Center in Bay St. Louis, Mississippi; a facility at the Naval Postgraduate School in Monterey, California; the Chesapeake Bay Detachment in Maryland; and additional sites located in Maryland, Virginia, Alabama, and Florida.

The Flight Support Detachment, located aboard the Patuxent River Naval Air Station in Lexington Park, Maryland, operates and maintains five uniquely configured P-3 Orion turboprop aircraft as airborne research platforms for worldwide scientific research operations.

The Chesapeake Bay Detachment occupies a 168-acre site near Chesapeake Beach, Maryland, and provides facilities and support services for research in radar, electronic warfare, optical devices, materials, communications, and fire research. Because of its location high above the Chesapeake Bay on the western shore, unique experiments can be performed in conjunction with the Tilghman Island site 16 km across the bay. The Navy Technology Center for Safety and Survivability, which conducts fire research on simulated ship and submarine platforms, is collocated with the Chesapeake Bay Detachment site.

The Naval Research Laboratory-Stennis Space Center is a tenant activity at NASA's Stennis Space Center. Other Navy tenants at the Stennis Space Center include the Naval Meteorology and Oceanography Command and the Naval Oceanography Command and the Naval Oceanographic Office, who are major operational users of the oceanographic and atmospheric research and development performed by the Naval Research Laboratory. This unique concentration of operational and research oceanographies make Stennis Space Center the center of naval oceanography and the largest such grouping in the Western world.

The Marine Meteorology Division at Monterey, California, a tenant activity of the Naval Postgraduate School, is collocated with the Fleet Numerical Meteorology and Oceanography Center to support development and upgrades of numerical atmospheric forecast systems and related user products. This collocation allows access to the Navy's largest vector supercomputer, providing real time as well as archived global atmospheric and oceanographic databases for research at Monterey and at other NRL locations.

Other smaller field sites have been chosen primarily because they provide favorable conditions to operate specific antennas and electronic subsystems and are close to NRL's main site.

Financial Profile	FY 1995	FY 1996	FY 1997
Cost of Good Sold ($millions)	$502.7	$568.4	$592.4
Net Operating Results	7.6	(18.6)	(15.6)
Accumulated Operating Results	33.3	15.6	0.0

Project funding and related contractual efforts were deferred from FY 1995 to FY 1996. FY 1995 costs were therefore significantly lower than budgeted; however, this deferral is not expected to impact FY 1996 and FY 1997 budgeted cost levels. Negative Net Operating Results

are budgeted for FY 1996 and FY 1997 to achieve zero Accumulated Operating Results in FY 1997.

Workload:	FY 1995	FY 1996	FY 1997
Direct Labor Hours	3,735,814	3,901,905	3,744,871

Total direct hours decrease in FY 1997 due to phasing of total staffing reductions required to meet out-year mandated civilian personnel controls.

Performance Indicators:	FY 1995	FY 1996	FY 1997
Total Direct Work Years	2,148	2,193	2,105
Costs Per Direct Workyear (Direct Labor Plus Overhead) ($thousands)	$132.3	$136.9	$147.5

The increase in FY 1997 of the cost per direct workyear is a function of the following changes:

	$ Thousands
FY 1996 Cost Per Direct Workyear	$136.9
Decrease in Direct Workyears	5.9
Inflation at 2.2%	3.0
Realignment of CPP Equipment ($2.3 million)	1.1
Other Changes	0.6
FY 1997 Cost Per Direct Workyear	$147.5

Total direct workyears decrease in FY 1997 because of phasing of total staffing reductions required to meet out-year mandated civilian personnel controls.

The increase in FY 1997 of the cost per direct workyear is principally caused by the decrease in direct workyears. Since a major portion of overhead, e.g., facilities maintenance and repairs, is fixed, it takes time to reduce overhead in response to direct workyear decreases. Such decreases will be effected in FY 1998 in order to bring the cost per direct workyear down to pre-FY 1997 levels plus inflation.

Inflation accounts for $3.0 thousand of the increase. The realignment of equipment costing less than $100,000 from the capital purchase program to overhead accounts for most of the remaining increase.

Customer Rate Changes	FY 1996	FY 1997
Stabilized Customer Rate	$74.98	$81.49
Stabilized Rate Change	0.0%	8.7%
Percent Change in Composite Customer Rate	1.6%	5.3%

The stabilized billing rate consists of direct labor and applied overhead. All remaining direct costs are billed on a 100% reimbursable basis. The composite rate change shown above incorporates both the stabilized and non-stabilized parts of the budget.

Unit Costs:	FY 1995	FY 1996	FY 1997
Per direct Labor Hour	$76.02	$76.92	$82.91

Staffing:	FY 1995	FY 1996	FY 1997
Civilian End Strength	3,384	3,470	3,367
Civilian Work Years	3,440	3,476	3,372
Military End Strength	55	74	74
Military Work Years	54	74	74

The civilian personnel changes are reductions to meet out-year mandated civilian personnel controls. Early phasing of the reductions is required to avoid skill imbalances and major reductions in force in later years. These estimates are consistent with funded programs in fiscal years 1996 and 1997. The military personnel fluctuations are the result of the transfer of a research flight contingent to the Naval Research Laboratory.

Headquarters Cost:	FY 1995	FY 1996	FY 1997
Cost of Management Headquarters ($millions)	$ 0.0	$ 0.0	$ 0.0

Office of Naval Research support of the Naval Research Laboratory is not significant and is therefore not financed through the Defense Business Operations Fund. Less than one-fourth work year of Office of Naval Research support is provided to the Naval Research Laboratory. The Office of Naval Research incurs no incremental costs and has no additional staff because of the existence of the Naval Research Laboratory.

Capital Budget Authority:	FY 1995	FY 1996	FY 1997
Equipment-Non ADPE/TELECOM	$8.450	$8,874	$11,179
ADPE/Telecommunications Equipment	2.232	3.542	1,021
Software Development	0	.105	0
Minor Construction	.896	1.500	1.500
Reliability, Maintainability, and Supportability Modifications	0	0	0
TOTAL ($millions)	$11.578	$14.021	$13.700

The increases in capital budget authority from FY 1995 to FY 1996 are necessary to ensure that NRL stays on the leading edge of modern technology in order to provide a full range of research and development technologies to their customers. In addition, much-needed facilities repairs are necessary across all reported FYs to upgrade deteriorating and aging structures. The reduction in FY 1997 capital budget authority results primarily from the change in the investment threshold from $50,000 to $100,000.

Economies and Efficiencies:

The Naval Research Laboratory is continuing to take initiatives to effect economies and efficiencies. For several fiscal years, overhead cost growth has been held below inflation, with the exceptions of externally directed additions to overhead such as military salaries and

depreciation expense. Through budget controls, such as productivity ratio controls, and top management review of performance against them, the indirect staffing is being controlled commensurate with direct staffing decreases.

R&D - NAVAL RESEARCH LABORATORY
REVENUE AND EXPENSES
(Dollars in Millions)

	FY 1995	FY 1996	FY 1997
Revenue:			
Gross Sales	492.4	533.6	560.5
Operations	0.0	0.0	0.0
Capital Surcharge	10.8	16.3	16.3
Depreciation except Maj Const	0.0	0.0	0.0
Major Construction Depreciation	0.0	0.0	0.0
Other Income	**503.2**	**549.9**	**576.8**
Total Income			
Expenses:			
Cost of Materiel Sold from Inventory			
Negotiated Purchases from Customers			
Transportation	1.1	1.4	1.4
Salaries and Wages:			
Military Personnel	2.1	3.1	2.9
Civilian Personnel	218.2	227.3	229.2
Materials, Supplies and			
Parts used in Operations	66.0	82.1	83.2
Facility Repair Charge	21.4	19.4	20.8
Depreciation - Capital	10.8	16.3	16.3
Contracted Engineering Services	0.0	0.0	0.0
Lease Costs	0.2	0.4	0.4
Purchased Utilities	9.9	10.2	10.4
Purchased Communications	5.0	5.4	5.5
Equipment Maintenance	0.0	0.0	0.0
Fuel	0.3	0.6	0.9
Other Expenses	167.6	202.4	221.6
Total Expenses	**502.7**	**568.4**	**592.4**
Operating Result	0.5	(18.6)	(15.6)
Less Capital Surchg Reservation	0.0	0.0	0.0
Plus Appropriations Affecting NOR/AOR	0.0	0.0	0.0
Other Changes Affecting NOR/AOR	7.2	0.9	0.0
Net Result	7.7	(17.7)	(15.6)
Prior Year AOR	25.6	33.3	15.6
Accumulated Operating Result	**33.3**	**15.6**	**(0.0)**

R&D - NAVAL RESEARCH LABORATORY
SOURCE OF REVENUE
(Dollars in Millions)

	FY 1995	FY 1996	FY 1997
1. New Orders	487.9	556.9	566.2
a. Orders from DoD Components	437.5	505.8	511.8
Department of the Navy	307.1	328.6	337.9
Operations and Maintenance, Navy	16.3	16.1	17.0
Operations and Maintenance, Marine Corps	0.3	0.0	0.0
O&M, Navy Reserve	0.0	0.0	0.0
O&M, Marine Corps Reserve	0.0	0.0	0.0
Aircraft Procurement, Navy	2.3	3.3	3.3
Weapons Procurement, Navy	0.1	0.4	0.4
Shipbuilding & Conversion, Navy	2.5	4.2	4.2
Other Procurement, Navy	11.3	16.7	16.7
Procurement, Marine Corps	0.0	0.0	0.0
Family Housing, Navy and Marine Corps	(0.0)	0.3	0.3
Research, Development, Test & Eval, Navy	272.3	283.7	292.1
Military Construction, Navy	0.0	0.1	0.1
Other Navy Appropriations	2.1	3.9	3.9
Other Marine Corps Appropriations	0.0	0.0	0.0
Department of the Army	8.0	7.0	7.4
Army Operation & Maintenance Accounts	0.6	0.1	0.1
Army Res, Dev, Test & Eval Accounts	6.8	6.4	6.8
Army Procurement Accounts	0.6	0.3	0.3
Army Other	0.0	0.2	0.2
Department of the Air Force	56.6	79.7	78.4
Air Force Operation & Maintenance Accounts	0.2	0.5	0.5
Air Force Res, Dev, Test & Eval Accounts	31.3	62.9	51.5
Air Force Procurement Accounts	25.0	14.9	25.2
Air Force Other	0.1	1.4	1.2
DoD Appropriated Accounts	65.8	90.5	88.1
Base Closure and Realignment	0.0	0.0	0.0
Operation & Maintenance Accounts	1.1	1.0	1.0
Res, Dev, Test & Eval Accounts	64.5	84.3	84.3
Procurement Accounts	0.2	4.2	2.3
DoD Other	0.0	1.0	0.6
b. Orders from DBOF Business Areas	16.3	15.0	16.0
c. Total DoD	453.8	520.8	527.8
d. Other Orders	34.1	36.1	38.4
Other Federal Agencies	30.7	32.2	34.4
Foreign Military Sales	0.7	0.7	0.7
Non Federal Agencies	2.7	3.2	3.3
2. Carry-In Orders	117.5	102.2	109.2
3. Total Gross Orders (available funding)	605.4	659.1	675.5
4. Carry-Out Orders	102.2	109.2	98.6
Change in Backlog (carry-out less carry-in)	(15.3)	7.0	(10.6)
5. Total Gross Sales	503.2	549.9	576.8

Changes in the Costs of Operation
Component/Business Area: Naval Research Lab - Research and Development
Date: March 1996
(DOLLARS IN MILLIONS)

	Expenses
FY 1995 Actual:	502.7
FY 1996 Estimate in President's Budget:	602.1
Program Changes:	(11.0)
Civilian Personnel	0.0
Military Personnel	1.2
Materials / Fuel	(23.5)
Contractual Services	(0.4)
Other/Miscellaneous	
FY 1996 Estimate:	568.4
Pricing Adjustments:	
FY 1997 Pay Raise	5.1
Civilian Personnel	0.1
Military Personnel	1.4
Annualization of Prior Year Pay Raise	4.2
General Purchase Inflation	2.5
Other Price Changes	
Program Changes:	(4.5)
Civilian Personnel	(0.3)
Military Personnel	(0.4)
Materials/Fuel	14.9
Contractual Services	1.0
Major Real Property Maintenance & Repair	0.0
Other/Miscellaneous	
FY 1997 Estimate:	592.4

BUSINESS AREA CAPITAL INVESTMENT SUMMARY
Department of the Navy
H - Research and Development
(Dollars in Millions)

Line No.	Item Description	FY 1995		FY 1996		FY 1997	
			Total		Total		Total
	Non-ADP Equipment (FY95>$500K, FY96/97>$250K)						
	Replacement						
1a	Infrared Compact Range Facility	1	1.150				
1a	Accelerator Mass Spectrometry (AMS) Facility	1	0.689				
1a	Transmission Electron Microscope and Environ Cell	1	1.040				
1a	Contamination Control Module	1	0.532				
1001	Solid State, Multinuclear, wide Bore, High Field NMR Spectrometer			1	1.200		
1002	Scale Model Analysis Facility (SMAF) Upgrade			1	1.050		
1003	Cryogenic Vacuum Pumps and Thermal Shroud for Thermal Vacuum Chamber			1	0.750		
1004	Bottom-Mounted Acoustic Doppler Current Profilers			1	0.575		
1005	Compact Range Capability Upgarde (Phase I of II)			1	0.267		
1006	Large Wafer Ion Mill Chemically Assisted Ion Beam Etch System					1	0.800
1007	Air Acoustics System Digital Data Acquisition System					1	0.700
1008	Ion Beam Accelerator Support System					1	0.475
1009	Enhancements to Accelerator Mass Spectrometry System					1	0.448
1010	SEM with X-ray Chemical Analysis Spectrometer and Image Analysis					1	0.436
1011	Global Navigation Satellite System Simulator					1	0.260
1012	Compact Range Capability Upgrade (Phase II of II)					1	0.260
	New Mission						
1a	15Gb/Sec Bit Error Rate Test Set	1	0.593				
	Total Non-ADP Equipment (>$250K)	**5**	**4.004**	**5**	**3.842**	**7**	**3.379**
2001	**Total Non-ADP Equip (>$100K<$250K) (Repl./Productivity/New Mission)**	**33**	**4.445**	**28**	**5.032**	**40**	**7.680**

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Exhibit Fund-9a Business Area Capital Investment Summary

Line No.	Item Description	FY 1995		FY 1996		FY 1997	
			Total		Total		Total
	ADP Equipment (>$100K)						
3001	Parallel RISC-based Large Memory Supercomputer			1	1.000		
3002	Multiple & Parallel Processor Computing Capability for Tactical Ocean Sim. Lab			1	0.985		
3003	Mini Commando Radiant Hail Tactical Imagery Terminal			1	0.300		
3004	High Performance Local Area Network System			1	0.250		
3005	Communication Networking Support System			1	0.210		
3006	Data Acquisition System			1	0.175		
3007	SeaWIFS Archival/Distribution System			1	0.168		
3008	ARGOS Operations Center			1	0.136		
3009	RAID Disk Array System Memory Upgrade			1	0.116		
3010	IR Chaff Real-Time Measurement/Signal Processing Facility			1	0.102		
3011	Multiprocessor Computer/Fileserver			1	0.100		
3012	Virtual Reality Research Facility					1	0.650
3014	Sea-Going Data Acquisition System					1	0.321
3017	Unmanned Air Vehicle's Control Workstation					1	0.170
	Total ADP Equipment (>$100K)	**0**	**0.000**	**11**	**3.542**	**3**	**1.141**
4001	**Total ADP Equipment (>$50K<$100K)**	**29**	**2.232**	**0**	**0.000**	**0**	**0.000**
	Off The Shelf Software (>$100K)						
5001	Signal Processing Workstation Software		0.000	1	0.105	0	0.000
	Total Off The Shelf Software (>$100K)	**0**	**0.000**	**1**	**0.105**	**0**	**0.000**
6001	**Total Off The Shelf Software (>$100K)**	**0**	**0.000**	**0**	**0.000**	**0**	**0.000**
	Minor Construction (>$100K<$300K)						
	Provide Addition to Bldg A49	1	0.225				
	Bldg 3 - New Mezzanine	1	0.261				
	Various Minor Construction Projects	7	0.410				
7001	Additional Space Science Research Facility			1	0.270		
7002	Isolated Vibration Free Electron Microscope Facility			1	0.270		

Line No.	Item Description	FY 1995		FY 1996		FY 1997	
			Total		Total		Total
7003	Extend Perimeter Fence and Correct Parking Deficiency			1	0.270		
7004	Upgrade Utility System to Support Info Tech Research			1	0.270		
7005	Upgrade Utility System to Support Radar Research					1	0.270
7006	High Bay Facility for Spacecraft/Satellite Research					1	0.270
7007	Causeway Drainage Control (Erosion Control)					1	0.270
7008	Pulsed Power Facility to Support Mercury Accelerator Project					1	0.270
7009	Electrical Switchgear Enclosure					1	0.203
7010	Various Minor Construction Projects			1	04.20	1	0.217
	Total Minor Construction (>$100K<$300K)	**9**	**0.896**	**5**	**1.500**	**6**	**1.500**
	TOTAL CAPITAL PURCHASE PROGRAM	**76**	**11.578**	**47**	**14.021**	**51**	**13.700**

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BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 President's Budget					
B. Component/Business Area/Date Department of the Navy Research and Development	C. Line No. & Item Description 1001. Non-ADP Equipment (Replacement) >$250,000 Solid State, Multinuclear, Wide Bore, High Field NMR Spectrometer						D. Activity Identification Naval Research Laboratory					
	FY 1995			FY 1996			FY 1997					
Element of Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
Solid State, Multinuclear, Wide Bore, High Field NMR Spectrometer				1	1200	1200						

Narrative Justification:

Purpose/Use: To conduct basic and applied research and development studies in the broad fields of chemical diagnostics, reaction rate control materials chemistry, surface and electrochemistry, combustion, and fuels chemistry. Specialized programs within these fields include organic polymeric materials, coatings, dynamics, laser chemistry, tribology, physical and chemical characterization of surfaces and theory of surfaces, chemistry of electronic materials, submarine atmosphere analysis and control, nanometer scale phenomena, sensors, and solution chemistry. This item is a high field (500 MHz), wide bore (89 mm) multinuclear research nuclear magnetic resonance spectrometer for solids and liquids. Status Quo: NRL has been unable to perform many lengthy experiments and those involving instrument modification with the present MSL spectrometer. Alternative/Justifications: This new instrument will have new, and necessary, capabilities: a) higher field for greater spectral resolution; b) higher field to explore the use of induced magnetization to transfer NMR coherence over distances of 1 micron; and c) solid state triple resonance experiments. This instrument is crucial to state-of-the-art characterization of organic and polymeric materials, to innovative non-destructive analysis and to the continued evolution of more powerful nuclear magnetic resonance techniques. It will supplement an aging MSL-300 instrument purchased in 1984.

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 President's Budget					
B. Component/Business Area/Date Department of the Navy Research and Development	C. Line No. & Item Description 1002. Non-ADP Equipment (Replacement) >$250,000 Scale Model Analysis Facility (SMAF) Upgrade						D. Activity Identification Naval Research Laboratory					
	FY 1995			FY 1996			FY 1997					
Element of Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
Scale Model Analysis Facility (SMAF) Upgrade				1	1050	1050						

Narrative Justification:

Purpose/Use: To measure and analyze the radar cross section (RCS) of existing ships, in the context of navy fleet survivability against radar guided anti-ship weaponary, can never be overrated. Status Quo: The RCS field measurement of navy ships is an extremely cumbersome and expensive task due to unpredictable factors ranging from ship scheduling to weather conditions. For RCS studies of new ship designs, it is entirely impractical to construct full-size mock-ups of sufficient quality. The scale model analysis facility (SMAF) is an indoor compact range established at NRL as a low cost alternative for measuring and analyzing the RCS of target platforms, in a controlled manner, using submillimeter waves and reduced size precision scale models of the targets and the environment. Alternative/Justifications: Tremendous cost and time savings in RCS studies can be realized with SMAF. The vast number of agencies involved, coupled with the unpredictability of weather and/or scheduling, field measurements (including data processing and analysis) can easily cost millions of dollars taking months, if not years, to complete. The cost to run a thorough RCS study in SMAF, however, is only a small fraction, approximately 10 to 15%, of that for field measurement because external support is not needed, thereby eliminating the complicated logistics and all possible inherent delays. To look at the cost benefit with more realistic terms, assume that on average the Navy performs four field measurements at $1.5M each, the use of SMAF can easily give the Navy an annual saving of over $5.0M or $1.2M per study. Second, the controlled environment offered by SMAF can enable ship designers and radar signature control experts to refine their designs to enhance fleet survivability more swiftly and precisely than is possible with field measurements. Third, since scale models are used in SMAF which do not require support from navy ships, the Navy can minimize non-deployment time of its fleet assets. Examples of research programs supported are Outlaw Bandit (FFG-7, DD963, CG47 classes), DDG51, DDG51 Flt IIA, and LPD-17.

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 President's Budget					
B. Component/Business Area/Date Department of the Navy Research and Development	C. Line No. & Item Description 1003. Non-ADP Equipment (Replacement) >$250,000 Cryogenic Vacuum Pumps and Thermal Shroud for Large Thermal Vacuum Chamber						D. Activity Identification Naval Research Laboratory					
	FY 1995			FY 1996			FY 1997					
Element of Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
Cryogenic Vacuum Pumps and Thermal Shroud for Large Thermal Vacuum Chamber				1	750	750						

Narrative Justification:

Purpose/Use: To allow thermal vacuum testing capabilities of all spacecraft payloads. Status Quo: NRL's large thermal vacuum chamber uses oil-diffusion pumps to create the high vacuum required for spacecraft testing. Many modern payloads contain sensors (e.g. optical, UV) that can be ruined if exposed to oil contamination. Therefore, these payloads cannot be tested in our chamber. In addition, our antiquated thermal shroud system needs a major overhaul to allow testing at liquid nitrogen temperatures. Alternatives/Justifications:By replacing the present system of four oil diffusion pumps with cryogenic vacuum pumps, we would have an oil free means of creating a high vacuum. Also, by modifying the existing thermal shroud system we will be able to accurately produce thermal environments down to liquid nitrogen temperatures. This would allow NRL to test any spacecraft payload in the foreseeable future. The Payload Checkout Facility (PCF) provides a major service to a multitude of NRL scientists and engineers and DoD customers, as well as outside agencies and companies. The present thermal vacuum equipment used by the PCF is limited in its ability to test many payloads, the high vacuum pumps must be replaced with oil free pumps - the only type, available large enough for this chamber are cryogenic pumps. In addition, to allow the accurate, low temperature testing also being specified by modern payloads, an upgraded cryogenic thermal control system is needed. Without these upgrades, NRL will be unable to furnish thermal vacuum testing for many spacecraft. Many space science payloads, HTSSE, and space programs that use optical instruments will be supported by this chamber.

000523

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 President's Budget					
B. Component/Business Area/Date Department of the Navy Research and Development	C. Line No. & Item Description 1004. Non-ADP Equipment (Replacement) >$250,000 Bottom-Mounted Acoustic Doppler Current Profilers						D. Activity Identification Naval Research Laboratory					
	FY 1995			FY 1996			FY 1997					
Element of Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
Bottom-Mounted Acoustic Doppler Current Profilers				1	575	575						

Narrative Justification:

Purpose/Use: Measurement of ocean currents is an important part of the Navy's role in evaluating the marine environment. Status Quo: This is traditionally done by deploying self-contained instruments for extended periods to obtain time series measurements. In the past, current meters (CMs), which are 15 years old, have been positioned along a mooring line with a subsurface float to keep the line taut. NRL will supplement this technique with Acoustic Doppler Current Profilers (ADCPs) that sit on the bottom and measure time series of horizontal currents remotely by an acoustic technique. ADCPs are uniquely suited for work on continental shelves, where the Navy now has its highest priorities. Six instruments are required for present and planned research programs. Alternative/Justification: The principal advantages of ADCPs are: 1) Survivability. Fishing is so intense on many shelves that conventional moorings are prohibitively risky. By using bottom-mounted ADCPs in trawl-resistant mounts, the risk level is greatly reduced. 2) Data quality. ADCPs resolve up to 75 depth levels versus 5 or so for conventional moorings. Their range of 300m covers the full water depth on most shelves. Accuracy is also higher since bottom mounted instruments are unaffected by mooring motion. 3) Cost. One ADCP on a mooring will serve in place of several CMs, proportionately reducing maintenance and setup costs. Reduced risk of instrument loss is also a significant saving. Purchase of ADCPs is essential if the Navy is to have a leading position in shallow water oceanography. Research programs supported are Very High Resolution 4-D Coastal Ocean Currents, Coastal Simulation, Coastal Ocean Sensing and Data Fusion, Coastal and Semi-Enclosed Seas, Energy Transfer Across Slope, Yellow and East China Sea Response to Winds and Currents, and Littoral Optics Environment.

000524

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 President's Budget					
B. Component/Business Area/Date Department of the Navy Research and Development	C. Line No. & Item Description 1005. Non-ADP Equipment (Replacement) >$250,000 Compact Range Capability Upgrade (Phase I of II)						D. Activity Identification Naval Research Laboratory					
	FY 1995			FY 1996			FY 1997					
Element of Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
Compact Range Capability Upgrade (Phase I of II)				1	267	267						

Narrative Justification:

Purpose/Use: Upgrade, automation and enhancement of the current vintage 1980 Scientific Atlanta Compact Range Facility will support current and future metrology capabilities to characterize and evaluate microwave and millimeter wave (MMW) phased array jammers, as well as, perform RCS measurements on antenna arrays and unmanned vehicles (UMV). Phase I will allow a fully automated capability from 10MHz to 26.5GHz. Status Quo: The existing Scientific Atlanta equipment is obsolete and no longer easily supported for maintenance. Alternative/Justification: This state-of-the-art system will expedite measurement and analysis of data, saving much time. It is estimated that it takes from 16 to 40 hours per test for data collection and analysis. With 15 to 20 such tests planned each year, it can be seen that this state-of-the-art equipment will provide an enhanced metrology capability; which will support the following current and future programs: ONR/NRL 6.2 Microwave Jammer Technology Program, Tri-Service Microwave Power Module Program, ONR/NRL 6.2 MMW CM Program, ARPA MAFET Program, and ONR 6.3 Advanced Airborne Support Jammer Pod Program. Phase II of II is planned for FY 1997 (item 1012).

000525

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1997 President's Budget
B. Component/Business Area/Date Department of the Navy Research and Development	C. Line No. & Item Description 1006. Non-ADP Equipment (Replacement) >$250,000 Large Wafer Ion Mill and Chemically Assisted Ion Beam Etch System	D. Activity Identification Naval Research Laboratory

	FY 1995			FY 1996			FY 1997					
Element of Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
Large Wafer Ion Mill and Chemically Assisted Ion Beam Etch System							1	800	800			

Narrative tification:

Purpose/Use: The proposed ion mill and chemically assisted ion beam etch system will provide NRL with the capability for carrying out processing in non-traditrional electronic materials including magnetic metals and magnetic oxides in order to fabricate prototype device structures in magnetoelectronics. The proposed new acquisition will permit in-house fabrication of prototype device structures in the field of magnetoelectronics. NRL is the pioneering DoD laboratory in this new field, which employs non-traditional electronic structures, such as magnetic metal films and magnetic oxide films. Status Quo: There are currently no facilities at NRL to carry out this important step in processing non-traditional electronic materials. Alternative/Justification: Without this state-of-the-art capability, NRL's leadership role in this field which it pioneered will be in jeopardy. Without NRL's leadership, the potential for developing this new technology will be lost. Research programs supported are ARI "Spin Polorized Heterostructures," ARI "Oxide Electronic Materials," ARPA-ULTRA "Non-Volatile Magnetic Memory," ARPA GMR Consortim, Vacuum Microelectronics, and ARPA Advanced Lithography.

000526

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1997 President's Budget
B. Component/Business Area/Date Department of the Navy Research and Development	C. Line No. & Item Description 1007. Non-ADP Equipment (Replacement) >$250,000 Air Acoustics System and Digital Data Acquisition System	D. Activity Identification Naval Research Laboratory

	FY 1995			FY 1996			FY 1997					
Element of Cost				Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
Air Acoustics System and Digital Data Acquisition System							1	700	700			

Narrative Justification:

Purpose/Use: This laboratory system represents a unique capability which exists at present nowhere in the world. The two new major components- 1) the digital data acquisition system and 2) the laser 3-D vibrometer/microphone holographic scanning systems - would themselves remove the major shortcomings associated with our current capability. Status Quo: The 10-year-old data acquisition and data reduction system for vibration, acoustic and modal testing is obsolete. The data reduction and analysis software is no longer supported by the source company. Replacement components for the hardware are becoming increasingly difficult to find. Alternative/Justification: The proposed digital data acquisition system solves the problems associated with our current analog system. It provides greatly improved signal quality (at least 20dB). It is sized to allow acquisition of all data for one test at once. At the completion of the test, the data is immediately available to the analyst for review, processing and comparison with analytical modeling data. NRL's current acoustic holography systems operate underwater in our pool facilities. In order to apply near field acoustic holography to non-underwater Naval problems, a similar system capable of operating in air must be realized. This includes the sensor systems (both conventional and new 3-D laser vibrometer systems), the robotic scanning systems, and the display and processing systems. The overall new air acoustics laboratory system would allow NRL to address a number of structural acoustics issues and apply this knowledge to solving a number of related problems in areas important to the Navy, DoD, and the Nation, in general. These presently include (A) the vibro-acoustic payload fairing damage launch problem; (B) submarine machinery noise quieting; (C) aircraft interior noise control, and (D) a number of "dual use" applications. Both existing NRL programs and planned future initiatives will have to be either refocussed or in some cases eliminated without availability of the state-of-the-art capability.

000527

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 President's Budget					
B. Component/Business Area/Date Department of the Navy Research and Development	C. Line No. & Item Description 1008. Non-ADP Equipment (Replacement) >$250,000 Ion Beam Accelerator Support System						D. Activity Identification Naval Research Laboratory					
	FY 1995			FY 1996			FY 1997					
Element of Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
Ion Beam Accelerator Support System							1	475	475			

Narrative Justification:

Purpose/Use: Intense ion beams are needed to simulate the effects of soft x-rays from nuclear weapons and for driving inertial confinement fusion targets both for radiation production and for long range national energy needs. The ion beam accelerator, Mercury, will provide the capability to produce such beams for both application and study. The Ion Beam Accelerator Support System will provide the necessary equipment to operate this accelerator. Alternative/Justification: The equipment will support both the Defense Nuclear Agency nuclear weapon effects simulation and the Department of Energy inertial confinement fusion programs at NRL.

000528

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 President's Budget					
B. Component/Business Area/Date Department of the Navy Research and Development	C. Line No. & Item Description 1009. Non-ADP Equipment (Replacement) >$250,000 Enhancements to Accelerator Mass Spectrometry System						D. Activity Identification Naval Research Laboratory					
	FY 1995			FY 1996			FY 1997					
Element of Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
Enhancements to Acceleratory Mass Spectrometry System							1	448	448			

Narrative Justification:

Purpose/Use: To enhance the accelerator mass spectrometer system under development in NRL to create the world's most advanced trace element acceleratory mass spectrometer. The enhancements must provide part-per-trillion (10^{-12}) sensitivity with a few um spatial resolution over a broad mass range with minimal system dead time. Status Quo: The current systems cannot meet performance requirements needed for numerous appications. Current technology does not provide a means to simultaneously measure part-per-trillion levels of multiple impurities in electronic materials, with a spatial resolution of a few um. Such measurements will be required to fabricate reliable ultra large scale integrated devices, such as a 1 gigabit memory chip. Alternative/Justification: The proposed enhancements will provide the required capability. This will be accomplished by parallel acquisition of a broad mass range of impurities, at MHz rates, with reduced background signals and reduced sample contamination. The enhancements will also allow measurements for numerous other applications that have previously been difficult if not impossible. Examples include determination of genome functionality, of pollution sources in the ocean, and of historic shallow water hydrology. Other applications of this advanced tool are yet to be discovered. Upgrading the facility at the University of North Texas was considered, but ruled out because it could not meet the objective as the sytstem is not amenable to upgrades required. Research programs supported are Accelerator Mass Spectrometry (61153N), Plasma Processing (ARI), Nan-channel glass (ARI), ULTRA Program (ARI), Mechanical Loss Spectroscopy in Quarts (Naval Surface Warfare Center), Active Dielectrics for Microwave Applications (CRADA with SCT, SPAWAR), Applications of Magneto Transport in Thin Films (ARPA), Si Roadmap 2000 (Sematech), and Pulsed Laser Deposition of Thin Films.

000529

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 President's Budget					
B. Component/Business Area/Date Department of the Navy Research and Development	C. Line No. & Item Description 1010. Non-ADP Equipment (Replacement) >$250,000 SEM with X-ray Chemical Analysis Spectrometer and Image Analysis						D. Activity Identification Naval Research Laboratory					
	FY 1995			FY 1996			FY 1997					
Element of Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
SEM with X-ray Chemical Analysis Spectrometer and Image Analysis							1	436	436			

Narrative Justification:

Purpose/Use: The high-performance scanning electron microscope (SEM) is essential to modern materials science and many other NRL activities. Status Quo: The present SEM, which has 10-year-old topographic imaging and chemical analysis capability, is experiencing unacceptable downtime as it ages. Alternative/Justification: The proposed state-of-the-art SEM will provide high resolution topographic imaging, image analysis, and chemical analysis. While high-performance, it will be a general purpose instrument capable of studying most of the wide variety of specimens of interest to NRL. Research programs supported are 6.1 core, ONR 6.1, APN, OMN, and the Fleet Failure Analysis Program along with other NRL research programs. Productivity will be enhanced by the integration of state-of-the-art topographic imaging, x-ray spectrometer, and image analysis, combined with a stage capable of examining larger specimens.

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000530

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 President's Budget					
B. Component/Business Area/Date Department of the Navy Research and Development	C. Line No. & Item Description 1011. Non-ADP Equipment (Replacement) >$250,000 Global Navigation Satellite System Simulator						D. Activity Identification Naval Research Laboratory					
	FY 1995			FY 1996			FY 1997					
Element of Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
Global Navigation Satellite System Simulator							1	260	260			

Narrative Justification:

Purpose/Use: The objective is to augment existing satellite navigation studies with Global Navigation Satellite Systems capability. Status Quo: Current efforts include Global Positioning Systems simulator. Alternative/Justification: This will expand efforts to include Global Navigation Satellite Systems in studying Global Navigation by satellite. There is considerable interest to determine the feasibility of using Global Navigation Satellite Systems with Global Positioning Systems. This equipment will allow lab simulation tests to study navigation capabilities of Global Navigation Satellite Systems with Global Positioning Systems. Research programs supported are: Satellite Navigation Technology.

000531

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 President's Budget					
B. Component/Business Area/Date Department of the Navy Research and Development	C. Line No. & Item Description 1012. Non-ADP Equipment (Replacement) >$250,000 Compact Range Capability Upgrade (Phase II of II)						D. Activity Identification Naval Research Laboratory					
	FY 1995			FY 1996			FY 1997					
Element of Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
Compact Range Capability Upgrade (Phase II of II)							1	260	260			

Narrative Justification:

Purpose/Use: The upgrade, automation and enhancement of the current vintage 1980 Scientific Atlanta Compact Range Facility will support current and future metrology capabilities to characterize and evaluate microwave and millimeter wave (MMW) phased array jammers, as well as perform RCS measurements on antenna arrays and unmanned vehicles (UMV). Phase II will allow a fully automated capability from 26.5GHz to 110GHZ as well as an ISAR imaging capability. Status Quo: The existing Scientific Atlanta equipment is obsolete, no longer easily supported for maintenance. Alternative/Justification: This enhanced metrology capability will support the following programs: ONR/NRL 6.2 Microwave Jammer Technology Program, Tri-Service Millimeter Power Module Program, ONR/NRL 6.2 MMW CM Program, ARPA MAFET Program, and ONR 6.3A Advanced Airborne Support Jammer Pod Program. Phase I of II is planned for FY 1996 (item 1005).

000532

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1997 President's Budget
B. Component/Business Area/Date Department of the Navy Research and Development	C. Line No. & Item Description 2001. Non-ADP Equipment >$100,000 <$250,000	D. Activity Identification Naval Research Laboratory

	FY 1995			FY 1996			FY 1997					
Element of Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
Non-ADP Equipment >$100,000 <$250,000				28		5032	40		7680			

Narrative Justification:

This investment provides the most impact to the greatest number of people and projects supported by the Laboratory. All items in this category are research equipment for research divisions. Examples follow: SUBSCAN System, Hydrogen Maser, Mechanical Properties Microprobe, Short Pulse High Prf C02 Laser, Monolithic Microwave Integrated Circuit (MMIC) Superhet Receivers, Ultra-High Vacuum Atomic Force Microscope/Scanning Tunneling Microscope System, HP Network Analyzer System, Infrared Analytical Microprobe, Ti:Sapphire Regenerative Amplifier, Digital Instruments Multi-Mode Scanning Probe Microscope, Seabat Obstacle Avoidance Sonar, Vacuum Relay Optics Junction Box System, Demonstration Facility, Multi Channel Sampling Unit, Network Analyzer System, Moored Thermistor Chain, Automated Image Analyzer, Grating Compressor System, Optical Mask Aligner, Fourier Transform Infrared Spectrometer, Extended Interaction Amplifier, Argon-Ion Laser, Glass Rod and Tube Furnace, Traveling-Wave-Tube RF Amplifier System for the High Power Microwave Facility, Laser Heterodyne System, VXI System for Real-time Radiation Data Collection, 32 Channel Data Acquisition System, Ultrahigh Vacuum Variable Balance Magnetron Sputtering Deposition System, Cesium Clock, Electron Cyclotron Resonance (ECR) Reactive Ion Etcher, Reactive Ion Etching Processing Chamber, Wave, Tide, Temperature and Conductivity Recorder Array, SHIMMER Development System, Pulsed Magnetic Field Coil, Frequency Conversion Module, Signal Generator, Reactive Ion Etching System, UVIX-Ray Detector Facility, Broadband Transducer, Tactical Data Link Testing System, High Power Countermeasures Testing Capability, Microwave Lab, Digital Radio Frequency Memory Unit with Controller, Modification to Multimode Towed Vehicle, Electron Paramagnetic Spin Resonance Spectrometer Upgrade, Upgrade to Measurement Capability in RF and MW Wave and IR, Electron Nuclear Double Resonance System, Laser System for Plasma/Flame Diagnostics, High Speed Frequency Synthesizer, Protein Sequencing System, Agema Infrared Camera, Real-Time Data Validation Suite, Surface Fourier Transform Infrared Spectroscopy (FTIR) System, Augmented Railgun Barrell for the Subscale Electric Launcher, Lightwave Component Analyzer, Portable Cellular Test Bed, Global Navigation Satellite System Receiver, HP Wideband Surveillance Receiver, Soft-X-Ray Optical System, Scanning Probe Lithography System, Sarnoff CCD Camera, Ultrasonic Tank/Generator System, Silicon Molecular Beam Epitaxy Control System Upgrade, OMETRON Laser Virbrometer, Bubble Tank Instrumentation, Spectrum Analyzer, Soft X-Ray Crystal Spectrometer With Microchannel Plate Detector, Dual Beam Spectrophotometer, High Field Superconducting Magnet System, Low Radar Cross Section Pylon Mounting System, Filament Fusion Splicing Workstation, Crack Monitoring System, Radio Frequency Spectrum Analyzer for the High-Power Microwave Facility, Alexandrite Laser, Transmission Electron Microscope (TEM) Specimen Holders, X-Ray Framing Camera, Redundant Array of Inexpensive Disk (RAID) System, Frequency Conversion Module, Olympus SZH Stereo Photomicroscope, HP 4195A Low-Frequency Network Analyzer, Optical Parametric Oscillator/Amplifier Multiwavelength Laser, and Vacuum Chamber for Laser Pulse Compression. The Naval Research Laboratory is a highly technical and sophisticated research center requiring state-of-the-art technology to satisfactorily accomplish its mission. Much of the equipment planned for purchase replaces items that are currently operating in a degraded mode because of their age and because their technology no longer supports current and projected requirements. The need to maintain a state-of-the-art equipment base is critical in all areas of science, technology, warfare systems, sensors research, materials and space technology.

000533

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 President's Budget					
B. Component/Business Area/Date Department of the Navy Research and Development	C. Line No. & Item Description 3001. ADP Equipment >$100,000 Parallel RISC-based Large Memory Supercomputer						D. Activity Identification Naval Research Laboratory					
	FY 1995			FY 1996			FY 1997					
Element of Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
Parallel RISC-based large memory Supercomputer				. 1	1000	1000						

Narrative Justification:

Purpose/Use: To provide a multiple CPU RISC-based Multi-Division classified use supercomputer with a very large memory and disk capacity which will allow the solution of a number of currently unsolvable problems at NRL. Status Quo: NRL is presently using the Convex C-3820 with two CPUs. It is not capable of performing current let alone future workload. NAVSEA projects in ship design and IR modeling are adversely affected. Electronic Warfare capabilities of Navy are adversely affected. Alternative/Justification: The most attractive speedup strategy involves utilizing increasingly greater numbers of CPUs on both multiple job workloads and single time-critical problems. Individual RISC CPUs that compete with the C-3820 throughout (2 CPUs) at one-tenth the cost are now available. RISC processors are now at least five times faster on scaler codes like the Radar Target Signature ship design codes than the Convex C-3820 CPUs and twice as fast on vector codes like Method of Moments. Consideration is being given to offerings from Cray, SGI, Convex/HJP, DEC, Sun, and IBM in a competitive fashion. The technical evaluation includes cost, benchmark performance on both industry standard and NRL codes, architecture and system scalability, software program environment, and company/product stability. All the above vendors have multiple CPU single chassis platforms in production today: Convex/HP PA-RISC, DEC ALPHA 21165, SGI R8000. This new computer resource will not only allow larger problems to be solved, but will also enhance worker productivity by allowing for faster computer code diagnostics as well as faster scientific validations and optimization of engineering designs. There are several projects for which the current resources of Convex C-3820 and workstations are adequate. NRL has pressing need to calculate the radar cross section of DDG-51 class ships but is currently requiring about 38 days of CPU time just for preprocessing geometry. This is greatly reducing the number of design options the Navy can explore in its ship building programs. NRL has classified Method of Moments and Finite Difference - Time Domain applications which will not fit on currently available computers in support of NAVSEA ship and missile design. NRL operates in Convex C-3820 computer center which is well utilized, with sustained 24-hour load factors of 4-8 jobs vying for execution on the two CPUs and long haul jobs that run for weeks and even months on end. Workloads for the CRUISE Missiles and Radar Target Signature codes have substantially exceeded the current resources with highly compute intensive NAVSEA IR modeling exceeding the capability of the C-3820 altogether. Leasing and modification of existing assets alternatives were explored and found to be more costly than purchase.

000534

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 President's Budget					
B. Component/Business Area/Date Department of the Navy Research and Development	C. Line No. & Item Description 3002. ADP Equipment >$100,000 Multiple and Parallel Processor Computing Capability for Tactical Oceanography Simulation Laboratory						D. Activity Identification Naval Research Laboratory					
	FY 1995			FY 1996			FY 1997					
Element of Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
Multiple & Parallel Processor Computing capability for Tactical Oceanography Simulation Laboratory				1	985	985						

Narrative Justification:

Purpose/Use: The high performance calculations are required to support any real-time or near real-time simulation efforts. Status Quo: Due to acoustic and nonacoustic component issues within the MIW/AMW warfare areas becoming the priority, the frequency regimes are routinely extended into the KHz and GHz regimes and calculation time becomes the critical parameter. A dedicated, high speed, multiple processor calculation capability is required in TOSL to respond to increasing demands in both volume and high frequency calculations.

Alternative/Justification: The procurement supports RDT&E modeling and simulation efforts in underwater acoustics, ocean, environments, acoustic and nonacoustic propagation models, undersea warfare in shallow water, semi-enclosed seas and operationally significant littoral regions. The coupling of acoustic models, environmental descriptions, and high speed computing creates a capability with cross warfare (ASW, MCM, NSW) applications. It is directly related to and provides applications for priority research topics associated with ocean boundary dynamics, ocean predictive modeling, acoustic modeling, propagation, boundary scattering and signal processing. It supports the DoD Critical Technologies under Weapons System Environment and Underwater Acoustic Propagation topics and the DoD Simulation and Modeling. Specifically, the procured capability will be applied to: Environmental Support to MCM Simulations, Warfare Effectiveness, Coastal Oceanography/Geophysics, Amphibious Warfare, Shallow-water Acoustic ASW (Scattering Strength Estimation, Application of Genetic and Standard search Algorithms, and Acoustic Mine Hunting. The ability to assemble environmental descriptions, perform high fidelity calculations and visualize/analyze the results are in place. The proposed state-of-the-art calculation capability is required to respond to the numerous and difficult performance problems being imposed by fleet and sponsors.

000535

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)	A. Budget Submission FY 1997 President's Budget

B. Component/Business Area/Date	C. Line No. & Item Description	D. Activity Identification
Department of the Navy Research and Development	3003. ADP Equipment > $100,000 Mini Commando Radiant Hail Tactical Imagery Terminal	Naval Research Laboratory

	FY 1995			FY 1996			FY 1997					
Element of Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
Mini Commando Radiant Hail Tactical Imagery Terminal				1	300	300						

Narrative Justification:

Purpose/Use: To procure components resulting in a prototype imagery terminal capable of simultaneously receiving and processing intelligence reports, as well as other functions to provide tactical users the flexibility to operate in all tactical environments without additional equipment. NRL has been actively involved in the development of an advanced development prototype which will be turned over for deployment or production. Status Quo: Currently, we have no residual terminal/components to serve as a test bed for future enhancements/designs that will evolve in providing the military community with less expensive, more powerful products. Alternative/Justification: This terminal will also allow new engineers to become knowledgeable in the design and uses of the various components of this type of tactical terminal. Research programs which will be supported are Radiant Hail, A2C2S, and TALON/GLOBAL sword.

000536

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 President's Budget								
B. Component/Business Area/Date Department of the Navy Research and Development	C. Line No. & Item Description 3004. ADP Equipment > $100,000 High Performance Local Area Network System			D. Activity Identification Naval Research Laboratory								
	FY 1995			FY 1996			FY 1997					
Element of Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
High Performance Local Area Network System				1	250	250						

Narrative Justification:

Purpose/Use: To support modeling, simulation, algorithm development, and visualization efforts. Status Quo: The current configuration consists of two Silicon Graphics Incorportated Workstations, a VGX 4D and an Indigo. Both of these are discontinued products. Upgrading proved unfeasible since no real gain in computing power or visualization ability would be achieved. Alternative/Justification: The High Performance Visualization Local Area Network will provide needed support to ongoing systems integration work, with an emphasis on effectiveness assessment issues. Combat system functional blocks will be built, tested, and evaluated on the requested equipment to determine optimal methods of combat system element integration. This research makes use of computation-intensive sensor fusion algorithms, both existing and under development. In order to leverage from prior developments, a UNIX-based environment is required. Current assets consist of two obsolete SGI systems that lack the computing power to perform more than basic functions. We will use these tools to support EW systems effectiveness assessment related modeling work, system engineering modeling, 6.2 sensor integration and correlation algorithm development, and the ARPA feature extraction projects.

000537

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1997 President's Budget
B. Component/Business Area/Date Department of the Navy Research and Development	C. Line No. & Item Description 3005. ADP Equipment > $100,000 Communication Networking Support System	D. Activity Identification Naval Research Laboratory

	FY 1995			FY 1996			FY 1997					
Element of Cost				Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
Communication Networking Support System				1	210	210						

Narrative Justification:

Purpose/Use: A state-of-the-art communication networking infrastructure will enhance advanced research and development in the area of communications, networking, distributed computing, and networking security. Extreme flexibility in network configuration, network separation, high data rates, and ability to attach to high-speed switched ethernet (100 Mbps), FDDI (Fiber Distributed Data Interface, 100 Mbps), and ATM (Asynchronous Transfer Mode, 155 Mbps and faster) services is essential to perform research on currently funded programs.
Alternative/Justification: The technology selected is a combination of switched ethernet (10 Mbps/user), switched high-speed ethernet (100Mbps/user), FDDI, and ATM. With this architecture, high-speed service will be available to selected high-speed UNIX workstations that need this service to support distributed interactive simulation, video teleconferencing, distributed high performance computing and other data-intensive applications, while lower speed service will be available for PCs and Macintosh computers. This service will be provided by a few high-speed network hubs. The remaining hubs will provide 10 Mbps service to users having less intensive data transfer requirements. Consequently, the selected networking plan services current needs and provides the growth path for future needs without the need for elaborate recabling and stringing of new lines outside of the conduits. The high-speed network hub components provide high-speed service for users with special needs, while the 10 Mbps switched ethernet hubs provides better service to other users than they are presently getting with conventional shared ethernet service. Research programs supported are ARPA Real Time Networking and Information Transfer (RITN), ARPA Scalable Advanced Distributed Simulation (SADS), Data/Voice Integration ATD, Secure High Performance Local Area Network (SHPL), and MISSI.

000538

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1997 President's Budget
B. Component/Business Area/Date Department of the Navy Research and Development	C. Line No. & Item Description 3006. ADP Equipment > $100,000 Data Acquisition System	D. Activity Identification Naval Research Laboratory

	FY 1995			FY 1996			FY 1997					
Element of Cost				Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
Data Acquisition System				1	175	175						

Narrative Justification:

Purpose/Use: Data acquisitions. Status Quo: The primary data acquisition system for NRL's Structural Acoustics Laboratory is no longer adequate to support current programs and must be upgraded. The number and size of experimental programs requiring use of NRL's primary data acquisition system has grown significantly in recent years. Current and proposed experiments require approximately two orders of magnitude increase in acquisition speed and storage capacity over what the current system can provide. Alternative/Justification: The proposal would provide for a more powerful control and acquisition computer coupled with a new-technology data acquisition backbone. Disk drives and user terminals are needed to support this system. An improved analysis workstation and online storage subsystem are also required. Failure to achieve this upgrade will degrade acquisition capabilities and strongly, negatively impact NRL's ability to support new experimental programs. While piecemeal component replacement will help bridge the gap, without the capital investment in the underlying systems, the Structural Acoustics Laboratory's capabilities will no longer meet even current demands. Research programs supported are Acoustics/Shallow Water Active Classification, Mine CounterMeasures programs, ONR/N87 Structural Acoustics programs, ARPA/ONR LW Machinery Cradle Program, and NASA/ARPA Holography and Active Control Program.

000539

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1997 President's Budget
B. Component/Business Area/Date Department of the Navy Research and Development	C. Line No. & Item Description 3007. ADP Equipment > $100,000 SeaWiFS Archival/Distribution System	D. Activity Identification Naval Research Laboratory

	FY 1995			FY 1996			FY 1997					
Element of Cost				Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
SeaWiFS Archival/ Distribution System				1	168	168						

Narrative Justification:

Purpose/Use: In August of 1995, the Sea-viewing Wide Field-of-view Sensor (SeaWiFS) will be launched, beginning a new era in ocean color research. NASA has designated NRL as one of only five U.S. receiving sites authorized to receive SeaWiFS high resolution data directly from the satellite. As part of our agreement with NASA, we have agreed to make SeaWiFS data that we receive available to other researchers. These data are also to be used with joint NOAA research as a coordinated Navy, NASA, NOAA effort. We are also tasked to perform in-house research consisting of creating large databases of environmental parameters derived from SeaWiFS data. These SeaWiFS data support our research at the 6.1 through 6.3 research areas. In order to support our in-house database activities as well as to satisfy data distribution requirements with minimal cost and impact on research, it is necessary to upgrade the volume and level of automation of our mass storage facilities.
Alternative/Justification: The proposed archival system will allow automation of the archival/distribution functions by keeping the required dataset near-line for unattended access by outside groups and NRL researchers. This archival system will help position our receiving site as a major research center for understanding the variability of coastal waters. It will ease data retrieval for many academic researchers by providing a dial-in capability. Research programs supported are Defense Research Sciences (61153N), Applied Research, and Demonstration and Validation.

000540

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1997 President's Budget
B. Component/Business Area/Date Department of the Navy Research and Development	C. Line No. & Item Description 3008. ADP Equipment >$100,000 ARGOS Operations Center	D. Activity Identification Naval Research Laboratory

	FY 1995			FY 1996			FY 1997					
Element of Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
ARGOS Operations Center				1	136	136						

Narrative Justification:

Purpose/Use: NRL has three experiments (Unconventional Stellar Aspect (USA), High Resolution Airglow/Auroral Spectrometer (HIRAAS), Global Imaging Monitor of the Ionosphere (GIMI) scheduled for flight on board the Advanced Research and Global Observation Satellite (ARGOS) Air Force STP-P91-1 satellite. The requirement is to (1) address experiment command, control, mission planning, and scheduling operations of these experiments during the 3 year operational lifetime of the mission, and (2) provide high speed network connectivity between ARGOS dedicated computer resources and data processing, distribution, archiving, and visualization resources available in NRL, and high performance computing (HPC) resources inside and outside of NRL, for processing and analyzing ARGOS data.

Alternative/Justification: The choice of common software is intended to streamline the development of NRL experiment observation plans and the submission of these plans to the space vehicle operations center, because the GSE computer system dedicated to run both OASIS-CC and -PS software in the ARGOS Operation Center at NRL. The requirement for higher speed network connectivity for ARGOS and for NRL is firm. The eventual migration to ATM is inevitable. If we are unable to purchase the necessary hardware now, we will begin with a transition to an intermediate technology such as fast-ethernet of the more costly FDDI. The biggest downside to a two-stage migration would be the need to use two different cabling systems, one to support the near term solution and one to suppport the final ATM solution; the existing ethernet cable plant cannot be used. Research programs supported are Advanced Research and Global Observation Satellite (ARGOS) STP-P91-1 Experiments, Unconventional Stellar Aspect (USA), High Resolution Airglow/Auroral Spectroscopy (HIRAAS), Global Imaging Monitor of the Ionosphere (GIMI), Environmental Effects for Distributed Interactive Simulation (E2DSI), and Gamma Ray Observatory/Oriented Scintillation Spectrometer Experiment (GRO/OSSE).

000541

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 President's Budget					
B. Component/Business Area/Date Department of the Navy Research and Development	C. Line No. & Item Description 3009. ADP Equipment >$100,000 RAID Disk Array System Memory Upgrade						D. Activity Identification Naval Research Laboratory					
	FY 1995			FY 1996			FY 1997					
Element of Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
RAID Disk Array System Memory Upgrade				1	116	116						

Narrative Justification:

Purpose/Use: This proposal would provide 216 GB of storage space, allowing for the full supercomputing capabilities of the SGI Power Challenge Multiprocessor Computer. This will give users flexibility in applying the machine to current and future programs that require supercomputer-scale processing. Additional memory will be added as well to bring each processor up to its potential. Status Quo: SGI Power Challenge multiprocessor computer is severely handicapped by a lack of storage and memory capacity; both must be immediately upgraded to allow increased productivity. Only twenty-four gigabytes of disk storage space are currently available. Given the size and power of the system, this severely limits the capability of the machine to handle significant problems and thus impacts the users and their respective programs. Alternative/Justification: Maintaining the status quo is negatively impacting current programs by limiting the size of problems addressable by users. Likewise, it tends to make the platform unattractive to users and research customers alike for future (larger) problems. Research programs supported are Acoustics/Shallow Water Active Classification, ONR/N87 Structural Acoustics Programs, ARPA/ONR LW Machinery Cradle Program, and NASA/ARPA Interior Acoustics Simulations.

000542

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 President's Budget					
B. Component/Business Area/Date Department of the Navy Research and Development	C. Line No. & Item Description 3010. ADP Equipment >$100,000 IR Chaff Real-Time Measurement/Signal Processing Facility						D. Activity Identification Naval Research Laboratory					
	FY 1995			FY 1996			FY 1997					
Element of Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
IR Chaff Real-Time Measurement/Signal Processing Facility				1	102	102						

Narrative Justification:

Purpose/Use: NRL provides real-time data acquisition and analysis of infrared materials and devices required in the development of systems for ships and aircraft. Status Quo: NRL's current capability to measure and process IR sample lot data is limited by worn equipment, labor intensive cryogenic-coolers, low processor memory and an insufficient number of wide-band wide-range analog recorder channels. The result is a slow turnaround rate in delivering data to customers and the inability to provide data for more than two channels (IR bands) simultaneously. Continuing 'as is' will jeopardize NRL's ability to provide timely support at competitive cost to planned research customer increases in sample lot testing requirements. Alternative/Justification: The acquisition of an analog recording, processor and processor memory will provide the necessary components for upgrading the Measurement System. Procurement of a Real-Time Measurement/Signal Processing System will significantly improve turn-around time of test results and data analyses, allow simultaneous measurements in 3 spectral bandpasses and provide immediate savings in data processing labor costs. The refurbishment of the AGA 780 Dual Band Imager will increase its shelf-life, improve the detector specifications to that of more expensive models, and will increase its functionality by permitting camera operation in remote locations where use of liquid nitrogen is impractical. As NRL becomes more involved in infrared R&D projects and with the additional workload of acceptance lot testing for the RR-191 and the TORCH systems, there is a critical need for the new system. Without upgrades to the current image processing system NRL will be unable to support the additional research efforts which are anticipated in this area of R&D.

000543

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 President's Budget					
B. Component/Business Area/Date Department of the Navy Research and Development				C. Line No. & Item Description 3011. ADP Equipment >$100,000 Multiprocessor computer/file server			D. Activity Identification Naval Research Laboratory					
	FY 1995			FY 1996			FY 1997					
Element of Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
Multiprocessor computer/file server				1	100	100						

Narrative Justification:

Purpose/Use: NRL is at the forefront of DoD research and development in artificial intelligence, telecommunications, computer networking, human-computer interaction, information security, parallel computation, and computer science. One of the most important shared computing resources of NRL is a Sun multiprocessor compute/file server. It is programmed to perform numerous specific tasks in support of R&D, and it also provides basic infrastructure support for electronic mail and information filing and searching. Status Quo: The current configuration is fundamentally obsolescent and limited in terms of bus capacity. The backplane dates back to FY92 and restricts total system throughput. The system is expensive to maintain and repair, and contains numerous old components that are not supported by current software, or are increasingly likely to fail, or both. The last upgrade, which provided faster CPUs and more disk space, but no fundamental improvement in bus throughput, reliability, or maintainability, was in FY93. Sticking with the status quo will not remedy any of these basic shortcomings.
Alternative/Justification: The new system would provide much needed improvements in system throughput and reliability, and it would also be incrementally expandable for several years to come.

000544

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 President's Budget					
B. Component/Business Area/Date Department of the Navy Research and Development	C. Line No. & Item Description 3012. ADP Equipment >$100,000 Virtual Reality Research Facility						D. Activity Identification Naval Research Laboratory					
	FY 1995			FY 1996			FY 1997					
Element of Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
Virtual Reality Research Facility							1	650	650			

Narrative Justification:
Purpose/Use: NRL provides researchers with an immersive virtual environment that can be utilized effectively by multiple persons for scientific data exploration, training system design, and other applications of virtual reality. Status Quo: NRL currently has virtual reality head-mounted displays and the first U.S. version of the Virtual Workbrench. These both fail to meet the needs of a virtual reality system that supports multi-user immersion. Head mounted displays are specifically single user and have poor visual quality (resolution), in our case 300 x 400 pixels over a 60 degree field-of-view. A real-life user with similar eyesight would be legally blind. The Virtual Workbench supports multiple users, but it is non-immersive and is applicable only to a small subset of the virtual reality problems of interest to NRL, namely those applications where users would normally stand over a table or workbench.
Alternative/Justification: The Cave Automated Virtual Environment (CAVE) is a revolutionary concept for visualizing and interacting with virtual environments (virtual reality). It fulfills all criteria for a virtual reality system that supports multiple users and a strong interactive capability. We chose the new acquisition because it is the only way to provide NRL with a virtual reality capability that will enhance NRL science through a significantly improved visualization capability and will also provide a unique platform to expand its exploration of both virtual reality research and advanced development for Navy applications. Multiple users will operate effectively within a high-resolution virtual reality that supports powerful interactive paradigms. Virtual Reality has emerged as the key computer science tool for advancing a number of disciplines of interest to the Navy. These include training, education, scientific and engineering analysis, cooperative work (rapid prototyping for manufacturing), telecommunications, telepresence, and military medicine. As noted above, current NRL/ITD VR Lab equipment (head mounted displays and the Virtual Workbench) for virtual reality is limited in capability and cannot support the needed interaction of multiple team-members over a wide range of virtual reality applications. Investigation has shown the selected alternative as the only method to meet the needed capability. Failure to acquire this item will (1) deny NRL scientists access to a powerful tool for data analysis and enhanced scientific understanding, (2) limit the ability of NRL researchers to explore new methods and techniques for utilizing virtual reality, and (3) make impossible planned work in support of current ARPA and ONR projects as well as planned future proposals that would be designed around this unique and powerful capability.

000545

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 President's Budget					
B. Component/Business Area/Date Department of the Navy Research and Development	C. Line No. & Item Description 3014. ADP Equipment >$100,000 Sea-Going Data Acquisition System						D. Activity Identification Naval Research Laboratory					
	FY 1995			FY 1996			FY 1997					
Element of Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
Sea-Going Data Acquisition System							1	321	321			

Narrative Justification:

Purpose/Use: NRL's objective is to obtain a state-of-the-art data acquisition system which meets present research program needs and is expandable for recognized future needs. The system needs to offer configuration flexibility to meet changing requirements for channel capacity and sample rates. The thrust into shallow water acoustics is driving acoustic research requirements to higher frequencies and more data channels. Present optical sensor technology is pushing capabilities to broader bandwidths and greater dynamic ranges. This thrust in sensor technology drives the acquisition requirements to greater throughput rates, dynamic range, and increased channel capacity. Status Quo: Systems existing within NRL do not meet present acquisition requirements nor are they expandable to future requirements using new sensor technology. Existing and future research programs which will use the data acquisition system require that all data be recorded coherently. The acquisition system throughput rate cannot be matched by existing digital record capabilities. Alternative/Justification: A state-of-the-art high throughput rate (many megabits per second) recorder to match the performance of the acquisition system is needed. The recorder will match the performance of the acquisition system and provide a record capability of several tens of hours. The multi-sample/recorder system introduces complexities which greatly increase signal processing time, cost, and introduce sampling errors whose randomness would preclude coherent signal processing at the resolutions required by the research being conducted. Research programs supported are Shallow Water Program, Matched Field Processing in Shallow Water, ONR Undersea Noise Program, and Acoustic Inversion for Geoacoustic Parameters.

000546

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 President's Budget					
B. Component/Business Area/Date Department of the Navy Research and Development	C. Line No. & Item Description 3017. ADP Equipment >$100,000 Unmanned Air Vehicle's Control Workstation						D. Activity Identification Naval Research Laboratory					
	FY 1995			FY 1996			FY 1997					
Element of Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
Unmanned Air Vehicle's Control Workstation							1	170	170			

Narrative Justification:

Purpose/Use: NRL will significantly expand its role in the area of Unmanned Air Vehicles (UAVs) and UAV payload development. Alternative/Justification: The UAV Control Workstation will provide a very substantial capability to participate in programs demonstrating real-world UAV applications. The first project to capitalize on this new NRL capability is the Airborne Biological/Chemical Detector. Once we have the core systems in hand, there will be many other opportunities to conduct system demonstrations for a wide variety of sensors and EW payloads. Other research programs supported will be EAGER (Autonomous Airborne Decoy), TMET (Transonic Mis. Engag. Target), FLYRT, ECM Deployment Technology, and Small Ship Compatible Decoy.

000547

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 President's Budget					
B. Component/Business Area/Date Department of the Navy Research and Development	C. Line No. & Item Description 5001. ADP Off-the-Shelf Software >$100,000 Signal Processing Workstation Software						D. Activity Identification Naval Research Laboratory					
	FY 1995			FY 1996			FY 1997					
Element of Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
Signal Processing Workstation Software				1	105	105						

Narrative Justification:

Purpose/Use: To provide a graphical design environment to engineers for developing advanced signal processing algorithms and hardware architectures. Status Quo: In the current method, signal processing algorithms and architectures are simulated laboriously writing software to implement the various functions and simulate the input data. Alternative/Justfication: The Signal Processing Workstation Software automates this process. This software provides the user a graphical interface to develop and test signal processing algorithms and architectures. The user simply calls up functional blocks from a library to perform the routines required. Specialized libraries exist for radar and communications systems, which are of particular interest to NRL. Research programs supported are Surveillance Block, RASSP Program, Retract Sky, and MTD/MTI.

000548

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1997 President's Budget
B. Component/Business Area/Date Department of the Navy Research and Development	C. Line No. & Item Description 7001. Minor Construction >$200,000 Addition to Space Science Research Facility	D. Activity Identification Naval Research Laboratory

	FY 1995			FY 1996			FY 1997					
Element of Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
Addition to Space Science Research Facility				1	270	270						

Narrative Justification:

This project is to construct a 2000sf addition to the Space Science Research facility. This facility will be utilized to conduct multidisciplinary research review and support functions in support of the entire laboratory. Specific requirements include physical laboratory demonstration spaces to accommodate free integration of the research community. The project will also include technical information computer systems with state-of-the-art interaction through the laboratory fiber optics communication systems.

000549

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 President's Budget					
B. Component/Business Area/Date Department of the Navy Research and Development	C. Line No. & Item Description 7002. Minor Construction >$200,000 Isolated Vibration Free Electron Microscope Facility						D. Activity Identification Naval Research Laboratory					
	FY 1995			FY 1996			FY 1997					
Element of Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
Isolated Vibration Free Electron Microscope Facility				1	270	270						

Narrative Justification:

This project is to construct a vibration free, 2000sf addition to Building 1005 to house a JEM-4000FXII Electron Microscope. This addition will be totally isolated from the mechanical/electrical systems in the existing 1005 facility to provide for the environmental conditions necessary for equipment operation. The electron microscope will employ a high-brightness, high-stability 400 kv electron gun and existing facility cannot be retrofitted without major costs to accommodate this equipment.

000550

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1997 President's Budget
B. Component/Business Area/Date Department of the Navy Research and Development	C. Line No. & Item Description 7003. Minor Construction >$200,000 Extend Perimeter Fence and Correct Parking Deficiency	D. Activity Identification Naval Research Laboratory

	FY 1995			FY 1996			FY 1997					
Element of Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
Extend Perimeter Fence and Correct Parking Deficiency				1	270	270						

Narrative Justification:

The Naval Research Laboratory (NRL) received 3 acres of land from the Naval District Washington (NDW) as a result of the family housing upgrade under construction. The extended parking lot and extended perimeter fencing encloses this land into NRL's current secure area and provides additional parking for the employees located in Building 222. Currently, Building 222 has a 75-car parking deficiency to accommodate the employees and visitors of this facility.

000551

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 President's Budget					
B. Component/Business Area/Date Department of the Navy Research and Development	C. Line No. & Item Description 7004. Minor Construction >$200,000 Upgrade Utility System to Support Info Tech Research						D. Activity Identification Naval Research Laboratory					
	FY 1995			FY 1996			FY 1997					
Element of Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
Upgrade Utility System to Support Info Tech Research				1	270	270						

Narrative Justification:

This project is in support of the major repair/renovation of Building 1. This work includes the cost for the upgrade of the HVAC/Electrical systems to accommodate the increased capacity of the facility for the Information Technology Research function which will occupy this facility when construction is complete.

000552

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 President's Budget					
B. Component/Business Area/Date Department of the Navy Research and Development	C. Line No. & Item Description 7005. Minor Construction >$200,000 Upgrade Utility System to Support Radar Research						D. Activity Identification Naval Research Laboratory					
	FY 1995			FY 1996			FY 1997					
Element of Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
Upgrade Utility System to Support Radar Research							1	270	270			

Narrative Justification:

This project is in support of the major repair/renovation of Building 60. This work includes the cost associated with the necessary upgrade of the HVAC/Electrical systems to accommodate the increased capacity of the facility for the Radar Research function, which will occupy this facility when construction is complete.

000553

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1997 President's Budget
B. Component/Business Area/Date Department of the Navy Research and Development	C. Line No. & Item Description 7006. Minor Construction >$200,000 High Bay Facility for Spacecraft/Satellite Research	D. Activity Identification Naval Research Laboratory

	FY 1995			FY 1996			FY 1997					
Element of Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
High Bay Facility for Spacecraft/Satellite Research							1	270	270			

Narrative Justification:

Construct a two-story enclosure within an existing high-bay facility (Building A59) containing laboratories for the Naval Center for Space Technology. This will provide approximately 3,000sf of spacecraft and satellite lab in the high-bay space of Building A59 to support the design, test processing and system analysis for spacecraft environmental and mechanical testing applications. This project is critical to space systems integration capabilities.

000554

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1997 President's Budget
B. Component/Business Area/Date Department of the Navy Research and Development	C. Line No. & Item Description 7007. Minor Construction >$200,000 Causeway Drainage Control (Erosion Control)	D. Activity Identification Naval Research Laboratory

	FY 1995			FY 1996			FY 1997					
Element of Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
Causeway Drainage Control (Erosion Control)							1	270	270			

Narrative Justification:

This project is to construct a causeway and drainage control for Buildings 1005, 1007, and 1008 at NRL Stennis Space Center (NRLSSC). Failure to accomplish this work will ultimately lead to serious erosion, and adverse environmental conditions which will have a negative impact on the acoustic research currently being conducted at NRLSSC.

000555

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)							A. Budget Submission FY 1997 President's Budget					
B. Component/Business Area/Date Department of the Navy Research and Development	C. Line No. & Item Description 7008. Minor Construction >$200,000 Pulsed Power Facility to Support Mercury Accelerator Project						D. Activity Identification Naval Research Laboratory					
	FY 1995			FY 1996			FY 1997					
Element of Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
Pulsed Power Facility to Support Mercury Accelerator Project							1	270	270			

Narrative Justification:

This project will support the reconfiguration of some of the existing infrastructure and new construction in Building 256 to support the Mercury Accelerator project. This project's intention is for NRL to maintain pulsed power expertise and capability for the Navy and to maintain the ability to support DNA and SNL missions.

000556

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)	A. Budget Submission FY 1997 President's Budget

B. Component/Business Area/Date	C. Line No. & Item Description	D. Activity Identification
Department of the Navy Research and Development	7009. Minor Construction >$200,000 Electrical Switchgear Enclosure	Naval Research Laboratory

	FY 1995			FY 1996			FY 1997					
Element of Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
Electrical Switchgear Enclosure							1	203	203			

Narrative Justification:

This project is to construct an electrical switchgear enclosure as part of the major substation repair project. The current electrical switchgear is over 40 years old and replacement parts are not currently readily available. The new switchgear currently being considered for replacement required it to be installed inside an electrical enclosure for efficient/effective operation.

000557

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION (Dollars in Thousands)				A. Budget Submission FY 1997 President's Budget								
B. Component/Business Area/Date Department of the Navy Research and Development	C. Line No. & Item Description 7010. Minor Construction >$100,000 <$200,000 Various Minor Construction Projects						D. Activity Identification Naval Research Laboratory					
	FY 1995			FY 1996			FY 1997					
Element of Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost			
Various Minor Construction Projects				VAR		420	VAR		217			

Narrative Justification:

Minor construction funds will be used for miscellaneous small projects for the improvement and upkeep of the NRL physical plant. For example, construction of loading ramp and miscellaneous projects associated with Major Repair Projects. Also, these estimates include authorization to cover change orders on current year and active prior year projects.

000558

Department of the Navy - Defense Business Operations Fund
Business Area: RESEARCH AND DEVELOPMENT/Activity Group: NAVAL RESEARCH LABORATORY
CAPITAL BUDGET EXECUTION
(Dollars in Millions)
FY 1996

Title/Description	Original Request	Change	Revised Request	Explanation/Reason for Change
Equipment (non-ADPE/TEL):				
Equipment except ADPE and TELECOM < 500K	6.618	(1.319)	5,299	2/
Solid State, Multinuclear, Wide Bore, High Field NMR Spectrometer	1.200	0.000	1.200	
Scale Model Analysis Facility (SMAF) Upgrade		1.050	1.050	1/
Cryogenic Vacuum Pumps & Thermal Shroud for Lrg Therm Vac Chamber		0.750	0.750	1/
Bottom-Mounted Acoustic Doppler Current Profilers		0.575	0.575	1/
Satellite Data Receiving and Processing System	0.720	(0.720)		1/
Subtotal - Equipment	**8.538**	**(0.335)**	**8.874**	
ADPE and Telecomm Equip				
Equipment - ADPE < 100K	4.622	(4.622)	0.000	2/
Parallel RISC-based Large Memory Supercomputer		1.000	1.000	1/
Multiple & Parallel Processor Comput for Tactical Ocean Sim Lab		0.985	0.985	1/
Mini Commando Radiant Hail Tactical Imagery Terminal		0.300	0.300	1/
High Performance Visualization Local Area Network System		0.250	0.250	1/
Communication Networking Support System		0.210	0.210	1/
Data Acquisition System		0.175	0.175	1/
SeaWIFS Archival/Distribution System		0.168	0.168	1/
ARGOS Operations Center for Satellite Experiments		0.136	0.136	1/
RAID Disk Array System Memory Upgrade		0.116	0.116	1/
IR Chaff Real-Time Measurement/Signal Processing Facility		0.102	0.102	1/
Multiprocessor Computer/Fileserver		0.100	0.100	1/
SGI Power Challenge XL8 Processor, 300 Mflop Computer	0.635	(0.635)		1/
Silicon Graphics Power Challent XL Computer Expansion	0.162	(0.162)		1/
400 GB Redundant Array of Inexpensive Disks (RAID)	0.100	(0.100)		1/

000559

Title/Description	Original Request	Change	Revised Request	Explanation/Reason for Change
Reality Engine Upgrade	0.100	(0.100)		1/
Adaptive Solutions Logical Connection Machine	0.115	(0.115)		1/
Gigaswitch Network Intercon, Ttl Floating Point Processor & Wrkstn Server	0.228	(0.228)		1/
Subtotal - ADPE/TEL Equip	**5.962**	**(2.420)**	**3.542**	
Software Development				
Signal Processing Workstation Software	0.000	0.105	0.105	1/
Subtotal - Software Development	**5.962**	**(2.315)**	**3.647**	
Minor Construction				
Addition to Bldg Space Science Research Facility	0.300	(0.030)	0.270	3/
Isolated Vibration Free Electron Microscope Facility		0.270	0.270	1/
Extend Perimeter Fence and Correct Parking Deficiency		0.270	0.270	1/
Upgrade Utility System to Support Information Tech Research	0.300	(0.030)	0.270	3/
Various Minor Construction Projects	0.050	0.370	0.420	1/
Demolition of Bldg	0.250	(0.250)		1/
Research Lab	0.300	(0.300)		1/
Pulsed Power Facility	0.300	(0.300)		1/
Subtotal - Minor Construction	**1.500**	**(0.000)**	**1.500**	
TOTAL CAPITAL INVESTMENT	**16.000**	**(1.980)**	**14.021**	

000560

1/ These substitutions and/or updates of planned equipment acquisitions are the result of normal priority changes inherent with the execution of broadly based science and technology programs. Unlike shipyards and NADEPS, which have stable production environments, the research environment is dynamic, i.e., is constantly changing in areas of research and research priorities. Furthermore, rapid advances in the capability of research equipment and research-support ADPE are constant.

2/ These substitutions and/or program decreases are the result of the threshold change from $50,000 to $100,000

3/ These revisions of estimates exclude modification costs that are now budgeted in FY97.

DEPARTMENT OF THE NAVY
DEFENSE BUSINESS OPERATIONS FUND
RESEARCH AND DEVELOPMENT
NAVAL FACILITIES ENGINEERING SERVICE CENTER

Activity Group Function:

The Naval Facilities Engineering Service Center provides specialized engineering, scientific, and technical products and services on a worldwide basis. Areas of expertise include shore, ocean and waterfront facilities; environment; energy and utilities; and amphibious and advanced base operations. In these product and service areas, NFESC performs specialized design, engineering, field engineering, test, evaluation and research, and consulting. Services are performed for customers from the Navy, Marine Corps, and other Department of Defense and Federal Agencies.

Activity Group Composition:

Naval Facilities Engineering Service Center Port Hueneme, California

Financial Profile:	FY 1995	FY 1996	FY 1997
Cost of Goods Sold ($millions)	$ 49.3	$ 51.4	$ 52.5
Net Operating Results	- 0.3	- 1.5	- 0.1
Accumulated Operating Results	1.6	0.1	0.0

Costs and direct labor hours are up because of an increase in the demand for NFESC products. Increased labor costs have been offset by efficiencies associated with collocating departments into a new building.

Workload:	FY 1995	FY 1996	FY 1997
Direct Labor Hours	349,619	375,725	405,579

Performance Indicators:

Total activity cost per billable direct labor hour for services rendered. Indicator includes labor, materials, associated contracts, and application of overhead.

	FY 1995	FY 1996	FY 1997
($ per billable Direct Labor Hour)	$ 140.92	$ 136.75	$ 129.55

Percent of overhead cost to total cost:

FY 1995	FY 1996	FY 1997
30.7 %	28.3 %	26.7 %

Direct labor hour ratio to total hours available:

FY 1995	FY 1996	FY 1997
59.8 %	64.4 %	66.6 %

Customer Rate Changes:	FY 1996	FY 1997
Stabilized Customer Rate	$81.60	$70.61
Stabilized Rate Change	4.0%	- 13.5%
Composite Rate Change	3.5%	- 6.5%

The stabilized billing rate consists of direct labor and applied overhead. All remaining direct costs are billed on a 100% reimbursable basis. The composite rate change shown above incorporates both the stabilized and non-stabilized parts of the budget.

Unit Costs:	FY 1995	FY 1996	FY 1997
(cost per Direct Labor Hour)	$ 81.58	$ 76.59	$ 73.11

Staffing:	FY 1995	FY 1996	FY 1997
Civilian End Strength	331	336	340
Civilian Work Years	320	330	340
Military End Strength	14	4	4
Military Workyears	14	4	4

Headquarters Costs:	**FY 1995**	**FY 1996**	**FY 1997**
($ in millions)	0.1	0.1	0.1

Capital Budget Authority:

($ in millions)

	FY 1995	**FY 1996**	**FY 1997**
Equipment-Non ADPE/TELECOM	0.212	0.868	0.695
ADPE/Telecommunications Equipment	0.060	0.000	0.000
Software Development	0.000	0.000	0.000
Minor Construction	0.000	0.000	0.000
Reliability, Maintainability, and Supportability Modifications	0.000	0.000	0.000
Total ($millions)	0.272	0.868	0.695

FY 1995 total authority was originally $.550 million however, NFESC postponed investments until after the physical move in FY 1996.

FY 1996 added a replacement of a Linear Cable Engine ($.398 million) due to the breakdown of overaged unit.

Other overaged equipment is being replaced in FY 1997.

Economies and Efficiencies:

The move into the new building during FY 1996 will result in overhead efficiencies.

R&D/NAVAL FACILITIES ENGINEERING SERVICE CENTER
REVENUE AND EXPENSES
(Dollars in Millions)

	FY 1995	FY 1996	FY 1997
Revenue:			
Gross Sales			
Operations	48.3	49.4	51.9
Capital Surcharge	0.0	0.0	0.0
Depreciation except Maj Const	0.7	0.5	0.5
Major Construction Depreciation	0.0	0.0	0.0
Other Income	0.0	0.0	0.0
Total Income	**49.0**	**49.9**	**52.4**
Expenses:			
Cost of Materiel Sold from Inventory			
Negotiated Purchases from Customers			
Transportation	0.1	0.3	0.3
Salaries and Wages:			
Military Personnel	0.6	0.3	0.3
Civilian Personnel	20.9	21.8	23.1
Materials, Supplies and			
Parts used in Operations	7.1	4.0	4.0
Facility Repair Charge	0.2	0.2	0.2
Depreciation - Capital	0.7	0.5	0.5
Contracted Engineering Services	0.1	0.2	0.2
Lease Costs	0.0	0.0	0.0
Purchased Utilities	0.5	0.4	0.4
Purchased Communications	0.2	0.4	0.4
Equipment Maintenance	0.3	0.4	0.4
Fuel	0.1	0.2	0.2
Other Expenses	18.4	22.7	22.5
Total Expenses	**49.3**	**51.4**	**52.5**
Operating Result	(0.3)	(1.5)	(0.1)
Less Capital Surchg Reservation	0.0	0.0	0.0
Plus Appropriations Affecting NOR/AOR	0.0	0.0	0.0
Other Changes Affecting NOR/AOR	0.0	0.0	0.0
Net Result	(0.3)	(1.5)	(0.1)
Prior Year AOR	1.9	1.6	0.1
Accumulated Operating Result	**1.6**	**0.1**	**(0.0)**

R&D/NAVAL FACILITIES ENGINEERING SERVICE CENTER

SOURCE OF REVENUE

(Dollars in Millions)

	FY 1995	FY 1996	FY 1997
1. New Orders	63.8	47.5	47.4
a. Orders from DoD Components	58.0	40.9	40.9
Department of the Navy	29.2	21.4	20.8
Operations and Maintenance, Navy	8.0	4.7	4.9
Operations and Maintenance, Marine Corps	0.8	0.5	0.5
O&M, Navy Reserve	0.0	0.0	0.0
O&M, Marine Corps Reserve	0.0	0.0	0.0
Aircraft Procurement, Navy	0.0	0.0	0.0
Weapons Procurement, Navy	0.0	0.0	0.0
Shipbuilding & Conversion, Navy	0.1	0.0	0.0
Other Procurement, Navy	2.6	1.5	1.5
Procurement, Marine Corps	0.0	0.0	0.0
Family Housing, Navy and Marine Corps	0.1	0.2	0.2
Research, Development, Test & Eval, Navy	17.3	13.6	12.7
Military Construction, Navy	0.3	1.0	1.0
Other Navy Appropriations	0.0	0.0	0.0
Other Marine Corps Appropriations	0.0	0.0	0.0
Department of the Army	0.8	1.4	1.4
Army Operation & Maintenance Accounts	0.0	0.0	0.0
Army Res, Dev, Test & Eval Accounts	0.5	1.3	1.3
Army Procurement Accounts	0.0	0.0	0.0
Army Other	0.3	0.1	0.1
Department of the Air Force	0.4	0.4	0.3
Air Force Operation & Maintenance Accounts	0.0	0.0	0.0
Air Force Res, Dev, Test & Eval Accounts	0.0	0.1	0.0
Air Force Procurement Accounts	0.0	0.3	0.3
Air Force Other	0.4	0.0	0.0
DoD Appropriated Accounts	27.6	17.7	18.5
Base Closure and Realignment	3.5	1.8	2.1
Operation & Maintenance Accounts	18.0	7.5	7.4
Res, Dev, Test & Eval Accounts	6.0	8.4	8.9
Procurement Accounts	0.0	0.0	0.0
DoD Other	0.0	0.0	0.0
b. Orders from DBOF Business Areas	4.5	5.5	5.3
c. Total DoD	62.5	46.4	46.3
d. Other Orders	1.4	1.1	1.1
Other Federal Agencies	0.7	0.9	0.9
Foreign Military Sales	0.4	0.0	0.0
Non Federal Agencies	0.3	0.2	0.2
2. Carry-In Orders	27.5	42.3	39.9
3. Total Gross Orders (available funding)	91.3	89.8	87.3
4. Carry-Out Orders	42.3	39.9	34.9
Change in Backlog (carry-out less carry-in)	14.8	(2.4)	(5.0)
5. Total Gross Sales	49.0	49.9	52.4

DEPARTMENT OF THE NAVY
DEFENSE BUSINESS OPERATIONS FUND
R&D/NAVAL FACILITIES ENGINEERING SERVICE CENTER
CHANGES IN THE COSTS OF OPERATIONS
($ IN MILLIONS)

	Costs
FY 1995 Actual	49.3
FY 1996 Estimate in President's Budget	46.6
Estimated Impact in FY 1996 of Actual FY 1995 Experience	
Pricing Adjustment:	
General Inflation	-.2
Program Changes:	
Capital Purchase Program Threshold Change	.2
Increase in direct costs due to workload increase in Lock programs	4.8
FY 1996 Current Estimate:	51.4
Pricing Adjustments:	
Pay Raise:	
FY 1996 CIVPERS Pay Raise	0.5
Annualization of FY 1994 Pay Raise	0.1
General Purchase Inflation	0.7
Productivity Initiatives and Other Efficiencies:	
Decrease in G&A costs	-0.7
Program Changes:	
Increase in direct costs due to workload increase	0.6
Capital Purchase Program Threshold Change	-0.1
FY 1997 Estimate	52.5

DEPARTMENT OF THE NAVY
BUSINESS AREA CAPITAL BUDGET SUMMARY
RESEARCH AND DEVELOPMENT
NAVAL FACILITIES ENGINEERING SERVICE CENTER
SUMMARY OF CPP PROGRAM
($ in Millions)

LINE #	Item Description	FY 1995 $50K THRESHOLD		FY 1996 $100K THRESHOLD		FY 1997 $100K THRESHOLD	
		Quant	Total Cost	Quant	Total Cost	Quant	Total Cost
	1a. Non-ADP Equip. (>$500,000)						
	- Replacement	0	0	0	0	0	0
	- Productivity						
	- New Mission	0	0	0	0	0	0
	- Environmental						
	1b. Non-ADP Equip. (>$100,000<$500,000)						
L0005	- Replacement	2	0.212	5	0.868	6	0.695
	- Productivity						
	- New Mission	0	0	0	0	0	0
	- Environmental						
	Subtotal	2	0.212	5	0.868	6	0.695
	2. Minor Construction	0	0	0	0	0	0
	3. ADPE & Telecomm						
L0010	- Computer Hardware (Production)	1	0.060	0	0	0	0
	- Computer Software (Operating System)						
	- Telecommunications						
	- Other Computer & Telecomm Support Equip.						
	Subtotal	1	0.060	0	0	0	0
	4. Software Development	0	0	0	0	0	0
	TOTAL	3	0.272	5	0.868	6	0.695

000567

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ In Thousands) Naval Facilities Engineering Service Center	A. FY 1997 PRESIDENT'S BUDGET

Department of the Navy/Research and Development	C. L0005 Equipment- Replacement - < $500K	D. Naval Facilities Engineering Service Center

	FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment	2	VARIOUS	212	5	VARIOUS	868	6	VARIOUS	695
TOTAL		VARIOUS	212		VARIOUS	868		VARIOUS	695

Narrative Justification:

The Naval Facilities Engineering Service Center (NFESC) plans to replace outdated equipment to ensure the continued capability of Facilities, Ocean, Energy and Environmental Departments in support of the Naval Shore mission. Replacement of the equipment is essential to eliminate uneconomical repairs. Equipment requirements to support RDT&E and Engineering Services to include high technology components for precision machinery, instrumentation and measurement on site and in the field. Equipment purchases will support environmental quality, energy efficiency, ocean construction, electronic projects and facilities life cycle management products and services. Equipment replacements will be required to sustain operations at current levels.

In FY 1997 NFESC requests the purchase of one linear cable engine (LCE) at $398K to ensure safe and reliable cable passing and alignment of junction boxes while maintaining tension during deployment of cable on the seafloor. The present LCE unit has exceeded its service life and has become unreliable. The Loss of cable deployment capabilities are estimated to cost NFESC $500,000 to $600,000 per year of direct project funding.

000568

Department of the Navy - Defense Business Operations Fund
Research & Development/Naval Facilities Engineering Service Center

CAPITAL BUDGET EXECUTION

(dollars in millions)

FY 1996

Title/Description	Original Request	Change	Revised Request	Explanation/Reason for Change
Equipment (non-ADPE/TEL):				
Total Projects Affected By Threshold Change	0	0	0	
LINEAR CABLE ENGINE	0	398	398	Added due to unanticipated breakdown of existing unit.
MASS SELECTIVE DETECTION SYS.	105	0	105	
SELF POWERED SIDE SCAN WINCH	105	0	105	
HP KOBE PUMP (DOL/72" PRESSURE VESSEL)	100	0	100	
SWATCH BATHYMETRIC SYSTEM	101	59	160	Increased cost due to pricing change.
Subtotal - Equipment	411	457	868	
ADPE and Telecomm Equip:				
Total Projects Affected By Threshold Change	257	(257)	0	Capital items reduced due to change in threshold from $50K to $100K
Subtotal - ADPE/TEL Equipment	257	(257)	0	
Software Development:				
Total Projects Affected By Threshold Change	100	(100)	0	Capital items reduced due to change in threshold from $50K to $100K
Subtotal - Software Development	100	(100)	0	
Minor Construction:				
No Projects Budgeted	0	0	0	
Subtotal - Minor Construction	0	0	0	
TOTAL CAPITAL INVESTMENT	768	100	868	

000569

FY1997 PLANNING BUDGET
Defense Business Operations Fund
Navy Transportation/Military Sealift Command
Budget Narrative

Activity Group Function: The Military Sealift Command (MSC) operates under the Defense Business Operations Fund (DBOF) in two separate capacities. MSC operates as the Transportation Component Command (TCC) for sealift to the Commander in chief, U.S. Transportation Command; the budget for this mission is included in the Transportation business area of the Defense Business Operations Fund controlled by TRANSCOM (DBOF-T). Additionally, MSC operates as the Type Commander for CNO for a number of Service Unique vessels (DBOF-N) operated as Naval Fleet Auxiliary Force (NFAF) vessels, Special Mission Ships (SMS) and Navy sponsor of Preposition Forces (APF-N). NFAF provides support utilizing civilian manned non-combatant ships for material support, SMS provides unique seagoing platforms to the military services, and APF-N deploys advance material for strategic lifts. Major customers include CINCPACFLT, CINCLANTFLT, NAVSEA, COMNAVMETOCCOM, SPAWAR and DIRSSP.

Activity Group Composition: Military Sealift Command, headquartered in Washington, D.C. is composed of five area commands located in Bayonne, New Jersey; Oakland, California; London, England; Yokohama, Japan and Washington, D.C. The Bayonne and Oakland area commands are located at BRAC bases and will be relocating in the future. In addition, MSC has three subarea commands in Norfolk, Virginia; Naples, Italy; Guam and eight port offices.

Financial Profile:	**FY 95**	**FY 96**	**FY 97**
Cost of Good Sold ($millions)	1,069.4	1,191.9	1,179.2
NOR	(9.0)	46.3	(32.6)
AOR	(13.7)	32.6	0.0

NFAF continues to expand at a significant rate. From FY 1995 through FY 1997 the NFAF will convert three T-AFS 1 Class supply ships and five T-AE 26 Class ammo ships to civilian mariner operation. Additionally, during this period the NFAF will gain three T-AO 187 Class fleet oilers from the new construction program. SMS will reactivate the T-AGS 45 and do additional reimbursable work aboard the T-AH's. This budget also includes the transfer of T-AGOS 1 Class undersea surveillance ships to other government agencies, the deactivation of three T-AGOS, the deactivation/transfer of four T-AO 187 Class fleet oilers and a T-AG, the placement of two T-AFS 1 Class fleet stores ship in ROS for portions of FY 1996 and FY 1997, and the activation and operation of two T-LKAs starting in FY 1996.

Workload:	**FY 95**	**FY 96**	**FY 97**
Per Diem Ship Days	24,952	25,184	25,071
Reimbursable Ship Days	6,727	8,456	7,893
Total Ship Days	31,679	33,640	32,964

FY1997 PLANNING BUDGET
Defense Business Operations Fund
Navy Transportation/Military Sealift Command
Budget Narrative

FY96 and FY97 per diem days reflects the deactivation/transfer of four T-AOs, four T-AGOS, one T-AG and the additional of two T-LKAs, three T-AOs and three T-AE becoming fully operational. The increase in reimbursable ships days reflects the CIVMOD occurring aboard two T-LKAs, three T-AFSs, five T-AESs and reactivation of the T-AGS 45.

Performance Indicators:	**FY 95**	**FY 96**	**FY 97**
Ship Availability	99%	99%	99%
Customer Rate Changes:	**FY 95**	**FY 96**	**FY 97**
NFAF	-13.9	3.6	-7.5
SMS	-13.4	-0.9	-28.0
APF-N	-22.5	17.8	-4.0
Unit Costs: ($/per diem day)	**FY 95**	**FY 96**	**FY 97**
NFAF	39,569	45,623	43,424
SMS	23,721	24,290	23,823
APF-N	61,079	68,138	70,882

NFAF's FY 1996 spike reflects the conversions of two T-AFSs and two T-AEs and the transfer of five CIVMAR manned T-AE's to MSC for operation. FY 1997 only reflects two T-AEs conversions.

SMS reflects the re-activation of the USNS Waters (T-AGS 45) in FY 1996 under a new sponsor, delayed deactivation of USNS Vanguard (T-AG 194) until a new replacement ship is found and an increase in time charter days.

APF-N FY 1996 and FY 1997 unit costs include additional sponsor reimbursable work to meet various sponsor requirements.

Staffing:	**FY 95**	**FY 96**	**FY 97**
Civilian Endstrength	4,457	4,802	4,834
Civilian Workyears	4,616	5,040	5,067
Military Endstrength	1,051	1,216	1,247
Military Workyears	967	1,166	1,223

Changes are due primarily to revised ship manning on several NFAF ships, deactivation/activation timing impacts, and increases for various CIVMAR manned ships.

FY1997 PLANNING BUDGET
Defense Business Operations Fund
Navy Transportation/Military Sealift Command
Budget Narrative

Headquarter Costs:	**FY 95**	**FY 96**	**FY 97**
($ in millions)			
Cost of Management Headquarters	26.0	23.1	25.0

Headquarters cost increased in FY 1995 from the plan by $2.5 million due to increased reimbursable overhead associated with several research/Information Technology projects. When headquaters costs are normalized for reimbursable overhead and escalation, MSC headquarters costs increase by 2% from FY1995 to FY 1997 with workload increasing 4% and revenue increasing 10%. The major factor impacting this efficiency is the MSC reengineering/ reinvention effort.

Capital Budget Authority:	**FY 95**	**FY 96**	**FY 97**
($ in millions)			
Equipment- Non ADPE/TELECOM	0.2	0.0	0.0
ADPE/TELECOM	3.3	2.2	1.3
Software Development	1.3	3.6	1.5
Minor Construction	0.0	0.2	0.0
Total	4.8	6.0	2.8

The majority of CPP costs are associated with information technology efforts - i.e. system development and acquisition of ADPE . MSC is migrating from the mainframe to a client/server environment; which will reduce costs as MSC will become less reliant on costs associated with maintaining a mainframe.

Economies and Efficiencies

MSC has various systems in place to reduce costs and an increase efficiencies. Three major ones include: Bulk purchase of lube oil, Use of vibration analysis system and lube oil analysis for early detection of potential maintenance problems, Hull/Propeller cleaning to reduce drag thus reducing fuel consumption. Additionally, the reinvention initiative,undertaken in FY 1996, will have a significant impact on reducing overhead in the outyears.

NAVY TRANSPORTATION/MILITARY SEALIFT COMMAND
REVENUE AND EXPENSES
(Dollars in Millions)

	FY 1995	FY 1996	FY 1997
Revenue:			
Gross Sales			
Operations	1,058.2	1,235.6	1,142.8
Capital Surcharge	0.0	14.6	0.0
Depreciation except Maj Const	2.2	2.6	3.8
Major Construction Depreciation	0.0	0.0	0.0
Other Income	0.0	0.0	0.0
Total Income	**1,060.4**	**1,252.8**	**1,146.6**
Expenses:			
Cost of Materiel Sold from Inventory			
Negotiated Purchases from Customers			
Transportation	1.9	2.4	2.4
Salaries and Wages:			
Military Personnel	33.8	35.3	39.7
Civilian Personnel	255.4	274.1	282.2
Materials, Supplies and			
Parts used in Operations	49.4	53.6	44.5
Facility Repair Charge	0.2	0.2	0.2
Depreciation - Capital	2.2	2.6	3.8
Contracted Engineering Services	0.0	0.0	0.0
Lease Costs	193.9	368.6	384.6
Purchased Utilities	9.3	7.1	7.4
Purchased Communications	10.1	5.1	5.3
Equipment Maintenance	0.1	0.6	0.6
Fuel	82.1	88.6	91.6
Other Expenses	430.9	353.7	316.9
Total Expenses	**1,069.4**	**1,191.9**	**1,179.2**
Operating Result	(9.0)	60.9	(32.6)
Less Capital Surchg Reservation	0.0	14.6	0.0
Plus Appropriations Affecting NOR/AOR	0.0	0.0	0.0
Other Changes Affecting NOR/AOR	0.0	0.0	0.0
Net Result	(9.0)	46.3	(32.6)
Prior Year AOR	(4.7)	(13.6)	32.6
Accumulated Operating Result	**(13.6)**	**32.6**	**(0.0)**

NAVY TRANSPORTATION/MILITARY SEALIFT COMMAND
SOURCE OF REVENUE
(Dollars in Millions)

	FY 1995	FY 1996	FY 1997
1. New Orders	1,052.6	1,252.8	1,146.6
a. Orders from DoD Components	1,049.3	1,252.1	1,145.9
Department of the Navy	1,032.4	1,236.6	1,129.7
Operations and Maintenance, Navy	971.4	1,103.0	1,034.5
Operations and Maintenance, Marine Corps	0.0	0.0	0.0
O&M, Navy Reserve	0.0	0.0	0.0
O&M, Marine Corps Reserve	0.0	0.0	0.0
Aircraft Procurement, Navy	0.0	0.0	0.0
Weapons Procurement, Navy	0.0	0.0	0.0
Shipbuilding & Conversion, Navy	49.6	131.9	94.8
Other Procurement, Navy	5.6	0.4	0.4
Procurement, Marine Corps	0.0	0.0	0.0
Family Housing, Navy and Marine Corps	0.0	0.0	0.0
Research, Development, Test & Eval, Navy	5.7	1.3	0.0
Military Construction, Navy	0.0	0.0	0.0
Other Navy Appropriations	0.0	0.0	0.0
Other Marine Corps Appropriations	0.0	0.0	0.0
Department of the Army	0.0	0.0	0.0
Army Operation & Maintenance Accounts	0.0	0.0	0.0
Army Res, Dev, Test & Eval Accounts	0.0	0.0	0.0
Army Procurement Accounts	0.0	0.0	0.0
Army Other	0.0	0.0	0.0
Department of the Air Force	16.5	15.5	16.2
Air Force Operation & Maintenance Accounts	16.5	15.5	16.2
Air Force Res, Dev, Test & Eval Accounts	0.0	0.0	0.0
Air Force Procurement Accounts	0.0	0.0	0.0
Air Force Other	0.0	0.0	0.0
DoD Appropriated Accounts	0.3	0.0	0.0
Base Closure and Realignment	0.0	0.0	0.0
Operation & Maintenance Accounts	0.3	0.0	0.0
Res, Dev, Test & Eval Accounts	0.0	0.0	0.0
Procurement Accounts	0.0	0.0	0.0
DoD Other	0.0	0.0	0.0
b. Orders from DBOF Business Areas	2.7	0.7	0.7
c. Total DoD	1,052.0	1,252.8	1,146.6
d. Other Orders	0.6	0.0	0.0
Other Federal Agencies	0.5	0.0	0.0
Foreign Military Sales	0.1	0.0	0.0
Non Federal Agencies	0.0	0.0	0.0
2. Carry-In Orders	81.0	73.2	73.2
3. Total Gross Orders (available funding)	1,133.6	1,326.0	1,219.8
4. Carry-Out Orders	73.2	73.2	73.2
Change in Backlog (carry-out less carry-in)	(7.8)	0.0	0.0
5. Total Gross Sales	1,060.4	1,252.8	1,146.6

FY 1997 PLANNING BUDGET
Changes in the Costs of Operation
Navy Transportation/Military Sealift Command
Date: Congressional Submission
(Dollars in Millions)

	Expenses
FY 1995 Actual:	1,069.4
FY 1996 Estimate in President's Budget:	1,237.3
Estimated Impact in FY 1996 of Actual FY 1995 Experience:	0.0
Pricing Adjustments:	
a. FY 1995 Pay Raise	0.0
(1) Civilian Personnel	0.0
(2) Military Personnel	0.0
b. Annualization of Prior Year Pay Raises	0.0
(1) Civilian Personnel	0.0
(2) Military Personnel	0.0
c. Fuel	0.0
d. Supplies	(0.4)
e. General Purchase Inflation	(7.1)
Program Changes (list) as appropriate	
a. DLRs	0.0
b. Manning	0.0
c. Depot Maintenance	0.0
d. Commercial Augmentation	0.0
e. Military Augmentation	0.0
f. Flying Hour Change	0.0
g.Other	
Unfunded MPS buyout	2.4
MPSRON 1 move to MED	3.3
TAH/ MTF operation/AMAL Increase	6.9
Reduced FOS days	(5.6)
USNS Waters NAVO sponsor	6.2
New NAVO CONOP contract	(3.4)
Decrease in time charter	(1.2)
Decrease in M&R	(25.3)
ROS CD T-AGOS	(3.6)
USNS Hayes cost reduction initatives	(2.1)
Cancellation T-ATS program	(8.5)
Reduced SOSUS support	(2.0)
Reduced OPTEMPO T-AFS 1 class	(5.0)
FY1996 Current Estimate:	1,191.9

FY 1997 PLANNING BUDGET
Changes in the Costs of Operation
Navy Transportation/Military Sealift Command
Date: Congressional Submission
(Dollars in Millions)

	Expenses
FY1996 Current Estimate:	1,191.9
Pricing Adjustments:	
a. FY 1997 Pay Raise	
(1) Civilian Personnel	3.3
(2) Military Personnel	0.1
b. Annualization of Prior Year Pay Raises	
(1) Civilian Personnel	4.5
(2) Military Personnel	0.0
c. Fuel	1.2
d. Supplies	1.6
e. DLRs	0.0
f. General Purchase Inflation	16.3
Productivity Initiatives & Other Efficiencies:	
a. Vibration/Lube Oil analysis, Bulk purchases, Hull cleaning	(7.4)
Program Changes:	
a. DLRs	0.0
b. Manning	0.0
c. Depot Maintenance	0.0
d. Commercial Augmentation	0.0
e. Military Augmentation	0.0
f. Flying Hour Change	0.0
g. Other	
Decrease in ship days (Leap year)	(2.0)
Decrease in M&R	(19.8)
Decrease in time charters	(0.6)
USNS Waters reactivation	6.0
Deactivation of the USNS WYMAN	(5.5)
Deactivation of the USNS ZEUS	(10.0)
Full year operation of the USNS WATERS & BOWDITH	1.8
Decrease in T-AH/MTF operation/AMAL	(1.2)
Decrease in TAGS 60 class SCN/PSA	(2.1)
MPS interest payment	12.8
T-AH FOS	1.9
Two T-AEs (BUTTE/KISKA)	19.4
Two T-LKA full year ops (MOBILE/EL PASO)	10.4
T-AFS CIVMOD support costs	0.8
CIVMOD/PSA/Outfitting T-AFS	(25.4)
Full OPS T-AO (RAPPAHANNOCK/LARAMIE)	18.1
Inact T-AO (LENTHALL)	(17.1)
ROS vice FOS T-AFS (MARS/CONCORD)	(9.6)
Inact T-AGOS (AUDACIOUS)	(1.8)
Reduced days at sea	(3.1)
Two T-AO inact FY96	(5.7)
Reduced SOSUS support	(1.3)
Increase in G&A	0.5
Other Changes:	
a. Depreciation	1.2
FY 1997 Estimate:	1,179.2

Business Area Capital Investment Summary
Component: Military Sealift Command
Business Area: Transportation
Date: Congressional Submission
($ in Millions)

Line Number	Item Description	FY 1995 Qty	FY 1995 Total Cost	FY 1996 Qty	FY 1996 Total Cost	FY 1997 Qty	FY 1997 Total Cost	FY 1998 Qty	FY 1998 Total Cost
	Equipment								
C001	Replacement		0.2						
	Productivity								
	New Mission								
	Environmental Compliance								
	Sub-total	1	0.2	0	0.0	0	0.0	0	0.0
	ADPE & Telecomm								
	Computer Hardware (Production)								
C002	Briefing Complex		0.2						
C003	TDMS		0.2		0.1		0.1		
C004	Systems				0.1		0.1		
C005	Mobile Office		2.0		0.1		0.1		
C006	Lan		0.9		1.9		1.0		
	Computer Software (Operating)								
	Telecommunications								
	Other Communications and Telecommunications Support Equipment								
	Sub-total	var	3.3	var	2.2	var	1.3	0	0.0
	Software Development		1.3		3.6		1.5		
C007	Systems		0.8		2.7		1.1		
C008	Lan		0.2		0.7		0.3		
C009	TDMS		0.3		0.2		0.1		
C010	Minor Construction				0.2				
	Total	var	4.8	var	6.0	var	2.8	0	0.0

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BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION
(Dollars in Thousands)

A. Budget Submission
FY 1997 Planning Budget - Congressional

B. Component/Business Area/Date
Military Sealift Command/Transportation/ March 1996

C. Line No. & Item Description
C003 TDMS

D. Activity Identification

ELEMENTS OF COST	FY 1995 Qty	FY 1995 Unit Cost	FY 1995 Total Cost	FY 1996 Qty	FY 1996 Unit Cost	FY 1996 Total Cost	FY 1997 Qty	FY 1997 Unit Cost	FY 1997 Total Cost	FY 1998 Qty	FY 1998 Unit Cost	FY 1998 Total Cost
ADPE	VAR		212	VAR		75	VAR		50			
Total			212			75			50			

000578

Narrative Justification:

TDMS equipment provides a secure physical archive and replaces the existing manual, labor intensive, paper based system that has a high risk of losing critical material due to age and handling.
The above purchases are part of the continuing MSC effort to maintain the TDMS.

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION
(Dollars in Thousands)

A. Budget Submission
FY 1997 Planning Budget - Congressional

B. Component/Business Area/Date: Military Sealift Command/Transportation/ March 1996

C. Line No. & Item Description: C004

D. Activity Identification: Systems Development

ELEMENTS OF COST	FY 1995 Qty	FY 1995 Unit Cost	FY 1995 Total Cost	FY 1996 Qty	FY 1996 Unit Cost	FY 1996 Total Cost	FY 1997 Qty	FY 1997 Unit Cost	FY 1997 Total Cost	FY 1998 Qty	FY 1998 Unit Cost	FY 1998 Total Cost
ADPE				VAR		100	VAR		100			
Total	0		0			100			100			

000579

Narrative Justification:

In order to implement systems development efforts, various hardware (ADPE) is required. MSC will be migrating from a mainframe to a client/server environment; above funding covers costs associated with the acquisition of servers and associated peripherals. The above is part of MSC continuing effort to upgrade its computer support to its fleet.

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION
(Dollars in Thousands)

A. Budget Submission
FY 1997 Planning Budget - Congressional

B. Component/Business Area/Date

Military Sealift Command/Transportation/ March 1996

C. Line No. & Item Description

C005 Mobile Office

D. Activity Identification

ELEMENTS OF COST	FY 1995 Qty	FY 1995 Unit Cost	FY 1995 Total Cost	FY 1996 Qty	FY 1996 Unit Cost	FY 1996 Total Cost	FY 1997 Qty	FY 1997 Unit Cost	FY 1997 Total Cost	FY 1998 Qty	FY 1998 Unit Cost	FY 1998 Total Cost
Mobile Offices	VAR		2,000	VAR		100	VAR		100			
Total			2,000			100			100			

000580

Narrative Justification:

Provides for complete Command, Control, and Communications capabilities which would include all office infrastructure support. Mobile office is to be totally self contained requiring no external facilities to satisfy C3 system functionality. Offices will include UPS, fax, printer, micros, INMARSAT, etc.

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION
(Dollars in Thousands)

A. Budget Submission
FY 1997 Planning Budget - Congressional

B. Component/Business Area/Date
Military Sealift Command/Transportation/ March 1996

C. Line No. & Item Description
C006 Lan Items

D. Activity Identification

ELEMENTS OF COST	FY 1995 Qty	FY 1995 Unit Cost	FY 1995 Total Cost	FY 1996 Qty	FY 1996 Unit Cost	FY 1996 Total Cost	FY 1997 Qty	FY 1997 Unit Cost	FY 1997 Total Cost	FY 1998 Qty	FY 1998 Unit Cost	FY 1998 Total Cost
ADPE	VAR		873	VAR		1,929	VAR		1,086			
Total			873			1,929			1,086			

000581

Narrative Justification:

As a result of an IG audit, it was determined that all LAN related procurements should be obtained with investment vice expense funding. Accordingly, the above represents MSC requirments to implement LANS at all offices, area commands, and headquarters. Equipment includes servers, micros, printers, etc.

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION
(Dollars in Thousands)

A. Budget Submission
FY 1997 Planning Budget - Congressional

B. Component/Business Area/Date	C. Line No. & Item Description	D. Activity Identification
Military Sealift Command/Transportation/ March 1996	C007	Systems Development

	FY 1995			FY 1996			FY 1997			FY 1998		
ELEMENTS OF COST	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
Software Development	VAR		834	VAR		2,721	VAR		1,050			
Total			834			2,721			1,050			

0005825

Narrative Justification:

All systems operate on existing MSC or NCTS computers. All funds are for system design, test, implementation, documentation, and user training.

Certain systems providing ship schedule/voyage management and storage/archiving/distribution of ship technical date (drawings/technical manuals) are mission critical.

Various modules integrate existing worldwide procurement system with developing/deploying financial system; this ensures validation of accounting data at time of origination, and tracking of both procurement and funds control from obligation through payment.

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION
(Dollars in Thousands)

A. Budget Submission
FY 1997 Planning Budget - Congressional

B. Component/Business Area/Date
Military Sealift Command/Transportation/ March 1996

C. Line No. & Item Description
C008 Lan Items

D. Activity Identification

ELEMENTS OF COST	FY 1995 Qty	FY 1995 Unit Cost	FY 1995 Total Cost	FY 1996 Qty	FY 1996 Unit Cost	FY 1996 Total Cost	FY 1997 Qty	FY 1997 Unit Cost	FY 1997 Total Cost	FY 1998 Qty	FY 1998 Unit Cost	FY 1998 Total Cost
Software	VAR		194	VAR		700	VAR		319			
Total			194			700			319			

000583

Narrative Justification:

As a result of an IG audit, it was determined that all LAN related procurements should be obtained with investment vice expense funding. Accordingly, the above represents MSC requirments to implement LANS at all offices, area commands, and headquarters.

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION
(Dollars in Thousands)

A. Budget Submission
FY 1997 Planning Budget - Congressional

B. Component/Business Area/Date: Military Sealift Command/Transportation/ March 1996

C. Line No. & Item Description: C009 TDMS

D. Activity Identification:

ELEMENTS OF COST	FY 1995 Qty	FY 1995 Unit Cost	FY 1995 Total Cost	FY 1996 Qty	FY 1996 Unit Cost	FY 1996 Total Cost	FY 1997 Qty	FY 1997 Unit Cost	FY 1997 Total Cost	FY 1998 Qty	FY 1998 Unit Cost	FY 1998 Total Cost
Software Development	VAR		276	VAR		145	VAR		120			
Total			276			145			120			

000584
584

Narrative Justification:

The Technical Data and Management System (TDMS) provides CALS and industry compatibility. TDMS provides electronic storage, import, export, revision, reproduction, and distribution of MSC technical data for global engineering and logistics operations. The above purchases are part of the continuing MSC effort to maintain the TDMS.

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION
(Dollars in Thousands)

A. Budget Submission
FY 1997 Planning Budget - Congressional

B. Component/Business Area/Date
Military Sealift Command/Transportation/ March 1996

C. Line No. & Item Description
C010 Minor Construction

D. Activity Identification

ELEMENTS OF COST	FY 1995 Qty	FY 1995 Unit Cost	FY 1995 Total Cost	FY 1996 Qty	FY 1996 Unit Cost	FY 1996 Total Cost	FY 1997 Qty	FY 1997 Unit Cost	FY 1997 Total Cost	FY 1998 Qty	FY 1998 Unit Cost	FY 1998 Total Cost
Building 6060				VAR		180						
Total	0		0			180	0		0			

Narrative Justification:

Currently MSCWESTPAC is working out of a rented temporary building. The building was leased at an annual rate of $115K. Estimated purchase price of building 6060 is $180K resulting in payback/savings within 18 months. Additionally, it is uncertain if the current lease will be able to be renewed beyond FY 1997.

000585

Department of the Navy - Defense Business Operations Fund
Transportation/ Military Sealift Command
CAPITAL BUDGET EXECUTION
(dollars in millions)
FY 1996

Title/Description	Original Request	Change	Revised Request	Explanation/Reason for Change
Equipment (non-ADPE/TEL):				
Subtotal - Equipment				
ADPE and Telecomm Equip Computer Hardware	2.8	(0.6)	2.2	Reduced hardware procurement associated with LAN
Subtotal - ADPE/TEL Equip	2.8	(0.6)	2.2	
Software Development: TDMS/Systems/LAN	3.0	0.6	3.6	Increased development requirements associated with LAN
Subtotal - Software Develop	3.0	0.6	3.6	
Minor Construction: Building at WESTPAC	0.2		0.2	
Subtotal - Minor Construction	0.2	0.0	0.2	
TOTAL CAPITAL INVESTMENT	6.0	0.0	6.0	

000586

DEPARTMENT OF THE NAVY
DEFENSE BUSINESS OPERATIONS FUND
BUSINESS AREA: INFORMATION SERVICES
ACTIVITY GROUP:
NAVAL COMPUTER AND TELECOMMUNICATIONS STATION

Activity Group Functions:
The mission of the Naval Computer and Telecommunications Station (NAVCOMTELSTA) is to provide regional communication and automated information systems (AIS) services to customers; to manage and direct remote facilities, as required; to provide local Information Services (IS) support in coordination with the regional center; and to design, develop, and maintain standard Navy automated information systems. NAVCOMTELSTAs are Base Level Computing IS service centers which provide IS support to Navy customers.

Activity Group Composition:

ACTIVITIES	LOCATION
NAVCOMTELSTA Washington	Washington, D.C.
NAVCOMTELSTA Pensacola	Pensacola, Florida
NCTAMS LANT Norfolk	Norfolk, Virginia
NAVCOMTELSTA San Diego	San Diego, California
NAVCOMTELSTA Jacksonville	Jacksonville, Florida
NAVCOMTELSTA New Orleans	New Orleans, Louisiana
NCTAMS EASTPAC	Pearl Harbor, Hawaii
NAVCOMTELDET Newport	Newport, Rhode Island

Budget Highlights:
Significant issues regarding FY 1995, FY 1996, and FY 1997 are as follows:

o The NAVCOMTELSTA submission reflects the disestablishment and closure of the Naval Computer and Telecommunications Detachment, San Francisco, California as a result of Department of Navy Base Realignment and Closure (BRAC) actions in the San Francisco Bay Area.

o The NAVCOMTELCOM submission highlights the FY 1995 transfer of the NAVCOMTELSTA New Orleans Data Processing Installation (DPI) to the Department of Defense (DOD) under the Defense Management Review Decision (DMRD) 918 (79 end strength).

Budget Highlights: Cont'd.

o The submission also reflects the NAVCOMTELSTA activity group's initiative to eventually eliminate all Military Personnel from the activity group's resource base by reducing 23 military personnel from the previous control of 84 end strength in FY 1996 and a 20 billet reduction in FY 1997.

o The submission reflects the functional transfer of the support resources associated with the Fleet Readiness Analysis/Assessment Program from NAVCOMTELSTA Washington, D. C. to Chief of Naval Operations (CNO) Information Resource Management Division (N65) of three civilian and 15 encumbered military billets (total military billets transferred are 4 officer and 16 enlisted).

o The submission reflects the transfer of civilian personnel resources (3 end strength, 3 work years) associated with Aviation Training Support System (ATSS) to Chief of Naval Education and Training (CNET) in FY 1996 associated with the closure of NAVCOMTELDET San Francisco.

o Unit costs and customer prices are predicted to remain stable with only percent fluctuations caused by mandatory civilian and military personnel pay raises, along with locality pay adjustments.

Financial Profile:

($ Millions)	FY 1995	FY 1996	FY 1997
Cost of Goods Sold	$280.8	$224.2	$169.6
Net Operating Results	-4.0	0.0	-13.8
Accumulated Operating Results	+13.8	+13.8	0.0

Ths declining cost of goods sold reflects the removal of major hardware/software acquisition costs for customers from the DBOF account. The NCTS will continue to provide this support for its customers, but the costs will be charged directly to customer accounts rather than financed initially through DBOF. Additionally, costs decline in FY 1996 due to the disestablishment of NAVCOMTELSTA San Francisco, the loss of 20 military personnel billets and rightsizing of operational costs in FY 1997.

Workload:

	FY 1995	FY 1996	FY 1997
Direct Labor Hours	1,542,035	1,553,790	1,481,055

The reduction of hours is primarily due to slight workload reductions and the closure NAVCOMTELSTA San Francisco.

Customer Rate Changes:

	FY 1996	FY 1997
Stabilized Customer Rate	$47.59	$43.34
Stabilized Rate Change		-8.9%
Percent Change in Composite Customer Rate	0.5%	-7.3%

The stabilized billing rate consists of direct labor and applied overhead. All remining direct costs are billed on a 100% reimbursable basis. The composite rate change shown above incorporates both the stabilized and non-stabilized parts of the budget.

Unit Costs:

	FY 1995	FY 1996	FY 1997
Cost Per Billable Hour	$56.06	$52.27	$52.74

Staffing:

	FY 1995	FY 1996	FY 1997
Civilian End Strength	1,297	1,255	1,228
Civilian Workyears	1,297	1,249	1,232
Military End Strength	109	60	40
Military Workyears	134	59	39

Decrease between FY95 and FY96 reflects capitalization of the DPI located at NAVCOMTELSTA New Orleans. Decrease between FY96 and FY97 reflects disestablishment of NAVCOMTELSTA San Francisco. Military Personnel decreases are associated with the NAVCOMTELSTA activity group's initiative to effect organizational changes to eventually eliminate all Military Personnel ftom the group's resource base.

Headquarters Costs:

(In Millions of Dollars)

	FY 1995	FY 1996	FY 1997
Civilian Personnel	.4	.5	.6
Travel/Equip/Materials/Supplies	.1	.1	.1
Total	**.5**	**.6**	**.7**

Increase between all years represent civilian pay adjustments, including locality pay adjustments.

Capital Budget Authority:

Authority:	FY 1995	FY 1996	FY 1997
Software Development	.4	.0	.3
Minor Construction	.2	.0	.0
Total	.6	.0	.3

The change in capital budget authority between FY 1995 and FY 1996 is due to the change in the investment threshold from $50 thousand to $100 thousand. The FY 1997 NAVCOMTELSTA capital purchases program is for the acquisiton of software required to automate time and labor information input into the standard financial systems.

INFORMATION SERVICES - NAVAL COMPUTER & TELECOMMUNICATIONS COMMAND
REVENUE AND EXPENSES
(Dollars in Millions)

	FY 1995	FY 1996	FY 1997
Revenue:			
Gross Sales			
Operations	275.0	223.5	155.1
Capital Surcharge	0.0	0.0	0.0
Depreciation except Maj Const	2.1	0.7	0.7
Major Construction Depreciation	0.0	0.0	0.0
Other Income	0.0	0.0	0.0
Total Income	**277.1**	**224.2**	**155.8**
Expenses:			
Cost of Materiel Sold from Inventory	0.0	0.0	0.0
Negotiated Purchases from Customers	0.0	0.0	0.0
Transportation	0.0	0.1	0.1
Salaries and Wages:			
Military Personnel	10.5	3.7	1.9
Civilian Personnel	72.0	70.5	71.0
Materials, Supplies and			
Parts used in Operations	95.1	59.0	43.2
Facility Repair Charge	1.8	2.8	2.8
Depreciation - Capital	2.1	0.7	0.7
Contracted Engineering Services	5.4	5.0	0.8
Lease Costs	2.1	0.6	0.4
Purchased Utilities	2.9	2.9	2.9
Purchased Communications	12.1	0.4	0.4
Equipment Maintenance	2.6	1.5	1.5
Fuel	0.0	0.0	0.0
Other Expenses	74.3	76.9	43.8
Total Expenses	**280.8**	**224.2**	**169.6**
Operating Result	(3.8)	0.0	(13.8)
Less Capital Surchg Reservation	0.0	0.0	0.0
Plus Appropriations Affecting NOR/AOR	0.0	0.0	0.0
Other Changes Affecting NOR/AOR	(0.2)	0.0	0.0
Net Result	(4.0)	0.0	(13.8)
Prior Year AOR	17.8	13.8	13.8
Accumulated Operating Result	**13.8**	**13.8**	**(0.0)**

INFORMATION SERVICES-NAVAL COMPUTER & TELECOMMUNICATIONS COMMAND

SOURCE OF REVENUE

(Dollars in Millions)

	FY 1995	FY 1996	FY 1997
1. New Orders	298.0	152.7	94.8
a. Orders from DoD Components	175.9	90.2	48.2
Department of the Navy	103.2	52.9	17.3
Operations and Maintenance, Navy	86.0	44.1	12.1
Operations and Maintenance, Marine Corps	2.2	1.1	1.8
O&M, Navy Reserve	2.7	1.4	0.2
O&M, Marine Corps Reserve	0.0	0.0	0.0
Aircraft Procurement, Navy	0.4	0.2	0.0
Weapons Procurement, Navy	0.0	0.0	0.0
Shipbuilding & Conversion, Navy	0.3	0.1	0.2
Other Procurement, Navy	10.0	5.1	1.6
Procurement, Marine Corps	0.0	0.0	0.0
Family Housing, Navy and Marine Corps	0.0	0.0	0.0
Research, Development, Test & Eval, Navy	1.2	0.6	1.0
Military Construction, Navy	0.0	0.0	0.0
Other Navy Appropriations	0.3	0.1	0.4
Other Marine Corps Appropriations	0.0	0.0	0.0
Department of the Army	19.7	10.1	6.6
Army Operation & Maintenance Accounts	12.9	6.6	4.2
Army Res, Dev, Test & Eval Accounts	0.0	0.0	0.0
Army Procurement Accounts	6.8	3.5	2.4
Army Other	0.0	0.0	0.0
Department of the Air Force	3.8	2.0	3.0
Air Force Operation & Maintenance Accounts	1.3	0.7	1.0
Air Force Res, Dev, Test & Eval Accounts	0.0	0.0	0.0
Air Force Procurement Accounts	2.5	1.3	2.0
Air Force Other	0.0	0.0	0.0
DoD Appropriated Accounts	49.2	25.2	21.3
Base Closure and Realignment	0.0	0.0	0.0
Operation & Maintenance Accounts	23.8	12.2	10.7
Res, Dev, Test & Eval Accounts	0.0	0.0	0.0
Procurement Accounts	25.4	13.0	7.9
DoD Other	0.0	0.0	2.7
b. Orders from DBOF Business Areas	88.4	45.3	40.6
c. Total DoD	264.3	135.5	88.8
d. Other Orders	33.7	17.3	6.0
Other Federal Agencies	33.7	17.3	6.0
Foreign Military Sales	0.0	0.0	0.0
Non Federal Agencies	0.0	0.0	0.0
2. Carry-In Orders	190.1	211.0	139.5
3. Total Gross Orders (available funding)	488.1	363.7	234.3
4. Carry-Out Orders	211.0	139.5	78.5
Change in Backlog (carry-out less carry-in)	20.9	(71.5)	(61.0)
5. Total Gross Sales	277.1	224.2	155.8

000591

DEFENSE BUSINESS OPERATIONS FUND
CHANGES IN THE COST OF OPERATIONS
COMPONENT: NAVAL COMPUTER AND TELECOMMUNICATIONS STATION
BUSINESS AREA: INFORMATION SERVICES
(Dollars in Millions)

	EXPENSES (DBC 4970)
FY 1995 Actual	282.0
FY 1996 Estimate in President's Budget	**155.9**
Pricing Adjustments:	
Annualization of Prior Year Pay Raises	-.3
Civilian Personnel	.3
Military Personnel	0
General Purchase Inflation	1.3
Program Changes:	
Customer Workload Changes	50.0
Volume of Sales Changes	28.4
Costs Changes Due to BRAC	-10.4
Decreased Military Personnel Costs	-1.0
FY 1996 Current Estimate	**224.2**
Pricing Adjustments:	
Annualization of Prior Year Pay Raises	.3
Civilian Personnel	1.2
Military Personnel	.1
Fund Price Change	.7
General Purchase Inflation	1.6
Other Price Changes	1.4
Program Changes:	
Customer Workload Changes	-41.4
Volume of Sales Changes	-18.5
FY 1997 Estimate:	**169.6**

EXHIBIT FUND-9A

BUSINESS AREA CAPITAL INVESTMENT SUMMARY
NAVCOMTELSTAs
Information Services / CDA
Feb-96
($ in Millions)

Line #	Item Description	FY 1995		FY 1996		FY 1997	
		Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost
	Non ADPE Equipment						
001	Non ADPE Equipment (Replacement)						
002	Non ADPE Equipment (Productivity)						
003	Non ADPE Equipment (New Mission)						
004	Non ADPE Equipment (Environmental Compl)						
	Subtotal Non ADPE Equipment		0.000		0.000		0.000
	ADPE Equipment						
005	ADPE Equipment (Comp Hardware-Production)						
006	ADPE Equipment (Comp Software-Oper System)						
007	ADPE Equipment (Telecommunications)						
008	ADPE Equipment (Other Comp/Telcom Sup Eq)						
	Subtotal ADPE Equipment		0.000		0.000		0.000
009	Software Development		0.400				0.320
	Subtotal Software Development		0.400		0.000		0.320
010	Minor Construction		0.190				
	Subtotal Minor Construction		0.190		0.000		0.000
	Grand Total Capital Purchase Program		0.590		0.000		0.320

000593

EXHIBIT FUND-9B

BUSINESS AREA CAPITAL INVESTMENT JUSTIFICATION ($ In Thousands)							A. Budget Submission FY 1997 PRESIDENTIAL		
B. Component/Business Area/Date NAVCOMTELSTAs/Information Services (CDA)/ Feb-96			C. Line No. & Item Description 009 Software - DMARS				D. Activity Identification NCTS, New Orleans (N68606)		
	FY 1995			FY 1996			FY 1997		
Element of Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
END ITEM									320.0

Narrative Justification

The current environment requires DBOF personnel to manually input time and labor information into unique standard financial systems. Because there is no common automated system for the data source, information is often incorrect and inconsistent between the standard financial systems. There are currently 8 DBOF organizations within the NAVCOMTELCOM claimancy, each of which expends a minimum of 1 man-year of effort reconciling these systems; in all cases, the personnel utilized to perform the reconciliation are otherwise fully billable resources (at an estimated direct billing loss of $80K/resource/year). The benefits of automating the data sourcing and collecting the data for ad hoc reporting would completely free up the labor currently utilized for reconciliation and would facilitate project management (financial estimates of the intangible benefits were not considered in this exhibit or in the Economic Analysis). An Economic Analysis was performed; the total present value of savings was $2.24M and the savings/investment ratio was 7.0; break-even was achieved in year one. If the proposed capital investment is not approved, the NAVCOMTELCOM claimancy will continue to lose an estimated $640K per year due to the inability to direct bill this labor to funded work.

000594

Department of the Navy - Defense Business Operations Fund
INFORMATION TECHNOLOGY/NAVCOMTELSTAs
CAPITAL BUDGET EXECUTION
(Dollars in Millions)
FY 1996

Title/Description	Original Request	Change	Revised Request	Explanation/Reason for Change
Equipment (non-ADPE/TEL):	0.000	0.000	0.000	
Subtotal - Equipment	0.000	0.000	0.000	
ADPE and Telecomm Equip:	0.400	-0.400	0.000	Equipment no longer required or no longer meets threshold requirement.
Subtotal - ADPE/TEL Equip	0.400	-0.400	0.000	
Software Development:	0.350	-0.350	0.000	Project no longer required.
Subtotal - Software Develop	0.350	-0.350	0.000	
Minor Construction:	0.000	0.000	0.000	
Subtotal - Minor Construction	0.000	0.000	0.000	
TOTAL CAPITAL INVESTMENT	**0.750**	**-0.750**	**0.000**	

000595

DEPARTMENT OF THE NAVY
DEFENSE BUSINESS OPERATIONS FUND
BUSINESS AREA: INFORMATION SERVICES
ACTIVITY GROUP: FLEET MATERIAL SUPPORT OFFICE
MARCH 1996

Activity Group Functions:

The Navy Fleet Material Support Office (FMSO) is a progressive, full service software design agency with over 30 years of proven experience providing high quality, on time products and services to customers, under the management of the Naval Supply Systems Command (NAVSUP). FMSO employs a multi-talented workforce, highly experienced in state of the art systems development using information technology to design, develop, maintain, and environmentally support world class business systems. As such, FMSO is responsible for the development, implementation and maintenance of Automated Information Systems (AIS) for the business areas required by customers. Customers include Department of Defense (DOD), NON-DOD other Federal, and authorized foreign military sales; specific customers are the NAVSUP and all of its field activities, the Defense Finance and Accounting Service Cleveland Center, the Joint Logistics Systems Center, the Defense Information Systems Agency, the Strategic Systems Project Office (SSPO), the Royal Saudi Naval Forces, the Defense Logistics Agency, and others. Customer services provided include system design, analysis, programming, business process and data modeling, integration with interfacing information systems, documentation, configuration management, customer system training and others. FMSO is a totally reimbursable activity in the Defense Business Operations Fund, Information Services Business area, using Fee For Service as the business process for conducting operations. FMSO was identified in the budget review process as having one of the lowest overhead rates in the information services business area. FMSO is also the first Navy activity to achieve a Capability Maturity Model (CMM) Level III rating. The CMM rating certifies that FMSO has the policies and practices in place that lead to quality software development on a defined and repeatable basis. Achieving a Level III rating places FMSO in a select group of software agencies, since fewer than ten percent of all activities assessed have a rating of III or higher.

Activity Group Composition:

Navy Fleet Material Support Office
Mechanicsburg, PA 17055

Financial Profile:	FY 1995	FY 1996	FY 1997
Cost of Goods Sold ($millions)	84.8	67.4	79.9
Net Operating Results	1.2	-2.0	-0.9
Accumulated Operating Result	2.9	0.9	0.0

Cost of good sold: The reduction in cost from FY 1995 to FY 1996 is due primarily to the reduction in other direct nonlabor costs which supported work for the Joint Logistic Systems

Centers. The increase in cost from FY 1996 to FY 1997 is due to additional Trident/Strategic System Project Office software services increases. Our total overhead rate is 27.5% in FY 1996 and is reduced to 25.3% in FY 1997.

Net Operating Results/Accumulated Operating Results: The accumulated operating result of $2.9 million in FY 1995 is a reflection of FMSO's performance in revenue exceeding expenses above established budget targets through FY 1995. This was accomplished by increasing the number of direct billable labor hours with a marginal increase in cost and with no increase to overhead. This FY 1995 performance offsets some of the revenue required in FY 1996, thus resulting in a planned negative net operating result in FY 1996. This reduces our direct billable labor hour cost. The balance of the accumulated operating result of $0.90 million is returned to the customer, as calculated in the FY 1997 rate as an offset to cost.

Workload:	FY 1995	FY 1996	FY 1997
Direct Labor Hours	1,163,097	1,113,750	1,242,945

Workload: Direct Labor hours at FMSO reflect the hours worked against a customer's project. In general, a direct workyear has 1,650 hours of direct customer support; hours spent in a leave status, training, collateral duties, other non-customer support or general administrative support are not charged directly to the customer but recovered in the rate. The increase in direct hours in FY 1996 from the FY 1995 level is due to the functional transfer of the Trident software function to FMSO. The increase from FY 1996 to FY 1997 of 25,245 hours is due to the conversion of 27 general administrative overhead personnel positions to direct billable.

Performance Indicators:	FY 1995	FY 1996	FY 1997
Timeliness	95%	95%	95%
Customer Satisfaction	83%	85%	85%
Quantity	96%	98%	98%

Performance Indicator: These measures are negotiated with our customers during the Service Level Agreement process. Timeliness of 95% means that we deliver 95% of the time on or before the required customer due date. Quantity of 96% means that we delivered the product 96% of the time within the quarter of the fiscal year required. Customer satisfaction surveys are sent to the actual users of the systems and data is tallied.

Customer Rate Changes:	FY 1996	FY 1997
Percent Change in Composite Customer Rate	0.1%	19.0%

Customer Rate Changes: The substantial increase from FY1996 to 1997 is caused by the inclusion of other direct costs in the stabilized rate calculation. Prior to FY 1997, other direct costs were not included in the direct labor hour rate, these other direct non labor

costs, such as project unique travel, implementation required equipment, and others were billed directly to the benefitting customer.

Unit Costs:	FY 1995	FY 1996	FY 1997
Cost per Direct Labor Hour	$47.44	$45.58	$51.19

The unit cost decrease between FYs 1995 - 1996 is primarily due to the $17.6 million decrease in other direct costs, despite the 4.2% reduction of direct billable labor hours due to personnel attrition. The unit cost increase between FYs 1996 - 1997 is caused by the addition of $9.8 million of other direct nonlabor costs, the approved cost escalation of $1.2 million, and the Trident/Strategic Systems Project Office services increase, while direct billable hours increased by 11.6% to 1,242,945 hours.

Stabilized Rate:	FY 1995	FY 1996	FY 1997
Cost per Direct Labor Hour	$48.06	$48.17	$58.31

Stabilized Rate: The 21.1% increase between FYs 1996 - 1997 is the result of:

a) The addition of $9.8 million of other direct nonlabor costs which was previously excluded from the rate calculation.

b) The inclusion of the $1.2 million of approved price escalation.

c) The additional costs for Trident/Strategic Systems Project Officer software services. These cost increases are divided by an additional 11.6% of direct billable hours over FY 1996, or a total of 1,242,945.

d) The transfer of 27 general adminstrative overhead personnel positions to direct billable work, resulting in an increase of 25,245 in direct billable hours.

Staffing:	FY 1995	FY 1996	FY 1997
Civilian End Strength	883	885	873
Civilian Work Years	863	886	874
Military End Strength	18	18	18
Military Work Years	18	18	18

Staffing: The increase in workyears from FY 95 to FY 96 is caused by the functional transfer of the Trident software design function back to FMSO during December 1994. Civilian staffing reflects an estimate for attrition of 12 in both end-strength and workyears for FY1996 - 1997. Military end-strength/workyears are level at 18 for all years. Military workyears evenly divided between overhead and direct billable for all years. Civilian workyears about 80% direct billable in FYs1995 and 1996 and increases to 82% in FY1997.

Headquarters Cost:	FY 1995	FY 1996	FY 1997
Cost of Management Headquarters ($ millions)	0.000	0.180	0.185

Headquarters costs for the management command are projected to be incurred beginning in FY 96 with inflation increasing the FY 97 cost. Prior to FY 96, the Headquarters Management Command did not assess any management cost to FMSO. Beginning in FY 96, NAVSUP identified 3 people at a rate of $60 thousand each as being responsible for management command costs for FMSO.

Capital Budget Authority:	FY 1995	FY 1996	FY 1997
ADP and Telecom ($ millions)	0.500	0.478	0.503

Capital Budget Authority: The requested funding supports the following two programs:

a. Local Area Network Upgrade

FY1995	FY1996	FY1997
$.431	$.338	$.383

Purpose: To update/upgrade the hardware and software used at FMSO which will improve response time and reduce maintenance costs by using technology improvements.

b. Management Information Systems Rehost

FY1995	FY1996	FY1997
$.069	$.140	$.120

Purpose: Move mainframe computer work to a lower cost client/server environment.

Economies and Efficiencies:

In FY 97 twenty-seven overhead personnel will convert to direct billable workyears. This will increase revenue while costs remain stable. Additionally, attrition of twelve personnel will decrease costs.

INFORMATION SERVICES - FLEET MATERIAL SUPPORT OFFICE
REVENUE AND EXPENSES
(Dollars in Millions)

	FY 1995	96	FY 1997
Revenue			
Gross Sales			
Operations	86.1	65.4	79.0
Capital Surcharge	0.0	0.0	0.0
Depreciation except Maj Const	0.0	0.0	0.0
Major Construction Depreciation	0.0	0.0	0.0
Other Income	0.0	0.0	0.0
Total Income	**86.1**	**65.4**	**79.0**
Expenses:			
Cost of Materiel Sold from Inventory	0.0	0.0	0.0
Negotiated Purchases from Customers	0.0	0.0	0.0
Transportation	0.9	0.6	0.7
Salaries and Wages:			
Military Personnel	1.3	1.4	1.4
Civilian Personnel	44.2	45.8	51.4
Materials, Supplies and			
Parts used in Operations	1.8	1.2	1.0
Facility Repair Charge	2.6	0.0	0.0
Depreciation - Capital	0.0	0.4	0.5
Contracted Engineering Services	0.0	0.0	0.0
Lease Costs	0.7	0.4	0.5
Purchased Utilities	0.0	2.2	2.5
Purchased Communications	0.2	0.0	0.0
Equipment Maintenance	0.0	0.5	0.9
Fuel	0.0	0.0	0.0
Other Expenses	33.1	14.9	21.2
Total Expenses	**84.8**	**67.4**	**79.9**
Operating Result	1.2	(2.0)	(0.9)
Less Capital Surchg Reservation		0.0	0.0
Plus Appropriations Affecting NOR/AOR		0.0	0.0
Other Changes Affecting NOR/AOR	0	0.0	0.0
Net Result	1.3	(2.0)	(0.9)
Prior Year AOR	1.7	3.0	1.0
Accumulated Operating Result	3.0	**1.0**	**0.0**

INFORMATION SERVICES - FLEET MATERIAL SUPPORT OFFICE
SOURCE OF REVENUE
(Dollars in Millions)

	FY 1995	FY 1996	FY 1997
1. New Orders	86.1	65.4	79.0
a. Orders from DoD Components	6.0	7.7	10.4
Department of the Navy	6.0	7.7	10.4
Operations and Maintenance, Navy	6.0	7.7	10.4
Operations and Maintenance, Marine Corps	0.0	0.0	0.0
O&M, Navy Reserve	0.0	0.0	0.0
O&M, Marine Corps Reserve	0.0	0.0	0.0
Aircraft Procurement, Navy	0.0	0.0	0.0
Weapons Procurement, Navy	0.0	0.0	0.0
Shipbuilding & Conversion, Navy	0.0	0.0	0.0
Other Procurement, Navy	0.0	0.0	0.0
Procurement, Marine Corps	0.0	0.0	0.0
Family Housing, Navy and Marine Corps	0.0	0.0	0.0
Research, Development, Test & Eval, Navy	0.0	0.0	0.0
Military Construction, Navy	0.0	0.0	0.0
Other Navy Appropriations	0.0	0.0	0.0
Other Marine Corps Appropriations	0.0	0.0	0.0
Department of the Army	0.0	0.0	0.0
Army Operation & Maintenance Accounts	0.0	0.0	0.0
Army Res, Dev, Test & Eval Accounts	0.0	0.0	0.0
Army Procurement Accounts	0.0	0.0	0.0
Army Other	0.0	0.0	0.0
Department of the Air Force	0.0	0.0	0.0
Air Force Operation & Maintenance Accounts	0.0	0.0	0.0
Air Force Res, Dev, Test & Eval Accounts	0.0	0.0	0.0
Air Force Procurement Accounts	0.0	0.0	0.0
Air Force Other	0.0	0.0	0.0
DoD Appropriated Accounts	0.0	0.0	0.0
Base Closure and Realignment	0.0	0.0	0.0
Operation & Maintenance Accounts	0.0	0.0	0.0
Res, Dev, Test & Eval Accounts	0.0	0.0	0.0
Procurement Accounts	0.0	0.0	0.0
DoD Other	0.0	0.0	0.0
b. Orders from DBOF Business Areas	65.5	49.9	57.6
c. Total DoD	71.5	57.5	67.9
d. Other Orders	14.5	7.9	11.1
Other Federal Agencies	8.1	4.8	6.7
Foreign Military Sales	6.4	3.2	4.4
Non Federal Agencies	0.0	0.0	0.0
2. Carry-In Orders	0.0	0.0	0.0
3. Total Gross Orders (available funding)	86.1	65.4	79.0
4. Carry-Out Orders	0.0	0.0	0.0
Change in Backlog (carry-out less carry-in)	0.0	0.0	0.0
5. Total Gross Sales	86.1	65.4	79.0

CHANGES IN THE COSTS OF OPERATION
NAVY - INFORMATION SERVICES - FMSO
MARCH 1996
($ IN MILLIONS)

			Expenses
FY 1995 Actual			84.807
FY 1996 Estimate in President's Budget:			51.821
Program Changes:			
Labor - WYs greater than planned			2.982
Mat'l - $412K is for ADP Equip Replacement			0.446
Contract - Data Ctr/Consulting/Procure Spt			0.250
Other Direct Cost - Not Previously included In Budget Statements			11.950
	Trident:	7.658	
	NAVSUP:	1.925	
	JLSC:	1.000	
	DFAS:	0.433	
	DLA:	0.184	
	NAVILCO:	0.750	
FY 1996 Current Estimate:			67.449
Pricing Adjustments:			
Annualization of Prior Year Pay Raises			0.265
FY 1997 Pay Raise			
Civilian Personnel			0.683
Military Personnel			(0.001)
General Purchase Inflation			0.247
Program Changes:			
Attrition of 12 Personnel			(0.675)
Trident Project reclassified from Other Direct			
Labor			4.210
Nonlabor			0.517
Other Direct Cost - Trident Operations Costs Now Part of FMSO Operations Costs			6.242
Depreciation			0.088
Material			(0.236)
Travel			0.106
BOS			0.180
Training			0.069
Transportation			0.009
Printing			0.012
ADP Services			0.276
Equipment Maintenance			0.035
Other			0.472
FY 1997 Estimate:			79.948

BUSINESS AREA CAPITAL INVESTMENT

NAVY/INFORMATION SERVICES/FMSO

MARCH 1996

($ in Millions)

Line Number	Item Description	FY 95		FY 96		FY 97	
		Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost
	Equipment						
	- Replacement						
	- Productivity						
	- New Mission						
	- Environmental						
	- Compliance						
	ADP & Telecom		0.500		0.478		0.503
	Software Development						
	Minor Construction						
	TOTAL	0.000	0.500	0.000	0.478	0.000	0.503

000603

Exhibit Fund-9a
Business Area Capital Investment Summary

($ in Thousands)							A. Budget Submission NAVCOMPT		
B. Component/Business Area/Date Navy/Information Services/FMSO 10 Jul 95			C. Line No. & Item Description ADP & Telecom			D. Activity Identification			
	FY 95			FY 96			FY 97		
Element of Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
1. LAN UPGRADE			**431**			**338**			**383**
Bridges to Routers			170						
Windows/Mice			44						
PCs			167						
Memory Upgrades			34						
O/A Software			16						
Superserver				1	250	250			
Office Automation Software				1	40	40	1	213	213
Upgrade to Novel 4.01				1	48	48			
Install Bridge in 308							1	20	20
Ethernet 16 port hubs							2	20	40
Upgrade Repeaters							10	10	100
Token Ring Cable							1	10	10
2. MIS REHOST			**69**			**140**			**120**
Oracle SQL NET				600	0.098	59	1	55	55
Upgrade Support				600	0.014	8	1	5	5
FTP PC/TCP OnNet Version				400	0.158	63	1	60	60
OnNet Support & Maintenance				400	0.024	10			
TOTAL			**500**			**478**			**503**

Narrative Justification:

1. UPGRADE LOCAL AREA NETWORK (LAN): The purpose of this initiative is to upgrade the hardware/software for the FMSO LAN to a basic configuration which should remain functional for the foreseeable future. This project is required to keep FMSO current with technology in order to efficiently operate.

2. MANAGEMENT INFORMATION SYSTEM/CLIENT SERVER: The purpose of this initiative is to move mainframe computer work to a client/server environment. This will allow us to start migrating our work from a mainframe development/maintenance environment to a less costly internal client server.

CAPITAL BUDGET EXECUTION
NAVY/INFORMATION SERVICES/FMSO
MARCH 1996
(dollars in thousands)
FY 1996

Title/Description	Original Request	Change	Revised Request	Explanation/Reason for Change
ADPE and Telecomm Equip				
LAN UPGRADE	338	0	338	
MIS REHOST	140	0	140	
TOTAL CAPITAL INVESTMENT	478	0	478	

000603

DEPARTMENT OF THE NAVY
DEFENSE BUSINESS OPERATIONS FUND
DEFENSE PRINTING SERVICE

Activity Group Function:

The Defense Printing Service (DPS) is responsible for the Department of Defense (DOD) printing program and document automation encompassing value-added conversion, electronic storage, and output and distribution of hardcopy and digital information. DPS is the single manager for all DOD printing and duplicating whether produced in-house or produced through the Government Printing Office (GPO). The Joint Committee on Printing (JCP), Congress of the United States, exercises oversight of all federal printing including the DPS in-house printing capability. All DOD printing requirements are forwarded to DPS to assure compliance with DOD Directives and with the Federal Printing Program. In FY 1997 DPS transfers to Defense Logistics Agency.

OUTPUTS: Besides traditional offset printing and duplicating production, DPS provides electronic scanning, storage, output and distribution, reproduction, micrographics, automated publishing, copier management, and contract printing.

CUSTOMERS: DPS's primary customers are Army (36%), Navy (31%), Air Force (15%), and other Defense agencies (18%). The percentage for each of our primary customers includes both DBOF and non-DBOF funded activities.

Activity Group Composition:

DPS manages a worldwide printing, duplicating, and document automation production and procurement network. At the end of FY 1995 it was comprised of a headquarters element located on the Washington Navy Yard, 5 Area offices, 79 major field locations and 163 smaller reprographics facilities. Approximately 2,100 civilian personnel currently support the DPS mission in a variety of disciplines. Major plant locations are included as attachment (1).

Financial Profile:

($ millions)	FY 1995	FY 1996
Cost of Goods Sold	$402.1	$400.0
Net Operating Results (NOR)	$ 15.8	($ 6.3)
Accumulated Operating Results (AOR)	($ 21.4)	($ 27.7)

The decrease in NOR from FY 1995 to FY 1996 is due primarily to a 6.8% rate decrease. The challenge to DPS is to reduce costs that are relatively fixed, at least in the short run, in response to potentially rapid changes in customer demand. Through economies and efficiencies total cost was reduced by .5% from FY 1995 to FY 1996, despite inflationary increases.

Workload:

(Units in Millions)	FY 1995	FY 1996
Offset Production	696	670
Document Automation	4,540	5,055
Reproduction	33	32
TOTAL	5,269	5,757

In-house offset press and reproduction will decrease through additional outsourcing and document conversion of paper products to digital. A decrease in the FY 1996 DPS rate will increase demand between FY 1995 and FY 1996 for our products with most of the increase in document automation.

Performance Indicators:

	FY 1995	FY 1996
Labor Index of Efficiency	101%	106%
Direct Labor Hrs/Total Hrs	57%	58%

The index of efficiency improvement reflects the purchase of more productive equipment. The projected improvement in direct labor hours to total labor hours reflects FY 1996 overhead personnel reductions.

Customer Rate Changes:

FY 1995	FY 1996
16.0%	(6.8%)

The decrease in the FY 1996 composite rate of 6.8% over FY 1995 improves our customers' purchasing power and increases customer demand.

Unit Costs:

DPS participated with the OSD Unit Cost Working Group to develop comprehensive unit cost measures. In FY 1995 DPS began using three measurable outputs and five unmeasurable outputs to track costs. The measurable outputs consist of offset printing units, electronic impressions and running feet of reproduction. Unmeasurable outputs will be tracked in total dollars and consist of micrographics, automated publishing, other production, copier program, and contract printing. DPS restructured its pricing manual to simplify the process of computing the unit cost measures.

	FY 1995	FY 1996
Measured		
Offset Production	$.0486	$.0472
Document Automation	.0326	.0244
Reproduction	.3622	.3387

Staffing:

	FY 1995	FY 1996
Civilian End Strength	2,119	2,099
Civilian Work Years	2,263	2,150
Military End Strength	0	0
Military Work Years	0	0

DPS completed a core capacity analysis in FY 1994. To reach this core capacity, a significant rightsizing effort has been underway with a corresponding increase in the outsourcing of traditional printing and duplicating. In addition, the remaining core operations are being automated to achieve electronic input, storage, output, and distribution. Finally, DPS has been automating many of its overhead functions, making it possible for corresponding personnel reductions.
Overhead hours to total hours worked has steadily decreased from 49% in FY 1993 to 42% in FY 1996.

Headquarters Cost:
($ in Millions)

FY 1995	FY 1996
$ 8.6	$ 7.

Operating cost decreases in FY 1996 are due primarily to closing two Area headquarters at the end of FY 1995. DPS has its main headquarters at the Washington Navy Yard and five Area offices.

Capital Budget Authority:

($ in Millions)	FY 1995	FY 1996
Equipment-Non ADPE/ Telecomm.	$6.4	$7.8
ADPE/Telecomm. Equipment	0	0
Software Development	.6	0
Minor Construction	.6	.6
Reliability, Maintainability, and Supportability Modifications	0	0
TOTAL	$7.6	$8.4

The $7.8 million Non-ADPE authority in FY 1996, although an increase over FY 1995, is a reduction over the original request of $14.4 million in the FY 1996/1997 President's Budget submission.

Economies and Efficiencies:

This budget incorporates anticipated productivity improvements, cost savings from capital investments, consolidation actions, infrastructure reductions, and management initiatives. Since inception of the DOD printing consolidation on 6 April 1992, DPS has eliminated over 1,600 personnel billets, closed over 100 facilities, vacated 700,000 square feet of space, eliminated over 4,000 pieces of production equipment, and increased outsourcing by almost $100 million. Significant improvements have also occurred in overhead labor hour reductions and corresponding cost reductions. From FY 1993, the first full fiscal year of the DMRD 998 DOD printing consolidation, to FY 1996 overhead to total hours have decreased from 49 percent to 42 percent and indirect cost to total cost has decreased from 22 percent to 17 percent.

DEFENSE PRINTING SERVICE
REVENUE AND EXPENSES
(Dollars in Millions)

	FY 1995	FY 1996
Revenue:		
Gross Sales		
Operations	410.8	385.1
Capital Surcharge	0.0	0.0
Depreciation except Maj Const	7.0	8.6
Major Construction Depreciation	0.0	0.0
Other Income	0.0	0.0
Total Income	**417.8**	**393.7**
Expenses:		
Cost of Materiel Sold from Inventory		
Negotiated Purchases from Customers		
Transportation	1.0	0.6
Salaries and Wages:		
Military Personnel	0.0	0.0
Civilian Personnel	94.2	88.1
Materials, Supplies and		
Parts used in Operations	37.7	37.6
Facility Repair Charge	0.7	0.8
Depreciation - Capital	7.0	8.6
Contracted Engineering Services	0.0	0.0
Lease Costs	18.5	21.4
Purchased Utilities	3.8	4.0
Purchased Communications	0.0	0.0
Equipment Maintenance	31.1	29.0
Fuel	0.0	0.0
Other Expenses	208.1	209.9
Total Expenses	**402.1**	**400.0**
Operating Result	15.8	(6.3)
Less Capital Surchg Reservation	0.0	0.0
Plus Appropriations Affecting NOR/AOR	0.0	0.0
Other Changes Affecting NOR/AOR	(0.1)	0.0
Net Result	15.7	(6.3)
Prior Year AOR	(37.0)	(21.4)
Accumulated Operating Result	**(21.4)**	**(27.7)**

DEFENSE PRINTING SERVICE
SOURCE OF REVENUE
(Dollars in Millions)

	FY 1995	FY 1996
1. New Orders	432.2	388.3
a. Orders from DoD Components	302.7	274.6
Department of the Navy	99.2	90.4
Operations and Maintenance, Navy	67.3	60.8
Operations and Maintenance, Marine Corps	12.4	11.1
O&M, Navy Reserve	3.1	2.7
O&M, Marine Corps Reserve	0.8	0.6
Aircraft Procurement, Navy	3.5	3.4
Weapons Procurement, Navy	0.0	0.1
Shipbuilding & Conversion, Navy	2.5	2.2
Other Procurement, Navy	0.5	0.3
Procurement, Marine Corps	0.0	0.0
Family Housing, Navy and Marine Corps	0.0	0.0
Research, Development, Test & Eval, Navy	0.7	0.7
Military Construction, Navy	0.2	0.3
Other Navy Appropriations	8.1	8.1
Other Marine Corps Appropriations	0.1	0.1
Department of the Army	107.0	100.0
Army Operation & Maintenance Accounts	95.6	89.7
Army Res, Dev, Test & Eval Accounts	5.2	4.5
Army Procurement Accounts	0.1	0.1
Army Other	6.2	5.7
Department of the Air Force	60.9	64.4
Air Force Operation & Maintenance Accounts	51.8	55.4
Air Force Res, Dev, Test & Eval Accounts	2.2	2.4
Air Force Procurement Accounts	0.0	0.0
Air Force Other	7.0	6.6
DoD Appropriated Accounts	35.6	19.8
Base Closure and Realignment	0.0	0.0
Operation & Maintenance Accounts	12.2	0.5
Res, Dev, Test & Eval Accounts	0.5	0.3
Procurement Accounts	0.2	0.2
DoD Other	22.7	18.9
b. Orders from DBOF Business Areas	104.0	91.4
c. Total DoD	406.7	366.0
d. Other Orders	25.5	22.3
Other Federal Agencies	23.8	20.3
Foreign Military Sales	0.0	0.0
Non Federal Agencies	1.6	2.0
2. Carry-In Orders	27.3	41.8
3. Total Gross Orders (available funding)	459.5	430.1
4. Carry-Out Orders	41.8	36.5
Change in Backlog (carry-out less carry-in)	14.5	(5.3)
5. Total Gross Sales	417.7	393.6

CHANGES IN COSTS OF OPERATION
DEFENSE PRINTING SERVICE

(DOLLARS IN MILLIONS)

	EXPENSES
FY 1995 Estimate Actual	$402.1
FY 1996 Estimate in President's Budget:	$410.6
Estimated Impact in FY 1996 of Actual FY 1995 Experience:	
a. Reduced workload.	($9.9)
Pricing Adjustments:	
a. FY 1996 Pay Raise	
Civilian Personnel	
Military Personnel	
b. Annualization of Prior Year Pay Raises	
c. Material	$ 0.4
d. General Purchase Inflation	($3.5)
Program Changes:	
a. Workload increase primarily for data conversion of technical manuals and technical orders to digital formats ; partially offset by less traditional printing.	$3.6
b. Severance Pay.	($1.2)
FY 1996 Current Estimate	$400.0

DEPARTMENT OF THE NAVY
DEFENSE PRINTING SERVICE
CAPITAL BUDGET SUMMARY
(DOLLARS IN MILLIONS)

Line Number	Item Description	FY 1995		FY 1996		FY 1997	
		Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost
0004	Non Automated Data Processing Equipment (<$500,000)						
	Production Equipment (Productivity)		$6.4		$7.8		$0.0
	Subtotal Non Automated Data Processing Equipment (<$500,000)		$6.4		$7.8		$0.0
0029	Software-Printing Resources Management Information System (PRMIS) (>$50,000<$100,000)		$0.6		$0.0		$0.0
	Subtotal Software-(PRMIS) (>$50,000<$100,000)		$0.6		$0.0		$0.0
0032	Minor Construction (<$300,000)		$0.6		$0.6		$0.0
	Subtotal Minor Construction (<$300,000)		$0.6		$0.6		$0.0
	Grand Total Capital Purchases Program		$7.6		$8.4		$0.0

FUND-9a

000613

CAPITAL PURCHASES JUSTIFICATION
DEFENSE PRINTING SERVICE
(DOLLARS IN MILLIONS)

0004 - Non ADP Equipment (Under $500K)

	FY 1995			FY 1996			FY 1997		
ELEMENT OF COST	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
Production Equipment (Productivity)					VAR	$7.8			$0.0
						$7.8			$0.0

Narrative Justification: This request represents production equipment required to replace worn out or obsolete equipment currently in use in DPS components and to implement print on demand initiatives. Replacement production equipment is selected to increase operational productivity and efficiency and provide state-of-the-art service to DPS components. High-speed and ultra high-speed duplicators, production publishers, print on demand systems and electronic printing systems will be purchased with these Capital Purchase Program funds. The new equipment will specifically provide increased production speeds and improved printer resolutions; on-line/automated production of multiple traditional printing processes; electronic storage of data; reproduction from multiple sources (paper, floppy disk, network, modem); other technological improvements and labor saving capabilities. The above total equipment cost is $4.4 million in FY 1995 and $3.8 million in FY 1996. In FY 1995 and FY 1996 the Defense Printing Service obligational authority was increased by $2.0 million and $4.0 million respectively for expansion of print-on-demand publishing systems. Much of FY 1995 is devoted to site visits, evaluation and developing the requirement definition and system description. The purchase of system description development and equipment cost $2.0M during the fourth quarter of FY 1995. A significant number of sites will have equipment installed during FY 1996, at a cost of $4.0 million.

000614

CAPITAL PURCHASES JUSTIFICATION
DEFENSE PRINTING SERVICE
(DOLLARS IN MILLIONS)

0032 - Minor Construction (Under $300K)

ELEMENT OF COST	FY 1995			FY 1996			FY 1997		
	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
Minor Construction					VAR	$0.6			$0.0
						$0.6			$0.0

Narrative Justification: This represents numerous minor construction projects at the various Defense Printing Service (DPS) facilities/sites. Many of these sits were acquired through Defense Management Report Decision (DMRD) 998 from the Army, Air Force, and Defense Logistics Agency-some which require upgraded safety standards. Minor construction projects are required to bring these facilities up to standard and to improve the overall quality of life for those employees working in these sites. Additionally, site alterations are required to accommodate the realignment and consolidation of DMRD activities, mission changes, and space requirements of specific DPS facilities. DPS Projects include moving printing plants and duplicating facitlites to new locations, reconfiguring plant and office layouts, providing increased security, improving heating/ventilation/cooling and other projects that improve efficiency/productivity and quality of life.

000615

Department of the Navy - Defense Business Operations Fund
Defense Printing Service

CAPITAL BUDGET EXECUTION
(Dollars in Millions)
FY 1996

Title/Description	Original Request	Change	Revised Request	Explanation/Reason for Change
Equipment (non-ADPE/TEL)	$14.4	($6.6)	$7.8	Due to project implementation delays, FY 96 on-demand printing allotment of $8 million in DBOF CPP authority has been reallocated. $4 million is allotted in FY 96 and $4 million in FY 97 to more closely coincide with project execution. After a zero-based review of replacement equipment required in FY 1996, which reflected actual downsizing achievements, $2.6 million in authority for replacement equipment was deemed in excess.
0004 - Non-Automated Data Processing Equipment (<$500,000)				
Subtotal - Equipment	$14.4	($6.6)	$7.8	
ADPE and Telecomm Equip				
Subtotal - ADPE/TEL Equip	$0.0	$0.0	$0.0	
Software Development:				
Subtotal - Software Develop	$0.0	$0.0	$0.0	
Minor Construction:	$0.6	$0.0	$0.6	
0032 - Minor Construction (<$300,000)				
Subtotal - Minor Construction	$0.6	$0.0	$0.6	
TOTAL CAPITAL INVESTMENT	$15.0	($6.6)	$8.4	

000616

DEPARTMENT OF THE NAVY
DEFENSE BUSINESS OPERATIONS FUND
BASE SUPPORT/NAVY PUBLIC WORKS CENTERS

Activity Group Function: The Navy Public Works Centers (PWCs) provide utilities services, facilities maintenance, family housing services, transportation support, engineering services and shore facilities planning support required by operating forces and other activities.

PWCs have a unique Command and Control structure. They are under the Command of the regional Naval Base Commander serving as Immediate Superior in Command (ISIC); and under the technical control of the Naval Facilities Engineering Command as Major Claimant.

The Public Works Centers are base support providers to military, federal, state, and local activities located within the regional areas serviced by the Public Works Centers and their detachments. Currently, Public Works Centers provide services to Defense, Navy, Army, Air Force, Marine Corps, Coast Guard, National Aeronautics and Space Administration, state, and other federal and non-federal activities.

The mission of the PWCs is to provide customers with the BEST public works services to meet their diverse needs, thereby becoming the provider of choice.

Activity Group Composition:

ACTIVITY	LOCATION
PWC Great Lakes	Great Lakes, Illinois
PWC Guam	Agana, Guam, Marianas Islands
PWC Jacksonville	Jacksonville, Florida
PWC Norfolk	Norfolk, Virginia
PWC Pearl Harbor	Pearl Harbor, Hawaii
PWC Pensacola	Pensacola, Florida
PWC San Diego	San Diego, California
PWC San Francisco Bay	Oakland, California
PWC Washington	Washington, D.C.
PWC Yokosuka	Yokosuka, Japan
PWC Detachment, Philadelphia	Philadelphia, Pennsylvania

PWC Detachment, Philadelphia is a detachment of PWC San Francisco Bay. Separate budgets and rate schedules were prepared for this detachment. The rates are included in the East Coast PWC rate calculations, rather than the West Coast with PWC San Francisco Bay to avoid customer confusion on coastal rates.

Financial Profile:	**FY 1995**	**FY 1996**	**FY 1997**
Cost of Goods Sold ($millions)	$1,969.5	$1,941.6	$1,904.5
Net Operating Results	20.3	(17.7)	(6.7)
Accumulated Operating Results	26.9	8.2	0.0

Costs are decreasing because of Defense downsizing, Base Realignment and Closure actions, Public Works Centers' efforts to reduce costs, and transfer of traditional Public Works functions from the PWCs.

Net Operating Results and Accumulated Operating Results are decreasing. Prior year gains are returned to the customers through rate reductions.

Workload:	Unit of Measure	FY 1995	FY 1996	FY 1997
Utilities				
Electricity	MWH	4,245,620	4,151,724	4,110,715
Potable Water	KGAL	24,303,497	24,034,399	23,262,635
Salt Water	KGAL	7,708,358	7,842,112	7,796,057
Heating	MBTU	547,183	440,000	462,293
Steam	MBTU	7,850,479	7,870,944	7,620,976
Clean Steam	MBTU	2,715,198	3,068,729	3,086,966
Sewage	KGAL	15,653,827	15,266,976	15,139,145
Natural Gas	MBTU	1,834,816	1,869,115	1,805,335
Compressed Air	KCF	9,512,761	10,179,025	9,226,576
Telephones	LINES	1,226,041	0	0
Sanitation				
Refuse Collection	CUYD	4,288,743	3,816,996	3,910,601
Pest Control	HOURS	116,473	112,932	107,813
Hazardous Waste I	GAL	884,525	685,560	681,049
Hazardous Waste II	LBS	11,721,912	12,004,846	10,961,954
Environmental Engineering	HOURS	97,832	111,955	126,121
Industrial Waste	KGAL	158,216	65,518	57,058
Transportation Services				
Equipment Rental	HOURS	25,058,262	22,633,585	22,611,651
Vehicle Operations	HOURS	885,035	866,566	823,473
Vehicle Maintenance	SRO	120,707	123,789	123,497
Maintenance & Repair				
Specifics	JOBS	7,158	10,535	10,598
Minors	ITEMS	23,954	24,350	24,175
Emergency/Service	CHITS	314,538	360,053	357,536
Recurring	ITEMS	129,898	143,930	147,868
Design				
Design Management	CWE	257,746,980	253,562,165	236,858,892
PWC Design	CWE	153,597,288	179,808,489	177,303,197
Planning	HOURS	383,476	486,243	469,156
Contracting				
FSC Administration	WIP	328,124,295	313,172,512	318,127,749
FSC Inspection	WIP	286,971,888	265,887,076	269,436,000
Non-MCON Administration	WIP	134,903,213	154,510,977	163,446,877
Non-MCON Inspection	WIP	68,917,027	111,497,901	116,813,880

Performance Indicators:

Key corp e performance measures for Navy Public Works Centers have been established. The overall goal of the PWC Co orate Steering Group (CSG) was to establish a cadre of measurement devices that ld measure products/services to gauge effectiveness, to assist in management of the produc ervices, to assure accountability, and to assist in making sound budget decisions. In addition to the above, the considerations for indicator changes were that each must be meaningful to the majority of the reporting groups (e.g., PWCs, Naval Facilities Engineering Command, Assistant Secretary of the Navy (Financial Management and Comptroller), and the Office of the Secretary Defense), controlled by the product/service manager, and already measured through norm porting p ss or could be measured without significant additional cost to prevent establish nt of a "m ement bureaucracy."

Although unit cost remains the primary efficiency measure, also track the percentage of total cost that is outsourced, the gre..est growth commodities, the ommodities in decline, and operating results when compared to budget.

	FY 1995	FY 1996	FY 1997
Outsourcing Percentage	64%	63%	64%
Net Operating Results ($000)	20,311	(17,735)	(6,740)

CUSTOMER SATISFACTION

Customer satisfaction is clearly viewed as the most important PWC product/service indicator since cost, quality, quantity, and timeliness affect the outcome. A c tomer survey is given annually by each of the PWCs. A five-point scale showing an average index is provided.

The customer satisfaction goal is to improve by .1 each year through FY 1997.

	FY 1995	FY 1996	FY 1997
Overall	3	3.8	3.9
Utilities service	4.	4.1	4.2
Transportation	4	4.1	4.2
Contracts	3	3.6	3.7
Engineering	3.	3.7	3.8
Facilities Maintenance	3.7	3.8	3.9

QUALITY

Although customer satisfaction remains the best indicator of overall value which includes quality, other indicators have been established that have immense impact on the productivity of our customer base:

Electricity outage - - number of unplanned interruptions to service.

FY 1995	FY 1996	FY 1997
707	700	697

Transportation available/utilization - - actual rental of equipment divided by total possible rental hours.

FY 1995	FY 1996	FY 1997
88%	91%	92%

TIMELINESS

Timeliness indicators are most important in the area of maintenance of real property.

	FY 1995	FY 1996	FY 1997
Time to execute emergency work	15.5 hours	16.0 hours	15.2 hours
Time to execute service work	8.2 days	9.6 days	9.1 days
Time to execute minor and specific work	124 days	120 days	115 days

Emergency and service work are small jobs that generally take less than 16 hours to complete. The indicator is the average (mean) time that it takes to finish a job from the time the customer calls in the order, until the customer signs off on the job as complete. PWC's FY 1994 performance in timeliness of emergency and service work were 17.5 hours and 10.6 days respectively. FY 1995 actual performance exceeded PWC internal goals of 16.5 hours for emergency work and 10.1 days for service work.

Minor and specific work are large scale jobs--over 16 hours to complete. The indicator is the average (mode) that it takes from the time the order is received and funded, until the customer signs off on the job as complete.

Two other timeliness-base goals for the PWC corporation are in the areas of real property execution. Execution can have significant financial and effectiveness impact on the products/services provided by the PWCs. We track the percentage of PWC plant value spent on MRP.

FY 1995	FY 1996	FY 1997
2.83%	2.10%	2.08%

Customer Rate Changes:	FY 1996	FY 1997*
East Coast and Great Lakes:		
Utilities and Sanitation	-3.0%	-2.0%
Other services	-2.9%	2.5%
Composite	-2.9%	0.7%
West Coast and Pacific		
Utilities and Sanitation	-11.3%	2.2%
Other services	1.0%	4.3%
Composite	-3.8%	3.6%

* East Coast Rates include PWC Detachment Philadelphia for the first time.

Unit Costs:		FY 1995	FY 1996	FY 1997
Utilities				
Electricity	MWH	89.10	84.79	84.63
Potable Water	KGAL	2.92	2.45	2.49
Salt Water	KGAL	0.50	0.61	0.67
Heating	MBTU	9.87	12.97	10.85
Steam	MBTU	13.93	14.93	14.46
Clean Steam	MBTU	15.73	13.61	13.50
Sewage	KGAL	4.58	3.43	3.90
Natural Gas	MBTU	5.98	5.28	5.16
Compressed Air	KCF	0.91	0.94	0.98
Telephones	LINES	45.48	0.00	0.00
Sanitation				
Refuse Collection	CUYD	5.52	5.30	4.71
Pest Control	HOURS	38.38	40.96	39.07
Hazardous Waste	GAL	3.14	3.42	3.21
Hazardous Waste II	LBS	1.63	2.02	2.09
Environmental Engineering	HOURS	68.29	60.82	55.97
Industrial Waste	KGAL	36.86	103.28	113.66
Transportation Services				
Equipment Rental	HOURS	2.95	3.39	3.21
Vehicle Operations	HOURS	50.27	47.31	47.72
Vehicle Maintenance	SRO	116.97	143.35	132.60
Maintenance & Repair				
Specifics	JOBS	38,635.57	32,281.27	31,910.23
Minors	ITEMS	5,471.32	5,450.44	5,373.32
Emergency/Service	CHITS	224.72	216.43	208.41
Recurring	ITEMS	2,029.12	1,735.28	1,610.33
Design				
Design Management	CWE	0.04	0.04	0.04
PWC Design	CWE	0.07	0.09	0.09
Planning	HOURS	49.16	52.48	53.24
Contracting				
FSC Administration	WIP	0.06	0.07	0.07
FSC Inspection	WIP	0.06	0.07	0.05
Non-MCON Administration	WIP	0.06	0.07	0.07
Non-MCON Inspection	WIP	0.05	0.05	0.05

Staffing:	**FY**	**FY 1996**	**FY 1997**
Civilian End Strength	1[illegible]	1[illegible]435	13,380
Civilian Work Years	14,[illegible]	1[illegible]01	13,485
Military End Strength	11[illegible]	10[illegible]	108
Military Workyears	117	10[illegible]	108

Headquarters Costs:	**FY 1995**	**FY 1996**	**FY 1997**
($ in millions)			
	1.0	1.0	1.0

Headquarters costs remain constant over all years because of efforts to control/reduce overhead expenditures, which is consistent with the PWC thrust.

Capital Budget Authority:

	($ in millions)		
	FY 1995	**FY 1996**	**FY 1997**
Equipment-Non ADPE/TELECOM	13.7	8.5	11.0
ADPE/Telecommunications Equipment	0.7	0.4	0.5
Software Development	0.4		
Minor Construction	4.5	6.3	6.7
Reliability, Maintainability, and Supportability Modifications			
Total	19.3	15.2	18.2

Economies and Efficiencies:

The PWCs set a goal of productivity improvement six years ago that has been maintained through the FY 1997 budget cycle -- cumulative PWC rate growth will be 1% below cumulative general escalation. PWCs have surpassed this six-year cumulative level of productivity through gains made through consolidation, process improvements, benchmarking, competitive practices, and partnering efforts.

Competition -- Service decisions based on total value. Value includes quality, quantity, and timeliness factors.

Process action teams (PATs) made up of both PWC and customer personnel have been created to review the contracting process. These PATs have identified and eliminated several non-value steps in the contracting process which allow contra[illegible]rate reductions.

PWC San Francisco is studying outsourcing ownership and operations of selected utility systems with commercial suppliers. The result of such outsourcing may be reduced rates to PWC customers. Commodities currently under study are electricity, water, sewer, and natural gas.

PWCs have and are implementing Job Order Contracts which reduce the overall cost of public products and services by reducing design and contracting costs. In addition, the customers are pleased with the reduced cycle times.

Partnering -- Working directly with suppliers, customers, and other PWCs to lower overall cost.

PWC Detachment Philadelphia is partnering with Fleet Industrial Supply Center (FISC) Detachment in Philadelphia to operate a shop store which includes receiving, warehousing and issue of public works materials. The PWC Detachment will obtain small purchase procurement authority and retain existing ordering authority. This combination of material procurement will allow the PWC Detachment to operate with a very small materials department which is expected to result in overhead savings to PWC Detachment customers.

Other PWCs are also working with FISCs to investigate material procurement and storage alternatives in an effort to improve timeliness and reduce costs. Alternatives include contracting with national suppliers.

PWC San Francisco Bay accepted ownership of heater room condensate return equipment from the customer. This has allowed the PWC to return the condensate to the main steam plants. This initiative has reduced the customers' cost for the maintenance and repair of the condensate return equipment, and reduced the PWC's overall steam production costs.

Consolidations -- Saving through economies of scales.

DMRD 967 expanded existing PWCs and directed the establishment of new ones. Savings are being achieved through consolidation of maintenance contracts, elevator inspection contracts, and architectural and engineering contracts. In addition, construction projects for individual site hazardous waste storage facilities have been canceled because of excess capacity at other consolidated sites. Transportation assets have been pooled to increase rental availability with fewer leasing requirements.

The magnitude of the utility systems is allowing other economies. Rate intervention and purchase agreement negotiations are resulting in lower unit costs. The capability to convert boilers for use of alternative fuels allows the PWCs to purchase alternative fuels with the least overall cost by season and availability.

PWC Great Lakes has negotiated with Commonwealth Edison a long-term contract with cost avoidance incentive which will stabilize Navy long-range electric costs.

Consolidations have enabled better utilization of manpower and a per unit reduction in overhead. The "pooling" of experience, skills, and talent has led to more creative and less costly solutions to utility system problems. Critical work, which previously did not get done, or waited for contract support, can now be accomplished using resources from several sites.

Process Improvements: Changing the way we do business through both breakthrough methodologies and incremental improvements.

In process reviews, the PWCs are employing PATs and Kaizen Teams to accomplish service and cost improvements. They flow chart targeted processes, collect internal and external data, study alternatives, and make recommendations for improvements.

Several PWCs have established Construction Departments which accomplish all specific work. The concept is to get the work started quickly, get in, get out, and turn over quality products to the customers. The department's goals include reducing initial response time, time required to perform the work, and improve the customer's image of the PWC.

PWC Great Lakes instituted a "Bright Ideas" program. Recommendations include improvements to the utilities maintenance process, customer funding for engineering work, engineering consultations, boiler plant operation, contracting, painting, parking space safety, project programming, visitor information, training, contract records, job announcement, purchase orders, verification of services, and steam plant control booth.

We have other gains for our customers in various product/service areas:

-- At PWC Norfolk, a PAT reviewed crane operations and identified ways to eliminate several extremely expensive, costly to maintain cranes, from the inventory.

-- Replacing maintenance trucks (customer and PWC shops) with electric golf carts to reduce customer operating costs and reduce air pollution.

-- Reviewing billing system to produce bills which are more accurate and easier to read and understand.

-- PAT team at PWC Norfolk identified ways to reduce refuse collection costs by 15%.

-- PWC Washington has scheduled a monthly meeting between the Staff Civil Engineers from their major customers and PWC personnel. This allows the resolution of problems before they become major problems.

BASE SUPPORT/NAVY PUBLIC WORKS CENTERS
REVENUE AND EXPENSES
(Dollars in Millions)

	FY 1995	FY 1996	FY 1997
Revenue:			
Gross Sales			
Operations	1,972.3	1,902.8	1,878.5
Capital Surcharge	0.0	0.0	0.0
Depreciation except Maj Const	23.8	21.1	19.3
Major Construction Depreciation	0.0	0.0	0.0
Other Income	0.0	0.0	0.0
Total Income	**1,996.1**	**1,923.9**	**1,897.8**
Expenses:			
Cost of Materiel Sold from Inventory			
Negotiated Purchases from Customers			
Transportation	3.1	1.0	1.1
Salaries and Wages:			
Military Personnel	7.3	6.6	7.5
Civilian Personnel	641.3	649.3	623.9
Materials, Supplies and			
Parts used in Operations	185.1	186.2	183.8
Facility Repair Charge	430.2	465.4	467.9
Depreciation - Capital	23.8	21.1	19.3
Contracted Engineering Services	15.4	9.9	9.5
Lease Costs	4.1	7.8	7.4
Purchased Utilities	356.8	327.3	314.9
Purchased Communications	52.2	3.1	3.0
Equipment Maintenance	2.2	3.7	3.3
Fuel	16.2	21.7	20.7
Other Expenses	231.8	238.6	242.4
Total Expenses	**1,969.5**	**1,941.6**	**1,904.5**
Operating Result	26.6	(17.7)	(6.7)
Less Capital Surchg Reservation	0.0	0.0	0.0
Plus Appropriations Affecting NOR/AOR	0.0	0.0	0.0
Other Changes Affecting NOR/AOR	(6.3)	(1.0)	(1.5)
Net Result	20.3	(18.7)	(8.2)
Prior Year AOR	6.6	26.9	8.2
Accumulated Operating Result	**26.9**	**8.2**	**(0.0)**

BASE SUPPORT/NAVY PUBLIC WORKS CENTERS

SOURCE OF REVENUE

(Dollars in Millions)

	FY 1995	FY 1996	FY 1997
1. New Orders	2,185.2	1,883.7	1,848.7
a. Orders from DoD Components	1,702.8	1,477.2	1,451.6
Department of the Navy	1,364.6	1,169.1	1,143.4
Operations and Maintenance, Navy	1,018.8	902.8	893.4
Operations and Maintenance, Marine Corps	26.5	19.0	19.3
O&M, Navy Reserve	8.2	8.1	7.9
O&M, Marine Corps Reserve	1.0	0.6	0.6
Aircraft Procurement, Navy	(0.2)	0.1	0.1
Weapons Procurement, Navy	0.0	0.0	0.0
Shipbuilding & Conversion, Navy	1.6	1.5	1.6
Other Procurement, Navy	0.6	0.8	0.9
Procurement, Marine Corps	0.0	0.0	0.0
Family Housing, Navy and Marine Corps	293.6	220.4	204.1
Research, Development, Test & Eval, Navy	4.8	4.5	4.4
Military Construction, Navy	8.2	4.5	4.2
Other Navy Appropriations	1.2	6.2	6.5
Other Marine Corps Appropriations	0.3	0.4	0.4
Department of the Army	44.6	24.7	24.6
Army Operation & Maintenance Accounts	31.4	16.7	16.5
Army Res, Dev, Test & Eval Accounts	0.0	0.0	0.0
Army Procurement Accounts	(0.0)	0.0	0.0
Army Other	13.2	8.0	8.1
Department of the Air Force	30.9	34.6	35.1
Air Force Operation & Maintenance Accounts	26.5	28.1	28.5
Air Force Res, Dev, Test & Eval Accounts	0.0	0.0	0.0
Air Force Procurement Accounts	0.0	0.0	0.0
Air Force Other	4.4	6.5	6.6
DoD Appropriated Accounts	262.6	248.9	248.4
Base Closure and Realignment	28.6	39.0	41.7
Operation & Maintenance Accounts	176.2	152.0	147.8
Res, Dev, Test & Eval Accounts	2.1	1.7	1.7
Procurement Accounts	0.4	0.9	0.9
DoD Other	55.2	55.2	56.3
b. Orders from DBOF Business Areas	434.2	362.2	351.6
c. Total DoD	2,137.0	1,839.5	1,803.2
d. Other Orders	48.2	44.2	45.5
Other Federal Agencies	17.1	16.2	14.8
Foreign Military Sales	0.0	0.1	0.1
Non Federal Agencies	31.1	27.9	30.6
2. Carry-In Orders	583.7	772.8	732.6
3. Total Gross Orders (available funding)	2,768.9	2,656.5	2,581.3
4. Carry-Out Orders	772.8	732.6	683.5
Change in Backlog (carry-out less carry-in)	189.1	(40.2)	(49.1)
5. Total Gross Sales	1,996.1	1,923.9	1,897.8

DEPARTMENT OF THE NAVY
DEFENSE BUSINESS OPERATIONS FUND
BASE SUPPORT/NAVY PUBLIC WORKS CENTERS

Changes in the Costs of Operations
($ in Millions)

1. FY 1995 Actual	1,969.5
2. FY 1996 Estimate in President's Budget	1,704.3
3. Estimated Impact in FY 1996 of Actual FY 1995 Experience:	
Increased Cost because of reformulated gas	0.7
Increase in GSA equipment purchase costs	1.2
Increase in purchased utility rates above allowed inflation.	1.6
4. Pricing Adjustments:	
General Inflation	(7.8)
5. Program Changes:	
Establishment of PWC Detachment Philadelphia.	33.9
Restoral of New Sanno Hotel Functional Transfer, Official Transfer pending	0.1
Ikego Housing expansion at PWC Yokosuka.	2.4
Increase of workload associated with environmental clean up and compliance	16.0
Increase of customer orders associated with Base Closure/Realignment; maintenance and repair; and other public works support workload requirements.	190.4
Transfer of Executive Motor Pool to Naval District Washington	(3.7)
Capital Purchases Program threshold change	10.0
Maintenance expense reduction due to early execution in FY 1995	(7.5)
6. FY 1996 Current Estimate	1,941.6

DEPARTMENT OF THE NAVY
DEFENSE BUSINESS OPERATIONS FUND
BASE SUPPORT/NAVY PUBLIC WORKS CENTERS

Changes in the Costs of Operations
($ in Millions)

6. FY 1996 Current Estimate	1,941.6
7. Pricing Adjustments:	
Pay Raise:	
FY 1996 CIVPERS Pay Raise	12.4
Annualization of FY 1996 Pay Raise	5.2
Fuel	(0.1)
Material and Supplies	4.4
General Purchases	24.2
Yen Rate Adjustment	(1.4)
8. Productivity Initiatives and Other Efficiencies:	(37.1)
9. Program Changes:	
Phased closure of PWC San Francisco in accordance with BRAC decisions	(41.9)
Increased maintenance and repair associated with the implementation of BRAC decisions and increased customer orders at PWC Washington and PWC Norfolk.	30.1
Decrease in customer workload associated with BRAC decisions at PWC Guam.	(18.0)
Transfer of Executive Motor Pool to Naval District Washington	(0.5)
Transfer of Family Housing Management to Family Housing Support Office.	(14.4)
10. FY 1997 Current Estimate:	1,904.5

DEPARTMENT OF THE NAVY
DEFENSE BUSINESS OPERATIONS FUND
BASE SUPPORT
NAVY PUBLIC WORKS CENTERS
SUMMARY OF CPP PROGRAM
($ IN MILLIONS)

LINE #	Item Description	FY 1995 $50K THRESHOLD		FY 1996 $100K THRESHOLD		FY 1997 $100K THRESHOLD	
		Quant	Total Cost	Quant	Total Cost	Quant	Total Cost
	1a. Non-ADP Equip. (>$500,000)						
	- Replacement						
L0001	Command Control Comm System	1	0.851	0	0.000	0	0.000
L0002	70 Ton Mobile Crane Truck	1	0.821	0	0.000	0	0.000
L0003	Crane Truck MTD 2-Eng PRT 41-50 Ton	0	0.000	1	0.853	0	0.000
L0004	Crane Truck MTD 2-Eng PRT	0	0.000	1	0.834	0	0.000
L0005	Crane Truck MTD 2-Eng PRT 51 Ton & Up	0	0.000	2	1.000	1	0.853
L0006	Crane Truck MTD 2-Eng PRT 31-40 Ton	0	0.000	0	0.000	1	0.513
L0007	Crane Truck MTD 2-Eng DED 51 Ton & Up	0	0.000	0	0.000	2	1.029
	1b. Non-ADP Equip. (>$100,000<$500,000)						
L0008	- Replacement	122	11.324	45	4.959	54	7.720
L0009	- Environmental	6	0.706	5	0.862	6	0.867
	Subtotal Non-ADP Equipment	130	13.702	54	8.508	64	10.982
L0010	2. Minor Construction	38	4.499	47	6.283	46	6.734
	3. ADPE & Telecomm						
	- Computer Hardware (>$100,000)						
L0011	SCADA System	1	0.145	0	0.000	0	0.000
L0012	Computer Aided Design System (CAD 2)	1	0.111	0	0.000	0	0.000
L0013	GEMS II Workstation/HUB Routers/ATM	1	0.102	0	0.000	0	0.000
L0014	HUBS System	0	0.000	1	0.100	0	0.000
L0015	Optical Filing System	0	0.000	1	0.112	0	0.000
L0016	CAD 2	0	0.000	2	0.200	2	0.200
L0017	GEMS II Workstation	0	0.000	0	0.000	1	0.100
L0018	Facilities Cust Base Hardware/UPS Equip.	0	0.000	0	0.000	1	0.200
L0019	Computer Hardware (<$100,000)	6	0.364	0	0.000	0	0.000
	Subtotal ADPE&Telecomm	9	0.722	4	0.412	4	0.500
L0020	4. Software Development	5	0.355	0	0.000	0	0.000
	TOTAL	182	19.278	105	15.203	114	18.216

000631

DBOF 9B

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)	A. FY 1997 PRESIDENT'S BUDGET
B. Department of the Navy/Base Support	C. L0003 Equipment- >$500,000

	D. Public Works Centers								
	FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment	0	0.00	0	1	853.00	853	0	0.00	0
TOTAL		0.00	0		853.00	853		0.00	0

Narrative Justification:

This requirement includes one 41 to 51 ton crane truck which support fleet personnel and customer maintenance, repair, construction, and transportation requirements. The proposed cranes will replace overaged assets which are beyond economical repair. Replacement will reduce workload delays and equipment downtimes. Replacement will also provide equipment maintenance costs, provide safe operation, increase availability, and reduce costs which are directly related to unit cost and fleet readiness.

J0632

DBOF 9B

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)	A. FY 1997 PRESIDENT'S BUDGET

B. Department of the Navy/Base Support	C. L0004 Equipment- >$500,000	D. Public Works Centers

	FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment	0	0.00	0	1	834.00	834	0	0.00	0
TOTAL		0.00	0		834.00	834		0.00	0

Narrative Justification:

This requirement includes one twin engine mobile crane truck which supports fleet personnel and customer maintenance, repair, construction, and transportation requirements. The proposed crane will replace an overaged asset which is beyond economical repair. Replacement will reduce workload delays and equipment downtimes. Replacement will also provide for stable equipment maintenance costs, provide safe operation, increase availability, and reduce costs which are directly related to unit cost and fleet readiness.

000633

DBOF 9B

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)	A. FY 1997 PRESIDENT'S BUDGET

B. Department of the Navy/Base Support	C. L0005 Equipment- >$500,000	D. Public Works Centers

	FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment	0	0.00	0	2	500.00	1,000	1	853.00	853
TOTAL		0.00	0		500.00	1,000		853.00	853

Narrative Justification:

This requirement includes two 51 ton and up crane trucks in FY 1996 and one in FY 1997 which supports fleet personnel and customer maintenance, repair, construction, and transportation requirements. The proposed cranes will replace overaged assets which are beyond economical repair. Replacement will reduce workload delays and equipment downtimes. Replacement will also provide for stable equipment maintenance costs, provide safe operation, increase availability, and reduce costs which are directly related to unit cost and fleet readiness.

000634

DBOF 9B

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)	A. FY 1997 PRESIDENT'S BUDGET

B. Department of the Navy/Base Support	C. L0006 Equipment- >$500,000	D. Public Works Centers

	FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment	0	0.00	0	0	0.00	0	1	513.00	513
TOTAL		0.00	0		0.00	0		513.00	513

Narrative Justification:

This requirement includes one 31 to 41 ton mobile crane truck which supports fleet personnel and customer maintenance, repair, construction, and transportation requirements. The proposed crane will replace an overaged asset which is beyond economical repair. Replacement will reduce workload delays and equipment downtimes. Replacement will also provide for stable equipment maintenance costs, provide safe operation, increase availability, and reduce costs which are directly related to unit cost and fleet readiness.

000635

DBOF 9B

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)	A. FY 1997 PRESIDENT'S BUDGET

B. Department of the Navy/Base Support	C. L0007 Equipment- >$500,000	D. Public Works Centers

	FY 1995			FY 1996			FY 1997		
Element Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment	0	0.00	0	0	0.00	0	2	514.50	1,029
TOTAL		0.00	0		0.00	0		514.50	1,029

Narrative Justification:

This requirement includes two 51 ton and up twin diesel engine crane trucks which support fleet personnel and customer maintenance, repair, construction, and transportation requirements. The proposed cranes will replace overaged assets which are beyond economical repair. Replacement will reduce workload delays and equipment downtimes. Replacement will also provide for stable equipment maintenance costs, provide safe operation, increase availability, and reduce costs which are directly related to unit cost and fleet readiness.

000636

DBOF 9B

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)	A. FY 1997 PRESIDENT'S BUDGET

B. Department of the Navy/Base Support	C. L0008 Equipment->$100,000<$500,000	D. Public Works Centers

	FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment				45	VAR	4,959	54	VAR	7,720
TOTAL					VAR	4,959		VAR	7,720

Narrative Justification:

Equipment includes engine analyzers, material handling (i.e. fork lifts), car/truck washers, generators, milling machines and Civil Engineering Support Equipment (CESE). CESE includes trucks, trailers, crawlers, small crane trucks, backhoes, and other vehicles incident to public works transportation functions. Included in this category are administrative equipment such as automated filing systems, large engineering application copiers and other equipment incidental to administrative functions.

PWC shop, CESE, and administrative equipment supports customer maintenance, repair, construction, utilities, and transportation requirements. Equipment purchases as budgeted will replace overaged as well as equipment beyond economical repair. This will reduce workload delays and equipment downtimes. Replacements will provide for stable equipment maintenance costs which are directly related to unit costs.

000637

DBOF 9B

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)	A. FY 1997 PRESIDENT'S BUDGET

B. Department of the Navy/Base Support	C. L0009 Equipment->$100,000<$500,000	D. Public Works Centers

	FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment				5	VAR	862	6	VAR	867
TOTAL					VAR	862		VAR	867

Narrative Justification:

Items requested under environmental requirements include equipment such as, chromatographs, atomic absorption spectrophotomers, gas chromatograph, graphite furnace atomic absorption machines, spectrophotoms and automatic sample extractors. Environmental and pollution compliance equipment also includes above ground storage containment units, portable environmental monitoring units, portable emergency shower units, oil skimmers, spill boom machines and other equipment required to operate the PWC mission within within state and Federal environmental compliance standards.

Replacing the requested equipment will ensure accurate and compliant testing and will allow the measuring and containment processes to continue to be performed at the least cost to Navy customers. The current equipment is overaged and deteriorated due to heavy use and is costly to maintain. Replacement will provide for cost avoidance which is directly related to unit cost.

0009638

DBOF 9B

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)	A. FY 1997 PRESIDENT'S BUDGET

B. Department of the Navy/Base Support	C. L0010 Minor Construction	D. Public Works Centers

	FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Const.				47	VAR	6,283	46	VAR	6,734
TOTAL					VAR	6,283		VAR	6,734

Narrative Justification:

Minor construction includes mission facilities and environmental projects to construct shelters for hazardous waste storage, environmental test lab, water/sewage pumping equipment, materials storage, security fencing/lighting, fire protection sprinkler systems, utilities control systems, paving, and other facilities in support of PWC products and services.

Construction projects as budgeted provide enhanced PWC shop and operational facilities which include safety, security and environmental compliance requirements. These projects will reduce operational hazards, stabilize maintenance costs and meet environmental standards which are directly related to unit costs.

000639

DBOF 9B

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)	A. FY 1997 PRESIDENT'S BUDGET

B. Department of the Navy/Base Support	C. L0014 ADPE & Telecomm	D. Public Works Centers

	FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADPE & Telecomm	0	0.00	0	1	100.00	100	0	0.00	0
TOTAL		0.00	0		100.00	100		0.00	0

Narrative Justification:

Management information hardware requested includes the replacement and reconfiguration of client server based Computer Aided Design HUBS systems.

Information management hardware directly supports PWCMIS and provides automated information support to the PWC and customers. The system consists of applications are designed to fulfill the management requirements of general engineering, facilities costing, and production management engineering. This includes controls for the production engineering planning, and maintenance and repair costing on all PWC facilities and utilities. Equipment purchases in support of PWCMIS will replace overaged and obsolete equipment to ensure continuous system reliability and maintenance.

000640

DBOF 9B

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)	A. FY 1997 PRESIDENT'S BUDGET

B. Department of the Navy/Base Support	C. L0015 ADPE & Telecomm	D. Public Works Centers

	FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADPE & Telecomm	0	0.00	0	1	VAR	112	0	0.00	0
TOTAL		0.00	0		VAR	112		0.00	0

Narrative Justification:

Management information hardware requested includes the replacement of exsisting general pubic works application optical filing system hardware.

Information management hardware directly supports PWCMIS and provides automated information support to the PWC and customers. The system consists of applications designed to fulfill the management requirements of commercial accounting, budgeting and production management including controls for the production workforce and all categories of work from receipt to completion in any of the Planning, Maintenance, Utilities and Transportation Departments. Equipment purchases in support of PWCMIS will replace overaged and obsolete equipment to ensure continuous system reliability and maintenance.

000641

DBOF 9B

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)	A. FY 1997 PRESIDENT'S BUDGET

B. Department of the Navy/Base Support	C. L0016 ADPE & Telecomm	D. Public Works Centers

	FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADPE & Telecomm	0	0.00	0	2	100.00	200	2	100.00	200
TOTAL		0.00	0		100.00	200		100.00	200

Narrative Justification:

Management information hardware requested includes the replacement of two Computer Aided Design (CAD) systems in FY 1996 and two CAD systems in FY 1997 utilized in general Pubic Works Centers management information applications.

Information management hardware directly supports PWCMIS and provides automated information support to the PWC and its customers. The system consists of applications designed to fulfill the management requirements of commercial accounting, budgeting and production management, which includes controls for the production workforce and all categories of work from receipt to completion in any of the Planning, Maintenance, Utilities and Transportation Departments. Equipment purchases in support of PWCMIS will replace overaged and obsolete equipment to ensure continuous system reliability and maintenance.

000642

DBOF 9B

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)	A. FY 1997 PRESIDENT'S BUDGET

B. Department of the Navy/Base Support	C. L0017 ADPE & Telecomm	D. Public Works Centers

	FY 1995			FY 1996			FY 1997		
Element of Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADPE & Telecomm	0	0.00	0	0	0.00	0	1	100.00	100
TOTAL		0.00	0		0.00	0		100.00	100

Narrative Justification:

Management information hardware requested includes replacement of a GEM II engineering application as well as associated Computer Aided Design file servers and hubs.

Information management hardware directly supports PWCMIS and provides automated information support to the PWC and its customers. The system consists of applications designed to fulfill the management requirements of commercial accounting, budgeting and production management, which includes controls for the production workforce and all categories of work from receipt to completion in any of the Planning, Maintenance, Utilities and Transportation Departments. Equipment purchases in support of PWCMIS will replace overaged and obsolete equipment to ensure continuous system reliability and maintenance.

000643

DBOF 9B

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION ($ in Thousands)	A. FY 1997 PRESIDENT'S BUDGET
B. Department of the Navy/Base Support	C. L0018 ADPE & Telecomm
D. Public Works Centers	

	FY 1995			FY 1996			FY 1997		
Element of	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADPE & Telecomm	0	0.00	0	0	0.00	0	1	200.00	200
TOTAL		0.00	0		0.00	0		200.00	200

Narrative Justification:

Management information hardware includes the replacement of computer based basic facilities requirements and base structuring hardware and associated emergency power backup systems(i.e. UPS).

Information management hardware directly supports PWCMIS and provides automated information support to the PWC and its customers. The system consists of applications designed to fulfill the management requirements of commercial accounting, budgeting and production management, which includes controls for the production workforce and all categories of work from receipt to completion in any of the Planning, Maintenance, Utilities and Transportation Departments. Equipment purchases in support of PWCMIS will replace overaged and obsolete equipment to ensure continuous system reliability and maintenance.

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Department of the Navy - Defense Business Operations Fund
Base Support/Navy Public Works Centers
CAPITAL BUDGET EXECUTION

FY 1996

Title/Description	Original Request	Change	Revised Request	Explanation/Reason for Change
Equipment (non-ADPE/TEL):				
Various Civil Engineering Support Equipment and Industrial Plant Equipment.	7,498	(7,498)	0	Capital items reduced due to change in threshold from $50K to $100K.
TRUCK TRACTOR 4X4 24000 GVW	425	0	425	
TRUCK TRACTOR 4X2/6X2 32000 GVW	365	0	365	
TRUCK MAINTENANCE POLE & LINE DED	786	(51)	735	Reduced pricing due to change in specifications.
TRUCK OVRHD MAINT AERIAL SERV PLTFM	242	242	484	Added quantity required to meet workload requirements.
TRUCK REEL HANDLING/TENSIONING POWERED	233	0	233	
TRUCK TANK AVGAS/JET FUEL 1000-1999 GAL	320	0	320	
TRUCK TANK AVGAS/JETFUEL 5000 GAL & UP	230	0	230	
TRACTOR CRAWLER DED 195 HP	372	0	372	
CLEANER BASIN/MANHOLE VAC/HYD TRUCK MTD	373	(129)	244	Deferred quantity due to workload changes.
TRUCK MAT HNDLG CHAIN HOIST/HAUL	0	125	125	
TRUCK MAT HNDLG HOIST/HAUL TO 45 CU YD	248	(248)	0	Canceled due to workload changes.
TRUCK REFUSE COLLECT COMPACT W/HOIST	275	0	275	
CRANE TRUCK MTD 2-ENG PRT 5-14 TON	0	115	115	
CRANE TRUCK MTD 2-ENG PRT 31-40 TON	244	0	244	
CRANE TRUCK MTD 2-ENG PRT 41-50 TON	853	0	853	
CRANE TRUCK MTD 2-ENG PRT	0	839	839	
CRANE TRUCK MTD HYD DED 20-50 TON	237	0	237	
CRANE TRUCK MTD HYD DED 51 TON & UP	995	0	995	
CRANE WHL MTD SWING CAB 4X4 15 TON & UP	260	(260)	0	Canceled due to workload changes.
PAINT BOOTH (ENVIR COMPLIANCE REQUIREMENT)	300	0	300	
GLOGAL POSITIONING SYSTEM	195	(195)	0	Canceled due to workload changes.
GAS CHROMATOGRAPH--VOL ORG CO2 SYS	0	135	135	
REID VAPOR APPARATUS	135	102	237	
HYDROPULPER	175	-175	0	Deferred due to workload changes.
GREASE/OIL INCINERATOR	100	-100	0	Deferred due to workload changes.
GAS CHROMATOGRAPH	400	-400	0	Deferred due to workload changes.
CNC CHUCKER	165	0	165	
EDM MACHINE	150	0	150	
100K LB LIFT	105	0	105	
AUTOMATED SAMPLE EXTRACTION	125	0	125	
ATOMIC ABSORPTION SPECTROPHOTOM	200	0	200	
Subtotal - Equipment	16,006	(7,498)	8,508	

000645

Department of the Navy - Defense Business Operations Fund
Base Support/Navy Public Works Centers
CAPITAL BUDGET EXECUTION

FY 1996

Title/Description	Original Request	Change	Revised Request	Explanation/Reason for Change
ADPE and Telecomm Equip:				
Computer Hardware and Operating System Software	435	(435)	0	Capital items reduced due to change in threshold from $50K to $100K.
HUBS	100	0	100	
CAD 2	200	0	200	
OPTICAL FILING SYSTEM	112	0	112	
Subtotal - ADPE/TEL Equipment	847	(435)	412	
Software Development:				
Software Development Projects	413	(413)	0	Capital items reduced due to change in threshold from $50K to $100K.
Subtotal - Software Development	413	(413)	0	
Minor Construction:				
Various Minor Construction Projects	2,276	(2,276)	0	Capital items reduced due to change in threshold from $50K to $100K.
INSTALL GAS TANKS	221	0	221	
MOD BLA IGNIT SYS, B27 SRF & B1802 "K"	150	0	150	
CONST MAINT SOLVENT RECOVERY FACILITY	154	92	246	Increased cost due to unanticipated project pricing changes.
CONST WELDING SHOP ADDN B3000, NAVSTA	0	196	196	Added due to workload requirements.
CONST PERMANENT WORK SHED, MAIN FAC	185	0	185	
CONST COMP GAS STORAGE FAC. B3004	165	0	165	
INST GEN SANA BOOSTER PUMP	196	(196)	0	Canceled due to workload changes.
INST FLUORIDE FEEDERS, VAR LOCS	116	0	116	
CONST FORCED AIR REMED PLATFORM, C900	170	0	170	
CAPACITOR BANK-MYPT	104	(104)	0	Canceled due to workload changes.
ENCL SUBSTATION WHARF E-2 MYPT	164	0	164	
ENCL SUBSTATION WHARF-MYPT	164	0	164	
NATURAL GAS LINE - MAYPORT	0	180	180	Added due to unanticipated workload changes.
CONSTR/ALTER SWITCHES MOD TO FEEDERS	0	196	196	Added due to unanticipated workload changes.
CONSTR 12" WATER MAIN OCEANA	270	(270)	0	Canceled due to workload changes.
CO4-93 WATER LINE AMPHIB	258	(258)	0	Canceled due to workload changes.
RC36-94 NH 200 DEMOLITION	234	0	234	
C7-91E STREET LIGHTS MARYLAND/HUGHES	198	0	198	
RC1-93E INSTALL FIBER OPTICS	164	0	164	
C16-94 Q 50 AST UPGRADE	150	0	150	

000646

Department of the Navy - Defense Business Operations Fund
Base Support/Navy Public Works Centers

CAPITAL BUDGET EXECUTION

FY 1996

Title/Description	Original Request	Change	Revised Request	Explanation/Reason for Change
LAB EXPANSION	300	(48)	252	Reduced cost due to project specification changes.
CONSTRUCT GAS STATION, PWC COMP.	247	0	247	
CONSTRUCT UTILITIES ADMIN OFF, B166	200	(20)	180	Reduced cost due to project specification changes.
CONSTRUCT WHARFBUILDERS FAC.	245	0	245	
EXPAND HAZ MATL GEAR LOCKER, A-12	158	0	158	
UPGRADE DISTRIBUTION SYS HALE ALII	150	107	257	Increased cost due to unanticipated project pricing changes.
REMOTE SCADA NAVMAG LLL/WL	160	100	260	Increased cost due to unanticipated project pricing changes.
NEW BLDG B10-B17 CONSOLIDATION	115	115	230	Increased cost due to unanticipated project pricing changes.
PROVIDE REMOTE SCADA BLDG. 166	165	100	265	Increased cost due to unanticipated project pricing changes.
CONSTRUCT FLOW METERING MANHOLE	100	0	100	
CEMENT LINE PH, WL, HALAWA, CW	190	(190)	0	Canceled due to workload changes.
REMODEL CARPENTER SHOP (97-017)	285	0	285	
CAR WASH NASNI (82-786)	155	0	155	
REPAIR STREET LIGHT (R5-92)	100	0	100	
CONVERT PG&E TO WAPA	280	0	280	
FIRE PROT FOR HAZMAT STG	100	0	100	
INSTALL EMERGENCY GENERATOR	150	0	150	
INST ACOUSTIC WALL BOARD IN CARP	120	0	120	
Subtotal - Minor Construction	8,559	(2,276)	6,283	
TOTAL CAPITAL INVESTMENT	25,825	(10,622)	15,203	

000647

DEPARTMENT OF THE NAVY
DEFENSE BUSINESS OPERATIONS FUND
SUPPLY MANAGEMENT

Activ Group Function:

The Department of the Navy Supply Management Business Area of the Defense Business Operations Fund (DBOF) performs inventory management functions that result in the sale of aviation, shipboard and amphibious consumables and repairables, fuel, ships store stock, general use consumables including subsistence material, and publications and forms to a wide variety of customers. These include Fleet and Marine Corps forces, Department of the Navy shore activities, Army, Air Force, Defense Agencies, and other government agencies and foreign governments. All costs related to supplying this material to the customer are recouped through a stabilized price which includes the cost of the material, overhead (personnel, depreciation, transportation etc.), and receipt and issue processing at Defense Logistics Agency's distribution depots.

Th Department benefits from the operation of this business area in two ways: 1) because a single inv ory supplies all customers, investment in inventories is reduced and 2) purchase costs are reduced through bulk material purchases and centralized management.

Due to both the refinement of functions and force reduction, the Distribution Depots business area is merged with the Supply Management business area in FY 1996. The Supply Management stabilized price also bears the cost of the functions performed by a declining number of logistics support activities. Therefore, in FY 1997, the Logistics Support Activities business area is also merged with the Supply Management business area.

Activity Group Composition:

Navy Inventory Control Point, Mechanicsburg, Pa
Navy Inventory Control Point, Philadelphia, Pa
Marine Corps Logistics Base, Albany, Ga

Financial Profile:	FY 1995	FY 1996	FY 1997
Cost of Goods Sold ($millions)	5166.0	4919.6	4639.6
Net Operating Results	264.7	-317.0	-69.4
Accumulated Operating Results	834.1	09.8	0.0

Cost of Goods Sold: Cost of Goods sold reflects clining Retail obligations due to inventory downsizing initiatives and Wholesale net sales less the applicable surcharge that are directly related to decreasing sales projections due to total DoN downsizing. Cost of Goods sold requirements decrease in all budget years relative to the previous year as follows: FY 1996 -4.7 % FY 1997 -5.6 %.

Net Operating Results: Pricing policy for DoD quires that all profits generated by a DBOF business area be returned to the customer in reduced p es in the budget year. Due to the large AOR in FY 1995, prices were reduced to return profits to t e customer and are reflected in the resulting

NOR. Total expenses decline in all budget years relative to the previous year as follows: FY 1996 -8.8 % FY 1997 -3.3 %.

Accumulated Operating Results: AOR decreases significantly in FY 1996 due to the following: 1) $417 million was redistributed to other DoN industrial business areas to offset losses that would have caused significant rate increases in those business areas. 2) $12.2 million was redistributed to pay for DoN operations in Bosnia in FY 1996. In FY 1997, $30.4 million, a result of Marine Corps Supply Management downsizing retail operations, was retained in the business area to act as a cash reserve.

Workload:	FY 1995	FY 1996	FY 1997
Net Sales	6598.1	5450.7	5401.4

Workload: The workload or unit cost resourcing unit of measure for Supply Management is net sales. The submission reflects an overall drop in net sales of -3.8% from FY 1995 to FY 1996 (adjusted for wholesale rate change) and -5.6% from FY 1996 to FY 1997, based on the force structure, OPTEMPO and funded workload which resulted from Program Review (PR) 97. Aviation material requirements are based on the recurring demand from the funded Flying Hour Program, while the shipboard recurring demand has similarly been reduced to match the decreased number of ships in the fleet.

Performance Indicators:	FY 1995	FY 1996	FY 1997
Supply Material Availability:			
Navy	78.3%	82.0%	82.0%
Marine Corps	85.0%	85.0%	85.0%

Customer Rate Changes:	FY 1996	FY 1997
Navy	-22.5%	8.6%
Marine Corps	- 9.1%	-11.4%

Unit Costs:	FY 1995	FY 1996	FY 1997
Wholesale ($)	.67	.87	.75
Retail ($)	.98	.99	1.00

Staffing:	FY 1995	FY 1996	FY 1997
Civilian End Strength	5956	7050	6658
Civilian Workyears	6267	7066	6642
Military End Strength	76	379	531
Military Workyears	76	379	531

Civilian and Military End Strength/Workyears: The civilian and military personnel totals provided in the Supply Management quantitative data include Distribution Depot totals starting in FY 1996 and Logistics Support Activities totals in FY 1997 since those business areas have been combined with the Supply Management business area.

The total civilian and military end strength decreases by 21 percent in FY 1996 and 6.2 percent in FY 1997. The significant decreases are a result of Base Realignment and Closure (streamlining to match force structure reductions), reduced workload, and business area functional transfers to O&M,N.

Headquarters Cost:	FY 1995	FY 1996	FY 1997
($millions)	$9.7	$7.0	$7.1

Costs are included to support the contribution of headquarters resources towards fulfilling the objective of this business area. The reduction of $2.7 million between FY 1995 and FY 1996 is a proportionate re-allocation of HQ costs back to O&M,N based on the transition of DBOF costs to O&M,N for contracting, service craft, port services, terminal operations, etc., that are occurring in FY 1996.

Capital Budget Authority:	FY 1995	FY 1996	FY 1997
Equipment-Non ADPE/TELECOM	.014	1.677	9.949
ADPE/Telecommunications Equip.	2.481	16.244	15.999
Software Development	0.000	0.000	6.861
Minor Construction	0.385	0.100	4.000
Reliability, Maintainability, and Supportability Modifications	0.000	0.000	0.310
TOTAL ($millions)	2.880	18.021	37.119

The Supply Management business area Capital Budget finances the procurement of capital equipment, management information systems, and minor construction. These items are depreciated over the useful life of the asset, with the cost of depreciation included in the material surcharge. The increase in FY 1996 includes $12 million for the Material Management Standard System being developed by the Joint Logistics Systems Center. The increase in FY 1997 is the result of the Logistics Support Activity Business Area being combined with the Supply Management Business Area.

Economies and Efficiencies:

The Department of the Navy is committed to achieving maximum utilization of minimal inventory investments through the Inventory Reduction Program (IRP). Requirements are being eliminated and associated inventory is being sold without replacement. The significant initiatives which are incorporated into the Department's submission follow:

- Aggressive program to cancel contracts and/or buys in process for material which becomes inactive subsequent to a buy decision.
- Continuation of an aggressive disposal policy.
- Introduction of cultural change in inventory management.
  -- Personnel evaluations based on Inventory Reduction Program (IRP) objectives.
  -- Total Quality Leadership (TQL) at all levels.
  -- Personal Qualifications Standards established.
- Improved files accuracy.
- State of the art demand forecasting techniques.

- Elimination of requirements and recurring demand 24 months prior to decommissionings.
- Increased reliance on wholesale inventories.
- Maximum use of anticipated materials generated from decommissionings and force structure reductions.
- Consolidation ashore of insurance stock (low mission criticality).
- Expanded reliability improvement initiatives to reduce inventories and lower maintenance costs.
- Increased use of total asset visibility. The visibility of Wholesale, and consumer inventories are being tied together to optimize inventory investment.

Supply Inventory and Material Replacement:	FY 1995	FY 1996	FY 1997
Peacetime Inventory @ Standard Price ($billions)	34.8	28.0	29.9
Congressional Obligations Limitation (65%)			
Marine Corps	15%	14%	14%
Navy	53%	63%	64%

Inventory: The DoN continues to aggressively pursue the goals of the DoD Inventory Reduction Plan and this submission supports the objective of reducing inventory investment and matching force structure decreases. Phase II of the Consumable Item Transfer to the Defense Logistics Agency further reduces DoN wholesale consumable levels in FY 1996 and FY 1997. This submission also reflects an offset to these reductions. Beginning in FY 1996, aviation end use inventory (previously purchased with O&M,N dollars) is capitalizated into the DBOF inventory to increase the visibility of all material to all customers. The net change results in an increase to inventory of $3.7B by the end of FY 1997 through capitalization actions.

Cost of Depot Level Repairables:	FY 1995	FY 1996	FY 1997
Total	1595.5	1757.8	1478.2
Repair	1197.0	1173.8	1028.3
Procurement	398.5	584.0	449.9

The obligations for DLRs highlight the dependence on repair versus procurement. Repair obligations primarily support recurring demand and include the year to year fluctuations in organic DLR repair prices of the Naval Aviation Depots, Shipyards and Weapon Stations. Procurement obligations support both outfitting and repair attrition requirements.

Additional Required Data:

	FY 1995	FY 1996	FY 1997
Items Managed:#	891,348	887,346	875,031
Requisitions Received:($ millions)	7,067.6	5,654.1	5,945.4
Contracts Executed: #	28,917	27,436	25,222
Purchase Inflation: %	3.0	2.0	2.2
Receipts:(# thousands)	1,941.2	1,996.9	1,776.6
Issues:(# thousands)	4,104.6	5,672.3	5,047.8

FUND 14
DEFENSE BUSINESS OPERATIONS FUND
SUPPLY MANAGEMENT - DON
REVENUE AND EXPENSES
(Dollars in Millions)

	FY 1995	FY 1996	FY 1997
REVENUE:			
Net Sales:			
Operations	6,550.7	5,379.2	5,308.0
Fixed Fee Retail Reimbursement	0.0	27.4	28.3
Capital Surcharge	44.5	38.7	39.7
Depreciation except Maj Const	2.9	5.4	25.4
Major Construction Depreciation	0.0	0.0	0.0
Other Income	129.6	73.2	159.0
Refunds/Discounts	(10.9)	0.0	0.0
Total Income	6,716.8	5,523.9	5,560.4
EXPENSES:			
Cost of Material Sold from Inventory	5,166.0	4,919.6	4,639.6
Negotiated Purchases from Customers	0.0	0.0	0.0
Transportation	75.8	68.0	62.0
Salaries and Wages:	0.0	0.0	0.0
Military Personnel	5.9	14.5	22.1
Civilian Personnel	323.0	338.3	326.9
Materials, Supplies and Parts	27.5	29.8	54.0
used in Operations	0.0	0.0	0.0
Facility Repair Charge	5.7	5.8	7.9
Depreciation - Capital	2.9	5.4	25.4
Contracted Engineering Services	0.2	0.2	0.2
Lease Costs	1.8	1.7	6.7
Purchased Utilities	4.1	2.8	4.5
Purchased Communications	6.5	5.4	10.6
Equipment Maintenance	1.2	1.2	1.2
Fuel	0.3	0.3	0.3
Other Expenses	618.8	380.0	428.7
To Distribution Depots	40.3	0.0	0.0
To Logistics Support	127.6	17.0	0.0
Total Expenses	6,407.6	5,790.0	5,590.1
Less Capital Surcharge Reservation	44.5	38.7	39.7
Plus Appropriations Affecting NOR/AOR	0.0	0.0	0.0
Other Changes Affecting NOR/AOR	0.0	(12.2)	0.0
NET OPERATING RESULT	264.7	(317.0)	(69.4)
Prior Year AOR	569.4	834.1	99.8
Redistribution of AOR	0.0	(417.2)	0.0
Cash Factor	0.0	0.0	(30.4)
ACCUMULATED OPERATING RESULT	834.1	99.8	(0.0)

FUND-11
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT
SOURCE OF REVENUE
(Dollars in Millions)

		FY 1995	FY 1996	FY 1997
1a.	New Orders from DoD Components:			
	Own Component			
	Military Personnel, M.C.	36.3	27.4	56.8
	O & M, M.C.	168.7	137.0	72.6
	O & M, M.C. Reserve	1.1	1.3	1.3
	Reserve Personnel, M.C.	5.0	5.9	6.2
	Procurement, M.C.	19.9	35.3	38.8
	RDT & E, Navy	0.0	0.0	0.0
	Reserve Personnel, Navy	2.4	2.1	2.1
	Military Personnel, Navy	46.9	40.5	41.4
	Aircraft Procurement, Navy	754.0	894.6	748.7
	Shipbuilding & Conv, Navy	98.4	94.7	67.3
	O & M, Navy	3,045.2	2,264.0	2,594.3
	O & M, Navy Reserve	39.0	39.2	37.8
	Other Procurement, Navy	86.8	68.3	74.9
	Defense Business Operations Fund	1,859.3	1,668.5	1,452.3
	Trust Revolving Fund, M.C.	0.1	0.1	0.0
	Other Service (O&M)			
	Army	5.3	7.4	5.3
	Air Force	13.1	5.7	2.2
	All Other DoD	339.3	339.8	328.3
		0.0	0.0	0.0
	Subtotal	6,520.8	5,631.8	5,530.3
1b.	Orders from other Fund Business Areas:			
	Supply Management, Navy	1.6	0.2	0.2
	M.C. Depots	11.7	11.0	11.1
	Distribution Depots, Navy	4.8	0.0	0.0
	Logistics Support, Navy	63.9	61.2	0.0
	Subtotal	82.0	72.4	11.3
1c.	Total DoD	6,602.8	5,704.2	5,541.6
1d.	Other Orders:			
	Other Federal Agencies	56.1	42.6	46.9
	Trust Fund	0.0	0.0	0.0
	Foreign Military Sales	116.2	101.6	100.5
	Non Federal Agencies	206.6	159.1	183.0
	Subtotal	378.9	303.3	330.4
2.	Carry-In Orders	0.0	0.0	0.0
3.	Total Gross Orders	6,981.7	6,007.5	5,872.0
4.	Change to Backlog	(0.0)	0.0	(0.0)
5.	Total Gross Sales	6,981.7	6,007.5	5,872.0
	Reimbursable Orders	129.6	73.2	159.0

FUND-2
SUPPLY MANAGEMENT - DON
CHANGES IN OPERATIONS
(Dollars in Millions)

1. FY 1995 Current Estimate	5,387.8
2. FY 1996 President's Budget	5,286.5
3. Pricing Adjustments:	(89.3)
FY 1996 Payraise:	2.1
Military Personnel	0.0
Civilian Personnel	2.1
Change in Economic Assumption (Gen. Inflation)	(5.6)
Annualization of Prior Year Pay Raises	0.0
DBOF Price Changes:	(94.5)
Supplies, Material & Equipment	0.0
Other Intrafund Purchases	(94.5)
Industrial Fund Purchases	0.0
Transportation	0.0
General Purchase Inflation	8.7
4. Productivity Initiatives and Other Efficiencies	0.0
DMRD Reduction	0.0
5. Workload Changes	121.9
Personal Property	0.0
Force Level Reduction (Operations)	1.7
Consumable Item Transfer (Pipeline)	24.1
Consumable Item Transfer	20.0
Adjustment Driven by chg in Sales (BP 91)	21.7
Force Reductions (Wholesale Procurement)	17.9
Force Reductions (Retail)	(77.5)
Force Reductions (Wholesale Repair)	114.0
6. Other Changes	(28.9)
Centrally Managed Programs	(1.2)
SUP 01 Miscellaneous	(4.2)
DLA Rate/Pricing	(19.1)
Minor Construction	(2.9)
PBD 423 CPP	(0.4)
Functional Transfers	(0.9)
FT Trident	(1.0)
FT Inv Mgmt & Sys Del	(0.4)
FT Supply Support Ops	0.1
Base Level Computing	(1.6)
Capital Budget Adjustment	4.7
PBD 426 Ops	0.7
BRAC Savings	(2.0)
PBD 426 CPP	(0.7)
7. FY 1996 Current Estimate	5,290.2

FUND-2
SUPPLY MANAGEMENT - DON
CHANGES IN OPERATIONS
(Dollars in Millions)

Continued

8. Pricing Adjustments:	13.8
FY 1997 Payraise:	8.2
Military Personnel	0.4
Civilian Personnel	7.8
Annualization of Prior Year Pay Raises	1.9
DBOF Price Changes:	(13.5)
Fund Price Changes	11.1
Other Intrafund Purchases	40.5
Industrial Fund Purchases	(65.1)
Transportation	0.0
General Purchase Inflation	17.6
Material Procurement	0.0
Retail Operations	(0.4)
9. Productivity Initiatives and Other Efficiencies	27.2
DMRD Savings	27.2
10. Workload Changes:	(493.1)
Force Level Reduction (Operations)	(16.8)
Adjustment driven by change in sales	(36.2)
Force Reductions (Wholesale Procurement)	(289.8)
Force Reductions (Retail)	38.7
Force Reductions (Wholesale Repair)	(95.7)
DRMO Reimbursable	0.5
Consumable Item Transfer (Pipeline)	32.8
Consumable Item Transfer	(126.1)
Cost of Operations	
Civilian Personnel Compensation	(0.4)
Reimbursement to Distribution Depots	(0.1)
11. Other Changes	123.2
Active Duty Personnel Downsizing	(0.5)
BRAC Savings	(1.0)
Capital Budget Adjustment	0.6
Outsourcing Adjustment	(0.5)
Logistics Support Into Supply Management	126.8
MRP Adjustment	0.4
PBD 426 Ops	0.9
PBD 423 JEDMICS	(4.4)
PBD 426 CPP	0.9
11. FY 1997 Current Estimate	4,961.3

SM-4
SUPPLY MANAGEMENT- DON
INVENTORY STATUS
(Dollars in Millions)
FY 1995

		TOTAL	MOBILIZATION	PEACETIME OPERATING	PEACETIME OTHER
1.	Inventory BOP	31,176.6	544.8	12,957.7	17,674.1
2.	BOP Inventory Adjustments	4,935.6	87.5	3,668.0	1,180.1
	a. Reclassification Change (memo)	(0.0)	(10.3)	1,682.6	(1,672.3)
	b. Price Change Amount (memo)	4,935.6	97.8	1,985.4	2,852.4
	c. Inventory Reclassified and Repriced	36,112.2	632.3	16,625.7	18,854.2
3.	Receipts at Standard	4,591.0	20.3	4,531.9	38.8
4.	Sales at Standard	6,981.7	0.2	6,981.5	0.0
5.	Inventory Adjustments	0.0	0.0	0.0	0.0
	a. Capitalizations + or (-)	(714.3)	(0.6)	(126.6)	(587.1)
	b. Returns From Customers for Credit +	383.6	0.4	146.0	237.2
	c. Returns From Customers Without Credit	13,310.8	0.7	5,145.5	8,164.6
	d. Returns to Suppliers (-)	(103.7)	0.0	(1.1)	(102.6)
	e. Transfers to Property Disposal (-)	(4,162.4)	(0.4)	(0.3)	(4,161.7)
	f. Issues/Receipts without Reimbursement +/-	(644.5)	(19.8)	(152.9)	(471.8)
	g. Other (list/explain)	(6,563.9)	(207.2)	(5,391.9)	(964.8)
	h. Total Adjustments	1,505.6	(226.9)	(381.3)	2,113.8
6.	Inventory EOP	35,227.1	425.5	13,794.8	21,006.8
7.	Inventory EOP, Revalued (LAC,Discounted)	16,407.3	312.5	8,261.2	7,833.6
	a. Approved Acquisition Objective (memo)	0.0	0.0	0.0	4,239.7
	b. Economic Retention (memo)	0.0	0.0	0.0	2,381.4
	c. Contingency Retention (memo)	0.0	0.0	0.0	1,097.8
	d. Potential DoD Reutilization (memo)	0.0	0.0	0.0	114.7
8.	Inventory on Order EOP (memo)	2,329.4	6.0	2,096.4	227.0

9. Narrative

Other adjustments (line 5g):

	TOTAL	MOBILIZATION	OPERATING	OTHER
Other Gains/Losses	(816.8)	1.8	(1,356.3)	537.7
Strata Transfers	0.0	(209.0)	1,711.5	(1,502.5)
Net/Standard Difference	(5,747.1)	0.0	(5,747.1)	0.0
Total	(6,563.9)	(207.2)	(5,391.9)	(964.8)

SM-4
SUPPLY MANAGEMENT- DON
INVENTORY STATUS
(Dollars in Millions)
FY 1996

	TOTAL	MOBILIZATION	PEACETIME OPERATING	PEACETIME OTHER
1. Inventory BOP	35,227.1	425.5	13,794.8	21,006.8
2. BOP Inventory Adjustments	(5,525.2)	(21.6)	216.7	(5,720.3)
a. Reclassification Change (memo)	0.0	0.0	1,787.2	(1,787.2)
b. Price Change Amount (memo)	(5,525.2)	(21.6)	(1,570.5)	(3,933.1)
c. Inventory Reclassified and Repriced	29,701.9	403.9	14,011.5	15,286.5
3. Receipts at Standard	3,397.1	11.5	3,329.8	55.8
4. Sales at Standard	6,007.5	0.0	6,007.5	0.0
5. Inventory Adjustments	0.0	0.0	0.0	0.0
a. Capitalizations + or (-)	1,763.9	(0.9)	1,907.2	(142.4)
b. Returns From Customers for Credit +	556.8	0.5	291.5	264.8
c. Returns From Customers Without Credit	8,331.9	0.0	2,965.1	5,366.8
d. Returns to Suppliers (-)	(50.5)	0.0	(0.4)	(50.1)
e. Transfers to Property Disposal (-)	(3,837.9)	0.0	0.0	(3,837.9)
f. Issues/Receipts without Reimbursement +/-	(227.9)	0.1	(76.8)	(151.2)
g. Other (list/explain)	(5,166.3)	2.0	(4,377.6)	(790.7)
h. Total Adjustments	1,370.0	1.7	709.0	659.3
6. Inventory EOP	28,461.5	417.1	12,042.8	16,001.6
7. Inventory EOP, Revalued (LAC,Discounted)	16,451.5	311.6	8,682.1	7,457.8
a. Approved Acquisition Objective (memo)	0.0	0.0	0.0	4,177.6
b. Economic Retention (memo)	0.0	0.0	0.0	2,158.3
c. Contingency Retention (memo)	0.0	0.0	0.0	1,013.8
d. Potential DoD Reutilization (memo)	0.0	0.0	0.0	108.1
8. Inventory on Order EOP (memo)	2,316.9	3.6	2,183.5	129.8

9. Narrative

Other adjustments (line 5g):

	TOTAL	MOBILIZATION	OPERATING	OTHER
Other Gains/Losses	(197.1)	2.0	(79.4)	(119.7)
Strata Transfers	0.0	0.0	671.0	(671.0)
Net/Standard Difference	(4,969.2)	0.0	(4,969.2)	0.0
Total	(5,166.3)	2.0	(4,377.6)	(790.7)

SM-4
SUPPLY MANAGEMENT- DON
INVENTORY STATUS
(Dollars in Millions)
FY 1997

	TOTAL	MOBILIZATION	PEACETIME OPERATING	PEACETIME OTHER
1. Inventory BOP	28,461.5	417.1	12,042.8	16,001.6
2. BOP Inventory Adjustments	1,282.6	7.8	3,475.1	(2,200.3)
a. Reclassification Change (memo)	0.0	0.0	2,972.2	(2,972.2)
b. Price Change Amount (memo)	1,282.6	7.8	502.9	771.9
c. Inventory Reclassified and Repriced	29,744.1	424.9	15,517.9	13,801.3
3. Receipts at Standard	3,592.7	7.3	3,560.5	24.9
4. Sales at Standard	5,872.0	0.0	5,872.0	0.0
5. Inventory Adjustments	0.0	0.0	0.0	0.0
a. Capitalizations + or (-)	1,919.8	0.0	2,279.5	(359.7)
b. Returns From Customers for Credit +	470.6	0.5	305.2	164.9
c. Returns From Customers Without Credit	9,569.7	0.0	3,952.2	5,617.5
d. Returns to Suppliers (-)	(42.2)	0.0	(2.4)	(39.8)
e. Transfers to Property Disposal (-)	(3,266.7)	0.0	(5.0)	(3,261.7)
f. Issues/Receipts without Reimbursement +/-	(254.7)	0.0	(36.9)	(217.8)
g. Other (list/explain)	(5,547.5)	0.0	(4,742.4)	(805.1)
h. Total Adjustments	2,849.0	0.5	1,750.2	1,098.3
6. Inventory EOP	30,313.8	432.7	14,956.6	14,924.5
7. Inventory EOP, Revalued (LAC,Discounted)	17,075.7	315.0	10,137.8	6,622.9
a. Approved Acquisition Objective (memo)	0.0	0.0	0.0	3,816.4
b. Economic Retention (memo)	0.0	0.0	0.0	1,815.6
c. Contingency Retention (memo)	0.0	0.0	0.0	896.1
d. Potential DoD Reutilization (memo)	0.0	0.0	0.0	94.8
8. Inventory on Order EOP (memo)	2,301.2	2.2	2,122.9	5.8

9. Narrative

Other adjustments (line 5g):	TOTAL	MOBILIZATION	OPERATING	OTHER
Other Gains/Losses	(19.8)	0.0	(93.8)	74.0
Strata Transfers	0.0	0.0	879.1	(879.1)
Net/Standard Difference	(5,527.8)	0.0	(5,527.8)	0.0
Total	(5,547.6)	0.0	(4,742.5)	(805.1)

FUND-15
SUPPLY MANAGEMENT - DON
FUEL DATA
(Dollars in Millions)
FY 1995

PRODUCT	-----PROCURED FROM DFSC----- Barrels	U/P	Ext Cost	-----PROCURED BY SERVICE---- Barrels	U/P	Ext Cost	STABILIZED PRICE
JP5	14.9	$30.66	$457.9	0.0	$0.00	$0.0	$30.66
JP4	0.0	$0.00	$0.0	0.0	$0.00	$0.0	$0.00
Propane	0.0	$0.00	$0.0	0.0	$0.78	$0.0	$0.00
AVGAS	0.0	$88.62	$0.2	0.0			$88.62
Distillates	15.1	$28.56	$430.0	1.6	$26.61	$42.8	$28.56
MOGAS Lead	0.0	$35.28	$0.0	0.0	$0.00	$0.0	$35.28
MOGAS Unlead	0.2	$28.56	$4.7	0.0	$27.13	$0.2	$28.56
Residual	1.5	$17.64	$25.8	0.2	$12.27	$2.3	$17.64
Bunker "C"	0.0	$16.01	$0.0	3.1	$12.27	$38.3	$16.01
Kerosene	0.0	$28.56	$0.0	0.0	$76.44	$0.0	$28.56
Lube Oil	0.0	$94.08	$0.7	0.0	$0.00	$0.0	$94.08
Coal	0.0	$52.20	$2.2	0.0	$0.00	$0.0	$52.20
Diesel	0.2	$28.56	$5.6	0.0	$0.00	$0.0	$28.56
Reclaimed	0.2	$17.22	$3.5	0.0			$17.22
TOTAL	32.1		$930.6	4.9		$83.7	
			Total Obligations	$1,014.3			

FUND-15
SUPPLY MANAGEMENT - DON
FUEL DATA
(Dollars in Millions)
FY 1996

PRODUCT	-----PROCURED FROM DFSC----- Barrels	U/P	Ext Cost	-----PROCURED BY SERVICE---- Barrels	U/P	Ext Cost	STABILIZED PRICE
JP5	15.6	$32.76	$510.8	0.0	$0.00	$0.0	$32.76
JP4	0.0	$0.00	$0.0	0.0	$0.00	$0.0	$0.00
Propane	0.0	$0.00	$0.0	0.0	$0.78	$0.0	$0.00
AVGAS	0.0	$94.92	$0.2	0.0			$94.92
Distillates	17.4	$30.66	$534.1	0.0	$0.00	$0.0	$30.66
MOGAS Lead	0.0	$37.80	$0.1	0.0	$0.00	$0.0	$37.80
MOGAS Unlead	0.2	$30.66	$4.8	0.0	$28.79	$0.3	$30.66
Residual	1.6	$18.48	$29.1	0.2	$13.02	$2.6	$18.48
Kerosene	0.0	$30.66	$0.0	0.0	$76.44	$0.0	$30.66
Lube Oil	0.0	$101.01	$0.7	0.0	$0.00	$0.0	$101.01
C[illegible]	0.0	$52.20	$1.9	0.0	$0.00	$0.0	$52.20
Diesel	0.2	$28.56	$5.9	0.0	$0.00	$0.0	$28.56
Reclaimed	.2	$18.90	$4.0	0.0			$18.90
TOTAL	35.2		$1,091.6	0.2		$2.9	
			Total Obligations	$1,094.6			

FUND-15
SUPPLY MANAGEMENT - DON
FUEL DATA
(Dollars in Millions)
FY 1997

PRODUCT	-----PROCURED FROM DFSC----- Barrels	U/P	Ext Cost	-----PROCURED BY SERVICE---- Barrels	U/P	Ext Cost	STABILIZED PRICE
JP5	14.5	$33.18	$480.9	0.0	$0.00	$0.0	$33.18
JP4	0.0	$0.00	$0.0	0.0	$0.00	$0.0	$0.00
Propane	0.0	$0.00	$0.0	0.0	$0.78	$0.0	$0.00
AVGAS	0.0	$99.12	$0.2	0.0			$99.12
Distillates	16.2	$31.08	$503.1	0.0	$0.00	$0.0	$31.08
MOGAS Lead	0.0	$38.22	$0.1	0.0	$0.00	$0.0	$38.22
MOGAS Unlead	0.2	$31.08	$4.7	0.0	$29.16	$0.2	$31.08
Residual	1.5	$18.90	$27.5	0.2	$13.19	$2.5	$18.90
Kerosene	0.0	$31.08	$0.0	0.0	$76.44	$0.0	$31.08
Lube Oil	0.0	$102.48	$0.7	0.0	$0.00	$0.0	$102.48
Coal	0.0	$52.20	$1.9	0.0	$0.00	$0.0	$52.20
Diesel	0.2	$28.98	$6.1	0.0	$0.00	$0.0	$28.98
Reclaimed	0.2	$19.32	$3.6	0.0			$19.32
TOTAL	32.7		$1,028.8	0.2		$2.7	
			Total Obligations	$1,031.5			

SM - 1
FY 1995 BUDGET
DEPARTMENT OF THE NAVY SUPPLY MANAGEMENT BY DIVISION
(Dollars in Millions)

DIVISION	PEACETIME INVENTORY	NET CUSTOMER ORDERS	NET SALES	OBLIGATION TARGETS				COMMITMENT TARGET	TARGET TOTAL
				OPERATING	MOBILIZATION	OTHER	TOTAL OBLIGATIONS		
BP 14									
Approved	1,407.6	100.9	108.5	74.4	0.0	0.0	74.4	0.0	74.4
Request	1,249.1	122.8	145.4	74.4	0.0	0.0	74.4	0.0	74.4
Delta	(158.5)	21.9	36.9	0.0	0.0	0.0	0.0	0.0	0.0
BP 15									
Approved	20.2	10.4	10.4	11.3	0.0	0.0	11.3	0.0	11.3
Request	21.5	9.8	8.3	9.2	0.0	0.0	9.2	0.0	9.2
Delta	1.3	(0.6)	(2.1)	(2.1)	0.0	0.0	(2.1)	0.0	(2.1)
BP 21 - Total									
Approved	61.0	192.0	192.0	186.5	0.0	0.0	186.5	0.0	186.5
Request	71.4	195.4	195.4	184.2	0.0	0.0	184.2	0.0	184.2
Delta	10.4	3.4	3.4	(2.3)	0.0	0.0	(2.3)	0.0	(2.3)
BP 23									
Approved	58.5	57.1	57.1	33.4	0.0	0.0	33.4	0.0	33.4
Request	65.4	31.8	31.8	21.3	0.0	0.0	21.3	0.0	21.3
Delta	6.9	(25.3)	(25.3)	(12.1)	0.0	0.0	(12.1)	0.0	(12.1)
BP 25									
Approved	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0
Request	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delta	0.0	0.0	(1.0)	(1.0)	0.0	0.0	(1.0)	0.0	(1.0)
BP 28 - Total									
Approved	1,407.9	1,306.3	1,304.9	1,199.7	0.0	0.0	1,199.7	0.0	1,199.7
Request	1,583.8	1,158.7	1,161.6	1,145.9	0.0	0.0	1,145.9	0.0	1,145.9
Delta	175.9	(147.6)	(143.3)	(53.8)	0.0	0.0	(53.8)	0.0	(53.8)
BP 34									
Approved	1,882.9	641.2	621.8	308.7	0.0	0.0	308.7	0.0	308.7
Request	1,987.5	652.7	637.8	352.6	0.0	0.0	352.6	0.0	352.6
Delta	104.6	11.5	16.0	43.9	0.0	0.0	43.9	0.0	43.9
BP 38 - Total									
Approved	205.8	986.3	986.3	983.7	0.0	0.0	983.7	0.0	983.7
Request	187.8	1,064.5	1,064.5	1,014.3	0.0	0.0	1,014.3	0.0	1,014.3
Delta	(18.0)	78.2	78.2	30.6	0.0	0.0	30.6	0.0	30.6
BP 54									
Approved	42.8	12.3	12.8	2.0	0.0	0.0	2.0	0.0	2.0
Request	37.6	7.6	9.3	3.1	0.0	0.0	3.1	0.0	3.1
Delta	(5.2)	(4.7)	(3.5)	1.1	0.0	0.0	1.1	0.0	1.1
BP 81									
Approved	8,047.3	783.2	804.0	310.4	0.0	0.0	310.4	0.0	310.4
Request	8,272.3	760.2	726.4	352.4	0.0	0.0	352.4	0.0	352.4
Delta	225.0	(23.0)	(77.6)	42.0	0.0	0.0	42.0	0.0	42.0
			***Repair ----->	231.2					
BP 84									
Approved	382.6	44.7	52.2	41.9	0.0	0.0	41.9	0.0	41.9
Request	406.1	66.7	55.6	35.3	0.0	0.0	35.3	0.0	35.3
Delta	23.5	22.0	3.4	(6.6)	0.0	0.0	(6.6)	0.0	(6.6)
			***Repair ----->	8.3					
BP 85									
Approved	18,931.9	2,629.6	2,628.3	1,438.5	0.0	0.0	1,438.5	0.0	1,438.5
Request	20,919.1	2,613.8	2,562.0	1,207.8	0.0	0.0	1,207.8	0.0	1,207.8
Delta	1,987.2	(15.8)	(66.3)	(230.7)	0.0	0.0	(230.7)	0.0	(230.7)
			***Repair ----->	957.5					
BP 91- Total									
Approved				1,259.7			1,259.7		1,259.7
Request				1,298.4			1,298.4		1,298.4
Delta				(38.7)			(38.7)		(38.7)
GRAND TOTAL									
Approved	**32,448.5**	**6,764.0**	**6,779.3**	**5,851.2**	**0.0**	**0.0**	**5,851.2**	**0.0**	**5,851.2**
Request	**34,801.6**	**6,684.0**	**6,598.1**	**5,698.9**	**0.0**	**0.0**	**5,698.9**	**0.0**	**5,698.9**
Delta	**2,353.1**	**(80.0)**	**(181.2)**	**(152.3)**	**0.0**	**0.0**	**(152.3)**	**0.0**	**(152.3)**

SM - 1
FY 1996 BUDGET
DEPARTMENT OF THE NAVY SUPPLY MANAGEMENT BY DIVISION
(Dollars in Millions)

DIVISION	PEACETIME INVENTORY	NET CUSTOMER ORDERS	NET SALES	OBLIGATION TARGETS				COMMITMENT TARGET	TARGET TOTAL
				OPERATING	MOBILIZATION	OTHER	TOTAL OBLIGATIONS		
BP 14									
Approved	1,144.4	68.4	68.4	65.8	0.0	0.0	65.8	0.0	65.8
Request	949.3	79.4	81.4	68.0	0.0	0.0	68.0	0.0	68.0
Delta	(195.1)	11.0	13.0	2.2	0.0	0.0	2.2	0.0	2.2
BP 15									
Approved	17.5	10.2	10.2	10.9	0.0	0.0	10.9	0.0	10.9
Request	20.7	7.9	7.9	8.5	0.0	0.0	8.5	0.0	8.5
Delta	3.2	(2.3)	(2.3)	(2.4)	0.0	0.0	(2.4)	0.0	(2.4)
BP 21 - Total									
Approved	58.6	192.7	192.7	187.8	0.0	0.0	187.8	0.0	187.8
Request	69.7	154.8	154.8	147.4	0.0	0.0	147.4	0.0	147.4
Delta	11.1	(37.9)	(37.9)	(40.4)	0.0	0.0	(40.4)	0.0	(40.4)
BP 23									
Approved	50.1	49.0	49.0	38.6	0.0	0.0	38.6	0.0	38.6
Request	58.0	37.0	37.0	28.9	0.0	0.0	28.9	0.0	28.9
Delta	7.9	(12.0)	(12.0)	(9.7)	0.0	0.0	(9.7)	0.0	(9.7)
BP 25									
Approved	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0
Request	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0
Delta	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BP 28 - Total									
Approved	1,149.2	1,192.5	1,190.9	1,117.7	0.0	0.0	1,117.7	0.0	1,117.7
Request	1,441.6	1,008.0	1,013.2	957.0	0.0	0.0	957.0	0.0	957.0
Delta	292.4	(184.5)	(177.7)	(160.7)	0.0	0.0	(160.7)	0.0	(160.7)
BP 34									
Approved	1,223.6	244.0	273.1	187.9	0.0	0.0	187.9	0.0	187.9
Request	944.7	324.0	368.4	281.6	0.0	0.0	281.6	0.0	281.6
Delta	(278.9)	80.0	95.3	93.7	0.0	0.0	93.7	0.0	93.7
BP 38 - Total									
Approved	215.2	994.5	994.5	1,005.5	0.0	0.0	1,005.5	0.0	1,005.5
Request	216.6	1,074.7	1,074.7	1,094.6	0.0	0.0	1,094.6	0.0	1,094.6
Delta	1.4	80.2	80.2	89.1	0.0	0.0	89.1	0.0	89.1
BP 54									
Approved	29.6	12.2	12.4	2.0	0.0	0.0	2.0	0.0	2.0
Request	25.6	11.0	10.4	3.9	0.0	0.0	3.9	0.0	3.9
Delta	(4.0)	(1.2)	(2.0)	1.9	0.0	0.0	1.9	0.0	1.9
BP 81									
Approved	5,670.1	503.5	503.5	314.7	0.0	0.0	314.7	0.0	314.7
Request	5,147.1	537.0	537.0	382.1	0.0	0.0	382.1	0.0	382.1
Delta	(523.0)	33.5	33.5	67.4	0.0	0.0	67.4	0.0	67.4
			***Repair ---->	187.4					
BP 84									
Approved	329.9	53.9	58.1	41.4	0.0	0.0	41.4	0.0	41.4
Request	288.0	48.9	54.5	33.3	0.0	0.0	33.3	0.0	33.3
Delta	(41.9)	(5.0)	(3.6)	(8.1)	0.0	0.0	(8.1)	0.0	(8.1)
			***Repair ---->	11.6					
BP 85									
Approved	13,516.6	1,979.3	2,138.5	1,363.1	0.0	0.0	1,363.1	0.0	1,363.1
Request	18,883.1	1,814.6	2,110.4	1,342.4	0.0	0.0	1,342.4	0.0	1,342.4
Delta	5,366.5	(164.7)	(28.1)	(20.7)	0.0	0.0	(20.7)	0.0	(20.7)
			***Repair ---->	974.8					
BP 91- Total									
Approved				1,080.7			1,080.7		1,080.7
Request				1,061.7			1,061.7		1,061.7
Delta				(19.0)			(19.0)		(19.0)
GRAND TOTAL									
Approved	**23,404.8**	**5,300.2**	**5,492.3**	**5,417.1**	**0.0**	**0.0**	**5,417.1**	**0.0**	**5,417.1**
Request	**28,044.4**	**5,097.3**	**5,450.7**	**5,410.4**	**0.0**	**0.0**	**5,410.4**	**0.0**	**5,410.4**
Delta	**4,639.6**	**(202.9)**	**(41.6)**	**(6.7)**	**0.0**	**0.0**	**(6.7)**	**0.0**	**(6.7)**

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FY 1997 BUDGET
DEPARTMENT OF THE NAVY SUPPLY MANAGEMENT BY DIVISION
(Dollars in Millions)

DIVISION	PEACETIME INVENTORY	NET CUSTOMER ORDERS	NET SALES	OBLIGATION TARGETS				COMMITMENT TARGET	TARGET TOTAL	CREDIT SALES
				OPERATING	MOBILIZATION	OTHER	TOTAL OBLIGATIONS			
BP 14										
Approved	1,248.9	82.0	82.0	80.6	0.0	0.0	80.6	0.0	80.6	4.9
Request	1,092.0	79.2	78.5	48.7	0.0	0.0	48.7	0.0	48.7	5.9
Delta	(156.9)	(2.8)	(3.5)	(31.9)	0.0	0.0	(31.9)	0.0	(31.9)	1.0
BP 15										
Approved	14.5	9.9	9.9	10.4	0.0	0.0	10.4	0.0	10.4	0.0
Request	20.2	7.7	7.7	8.1	0.0	0.0	8.1	0.0	8.1	0.0
Delta	5.7	(2.2)	(2.2)	(2.3)	0.0	0.0	(2.3)	0.0	(2.3)	0.0
BP 21 - Total										
Approved	58.4	191.7	191.7	188.1	0.0	0.0	188.1	0.0	188.1	0.0
Request	66.2	126.8	126.8	123.8	0.0	0.0	123.8	0.0	123.8	0.0
Delta	7.8	(64.9)	(64.9)	(64.3)	0.0	0.0	(64.3)	0.0	(64.3)	0.0
BP 23										
Approved	35.8	51.9	51.9	39.0	0.0	0.0	39.0	0.0	39.0	0.0
Request	50.4	33.2	33.2	24.9	0.0	0.0	24.9	0.0	24.9	0.0
Delta	14.6	(18.7)	(18.7)	(14.1)	0.0	0.0	(14.1)	0.0	(14.1)	0.0
BP 25										
Approved	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0
Request	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0
Delta	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BP 28 - Total										
Approved	1,059.5	1,128.2	1,128.0	1,064.0	0.0	0.0	1,064.0	0.0	1,064.0	17.5
Request	1,375.3	1,031.6	1,031.3	1,008.0	0.0	0.0	1,008.0	0.0	1,008.0	18.6
Delta	315.8	(96.6)	(96.7)	(56.0)	0.0	0.0	(56.0)	0.0	(56.0)	1.1
BP 34										
Approved	1,257.0	273.2	264.4	185.2	0.0	0.0	185.2	0.0	185.2	13.9
Request	408.6	306.9	289.8	198.1	0.0	0.0	198.1	0.0	198.1	15.5
Delta	(848.4)	33.7	25.4	12.9	0.0	0.0	12.9	0.0	12.9	1.6
BP 38 - Total										
Approved	221.7	958.1	958.1	960.9	0.0	0.0	960.9	0.0	960.9	1.4
Request	140.9	1,036.2	1,036.2	1,031.5	0.0	0.0	1,031.5	0.0	1,031.5	2.1
Delta	(80.8)	78.1	78.1	70.6	0.0	0.0	70.6	0.0	70.6	0.7
BP 54										
Approved	22.2	9.9	10.0	2.0	0.0	0.0	2.0	0.0	2.0	0.1
Request	21.9	4.5	4.4	3.4	0.0	0.0	3.4	0.0	3.4	0.1
Delta	(0.3)	(5.4)	(5.6)	1.4	0.0	0.0	1.4	0.0	1.4	0.0
BP 81										
Approved	5,878.9	611.1	611.1	294.0	0.0	0.0	294.0	0.0	294.0	46.1
Request	5,176.5	561.1	556.2	347.6	0.0	0.0	347.6	0.0	347.6	66.5
Delta	(702.4)	(50.0)	(54.9)	53.6	0.0	0.0	53.6	0.0	53.6	20.4
			***Repair ---->	201.0						
BP 84										
Approved	312.4	50.1	50.1	37.4	0.0	0.0	37.4	0.0	37.4	0.8
Request	255.5	58.5	54.2	26.1	0.0	0.0	26.1	0.0	26.1	0.8
Delta	(56.9)	8.4	4.1	(11.3)	0.0	0.0	(11.3)	0.0	(11.3)	0.0
			***Repair ---->	11.9						
BP 85										
Approved	13,545.0	2,204.6	2,199.0	1,222.7	0.0	0.0	1,222.7	0.0	1,222.7	347.3
Request	21,273.6	2,229.1	2,182.1	1,104.5	0.0	0.0	1,104.5	0.0	1,104.5	361.1
Delta	7,728.6	24.5	(16.9)	(118.2)	0.0	0.0	(118.2)	0.0	(118.2)	13.8
			***Repair ---->	815.4						
BP 91- Total										
Approved				1,063.5			1,063.5		1,063.5	
Request				1,035.9			1,035.9		1,035.9	
Delta				27.6			27.6		27.6	
GRAND TOTAL										
Approved	**23,654.3**	**5,570.7**	**5,557.2**	**5,148.8**	**0.0**	**0.0**	**5,148.8**	**0.0**	**5,148.8**	**432.0**
Request	**29,881.1**	**5,474.8**	**5,401.4**	**4,961.6**	**0.0**	**0.0**	**4,961.6**	**0.0**	**4,961.6**	**470.6**
Delta	**6,226.8**	**(95.9)**	**(155.8)**	**(187.2)**	**0.0**	**0.0**	**(187.2)**	**0.0**	**(187.2)**	**38.6**

OPERATING REQUIREMENT
NAVY SUPPLY MANAGEMENT
SHIPBOARD CONSUMABLES
FY 1996
(Dollars in Millions)

SM-3B

WEAPON SYSTEM	BASIC REPLEN	OUTFITS	SPECIAL PROGRAMS	BASIC REWORK	TOTAL
Aegis	0.2				0.2
Air Cond, Ref, Life Support Sys	0.1				0.1
Air/Air Missiles	1.6				1.6
AN/BQQ-5&6 Sonar	1.5				1.5
Aviation Guns	0.1				0.1
Base, Mobile + LOX	0.2				0.2
CIWS, MK-16 Phalanx	2.5		3.2		5.7
Crypto	0.1				0.1
Damage Control	4.5				4.5
Deck Repln & Weap Hdlng Equip	0.1				0.1
DSSP	0.3	0.3			0.6
EEBD Replacement			11.6		11.6
Electric Power Dist	0.3				0.3
EOD, Diving, Spec Warfare	1.5				1.5
ESM System	0.6				0.6
Gages	0.1				0.1
Gun Mount 5"/54	1.5				1.5
Guns	0.1				0.1
Harpoon Missile	0.1				0.1
Internal Com AN/UNQ-7	0.2				0.2
LM 2500	0.1				0.1
Mines/Mineweeping Equip	0.6				0.6
Misc Low $ Programs		0.2	2.1		2.3
Misc Test Equip	0.6				0.6
MK 46 Torpedo	0.5				0.5
MK 48 Torpedo	0.7				0.7
MK 50 Torpedo	0.1				0.1
MK 75 Gun Mount	0.2				0.2
NATO SeaSparrow	0.1				0.1
Navigation (Electronic)	0.1				0.1
Navigational Conventional	0.1				0.1
Nuclear	25.7	9.3			35.0
Ordnance Handling	0.3				0.3
Periscope	0.2				0.2
PHM	0.1				0.1
Pumps, Compressors, Bearings	0.2				0.2
Radiac	0.1				0.1
Ship Boilers	0.3				0.3
Ship Communications	0.1				0.1
Ship Habitability	0.4				0.4
Shore Communications	0.1				0.1
SLQ-32 Outboard Launcher	0.1				0.1
Steam Turbine Generators	0.1				0.1
Sub Armament & Elec	0.1				0.1
Sub Aux System	1.1				1.1

OPERATING REQUIREMENT
NAVY SUPPLY MANAGEMENT
SHIPBOARD CONSUMABLES
FY 1996
(Dollars in Millions)

SM-3B

Continued

WEAPON SYSTEM	BASIC REPLEN	OUTFITS	SPECIAL PROGRAMS	BASIC REWORK	TOTAL
Sub Comm & Data Pro	1.1				1.1
Sub Propulsion	0.3				0.3
Sub Ship Control Equip	0.3				0.3
Submarine Ventilation	0.1				0.1
Subsafe Level 1	8.6				8.6
SVTT MK 32	0.1				0.1
SWS Code 84	0.1				0.1
Valves	1.7				1.7
WSC-3	0.4				0.4
Gross Requirement	60.3	9.8	16.9	0.0	87.0
DMR 971 Program Adj.	-13.8				-13.8
< $3M Deduct			-2.2		-2.2
Asset Offset		-2.4			-2.4
Credit Mods	-1.9	-0.3	-0.6		-2.8
BOSS	-1.8	-0.5	-0.7		-3.0
Contract Terminations	-0.6	-0.1	-0.2		-0.9
Unfunded	0.2		-0.3		-0.1
Subtotal	42.4	6.5	12.9	0.0	61.8
Provisioning Sell down					2.0
FOO					0.5
Initial					3.7
TOTAL					68.0

OPERATING REQUIREMENT
NAVY SUPPLY MANAGEMENT
SHIPBOARD CONSUMABLES
FY 1997
(Dollars in Millions)

SM-3B

WEAPON SYSTEM	BASIC REPLEN	OUTFITS	SPECIAL PROGRAMS	BASIC REWORK	TOTAL
Advanced Seal Delivery System		0.4			0.4
Aegis	0.2	0.3			0.5
Air Cond, Ref, Life Support Sys	0.1				0.1
Air/Air Missiles	1.3				1.3
AN/BQQ-5&6 Sonar	1.3				1.3
AN/SLQ-32	0.1				0.1
AN/WSC-3	0.3				0.3
Aviation Guns	0.1				0.1
Base, Mobile + LOX	0.2				0.2
CIWS, MK-16 Phalanx	2.1				2.1
Crypto	0.1				0.1
Damage Control	3.8		4.2		8.0
Deck Repln & Weap Hdlng Equip	0.1				0.1
DSSP	0.2	0.4			0.6
Electric Power Dist	0.2				0.2
EOD, Diving, Spec Warfare	1.3				1.3
ESM System	0.5				0.5
Gages	0.1				0.1
Gun Mount 5"/54	1.3				1.3
Guns	0.1				0.1
Harpoon Missile	0.1				0.1
Internal Com AN/UNQ-7	0.2				0.2
LM 2500	0.1				0.1
Mines/Minesweeping Equip	0.5				0.5
Misc Low $ Programs			3.3		3.3
Misc Test Equip	0.5				0.5
MK 46 Torpedo	0.4				0.4
MK 48 Torpedo	0.6				0.6
MK 50 Torpedo	0.1				0.1
MK 75 Gun Mount	0.2				0.2
NATO SeaSparrow	0.1				0.1
Navigation (Electronic)	0.1				0.1
Navigational Conventional	0.1				0.1
Nuclear	21.8	9.2			31.0
Ordnance Handling	0.2				0.2
Periscope	0.2				0.2
PHM	0.1				0.1
Pumps, Compressors, Bearings	0.2				0.2
Radiac	0.1				0.1
Ship Boilers	0.2				0.2
Ship Communications	0.1				0.1
Ship Habitability	0.3				0.3
Shore Communications	0.1				0.1
Steam Turbine Generators	0.1				0.1
Sub Armament & Elec	0.1				0.1

OPERATING REQUIREMENT
NAVY SUPPLY MANAGEMENT
SHIPBOARD CONSUMABLES
FY 1997
(Dollars in Millions)

SM-3B

Continued

WEAPON SYSTEM	BASIC REPLEN	OUTFITS	SPECIAL PROGRAMS	BASIC REWORK	TOTAL
Sub Aux System	0.9				0.9
Sub Comm & Data Pro	0.9				0.9
Sub Propulsion	0.2				0.2
Sub Ship Control Equip	0.3				0.3
Submarine Ventilation	0.1				0.1
Subsafe Level 1	7.3				7.3
SVTT MK 32	0.1				0.1
SWS Code 84	0.1				0.1
Valves	1.4				1.4
					0.0
Gross Requirement	51.2	10.3	7.5	0.0	69.0
DMR 971 Program Adj.	-6.6	-1.7	-0.7		-9.0
< $3M Deduct			-3.3		-3.3
Asset Offset		-2.1			-2.1
Credit Mods	-0.7	-0.1	-0.1		-0.9
BOSS	-1.7	-0.5	-0.2		-2.4
Contract Terminations	-0.7	-0.1	-0.1		-0.9
Unfunded	-5.2				-5.2
Subtotal	36.3	5.8	3.1	0	45.2
Provisioning Sell down					1.3
Initial					2.9
Price Change					-0.7
TOTAL					48.7

OPERATING REQUIREMENT
NAVY SUPPLY MANAGEMENT
AVIATION CONSUMABLES
FY 1996
(Dollars in Millions)

SM-3B

WEAPON SYSTEM	BASIC REPLEN	OUTFITS	SPECIAL PROGRAMS	BASIC REWORK	TOTAL
A-4	1.2				1.2
Support Equipment	29.8				29.8
Training Devices	0.1				0.1
Helos	84.8		19.1		103.9
F-14	30.1				30.1
P-3	15.2		3.2		18.4
S-3	8.3		2.0		10.3
A-6/EA-6	0.1		1.9		2.0
E-2/C-2	12.3				12.3
AV-8	11.5				11.5
F/A-18	52.9		106.0		158.9
CAT & Arresting Gear	9.0				9.0
Other	6.0		4.0		10.0
Terminations/Credit Mods					-37.5
Consumable Item Transfer					-50.8
DMR Savings					-40.7
Long Term Contracting					-7.1
TOTAL	261.3	0.0	136.2	0.0	261.4
System Stock: Initial/Follow-on					20.2
Operating Requirement					281.6

OPERATING REQUIREMENT
NAVY SUPPLY MANAGEMENT
AVIATION CONSUMABLES
FY 1997
(Dollars in Millions)

SM-3B

WEAPON SYSTEM	BASIC REPLEN	OUTFITS	SPECIAL PROGRAMS	BASIC REWORK	TOTAL
A-4	1.3				1.3
Support Equipment	31.8				31.8
Training Devices	0.1				0.1
Helos	90.7		11.0		101.7
F-14	32.2				32.2
P-3	16.3				16.3
S-3	8.9				8.9
A-6/EA-6	0.1		1.5		1.6
E-2/C-2	13.1				13.1
AV-8	12.3				12.3
F/A-18	56.6		106.0		162.6
CAT & Arresting Gear	9.6				9.6
Other	3.2		4.0		7.2
Terminations/Credit Mods					-27.7
Consumable Item Transfer					-146.4
DMR Savings					-35.6
Long Term Contracting					-2
TOTAL	276.2	0.0	122.5	0.0	187.0
System Stock: Initial/Follow-on					11.1
Operating Requirement					198.1

OPERATING REQUIREMENT
MARINE CORPS SUPPLY MANAGEMENT
AMPHIBIOUS SUPPLIES
FY 1996
(Dollars in Millions)

SM-3B

WEAPON SYSTEM	BASIC REPLEN	OUTFITS	SPECIAL PROGRAMS	BASIC REWORK	TOTAL
Recurring Demands	0.3				0.3
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
TOTAL ORDNANCE TANK AUTOMOTIVE	0.3	0.0	0.0	0.0	0.3
Mod Kits (NONTEL)		0.3			0.3
Recurring Demands	0.3				0.3
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
TOTAL COMMUNICATION AND ELECTRONICS	0.3	0.3	0.0	0.0	0.6
Recurring Demands (Bulk Fuel Components)	2.4				2.4
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
TOTAL ENGINEER SUPPORT AND CONSTRUCTION	2.4	0.0	0.0	0.0	2.4
Recurring Demands	0.5				0.5
Transportation	0.1				0.1
					0.0
					0.0
					0.0
					0.0
					0.0
TOTAL GENERAL PROPERTY	0.6	0.0	0.0	0.0	0.6
TOTAL	3.6	0.3	0.0	0.0	3.9

OPERATING REQUIREMENT
MARINE CORPS SUPPLY MANAGEMENT
AMPHIBIOUS SUPPLIES
FY
(Dollar Millions)

SM-3B

WEAPON SYSTEM	BASIC REPLEN	OUTSIDE	SPECIAL PROGRAMS	BASIC REWORK	TOTAL
Recurring Demands	0.2				0.2
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
TOTAL ORDNANCE TANK AUTOMOTIVE	0.2	0.0	0.0	0.0	0.2
Recurring Demands	0.3				0.3
Missile Modifications		0.6			0.6
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
TOTAL COMMUNICATION AND ELECTRONICS	0.3	0.6	0.0	0.0	0.9
Recurring Demands (Bulk Fuel Components)	1.8				1.8
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
TOTAL ENGINEER SUPPORT AND CONSTRUCTION	1.8	0.0	0.0	0.0	1.8
Recurring Demands	0.5				0.5
Transportation					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
TOTAL GENERAL PROPERTY	0.5	0.0	0.0	0.0	0.5
TOTAL	2.8	0.6	0.0	0.0	3.4

OPERATING REQUIREMENT
NAVY SUPPLY MANAGEMENT
SHIPBOARD REPARABLES
FY 1996
(Dollars in Millions)

SM-3B

WEAPON SYSTEM	BASIC REPLEN	OUTFITS	SPECIAL PROGRAMS	BASIC REWORK	TOTAL
.5 FLSIP+ COSAL			12.9		12.9
ACLS	0.9			1.6	2.5
Advance Signal Processor	0.1			0.4	0.5
Aegis	4.3	10.8		5.6	20.7
Air Cond, Ref, Life Support Sys	0.7			6.1	6.8
Aircraft Carrier Catapult Cover	0.0		10.3	3.3	13.6
Air/Air Missiles	0.1			0.7	0.8
Air/Ground Missiles	0.5			0.6	1.1
AN/BSY-1	1.1			0.6	1.7
AN/BSY-2	0.1			1.0	1.1
AN/PRC-114		0.2		0.0	0.2
AN/SPA-25G		0.1		0.0	0.1
AN/SLQ-25		0.1		0.0	0.1
AN/SPN-43		0.3		0.0	0.3
AN/SPS-40,10,29,37,43		0.0		0.9	0.9
AN/SPS-48	0.6	1.0		1.2	2.8
AN/SPS-55, 63 Radar		0.0		1.7	1.7
AN/SQQ-32/SQQ-30	1.2	3.9	9.5	2.7	17.3
AN/SQQ-89	0.1	1.0		0.9	2.0
AN/SRS-1		0.5		0.0	0.5
AN/UPX-34		0.4		0.0	0.4
AN/URC-107(V) 7 JTIDS		6.6		0.3	6.9
AN/USC-38 (V)	0.5	7.1		0.8	8.4
AN/USC-42		2.2		0.0	2.2
AN/USQ-101		0.8		0.0	0.8
AN/USQ-82(V)	0.5	0.8		0.5	1.8
AN/USQ-119		0.3		0.0	0.3
AN/UYA-4				1.4	1.4
AN/UYK-43(V) B		0.9		0.8	1.7
AN/UYK-44				0.4	0.4
AN/UYQ-21	0.2	0.8		0.4	1.4
AN/UYS-2A		0.1		0.0	0.1
AN/WLR-9B		0.1		0.0	0.1
Auto Digital Acquisition Subsys		1.4		0.0	1.4
Avionics	2.0	0.0		1.0	3.0
Commercial Depot GFM/Bleed Air		0.0		1.1	1.1
Bleed Air Valve				0.6	0.6
BQQ5 Sonar	0.3	0.1		3.5	3.9
Calibration Standards		4.5		0.0	4.5
CARPER			16.9	0.0	16.9
CEC		0.2		0.0	0.2
CFEE	0.1			1.2	1.3
CIWS	4.5	5.2	5.8	7.7	23.2
Code OOD	0.4			0.8	1.2
Common Computers	0.1			1.4	1.5

OPERATING REQUIREMENT
NAVY SUPPLY MANAGEMENT
SHIPBOARD REPARABLES
FY 1996
(Dollars in Millions)

SM-3B

Continued

WEAPON SYSTEM	BASIC REPLEN	OUTFITS	SPECIAL PROGRAMS	BASIC REWORK	TOTAL
Cryogenics & Mobile Facilities	0.1			0.0	0.1
Common Display Console		0.3		0.0	0.3
Crypto	0.1			1.0	1.1
Damage Control	0.9			1.3	2.2
Deck Repln & Weap Hdlng Equip	0.5			1.3	1.8
DSSP	0.8	1.4		1.4	3.6
Electric Power Dist	2.4			2.9	5.3
Electronic Surveillance	0.1			1.4	1.5
EOD, Diving, Spec Warfare	0.3			0.9	1.2
ESGN System	0.3			11.4	11.7
ESM System	1.9			5.5	7.4
ISOTTA Fraschini Depot Overhaul				0.4	0.4
Gages	0.1			0.0	0.1
GMLS MK 26	0.0	0.5		0.0	0.5
GPETE	0.7	12.5		0.8	14.0
Gun Mount 5"/54	0.3	0.3		0.3	0.9
Guns	0.5			0.2	0.7
Harpoon Missile	0.0			0.1	0.1
Helo Land System	2.8			1.2	4.0
ICSS 05122	0.4			0.3	0.7
LCAC Prop Depot Repair Parts	0.0			4.9	4.9
Internal Com AN/UNQ-7	0.2			1.5	1.7
JMCIS Backbone Hub	0.0	0.4		0.0	0.4
LM 2500	1.1			9.6	10.7
Lo-Mix	0.0		0.7	0.0	0.7
MATCS	0.2			1.2	1.4
Meteorological	0.3			1.3	1.6
Military Sealift Command	0.4			0.4	0.8
Mines/Minesweeping Equip	0.4	0.1		1.1	1.6
Misc SPAWAR	0.5			0.2	0.7
Misc 2D Radar	0.1			0.8	0.9
Misc Sub Sonar Equip	0.7			1.2	1.9
Misc Test Equip	0.1			0.6	0.7
ERQ	0.0			27.9	27.9
Miscellaneous	0.0	4.2	8.3	0.0	12.5
MK 8	0.0	0.2		0.0	0.2
MK 34	0.0	0.7		0.0	0.7
MK 45	0.0	0.6		0.0	0.6
MK 46 Torpedo	1.5			0.1	1.6
MK 48 Torpedo	2.4			8.6	11.0
MK 50 Torpedo	0.0			0.7	0.7
MK 75 Gun Mount	0.0	0.2		0.2	0.4
MK 86 GFCS	0.4			3.4	3.8
MK 92 GFCS	0.2			4.3	4.5
MK 92 Simulator	0.0			1.0	1.0

OPERATING REQUIREMENT
NAVY SUPPLY MANAGEMENT
SHIPBOARD REPARABLES
FY 1996
(Dollars in Millions)

SM-3B

Continued

WEAPON SYSTEM	BASIC REPLEN	OUTFITS	SPECIAL PROGRAMS	BASIC REWORK	TOTAL
FMS Repair/Replace	0.0			0.6	0.6
NATO SeaSparrow	0.2	0.6	2.5	4.3	7.6
Navigational Conventional	0.9			2.7	3.6
Navigation (Electronic)	0.6			6.5	7.1
NAVSTAR GPS	0.3			0.0	0.3
NCCS	0.0			0.5	0.5
NDI	0.0			0.3	0.3
Night Vision Devices	0.0	0.5		0.0	0.5
FMS Unique NICN/NIIN	0.0			0.1	0.1
Non FBM Navigation	0.1			1.0	1.1
Nuclear Support	1.8	0.9		0.5	3.2
Ocean Surveillance	0.0			0.2	0.2
OE-120/UPX	0.0	0.2		0.0	0.2
Ordnance Handling	0.2			0.1	0.3
Other Non Material	0.0		4.9	0.0	4.9
Other GFCS	0.1			0.0	0.1
Periscope	0.2			0.8	1.0
PHM	2.4			0.0	2.4
Props, Shaft Control	3.0			2.5	5.5
Pumps, Compressors, Bearings	2.1			5.1	7.2
Radiac	0.0			0.4	0.4
RAM	0.2	0.4		0.0	0.6
RD-358A	0.0			0.5	0.5
SATCOM	0.7	2.2		2.3	5.2
Ship Boilers	0.7			0.9	1.6
Ship Communications	0.7			2.5	3.2
Ship Diesel Engines	1.6			2.2	3.8
Ship Gas Turbines	1.6			4.7	6.3
Ship Habitability	0.0			0.1	0.1
SHIPALT	0.0		3.9	0.0	3.9
Shore Communications	0.2			0.1	0.3
SINS/DMINS	0.1			1.7	1.8
SLQ-32	0.0	1.4		2.4	3.8
Small Arms	0.0			1.5	1.5
SNAP 1	0.0			0.9	0.9
SNAP 2	0.0			0.7	0.7
SPG 51	0.0			0.2	0.2
SPG 55	0.1			0.0	0.1
SSN 688 CL VLS Outboard Cables	0.0	1.6		0.0	1.6
Steam Turbine Generators	5.9			0.6	6.5
Sub Armament & Elec	1.2			1.4	2.6
Sub Aux System	0.1			0.7	0.8
Sub Comm & Data Pro	1.0			4.6	5.6
Sub Propulsion	2.0			2.2	4.2
Sub Ship Control Equip	0.1			2.0	2.1

OPERATING REQUIREMENT
NAVY SUPPLY MANAGEMENT
SHIPBOARD REPARABLES
FY 1996
(Dollars in Millions)

SM-3B

Continued

WEAPON SYSTEM	BASIC REPLEN	OUTFITS	SPECIAL PROGRAMS	BASIC REWORK	TOTAL
Sub FCS	0.7			0.6	1.3
Sub Sonar	0.2			0.3	0.5
Submarine Ventilation	1.8			7.1	8.9
Subsafe Level 1	0.7			1.1	1.8
Surface ASW FCS	0.0			0.1	0.1
Sub EOG	0.0			0.6	0.6
Surface REWSON	0.2			0.4	0.6
Surface Sonar	0.1			0.5	0.6
SVTT MK 32	0.0			0.1	0.1
TAC 3	0.0	0.4		0.0	0.4
TAC 4	0.0	0.3		0.0	0.3
Tactical Display	0.2			0.9	1.1
TARTAR missile	1.2			0.8	2.0
TAS MK 23	0.0			0.9	0.9
TB-29/BQ Receiver	0.0	0.2		0.0	0.2
Teletype	0.0			0.4	0.4
Tomahawk	0.3	3.9		0.4	4.6
Unassigned Weapon Sys	0.0			1.5	1.5
URT-23	0.0			1.4	1.4
Valves	0.3			0.8	1.1
Vertical Launch	0.4	2.1		1.5	4.0
VSTOL Opt Land Sys MK 11 Mod	0.0	0.4		0.0	0.4
WSC-3	0.0			1.4	1.4
WSC-6	0.1			0.3	0.4
Gross Requirement	73.3	85.9	75.7	227.5	462.4
Contract Terminations	-3.3	-4.8	-4.0		-12.1
BOSS	-2.6	-4.3	-3.1		-10.0
< $3M Deduct			-11.9		-11.9
DMR 971/Program Adj.	-20.7				-20.7
Asset Offset		-11.0			-11.0
Credit Mods	-7.9	-12.0	-9.3	-10.0	-39.2
Unfunded	14.3		-11.0	7.4	10.7
Unfund ERQ				-37.5	-37.5
Subtotal	53.1	53.8	36.4	187.4	330.7
Provisioning Sell down					10.9
FOO					7.6
Initial					32.9
TOTAL					382.1

OPERATING REQUIREMENT
NAVY SUPPLY MANAGEMENT
SHIPBOARD REPARABLES
FY 1997
(Dollars in Millions)

SM-3B

WEAPON SYSTEM	BASIC REPLEN	OUTFITS	SPECIAL PROGRAMS	BASIC REWORK	TOTAL
.5 FLSIP+ COSAL			10.1		10.1
ACLS	0.7			1.7	2.4
Advance Signal Processor	0.2			0.5	0.7
Advance Seal Delivery Sys.	0.0	6.0		0.0	6.0
Aegis	2.6	11.1		7.0	20.7
Air Cond, Ref, Life Support Sys	0.3			4.1	4.4
Air/Air Missiles	0.1			0.7	0.8
Air/Ground Missiles	0.1			0.4	0.5
AN/BQQ-5/6 Sonar	0.0	0.7		0.0	0.7
AN/BST-1	0.0	0.3		0.0	0.3
AN/BSY-1	0.7			0.7	1.4
AN/BSY-2	0.6			1.0	1.6
AN/SLQ-20B	0.0	2.4		0.0	2.4
AN/SPQ-9	0.0	0.5		0.0	0.5
AN/SPS-40,10,29,37,43	0.2	0.0		1.2	1.4
AN/SPS-48	0.6	1.0		1.4	3.0
AN/SPS-55, 63 Radar	0.1	0.0		1.9	2.0
AN/SQQ-32/SQQ-30	1.0	1.6		2.5	5.1
AN/SQQ-89	0.6	0.9		1.2	2.7
AN/SQS-53	0.0	0.5		0.0	0.5
AN/SRS-1	0.0	0.2		0.0	0.2
AN/SYQ-18	0.0	1.6		0.0	1.6
AN/UPX-34	0.0	0.4		0.0	0.4
AN/URC-107(V) 7 JTIDS	0.0	2.8		0.0	2.8
AN/USC-38 (V)	0.4	14.3		0.6	15.3
AN/USC-42	0.0	2.3		0.0	2.3
AN/USQ-101	0.0	0.1		0.0	0.1
AN/USQ-119	0.0	0.3		0.0	0.3
AN/USQ-82(V)	0.2	0.3		0.3	0.8
AN/UYA-4	0.1	0.0		1.6	1.7
AN/UYK-43(V) B	0.2	0.9		0.9	2.0
AN/UYK-44	0.2	0.0		0.5	0.7
AN/UYQ-21	0.4	0.5		0.9	1.8
AN/UYS-2A	0.0	0.9		0.0	0.9
ANDVT, JTIDS	0.0	0.0		0.3	0.3
Auto Digital Acquisition Subsys	0.0	1.4		0.0	1.4
Aviation Guns	0.0	0.0		0.1	0.1
Avionics	1.6	0.0		1.3	2.9
Baseband Switch	0.0	0.5		0.0	0.5
Bleed Air Valve	0.1	0.0		0.5	0.6
BQQ5 Sonar	0.3	0.0		3.7	4.0
Calibration Standards	0.0	5.0		0.0	5.0
CARPER	0.0	0.0	34.2	0.0	34.2
CEC	0.0	0.2		0.0	0.2
CFEE	0.3			1.3	1.6

OPERATING REQUIREMENT
NAVY SUPPLY MANAGEMENT
SHIPBOARD REPARABLES
FY 1997
(Dollars in Millions)

SM-3B

Continued

WEAPON SYSTEM	BASIC REPLEN	OUTFITS	SPECIAL PROGRAMS	BASIC REWORK	TOTAL
CIWS	3.1	2.3	5.8	7.9	19.1
Code OOD	1.1	0.0		0.9	2.0
Common Computers	0.1	0.0		1.7	1.8
Common Display Console	0.0	0.1		0.0	0.1
Cryogenics & Mobile Facilities	0.0	0.1		0.0	0.1
Crypto	0.2	0.0		1.1	1.3
Damage Control	0.8	0.0		1.1	1.9
Deck Repln & Weap Hdlng Equip	3.2	0.0		1.4	4.6
DSSP	0.2	1.6		1.3	3.1
Electric Power Dist	1.1	0.0		2.7	3.8
Electronic Surveillance	0.3	0.0		1.4	1.7
EOD, Diving, Spec Warfare	0.4	0.0		0.8	1.2
ESGN System	0.1	0.0		11.4	11.5
ESM System	1.2	0.0		6.3	7.5
FMS Repair/Replace	0.0	0.0		1.2	1.2
GPETE	0.6	12.3		0.0	12.9
Gun Mount 5"/54	0.3	0.3		0.3	0.9
Guns	0.1	0.0		0.2	0.3
Harpoon Missile	0.0	0.0		0.1	0.1
Helo Land System	0.8	0.0		1.2	2.0
ICSS 05122	0.4	0.0		0.3	0.7
Integrated ESM Mast	0.0	3.1		0.0	3.1
Internal Com AN/UNQ-7	0.5	0.1		1.6	2.2
ISOTTA Fraschini Depot Overhaul	0.0	0.0		0.5	0.5
LCAC Prop Depot Repair Parts	0.0	0.0		4.8	4.8
LLLTV	0.0	0.2		0.0	0.2
LM 2500	1.5	0.0		10.2	11.7
Lo-Mix	0.0	0.0	0.6	0.0	0.6
MATCS	0.4	0.0		1.2	1.6
Meteorological	0.4	0.0		1.1	1.5
Military Sealift Command	0.2	0.0		0.4	0.6
Mines/Minesweeping Equip	0.7	0.1		1.1	1.9
Misc 2D Radar	0.1	0.0		0.9	1.0
Misc SPAWAR	1.4	0.0		0.2	1.6
Misc Sub Sonar Equip	0.4	0.0		1.4	1.8
Misc Test Equip	0.3	0.0		0.6	0.9
Miscellaneous	0.0	4.2	3.4	0.0	7.6
MK 105 Upgrade	0.0	1.0		0.0	1.0
MK 34	0.0	0.8		0.0	0.8
MK 45	0.0	0.4		0.0	0.4
MK 46 Torpedo	0.0	0.0		0.1	0.1
MK 48 Torpedo	2.6	0.0		9.0	11.6
MK 50 Torpedo	0.1	0.0		0.7	0.8
MK 68 GFCS	0.1	0.0		0.0	0.1
MK 75 Gun Mount	0.1	0.2		0.3	0.6

OPERATING REQUIREMENT
NAVY SUPPLY MANAGEMENT
SHIPBOARD REPARABLES
FY 1997
(Dollars in Millions)

SM-3B

Continued

WEAPON SYSTEM	BASIC REPLEN	OUTFITS	SPECIAL PROGRAMS	BASIC REWORK	TOTAL
MK 8	0.0	0.2		0.0	0.2
MK 86 GFCS	0.8	0.0		4.0	4.8
MK 92 GFCS	0.5	0.0		5.4	5.9
MK 92 Simulator	0.0			0.1	0.1
NATO SeaSparrow	0.1			5.0	5.1
Navigation (Electronic)	1.4			6.2	7.6
Navigational Conventional	0.6			2.9	3.5
NAVSTAR GPS	0.2			0.0	0.2
NCCS	0.0			0.4	0.4
NDI	0.0			0.3	0.3
Night Vision Devices	0.0	0.4	2.8	0.0	3.2
Non FBM Navigation	0.2	0.0		1.0	1.2
Nuclear Support	0.5	0.9		0.5	1.9
Ocean Surveillance	0.0	0.0		0.2	0.2
OE-120/UPX	0.0	0.2		0.0	0.2
Ordnance Handling	0.1	0.0		0.1	0.2
Other Non Material	0.0	0.0	5.2	0.0	5.2
Periscope	0.1	0.3		0.8	1.2
Props, Shaft Control	0.7	0.0		2.5	3.2
Pumps, Compressors, Bearings	1.0	0.0		5.1	6.1
Radiac	0.1	0.0		0.4	0.5
RAM	0.4	0.6		0.0	1.0
RD-358A	0.3	0.0		0.6	0.9
SATCOM	2.6	2.0		2.4	7.0
Ship Boilers	0.6			0.9	1.5
Ship Communications	1.5			3.0	4.5
Ship Diesel Engines	0.0			2.3	2.3
Ship Gas Turbines	2.1			4.7	6.8
Ship Habitability	0.0			0.1	0.1
SHIPALT	0.0		1.4	0.0	1.4
Shore Communications	0.6			0.2	0.8
SINS/DMINS	0.0			1.8	1.8
SLQ-32	0.2	0.9		2.8	3.9
Small Arms	0.0			1.6	1.6
SNAP 1	0.0			1.4	1.4
SNAP 2	0.0			0.9	0.9
SPG 51	0.0			0.4	0.4
SSDS MK1	0.0	1.2		0.0	1.2
SSN 688 CL VLS Outboard Cables	0.0	1.0		0.0	1.0
Steam Turbine Generators	0.7			0.5	1.2
Sub Armament & Elec	0.6			1.5	2.1
Sub Aux System	0.3			0.8	1.1
Sub Comm & Data Pro	0.4			4.7	5.1
Sub Propulsion	0.1			1.9	2.0
Sub Ship Control Equip	0.1			2.6	2.7

OPERATING REQUIREMENT
NAVY SUPPLY MANAGEMENT
SHIPBOARD REPARABLES
FY 1997
(Dollars in Millions)

SM-3B

Continue

WEAPON SYSTEM	BASIC REPLEN	OUTFITS	SPECIAL PROGRAMS	BASIC REWORK	TOTAL
Sub EOG	0.0			0.5	0.5
Sub FCS	0.0			0.6	0.6
Sub Sonar	0.1			0.2	0.3
Submarine Ventilation	0.3			7.0	7.3
Subsafe Leve	0.5			1.2	1.7
Surface ASW S	0.1			0.1	0.2
Surface REWSON	0.4			0.5	0.9
Surface Sonar	0.4			0.5	0.9
SVTT MK 32	0.1			0.1	0.2
TAC 3	0.0	0.7		0.0	0.7
TAC 4	0.0	0.3		0.0	0.3
Tactical Display	0.3			0.9	1.2
TARTAR missile	0.2			0.9	1.1
TAS MK 23	0.2			1.2	1.4
Teletype	0.0			0.4	0.4
Tomahawk	0.3			0.5	0.8
Unassigned Weapon Sys	0.0			3.3	3.3
URT-23	0.0			2.2	2.2
USQ-122	0.0	0.4		0.0	0.4
Valves	0.2	0.0		0.6	0.8
Vertical Launch	0.5	1.3		1.7	3.5
WSC-3	0.1	0.0		1.5	1.6
WSC-6	0.2			0.4	0.6
Gross Requirement	55.1	93.9	63.5	206.0	418.5
Contract Terminations	-3.6	-5.4	-4.2		-13.2
BOSS	-2.2	-4.0	-2.4		-8.6
< $3M Deduct			-6.4		-6.4
DMR 971/Program Adj.	-8.7	-15.6	-2.5		-26.8
Asset Offset		-13.6			-13.6
Credit Mods	-9.4	-13.9	-9.7	-5.0	-38.0
Unfunded	13.6		-1.5		12.1
Subtotal	44.8	41.4	36.8	201.0	324.0
Provisioning Sell down					5.6
FOC					2.0
Initial					19.7
Price Change					-3.7
TOTAL					347.6

OPERATING REQUIREMENT
MARINE CORPS SUPPLY MANAGEMENT
DEPOT LEVEL REPARABLES
FY 1996
(Dollars in Millions)

SM-3B

WEAPON SYSTEM	BASIC REPLEN	OUTFITS	SPECIAL PROGRAMS	BASIC REWORK	TOTAL
					0.0
LAV PIP		0.5			0.5
Logistics Vehicle System (LVS)		0.2			0.2
Basic Replen/Rework	0.8			6.2	7.0
					0.0
					0.0
					0.0
TOTAL ORDNANCE TANK AUTOMOTIVE	0.8	0.7	0.0	6.2	7.7
Pedestal Mounted Stinger		0.1			0.1
					0.0
					0.0
					0.0
					0.0
TOTAL GUIDED MISSILES AND EQUIPMENT	0.0	0.1	0.0	0.0	0.1
TSC-96 PIP Fleet Satellite Comm Term		0.2			0.2
Unit Level Circuit Switch		0.3			0.3
Joint Tactical Inf. Dist System		2.5			2.5
SINCGARS Radio System		1.1			1.1
Tactical Air Operation Module (TAOM)		0.1			0.1
Advanced Tactical Air Command Control		1.1			1.1
Marine Tactical Command and Control System		2.0			2.0
Joint Service Imagery Processing System		2.1			2.1
Meteorological Systems		0.9			0.9
Intelligence Support Equipment		7.0			7.0
Modification Kits (INTEL)		0.8			0.8
Night Vision Equipment		0.5			0.5
Modification Kits (NON-TEL)		1.0			1.0
Basic Replen/Rework	0.2			5.1	5.3
TOTAL COMMUNICATION AND ELECTRONICS	0.2	19.6	0.0	5.1	24.9
Engineer Support Tractor		0.1			0.1
Container Handler		0.1			0.1
Basic Replen/Rework				0.3	0.3
					0.0
TOTAL ENGINEER SUPPORT AND CONTRUCTION	0.0	0.2	0.0	0.3	0.5
Transportation	0.1				0.1
					0.0
TOTAL GENERAL PROPERTY	0.1	0.0	0.0	0.0	0.1
TOTAL	1.1	20.6	0.0	11.6	33.3

OPERATING REQUIREMENT
MARINE CORPS SUPPLY MANAGEMENT
DEPOT LEVEL REPARABLES
FY 1997
(Dollars in Millions)

SM-3B

WEAPON SYSTEM	BASIC REPLEN	OUTFITS	SPECIAL PROGRAMS	BASIC REWORK	TOTAL
LAV PIP		0.3			0.3
Logistics Vehicle System (LVS)		0.2			0.2
Modification Kits	0.0	0.1		0.0	0.1
Basic Replen/Rework	0.7			6.5	7.2
					0.0
					0.0
					0.0
TOTAL ORDNANCE TANK AUTOMOTIVE	0.7	0.6	0.0	6.5	7.8
Hawk Mod		0.9			0.9
JAVELIN		0.1			0.1
Missile Mod		1.7			1.7
					0.0
					0.0
					0.0
					0.0
TOTAL GUIDED MISSILES AND EQUIPMENT	0.0	2.7	0.0	0.0	2.7
MANPACK Radios and Equipment		0.7			0.7
TSC-96 PIP Fleet Sat Comm Term		0.1			0.1
Joint Tactical Info Dist. System		0.9			0.9
Tactical Air Operations Module		0.1			0.1
Tact Combat Ops System		0.2			0.2
Intelligence Support Equipment		3.3			3.3
Modification Kits (NON-TEL)		1.0			1.0
Night Vision Equipment		0.3			0.3
Modification Kits (INTEL)		1.8			1.8
Vehicle MTD. Radios and Equipment		0.9			0.9
Firefinder Radar Upgrade		0.5			0.5
Marine Tactical Command and Control System		0.1			0.1
Basic Replen/Rework	0.2			5.1	5.3
					0.0
TOTAL COMMUNICATION AND ELECTRONICS	0.2	9.9	0.0	5.1	15.2
Basic Replen/Rework				0.3	0.3
					0.0
					0.0
TOTAL ENGINEER SUPPORT CONSTRUCTION	0.0	0.0		0.3	0.3
Transportation	0.1	0.0		0.0	0.1
					0.0
TOTAL GENERAL PROPERTY	0.1	0.0		0.0	0.1
TOTAL	1.0	13.2	0.0	11.9	26.1

OPERATING REQUIREMENT
NAVY SUPPLY MANAGEMENT
AVIATION REPARABLES
FY 1996
(Dollars in Millions)

SM-3B

WEAPON SYSTEM	BASIC REPLEN	OUTFITS	SPECIAL PROGRAMS	BASIC REWORK	TOTAL
A-4	1.2				1.2
Support Equipment	2.2	30.9			33.1
Helos	37.1	17.0	13.4		67.5
F-14	16.9	12.8	8.4		38.1
P-3	9.8	0.2	0.9		10.9
S-3	8.2	6.6	6.5		21.3
A-6/EA-6	6.2	13.4			19.6
E-2/C-2	7.2	10.0			17.2
AV-8	6.5	76.7			83.2
F/A-18	37.4	130.4	22.1		189.9
Other	9.0	124.4	8.8		142.2
Terminations/Credit Mods					-74.4
DMR Savings					-212.4
TOTAL	141.7	422.4	60.1	0.0	337.4
System Stock: Initial/Follow-on					30.2
Repair					974.8
Operating Requirement					1342.4

OPERATING REQUIREMENT
NAVY SUPPLY MANAGEMENT
AVIATION REPARABLES
FY 1997
(Dollars in Millions)

SM-3B

WEAPON SYSTEM	BASIC REPLEN	OUTFITS	SPECIAL PROGRAMS	BASIC REWORK	TOTAL
A-4	1.8				1.8
Support Equipment	3.8	22.0			25.8
F-[illegible]os	63.0	54.1	4.6		121.7
F-4	27.5	10.6	5.4		43.5
P-3	16.3	0.3			16.6
S-3	14.7	5.2	7.3		27.2
A-6/EA-6	8.0	7.1			15.1
E-2/C-2	12.4	7.6			20.0
AV-8	11.1				11.1
F/A-18	65.3	31.7	22.2		119.2
Other	2.3	73.5	8.8		84.6
Terminations/Credit Mods					-58.2
DMR Savings					-151.4
TOTAL	226.2	212.1	48.3	0.0	277.0
System Stock: Initial/Follow-on					12.1
Repair					815.4
Operating Requirement					1104.5

SUPPLY MANAGEMENT - DON
WHOLESALE - SURCHARGE CALCULATION
(Dollars in Millions)

SM-5B

COMPOSITE SHIPS/AVIATION	FY 96	FY 97
1. CY Net sales at Cost	2604.0	2418.8
2. +/- PY Material Inflation	4.8	47.4
3. CY Net Sales @ PY Cost	2608.8	2466.2
4. PY Surcharge	46.8%	16.0%
5. CY Net Sales at PY Prices	3829.7	2860.9
1A. CY Net sales at Cost	2604.0	2418.8
4A. CY Surcharge	14.0%	28.4%
5A. CY Net Sales at CY Prices	2968.5	3106.7
PERCENT CHANGE TO CUSTOMER	-22.5%	8.6%

SUPPLY MANAGEMENT - DON
WHOLESALE - SURCHARGE CALCULATION
(Dollars in Millions)

SM-5B

SHIP CONSUMABLES	FY 96	FY 97
1. CY Net sales at Cost	60.2	61.1
2. +/- PY Material Inflation	-2.3	-1.2
3. CY Net Sales @ PY Cost	57.9	59.9
4. PY Surcharge	58.1%	13.5%
5. CY Net Sales at PY Prices	91.6	68.0
1A. CY Net sales at Cost	60.2	61.1
4A. CY Surcharge	13.5%	28.4%
5A. CY Net Sales at CY Prices	68.3	78.5
PERCENT CHANGE TO CUSTOMER	-25.4%	15.4%

SUPPLY MANAGEMENT - DON
WHOLESALE - SURCHARGE CALCULATION
(Dollars in Millions)

SM-5B

AVIATION CONSUMABLES	FY 96	FY 97
1. CY Net sales at Cost	241.2	225.7
2. +/- PY Material Inflation	1.9	-4.5
3. CY Net Sales @ PY Cost	243.1	221.2
4. PY Surcharge	47.9%	13.2%
5. CY Net Sales at PY Prices	359.6	250.4
1A. CY Net sales at Cost	241.2	225.7
4A. CY Surcharge	13.2%	28.4%
5A. CY Net Sales at CY Prices	272.9	289.8
PERCENT CHANGE TO CUSTOMER	-24.1%	15.7%

SUPPLY MANAGEMENT - DON
WHOLESALE - SURCHARGE CALCULATION
(Dollars in Millions)

SM-5B

BP81-SHIPS REPAIRABLES	FY 96	FY 97
1. CY Net sales at Cost	453.6	433.1
2. +/- PY Material Inflation	-23.4	-3.7
3. CY Net Sales @ PY Cost	430.2	429.4
4. PY Surcharge	56.1%	11.2%
5. CY Net Sales at PY Prices	671.5	477.5
1A. CY Net sales at Cost	453.6	433.1
4A. CY Surcharge	11.0%	28.4%
5A. CY Net Sales at CY Prices	503.6	556.2
PERCENT CHANGE TO CUSTOMER	-25.0%	16.5%

SUPPLY MANAGEMENT - DON
WHOLESALE - SURCHARGE CALCULATION
(Dollars in Millions)

SM-5B

BP85-AVIATION REPAIRABLES	FY 96	FY 97
1. CY Net sales at Cost	1848.9	1698.8
2. +/- PY Material Inflation	28.6	56.8
3. CY Net Sales @ PY Cost	1877.5	1755.6
4. PY Surcharge	44.2%	17.6%
5. CY Net Sales at PY Prices	2707.0	2065.2
1A. CY Net sales at Cost	1848.9	1698.8
4A. CY Surcharge	14.9%	28.4%
5A. CY Net Sales at CY Prices	2123.6	2182.1
PERCENT CHANGE TO CUSTOMER	-21.6%	5.7%

SUPPLY MANAGEMENT - DON
WHOLESALE - SURCHARGE CALCULATION
(Dollars in Millions)

SM-5B

COMPOSITE MARINE CORPS	FY 96	FY 97
1. CY Net sales at Cost	39.2	21.5
2. +/- PY Material Inflation	-1.1	0.0
3. CY Net Sales @ PY Cost	38.1	21.5
4. PY Surcharge	51.6%	40.2%
5. CY Net Sales at PY Prices	57.8	30.1
1A. CY Net sales at Cost	39.2	21.5
4A. CY Surcharge	37.8%	24.2%
5A. CY Net Sales at CY Prices	54.0	26.7
PERCENT CHANGE TO CUSTOMER	-9.1%	-11.4%

SUPPLY MANAGEMENT - DON
WHOLESALE - SURCHARGE CALCULATION
(Dollars in Millions)

SM-5B

BP54-MARINE CORPS CONSUMABLES	FY 96	FY 97
1. CY Net sales at Cost	8.9	3.6
2. +/- PY Material Inflation	-0.3	0.0
3. CY Net Sales @ PY Cost	8.6	3.6
4. PY Surcharge	51.7%	43.7%
5. CY Net Sales at PY Prices	13.0	5.2
1A. CY Net sales at Cost	8.9	3.6
4A. CY Surcharge	43.7%	22.2%
5A. CY Net Sales at CY Prices	12.8	4.4
PERCENT CHANGE TO CUSTOMER	-7.9%	-14.9%

SUPPLY MANAGEMENT DON
WHOLESALE - SURCHARGE CALCULATION
(Dollars in Millions)

SM-5B

BP84-MARINE CORPS REPAIRABLES	FY 96	FY 97
1. CY Net sales at Cost	30.3	17.9
2. +/- PY Material Inflation	-0.9	0.0
3. CY Net Sales @ PY Cost	29.4	17.9
4. PY Surcharge	51.7%	39.5%
5. CY Net Sales at PY Prices	44.6	25.0
1A. CY Net sales at Cost	30.3	17.9
4A. CY Surcharge	39.5%	24.6%
5A. CY Net Sales at CY Prices	42.3	22.3
PERCENT CHANGE TO CUSTOMER	-10.6%	-10.7%

FUND 9A
SUPPLY MANAGEMENT - DON
CAPITAL BUDGET SUMMARY
(Dollars in Millions)

Line Number	Item Description	FY 1995 Quantity	FY 1995 Total Cost	FY 1996 Quantity	FY 1996 Total Cost	FY 1997 Quantity	FY 1997 Total Cost
	1a. Non-ADP Equipment (>500,000)						
0001	- Replacement					1	0.300
0002	- Environmental Compliance						4.455
0003	1b. Non-ADP Equipment (>100,000<500,000)		0.014		1.677		5.194
	Subtotal Non-ADP Equipment		0.014		1.677		9.949
	2. ADP Equipment (>100,000)						
0004	- Computer Hardware (production)		2.481		16.244		15.999
	Subtotal ADP Equipment (>100,000)		2.481		16.244		15.999
	3. Software Development (>100,000)						
0005	- APADE					3	0.256
0006	- CD-ROM					6	0.512
0007	- E-MAIL					1	0.085
0008	- ITIMP EDI UADPS-ICP					3	0.256
0009	- LAN					4	0.341
0010	- LOGMARS/EPOS					4.6	0.392
0011	- UADPS-SP/U2					49.8	4.251
0012	- Transportation					9	0.768
	Subtotal Software (>100,000)		0.000		0.000	80.4	6.861
0013	4. Minor Construction		0.385		0.100		4.000
	Subtotal Minor Construction		0.385		0.100		4.000
0014	5. Reliability, Maintainability & Supportability Mods						0.310
	GRAND TOTAL CAPITAL PURCHASE PROGRAM		2.880		18.021		37.119

000693

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION
($ in Thousands)

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE NAVY/SUPPLY MANAGEMENT/JAN 1996							*01 ITEM DESCRIPTION* AUTOMATED MATERIAL HANDLING		
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
01 AUTOMATED MATERIAL HANDLING SYS							1	VAR	300

Narrative Justification

Automated Material Handling System - The existing conveyor systems in Buildings 474, 475, and 452 at FISC Pearl Harbor were installed in 1941 and updated in 1985. This system consists of approximately 5 miles of tote pan conveyor used to transport binnable receipts to storage, issues to packing, and packed issues to shipping. The system has outlived its useful life. Maintenance costs are high and spare parts are hard to find. ***Funding will replace this outdated conveyor system.*** This project is imperative since fleet readiness and shorebased logistical support are dependent upon availability of reliable AMHS. Funding for this project will allow FISC Pearl Harbor to increase utilization of both manpower and equipment and will improve the efficiency and productivity of warehouse operations.

If not funded, this system will become a safety hazard and NAVSUP will continue to spend maintenance dollars on a system that has outlived its usefulness.

000694

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION
($ in Thousands)

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE NAVY/SUPPLY MANAGEMENT/JAN 1996										*02 ITEM DESCRIPTION* HAZARDOUS INVENTORY CONTROL SYSTEM	
		FY 1995			FY 1996			FY 1997	
ELEMENTS OF COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
02 HAZARDOUS INV CONTROL SYSTEMS								VAR	4,455

Narrative Justification

FISC HAZMAT MANAGEMENT INITIATIVES: Establishment of comprehensive hazardous material reutilization programs at all FISCs. Projected funding requirement based on detailed estimate for startup of FISC single service point at NAVBASE San Diego which was funded in FY 1992 as well as initial rough order magnitude (ROM) estimates from all other FISCs.

HMC&M PROTOTYPE SYSTEM EQUIPMENT: Each installation is expected to cost approximately $170-$180K for initial hardware to support a networked system. The fiscal year 1996 and 1997 requirements will fund 11 systems for operational shore activities in each fiscal year.

IMPLEMENTATION OF AFLOAT HAZARDOUS MATERIAL CONTROL SYSTEM: Funding is required to outfit all Navy afloat commands with necessary hardware and software to operate the Hazardous Material Inventory Control System (HICS), a method for managing hazardous material which minimizes usage and reduces waste. FY 1996 and 1997 requirements will cover installation on all small ships, including submarines.

000695

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION
($ in Thousands)

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE NAVY/SUPPLY MANAGEMENT/JAN 1996										*03 ITEM DESCRIPTION* CIVIL ENGINEERING SUPPORT EQUIPMENT	
	FY 1995			FY 1996				FY 1997			
ELEMENTS OF COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST		QTY	UNIT COST	TOTAL COST	
0 CIVIL ENG SUPPORT EQUIP					VAR	977			VAR	2,239	

Narrative Justification

Civil Engineering Support Equipment - This program funds the procurement of overaged non-passenger carrying vehicles (stake trucks, pickup/utility trucks and panel trucks/vans for FISCs and ICPs.

Equipment which is not replaced at the end of its expected life becomes uneconomical to maintain, unsafe, and unreliable. At present, NAVSUP field activities have approximately 700 vehicles that will eventually need replacing.

969000

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION
($ in Thousands)

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE NAVY/SUPPLY MANAGEMENT/JAN 1996							*03 ITEM DESCRIPTION* COLLATERAL EQUIPMENT			
		FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	
03 COLLATERAL EQUIPMENT						200		VAR	500	

Narrative Justification

Collateral Equipment - Due to the Increase in the Expense/Investment Threshold, Collateral Equipment will be funded by the Operating Budget beginning in FY 96.

000697

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION
($ in Thousands)

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE NAVY/SUPPLY MANAGEMENT/JAN 1996											*03 ITEM DESCRIPTION* OTHER SUPPLY SUPPORT EQUIP
ELEMENTS OF COST	QTY	FY 1995 UNIT COST	TOTAL COST	QTY	FY 1996 UNIT COST	TOTAL COST	QTY	FY 1997 UNIT COST	TOTAL COST		
03 SHOP & OFFICE EQUIP			14		VAR	500			800		

Narrative Justification

Shop and Office Equipment - Due to the Increase in the Expense/Investment Threshold, Collateral Equipment will be funded by the Operating Budget beginning in FY 96.

000698

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION
($ in Thousands)

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE NAVY/SUPPLY MANAGEMENT/JAN 1996							*03 ITEM DESCRIPTION* FORKLIFT TRUCKS		
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
03 FORKLIFT TRUCKS							70	VAR	1,655

Narrative Justification

Forklift Trucks - This program funds the procurement of new/initial outfitting and replacement material handling equipment (MHE) requirements for the Fleet and Industrial Supply Centers (FISC) and Inventory Control Points (ICP).

Equipment which is not replaced at the end of it's expected service life becomes uneconomical to maintain, unsafe, unreliable, and unable to sustain increased operational tempos. Many of the over-aged forklifts currently in service are technologically obsolete, impacting mission capabilities. Additional intangible costs are also incurred, such as: increased manpower requirements, productivity losses, ineffective space utilization, material damage, and leasing costs. New replacement equipment enables activities to meet handling and logistical requirements in an efficient and effective manner.

000699

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION
($ in Thousands)

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE NAVY/SUPPLY MANAGEMENT/JAN 1996										*04 ITEM DESCRIPTION* BLC
ELEMENTS OF COST	QTY	FY 1995 UNIT COST	TOTAL COST	QTY	FY 1996 UNIT COST	TOTAL COST	QTY	FY 1997 UNIT COST	TOTAL COST	
04 BLC									2,199	

000700

Narrative Justification

Base Level Computing - Base Level Computing (BLC) is a program designed to replace and upgrade the aging interface between the end user at the keyboard and the Defense Information Systems Office (DISO) data center, for NAVSUP managed activities using the Uniform Data Processing System for Stock Points (UADPS-SP). This interface will also support the CIM system which ultimately replaces UADPS-SP. The overall program concept is described in a Mission Need Statement (MNS) approved by the Assistant Secretary of the Navy (ASN(RD&A)) and milestone decision authority was delegated to the Naval Supply Systems Command (NAVSUP). The program consists of a number of individual and independent Abbreviated System Decision Papers (ASDPs) which conform to the overall concept described in the approved MNS. The ASDPs include the justification and economic analysis associated with the work at each individual site.

The BLC Program is phased over time and the initial installations should be completed in FY97 although equipment will be replaced continuously in the future. During FY96 and FY97 we will continue equipment installations at Fleet and Industrial Supply Centers (FISCs) which began in FY94

COMPONENT/BUSINESS AREA/DATE	*04 ITEM DESCRIPTION*
NAVY/SUPPLY MANAGEMENT/JAN 1996	BLC

Narrative Justification (continued)

and FY95 and will begin work at other smaller activities. The ultimate goal is to build an architecture which will support a three tier computing and information system architecture which locates processing at the most economical and technically efficient level, and is consistent with overall DoD information system plan. If executed in accordance with the overall plan described in the MNS, the BLC Program will, over time, significantly improve ashore supply processing for the fleet.

007021

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION
($ in Thousands)

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE NAVY/SUPPLY MANAGEMENT/JAN 1996										*04 ITEM DESCRIPTION* LOGMARS
ELEMENTS OF COST	QTY	FY 1995 UNIT COST	TOTAL COST	QTY	FY 1996 UNIT COST	TOTAL COST	QTY	FY 1997 UNIT COST	TOTAL COST	
04 LOGMARS									2,300	

Narrative Justification

LOGMARS - The Logistics Applications of Automated Marking and Reading Symbols (LOGMARS) funds provide ships and stock points with capability to "read" bar coded information for entry into existing computer systems. LOGMARS has generated significant cost avoidance savings in the functional area of physical inventory, inventory location survey, material receiving and issue, and government property accounting as documented in the final report of the OSD-sponsored LOGMARS Steering Group. In order to utilize bar coded data, the funding will provide the necessary equipment and programs to interface with existing computer systems. With greater emphasis on acquisition of commercial products and the associated bar codes, this will place greater emphasis on automated source data entry initiatives. Increased productivity, data accuracy, and visibility and control of inventories will be realized with LOGMARS technology.

007702

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE	*04 ITEM DESCRIPTION*
NAVY/SUPPLY MANAGEMENT/JAN 1996	**LOGMARS**

Narrative Justification (continued)

Funding continues to equip Navy activities ashore and afloat with bar code equipment and programs. As equipment ages and technology advances, there will continue to be a need to replace obsolete equipment and old equipment that breaks down as the cost for repair approaches the cost of replacement. Also, replacement equipment is required when equipment is no longer being manufactured.

DMRD 987 Inventory Reduction Plan Improvement (IRP) specifically cites LOGMARS as a new technology that the services must continue to implement to enhance readiness, responsiveness, productivity inventory control and the overall quality of support.

000703

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION
($ in Thousands)

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE NAVY/SUPPLY MANAGEMENT/JAN 1996										*04 ITEM DESCRIPTION* UADPS-SP/U2
ELEMENTS OF COST	QTY	FY 1995 UNIT COST	TOTAL COST	QTY	FY 1996 UNIT COST	TOTAL COST	QTY	FY 1997 UNIT COST	TOTAL COST	
04 UADPS-SP/U2 (Equipment)									500	

Narrative Justification

UADPS-SP - The Uniform Automated Data Processing System for Stock Points (UADPS-SP) is the standard Navy-wide automated supply and financial management application system designed to support Navy operating forces. An enhancement of UADPS-SP, called UADPS-SP/U2, expands the current UADPS-SP functionality to incorporate the concept of "regionalization" of inventory management within the Department of Defense. These capital investment requirements support peripheral and telecommunications infrastructure required to support implementation of UADPS-SP/U2 at all potential Fleet and Industrial Supply Centers (FISCs) and partner sites (the FISCs become the Navy's primary provider of regional logistics support services). All expenditures of these funds are supported by business case analyses. These investments fully support both the Defense Information Infrastructure (DII) initiative and the Regional Maintenance plan endorsed by the Chief of Naval Operations.

000204

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION
($ in Thousands)

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE	*04 ITEM DESCRIPTION*
NAVY/SUPPLY MANAGEMENT/JAN 1996	**JEDMICS**

ELEMENTS OF COST	FY 1995 QTY	FY 1995 UNIT COST	FY 1995 TOTAL COST	FY 1996 QTY	FY 1996 UNIT COST	FY 1996 TOTAL COST	FY 1997 QTY	FY 1997 UNIT COST	FY 1997 TOTAL COST
04 JEDMICS (Equipment)			2,481			4,244			0

Narrative Justification

JEDMICS - JEDMICS is an OSD-directed effort in response to Congressional direction in PL 96-525 to develop a centralized automated system to index, store, retrieve, and distribute technical drawings. The Joint Engineering Data Management Information and Control System (JEDMICS), which was developed in response to Congressional direction, replaces labor intensive, inefficient manual and semi-automated technical repositories with automated central repositories for all engineering and manufacturing information on ships, aircraft and electronics. This information is used by the fleet shore establishment and industry in support of spares acquisition, equipment maintenance and modernization and preparation of technical publications.

JEDMICS was designated the DoD standard system for storing engineering drawings by ASD C31 ltr of 14 Nov 1991. FY 1996 and FY 1997 dollars are being used for technology refreshment and follow-on expansion to additional users for the eight primary technical data repositories.

A pre-investment economic analysis was completed/approved before JEDMICS received MAISRC authority to proceed with implementation. The discounted savings investment ratio is 1.5. Total program benefits for life cycle 1992 through 2005 are projected at $42.4M. In FY 97, this program is funded by direct appropriation.

000705

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION
($ in Thousands)

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE	*04 ITEM DESCRIPTION*
NAVY/SUPPLY MANAGEMENT/JAN 1996	**Material Management Standard System (MMSS)**

ELEMENTS OF COST	FY 1995 QTY	FY 1995 UNIT COST	FY 1995 TOTAL COST	FY 1996 QTY	FY 1996 UNIT COST	FY 1996 TOTAL COST	FY 1997 QTY	FY 1997 UNIT COST	FY 1997 TOTAL COST
04 Material Mgmt Standard System (Equipment)			0			12,000			11,000

Narrative Justification

Material Management Standard System - These funds are to support the fielding of the Material Management Standard System (MMSS) being developed by the Joint Logistics Systems Center to Navy and Marine Corps Inventory Control Points (ICPs). During the FY96/97 OSD/OMB Budget Review, the responsibility for acquisition of hardware for fiscal years 1996-1997 was transferred from the JLSC to the Military Services and the Defense Logistics Agency (DLA).

The MMSS was created in response to the DoD initiative to standardize logistics systems across DoD. Over the past two years the JLSC, working with the services and DLA, has evaluated the processes of the DoD ICPs, selected and developed the optimum automated information systems to support improved standard business practices. These funds continue the deployment of these systems to the Department ICPs.

902006

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE	*04 ITEM DESCRIPTION*
NAVY/SUPPLY MANAGEMENT/JAN 1996	**Material Management Standard System (MMSS)**

Narrative Justification (continued)

The type and amount of equipment needed is dependent upon projects fielded, the size of each site, and the availability and applicability of equipment currently at that site. This requirement is based upon site surveys representative of various size sites. As project deployment to a specific site nears, a final survey will be conducted to confirm requirements. Representative configurations vary in size from those including servers at approximately $314K-$650K per site to personal computer workstations with 17 or 15 inch displays at $3.1 - $2.7K per site, X-terminal workstations at $2K per site, and MMS connectivity to Local Area Networks (LANs). This represents a mixture of those configurations dependent upon deployment schedule and site requirements.

The MMSS will provide a radically improved functional capability to the services and DLA, reduce DoD costs for information services and establish a systems infrastructure on which DoD can improve the way it does business. Specific improvements include:

--Reduced inventories through better management information on purchase decisions.
--Reduced labor requirements for material management processes.
--Reduced Information Technology costs.
--Improved visibility and control of assets.

Once implementation is completed, legacy applications will be reduced or eliminated, decreasing ADP costs markedly.

The projected reductions in the DoD inventories cannot be met without an improved supply management information infrastructure. In addition, the Department cannot comply with its objective to standardize information systems and business practices and effectively implement throughout the Department ICPs. This initiative supports the sustainment of readiness in a downsizing environment.

002007

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION
($ in Thousands)

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE							*05 ITEM DESCRIPTION*		
NAVY/SUPPLY MANAGEMENT/JAN 1996							APADE		
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
05 APADE							3	85.305	256

Narrative Justification

APADE - These Central Design Agency (CDA) personnel are modifying Automation of Procurement and Accounting Data Entry (APADE) programs for enhancements to accommodate small purchase, Electronic Data Interchange (EDI) and non-standard requisitioning and demand data reporting by Fleet and Industrial Supply Center (FISC) procurement centers.

007008

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION
($ in Thousands)

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE							*06 ITEM DESCRIPTION*		
NAVY/ SUPPLY MANAGEMENT/JAN 1996							Compact Disc-Read Only Memory (CD-ROM)		
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
06 CD-ROM (CDA)							6	85.305	512

Narrative Justification

CD-ROM - The Compact Disc-Read Only Memory (CD-ROM) provides information digitally for direct use with personal computers replacing both paper and microfiche as a means to distribute manuals, publications, and data bases. CD-ROM is one of the technologies whose primary importance is increasing the currency, consistency, security and accessibility of information. This product provides massive storage capacity, saves money on warehousing and mailing costs, and increases productivity by providing data in a rapid lookup and retrieval mode. A single CD-ROM can hold 300,000 pages of text which equates to 2,500 pounds of paper, takes up 120 feet of shelf space and costs $958 to mail. A single CD-ROM weighs 0.7 ounces, takes less than an inch of space and cost $0.75 to mail. CD-ROM is the most practical and economical media for the multiple distribution of digital data. Real savings are to be achieved from the reduction of printing, decreased mailings, less necessary manpower for the handling of documents, and the diminished need for warehouse space.

000709

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION
($ in Thousands)

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE NAVY/SUPPLY MANAGEMENT/JAN 1996							*07 ITEM DESCRIPTION* E-MAIL		
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
07 E-MAIL (CDA)							1	85.305	85

Narrative Justification

E-MAIL- NAVSUP is installing a corporate-wide electronic mail facility with Hub located in Mechanicsburg, Pa. We will use a small number of Fleet Material Support Office (FMSO) resources to manage the mail hub, install new users, and provide new Internet capabilities through the installation of a new Internet Domain Name System.

000720

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION
($ in Thousands)

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE NAVY/SUPPLY MANAGEMENT/JAN 1996							*08 ITEM DESCRIPTION* ITIMP EDI UADPS-ICP (CDA)			
		FY 1995			FY 1996				FY 1997	
ELEMENTS OF COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	
08 ITIMP EDI UADPS-ICP (CDA)							3	85.305	256	

Narrative Justification

ITIMP - These Central Design Agency (CDA) resources will be modifying ADP programs for enhancements to Integrated Technical, Item Management and Procurement (ITIMP) to accommodate Inventory Control Point (ICP) procurement Electronic Data Interchange (EDI) including expanding upon baseline transactions to incorporate the 841 transaction set for commercial and organic manufacturing solicitations.

000711

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION
($ in Thousands)

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE	*09 ITEM DESCRIPTION*
NAVY/SUPPLY MANAGEMENT/JAN 1996	LAN

ELEMENTS OF COST	FY 1995 QTY	FY 1995 UNIT COST	FY 1995 TOTAL COST	FY 1996 QTY	FY 1996 UNIT COST	FY 1996 TOTAL COST	FY 1997 QTY	FY 1997 UNIT COST	FY 1997 TOTAL COST
09 LAN (CDA)							4	85.305	341

Narrative Justification

LAN- In accordance with the overall Base Level Computing (BLC) concept as described in the approved Mission Needs Statement (MNS), NAVSUP will be installing Local Area Networks (LANS) in a number of small activities that are users of the Uniform Automated Data Processing System for Stock Points (UADPS-SP). NAVSUP plans to use Fleet Material Support Office (FMSO) resources for some of the LAN installations. These resources will also be used to establish a help desk to provide technical support and trouble shooting services to activities with installed LANS. The LAN installations at small sites are supported by an approved Abbreviated System Decision Paper (ASDP).

000712

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION
($ in Thousands)

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE NAVY/SUPPLY MANAGEMENT/JAN 1996							*10 ITEM DESCRIPTION* LOGMARS/EPOS		
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
10 LOGMARS/EPOS (CDA)							4.6	85.305	392

Narrative Justification

LOGMARS (EPOS) - The Logistic Applications of Automated Marking and Reading Symbols (LOGMARS) equipment funding provides ships and stock points with the capability to "read" bar coded information for entry into existing computer systems. LOGMARS has generated significant cost avoidance savings in the functional area of physical inventory, inventory location survey, material receiving and issue, and government property accounting as documented in the final report of the OSD-sponsored LOGMARS Steering Group. Increased productivity, data accuracy, and visibility and control of inventories will be realized with LOGMARS technology, and these benefits contribute to improved Fleet support and readiness.

The CDA efforts reflected here support legacy system modifications required to implement Electronic Point of Sale (EPOS) initiatives within the LOGMARS technology.

000713

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION
($ in Thousands)

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE NAVY/SUPPLY MANAGEMENT/JAN 1996							*11 ITEM DESCRIPTION* UADPS-SP/UADPS-2		
	FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
11 UADPS-SP/U2 (CDA)							49.83	85.305	4,251

Narrative Justification

UADPS-SP - The Uniform Automated Data Processing System for Stock Points (UADPS-SP) is the Navy-wide automated supply, financial and resources management application system designed to support Navy operating forces. It is a Navy legacy system operated at over 35 Naval Commands including Fleet and Industrial Supply Centers (FISCs), Naval Air Stations, Naval Shipyards and Training Centers. The UADPS-SP system provides uniform logistics data support to the Chief of Naval Operations, Commander in Chief Atlantic Fleet (CINCLANTFLT), Commander in Chief Pacific Fleet (CINCPACFLT), Chief of Naval Education and Training, Chief of Naval Reserves, Comptroller of the Navy, and Commandant of the Marine Corps. This system is operated primarily at Defense Information Systems Agency (DISA) ADP installations and at several remote activities.

000714

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE	*11 ITEM DESCRIPTION*
NAVY/SUPPLY MANAGEMENT/JAN 1996	**UADPS-SP/UADPS-2**

Narrative Justification (continued)

The Central Design Agency (CDA) efforts reflected herein are directed toward complying with OSD/Congressionally-mandated changes, and corrective software maintenance efforts. An additional CDA effort for this AIS has been directed toward incorporating the FISC facts of CNO Management Review Initiative #20 which provides the necessary functionality to complement Corporate Information Management (CIM) enterprise-wide systems. Specifically, these efforts provide the necessary management tools:

- *To reduce inventory and infrastructure costs through centralized inventory management and expanded regional asset visibility.*
- *To supply centralized management of separate consumer inventories to the "wrench-turner" level.*
- *To consolidate geographic "stovepipe" inventories under a single ADP system to achieve personnel and inventory.*
- *To expand consumer level asset visibility and sharing.*
- *To achieve cost avoidance as legacy systems are eliminated.*

000715

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION
($ in Thousands)

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE NAVY/SUPPLY MANAGEMENT/JAN 1996							*12 ITEM DESCRIPTION* TRANSPORTATION			
	FY 1995			FY 1996			FY 1997			
ELEMENTS OF COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	
12 TRANSPORTATION (C							9	85.305	768	

Narrative Justification

Transportation - The funds provide for development of the Navy Material Transportation Office Management Information System's Budget Mana[illegible] System and integration of the Transportation Operations Management System.

000746

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION
($ in Thousands)

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE NAVY/SUPPLY MANAGEMENT/JAN 1996										*13 ITEM DESCRIPTION* MINOR CONSTRUCTION
ELEMENTS OF COST	QTY	FY 1995 UNIT COST	TOTAL COST	QTY	FY 1996 UNIT COST	TOTAL COST	QTY	FY 1997 UNIT COST	TOTAL COST	
13 MINOR CONSTRUCTION		VAR	385		VAR	100		VAR	4,000	

Narrative Justification

Minor Construction - Minor construction is the erection, installation, or assembly of new real property, or the addition, expansion, extension, alteration or replacement of existing real property to meet ever changing requirements. For example, construct main gates at both ASO and SPCC and erect new overhanging roofs.

000717

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION
($ in Thousands)

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE NAVY/SUPPLY MANAGEMENT/JAN 1996						*14 ITEM DESCRIPTION* MK-86 ALLTV CAMERA			
		FY 1995			FY 1996			FY 1997	
	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
ELEMENTS OF COST									
14 MK-86 ALLTV CAMERA							125		310

Narrative Justification

Purpose/Use: Upgrade to all 125 ALLTV cameras, which are used to repair the most frequent Casualty Report (CASREP) items associated with the MD-86 weapon system. Status Quo: Current vidicon tube technology exhibits a high wearout rate. For example, Reliability estimates are 2,500 failures per million hours with vidicon tube technology. Alternative/Justification: Reliability of the replacement system which is a form of CCD detector, is projected to be only 25 failures per million hours, which is virtually wearout-proof. In addition, the new technology will increase low-light capability such that operational time increases from 53% to 85%.

000718

Department of the Navy - Defense Business Operations Fund
Supply Management
Capital Budget Execution
(dollars in millions)
FY 1996

Title / Description	Original Request	Change	Revised Request	Explanation
Equipment (non-ADPE/TEL)	**0.1**	**1.577**	**1.677**	Was in LSA
ADPE Equipment	**16.244**	**0**	**16.244**	
- MMSS	12	0	12	
- JEDMICS	4.244	0	4.244	
Minor Construction	**0.3**	**-0.2**	**0.1**	To LSA
Total	**16.644**	**1.377**	**18.021**	

000719

DEPARTMENT THE NAVY
DEFENSE BUSINESS RATIONS FUND
LOGISTICS SUPP[illegible]T ACTIVITIES

Activity Group Function:

The Navy Logistics Support Business area of the Defense Business Operations Fund provides for the management of miscellaneous supply related services to afloat and ashore customers in a specific geographic region. These services include reimbursable fuel operations, large and small procurement in support of fleet units port services for docked ships, and the load out of combat logistics force ships for Fleet commanders.

Costs of this business area include, but are not limited to, civilian labor, military personnel at these installations, depreciation and capital assets. In FY 1997, the Logistics Support Activities business area is merged with the Supply Management Business Area.

Activity Group Composition:

Fleet and Industrial Supply Center, Norfolk, VA
Fleet and Industrial Supply Center, San Diego, CA
Fleet and Industrial Supply Center, Puget Sound, WA
Fleet and Industrial Supply Center, Jacksonville, FL
Fleet and Industrial Supply Center, Pearl Harbor, HI
Fleet and Industrial Supply Center, Yokosuka, JA

Due to the decisions announced through the BRAC III and IV pr[illegible]ess, the following activities will close by the end of FY 1999:

Fleet and Industrial Supply Center, Charleston, SC
Fleet and Industrial Supply Center, Pensacola, FL
Fleet and Industrial Supply Center, Oakland [illegible]A
Fleet and Industrial Supply Center, Guam

Financial Profile:	FY 1995	FY [illegible]96	FY 1997
Costs ($millions)	265.1	115.7	0.0
Net Operating Result	0.0	0.0	0.0
Accumulated Operating Results	0.0	0.0	0.0

Staffing:	FY 1995	FY 1996	FY 1997
Civilian End Strength	2053	[illegible]	0
Civilian Workyears	2258		0
Military End Strength	450		0
Military Workyears	450	[illegible]	0

Capital Budget Authority:	FY 1995	FY 1996	FY 1997
Equipment-Non ADPE/TELECOM	4.859	7.702	0.000
ADPE/Telecommunications Equip.	4.505	5.607	0.000
Software Development	4.751	5.843	0.000
Minor Construction	0.290	1.000	0.000
Reliability, Maintainability, and Supportability Modifications	0.000	0.000	0.000
TOTAL ($millions)	14.405	20.152	0.000

This budget finances the procurement of capital equipment, management information systems, and minor construction. These items are depreciated over the useful life of the asset, with the cost of depreciation included in the material surcharge.

FUND 14
DEFENSE BUSINESS OPERATIONS FUND
LOGISTICS SUPPORT ACTIVITIES - DON
REVENUE AND EXPENSES
(Dollars in Millions)

	FY 1995	FY 1996	FY 1997
REVENUE:			
Net Sales:			
Operations			
Fixed Fee Retail Reimbursement			
Capital Surcharge			
Depreciation except Maj Const	13.5	17.5	0.0
Major Construction Depreciation	0.0	0.0	0.0
Other Income	251.6	98.2	0.0
Reimbursable	124.0	81.2	0.0
From Supply Management	127.6	17.0	0.0
Refunds/Discounts			
Total Income	265.1	115.7	0.0
EXPENSES:			
Cost of Material Sold from Inventory			
Negotiated Purchases from Customers			
Transportation	0.0	0.0	0.0
Salaries and Wages:	88.6	11.7	0.0
Military Personnel	9.4	7.4	0.0
Civilian Personnel	79.2	4.3	0.0
Materials, Supplies and Parts			
used in Operations	25.9	24.9	0.0
Facility Repair Charge	7.5	1.2	0.0
Depreciation - Capital	13.5	17.5	0.0
Contracted Engineering Services	0.0	0.0	0.0
Lease Costs	5.2	4.8	0.0
Purchased Utilities	1.5	1.6	0.0
Purchased Communications	4.0	4.1	0.0
Equipment Maintenance	1.5	0.0	0.0
Fuel	0.7	0.7	0.0
Other Expenses	116.7	49.2	0.0
Total Expenses	265.1	115.7	0.0
Operating Results	0.0	0.0	0.0
NET OPERATING RESULT	0.0	0.0	0.0
Prior Year AOR	0.0	0.0	0.0
ACCUMULATED OPERATING RESULT	0.0	0.0	0.0

FUND-2
LOGISTICS SUPPORT ACTIVITIES - NAVY
CHANGES IN OPERATIONS
(Dollars in Millions)

1. FY 1995 Current Estimate	266.0
2. FY 1996 President's Budget	130.6
3. Pricing Adjustments:	0.1
FY 1996 Payraise:	0.1
Military Personnel	
Civilian Personnel	0.1
3. Productivity Initiatives and Other Efficiencies	0.0
DMRD Reduction	
4. Workload Changes	-1.0
Increased FY 1995 Wholesale Sales	-1.0
5. Other Changes	-9.5
CPP Increase	-1.5
BRAC Savings	-1.0
FT Open Purchase Contract	0.2
FT Sima Little Creek	0.1
FT Charleston to SPAWAR	-3.3
BRAC IV Oakland	-4.0
PBD 426 OPS	0.4
PBD 426 CPP	-0.4
6. FY 1996 Current Estimate	120.2
7. Pricing Adjustments:	2.9
FY 1997 Payraise:	0.3
Military Personnel	0.2
Civilian Personnel	0.1
Annualization of Prior Year Pay Raises	0.0
Fund Price Changes:	2.1
General Purchase Inflation	0.5
8. Productivity Initiatives and Other Efficiencies	0.0
9. Workload Changes:	-123.1
Force Level Reduction (Operations)	0.2
Adjustment driven by change in Sales	-0.2
Active Duty Personnel Downsizing	-0.3
BRAC Savings	0.0
Fuel Ops Reimbursement	3.6
Logistics Support into Supply Management	-126.7
DFAS Payment	0.2
MRP Adjustment	0.1
10. Other Changes	0.0
11. FY 1997 Current Estimate	0.0

FUND 9A
LOGISTICS SUPPORT ACTIVITIES - DON
CAPITAL BUDGET SUMMARY
(Dollars in Millions)

Line Number	Item Description	FY 1995 Quantity	FY 1995 Total Cost	FY 1996 Quantity	FY 1996 Total Cost	FY 1997 Quantity	FY 1997 Total Cost
	1a. Non-ADP Equipment (>500,000)						
0001	- Replacement			1	0.300		
0002	- Environmental Compliance		4.082		4.455		
0003	1b. Non-ADP Equipment (>100,000<500,000)		0.777		2.947		
	Subtotal Non-ADP Equipment		4.859		7.702		0.000
	2. ADP Equipment (>100,000)						
0004	- Computer Hardware (production)		4.505		5.607		
	Subtotal ADP Equipment (>100,000)		4.505		5.607		0.000
	3. Software Development (>100,000)						
0005	- APADE	3	0.238	3	0.238		
0006	- CD ROM	6	0.476	6	0.477		
0007	- E-MAIL	1	0.079	1	0.079		
0008	- ITIMP EDI UADPS-ICP	3	0.238	3	0.238		
0009	- LAN	4	0.317	4	0.318		
0010	- LOGMARS/EPOS	4.6	0.365	4.6	0.366		
0011	- UADPS-SP/U2	31	2.461	42.9	3.412		
0012	- Transportation	9	0.577	9	0.715		
	Subtotal Software (>100,000)	61.6	4.751	73.5	5.843		0.000
0013	4. Minor Construction		0.290		1.000		0.000
	Subtotal Minor Construction		0.290		1.000		0.000
	GRAND TOTAL CAPITAL PURCHASE PROGRAM		14.405		20.152		0.000

000724

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION
($ in Thousands)

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE NAVY/LOGISTICS SUPPORT/JAN 1996										*01 ITEM DESCRIPTION* AUTOMATED MATERIAL HANDLING
	FY 1995			FY 1996			FY 1997			
ELEMENTS OF COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	
01 AUTOMATED MATERIAL HANDLING SYS				1	VAR	300				

Narrative Justification

Automated Material Handling System - The existing conveyor systems in Buildings 474, 475, and 452 at FISC Pearl Harbor were installed in 1941 and updated in 1985. This system consists of approximately 5 miles of tote pan conveyor used to transport binnable receipts to storage, issues to packing, and packed issues to shipping. The system has outlived its useful life. Maintenance costs are high and spare parts are hard to find. ***Funding will replace this outdated conveyor system.*** This project is imperative since fleet readiness and shorebased logistical support are dependent upon availability of reliable AMHS. Funding for this project will allow FISC Pearl Harbor to increase utilization of both manpower and equipment and will improve the efficiency and productivity of warehouse operations.

If not funded, this system will become a safety hazard and NAVSUP will continue to spend maintenance dollars on a system that has outlived its usefulness.

000725

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION
($ in Thousands)

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE NAVY/LOGISTICS SUPPORT/JAN 1996										*02 ITEM DESCRIPTION* HAZARDOUS INVENTORY CONTROL SYSTEM
	FY 1995			FY 1996			FY 1997			
ELEMENTS OF COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	
02 HAZARDOUS INV CONTROL SYSTEMS		VAR	4,082		VAR	4,455				

Narrative Justification

FISC HAZMAT MANAGEMENT INITIATIVES: Establishment of comprehensive hazardous material reutilization programs at all FISCs. Projected funding requirement based on detailed estimate for startup of FISC single service point at NAVBASE San Diego which was funded in FY 1992 as well as initial rough order magnitude (ROM) estimates from all other FISCs.

HMC&M PROTOTYPE SYSTEM EQUIPMENT: Each installation is expected to cost approximately $170-$180K for initial hardware to support a networked system. The fiscal year 1996 and 1997 requirements will fund 11 systems for operational shore activities in each fiscal year.

IMPLEMENTATION OF AFLOAT HAZARDOUS MATERIAL CONTROL SYSTEM: Funding is required to outfit all Navy afloat commands with necessary hardware and software to operate the Hazardous Material Inventory Control System (HICS), a method for managing hazardous material which minimizes usage and reduces waste. FY 1996 and 1997 requirements will cover installation on all small ships, including submarines.

0007226

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION
($ in Thousands)

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE NAVY/LOGISTICS SUPPORT/JAN 1996										
							03 ITEM DESCRIPTION CIVIL ENGINEERING SUPPORT EQUIPMENT			
	FY 1995			FY 1996			FY 1997			
ELEMENTS OF COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	
03 CIVIL ENG SUPPORT EQUIP					VAR	1,124				

Narrative Justification

Civil Engineering Support Equipment - This program funds the procurement of overaged non-passenger carrying vehicles (stake trucks, pickup/utility trucks and panel trucks/vans for FISCs.

Equipment which is not replaced at the end of its expected life becomes uneconomical to maintain, unsafe, and unreliable. At present, NAVSUP field activities have approximately 700 vehicles that will eventually need replacing.

432000

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION
($ in Thousands)

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE NAVY/LOGISTICS SUPPORT/JAN 1996										*03 ITEM DESCRIPTION* COLLATERAL EQUIPMENT
ELEMENTS OF COST	QTY	FY 1995 UNIT COST	TOTAL COST	QTY	FY 1996 UNIT COST	TOTAL COST	QTY	FY 1997 UNIT COST	TOTAL COST	
03 COLLATERAL EQUIPMENT		VAR	300		VAR	100				

...ative Justification

...ral Equipment - Due to the Increase in the Expense/Investment Threshold, Collateral Equipment will be funded by the Operating Budget ...ining in FY 96.

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION
($ in Thousands)

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE NAVY/LOGISTICS SUPPORT/JAN 1996										*03 ITEM DESCRIPTION* OTHER SUPPLY SUPPORT EQUIP	
ELEMENTS OF COST	QTY	FY 1995 UNIT COST	TOTAL COST	QTY	FY 1996 UNIT COST	TOTAL COST	QTY	FY 1997 UNIT COST	TOTAL COST		
03 SHOP & OFFICE EQUIP		VAR	11		VAR	300					

Narrative Justification

Shop and Office Equipment - This program replaces obsolete equipment which is beyond economical repair and procures new equipment which will enable a unit to perform more effectively. Items purchased are used at Fleet and Industrial Supply Centers (FISCs). Activities identify requirements annually. ***In the recent past, these requirements have exceeded funding available by a factor of 3 to 1.***

Needs are fulfilled based on priorities determined by the requester and the Headquarters staff. Emphasis is given to replacing older equipment and to procuring those items which will provide productivity improvement. The following are examples of equipment procured under this program: retrieval systems, communications systems, public works shop equipment, fuel testing equipment and mooring aids. If sufficient funding is not provided, equipment will break down more frequently, impacting productivity and the safety of the workforce.

0007229

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE NAVY/LOGISTICS SUPPORT/JAN 1996										
				03 ITEM DESCRIPTION FORKLIFT TRUCKS						
ELEMENTS OF COST	QTY	FY 1995 UNIT COST	TOTAL COST	QTY	FY 1996 UNIT COST	TOTAL COST	QTY	FY 1997 UNIT COST	TOTAL COST	
03 FORKLIFT TRUCKS	47	VAR	466	62	VAR	1,423				

Narrative Justification

Forklift Trucks - This program funds the procurement of new/initial outfitting and replacement material handling equipment (MHE) requirements for the Fleet and Industrial Supply Centers (FISC) and Inventory Control Points (ICP).

Equipment which is not replaced at the end of it's expected service life becomes uneconomical to maintain, unsafe, unreliable, and unable to sustain increased operational tempos. Many of the over-aged forklifts currently in service are technologically obsolete, impacting mission capabilities. Additional intangible costs are also incurred, such as: increased manpower requirements, productivity losses, ineffective space utilization, material damage, and leasing costs. New replacement equipment enables activities to meet handling and logistical requirements in an efficient and effective manner.

000730

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION
($ in Thousands)

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE NAVY/LOGISTICS SUPPORT/JAN 1996										*04 ITEM DESCRIPTION* BLC
	FY 1995			FY 1996			FY 1997			
ELEMENTS OF COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	
04 BLC			2,983			2,207				

Narrative Justification

Base Level Computing - Base Level Computing (BLC) is a program designed to replace and upgrade the aging interface between the end user at the keyboard and the Defense Information Systems Office (DISO) data center, for NAVSUP managed activities using the Uniform Data Processing System for Stock Points (UADPS-SP). This interface will also support the CIM system which ultimately replaces UADPS-SP. The overall program concept is described in a Mission Need Statement (MNS) approved by the Assistant Secretary of the Navy (ASN(RD&A)) and milestone decision authority was delegated to the Naval Supply Systems Command (NAVSUP). The program consists of a number of individual and independent Abbreviated System Decision Papers (ASDPs) which conform to the overall concept described in the approved MNS. The ASDPs include the justification and economic analysis associated with the work at each individual site.

The BLC Program is phased over time and the initial installations should be completed in FY97 although equipment will be replaced continuously in the future. During FY96 and FY97 we will continue equipment installations at Fleet and Industrial Supply Centers (FISCs) which began in FY94

000731

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE	*04 ITEM DESCRIPTION*
NAVY/LOGISTICS SUPPORT/JAN 1996	**BLC**

Narrative Justification (continued)

and FY95 and will begin work at other smaller activities. The ultimate goal is to build an architecture which will support a three tier computing and information system architecture which locates processing at the most economical and technically efficient level, and is consistent with overall DoD information system plan. If executed in accordance with the overall plan described in the MNS, the BLC Program will, over time, significantly improve ashore supply processing for the fleet.

000732

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION
($ in Thousands)

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE NAVY/LOGISTICS SUPPORT/JAN 1996							*04 ITEM DESCRIPTION* LOGMARS			
	FY 1995			FY 1996			FY 1997			
ELEMENTS OF COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	
04 LOGMARS			457			2,400				

Narrative Justification

LOGMARS - The Logistics Applications of Automated Marking and Reading Symbols (LOGMARS) funds provide ships and stock points with capability to "read" bar coded information for entry into existing computer systems. LOGMARS has generated significant cost avoidance savings in the functional area of physical inventory, inventory location survey, material receiving and issue, and government property accounting as documented in the final report of the OSD-sponsored LOGMARS Steering Group. In order to utilize bar coded data, the funding will provide the necessary equipment and programs to interface with existing computer systems. With greater emphasis on acquisition of commercial products and the associated bar codes, this will place greater emphasis on automated source data entry initiatives. Increased productivity, data accuracy, and visibility and control of inventories will be realized with LOGMARS technology.

0000233

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE	*04 ITEM DESCRIPTION*
NAVY/LOGISTICS SUPPORT/JAN 1996	**LOGMARS**

Narrative Justification (continued)

Funding continues to equip Navy activities ashore and afloat with bar code equipment and programs. As equipment ages and technology advances, there will continue to be a need to replace obsolete equipment and old equipment that breaks down as the cost for repair approaches the cost of replacement. Also, replacement equipment is required when equipment is no longer being manufactured.

DMRD 987 Inventory Reduction Plan Improvement (IRP) specifically cites LOGMARS as a new technology that the services must continue to implement to enhance readiness, responsiveness, productivity inventory control and the overall quality of support.

000734

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION
($ in Thousands)

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE NAVY/LOGISTICS SUPPORT/JAN 1996										*04 ITEM DESCRIPTION* UADPS-SP/U2
	FY 1995			FY 1996			FY 1997			
ELEMENTS OF COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	
04 UADPS-SP/U2 (Equipment)			1,065			1,000				

Narrative Justification

UADPS-SP - The Uniform Automated Data Processing System for Stock Points (UADPS-SP) is the standard Navy-wide automated supply and financial management application system designed to support Navy operating forces. An enhancement of UADPS-SP, called UADPS-SP/U2, expands the current UADPS-SP functionality to incorporate the concept of "regionalization" of inventory management within the Department of Defense. These capital investment requirements support peripheral and telecommunications infrastructure required to support implementation of UADPS-SP/U2 at all potential Fleet and Industrial Supply Centers (FISCs) and partner sites (the FISCs become the Navy's primary provider of regional logistics support services). All expenditures of these funds are supported by business case analyses. These investments fully support both the Defense Information Infrastructure (DII) initiative and the Regional Maintenance plan endorsed by the Chief of Naval Operations.

000735

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION
($ in Thousands)

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE NAVY/LOGISTICS SUPPORT/JAN 1996										
							05 ITEM DESCRIPTION APADE			
	FY 1995			FY 1996			FY 1997			
ELEMENTS OF COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	
05 APADE (CDA)	3	79.365	238	3	79.481	238				

Narrative Justification

APADE - These Central Design Agency (CDA) personnel are modifying Automation of Procurement and Accounting Data Entry (APADE) programs for enhancements to accommodate small purchase, Electronic Data Interchange (EDI) and non-standard requisitioning and demand data reporting by Fleet and Industrial Supply Center (FISC) procurement centers.

000236

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION
($ in Thousands)

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE	*06 ITEM DESCRIPTION*
NAVY/LOGISTICS SUPPORT/JAN 1996	**Compact Disc-Read Only Memory (CD-ROM)**

ELEMENTS OF COST	FY 1995 QTY	FY 1995 UNIT COST	FY 1995 TOTAL COST	FY 1996 QTY	FY 1996 UNIT COST	FY 1996 TOTAL COST	FY 1997 QTY	FY 1997 UNIT COST	FY 1997 TOTAL COST
06 CD-ROM (CDA)	6	79.365	476	6	79.481	477			

Narrative Justification

CD-ROM - The Compact Disc-Read Only Memory (CD-ROM) provides information digitally for direct use with personal computers replacing both paper and microfiche as a means to distribute manuals, publications, and data bases. CD-ROM is one of the technologies whose primary importance is increasing the currency , consistency, security and the accessibility of information. This product provides massive storage capacity, saves money on warehousing and mailing costs, and increases productivity by providing data in a rapid lookup and retrieval mode. A single CD-ROM can hold 300,000 pages of text which equates to 2,500 pounds of paper, takes up 120 feet of shelf space and costs $958 to mail. A single CD-ROM weighs 0.7 ounces, takes less than an inch of space and cost $0.75 to mail. CD-ROM is the most practical and economical media for the multiple distribution of digital data. Real savings are to be achieved from the reduction of printing, decreased mailings, less necessary manpower for the handling of documents, and the diminished need for warehouse space.

000737

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION
($ in Thousands)

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE NAVY/LOGISTICS SUPPORT/JAN 1996										
							07 ITEM DESCRIPTION E-MAIL			
		FY 1995			FY 1996				FY 1997	
ELEMENTS OF COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	
07 E-MAIL (CDA)	1	79.365	79	1	79.481	79				

Narrative Justification

E-MAIL- NAVSUP is installing a corporate-wide electronic mail facility with Hub located in Mechanicsburg, Pa. We will use a small number of Fleet Material Support Office (FMSO) resources to manage the mail hub, install new users, and provide new Internet capabilities through the installation of a new Internet Domain Name System.

000238

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION
($ in Thousands)

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE NAVY/LOGISTICS SUPPORT/JAN 1996										*08 ITEM DESCRIPTION* ITIMP EDI UADPS-ICP (CDA)
		FY 1995			FY 1996			FY 1997		
ELEMENTS OF COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	
08 ITIMP EDI UADPS-ICP (CDA)	3	79.365	238	3	79.481	238				

Narrative Justification

ITIMP - These Central Design Agency (CDA) resources will be modifying ADP programs for enhancements to Integrated Technical, Item Management and Procurement (ITIMP) to accommodate Inventory Control Point (ICP) procurement Electronic Data Interchange (EDI) including expanding upon baseline transactions to incorporate the 841 transaction set for commercial and organic manufacturing solicitations.

000239

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION
($ in Thousands)

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE NAVY/LOGISTICS SUPPORT/JAN 1996								*09 ITEM DESCRIPTION* LAN		
	FY 1995			FY 1996			FY 1997			
ELEMENTS OF COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	
09 LAN (CDA)	4	79.365		4	79.481	318				

Narrative Justification

In accordance with the overall Base Level Computing (BLC) concept as described in the approved Mission Needs Statement (MNS), NAVSUP will be installing Local Area Networks (LANS) in a number of small activities that are users of the Uniform Automated Data Processing System for Stock Points (UADPS-SP). NAVSUP plans to use Fleet Material Support Office (FMSO) resources for some of the LAN installations. These resources will also be used to establish a help desk to provide technical support and trouble shooting services to activities with installed LANS. The LAN installations at small sites are supported by an approved Abbreviated System Decision Paper (ASDP).

0074C

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION
($ in Thousands)

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE NAVY/LOGISTICS SUPPORT/JAN 1996										
							10 ITEM DESCRIPTION LOGMARS/EPOS			
ELEMENTS OF COST	QTY	FY 1995 UNIT COST	TOTAL COST	QTY	FY 1996 UNIT COST	TOTAL COST	QTY	FY 1997 UNIT COST	TOTAL COST	
10 LOGMARS/EPOS (CDA)	4.6	79.365	365	4.6	79.481	366				

Narrative Justification

LOGMARS (EPOS) - The Logistic Applications of Automated Marking and Reading Symbols (LOGMARS) equipment funding provides ships and stock points with the capability to "read" bar coded information for entry into existing computer systems. LOGMARS has generated significant cost avoidance savings in the functional area of physical inventory, inventory location survey, material receiving and issue, and government property accounting as documented in the final report of the OSD-sponsored LOGMARS Steering Group. Increased productivity, data accuracy, and visibility and control of inventories will be realized with LOGMARS technology, and these benefits contribute to improved Fleet support and readiness.

The CDA efforts reflected here support legacy system modifications required to implement Electronic Point of Sale (EPOS) initiatives within the LOGMARS technology.

000741

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION
($ in Thousands)

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE NAVY/LOGISTICS SUPPORT/JAN 1996										*11 ITEM DESCRIPTION* UADPS-SP/UADPS-2
		FY 1995			FY 1996			FY 1997		
	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	
ELEMENTS OF COST										
11 UADPS-SP/U2	31.01	79.365	2,461	42.93	79.481	3,412				
(CDA)										

Narrative Justification

UADPS-SP - The Uniform Automated Data Processing System for Stock Points (UADPS-SP) is the Navy-wide automated supply, financial and resources management application system designed to support Navy operating forces. It is a Navy legacy system operated at over 35 Naval Commands including Fleet and Industrial Supply Centers (FISCs), Naval Air Stations, Naval Shipyards and Training Centers. The UADPS-SP system provides uniform logistics data support to the Chief of Naval Operations, Commander in Chief Atlantic Fleet (CINCLANTFLT), Commander in Chief Pacific Fleet (CINCPACFLT), Chief of Naval Education and Training, Chief of Naval Reserves, Comptroller of the Navy, and Commandant of the Marine Corps. This system is operated primarily at Defense Information Systems Agency (DISA) ADP installations and at several remote activities.

000742

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE	*11 ITEM DESCRIPTION*
NAVY/LOGISTICS SUPPORT/JAN 1996	**UADPS-SP/UADPS-2**

Narrative Justification (continued)

The Central Design Agency (CDA) efforts reflected herein are directed toward complying with OSD/Congressionally-mandated changes, and corrective software maintenance efforts. An additional CDA effort for this AIS has been directed toward incorporating the FISC facts of CNO Management Review Initiative #20 which provides the necessary functionality to complement Corporate Information Management (CIM) enterprise-wide systems. Specifically, these efforts provide the necessary management tools:

- *To reduce inventory and infrastructure costs through centralized inventory management and expanded regional asset visibility.*
- *To supply centralized management of separate consumer inventories to the "wrench-turner" level.*
- *To consolidate geographic "stovepipe" inventories under a single ADP system to achieve personnel and inventory.*
- *To expand consumer level asset visibility and sharing.*
- *To achieve cost avoidance as legacy systems are eliminated.*

000243

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION
($ in Thousands)

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE NAVY/LOGISTICS SUPPORT JAN 1996								*12 ITEM DESCRIPTION* TRANSPORTATION		
ELEMENTS OF COST	QTY	FY 1995 UNIT COST	TOTAL COST	QTY	FY 1996 UNIT COST	TOTAL COST	QTY	FY 1997 UNIT COST	TOTAL COST	
12 TRANSPORTATION (CDA)		79.365	577	9	79.481	715				

ve Justification

Transportation - The funds pr[illegible]pment of the Navy Material Transportation Office Management Information System's Budget Management System and integration of the Transportation Operations Management System.

000744

SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION
($ in Thousands)

BUDGET SUBMISSION
FY 1997 President's Budget

COMPONENT/BUSINESS AREA/DATE NAVY/LOGISTICS SUPPORT/JAN 1996					*13 ITEM DESCRIPTION* MINOR CONSTRUCTION				
ELEMENTS OF COST	QTY	FY 1995 UNIT COST	TOTAL COST	QTY	FY 1996 UNIT COST	TOTAL COST	QTY	FY 1997 UNIT COST	TOTAL COST
13 MINOR CONSTRUCTION		VAR	290		VAR	1,000			

Narrative Justification

Minor Construction - Minor construction is the erection, installation, or assembly of new real property, or the addition, expansion, extension, alteration or replacement of existing real property to meet ever changing requirements. For example, construct main gates and construct new water meter building.

000745

Department of the Navy - Defense Business Operations Fund
Logistics Support Activities
Capital Budget Execution
(dollars in millions)
FY 1996

Title / Description	Original Request	Change	Revised Request	Explanation
Equipment (non-ADPE/TEL)	**9.378**	**-1.676**	**7.702**	
- AMHS	0.3		0.3	
- Hazardous Inventory Control System	4.455		4.455	
- Other	4.623	-1.676	2.947	To SM (1.577)
ADPE Equipment	**5.607**		**5.607**	
Software Development	**5.843**	**0**	**5.843**	
- APADE	0.238		0.238	
- CD ROM	0.477		0.477	
- E-MAIL	0.079		0.079	
- LAN	0.318		0.318	
- UDAPS - SP U2	3.412		3.412	
- LOGMARS/EPOS	0.366		0.366	
- UADPS - ICP	0.238		0.238	
- Transportation	0.715		0.715	
Minor Construction	**0.8**	**0.2**	**1.0**	From SM
Total	**21.628**	**-1.476**	**20.152**	

000746