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**DEFENSE BUSINESS OPERATIONS FUND - NAVY**

**FY 1995 BUDGET ESTIMATES**

**OPERATING AND CAPITAL BUDGETS**

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**DEFENSE BUSINESS OPERATIONS FUND - NAVY  
FY 1995 BUDGET ESTIMATES**

The Department of the Navy 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. These DBOF activities include:

Supply Operations: Consists of three business areas. The Supply Management business area performs inventory management functions for shipboard and aviation repairables and consumables. Distribution Depots provide management of overseas Fleet Industrial Supply Centers. Logistic Support Activities perform miscellaneous support functions such as contract management reviews, port services, and large and small procurement for ashore and fleet commanders. Beginning in FY 1995, costs for the movement of house hold goods will be mission funded.

Depot Maintenance:

Shipyards: Consists of eight shipyards three of which are in a closing status as a result of Base Realignment and Closure Decisions. Workload declines 14 percent from FY 1994 to FY 1995 with personnel staffing levels declining by 10,000.

Aviation Depots: Consists of six aviation depots three of which are in closing status. Workload declines from FY 1994 to FY 1995 result in a staffing reduction of 3,000.

Weapons Stations: Consists of five weapons stations. This budget reflects the establishment of the Naval Ordnance Center, a major management initiative to provide world-wide logistics management of all Navy and Marine Corps ordnance under one organization. In addition, this budget reflects Mobilization costs for wartime contingencies funded from the Operations and Maintenance, Navy account.

Marine Corps Depots: Consists of one east coast and one west coast depot facility. Significant Desert Storm carryover work continues through FY 1994 and 1995 with most of the backlog completed by FY 1995.

Transportation: Consists of the Naval Fleet Auxiliary Force (NFAP) vessels and Special Mission Ships (SMS) in FY 1994, and the addition of Afloat Prepositioning Force (APF) service unique ships in FY 1995 which increases workload for this business area by 30 percent. Common user transportation functions are operated by the U.S. Transportation Command (TRANSCOM).

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 approximately 8 percent through the budget years 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 major Naval bases throughout the world. Workload and civilian personnel remain steady from FY 1994 to 1995.

**Defense Printing Service:** A consolidated DoD business area consisting of Printing Production and Procurement facilities and numerous smaller Reprographic facilities. Significant workload reductions occur over the budget period which cause personnel reductions of 25 percent.

**COST OF OPERATIONS**

Costs incurred in providing goods and services sold to customers total \$22,603.4 million in FY 1995.

	(dollars in millions)			
	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>	<u>Change</u>
Supply Management	6,745.6	6,263.0	6,261.4	-1.6
Distribution Depots	99.6	97.8	61.2	-36.6
Logistics Support	264.6	276.5	230.8	-45.7
Depot Maintenance - Ships	5,416.7	3,896.2	3,278.6	-617.6
Depot Maintenance - Aircraft	2,288.1	1,953.1	1,851.9	-101.2
Depot Maintenance - Ordnance	684.2	576.0	470.3	-105.7
Depot Maintenance - Other	189.9	179.7	164.5	-15.2
Transportation	667.5	749.3	1,166.4	417.1
Research and Development	6,758.6	7,307.8	6,893.4	-414.4
Information Services	306.1	265.7	231.5	-34.2
Printing Services	427.7	338.9	319.4	-19.5
Base Support	1,814.5	1,706.7	1,674.1	-32.6
<b>Totals</b>	<b>25,663.1</b>	<b>23,610.8</b>	<b>22,603.4</b>	<b>-1,007.4</b>

**STAFFING LEVELS**

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

	(end strength in thousands)			
	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>	<u>Change</u>
Supply Management	7.1	5.8	4.5	-1.3
Distribution Depots	1.4	1.5	1.4	-0.1
Logistics Support	3.1	3.6	3.5	-0.1
Depot Maintenance - Ships	50.1	42.2	32.1	-10.1
Depot Maintenance - Aircraft	18.6	17.1	14.3	-2.8
Depot Maintenance - Ordnance	7.3	5.8	5.1	-.7
Depot Maintenance - Other	2.2	2.0	2.1	+.1
Transportation	5.5	6.3	6.4	+.1
Research and Development	55.2	54.9	50.5	-4.4
Information Services	4.6	2.6	2.4	-.2

Printing Services	2.7	2.2	2.0	- .2
Base Support	14.4	13.6	13.3	- .3
Total	172.2	157.6	137.6	-20.0

NET OPERATING RESULT

	(dollars in millions)			
	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>	<u>Change</u>
Supply Management	114.7	-53.9	-217.8	-243.1
Distribution Depots	0	- .5	.5	1.0
Logistics Support	0	-3.6	3.6	7.2
Depot Maintenance - Ships	-158.2	160.7	430.8	270.1
Depot Maintenance - Aircraft	-151.0	42.9	196.2	153.3
Depot Maintenance - Ordnance	39.0	52.7	75.3	22.6
Depot Maintenance - Other	-32.5	23.6	17.3	-6.3
Transportation	-122.2	123.3	-6.9	-130.2
Research and Development	263.2	-307.6	134.5	442.1
Information Services	27.1	-7.5	-13.3	-5.8
Printing Services	-24.2	-17.8	45.5	63.3
Base Support	-22.1	-34.2	102.7	136.9
Total	-66.1	-21.9	768.4	790.3

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 or transportation ship days for the industrial business areas. For the supply business area, workload changes are indicated by net sales. The FY 1995 growth in the transportation business area reflects the transfer of Navy-unique Maritime Prepositioning Programs from TRANSCOM (U.S. Transportation Command) DBOF to Navy DBOF and the transition of additional fleet auxiliary ships from mission funded to DBOF funded. The FY 1994 increase in Information Services is due to the intra-DBOF transfer of the Fleet Material Support Office from the Supply business area to Information Services business area.

	(percent change)	
	<u>FY 1994</u>	<u>FY 1995</u>
Supply Management	-11.0%	-17.0%
Depot Maintenance - Ships	-11.0%	-14.1%
Depot Maintenance - Aircraft	-5.5%	-8.8%
Depot Maintenance - Ordnance	-20.8%	-17.7%
Depot Maintenance - Other	-11.8%	-7.7%
Transportation (ship per diem days)	-1.4%	30.4%
Research and Development	5.9%	-6.7%
Information Services	17.8%	-11.9%
Printing Services	-20.9%	-13.7%
Base Support	1.6%	-1.1%

CUSTOMER RATE CHANGES

Composite rate changes from FY 1994 to FY 1995, designed to achieve an accumulated operating result of zero at the end of FY 1995, are as follows:

	(percent change)
	<u>FY 1995</u>
Supply Management (wholesale)	22.1%
Depot Maintenance - Ships	18.7%
Depot Maintenance - Aircraft (composite)	27.6%
Depot Maintenance - Ordnance	16.4%
Depot Maintenance - Other	34.3%
Transportation:	
Fleet Auxiliary	-18.2%
Special Mission	-14.1%
Afloat Prepositioning Ships	-22.5%
Research and Development:	
Research Lab	1.9%
Civil Engineering Lab	6.0%
NCCOSC	8.5%
Undersea Warfare Centers	6.4%
Surface Warfare Centers	16.1%
Air Warfare Centers	15.5%
Information Services:	
Fleet Material Support Office	9.4%
NCTC	-5.4%
Printing Services	16.0%
Base Support:	
East Coast - composite	2.3%
East Coast - utilities	2.4%
West Coast - composite	6.1%
West Coast - utilities	9.6%

#### UNIT COST

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. The following Unit Cost goals have been established for FY 1995:

<u>Business Area</u>	<u>Unit Cost Goal</u>	<u>Unit Cost</u>
		<u>FY 1995</u>
Supply Management	Oblig/\$ Whls Sale	.78
	Oblig/\$ Retail Sale	.97
Other Outputs	(OA, \$ in millions):	
	Centrally Managed Programs	116.9
	Over Ocean Transportation	85.3
	Hazardous Waste	.3
	Pubs Mngt/Reactor Parts	4.1
	Consumable Item Trns Pipeline	51
Distribution Depots	Line Item Received/Issued (Unit Cost)	33.36
	RPM Reserve (OA, \$ in millions):	9.4
Logistics Support Activity (OA, \$ in millions):		
	Fuel Operations	15.7

Air/Ocean Terminal Opns		7.8
Contract Management Reviews		.5
Port Services		.7
Service Craft		1.7
Large Purchases		19.1
Small Purchases		23.0
FOSSAC		5.8
Environmental Funding		3.5
RPM Reserve		3.8
MILPERS		9.4
G&A Support to Others		49.5
Depot Maint-Ships	\$ per Direct Labor Hour	70.74
Depot Maint-Aircraft	\$ per Direct Labor Hour	120.25
Depot Maint-Ordnance	\$ per Direct Labor Hour	97.48
Depot Maint-Other	\$ per Direct Labor Hour	64.81
Base Support	PY Cost PWC Services	1.038
Research and Development	\$ per Direct Labor Hour	119.10
Printing Services	Cost Per Production Unit	.09
Transportation	SMS cost per day \$	26,030
	NFAP cost per day \$	31,150
	APP cost per day \$	58,240

### CAPITAL BUDGET

The following table depicts capital investment levels for the Navy DBOF business areas:

	(dollars in millions)		
	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
Supply Management	.6	6.0	4.8
Distribution Depots	.8	1.0	.8
Logistics Support	5.6	33.4	25.3
Depot Maintenance - Ships	46.4	63.3	52.0
Depot Maintenance - Aircraft	36.9	11.4	8.0
Depot Maintenance - Ordnance	11.1	27.6	21.2
Depot Maintenance - Other	4.5	4.3	3.6
Transportation	3.2	5.1	5.0
Research and Development	102.5	159.6	161.9
Information Services	12.4	2.1	.9
Printing Services	11.6	12.4	12.4
Base Support	<u>13.5</u>	<u>31.3</u>	<u>33.1</u>
Totals	249.1	357.5	329.0

Note: The FY 1994 total is \$155.4 and 30 percent below the FY 1994 President's Budget due to impending base closures.

**DEFENSE BUSINESS OPERATIONS FUND - NAVY**  
**REVENUE AND EXPENSES**  
(Dollars in Millions)

	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
<b>Revenue:</b>			
<b>Gross Sales:</b>			
Operations	24,874.1	22,437.3	22,855.6
Capital Surcharge	30.5	0.0	170.0
Depreciation except Maj Const	381.2	397.5	450.3
Major Construction Depreciation	153.7	187.2	0.0
Total Gross Sales	25,439.6	23,022.0	23,475.9
Other Income	54.2	54.5	56.8
Total Income	25,493.8	23,076.5	23,532.7
<b>Expenses:</b>			
Cost of Materiel Sold from Inventory	5,851.7	5,492.2	4,899.8
Negotiated Purchases from Customers	439.6	295.9	439.0
Transportation	121.8	111.2	119.4
Salaries and Wages:			
Military Personnel	226.0	219.5	170.9
Civilian Personnel	8,420.0	8,101.0	7,557.0
Materials, Supplies and			
Parts used in Operations	2,427.3	2,427.1	2,424.0
Facility Repair Charge	556.7	570.7	537.2
Depreciation - Capital	517.7	580.1	479.5
Contracted Engineering Services	353.6	566.9	583.6
Lease Costs	190.4	158.6	293.0
Purchased Utilities	658.6	702.9	709.0
Purchased Communications	161.6	156.0	143.1
Equipment Maintenance	156.4	177.9	166.7
Fuel	131.9	166.4	167.7
Other Expenses	4,014.0	4,072.3	4,093.7
Total Expenses	24,227.3	23,798.6	22,783.5
Work in Process Adjusted	-1,670.3	0.0	0.0
Comp Work for Activity Reten Adj	234.5	187.9	180.1
Cost of Goods Sold	25,663.1	23,610.8	22,603.4
Operating Result	-169.3	-534.3	929.3
Less Capital Surchg Reservation	23.2	0.0	170.0
Plus Appropriations Affcting NOR/AOR	16.6	0.0	0.0
Other Changes Affecting NOR/AOR	375.3	781.0	203.1
Inventory Gains and Losses	-265.5	-268.6	-194.0
Net Operating Result	-66.1	-21.9	768.4
Transfers Not Affecting NOR/AOR	0.0	0.0	0.0
Prior Year and Other Adjustments	164.5	265.4	0.0
Other Inventory Adjustments	0.0	0.0	0.0
WRM Appropriations	0.0	0.0	0.0
Net Result	98.4	243.5	768.4

DEFENSE BUSINESS OPERATIONS FUND - NAVY  
SOURCE OF REVENUE  
(Dollars in Millions)

	FY 1993 -----	FY 1994 -----	FY 1995 -----
1. Orders from DoD Components:			
Army	339.5	241.6	247.2
Navy	17,474.7	16,415.3	16,543.5
Air Force	223.0	299.0	292.2
Marine Corps	626.1	378.0	428.3
Other	2,138.3	1,659.6	1,825.5
2. Orders from other DBOF Business Areas	2,604.9	2,241.0	2,125.1
3. Total DoD	23,406.4	21,234.5	21,461.9
4. Other Orders:			
Other Federal Agencies	272.3	210.5	193.4
Trust Fund	341.9	370.0	421.4
Non Federal Agencies	241.0	184.8	77.5
5. Total Gross Orders	24,261.5	21,999.7	22,154.1
6. Credits and Allowances:			
Discounts	0.0	0.0	0.0
Price Reductions	98.6	0.0	0.0
7. Change to Backlog	-1,276.9	-1,022.2	-1,322.0
8. Total Gross Sales	25,439.6	23,022.0	23,475.9

DEFENSE BUSINESS OPERATIONS FUND - NAVY  
CAPITAL BUDGET  
(Dollars in Millions)

	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
Equipment (except ADP & TELCOM)	160.5	178.6	168.4
Minor Construction	36.2	50.8	40.8
ADPE & TELCOM	42.5	117.8	105.9
Software	9.8	10.3	13.8
Total	249.0	357.5	329.0

DEFENSE BUSINESS OPERATIONS FUND - NAVY  
MATERIAL INVENTORY DATA  
(Dollars in Millions)  
FISCAL YEAR 1993

	Total	----- Peacetime -----		
		Mobilization	Operating      Other	
Materiel Inventory BOP	19,272.4	493.4	10,226.0      8,553.0	
BOP Reclassification Changes	0.0	0.0	2,020.8      -2,020.8	
Price Changes	354.7	26.9	367.9      -40.1	
Receipts from Commercial Sources	6,380.4	28.6	6,325.4      26.4	
Negotiated Purchase from Customers	557.3	0.6	394.3      162.4	
Gross Sales	8,370.6	2.4	8,368.2      0.0	
Materiel Inventory Adjustments				
CAPITALIZATIONS + OR (-)	-1,164.9	-1.3	-346.0      -817.6	
RETURNS TO SUPPLIERS (-)	-45.1	0.0	0.0      -45.1	
TRANSFERS TO PROP. DISP. (-)	-3,371.9	0.0	0.0      -3,371.9	
ISSUES/RECEIPTS WITHOUT REIMBURSEMENT + or (-)	-707.7	-32.4	-188.3      -487.0	
OTHER (list)	6,447.5	-16.9	-251.2      6,715.6	
TOTAL ADJUSTMENTS	1,157.9	-50.6	-785.5      1,994.0	
Materiel Inventory EOP	19,352.1	496.5	10,180.7      8,674.9	
ECONOMIC RETENTION (memo)				4,099.4
POLICY RETENTION (memo)				351.0
POTENTIAL EXCESS (memo)				193.3
OTHER (memo)				4,031.2
Materiel Inventory on Order				
EOP (memo)	3,123.9	36.9	2,758.2      328.8	



DEFENSE BUSINESS OPERATIONS FUND - NAVY  
MATERIAL INVENTORY DATA  
(Dollars in Millions)  
FISCAL YEAR 1994

	Total Mobilization	----- Peacetime -----		
		Operating	Other	
Materiel Inventory BOP	19,352.1	496.5	10,180.7	8,674.9
BOP Reclassification Changes	-0.0	14.1	1,945.7	-1,959.8
Price Changes	590.3	6.4	297.0	286.9
Receipts from Commercial Sources	5,623.4	6.0	5,591.4	26.0
Negotiated Purchase from Customers	415.2	0.4	184.0	230.8
Gross Sales	7,847.4	0.0	7,847.4	0.0
Materiel Inventory Adjustments				
CAPITALIZATIONS + OR (-)	-1,871.0	-21.5	-562.0	-1,287.5
RETURNS TO SUPPLIERS (-)	-30.1	0.0	0.0	-30.1
TRANSFERS TO PROP. DISP. (-)	-2,581.9	0.0	0.0	-2,581.9
ISSUES/RECEIPTS WITHOUT REIMBURSEMENT + or (-)	-151.4	-1.6	-59.1	-90.7
OTHER (list)	4,875.1	0.1	-866.5	5,741.5
TOTAL ADJUSTMENTS	240.7	-23.0	-1,487.6	1,751.3
Materiel Inventory EOP	18,374.3	500.4	8,863.8	9,010.1
ECONOMIC RETENTION (memo)				3,613.8
POLICY RETENTION (memo)				309.3
POTENTIAL EXCESS (memo)				206.2
OTHER (memo)				4,880.8
Materiel Inventory on Order				
EOP (memo)	2,935.7	1.0	2,718.6	216.1

DEFENSE BUSINESS OPERATIONS FUND - NAVY  
MATERIAL INVENTORY DATA  
(Dollars in Millions)  
FISCAL YEAR 1995

	Total	----- Peacetime -----		
		Mobilization	Operating      Other	
Materiel Inventory BOP	18,374.3	500.4	8,863.8    9,010.1	
BOP Reclassification Changes	0.0	0.0	1,768.4   -1,768.4	
Price Changes	1,414.8	11.4	821.7      581.7	
Receipts from Commercial Sources	5,030.8	48.8	4,989.0      -7.0	
Negotiated Purchase from Customers	546.4	0.4	320.1        225.9	
Gross Sales	7,592.0	0.0	7,592.0      0.0	
Materiel Inventory Adjustments				
CAPITALIZATIONS + OR (-)	-875.2	-1.4	-145.0    -728.8	
RETURNS TO SUPPLIERS (-)	-20.2	0.0	0.0       -20.2	
TRANSFERS TO PROP. DISP. (-)	-3,251.4	0.0	0.0       -3,251.4	
ISSUES/RECEIPTS WITHOUT REIMBURSEMENT + or (-)	-156.6	0.1	-56.9      -99.8	
OTHER (list)	4,630.2	0.0	-414.6    5,044.8	
TOTAL ADJUSTMENTS	326.8	-1.3	-616.5    944.6	
Materiel Inventory EOP	18,101.1	559.7	8,554.5    8,986.9	
ECONOMIC RETENTION (memo)				3,376.1
POLICY RETENTION (memo)				288.4
POTENTIAL EXCESS (memo)				213.0
OTHER (memo)				5,109.4
Materiel Inventory on Order				
EOP (memo)	2,637.6	0.4	2,621.6    15.6	

**DEFENSE BUSINESS OPERATIONS FUND - NAVY**

**FY 1995 OPERATING BUDGET**

**DEFENSE BUSINESS OPERATIONS FUND - NAVY  
FY 1995 BUDGET ESTIMATE**

**SUPPLY MANAGEMENT**

**BACKGROUND**

The Navy Supply Management Business Area of the Defense Business Operations Fund (DBOF) represents functional areas which previously were financed in the Department of the Navy Stock Fund (DONSF). In FY 1992 DONSF operations were incorporated into the DBOF under Supply Management - Navy. For enhanced visibility, the operations were subsequently divided into the three current business areas: Supply Management, Distribution Depots, and Logistics Support Activities.

The Supply Management Business Area performs inventory management functions that result in the sale of aviation, shipboard and amphibious consumables and repairables, fuel, ships store stock (through FY 1994), 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 a surcharge to cover costs such as inventory losses, transportation, obsolescence and cost of inventory management supply operations including, but not limited to, civilian labor, military personnel at supply activities, a portion of the Headquarters costs related to inventory management, the receipt and issue of Department managed material and Department owned retail material at distribution depots, and the depreciation of capital assets.

The Department benefits from the operation of this business area in two ways: because a single inventory of parts supplies all customers, investment in inventories is reduced; and purchase costs are reduced through bulk material purchases and centralized management.

Operations costs for the following activities are funded in the Supply Management business area:

Navy Ships Parts Control Center, Mechanicsburg, Pa  
Navy Aviation Supply Office, Philadelphia, Pa  
Marine Corps Logistics Base, Albany, Ga

In order to refine the Navy Distribution Depots business area, beginning in FY 1993, outputs and cost at depots that directly supported inventory management were identified and moved to Supply Management. The functions included transportation, repairable returns tracking and handling, nuclear material inspection, price

fighter which reviews customer price inquiries and identifies items which can be procured at a lower cost, and centrally managed programs.

The workload or unit cost resourcing unit of measure for Supply Management is net sales, both wholesale and retail. With the implementation of unit cost, the unit cost goal has replaced cash as the management tool for this business area.

**BUDGET HIGHLIGHTS**

**Workload** - The workload in Supply Management is wholesale and retail net sales. The submission reflects an overall drop in net sales of 11% from FY 1993 to FY 1994, and 17% from FY 1994 to FY 1995 (adjusted for rate change). The primary factors contributing to reduced sales are: (1) reduced recurring demand to match force structure and OPTEMPO reductions; (2) elimination of intermediate retail levels of inventory at Navy Fleet and Industrial Supply Centers; (3) transfer of material management of the majority of consumable items to the Defense Logistics Agency; and (4) transfer of ashore fuel sales in FY 1995 from Navy Supply Management accounting to Defense Fuel Supply Center.

Wholesale and Retail net sales are depicted below:

	(Dollars in Millions)		
	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
Wholesale	3693.2	3268.5	3673.5
Retail	3035.5	2938.5	2135.5
<b>Total Net Sales</b>	<b>6728.7</b>	<b>6207</b>	<b>5809</b>

**Economic Assumptions / Performance Indicators**

	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
Number of Items Managed	538,863	465,818	463,818
Number of Receipts	320,173	307,366	296,483
Number of Issues	333,356	321,852	309,960
Purchase Inflation	base	2.6%	2.8%
Supply Material Availability:			
Navy	81.6%	81.6%	81.6%
Marines	80.1%	85.0%	85.0%
Unit Cost: (Dollars)			
Wholesale	.86	.94	.78
Retail	.94	.99	.97
Personnel (End Strength):			
Civilian	6867	5724	4396

Military	323	119	119
Total Cost	7123.9	6531.7	6522.1
Customer Rate Changes	+10.4%	+6.0%	+22.1%
Net Operating Results	114.9	25.3	-217.8

Inventories / 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 as well as making smart decisions to reduce first buy requirements for new items. 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. Such buys are down 85% from FY 1988 to FY 1993.
- Continuation of an aggressive disposal policy. \$ 3.5 billion sent to disposal in FY 1993 which eliminates outyear holding and storage cost for inventory which is no longer required.
- Introduction of cultural change in inventory management.
  - Personnel evaluations based on IRP objectives.
  - Total Quality Management (TQM) 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.
- Reduced consumer level inventories through Readiness Based Sparing (RBS). RBS builds spare part allowances based on the incremental improvement of an item versus the previous demand based methodology.
- 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.

Inventory levels presented in the submission statements are a subset of the inventory shown on the annual Supply System Inventory Report (SSIR). The projected ending inventory levels for FY 1993 through FY 1995 follow:

<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
\$18,857	\$17,935	\$17,714

Capital Budget - This budget proposes capital budgets for all business areas. This budget finances all procurement of capital equipment, management information systems, and minor construction.

**SUPPLY MANAGEMENT - NAVY  
REVENUE AND EXPENSES  
(Dollars in Millions)**

	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
<b>Revenue:</b>			
<b>Gross Sales:</b>			
Operations	7,150.0	6,389.8	6,150.5
Capital Surcharge	0.0	0.0	66.7
Depreciation except Maj Const	16.6	32.1	30.3
Major Construction Depreciation	1.2	1.3	0.0
<b>Total Gross Sales</b>	<b>7,167.8</b>	<b>6,423.2</b>	<b>6,247.5</b>
<b>Other Income</b>	<b>54.2</b>	<b>54.5</b>	<b>56.8</b>
<b>Total Income</b>	<b>7,222.0</b>	<b>6,477.7</b>	<b>6,304.3</b>
<b>Expenses:</b>			
Cost of Materiel Sold from Inventory	5,851.7	5,492.2	4,899.8
Negotiated Purchases from Customers	439.6	295.9	439.0
Transportation	98.1	74.0	73.6
<b>Salaries and Wages:</b>			
Military Personnel	21.5	7.0	5.9
Civilian Personnel	274.7	291.1	243.7
<b>Materials, Supplies and</b>			
Parts used in Operations	3.8	3.8	4.0
Facility Repair Charge	7.0	7.2	9.6
Depreciation - Capital	17.8	33.4	30.3
Contracted Engineering Services	0.0	0.0	0.0
Lease Costs	0.2	0.2	1.4
Purchased Utilities	9.3	9.6	11.7
Purchased Communications	2.6	2.8	4.6
Equipment Maintenance	16.3	16.7	18.8
Fuel	0.0	0.0	0.0
Other Expenses	3.0	29.1	519.0
<b>Total Expenses</b>	<b>6,745.6</b>	<b>6,263.0</b>	<b>6,261.4</b>
Work in Process Adjusted	0.0	0.0	0.0
Comp Work for Activity Reten Adj	0.0	0.0	0.0
<b>Cost of Goods Sold</b>	<b>6,745.6</b>	<b>6,263.0</b>	<b>6,261.4</b>
<b>Operating Result</b>	<b>476.4</b>	<b>214.7</b>	<b>42.9</b>
Less Capital Surchg Reservation	0.0	0.0	66.7
Plus Appropriations Affecting NOR/AOR	16.6	0.0	0.0
Other Changes Affecting NOR/AOR	0.0	0.0	0.0
Inventory Gains and Losses	(378.3)	(268.6)	(194.0)
<b>Net Operating Result</b>	<b>114.7</b>	<b>(53.9)</b>	<b>(217.8)</b>
Transfers Not Affecting NOR/AOR	0.0	0.0	0.0
Prior Year and Other Adjustments	0.0	0.0	0.0
Other Inventory Adjustments	0.0	0.0	0.0
WRM Appropriations	0.0	0.0	0.0
<b>Net Result</b>	<b>114.7</b>	<b>(53.9)</b>	<b>(217.8)</b>



**SUPPLY MANAGEMENT - NAVY  
SOURCE OF REVENUE  
(Dollars in Millions)**

	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
<b>1. Orders from DoD Components:</b>			
Army	29.4	26.5	25.6
Navy	4,846.8	4,080.7	4,162.9
Air Force	20.6	18.8	20.1
Marine Corps	304.1	209.2	231.6
Other	1,282.2	992.0	1,081.4
<b>2. Orders from other     DBOF Business Areas</b>	<b>484.0</b>	<b>444.4</b>	<b>362.6</b>
<b>3. Total DoD</b>	<b>6,767.1</b>	<b>5,771.6</b>	<b>5,884.2</b>
<b>4. Other Orders:</b>			
Other Federal Agencies	95.4	88.0	73.9
Trust Fund	149.5	158.0	185.4
Non Federal Agencies	134.2	118.2	6.4
<b>5. Total Gross Orders</b>	<b>7,146.2</b>	<b>6,135.8</b>	<b>6,149.9</b>
<b>6. Credits and Allowances:</b>			
Discounts	0.0	0.0	0.0
Price Reductions	98.5	0.0	0.0
<b>7. Change to Backlog</b>	<b>120.1</b>	<b>287.4</b>	<b>97.6</b>
<b>8. Total Gross Orders</b>	<b>7,167.8</b>	<b>6,423.2</b>	<b>6,247.5</b>

**SUPPLY MANAGEMENT - NAVY  
CAPITAL BUDGET  
(Dollars in Millions)**

	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
Equipment	0.2	0.2	0.2
Minor Construction	0.4	0.5	0.5
Management Information Systems	0.0	5.3	4.1
CDA	0.0	0.0	0.0
<b>Total</b>	<b>0.6</b>	<b>6.0</b>	<b>4.8</b>

**SUPPLY MANAGEMENT - NAVY  
MATERIAL INVENTORY DATA  
(Dollars in Millions)  
FISCAL YEAR 1983**

	Total Mobilization	Operating	— Peacetime — Other	
	_____	_____	_____	_____
Material Inventory BOP	19,769.9	493.4	9,758.2	8,553.0
BOP Reclassification Changes	0.0	0.0	2,020.8	(2,020.8)
Price Changes	345.2	26.9	367.9	(40.1)
Receipts from Commercial Sources	5,576.3	28.6	5,213.3	26.4
Negotiated Purchase from Customers	557.8	0.6	394.3	162.4
Gross Sales	7,509.7	2.4	7,283.1	0.0
Material Inventory Adjustments				
CAPITALIZATIONS + OR (-)	(1,164.9)	(1.3)	(346.0)	(817.6)
RETURNS TO SUPPLIERS (-)	(45.1)	0.0	0.0	(45.1)
TRANSFERS TO PROP. DISP.(-)	(3,371.9)	0.0	0.0	(3,371.9)
ISSUES/RECEIPTS WITHOUT REIMBURSEMENT + or (-)	(707.7)	(32.4)	(188.3)	(487.0)
OTHER (list)	6,447.5	(16.9)	(251.2)	6,715.6
TOTAL ADJUSTMENTS	1,157.9	(50.6)	(785.5)	1,994.0
Material Inventory EOP	18,857.3	496.5	9,685.9	8,674.9
ECONOMIC RETENTION (memo)				4,069.4
POLICY RETENTION (memo)				351.0
POTENTIAL EXCESS (memo)				183.3
APPROVED ACQUISITION OBJECTIVE				4,031.2
Material Inventory on Order				
EOP (memo)	2,996.7	36.9	2,633.0	326.8

**SUPPLY MANAGEMENT - NAVY  
MATERIAL INVENTORY DATA  
(Dollars in Millions)  
FISCAL YEAR 1994**

	Total	— Peacetime —		
		Mobilization	Operating Other	
Material Inventory BOP	18,857.3	486.5	9,685.9	8,574.9
BOP Reclassification Changes	(0.0)	14.1	1,945.7	(1,959.8)
Price Changes	590.3	6.4	297.0	286.9
Receipts from Commercial Sources	4,453.4	6.0	4,421.4	26.0
Negotiated Purchase from Customers	415.2	0.4	184.0	230.8
Gross Sales	6,621.7	0.0	6,621.7	0.0
<b>Material Inventory Adjustments</b>				
CAPITALIZATIONS + OR (-)	(1,871.0)	(21.5)	(562.0)	(1,287.5)
RETURNS TO SUPPLIERS (-)	(30.1)	0.0	0.0	(30.1)
TRANSFERS TO PROP. DISP.(-)	(2,581.9)	0.0	0.0	(2,581.9)
ISSUES/RECEIPTS WITHOUT REIMBURSEMENT + or (-)	(151.4)	(1.6)	(89.1)	(60.7)
OTHER (list)	4,875.1	0.1	(886.5)	5,741.5
TOTAL ADJUSTMENTS	240.7	(23.0)	(1,487.6)	1,751.3
Material Inventory EOP	17,935.2	500.4	8,424.7	9,010.1
ECONOMIC RETENTION (memo)				3,613.8
POLICY RETENTION (memo)				309.3
POTENTIAL EXCESS (memo)				206.2
APPROVED ACQUISITION OBJECTIVE				4,880.8
Material Inventory on Order				
EOP (memo)	2,824.6	1.0	2,607.5	216.1

**SUPPLY MANAGEMENT - NAVY  
MATERIAL INVENTORY DATA  
(Dollars in Millions)  
FISCAL YEAR 1995**

	<b>Total</b>	<b>Mobilization</b>	<b>Operating</b>	<b>— Peacetime — Other</b>
	_____	_____	_____	_____
<b>Material Inventory BOP</b>	<b>17,935.2</b>	<b>500.4</b>	<b>8,424.7</b>	<b>9,010.1</b>
<b>BOP Reclassification Changes</b>	<b>0.0</b>	<b>0.0</b>	<b>1,768.4</b>	<b>(1,768.4)</b>
<b>Price Changes</b>	<b>1,414.8</b>	<b>11.4</b>	<b>821.7</b>	<b>581.7</b>
<b>Receipts from Commercial Sources</b>	<b>3,846.3</b>	<b>48.8</b>	<b>3,804.5</b>	<b>(7.0)</b>
<b>Negotiated Purchase from Customers</b>	<b>546.4</b>	<b>0.4</b>	<b>320.1</b>	<b>225.9</b>
<b>Gross Sales</b>	<b>6,354.9</b>	<b>0.0</b>	<b>6,354.9</b>	<b>0.0</b>
<b>Material Inventory Adjustments</b>				
<b>CAPITALIZATIONS + OR (-)</b>	<b>(875.2)</b>	<b>(1.4)</b>	<b>(145.0)</b>	<b>(728.8)</b>
<b>RETURNS TO SUPPLIERS (-)</b>	<b>(20.2)</b>	<b>0.0</b>	<b>0.0</b>	<b>(20.2)</b>
<b>TRANSFERS TO PROP. DISP.(-)</b>	<b>(3,251.4)</b>	<b>0.0</b>	<b>0.0</b>	<b>(3,251.4)</b>
<b>ISSUES/RECEIPTS WITHOUT   REIMBURSEMENT + or (-)</b>	<b>(156.6)</b>	<b>0.1</b>	<b>(56.9)</b>	<b>(99.8)</b>
<b>OTHER (list)</b>	<b>4,630.2</b>	<b>0.0</b>	<b>(414.6)</b>	<b>5,044.8</b>
<b>TOTAL ADJUSTMENTS</b>	<b>326.8</b>	<b>(1.3)</b>	<b>(616.5)</b>	<b>944.6</b>
<b>Material Inventory EOP</b>	<b>17,714.6</b>	<b>559.7</b>	<b>8,168.0</b>	<b>8,986.9</b>
<b>ECONOMIC RETENTION (memo)</b>				<b>3,376.1</b>
<b>POLICY RETENTION (memo)</b>				<b>288.4</b>
<b>POTENTIAL EXCESS (memo)</b>				<b>213.0</b>
<b>APPROVED ACQUISITION OBJECTIVE</b>				<b>5,109.4</b>
<b>Material Inventory on Order</b>				
<b>EOP (memo)</b>	<b>2,539.5</b>	<b>0.4</b>	<b>2,523.5</b>	<b>15.6</b>

**SUPPLY MANAGEMENT - NAVY  
FUEL DATA  
(DOLLARS IN MILLIONS)**

FY 1983

<u>PRODUCT</u>	<u>Barrels</u>	<u>Cost Per Barrel</u>	<u>Extended Cost</u>	<u>Stabilized Price</u>
JP-4	0.0	28.1	0.0	\$25.6
Distillates	23.9	29.4	695.7	\$26.7
JP-5	13.4	31.5	421.8	\$26.1
JP-8	0.0	0.0	0.0	\$0.0
Motor Gas				
Leaded	0.0	35.7	1.5	\$53.4
Unleaded	0.2	34.9	5.5	\$31.2
Residual	0.7	28.1	19.9	\$20.6
AVGAS	0.0	55.9	0.2	\$46.3
AF				
Special Fuels 1 (JA-1)	0.0	0.0	0.0	\$0.0
Special Fuels 2 (JP-TS)	0.0	0.0	0.0	\$0.0
Gasohol	0.0	0.0	0.0	\$0.0
Diesel	0.1	29.4	4.0	\$0.0
Navy Reclaimed	0.8	17.6	13.7	\$20.6
Other				
Bunker "C"	5.4	15.3	82.2	\$15.3
Lube Oil	0.0	97.4	1.6	\$88.5
Coal	0.0	52.5	2.4	\$0.0
Navy Special	0.0	28.1	0.0	\$20.6
Into Plane	0.0	0.0	0.0	\$0.0
Other	0.3	0.8	0.2	\$0.0
<b>Total</b>	<b>44.3</b>		<b>1,238.6</b>	

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**SUPPLY MANAGEMENT - NAVY  
FUEL DATA  
(DOLLARS IN MILLIONS)**

FY 1984

<u>PRODUCT</u>	<u>Barrels</u>	<u>Cost Per Barrel</u>	<u>Extended Cost</u>	<u>Stabilized Price</u>
JP-4	0.2	32.3	6.1	\$26.8
Distillates	20.0	32.8	653.8	\$28.0
JP-5	13.8	35.7	492.2	\$27.4
JP-8	0.0	0.0	0.0	\$0.0
Motor Gas				
Leaded	0.0	40.7	0.4	\$56.1
Unleaded	0.1	38.2	4.9	\$32.8
Residual	0.6	25.6	15.1	\$21.6
AVGAS	0.0	56.3	0.2	\$48.6
AF				
Special Fuels 1 (JA-1)	0.0	0.0	0.0	\$0.0
Special Fuels 2 (JP-TS)	0.0	0.0	0.0	\$0.0
Gasohol	0.0	0.0	0.0	\$0.0
Diesel	0.1	32.8	3.5	\$32.8
Navy Reclaimed	0.0	0.0	0.0	\$0.0
Other				
Bunker "C"	5.2	16.0	82.9	\$16.0
Lube Oil	0.1	107.9	7.1	\$82.9
Coal	0.0	52.0	2.0	\$52.0
Navy Special	0.0	0.0	0.0	\$0.0
Into Plane	0.0	0.0	0.0	\$0.0
Other	0.3	0.8	0.2	\$0.0
<b>Total</b>	<u>40.3</u>		<u>1,268.4</u>	-

**SUPPLY MANAGEMENT - NAVY  
FUEL DATA  
(DOLLARS IN MILLIONS)**

**FY 1965**

<u>PRODUCT</u>	<u>Barrels</u>	<u>Cost Per Barrel</u>	<u>Extended Cost</u>	<u>Stabilized Price</u>
JP-4	0.0	29.8	0.0	\$28.2
Distillates	11.5	28.6	327.7	\$29.6
JP-5	6.7	30.7	204.1	\$28.8
JP-8	0.0	0.0	0.0	\$0.0
Motor Gas				
Leaded	0.0	35.3	1.4	\$58.9
Unleaded	0.1	28.6	3.4	\$29.6
Residual	0.5	17.6	8.5	\$22.7
AVGAS	0.0	88.6	0.1	\$51.1
AF				
Special Fuels 1 (JA-1)	0.0	0.0	0.0	\$0.0
Special Fuels 2 (JP-TS)	0.0	0.0	0.0	\$0.0
Gasohol	0.0	0.0	0.0	\$0.0
Diesel	0.1	28.6	3.5	\$0.0
Navy Reclaimed	0.4	17.2	6.6	\$22.7
Other				
Bunker "C"	2.4	16.8	39.7	\$16.8
Lube Oil	0.0	115.5	0.7	\$97.7
Coal	0.0	52.0	2.0	\$0.0
Navy Special	0.0	26.5	0.0	\$22.7
Into Plane	0.0	0.0	0.0	\$0.0
Other	0.3	0.8	0.2	\$0.0
<b>Total</b>	<u>21.9</u>		<u>597.9</u>	



FY 1995 BUDGET ESTIMATE  
Supply Management Business Area  
SUMMARY BY DIVISION  
(Dollars in Millions)

DIVISION	NET CUSTOMER ORDERS	NET SALES	OBLIGATION TARGETS		
			OPERATING	MOBILIZATION	TOTAL
BP 14					
FY 1993	238.6	248.9	162.5	0.0	162.5
FY 1994	160.8	160.8	118.6	0.0	118.6
FY 1995	138.2	138.2	80.4	0.0	80.4
BP 15					
FY 1993	9.5	9.9	8.1	0.0	8.1
FY 1994	11.5	11.5	12.2	0.0	12.2
FY 1995	10.6	10.6	11.3	0.0	11.3
BP 21					
FY 1993	201.1	201.1	182.7	0.0	182.7
FY 1994	195.8	195.8	189.3	0.0	189.3
FY 1995	82.6	82.6	82.6	0.0	82.6
BP 23					
FY 1993	47.0	47.0	65.5	0.0	65.5
FY 1994	51.7	51.7	38.8	0.0	38.8
FY 1995	31.9	31.9	32.2	0.0	32.2
BP 25					
FY 1993	0.0	0.0	1.0	0.0	1.0
FY 1994	1.0	1.0	1.0	0.0	1.0
FY 1995	1.0	1.0	1.0	0.0	1.0
BP 28					
FY 1993	1,483.1	1,484.5	1,357.9	0.0	1,357.9
FY 1994	1,422.7	1,423.1	1,402.4	0.0	1,402.4
FY 1995	1,413.9	1,411.4	1,281.4	0.0	1,281.4
BP 34					
FY 1993	674.2	725.9	458.2	0.0	458.2
FY 1994	410.4	450.2	329.0	0.0	329.0
FY 1995	528.1	530.0	281.0	0.0	281.0
BP 38					
FY 1993	1,292.8	1,292.8	1,230.7	0.0	1,230.7
FY 1994	1,255.0	1,255.0	1,267.7	0.0	1,267.7
FY 1995	597.6	597.6	597.8	0.0	597.8
BP 54					
FY 1993	12.8	12.3	10.2	0.0	10.2
FY 1994	8.5	10.3	5.7	0.0	5.7
FY 1995	17.3	17.8	5.2	0.0	5.2
BP 81					
FY 1993	776.8	794.1	275.0	0.0	275.0
FY 1994	793.4	793.4	392.7	0.0	392.7
FY 1995	840.2	840.2	442.3	0.0	442.3
BP 84					
FY 1993	10.3	3.6	37.7	0.0	37.7
FY 1994	36.5	39.6	44.0	0.0	44.0
FY 1995	58.3	60.2	39.4	0.0	39.4
BP 85					
FY 1993	1,861.9	1,907.1	1,524.8	0.0	1,524.8
FY 1994	1,571.8	1,814.1	1,457.8	0.0	1,457.8
FY 1995	1,992.2	2,087.0	1,258.7	0.0	1,258.7
BP 91					
FY 1993	0.0	0.0	1,264.5	0.0	1,264.5
FY 1994	0.0	0.0	1,331.4	0.0	1,331.4
FY 1995	0.0	0.0	1,270.1	0.0	1,270.1

**FY 1995 BUDGET ESTIMATE  
SUPPLY MANAGEMENT BUSINESS AREA  
WEAPON SYSTEM SUMMARY  
(DOLLARS IN MILLIONS)**

**SM-3D**

<u>WEAPON SYSTEM</u>	<u>AVIATION</u>			
	<u>BP-34 FY 1994</u>	<u>BP-34 FY 1995</u>	<u>BP-85 FY 1994</u>	<u>BP-85 FY 1995</u>
A-4	16.4	15.1		
A-7	1.5	1.4		
SUPPT EQUIPMT	33.6	21.6	22.7	43.5
TRNG DEVICES	0.1	0.1		
F-4	0.5	0.5		
HELOS	110.5	105.2	112.7	123.0
F-14	38.8	33.0	80.3	44.2
P-3	19.7	18.3	9.8	17.2
S-3	26.7	23.7	14.4	7.7
A-6/EA-6	33.1	18.7	8.4	7.5
E-2/C-2	7.0	7.0	18.6	29.1
AV-8	36.7	35.3	34.4	46.0
F/A-18	191.0	182.3	195.3	189.6
CAT & ARREST	7.8	7.3		
OTHER	28.9	19.8	139.8	263.0
TERM/CR MODS	(43.7)	(31.5)	(78.3)	(89.7)
CIT	(80.7)	(82.6)		
DMR SAVINGS	(105.0)	(94.2)	(176.2)	(270.5)
LONG TERM CONTRACTING	(7.5)	(6.8)		
SYS STK: INITIAL/FOLLOW-ON REPAIR	13.6	6.8	27.6	5.1
			1,048.3	843.0
<b>TOTAL</b>	<b>329.0</b>	<b>281.0</b>	<b>1,457.8</b>	<b>1,258.7</b>

**FY 1995 BUDGET ESTIMATE**  
**SUPPLY MANAGEMENT BUSINESS AREA**  
**WEAPON SYSTEM SUMMARY**  
**BP-14**  
**(DOLLARS IN MILLIONS)**

SM-30

	FY 1994	FY 1995
<b>FOLLOW-ON STOCKAGE</b>	0.0	0.1
<b>INITIAL SYSTEM STOCK</b>	5.0	4.0
<b>WEAPON SYSTEM</b>		
ACLS	0.3	0.1
AEGIS	0.3	0.3
AIR COND. REF. LIFE SUPPORT SYS	2.0	1.6
AIR/AIR MISSILES	0.3	0.2
AIR/GROUND MISSILES	0.3	0.1
ANBSY-1	0.1	0.1
AN/SPS-40,10,29,37,43,53 AN	0.1	0.2
AN/SPS-48	0.5	0.1
AN/SPS-55,63 RADAR	0.1	0.2
AN/SRC-47		0.2
AN/USC-38	0.1	
AN/UJA-4	0.2	0.1
AN/UJO-21	1.2	0.8
ASROC		0.1
AVIATION GUNS	0.5	0.4
AVIONICS	0.9	0.4
BASE. MOBILE + LOX	0.4	0.2
BLEED AIR VALVE	0.1	
CIWS, MK-16 PHALANX	5.8	4.5
COMMON COMPUTERS	0.1	0.1
CRYPTO	0.1	0.1
DAMAGE CONTROL	1.3	2.8
DECK REPLN & WEAP HANDLING EQUIP	1.5	1.0
DSSP	0.7	0.6
ELECTRIC POWER DIST	3.5	1.7
EOD, DIVING, SPEC WARFARE	4.5	2.5
ESEOC MSP	4.1	
ESGN SYSTEM	0.1	0.1
ESM SYSTEM	0.1	0.1
FMS COOPLOG	1.3	
GUN MOUNT 5/54	0.5	0.3
GUNS	0.1	

HARPOON MISSILE	0.2	0.1
INTERNAL COMMUN AN/UNQ-7	1.3	0.7
LM 2500	2.3	2.8
LOAD LISTS	1.7	0.8
LOMIX		0.9
MATCS	0.2	0.1
MEASURING DEVICES	0.3	
METEOROLOGICAL		0.1
MINES/MINESWEEPING EQUIP	0.4	0.2
MISC 2D RADAR	0.1	0.1
MISC TEST EQUIP	1.1	1.1
MISCELLANEOUS	2.2	4.3
MK 46 TORPEDO	1.4	0.4
MK 48 TORPEDO	1.2	0.8
MK 50 TORPEDO	0.1	0.1
MK 75 GUN MOUNT	0.4	0.2
MK 92 GFCS	0.1	
NAVIGATIONAL CONVENTIONAL	0.1	0.1
NAVIGATION(ELECTRONIC)	0.7	0.6
NON FBM NAVIGATION	0.2	0.2
NUCLEAR	37.4	30.4
ORDNANCE HANDLING	1.1	0.5
OSI MAINTENANCE	1.5	
PERISCOPE	0.4	0.2
PHM	0.2	0.2
PM MISC		1.0
PROPS/SHAFT CONTROL	0.9	0.3
PUMPS, COMPRESSORS, BEARINGS	3.2	1.5
QA VALVE BALL	0.1	0.1
RAM	0.1	0.1
SATCOM		0.1
SEOC MSP		2.8
SHIP BOILERS	1.7	1.0
SHIP COMMUNICATIONS	0.4	0.3
SHIP DIESEL ENGINES	0.5	0.4
SHIP GAS TURBINES	0.7	0.4
SHIP HABITABILITY	0.4	0.5
SHIPALT	8.7	8.9
SHORE COMMUNICATIONS	0.1	0.1
SIDEWINDER	1.8	
SINS/DMINS	0.1	
SLQ-32	0.3	0.2
SMALL ARMS	0.1	0.1
SMALL BOATS	0.2	0.1
SNAP 1	0.2	0.1
SNAP 2		0.1

STEAM TURBINE GENERATORS	1.6	0.9
STRATEGIC SUBMARINE PL		0.9
SUB ARMAMENT & ELEC	0.2	0.1
SUB AUX SYSTEM	2.9	2.4
SUB COMM & DATA PRO	0.8	
SUB PROPULSION	0.5	0.4
SUB SHIP CONTROL EQUIP	0.4	0.3
SUBMARINE COMMUNICATIONS		1.3
SUBMARINE SONAR	1.0	0.5
SUBSAFE LEVEL I	12.2	9.8
SURFACE ASW FCS	0.1	
SURFACE SONAR	0.4	0.3
SVTT MK32	0.1	0.1
SWS	0.1	0.2
TARTAR MISSILE	0.5	0.3
TRIREFFAC LOAD LIST	2.1	2.1
UNASSIGNED WEAPON SYS	4.2	1.0
URT-23	0.2	0.1
VALVES	3.3	1.9
WSC-3	0.1	0.1
SUBTOTAL	136.9	104.6
GROSS REQUIREMENT	141.9	108.7
BOTTOM UP REVIEW	-4.8	-9.8
ASSET OFFSET	-4.9	-5.1
CREDIT MODS	-5.6	-2.8
CONTRACT TERMINATIONS	-3.7	-1.9
CIT ADJUST	-1.0	-6.5
BOSS	-5.6	-4.0
PROVISIONING SELLDOWN	2.3	1.8
TOTAL	118.6	80.4

**FY 1995 BUDGET ESTIMATE  
 SUPPLY MANAGEMENT BUSINESS  
 WEAPON SYSTEM SUMMARY  
 BP-85  
 (DOLLARS IN MILLIONS)**

	FY 1994	FY 1995
<b>FOLLOW-ON STOCKAGE</b>	<b>2.5</b>	<b>2.9</b>
<b>NON PSD DRIVEN</b>	<b>3.2</b>	<b>3.8</b>
<b>INITIAL SYSTEM STOCK</b>	<b>16.7</b>	<b>19.4</b>
<b>WEAPON SYSTEM</b>		
<b>ACLS</b>	<b>1.2</b>	<b>0.7</b>
<b>ADVANCE SIGNAL PROCESSOR</b>	<b>1.5</b>	<b>1.7</b>
<b>AEGIS</b>	<b>13.4</b>	<b>23.6</b>
<b>AEL PPR PROGRAM</b>		<b>1.0</b>
<b>AIR COND. REF. LIFE SUPPORT SYS</b>	<b>10.2</b>	<b>6.0</b>
<b>AIRCRAFT CARRIER CATAPULT COVER</b>	<b>9.1</b>	<b>6.0</b>
<b>AIR/AIR MISSILES</b>	<b>0.9</b>	<b>1.0</b>
<b>AIR/GROUND MISSILES</b>	<b>1.0</b>	<b>0.7</b>
<b>AMRAAM</b>		<b>1.1</b>
<b>AN/BSY-1</b>	<b>11.5</b>	<b>19.1</b>
<b>AN/BSY-2</b>	<b>2.9</b>	<b>0.7</b>
<b>AN/SLR-24</b>	<b>2.3</b>	<b>2.0</b>
<b>AN/SPS-40,10,29,37,43</b>	<b>3.8</b>	<b>4.3</b>
<b>AN/SPS-48</b>	<b>5.5</b>	<b>3.6</b>
<b>AN/SPS-52</b>	<b>0.5</b>	<b>0.8</b>
<b>AN/SPS-55. 63 RADAR</b>	<b>2.8</b>	<b>2.6</b>
<b>AN/SQQ-32</b>		<b>1.0</b>
<b>AN/SQQ-89</b>	<b>7.1</b>	<b>12.6</b>
<b>AN/SRC-47</b>	<b>0.3</b>	<b>0.4</b>
<b>AN/SRQ-4</b>	<b>4.3</b>	<b>1.0</b>
<b>AN/SRS-1(V)</b>	<b>1.8</b>	<b>2.7</b>
<b>AN/URC-107(V)7 JTIDS</b>		<b>4.0</b>
<b>AN/USC-38(V)</b>	<b>3.7</b>	<b>4.7</b>
<b>AN/USC-42</b>		<b>3.1</b>

AN/USQ-82(V)	2.7	3.2
AN/UYA-4	2.5	3.1
AN/UYK-43(V)B	3.7	3.1
AN/UYK-44	1.5	1.4
AN/UYQ-21	5.4	3.8
AN/WLR-1H(V)5	0.9	
AN/WLR-8	0.1	
AN/WSN-3A(V)2	0.1	
ASROC		0.1
AVIATION GUNS	0.3	0.4
AVIONICS	5.8	5.0
BASIC POINT DEFENSE	0.3	0.3
BLEED AIR VALVE	0.7	0.6
BQQ5 SONAR	5.7	4.8
BQQ/BQQ6 SONAR	1.0	1.2
CALIBRATION STANDARDS	5.5	3.9
CFEE	1.9	2.0
CIWS	36.0	31.9
CODE OOD	2.1	2.9
COMMON COMPUTERS	2.7	3.2
COMMON DISPLAY CONSOLE	1.0	1.4
CRYPTO	3.0	3.5
DAMAGE CONTROL	2.1	1.6
DECK REPLN & WEAP HANDLING EQUIP	2.4	2.3
DSSP	4.0	3.0
ELECTRIC POWER DIST	5.5	5.2
ELECTRONIC SURVEILLANCE	1.6	2.1
EOD, DIVING SPEC WARFARE	2.1	2.7
ESGN SYSTEM	9.5	13.7
ESM SYSTEM	2.8	2.7
FIRE FIGHTER BREATHING APPARTUS		11.0
FMS COOPLOG	2.8	
GMLS MK26	1.3	
GPETE	26.6	23.6
GUN MOUNT 5/54	0.7	0.7
GUNS	0.3	0.2
HARPOON MISSILE	0.5	0.5
HELO LAND SYSTEM	2.6	3.0
HF BRDBAND AN/URC( )		4.8
ICSS 05122	0.1	0.1
INTERNAL COMMUN, AN/UNQ-7	1.2	1.2
IPMP SSN 21 CLASS		1.3

LM 2500	9.2	10.2
LOAD LIST	4.3	4.1
LO-MIX	2.0	2.0
MATCS	0.7	0.8
MEASURING DEVICES	0.2	0.1
MILITARY SEALIFT COMMAND	2.0	0.4
MINES/MINESWEEPING EQUIP	1.2	1.5
MISC 2D RADAR	0.9	1.2
MISC SUB SONAR EQUIP	4.9	
MISC TEST EQUIP	0.8	1.0
MISC TORPEDO		0.1
MISCELLANEOUS	20.9	20.0
MK 46 TORPEDO	0.2	0.6
MK 48 TORPEDO	8.2	10.2
MK 50 TORPEDO	1.5	1.5
MK 68 GFCS	0.5	0.5
MK 75 GUN MOUNT	0.4	0.4
MK 86 GFCS	3.3	3.6
MK 92 GFCS	12.2	7.8
MK-41 VLS	3.8	3.3
MK49 GMLS	1.4	
MK57		1.0
NATO SEASPARROW MISSILE	6.3	6.5
NAVIGATIONAL CONVENTIONAL	3.6	4.5
NAVIGATION(ELECTRONIC)	8.0	9.8
NCCS	0.1	0.1
NON FBM NAVIGATION	1.3	1.4
NSF FOR ACO OF TECH DATA	0.1	0.1
NSF FOR REVERSE ENG.	0.3	0.3
NUCLEAR SUPPORT	2.0	2.3
OCEAN SURVEILLANCE	0.9	1.1
ORDNANCE HANDLING	0.3	0.4
OSI MAINTENANCE	9.2	9.1
PERISCOPE	7.7	7.6
PHM	1.4	1.4
PROPS/SHAFT CONTROL	6.3	2.2
PUMPS, COMPRESSORS, BEARINGS	5.8	0.5
QA VALVE BALL	0.1	0.2
RADIAC	0.5	0.5
RAM		0.1
RD-358A	0.4	0.6
RELIABILITY/MAINTAINABILITY	2.0	3.0



REVERSE OSMOSIS DESALINATOR	1.9	1.9
SATCOM	2.9	5.4
SHIP BOILERS	2.3	2.0
SHIP COMMUNICATIONS	4.8	7.0
SHIP DIESEL ENGINES	2.9	3.1
SHIP GAS TURBINES	3.5	3.8
SHIP HABITABILITY	0.1	
SHIPALT	11.1	9.9
SHORE COMMUNICATION	0.3	0.6
SINS/DMINS	1.8	2.1
SLQ-32	10.3	12.5
SMALL ARMS	1.8	1.7
SNAP 1	3.6	4.0
SNAP 2	1.9	2.2
SPG 51	1.7	1.8
SPG 55	2.6	2.8
STEAM TURBINE GENERATORS	4.2	1.9
STRATEGIC SUBMARINE PL	3.3	3.3
SUB ARMAMENT & ELEC	1.6	1.6
SUB AUX SYSTEM	7.4	8.2
SUB COMM & DATA PRO	4.8	5.2
SUB PROPULSION	2.9	3.1
SUB SHIP CONTROL EQUIP	2.3	2.7
SUBMARINE COMMUNICATIONS		0.2
SUBMARINE FCS	0.6	0.5
SUBMARINE SONAR	1.2	5.9
SUBSAFE LEVEL I	1.8	1.4
SUB-SURFACE REWSON	0.7	0.7
SURFACE ASW FCS	0.4	0.4
SURFACE REWSON	1.3	0.2
SURFACE SONAR	1.7	2.0
SVTT MK32	0.1	0.1
TACTICAL DISPLAY	1.0	1.3
TARTAR MISSILE	4.6	4.1
TAS MK23	2.6	3.2
TB-29/BQ		2.8
TECHNICAL REFERRALS	4.0	4.3
TERRIER MISSILE	0.1	0.1
TLL ADVANCED PPRS	1.5	
TMDE	1.2	1.9
TOMAHAWK	0.6	0.7
TRIREFAC LOAD LIST	3.2	3.2

UNASSIGNED WEAPON SYS	1.1	1.2
URT-23	2.6	3.5
VALVES	1.0	0.7
VSTOL OPT LAND SYS MK11 MOD 0	1.3	
WLQ-4	0.4	1.0
WLR-8		0.9
WSC-3	2.1	2.6
WSC-6	1.1	1.3
SUBTOTAL	483.9	512.9
CONTRACT TERMINATION	-19.6	-9.9
BOTTOM UP REVIEW	-19.9	-9.7
PROGRAM ADJUST	0.0	-16.2
BOSS SAVINGS	-11.6	-19.8
ASSET OFFSET	-20.4	-20.4
CREDIT MODS	-50.6	-30.6
PROVISIONING SELLDOWN	8.5	9.9
SUBTOTAL	370.3	416.2
TOTAL	392.7	442.3

**FY 1995 BUDGET ESTIMATE  
MARINE CORPS SUPPLY MANAGEMENT  
WEAPON SYSTEM SUMMARY  
(Dollars in Millions)**

SM-3D

WEAPON SYSTEM	FY 1994	FY 1995
AAV7A1 PIP (PRODUCT IMPROVEMENT PROGRAM)	0.3	
UNIT LEVEL CIRCUIT SWITCH (ULCS)	14.1	
ADVANCED TACT AIR COMMAND CENTRAL (ATACC)	1.2	1.1
MARINE TACT COMMAND & CONTROL SYS (MTACCS)	0.1	
INTEL SUPPORT EQUIPMENT	4.0	7.9
MOD KITS (INTEL)	1.3	0.8
MISC ORDNANCE TANK AUTOMOTIVE SYSTEMS	9.3	9.6
MISC COMMUNICATION AND ELECTRONICS SYSTEMS	0.8	0.6
MISC ENGINEER SUPPORT AND CONSTRUCTION SYSTEMS	2.3	2.2
MISC GENERAL PROPERTY SYSTEMS	2.1	2.1
LIGHT ARMORED VEHICLE (LAV)	0.2	3.3
TACTICAL COMM CTR EQUIPMENT		0.1
NIGHT VISION EQUIPMENT	2.1	0.9
VEH MTD RADIOS	0.1	
TSC-96 PIP FLEET-SATELLITE COMM TERM	0.3	
ITEMS LESS 100K	0.1	
MARINE TACT. AIR COMMAND & CONTROL (MTACCS)	2.7	
ITEMS<2M (INTEL)	0.5	
METEOROLOGICAL SYS=.3 AND MULE=.2	4.1	
ARMORED COMBAT EXCAVATOR (ACE)	0.1	0.1
POWER EQ.	0.1	
SHELTER FAMILY	0.1	
PEDESTAL MTD STINGER	0.6	0.6
MISC GUIDED MISSILES AND EQUIPMENT SYSTEMS	2.4	2.5
LIGHT ARMORED VEHICLE PRODUCT IMPROVEMENT PROGRAM		0.4
MOD KITS		2.0
LOGISTIC VEHICLE SYSTEM (LVS)		0.1
TRAILERS, ALL TYPES		0.2
TACTICAL COMM CTR EQ		1.4
JOINT TACTICAL INFORM DIST SYST (JTIDS)		1.0
SINGARS RADIO SYST		0.2
POSITION LOCATION REPORTING SYST (PLRS)		0.1
MARINE TACT COMMAND & CONTROL SYST (MTACCS)		0.4
MOD KITS (NONTEL)		0.3
JT SERV IMAGERY PROCESSOR		6.0
<b>TOTAL OBLIGATIONS</b>	<b>48.9</b>	<b>43.9</b>

**FY 1995 BUDGET ESTIMATE  
Supply Management Business Area  
CUSTOMER PRICE EXHIBIT**

SM-5

NAVY WHOLESALE	FY 1993		FY 1994		FY 1995	
	\$	%	\$	%	\$	%
Sales at cost	2803.7		2518.5		2320.3	
<b>Surcharge elements</b>						
Operating costs	845.3	30.1%	1258.6	50.0%	1089.9	47.0%
Transportation	49.9	1.8%	in ops	0.0%	in ops	0.0%
Obsolescence/losses	390.0	13.9%	177.9	7.1%	136.6	5.9%
Condemnations	197.0	7.0%	69.9	2.8%	54.1	2.3%
Inflation	72.5	2.6%	0.0	0.0%	0.0	0.0%
DMRD	-515.0	-18.4%	-600.8	-23.9%	-82.6	-3.6%
Retail sell-down	-140.2	-5.0%	0.0	0.0%	0.0	0.0%
Price stabilization	-26.2	-0.9%	-64.6	-2.6%	0.0	0.0%
Price equalization	0.0	0.0%	-22.5	-0.9%	0.0	0.0%
Cash recovery	0.0	0.0%	55.3	2.2%	374.4	16.1%
Prior Yr Recovery	0.0	0.0%	-173.8	-6.9%	-297.3	-12.8%
Sales at Standard	3677.0		3218.5		3595.4	
Customer escalation		10.4%		5.8%		22.1%

**FY 1995 BUDGET ESTIMATE  
Supply Management Business Area  
CUSTOMER PRICE EXHIBIT**

SM-5

BP 14	FY 1993		FY 1994		FY 1995	
	\$	%	\$	%	\$	%
Sales at cost	185.7		105.9		89.0	
<b>Surcharge elements</b>						
Operating costs	56.4	30.4%	63.9	60.3%	60.5	68.0%
Transportation	3.0	1.6%	in ops	0.0%	in ops	0.0%
Obsolescence/losses	24.9	13.4%	6.7	6.3%	4.9	5.5%
Condemnations	0.0	0.0%	0.0	0.0%	0.0	0.0%
Inflation	6.1	3.3%	0.0	0.0%	0.0	0.0%
DMRD	-16.2	-8.7%	-8.7	-8.2%	-4.8	-5.4%
Retail sell-down	-9.7	-5.2%	0.0	0.0%	0.0	0.0%
Price stabilization	-0.3	-0.2%	-2.0	-1.9%	0.0	0.0%
Price equalization	0.0	0.0%	0.0	0.0%	0.0	0.0%
Cash recovery	0.0	0.0%	2.3	2.2%	0.0	0.0%
Prior Yr Recovery	0.0	0.0%	-7.3	-6.9%	-11.4	-12.8%
Sales at Standard	249.9		160.8		138.2	
Customer escalation		10.4%		15.6%		4.3%

**FY 1995 BUDGET ESTIMATE**  
**Supply Management Business Area**  
**CUSTOMER PRICE EXHIBIT**

SM-5

BP 34	FY 1993		FY 1994		FY 1995	
	\$	%	\$	%	\$	%
Sales at cost	495.5		396.7		348.1	
<b>Surcharge elements</b>						
Operating costs	143.7	29.0%	184.8	46.6%	137.8	39.6%
Transportation	12.9	2.6%	in ops	0.0%	in ops	0.0%
Obsolescence/losses	61.4	12.4%	35.7	9.0%	23.9	6.9%
Condemnations	0.0	0.0%	0.0	0.0%	0.0	0.0%
Inflation	16.4	3.3%	0.0	0.0%	0.0	0.0%
DMRD	-73.8	-14.9%	-129.3	-32.6%	-11.2	-3.2%
Retail sell-down	-27.3	-5.5%	0.0	0.0%	0.0	0.0%
Price stabilization	97.1	19.6%	-19.0	-4.8%	0.0	0.0%
Price equalization	0.0	0.0%	0.0	0.0%	0.0	0.0%
Cash recovery	0.0	0.0%	8.7	2.2%	76.0	21.8%
Prior Yr Recovery	0.0	0.0%	-27.4	-6.9%	-44.6	-12.8%
Sales at Standard	725.9		450.2		530.0	
Customer escalation		10.4%		-21.2%		30.2%

**FY 1995 BUDGET ESTIMATE**  
**Supply Management Business Area**  
**CUSTOMER PRICE EXHIBIT**

SM-5

BP 81	FY 1993		FY 1994		FY 1995	
	\$	%	\$	%	\$	%
Sales at cost	601.1		515.4		516.3	
<b>Surcharge elements</b>						
Operating costs	182.7	30.4%	310.7	60.3%	350.8	67.9%
Transportation	11.3	1.9%	in ops	0.0%	in ops	0.0%
Obsolescence/losses	71.8	11.9%	38.7	7.5%	40.3	7.8%
Condemnations	42.4	7.1%	26.8	5.2%	20.0	3.9%
Inflation	20.2	3.4%	0.0	0.0%	0.0	0.0%
DMRD	-165.5	-27.5%	-86.4	-16.8%	-21.0	-4.1%
Retail sell-down	-30.0	-5.0%	0.0	0.0%	0.0	0.0%
Price stabilization	60.1	10.0%	21.1	4.1%	0.0	0.0%
Price equalization	0.0	0.0%	-8.6	-1.7%	0.0	0.0%
Cash recovery	0.0	0.0%	11.3	2.2%	0.0	0.0%
Prior Yr Recovery	0.0	0.0%	-35.6	-6.9%	-66.2	-12.8%
Sales at Standard	794.1		793.4		840.2	
Customer escalation		10.4%		17.8%		7.8%

**FY 1995 BUDGET ESTIMATE**  
**Supply Management Business Area**  
**CUSTOMER PRICE EXHIBIT**

SM-5

BP 85	FY 1993		FY 1994		FY 1995	
	\$	%	\$	%	\$	%
Sales at cost	1521.4		1500.5		1366.9	
<b>Surcharge elements</b>						
Operating costs	462.5	30.4%	699.2	46.6%	540.8	39.6%
Transportation	22.7	1.5%	in ops	0.0%	in ops	0.0%
Obsolescence/losses	231.9	15.2%	96.8	6.5%	67.5	4.9%
Condemnations	154.6	10.2%	43.1	2.9%	34.1	2.5%
Inflation	29.8	2.0%	0.0	0.0%	0.0	0.0%
DMRD	-259.5	-17.1%	-376.4	-25.1%	-45.6	-3.3%
Retail slowdown	-73.2	-4.8%	0.0	0.0%	0.0	0.0%
Price stabilization	-183.1	-12.0%	-64.7	-4.3%	0.0	0.0%
Price equalization	0.0	0.0%	-13.9	-0.9%	0.0	0.0%
Cash recovery	0.0	0.0%	33.0	2.2%	298.4	21.8%
Prior Yr Recovery	0.0	0.0%	-103.5	-6.9%	-175.1	-12.8%
Sales at Standard	1907.1		1814.1		2087.0	
Customer escalation		10.4%		6.3%		28.3%



**FY 1995 BUDGET ESTIMATE  
SUPPLY MANAGEMENT BUSINESS AREA  
CUSTOMER PRICE EXHIBIT**

Marine Corps Wholesale	FY93		FY94		FY95	
	\$	%	\$	%	\$	%
Sales at Cost	72.94		142.58		139.29	2.30
Operating Costs			22.88	16.04	16.12	11.57
Distribution Depots			13.99	9.81	9.64	6.92
Transportation	1.68	2.30	3.28	2.30	1.39	0.09
Obsolescence/Losses	5.54	7.60	10.83	7.59	10.59	7.60
Inflation	2.41	3.30	4.13	2.89	3.90	2.80
Stabilization	17.43	23.90	9.81	6.88	30.24	21.71
Prior Yr. Recovery			2.28	1.59	0.10	
Sales at Standard	100.00		209.78		211.27	
Customer escalation						0.70

**FY 1995 BUDGET ESTIMATE  
SUPPLY MANAGEMENT BUSINESS AREA  
CUSTOMER PRICE EXHIBIT**

<b>Amphibious Supplies (BP54)</b>	<b>FY93</b>		<b>FY94</b>		<b>FY95</b>	
	<b>\$</b>	<b>%</b>	<b>\$</b>	<b>%</b>	<b>\$</b>	<b>%</b>
<b>Sales at Cost</b>	<b>72.94</b>		<b>74.62</b>	<b>2.30</b>	<b>72.90</b>	<b>2.30</b>
<b>Operating Costs</b>			<b>12.07</b>	<b>16.18</b>	<b>8.58</b>	<b>11.77</b>
<b>Distribution Depots</b>			<b>7.34</b>	<b>9.84</b>	<b>5.18</b>	<b>7.10</b>
<b>Transportation</b>	<b>1.68</b>	<b>2.30</b>	<b>1.72</b>	<b>2.30</b>	<b>0.73</b>	<b>1.00</b>
<b>Obsolescence/Losses</b>	<b>5.54</b>	<b>7.60</b>	<b>5.67</b>	<b>7.60</b>	<b>5.54</b>	<b>7.60</b>
<b>Inflation</b>	<b>2.41</b>	<b>3.30</b>	<b>2.16</b>	<b>2.90</b>	<b>2.04</b>	<b>2.80</b>
<b>Stabilization</b>	<b>17.43</b>	<b>23.90</b>	<b>3.93</b>	<b>5.27</b>	<b>15.60</b>	<b>21.40</b>
<b>Prior Yr. Recovery</b>			<b>2.28</b>	<b>3.06</b>		
<b>Sales at Standard</b>	<b>100.00</b>		<b>109.80</b>		<b>110.57</b>	
<b>Customer escalation</b>		<b>10.40</b>		<b>9.80</b>		<b>0.70</b>

<b>Marine Corps Depot Level Repairables (BP84)</b>	<b>FY93</b>		<b>FY94</b>		<b>FY95</b>	
	<b>\$</b>	<b>%</b>	<b>\$</b>	<b>%</b>	<b>\$</b>	<b>%</b>
<b>Sales at Cost</b>			<b>67.96</b>		<b>66.39</b>	<b>2.30</b>
<b>Operating Costs</b>			<b>10.81</b>	<b>15.91</b>	<b>7.54</b>	<b>11.35</b>
<b>Distribution Depots</b>			<b>6.65</b>	<b>9.79</b>	<b>4.46</b>	<b>6.72</b>
<b>Transportation</b>			<b>1.56</b>	<b>2.30</b>	<b>0.66</b>	<b>1.00</b>
<b>Obsolescence/Losses</b>			<b>5.16</b>	<b>7.60</b>	<b>5.05</b>	<b>7.60</b>
<b>Inflation</b>			<b>1.97</b>	<b>2.90</b>	<b>1.86</b>	<b>2.80</b>
<b>Stabilization</b>			<b>5.88</b>	<b>8.65</b>	<b>14.64</b>	<b>22.05</b>
<b>Prior Yr. Recovery</b>					<b>0.10</b>	<b>0.15</b>
<b>Sales at Standard</b>			<b>100.00</b>		<b>100.70</b>	
<b>Customer escalation</b>						<b>0.70</b>

**DEPARTMENT OF THE NAVY**  
**SUMMARY OF PRICE, PROGRAM AND OTHER CHANGES**  
 (In Millions of Dollars)

	Cost of Operations FY 1993	Price Growth Percent	Amount	Program & Other Changes	Cost of Operations FY 1994	Price Growth Percent	Amount	Program & Other Changes	Cost of Operations FY 1995
<b>SUPPLY MANAGEMENT</b>									
<b>MILITARY PERSONNEL COMPENSATION</b>									
010 Officer Composite	18,136	0.025	0.453	-12,747	5,842	0.028	0.164	-1,079	4,927
050 Enlisted Composite	3,324	0.025	0.063	-2,228	1,179	0.028	0.033	-0.218	0.994
Total Military Personnel Compensation	21,460		0.537	-14,975	7,022		0.197	-1.297	5,921
<b>CIVILIAN PERSONNEL COMPENSATION</b>									
101 Executive, General & Special Schedule	247,101		2,453	16,480	266,034		2,799	-47,931	220,902
100 Wage Board	27,950		0.297	-2,753	25,994		0.206	-2,627	22,753
104 Foreign National Direct Hire (FNDH)	0.000		0.000	0.000	0.000		0.000	0.000	0.000
105 Separation Liability (FNDH)	0.000		0.000	0.000	0.000		0.000	0.000	0.000
106 Benefits to Former Employees	0.000		0.000	0.000	0.000		0.000	0.000	0.000
Total Civilian Personnel Compensation	274,951		2,750	19,727	291,128		3,005	-50,558	243,665
<b>INVENTORY PROCUREMENT</b>									
201 Other Consumable Purchases - Wholesale	0.000		0.000	0.000	0.000		0.000	0.000	0.000
202 Other Consumable Purchases - Retail	0.000		0.000	0.000	0.000		0.000	0.000	0.000
203 DLR Procurement (Replen) Purch - Wholesale	0.000		0.000	0.000	0.000		0.000	0.000	0.000
204 DLR Procurement (Replen) Purch - Retail	0.000		0.000	0.000	0.000		0.000	0.000	0.000
205 DLR Repair Purchases	0.000		0.000	0.000	0.000		0.000	0.000	0.000
Organic (DBOF)	0.000		0.000	0.000	0.000		0.000	0.000	0.000
From Army Dep Maint									
From Navy Dep Maint									
From Air Force Dep Maint									
Contract									
206 Clothing Purchases	0.000		0.000	0.000	0.000		0.000	0.000	0.000
207 Medical/Dental Purchases	0.000		0.000	0.000	0.000		0.000	0.000	0.000
208 Fuel Purchases	0.000		0.000	0.000	0.000		0.000	0.000	0.000
209 Commissary/Subsistence Purchases	0.000		0.000	0.000	0.000		0.000	0.000	0.000
211 Returns (for credit) from Customers	0.000		0.000	0.000	0.000		0.000	0.000	0.000
Total Inventory Procurement	0.000		0.000	0.000	0.000		0.000	0.000	0.000
<b>TRAVEL</b>									
301 Per Diem	0.919		0.000	0.100	0.819		0.000	0.162	0.761

302 Other Travel Costs	1,501	0,026	0,039	1,540	0,043	0,487	2,040
303 MAC Passengers (DBOF)				0,000	0,000		0,000
307 Leased Vehicles				0,000	0,000		0,000
Total Travel	2,020		0,039	2,159	0,043	0,819	2,821

**MATERIAL, EQUIP & SUPPLIES (INTERNAL OPS)**

401 Fuel Purchases (Other than from Supp Ops)			0,000	0,000	0,000		0,000
415 DLA Managed Purchases	1,510	0,018	0,027	1,537	0,049		1,586
416 GSA Managed Supply Operations Purchases	0,130	0,026	0,003	0,133	0,004		0,137
421 Locally Purch Supp & Mat (Other than fr Supp Ops)	2,117	0,026	0,055	2,172	0,061		2,233
Total Material, Equipment & Supplies	3,757		0,085	3,842	0,114	0,000	3,956

**OTHER INTRAFUND (DBOF) PURCHASES**

615 Navy Data Automation Centers	55,377	-0,061	-3,378	51,999	-2,808	1,991	51,182
633 Naval Publications and Printing Service	1,215	0,015	0,018	1,233	0,197	0,950	2,390
634 Naval Public Works Centers Utilities	8,277	0,026	0,215	8,492	0,238	0,755	9,485
635 Naval Public Works Centers - Public Works	3,932	0,004	0,018	3,948	0,150	0,968	5,063
637 Naval Shipyards	2,260	0,091	0,206	2,565	0,490	-0,435	2,610
Total Industrial Fund Purchases	71,061		-2,923	68,237	-1,743	4,226	70,720

**TRANSPORTATION**

701 MAC Cargo (DBOF)	51,025	0,024	1,225	36,258	1,015	-1,033	36,240
702 MAC SAAM (DBOF)				0,000	0,000		0,000
703 JCS Exercises (DBOF)	37,212	0,067	3,237	28,776	-8,944	8,949	28,760
721 MTMC Port Handling (DBOF)				0,000	0,000		0,000
731 Commercial Air nonpremium	9,581	0,224	2,142	8,121	0,771	-0,775	8,117
751 Commercial Land nonpremium	26,704	0,026	0,694	19,799	0,554	-1,233	19,110
755 Premium/Overnight/Express	34,298	0,028	0,892	25,417	0,712	-1,563	24,546
761 Other Transportation	158,800		8,190	118,361	0,000	2,325	118,774

**DEPRECIATION/AMORTIZATION**

801 Real Property Maintenance (MRP)	3,864		0,000	5,815	0,000	-1,215	4,600
802 Equipment, except ADPE and Telecom	9,238		0,000	19,488	0,000	-0,065	19,400
803 ADPE and Telecom Resources			0,000	0,000	0,000		0,000
804 Software Development	3,500		0,000	5,900	0,000	-0,500	5,300
805 Minor Construction			0,000	0,000	0,000		0,000
806 Management Improvement Initiatives			0,000	0,000	0,000		0,000
807 Major Construction (MILCON)	1,200		0,000	1,300	0,000	-1,300	0,000
Total Depreciation/Amortization	17,800		0,000	33,400	0,000	-3,100	30,300

**OTHER PURCHASED SERVICES**

901 Foreign National Indirect Hire (FNHI)				0,000			0,000
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902 Separation Liability	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
912 SLUC (GSA Leases)	0.000	1.157	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
913 Purchased Utilities (Non DBOF)	2.593	2.750	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
914 Purchased Communications (Non DBOF)	0.212	0.316	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
915 Rents & Leases	0.308	0.316	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
921 Printing & Reproduction	16.302	16.726	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
922 Equipment Maintenance by Contract	7.000	7.362	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
923 Facility Maintenance by Contract	0.015	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
931 Contract Consultants	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
932 Contract Studies & Analysis	6.966	6.477	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
933 Prof & Management Services by Contract	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
934 Contract Eng & Technical Services (CETS)	0.106	0.106	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
941 Technical Drawings (Supply Ops only)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
942 Forgings & Castings (Supply Ops only)	18.237	26.247	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
951 ADPE Maintenance	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
952 Software Development	230.348	276.339	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
953 Reimbursements to Distribution Depots	13.775	67.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
954 Reimbursements to DLSC/DAA/SO/DRMS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
969 Other Engineering Services & Support	3.264	3.549	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
967 Other Intragovernmental Contracts	22.631	21.951	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
989 Other Contracts	61.479	57.711	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
996 Other Costs	404.476	488.447	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Total Other Purchases	954.025	1012.595	45.722	12.949	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	
TOTAL COST OF OPERATIONS (Includes Reimbursements)	4.574	1.805	4.574	1.805	1012.595	1012.595	1012.595	1012.595	1012.595	1012.595	1012.595	1012.595	1012.595	1012.595	1012.595	1012.595	1012.595	1012.595	1012.595	1012.595	1012.595	1012.595

**SUPPLY MANAGEMENT - NAVY  
CHANGES IN OPERATIONS  
(Dollars in Millions)**

**OBLIGATIONS**

<b>1. FY 1993 Actual Costs:</b>	<b>6,250.5</b>
<b>2. Pricing Adjustments:</b>	<b>422.1</b>
FY 1994 Pay Raise	0.0
Military Personnel	0.0
Civilian Personnel	0.0
Annualization of Prior Year Pay Raises	3.3
DBOF Price Changes:	266.0
Supplies, Material & Equipment	0.1
Other Intrafund Purchases	53.8
Industrial Fund Purchases	203.9
Transportation	8.2
General Purchase Inflation	152.8
<b>3. Productivity Initiatives and Other Efficiencies:</b>	<b>(157.3)</b>
DMRD Reduction	(150.0)
DMRD 971 Efficiency Improvement	(1.5)
Sonobuoy Transfer	(25.0)
MILPERS Adjustment	(2.4)
Cherry Point	11.1
Headquarters to DBOF	10.5
<b>4. Workload Changes:</b>	<b>(257.8)</b>
Personal Property	0.5
Force Reduction (Operations)	(8.9)
Consumable Item Transfer (Pipeline)	(1.2)
Consumable Item Transfer	88.2
DRMO Reimbursable	49.3
Adjustment driven by change in sales (bp91)	(10.7)
Program Changes (Wholesale Procurement)	33.6
Force Reduction (Retail)	(170.4)
Force Reduction (Wholesale Repair)	(238.2)
<b>5. Other Changes:</b>	<b>(19.0)</b>
Active Duty Personnel Downsizing	(2.7)
Demilitarization Costs	0.2
SWT Funding Decrease due to DLA Reimb	(6.2)
Centrally Managed Program Adjustment	(16.2)
UK FBM Functional Transfer	(0.1)
SUP Support Consolidation FTR	1.3
HRO/EEO Puget Sound FTR	(0.9)
Telecommunications FTR	(0.5)
Realign MILPERS between business areas	(11.1)
Operations/Maintenance from Capital Budget	12.8
Virtual Consolidation among ICPs	(1.9)
Regionalization of FISCs	(1.7)
Locality Pay Raise Adjustment	8.3
High Grade Adjustment	(0.1)
MRP BUCON adjustment	1.4
BRAC Savings	(1.6)
<b>6. FY 1994 Current Estimate:</b>	<b>6,238.5</b>

<b>7. Pricing Adjustments:</b>	<b>(64.6)</b>
FY 1995 Pay Raise	3.3
Military Personnel	0.2
Civilian Personnel	3.1
Annualization of Prior Year Pay Raises	0.0
DBOF Price Changes:	64.9
Supplies, Material & Equipment	5.6
Other Intrafund Purchases	54.2
Industrial Fund Purchases	9.0
Transportation	(3.9)
General Purchase Inflation	(132.8)
<b>8. Productivity Initiatives and Other Efficiencies:</b>	<b>(430.8)</b>
DMRD Savings	(194.7)
ADP Consolidation Savings	(7.5)
MILPERS Adjustment	(0.2)
Cherry Point (Marines)	0.3
Reduced Retail Inventories	(107.8)
BP 21 Deletion	(94.8)
Sonobuoy Transfer	(25.8)
Headquarters to DBOF	(0.3)
<b>9. Workload Changes:</b>	<b>(680.8)</b>
Transfer of Aviation Fuel to DLA	(514.4)
Force Reduction (Operations)	(2.5)
Consumable Item Transfer	43.7
Consumable Item Transfer (Pipeline)	(49.0)
DRMO Reimbursable	(15.9)
Adjustment driven by change in sales	(5.6)
Force Reduction (Wholesale Procurement)	7.8
Force Reduction (Retail)	(10.2)
Force Reduction (Wholesale Repair)	(134.7)
<b>10. Other Changes:</b>	<b>10.5</b>
Depreciation Expense	0.0
Active Duty Personnel Downsizing	(0.8)
Centrally Managed Program Adjustment	(7.0)
Subsistence	(3.9)
Pierside Purchase from Log Sprt	5.6
BRAC Savings	(3.9)
Virtual Consolidation among ICPs	(2.7)
Regionalization of FISCs	(1.9)
Headquarters Savings	(1.6)
SWT Funding Adj due to DLA Reimb	2.9
Capital Budget Program Adjustment	(1.3)
Locality Pay Raise Adjustment	1.5
VERA/SIP Costs	20.8
CAIMS to NOC	(5.1)
High Grade Adjustment	(0.2)
Military Costing Adjustment	(1.1)
Operations/Maint from Capital Budget	1.1
Realign MILPERS between business areas	0.9
DRMS Reimbursement	1.7
One less paid day	(1.0)
DLA Rate Increase (\$29 to \$29.71)	6.5
<b>11. FY 1995 Current Estimate:</b>	<b>5,072.8</b>

**DEFENSE BUSINESS OPERATIONS FUND - NAVY  
FY 1995 BUDGET ESTIMATE**

**DISTRIBUTION DEPOTS**

**Background**

The Navy Distribution Depot Business Area of the Defense Business Operations Fund provides for the management and operation of the distribution function of the Fleet and Industrial Supply Centers at Pearl Harbor, HI.; Yokosuka, Japan; and Guam. Their mission is to provide material distribution services (basic receipt, storage, issue and delivery of material) to afloat and ashore customers in a specific geographic region. Costs of this business area include, but are not limited to, civilian labor, military personnel at these installations, a portion of the headquarters costs related to distribution, and depreciation of capital assets. The workload at Distribution Depots is largely driven by inventory management decisions made within Supply Management. The majority of revenue received by the Distribution Depots is provided by, and reflected in, the cost of, the Supply Management business area.

Commencing in FY 1993, costs not related to distribution of material were removed from Distribution Depots and passed to Supply Management or incorporated into the newly formed Logistics Support Business area. As a result, transportation, repairable returns tracking and handling, nuclear material inspection, price fighter, and centrally managed programs were moved to Supply Management, and contracting, fuel operations, service craft, port services, terminal operations, and other miscellaneous activities were moved to Logistics Support.

**Budget Highlights**

**Workload** - Distribution Depots operating cost authority is provided under unit cost resourcing. Approved budget requirements and projected workload are used to develop a unit cost goal that is applied to the actual workload during the year of budget execution to determine the approved cost authority. The workload, or unit of measure, for Distribution Depots is receipts and issues at the Navy Distribution Depots, and reflect a 5.6 percent decrease from FY 1994 to FY 1995 as indicated below:

	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
Receipts and Issues (In millions)	1.92	1.96	1.85

**Performance Indicators**

	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
Unit Cost	\$36.62	\$32.12	\$33.36
Civilian End Strength	1162	1213	1186
Military End Strength	326	265	263



Capital Budget - This budget proposes capital budgets for all business areas. This budget finances the procurement of capital equipment, management information systems, and minor construction. These are depreciated over the useful life of the asset, with the cost of depreciation included in the material surcharge.

**DISTRIBUTION DEPOT - NAVY  
CAPITAL BUDGET  
(Dollars in Millions)**

	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
Equipment	0.0	0.0	0.0
Minor Construction	0.8	1.0	0.8
Management Information Systems	0.0	0.0	0.0
CDA	0.0	0.0	0.0
Total	0.8	1.0	0.8

**DISTRIBUTION DEPOT - NAVY  
REVENUE AND EXPENSES  
(Dollars in Millions)**

	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
<b>Revenue:</b>			
<b>Gross Sales:</b>			
Operations	0.0	0.0	0.0
Capital Surcharge	0.0	0.0	0.0
Depreciation except Maj Const	12.3	12.1	11.5
Major Construction Depreciation	9.7	10.7	0.0
Total Gross Sales	22.0	22.8	11.5
Other Income	5.0	5.0	5.1
Total Income	27.0	27.8	16.6
<b>Expenses:</b>			
Cost of Material 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
<b>Salaries and Wages:</b>			
Military Personnel	13.4	10.1	8.7
Civilian Personnel	23.5	19.8	17.4
<b>Materials, Supplies and</b>			
Parts used in Operations	0.0	0.0	0.0
Facility Repair Charge	3.0	3.1	1.0
Depreciation - Capital	22.0	22.8	11.5
Contracted Engineering Services	0.0	0.0	0.0
Lease Costs	1.6	1.6	0.5
Purchased Utilities	2.5	2.5	0.8
Purchased Communications	2.4	2.5	0.8
Equipment Maintenance	2.2	2.3	0.7
Fuel	0.0	0.0	0.0
Other Expenses	29.0	33.1	19.8
Total Expenses	99.6	97.8	61.2
Work in Process Adjusted	0.0	0.0	0.0
Comp Work for Activity Reten Adj	0.0	0.0	0.0
Cost of Goods Sold	99.6	97.8	61.2
Operating Result	(72.6)	(70.0)	(44.6)
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( Supply Mgt)	72.6	69.5	45.1
Inventory Gains and Losses	0.0	0.0	0.0
Net Operating Result	0.0	(0.5)	0.5
Transfers Not Affecting NOR/AOR	0.0	0.0	0.0
Prior Year and Other Adjustments	0.0	0.0	0.0
Other Inventory Adjustments	0.0	0.0	0.0
WRM Appropriations	0.0	0.0	0.0
Net Result	0.0	(0.5)	0.5

**DISTRIBUTION DEPOT - NAVY**  
**SOURCE OF REVENUE**  
(Dollars in Millions)

	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
<b>1. Orders from DoD Components:</b>			
Army	0.0	0.0	0.0
Navy	27.0	27.8	16.6
Air Force	0.0	0.0	0.0
Marine Corps	0.0	0.0	0.0
Other	0.0	0.0	0.0
<b>2. Orders from other     DBOF Business Areas</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>3. Total DoD</b>	<b>27.0</b>	<b>27.8</b>	<b>16.6</b>
<b>4. Other Orders:</b>			
Other Federal Agencies	0.0	0.0	0.0
Trust Fund	0.0	0.0	0.0
Non Federal Agencies	0.0	0.0	0.0
<b>5. Total Gross Orders</b>	<b>27.0</b>	<b>27.8</b>	<b>16.6</b>
<b>6. Credits and Allowances:</b>			
Discounts	0.0	0.0	0.0
Price Reductions	0.0	0.0	0.0
<b>7. Change to Backlog</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>8 Total Gross Sales</b>	<b>27.0</b>	<b>27.8</b>	<b>16.6</b>

**DISTRIBUTION DEPOTS  
CHANGES IN OPERATIONS  
(Dollars in Millions)**

**OBLIGATIONS**

<b>1. FY 1993 Actual Costs</b>	<b>77.6</b>
<b>2. Pricing Adjustments:</b>	<b>1.2</b>
FY 1994 Pay Raise	0.0
Military Personnel	0.0
Civilian Personnel	0.0
Annualization of Prior Year Pay Raises	0.6
DBOF Price Changes:	(0.1)
Supplies, Material & Equipment	0.0
Other Intrafund Purchases	(0.1)
Transportation	0.0
General Purchase Inflation	0.7
Other Price Changes:	0.1
Foreign National Indirect Hires	0.1
<b>3. Productivity Initiatives and Other Efficiencies:</b>	<b>-0.2</b>
ADP Consolidation Savings	-0.3
Efficiency Improvements	-0.3
Headquarters to DBOF	0.4
<b>4. Workload Changes:</b>	<b>-1.7</b>
Adjustment driven by change in sales	1.9
Japan FNIH Pay due to burdensharing	-3.6
<b>5. Other Changes:</b>	<b>-1.0</b>
Active Duty Personnel downsizing	-2.5
Force Level Impact	-0.5
Realign MILPERS between business areas	-1.6
Foreign Currency Adjustment	0.4
Capital budget program adjustment	1.7
Locality Pay Raise Adjustment	0.4
MRP adjustment	1.3
<b>6. FY 1994 Current Estimate:</b>	<b>75.9</b>
<b>7. Pricing Adjustments:</b>	<b>1.6</b>
FY 1995 Pay Raise	0.5
Military Personnel	0.3
Civilian Personnel	0.2
Annualization of Prior Year Pay Raises	0.0
DBOF Price Changes:	0.2
Supplies, Material & Equipment	0.0
Other Intrafund Purchases	0.2
General Purchase Inflation	0.9
Other Price Changes:	0.1
Foreign National Indirect Hires	0.1

<b>8. Productivity Initiatives and Other Efficiencies:</b>	<b>-1.8</b>
ADP Consolidation	-1.0
MILPERS Adjustment	-0.8
<b>9. Workload Changes:</b>	<b>-0.2</b>
Adjustment driven by change in size	-0.2
<b>10. Other Changes:</b>	<b>2.0</b>
Active Duty Personnel downsizing	-1.5
One less paid day	-0.1
Realign MILPERS between business areas	1.8
Force Level Impact	-0.2
BRAC Savings	-0.8
VERA Costs	0.2
Locality Pay Raise Adjustment	0.5
MRP Adjustment	2.1
<b>11. FY 1995 Estimate:</b>	<b>77.4</b>

**DEFENSE BUSINESS OPERATIONS FUND - NAVY  
FY 1995 BUDGET ESTIMATE**

**LOGISTICS SUPPORT ACTIVITIES**

**Background**

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. Beginning in FY 1993, costs not related to distribution of material or supply management were removed from Distribution Depots and Supply Management and incorporated into the Logistics Support Activities Business area. These services include contract management reviews, 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.

Cost of this business area include, but are not limited to, civilian labor, military personnel at these installations, depreciation and capital assets. The revenue received by Logistics Support Activities is provided by, and reflected in the cost of the Supply Management business area. In FY 1995, revenue of approximately \$ 68 million will be earned directly by this business area as fee for service charges from its customers.

The following activities are included in the Logistics Support Activities business area:

- Fleet Industrial Support Center, Norfolk, VA.
- Fleet Industrial Support Center, Charleston, SC.
- Fleet Industrial Support Center, Pensacola, FL.
- Fleet Industrial Support Center, Puget Sound, WA.
- Fleet Industrial Support Center, Oakland, CA.
- Fleet Industrial Support Center, Jacksonville, FL.
- Fleet Industrial Support Center, San Diego, CA.

Although the Logistics Support Activities business area receives its operating cost authority under unit cost resource authority, there are no developed outputs that use unit cost goals. Authority is provided at a fixed level based on workload requirements.

**Budget Highlights**

**Workload / Cost** - The workload in this business area is driven by customer requirements in individual geographic areas. It is not related to sales of material and can be expected to decrease at a different rate than general force levels. Obligation costs decrease by \$ 45.3 million between FY 1994 to FY 1995. This decrease is primarily driven by functional realignment of the Personal Property function to mission funding (-\$17.4 million), decrease in the Capital program (-\$10.4 million), decrease in fuel

prices (-\$8 million), and a decrease in costs due to force structure reductions (-\$5.8 million).

Personnel - The FY 1993 to FY 1994 personnel increase is due to a realignment from Distribution Depots and the Supply Management business areas. Workload decreases result in a 3 percent end strength reduction between FY 1994 and FY 1995.

	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
Civilian End Strength	3118	3388	3325
Military End Strength	0	227	185

Capital Budget - This budget proposes capital budgets for all business areas. 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.



**LOGISTICS SUPPORT ACTIVITIES - NAVY**  
**REVENUE AND EXPENSES**  
(Dollars in Millions)

	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
<b>Revenue:</b>			
<b>Gross Sales:</b>			
Operations	0.0	0.0	0.0
Capital Surcharge	0.0	0.0	0.0
Depreciation except Maj Const	23.4	23.4	18.5
Major Construction Depreciation	9.7	9.7	0.0
<b>Total Gross Sales</b>	<b>33.1</b>	<b>33.1</b>	<b>18.5</b>
Other Income	70.6	63.3	57.9
<b>Total Income</b>	<b>103.7</b>	<b>96.4</b>	<b>76.4</b>
<b>Expenses:</b>			
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
<b>Salaries and Wages:</b>			
Military Personnel	0.0	12.9	9.4
Civilian Personnel	107.3	138.9	131.4
<b>Materials, Supplies and</b>			
Parts used in Operations	24.4	24.9	21.0
Facility Repair Charge	3.6	3.6	3.3
Depreciation - Capital	33.1	33.1	18.5
Contracted Engineering Services	0.0	0.0	0.0
Lease Costs	1.7	1.7	1.8
Purchased Utilities	6.1	6.2	5.5
Purchased Communications	3.0	3.0	1.1
Equipment Maintenance	6.1	5.9	3.8
Fuel	0.0	0.0	0.0
Other Expenses	79.3	46.3	35.0
<b>Total Expenses</b>	<b>264.6</b>	<b>276.5</b>	<b>230.8</b>
Work in Process Adjusted	0.0	0.0	0.0
Comp Work for Activity Reten Adj	0.0	0.0	0.0
<b>Cost of Goods Sold</b>	<b>264.6</b>	<b>276.5</b>	<b>230.8</b>
<b>Operating Result</b>	<b>(160.9)</b>	<b>(180.1)</b>	<b>(154.4)</b>
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(Supply Mgt.)	160.9	176.5	158.0
Inventory Gains and Losses	0.0	0.0	0.0
<b>Net Operating Result</b>	<b>(0.0)</b>	<b>(3.6)</b>	<b>3.6</b>
Transfers Not Affecting NOR/AOR	0.0	0.0	0.0
Prior Year and Other Adjustments	0.0	0.0	0.0
Other Inventory Adjustments	0.0	0.0	0.0
WRM Appropriations	0.0	0.0	0.0
<b>Net Result</b>	<b>(0.0)</b>	<b>(3.6)</b>	<b>3.6</b>

**LOGISTICS SUPPORT ACTIVITIES - NAVY**  
**SOURCE OF REVENUE**  
(Dollars in Millions)

	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
<b>1. Orders from DoD Components:</b>			
Army	0.0	0.0	0.0
Navy	103.7	96.4	76.4
Air Force	0.0	0.0	0.0
Marine Corps	0.0	0.0	0.0
Other	0.0	0.0	0.0
<b>2. Orders from other DBOF Business Areas</b>	0.0	0.0	0.0
<b>3. Total DoD</b>	103.7	96.4	76.4
<b>4. Other Orders:</b>			
Other Federal Agencies	0.0	0.0	0.0
Trust Fund	0.0	0.0	0.0
Non Federal Agencies	0.0	0.0	0.0
<b>5. Total Gross Orders</b>	103.7	96.4	76.4
<b>6. Credits and Allowances:</b>			
Discounts	0.0	0.0	0.0
Price Reductions	0.0	0.0	0.0
<b>7. Change to Backlog</b>	0.0	0.0	0.0
<b>8 Total Gross Sales</b>	103.7	96.4	76.4

**LOGISTICS SUPPORT ACTIVITIES - NAVY  
CAPITAL BUDGET  
(Dollars in Millions)**

	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
Equipment	4.8	24.5	16.6
Minor Construction	0.8	0.8	0.9
Management Information Systems	0.0	8.1	7.8
CDA	0.0	0.0	0.0
Total	5.6	33.4	25.3

**LOGISTICS SUPPORT ACTIVITIES - NAVY  
CHANGES IN OPERATIONS  
(Dollars in Millions)**

**OBLIGATIONS**

<b>1. FY 1993 Actual Costs</b>	<b>231.5</b>
<b>2. Pricing Adjustments:</b>	<b>1.5</b>
<b>FY 1994 Pay Raise</b>	<b>0.0</b>
<b>Military Personnel</b>	<b>0.0</b>
<b>Civilian Personnel</b>	<b>0.0</b>
<b>Annualization of Prior Year Pay Raises</b>	<b>1.1</b>
<b>DBOF Price Changes:</b>	<b>-0.9</b>
<b>Supplies, Material &amp; Equipment</b>	<b>0.6</b>
<b>Other Intrafund Purchases</b>	<b>-1.4</b>
<b>General Purchase Inflation</b>	<b>1.3</b>
<b>Other Pricing Changes:</b>	<b>0.1</b>
<b>Foreign National Indirect Hires</b>	<b>0.1</b>
<b>3. Productivity Initiatives and Other Efficiencies:</b>	<b>-0.5</b>
<b>DMRD 971 Efficiency Improvements</b>	<b>-0.5</b>
<b>4. Program Changes:</b>	<b>10.2</b>
<b>Japan FNIH Pay due to burdensharing</b>	<b>-3.8</b>
<b>Force Level Adjustment</b>	<b>-2.4</b>
<b>Adjustment driven by changes in sales</b>	<b>16.3</b>
<b>5. Other Changes:</b>	<b>33.6</b>
<b>Clean Air Act</b>	<b>2.2</b>
<b>Ozone Depleting Program</b>	<b>0.2</b>
<b>Realign MILPERS between business areas</b>	<b>12.9</b>
<b>Capital budget program adjustment</b>	<b>3.2</b>
<b>Foreign Currency Adjustment</b>	<b>0.3</b>
<b>Locality Pay Raise Adjustment</b>	<b>3.2</b>
<b>DPI to DISA</b>	<b>-4.5</b>
<b>BRAC III VERA/SIPS Costs</b>	<b>16.1</b>
<b>6. FY 1994 Current Estimate:</b>	<b>276.3</b>
<b>7. Pricing Adjustments:</b>	<b>4.1</b>
<b>FY 1995 Pay Raise</b>	<b>1.8</b>
<b>Military Personnel</b>	<b>0.4</b>
<b>Civilian Personnel</b>	<b>1.4</b>
<b>Annualization of Prior Year Pay Raises</b>	<b>0.0</b>
<b>DBOF Price Changes:</b>	<b>0.8</b>
<b>Supplies, Material &amp; Equipment</b>	<b>0.7</b>
<b>Other Intrafund Purchases</b>	<b>0.0</b>
<b>General Purchase Inflation</b>	<b>1.5</b>
<b>Other Pricing Changes:</b>	<b>0.0</b>
<b>Foreign National Indirect Hires</b>	<b>0.0</b>

<b>8. Productivity Initiatives and Other Efficiencies:</b>	<b>0.0</b>
<b>9. Program Changes:</b>	<b>-5.8</b>
Japan FNIH Pay due to burdensharing	-1.7
Force Levels Adjustment	-1.6
Adjustment driven by change in workload	-2.5
<b>10. Other Changes:</b>	<b>-43.6</b>
Ozone Depleting Program/Clean Air Act	1.1
Pierside Purchase to Supply Mgmt	-5.6
Realign MILPERS between business areas	-2.7
Capital budget program adjustment	-10.4
One less paid day	-0.5
Military Costing Adjustment	-1.2
Locality Pay Raise Adjustment	1.1
Fuel Adjustment	-8.0
Personal property Transfer to O&M,N	-17.4
<b>11. FY 1995 Estimate:</b>	<b>231.0</b>

**DEPARTMENT OF THE NAVY  
DEFENSE BUSINESS OPERATIONS FUND  
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 crafts 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:

<u>Activities</u>	<u>Location</u>
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 submission reflects the many changes occurring in the Navy community. The need for a smaller fleet and reduced ship maintenance budgets led to significant fluctuations from the original plan during FY 1993. The shipyards react to the fleet's needs and those needs are changing quickly and dramatically as the Department of Defense (DOD) makes decisions about both the size and the types of ships that will make up the fleet. For example, both the USS *Texas* and the USS *Forrestal* were undergoing overhauls when the decision was made as part of the Secretary's Bottom Up Review to inactivate both ships rather than complete the availabilities. The 1993 Base Realignment and Closure (BRAC) decisions caused significant alteration of this activity group. Philadelphia NSY was already approved for closure during the last BRAC review and five other shipyards were considered for closure during this year's process. Charleston NSY and Mare Island NSY are now on the closure list.

The rapid pace of change is likely to continue as the Navy and our country struggle with decisions about the size of the budget and the Navy's force structure.

**IMPACT OF BASE CLOSURE**

There are no FY 1995 ship maintenance inductions planned for Naval Shipyards at Charleston, South Carolina; Mare Island (Vallejo), California; and Philadelphia, Pennsylvania. These shipyards are scheduled to close in FY 1996. As shipwork declines at these activities, a portion of the workforce will be directly employed in environmental cleanup and other closure related activities. These payroll and other related costs will be reimbursably funded from the Base Closure and Realignment (BRAC) account. Costs incurred by the Naval Shipyards in performing these functions will be reported as DBOF operations, but are not included in setting Shipyard customer rates.

The impact of BRAC funding on the Naval Shipyard budget estimates is as follows:

	<u>Total</u>	<u>Shipwork &amp; Other Work</u>	<u>BRAC</u>
<b><u>FY 1994</u></b>			
Revenue (\$M)	\$3,719	\$3,391	\$328
Cost of Operations (\$M)	\$3,896	\$3,568	\$328
Civilian End Strength	41,696	40,023	1,673
Military End Strength	468	468	0
	<u>Total</u>	<u>Shipwork &amp; Other Work</u>	<u>BRAC</u>
<b><u>FY 1995</u></b>			
Revenue (\$M)	\$3,770	\$3,374	\$396
Cost of Operations (\$M)	\$3,279	\$2,883	\$396
Civilian End Strength	31,752	27,243	4,509
Military End Strength	371	371	0

**WORKLOAD:**

The naval shipyard workload in this submission is based on funded mandays agreed to by CINCLANTFLT, CINCPACFLT, FMP representatives and OPNAV sponsors at the East and West Coast Scheduling Conferences, and authorized changes since the conferences, plus FY 1993 work competitively won as well as carryover work on prior year inductions.

Deleted availabilities and a general decline in miscellaneous work cause an overall reduction in FY 1994 and 95. The magnitude of this reduction is masked somewhat by the additional mandays for base closure included in the estimates for Charleston, Mare Island, and Philadelphia Naval Shipyards which were not in the previous President's budget.

MANPOWER TRENDS:

The shipyards' commitment to delivering a cost competitive product is clearly demonstrated in our planned workforce actions. Labor accounts for approximately 60 percent of mission related shipyard costs. Total FY 1995 workload, including BRAC funded work, is 23.5 percent less than the FY 1993 workload. Our total FY 1995 civilian and military end strength is 32,123 people, a reduction of 45.5 percent (or 26,869 people) from the workforce at the beginning of FY 1993. The personnel reductions will allow us to improve the direct labor indicator (DLI) each fiscal year and maintain a competitive manday cost structure. Although the workload declines by 14 percent from FY 1994 to FY 1995, the FY 1995 DLI rate of 59.8 percent is 0.9 percent above our FY 1993 DLI rate. Projected end strength figures are provided below.

	<u>Civilian</u>	<u>Military</u>	<u>Total</u>
FY 1992	58,375	617	58,992
FY 1993	49,424	663	50,087
FY 1994	41,696	468	42,164
FY 1995	31,752	371	32,123

The workforce reduction will be accomplished primarily through the combination of Reduction In Force (RIF), Separation Incentive Pay program and Voluntary Early Retirement Authority (SIP/VERA). In addition, shipyards have and will be operating aggressive out-placement programs which include job fairs with both public and private firms in order to increase attrition thereby reducing the number of people separated by RIF. RIFs and SIP/VERA totaling 18,162 people and costing \$268.1M are included in this submission.

DIRECT LABOR HOURS:

Shipyard costs are allocated and billed to customers on the basis of Direct Labor Hours (DLH). Direct Labor Hours included in the budget estimates are:

	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
DLHs (000s)	60,570	53,932	46,346



### RATES AND UNIT COST:

Customer rates, designed to achieve an Accumulated Operating Result (AOR) of zero at the end of FY 1995, will increase by an average of 18.7 percent over FY 1994 program rates. The average rate per direct labor hour applicable to customer work funded in FY 1995 will be \$84.04 per hour. A portion of FY 1995 ship maintenance inductions funded at this rate will be carried forward and accomplished by the Shipyards in succeeding years. This customer rate includes the AOR recovery factor and a surcharge to fund JLSC (Joint Logistics Support Center). The unit cost of operating Shipyards during FY 1995 is projected to be \$70.74 per direct labor hour.

### PRODUCTIVITY INITIATIVES/COST REDUCTION:

Our commitment to continuous improvement in cost and quality performance is reflected in the details of this budget submission and will be executed via our Naval Shipyard Corporate Operations Strategy and Plan (COSP). The COSP is our blueprint for improvement and includes specific actions to be taken in all major shipyard functional areas. It forms the basis for individual shipyard strategic plans that will facilitate the accomplishment of the efficiencies and programs that this budget describes.

Continuous efforts are underway to improve and streamline work processes in order to accomplish the planned levels of performance and productivity.

Examples of specific process improvements and cost reductions include:

- Charleston NSY received approval from the South Carolina Department of Health and Environmental Control to operate four Dockside Chlorination Units to control biofouling of heat exchange surfaces during submarine overhaul. Cost savings are estimated at up to \$400K per overhaul.
- Due to declining workload Mare Island NSY and Pearl Harbor NSY reduced the swing and graveyard shifts which produced savings of almost \$1M.
- Puget Sound NSY developed a new procedure to repair detachable anchor chain links rather than replacing them which saved their customers \$160K.

**FEDERAL EMPLOYEE COMPENSATION ACT (FECA) MANAGEMENT:**

All shipyards are actively working to reduce FECA costs. Injured employees represent substantial cost, not only in terms of compensation, but in terms of lost productivity and hiring and training of additional personnel. Examples of programs in place include:

- Establishment of an OSH Award Program to recognize improvement of safety performance.
- Use of registered nurses to follow up with the medical community and employees concerning injuries and available work for the employees.
- Rehabilitation and retraining for injured employees.
- Reviewing charge back lists from the Department of Labor, investigating possible fraudulent claims, and establishing communications with State and Federal authorities necessary to assist in case reviews.
- Development of a workplace inspection checklist which provides for increased supervisory OSH enforcement and improved OSH compliance.

**ENVIRONMENTAL COMPLIANCE:**

Naval Shipyards are committed to providing a cleaner and safer environment. Examples of initiatives and hazardous waste minimization projects include:

- Portsmouth NSY working with local community and regulatory agencies by:
  - Entering into an agreement with the State of Maine, municipalities, and EPA Region I to purchase recycled materials.
  - Holding household hazardous waste clean-up days for local towns.
  - Giving environmental awareness presentations in schools.
  - Sponsoring community environmental information meetings.
- Philadelphia NSY was able to dispose of nine "donuts" (oil/water separators) and create a haven for marine life. The donuts which weigh about thirty tons, will be added to an artificial reef along the New Jersey coast about ten miles south of Cape May. Cost avoidance is \$328K.

- Mare Island NSY developed a process for recirculating contaminated sealant. Savings for water, treatment, and sampling amount to \$306K annually.
- Long Beach NSY has purchased a diesel fuel recycling unit that is capable of recycling 650 gallons per hour of diesel fuel. The shipyard purchases approximately 250,000 gallons of fuel per year for 200 vehicles, testing of diesel engines and flushing of piping systems. Using recycled fuel for these applications the shipyard will save about \$255K per year.
- Other examples of waste minimization projects include: recycling of lube oil for use in crane gear boxes; solvent distillation; machine tool coolant reclamation; aerosol can puncturing; reduction of paint wastes through bulk paint procurement; fluorescent tube recycling; use of cubic yard boxes instead of 55 gallon drums for PCB wastes; and innovative management control over hazardous material purchases, inventory and use.

SUMMARY OF WORKLOAD INDICATORS:

	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
CV SLEP/MTS/CONV	1	--	--
ROH/COH/RF	6	9	5
DMP	1	--	1
OTHER STARTS: (SRA, ERP, IA, PMA, PSA, etc.)	<u>46</u>	<u>51</u>	<u>50</u>
TOTAL	54	60	56

CAPITAL BUDGET

The Capital Budget seeks to maintain and develop naval shipyard capabilities through the acquisition of equipment and the execution of minor construction projects. The nature of the budgeted workload and the requirement to comply with all federal, state and local laws and regulations (especially statutes concerning environmental issues) defines which projects will be submitted in the budget. The program seeks to maximize return on investment by selecting those projects which provide the best combination of technical capability and financial performance.

The program also seeks to improve the efficiency of naval shipyard operations through the introduction of new technology such as computer-numeric-controlled (CNC) machine tools, integrated turning centers and other technological innovations.

The table below provides a summary of the Capital Budget (\$M):

	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
Equipment (non-ADPE)	43.6	44.1	33.1
Automated Data Processing Equip	0	7.7	11.5
Minor Construction	<u>2.8</u>	<u>11.5</u>	<u>7.4</u>
Total Capital Budget	\$46.4	\$63.3	\$52.0

**DEPOT MAINTENANCE - SHIPS  
REVENUE AND EXPENSE  
(Dollars in Millions)**

	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
<b>Revenue:</b>			
<b>Gross Sales:</b>			
Operations	5,010.2	3,598.8	3,633.1
Capital Surcharge	7.3	0.0	60.8
Depreciation except Maj Const	75.5	67.2	76.3
Major Construction Depreciation	37.8	53.0	0.0
<b>Total Gross Sales</b>	<b>5,130.8</b>	<b>3,719.0</b>	<b>3,770.2</b>
Other Income	0.0	0.0	0.0
<b>Total Income</b>	<b>5,130.8</b>	<b>3,719.0</b>	<b>3,770.2</b>
<b>Expenses:</b>			
Cost of Materiel Sold from Inventory	0.0	0.0	0.0
Negotiated Purchases from Customers	0.0	0.0	0.0
Transportation	8.0	11.1	15.5
<b>Salaries and Wages:</b>			
Military Personnel	36.6	25.6	7.4
Civilian Personnel	2,633.7	2,338.0	2,094.7
<b>Materials, Supplies and</b>			
Parts used in Operations	387.2	384.1	332.1
Facility Repair Charge	113.6	114.3	93.2
Depreciation - Capital	113.3	120.2	106.5
Contracted Engineering Services	18.7	16.3	14.4
Lease Costs	16.9	16.5	14.9
Purchased Utilities	122.0	123.7	122.9
Purchased Communications	13.7	13.6	13.8
Equipment Maintenance	18.9	25.1	19.6
Fuel	10.7	11.5	7.7
Other Expenses	553.4	696.1	436.1
<b>Total Expenses</b>	<b>4,046.7</b>	<b>3,896.2</b>	<b>3,278.6</b>
Work in Process Adjusted	(1,395.2)	0.0	0.0
Comp Work for Activity Reten Adj	25.2	0.0	0.0
<b>Cost of Goods Sold</b>	<b>5,416.7</b>	<b>3,896.2</b>	<b>3,278.6</b>
<b>Operating Result</b>	<b>(285.9)</b>	<b>(177.1)</b>	<b>491.6</b>
Less Capital Surchg Reservation	0.0	0.0	60.8
Plus Appropriations Affecting NOR/AOR	0.0	0.0	0.0
Other Changes Affecting NOR/AOR	127.8	337.8	0.0
Inventory Gains and Losses	0.0	0.0	0.0
<b>Net Operating Result</b>	<b>(158.2)</b>	<b>160.7</b>	<b>430.8</b>
Transfers Not Affecting NOR/AOR	0.0	0.0	0.0
Prior Year and Other Adjustments	149.3	0.0	0.0
Other Inventory Adjustments	0.0	0.0	0.0
WRM Appropriations	0.0	0.0	0.0
<b>Net Result</b>	<b>(8.9)</b>	<b>160.7</b>	<b>430.8</b>

**DEPOT MAINTENANCE - SHIPS, NAVY  
CHANGES IN OPERATION  
(DOLLARS IN MILLIONS)**

	<b><u>EXPENSES</u></b>
<b>FY 1993 ACTUAL</b>	<b>4,046.7</b>
<b>Pricing adjustments:</b>	
Civilian Personnel	84.8
Military Personnel	0.4
Fuel	0.3
Other Materials and Supplies	7.8
Other DBOF Purchases	2.2
Other Purchases	23.1
<b>Productivity Initiatives and Other Efficiencies:</b>	
Savings from Capital Investments	(2.5)
Anticipated DMRD Savings - Productivity	(55.8)
Anticipated DMRD Savings - Downsize & Restructure	(25.2)
Anticipated DMRD Savings - Consolidate Data Processing	(4.2)
Anticipated DMRD Savings - from creation of DBOF	(34.2)
Anticipated DMRD Savings - Consolidate Public Works	(1.8)
<b>Program Changes:</b>	
Base Realignment and Closure	234.2
Workload Changes	(379.6)
<b>FY 1994 CURRENT ESTIMATE</b>	<b>3,896.2</b>
<b>Pricing adjustments:</b>	
Civilian Personnel	31.6
Military Personnel	0.5
Fuel	(2.6)
Other Materials and Supplies	22.8
Other DBOF Purchases	11.8
Other Purchases	27.8
<b>Productivity Initiatives and Other Efficiencies:</b>	
Savings from Capital Investments	(1.2)
Anticipated DMRD Savings - Downsize and Restructure	(168.2)
Anticipated DMRD Savings - Consolidate Data Processing	(4.2)
Anticipated DMRD Savings - from Creation of DBOF	(32.2)
<b>Program Changes:</b>	
Base Realignment and Closure	67.9
Workload Changes	(571.6)
<b>FY 1995 CURRENT ESTIMATE</b>	<b>3,278.6</b>

**DEPOT MAINTENANCE - SHIPS**  
**SOURCE OF REVENUE**  
(Dollars in Millions)

	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
<b>1. Orders from DoD Components:</b>			
Army	3.4	2.9	1.8
Navy	3,295.0	3,337.2	2,778.3
Air Force	0.2	0.3	0.3
Marine Corps	1.8	1.0	0.6
Other	55.9	127.2	205.2
<b>2. Orders from other</b>			
DBOF Business Areas	133.2	139.3	139.1
<b>3. Total DoD</b>	<b>3,489.5</b>	<b>3,607.8</b>	<b>3,125.2</b>
<b>4. Other Orders:</b>			
Other Federal Agencies	22.8	18.7	8.7
Trust Fund	26.1	32.5	50.1
Non Federal Agencies	25.2	12.9	13.0
<b>5. Total Gross Orders</b>	<b>3,563.6</b>	<b>3,671.8</b>	<b>3,197.0</b>
<b>6. Credits and Allowances:</b>			
Discounts	0.0	0.0	0.0
Price Reductions	0.0	0.0	0.0
<b>7. Change to Backlog</b>	<b>(1,567.2)</b>	<b>(47.2)</b>	<b>(573.2)</b>
<b>8 Total Gross Sales</b>	<b>5,130.8</b>	<b>3,719.0</b>	<b>3,770.2</b>

DEPOT MAINTENANCE - SHIP, NAVY  
CAPITAL BUDGET  
(Dollars in Millions)

	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
Equipment - Except ADPE & TELECOM	43.6	44.1	33.1
Minor Construction	2.8	11.5	7.4
ADPE & TELECOM	0.0	7.7	11.5
Software	0.0	0.0	0.0
Total	46.4	63.3	52.0



**MATERIAL INVENTORY DATA**  
(Dollars in Millions)  
**FISCAL YEAR 1983**

	<u>Total</u>	<u>Mobilization</u>	<u>--- Peacetime ---</u>	
			<u>Operating</u>	<u>Other</u>
<b>Material Inventory BOP</b>	<b>304.4</b>	<b>0.0</b>	<b>304.4</b>	<b>0.0</b>
<b>BOP Reclassification Changes</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Price Changes</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Receipts from Commercial Sources</b>	<b>192.1</b>	<b>0.0</b>	<b>192.1</b>	<b>0.0</b>
<b>Negotiated Purchase from Customers</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Gross Sales</b>	<b>201.4</b>	<b>0.0</b>	<b>201.4</b>	<b>0.0</b>
<b>Material Inventory Adjustments</b>				
<b>CAPITALIZATIONS + OR (-)</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>RETURNS TO SUPPLIERS (-)</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>TRANSFERS TO PROP. DISP.(-)</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>ISSUES/RECEIPTS WITHOUT</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>REIMBURSEMENT + or (-)</b>				
<b>OTHER (list)</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>TOTAL ADJUSTMENTS</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Material Inventory EOP</b>	<b>295.1</b>	<b>0.0</b>	<b>295.1</b>	<b>0.0</b>
<b>ECONOMIC RETENTION (memo)</b>				<b>0.0</b>
<b>POLICY RETENTION (memo)</b>				<b>0.0</b>
<b>POTENTIAL EXCESS (memo)</b>				<b>0.0</b>
<b>Material Inventory on Order</b>				
<b>EOP (memo)</b>	<b>73.8</b>	<b>0.0</b>	<b>73.8</b>	<b>0.0</b>

**MATERIAL INVENTORY DATA**  
(Dollars in Millions)  
**FISCAL YEAR 1994**

	<u>Total</u>	<u>Mobilization</u>	<u>--- Peacetime --- Operating</u>	<u>Other</u>
<b>Material Inventory BOP</b>	<b>295.1</b>	<b>0.0</b>	<b>295.1</b>	<b>0.0</b>
<b>BOP Reclassification Changes</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Price Changes</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Receipts from Commercial Sources</b>	<b>348.6</b>	<b>0.0</b>	<b>348.6</b>	<b>0.0</b>
<b>Negotiated Purchase from Customers</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Gross Sales</b>	<b>395.6</b>	<b>0.0</b>	<b>395.6</b>	<b>0.0</b>
<b>Material Inventory Adjustments</b>				
<b>CAPITALIZATIONS + OR (-)</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>RETURNS TO SUPPLIERS (-)</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>TRANSFERS TO PROP. DISP.(-)</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>ISSUES/RECEIPTS WITHOUT   REIMBURSEMENT + or (-)</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>OTHER (list)</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>TOTAL ADJUSTMENTS</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Material Inventory EOP</b>	<b>248.1</b>	<b>0.0</b>	<b>248.1</b>	<b>0.0</b>
<b>ECONOMIC RETENTION (memo)</b>				<b>0.0</b>
<b>POLICY RETENTION (memo)</b>				<b>0.0</b>
<b>POTENTIAL EXCESS (memo)</b>				<b>0.0</b>
<b>Material Inventory on Order</b>				
<b>EOP (memo)</b>	<b>62.0</b>	<b>0.0</b>	<b>62.0</b>	<b>0.0</b>

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

	<u>Total</u>	<u>Mobilization</u>	<u>--- Peacetime --- Operating</u>	<u>Other</u>
<b>Material Inventory BOP</b>	248.1	0.0	248.1	0.0
<b>BOP Reclassification Changes</b>	0.0	0.0	0.0	0.0
<b>Price Changes</b>	0.0	0.0	0.0	0.0
<b>Receipts from Commercial Sources</b>	285.6	0.0	285.6	0.0
<b>Negotiated Purchase from Customers</b>	0.0	0.0	0.0	0.0
<b>Gross Sales</b>	339.8	0.0	339.8	0.0
<b>Material Inventory Adjustments</b>				
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
<b>TOTAL ADJUSTMENTS</b>	0.0	0.0	0.0	0.0
<b>Material Inventory EOP</b>	193.9	0.0	193.9	0.0
ECONOMIC RETENTION (memo)				0.0
POLICY RETENTION (memo)				0.0
POTENTIAL EXCESS (memo)				0.0
<b>Material Inventory on Order</b>				
EOP (memo)	48.5	0.0	48.5	0.0

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

<u>Activities</u>	<u>Location</u>
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

BUDGET HIGHLIGHTS

BRAC-93 Decisions. The budget incorporates the closures of Naval Aviation Depots (NAVAVNDEPOTs) Alameda, Norfolk and Pensacola. NAVAVNDEPOT Pensacola is scheduled for operational closure by the end of fiscal year (FY) 1995 with NAVAVNDEPOTs Alameda and Norfolk scheduled for operational closure by the end of FY 1996. BRAC costs for FY 1994 and FY 1995 are \$64.4 million (M) and \$245.3M respectively. These costs are not included in the following budget exhibits for this business area because they are not included in the stabilized billing rates passed on to the NAVAVNDEPOTs' customers. BRAC requirements and associated costs, however, will be executed at the NAVAVNDEPOTs and both revenue and costs will be recorded as such.

Productivity Improvements. Based on actions initiated under the Defense Management Review (DMR), the following Defense Business Operations Fund (DBOF) savings levels are included in this budget (Dollars in Millions):

	<u>FY 1994</u>	<u>FY 1995</u>
Depot Maintenance Consolidation	\$91.1	\$100.5
General Reductions	38.4	50.9
Total	\$129.5	\$151.4

**Unit Cost Goals.** The budget reflects the following FY 1994-1995 unit cost goals with and without BRAC-93 adjustments (Dollars and DLHs in Millions):

	<u>FY 1993</u>	<u>WITH BRAC-93</u>	
		<u>FY 1994</u>	<u>FY 1995</u>
Total Costs	\$2,096.5	\$2,017.4	\$2,097.2
Direct Labor Hours (DLH)	19.838	18.738	17.080
Unit Cost	\$105.68	\$107.66	\$122.79
% Change Unit Cost		1.9%	14.1%
% Change Workload/DLHs		-5.5%	-8.8%

  

	<u>FY 1993</u>	<u>WITHOUT BRAC-93</u>	
		<u>FY 1994</u>	<u>FY 1995</u>
Total Costs	\$2,096.5	\$1,953.1	\$1,851.9
Direct Labor Hours (DLH)	19.838	17.812	15.401
Unit Cost	\$105.68	\$109.65	\$120.25
% Change Unit Cost		3.8%	9.7%
% Change Workload/DLHs		-10.2%	-13.5%

A variety of factors are impacting the NAVAVNDEPOTs' cost per DLH from FY 1994-1995. The major variables include: a) declining workload; b) increase in the average age of the aircraft inventory and its impact upon maintenance and repair costs; and c) engineering specification changes increasing material costs in support of engine and component workload. As the corporation downsizes from six to three NAVAVNDEPOTs, capacity utilization will increase at the gaining NAVAVNDEPOTs, fixed infrastructure costs will decrease, and after adjusting for transition costs associated with NAVAVNDEPOT closures and workload transfers, composite unit cost goals should improve significantly.

Since FY 1993, the NAVAVNDEPOTs have published unit price catalogues for their major product lines (i.e., airframes, engines, aircraft modifications, product support, etc.). Effective FY 1994, the NAVAVNDEPOTs will implement and include unit prices for component repair items.

**FY 1994/1995 STABILIZED RATES.** The FY 1995 composite stabilized rate is \$133.80 or an increase of 27.56% when compared with the FY 1994 composite rate. The FY 1995 composite rate was developed to recover all costs and achieve breakeven against FY 1995 inducted workload and to recoup prior year losses. The FY 1995 composite rate includes a recoupment of \$188.6M or \$16.35 per DLH. A Passthrough of \$96.5M is budgeted in FY 1994 to offset a portion of these losses which occur at closing activities.

RIF/SIP. This budget reflects the following for Reduction-in-Force (RIF) and separation incentive pay (SIP) (Dollars in Millions):

	<u>FY 1994</u>	<u>FY 1995</u>
RIF/Severance Pay	6.9	31.0
Health Care/Liability	0.0	5.2
Total	\$6.9	\$36.2

FY 1994 reflects RIFs for NAVAVNDEPOTs Alameda and Norfolk. FY 1995 reflects projected RIFs associated with the closures of NAVAVNDEPOTs Alameda, Norfolk and Pensacola.

OTHER SIGNIFICANT BUDGET HIGHLIGHTS.

New reimbursable orders required to finance NAVAVNDEPOTs operations for FYs 1994 and FY 1995 are \$1,877.9 million (M) and \$1,942.6M respectively. The FY 1994 amount contains a Passthrough of \$96.5M to offset a portion of prior years losses. The FY 1995 amount contains a recoupment of \$188.6M to offset the remaining prior years losses. The increase in FY 1994 orders over the FY 1994 President's Budget amount is due mainly to increased workload in the Components and Product Support Directorate Programs (working 1,623,701 more DLhs)

Revenue projection is \$1,899.5M for FY 1994 and \$2,074.7M for FY 1995. The increase in revenue is due mainly to the recoupment of \$188.6M discussed earlier.

Costs of Operations estimates for FY 1994 and FY 1995 are \$1,953.1M and \$1,851.9M respectively. The decrease in costs is due primarily to reduced workload in the Aiframes, Components, and Other Support Programs (working 2,006,720 fewer DLhs).

ENVIRONMENT.

The NAVAVNDEPOTs continue to make significant strides toward protection of human health and improved environment in this budget. All Class I and Class II requirements are funded to ensure full compliance with statutory, regulatory, or other legal standards. The following amounts are included in this budget for environmental compliance: \$45.1M in FY 1994 and \$45.4M in FY 1995.

EQUIPMENT AND FACILITIES.

	(Dollars in Millions)	
	<u>FY 1994</u>	<u>FY 1995</u>
Non-ADP	\$11.4	\$ 8.0
Equipment	7.3	5.9
Minor Construction	4.1	2.1
Management Initiatives	0.0	0.0
ADP (JLSC/DITSO)	5.5	4.5
Total CPP	\$16.9	\$12.5

SUMMARY OF OPERATIONS.

(Dollars in Millions)

	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
Revenue	\$2,126.8	\$1,899.5	\$2,074.7
Costs of Goods & Services	2,288.1	1,953.1	1,851.9
Revenue Less Costs	-161.3	-53.6	222.8
Reservation of Surcharges	-15.8	0.0	-26.6
Prior Year & Other Adjustments	172.5	0.0	0.0
Transfers	0.0	0.0	0.0
Passthroughs	0.0	96.5	0.0
Accumulated Operating Results	\$ -210.2	\$ -196.2	\$ 0.0

SUMMARY OF NEW CUSTOMER ORDERS.

(Dollars in Millions)

	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
Navy Appropriations & Funds:			
Operation & Maintenance	\$ 650.1	\$ 653.7	\$ 587.3
RDT&E	46.1	47.4	53.5
Procurement	284.6	279.5	254.6
Other Navy Customers	46.3	85.2	290.9
Other DOD Customers	914.0	804.2	747.7
Non-DOD Customers	8.6	7.9	8.6
Total All Customers	\$1,949.7	\$1,877.9	\$1,942.6

End Strength.

	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
Civilian	18,462	16,881	14,100
Military	243	230	200

REVENUE AND EXPENSES  
(Dollars in Millions)

	FY 1993 -----	FY 1994 -----	FY 1995 -----
<b>Revenue:</b>			
<b>Gross Sales:</b>			
Operations	2,041.1	1,824.2	1,978.7
Capital Surcharge	15.8	0.0	26.6
Depreciation except Maj Const	60.6	60.8	69.4
Major Construction Depreciation	9.3	14.5	0.0
<b>Total Gross Sales</b>	<b>2,126.8</b>	<b>1,899.5</b>	<b>2,074.7</b>
Other Income	0.0	0.0	0.0
<b>Total Income</b>	<b>2,126.8</b>	<b>1,899.5</b>	<b>2,074.7</b>
<b>Expenses:</b>			
Cost of Materiel Sold from Inventory	0.0	0.0	0.0
Negotiated Purchases from Customers	0.0	0.0	0.0
Transportation	3.2	2.4	1.9
<b>Salaries and Wages:</b>			
Military Personnel	14.3	12.4	9.0
Civilian Personnel	956.4	805.5	679.5
Materials, Supplies and	0.0	0.0	0.0
Parts used in Operations	760.5	713.0	756.9
Facility Repair Charge	59.2	69.1	52.6
Depreciation - Capital	70.0	75.3	68.0
Contracted Engineering Services	21.3	32.3	31.2
Lease Costs	0.9	1.1	2.5
Purchased Utilities	51.5	52.5	50.8
Purchased Communications	1.9	1.7	1.8
Equipment Maintenance	7.8	9.3	10.5
Fuel	3.4	3.9	2.9
Other Expenses	195.9	174.6	184.3
<b>Total Expenses</b>	<b>2,146.3</b>	<b>1,953.1</b>	<b>1,851.9</b>
Work in Process Adjusted	-191.4	0.0	0.0
Comp Work for Activity Reten Adj	49.6	0.0	0.0
<b>Cost of Goods Sold</b>	<b>2,288.1</b>	<b>1,953.1</b>	<b>1,851.9</b>
<b>Operating Result</b>	<b>-161.3</b>	<b>-53.6</b>	<b>222.8</b>
Less Capital Surchg Reservation	15.8	0.0	26.6
Plus Appropriations Affcting NOR/AOR	0.0	0.0	0.0
Other Changes Affecting NOR/AOR	21.1	96.5	0.0
Inventory Gains and Losses	5.0	0.0	0.0
<b>Net Operating Result</b>	<b>-151.0</b>	<b>42.9</b>	<b>196.2</b>
Transfers Not Affecting NOR/AOR	0.0	0.0	0.0
Prior Year and Other Adjustments	146.4	0.0	0.0
Other Inventory Adjustments	0.0	0.0	0.0
WRM Appropriations	0.0	0.0	0.0
<b>Net Result</b>	<b>-4.6</b>	<b>42.9</b>	<b>196.2</b>



**DEPOT MAINTENANCE - AIRCRAFT NAVY**  
**CHANGE IN OPERATIONS**  
(Dollars in Millions)

1.	<b>FY 1993 Actual Cost</b>	<b>\$2,146.3</b>
2.	<b>Pricing Adjustments</b>	<b>64.6</b>
	a. Annualize FY 1993 pay raise	16.4
	b. FY 1994 locality increase	9.7
	c. Stock Fund - Fuel	0.4
	d. Stock Fund - Nonfuel	32.4
	e. Industrial Fund Purchases	(1.1)
	f. General Purchase Inflation	6.8
3.	<b>Productivity Initiatives *</b>	<b>33.7</b>
	(Defense Management Review Initiatives)	
4.	<b>Program Changes</b>	<b>(197.1)</b>
	a. Airframes	(152.1)
	b. Engines	(20.4)
	c. Components	(107.9)
	d. Support Equipment	(13.1)
	e. Product Support Directorate	35.3
	f. Modifications	(22.9)
	g. Other Support	84.0
5.	<b>Other Changes</b>	<b>(94.4)</b>
6.	<b>FY 1994 Current Estimate</b>	<b>\$1,953.1</b>
7.	<b>Pricing Adjustments</b>	<b>131.0</b>
	a. Annualize FY 1994 locality increase	9.9
	b. FY 1995 pay raise	7.0
	c. Stock Fund - Fuel	(0.5)
	d. Stock Fund - Nonfuel	100.6
	e. Industrial Fund Purchases	5.5
	f. General Purchase Inflation	8.4
	g. Funded Military Personnel	0.1
8.	<b>Productivity Initiatives *</b>	<b>(13.3)</b>
	(Defense Management Review Initiatives)	
9.	<b>Program Changes</b>	<b>(132.5)</b>
	a. Airframes	(73.1)
	b. Engines	(7.1)
	c. Components	(56.0)
	d. Support Equipment	2.6
	e. Product Support Directorate	(12.6)
	f. Modifications	9.6
	g. Other Support	4.1
5.	<b>Other Changes</b>	<b>(86.4)</b>
6.	<b>FY 1995 Current Estimate</b>	<b>\$1,851.9</b>

\* Amounts reflect operating adjustments only. Additional savings are tracked in the capital budget.

**DEPOT MAINTENANCE - AIRCRAFT NAVY**  
**SOURCE OF REVENUE**  
(Dollars in Millions)

	FY 1993 -----	FY 1994 -----	FY 1995 -----
1. Orders from DoD Components:			
Army	16.6	7.2	2.5
Navy	983.8	973.5	1,140.8
Air Force	35.4	117.7	96.1
Marine Corps	0.4	0.2	0.0
Other	18.8	5.3	0.6
2. Orders from other DBOF Business Areas	843.2	674.0	648.5
3. Total DoD	1,898.2	1,777.9	1,888.5
4. Other Orders:			
Other Federal Agencies	8.7	6.1	6.5
Trust Fund	42.8	20.5	45.6
Non Federal Agencies	0.0	1.8	2.0
5. Total Gross Orders	1,949.7	1,806.3	1,942.6
6. Credits and Allowances:			
Discounts	0.0	0.0	0.0
Price Reductions	0.0	0.0	0.0
7. Change to Backlog	-177.1	-93.2	-132.1
8. Total Gross Sales	2,126.8	1,899.5	2,074.7

DEPOT MAINTENANCE - AIRCRAFT NAVY  
CAPITAL BUDGET  
(Dollars in Millions)

	FY 1993 -----	FY 1994 -----	FY 1995 -----
Equipment - Except ADPE & TELECOM	32.9	7.3	5.9
Minor Construction	4.0	4.1	2.1
ADPE & TELECOM	0.0	0.0	0.0
Software	0.0	0.0	0.0
Total	36.9	11.4	8.0

**DEPOT MAINTENANCE - AIRCRAFT NAVY**  
**MATERIAL INVENTORY DATA**  
 (Dollars in Millions)  
**FISCAL YEAR 1993**

	Total	Mobilization	----- Peacetime -----	
			Operating	Other
Materiel Inventory BOP	136.1	0.0	136.1	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	803.9	0.0	803.9	0.0
Negotiated Purchase from Customers	0.0	0.0	0.0	0.0
Gross Sales	763.9	0.0	763.9	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	0.0	0.0	0.0	0.0
REIMBURSEMENT + or (-)				
OTHER (list)	0.0	0.0	0.0	0.0
TOTAL ADJUSTMENTS	0.0	0.0	0.0	0.0
Materiel Inventory EOP	176.1	0.0	176.1	0.0
ECONOMIC RETENTION (memo)				0.0
POLICY RETENTION (memo)				0.0
POTENTIAL EXCESS (memo)				0.0
Materiel Inventory on Order				
EOP (memo)	44.0	0.0	44.0	0.0

DEPOT MAINTENANCE - AIRCRAFT NAVY  
MATERIAL INVENTORY DATA  
(Dollars in Millions)  
FISCAL YEAR 1994

	Total Mobilization	---- Peacetime ----		
		Operating	Other	
Materiel Inventory BOP	176.1	0.0	176.1	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	710.3	0.0	710.3	0.0
Negotiated Purchase from Customers	0.0	0.0	0.0	0.0
Gross Sales	716.9	0.0	716.9	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	169.5	0.0	169.5	0.0
ECONOMIC RETENTION (memo)				0.0
POLICY RETENTION (memo)				0.0
POTENTIAL EXCESS (memo)				0.0
Materiel Inventory on Order				
EOP (memo)	42.2	0.0	42.2	0.0

DEPOT MAINTENANCE - AIRCRAFT NAVY  
MATERIAL INVENTORY DATA  
(Dollars in Millions)  
FISCAL YEAR 1995

	Total Mobilization	----- Peacetime -----		
		Operating	Other	
Materiel Inventory BOP	169.5	0.0	169.5	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	796.7	0.0	796.7	0.0
Negotiated Purchase from Customers	0.0	0.0	0.0	0.0
Gross Sales	794.8	0.0	794.8	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	171.4	0.0	171.4	0.0
ECONOMIC RETENTION (memo)				0.0
POLICY RETENTION (memo)				0.0
POTENTIAL EXCESS (memo)				0.0
				0.0
Materiel Inventory on Order				
EOP (memo)	42.9	0.0	42.9	0.0

DEPARTMENT OF THE NAVY  
DEFENSE BUSINESS OPERATIONS FUND  
NAVAL WEAPONS STATIONS

Activity Group Function:

The Weapons Stations provide all services for explosive outloading 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 surface, air 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 transportability. All five stations are host activities with significant military/tenant support responsibilities. Four of the stations provide complete homeporting services for naval combat logistic ships.

Activity Group Composition:

<u>Activities</u>	<u>Location</u>
Naval Weapons Station	Charleston, South Carolina
Naval Weapons Station	Concord, California
Naval Weapons Station	Earle, Colts Neck, New Jersey
Naval Weapons Station	Seal Beach, California
Naval Weapons Station	Yorktown, Virginia

Budget Highlights:

Summary of Budget Data (\$M)

	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
Revenue	676	528	559
Cost	675	576	470
Orders	663	530	528
CIVPERS End-strength	6,350	5,322	4,794

The Weapons Stations current budget estimates for FY 1994 and FY 1995 reflect significant reductions in workload, staffing and cost from FY 1993.

FY 1994 civilian workload execution is anticipated to be below the President's budget even with the Port Hadlock detachment to WPNSTA Seal Beach (105 workyears) and the add back of 321 workyears for the Public Works Center consolidation at WPNSTA Charleston.

Naval Ordnance Center:

The Secretary of the Navy on 5 January 1993 approved the establishment of the Naval Ordnance Center (NAVORDCEN) for the world wide logistics management of all Navy and Marine Corps ordnance. The NAVORDCEN Headquarters was established on 1 October 1993 located at Indian Head, Maryland, and will be staffed by a total of 109 personnel (19 military and 90 civilian). For FY 1994 and out, overhead costs of the NAVORDCEN Headquarters will be spread over the direct labor hours performed at the Naval Weapons Stations.

With the stand-up of the NAVORDCEN the savings that were envisioned when the Secretary of the Navy approved the NAVORDCEN concept will begin to accrue. In fact, a small portion of the savings have already been achieved through incentivized separations that have been effected at the five Naval Weapons Stations. Total annual savings are anticipated to be \$164.0 million annually which will be phased in through FY 1996.

Mobilization Funding:

The WPNSTAS maintain mobilization capabilities for explosive loading, retail ammunition management services, intermediate and depot level maintenance, and other ordnance related fleet support functions. The infrastructure of the five stations has a current plant value of \$2.7 billion and is comprised of 66,135 acres of real property, 2,801 buildings, piers and related structures, 687 miles of roads, 403 miles of rail and 1,251 explosive magazines. The FY 1995 budget reflects the recent decision (20 December 1993) by the DBOF Corporate Board to continue funding mobilization costs in the operation and maintenance appropriation vice DBOF rates.

Capital Investment:

The budget reflects funding for the Capital Purchases Program (CPP) which includes equipment, minor construction, ADPE and telecommunications, and software development. The CPP program totals \$21.2 million in FY 1995.



Workload Indicators:

	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
<b>Category 1 - NAVSEA</b>			
Surface Launched Missiles/VLS	260	197	165
Ordnance Support	1,662	1,290	1,009
<b>Category 2 - NAVAIR</b>			
Air Launched Missiles	142	84	65
Countermeasures, Test, and Eval	286	203	160
<b>Category 3 - SUPPLY MANAGEMENT</b>			
Maintenance	87	66	49
<b>Category 4 - DIRSSP, SPAWAR</b>			
Trident Support, Electronics	125	87	75
<b>Category 5 - OTHER NAVY</b>			
Shipyards, Tenents	860	624	497
<b>Category 6 - ARMY, AIR FORCE</b>			
Interservicing	260	184	181
<b>Category 7 - MARINE CORPS</b>			
Amphibious Warfare	137	133	129
<b>Category 8 - FMS AND OTHERS</b>			
Documentation and Spares	126	122	113
	-----	-----	-----
<b>TOTAL</b>	<b>3,945</b>	<b>3,000</b>	<b>2,446</b>

**DEPOT MAINTENANCE - ORDNANCE NAVY**  
**REVENUE AND EXPENSES**  
(Dollars in Millions)

	FY 1993 -----	FY 1994 -----	FY 1995 -----
<b>Revenue:</b>			
<b>Gross Sales:</b>			
Operations	643.8	498.5	525.6
Capital Surcharge	0.0	0.0	13.7
Depreciation except Maj Const	17.3	4.8	20.0
Major Construction Depreciation	14.6	24.8	0.0
<b>Total Gross Sales</b>	<b>675.7</b>	<b>528.0</b>	<b>559.3</b>
Other Income	0.0	0.0	0.0
<b>Total Income</b>	<b>675.7</b>	<b>528.0</b>	<b>559.3</b>
<b>Expenses:</b>			
Cost of Materiel Sold from Inventory	0.0	0.0	0.0
Negotiated Purchases from Customers	0.0	0.0	0.0
Transportation	0.6	0.2	0.2
<b>Salaries and Wages:</b>			
Military Personnel	26.6	27.1	15.5
Civilian Personnel	334.7	260.5	243.9
<b>Materials, Supplies and</b>			
Parts used in Operations	61.6	51.7	46.8
Facility Repair Charge	61.8	48.9	51.2
Depreciation - Capital	14.6	24.8	20.0
Contracted Engineering Services	3.9	5.8	6.1
Lease Costs	0.9	1.1	1.1
Purchased Utilities	13.9	17.7	16.1
Purchased Communications	4.7	5.6	5.7
Equipment Maintenance	5.5	5.0	5.1
Fuel	3.8	4.9	4.0
Other Expenses	142.5	122.9	54.6
<b>Total Expenses</b>	<b>675.1</b>	<b>576.0</b>	<b>470.3</b>
Work in Process Adjusted	-9.1	0.0	0.0
Comp Work for Activity Reten Adj	0.0	0.0	0.0
<b>Cost of Goods Sold</b>	<b>684.2</b>	<b>576.0</b>	<b>470.3</b>
<b>Operating Result</b>	<b>-8.5</b>	<b>-48.0</b>	<b>89.0</b>
Less Capital Surchg Reservation	0.0	0.0	13.7
Plus Appropriations Affcting NOR/AOR	0.0	0.0	0.0
Other Changes Affecting NOR/AOR	-10.1	100.7	0.0
Inventory Gains and Losses	57.6	0.0	0.0
<b>Net Operating Result</b>	<b>39.0</b>	<b>52.7</b>	<b>75.3</b>
Transfers Not Affecting NOR/AOR	0.0	0.0	0.0
Prior Year and Other Adjustments	-28.0	0.0	0.0
Other Inventory Adjustments	0.0	0.0	0.0
WRM Appropriations	0.0	0.0	0.0
<b>Net Result</b>	<b>11.0</b>	<b>52.7</b>	<b>75.3</b>

**DEPARTMENT OF THE NAVY  
DEFENSE BUSINESS OPERATIONS FUND  
NAVAL WEAPONS STATIONS**

**SUMMARY OF CHANGES IN OPERATIONS  
(\$ IN MILLIONS)**

	<b>COSTS</b> -----
1. FY 1993 Actual	675.1
3. Productivity Initiatives	
a. General Reductions	10.5
4. Program Changes	
Direct Workyear Changes	
a. Workyear Reductions included in NOC Savings	-30.8
b. Retention of Public Works functions at Charleston	4.7
Direct Non-Labor Workload Changes	
a. Miscellaneous Workload Reductions	-50.2
b. Retention of Public Works functions at Charleston	23.7
Production Workyear Changes	
a. Miscellaneous Workload Reductions	-22.7
G&A Workyear Changes	
a. Miscellaneous Workload Reductions included in NOC Savings	-14.0
Other Overhead Non-Labor Changes	
a. Miscellaneous Workload Reductions included in NOC Savings	-22.3
b. Revision to RPM and Repair 10-year average cost	4.0
c. Depreciation based upon actual experience	-2.0
5. FY 1994 Current Estimate	576.0
Pricing Adjustments	
a. FY 1995 Civilian Pay Raise	8.0
b. FY 1995 Military Pay Raise	-4.0
c. Stock Fund - fuel	0.0
d. Stock Fund - non-fuel	2.5
e. DBOF Price Changes	5.0
f. General Purchases Inflation	2.8

DEPARTMENT OF THE NAVY  
DEFENSE BUSINESS OPERATIONS FUND  
NAVAL WEAPONS STATIONS

SUMMARY OF CHANGES IN OPERATIONS  
(\$ IN MILLIONS)

	COSTS
	-----
6. Program Changes	
Direct Workyear Changes	
a. Miscellaneous Workload Reductions	-8.5
Direct Non-Labor Workload Changes	
a. Direct Non-Labor Workload Changes	-65.1
b. Voluntary Separation Incentives	-3.1
Production Workyear Changes	
a. Miscellaneous Workload Reductions	-12.2
G&A Workyear Changes	
a. Workyear Reductions included in NOC Savings	-8.7
Other Overhead Non-Labor Changes	-22.4
7. FY 1995 Current Estimate	470.3

**DEPOT MAINTENANCE - ORDNANCE NAVY**  
**SOURCE OF REVENUE**  
(Dollars in Millions)

	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
<b>1. Orders from DoD Components:</b>			
Army	7.3	1.3	1.4
Navy	535.7	451.8	454.7
Air Force	6.2	2.2	2.3
Marine Corps	24.1	18.1	16.8
Other	44.7	3.4	3.8
<b>2. Orders from other</b>			
DBOF Business Areas	41.0	50.4	45.6
<b>3. Total DoD</b>	<b>659.0</b>	<b>527.2</b>	<b>524.7</b>
<b>4. Other Orders:</b>			
Other Federal Agencies	0.2	1.6	2.0
Trust Fund	0.0	0.0	0.0
Non Federal Agencies	3.7	1.2	1.5
<b>5. Total Gross Orders</b>	<b>662.9</b>	<b>530.0</b>	<b>528.2</b>
<b>6. Credits and Allowances:</b>			
Discounts	0.0	0.0	0.0
Price Reductions	0.0	0.0	0.0
<b>7. Change to Backlog</b>	<b>-12.8</b>	<b>2.0</b>	<b>-31.1</b>
<b>8 Total Gross Sales</b>	<b>675.7</b>	<b>528.0</b>	<b>559.3</b>

DEPOT MAINTENANCE - ORDNANCE NAVY  
CAPITAL BUDGET  
(Dollars in Millions)

	FY 1993 -----	FY 1994 -----	FY 1995 -----
Equipment - Except ADPE & TELECOM	7.1	5.0	3.8
Minor Construction	4.0	4.5	4.2
ADPE & TELECOM	0.0	17.9	13.0
Software	0.0	0.1	0.1
Total	11.1	27.6	21.2

**DEPOT MAINTENANCE - ORDNANCE NAVY**  
**MATERIAL INVENTORY DATA**  
 (Dollars in Millions)  
 FISCAL YEAR 1993

	Total Mobilization	Operating	---- Peacetime --	
			Operating	Othe
Material Inventory BOP	14.4	0.0	14.4	0.
BOP Reclassification Changes	0.0	0.0	0.0	0.
Price Changes	0.0	0.0	0.0	0.
Receipts from Commercial Sources	63.5	0.0	63.5	0.
Negotiated Purchase from Customers	0.0	0.0	0.0	0.
Gross Sales	68.2	0.0	68.2	0.
<b>Material Inventory Adjustments</b>				
CAPITALIZATIONS + OR (-)	0.0	0.0	0.0	0.
RETURNS TO SUPPLIERS (-)	0.0	0.0	0.0	0.
TRANSFERS TO PROP. DISP. (-)	0.0	0.0	0.0	0.
ISSUES/RECEIPTS WITHOUT	0.0	0.0	0.0	0.
REIMBURSEMENT + or (-)				
OTHER (list)	0.0	0.0	0.0	0.
TOTAL ADJUSTMENTS	0.0	0.0	0.0	0.
Material Inventory EOP	9.7	0.0	9.7	0.
ECONOMIC RETENTION (memo)				0.
POLICY RETENTION (memo)				0.
POTENTIAL EXCESS (memo)				0.
Material Inventory on Order				
EOP (memo)	4.0	0.0	4.0	0.

DEPOT MAINTENANCE - ORDNANCE NAVY  
MATERIAL INVENTORY DATA  
(Dollars in Millions)  
FISCAL YEAR 1994

	Total	Mobilization	----- Peacetime -- Operating	Othe
	-----	-----	-----	-----
Materiel Inventory BOP	9.7	0.0	9.7	0.
BOP Reclassification Changes	0.0	0.0	0.0	0.
Price Changes	0.0	0.0	0.0	0.
Receipts from Commercial Sources	56.9	0.0	56.9	0.
Negotiated Purchase from Customers	0.0	0.0	0.0	0.
Gross Sales	57.2	0.0	57.2	0.
<b>Materiel Inventory Adjustments</b>				
CAPITALIZATIONS + OR (-)	0.0	0.0	0.0	0.
RETURNS TO SUPPLIERS (-)	0.0	0.0	0.0	0.
TRANSFERS TO PROP. DISP. (-)	0.0	0.0	0.0	0.
ISSUES/RECEIPTS WITHOUT REIMBURSEMENT + or (-)	0.0	0.0	0.0	0.
OTHER (list)	0.0	0.0	0.0	0.
TOTAL ADJUSTMENTS	0.0	0.0	0.0	0.
<b>Materiel Inventory EOP</b>	9.4	0.0	9.4	0.
ECONOMIC RETENTION (memo)				0.
POLICY RETENTION (memo)				0.
POTENTIAL EXCESS (memo)				0.
<b>Materiel Inventory on Order</b>				
EOP (memo)	3.9	0.0	3.9	0.



**DEPOT MAINTENANCE - ORDNANCE NAVY**  
**MATERIAL INVENTORY DATA**  
 (Dollars in Millions)  
**FISCAL YEAR 1995**

	Total Mobilization	Operating	Peacetime	
			Operating	Othe
Materiel Inventory BOP	9.4	0.0	9.4	0.
BOP Reclassification Changes	0.0	0.0	0.0	0.
Price Changes	0.0	0.0	0.0	0.
Receipts from Commercial Sources	50.6	0.0	50.6	0.
Negotiated Purchase from Customers	0.0	0.0	0.0	0.
Gross Sales	50.8	0.0	50.8	0.
Materiel Inventory Adjustments				
CAPITALIZATIONS + OR (-)	0.0	0.0	0.0	0.
RETURNS TO SUPPLIERS (-)	0.0	0.0	0.0	0.
TRANSFERS TO PROP. DISP. (-)	0.0	0.0	0.0	0.
ISSUES/RECEIPTS WITHOUT REIMBURSEMENT + or (-)	0.0	0.0	0.0	0.
OTHER (list)	0.0	0.0	0.0	0.
TOTAL ADJUSTMENTS	0.0	0.0	0.0	0.
Materiel Inventory EOP	9.3	0.0	9.3	0.
ECONOMIC RETENTION (memo)				0.
POLICY RETENTION (memo)				0.
POTENTIAL EXCESS (memo)				0.
Materiel Inventory on Order				
EOP (memo)	3.9	0.0	3.9	0.

**DEFENSE BUSINESS OPERATIONS FUND  
Marine Corps Depot Maintenance  
Summary of Operations Narrative**

**Activity Group Functions:** The Marine Corps Depot Maintenance (MCDM) is comprised of one activity group, the Depot Maintenance Activity (DMA) group. The mission of MCDM is to provide quality and responsive maintenance and maintenance support services to the Fleet Marine Force (FMF) and other customers and to maintain a core industrial base to support mobilization and surge requirements. The depots return unserviceable equipment to serviceable condition and perform maintenance through depot level overhaul, rebuild, modification and Inspect and Repair Only as Necessary (IROAN) on all types of ground combat and combat support equipment used by the Marine Corps and other Department of Defense (DOD) services. The MCDM also provides technical assistance and technical inspection services for FMF and Marine Corps Reserve Units; provides maintenance, inspection, and preservation for in-storage base tactical stocks; performs material inspection and evaluation; performs quality control services; accomplishes test, repair and calibration of electrical, electronic, mechanical, radio and radar equipment; and calibration support for other military services under interservice support agreements; and provides technical and on-the-job training to develop and maintain levels in required skills of civilians and Marines in their technical specialties.

The primary customer of the MCDM is the Marine Corps with requirements developed by the Integrated Logistics Support Directorate (ILSD) and the Fleet Maintenance Division. Other customers include the Navy, Army, Air Force, Coast Guard, Foreign Military Sales, and other government agencies.

**Activity Group Composition:** The Marine Corps Depot Maintenance Business area is headquartered in Albany, Georgia and is comprised of two Depot Maintenance Activities (DMAs) - one located at Albany, Georgia and the other at Barstow, California. The Marine Corps depots maintain virtually identical capabilities to provide support for Marine Corps operational units depending on unit location.

**Budget Highlights:** Numerous events have affected the MCDM in FY 1993 through FY 1995. FY 1993 was another challenging year for the Marine Corps Depot Maintenance, meeting all the priority requirements for all the different repair programs mentioned above. Events and changes during the past year will affect the MCDM in the coming years. Repair and rebuild of Maritime Prepositioned Ships (MPS) assets, the Southwest Asia Paint and

Corrosion Program, and Marine Corps and Marine Corps Reserve unit equipment damaged during Desert Shield/Desert Storm (DS/DS) resulted in larger than usual carryover/backlog in FY 1992 and FY 1993. This carryover will be reduced significantly by the end of FY 1995.

The activities have analyzed productivity and are continuously reducing costs to generate savings to the customer. This will enhance their ability to compete in both the public and private sector. The MCDM activities will effect savings through interservicing, capacity utilization, competition, and improved processes and repair methods. The Marine Corps plans to meet these goals by assessment of performance and continued improvement in efficiencies. Equipment purchases, environmental projects, and minor construction projects are designed to enhance the mission and the efficiency of the DMAs. As a result, work in process is reduced.

Civilian End-Strength:

<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
2,189	2,013	2,069

In FY 1994 new orders decline and in FY 1994 and FY 1995 carryover declines which translates into a reduction of temporary employees and overtime hours. The level of effort for the Marine Corps Depot Maintenance is projected to be approximately 1612 direct workyears for FY 1994, and 1492 direct workyears for FY 1995.

Capital Budget: The budget reflects funding for the Capital Purchases Program (CPP) which includes equipment and minor construction. The CPP program totals \$3.6 million in FY 1995.

The budget reflects a change from the FY 1994 President's Budget in Equipment Items to include a new design of the Carbon Absorption/Thermal Oxidation System. The new system, Terra-Aqua System, employs a combination of ultra violet light, ozonized water, and a carbon bed for final air polishing. This system is designed to lower levels of volatile organic compounds generated by the paint booths. The project is expected to cost \$1.7 million, is essential to comply with recent Clean Air Act Amendment requirements and to support Strategic Environmental Research and Development (SERDEP) Project.

Total Costs: The total cost of operations decreases 5.4 percent from FY 1993 to FY 1994 8.5 percent between FY 1994 and FY 1995 due to a reduction in labor hours, direct material, and overhead costs as a result of declining workload.

Summary of Workload Indicators:

	New Customer Orders Received		
	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
Operation and Maintenance	176,468	50,336	80,694
Procurement, Marine Corps	5,038	6,426	6,335
Other D'OF Customers	6,885	10,800	10,400
Army	9,010	0	0
Other	<u>13,348</u>	<u>4,943</u>	<u>21,801</u>
Total	210,749	72,505	119,230

**DEPOT MAINTENANCE - OTHER, NAVY**  
**REVENUE AND EXPENSES**  
(Dollars in Millions)

	FY 1993	FY 1994	FY 1995
	-----	-----	-----
<b>Revenue:</b>			
<b>Gross Sales:</b>			
Operations	153.5	200.2	179.2
Capital Surcharge	0.0	0.0	2.2
Depreciation except Maj Const	1.7	1.2	2.6
Major Construction Depreciation	2.2	2.0	0.0
<b>Total Gross Sales</b>	<b>157.4</b>	<b>203.3</b>	<b>184.0</b>
Other Income	0.0	0.0	0.0
<b>Total Income</b>	<b>157.4</b>	<b>203.3</b>	<b>184.0</b>
<b>Expenses:</b>			
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
<b>Salaries and Wages:</b>			
Military Personnel	1.6	1.4	1.0
Civilian Personnel	99.4	91.5	84.5
Materials, Supplies and	0.0	0.0	0.0
Parts used in Operations	58.8	60.9	57.0
Facility Repair Charge	2.0	2.3	2.2
Depreciation - Capital	3.9	3.1	2.6
Contracted Engineering Services	1.0	1.2	1.2
Lease Costs	0.0	0.0	0.0
Purchased Utilities	4.5	4.0	4.2
Purchased Communications	0.2	0.2	0.2
Equipment Maintenance	1.3	0.9	0.9
Fuel	0.3	0.4	0.4
Other Expenses	17.0	13.8	10.3
<b>Total Expenses</b>	<b>189.9</b>	<b>179.7</b>	<b>164.5</b>
Work in Process Adjusted	0.0	0.0	0.0
Comp Work for Activity Reten Adj	0.0	0.0	0.0
<b>Cost of Goods Sold</b>	<b>189.9</b>	<b>179.7</b>	<b>164.5</b>
<b>Operating Result</b>	<b>-32.5</b>	<b>23.6</b>	<b>19.5</b>
Less Capital Surchg Reservation	0.0	0.0	2.2
Plus Appropriations Affecting NOR/AOR	0.0	0.0	0.0
Other Changes Affecting NOR/AOR	0.0	0.0	0.0
Inventory Gains and Losses	0.0	0.0	0.0
<b>Net Operating Result</b>	<b>-32.5</b>	<b>23.6</b>	<b>17.3</b>
Transfers Not Affecting NOR/AOR	0.0	0.0	0.0
Prior Year and Other Adjustments	-39.0	0.0	0.0
Other Inventory Adjustments	0.0	0.0	0.0
IRM Appropriations	0.0	0.0	0.0
<b>Net Result</b>	<b>-71.5</b>	<b>23.6</b>	<b>17.3</b>

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

**SUMMARY OF CHANGES IN OPERATIONS  
(\$ IN MILLIONS)**

	<b>COSTS</b> -----
<b>FY 1993 ACTUAL</b>	<b>189.9</b>
<b>PRICING ADJUSTMENTS</b>	
A. Locality Pay Increase	2.2
B. Material Price Increases	
Stock Fund - Non-Fuel	1.7
Commercial	0.6
C. Other Purchases	0.7
<b>PRODUCTIVITY INITIATIVES AND OTHER EFFICIENCIES</b>	
A. Depot Maintenance Consolidation - Increase Competition	-4.6
B. General Reductions	-2.1
<b>PROGRAM CHANGES</b>	
A. Army Workload	-7.6
B. Travel/Other Purchases	-4.3
C. Depreciation	-0.8
D. Other	4.0
<b>FY 1994 CURRENT ESTIMATE</b>	<b>179.7</b>
<b>PRICING ADJUSTMENTS</b>	
A. FY 1995 Military/Civilian Pay Raise	1.1
B. Locality Pay Increase	0.6
C. Annualization of Prior Year Pay Raises	0.4
D. Material Price Increases	
Stock Fund - Non-Fuel	6.3
Commercial	0.5
E. Other Purchases	0.6
<b>PRODUCTIVITY INITIATIVES AND OTHER EFFICIENCIES</b>	
A. Depot Maintenance Consolidation - Increase Competition	-6.6
B. General Reductions	-1.6
<b>PROGRAM CHANGES</b>	
A. Workload Decreases, DS/DS, Army	-11.8
B. Military/Civilian Equivalency	-0.4
C. Other Purchases	-3.8
<b>OTHER CHANGES IN</b>	
A. Depreciation Expense	-0.5
<b>FY 1995 CURRENT ESTIMATE</b>	<b>164.5</b>

**DEPOT MAINTENANCE - OTHER, NAVY**  
**SOURCE OF REVENUE**  
(Dollars in Millions)

	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
<b>1. Orders from DoD Components:</b>			
Army	9.0	0.0	0.0
Navy	1.0	1.3	1.9
Air Force	0.0	0.0	0.0
Marine Corps	182.4	58.5	89.8
Other	17.5	12.3	27.2
<b>2. Orders from other</b>			
DBOF Business Areas	0.0	0.0	0.0
<b>3. Total DoD</b>	<b>209.9</b>	<b>72.1</b>	<b>118.9</b>
<b>4. Other Orders:</b>			
Other Federal Agencies	0.8	0.0	0.0
Trust Fund	0.0	0.0	0.0
Non Federal Agencies	0.0	0.4	0.3
<b>5. Total Gross Orders</b>	<b>210.7</b>	<b>72.5</b>	<b>119.2</b>
<b>6. Credits and Allowances:</b>			
Discounts	0.0	0.0	0.0
Price Reductions	0.0	0.0	0.0
<b>7. Change to Backlog</b>	<b>53.3</b>	<b>-130.8</b>	<b>-64.8</b>
<b>8 Total Gross Sales</b>	<b>157.5</b>	<b>203.3</b>	<b>184.0</b>

DEPOT MAINTENANCE - OTHER, NAVY  
CAPITAL BUDGET  
(Dollars in Millions)

	FY 1993 -----	FY 1994 -----	FY 1995 -----
Equipment - Except ADPE & TELECOM	3.1	2.1	2.4
Minor Construction	1.4	2.2	1.2
ADPE & TELECOM	0.0	0.0	0.0
Software	0.0	0.0	0.0
Total	4.5	4.3	3.6



DEPOT MAINTENANCE - OTHER, NAVY  
 MATERIAL INVENTORY DATA  
 (Dollars in Millions)  
 FISCAL YEAR 1993

	Total	----- Peacetime -----		
		Mobilization	Operating	Othe
Materiel Inventory BOP	12.9	0.0	12.9	0.
BOP Reclassification Changes	0.0	0.0	0.0	0.
Price Changes	0.0	0.0	0.0	0.
Receipts from Commercial Sources	52.6	0.0	52.6	0.
Negotiated Purchase from Customers	0.0	0.0	0.0	0.
Gross Sales	51.6	0.0	51.6	0.
Materiel Inventory Adjustments				
CAPITALIZATIONS + OR (-)	0.0	0.0	0.0	0.
RETURNS TO SUPPLIERS (-)	0.0	0.0	0.0	0.
TRANSFERS TO PROP. DISP. (-)	0.0	0.0	0.0	0.
ISSUES/RECEIPTS WITHOUT	0.0	0.0	0.0	0.
REIMBURSEMENT + or (-)				
OTHER (list)	0.0	0.0	0.0	0.
TOTAL ADJUSTMENTS	0.0	0.0	0.0	0.
Materiel Inventory EOP	13.9	0.0	13.9	0.
ECONOMIC RETENTION (memo)				0.
POLICY RETENTION (memo)				0.
POTENTIAL EXCESS (memo)				0.
Materiel Inventory on Order				
EOP (memo)	3.5	0.0	3.5	0.

DEPOT MAINTENANCE - OTHER, NAVY  
 MATERIAL INVENTORY DATA  
 (Dollars in Millions)  
 FISCAL YEAR 1994

	Total Mobilization	---- Peacetime --		
		Operating	Othe	
Materiel Inventory BOP	13.9	0.0	13.9	0.
BOP Reclassification Changes	0.0	0.0	0.0	0.
Price Changes	0.0	0.0	0.0	0.
Receipts from Commercial Sources	54.2	0.0	54.2	0.
Negotiated Purchase from Customers	0.0	0.0	0.0	0.
Gross Sales	56.0	0.0	56.0	0.
Materiel Inventory Adjustments				
CAPITALIZATIONS + OR (-)	0.0	0.0	0.0	0.
RETURNS TO SUPPLIERS (-)	0.0	0.0	0.0	0.
TRANSFERS TO PROP. DISP. (-)	0.0	0.0	0.0	0.
ISSUES/RECEIPTS WITHOUT REIMBURSEMENT + or (-)	0.0	0.0	0.0	0.
OTHER (list)	0.0	0.0	0.0	0.
TOTAL ADJUSTMENTS	0.0	0.0	0.0	0.
Materiel Inventory EOP	12.1	0.0	12.1	0.
ECONOMIC RETENTION (memo)				0.
POLICY RETENTION (memo)				0.
POTENTIAL EXCESS (memo)				0.
Materiel Inventory on Order				
EOP (memo)	3.0	0.0	3.0	0.

DEPOT MAINTENANCE - OTHER, NAVY  
MATERIAL INVENTORY DATA  
(Dollars in Millions)  
FISCAL YEAR 1995

	Total Mobilization	---- Peacetime --		
		Operating	Othe	
Materiel Inventory BOP	12.1	0.0	12.1	0.
BOP Reclassification Changes	0.0	0.0	0.0	0.
Price Changes	0.0	0.0	0.0	0.
Receipts from Commercial Sources	51.6	0.0	51.6	0.
Negotiated Purchase from Customers	0.0	0.0	0.0	0.
Gross Sales	51.8	0.0	51.8	0.
Materiel Inventory Adjustments				
CAPITALIZATIONS + OR (-)	0.0	0.0	0.0	0.
RETURNS TO SUPPLIERS (-)	0.0	0.0	0.0	0.
TRANSFERS TO PROP. DISP. (-)	0.0	0.0	0.0	0.
ISSUES/RECEIPTS WITHOUT REIMBURSEMENT + or (-)	0.0	0.0	0.0	0.
OTHER (list)	0.0	0.0	0.0	0.
TOTAL ADJUSTMENTS	0.0	0.0	0.0	0.
Materiel Inventory EOP	11.9	0.0	11.9	0.
ECONOMIC RETENTION (memo)				0.
POLICY RETENTION (memo)				0.
POTENTIAL EXCESS (memo)				0.
Materiel Inventory on Order				
EOP (memo)	2.9	0.0	2.9	0.

**DEFENSE BUSINESS OPERATIONS FUND - NAVY  
TRANSPORTATION - MILITARY SEALIFT COMMAND  
FY 1995 BUDGET ESTIMATE**

**Business Area Function**

The Military Sealift Command (MSC) has two major missions. One is as the Transportation Component Command (TCC) for sealift to the Commander in Chief, U.S. Transportation Command (TRANSCOM). The budget for this mission is included in the Transportation business area of the Defense Business Operations Fund (DBOF) controlled by TRANSCOM. The second major mission is as the Type Commander for Chief of Naval Operations for service unique vessels operated as Naval Fleet Auxiliary Force (NFAF) ships, Special Mission Ships (SMS), or Afloat Prepositioned Force (APF) service unique ships. The NFAF provides support utilizing civilian manned non-combatant ships for underway replenishment of fuel, stores, supplies, and ammunition; towing and salvage operations and resupply of ballistic missiles. In addition, miscellaneous time charters are provided to support harbor tug requirements, deep submergence vehicle support/rescue requirements and miscellaneous towing requirements. The SMS program provides unique seagoing platforms used for research and other purposes. The APF program provides 13 Maritime Prepositioning Ships, two hospital ships (T-AH) ships and a fleet hospital storage ship prepositioned at strategic locations.

**Activity Group composition**

Military Sealift Command (MSC), with headquarters 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. There are also three sub-area commands located in Norfolk, Virginia; Naples, Italy and Guam in addition to eight port offices.

**Workload Changes**

The Naval Fleet Auxiliary Force (NFAF) continues to expand at a significant rate. During the period from FY 1993 to FY 1995, five AFS 1 class supply ships, one AE 26 class ammunition ship, and three AGOS 1 class undersea surveillance ships supporting counter-narcotics efforts will be converted from fleet operation to MSC operation. Additionally, during this period the NFAF will gain three T-AO 187 class oilers and three T-AGOS 19/23 class undersea surveillance ships which are scheduled to be delivered from new construction. The budget also includes transfer of seven T-AGOS 1 class undersea surveillance ships to other government agencies, deactivation of two T-AK class fleet ballistic missile ships, and the placement of two T-AO 187 class fleet oilers in Reduced Operating Status (ROS) during FY 1994 and FY 1995.

The Special Mission Ships (SMS) program decreases in FY 1994 and FY 1995 after several years of relative stability with deactivation of two T-AGORs (ocean research), two T-AGSs (survey), one T-AGM (missile range), one T-ARC (cable) and one T-AGDS (submarine rescue) ship. Inactivations are partially offset by the addition of two T-AGSs from new construction and the chartering of a T-ASR (submarine rescue) ship.

The Navy portion of the Afloat Prepositioned Force (APF) is being transferred, within the DBOF, from TRANSCOM to Navy operation in FY 1995. These 16 ships and the support of the Medical Treatment Facility (MTF) aboard the hospital ships increase the FY 1995 Navy operating budget by \$300.6 million.

Rates

Customer billing rates for FY 1995 decrease from FY 1994 by -18.2% for NFAF, -14.1% for SMS and -22.5% for APF to attain a zero accumulated operating result by end FY 1995.

Personnel staffing

Personnel end year staffing levels required to execute the program are as follows:

	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
Military End Strength	776	938	1,081
Civilian End Strength	<u>4,760</u>	<u>5,334</u>	<u>5,290</u>
Total End Strength	5,536	6,272	6,371

Capital Budget

Capital investment requirements are as follows:

	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
Dollars in millions	3.2	5.1	5.0

**TRANSPORTATION - NAVY  
REVENUE AND EXPENSES  
(Dollars in Millions)**

	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
<b>Revenue:</b>			
<b>Gross Sales:</b>			
Operations	544.8	872.0	1,158.5
Capital Surcharge	0.0	0.0	0.0
Depreciation except Maj Const	0.4	0.6	1.0
Major Construction Depreciation	0.0	0.0	0.0
<b>Total Gross Sales</b>	<b>545.3</b>	<b>872.6</b>	<b>1,159.5</b>
Other Income	0.0	0.0	0.0
<b>Total Income</b>	<b>545.3</b>	<b>872.6</b>	<b>1,159.5</b>
<b>Expenses:</b>			
Cost of Materiel Sold from Inventory	0.0	0.0	0.0
Negotiated Purchases from Customers	0.0	0.0	0.0
Transportation	1.2	1.1	1.9
<b>Salaries and Wages:</b>			
Military Personnel	30.5	32.1	33.7
Civilian Personnel	252.2	257.8	285.5
<b>Materials, Supplies and</b>			
Parts used in Operations	34.7	45.5	51.6
Facility Repair Charge	0.4	0.2	0.3
Depreciation - Capital	0.5	0.7	1.0
Contracted Engineering Services	0.0	0.0	0.0
Lease Costs	95.5	75.9	219.2
Purchased Utilities	0.1	0.3	0.3
Purchased Communications	3.0	2.6	3.5
Equipment Maintenance	0.1	0.2	0.5
Fuel	51.3	70.9	91.6
Other Expenses	198.0	262.0	477.4
<b>Total Expenses</b>	<b>667.5</b>	<b>749.3</b>	<b>1,166.4</b>
Work in Process Adjusted	0.0	0.0	0.0
Comp Work for Activity Reten Adj	0.0	0.0	0.0
<b>Cost of Goods Sold</b>	<b>667.5</b>	<b>749.3</b>	<b>1,166.4</b>
<b>Operating Result</b>	<b>(122.2)</b>	<b>123.3</b>	<b>(6.9)</b>
Less Capital Surchg Reservation	0.0	0.0	0.0
Plus Appropriations Affcting NOR/AOR	0.0	0.0	0.0
Other Changes Affecting NOR/AOR	0.0	0.0	0.0
Inventory Gains and Losses	0.0	0.0	0.0
<b>Net Operating Result</b>	<b>(122.2)</b>	<b>123.3</b>	<b>(6.9)</b>
Transfers Not Affecting NOR/AOR	0.0	0.0	0.0
Prior Year and Other Adjustments	(342.8)	232.6	0.0
Other Inventory Adjustments	0.0	0.0	0.0
WRM Appropriations	0.0	0.0	0.0
<b>Net Result</b>	<b>(465.0)</b>	<b>355.9</b>	<b>(6.9)</b>

**TRANSPORTATION  
CHANGES IN OPERATION  
(DOLLARS IN MILLIONS)**

**EXPENSES**

<b>FY 1993 ACTUAL</b>	<b>667.5</b>
<b>Pricing adjustments:</b>	
Civilian Personnel	3.1
Fuel	5.4
Other Materials and Supplies	1.1
Other Purchases	7.6
<b>Productivity Initiatives and Other Efficiencies:</b>	
Reduce TAO crew size	(8.0)
<b>Workload Changes:</b>	
T-AOs and T-AFS/s deliveries/full year of operations	70.0
T-AGO's class 1 Deact/FOS	(9.5)
2 T-AFS/s conversions	25.0
Pre-delivery costs for conversion of T-AE (FLINT)	1.5
T-AGM Deactivation	(10.2)
Convert McDonnell/Lt Hales to contract operations	(1.1)
<b>Other Changes:</b>	
All other	(3.1)
<b>FY 1994 CURRENT ESTIMATE</b>	<b>749.3</b>
<b>Pricing adjustments:</b>	
Civilian Personnel	5.4
Military Personnel	0.9
Fuel	(9.8)
Other Materials and Supplies	3.4
Other Purchases	9.1
<b>Productivity Initiatives and Other Efficiencies:</b>	
Reduce TAO crew size (annualize FY 1994 action)	(0.7)
<b>Workload Changes:</b>	
2 T-AFSs, 2 T-AOs, & 1 T-AGOS on for full year	16.7
Add 1 T-AE and two T-AOs	5.9
Deactivate Maury	1.9
Add Pathfinder and Sumner	4.6
Additional Full Operating Status days for Hayes	3.0
Reduce days of Full Operating Status for Myer	(12.7)
Deactivate Myer	3.1
Add T-ASR (time charter)	2.3
Deactivate two T-AOs	7.4
Overhead support for added workload	2.6

**Transfer of Prepositioned Ships from TRANSCOM**

**369.6**

**Other Changes:**

**Fuel costs - fewer number of sea days**

**(3.7)**

**Maintenance and Repair**

**11.6**

**Depreciation**

**0.3**

**Civilian Personnel**

**0.6**

**Military Personnel**

**1.9**

**Price Military at civilian equivalent cost**

**(9.4)**

**Realign Common User/Service Unique support**

**3.4**

**All other**

**(0.3)**

**FY 1995 ESTIMATE**

**1,166.4**



**TRANSPORTATION - NAVY**  
**SOURCE OF REVENUE**  
(Dollars in Millions)

	<u><b>FY 1993</b></u>	<u><b>FY 1994</b></u>	<u><b>FY 1995</b></u>
<b>1. Orders from DoD Components:</b>			
Army	0.0	0.0	0.0
Navy	527.4	848.8	1,138.8
Air Force	16.1	15.8	11.9
Marine Corps	0.0	0.0	0.0
Other	1.0	7.3	8.0
<b>2. Orders from other</b>			
DBOF Business Areas	0.7	0.7	0.7
<b>3. Total DoD</b>	<b>545.2</b>	<b>872.6</b>	<b>1,159.5</b>
<b>4. Other Orders:</b>			
Other Federal Agencies	0.0	0.0	0.0
Trust Fund	0.0	0.0	0.0
Non Federal Agencies	0.0	0.0	0.0
<b>5. Total Gross Orders</b>	<b>545.3</b>	<b>872.6</b>	<b>1,159.5</b>
<b>6. Credits and Allowances:</b>			
Discounts	0.0	0.0	0.0
Price Reductions	0.0	0.0	0.0
<b>7. Change to Backlog</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>8 Total Gross Sales</b>	<b>545.3</b>	<b>872.6</b>	<b>1,159.5</b>

TRANSPORTATION - NAVY  
CAPITAL BUDGET  
(Dollars in Millions)

	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
Equipment (Except ADP & TELCOM)	0.1	0.1	0.2
Minor Construction	0.0	0.3	0.0
ADPE & TELCOM	0.0	3.9	3.5
Software	3.1	0.8	1.3
Total	3.2	5.1	5.0

**DEFENSE BUSINESS OPERATIONS FUND - NAVY  
RESEARCH AND DEVELOPMENT  
SUMMARY OF OPERATIONS**

**FUNCTIONAL DESCRIPTION:**

The R&D business area reflected in this budget consists of numerous navy activities which were realigned into four Warfare Centers and two stand-alone laboratories in accordance with DMRD 922 direction on 01 January 1992. These realignments preserve the Navy's R&D capability with fewer resources by purifying mission responsibilities (see below) and establishing R&D leadership areas. Significant customers include O&M,N (16%), RDT&E (37%), Other DBOF (6%), OPN (9%), WPN (7%) and APN (5%).

**BUSINESS AREA COMPOSITION:**

**NAVAL AIR WARFARE CENTER**

Provides 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 for sensor systems used to conduct anti-submarine warfare from air platforms.

**Activity Group Composition:**

**Activities**

**Locations**

Naval Air Warfare Center, Aircraft Division

Patuxent River, MD  
Indianapolis, IND  
Lakehurst, NJ  
Trenton, NJ

Naval Air Warfare Center, Weapons Division

Warminster, PA  
China Lake, CA  
Point Mugu, CA  
Albuquerque, NM  
White Sands, NM

**NAVAL SURFACE WARFARE CENTER**

Provides full spectrum research, development, test and evaluation, engineering, and fleet support 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:

Activities

Locations

Dahlgren Division

Dahlgren, VA.  
Panama City, FL.

Carderock Division

White Oak, MD  
Carderock, MD  
Annapolis, MD  
Philadelphia, PA.

Indian Head Division

Indian Head, MD

Crane Division

Crane, IND

Port Hueneme Division

Louisville, KY  
Port Hueneme, CA  
Yorktown, VA  
Dam Neck, VA  
San Diego, CA

**NAVAL UNDERSEA WARFARE CENTER**

Provides full spectrum research, development, test and evaluation, engineering and fleet support for submarines, autonomous underwater systems and offensive and defensive weapon systems associated with undersea warfare.

Activity Group Composition:

Activity Group

Locations

Newport Division

Newport, RI  
New London, CONN  
Norfolk, VA

Keyport Division

Keyport, WA

**NAVAL COMMAND, CONTROL AND OCEAN SURVEILLANCE CENTER**

Provides full spectrum research, development, test and evaluation, engineering and fleet support for command, control and communication systems and ocean surveillance and the integration of those systems in multi-platforms.

Activity Group Composition:

Activity Group

Locations

NCCOSC RDT&E Division

San Diego, CA

NCCOSC West Coast Division

San Diego, CA

NCCOSC East Coast Division

Charleston, SC

**NAVAL RESEARCH LABORATORY**

The Navy's single, integrated, full spectrum corporate laboratory. Conducts a broad-based multi-disciplined 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.

Activity Group Composition

Activity Group

Location

Naval Research Laboratory

Washington, DC

**NAVAL CIVIL ENGINEERING LABORATORY**

The Navy's primary engineering and technology center for shore establishments, Naval Construction Forces (SEABEES), and the Marine Corps Engineers. Major efforts are directed toward the development of innovative products and services to improve the acquisition, operations, and maintenance of Naval shore and ocean facilities, and the enhancement of SEABEE and Marine Corps operational readiness. Other areas of emphasis include physical security, ordnance facilities, structural dynamics and environmental protection. This laboratory recently merged with the Naval Facilities Engineering Service Center (NFRSC) and will henceforth, be referred to as the Naval Facilities Engineering Service Center.

Activity Group Composition

Activity Group

Location

Naval Facilities Engineering Service Center

Port Hueneme, CA

**Budget Highlights:**

**Workload:** Direct Labor Hours (DLHs) currently represent the best output indicator for the research and development community. From FY 1993 to FY 1994, DLH's increase 6 percent representing the net effect of general DOD downsizing offset by large increases due to previously mission funded engineering centers merging into the DBOF in accordance with the DMRD 922 Laboratory Consolidation Plan. Most notable is NCCOSC whose workload base increases 90 percent with the incorporation of numerous engineering centers. Workload then declines 7 percent in FY 1995 reflecting the decline in R&D customer funding.

**Costs:** Cost of Goods Sold rise approximately 8 percent from FY 1993 to FY 1994 followed by a decline of 6 percent in FY 1995 reflecting the realignments and workload changes discussed above.

**Economies and Efficiencies:** Cost savings associated with a variety of productivity initiatives are being realized by many methods such as contracting and acquisition streamlining, productivity returns on capital investment purchases, video teleconferencing in lieu of travel, and implementation of Total Quality Leadership processes. Expected savings and other productivity initiatives are estimated to increase by \$45 million from FY 1993 to FY 1994 with an additional \$140 million increase from FY 1994 to FY 1995.

**Personnel:** The R&D business area is utilizing Voluntary Early Retirement Authority and Separation Incentive Pay as force shaping tools to meet an aggressive 8 percent decline in personnel through the budget years. To the extent that these incentives are not taken, reduction in force measures may be required.

**Base Closure and Realignment:** BRAC II and III decisions have been reflected in this submission. BRAC costs are treated as a direct reimbursable from the BRAC appropriation. Personnel and other savings associated with Base Closure have also been incorporated.

**Stabilized Rates:** R&D stabilized rates have been set to achieve accumulated operating results of zero by the end of FY 1995. On average, the rates increase 11 to 12 percent over FY 1994. Significant causes include reflecting VERA/SIP costs in rates in FY 1995, locality pay increases, and recoupment of prior year losses.

**Capital Purchase Program: FY 1995 Capital purchases by category  
are as follows (in millions):**

<b>Non ADP Equipment</b>	<b>\$70.8</b>
<b>ADP Equipment/Telecommunications</b>	<b>\$63.1</b>
<b>Software Development</b>	<b>\$11.9</b>
<b>Minor Construction</b>	<b>\$16.1</b>
	<b>-----</b>
<b>Total Purchases</b>	<b>\$161.9</b>

**RESEARCH AND DEVELOPMENT - NAVY**  
**REVENUE AND EXPENSES**  
(Dollars in Millions)

	FY 1993	FY 1994	FY 1995
	-----	-----	-----
<b>Revenue:</b>			
<b>Gross Sales:</b>			
Operations	6,808.1	6,804.4	6,856.0
Capital Surcharge	7.4	0.0	0.0
Depreciation except Maj Const	133.4	160.1	171.9
Major Construction Depreciation	33.7	35.7	0.0
Total Gross Sales	6,982.6	7,000.2	7,027.9
Other Income	0.0	0.0	0.0
Total Income	6,982.6	7,000.2	7,027.9
<b>Expenses:</b>			
Cost of Materiel Sold from Inventory	0.0	0.0	0.0
Negotiated Purchases from Customers	0.0	0.0	0.0
Transportation	8.8	20.7	24.9
<b>Salaries and Wages:</b>			
Military Personnel	65.5	73.9	60.9
Civilian Personnel	2,924.6	3,096.1	2,989.3
<b>Materials, Supplies and</b>			
Parts used in Operations	860.9	911.8	918.6
Facility Repair Charge	151.2	162.9	165.9
Depreciation - Capital	167.1	195.8	171.9
Contracted Engineering Services	295.0	499.3	518.2
Lease Costs	17.7	24.5	24.6
Purchased Utilities	99.8	114.1	118.4
Purchased Communications	49.5	63.1	54.5
Equipment Maintenance	58.7	77.3	78.1
Fuel	28.7	30.9	25.8
Other Expenses	1,974.5	2,052.0	1,757.2
Total Expenses	6,702.0	7,322.4	6,908.3
Work in Process Adjusted	-74.6	0.0	0.0
Comp Work for Activity Reten Adj	18.0	14.6	14.9
Cost of Goods Sold	6,758.6	7,307.8	6,893.4
Operating Result	224.0	-307.6	134.5
Less Capital Surchg Reservation	7.4	0.0	0.0
Plus Appropriations Affcting NOR/AOR	0.0	0.0	0.0
Other Changes Affecting NOR/AOR	-0.9	0.0	0.0
Inventory Gains and Losses	47.5	0.0	0.0
Net Operating Result	263.2	-307.6	134.5
Transfers Not Affecting NOR/AOR	0.0	0.0	0.0
Prior Year and Other Adjustments	214.5	10.0	0.0
Other Inventory Adjustments	0.0	0.0	0.0
WRM Appropriations	0.0	0.0	0.0
Net Result	477.7	-297.6	134.5



**RESEARCH AND DEVELOPMENT - NAVY  
CHANGES IN OPERATIONS  
(Dollars in Millions)**

**EXPENSES**  
-----

1. FY 1993 Actual Costs	6,702.0
2. Pricing Adjustments	
Pay Raise	67.5
Inflation	63.0
3. Productivity Initiatives and Other Efficiencies	-44.8
4. R&D realignment from mission funding to DBOF	534.7
5. Other Changes	0.0
6. FY 1994 Current Estimate	7,322.4
7. Pricing Adjustments	
Pay Raise	53.0
DBOF rate increase/inflation	178.6
8. Productivity Initiatives and Other Efficiencies	-140.8
9. Workload Changes	-504.9
10. Other Changes	0
11. FY 1995 Current Estimate	6,908.3

RESEARCH AND DEVELOPMENT - NAVY  
SOURCE OF REVENUE  
(Dollars in Millions)

	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
1. Orders from DoD Components:			
Army	60.3	53.3	55.1
Navy	5,910.6	5,375.1	5,486.9
Air Force	68.9	76.2	84.4
Marine Corps	64.4	46.5	44.3
Other	499.7	403.3	388.9
2. Orders from other DBOF Business Areas	476.0	379.8	367.6
3. Total DoD	7,079.9	6,334.2	6,427.2
4. Other Orders:			
Other Federal Agencies	88.1	69.7	77.2
Trust Fund	123.5	159.0	140.3
Non Federal Agencies	38.1	19.9	22.1
5. Total Gross Orders	7,329.6	6,582.8	6,666.8
6. Credits and Allowances:			
Discounts	0.0	0.0	0.0
Price Reductions	0.0	0.0	0.0
7. Change to Backlog	347.0	-417.4	-361.1
8. Total Gross Sales	6,982.6	7,000.2	7,027.9

RESEARCH AND DEVELOPMENT - NAVY  
CAPITAL BUDGET  
(Dollars in Millions)

	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
Equipment (Except ADP & TELCOM)	53.6	62.9	70.8
Minor Construction	16.5	17.5	16.1
ADPE & TELCOM	32.4	70.3	63.1
Software	0.0	8.9	11.9
Total	102.5	159.6	161.9

DEFENSE BUSINESS OPERATIONS FUND - NAVY  
FY 1995 BUDGET ESTIMATE

INFORMATION SERVICES

FUNCTIONAL DESCRIPTION

Information service activities provide regional Base Level Computing (BLC) and automated information systems (AIS) to customers and manage certain remote facilities. These activities design, develop, and maintain standard Navy automated information systems and provide automated data processing support. Naval Computer and Telecommunications Stations (NAVCOMTELSTAs) are multiprocessing and multiprogramming time sharing service centers which provide information service support to Navy customers.

Activity Composition:

NAVCOMTELSTA Washington	Washington, DC
NAVCOMTELSTA Pensacola	Pensacola, FL
NCTAMS LANT Norfolk	Norfolk, VA
NAVCOMTELSTA San Diego	San Diego, CA
NAVCOMTELDET San Francisco	San Francisco, CA
NAVCOMTELSTA Jacksonville	Jacksonville, FL
NAVCOMTELSTA New Orleans	New Orleans, LA
NCTAMS EASTPAC	Pearl Harbor, HI
NAVCOMTELSTA Newport	Newport, RI
Fleet Maintenance Support Office	Mechanicsburg, PA

Budget Highlights:

The budget reflects several transfers of activities, including:

- eight Data Processing Installations moving to the Defense Information Technology Services Organization (DITSO) during FY 1994.
- three Activities Providing Telephone Service (APTS) transferring from Navy Public Works Centers into the Information Service business area in FY 1994.
- restoral in FY 1994 of three Central Design Agencies previously transferred to DITSO.
- funding for FMSO transfers into the Information Services business group from Supply Operations in FY 1994.

Civilian personnel in this business group should stabilize at approximately 2,300 end strength after the various realignments of activities. The Navy will continue to need capable support in base level computing even as it continues to downsize. Unit costs and customer prices should remain stable, with changes due mainly to normal escalation and pay raises.

Summary of Operations.

	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
Revenue	330.4	258.2	218.2
Cost of Goods and Services	306.1	265.7	231.5
Revenue Less Cost	24.3	-7.5	-13.3
Change in Inventory	2.8	0.0	0.0
Net Operating Result	27.1	-7.5	-13.3
Accumulated Operating Result	5.1	13.2	0.0

End Strength.

Civilian (USDH)	4,416	2,410	2,174
Military	220	245	239

**INFORMATION SERVICES - NAVY**  
**REVENUE AND EXPENSES**  
(Dollars in Millions)

	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
<b>Revenue:</b>			
<b>Gross Sales:</b>			
Operations	320.7	255.0	216.4
Capital Surcharge	0.0	0.0	0.0
Depreciation except Maj Const	9.7	3.2	1.8
Major Construction Depreciation	0.0	0.0	0.0
<b>Total Gross Sales</b>	<b>330.4</b>	<b>258.2</b>	<b>218.2</b>
Other Income	0.0	0.0	0.0
<b>Total Income</b>	<b>330.4</b>	<b>258.2</b>	<b>218.2</b>
<b>Expenses:</b>			
Cost of Materiel Sold from Inventory	0.0	0.0	0.0
Negotiated Purchases from Customers	0.0	0.0	0.0
Transportation	0.2	0.2	0.2
<b>Salaries and Wages:</b>			
Military Personnel	7.7	8.8	12.0
Civilian Personnel	121.8	136.5	123.7
<b>Materials, Supplies and</b>			
Parts used in Operations	47.7	24.6	25.5
Facility Repair Charge	6.7	2.1	1.4
Depreciation - Capital	9.7	3.2	1.8
Contracted Engineering Services	8.1	4.4	4.5
Lease Costs	8.2	3.6	1.7
Purchased Utilities	7.1	3.1	2.1
Purchased Communications	1.9	2.5	1.1
Equipment Maintenance	12.3	10.3	9.7
Fuel	0.0	0.0	0.0
Other Expenses	76.0	67.2	48.5
<b>Total Expenses</b>	<b>307.4</b>	<b>266.5</b>	<b>232.2</b>
Work in Process Adjusted	0.0	0.0	0.0
Comp Work for Activity Reten Adj	1.3	0.8	0.7
<b>Cost of Goods Sold</b>	<b>306.1</b>	<b>265.7</b>	<b>231.5</b>
<b>Operating Result</b>	<b>24.3</b>	<b>-7.5</b>	<b>-13.3</b>
Less Capital Surchg Reservation	0.0	0.0	0.0
Plus Appropriations Affcting NOR/AOR	0.0	0.0	0.0
Other Changes Affecting NOR/AOR	0.0	0.0	0.0
Inventory Gains and Losses	2.8	0.0	0.0
<b>Net Operating Result</b>	<b>27.1</b>	<b>-7.5</b>	<b>-13.3</b>
Transfers Not Affecting NOR/AOR	0.0	0.0	0.0
Prior Year and Other Adjustments	3.1	15.6	0.0
Other Inventory Adjustments	0.0	0.0	0.0
WRM Appropriations	0.0	0.0	0.0
<b>Net Result</b>	<b>30.2</b>	<b>8.1</b>	<b>-13.3</b>

**INFORMATION SERVICES - NAVY  
CHANGE IN OPERATIONS  
(Dollars in Millions)**

1.	<b>FY 1993 Actual Cost</b>	<b>\$307.4</b>
2.	<b>Pricing Adjustments</b>	<b>6.1</b>
	a. Annualize FY 1993 pay raise	1.2
	b. FY 1994 locality increase	1.1
	c. Stock Fund - Nonfuel	1.3
	d. Industrial Fund Purchases	.2
	e. General Purchase Inflation	2.3
3.	<b>Program Changes</b>	<b>(47.0)</b>
	a. Realignment of the Fleet Maintenance Support Office to Information Services from Supply Operations	67.3
	b. Realignment of three Activities Providing Telephone Service (APTS) to Information Services from Base Support.	32.5
	c. Restoration of NAVCOMTELSTA New Orleans	7.4
	d. Realignment of nine Data Processing Installations and management staff from Information Services to the Defense Information Services Organization.	(146.2)
	e. Reduced cost, downsizing and efficiencies.	(8.0)
4.	<b>FY 1994 Current Estimate</b>	<b>\$266.5</b>
5.	<b>Pricing Adjustments</b>	<b>5.1</b>
	a. FY 1995 Pay Raise	1.3
	b. Stock Fund - Nonfuel	0.9
	c. Industrial Fund Purchases	0.8
	d. General Purchase Inflation	2.1
6.	<b>Program Changes</b>	<b>(39.4)</b>
	a. Realignment of various APTS from Information Services to direct funding.	(34.1)
	b. Reduced cost, downsizing and efficiencies.	(5.3)
7.	<b>FY 1995 Current Estimate</b>	<b>\$232.2</b>

**INFORMATION SERVICES - NAVY**  
**SOURCE OF REVENUE**  
(Dollars in Millions)

	FY 1993 -----	FY 1994 -----	FY 1995 -----
1. Orders from DoD Components:			
Army	10.6	5.3	4.0
Navy	175.0	108.7	88.4
Air Force	4.6	3.7	2.8
Marine Corps	5.4	1.9	1.5
Other	20.5	13.0	10.7
2. Orders from other DBOF Business Areas	135.3	119.5	104.6
3. Total DoD	351.4	252.1	212.0
4. Other Orders:			
Other Federal Agencies	20.1	5.1	3.9
Trust Fund			
Non Federal Agencies			
5. Total Gross Orders	371.5	257.2	215.9
6. Credits and Allowances:			
Discounts	0.0	0.0	0.0
Price Reductions	0.0	0.0	0.0
7. Change to Backlog	41.0	-1.0	-2.4
8. Total Gross Sales	330.5	258.2	218.3



INFORMATION SERVICES - NAVY  
CAPITAL BUDGET  
(Dollars in Millions)

	FY 1993	FY 1994	FY 1995
	-----	-----	-----
Equipment - Except ADPE & TELECOM	0.0	0.0	0.0
Minor Construction	0.1	0.1	0.0
ADPE & TELECOM	10.1	1.5	0.4
Software	2.2	0.5	0.5
Total	12.4	2.1	0.9

**DEFENSE BUSINESS OPERATIONS FUND - NAVY  
DEFENSE PRINTING SERVICE  
SUMMARY OF OPERATIONS**

**FUNCTIONAL DESCRIPTION:** The role of the Defense Printing Service (DPS) is to manage all Department of Defense printing and duplicating. The implementation of Defense Management Report Decision (DMRD) 998 which consolidated all Department of Defense printing and duplicating under the DPS took place on 6 April 1992. This business-like approach has resulted in increased efficiencies at DPS plants and has generated cost savings for Defense customer activities.

The mission of DPS is to provide printing and duplicating services to Department of Defense activities and the Executive Office of the President. DPS is the single manager for all Department of Defense printing and duplicating whether produced in-house or procured through the Government Printing Office. The Joint Committee on Printing, Congress of the United States, exercises oversight of all federal printing and the DPS in-house printing equipment capability. All DOD printing requirements are forwarded to the DPS to assure compliance with the Federal Printing Program.

**BUSINESS AREA COMPOSITION:** DPS operations involve the management of a worldwide printing and duplicating production and procurement network. It is currently comprised of a headquarters element located in the Washington Navy Yard, Washington, DC, 101 major printing production and procurement facilities and 247 smaller reprographics facilities. Over 2,700 civilian personnel support the DPS mission in a variety of direct labor and overhead disciplines.

**BUDGET HIGHLIGHTS:** DPS's primary customers include O&M, Navy (17%) O&M, Army (25%), O&M, Air Force (16%), and other DoD Agencies (24%). DPS produces a variety of outputs including quick turn-around and classified printing, duplicating, automated publishing, micro-publishing and self service. Rates for each output category are published and include overhead charges and surcharges if necessary. The FY 1995 composite stabilized rate increases 16% over FY 1994, the majority of which is required to finance VERA/SIP costs in the DBOF (vice mission funded), accommodate locality pay increases and recover prior year operating losses principally caused by an unforeseen decrease in workload volume.

Workload:

DPS outputs, expressed as Press Units, decline significantly from 6,100 in FY 1993 to 3,900 million units in FY 1994. In FY 1995 Press Units again decline to 3,600 million. These reductions reflect funding decreases on the customer side as DoD continues downsizing.

Costs:

Costs decline 20 percent from FY 1993 to FY 1994 and another 6 percent in FY 1995. These cost decreases are consistent with customer funding declines.

Productivity and Efficiencies:

A variety of cost saving initiatives have been reflected in this budget. Improvements tied to the printing consolidation, general efficiencies and investment in productivity enhancing equipment have resulted in additional savings of \$6.6 million from FY 1993 to FY 1994 and an additional \$7.7 million in FY 1995.

Capital Budget:

The DPS Capital Purchase Program (CPP) will be used to automate, replace and upgrade worn-out and obsolete equipment at DPS sites. This budget includes \$12.4 million in FY 1995 capital authority which will facilitate DMRD 998 productivity savings by: increasing production speeds, improving printer resolution and dependability, providing electronic storage and retrieval, reproducing multiple mediums (paper, computer diskettes, network, microfiche etc.) and providing other labor-saving enhancements.

Personnel:

End strength declines from 2,690 in FY 1993 to 2,192 in FY 1994 and 1,985 in FY 1995. These reductions are consistent with the workload decline anticipated in this business area. The DPS will utilize Voluntary Early Retirement Authority and Separation Incentive Pay as force shaping tools to accomplish these personnel reductions. To the extent these incentives are not taken, Reductions in Force may be required.

DEFENSE PRINTING SERVICE (NAVY)  
REVENUE AND EXPENSES  
(DOLLARS IN MILLIONS)

	FY 1993	FY 1994	FY 1995
	-----	-----	-----
<b>Revenue:</b>			
<b>Gross Sales:</b>			
Operations	394.6	310.4	352.5
Capital Surcharge	0.0	0.0	0.0
Depreciation except Maj Const	8.7	10.5	12.4
Major Construction Depreciation	0.2	0.2	0.0
<b>Total Gross Sales</b>	<b>403.5</b>	<b>321.1</b>	<b>364.9</b>
<b>Other Income</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Total Income</b>	<b>403.5</b>	<b>321.1</b>	<b>364.9</b>
<b>Expenses:</b>			
Cost of Materiel Sold from Inventory	0.0	0.0	0.0
Negotiated Purchases from Customers	0.0	0.0	0.0
Transportation	0.8	0.6	0.4
<b>Salaries and Wages:</b>			
Military Personnel	0.2	0.0	0.0
Civilian Personnel	123.3	88.1	77.7
<b>Materials, Supplies and</b>			
Parts used in Operations	38.3	30.7	27.3
Facility Repair Charge	0.8	0.9	0.9
Depreciation - Capital	8.9	10.8	12.7
Contracted Engineering Services	0.0	0.0	0.0
Lease Costs	43.3	27.8	20.9
Purchased Utilities	3.5	2.9	2.6
Purchased Communications	1.2	0.9	0.8
Equipment Maintenance	25.4	21.8	15.7
Fuel	0.0	0.0	0.0
Other Expenses	182.0	154.4	160.4
<b>Total Expenses</b>	<b>427.7</b>	<b>338.9</b>	<b>319.4</b>
Work in Process Adjusted	0.0	0.0	0.0
Comp Work for Activity Reten Adj	0.0	0.0	0.0
Cost of Goods Sold	427.7	338.9	319.4
<b>Operating Result</b>	<b>-24.2</b>	<b>-17.8</b>	<b>45.5</b>
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
Inventory Gains and Losses	0.0	0.0	0.0
<b>Net Operating Result</b>	<b>-24.2</b>	<b>-17.8</b>	<b>45.5</b>
Transfers Not Affecting NOR/AOR	0.0	0.0	0.0
Prior Year and Other Adjustments	5.6	7.2	0.0
Other Inventory Adjustments	0.0	0.0	0.0
WRM Appropriations	0.0	0.0	0.0
<b>Net Result</b>	<b>-18.6</b>	<b>-10.6</b>	<b>45.5</b>

DEFENSE PRINTING SERVICE  
CHANGES IN OPERATIONS  
(Dollars in Millions)

	<u>EXPENSES</u> -----
1. FY 1993 Actual Costs	427.6
2. Pricing Adjustments	
Pay Raise	2.6
Inflation	7.7
3. Productivity Initiatives and Other Efficiencies	-6.6
4. Workload Changes	-92.4
5. Other Changes	0.0
6. FY 1994 Current Estimate	338.9
7. Pricing Adjustments	
Pay Raise	1.3
Inflation	7.2
8. Productivity Initiatives and Other Efficiencies	-7.7
9. Workload Changes	-20.3
10. Other Changes	0
11. FY 1995 Current Estimate	319.4

DEFENSE PRINTING SERVICE (NAVY)  
 SOURCE OF REVENUE  
 (Dollars in Millions)

	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
1. Orders from DoD Components:			
Army	109.2	79.3	91.1
Navy	96.8	47.6	54.3
Air Force	53.0	51.2	58.8
Marine Corps	12.4	5.2	6.0
Other	49.1	49.2	57.5
2. Orders from other DBOF Business Areas	90.4	76.1	87.4
3. Total DoD	410.9	308.6	355.1
4. Other Orders:			
Other Federal Agencies	2.5	2.3	1.7
Trust Fund	0.0	0.0	0.0
Non Federal Agencies	1.6	1.6	1.8
5. Total Gross Orders	415.0	312.5	358.6
6. Credits and Allowances:			
Discounts	0.0	0.0	0.0
Price Reductions	0.0	0.0	0.0
7. Change to Backlog	11.5	-8.6	-6.3
8. Total Gross Sales	403.5	321.1	364.9

DEFENSE PRINTING SERVICE (NAVY)  
CAPITAL BUDGET  
(Dollars in Millions)

	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>
Equipment (Except ADP & TELCOM)	6.4	11.8	11.8
Minor Construction	0.7	0.6	0.6
ADPE & TELCOM	0.0	0.0	0.0
Software	4.5	0.0	0.0
Total	11.6	12.4	12.4

**DEFENSE BUSINESS OPERATIONS FUND  
NAVY PUBLIC WORKS CENTERS  
BASE SUPPORT**

**ACTIVITY GROUP FUNCTION:** The Naval Facilities Engineering Command's 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.

Technology, global politics, Department of Defense (DOD) consolidations, environmental protection and repair have all affected the way we view business in the PWCs. Since we provide nearly one-half of Navy's total base operating support services in the areas of utilities, sanitation, and maintenance/repair services, expenditures for PWCs services are extensive in the Navy community. In addition to serving Navy customers in major Naval geographical activity concentrations, we also provide services to other DOD and Federal government components.

**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, DC
PWC Yokosuka	Yokosuka, Japan

**BUDGET HIGHLIGHTS:**

**PUBLIC WORKS CONSOLIDATION:**

Defense Management Review Decision (DMRD) 967 directed the consolidation of public works functions performed by geographically contiguous Public Works Departments, to reduce the support required to manage and execute DOD public works productive efforts. It specifically directed the expansion



of selected Public Works Centers (PWCs) and the establishment of new PWCs. This consolidation affects approximately sixty-five diverse Navy field activities, and is reflected in this submission.

PWC Jacksonville and PWC Washington became fully operational in FY 1993. A Public Works Center in Charleston, South Carolina was scheduled to begin operations in FY 1994 and was included in the FY 1994 President's Budget; however, the Base Realignment and Closure Commission recommended closure of several of the activities that would have been supported. Establishment of a PWC in Charleston is no longer feasible, and the current estimates no longer reflect personnel, costs, or revenues for this site.

CAPITAL INVESTMENT:

Our capital investment numbers are \$32 million and \$33 million for FY 1994 and FY 1995, in the following categories:

	<u>FY 1994</u>	<u>FY 1995</u>
Equipment	20.5	23.6
Minor Construction	7.7	7.0
ADPE & TELCOM	3.1	2.5

PASSENGER-CARRYING VEHICLES

PWCs have included passenger-carrying vehicles in their FY 1995 budget. Prior Navy budgets had included these centrally managed items in the budget for Other Procurement, Navy (OP,N), and limited numbers of vehicles were provided to the PWCs. The direction indicated by both DMRD 971 under full-costing methodologies, and DMRD 967 which directed PWCs to operate like commercial leasing firms, led to the inclusion of these items in the PWC budgets -- under both expense items and in the investment budget.

Unfortunately, Section 1343 of Title 31 prohibits the expenditure of an appropriation to buy or lease a passenger motor vehicle except as specifically provided by law. Although DBOF is not generally considered an Appropriation, it is included under Title V of the DOD Appropriations Act; therefore, the Section 1343 limitation appears to apply to DBOF. PWCs will be unable to purchase any vehicles without specific legislative action since the OP,N budget no longer contains reference to DBOF activity vehicles. The law must be repealed, the Authorization Act

must specifically mention that X-number of vehicles may be purchased with DBOF funding, or a decision that DBOF is not an Appropriation (therefore not subject to Section 1343) must be forthcoming or PWCs will be unable to procure any vehicles after FY 1994.

#### BASE REALIGNMENT AND CLOSURE (BRAC):

This budget reflects BRAC III workload and personnel based on closure of PWC, SAN Francisco. Costs associated with planned closure and to be paid by BRAC funding are included as direct customer costs, and are not included in the rate calculations for FY 1995. PWC Great Lakes staffing and workload have been increased to account for Naval Training Center consolidation at Great Lakes. Preliminary workload increases equate to 28 workyears. Since the Naval Aviation Depot is closing in Pensacola, PWC Pensacola has budgeted for a workload decrease in FY 1994 and FY 1995. Although relocation of other activities into Pensacola is scheduled, the transition is expected to result in reduced orders for the interim.

PWC San Diego and PWC Norfolk are also facing transitions. Although Navy personnel are vacating the Naval Training Center, Miramar Naval Air Station, and the Naval Aviation Depot, other activities are scheduled to relocate into these areas, and maintenance requirements are expected to be immediate. Workload considerations have been offset.

Naval Air Station, Agana, is also closing. Orders for PWC Guam will actually increase in the near future to prepare for essential Naval Air Station activities to relocate to Andersen Air Force Base. In addition, the increased orders at Andersen have made a new PWC field site operationally feasible. The PWC field site will support both the air community and Naval Computer and Telecommunications Command operations. Productivity will be enhanced because personnel will report directly to Andersen, thereby saving conveyance time during the workday.

#### PRODUCTIVITY AND ENHANCED OPERATIONS

The Public Works Centers have been able to surpass achieve productivity through gains made through consolidation, process improvements, benchmarking, competitive practices, and partnering efforts. In addition to the productivity

gains reflected in our rate schedules, other significant cost saving benefits accrue directly to our customer base.

Three areas of major PWC effort are competition, partnering, and consolidation.

COMPETITION -- Service decisions based on total value. Value includes quality, quantity, and timeliness factors.

All PWC services use competitive practices. When commercial sources can offer superior value, the PWCs discontinue in-house performance. PWC workload has been studied under the A-76 Circular for Commercial Activities, and most services remained in house. Our current contractual procurements including both materials and facility maintenance contracts use competitive bid practices. Rates for labor and other product/service provision are constantly benchmarked against commercial sources.

Several areas previously contracted by our customer base have, however, been brought to the PWC at a customer savings of \$2.9 million in FY 1993. These areas include crane operations, providing demineralized water to surface ships, generating liquid nitrogen, providing bus service from the Naval Base in Yokosuka, Japan, to the Narita Airport, and providing hospital maintenance service.

PARTNERING -- Working directly with both suppliers and customers to lower overall cost. Partnering efforts listed have saved our customers almost \$14 million in FY 1993.

Supplier partnering efforts include working with the housing contractor in Pearl Harbor to improve quality and thereby reduce rework; awarding contracts that combine design and construction of facilities; working with suppliers to obtain maximum quantities of reclaimed fuel oil which is substantially less expensive; and encouraging waste disposal agents to find less expensive disposal alternatives to normal landfill operations.

PWCs have also been working closely with their customer base to search and implement energy conservation measures based on life-cycle cost in their facilities; encouraging recycling efforts and then recommending alternative pickup schedules for the remaining solid waste; offering evening fuel dispensing at parking site from fuel vehicle; initiating 24 hour automated fuel dispensing; recommending avoidance

methodologies on electrical peak demand charges; performing vehicle use evaluations to reduce rental; and assessing risk factors in reducing recurring maintenance for facilities and equipment.

CONSOLIDATION -- Savings through economies of scale are approaching \$5 million for FY 1993.

DMRD 967 expanded existing PWCs and directed the establishment of new ones. Savings are already being achieved through consolidation of maintenance contracts, elevator inspection contracts, and A&E contracts. In addition, construction projects for individual site hazardous waste storage facilities were cancelled 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 allows other economies. Rate intervention and purchase agreement negotiations result in lower unit costs. We can also use several different fuels for the same boilers; therefore, we can purchase the one with the least overall cost by season and availability.

OTHER PRODUCTIVITY EFFORTS -- Other aggressive actions have been taken to improve the efficiency and effectiveness of our service delivery systems, and resulting cost savings have been reflected in this submission:

--Training employees in the tenets of Total Quality Leadership, and empowering them to initiate changes resulting in incremental improvements to processes. Expected gains have been incorporated.

--Keeping a close eye on overhead and improving internal processes as part of TQL implementation.

--Working with Defense Reutilization and Marketing Service (DRMS) to include lower cost methods of disposing of certain categories of waste in their contracts and to improve their billing. We have also pursued alternatives to DRMS.

--Instituting greater levels of recycling, and seeking lower-cost strategies for disposal of the remaining waste.

--Converting boilers to a cheaper and environmentally cleaner fuel -- natural gas.

--Working with suppliers to obtain maximum quantities of fuel oil reclaimed, which is substantially cheaper than other types of fuel. It must, however, be processed and handled differently to maintain quality control and environmental compliance.

--Improving efficiency of the steam distribution systems. We have begun major upgrades to steam line insulation that should save in overall energy costs.

--Working with customers to achieve energy savings by analyzing heating strategies, and installing individual heating plants where this option is less costly than obtaining heat from the central steam system.

--Working with our customers to more effectively use their maintenance dollars through long range maintenance planning.

--Purchase agreement negotiations with local electric, natural gas and communications suppliers resulting in lower unit costs.

--Implementing peak-shaving operations. Computerized tracking of the electrical demand trends will lead to more efficient peak-shaving operations, thereby avoiding electrical purchase penalties.

--Instituting enhanced safety and return-to-work programs. We have achieved a reduced accident rate, and have been successful at identifying productive light-duty tasks for individuals unable to return to their normal duties following injury. This has enabled us to reduce Federal Employees Compensation Act payments, as well as decrease overall lost productivity of personnel.

**BASE OPERATIONS - NAVY  
REVENUE AND EXPENSES  
(Dollars in Millions)**

	FY 1993 -----	FY 1994 -----	FY 1995 -----
<b>Revenue:</b>			
<b>Gross Sales:</b>			
Operations	1,731.7	1,615.6	1,742.0
Capital Surcharge	0.0	0.0	0.0
Depreciation except Maj Const	21.6	21.5	34.8
Major Construction Depreciation	35.4	35.4	0.0
<b>Total Gross Sales</b>	<b>1,788.6</b>	<b>1,672.6</b>	<b>1,776.8</b>
Other Income	0.0	0.0	0.0
<b>Total Income</b>	<b>1,788.6</b>	<b>1,672.6</b>	<b>1,776.8</b>
<b>Expenses:</b>			
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	0.9	0.9
<b>Salaries and Wages:</b>			
Military Personnel	8.1	8.2	7.3
Civilian Personnel	568.5	577.1	585.8
<b>Materials, Supplies and</b>			
Parts used in Operations	149.5	176.1	183.1
Facility Repair Charge	147.5	156.0	155.7
Depreciation - Capital	56.9	56.9	34.8
Contracted Engineering Services	5.6	7.7	8.0
Lease Costs	3.5	4.6	4.5
Purchased Utilities	338.3	366.4	373.5
Purchased Communications	77.5	57.5	55.2
Equipment Maintenance	1.8	3.0	3.2
Fuel	33.6	43.8	35.5
Other Expenses	563.4	420.8	391.1
<b>Total Expenses</b>	<b>1,954.9</b>	<b>1,879.2</b>	<b>1,838.6</b>
Work in Process Adjusted	0.0	0.0	0.0
Comp Work for Activity Reten Adj	140.4	172.5	164.5
<b>Cost of Goods Sold</b>	<b>1,814.5</b>	<b>1,706.7</b>	<b>1,674.1</b>
<b>Operating Result</b>	<b>-25.9</b>	<b>-34.2</b>	<b>102.7</b>
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	3.9	0.0	0.0
Inventory Gains and Losses	-0.1	0.0	0.0
<b>Net Operating Result</b>	<b>-22.1</b>	<b>-34.2</b>	<b>102.7</b>
Transfers Not Affecting NOR/AOR	0.0	0.0	0.0
Prior Year and Other Adjustments	55.4	0.0	0.0
Other Inventory Adjustments	0.0	0.0	0.0
WRM Appropriations	0.0	0.0	0.0
<b>Net Result</b>	<b>33.3</b>	<b>-34.2</b>	<b>102.7</b>

**CHANGES IN THE COSTS OF OPERATION  
DEFENSE BUSINESS OPERATIONS FUND  
NAVY PUBLIC WORKS CENTERS  
BASE SUPPORT  
(Dollars in Millions)**

	<u>Expenses</u>
<b>FY 1993 Actual</b>	<b>1,954.9</b>
<b>Pricing Adjustments:</b>	
Annualization of FY 1993 Pay Raise	9.4
Locality Pay Increase	6.1
DBOF Price Changes	0.2
General Purchase Inflation	29.2
Other Price Changes	
Fuel	1.3
Material	4.2
<b>Productivity Initiatives and Other Efficiencies:</b>	
Productivity Initiative	(18.6)
<b>Program Changes</b>	
Phased closure of PWC San Francisco directed by BRAC	(21.2)
Reduction at PWC Pensacola due to closure of NADEP directed by BRAC	(2.7)
Functional transfer of telephone services	(32.5)
BRAC related personnel costs at PWC San Francisco Bay	2.1
Anticipated reduction in customer orders due to Defense downsizing	(46.6)
<b>Other changes:</b>	
Reduction in high grade civilian positions	(0.1)
Yen exchange rate	5.5
Government of Japan cost sharing	(12.0)
<b>FY 1994 Current Estimate</b>	<b>1,879.2</b>

**CHANGES IN THE COSTS OF OPERATION  
DEFENSE BUSINESS OPERATIONS FUND  
NAVY PUBLIC WORKS CENTERS  
BASE SUPPORT  
(Dollars in Millions)**

	<u>Expenses</u>
<b>FY 1994 Current Estimate</b>	<b>1,879.2</b>
<b>Pricing Adjustments</b>	
FY 1995 Civilian Pay Raise	6.3
Reduction in Military Personnel expense due to use of civilian equivalency costing	(1.8)
Annualization of FY 1994 Locality Pay Increase	4.2
DBOF Price Changes	1.8
General Purchase Inflation	27.8
Other Price Changes	.
Fuel	(8.1)
Material	7.9
<b>Productivity Initiatives and Other Efficiencies:</b>	
Productivity Initiative	(19.7)
<b>Program Changes</b>	
BRAC related personnel costs at PWC San Francisco Bay	5.5
Increase of workload in environmental clean up and compliance	1.1
Anticipated reduction in customer orders due to Defense downsizing	(33.9)
Passenger carrying vehicles less than \$25K	1.4
<b>Other Changes:</b>	
Depreciation	(22.1)
Reduction in high grade civilian positions	(0.1)
Realignment of military billets	0.8
Government of Japan cost sharing	(11.7)
<b>FY 1995 Estimate</b>	<b>1,838.6</b>



**BASE OPERATIONS - NAVY**  
**SOURCE OF REVENUE**  
(Dollars in Millions)

	FY 1993 -----	FY 1994 -----	FY 1995 -----
<b>1. Orders from DoD Components:</b>			
Army	93.7	65.8	65.7
Navy	1,171.7	1,066.3	1,143.5
Air Force	17.9	13.1	15.4
Marine Corps	31.0	37.4	37.6
Other	148.9	46.7	42.2
<b>2. Orders from other DBOF Business Areas</b>	<b>401.2</b>	<b>356.9</b>	<b>369.0</b>
<b>3. Total DoD</b>	<b>1,864.4</b>	<b>1,586.2</b>	<b>1,673.6</b>
<b>4. Other Orders:</b>			
Other Federal Agencies	33.7	19.0	19.5
Trust Fund	0.0	0.0	0.0
Non Federal Agencies	38.1	28.7	30.3
<b>5. Total Gross Orders</b>	<b>1,936.1</b>	<b>1,633.9</b>	<b>1,723.4</b>
<b>6. Credits and Allowances:</b>			
Discounts	0.0	0.0	0.0
Price Reductions	0.0	0.0	0.0
<b>7. Change to Backlog</b>	<b>147.5</b>	<b>-38.6</b>	<b>-53.4</b>
<b>8 Total Gross Sales</b>	<b>1,788.6</b>	<b>1,672.6</b>	<b>1,776.8</b>

BASE OPERATIONS - NAVY  
CAPITAL BUDGET  
(Dollars in Millions)

	FY 1993 -----	FY 1994 -----	FY 1995 -----
Equipment (Except ADP & TELCOM)	8.7	20.5	23.6
Minor Construction	4.7	7.7	7.0
ADPE & TELCOM	0.0	3.1	2.5
Software	0.0	0.0	0.0
Total	13.5	31.3	33.1

**DEFENSE BUSINESS OPERATIONS FUND - NAVY**

**FY 1995 CAPITAL BUDGET**

**DEFENSE BUSINESS OPERATIONS FUND - NAVY**

**FY 1995 CAPITAL BUDGET**

**SUPPLY OPERATIONS**

**Supply Management Capital Budget Summary**  
 Department of the Navy  
 Date: January 1994  
 (\$ in Millions)

Line Number	Item Description	FY 1993		FY 1994		FY 1995	
		Quant	Total Cost	Quant	Total Cost	Quant	Total Cost
0001	1b. Equip Except ADP & TELCOM (>15,000<500,000) Subtotal Equipment (>15,000<500,000)		0.200 0.200		0.200 0.200		0.206 0.206
0002	2a. ADP Equipment (>100,000)				1.362		0.000
0003	- UICP (Replacement)				3.961		4.100
0004	- EDMICS (Productivity) - EDMICS (New Mission) Subtotal ADP Equipment (>100,000)		0.000		5.323		4.100
0005	2b. ADP Equipment (>15,000<100,000) Subtotal ADP Equipment (>15,000<100,000)		0.000 0.000		0.000		0.000
0006	3a. Central Design Activity						
0007	- EDMICS						
0008	- UADPS - ICP						
0009	- CAIMS						
0010	- PX Series - RAMP						
0011	3c. Minor Construction Subtotal Minor Construction		0.427 0.427		0.464 0.464		0.475 0.475
	<b>GRAND TOTAL CAPITAL PURCHASE PROGRAM</b>		<b>0.627</b>		<b>5.987</b>		<b>4.761</b>

**SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION**

**BUDGET SUBMISSION  
FY 1995 PRESIDENT'S**

<b>COMPONENT/BUSINESS AREA/DATE</b>		<b>01 ITEM DESCRIPTION</b>																
<b>NAVY/SUPPLY MANAGEMENT/JANUARY 1994</b>		<b>OTHER SUPPLY SUPPORT EQUIPMENT</b>																
<b>ELEMENTS OF COST</b>	<b>QTY</b>	<b>FY 1993</b>		<b>TOTAL COST</b>		<b>QTY</b>		<b>FY 1994</b>		<b>TOTAL COST</b>		<b>QTY</b>		<b>FY 1995</b>		<b>TOTAL COST</b>		
		<b>UNIT COST</b>	<b>COST</b>	<b>QTY</b>	<b>COST</b>	<b>QTY</b>	<b>COST</b>	<b>QTY</b>	<b>COST</b>	<b>QTY</b>	<b>COST</b>	<b>QTY</b>	<b>COST</b>	<b>QTY</b>	<b>COST</b>	<b>QTY</b>	<b>COST</b>	
<b>01 SHOP &amp; OFFICE EQUIPMENT</b>																		<b>VAR 206</b>

*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 are used in Inventory Control Points. 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 and public works shop equipment.*

**SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION**

**BUDGET SUBMISSION  
FY 1995 PRESIDENT'S**

COMPONENT/BUSINESS AREA/DATE NAVY/SUPPLY MANAGEMENT/JANUARY 1994	03 ITEM DESCRIPTION EDMICS									
	FY 1993		FY 1994		FY 1995		TOTAL COST		TOTAL COST	
ELEMENTS OF COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	TOTAL COST
03 EDMICS (Equipment)										4,100

*Narrative Justification*

**EDMICS** - The Engineering Data Management Information and Control System (EDMICS) 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 EDMICS system 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.

EDMICS was designated the DoD standard system for storing and distributing technical drawings by ASD C3I ltr of 14 Nov 1991. FY 1995 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 EDMICS received MAISRC authority to proceed with exceeding investment starting in FY 1999. Total benefits are projected at \$43.6M through FY 2005.

**SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION**

**BUDGET SUBMISSION  
FY 1995 PRESIDENT'S**

<b>COMPONENT/BUSINESS AREA/DATE</b>	<b>02 ITEM DESCRIPTION</b>
<b>NAVY/SUPPLY MANAGEMENT/JANUARY 1994</b>	<b>UIC/OPERATIONS AND SUPPORT</b>

An approved Economic Analysis (EA) is part of the System Decision Paper (SDP) IV documentation. This EA describes a payback of \$182.6 million, comprised of reduced investment in weapon system parts inventories through refined inventory levels computations, and increased automation savings, which helps the Navy achieve the DMRD 901 and other savings already reflected in the budget..

The EA describes a capital investment of \$18.55 million over the period FY93-FY96, \$3.75 million of this total is for upgraded system software licenses. Of the \$18.55 million total, \$16.1 million was provided from DMRD 924 funds and the UICP funding was reduced accordingly. This leaves a residual funding requirement of \$1.362 million in FY 1994 and \$0.888 million in FY 1996. The balance of the money budgeted for capital investments in FY 1996 covers a portion of the DoD megacenter consolidation effort. The EA for megacenter consolidation is currently being prepared. Failure to fund the residual ICP operations capital investment will reduce the payback by \$22.2 million.



**SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION**

**BUDGET SUBMISSION  
FY 1995 PRESIDENT'S**

COMPONENT/BUSINESS AREA/DATE NAVY/SUPPLY MANAGEMENT/JANUARY 1994	II ITEM DESCRIPTION MINOR CONSTRUCTION										
	FY 1993			FY 1994			FY 1995			VAR	
ELEMENTS OF COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST		
II MINOR CONSTRUCTION											475
<i>Narrative Justification</i>											

*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, paving a gravel lot at SPCC, construct fitness center at ASO.

**Distribution Depote Capital Budget Summary**  
**Department of the Navy**  
**Date: January 1994**  
**(\$ in Millions)**

Line Number	Item Description	FY 1993		FY 1994		FY 1995	
		Quant	Total Cost	Quant	Total Cost	Quant	Total Cost
0001	1. Minor Construction (>15,000<300,000)		0.782		1.014		0.828
	Subtotal Minor Const (>15,000<300,000)		0.782		1.014		0.828
	<b>GRAND TOTAL CAPITAL PURCHASE PROGRAM</b>		0.782		1.014		0.828

**SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION**

**BUDGET SUBMISSION  
FY 1995 PRESIDENT'S**

COMPONENT/BUSINESS AREA/DATE NAVY/DISTRIBUTION DEPOTS/JANUARY 1994	01 ITEM DESCRIPTION MINOR CONSTRUCTION									
	FY 1993		FY 1994		FY 1995		FY 1995		FY 1995	
ELEMENTS OF COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	VAR
11 MINOR CONSTRUCTION										828
<i>Narrative Justification</i>										

*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 track loading dock at FISC Oaman, construct retaining wall at FISC Yokosuka.

Logistics Support Capital Budget Summary  
 Department of the Navy  
 Date: January 1994  
 (\$ in Millions)

Line Number	Item Description	FY 1993		FY 1994		FY 1995	
		Quant	Total Cost	Quant	Total Cost	Quant	Total Cost
0001	1a. Equipment Except ADP & TELCOM (>500,000)						
0002	- Auto Material Handling Sys (Replacement)	1	0.147	1	0.800	1	0.400
0003	- Pollution Control Equipment (New Mission)	1	1.312		8.940		9.100
	- Hazardous Inventory Control System (HICS)						
	Subtotal Equipment (>500,000)	2	1.459	1	9.740	1	9.500
0004	1b. Equip Except ADP & TELCOM (>15,000<500,000)	76	3.341	55	2.699	55	2.545
	Subtotal Equipment (>15,000<500,000)	76	3.341	55	2.699	55	2.545
0005	2. ADP Equipment (>15,000<100,000)				12.045		4.515
	Subtotal ADP Equipment (>15,000<100,000)		0		12.045		4.515
0006	3. Software Development (Software>100,000)				8.046		7.875
0007	- APADE		0		0.223		0.236
0008	- Level II				1.336		1.362
0009	- UDAPS-SP				3.091		4.933
0010	- LOGMARS				0.197		0.209
0011	- EDI				0.685		0.681
	- Transportation				0.514		0.454
0012	4. Minor Construction		0.810		0.836		0.855
	GRAND TOTAL CAPITAL PURCHASE PROGRAM	78	5.610	56	33.366	56	25.290

**SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION**

**BUDGET SUBMISSION  
FY 1995 PRESIDENT'S**

COMPONENT/BUSINESS AREA/DATE	01 ITEM DESCRIPTION										
	NAVY/LOGISTICS SUPPORT/JANUARY 1994					AUTOMATED MATERIAL HANDLING					
ELEMENTS OF COST	FY 1993		FY 1994		FY 1995		QTY	TOTAL COST	QTY	FY 1995 UNIT COST	TOTAL COST
	QTY	COST	QTY	COST	QTY	COST					
01 AUTOMATED MATERIAL HANDLING SYS									1	VAR	400

*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.

**SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION**

**BUDGET SUBMISSION  
FY 1995 PRESIDENT'S**

COMPONENT/BUSINESS AREA/DATE	03 ITEM DESCRIPTION							
	NAVY/LOGISTICS SUPPORT/JANUARY 1994				HAZARDOUS INVENTORY CONTROL SYSTEM			
ELEMENTS OF COST	FY 1993	FY 1994	FY 1995	TOTAL	TOTAL	TOTAL	QTY	TOTAL
	QTY	UNIT COST	UNIT COST	COST	COST	COST		COST
03 HAZARDOUS INV CONTROL SYSTEMS								VAR 9,100

*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. (\$3,630K)

**HMC&M PROTOTYPE SYSTEM EQUIPMENT:** Funds in FY 1993 were used to purchase bar-coding equipment for three prototype sites in Portsmouth NSY, NADEP Jacksonville, and Submarine Base Kings Bay. Funds are required in FY 1994 to implement this system at major Navy industrial sites and at FISCs San Diego and Norfolk. The system will be necessary to interface the HAZMIN operations in those locations with local industrial activities in order to support the requirements of SARA Title III requirements which will affect all DoD activities beginning in FY 1994. (\$3,750K)

**SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION**

**BUDGET SUBMISSION  
FY 1995 PRESIDENT'S**

<b>COMPONENT/BUSINESS AREA/DATE NAVY/LOGISTICS SUPPORT/JANUARY 1994</b>	<b>03 ITEM DESCRIPTION HAZARDOUS INVENTORY CONTROL SYSTEM</b>
---	---

**IMPLEMENTATION OF AERLOAT HAZARDOUS MATERIAL CONTROL SYSTEM:** Export of Hazardous Inventory Control System (HICS) to all Fleet units. Funding required will cover all necessary computer hardware which will enable all Navy ships to establish hazardous material inventory operations in accordance with the guidance set forth by CNO. The systems will be interfaced through SALTS to regional HAZMIN centers operated by the FISCs in order that HAZMAT requirements and excess data can be processed in an orderly fashion. Implementation of this initiative is expected to save more than \$5 million on an annual basis. (\$1,560K).

HICS is the method for managing hazardous material to minimize usage and reduce waste. HAZMAT Facility initiatives incorporate systems and equipment to support requirements of the law, i.e. SARA Title III. HICS is needed to comply with the intent of the law and replaces manual manipulation of data to provide required reports. In addition, HICS enhances the NAVSUP Pollution Prevention Division's and FISCs effectiveness in executing responsibilities of HMC&M Program.

**SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION**

**BUDGET SUBMISSION  
FY 1995 PRESIDENT'S**

COMPONENT/BUSINESS AREA/DATE	04 ITEM DESCRIPTION									
	NAVY/LOGISTICS SUPPORT/JANUARY 1994					FORKLIFT TRUCKS				
ELEMENTS OF COST	FY 1993		FY 1994		FY 1995		TOTAL COST	QTY	TOTAL COST	VAR
	QTY	UNIT COST	QTY	UNIT COST	QTY	UNIT COST				
04 FORKLIFT TRUCKS								48		1,345

*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 its 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.



**SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION**

**BUDGET SUBMISSION  
FY 1995 PRESIDENT'S**

COMPONENT/BUSINESS AREA/DATE NAVY/LOGISTICS SUPPORT/JANUARY 1994	04 ITEM DESCRIPTION OTHER SUPPLY SUPPORT EQUIP											
	FY 1993			FY 1994			FY 1995			TOTAL COST	QTY	TOTAL COST
ELEMENTS OF COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST			
04 SHOP & OFFICE EQUIP												700

*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 requestor 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.

**SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION**

**BUDGET SUBMISSION  
FY 1995 PRESIDENT'S**

COMPONENT/BUSINESS AREA/DATE NAVY/LOGISTICS SUPPORT/JANUARY 1994	04 ITEM DESCRIPTION COLLATERAL EQUIPMENT								
	FY 1993 QTY	FY 1993 UNIT COST	TOTAL COST	QTY	FY 1994 UNIT COST	TOTAL COST	QTY	FY 1995 UNIT COST	TOTAL COST
ELEMENTS OF COST									
04 COLLATERAL EQUIPMENT								VAR	500

*Narrative Justification*

*Collateral Equipment* - Collateral equipment is essential for the initial outfitting of Military Construction projects. Examples of items procured include forklift trucks, furniture, storage racks, etc.

FY 1993 funds are requested for battery chargers for a cold storage warehouse at FISC San Diego, and FY 1994 funds are requested for AMHS vehicles for a cold storage warehouse at FISC Norfolk. If not funded completely, MILCON projects will not be complete and useable as required by law associated with military construction.

**SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION**

**BUDGET SUBMISSION  
FY 1995 PRESIDENT'S**

COMPONENT/BUSINESS AREA/DATE NAVY/LOGISTICS SUPPORT/JANUARY 1994	05 ITEM DESCRIPTION BLC								
	FY 1993		FY 1994		FY 1995		TOTAL COST		
ELEMENTS OF COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
05 BLC									2,645

*Narrative Justification*

*Base Level Computing - Base Level Computing (BLC) is a newly defined program which consolidates and combines a number of activity initiatives into a coordinated effort. An overall Mission Need Statement (MNS) has been prepared and is in the approval process. Although the LCM milestone requiring an overall economic analysis, has not been reached, preliminary work is underway. A number of activity Abbreviated System Decision Papers (ASDPs), which include economic analyses, have been prepared and approved for BLC work at individual sites. These ASDPs are a subset of the overall program and will be incorporated into the master economic analysis.*

*BLC supports a three-tier Client/Server computing and information processing architecture at NAVSUP headquarters and Navy Stock Points to help better perform basic responsibilities to identify, compute, forecast, budget, procure, and position material in anticipation of logistical requirements. The tiered Client/Server approach will provide partial relief of the mainframe, easier access to mainframe data, expanded access to alternate*

**SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION**

**BUDGET SUBMISSION  
FY 1995 PRESIDENT'S**

**COMPONENT/BUSINESS AREA/DATE  
NAVY/LOGISTICS SUPPORT/JANUARY 1994**

**05 ITEM DESCRIPTION  
BLC**

*data sources, significantly reduce application development cycles and processing costs, and facilitate end-user computing and application development. Ultimately, overall service to the Fleet will be improved.*

**SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION**

**BUDGET SUBMISSION  
FY 1995 PRESIDENT'S**

COMPONENT/BUSINESS AREA/DATE NAVY/LOGISTICS SUPPORT/JANUARY 1994	05 ITEM DESCRIPTION LOGMARS									
	FY 1993		TOTAL		FY 1994		TOTAL		FY 1995	
ELEMENTS OF COST	QTY	UNIT COST	QTY	COST	QTY	UNIT COST	QTY	COST	QTY	UNIT COST
05 LOGMARS										1,870

*Narrative Justification*

**LOGMARS** - The Logistics Applications of Automated Marking and Reading Symbols (LOGMARS) program 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. In order to utilize bar coded data, the programs will provide the necessary equipment and programs to interface with existing computer systems. *Increased productivity, data accuracy, and visibility and control of inventories will be realized with LOGMARS technology.* An Economic Analysis has been performed for the LOGMARS Program. The Net Present Value is \$43,015 and the payback years are estimated to be 4.19 years. The savings to cost ratio is 1.70. These benefits will all contribute to improved Fleet support and readiness. Funding continues to equip Navy activities ashore and afloat with bar code

**SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION**

**BUDGET SUBMISSION  
FY 1995 PRESIDENT'S**

<b>COMPONENT/BUSINESS AREA/DATE</b>	<b>05 ITEM DESCRIPTION</b>
<b>NAVY/LOGISTICS SUPPORT/JANUARY 1994</b>	<b>LOGMARS</b>

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 and the cost for repair approaches the cost of replacement. Also, replacement equipment is required when equipment is no longer being manufactured.

DMRD 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.

**SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION**

**BUDGET SUBMISSION  
FY 1995 PRESIDENT'S**

COMPONENT/BUSINESS AREA/DATE NAVY/LOGISTICS SUPPORT/JANUARY 1994	06 ITEM DESCRIPTION APADE									
	FY 1993		FY 1994		FY 1995		TOTAL COST		TOTAL COST	
ELEMENTS OF COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	TOTAL COST
06 APADE										236

*Narrative Justification*

APADE - Funding for the Automation of Procurement and Accounting Data Entry (APADE) system modify and enhance the current APADE software to accommodate Fleet and Industrial Supply Center (FISC) processing and Electronic Data Interchange (EDI). Specifically, the changes support modifying the current concept from a single data base servicing a single activity (UIC) to a single data base servicing multiple activities (UICs), changes to the system to accommodate DBOF accounting, and the introduction of EDI technology.

**SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION**

**BUDGET SUBMISSION  
FY 1995 PRESIDENT'S**

COMPONENT/BUSINESS AREA/DATE NAVY/LOGISTICS SUPPORT/JANUARY 1994	07 ITEM DESCRIPTION LEVEL II									
	FY 1993		FY 1994		FY 1995		TOTAL COST		TOTAL COST	
ELEMENTS OF COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	TOTAL COST
07 LEVEL II										1,362

*Narrative Justification*

**LEVEL II** - The UADPS LEVEL II system provides complete retail supply management functionality including material requisition and issue control, material receipt control, requisition status control, demand review and reorder, physical inventory and location audit/survey, excess and disposal, repairables management, and management reporting. The UADPS LEVEL II system also provides retail financial management functionality including financial inventory control and stores accounting.

The CDA efforts reflected here support the UADPS LEVEL II system, which provides automated support for thirteen CONUS and EXCONUS shore stations. The automated support includes supply and financial management capabilities to efficiently and effectively manage stock fund end use material carried at the station. An Economic Analysis (EA) has been performed for the Level II program. The Net Present Value is (\$1,475) and the payback years are estimated to be 1.15 years. The savings to cost ratio is 3.69.



**SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION**

**BUDGET SUBMISSION  
FY 1995 PRESIDENT'S**

COMPONENT/BUSINESS AREA/DATE NAVY/LOGISTICS SUPPORT/JANUARY 1994	08 ITEM DESCRIPTION UDAPS-SP									
	FY 1993		FY 1994		FY 1995		FY 1996		FY 1997	
ELEMENTS OF COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	TOTAL COST
08 UDAPS-SP										4,933

*Narrative Justification*

**UDAPS-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 on Naval Operations, CINCLANTFLT, CINCPACFLT, Chief of Naval Education and Training, Chief of Naval Reserves, Comptroller of the Navy, and Commandant of the Marine Corps. This support is provided at host ADP installations and at several remote activities which are satellites of those host installations.

**SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION**

**BUDGET SUBMISSION  
FY 1995 PRESIDENT'S**

<b>COMPONENT/BUSINESS AREA/DATE</b>	<b>08 ITEM DESCRIPTION</b>
<b>NAVY/LOGISTICS SUPPORT/JANUARY 1994</b>	<b>UDAPS-SP</b>

The 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 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 (e.g. DOSS).*

**SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION**

**BUDGET SUBMISSION  
FY 1995 PRESIDENT'S**

COMPONENT/BUSINESS AREA/DATE NAVY/LOGISTICS SUPPORT/JANUARY 1994	09 ITEM DESCRIPTION LOGMARS											
	FY 1993		FY 1994		FY 1995		FY 1993		FY 1994		FY 1995	
ELEMENTS OF COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
09 LOGMARS (EPOS)												209

*Narrative Justification*

**LOGMARS (EPOS)** - The LOGMARS program 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. In order to utilize bar coded data, the programs will provide the necessary equipment and programs to interface with existing computer systems. *Increased productivity, data accuracy, and visibility and control of inventories will be realized with LOGMARS.* These benefits will all contribute to improved Fleet support and readiness. Funding continues to equip Navy activities ashore and afloat with bar code equipment and programs.

The CDA efforts reflected here support legacy system modifications required to implement EPOS initiatives.

**SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION**

**BUDGET SUBMISSION  
FY 1995 PRESIDENT'S**

COMPONENT/BUSINESS AREA/DATE NAVY/LOGISTICS SUPPORT/JANUARY 1994	10 ITEM DESCRIPTION EDI											
	FY 1993		TOTAL COST		QTY		FY 1994		TOTAL COST		FY 1995	
ELEMENTS OF COST	QTY	UNIT COST	TOTAL COST	TOTAL COST	QTY	QTY	UNIT COST	TOTAL COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
10 EDI												681

*Narrative Justification*

**EDI**- Funds provide the development of Electronic Data Interchange (EDI) modules in functional areas such as procurement, transportation, supply management, and contract administration. Implementation of Phase I procurement EDI for Small Purchase, Transportation EDI, and the Advanced Traceability and Control - Plus (ATAC+) System (for retrograde tracking of depot-level repairables). Further development efforts will take place in FYs 94-96 for EDI implementations into Shipboard Systems (SNAP), the Non-standard Demand Data/BHJ process, Material Safety Data Sheet, Technical Data/Specification transmittal in conjunction with acquisition.

**SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION**

**SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION**

**BUDGET SUBMISSION  
FY 1995 PRESIDENT'S**

COMPONENT/BUSINESS AREA/DATE NAVY/LOGISTICS SUPPORT/JANUARY 1994	11 ITEM DESCRIPTION TRANSPORTATION											
	FY 1993		FY 1994		FY 1995		FY 1993		FY 1994		FY 1995	
ELEMENTS OF COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
11 TRANSPORTATION												454
<i>Narrative Justification</i>												

**Transportation-** The funds provide enhancement of a PC version of the Marine Corps Transportation management system at Navy shipping activities and CDA resources support development of the transportation funds administration modules of the Navy Material Transportation Office.

**SUPPLY OPERATIONS CAPITAL PURCHASES JUSTIFICATION**

**BUDGET SUBMISSION  
FY 1995 PRESIDENT'S**

COMPONENT/BUSINESS AREA/DATE NAVY/LOGISTICS SUPPORT/JANUARY 1994	12 ITEM DESCRIPTION MINOR CONSTRUCTION											
	FY 1993			FY 1994			FY 1995			VAR		
ELEMENTS OF COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
12 MINOR CONSTRUCTION												855

*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, addition to waterfront storage shed at FISC Jacksonville, and installation of a fence around industrial area at Cheatham Annex.

**DEFENSE BUSINESS OPERATIONS FUND - NAVY**

**FY 1995 CAPITAL BUDGET**

**DEPOT MAINTENANCE**

**BUSINESS AREA CAPITAL BUDGET SUMMARY**  
 Department of the Navy  
 Depot Maintenance/Naval Shipyards  
 FY 1995 President's Budget

(\$ in Millions)

LINE #	Item Description	FY 1993		FY 1994		FY 1995	
		Quant	Total Cost	Quant	Total Cost	Quant	Total Cost
	1a. Non ASP Equipment (>\$500,000)						
	<-----REPLACEMENT----->						
0001	60 TON PORTAL CRANE	2	12.250	2	12.900	2	12.900
0002	5000 GAL. NICKEL-COPPER (NICO) ALW TANKS	2	1.000				
0003	PIPE BENDER, 6", CNC			1	1.200		
0004	MILLING MACH, HORIZONTAL			1	0.700		
0005	TURK/MILL CENTER					1	0.960
0006	HORIZ BORING MILL, REMANUFACTURE					1	0.950
0007	BORING MACH, HORIZONTAL, CNC					1	1.950
0008	COLLATERAL EQUIPMENT FOR MCHN PROJECT P422			1	1.020		
0009	HAZ WIP/PAINT BOOTH, BLDG 205			1	2.000		
0010	DEFINING LABE SYSTEM			1	0.900		
0011	ASBESTOS REMOVAL EQUIPMENT			1	1.555		
	<-----PRODUCTIVITY----->						
0012	PUNCH PRESS, CNC					1	0.350
	<-----NEW MACHIN----->						
0013	7500 KVA PORTABLE TRANSFORMER			1	0.650		
	Subtotal Equipment (>\$500,000)	VAR	13.250	VAR	20.733	VAR	16.910



**BUSINESS AREA CAPITAL BUDGET SUMMARY**  
 Department of the Navy  
 Depot Maintenance/Naval Shipyards  
 FY 1995 President's Budget

(\$ in Millions)

Line #	Item Description	FY 1993		FY 1994		FY 1995	
		Quant	Total Cost	Quant	Total Cost	Quant	Total Cost
	1b. Non ADP Equipment (FY 93: >\$15K<\$50K; FY 94/95: >\$25K<\$50K) (Replacement/Productivity/New Mission)						
0014	Equipment (FY 93: >\$15K<\$50K; FY 94/95: >\$25K<\$50K)	VAR	30.350	VAR	23.403	VAR	16.147
	1c. Non ADP Equipment (FY 93: >\$15,000; FY 94/95: >\$25,000) (Replacement/Productivity/New Mission)						
	Subtotal Equipment (>\$15,000)	VAR	43.600	VAR	44.136	VAR	33.057
	2a. ADP Equipment (>\$100,000)						
0015	INFORMATION TECHNOLOGY (IT) CONSOLIDATION - ONR 924 (Other projects submitted by JSEC)			VAR	7.705	VAR	11.540
	Subtotal ADP Equipment (>\$100,000)			VAR	7.705	VAR	11.540
	7. Minor Construction (>\$15,000<\$300,000) (Replacement/Productivity/New Mission)	VAR	2.800	VAR	11.459	VAR	7.405
0016	Subtotal Minor Construction (>\$15,000<\$300,000)	VAR	2.800	VAR	11.459	VAR	7.405
	Grand Total Capital Purchase Program	VAR	46.400	VAR	63.300	VAR	52.000

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (\$ in thousands)		A. FY 1995 President's Budget														
B. Department of the Navy/Depot Maintenance/Naval Shipyards		C. 0001 60 TON PORTAL CRANE - REPLACEMENT					D. Activity, Location PTOWN, PUSSET, AND PEARL									
Element of Cost	END ITEM	FY 1993					FY 1994					FY 1995				
		Qty	Unit	Total	Qty	Unit	Total	Qty	Unit	Total	Qty	Unit	Total			
		2	VAR	12,250	2	VAR	12,500	2	VAR	12,500	2	VAR	12,500			

**Narrative Justifications:**

The shipyard portal cranes provide the waterfront lifting capability essential to the repair and overhaul of ships. The majority of the existing portal cranes were procured in the 1940's. They were overhauled regularly but are aging. Critical frame members have exhibited stress cracking and reliability is becoming an increasing problem. The manufacturers of many of these cranes are no longer in business. Further overhauls are not feasible in light of structural fatigue problems. Many of the portal cranes planned for replacement have configuration problems: e.g. hook height or boom reach are limited and are unable to adequately service the current ships under repair at the shipyards. Navy cannot be relied upon for critical lifts and do not meet OSHA standards for certain operations.

As an essential project to support the shipyard mission and because no viable alternative exists, no savings/cost avoidance were determined.

**BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION**  
(\$ in thousands)

**A. FY 1995 President's Budget**

**B. Activity, Location**  
NORFOLK

**C. 0005 TURN/MILL CENTER - REPLACEMENT**

Element of Cost	FY 1993			FY 1994			FY 1995		
	Qty	Unit	Total	Qty	Unit	Total	Qty	Unit	Total
END ITEM				1				960	960

**Narrative Justification**

To meet forecasted workload, this state-of-the-art Computer Numerical Controlled (CNC) milling/turning center will replace four over-age and obsolete machines. The unsatisfactory condition of the present equipment results in difficulty meeting required design tolerances and can no longer be used. This equipment is required to meet mandatory operations relating to refurbishing shipboard components (e.g. force draft blowers, ship service steam and turbine generators/rotors, feed pumps, etc.) for all ship types.

As an essential project to support the shipyard mission and because no viable alternative exists, no significant savings/cost avoidance were determined. The replacement of the four old machines will reduce maintenance costs from approximately \$1,200.00 per year to \$750.00 per year for the new machine.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (\$ in Thousands)										A. FY 1995 President's Budget		
B. Department of the Navy/Depot Maintenance/Naval Shipyards			C. 0006 HORIZONTAL BORING MILL, REMANUFACTURE - REPLACEMENT				D. Activity, Location, Puget Sound					
Element of Cost	FY 1993			FY 1994			FY 1995					
	Qty	Unit	Total	Qty	Unit	Total	Qty	Unit	Total	Qty	Unit	Total
END ITEM							1	950				950
Narrative Justification:												
<p>This machine requires remanufacture due to its poor mechanical and electrical condition. Greater operator skill is required to secure accurate machine positioning, maintenance downtime is increasing and tolerance and finish specifications cannot be met. Remanufacture will correct the machine's deficiencies. The control upgrade and chip conveyor, which will be installed as part of the remanufacture, will make this machine more economical to operate.</p> <p>An economic analysis has not been performed as this machine is essential to support this shipyard's mission. However, the estimated cost of remanufacture and upgrade is \$950,000 while the estimated cost of a new machine is approximately \$3,300,000. The NPV for the chosen alternative (rebuild) is \$51,262.</p>												

**BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION**  
(\$ in thousands)

A. FY 1995 President's Budget

B Department of the Navy/Depot Maintenance/Naval Shipyards  
 C. 0007 BORING MACH, HORIZONTAL, CNC - REPLACEMENT  
 D. Activity, Location  
 Norfolk

Element of Cost	FY 1993			FY 1994			FY 1995		
	Qty	Unit	Total	Qty	Unit	Total	Qty	Unit	Total
END ITEM							1	1,950	1,950

**Narrative Justifications**

This machine is required to replace two existing boring mills which no longer meet specifications due to poor condition and out dated technology. This equipment is required for scheduled submarine and surface ship overhauls to refurbish critical components such as shaft sleeves, ship service turbine generators, feed pumps and valve bodies. Because of the deteriorated condition, these machines cannot be remanufactured and must be replaced.  
 Even though this equipment is considered mission essential, an economic analysis for this project was performed and the NPV favoring new procurement was \$338,876.

**BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION**  
(\$ in thousands)

A. FY 1995 President's Budget

B. Department of the Navy/Depot Maintenance/Naval Shipyards

C. 0012 PUNCH PRESS, CNC - PRODUCTIVITY

D. Activity, Location  
Norfolk

Element of Cost	FY 1993			FY 1994			FY 1995		
	Qty	Unit	Total	Qty	Unit	Total	Qty	Unit	Total
END ITEM							1	550	550

**Narrative Justification:**

This equipment will replace several separate operations now required to produce parts for ship components (e.g. stacks, steam drum parts, scrubber plates, air registers, boiler braces, baffle plates, etc.). Layout/setup, punching, and grinding time will be greatly reduced as well as rework caused by equipment inaccuracies. This machine will allow parts to be produced directly from Computer Numerical Control (CNC) tapes from CAD/CAM systems. An economic analysis for this project was performed and the NPV favoring new procurement was \$159,539.

**BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION**  
( \$ in Thousands)

A. FY 1995 President's Budget

B. Department of the Navy/Depot Maintenance/Naval Shipyards  
 C. 0014 EQUIPMENT (FY 93: >\$15K<\$500K; FY 94/95: >\$25K<\$500K)  
 D. Activity, Location  
 PISMA, PHILA, NORVA, CHASH  
 LBEACH, MARE, PUGET, PEARL

Element of Cost	FY 1995			FY 1996			FY 1995		
	Qty	Unit	Total	Qty	Unit	Total	Qty	Unit	Total
END ITEM	VAR	VAR	30,350	VAR	VAR	23,403	VAR	VAR	16,147

**Narrative Justifications:**

These items are required for naval shipyards to accomplish assigned work, to meet mandatory regulations and to replace overage and unreliable equipment. Included are refueling support equipment under \$500,000; mandatory CESE/WME replacements; equipment to reduce or contain hazardous materials and wastes under \$500,000; equipment to improve or maintain air quality in the work place; laboratory equipment and other items.

Note: As a result of base closure action, the FY 94 programs for NAVSHIPYD CHASH and MARE have been reduced to \$500,000 each to fund mission essential and environmental projects. In addition, the FY 94 program for NAVSHIPYD PHILA has been reduced to \$765,000 to fund mission essential and environmental projects. The FY 95 programs have all been reduced to 90.0.

**BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION**  
(\$ in Thousands)

A. FY 1995 President's Budget

D. Activity, Location  
PTSMH, NORVA,  
LBEACH, PUGET, PEARL

C. 0015 INFORMATION TECHNOLOGY (IT)  
CONSOLIDATION - DMRD 926

B. Department of the Navy/Depot Maintenance/Naval Shipyards

Element of Cost	FY 1993			FY 1994			FY 1995		
	Qty	Unit	Total	Qty	Unit	Total	Qty	Unit	Total
END ITEM				VAR	VAR	7,705	VAR	VAR	11,540

**Narrative Justifications**

The objective of the Naval Shipyard Information Resource Management Improvement Program, formerly referred to as the DMRD 926 Consolidation Plan, is to migrate current standard legacy system from aging, proprietary mainframe and selected mini-computer platforms, as required by Navy and GSA, to a client-server based open systems environment. This program will lower the cost of the NAVSEA/Naval Shipyard technology environment, position shipyard IIM to support command-wide restructuring, base closure and downsizing actions, standardize shipyard mission-oriented processes in conjunction with CIM initiatives, and accommodate naval shipyard IT budget reductions already taken for DMRD 926. This initiative will eliminate duplicate applications and standardize applications across naval shipyards. This migration will retain the current functionality of existing legacy systems. No new system development or redesign will take place. The open systems, client-server based architecture to be utilized is a standards-based architecture which embraces the CIM technical reference model and applies the National Institute of Standards and Technology (NIST) Application Portability Profile (APP). This item description includes the operating/systems software and data conversion required to support the operation of the equipment. The total capital purchase cost to the Naval Shipyards for this hardware/software migration initiative in FY 94-FY 96 is \$26.15M. The Functional Economic Analysis (FEA) performed for this initiative validated the initial projected savings of \$101.6M. It is projected that this initiative will have a useful system life of four additional years beyond the original six program years (FY 1992-1997); therefore, it is now estimated that total program savings are \$122M in (discounted) current year dollars. The impact of not executing this program will be: (1) the inability to continue to support the downsized shipyard operations, (2) failure to integrate with mission-related business process improvements, (3) perpetuate an already outmoded and increasingly expensive and proprietary operating environment which NAVSEA has committed to Navy and the General Services Administration (GSA) to eliminate, and (4) negate the shipyards' ability to achieve the DMRD 926 savings taken in advance of program execution. The program is in concept development phase. Milestones 1/11 approval was granted in August 1993, complete mainframe off-load is scheduled for 4th quarter FY 96.



**BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION**  
(\$ in Thousands)

A. FY 1995 President's Budget

B. Department of the Navy/Depot Maintenance/Naval Shipyards  
 C. 0016 MMR CONSTRUCTION PROJECTS (\$15,000 TO \$300,000)  
 D. Activity, Location  
 PISMA, PHILA, NORVA, CHASH  
 LBEACH, MARE, PURET, PEARL

Element of Cost	FY 1993			FY 1994			FY 1995				
	Qty	Unit	Total	Qty	Unit	Total	Qty	Unit	Total		
	END ITEM				VAR	VAR	2,800	VAR	VAR	11,459	VAR

**Narrative Justification:**

The erection, installation and assembly of new mission essential facilities as well as the extension, alteration, conversion, replacement and relocation of existing facilities is mandatory for the Navy to reduce operating costs and meet readiness requirements. Naval shipyards must maintain facilities that average 50 years and in some instances are over 200 years old. Some of these facilities are structurally unbound and contain materials that are now considered harmful. In some cases less efficient temporary facilities are used in order to meet mission requirements.

New facilities are required to meet new mission changes, to correct environmental concerns and to reduce operating costs. Facilities on the West coast that do not meet seismic requirements need to be renovated/replaced. Some facilities on the East and West coasts contain asbestos hazards which must be abated. Additional lighting is required to provide sufficient illumination to waterfront and perimeter areas to prevent unauthorized infiltration and reduce personal injury. Finally, the construction of facilities is required to comply with environmental laws and regulations.

Notes: As a result of base closure action, the FY 94 program for NAVSHIP70 CHASH and MARE have been reduced to \$100,000 each to fund mission essential and environmental projects. The FY 95 programs have been reduced to \$0.0. In addition, the FY 94 program for NAVSHIP70 PHILA has been reduced to \$300,000 to fund mission essential and environmental projects.

**BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION**  
(\$ in Thousands)

		A. FY 1995 President's Budget								
		B. Department of the Navy/Depot Maintenance/Naval Shipyards			C. 0012 PUNCH PRESS, CNC - PRODUCTIVITY			D. Activity, Location		
					Norfolk					
		FY 1993			FY 1994			FY 1995		
Element of Cost		Qty	Unit	Total	Qty	Unit	Total	Qty	Unit	Total
END ITEM					1	550		1	550	550

**Economic Analysis (EA):**

**A. Present method, using existing equipment:**  
 Shop 41 Labor @ \$17.74/Hr x 8950 Hrs/yr = \$ 157,010  
 Shop 26 Labor @ \$17.51/Hr x 1420 Hrs/yr = \$ 24,844  
 Scrap/Rework = \$ 1,746  
 Tool Maintenance = \$  
**Total oper. costs/yr = \$178,207**

**B. Proposed method, purchasing new equipment (Prod. Inc. #2.6)**  
 Labor @ \$17.74/Hr x 3500 Hrs/yr = \$ 62,090  
 Labor @ \$17.51/Hr x 0 Hrs/yr = \$  
 Scrap/Rework = \$  
 Tool Maintenance = \$ 807  
**Total oper. costs/yr = \$ 62,977**

**C. Savings: Annual \$115,310, IRR = 16.36%, Payback period = 4.77 yrs, NPV = \$158,530**

**CAPITAL BUDGET SUMMARY**  
**NON-ADP PROGRAM - SUBMIT**  
**DEPARTMENT OF THE NAVY**  
**DEPOT MAINTENANCE - AVIATION DEPOTS**  
**(\$ IN MILLIONS)**

LINE #	Item Description	FY 1993		FY 1994		FY 1995	
		Quant	Total Cost	Quant	Total Cost	Quant	Total Cost
	<b>1A. NON-ADP EQUIPMENT (&gt;\$500,000)</b>						
	A. Replacement						
NEL 0000 R	CORPORATE AUTOMATED SHOT PEENING EQUIPMENT UPGRADE	4	4,313				
BEL 9301 R	PLASTIC MEDIA BLAST SYSTEM	1	2,000				
FEL 002A R	AUTOMATIC STARTER TEST FACILITY UPGRADE	1	2,000				
FEL 0017 R	PNEUMATIC TEST CELLS INSTRUMENTATION	1	0,600				
BEL 9303 R	METAL PREPARATION TANKS EQUIPMENT	1	0,550	1	3,000	3	3,900
FEL 0002 R	HYDROFORMING MACHINE						
NEL 0000 R	CORPORATE ASKARS UPGRADE						
	Subtotal - Replacement		9,463		3,000		3,900
	<b>B. Productivity</b>						
FEL 0004 P	HIGH PRESSURE COMPRESSED AIR STORAGE SYSTEM	1	0,600				
EEL 5603 P	AUTO DEBLADE SYSTEM					1	0,760
	Subtotal - Productivity		0,600		0,000		0,760
	<b>C. New Mission</b>						
NEL 000X N	CASS STATION EQUIPMENT			1	1,620		
	Subtotal - New Mission		0,000		1,620		0,000
	<b>SUBTOTAL - NON-ADP EQUIPMENT (&gt;\$500,000)</b>		10,283		4,620		4,660
NES 0000	<b>1B. TOTAL NON-ADP EQUIPMENT (&gt;\$25,000 &lt;\$500,000)</b> Replacement/Productivity/New Mission		6,695		2,476		1,197
	<b>2. GRAND TOTAL NON-ADP EQUIPMENT</b>		16,958		7,296		5,857
NMC 0000	<b>3. MINOR CONSTRUCTION (&gt;\$25,000 &lt;\$300,000)</b>		3,986		4,104		2,143
NMI 0000	<b>4. MANAGEMENT IMPROVEMENT INITIATIVES (&gt;\$500,000)</b>		15,942		0,000		0,000
	<b>GRAND TOTAL NON-ADP CAPITAL PURCHASES PROGRAM</b>		36,886		11,400		6,000

CAPITAL BUDGET SUMMARY  
ADP PROGRAM - SUBMIT  
DEPARTMENT OF THE NAVY  
DEPOT MAINTENANCE - AVIATION DEPOTS  
(\$ IN MILLIONS)

LINE #	Item Description	FY 1993		FY 1994		FY 1995	
		Quant	Total Cost	Quant	Total Cost	Quant	Total Cost
	1A. ADP & TELECOMMUNICATIONS EQUIPMENT (>\$100,000)						
F KL021AR	A. Replacement 610/640 SYSTEM			1	0.331		
E KL4003R	MULTI-USER COMPUTER SYSTEM			1	0.256		
E KL4004R	FILE SERVER SYSTEM			1	0.125		
E KL5002R	DIGITAL VAX UPGRADE					1	0.105
	Subtotal - Replacement				0.712		0.105
	B. Productivity						
C KL K034P	DESKTOP PUBLISHING SYSTEM			1	0.375		
E TL5003P	LAN FIBER - OPTIC NETWORK SYSTEM					1	0.200
	Subtotal - Productivity				0.375		0.200
	C. New Mission						
E KL3001N	NETWORKED CD - ROM SYSTEM			1	0.319		
	Subtotal - New Mission				0.319		0.000
	SUBTOTAL ADP & TELECOMMUNICATIONS EQUIPMENT (>\$100,000)				1.406		0.305
	1B. ADP & TELECOMMUNICATIONS EQUIPMENT (>\$25,000 <\$100,000)						
NKT0000	Replacement/Productivity/New Mission		0.263		0.167		0.025
	2. GRAND TOTAL ADP CAPITAL PURCHASES PROGRAM		0.263		1.573		0.330

CAPITAL BUDGET SUMMARY  
 DEPARTMENT OF THE NAVY  
 DEPOT MAINTENANCE - AVIATION DEPOTS  
 (\$ IN MILLIONS)

LINE #	Item Description	FY 1993		FY 1994		FY 1995	
		Quant	Total Cost	Quant	Total Cost	Quant	Total Cost
	GRAND TOTAL NON - ADP CAPITAL PURCHASES PROGRAM		36.866		11.400		6.000
	GRAND TOTAL ADP CAPITAL PURCHASES PROGRAM		0.323		5.458		4.459
	Joint Logistics Systems Center - Submit		0.060		3.863		4.129
	ADP Program - Submit		0.263		1.573		0.330
	GRAND TOTAL CAPITAL PURCHASES PROGRAM		37.209		16.858		12.459

**CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

B. Component/Business Area/Date Navy/Depot Maintenance/Aviation Depot/	C. Line No. & Item Description NEL000R CORPORATE ASKARS UPGRADE		FY 1993			FY 1994			FY 1995			
	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST
	D. Activity Identification											
EEL4001R JACKSONVILLE										1	0.810	0.810
ICELLO10R NORTH ISLAND										1	0.950	0.950
FEL0003R CHERRY POINT										1	2.140	2.140
<b>TOTAL</b>												<b>3.900</b>

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. 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.

**CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

A. FY 1995 PRESIDENT'S BUDGET

B. Component/Business Area  
Navy/Depot Maintenance/Aviation Depot

C. Line No. & Item Description  
EEL50SP AUTO DEBLADE SYSTEM

D. Activity Identification  
JACKSONVILLE

ELEMENTS OF COST	FY 1993			FY 1994			FY 1995		
	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST
							1	700	700

Justification:

The 6th through 14th stage compressor rotor assemblies of the T56 engine are currently disassembled manually. The blades are detached by shearing the locking pin with a sharp blow to the front side base of the blade and then removing the remainder of the pin from the compressor wheel. This manual procedure damages one compressor wheel for every five compressor rotors disassembled. There is no repair procedure for these compressor wheels, which must be replaced at an approximate cost of \$113,000 annually. Procurement of this equipment will produce an annual savings of \$113,000 and improve the quality of the final product.

A Cost Benefit Analysis has been performed with an: Average annual savings: \$172,887 starting in FY 96 Payback period: 3.3 years Rate of return: 22.7%

**CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

A. FY 1995 PRESIDENT'S BUDGET

B. Component/Business Area: Navy/Depot Maintenance/Aviation Depot  
 C. Line No. & Item Description: NES0000 TOTAL NON-ADP EQUIPMENT (>\$25,000 <\$500,000)

D. Activity Identification

ELEMENTS OF COST	FY 1995			TOTAL COST			TOTAL COST		
	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST
TOTAL									1,197

Justification:

- FES0000R Miscellaneous Capital Equipment
- FES0000N Capital Equipment Installations
- FESA015R 28" Swing Flat Bed Lathe Replacement
- FESC007R Automatic Grinding/Polishing Syst. Replacement
- FESA016R Surface Grinder Replacement
- FESA017R Small Diameter (Hyton) Lathe Replacement
- FESA006R Controller Upgrade for Vert. Spindle Grinder
- FESD010R Whirl Tower Software Upgrade
- FESB009R Automatic Cut-Off Machine Replacement
- EES000SN Miscellaneous Capital Equipment
- EES000SN In-House Installations
- EES5001R F404 Engine Adapter
- EES5002N Material Storage System
- CESM010R Miscellaneous Capital Equipment
- CESN041R Capital Equipment Installations
- CESA042R CNC 10" Lathe



**CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

A. FY 1995 PRESIDENT'S BUDGET

B. Component/Business Area  
Navy/Depot Maintenance/Aviation Depot

D. Activity Identification

C. Line No. & Item Description  
NMC0000 MINOR CONSTRUCTION (>\$25,000 <\$500,000)

ELEMENTS OF COST	FY 1995			FY 1995			FY 1995		
	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST
TOTAL									2,148
Justification:									
FMCCR95-89									
FMCCER80-81									
FMCC24-93									
FMCCR47-90									
FMCCR30-93									
FMCCA79-90									
FMCC99-92									
FMCR27-93									
EMC0008									
EMC0001									
EMC5002									
EMC5003									
CMCO029									
CMCO039									
CMCO024									
CMCO007									
CMCO002									

All/Rep to Chilled Water System, B133  
 Construct Shelter/Repair Paint Shop, Shop 858, B84  
 All to Air Conditioning Units, Mezz. E, B137  
 All/Rep to Security Perimeter Fence  
 All/Rep to Sodium Bicarbonate Blast, Shop 98211, B137  
 All to Mozzarella, B4224  
 Replace Air Conditioning Unit, Code 55210, B84  
 All/Rep to Engine Test Cells 1 & 2, B133  
 Misc Small Jobs  
 In-House Construction  
 CASS Transition Space  
 Enclose Prod. Cont Space  
 Repair and Improve Pad B Pavement  
 Relocate B-2 to B-250/B-472  
 Construct Hazardous Waste Sites  
 Demolish APCUS  
 Relocate Code 07 From B-2  
 Recycle/Treat Water

**CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

A. FY 1985 PRESIDENT'S BUDGET

B. Component/Business Area Navy/Depot Maintenance/Aviation Depot	C. Line No. & Item Description EKL5002R DIGITAL VAX UPGRADE			D. Activity Identification JACKSONVILLE					
	FY 1992			FY 1994			FY 1995		
ELEMENTS OF COST	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST
							1	106	106

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 95 Payback period: .8 years Rate of return: 93.5%

**CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

A. FY 1995 PRESIDENT'S BUDGET

B. Component/Business Area  
Navy/Depot Maintenance/Aviation Depot

(C. Line No. & Item Description  
|ETL5003P LAN FIBER - OPTIC NETWORK SYSTEM

D. Activity Identification  
JACKSONVILLE

ELEMENTS OF COST	FY 1992		FY 1993		FY 1994		FY 1995		TOTAL COST
	QUANT	UNIT COST	QUANT	UNIT COST	QUANT	UNIT COST	QUANT	UNIT COST	
1									200

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, Novell 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 95 Payback period: .8 years Rate of return: 96.6%

**A. FY 1995 PRESIDENT'S BUDGET**

**CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

**B. Component/Business Area**  
Navy/Depot Maintenance/Aviation Depot

**D. Activity Identification**

**C. Line No. & Item Description**  
NKT0000 ADP & TELECOMMUNICATIONS EQUIPMENT (>\$25K<\$100K)

ELEMENTS OF COST	FY 1994			FY 1995		
	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST
Cherry Point						
<b>TOTAL</b>						25 25

Justification: \_\_\_\_\_

NADEP, Cherry Point  
FKS0001P Information Subscription System

FY 1995  
25

Cost Benefit Analysis has been performed for the individual review of economic indicators.

**Depot Maintenance Capital Budget Submission**  
 Department of the Navy  
 Depot Maintenance/Weapons Station  
 FY 95 President's Budget  
 (\$In Millions)

Line #	DESCRIPTION	FY92		FY93		FY94		FY95	
		QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST
	1a. Non ADP Equip > 500K								
1	P-171 NON-ADP EQUIP (New Mission)			1	0.363	1	0.860	1	0.172
	Subtotal Non ADP Equip				0.363		0.860		0.172
	1b. Misc.Non ADP Equip < 500K								
2	Replacement			VAR	2.417	VAR	2.768	VAR	2.736
3	Productivity			VAR	0.104	VAR	0.500	VAR	0.477
4	New Mission					VAR	0.554	VAR	0.456
5	Envir/Safety			VAR	0.303	VAR	0.333		
	Subtotal Misc Non ADP Equip				2.824		4.155		3.669
	2a. ADP Equip > 100K								
6	LAN EXPANSION (Replacement)			1	0.388	1	0.280		

**Depot Maintenance Capital Budget Submission**  
 Department of the Navy  
 Depot Maintenance/Weapons Station  
 FY 95 President's Budget  
 (\$In Millions)

Line #	DESCRIPTION	FY92		FY93		FY94		FY95	
		QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST
7	SPARC FILE SERVER (Replacement)			1	0.107				
8	BROADBAND EXPANSION (Replacement)							1	0.185
9	CARTRIDGE TAPE SUBSYS (Replacement)			1	0.152				
10	ETHERNET COMM SYSTEM (Replacement)					2	0.100		
11	DISK STORAGE (Replacement)					2	0.110	2	0.110
12	HOST COMPUTER REPLACEMENT (Replacement)			1	0.259				
13	OA SYSTEM REPLACEMENT (Replacement)					1	0.232		
14	DHRD 924 MIGRATION TO OSE (Productivity)					VAR	13.413	VAR	9.460
15	HP 867 PROCESSOR UPGRADE & SQL (Productivity)			1	0.174				
16	P-171 ADP EQUIP (New Mission)			1	1.337	1	1.120	1	1.025
17	B&L OPEN SYS (LAN) (New Mission)			1	0.065	1	0.200		
18	B&L OPEN SYS (SERV) (New Mission)			1	0.310				

Depot Maintenance Capital Budget Submission  
 Department of the Navy  
 Depot Maintenance/Weapons Station  
 FY 95 President's Budget  
 (\$In Millions)

Line #	DESCRIPTION	FY92		FY93		FY94		FY95	
		QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST
19	B&L OPEN SYS (WAN) (New Mission)			1	0.159	1	0.125		
20	B&L OPEN SYSTEM (New Mission)							1	0.188
21	DATA COMMUNICATIONS (New Mission)							1	0.250
22	DISTR INFO SYS (New Mission)			1	0.307				
23	MEMORY (New Mission)			1	0.175				
	Subtotal ADP Equip				3.433		15.980		11.210
	2b. Misc.ADP Equip < 100K								
24	Replacement								
25	Productivity					VAR	0.184	VAR	0.259
26	New Mission					VAR	0.174	VAR	0.115
	Envir/Safety					VAR	0.099		
	Subtotal Misc ADP Equip				0.457		0.374		0.155

**Depot Maintenance Capital Budget Submission**  
 Department of the Navy  
 Depot Maintenance/Weapons Station  
 FY 95 President's Budget  
 (\$ in Millions)

Line #	DESCRIPTION	FY92		FY93		FY94		FY95	
		QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST
	<b>3a. Telecomm Equipment &gt; 100K</b>								
27	TELEPHONE SYSTEM REPLACEMENT (Replacement)			1	0.098	1	1.987	1	1.446
28	TLM QUICK TDP (Replacement)							1	0.101
	<b>Subtotal Telecomm Equipment</b>				0.098		1.987		1.547
	<b>3b. Misc. Telecomm Equipment &lt; 100K</b>								
29	Replacement							VAR	0.017
30	Productivity							VAR	0.042
	New Mission								
	Envlr/Safety								
	<b>Subtotal Misc Telecomm Equipment</b>								0.059
	<b>4a. Off the Shelf Software &gt; 100K</b>								



**Depot Maintenance Capital Budget Submission**  
**Department of the Navy**  
**Depot Maintenance/Weapons Station**  
**FY 95 President's Budget**  
**(\$ in Millions)**

Line /	DESCRIPTION	FY92		FY93		FY94		FY95	
		QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST
	Subtotal Off the Shelf Software								
	4b. Misc. Off the Shelf Software < 100K								
31	Replacement			VAR	0.062			VAR	0.045
32	Productivity			VAR	0.020	VAR	0.099		
	New Mission								
	Envir/Safety								
	Subtotal Misc Off the Shelf Software				0.082		0.099		0.045
	5a. Software Development > 100K								
33	RPS SYSTEM (Productivity)					VAR	0.050	VAR	0.050
	Subtotal Software Development						0.050		0.050

**Depot Maintenance Capital Budget Submission**  
 Department of the Navy  
 Depot Maintenance/Weapons Station  
 FY 95 President's Budget  
 (\$In Millions)

Line #	DESCRIPTION	FY92		FY93		FY94		FY95	
		QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST
	5b. Misc. Software Development < 100K								
	Replacement								
	Productivity								
	New Mission								
	Envir/Safety								
	Subtotal Misc Software Development								
	6a. Central Design Act Hardware > 100K								
	Subtotal Central Design Act Hardware								
	6b. Misc. Central Design Act Hardware < 100K								

**Depot Maintenance Capital Budget Submission**  
 Department of the Navy  
 Depot Maintenance/Weapons Station  
 FY 95 President's Budget  
 (\$In Millions)

Line #	DESCRIPTION	FY92		FY93		FY94		FY95	
		QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST
	Replacement								
	Productivity								
	New Mission								
	Envir/Safety								
	Subtotal Misc Central Design Act Hardware								
	7. Minor Construction								
34	Replacement			VAR	1.155	VAR	1.271	VAR	0.824
35	Productivity			VAR	0.423	VAR	0.460	VAR	0.675
36	New Mission			VAR	0.694	VAR	0.573	VAR	0.611
37	Envir/Safety			VAR	1.512	VAR	2.197	VAR	2.124
	Subtotal Misc Minor Construction				3.784		4.501		4.234
	GRAND TOTAL				11.041		27.606		21.149

**DEPOT MAINTENANCE CAPITAL PURCHASES JUSTIFICATION** A. Budget Submission  
 (Dollars in Thousands) FY95 PRESIDENT'S BUDGET

B. Component/Business Area/Date  
 DOM/DEPOT MAINT/WPNSTA/  
 C. Line. No & Description  
 1/P-171 NON-ADP EQUIP (New Mission)  
 D. Activity Identification  
 WPNSTA SEAL BEACH/CORONA

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
NON-ADP EQUIP										1	172	172

**Narrative Justification: (New Mission)**

The initial non-ADP outfitting of FY91 MILCOM P-171 (Weapon Test and Evaluation Facility). The projected total 5-year (FY92-96) cost is \$2,183k for non-ADP equipment. The outfitting is phased to provide for systematic integration and expansion of capabilities. This acquisition phase includes: an internal area intrusion detection system to support the high security levels required; and additional large screen display systems to allow simultaneous display of multiple performance event data.

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 battle group. Enormous increases in complexity and capability of individual weapons and systems have also occurred. Integration of hundreds of weapons systems and people in the battle group for successful operation depends on timely assessment/feedback to Fleet Command, OPNAV, Systems Commands, and supporting engineering activities. This must include: reconstruction of battle group interaction, with a synthesized threat of realistic proportion; quantification of force and individual systems performances; and identification of force-limiting problems. This feedback will assist users to: assess Fleet readiness/capability; validate tactics; correct current, systems deficiencies; allocate resources for new/improved systems; and identify additional battlegroup training needs. This requires computer resources for: automatic decision support; interactive graphics display to interpret/manipulate data; distributed databases to accumulate performance results; a high-speed information transfer.

The CNO has recognized the need to improve training effectiveness in the coming decades, despite decreasing budgets in order for the Navy to perform its world-wide mission. Improvement in the depth and timeliness of exercise feedback is a key element in enhancing training proficiency/Fleet readiness. Without this equipment, NWAC will not be able to service the needs of the Fleet for training/readiness assessment & provide rapid feedback of results during Fleet exercises.

DEPOT MAINTENANCE CAPITAL PURCHASES JUSTIFICATION A. Budget Submission (Dollars in thousands) FY95 PRESIDENT'S BUDGET		C. Line. No & Description 2/High Non ADP Equip Rep Items > 25K < 500K		D. Activity Identification Naval Weapons Stations						
B. Component/Business Area/Date DOM/DEPOT MAINT/WNMTA/		FY 1992		FY 1993		FY 1994		FY 1995		
ELEMENTS OF COST	NON-ADP EQUIP	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
										VAR

**Narrative Justification: (Replacement)**

This investment replaces aged equipment that is beyond economical repair and will reduce downtime and maintenance. Examples of the types of equipment being purchased are milling machines, lifts, lathes, compressors, finishing machines, electric hoists, two way radio console, and civil engineering support equipment such as semi-trailers, a rotary sweeper, tractor trucks, crane trucks, multi step vans and forklifts.

DEPOT MAINTENANCE CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)		A. Budget Submissions FY93 PRESIDENT'S BUDGET							
B. Component/Business Area/Date DOM/DEPOT MAINT/WPNSTA/	C. Line. No & Description 3/Misc Non ADP Equip Prod Items > 25K < 500K	D. Activity Identifications Naval Weapons Stations							
		FY 1993	FY 1994						
ELEMENTS OF COST	FY 1992		FY 1993		FY 1994		FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
NON-ADP EQUIP							VAR		477

**Narrative Justification: (Productivity)**

These investments are productivity related items which improve the quality and efficiency of the work performed at the weapons stations. Examples of the types of equipment being purchased are a hydraulic slip table, a multichannel signal conditioning amp with bridge computer circuits, retrofit of a computer numerical control gauging system to an existing shear machine, a digitizing scope, high resolution CCD camera, engine dynamometer, 420KV x-ray manipulator, WF imaging system and an electronic test set.



**DEPOT MAINTENANCE CAPITAL PURCHASES JUSTIFICATION** (Dollars in Thousands) **A. Budget Submission FY95 PRESIDENT'S BUDGET**

B. Component/Business Area/Date DOM/DEPOT MAINT/WPNSTA/	C. Line. No & Description S/BROADBAND EXPANSION (Replacement)			D. Activity Identification WPNSTA SEAL BEACH/MADLOCK		
	FY 1992	FY 1993	FY 1994	FY 1995	Unit Cost	Total Cost
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP EQUIP INSTALLATION				1	85	85
TOTAL						185

**Narrative Justification: (Replacement)**

Broadband cabling, amplifiers, taps, and hardware required to extend existing cable plant from headend equipment located at bldg 69 to bldg 833 located at the pier.

Provide continued ADP support to pier facilities located at Port Madlock. Local Area Network capability currently terminates approximately one mile from the pier. Extending the network will allow greatly improved ADP support for ship loadouts, ordnance management support (OMS), and military support personnel working at the pier. This will also provide much needed access to anticipated network facilities including file servers and network printers. Annual cost savings are estimated at \$25,000.

Without complete network access throughout Port Madlock facilities, key personnel will not have ready access to needed information being processed via ADP systems. They will be forced to continue manual methods of input and processing, duplicating existing information, and transporting information by hand and vehicle. Since much of the processed information is directly related to shipload operations, quality service to our customers is jeopardized. Equipment List: Cabling, amplifiers, taps, miscellaneous hardware.



**DEPOT MAINTENANCE CAPITAL PURCHASES JUSTIFICATION A. Budget Submission  
(Dollars in Thousands) FY93 PRESIDENT'S BUDGET**

B. Component/Business Area/Date DOM/DEPOT MAINT/WPNSTA/ D. Activity Identification WPNSTA YORKTOWN	C. Line. No & Description 11/DISK STORAGE (Replacement)			FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP EQUIP													2	55	110

**Narrative Justification: (Replacement)**

Upgrade to provide on line disk storage capacity of 20 Gigabytes. It will have connectivity to existing Government owned computers. The modification will use the current government licensed operating system software and firmware without additional cost.

Disk requirements increase an average of 5 Gigabytes per year. This growth demand equates to capability provided by the new disks. The lack of sufficient disk capacity results in reduced user service levels which means longer times for access and retrieval.

If this project is not purchased, the system will be inefficient, requiring more maintenance and access times for users. With 400 users saving 1 minute per day of transaction time a \$36,523 savings per year with the economic life of equipment being 3 years, the savings over the life of the equipment would be \$102,613. Annual maintenance of equipment + 110,000 for equipment purchase totals \$136,400 over the life of the equipment. TOTAL LIFE SAVINGS - \$102,613 plus the TOTAL LIFE INVESTMENT - \$136,400 is \$46,213/3 YEARS which shows a savings realized per year of \$9,243.

DEPOT MAINTENANCE CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY95 PRESIDENT'S BUDGET								
B. Component/Business Area/Date DON/DEPOT MAINT/WPMSA/	C. Line. No & Description 14/DHRD 924 MIGRATION TO OSE (Productivity)	FY 1992		FY 1993		FY 1994		FY 1995		
		Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP EQUIP									VAR	9460
<p><b>Narrative Justifications: (Productivity)</b></p> <p><b>NIMIP/DHRD 924 IMPLEMENTATION: NAVSEA Information Management Improvement Program (NIMIP) was approved by ASN (RDEA) 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 (MOCIMIP) project is one of five NAVSEA NIMIP activity group projects. MOCIMIP is to migrate selected applications from aging proprietary mainframe computer systems (Bull (Moneywell), 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 NCHS Financial, ILSMIS and 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. MOCIMIP is an application migration program (from proprietary to OSE) and it 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.</b></p> <p><b>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 its TEAM (functional economic analysis model).</b></p>										

**DEPOT MAINTENANCE CAPITAL PURCHASES JUSTIFICATION A. Budget Submission**  
 (Dollars in Thousands) **FY95 PRESIDENT'S BUDGET**

B. Component/Business Area/Date DON/DEPOT MAINT/WPNSSTA/	C. Line. No & Description 16/P-171 ADP EQUIP (New Mission)			D. Activity Identification WPNSSTA SEAL BEACH/CONOMA		
	FY 1992	FY 1993	FY 1994	FY 1995	1995	1995
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP EQUIP				1	1025	1025

**Narrative Justification: (New Mission)**

The initial ADP outfitting of FY91 MILCOM P-171 (Weapon Test and Evaluation Facility). Projected total 5-year cost (FY92-96) is \$5,352k for ADP equipment. Outfitting phased to provide systematic integration and expansion. Phase includes; additional real-time computer systems to provide multiple type and simultaneous missile firing analysis; a database computer for performance history/analysis; and additional graphics/engineering workstations/network system for reconstruction/analysis.

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 battle group. Enormous increases in complexity and capability of individual weapons and systems have also occurred. Integration of hundreds of weapons systems and people in the battle group for successful operation depends on timely assessment/feedback to Fleet Command, OPNAV, Systems Commands, and supporting engineering activities. This must include; reconstruction of battle group interaction, with a synthesized threat of realistic proportion; quantification of force and individual systems performances; and identification of force-limiting problems. This feedback will assist users to assess Fleet readiness/capability; validate tactics; correct current, systems deficiencies; allocate resources for new/improved systems; and identify additional battlegroup training needs. This requires computer resources for; automatic decision support; interactive graphics display to interpret/manipulate data; distributed databases to accumulate performance results; & high-speed information transfer.

The CMO has recognized the need to improve training effectiveness in the coming decades, despite decreasing budgets, in order for the Navy to perform its world-wide mission. Improvement in the depth and timeliness of exercise feedback is a key element in enhancing training proficiency/Fleet readiness. Without this equipment, NWC will not be able to service the needs of the Fleet for training/readiness assessment & provide rapid feedback of results during Fleet exercises.

**DEPOT MAINTENANCE CAPITAL PURCHASES JUSTIFICATION** (A. Budget Submission  
FY95 PRESIDENT'S BUDGET)  
(Dollars in Thousands)

**B. Component/Business Area/Date**  
DON/DEPOT MAINT/WPNSTA/

**C. Line. No & Description**  
20/DEL OPEN SYSTEM (New Mission)

**D. Activity Identification**  
WPNSTA SEAL BEACH

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP EQUIP										1	100	100

**Narrative Justification: (New Mission)**

These application servers for the Station's Corporate Database are Phase 1 of the Station's plan to conform to the vendor independent "open" systems upgrade. These servers are part of a plan which will eventually take the place of the mainframe and place the Station in an "open system" client server environment, which will be less proprietary and cheaper overall.

This is Phase 1 of procurement of application servers and associated software, to be used to support the "open system" client server environment. These procurements will incorporate information delivery technologies that will allow the Station to continue a high level of user service when major computer processing nodes are centralized at a remote computing center. This is building for the future, with savings to accumulate after implementation. Essentially, DOD will be able to tie into one, or many, centralized computer centers allowing not only management, but also business and logistic decisions to be made more efficiently and thus save millions of dollars for the Federal Government.

Because of the difficulties in procurement within the Federal Government, the procuring of these assets in lieu of the actual change-over is essential. Any delay in equipment being ready for change-over could severely impact viability of local business functions and place the Station's workload in jeopardy.

**DEPOT MAINTENANCE CAPITAL PURCHASES JUSTIFICATION** A. Budget Submission  
 (Dollars in Thousands) **FY93 PRESIDENT'S BUDGET**

B. Component/Business Area/Date  
**DOM/DEPOT MAINT/WPNSTA/**

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP EQUIP										1	230	230

C. Line. No & Description  
**21/DATA COMMUNICATIONS (New Mission)**

D. Activity Identification  
**WPNSTA SEAL BRACH/CORONA**

**Narrative Justifications: (New Mission)**

Data communications upgrades and expansions to existing networks (both unclassified and secure).  
 Required by DOD to continue conversion from TCP/IP to OSI protocols. Equipment requested is required to continue to provide the Command with data communications necessary to meet function and fulfill Fleet requirements. In addition, as more of the data transmission requirements on the network become secure, the need to expand the secure portion of the network will become imperative.

1. If enhancements are not made, network degradation will adversely affect the productivity of the Command and ability to fulfill mission to the Fleet.
2. If protocol conversion is not continued, this Command will lose capability to communicate with other DOD activities that are converting to OSI.
3. If the secure portion of the network is not expanded, the Command's ability to handle classified data will degrade severely.

DEPOT MAINTENANCE CAPITAL PURCHASES JUSTIFICATION A. Budget Submission (Dollars in Thousands) FY95 PRESIDENT'S REPORT		B. Component/Business Area/Date DOM/DEPOT MAINT/WPNS7A/		C. Line. No & Description 24/Misc ADP Equip Rep Items >23R < 100K		D. Activity Identification Naval Weapons Stations			
ELEMENTS OF COST	FY 1992		FY 1993		FY 1994		FY 1995		
	Quant	Unit Cost	Quant	Unit Cost	Quant	Unit Cost	Quant	Unit Cost	
ADP EQUIP									40
<p><b>Narrative Justification: (Replacement)</b></p> <p>This investment replaces aged ADP equipment that is beyond economical repair and will reduce downtime and maintenance. Examples of the types of ADP equipment purchased are a computer page printing systems, open systems environment data server, file server, an image processing system, head expander, disk storage and a digital document imaging system.</p>									

DEPOT MAINTENANCE CAPITAL PURCHASES JUSTIFICATION A. Budget Submission (Dollars in Thousands)		FY 1992		FY 1993		FY 1994		FY 1995				
B. Component/Business Area/Date DON/DEPOT MAINT/WHSTA/	C. Line. No & Description 28/Misc ADP Equip Prod Items >29K < 100K	D. Activity Identification Naval Weapons Stations	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Unit Cost	Quant	Unit Cost	Total Cost
ADP EQUIP										VAR		107

**Narrative Justification: (Productivity)**

These investments are productivity related items which improve the quality and efficiency of the work performed at the weapons stations. Examples of the types of ADP equipment purchased are Sun SMP network managers, UNIX SMP server, memory upgrade, disk array for UNIX server, CAD workstations, CAD/CAM workstations, document retrieval system, and a department file server.

**DEPOT MAINTENANCE CAPITAL PURCHASES JUSTIFICATION A. Budget Submission  
FY95 PRESIDENT'S BUDGET**  
(Dollars in Thousands)

B. Component/Business Area/Date DOM/DEPOT MAINT/WPNSTA/	C. Line. No & Description 27/TELEPHONE SYSTEM REPLACEMENT (Replacement)		D. Activity Identification WPNSTA YORKTOWN													
	FY 1992		FY 1993		FY 1994		FY 1995									
	Quant	Unit Cost	Quant	Unit Cost	Quant	Unit Cost	Quant	Unit Cost								
<b>ELEMENTS OF COST</b>																
<b>TELECOM EQUIP INSTALLATION</b>																
<b>TOTAL</b>												1	846	846	600	1446

**Narrative Justification: (Replacement)**

Funding in the amount of \$3.03M from FY90 and FY91 Industrial Depot Maintenance Equipment Program and the FY92 Capital Purchase Program was obligated for the purchase and installation of a new telephone switch, multiplexing equipment, and some cable plant replacement. In support of this commands telephone system upgrade the additional funding is required to replace the existing deteriorated cable plant which is projected to be \$3.6M.

Funding impact necessitates our activity to continue to phase the replacement with a completion date projected for 1995. The existing cable plant is of the 1945-50 time frame and only marginally meets current demands. Because of the deteriorated condition any future delays will increase the cost of maintenance and the probability of a major communication failure. Even with the decline of some workload the requirements for the system increase with use of modern security alarms, fire alarms, computers, key sets vs rotary dial, modems, and fax communication. A new air launched missile facility, a new STANDARD Missile facility, 25 new magazines, and consolidation of civilian personnel department functions from WPNSTA Earle and WPNSTA Charleston to Yorktown have further increased demand for replacement of unreliable telephone cables. We have a 90's technology telephone switch using deteriorating 40's technology cables. Four phases of base communication: Phase 1 - Procure switch and install FY90 and 91 funded, Phase 2 - Engineering design and cable plant FY92 and 93 funding, Phase 3 - Replace cable plant distribution FY94 funding, and Phase 4 - Replace cable plant distribution and remove old cable plant FY95 funding.

Alternatives: A. Purchase/install new switching equip, outside cable plant and subscriber equip; award maint contract. B. Award 10 yr end-to-end telecommunications service contract, to include installation of new switching equip, outside cable plant and subscriber equipment and system maintenance and logistic support. Alternative A: Total net present value: \$9,097,000, Alternative B: Total net present value: \$13,300,000 and Lease with Maintenance: \$2,016,452 per year.



**DEPOT MAINTENANCE CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission  
FY95 PRESIDENT'S BUDGET**

**B. Component/Business Area/Date  
DOM/DEPOT MAINT/WPNSTA/**

**C. Line. No & Description  
28/TLM QUICK TDP  
(Replacement)**

**D. Activity Identification  
WPNSTA SEAL BEACH/CORONA**

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
TELECOM EQUIP										1	101	101

**Narrative Justification: (Replacement)**

Equipment is a telemetry data processor for the Telemetry Ground Station. It will upgrade the capability of the quick-look station, giving it the capability to share the workload of surveying analog tapes, processing simultaneous real time telementered sources, and adding modern analysis display capabilities.

Building 500 remote battle group exercise support requires additional simultaneous real time data acquisition, analog tape surveys, and modern analysis display capabilities. This equipment will enable this station to perform data acquisition, and improve its ability to handle upcoming high data rate missile telepacks, yielding more efficient data processing. Command funding is the only source for this equipment since the Ground Station supports users with different sponsors. Annual cost savings are estimated at \$30,640.

Processing time for analog tapes will be increased, resulting in delays in producing data plots for MWAC flight analysts. Equipment List: Telemetry Data Processor.

DEPOT MAINTENANCE CAPITAL PURCHASES JUSTIFICATION		A. Budget Submission FY98 PRESIDENT'S BUDGET								
B. Component/Business Area/Date DOM/DEPOT MAINT/WFNSA/		C. Line. No & Description 29/Misc Telecom Equipment Rep Items >25K < 100K		D. Activity Identifications Naval Weapons Stations						
		FY 1992		FY 1993		FY 1994		FY 1995		
ELEMENTS OF COST	TELECOM EQUIP	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
										VAR

Narrative Justification: (Replacement)

The equipment being purchased is a TLM Quick Detrans-Disc system and will replace obsolete equipment.

**DEPOT MAINTENANCE CAPITAL PURCHASES JUSTIFICATION A. Budget Submission  
(Dollars in Thousands) FY95 PRESIDENT'S BUDGET**

B. Component/Business Area/Date DOM/DEPOT MAINT/WPNSA/	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
C. Line. No & Description 30/Misc Telecom Equipment Prod Items >25K < 100K												
D. Activity Identification Naval Weapons Stations										VAR		42

**Narrative Justification: (Productivity)**

This investment is for procurement of a video conference system that will provide WPNSA Seal Beach with closed circuit TV cameras and monitors for the purpose of conducting meetings, conferences, symposiums, etc. remotely with other sites and activities.

Video communications will allow the WPNSA Seal Beach 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.

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

**DEPOT MAINTENANCE CAPITAL PURCHASES JUSTIFICATION** A. Budget Submission  
 (Dollars in Thousands) **FY95 PRESIDENT'S BUDGET**

<b>B. Component/Business Area/Date</b> DON/DEPOT MAINT/WPNSGA/		<b>C. Line. No &amp; Description</b> 31/Misc Off the Shelf Software Rep Items >25K < 100K		<b>D. Activity Identification</b> Naval Weapons Stations			
<b>FY 1992</b>		<b>FY 1993</b>		<b>FY 1994</b>		<b>FY 1995</b>	
<b>ELEMENTS OF COST</b>	<b>Quant</b>	<b>Unit Cost</b>	<b>Total Cost</b>	<b>Quant</b>	<b>Unit Cost</b>	<b>Total Cost</b>	<b>Total Cost</b>
OFF THE SHELF SOFTWARE							48

**Narrative Justification: (Replacement)**

This investment purchases Systems Query Language (SQL) database license and communications software license.

The SQL database continues our conversion to Open Systems Environment (OSE) software applications. Conversion to OSE is in accordance with DoD guidelines and in compliance with the NAVSEA Information Resources Strategic Plan (IRSP). A major benefit of OSE software applications is the ease of migration from one hardware platform to another hardware platform (e.g., Honeywell/IBM to UNIX). This eliminates the need for proprietary hardware. It also reduces the need to purchase software that converts data from one hardware platform so it can be used by another hardware platform. Communications software will replace existing raw asynchronous network with a more capable, more reliable, DoD approved TCP/IP software for electronic mail and file transfer applications.

If the procurements are not made, the projected savings and improvements will be lost. Conversion to OSE software applications will not take place. WPNSGA Concord will not comply with DoD guidelines or the NAVSEA IRSP.

**..... CAPITAL PURCHASES JUSTIFICATION. A. Budget Submission**  
 (Dollars in Thousands) **FY93 PRESIDENT'S BUDGET**

**B. Component/Business Area/Date**  
 DON/DEPOT MAINT/WPNSSTA/

**C. Line. No & Description**  
 33/RFS SYSTEM  
 (Productivity)

**D. Activity Identification**  
 WPNSSTA SEAL BEACH

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
SOFTWARE DEVELOPMENT										VAR		50

**Narrative Justification: (Productivity)**

The Resource Planning System will provide an automated data collection and information processing system for the Capital Purchase Program (CPP). The system will be employed at Warfare Centers and Weapons Stations for collecting CPP related information.

Currently the CPP program is completed by each of the Weapon Stations and Warfare Centers using a cadre of computer software. This data is faxed/mailed to Headquarters where it must be reinput into a common structure to meet NAVCONPT reporting requirements. Reinputting of data at the Warfare Centers and Weapons Stations is very time consuming. Reinputting this data into a common structure at headquarters level is also time consuming. A consolidated CPP system will save data collection time at the activity level and at the headquarters level. Annual cost avoidance at the Warfare Stations, Warfare Centers, and Headquarters is estimated to be \$300,000 annually.

If an automated CPP system is not developed, the collection, tracking, and reporting of CPP data to NAVCONPT will continue to be done in an inefficient non systematic way.

**DEPOT MAINTENANCE CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)** **A. Budget Submission FY95 PRESIDENT'S BUDGET**

B. Component/Business Area/Date DON/DEPOT MAINT/WPNSA/ ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
C. Line. No & Description 34/Misc Minor Construction Rep Items												
D. Activity Identification Naval Weapons Stations										VAR		\$24

**Narrative Justification: (Replacement)**

This line funds the minor construction and the minor construction portion of projects which are a combination of Maintenance and Repair and minor construction. Examples of these projects include: construct SMS parking facility, construct ordnance field house, construct inert storage buildings, install boat lifts, construct new range facility, replace guard shack, replace PMSR storage at wharf, construct forklift battery shop, construct small boat pier, and upgrade electrical building.

**DEPOT MAINTENANCE CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
**FY95 PRESIDENT'S BUDGET**

**B. Component/Business Area/Date**  
**DON/DEPOT MAINT/WPNSSTA/**

**C. Line. No & Description**  
**35/Misc Minor Construction**  
**Prod Items**

**D. Activity Identification**  
**Naval Weapons Stations**

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
MINOR CONSTRUCTION										VAR		673

**Narrative Justification: (Productivity)**

The projects identified provide increased infrastructure support to the stations. Examples of these projects include: construct truck turn-around scale house, magazine access upgrades, and install local area network (Phase IV).

**DEPOT MAINTENANCE CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in thousands)

**A. Budget Submission  
FY95 PRESIDENT'S BUDGET**

**B. Component/Business Area/Date  
DON/DEPOT MAINT/WFHSTA/**

**C. Line. No & Description  
36/Misc Minor Construction  
New Mission Items**

**D. Activity Identification  
Naval Weapons Stations**

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
MINOR CONSTRUCTION										VAR		611

**Narrative Justification: (New Mission)**

The projects identified provide increased infrastructure support to the stations. Examples of these projects include: move overhead stanchions/enclose storage, enlarge bay access doors to accommodate containers, construct high level messanine deck for storage, and installation of power/lights to magazine.



**DEPOT MAINTENANCE CAPITAL PURCHASES JUSTIFICATION A. Budget Submission  
(Dollars in Thousands) FY95 PRESIDENT'S BUDGET**

**B. Component/Business Area/Date**  
**DOM/DEPOT MAINT/WPNSTA/**

**C. Line. No & Description**  
**37/Misc Minor Construction**  
**Env/Safety Items**

**D. Activity Identification**  
**Naval Weapons Stations**

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
MINOR CONSTRUCTION										VAR		2124

**Narrative Justification: (Environ/Safety)**

These projects are required to meet regulatory requirements which are primarily environmental or safety related. Examples of these projects include: rerouting pier force main interceptor, renovate telephone switch rooms, expand mainline firehouse, construct above ground tank containment, construct oil/water separators, construct lead acid battery storage facility, construct air emission control systems, install trenches at hazardous waste bldg, construct handicap ramp, pier fenders, construct weigh station, construct covered storage for transformer storage, install fire protection, construct hazardous material warehouse, modify building to inert storage, pedestrian walkways, installation of fencing at ammo/tow roads, and provide awning/floor drain for chemical holding tank cleaning system.

DEFENSE BUSINESS OPERATIONS FUND  
 MARINE CORPS DEPOT MAINTENANCE  
 SUMMARY OF INDUSTRIAL FUND  
 CAPITAL PURCHASES  
 (DOLLARS IN MILLIONS)

LINE NUMBER	ITEM DESCRIPTION	FY 1993		FY 1994		FY 1995	
		QUANTITY	TOTAL COST	QUANTITY	TOTAL COST	QUANTITY	TOTAL COST
	SUBTOTAL ALL EQUIPMENT CATEGORIES	22	3.2	22	2.1	28	2.4
	2. MINOR CONSTRUCTION >\$25K <\$300K						
013	REPLACEMENT	1	0.2			8	0.9
014	PRODUCTIVITY	10	0.8	10	1.6	2	0.3
015	NEW MISSION	4	0.3	4	0.6	10	1.2
	Subtotal	15	1.3	14	2.2		
	3A. SOFTWARE >\$500K						
016	REPLACEMENT						
017	PRODUCTIVITY						
018	NEW MISSION	0	0.0	0	0.0	0	0.0
	Subtotal						
	3B. SOFTWARE >\$25K <\$500K						
019	REPLACEMENT						
020	PRODUCTIVITY	0	0.0	0	0.0	0	0.0
021	NEW MISSION						
	Subtotal	37	4.5	36	4.3	38	3.6
	TOTAL						

DEFENSE BUSINESS OPERATIONS FUND  
MARINE CORPS DEPOT MAINTENANCE  
SUMMARY OF INDUSTRIAL FUND  
CAPITAL PURCHASES  
(DOLLARS IN MILLIONS)

LINE NUMBER	ITEM DESCRIPTION	FY 1993		FY 1994		FY 1995	
		QUANTITY	TOTAL COST	QUANTITY	TOTAL COST	QUANTITY	TOTAL COST
<b>IA. EQUIPMENT PURCHASES OVER \$500K</b>							
001	REPLACEMENT						
002	PRODUCTIVITY						
003	NEW MISSION	1	0.9	1	0.8	0	0.0
	Subtotal	1	0.9	1	0.8	0	0.0
<b>IB. INFO MGT EQUIPMENT &gt; \$500K.</b>							
004	REPLACEMENT						
005	PRODUCTIVITY						
006	NEW MISSION	0	0.0	0	0.0	0	0.0
	Subtotal	0	0.0	0	0.0	0	0.0
<b>IC. EQUIPMENT &gt;\$25K &lt;\$500K</b>							
007	REPLACEMENT	6	0.7	9	0.9	16	1.3
008	PRODUCTIVITY	12	1.4	8	0.2	8	0.8
009	NEW MISSION	3	0.2	4	0.2	4	0.3
	Subtotal	21	2.3	21	1.3	28	2.4
<b>1D. INFO MGT EQUIPMENT &gt;\$25K&lt;500K</b>							
010	REPLACEMENT						
011	PRODUCTIVITY	0	0.0	0	0.0	0	0.0
012	NEW MISSION	22	3.2	22	2.1	28	2.4
	Subtotal	22	3.2	22	2.1	28	2.4
<b>SUBTOTAL ALL EQUIPMENT CATEGORIES</b>							

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

A. FY 1995 PRESUDO

B. INDUSTRIAL FUND/ACT GRP/ACTIVITY  
 MARINE CORPS INDUSTRIAL FUND/DEPOT MAINTENANCE/

1C. EQUIPMENT >\$25K <\$500K

	FY 1993		FY 1994		FY 1995	
	QTY	UNIT COST	QTY	UNIT COST	QTY	UNIT COST
EQUIPMENT GREATER THAN 15K AND LESS THAN 500K					28	2,440

NARRATIVE JUSTIFICATION:

THIS EQUIPMENT WILL BE PROCURED TO REPLACE OUTDATED EQUIPMENT, ENHANCE CAPABILITIES TO SUSTAIN OUR MISSION, AND REDUCE MACHINE PROCESS TIME. EQUIPMENT PURCHASES PLAY A VITAL ROLE IN THE DMA'S ABILITY TO HARNESS TECHNOLOGY AND PROCURE LABOR SAVING DEVICES WHICH MORE EFFICIENTLY AND EFFECTIVELY UTILIZES PERSONNEL RESOURCES. FY 94 AND FY 95 EQUIPMENT INCLUDES A MILLING MACHINE, SAW BLADE VELDOR, ROTORBLAST MACHINE, TRANSMISSION TEST STAND, PARTS RETRIEVER VERTICAL MILLING MACHINE, LATHE, RADIATOR TEST VAT, SIGNAL GENERATOR, SPRECTRUM ANALYZER, THERMAL TEST STATION, DRILLING MACHINE, AND WATER JET CUTTING SYSTEM, ETC.

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/ACTIV | 2. MINOR CONSTRUCTION >\$15K <\$300K

MARINE CORPS INDUSTRIAL FUND/DEPOT MAINT

	FY 1992 ACTUALS		FY 1993 ESTIMATE		FY 1994 ESTIMATE		FY 1995 ESTIMATE		
	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
MINOR CONSTRUCTION (GREATER THAN 15K AND LESS THAN 300K							10		1,150

NARRATIVE JUSTIFICATION: THESE PROJECTS INCLUDE CONSTRUCTION OF FIRE ESCAPES, RELOCATION OF LVT STAND, ENCLOSING TOOL ROOM, REMOVAL OF THE DISPENSARY, CONSTRUCTION OF NEW HAZARDOUS WASTE STORAGE BLDG, CONSTRUCT COUNTING FACILITY, AND PROVIDE ADDITIONAL CONCRETE HARDSTAND. THESE PROJECTS WILL ENHANCE OUR CAPABILITIES TO BETTER MEET OUR CUSTOMER REQUIREMENTS. MINOR CONSTRUCTION PROJECTS ARE NECESSARY TO INSTALL MANY OF OUR CAPITAL EQUIPMENT ITEMS SUCH AS THE DYNAMOMETERS, GRIT BLAST BOOTH AND OTHER AREAS THAT NEED TO BE SET UP OR UPGRADED. IN ADDITION, THESE PROJECTS ARE VITAL TO THE DMA'S LABOR SAVING EFFORTS FOR A MORE EFFICIENT WORK PLACE.

**DEFENSE BUSINESS OPERATIONS FUND - NAVY**

**FY 1995 CAPITAL BUDGET**

**TRANSPORTATION**

0231

**Business Area Capital Budget Summary**  
**Component: Military Sealift Command**  
**Business Area: Transportation**  
**Date: Congressional Submission**  
**(\$ in Millions)**

Exhibit Fund - 9a

Line #	ITEM DESCRIPTION	FY 1993		FY 1994		FY 1995		FY 1996	
		Qty	Total Cost	Qty	Total Cost	Qty	Total Cost	Qty	Total Cost
C001	Equipment Replacement Productivity New Mission Sub-total	5	0.1	5	0.1	10	0.2		
C002	Minor Construction greater than \$15,000 but less than \$300,000				0.3				0.0
C003	ADPE & Telecomm Resources > \$15,000				3.2		3.5		
C004	- ADPE - Software Sub-total	0	0.0	0	3.9	0	3.5	0	0.0
C005	Software Development > \$15,000		0.9		0.2		1.3		
C006	- Planning & Systems Design - Systems Develop. - Deployment - Mgmt & Tech. Support Sub-total	0	3.1	0	0.8	0	1.3	0	0.0
	Management Improvement Initiatives > \$15,000								
	Major Const (non-add) Replacement Productivity New Mission Major Const. Total	0	0.0	0	0.0	0	0.0	0	0.0
	Grand Total Capital Purchases Program	5	3.2	5	5.1	10	5.0	0	0.0

**BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION**  
 (Dollars in Thousands)

**A. BUDGET SUBMISSION**  
 FY 1995 PLANNING BUDGET-CONGRESSIONAL

**B. Component/Business Area/Date** | **C. Line No. & Item Description** | **D. Activity ID**  
 Military Sealift Command/Transportation | C001 - Replacement Equip. |

ELEMENTS OF COST	FY 1993			FY 1994			FY 1995			FY 1996		
	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
Containers	5	Varies	100	5	Varies	100	10	Varies	200			
<b>Total</b>	<b>5</b>		<b>100</b>	<b>5</b>		<b>100</b>	<b>10</b>		<b>200</b>	<b>0</b>		<b>0</b>

**Narrative Justification:**

- Containers, primarily reefers, are used to provide effective transport of items within the NFAF program.



**BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION** | **A. BUDGET SUBMISSION**  
 (Dollars in Thousands) | **FY 1995 PLANNING BUDGET-CONGRESSIONAL**

**B. Component/Business Area/Date** | **C. Line No. & Item Description** | **D. Activity ID**  
 Military Sealift Command/Transportation | C003 International Maritime Satellite INMARSAT/Earth Station |

ELEMENTS OF COST	FY 1993			FY 1994			FY 1995			FY 1996		
	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
INMARSAT/Earth Station							10	Varies	611			
<b>Total</b>	<b>0</b>		<b>0</b>	<b>0</b>		<b>0</b>	<b>10</b>		<b>611</b>	<b>0</b>		<b>0</b>

**Narrative Justification:**

To provide increased communication capabilities for ship to shore.

**BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION** | **A. BUDGET SUBMISSION**  
 (Dollars in Thousands) | **FY 1995 PLANNING BUDGET-CONGRESSIONAL**

**B. Component/Business Area/Date** | **C. Line No. & Item Description** | **D. Activity ID**

Military Sealift Command/Transportation | C003 Fly Away Kits

ELEMENTS OF COST	FY 1993			FY 1994			FY 1995			FY 1996		
	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
Fly Away Kits												
- Generator/UPS							24	Varies	84			
- Micro							12	4.0	48			
- Fax							12	1.2	15			
- Printer							12	0.5	6			
- STU III							12	2.0	24			
- IMARSAT							12	35.0	420			
<b>Total</b>	<b>0</b>		<b>0</b>	<b>0</b>		<b>0</b>	<b>84</b>		<b>597</b>	<b>0</b>		<b>0</b>

**Narrative Justification:**

The Mobile Command, Control, and Communications (C3) Fly Away kits are needed to provide instant C3 capabilities at any port facility or theater that MSC might be required to support. Using the Mobile C3 Fly Away Kits operations, transportation, engineering, and contracting personnel can function fully within theater. Reserves also may make use of the capabilities of the Mobile C3 Fly Away Kits.

**BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION** | **A. BUDGET SUBMISSION**  
 (Dollars in Thousands) | **FY 1995 PLANNING BUDGET-CONGRESSIONAL**

**B. Component/Business Area/Date** | **C. Line No. & Item Description** | **D. Activity ID**  
 Military Sealift Command/Transportation | C003 Projection System

ELEMENTS OF COST	FY 1993			FY 1994			FY 1995			FY 1996		
	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
Projection System							12	Varies	182			
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>		<b>182</b>	<b>0</b>		<b>0</b>

**Narrative Justification:**

The projection system will provide a large screen color display to automate weather and ship locations. The system also will allow monitoring of LAN, Gateway, and traffic troubleshooting.

**BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION** | **A. BUDGET SUBMISSION**  
 (Dollars in Thousands) | **FY 1995 PLANNING BUDGET-CONGRESSIONAL**

**B. Component/Business Area/Date** | **C. Line No. & Item Description** | **D. Activity ID**  
 Military Sealift Command/Transportation | C005 & C006 Software Development |  
 | FY 1993 | FY 1994 | FY 1995 | FY 1996

ELEMENTS OF COST	Qty	FY 1993		Qty	FY 1994		Qty	FY 1995		Qty	FY 1996	
		Unit Cost	Total Cost		Unit Cost	Total Cost		Unit Cost	Total Cost		Unit Cost	Total Cost
Systems Devel			3,100		800				1,338			
<b>Total</b>	<b>0</b>		<b>3,100</b>	<b>0</b>	<b>800</b>	<b>0</b>	<b>0</b>	<b>1,338</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Narrative Justification:**

All systems operate on existing MSC or NARDAC 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 data (drawings/technical manuals) are mission critical. Ship technical data is now archived in paper form. Average document age is approximately 15 years. Archives grow about 15,000 documents/year. No additional storage is available. Physical handling to meet continuing reproduction needs is destroying original documents. In event of fire or other major building damage, MSC could not restore master files.

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 PURCHASES JUSTIFICATION (Dollars in Thousands)				A. BUDGET SUBMISSION FY 1995 PLANNING BUDGET - NAVCOMPT					
B. Component/Business Area/Date Military Sealift Command/Transportation		C. Line No. & Item Description C003 Mobile Office		D. Activity ID					
FY 1993		FY 1994		FY 1995		FY 1996			
ELEMENTS OF COST	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
Mobile Office				3		2,100			
Total	0		0	0		2,100	0		0

**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. These offices are to be located on/near the MPS.

**DEFENSE BUSINESS OPERATIONS FUND - NAVY**

**FY 1995 CAPITAL BUDGET**

**RESEARCH AND DEVELOPMENT**

**BUSINESS AREA CAPITAL BUDGET SUMMARY**  
 Research and Development - Navy  
 (\$ in Millions)

LINE #	Item Description	FY 1993		FY 1994		FY 1995	
		Quant	Total Cost	Quant	Total Cost	Quant	Total Cost
<b>1a. Non ADP Equipment (&gt;\$500,000)</b>							
	Naval Surface Warfare Center						
	Naval Air Warfare Center	1.5	3.0				8.5
	Naval Undersea Warfare Center	10.5	12.2				14.3
	Naval Command, Control and Ocean Surveillance Center	3.2	6.2				9.2
	Naval Research Laboratory	0.0	2.3				4.6
	Naval Facilities Engineering Service Center	0.0	1.2				3.0
	Subtotal Equipment (>\$500,000)	0.0	0.0				0.0
		15.3	24.8				31.6
<b>1b. ADP Equipment and Telecommunications (&gt;\$100,000)</b>							
	Naval Surface Warfare Center						
	Naval Air Warfare Center	11.2	12.6				12.0
	Naval Undersea Warfare Center	15.0	12.5				9.7
	Naval Command, Control and Ocean Surveillance Center	4.9	5.3				6.7
	Naval Research Laboratory	1.9	1.3				1.2
	Naval Facilities Engineering Service Center	5.0	8.9				6.4
	Subtotal Equipment (>\$100,000)	0.6	0.4				0.4
		39.5	39.1				39.3
<b>2a. ADP Equipment and Telecommunications (&gt;\$100,000)</b>							
	Naval Surface Warfare Center						
	Naval Air Warfare Center	3.9	23.9				16.4
	Naval Undersea Warfare Center	7.6	14.0				16.5
	Naval Command, Control and Ocean Surveillance Center	4.6	13.9				7.2
	Naval Research Laboratory	1.9	2.8				2.8
	Naval Facilities Engineering Service Center	2.0	1.1				1.9
	Subtotal ADP Equipment (>\$100,000)	0.0	0.0				0.0
		20.0	55.5				48.7
<b>2b. ADP Equipment and Telecommunications (&gt;\$25,000-\$100,000)</b>							
	Naval Surface Warfare Center						
	Naval Air Warfare Center	5.7	3.3				2.8
	Naval Undersea Warfare Center	2.4	4.7				4.3
	Naval Command, Control and Ocean Surveillance Center	0.9	0.9				2.2
	Naval Research Laboratory	1.0	2.8				2.5
	Naval Facilities Engineering Service Center	2.5	3.0				4.1
	Subtotal ADP Equipment (>\$25,000-\$100,000)	0.1	0.1				0.3
		12.4	14.9				19.3

3. Software Development (>\$25,000)									
Naval Surface Warfare Center						0.4			11.2
Naval Air Warfare Center						0.1			0.5
Naval Undersea Warfare Center						0.0			0.0
Naval Command, Control and Ocean Surveillance Center						0.3			0.1
Naval Research Laboratory						0.0			0.0
Naval Facilities Engineering Service Center						0.1			0.1
Subtotal Software Development (>\$25,000)						0.9			12.9
4. Minor Construction (>\$25,000-\$300,000)									
Naval Surface Warfare Center						7.2			6.5
Naval Air Warfare Center						6.3			4.8
Naval Undersea Warfare Center						2.2			1.8
Naval Command, Control and Ocean Surveillance Center						1.1			1.7
Naval Research Laboratory						1.6			1.5
Naval Facilities Engineering Service Center						0.2			0.0
Subtotal Minor Construction (>\$25,000-\$300,000)						19.5		17.4	18.2
Grand Total Capital Purchase Program						102.6		189.8	161.9



**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

**B. Component/Business Area/Date**  
DOM/R&D/

**C. Line. No & Description**  
3/PURCHASE/INSTALL CASTING  
BELL BLDG. (743)  
(Replacement)

**D. Activity Identification**  
NSWC Indian Head

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
NON-ADP EQUIP INSTALLATION												
<b>TOTAL</b>										1	1,199	1,199
												421
												1,616

**Narrative Justification: (Replacement)**

Casting Bell.

The present system for casting is outdated, 1950's technology, and labor intensive. Each motor is cast and vacuum tested individually to assure it is leakproof. It is necessary to update and improve upon methods to effect savings, improve productivity and provide improved safety. The new system utilizing the Casting Bell will provide improvements through use of a vacuum chamber into which multiple units can be placed and filled to a predetermined weight controlled by an electronic weigh system. An operator must fill these cases individually and "eyeball" the amount of material added in each case. The new system will improve safety by allowing automated casting from a control room. The system eliminates possible airleaks, and allows for casting of a number of units at a time. Once in place significant savings will occur by eliminating the amount of handling required, the ability to cast several units at once and manpower savings. Estimated savings are \$50 per unit. Improved safety will result from monitoring operations from the control room.

**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

**B. Component/Business Area/Date**

**C. Line. No & Description**  
4/CNC PORTAL-TYPE MACH CTR  
(Replacement)

**D. Activity Identification**  
MSNC - CRANE DIVISION

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
NON-ADP EQUIP INSTALLATION										1	1500	1500
<b>TOTAL</b>												222
												1722

**Narrative Justification: (Replacement)**

The equipment to be purchased will be a boring, drilling, milling machine center with horizontal and vertical capability. It will be a floor-type, double-column, Computer Numerically Controlled (CNC). The table will be 58" X 96" with an automatic tool changer; external and through-spindle coolant system; 5-axis capability (Universal Head with Direct Numerical Control Interface, Storage Rack and Software).

This project is to replace a Numerically Controlled (NC) Horizontal Machine that was purchased in 1970. This equipment is obsolete and old drives cannot be retrofitted because of the lack of availability of parts. It is driven by numerically controlled tapes, which do not have editing capability. The present machine is in such deteriorated condition, that the maintenance exceeds the value. For approximately every three hours spent in producing parts, one hour is required for maintenance in order to keep the machine running. The new equipment will be selected compatible with other CNC equipment on-station, which will allow easy transfer of projects from machine to machine to expedite production and decrease downtime due to maintenance and repair. A current vs. proposed method economic analysis has been performed.

If this equipment is not purchased, production times will continue to lengthen, excessive maintenance costs will continue to increase disproportionately and repair parts will become even more unavailable. Delays in production times and increased maintenance costs will create a condition that will be unacceptable to our customers and the ultimate result will be loss of projects.

**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

**B. Component/Business Area/Date**  
DON/R&D/

**C. Line. No & Description**  
6/Electron Microprobe  
(Productivity)

**D. Activity Identification**  
NSWC CARDEROCK DIV/ANNAPOLIS

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
NON-ADP EQUIP										1	750	750

**Narrative Justification: (Productivity)**

An Electron Microprobe is an instrument used to conduct elemental analysis on solid materials. It uses an electron beam to excite characteristic x-ray emissions producing both quantitative and qualitative results.

This microprobe replaces an existing system which is now at the end of its useful life and which is no longer receiving maintenance support from the manufacturer. The new probe will enhance current capabilities by providing quantitative image analysis that cannot be retrofitted to the existing instrument and its high automation level will increase productivity four-fold thus reducing contracting costs for work currently done out-of-house. The probe is vital to research in the areas of corrosion studies, superplastic superconducting materials and other metallographic analyses.

Failure to fund this project will result in continued high contracting costs in order to meet customer requirements and the loss of additional direct revenue from the inability to support additional work with this facility.

R&D CAPITAL PURCHASE JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1995 President's Budget								
B. Component/Business Area/Date DON/R&D/	C. Line. No & Description 7/Magnetic Physical Modeling Fixture (New Mission)	FY 1993		FY 1994		FY 1995				
		Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
NON-ADP EQUIP INSTALLATION					1	1430	1	980	980	
TOTAL						250			100	1000
						1680				

D. Activity Identification  
NSWC CARDEROCK DIV/ANNAPOLIS

**Narrative Justification: (New Mission)**

The Magnetic Physical Modeling Fixture is designed to measure the 3-dimensional magnetic field around large scale (circa 20-ft) models in order to evaluate magnetic silencing efforts.

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.

Failure to fund this project will result in the inability to meet customer requirements.

R&D CAPITAL PURCHASE JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1995 President's Budget				
B. Component/Business Area/Date DON/R&D/	C. Line. No & Description S/Enhanced Dynamometer Power Supply (New Mission)	D. Activity Identification NSWC CARDEROCK DIV/MEMPHIS				
		FY 1994		FY 1995		
		FY 1993	FY 1994	FY 1995	FY 1995	
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
NON-ADP EQUIP				1	600	600

**Narrative Justification: (New Mission)**

This project will procure a high capacity dynamometer for use in evaluating multiple contrarotating propulsor configurations.

The Large Cacitation Chamber Dynamometer System provides data required for the evaluation of surface ship and submarine propulsors. It is an integral and essential part of the LCC. Currently, customer requirements exist to provide power to the four independent propulsors of a twin shaft contrarotating propulsor system. The present dynamometer power supply does not deliver sufficient power to meet this need.

Failure to fund this project will result in the inability to meet customer requirements.

**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

**B. Component/Business Area/Date**

**C. Line. No & Description**  
10/Large Scale Structural  
Model Test Fixture (New  
Mission)

**D. Activity Identification**  
NSWC CARDEROCK DIVISION

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
NON-ADP EQUIP										1	400	400

**Narrative Justification: (New Mission)**

The Large Scale Structural Model Test Fixture is a system for evaluating the strength and performance of full-size or large scale 3-Dimensional structural models.

This fixture 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, etc. Specifically it will investigate compressive buckling mode interaction, strength sensitivity to structural geometry and initial imperfections, and reserve strength remaining after initial buckling, and repeated tension and compression loading.

Failure to fund this project will result in the inability to meet customer requirements.

**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

**B. Component/Business Area/Date**  
DON/R&D/

**C. Line. No & Description**  
11/SFDP High Pressure Air System Upgrade (New Mission)

**D. Activity Identification**  
NSWC CARDEROCK DIV/ANNAPOLIS

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
NON-ADP EQUIP INSTALLATION										1	250	250
<b>TOTAL</b>												<b>250</b> <b>50</b> <b>300</b>

**Narrative Justification: (New Mission)**

The submarine Fluid Dynamics Facility High Pressure Air System supplies high pressure air for a multitude of R&D facilities and purposes at Annapolis.

The SFDP High Pressure Air System is limited to 4200 pounds per square inch gauge (psig). At least 4800 psig capability is required to meet current needs. A trend towards pressure air systems in the 5000-6000 psig range is anticipated for the future aboard Navy ships as a space saving measure. New air bottles will provide a 5000/6000 psig capability provided a new compressor and manifold system able to handle the increased pressure is procured. This facility directly supports R&D efforts to provide quiet air systems in support of surface and undersea vehicle acoustical signature reduction.

Failure to fund this project will result in the inability to meet customer requirements.

R&D CAPITAL PURCHASE JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1995 President's Budget	
B. Component/Business Area/Date DON/R&D/	C. Line. No & Description 12/Misc Non ADP Equip Rep Items >=25K < 500K	D. Activity Identification Naval Warfare Centers	
		FY 1994	FY 1995
ELEMENTS OF COST	Unit Cost	Quant	Total Cost
NON-ADP EQUIP		VAR	3887
		VAR	5219
			3092

**Narrative Justification: (Replacement)**

This investment replaces aged equipment that is beyond economical repair and will also reduce downtime and maintenance. Examples of the types of equipment purchased are vertical stacking system, paint booth system, degreaser, casting equipment/loader, 100 gallon kettle, mixer bowl casting stand, mixer bowl temperature control system, integration dehumidification system, overhead crane, fire structure pump truck, digital analyzing meters, signal generators, network analyzers, voltmeters, gas chromatograph/mass spectrometer, forklifts, tow tractors, van trucks, wreckers, inertial navigation system, wide band hydrophones, scanning electron microscope, environmental test chamber, vertical milling machine, uninterruptable power supply, and a graphics arts vertical camera.



**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

<b>A. Budget Submission</b> FY 1995 President's Budget		<b>B. Component/Business Area/Date</b>		<b>C. Line. No &amp; Description</b> 13/Misc Non ADP Equip Prod Items =>25K < 500K		<b>D. Activity Identification</b> Naval Warfare Centers			
		<b>FY 1992</b>		<b>FY 1993</b>		<b>FY 1994</b>		<b>FY 1995</b>	
<b>ELEMENTS OF COST</b>	<b>Quant</b>	<b>Unit Cost</b>	<b>Total Cost</b>	<b>Quant</b>	<b>Unit Cost</b>	<b>Total Cost</b>	<b>Quant</b>	<b>Unit Cost</b>	<b>Total Cost</b>
<b>NON-ADP EQUIP</b>				VAR		3378	VAR		3146
									3013

**Narrative Justification: (Productivity)**

This investment purchases productivity related items which improve the quality and efficiency of the work performed at the Surface Warfare Centers. Examples of the types of equipment purchased are a sweeper, ilford film processor, robotic equipment, video system for battery test facility, pop-up target array system, thermal vacuum system, computer numerical control lathe, computer numerical control laser cutter, fluidised-bed furnace, ballistic flash x-ray system, cantilever rack system, high resolution infrared camera, door-hatch simulator, gas chromatograph/mass spectrometer, x-ray microfluorescence system, 3M automatic card feed/reader printer, diesel engine powered backup generator and a message camera system.

**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

**B. Component/Business Area/Date**  
DON/R&D/

**C. Line. No & Description**  
14/Misc Non ADP Equip New  
Mission Items =>25K < 500K

**D. Activity Identification**  
Naval Warfare Centers

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
NON-ADP EQUIP				VAR		3905	VAR		3393	VAR		1669

**Narrative Justification: (New Mission)**

Examples of the types of equipment purchased are a electronic surveying system, a strain gage signal conditioning system, a computer numerical control wire electrical discharge machine, an engine analyser, a telemetry system, an infrared modeling laboratory, casting stand, suppressive shield, exterior ovens, condition changer, overhead crane, and mixer support equipment.

**NEW CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
**FY 1995 President's Budget**

**B. Component/Business Area/Date**  
**DON/R&D/**

**C. Line. No & Description**  
**15/Misc Non ADP Equip**  
**Env/Safety Items =>25K <**  
**500K**

**D. Activity Identification**  
**Naval Warfare Centers**

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
NON-ADP EQUIP				VAR		1,076	VAR		854	VAR		309

**Narrative Justification: (Environ/Safety)**

These projects are required to meet regulatory requirements which are primarily environmental or safety related. Examples of the types of equipment purchased are railroad flashers, powder coating paint system, HMQ efficient dryer, vacuum system, baghouse, overhead crane for test cell, channel control/monitoring system for large cavitation channel, absorbants, skimmers, and containment devices.

R&D CAPITAL PURCHASE JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1993 President's Budget															
B. Component/Business Area/Date DON/R&D/	C. Line. No & Description 19/NETWORK OPTICAL DATA STOR (Replacement)	FY 1992			FY 1993			FY 1994			FY 1995						
		Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost				
	ELEMENTS OF COST																
	ADP EQUIP INSTALLATION																
	TOTAL														94	94	7 101

**Narrative Justification: (Replacement)**

Optical Disk Drives to replace magnetic tape drives for off line storage.

Network Optical Data Storage will provide immediate interactive retrievals, data manipulation, management, archiving and distribution among In-Service Engineering Activity (ISEA) supported programs such as AN/BQ-5, AN/SQQ-59, AN/BSX-1, and AN/BSX-2. The task of these programs require the maintenance and manipulation of a great deal of data. Rapid growth in the database makes it time consuming and expensive to run daily backups on magnetic tape and store off-line. Off-line tape archives require time consuming reloads for access and would limit our ability to interrelate the information. A current vs. proposed method economic analysis has been performed.

Automation of this data is critical for cost effective performance of information intensive tasks performed by the ISEA. Improved quality and increased productivity resulting from immediate access to accurate and detailed information will enable our activity to perform these tasks in an efficient manner.

----- SOURCE JUSTIFICATION  
(Dollars in Thousands)

A. Budget Submission  
FY 1995 President's Budget

B. Component/Business Area/Date  
DON/R&D/

C. Line. No & Description  
21/ADV GRAPHIC ENGINE  
(Replacement)

D. Activity Identification  
NSWC DARTMOUTH DIVISION DLWO

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP EQUIP										1	125	125

Narrative Justification: (Replacement)

The Virtual Reality (VR) Laboratory equipment is required to perform focused research on applications of virtual reality technology with Navy systems. VR technology employs high performance computers and computer graphics which allow people to interact with complex multi-dimensional data.

In one area, this research will help to determine the ability of VR to provide needed comprehension and control of complex, sparsely populated volumetric data, such as 3D radar data (e.g., ARGIS Radar Data). Its applicability in understanding output from other sensors will also be studied. There is also a good probability the application of VR technology will help solve current problems associated with data fusion. Finally, VR will prove useful as an aid in the understanding of a variety of complex multi-dimensional data sets resulting from various research and analysis efforts at NSWCDD. This equipment will support efforts in combat system development as well as in interface simulation and training.

**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

**B. Component/Business Area/Date**

**C. Line. No & Description**  
22/ADV WPNS CONTROL SYS  
(Replacement)

**D. Activity Identification**  
NSWC DANLORSEN DIVISION DLWO

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP EQUIP										5	47	235

**Narrative Justification: (Replacement)**

The Advanced Weapon Control System will be capable of providing a real-time far-term weapon control simulation/development tool for the purpose of demonstration, validation, and assessment of technological improvements in control elements, processing, interfaces, and display environments.

These efforts will support the Ship Self Defense Program, Close In Weapon System and Work In Process.

This equipment is essential for successful support of weapons controls systems development.

**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

**B. Component/Business Area/Date**

**C. Line. No & Description**  
25/DISPLAY SYSTEM UPCR  
(Replacement)

**D. Activity Identification**  
NSWC DARTMOUTH DIVISION DLMO

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP EQUIP										1	150	150

**Narrative Justification: (Replacement)**

The Virtual Reality (VR) Laboratory equipment is required to perform focused research on applications of virtual reality technology with Navy systems. VR technology employs high performance computers and computer graphics which allows people to interact with complex multi-dimensional data.

In one area, this research will help to determine the ability of VR to provide needed comprehension and control of complex, sparsely populated volumetric data, such as 3D radar data (e.g., Aegis Radar Data). Its applicability to use in understanding output from other sensors will also be studied. There is also a good probability the application of VR technology will help solve the data fusion problem. Finally, VR will prove useful as an aid in the understanding of a variety of complex multi-dimensional data sets resulting from various research and analysis efforts at NSWCDD. The results of VR research will benefit many different programs such as AEGIS, TOMAHAWK, SEALANTX, and STANDARD Missile.

**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

**B. Component/Business Area/Date**  
DON/R&D/

**C. Line. No & Description**  
30/SCI FAC WORKSTATION  
(Replacement)

**D. Activity Identification**  
NSWC DAHLGREN DIVISION DLWO

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP EQUIP							5	28	140	5	28	140

**Narrative Justification: (Replacement)**

The Parallel Processor System is a warfare system analysis and architecture tool used to evaluate the performance of existing and future weapon systems, fleet architectures, and BMS/C systems. The Secret Command Information (SCI) Facility will serve as a focal point for the ongoing work in distributed processing, Artificial Neural Networks, and computational statistics. The workstations will be used for graphics code development and to run graphics routines to aid analysts in the population of ADMRAL/ADPT output. These workstations will also serve as an additional node in the ADPT Parallel Processor System. This equipment will provide dedicated secure workstations that meet the SCI facility requirements for secure integration and testing.

New concepts and fleet weapons can be evaluated from both a cost and an effectiveness consideration. In addition, it has been estimated that time from concept development to product delivery can be reduced by at least 50% when the necessary analysis equipment is available on-site. This effort supports ASTER, OMNIS, GPS, ATBN, BILOC, and ADMRALS/ADPT programs.

Currently a number of team members do not have direct access to a workstation and must therefore develop software on pc's and then port the software to a workstation. Software conversion costs of about \$50K per year and other costs due to time delays are incurred because of this conversion process. Secure integration and testing must be performed at remote sites, which results in increased travel and reduced productivity.



**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

B. Component/Business Area/Date DON/R&D/	C. Line. No & Description 35/ADAC VAX Lab Upgrade (Replacement)			D. Activity Identification NSWC CARDEROCK DIVISION					
	FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP EQUIP	1	200	200	1	100	100	1	200	200

**Narrative Justification: (Replacement)**

The Acoustical Data Analysis Center VAX Computer Laboratory provides engineering and scientific support to the Signatures Directorate, the Navy and the Fleet in the form of acoustical data/signal processing and analysis.

FY94 & 95 upgrades will be a continuation of current efforts to (1) significantly reduce maintenance & operation cost, (2) provide for additional acoustical data processing capacity needed at Carderock, (3) replace selected obsolete components which are incompatible with hardware & software updates, and (4) fulfill current users' changing processing and storage requirements. Leasing of this equipment is not cost effective. Due to the interactive nature of the processing and tight scheduling, contracting is not possible. Due to the specialized nature of this system, there is no other compatible system with which to share. Repair is too expensive and some hardware items are no longer supported by the manufacturers.

Failure to fund this project will result in continued high maintenance costs, lost productivity due to equipment down time, and increased contracting costs in order to meet customer requirements.

**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

B. Component/Business Area/Date DON/R&D/	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
C. Line. No & Description 36/CAD II Systems - Directorate 90 (Replacement)							1	140	140	1	170	170
D. Activity Identification NSWC CARDEROCK DIV/PHIL.												

**Narrative Justification: (Replacement)**

This project will procure two Intergraph CAD II type 2A workstations with associated software and peripherals in each project year.

NAVSEA requires that all CAE/CAD/CAM be standardized under the Intergraph CAD2 contract. These workstations will be used to support Hull and Deck In-Service Engineering programs. Leasing is not an option of the NAVSEA CAD2 contract. The nature and volume of work makes contracting costly and inefficient. The Philadelphia site currently has no other compatible CAD resources.

Failure to fund this project will result in continued high maintenance costs, lost productivity due to equipment down time, and increased contracting costs in order to meet customer requirements.

**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

B. Component/Business Area/Date DON/R&D/	C. Line. No & Description 38/FIBER OPTIC NETWORK - LV (Replacement)			D. Activity Identification NSWC - CRANE DIVISION					
	FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP EQUIP							1	451	451

**Narrative Justification: (Replacement)**

The equipment to be procured consists of head-end equipment, fiber optic hubs, bridges, amplifiers, cabling for all buildings at the Station and installation of all equipment.

Utilization of the Local Area Network (LAN) increases daily as terminal/PCs are added and customers make greater use of the network to perform their tasks. The proposed solution is the migration of the LAN to a hub-based asynchronous transfer method of data communication and the migration to a fiber optic transmission medium for both noise and data. Packet switching will be replaced with circuit switching on cell-based networks. Some of our buildings have been wired with ethernet, which may be utilized in the transition. Equipment acquisition would be phased in over a five-year period with the main fiber being installed in FY95. An orderly migration to newer methods will save the Station money by allowing full return on investment and increased efficiency. A current vs. proposed method economic analysis has been performed.

The current growth and utilization of the Local Area Network (LAN) creates a burden on network administration to provide service and facilities to meet demand. Changes in current technology and the obsolescence of current equipment force a restructuring of both hardware and software wiring schemes. The status quo cannot be maintained because the components used in the transmission are obsolete and no longer sold by the manufacturer. An orderly migration to newer methods will save the Station money by allowing full return on investment and increased efficiency.

R&D CAPITAL PURCHASE JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1995 President's Budget									
B. Component/Business Area/Date		C. Line. No & Description 39/REPLACE HW 8200 TAPE DR (Replacement)				D. Activity Identification NSWC - CRANE DIVISION					
		FY 1992		FY 1993		FY 1994		FY 1995			
ELEMENTS OF COST		Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Total Cost
ADP EQUIP									1	201	201

**Narrative Justification: (Replacement)**

The equipment to be procured consists of disk drives for mass media storage and on-line retrieval to be used on the Louisville site mainframe.

With the advent of new media storage devices such as disk drive, cartridge disk (CD), data base machines, etc. the use of magnetic tape has become obsolete. Based on the requirements for quick access to data media, the use of new technology is a must. The old method of tape storage is expensive, unreliable and requires a large storage area. The replacement of tape drives will allow the Division to increase its storage capacity, allow for on-line retrieval of data, reduce storage space and increase data reliability. Some other advantages are: Manage disk usage to conserve free space and to cut backup and reload time, which minimize job reruns. Disk media will compress files, and trim over-allocated files and archives. A current vs. proposed method economic analysis has been performed.

The impact of staying "STATUS QUO" will result in the increase of maintenance costs, increase of reruns due to damaged media, non-compatibility with other agencies and loss of data. Not only is the new technology of disk storage more reliable but the over-all costs per data recorded is cost effective.

**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

**B. Component/Business Area/Date**  
DON/R&D/

**C. Line. No & Description**  
42/Network File Server  
(Replacement)

**D. Activity Identification**  
COASTSYSTA Panama City FL

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP EQUIP										1	200	200

**Narrative Justification: (Replacement)**

Replacement for disk file capabilities in the Advanced Technology Computational Facility.

The ATCF is a general scientific and engineering computer facility providing the hardware and software CSS personnel need to perform computations regarding sonar engineering, computational fluid dynamics, hydrodynamics, image processing, and other scientific areas. In keeping with the NAVSEA Information Resources Strategic Plan, the ATCF is planning to reduce its reliance on clustered DEC VAX minicomputers by shifting to a downsized open systems environment emphasizing networked capabilities. Effective file service is an essential part of the new environment. The current method of providing on-line data storage and file access is DEC's proprietary local area cluster networking product, combined with ordinary on-line disks supporting logged-in users.

If this request is not funded, the ATCF will be unable to migrate to an open systems, distributed client/server type of environment. This acquisition will help implement an orderly migration from the current environment to the more desirable and economical environment envisioned by NAVSEA.

R&D CAPITAL PURCHASE JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1995 President's Budget									
B. Component/Business Area/Date DON/R&D/		C. Line. No & Description 44/VAX 8610 Replacement (Replacement)				D. Activity Identification COASTSYSTA Panama City FL					
		FY 1992		FY 1993		FY 1994		FY 1995			
ELEMENTS OF COST	ADP EQUIP	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Total Cost
										1	300

**Narrative Justification: (Replacement)**

Replacement for obsolete realtime video digitizing equipment within the Advanced Technology Computational Facility.

This system, which is expected to be a high-performance video-capable workstation, is required to maintain video data analysis that is an essential part of the ATCF. The ATCF itself is a general scientific and engineering computer facility providing the hardware and software CSS personnel need to perform computations regarding image processing, navigation, guidance, and control, optics, visualization, and other scientific areas. The current method for meeting image processing requirements is to utilize Gould image processors linked to a VAX 8810. This system is complex and unreliable. The Gould components are obsolete and have been out of production for many years. Maintenance is expensive and parts availability is very poor.

If this request is not funded, the ATCF will be forced to continue to spend increasing amounts on deteriorating equipment, which will eventually become completely unworkable. This acquisition will eliminate the threat of failure in this particular facet of the ATCF and assure continued support for research projects capturing data in any video format.

R&D CAPITAL PURCHASE JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1995 President's Budget				
B. Component/Business Area/Date DON/R&D/	C. Line. No & Description 45/CALS DESKTOP PUBLISHING (Replacement)		D. Activity Identification NSWC PHD, POST NUMERIS			
	FY 1992		FY 1994		FY 1995	
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP EQUIP						
				VAR		120

**Narrative Justification: (Replacement)**

**DESCRIPTION:** Upgrade to state of the art workstations and advanced (Standard Mark-up Language format) page definition software with advanced graphics capabilities

**JUSTIFICATION:** This project provides the PHD YORKTOWN site with state of the art hardware and software that is CALS compliant for the production of engineering technical manuals. Currently, DOS based machines using INTEL 1486 Chip technology and VENTURA publisher software is utilized. This technology has been pushed to it's limit and is not always compatible with industrial contractors and CALS standards for the direct interchange of data. The proposed equipment would provide this capability.

**IMPACT:** Without this purchase full integration of CALS compliant software is not possible. Current capabilities are pushed to the limit and direct interchange of data is not possible. This purchase is needed to comply with requirements of CALS initiatives.

**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

**B. Component/Business Area/Date**  
DOM/R&D/

**C. Line. No & Description**  
47/DESKTOP EQUIPMENT  
REPLACE (Replacement)

**D. Activity Identification**  
NSWC PHD, PORT NUMBERS

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP EQUIP							VAR		450	VAR		400

**Narrative Justification: (Replacement)**

**DESCRIPTION:** Provide various engineering workstations and peripheral equipment

**JUSTIFICATION:** PHD currently has a variety of stand-alone microcomputers. This is a phased approach to provide standardized sharing of data with other government activities and handling of larger documents. The existing equipment must be either replaced or augmented with open system architecture hardware that is UNIX based and CALS compatible

**IMPACT:** maintenance costs for equipment currently in use is increasing. The proposed solution is to purchase replacement units for the equipment when the cost to maintain the equipment exceeds the replacement costs. Failure to procure this equipment as planned will result in unnecessary maintenance costs and a loss of productive time due to the inability of the current systems to effectively interface with more modern systems or systems utilizing updated technology



**NEW CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

**B. Component/Business Area/Date**  
DON/R&D/

**C. Line. No & Description**  
46/ENGINEERING  
WORKSTATIONS (Replacement)

**D. Activity Identification**  
NSWC PHD, PORT HUENEME

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP EQUIP										1	300	300

**Narrative Justification: (Replacement)**

**DESCRIPTION:** Graphic Engineering Workstations, memory, disk drives, telecommunications equipment and client-server software interfaces to support CALS.

**JUSTIFICATION:** Graphic Engineering Workstations are necessary to support CALS initiatives. The graphic engineering workstations take advantage of advanced technology and provide capability necessary to efficiently perform engineering functions such as review of proposed engineering changes to weapon systems software, test and maintenance procedures, and shipboard technical manuals. With continued manpower reductions it becomes even more critical to ensure personnel are equipped with the most advanced tools to perform quality in-service engineering support for customers.

**IMPACT:** failure to procure this equipment will inhibit engineering personnel from efficiently performing in-service engineering functions and will inhibit productivity savings through efficiencies. It will not be possible to fully support CALS initiatives.

**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

**B. Component/Business Area/Date**  
DON/R&D/

**C. Line. No & Description**  
49/OPTICAL DISK  
STORAGE-CALS (Replacement)

**D. Activity Identification**  
NSWC PHD, PORT HUENEME

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP EQUIP							1	240	240	1	120	120

**Narrative Justification: (Replacement)**

**DESCRIPTION:** Optical disk drives, controllers, software drivers and interfacing hardware such as cables and connectors to add optical disk storage to the network to support CALS.

**JUSTIFICATION:** This equipment is required to reduce on-line storage cost and computer room floor space required, and expand total data storage capability to support CALS initiatives. Phd is currently using workstations with insufficient data storage to process large volumes of data in such areas as evaluating vendor compliancy and engineering analysis. Because this information is not located within a central facility, the data is not backed up at the same time, making it impossible to reconstruct a database from back-up sets. As a result, the ability to ensure data integrity and continued operation in case of catastrophic failure is at risk. Adding a disk storage pool for engineering/logistics departments to share will make it possible to continue support and reuse space immediately when projects are able to archive data.

**IMPACT:** Failure to provide additional storage capacity will require projects requiring electronic review of engineering data to be accomplished in small increments resulting in time delays and possible interruptions to meeting ships' schedules.

**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

B. Component/Business Area/Date DOM/R&D/	C. Line. No & Description 50/REMOTE COMPUTER SYS-CALS (Replacement)			D. Activity Identification NSWC PHD, PORT NUMERIE		
	FY 1992	FY 1993	FY 1994	FY 1995	Unit Cost	Total Cost
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP EQUIP				1	450	450

**Narrative Justification: (Replacement)**

**DESCRIPTION:** Database Server (processor), optical and magnetic disk drives, controllers, application software and device drivers, engineering graphic workstations, and interfacing hardware such as cables and connectors.

**JUSTIFICATION:** At present, workstations are scattered throughout the network. Processing is insufficient to meet future requirements in such areas as evaluating vendor compliance and engineering analysis in accordance with calls initiatives. The ability to ensure data integrity and continued operation in case of a catastrophic failure is at risk. This project will provide a remote system capable of processing information in the functional work spaces. The remote system shall be capable of storing or retrieving data in the central computing facility. This will reduce on-line cost, make it possible to back-up information that is mission critical, and provide safeguards in case of equipment failures.

**IMPACT:** The command is required to evaluate contract deliverables to determine if the vendor has met CALS compliance requirements. Without additional equipment, testing of large deliverables will not be possible.

R&D CAPITAL PURCHASE JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1995 President's Budget											
B. Component/Business Area/Date DON/R&D/	C. Line. No & Description 51/REPLACE LAN EQUIPMENT (Replacement)	FY 1992			FY 1993			FY 1994			FY 1995		
		Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP EQUIP					1	432	432	1	360	360	1	360	360

**Narrative Justification: (Replacement)**

**DESCRIPTION:** Ethernet communication devices such as high-speed network, lan bridges, network gateways, micron optical data cable and multiport node concentrators/upgrades.

**JUSTIFICATION:** This project is a phased project for the replacement of obsolete/broken lan network communication devices in support of exchange/networking ability of engineering functions among the various engineering and logistics departments within the Port Hueneme site of pbd. Failure to replace equipment that is no longer functional will result in total collapse of the data communications network. The functions supported on the network are in direct support of testing and certifying weapon system software to support the fleet. Continued manpower reductions will provide an even more urgent requirement to ensure efficient electronic data exchange to meet customer demand.

**IMPACT:** 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.

**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

**B. Component/Business Area/Date**

**C. Line. No & Description**  
53/SHARF/43 PROGRAM GEN  
SYS (Replacement)

**D. Activity Identification**  
NSWC P&D, PORT HURON

ELEMENTS OF COST	FY 1992		FY 1993		FY 1994		FY 1995		Total Cost
	Quant	Unit Cost	Quant	Unit Cost	Quant	Unit Cost	Quant	Unit Cost	
ADP EQUIP							1	370	370

**Narrative Justification: (Replacement)**

**DESCRIPTION: SHARF/43 Program Generation System**

**JUSTIFICATION:** The SHARF/43 operating system is used in the development of tactical programs for CG, DDG, FFG, etc., Class ships. The tactical ships programs are coded, compiled and produced on the SHARF/43 operating system. The SHARF/43 systems currently used CDC 9766 disk drives. These disk drives contain all the operating systems software, the security kernel and all of the file directories. These disk drives have exceeded their useful life and are prone to failure causing critical downtime. The disk drives are no longer produced by CDC and parts are increasingly difficult to obtain.

**IMPACT:** Failure to procure required disk drives will result in continued costly maintenance and eventual inoperability of system due to inability to procure spare parts. This will result in inability to perform critical mission functions.

R&D CAPITAL PURCHASE JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1993 President's Budget								
B. Component/Business Area/Date DON/R&D/	C. Line. No & Description 54/VAX CLUSTER REPLACEMENT (Replacement)	FY 1992		FY 1993		FY 1994		FY 1995		
		Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP EQUIP										198

Narrative Justification: (Replacement)

DESCRIPTION: DEC 9000 SERIES CPU

JUSTIFICATION: THE VAX 11/780 and VAX 8200 have both reached the end of their economic lives. Maintenance support is becoming more expensive and the older machines are no longer able to keep up with the demands made on them. Each machine has the processing power of one VAX unit of processing (VUP) and limited memory. Ethernet interface was added to these machines after acquisition and is not as efficient as needed for effective in-service engineering. The CPU will replace two obsolete nodes, increasing the processing power of the cluster, reduce maintenance costs, reduce running costs and require less "footprint" in the computer room.

IMPACT: Failure to replace these nodes with newer versions will result in continued downtime and increasing maintenance costs as the system currently in use has well exceeded its economic life. No new interfaces can be added to the current system. Modernization to incorporate newer technologies is necessary.

**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

**B. Component/Business Area/Date**

**C. Line. No & Description**  
55/VAX UPGRADE  
(Replacement)

**D. Activity Identification**  
NSWC PND, PORT HUENEME

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP EQUIP										VAR		375

**Narrative Justification: (Replacement)**

**DESCRIPTION:** Hardware to replace and modernize four existing vax 11/780 vms operating systems

**JUSTIFICATION:** Mission critical procurement!!! The current operating systems were purchased in 1981 and are out of production. Current projects supported by these systems include: configuration management of all technical documents, software trouble reports and software engineering changes; mass compiles and builds for simulation software and for tactical programs. Software applications include: combat directions systems, electronic warfare, surface weapon systems surface and passive signatures, platform system integration, mine warfare and countermeasures and others. In order to produce this software, the division must provide equipment resources to design, code compile build, test and manage these projects

**IMPACT:** Mission critical --- failure to procure the required equipment will prevent the division from capitalizing on new technology available to improve the reliability, availability and maintainability of the system. This will increasingly result in lost productivity and increased costs.

**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

**B. Component/Business Area/Date**

**C. Line. No & Description**  
57/DMRD 924 MIGRATION TO  
OSE (Productivity)

**D. Activity Identification**  
NSWC - CRANE DIVISION

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP EQUIP							VAR		9351	VAR		7900

**Narrative Justification: (Productivity)**

NAVSEA Information Management Improvement Program (NIMIP)/DMRD 924 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 as directed by DMRD 924, (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 Information Resources Strategic Plan standards based computing. This program is part of the NAVSEA Business Case which analysed solutions for improving the Information Resource Management Business Function; it was approved by NSWC as the Mission Need Statement 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 mandated DMRD 924 savings.



R&D CAPITAL PURCHASE JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1995 President's Budget											
B. Component/Business Area/Date DON/R&D/	C. Line. No & Description 58/EDMICS SYSTEM (Productivity)	FY 1992			FY 1993			FY 1994			FY 1995		
		Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
					1	317	317	1	701	701	1	233	233
						24	24		53	53		18	18
						341	341		754	754		251	251

**Narrative Justification: (Productivity)**

Engineering Data Management Information Control System (EDMICS) is the automated data storage and retrieval system for the Navy. It is an information system that can provide on line access to engineering data. FY 93 requirements for hardware include a Stand Alone Scanning System, Aperture Card Scanner, 2 Workstations, Temporary Storage Devices, CD ROM 14", Network Server, and Edit Stations.

Approximately 60t of all request for engineering drawing images at NSWC are not filled because of "not in file" aperture cards, inconsistencies in file indexing and misplaced cards. EDMICS will provide continuous availability of data to multiple users with print on demand capability. It is estimated that a fully operational EDMICS system will reduce the need for reprourement of technical data by 90t. It is estimated that drawing retrieval time will be reduced from 7.5 minutes (manual retrieval) to 45 seconds. A current vs. proposed method economic analysis has been performed.

EDMICS will provide substantial cost avoidances in depot productivity to include increased response time in locating engineering data and reduced reprourement of technical data. Without the EDMICS System NSWC Crane will not have the capability to interact with other activities/contractors who have invested in what is rapidly becoming the standard for managing, distributing and exchanging engineering data throughout the Department of Defense.

**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

B. Component/Business Area/Date DON/R&D/	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
C. Line. No & Description 62/LEARNING RESOURCES CENTER (Productivity)												
D. Activity Identification NBWC - CRANE DIVISION										1	275	275

**Narrative Justification: (Productivity)**

Planned procurements include upgradeable/expandable 486 PCs with peripheral hardware and standard off-the-shelf software and courseware. Maintenance required after warranty expiration will be performed by the Center's PC Repair Facility (hardware), and software maintenance/upgrades will be included in the costs for the software.

The Human Resources Development Division is responsible for providing training to all Center employees, as required, and must maintain a level of current courses and equipment suitable for providing these classes. In our attempts to better satisfy the training needs of employees, and to do so in a more cost effective manner, we are currently planning a Learning Resource Center (LRC). The LRC will be multi-faceted in that it will allow us to provide needed training to our employees utilizing interactive video disk (IVD) courseware as well as other type of software conducive to our learning environment. The LRC will also be used for retraining purposes and for outplacement counseling assistance. A current vs. proposed method economic analysis has been performed.

If this equipment is not procured, our ability to train our employees in a more cost efficient manner will be diminished. Currently, travel expenses and instructor fees are high in order to keep our employees up-to-date and trained on computers and machinery in their area. This equipment will allow us to decrease travel expenses and instructor fees by providing training on site utilizing interactive video disk. Additionally, in the current unstable climate, our ability to retrain and conduct outplacement counseling will be severely hindered without this equipment.

**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

B. Component/Business Area/Date DON/R&D/	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
C. Line. No & Description 63/TACTICAL ADVANCED COMPUTE (Productivity)												
D. Activity Identification NSWC - CRANE DIVISION												
<b>ADP EQUIP INSTALLATION TOTAL</b>										1	94	94
												7
												101

**Narrative Justification: (Productivity)**

The Tactical Advanced Computer will consist of the hardware and software tools necessary to intergrate computer aided design tools.

The Tactical Advanced Computer will intergrate with existing NSWC hardware simulation tools in order to extend the module validation capability. This will allow module engineers to evaluate module level and testability with much greater efficiency and accuracy. This will allow the development of test programs sets to be performed more efficiently. An average test engineer can now develop 3 test programs per year, which would be improved to 6 programs per year. This system will allow easier transfer of data between networks. It will also allow the use of electronic design data directly for evaluation and developments, which eliminate costly data transfer errors. A current vs. proposed method economic analysis has been performed.

Not procuring this system would prohibit NSWC Crane from meeting government mandated information exchange capabilities. This system is absolutely necessary to maintain NSWC's charter for module engineering center of excellence. An annual savings of \$300K would be lost.

R&D CAPITAL PURCHASE JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1995 President's Budget							
B. Component/Business Area/Date DON/R&D/	C. Line. No & Description 65/IPE WORKSTATIONS (Productivity)	D. Activity Identification NSWC DAHLGREN DIVISION DLMO							
		FY 1994		FY 1995					
ELEMENTS OF COST	FY 1992		FY 1994		FY 1995				
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost			
ADP EQUIP				5	25	125	5	30	150

**Narrative Justification: (Productivity)**

The Integrated Programming Environment (IPE) supports software development by integrating the capabilities of graphics desktop computers with existing computer systems. The intent is to delegate development tasks to the lowest cost-part of the integrated environment by partitioning of tasks to the most efficient machine for that task.

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. An economic analysis has been performed for this investment yielding a Savings to Investment Ratio of 1.2.

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.

**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

**B. Component/Business Area/Date**  
DOH/R&D/

**C. Line. No & Description**  
66/LINKS HARDWARE  
(Productivity)

**D. Activity Identification**  
NSWC DAHLGREN DIVISION DLWO

ELEMENTS OF COST	FY 1992		FY 1993		FY 1994		FY 1995		Total Cost
	Quant	Unit Cost	Quant	Unit Cost	Quant	Unit Cost	Quant	Unit Cost	
ADP EQUIP					5	50	5	50	250
									250

**Narrative Justification: (Productivity)**

The Links project will provide standard connectivity between existing personal computers and desktop devices currently configured as multiple subnets connected to the NSWCDD backbone. By utilizing Links unix-based multi-processor computers and off-the-shelf software to connect the installed base of user devices, scientists and engineers can share information across these subnets and can access standard Center applications for their program management and engineering support.

The Links standard system configuration will allow the PCs and desk top devices of the scientists and engineers that are decentralized on different subnets (e.g., Novell, DECNET, Appletalk, NSWCNET) to easily share information. By utilizing Links, the different subnets will not have to duplicate effort and spend resources to provide connectivity with each subnet they need to communicate with. In addition, Links will provide a standard access method to Center applications that each subnet can utilize. An economic analysis has been performed for this investment yielding a savings to Investment Ratio (SIR) of 1.1.

Without Links, each subnet will have to provide a mechanism for sharing information with each of the different subnets that their users need to communicate with, or have no communication and sharing of information outside of their own subnet.

**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

**B. Component/Business Area/Date**  
DON/R&D/

**C. Line. No & Description**  
67/NETWORK UPGRADES  
(Productivity)

**D. Activity Identification**  
NSWC DARTMOUTH DIVISION DLMO

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP EQUIP							2	23	46	2	40	80

**Narrative Justification: (Productivity)**

The Parallel Processor System is a warfare system analysis and architecture tool used to evaluate the performance of existing and future weapon systems, fleet architectures, and EMCS systems. The SUN Workstations are used as nodes in a multiprocessing suite and for code development and analysis. These acquisitions provide general enhancements to the system, including file servers and memory expansion upgrades.

New concepts and fleet weapons can be evaluated from both cost and effectiveness considerations. These upgrades will enhance image processing as well as code development and analysis capability. An economic analysis has been performed for this investment yielding a Savings to Investment Ratio (SIR) of 1.2.

Current limited memory capacity decreases computer response times and limits software usage. These upgrades to currently owned equipment is more cost effective than purchasing new computers with the required memory capacity.

**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

**B. Component/Business Area/Date**  
DON/R&D/

**C. Line. No & Description**  
66/S&I POWER WS  
(Productivity)

**D. Activity Identification**  
NSWC DAHLGREN DIVISION DLMO

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP EQUIP				1	107	107	1	115	115	2	20	40

**Narrative Justification: (Productivity)**

The Algorithm Development and Modeling Facilities are used to perform research and development of new and evolving embedded system algorithms, simulations and models dealing with missile systems performance; specifically, the prediction and planning of missile trajectory characteristics. The multiple-user workstations will provide the advanced computational ability needed for complex missile trajectory and sensor reference scene research and development, prototype algorithm investigations, and sophisticated design visualization and demonstration. The resulting, intelligent, system capabilities will contain or reduce the skilled manning requirements aboard ship while enhancing the overall strike and combat systems performance.

The SGI workstations will be used to execute a combat system model in faster-than-real time to provide a database for developing and implementing decision algorithms that utilize Artificial Intelligence techniques such as Neural Nets and Expert Systems. This provides actions to be taken that will optimize ship survivability. An economic analysis has been performed for this investment yielding a Savings to Investment Ratio (SIR) of 1.1.

This equipment is required for continued support of strike and combat systems.

R&D CAPITAL PURCHASE JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1995 President's Budget							
B. Component/Business Area/Date DON/R&D/	C. Line. No & Description 70/WORKSTATION UPGRADE (Productivity)	D. Activity Identification NSWC DAHLGREN DIVISION DLWO							
		FY 1993		FY 1994		FY 1995			
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP EQUIP							1	350	350

**Narrative Justification: (Productivity)**

The Virtual Reality (VR) Laboratory equipment is required to perform focused research on applications of virtual reality technology with Navy systems. VR technology employs high performance computers and computer graphics which allows people to interact with complex multi-dimensional data.

In one area, this research will help to determine the ability of VR to provide needed comprehension and control of complex, sparsely populated volumetric data, such as 3D radar data (e.g., AEGIS Radar Data). Its applicability to use in understanding output from other sensors will also be studied. There is also a good probability that the application of VR technology will help solve the data fusion problem. Finally, VR will prove useful as an aid in the understanding of a variety of complex multi-dimensional data sets resulting from various research and analysis efforts at NSWCDD. This equipment will support Independent Research (IR) / Independent Exploratory Development (IED) efforts as well as those in distributed processing. An economic analysis has been performed for this investment yielding a Savings to Investment Ratio (SIR) of 1.1.



**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

**B. Component/Business Area/Date**  
DON/R&D/

**C. Line. No & Description**  
72/CAD II Systems -  
Directorate 10  
(Productivity)

**D. Activity Identification**  
NSWC CARDEROCK DIV/PHIL.

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP EQUIP							1	130	130	1	65	65

**Narrative Justification: (Productivity)**

This project will procure 2 Intergraph type 2A CAD II workstations with associated software and peripherals in each project year.

NAVSEA requires that all CAB/CAD/CAM be standardized under the Intergraph CAD II Contract. These workstations will directly support the Logistics and Machinery Directorate which is the NAVY's primary agent for the production of technical drawings, diagrams, and artwork and is the Technical Manual Maintenance Activity for over 120,000 Hull, Mechanical and Electrical Systems and Equipment Technical Manuals.

Failure to fund this project will result in continued high contracting costs in order to meet customer requirements and the loss of additional direct revenue from the inability to support additional work with this facility.

**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

**B. Component/Business Area/Date**  
DON/R&D/

**C. Line. No & Description**  
74/NC/CAD-CAM SYSTEM  
(Productivity)

**D. Activity Identification**  
NSWC - CRANE DIVISION

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP EQUIP										1	151	151

**Narrative Justification: (Productivity)**

Upgrade current Sun 3/260 to a solid model feature based system.

Presently the CNC Programming Support Branch provides programming support for this equipment utilizing a Sun 3/260 computer with four 3/60 diskless CAM workstations. The operating system software version currently on the Sun is obsolete. The CAM software will no longer be maintained by the vendor or supported on a Sun platform. Purchase of a new CAM system will permit faster processing and allow more users to access the system. This equipment will greatly improve the quality of the manufacturing process and products produced by this Station. A current vs. proposed method economic analysis has been performed.

The present configuration has reached capacity for the number of users on the system and will not continue to support the current or future needs of the Station.

**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

A. Budget Submission  
FY 1995 President's Budget

B. Component/Business Area/Date  
DON/R&D/

C. Line. No & Description  
75/Contracts Filing System  
(Productivity)

D. Activity Identification  
COASTSYSTA Panama City FL

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP EQUIP										1	295	295

**Narrative Justification: (Productivity)**

Laser disk filing system to replace current manual filing system for Station contracts.

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.

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.

**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

**B. Component/Business Area/Date**

**C. Line. No & Description**  
77/CAD/CAM (Productivity)

**D. Activity Identification**  
NSWC PHD, PORT HUENEME

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP EQUIP										1	150	150

**Narrative Justification: (Productivity)**

**DESCRIPTION:** Reduces Instruction Set Computer based workstations running industry standard software and interfacing with input (digitizers, scanners) processing software and output (laser plotters) devices.

**JUSTIFICATION:** This equipment is critical to the acquisition, development and production of engineering drawings which are currently completed in a manual method. Currently, drawings are developed or changed by individual draftsmen using master drawings and a long serial system of review and approval. Final production of needed drawings is done via oslid blueprint machines or reproduced on microfiche. This method is inefficient and extremely labor intensive. The proposed equipment will increase efficiency by enabling simultaneous review and approval and allow for high speed production of finished drawings and documentation for distribution.

**IMPACT:** Failure to procure this equipment will inhibit productivity efficiencies and will impact the responsiveness of engineering support to customers.

**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

B. Component/Business Area/Date DOM/R&D/	C. Line. No & Description 80/OPTICAL DISK STORAGE CALs (Productivity)			D. Activity Identification NSWC PHD, PORT HUENEME		
	FY 1992	FY 1993	FY 1994	FY 1995	Quant	Total Cost
ELEMENTS OF COST	Unit Cost	Quant	Unit Cost	Quant	Unit Cost	Total Cost
ADP EQUIP					VAR	120

**Narrative Justification: (Productivity)**

**DESCRIPTION:** Optical disk drives, controllers, software drivers and interfacing hardware to support the CALs initiative

**JUSTIFICATION:** This equipment will provide the ability to access drawing and textural data interactively and reduce on-line storage costs by expanding the total data storage capability

**IMPACT:** failure to provide this equipment will prohibit the efficient electronic review of engineering data by forcing personnel to review necessary functions in small increments. The disruption of service and slow response time will cause unnecessary delays in customer response and delivery schedules

**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

**B. Component/Business Area/Date**  
DOM/R&D/

**C. Line. No & Description**  
82/SHARE/43 CPU UPGRADE  
(Productivity)

**D. Activity Identification**  
NSWC PHD, FORT HUWENNE

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP EQUIP							VAR		150	VAR		130

**Narrative Justification: (Productivity)**

**DESCRIPTION: VYK-43 PROCESSOR**

**JUSTIFICATION:** This is a phased plan to upgrade the SHARE/43 CPU to avoid unnecessary downtime and delays in delivery schedules. The upgrade will result in a four to one improvement in cpu throughput. This increased throughput will decrease the time required to incorporate changes in the tactical operational programs delivered to the fleet. It will increase responsiveness to fleet program trouble reports for life cycle maintenance and decrease the time required for initial program development.

**IMPACT:** Failure to procure this equipment will diminish the responsiveness to fleet trouble reports as the current system becomes increasingly taxed and overwhelmed with the volume of data needed to effectively analyze problems. Service to the fleet will be impaired.

R&D CAPITAL PURCHASE JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1995 President's Budget							
B. Component/Business Area/Date DON/R&D/	C. Line. No & Description 83/ARRAY PROCESSORS (New Mission)	D. Activity Identification NSWC DAHLGREN DIVISION DLMO							
		FY 1992	FY 1993						
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	FY 1994		FY 1995			
				Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP EQUIP	4	30	120	4	43	172	4	42	168

**Narrative Justification: (New Mission)**

The Algorithm Development Network Thrust provides the environment to research various signal/data processing algorithms and candidate implementation strategies. This equipment provides a heterogeneous mix of processors operating in various architectural workstation configurations.

Prototyping of these algorithms and new architectural concepts will help solve real-time shipboard computer needs. The structured techniques will also provide insight to productivity enhancement techniques. The designs will support strong reuse where various at-sea configurations are built, which will further reduce insertion costs. These thrust strategies are in direct support of at least five of the DOD top-twenty technology thrusts. This thrust area supports specific strategic computing thrusts in various NAVSEA/PEO programs (AN/SQQ-89, SSTD, Mine Warfare, ASTO, and SEA 06K, PMS-400/AEGIS) and technology programs in ONT (ASW/ECS Blocks), DARPA (SCI), and SPAWAR (MOCR).

As the programs within the current missions evolve, NSWCDD needs to maintain its competitive knowledge in order to provide sponsors correct and timely guidance. Researchers can hypothesize various algorithms, but without the supporting hardware and software the required experimentation cannot be accomplished. The proposed procurement strategy enables development, experimentation and "lessons learned" directly applicable to the sponsors trying to evolve to COTS solutions. This capability is presently unavailable.

**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

**B. Component/Business Area/Date**  
DON/R&D/

**C. Line. No & Description**  
86/IRIS RD WS (New Mission)

**D. Activity Identification**  
NSWC DAHLGREN DIVISION DLWO

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP EQUIP INSTALLATION										1	205	205
TOTAL												205

**Narrative Justification: (New Mission)**

The High-Performance Graphics Display Thrust provides specialized graphics hardware necessary to conduct research in accurate/real-time 3D visualization requirements for advanced man-machine interfaces. Additional research in modelling human interactions will be pursued in order to aide the development of dynamic displays. The High Performance Graphics Superworkstation combines an advanced parallel subsystem and a highly parallel graphics system. The graphics system consists of multiple dedicated graphics engines working in parallel to perform interactive 3D visualization and real-time image processing. The FY95 acquisition is a display system multiple processor (IRIS 4D/280VGX) with 64 MB RAM and broadcast video capability.

These efforts will help extend the existing research in X-windows, PEX and the support tools --- which are the emerging MILCOTS/MOCR standards. These developments will support rapid prototyping efforts in many application efforts as well as provide potential productivity enhancements in the development of graphics-oriented Navy systems. This supporting technology enables the future combat system solutions to take advantage of COTS technologies and improved performance that comes with this insertion. This thrust area supports specific display thrusts in various NAVSEA/PEO programs (AN/SCQ-89, SSTD, AEGIS, ASTO, and SEA 06K, PMS-400/AEGIS) and technology programs in OMT (ASE/ECS Blocks), and SPAWAR (MOCR).

NSWCDD needs to conduct research and experimentation in this area in order to maintain pace with the advancing technologies being produced in industry. The positive aspects of this procurement is that enhanced performance of Navy operators will be viable at reduced costs and the associated "lessons learned" will be invaluable program guidance. This capability is presently unavailable.



R&D CAPITAL PURCHASE JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1995 President's Budget			
B. Component/Business Area/Date DOM/R&D/	C. Line. No & Description 91/UPGR VAX 6320/6540 (New Mission)	D. Activity Identification NSWC DANLGRN DIVISION DLWO			
		FY 1993	FY 1994	FY 1995	
ELEMENTS OF COST	Unit Cost	Quant	Total Cost	Unit Cost	Total Cost
ADP EQUIP		1	165		95

**Narrative Justification: (New Mission)**

This upgrade will increase the capability of the VAX 6320 computer currently used for 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 includes a VAX hardware upgrade and a software license upgrade.

As quality assurance tasks have grown significantly in recent years, the capacity of the 6320 to accomplish the workload in a timely and efficient manner has diminished. Present utilization has been maximised and backlogs exist. Critical needs are being met by utilizing costly contractual effort. The planned upgrade will increase the capacity (from 30 to 90 concurrent users), as well as increasing the processing capability of the system. Major programs supported by this facility are: AEGIS, TOMAHAWK, VLS, Ocean Surveillance Information System (OSIS), Computer-Aided Acquisitions and Logistic Support (CALS), and the Assistan SECNAV Information Resources Management Program.

This procurement is required to avoid additional costly contractual effort and to eliminate existing backlogs.

R&D CAPITAL PURCHASE JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1995 President's Budget												
B. Component/Business Area/Date DON/R&D/	C. Line. No & Description 92/CAD II Systems - Directorate 20 (New Mission)	D. Activity Identification NSWC CARDEROCK DIVISION	FY 1992			FY 1993			FY 1994			FY 1995		
			Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP EQUIP						1	225	225	1	240	240	1	225	225

**Narrative Justification: (New Mission)**

This project is to procure a total of 18 Intergraph CAD II workstations and related software and peripherals.

NAVSEA requires that all CAD/CAM be standardized under the Intergraph CAD2 contract. All systems will be used to support direct funded work from NAVSEA and related sponsors. Technical capabilities in surface and Undersea Vehicle Design Technologies & Related Systems Engineering and Platform Systems Integration cannot be maintained without these systems. This project will establish an effective CAD capability within the Ship Systems/Programs Directorate providing service throughout the Division. There is no lease option for the NAVSEA CAD2 contract. The volume and nature of work makes contracting costly and inefficient. Repair of existing systems is not viable as they are obsolete, limited and not modifiable to NAVSEA standard.

Failure to fund this project will result in the inability to meet customer requirements.

**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

**B. Component/Business Area/Date**  
DON/R&D/

**C. Line. No & Description**  
95/REMOTE SYSTEM - CALLS  
(New Mission)

**D. Activity Identification**  
NSWC PHD, PORT HUEMENE

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP EQUIP							VAR		450	VAR		350

**Narrative Justifications: (New Mission)**

**DESCRIPTION:** Database Server, Optical and Magnetic Disk Drives, Controllers, Application Software and Device Drivers, Engineering Graphic Workstations, and interfacing hardware such as cables and connectors

**JUSTIFICATION:** This project is to install a remote computer system on the network to support the computer-aided logistics (CALLS) initiative. The equipment shall be capable of processing engineering drawing and text data interactively and perform backup or data archival. The equipment shall operate as an integral part of the central computing center to reduce the on-line storage cost, the centralized computer room floor space requirement and expand the total data storage capability to meet engineering requirements. Currently, workstations are scattered throughout the network. Processing is insufficient to meet future requirements in such areas as evaluating vendor compliance and engineering analysis. The small systems do not operate in conjunction with computer systems within the centralized computer room.

**IMPACT:** Failure to procure the equipment in a phased manner as shown will make it impossible to reconstruct the database as the only means available currently are backups. As a result, the ability to ensure data integrity and continued operation in case of a catastrophic failure is at risk.

**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1993 President's Budget

**B. Component/Business Area/Date**  
DOM/R&D/

**C. Line. No & Description**  
96/SWEET TEST POOL  
EQUIPMENT (New Mission)

**D. Activity Identification**  
NEWC PHD, FORT HUMPHRE

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP EQUIP										1	200	200

**Narrative Justification: (New Mission)**

**DESCRIPTION:** Establishment of an engineering test equipment pool including such equipment as analysers, oscillators, generators, oscilloscopes, etc.

**JUSTIFICATION:** Engineering test equipment is continually utilized in performance of station in-service engineering functions. Currently, departments purchase their own equipment which could be shared by other engineering departments. The establishment of a centralized pool will prevent the duplication of purchased test equipment and ensure equipment purchased is compatible for several required uses.

**IMPACT:** Failure to establish and consolidate an engineering test equipment pool will preclude savings as a result of each department purchasing their own test equipment and possible duplication of equipment purchases.

**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

**B. Component/Business Area/Date**  
DON/R&D/

**C. Line. No & Description**  
97/Misc ADP Equip Rep  
Items =>25K < 100K

**D. Activity Identification**  
Naval Warfare Centers

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADP EQUIP				VAR		3237	VAR		1344	VAR		3428

**Narrative Justifications: (Replacement)**

This investment replaces aged equipment that is beyond economical repair and will reduce downtime and maintenance. Examples of the types of ADP equipment purchased are high speed network routers, high speed network bridges, network gateways, engineering network (DEC concentrator 500 hub, DEC bridge 52X DAS, FDDI interface cards, fiber cabling), DEC 4000 AXP departmental server and required peripherals, engineering database server, general purpose CAD workstation, high speed duplicating printer, CATD-CAD workstation, high speed duplicating printer, CATD-CAD workstation, advanced engineering workstations, and CAD graphics system.

R&D CAPITAL PURCHASE JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1995 President's Budget																	
B. Component/Business Area/Date		C. Line. No & Description 98/Misc ADP Equip Prod Items >25K < 100K					D. Activity Identification Naval Warfare Centers												
ELEMENTS OF COST	ADP EQUIP	FY 1992		FY 1993		FY 1994		FY 1995		Unit Cost	Quant	Total Cost	Unit Cost	Quant	Total Cost				
		Quant	Unit Cost	Total Cost	Unit Cost	Quant	Total Cost	Unit Cost	Quant							Total Cost			
					VAR							493		VAR	822	VAR			721

**Narrative Justification: (Productivity)**

This investment purchases productivity related items which improve the quality and efficiency of the work performed at the Surface Warfare Centers. Examples of the types of ADP equipment purchased are a portable Naval Tactical Data Systems (NTDS) computer interface monitor/data collection system, system engineering workstations, single mode fiber optic analyzer, network analyzers, engineering data backup system, engineering data expansion capability system, enhanced engineering tools, cartridge tape backup system, laser printer, simulation planning and research computer file server, modem servers, high speed modems, switch box-keyboards, and terminal servers.

**Narrative Justification: (New Mission)**

Examples of the types of ADP equipment to be purchased are engineering test equipment (analyzers, oscillators, generators, oscilloscopes), a curriculum development computer network, a Raster ODA workstation, an advanced computation system, an IGNS/MPP/MARS workstation, and CAD II workstations.

R&D CAPITAL PURCHASE JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1995 President's Budget									
B. Component/Business Area/Date DON/R&D/	C. Line. No & Description 101/BACKBONE UPGRADE - CALG (Replacement)	FY 1993			FY 1994			FY 1995			
		Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Unit Cost	Total Cost
TELECOM EQUIP							VAR				350

**Narrative Justification: (Replacement)**

**DESCRIPTION:** High speed, High Grade Optical Fiber and Data Communication Devices such as routers, bridges and gateways

**JUSTIFICATION:** This project will provide for upgrade of the existing network capability to support engineering requirements by increasing the data throughput rate from 100MBS to 1GMS by installing higher graded fiber-optic cable and faster routers between permanent buildings

**IMPACT:** If data throughput between buildings is not increased, it will not be possible to share solid modeling type data among various departments electronically. Use of manual methods such as magnetic tapes is too slow and cumbersome to satisfy weapon system maintenance support requirements in time to meet ships' schedules.



R&D CAPITAL PURCHASE JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1995 President's Budget								
B. Component/Business Area/Date DON/R&D/	C. Line. No & Description 102/GRAPHIC WORKSTATION NETWK (Replacement)	FY 1992		FY 1993		FY 1994		FY 1995		
		Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
TELECOM EQUIP										
								VAR		300

**Narrative Justification: (Replacement)**

**DESCRIPTION:** Data communication devices. This is a mission critical phased '(FY94/95) project

**JUSTIFICATION:** This equipment will be utilized to separate graphical engineering data from business type data traffic. Failure to separate data traffic will prevent improvement of mission related projects. The technology requirements necessary to perform technical analysis of weapon systems is not compatible with existing business systems. Therefore, unless the business system is either upgraded at the same time, it will not be possible to test weapon system modifications and repair actions accurately and may result in use of inoperable weapon systems at sea.

**IMPACT:** Failure to separate data traffic that is business from engineering-type will severely impair test of weapon system modifications and repair actions. The result may be the use of inoperable weapon systems at sea. This procurement is mission critical!!!

R&D CAPITAL PURCHASE JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1995 President's Budget								
B. Component/Business Area/Date DON/R&D/	C. Line. No & Description 106/DATA NETWORKS (Productivity)	D. Activity Identification NSWC DAHLGREN DIVISION DLWO	FY 1992		FY 1993		FY 1994		FY 1995	
			Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost
TELECOM EQUIP					VAR	750	VAR	500	VAR	475

**Narrative Justification: (Productivity)**

NSWCDD is in the process of expanding and enhancing its communications infrastructure. A multi-year effort to install a high speed media trunking system will be completed 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. The networks support Fleet needs of such programs as the Submarine Launched Ballistic Missile (SLBM), ARGIS Combat Systems, STANDARD Missile, TOMAHAWK, and Advanced Sea Mine. They allow the integration of distributed ADP resources, both secure and unclassified. This investment is for the routers, bridgers, and control systems needed to implement the networks on the new trunking system.

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. An economic analysis has been performed for this investment yielding a Savings to Investment Ratio (SIR) of 1.9.

R&D CAPITAL PURCHASE JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1995 President's Budget												
B. Component/Business Area/Date DON/R&D/	C. Line. No & Description 111/DTNET Extensions (New Mission)	FY 1992			FY 1993			FY 1994			FY 1995			
		Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	
TELECOM EQUIP					1	100	100	1	100	118	118	1	100	100

**Narrative Justification: (New Mission)**

The David Taylor Network (DTNET) is an integrated data/audio/video Division-wide network serving CARDEROCKDIV, NSWC.

Funding of about \$100K is required annually to extend DTNET to areas of the Division which do not yet have service. The funding is used to install cabling and terminal drops in new and existing buildings where service does not yet exist. The addition of SSES to the CARDEROCKDIV has altered the requirements for DTNET service from what was initially envisioned. Service must be provided at SSES where it does not yet exist.

Failure to fund this project will result in the inability to meet customer requirements.

**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

**B. Component/Business Area/Date**

**C. Line. No & Description**  
114/FDDI UPGRADE TO LAN  
(New Mission)

**D. Activity Identification**  
NSWC PHD, PORT HUEMENE

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
TELECOM EQUIP							VAR		360	VAR		250

**Narrative Justification: (New Mission)**

**DESCRIPTION:** Data Communication Devices, Finder Distributed Data Interface (FDDI) to FDDI Routers, Bridges and/or Gateways and FDDI to ETHERNET Routers, Bridges, Gateways

**JUSTIFICATION:** This project supports upgrade of the existing network backbone from a 10mbs to a 100mbs transmission to support engineering requirements. The upgrade is necessary to allow the sharing of engineering data among departments located in different buildings. In order to transport high density engineering data, drawings and textural, data throughput between buildings must be increased

**IMPACT:** Mission critical!!! Utilising manual means such as magnetic tapes will impact response time to mission assignments and may result in inoperable weapon systems deployed at sea. This is a two part project scheduled in FY 94 and FY 95

R&D CAPITAL PURCHASE JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1995 President's Budget			
B. Component/Business Area/Date DOM/R&D/	C. Line. No & Description 116/Misc Telecomm Equipment Prod Items >25K < 100K	D. Activity Identification Naval Warfare Centers			
		FY 1994		FY 1995	
ELEMENTS OF COST		Unit Cost	Total Cost	Unit Cost	Total Cost
TELECOM EQUIP		Quant	Cost	Quant	Cost
				VAR	55
				VAR	50

**Narrative Justification: (Productivity)**

These investments are productivity related items which improve the quality and efficiency of the work performed at the activity. Examples of the types of telecommunication are LAN Network Control Center, LAN Generator & Sweep System and LAN to SCMSD Building.

R&D CAPITAL PURCHASE JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1995 President's Budget														
B. Component/Business Area/Date DON/R&D/	C. Line. No & Description 118/LAN Protocol Software (Replacement)	D. Activity Identification COASTSYSTA Panama City FL	FY 1992			FY 1993			FY 1994			FY 1995				
			Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost		
OFF THE SHELF SOFTWARE									1	115	115			1	115	115

**Narrative Justification: (Replacement)**

Transfer Control Protocol/Interface Protocol (TCP/IP) software for microcomputers 501-1000 to allow Station PCs to communicate with local and remote computer systems using DoD standard protocols.

This software is required to replace 3Com TCP/IP software that is presently installed on the systems. The COASTSYSTA utilizes a local area network (LAN) with wide area network (WAN) access for virtually all of its data communications requirements. The DoD standard TCP/IP software suite is utilized to provide inter-host and micro-to-host communications on both the LAN and the WAN. The current method for providing micro-based TCP/IP has been to use a site-licensed 3Com TCP/IP product. However, 3Com has eliminated its support for networking software, "orphaning" the current product. This situation puts basic network communications for COASTSYSTA microcomputer users at risk.

If this request is not funded, the COASTSYSTA will be unable to adapt to the continuously changing microcomputer environment and will eventually lose its ability to communicate between microcomputers and multi-user systems. This kind of communications failure would clearly adversely affect the Station's ability to accomplish its mission and cannot be allowed to occur.

R&D CAPITAL PURCHASE JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1995 President's Budget							
B. Component/Business Area/Date DOM/R&D/	C. Line. No & Description 120/LINKS SOFTWARE (Productivity)	D. Activity Identification MSWC DANLAREN DIVISION DLWO							
		FY 1993		FY 1994		FY 1995			
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
OFF THE SHELF SOFTWARE				5		225	4	40	160

**Narrative Justification: (Productivity)**

The Links project will provide standard connectivity between existing personal computers and desktop devices currently configured as multiple subnets connected to the MSWCDD backbone. By utilizing Links unix-based multi-processor computers and off-the-shelf software to connect the installed base of user devices, scientists and engineers can share information across these subnets and can access standard Center applications for their program management and engineering support.

The Links standard system configuration will allow the PCs and desk top devices of the scientists and engineers that are decentralized on different subnets (e.g., Novell, DECNET, Appletalk, NSWCNET) to easily share information. By utilizing Links, the different subnets will not have to duplicate effort and spend resources to provide connectivity with each subnet they need to communicate with. In addition, Links will provide a standard access method to Center applications that each subnet can utilize. An economic analysis has been performed for this in investment yielding a Savings to Investment Ratio (SIR) of 1.2.

Without Links, each subnet will have to provide a mechanism for sharing information with each of the different subnets that their users need to communicate with, or have no communication and sharing of information outside of their own subnet.

**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

**B. Component/Business Area/Date**  
DOM/R&D/

**C. Line. No & Description**  
122/Misc Off the Shelf  
Software Rep Items =>25K <  
100K

**D. Activity Identification**  
Naval Warfare Centers

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
OFF THE SHELF SOFTWARE							VAR		64	VAR		113

**Narrative Justification: (Replacement)**

This investment replaces aged/out of date software which will reduce downtime. Examples of replacement Off the Shelf Software are: (1) LAN Menu Software, (2) LAN Mail Software, and (3) Misc Off the Shelf Software.



**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

**B. Component/Business Area/Date**  
DON/R&D/

**C. Line. No & Description**  
123/Misc Off the Shelf  
Software Prod Items =>25K  
< 100

**D. Activity Identification**  
Naval Warfare Centers

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
OFF THE SHELF SOFTWARE							VAR		65	VAR		100

**Narrative Justification: (Productivity)**

This investment purchases productivity related software which will improve the quality and efficiency of the work performed at the Surface Warfare Center. Examples of the Off the Shelf Software are: Graphic Software Upgrade File Archival Retrieval AXP System Analysis

R&D CAPITAL PURCHASE JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1995 President's Budget											
		B. Component/Business Area/Date DON/R&D/			C. Line. No & Description 124/DHRD 924 SOFTWARE (Productivity)			D. Activity Identification NSWC - CRANE DIVISION			Total Cost		
		FY 1992			FY 1993			FY 1994			FY 1995		
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		\$356	VAR		1,240

**Narrative Justification: (Productivity)**

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. The 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 Navsea Information Management Improvement Program as the Mission Need Statement for the NAVSEA Information Management Improvement Program. 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 mandated DMRD 924 savings.

**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

**B. Component/Business Area/Date**  
DOM/R&D/

**C. Line. No & Description**  
125/Misc Minor  
Construction Rep Items

**D. Activity Identification**  
Naval Warfare Centers

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
MINOR CONSTRUCTION				VAR		2148	VAR		1960	VAR		1680

**Narrative Justification: (Replacement)**

The projects identified fund the minor construction portion of projects which are a combination of Maintenance and Repair and miscellaneous Minor Construction. Examples of these projects include: construct technical office building (replaces trailers), construct temperature and humidity facility (replaces trailers), alterations and repairs to Bldg 79 for relocation of station photo lab/graphics arts branch, replace work shelter, renovate beach site (Coastal Test Range), replace environmental facility, upgrades and renovations to buildings to replace trailers and upgrade Bldg 1119 for Twin Screw Extruder operations.

**R&D CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

**B. Component/Business Area/Date**

**C. Line. No & Description**  
126/Misc Minor  
Construction Prod Items

**D. Activity Identification**  
Naval Warfare Centers

ELEMENTS OF COST	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
MINOR CONSTRUCTION				VAR		716	VAR		854	VAR		762

**Narrative Justification: (Productivity)**

The projects identified provide increased infrastructure support to the warfare centers. Examples of these projects include: small arms range, construct welding/materials lab, install electric meters, install direct digital control systems, install power lines to warehouse, provide piping installation to Air Test Facility.

**Narrative Justification: (New Mission)**

The projects identified provide increased infrastructure support to the warfare centers. Examples of these projects include: renovation of linear accelerator lab, physical repair lab renovations, construct communications shelter assembly building, construction of a bounded wave generator, titanium spray foaming facility, construct supply department office building, construct addition to provide project drawing repository and addition to building which houses expanded thermal spray facility.

R&D CAPITAL PURCHASE JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1995 President's Budget			
B. Component/Business Area/Date DOM/R&D/	C. Line. No & Description 128/Misc Minor Construction Env/Safety Items		D. Activity Identification Naval Warfare Centers		
	FY 1993		FY 1994		
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Unit Cost	Total Cost
MINOR CONSTRUCTION		VAR	2981	VAR	3698
				VAR	3450

**Narrative Justification: (Environ/Safety)**

These projects are required to meet regulatory requirements which are primarily environmental or safety related. Examples of these projects include: construct waste oil storage facility, reroute drainage at oil/water separator, construct 2 trailer loading ramps, install tank farm sump pump, construct oil drum storage facility, replace/relocate gas station, construct chemical storage facility, construct fueling station, UV/Ozone treatment NG emissions, toxic emission controls to various buildings, fire pump manifold connection, BMP improvements, Volatile Organic Compound recovery various locations, relocate photo lab to correct fire/safety deficiencies and West Jetty Hazmin Facility.

**CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

A. FY 1995  
PRESIDENT'S BUDGET

B. Department of the Navy/Research & Development  
C. P-369 MILCOM COLLATERAL EQUIP. (MESA)  
REPLACEMENT  
D. NMIC-UP  
LINE 6 WELDOORS

Element of Cost	FY 1992		FY 1993		FY 1994		FY 1995	
	Qty	Total Cost	Qty	Unit Cost	Qty	Unit Cost	Qty	Unit Cost
Hardware								
Software								
Installation								
<b>TOTAL</b>							1	1,301
								1,301

**Narrative Justification:**

**DESCRIPTION:** These procurements will provide the collateral equipment required to make the Missile Engagement Simulation Arena (MESA) (MILCOM 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.

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.

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.

**ECONOMIC ANALYSIS IMPACT:** 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.

**COST BENEFIT ANALYSIS HAS BEEN PERFORMED WITH:**

- Payback Period = 5.0 years
- Return on Investment (ROI) = 6%
- Average Annual Savings = \$512K

**CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

A. FY 1995  
PRESIDENT'S BUDGET

B. Department of the Navy/Research & Development

C. TERADYNE SCINTREL 8500 TEST SYSTEM REPLACEMENT  
LINE 8 ARL5501R

D. NMIC-AS

Element of Cost	FY 1992			FY 1993			FY 1994			FY 1995		
	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
Teradyne Scintrel 8500 Test System										1	710	710
<b>TOTAL</b>												710

**Narrative Justification:**

The Teradyne Scintrel 8500 Test System is designed to update and enhance the NMIC automatic in-circuit test capability. All printed wiring assemblies (PWA's) manufactured at NMIC Indianapolis are now tested on in-circuit testers. The increasing use of the in-circuit testers in the NMIC Indianapolis inventory has now created the need for additional test systems. The current testers are now 9 years old and are no longer supported by the manufacturer. The old equipment will still prove useful on older technologies, however, the new generation of in-circuit testers requested are needed to support the additional workload and the new technologies that the Government is working towards such as Boundary Scan and Surface Mount Technology. Almost every program at NMIC Indianapolis uses PWA's. All of them will be impacted by the procurement of this system. NMIC Indianapolis will not be capable of testing PWA's incorporating new technologies and the fleet support for these programs will be frozen at 1984 technology if this investment is not made.

**COST BENEFIT ANALYSIS HAS BEEN PERFORMED WITH:**

- Payback Period - 0.4 year
- Return on Investment (ROI) - 219% for FY94, 237% for FY95
- Average Annual Savings - \$1.364K



**CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

Element of Cost	FY 1992						FY 1994			FY 1995		
	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
Hardware												
Software												
Installation												
Other												
<b>TOTAL</b>												

A. FY 1995  
PRESIDENT'S BUDGET

B. Department of the Navy/Research & Development

C. MISSION PLANNING EQUIPMENT REPLACEMENT  
LINE # WEL0007A

D. NMIC-49

**Narrative Justification:**

DESCRIPTION: Mission Planning is becoming ever more important in the development, design, and utilization of modern weapons systems, and in the future will be 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. NMIC-49 programs such as the Joint Stand Off Weapon (JSOW), Standoff Land Attack Missile (SLAM), Highspeed Antiradiation Missile (HAMM), the Harpoon Weapon System, the Joint Direct Attack Missile (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 weaponing details associated with the target structure and kill mechanics, 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 purchase the mission planning equipment required to support a broad spectrum of mission planning development activities. The mission planning laboratory will essentially be able to mimic all the mission planning activities performed aboard an aircraft carrier in the Command Intelligence Center. To accommodate these requirements, the funds are being used to purchase a Tactical Aircraft Mission Planning System (TAMPS) in the shore configuration. TAMPS developmental hardware, and real time imagery processing equipment. The laboratory will make available to the technical development team of NMIC-49 the resources they require to perform mission planning development tasks essential to their programs. Failure to complete the Mission Planning Development and Support Laboratory will seriously compromise our efforts to build a significant role for NMIC-49 in the mission planning arena.

**COST BENEFIT ANALYSIS HAS BEEN PERFORMED WITH:**

Payback Period = 1.7 years  
 Return on Investment (ROI) = 38%  
 Internal Rate of Return = 47%  
 Average Annual Savings = \$906K beginning in July 1995

**CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

B. Department of the Navy/Research & Development

A. FY 1995  
PRESIDENT'S BUDGET

C. CASS AUTOMATED TEST EQUIPMENT  
REPLACEMENT

D. NMHC-AB

LINE # ARL9401R

Element of Cost	FY 1992			FY 1993			FY 1994			FY 1995		
	QTY	Unit Cost	Total Cost	QTY	Unit Cost	Total Cost	QTY	Unit Cost	Total Cost	QTY	Unit Cost	Total Cost
CASS Automated Test Equipment										1	2,400	2,400
<b>TOTAL</b>											2,400	2,400

**Narrative Justification:**

The CASS Automated Test System is a general purpose automated electronics test system which is being mandated for use Navy wide. Redesign/development/manufacturing support of various NMHC-AB avionics programs will be enhanced by adopting the Navy-wide standard automatic test system (CASS). The NMHC-AB Indianapolis support to various fleet programs such as F-18 Stores Management System Upgrade, ARIS, V-22, MAAM, and AIC-14 will be hindered without this capital investment. With the current situation, testing must first be done on the old system and then re-hosted to a CASS test system. This results in major inefficiencies. Thousands of man-hours are lost each year because the equipment must be tested twice.

In support of its mission NMHC-AB Indianapolis provides design and build, build-to-print, technical support, decentralized acquisition, and other functions. To fulfill its mission, NMHC's products and services must integrate with and support all aspects of Naval Aviation. In a streamlined Navy, the transition to the CASS testing program is a key Navy effort to reduce cost, standardize test resources, and improve efficiency. There is currently an estimated \$1.8 billion of CASS Test Program set work to be funded over the next 5 to 7 years. Of this approximately 30% to 50% is scheduled to be performed by Navy installations. NMHC-AB Indianapolis is expected to perform a portion of this work and will need the new CASS Test System to be able to perform the function properly.

**COST BENEFIT ANALYSIS HAS BEEN PERFORMED WITH:**

Payback Period - 2.4 years  
Return on Investment (ROI) - 37.9%  
Average Annual Savings - \$737K

**CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

A. FY 1993  
PRESIDENT'S BUDGET

B. Department of the Navy/Research & Development

C. ADVANCED MULTIPLE EMITTER SYSTEM  
REPLACEMENT

D. RMMC-W9

Element of Cost	FY 1992			FY 1993			FY 1994			FY 1995			
	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	
Hardware													
Software													
Installation													
Other													
<b>TOTAL</b>											1	1,750	1,750

**NARRATIVE JUSTIFICATION:**

**DESCRIPTION:** The procurement involves the purchase of a modern Radio Frequency (RF) threat generation source. The purpose of the procurement is to meet the future test requirements of the Electronic Warfare Integration Lab (EWIL).

The EWIL is run by the Radar Warning Receiver (RWR) Branch, and is the Navy's most complete facility for defining, developing, and testing integration concepts for the Navy's tactical aircraft communities. Within the EWIL, the AM/ALR-67 Radar Warning Receiver (RWR) can be simultaneously hooked-up and tested in an integrated fashion with the High Speed Anti-Radiation Missile (HAMM), Deceptive Electronic Countermeasures (DECM) (AM/ALQ-126B and AM/ALQ-162 jammers, and AM/ALQ-165) airborne self protection jammers, the ALR-67 chaff/flare dispenser, and the Integrated Defense Avionics Program (IDAP) boxes (ALQ-50 towed decoy, Buffer Storage Unit, and AM/ALQ-156A missile warning radar). With these systems connected, they are simultaneously injected with RF energy to check their integrated response. With this combined information, the system developers can best determine the optimum integration techniques to utilize and verify those concepts already defined and understood.

As the sophistication of new threat radars increase, so does the requirement for better simulators. This procurement is one of the newest threat generators available and is anticipated to have growth potential for many years to come. The installation of this new threat generator will be side by side with the existing Multiple Agile Radar Threat Simulator (MARTS) currently used in the EWIL and will complement the capabilities of MARTS by providing numerous fourth generation threats (the actual number of threats available is procurement dependent). The Advanced Multiple Emmitter System II (AMES II) is capable of supporting complex emitters with difficult scan, modulation, and agility characteristics. Robust hardware and software designs in the AMES II should provide for increased growth as new threat capabilities become known.

Another benefit to procuring the AMES II is that this station is identical to that being used by Point Mugu's Electronic Warfare Software Support Activity (EWSA) to develop new software upgrades for the AM/ALR-67, AM/ALQ-126B, AM/ALQ-163, AM/ALQ-47, etc. Threat databases should be easily transferable thus reducing lifecycle costs for both activities. Furthermore, RMMC-W9 has been tasked by NAVSTAPOINTMUGU to be the Independent Test and Evaluation activity for products developed by the EWSA. With common (and verified) threat generation capabilities, testing to like RF input conditions will be ensured. Without this new system, the Navy will be severely limited in its ability to deal with modern fourth and fifth generation threats.

**COST BENEFIT ANALYSIS HAS BEEN PERFORMED WITH:**

- Payback Period - 4 years
- Return on Investment (ROI) - 20%
- Internal Rate of Return - 10%
- Average Annual Savings - \$369K beginning April 1996

**CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

B. Department of the Navy/Research & Development	C. CNC VERTICAL TURRET LATHE REPLACEMENT										A. FY 1995 PRESIDENT'S BUDGET	
	LINE # AELOOOIR										B. NMIC-AD	
	FY 1992			FY 1993			FY 1994			FY 1995		Unit Cost
Element of Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
CNC Vertical Turret Lathe										1	1,000	1,000
<b>TOTAL</b>												1,000

**ARRATIVE JUSTIFICATION:**

**DESCRIPTION:** A vertical turret lathe/vertical boring mill is a vertical turning machine that is similar to conventional lathes turned on end. The advantage of this machine is the ease with which large or heavy work pieces can be set up and held. CNC offers continuous-path contouring capability by providing velocity and displacement control continuously for all machine motions. As a result, tools may be moved continuously along any prescribed path within the limits of the machine. CNC also handles various auxiliary operations such as the selection of tools, feed rates, and speeds. Its larger size will enable any future hardware machining requirements of larger design. The CNC capability will significantly reduce the amount of machining time and machining error associated with manually operated machines.

This is a replacement for the Bullard 74" Vertical Turret Lathe (2201). It was identified as a required replacement item in a 1992 DPMSC survey. The current machine is beyond economical repair and requires a complete rebuild. It was built in the 1940's and has far exceeded the service life. It does not conform to safety standards. A 1989 evaluation of this machine by the MNC company, a subsidiary of the Beveling Machine Company, concluded that it requires a complete rebuild at an estimated cost of \$500K to restore it as a manually operated machine. The rebuild would require six months of downtime. The price of the rebuild does not cover major castings, forging, or damaged hardened ways. In addition, all shipping costs would be the responsibility of the customer. Additional rebuild may be required in subsequent years.

The new machine is required for the manufacture of Low Loss Launch Valve (LLV) bodies. The LLV is a mission essential component of the aircraft carrier catapult system and is critical to the core mission of Naval Aviation. NMIC Lakehurst is the only overhaul point for the LLV.

Attempts to contract for LLV overhaul services to the private sector have repeatedly proven unsuccessful. Some of these private sector failures include contracts with the Hardy Times Valve, AC Valve, and Platt Manufacturing. These failures have caused program slippage and increased costs in restarting and rescheduling the work at NMIC Lakehurst. The Overhaul Program requires constant interaction with NMIC Lakehurst design and in-service engineering personnel. The co-location of the engineering and overhaul personnel allows for effective emergency Fleet support of the catapult system.

The loss of the new Vertical Turret Lathe capability could result in the unavailability of LLV for both ship overhaul construction and Fleet emergencies. In the former case, the inability to support the Navy's commitments to shipbuilders can result in claims against the government of up to \$100,000 per day. In the latter case, the lack of LLV will cause the "downing" of a catapult, thereby jeopardizing the mission and possibly the aircraft carrier and its crew.

**COST BENEFIT ANALYSIS HAS BEEN PERFORMED WITH:**

Return on Investment (ROI) = 7.12  
Average Annual Savings = \$71K  
Cost Avoidance = \$500K

**CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

B. Department of the Navy/Research & Development

A. FY 1995  
PRESIDENT'S BUDGET

D. NMUC-AD

C. NOTION SIMULATION TABLE REPLACEMENT

Element of Cost	LINE 0 AEL6002R													
	FY 1992				FY 1993				FY 1994				FY 1995	
	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Unit Cost	Total Cost
Notion Simulation Table													700	700
<b>TOTAL</b>													700	700

**RAIABILITY JUSTIFICATION:**

**DESCRIPTION:** This is an Applied Dynamics incorporated model AD-100 or equivalent with model RTS remote I/O system with a host. As technology changes between now and FY95, it is expected that equivalent compatible equipment will become available. The equipment uses a high level real time simulation language and does not require intensive traditional software language programming support (i.e. Fortran). The RTS provides very high quality input/output capability which provides such of the engineering required for hardware in the loop simulation.

**PROJECT PURPOSE:** The purpose of the project is to provide the Dynamic Flight Simulator (DFS) with the capability to run large high fidelity aerodynamically intensive programs with a system which is code compatible with the standard of the simulation industry. This system will perform hardware in the loop simulation including actual aircraft flight control system interfacing for newly developed aircraft which give great validity to the quality of simulations performed on the device. The user acceptance due to this is necessary for the continued growth and acceptance of the DFS.

**EXISTING METHOD AND SHORTCOMINGS:** Contractor services required to provide an unsatisfactory subset of this capability using existing equipment is estimated at \$300K per year. This number should be reduced to \$100K per year with the purchase of the new equipment.

**BENEFITS FROM PROPOSED CAPITAL INVESTMENT:** The capability that this will provide will contribute to the attraction of O&M in new business for the DFS per year for 5 years. The DFS is re-identifying its role to more flight simulation intensive uses. Its unique capabilities of large radius and controllable gimballed axes are becoming more critical as the role of simulation increases in importance for cost reduction throughout the DOD and NASA.

**IMPACT OF NOT MAKING THE CAPITAL INVESTMENT:** Without the development of this capability, serious use of the unique features of the DFS cannot be realized. This will be a serious loss to potential missions as well as the continued existence of the DFS. The missions potentially affected include all aircraft cockpit development T&E programs, aircrew equipment T&E programs, training curriculum development, aircraft mishap investigation, and physiological M&B.

**COST BENEFIT ANALYSIS HAS BEEN PERFORMED WITH:**

- Payback Period - 4 Years
- Return on Investment (ROI) - 22.0%
- Profitability (PP) Index - 2.3
- Average Annual Savings - \$160K

**CAPITAL PURCHASE JUSTIFICATION**  
(Dollars in Thousands)

A. FY 1995  
PRESIDENT'S BUDGET

B. Department of the Navy/Research & Development

C. ANECHOIC CHAMBER BLDG. 120  
REPLACEMENT

D. NMWC-AD

LINE # AEL5012R

Element of Cost	FY 1992			FY 1993			FY 1994			FY 1995		
	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
Anechoic Chamber Bldg. 120										1	500	500
<b>TOTAL</b>												<b>500</b>

**MARKETING JUSTIFICATION:**

**JUSTIFICATION:** The procurement is to refurbish the anechoic properties of the existing 90 foot chamber housed in Building 120 at the NMWCAD Warminster Antenna Range. The chamber has been in continuous use since 1974 and has deteriorated due to wear and tear as well as the fact that it is not environmentally controlled. The chamber was in used condition when purchased in 1974 and was transported to NMWCAD Warminster from its original construction site. The actual age of the chamber is unknown. Refurbishment is required to restore the low frequency performance (125 MHz to 1 GHz region) of this unique chamber and to comply with the MIL SPEC 8093 fire safety standard. Currently use is restricted to 1.0 GHz to 20 GHz because of the deterioration. Additionally, a backlog of Radar Cross Section measurement requirements exists because this chamber can no longer be used for these reflection sensitive measurements. The chamber is needed/used for the following programs: Fleet Vandal Targets, Global Positioning System install evaluations, H-60 and VP Special Projects, NAM Missile, and various Outlaw programs.

**QUALITATIVE JUSTIFICATION:** The deteriorated state of the current absorber limits test capabilities, requires increased setup time in order to check for chamber quiet zone, and requires additional maintenance. The refurbishment is essential to support sponsors and to maintain capabilities and expertise in communication band antennas.

**TRANSPORTABILITY JUSTIFICATION:** The purchase is requested for FY 1995 to bring it in line with the move (realignment) to Patuxent River. The chamber will be set up at Patuxent River. The increased capability, efficiency, and savings is why the purchase is not being delayed.

**IMPACT:** If the refurbishment is not completed in FY 1995 additional costs will be incurred in working around the limitations of the current chamber. These costs are in dollars as well as in schedule time since use of the facility requires suspending operation of other facilities. Delaying this procurement only delays the inevitable while adding maintenance and operating costs.

**SAVINGS:** The economic analysis for this procurement is provided in the UC/9007 9C. It should be noted that the analysis very conservatively assumes \$26,000 increased labor costs for use of the outdoor antenna range facility to perform measurements that cannot be performed in the chamber because of deterioration. There is no cost included in the analysis for the loss of schedule time that results from outdoor measurements, particularly when weather limitations are considered. There is also no means of accounting for measurements that cannot be done without the chamber. No alternative chamber is available to which this work can be contracted. The capability to be restored by this refurbishment is mission essential.

**COST BENEFIT ANALYSIS HAS BEEN PERFORMED WITH:**

- Payback Period                   • 10 Years
- Return on Investment (ROI)   • 10.16
- Profitability Index             • 1.0
- Average Annual Savings       • \$51K

**CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

B. Department of the Navy/Research & Development

C. CONCURRENT ENGR. WORKGROUP SYSTEM  
PRODUCTIVITY

LINE 6 UNLOO10P

A. FY 1995  
PRESIDENT'S BUDGET

D. NAWC-40

Element of Cost	FY 1992			FY 1993			FY 1994			FY 1995		
	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
Hardware												
Software												
Installation												
Other												
<b>TOTAL</b>												

**Narrative Justification:**

**DESCRIPTION:** This procurement consists of an integrated system which is being developed in several phases. In Phase I (FY92) 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 system. In our current phase (Phase II) the objective is to complete the obligations of each division and to expand the capabilities established in Phase I of the Concurrent Engineering Workgroup (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. The cultural aspects of CE are being addressed via TGT and other initiatives. 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. This envisioned system will enable developed products to be CALS compliant and insure that the data transfer between multiple organization, 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 20-30%, 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 and perhaps influence some cultural barriers. However, these technologies will not address all of the cultural issues. They will have to be addressed via education.

If this system is not procured the impact will be extensive. There is a current investment in Phase I in the Microprocessor Design Center, the Electronic Design and Simulation Facility, the Airframe CAE System, and the Weapon Systems Analysis System. If the follow-on phases are not met, then our competitive advantage will be jeopardized, equipment and software will be outdated and inadequate and will not be state-of-the-art, nor will NAWC/40 have the fundamental foundations needed to exploit CE and CALS technologies.

**COST BENEFIT ANALYSIS HAS BEEN PERFORMED WITH:**

Payback Period - 1 year  
 Return on Investment (ROI) - 77%  
 Internal Rate of Return - 80%  
 Average Annual Savings - \$2.820M beginning in May 1995

CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)												
B. Department of the Navy/Research & Development						A. FY 1995 PRESIDENT'S BUDGET						
C. NEW FLIGHT TEST INSTRUMENTATION NEW CAPABILITY						D. NMIC-UP						
LINE # WEL0004B												
Element of Cost	FY 1992			FY 1993			FY 1994			FY 1995		
	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
Equipment - Instrumentation										1	200	200
<b>TOTAL</b>												200

**Narrative Justification:**

DESCRIPTION: Hybrid chips process multiple analog data sources and output them as a single pulse code modulation data stream. Presently there are no spare chips and the original manufacturer will not commit to manufacture more. A replacement part has been identified and the procurement of 10 spares is essential to avoid severely impacting the MHCWYNS flight test operations and the loss of data and/or flight test.

Encrypting of flight test 762 aircraft equipment is continually increasing. Modern technology instrumentation systems are required to meet the new more sophisticated aircraft weapon system Y88 requirements. Without adequate capability to meet these new requirements, each lost flight test may cost up to \$10K. This will lead to program delays and increased costs for testing.

**COST BENEFIT ANALYSIS HAS BEEN PERFORMED WITH:**

- Payback Period - 2.6 years
- Return on Investment (ROI) - 37%
- Internal Rate of Return - 28.5%
- Average Annual Savings - \$367K



**CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

B. Department of the Navy/Research & Development

C. CASS STATION EQUIPMENT

LINE # WELCOONR

Element of Cost	FY 1992			FY 1993			FY 1994			FY 1995		
	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
CASS Station Equipment										1	1,728	1,728
<b>TOTAL</b>											<b>1,728</b>	<b>1,728</b>

**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 SPCNAV study on test equipment. The Consolidated Automated Support System (CASS) design incorporates 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 system, 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 maintainability 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.

A. FY 1995  
PRESIDENT'S BUDGET

B. NMIC-06

**CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

A. FY 1995  
PRESIDENT'S BUDGET

B. Department of the Navy/Research & Development

C. NMIC  
NEW MISSION

LINE # ARL0001F

D. NMIC-AD

Element of Cost	FY 1992			FY 1993			FY 1994			FY 1995		
	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
Maritime Multimission Interoperability Center (NMIC)										1	1,300	1,300
<b>TOTAL</b>												1,300

**NARRATIVE JUSTIFICATION:**

The Maritime Multimission Interoperability Center (NMIC) is a Naval Air Warfare Center Aircraft Division initiative to improve the process of developing and testing interoperable multi-mission Anti-Submarine Warfare, Anti-Surface Warfare, Anti-Air Warfare, and Space & Electronic Warfare assets. The NMIC will provide a cost effective capability to develop and test interoperable tactical data links and computer systems and their employment tactics as installed in multi-mission aircraft. New programs, Engineering Change Proposals, and software upgrades must conform to new CII standards and be interoperable with joint and allied systems. Current ASW simulation/stimulation capabilities have been developed to address specific platform issues. NMIC combined simulation/stimulation of multiple Air ASW multi-mission assets provides for advanced capabilities to test and evaluate ASW interoperability concepts necessary to demonstrate the feasibility and capability for fleet improvements.

This new laboratory will make extensive use of existing 800 test facility resources to complement the interoperability center test capabilities. The design of the NMIC has been initially scoped to conduct simultaneous testing of seven air and integrated ship/air Anti-Submarine Warfare (ASW) systems and platforms. The NMIC will provide the focused approach coupled with the appropriate facility resources necessary to ensure that multiple ASW sensor/weapons systems and platforms will optimally perform in a coordinated warfighting environment while subjected to repeatable, representative threat scenarios.

An economic analysis has been submitted and the cost of alternative methods of performing complex test and evaluation of interoperable ASW systems has been reviewed. The costs of performing these type of test scenarios using actual flight missions are exorbitant. Work-around tests using individual platform specific laboratories would result in fragmented data collection with an inherent increase in inefficiency, ineffectiveness, and schedule risk. The NMIC is the only means to provide scientifically controlled, covert interoperability testing of multiple ASW sensors/platforms.

As the quantitative number of fleet ASW multi-mission tactical assets decreases due to rising costs, the remaining force structure must interact to a greater degree to maintain a viable force multiplier balance. This investment supports a smaller, more effective force structure. The annual cost savings or cost avoidance will be based on program requirements. The savings will be computed from the cost of using simulation/stimulation capabilities in conjunction with ground and local flight operations as compared to full-scale multi-platform flight operations (local and detached).

Annual investments will be a combination of labor and off-the-shelf hardware. It is anticipated that each year will result in an incremental gain in functional capability. Therefore, all purchases are expected to be on-line within one year after obligation. The impact of not funding this requirement will result in fragmented/inefficient test capabilities and an increased risk to fleet interoperability.

**COST BENEFIT ANALYSIS HAS BEEN PERFORMED WITH:**

Payback Period - 8 years

**CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

B. Department of the Navy/Research & Development

A. FY 1995  
PRESIDENT'S BUDGET

C. VISION SYSTEM (IAVS)  
NEW MISSION

D. NMIC-AD

LINE # AEL0002H

Element of Cost	FY 1992			FY 1993			FY 1994			FY 1995		
	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
VISION System - Integrated Aircraft Weapon System (IAVS) Facility										1	1,300	1,300
<b>TOTAL</b>												1,300

**Narrative Justification:**

The Integrated Aircraft Weapon System (IAVS) Facility is a Naval Air Warfare Center Aircraft Division initiative to improve the Research Development Test and Evaluation (RDTE) of electro-optic devices, digital flight control systems, advanced radar apertures and the process of the stores management systems. The IAVS Facility Military Construction project designated P-493 is a single structure made up of three major complexes, Night Combat Laboratories, Integrated Control System Laboratory, and the Technology Demonstration Laboratories, which comprises a total of 6 separate independent laboratories. All of the laboratories will have the capability to operate autonomously or selectively provide data linkage to the Air Combat Environment Test and Evaluation Facility (ACE2EP) or to other laboratories in the Naval Air Warfare Center (NAWC) for interoperability testing.

The IAVS facility is unique in that there are no laboratory facilities in any service dedicated to RDTE of night combat systems or integrated/adaptive aircraft flight controls. In particular, there is no capability to provide controllable stimulation of infrared and other electro-optical sensors in an integrated system environment to allow detailed quantitative measuring of system performance.

There are no resources dedicated to the evaluation of integrated/adaptive aircraft flight control systems which allow operation of the flight control systems in an integrated pilot-in-the-loop combat-environment simulation, which is required to evaluate operational requirements, configuration concepts, and new flight control system technologies.

An economic analysis has been developed for individual components. The cost of alternative methods of performing complex RDTE of night vision systems, electro-optical sensors, flight control systems, radar systems, and stores management systems in actual flight would be exorbitant. In some scenarios, required low level flight profile testing would be precluded because of the uncertainty of performance of certain night vision systems if laboratory testing was not possible. Work around tests would generally consist of individual black box testing rather than full integrated system testing. Inability to control the test environment would preclude precise evaluation of integrated systems performance and test results would often be of a qualitative nature. The IAVS is the only means to provide a scientifically controlled environment to precisely measure performance of night vision systems. EO/IR/Reconnaissance/Laser and radar sensors, integrated flight controls, and integrated avionics.

There is no organic government capability for RDTE of generic tactical radar systems and apertures in a roof top environment where Radio Frequency (RF) radiation is allowed. This capability will provide RDTE support to Navy, Air Force, Army, and other services acquisition programs.

**COST BENEFIT ANALYSIS HAS BEEN PERFORMED WITH:**

Payback Period - 2.2 Years  
Return on Investment (ROI) - 428  
Average Annual Savings - \$439K

**CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

A. FY 1995  
PRESIDENT'S SUBJECT

B. Department of the Navy/Research & Development

C. NON-R&D EQUIPMENT (195000)

D. NMIC

LINE # H520000

Element of Cost	FY 1992		FY 1993		FY 1994		FY 1995		Total Cost
	Qty	Unit Cost	Qty	Unit Cost	Qty	Unit Cost	Qty	Unit Cost	
Aircraft Division									9.012
Weapons Division									4.264
<b>TOTAL</b>									<b>9.676</b>

Narrative justification:

See attached.

CAPITAL PURCHASES JUSTIFICATION  
DEPARTMENT OF THE NAVY  
RESEARCH & DEVELOPMENT - NAVAL AIR WARFARE CENTER  
LINE # NES0000 NON-ADP EQUIPMENT (<\$500,000) DETAIL

LINE #	DESCRIPTION
<b>AIRCRAFT DIVISION</b>	
A WES 0000	99 Channel Sonobuoy Receiver System
A WES 0000	Compact Range
A I ES 0000	Aluminium Braze VAC Furnace
A I ES 0000	Equipment Installation
A I ES 0000	PWB Bare Board Tester
A X ES 0000	Miscellaneous Equipment/Installation
A I ES 0000	Caine II Inertial Navigation Set
A WES 0000	A6E Part Task Trainer
A I ES 0000	3D-Systems SLA Solid Imager
A WES 0000	Hydraulic Power System
A I ES 0000	Robotic Tinning System
A I ES 0000	Oscilloscopes
A WES 0000	FASS Upgrade to 21GHZ
A I ES 0000	CP60 Corrugated Processor
A WES 0000	Pattern Receiver
A WES 0000	Hot Fracture Mechanics System
A I ES 0000	Temp/Altitude Test Chamber
A I ES 0000	Vibration & Shock Controller
A I ES 0000	Network Analyzer w/S Para.
A WES 0000	High Speed Recorder
A X ES 0000	Sony Color Video Cameras
A I ES 0000	Environmental Test Chambers
A I ES 0000	Particle Monitoring System
A I ES 0000	Tensile Testing Machine
A I ES 0000	Dig. Trans Calibration System
A I ES 0000	Fluid Extraction Apparatus
A I ES 0000	Image Analysis System
A I ES 0000	PWA Cleaning System
A WES 0000	Equipment Installation
A I ES 0000	Synthesized Sweeper HP3523A
A I ES 0000	Instrument Imaging Test System
A I ES 0000	Dage BT-22 Microtester
A I ES 0000	Hot & Cold Temperature Chamber
A I ES 0000	Dage BT-23 Shear Tester
A I ES 0000	4000 LB Forklift
A I ES 0000	Deep Access Wedge Bonder
A I ES 0000	Semi Trailer
A WES 0000	HP 3565A Signal Analyzer
A WES 0000	General Microwave 490 Peak Power Meter

AIRCRAFT DIVISION NON-ADP EQUIPMENT (< \$500K)

CAPITAL PURCHASES JUSTIFICATION  
DEPARTMENT OF THE NAVY  
RESEARCH & DEVELOPMENT - NAVAL AIR WARFARE CENTER  
LINE # NES0000 NON-ADP EQUIPMENT (<\$500,000) DETAIL

LINE #	DESCRIPTION
<b>WEAPON DIVISION</b>	
WP ES 0000	Data Analysis Workstations
WP ES 0000	Cess Vehicles
WC ES 0000	Corporate Network Emergency Power
WC ES 0000	Cess Vehicles
WC ES 0000	Network Emergency Power
WC ES 0000	EW Integration Test Bench
WC ES 0000	Microwave Test Station
WC ES 0000	Grader
WC ES 0000	Optics Shop Upgrade
WC ES 0000	Fire Radio
WC ES 0000	Photo Chemical Treatment System
WC ES 0000	Water Tunnel
WC ES 0000	Rebuild Gap Lathe
WC ES 0000	Transient Data System
WC ES 0000	Upgrade Cordin Camera Controls
WC ES 0000	Video Character System
WC ES 0000	Plasma Etch System for PWB Fab
WC ES 0000	UN/VIS Spectrometer
WP ES 0000	Tier Sorting Conveyor
WC ES 0000	Accelerators
WC ES 0000	3D Laser Digitizing
WC ES 0000	Thermal Analysis System Modules
WC ES 0000	Motion Analysis System
WC ES 0000	High Speed O'scope
WP ES 0000	Multi Scan Video Projector System
WC ES 0000	Seeker Spot Size MEA Equipment
WC ES 0000	Backhoe
WC ES 0000	Metal Shears
WC ES 0000	Vacuum Press Frame
WC ES 0000	Serial Bus Analyzer
WC ES 0000	HP 83957A RF Source

WEAPONS DIVISION NON-ADP EQUIPMENT (<\$500K)

**CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

B. Department of the Navy/Research & Development

C. LOCAL AREA NETWORK (LAN) REPLACEMENT

D. NMNC-AD

A. FY 1995  
PRESIDENT'S BUDGET

LINE # ARL0001R

Element of Cost	FY 1992			FY 1993			FY 1994			FY 1995		
	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
Local Area Network (LAN)										1	1,000	1,000
<b>TOTAL</b>											1,000	1,000

**Narrative Justification:**

This system is a broad fiber backbone cabling architecture for data, voice, security, and graphics for the entire Command. The system ties information systems together. We are currently in the third year (FY93) of the development effort and as of mid-year FY 1993 the project is 60 percent complete. 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 at NMNCAD Lakhurath are required because the site utilizes Cognizant Field Activity (CFA) and serves as a focal point for the Hierarchical 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, CARS Tracking System (CASSTRAC), Standards Acquisition Tracking System (SATAS), 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 inefficient 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 so far will be considered wasted, equipment purchased will not be fully utilized, and the rework involved in returning to some of the old ways information flowed (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 of \$6 million will be unattainable unless we are allowed to continue to pursue 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.

**COST BENEFIT ANALYSIS HAS BEEN PERFORMED WITH:**

- Payback Period = 6 years for FY93, 3 years for FY94 & FY95
- Return on Investment (ROI) = 15.1% for FY93, 34.5% for FY94, 42.4% for FY95
- Average Annual Savings = \$201K for FY93, \$414K for FY94, \$424K for FY95

**CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

A. FY 1995  
PRESIDENT'S BUDGET

B. Department of the Navy/Research & Development

C. COMMUNICATIONS SYSTEM UPGRADE  
REPLACEMENT

D. NMCC-UP

LINE # VTI0004R

Element of Cost	QTY	FY 1992			FY 1993			FY 1994			FY 1995		
		Unit Cost	Total Cost	QTY	Unit Cost	Total Cost	QTY	Unit Cost	Total Cost	QTY	Unit Cost	Total Cost	
Hardware													
Software													
Installation													
Other													
<b>TOTAL</b>													

**NARRATIVE JUSTIFICATION:**

This procurement will provide upgraded hardware for use system wide and for addition of capabilities in certain portions of NMCC China Labs' 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 services. 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 directive mandating the use of an engineering data distribution, storage and processing. All of these processing nodes 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, NMCC China Labs 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, falling 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, competition will occur as more computers are added to the network.

**COST BENEFIT ANALYSIS HAS BEEN PERFORMED WITH:**

Payback Period = 10 years  
 Return on Investment (ROI) = 88  
 Average Annual Savings = \$12K



**CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

Element of Cost	FY 1992				FY 1993				FY 1994				FY 1995		
	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
CAS II Workstations													40	50	2,000
<b>TOTAL</b>														50	2,000

B. Department of the Navy/Research & Development

C. CAS II WORKSTATIONS REPLACEMENT

LINE # MCL3701R

A. FY 1995 PRESIDENT'S BUDGET

D. MNC-AD

**Narrative Justification:**

CAS II is a centrally managed contract for procurement of engineering workstations to standardize the workstations under MNAVIA control. The primary purpose of CAS II 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 the Naval Air Warfare Center (NAWC) Indianapolis to be compatible with other MNAVIA facilities to allow concurrent engineering of systems. Also, these workstations will improve productivity of the MNC Indianapolis design engineers by replacing existing systems with new tools which will greatly reduce the cost of producing microelectronic devices.

The majority of engineering projects at this facility address the technical areas of planar graphics, spatial graphics, thermal analysis, structure analysis, quality assurance, and product integrity of military hardware. The CAS/CAS equipment are used to increase engineering productivity and decrease design cycle times. This facility has been restricted from buying CAS/CAS equipment for the last three years due to the impending CAS-II contract award. The combination of this restriction and the continuously shrinking capital purchase program (CPP) budget have contributed to the lack of state-of-the-art technology. Current CAS/CAS systems are in desperate need of replacement for all design projects and related documentation requirements. The following key Naval programs are a few of the programs which would be negatively impacted: Global Positioning Systems (GPS), Carrier Aircraft Inertial Navigation System (CAINS), Wallops/SPAN - Television Guided Air Launched Glide Weapons, AVN-16 - Navy Standard Airborne Computer.

**COST BENEFIT ANALYSIS HAS BEEN PERFORMED WITH:**

- Payback Period           • 1.6 years
- Return on Investment (ROI) • 36.2%
- Average Annual Savings   • \$776K in FY94; \$910K in FY95

**CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

3. Department of the Navy/Research & Development

A. FY 1995  
PRESIDENT'S BUDGET

D. MMC-49

C. PROCUREMENT WORKSTATION STD UPGRADE  
REPLACEMENT

LINE # WML00292

Element of Cost	FY 1992		FY 1993		FY 1994		FY 1995		
	QTY	Unit Cost	Total Cost	QTY	Unit Cost	Total Cost	QTY	Unit Cost	Total Cost
Hardware							1	499	499
Software									
Installation									
Other									
<b>TOTAL</b>									<b>499</b>

**Narrative Justification:**

DESCRIPTION: By the end of calendar year 1993, the workstation hardware currently owned by the Procurement Department will be at least two processor levels behind the state-of-the-art equipment. The useful life of a workstation is approximately 5 years. The inherent shortcomings of the current situation are obvious. Procurement of these new workstation upgrades will result in faster, more reliable units with more storage capacity and memory.

The majority of equipment that the Procurement Department currently owns was purchased by NAVSUP for use with the Automation of Procurement and Accounting Data Entry (APADE). Given the current state of the NAVSUP budget, it is highly unlikely that they will offer equipment upgrades in the future. Upgrades of the current equipment are also not possible with in-house monies due to the shrinking overhead budget. If the department is forced to use outdated equipment, productivity will worsen. Investing in these computer upgrades will result in increased productivity by replacing obsolete, unrepairable equipment. This will allow the Procurement Department to do more with less people.

The impact of not investing in the workstation upgrades will be an unproductive environment with more down time for repairs. The accounting and data entry processing functions will be slow and will require more manpower than is currently available.

**COST BENEFIT ANALYSIS HAS BEEN PERFORMED WITH:**

- Payback Period - 10 years
- Return on Investment (ROI) - 8%
- Average Annual Savings - \$76K beginning in FY95

**CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

A. FY 1995  
PRESIDENT'S REPORT

D. NAME-UD

C. COMPETITIVE ENVR. ENVIRONMENT  
REPLACEMENT

B. Department of the Navy/Research & Development

Element of Cost	FY 1992				FY 1994				FY 1995			
	QTY	Unit Cost	Total Cost	QTY	Unit Cost	Total Cost	QTY	Unit Cost	Total Cost	QTY	Unit Cost	Total Cost
Hardware												
Software												
Installation												
Other												
<b>TOTAL</b>												

**Executive Justification:**

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 submission is the first phase of a planned five-year effort. 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 1994 is to enhance the Competitive Engineering Environment by performing the following specific items: (1) expand the network to include several outlying buildings; (2) add hardware and software to simplify network maintenance; (3) add an electronic library for Military Specifications and Standards; (4) purchase solid modeling software to provide modern and faster design capability; (5) update obsolete equipment; and (6) purchase hydrocodes for analysis.

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 protecting 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 NMACVWS personnel. If not expanded, this capability will be postponed causing the system to become obsolete and its usefulness to deteriorate. NMACVWS may be left in a position where compliance to increasingly difficult requirements will not be possible. NMACVWS will lose its ability to be leaders in the development and testing of systems using energetic materials.

**COST BENEFIT ANALYSIS HAS BEEN PERFORMED WITH:**

- Payback Period                   • 1.6 years
- Return on Investment (ROI)   • 52%
- Internal Rate of Return       • 40%
- Average Annual Savings       • \$378K beginning in FY96

CAPITAL PURCHASE JUSTIFICATION (Dollars in Thousands)												
B. Department of the Navy/Research & Development						A. FY 1995 PRESIDENT'S BUDGET						
C. DISTRIBUTED COMPUTER INFO PROCESSING REPLACEMENT						D. NMIC-49						
LINE # W1L0402H												
Element of Cost	FY 1992			FY 1993			FY 1994			FY 1995		
	QTY	Unit Cost	Total Cost	QTY	Unit Cost	Total Cost	QTY	Unit Cost	Total Cost	QTY	Unit Cost	Total Cost
Hardware												
Software												
Installation												
<b>TOTAL</b>												

**Narrative Justification:**

DESCRIPTION: This funding is requested to establish a two phase distributed information processing system within the Technical Information Department (TID) NMICVMS for computing and networking purposes. The FY 1994 procurements will include a command reports system (including a classified document control database, command reports database, and several other administrative databases), a publications system, and a visual archives system. The FY 1995 procurements include a platform for a new integrated on-line library system and an on-line document storage and retrieval system.

This request represents a major change in the computing philosophy for both TID and NMICVMS. Through this request, we will request a number of databases currently housed on the China Lake SCP-VAX computer cluster and obtain the computing power to establish several new capabilities for TID.

The proposed information processing system will be housed on smaller high speed file server/workstation processing units (i.e. SunSPARC or Hewlett-Packard servers or workstations or Digital servers). Funding will also enable purchase of Ethernet cards for workstations already in place and will permit the installation of several new Ethernet drops throughout TID, resulting in nearly every Code 66 branch/office being connected to Ethernet.

Without funding for TID to establish this proposed system, the department will continue to operate in a much less than state-of-the-art environment. Many of our databases will continue to be hosted on the China Lake SCP-VAX cluster resulting in high general and administrative costs for storage and access. Additionally, as resources continue to shrink within the department, we must continue to search for more efficient and cost effective ways to accomplish our missions. We must have the capability to share workloads within the department electronically. Without this system, paper intensive processes will remain paper intensive.

**COST BENEFIT ANALYSIS HAS BEEN PERFORMED WITH:**

- Payback Period                   • 3 years
- Return on Investment (ROI)   • 24%
- Internal Rate of Return       • 7%
- Average Annual Savings       • \$107K beginning in 1995

**CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

A. FY 1995  
PRESIDENT'S BUDGET

C. CABLE TO NEW CONSTRUCTION  
REPLACEMENT

B. Department of the Navy/Research & Development

D. MMHC-WB

Element of Cost	FY 1992			FY 1993			FY 1994			FY 1995		
	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
Hardware												
Software												
Installation												
Other												
<b>TOTAL</b>												

**Narrative Justification:**

DESCRIPTION: Network growth is necessary to connect personnel who are located in other buildings. The purpose of this project is to provide communication needs for areas where no cable facilities are available. The additional cable facilities will result in increased network performance, reliability, security, and future expansion. It will also result in reduced installation, operation, and maintenance costs.

The impact of not funding this project is that non-connected personnel will continue to function at lower productivity by not having access to the main communications network.

**COST BENEFIT ANALYSIS HAS BEEN PERFORMED WITH:**

- Payback Period           • 5.4 years
- Return on Investment (ROI) • 19%
- Average Annual Savings   • \$30K beginning in FY95

**CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

Element of Cost	FY 1992				FY 1993				FY 1994				FY 1995			
	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	
EMICS Equipment													1	2,000	2,000	
<b>TOTAL</b>														2,000	2,000	

A. FY 1995  
PRESIDENT'S REPORT

B. WMC-UP

C. EMICS REPLACEMENT (INDICATED)  
LINE # WML4002R

D. Department of the Navy/Research & Development

**Narrative Justification:**

DESCRIPTION: In September of 1985, the Secretary of the Navy introduced a strategy for developing an electronic acquisition and logistics infrastructure for the future. Computer-Aided Acquisition and Logistics Support (CAALS) encompasses many advancements already used in industry. The Engineering Data Management Information and Control System (EMICS) is one of the CAALS modules. EMICS is a digital system to automate engineering repositories. It will provide electronic capture, interchange, and distribution of engineering data and information about that data. EMICS will support the acquisition, storage, retrieval, and dissemination of logistics technical information in digital form for major weapons systems. The need for EMICS is driven by several factors: (a) the need to improve the management of technical information; (b) the increased accuracy, timeliness, and use of logistics technical information; (c) the increased emphasis on competitive acquisition of spare parts; (d) the growing quantity of engineering drawings as a result of the development of highly complex weapon systems and equipment; and (e) the availability of new technology for high volume storage and retrieval of digital data for all new weapons systems to be delivered by the contractor to the Department of the Navy in digital form. The objective of EMICS is to meet the demand for engineering data through greater efficiency while significantly improving response time for both logistics and procurement support.

EMICS will support Navy air launched weapons systems. WMCUPWS performs procurement and logistics support for these weapons.

**COST BENEFIT ANALYSIS HAS BEEN PERFORMED WITH:**

- Payback period = 0.6 years
- Return on Investment (ROI) = 46.7%
- Internal Rate of Return = 33.7%
- Average Annual Savings = \$1.309K

**CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

A. FY 1995  
PRESIDENT'S REPORT

B. Department of the Navy/Research & Development

C. TANDEN T1P COMPUTER UPGRADE  
REPLACEMENT

D. NAME-49

Element of Cost	FY 1992				FY 1993				FY 1994				FY 1995	
	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Unit Cost	Total Cost
Hardware														
Software														
Installation														
Other														
<b>TOTAL</b>													2,500	2,500

**NARRATIVE JUSTIFICATION:**

**DESCRIPTION:** The current Tandem computer system hosts the procurement system as well as the on-line BankCard System. The Automation of Procurement and Accounting Data Entry (APADE) system is an on-line, interactive, standardized procurement system that applies the capabilities of automated data processing to the procurement system. This system supports buyers, contract specialists, and management. The system is the actual tool used by the Procurement Department to procure material and supplies for the HAWCUMPS.

Both the APADE and the BankCard system electronically transmit accounting data to the Comptroller Department without requiring the department's data entry personnel to input into the Center's financial system. The data transmitted includes obligation data for both APAGE and BankCard, and costing data for BankCard.

The above applications are currently hosted on a Tandem T1P series computer system. This system was introduced in 1983 and will become unsupported in December 1993. The T1P system upgrade will upgrade the system to Tandem's newest processor platform called Cyclone. All applications are fully portable to the new platform without changes since both platforms run the same operating system. The Cyclone system was introduced in 1990 and will have a useful life of at least 10 years.

Currently, approximately 855 (150 people) of the Procurement Department use APAGE 358 of the time. The Tandem System Upgrade would operate at approximately twice the rate of the existing system, resulting in considerable time savings as well as reduced maintenance costs.

**COST BENEFIT ANALYSIS HAS BEEN PERFORMED WITH:**

- Payback Period - 4 years
- Return on Investment (ROI) - 25%
- Internal Rate of Return - 9%
- Average Annual Savings - \$876K beginning April 1995

CAPITAL PURCHASE JUSTIFICATION (Dollars in Thousands)												
B. Department of the Navy/Research & Development					C. CALS CAD II REPLACEMENT (MANDATED) (LINE & UNL-6000R)							
Element of Cost	FY 1992			FY 1993			FY 1994			FY 1995		
	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
CALS CAD II Computer System Installation										1	1,335	1,335
										1	75	75
TOTAL											1,410	1,410

A. FY 1995 PRESIDENT'S BUDGET

B. NAME-NO

**Narrative Justification:**

**DESCRIPTION:** The Computer Aided Logistics System (CALS) Computer Aided Design (CAD) II uses microcomputer technology to automate the engineering design weapon system development process. Objectives of CAD II include: (a) improve reliability and supportability of weapon systems by the application of computer-aided technologies during weapon system development; (b) improve the quality and timeliness of logistics support; (c) automate the development, maintenance, and distribution of logistics support products; and (d) reduce the quantity of technical paperwork needed to develop, acquire, support, and maintain weapon systems.

Implementation of the CAD II program will result in more efficient procurement of spares, more efficient maintenance of operating systems, and more effective logistics planning and management of weapons systems.

CAD II will support Air-to-Air and Air-to-Ground missile systems, conventional ordnance, suspension and release systems. Failure to implement CALS CAD II will result in the degradation of weapon system procurement, logistics support, and maintenance support for Navy weapons. Fleet readiness will also be negatively impacted.

As a major participant in the 900 mandated CALS program, NAMECUBS will be unable to perform the basic logistics management functions necessary because of the inability to access the various databases required.

**COST BENEFIT ANALYSIS HAS BEEN PERFORMED WITH:**

- Payback Period = 0.27 years
- Return on Investment (ROI) = 192%
- Internal Rate of Return = 100%
- Average Annual Savings = \$2.704K



CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)																	
B. Department of the Navy/Research & Development						FY 1992			FY 1993			FY 1994			FY 1995		
Element of Cost						Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
CALS Module Integrated Electronic Technical Manuals/Publications																	
TOTAL												1	990			990	990

**NARRATIVE JUSTIFICATION:**

DESCRIPTION: The Computer Aided Acquisition and Logistics Support (CALS) Modules are required to comply with the DoD mandated strategy to effect the transition from the current paper intensive design, manufacturing, and support processes to a highly automated, integrated mode of operation. CALS focus is on the automation of weapon system technical information over the system life cycle. This includes part descriptions, specifications, and standards that the initial designer draws upon; the engineering drawings and product data used in design and manufacture; the information needed to guide people who operate the system in the field or who support and maintain it at all echelons of the logistics support structure; the materials needed to train new operators/maintainers; and the information needed for procurement, manufacturing, modification, and feedback to industry for future designs.

The CALS program currently is organized into two overlapping phases. The first focuses on converting current paper flows into digital form and on redesigning and integration of parallel duplicative processes that have evolved over the years.

**COST BENEFIT ANALYSIS HAS BEEN PERFORMED WITH:**

- Payback Period - 3.6 years
- Return on Investment(ROI) - 19.4%
- Internal Rate of Return - 9%
- Average Annual Savings - \$192k

**CAPITAL PROGRAMS JUSTIFICATION**  
(Dollars in thousands)

A. FY 1995  
PRESIDENT'S BUDGET

B. Department of the Navy/Research & Development

C. DATA PROCESSING SYSTEMS  
REPLACEMENT

D. NMCC-AD

Element of Cost	LINE # AF000048								
	FY 1992		FY 1993		FY 1994		FY 1995		
	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
WAS automated data processing equipment system							1	971	971
<b>TOTAL</b>									971

**Narrative Justification:**

**JUSTIFICATION:** As the NMCCAD draws down in personnel, it will be critical to automate processes wherever possible. In order to accomplish this, the NMCCAD must invest in automation equipment. The purchase of this office automation system will improve the speed and efficiency of many currently manual processes. The system will also provide a Classified Data Processing System with a standalone RISC based POSIX compliant OpenVMS application and file server and X window terminals which will replace the current classified engineering and scientific computing resources. The system will comply with open system standards and will allow removable magnetic and optical disk storage. The minimum hardware and software requirements include a uni-processor computer platform, X window terminals, tape backup, removable optical and magnetic disk storage, POSIX compliant OpenVMS Operating System, and Ada. PORTRAM and C compilers. The Computer Sciences Directorate at Flight Test & Engineering Group (FTEG) currently supports a Digital Equipment Corporation VAX 9530 midrange computer system which is used to support various FTEG classified engineering and scientific functions, including post-flight data reduction. EU tape processing, Ada and PORTRAM software development, graphical data analysis, and mathematical research and modeling.

The current computer platform is a 32-bit architecture single processor system whose performance and disk capabilities do not meet the growing requirements. The new processor would more than quadruple the current CPU performance. Additional memory would allow the engineering applications to run as shared images, thus allowing faster response times for the end user. The current removable disk storage capability has almost been exhausted, and with a requirement for a flight data repository, there is a requirement for a large data storage system such as an optical jukebox system. The replacement of the VAX 9530 and its associated peripherals will provide users the benefits of new technology, increased reliability of hardware in support of classified NMCCAD and NAVSTA functions, and the ability to run applications faster. The multi-processor 64-bit RISC based POSIX compliant computer processing system will also replace current engineering and scientific computing resources. The system will comply with open systems standards and will allow fiber network connectivity and optical disk storage.

**COST BENEFIT ANALYSIS HAS BEEN PERFORMED WITH:**

- Payback Period • 3 years
- Return on Investment (ROI) • 25.8%
- Profitability Index • 1.29
- Average Annual Savings • \$231K

**CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

B. Department of the Navy/Research & Development

A. FY 1995  
PRESIDENT'S BUDGET

C. DFS AERODYNAMIC SYSTEM  
REPLACEMENT

D. NAAMC-AD

Element of Cost	FY 1992				FY 1993				FY 1994				FY 1995			
	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	
DFS Aerodynamic System													1	810	810	
<b>TOTAL</b>															810	

**Narrative Justification:**

**DESCRIPTION:** This is an Applied Dynamics Incorporated model AD-100 or equivalent with model RTS remote I/O system with a host. As time and technology change between now and FY95, it is expected that equivalent compatible equipment will become available. The equipment uses a high level real time simulation language and does not require intensive traditional software language programming support (i.e. Fortran). The RTS provides very high quality input/output capability; which provides such of the engineering required for hardware in the loop simulation.

**PROJECT PURPOSE:** The purpose of the project is to provide the DFS with the capability to run large high fidelity aerodynamically intensive programs with a system which is code compatible with the standard of the simulation industry. This system will perform hardware in the loop simulation including actual aircraft flight control system interfacing for newly developed aircraft which give great validity to the quality of simulations performed on the device. The user acceptance, due to this is necessary for the continued growth and acceptance of the DFS.

**EXISTING METHOD AND SHORTCOMINGS:** Contractor services required to provide an unsatisfactory subset of this capability using existing equipment is estimated at \$300K per year. This number should be reduced to \$100K per year with the purchase of the new equipment.

**BENEFITS FROM PROPOSED CAPITAL INVESTMENT:** This investment will contribute to the attraction of \$2M in new business for the Dynamic Flight Simulator (DFS) per year for 5 years. The DFS is re-identifying its role to more flight simulation intensive uses. Its unique capabilities of large radius and controllable gimballed axes are becoming more critical as the role of simulation increases in importance for cost reduction throughout the DoD and NASA.

**IMPACT OF NOT MAKING THE CAPITAL INVESTMENT:** Without the development of this capability, maximum use of the unique features of the DFS cannot be realized. This will be a serious loss to potential missions as well as the continued existence of the DFS. The missions potentially affected include all aircraft cockpit development T&E programs, aircrew equipment T&E programs, training curriculum development, aircraft mishap investigation, and physiological R&D.

**COST BENEFIT ANALYSIS HAS BEEN PERFORMED WITH:**

- Payback Period           • 4 years
- Return on Investment (ROI) • 27.74%
- Profitability (PP) Index   • 1.39
- Average Annual Savings   • \$225K

**CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

A. FY 1993  
PRESIDENT'S BUDGET

B. Department of the Navy/Research & Development

C. CENTRIFUGE CONTROL SYSTEM  
REPLACEMENT  
LINE # ARL6034R

D. NMCC-AD

Element of Cost	FY 1992		FY 1993		FY 1994		FY 1995		
	QTY	Unit Cost	Total Cost	QTY	Unit Cost	Total Cost	QTY	Unit Cost	Total Cost
Centrifuge Control System							1	450	450
<b>TOTAL</b>									450

**Narrative Justification:**

**DESCRIPTION:** This system is an upgrade to the existing centrifuge control system, providing safer more productive operation of the Dynamic Flight Simulator facility. This will be especially important if this facility is to be operational at Warrminster after the transition of the rest of the Center to Patuxent River.

**QUALITATIVE JUSTIFICATION:** This upgrade will provide increased safety and better reliability.

**TRANSFERRABILITY:** This facility will not be transported to Patuxent River. However, it will remain a functional facility at Warrminster. This equipment is needed in order for Warrminster to continue supporting its program customers in aircraft flight simulation testing. A viability review was conducted and it was determined that based on the construction (anchor in bedrock) and size of the Centrifuge the equipment should remain at Warrminster and the function would continue to be performed at Warrminster. As part of the BAC, the NMCC/MVNAIR Centrifuge/DPS will continue to function at Warrminster. The remaining detachment will have as its charter/function the continuing performance of various types of flight simulation testing that can be performed with the Centrifuge system. The Centrifuge is the "bedrock" and will be staying at Warrminster. It cannot be moved. NMCC/MVNAIR will continue to benefit from the investment through use by the detachment personnel in support of Navy programs.

**SAVINGS:** Expected increase in facility usage will occur from quicker project set-up time (\$50K/year). Better maintainability and reliability will save \$100K/year. Better safety capability could result in economic savings far surpassing the above numbers.

**COST BENEFIT ANALYSIS HAS BEEN PERFORMED WITH:**

- Payback Period - 5 years
- Return on Investment (ROI) - 20.9%
- Profitability Index - 1.0
- Average Annual Savings - \$96K

**CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

A. FY 1993  
PRESIDENT'S BUDGET

B. Department of the Navy/Research & Development

C. OUL LASER SYSTEM ENHANCEMENTS REPLACEMENT

D. NMCC-AS

Element of Cost	FY 1992				FY 1993				FY 1994				FY 1995			
	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	
OUL Laser System Enhancements													1	410	410	
<b>TOTAL</b>															410	

**Narrative Justification:**

**DESCRIPTION:** The OUL Laser system (two dye pumped lasers) have a limited lifetime. They were purchased in FY91 and will be at the end of their useful life in FY96. Utilizing recently introduced new solid state-of-the-art technology, one single lightweight (less than 200 lbs) laser will be able to replace the two 1500 lb lasers currently installed in the aircraft.

**SAVINGS:** The current lasers require a host of costly scheduled maintenance procedures and alignment techniques to keep functioning, which the new laser will not need. In addition, the decreased weight of the system (2000 lbs) will result in significant fuel savings and increased mission duration.

**TRANSPORTABILITY:** The OUL Laser system is installed in a P-3A BuNo 152150, thus transportability to Paz River is not an issue.

**COST BENEFIT ANALYSIS HAS BEEN PERFORMED WITH:**

- Payback Period                    = 2 years
- Return on Investment (ROI)   = 30.16%
- Profitability Index             = 3
- Average Annual Savings       = \$124K

**CAPITAL PROGRAMS JUSTIFICATION**  
(Dollars in Thousands)

B. Department of the Navy/Research & Development

A. FY 1995  
PRESIDENT'S REPORT

D. NMWC-AD

C. GENERAL PURPOSE COMPUTER  
REPLACEMENT

LINE # ARLC0208

Element of Cost	FY 1992			FY 1993			FY 1994			FY 1995		
	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
General Purpose Computer										2	140	280
<b>TOTAL</b>											140	280

**Narrative Justification:**

**DESCRIPTION:** Two UNIX computers are needed to provide a time shared centrally operated UNIX platform for Scientific and Engineering processing.

**TRANSFERRABILITY:** The current plan allows for the computer system to be shipped to Pax River. The increased efficiency and savings is why the purchase is not being delayed.

**PROGRAMS/SPONSORS:** The computer system will be supporting the various programs and sponsors throughout the Center.

**SAVINGS:** Many programs have a need for a UNIX processor but do not have the workload to support purchasing their own machine. This need can be satisfied most economically by the establishment of a centrally operated system. Operations cost will be absorbed by the Computer Department's existing operators, analysts and management staff with little or no increase in expense. This will relieve the S&E personnel from performing the mundane operations tasks such as system administration and file backup.

**COST BENEFIT ANALYSIS HAS BEEN PERFORMED WITH:**

- Payback Period - 8 Years
- Return on Investment (ROI) - 21%
- Profitability Index - 1.1
- Average Annual Savings - \$59K

**CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

B. Department of the Navy/Research & Development

C. SOFTWARE UPGRADES  
REPLACEMENT

LINE # UNL4052R

A. FY 1995  
PRESIDENT'S SECRET

D. NMIC-UP

Element of Cost	FY 1992			FY 1993			FY 1994			FY 1995		
	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
Software										1	125	125
<b>TOTAL</b>												125

**Narrative Justification:**

**DESCRIPTION:** Software to upgrade the VAX computers network operating system. As the Local Area Network (LAN) is being upgraded, the remote computers will be upgraded to a standardized networking system. Cost savings will be realized through standardized software requiring less debugging and trouble shooting. Without this software we will continue to solve the noise of network interface problems on a trial and error basis.

**COST BENEFIT ANALYSIS HAS BEEN PERFORMED WITH:**

- Payback Period           • 5.1 years
- Return on Investment (ROI) • 20.5%
- Average Annual Savings   • \$26K

**CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

B. Department of the Navy/Research & Development

C. XEROX 4050 PRINTER REPLACEMENT

A. FY 1995  
PRESIDENT'S BUDGET

D. NMIC-49

LINE # W140018

Element of Cost	FY 1992			FY 1993			FY 1994			FY 1995		
	QTY	Unit Cost	Total Cost	QTY	Unit Cost	Total Cost	QTY	Unit Cost	Total Cost	QTY	Unit Cost	Total Cost
Hardware												
Software												
Installation												
Other												
<b>TOTAL</b>										1	101	101

**Narrative Justification:**

DESCRIPTION: The current Tandem computer system hosts the Automation of Procurement and Accounting Data Entry (APADE) procurement system as well as the on-line Bankcard System. This system is currently queued to a 3700 printer intended for very low volume printing. Higher volume printing for distribution of contracts and purchase orders is required on a regular basis. The current procedure involves the very costly utilization of 8020 (Defense Printing Service Office), formerly W70000 (Naval Publishing and Printing Service Detachment Branch Office). Projected 8020 costs for FY92, FY93, and FY94 are 94.8K each and for FY95 is 75K. With the procurement of a Xerox 4050 to operate in house, there is a one time hardware cost of 101K and a yearly operating cost of 54.2K (30K Labor/Delivery Order, 10.2K annual maintenance, and 8K annual supplies).

Without this procurement, the cost to the government of printing the required contracts and purchase orders for distribution is much higher than it would be if our department were able to efficiently reproduce these constantly recurring documents in-house.

**COST BENEFIT ANALYSIS HAS BEEN PERFORMED WITH:**

- Payback Period - 3 years
- Return on Investment (ROI) - 30%
- Internal Rate of Return - 17%
- Average Annual Savings - \$31K beginning in 1996



**CAPITAL PROCESS JUSTIFICATION**  
(Dollars in Thousands)

A. FY 1993  
PRESIDENT'S BUDGET

B. Department of the Navy/Research & Development

C. PRODUCTIVITY SOFTWARE (CAB, CAS)  
REPLACEMENT

D. NMIC-UP

LINE # WML4091R

Element of Cost	FY 1992			FY 1993			FY 1994			FY 1995		
	QTY	Unit Cost	Total Cost	QTY	Unit Cost	Total Cost	QTY	Unit Cost	Total Cost	QTY	Unit Cost	Total Cost
Software										1	100	100
<b>TOTAL</b>												100

**Narrative Justification:**

DESCRIPTION: Micro computer based engineering design and software development tools are using Computer Aided Design (CAD) and Computer Aided Software Engineering (CASE) software for more effective and efficient output. This item will procure CAD and CASE software to update existing computers. Benefits will include shorter software development time with resultant cost savings.

**COST BENEFIT ANALYSIS HAS BEEN PERFORMED WITH:**

- Payback Period           • 4.1 years
- Return on Investment (ROI) • 25%
- Internal Rate of Return   • 4.3%
- Average Annual Savings   • \$23K

**CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

A. FY 1995  
PRESIDENT'S BUDGET

B. Department of the Navy/Research & Development

C. CORE COMPUTER FINAL CONFIGURATION  
PRODUCTIVITY

D. NMCC-AS

LINE # AML6102P

Element of Cost	FY 1992			FY 1993			FY 1994			FY 1995		
	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
Core Computer Final Configuration										1	550	550
<b>TOTAL</b>											550	550

**Narrative Justification:**

This purchase doubles the processing capacity of the Core Computer DEC Vax. This increase in capacity is required due to the steadily increasing workload on the Core Computer. The workload on the current core computer is beginning to tax the system and a large portion of the production workload is yet to be converted. The final upgrade provides the center with resources to support substantial productivity increases in software development, adequate response time for the Center's computer users, and a provision of corporate information of all Naval Air Warfare Center (NMCC) Indianapolis personnel. Failure to acquire the final upgrade will cost NMCCAS Indianapolis three times as much to upgrade in later years.

**COST-BENEFIT ANALYSIS HAS BEEN PERFORMED WITH:**

- Payback Period           • 0.54 year
- Return on Investment (ROI) • 153.56
- Average Annual Savings   • \$604K

**CAPITAL PURCHASES JUSTIFICATION**  
(dollars in thousands)

D. Department of the Navy/Research & Development

C. ADP & TELECOMMUNICATIONS EQUIPMENT  
((\$100,000)

A. FY 1995  
PRESIDENT'S BUDGET

B. NMIC

Element of Cost	LINE # H10000											
	FY 1992			FY 1993			FY 1994			FY 1995		
	QTY	Unit Cost	Total Cost	QTY	Unit Cost	Total Cost	QTY	Unit Cost	Total Cost	QTY	Unit Cost	Total Cost
Aircraft Division												2,790
Weapons Division												1,841
<b>TOTAL</b>												<b>4,399</b>

Narrative justification:

See attached.

**CAPITAL PURCHASES JUSTIFICATION  
DEPARTMENT OF THE NAVY  
RESEARCH & DEVELOPMENT - NAVAL AIR WARFARE CENTER  
LINE # NKT0000 ADP & TELECOM EQUIPMENT (<\$100,000) DETAIL**

LINE #	DESCRIPTION
<b>AIRCRAFT DIVISION</b>	
A W KS 8SIP P	Computer Workstations
A KS 0000	Strategy Management Systems
A W KS 0LSER	-UNIX/POSIX Compatible System
A W KS FTEGR	VAXSTATION 4000 Systems
A I KS 6301 P	Compugraphic Typesetting w/S Upgrade
A I KS 6302 P	Negative File and Retrieval System
A L KS 00PVR	Test Data Archive System
A I KS 6303 P	EPI'S Fiery Color Laser
A W KS TSDRN	Problem Control Station
A L KS PEVDR	ADA Workstation
A I KS 6404 P	Scanning/Filing System
A W KS STORR	Office Workstations
A L KS PV24R	Model Analysis Software
<b>AIRCRAFT DIVISION ADP &amp; TELECOM EQUIP (&lt;\$100K)</b>	

<b>WEAPONS DIVISION</b>	
W KS 0000	Strategy Management Systems
W C KS 0282 R	Code C282 Digital Design Center
W C KS 3933 R	Tactical Advanced Computers
W C KS 0065 N	Image Processing Software
W C KS 3503 P	Computer Aided Design Workstation
W C KS 3932 P	Computer Aided Design Workstation
W C KS 0065 R	Tandem OSI Software
W C KS 0626 R	Human Resources Network Upgrade - Phase III
W P KS 3927 R	Upgrade CAD/CAM Systems
W P KS 0063 P	Communications Software for Network
W C KS 1032 R	Computer System
W C KS 641AP	Computer System
W C KS 641BP	Computer System
W C KS 2522 R	Mixed Analog & Digital Simulation Software
W C KS 2522 R	Gate Array Software
W C KS 3504 P	Computer System
W C KS 6418 P	Computer System
<b>WEAPONS DIVISION ADP &amp; TELECOM EQUIP (&lt;\$100K)</b>	

**CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

A. FY 1995  
PRESIDENT'S BUDGET

B. Department of the Navy/Research & Development

C. ANALYST WORKBENCH (AWB) DEVELOPMENT  
REPLACEMENT

D. NMIC-4B

LINE # WML0007B

Element of Cost	FY 1992			FY 1993			FY 1994			FY 1995		
	QSY	Unit Cost	Total Cost	QSY	Unit Cost	Total Cost	QSY	Unit Cost	Total Cost	QSY	Unit Cost	Total Cost
Hardware												
Software												
Installation												
Other												
<b>TOTAL</b>										1	470	470

**MARKETING JUSTIFICATION:**

**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 NMIC/NS Weapons Planning Group, there are requests from several other potential AWB users and model developers for a wide spectrum of applications.

For FY 1994 the following tasks are to be completed:

A scenario setup program (Map Manager) will be developed to allow the user to interactively build input files. The process of cross platforming the AWB on other platforms, such as the Power PC and Unix workstations, will begin. The process of creating a Distributive Interactive Simulations (DIS) interface on the AWB will begin. This will allow any event to be replayed, documented, and analyzed on the DIS network. Model enhancement for the AWB will focus on CJ and sensor models.

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.

**COST BENEFIT ANALYSIS HAS BEEN PERFORMED WITH:**

- Payback Period - 1 year
- Return on Investment (ROI) - 60%
- Internal Rate of Return - 64%
- Average Annual Savings - \$1.150K beginning in FY96

**CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in thousands)

A. FY 1995  
PRESIDENT'S BUDGET

B. Department of the Navy/Research & Development

C. MINOR CONSTRUCTION (4300K)

D. NMIC

LINE # MNC0000

Element of Cost	FY 1992		FY 1993		FY 1994		FY 1995		
	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
Aircraft Division									1,609
Weapons Division						0			3,002
<b>TOTAL</b>									<b>4,611</b>

**Narrative Justification:**

See attached.

**CAPITAL PURCHASES JUSTIFICATION  
DEPARTMENT OF THE NAVY  
RESEARCH & DEVELOPMENT - NAVAL AIR WARFARE CENTER  
LINE # NMC0000 MINOR CONSTRUCTION (<\$300,000) DETAIL**

<u>LINE #</u>	<u>DESCRIPTION</u>
<b>AIRCRAFT DIVISION</b>	
A I MC 0000	Renovation of Materials Lab
A I MC 0000	Replace Sub-Standard Bldg
A I MC 0000	East Air Conditioning Unit
A X MC 0000	POV Parking - 433-408 Area
A X MC 0000	Minor Construction Projects
A L MC 0000	Replace Tanks, Bldgs 309 & 365
A I MC 0000	Alteration and Repair of Bldgs
A L MC 0000	RSTS Jet Car Control Tower
A X MC 0000	Bldg 117 Addition
<b><u>AIRCRAFT DIVISION MINOR CONSTRUCTION (&lt;\$300K)</u></b>	
<b>WEAPON DIVISION</b>	
W C MC 0000	Construct System Engineer Bldg
W C MC 0000	Facility to Replace B421
W C MC 0000	Procurement Division (Replace 4 Duplexes)
W P MC 0000	Install Water Tank
W C MC 0000	Construct Ordnance Magazine
W P MC 0000	Secure Workspace in B761
W C MC 0000	Complete Airfield Security
W C MC 0000	Information Systems Department
W P MC 0000	Mod to Dorm for Women Firefighters
W C MC 0000	Airfield Pre-Engineered Bldg
W C MC 0000	Hazmat Storage & Containment Area
W C MC 0000	Tech Library Site Prep
W C MC 0000	EOD Pre-Engineered Bldg
W C MC 0000	Drill Well #32
<b><u>WEAPONS DIVISION MINOR CONSTRUCTION (&lt;\$300K)</u></b>	

**RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY95 President's Budget

**B. Component/Business Area/Date**  
DoD/R&D

**C. Line No. & Item Description**  
L065 Consolidation Automated Support Station (CASS)  
Radio Frequency (RF) Station

**D. Activity Identification**  
NUWC DIVISION, Keyport

ELEMENTS OF COST	FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Consolidation Automated Support Station (CASS)							1	2,200	2,200

**Narrative Justification:**

This test station will replace one of the current HP 9500 test systems, some of which are 18 years old. CASS has been designated as the Navy standard for automated test equipment. The RF station will support testing of electronic countermeasures, electronic counter-counter measures and fire control radar. Use of standard automated test equipment will save software generation, training documentation and improved supply support.



**RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION**

(Dollars in Thousands)

**A. Budget Submission**

FY95 President's Budget

**B. Component/Business Area/Date**  
DoN/R&D

**C. Line No. & Item Description**

1005 Submarine Sonar Advanced Concept Evaluator (ACE)

**D. Activity Identification**

NUWC Division, Newport

ELEMENTS OF COST	FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Advanced Concept Evaluator				1	869	869	1	500	500

**Narrative Justification:**

The Submarine Sonar Department at NUWC is the lead technical agent for the Navy's entire submarine sonar development program. In recent years, the increasing complexity of sonar sensors and their associated sonar processors has required increased emphasis on expanded exploratory development and simulation/evaluation of these prototype systems. Recent announcements from a variety of Navy and DOD components have stressed the importance of modeling and simulation in the post-Cold War environment, and the importance of extensive modeling prior to prototyping. The Submarine Sonar Advanced Concept Evaluator (ACE) will be used to provide a flexible, full bandwidth shore based environment to develop and assess advanced sonar systems, subsystems or concepts including beamforming for multi-line towed arrays, automatic detection and automatic classification programs, and other advanced systems development.

This equipment will provide a realistic at-sea environment in a shore based facility through the use of extensive synchronous wide bandwidth tape recording or alternatively, through the use of multiple waveform generators, computer generated scenario control, propagation effects models and inverse beamforming appropriate for the particular development. The use of this equipment for these programs will reduce the development time required for these systems, will greatly reduce the need for actual at-sea testing, and will improve the technical performance. Failure to provide the proper environment to perform the planned advanced development and assessment in an efficient and cost effective manner will increase technical risk and cost risk; will reduce the capacity of NUWC to successfully act as Technical Direction Agent; and may jeopardize future advanced development funding in these program areas.

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY95 President's Budget								
B. Component/Business Area/Date DoN/R&D	C. Line No. & Item Description 1013 Small Launcher Test Facility	FY 1993			FY 1994			FY 1995		
		Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
<b>ELEMENTS OF COST</b>										
	Test Facility				1	495		1	445	445
<b>Narrative Justification:</b>										
<p>The Launcher and Missile System Department of NUWC, Division Newport is responsible for the research and development of advanced submarines 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.</p> <p>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.</p> <p>A dedicated small launcher R&amp;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.</p> <p>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 provided 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.</p>										

**RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY95 President's Budget

**B. Component/Business Area/Date**  
DoN/R&D

**C. Line No. & Item Description**  
\_\_\_\_ Non ADP Equipment (>\$25K <\$500K)

**D. Activity Identification**  
NUWC Division, Newport/Keyport

ELEMENTS OF COST	FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Non ADP Equipment (>\$25K <\$500K)	38		5,083	43		5,294	78		9,665

**Narrative Justification:**

The NUWC Non-Automated Data Processing (Non-ADP) projects are budgeted in order to support Center mission areas and maintain expertise in Center leadership areas. A strong emphasis is placed on maintaining safety standards while advancing technology in the areas of the NUWC core technical capabilities. Out-of-date equipment must be replaced and new advanced technical capabilities must be installed in order that the Center consistently achieves high quality research and development in undersea warfare. Technological changes in conventional design affects all products and requires new facilities and equipment. CFP funds are used to improve the quality and productivity of technology support to the Navy as well as to provide for plant modernizations and improvements.

**RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY95 President's Budget

**B. Component/Business Area/Date**  
DoNVR&D

**C. Line No. & Item Description**  
1018 Acoustic Measurement/Underwater Tracking Range Proofing System (AMUTR)

**D. Activity Identification**  
NUWC Division, Newport

FY 1993		FY 1994		FY 1995	
Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
1	950	950	1	550	550

**ELEMENTS OF COST**

Tracking Range Proofing System

**Narrative Justification:**

The Acoustic Measurement Underwater Tracking Range will be a computer based system for the design, development and upgrade of acoustic measurement systems and underwater tracking systems associated with submarine weapon system RDT&E. It will consist of an inter-networked system of computers, from PC's to High Performance Computers. Developers will be able to model and simulate any part or all of a complete Test & Evaluation (T&E) System. They will also be able to analyze performance, test new designs, evaluate prospective modifications and perform research in new technology areas such as advanced signal and data processing algorithms.

These capabilities are essential to the continued upgrade of existing T&E facilities and the development of the next generation of acoustic measurement and underwater range systems. Continuing advances in submarine combat systems technologies are outstripping the abilities of current T&E systems to test them. This systems will facilitate the development of advanced concepts, support the analysis and engineering of new system designs and enable the integration and testing of the system upgrades needed to meet future submarine combat system T&E requirements.

This capability will provide substantial cost savings to the Navy by automating the current labor intensive modeling and simulation techniques now used. It will allow for integrated testing of new system designs prior to the expensive at-sea system installation and experimentation. It will support major range system upgrades without risk to expensive RDT&E of Fleet exercises through early integration and testing of the upgrades. When the system is fully operational (FY95), the Navy can expect an annual cost savings of \$ 500K with a calculated savings/investment ratio of 1.26 due to improved efficiency.

**RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

A. Budget Submission  
FY95 President's Budget

B. Component/Business Area/Date DoD/R&D	C. Line No. & Item Description 1021 High Performance Workstations		D. Activity Identification NUWC Division, Newport			
	FY 1993		FY 1994			
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
<b>ELEMENTS OF COST</b>						
High Performance Workstations	10	59.9	599		60	300

**Narrative Justification:**

The Naval Undersea Warfare Center (NUWC) Division, Newport currently utilizes 16 high performance workstations as part of the Advanced Scientific Engineering Computational Center (ASECC) Service Cost Center. These workstations are utilized to interface with the ASECC supercomputer and other Center computers, to provide an environment for the use of software engineering concepts in the development of software, to provide for pre- and post-processing of data and to provide a low cost stand alone computational capability to users. The overall use of high performance workstations is expected to grow substantially in the next few years with the introduction of new visualization software technology which will allow users to interact in real time with programs which are running on large high performance computers.

The existing workstations are currently provided to NUWC as part of the ASECC services contract which expires on 31 January 1993. At that time, the existing workstations provided by the ASECC contract will no longer be available. Without these workstations, NUWC will have insufficient resources to interface to the ASECC replacement and to network to other remote, high performance computer centers. In addition, the independent processing currently performed on the existing workstations could not be accomplished.

An economic analysis was performed on this multi-year funded project resulting in an estimated \$906K in annual cost savings beginning in 1993, and a savings/investment ratio of 4.02.

**RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY95 President's Budget

**B. Component/Business Area/Date**  
DoN/R&D

**C. Line No. & Item Description**  
1.081 Undersea Synthetic Environments Concept Evaluation

**D. Activity Identification**  
NUWC Division, Newport

ELEMENTS OF COST	FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Undersea Synthetic Environments Concept Evaluation				1	550	550	1	450	450

**Narrative Justification:**

The next generation of combat control systems requires that prior to costly system production, and at-sea testing that the system design be proven efficient and effective. This project will provide the facility to cost effectively design and develop the next generation of combat control systems for meeting the future Navy requirements.

This facility will provide 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 to provide a realistic means of simulation for the algorithms, information display and concepts under investigation. 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 was performed and indicates that this facility has a savings/investment ratio of 2.14 with a calculated cost savings of \$332K annually.

**RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY95 President's Budget

**B. Component/Business Area/Date**  
DoD/R&D

**C. Line No. & Item Description**  
L069 Material Inventory And Management Systems  
(MIMS) Upgrade

**D. Activity Identification**  
NUWC DIVISION, Keyport

ELEMENTS OF COST	FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Material Inventory and Management Systems (MIMS) Upgrade				1	250	250	1	360	360

**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.

**RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY95 President's Budget

**B. Component/Business Area/Date**  
DoD/R&D

**C. Line No. & Item Description**  
L072 Computer Aided Manufacturing And Design

**D. Activity Identification**  
NUWC DIVISION, Keyport

ELEMENTS OF COST	FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Computer Aided Manufacturing and Design							1	400	400

**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.



**RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY95 President's Budget

**B. Component/Business Area/Date**  
DoD/R&D

**C. Line No. & Item Description**  
L073 Digital Test Program Sets Development Hardware  
And Software

**D. Activity Identification**  
NUWC DIVISION, Keyport

ELEMENTS OF COST	FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Digital Test Program Sets Development Hardware and Software							1	200	200

**Narrative Justification:**

Generates digital test software used for the Teradyne L393, L210 and CASS. MK48/ADCAP is beginning to do digital development using CASS, we expect other programs to follow. Decrease the development time of test program software, reducing costs and improving schedule.

**RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY95 President's Budget

**B. Component/Business Area/Date**  
DoD/R&D

**C. Line No. & Item Description**  
L074 Consolidated Automated Support System (CASS)  
Software (Analog Test Programs)

**D. Activity Identification**  
MUNIC DIVISION, Keyport

ELEMENTS OF COST	FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
CASS Analog Test Programs						0	1	120	120

**Narrative Justification:**

Software to generate analog testing programs for CASS. Test programs are being developed for MK48/ADCAP and will be developed for other torpedo and combat systems programs. Will reduce development time for test software.

**RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY95 President's Budget

B. Component/Business Area/Date DoNVR&D	C. Line No. & Item Description 1030 Replacement Of Central Scientific And Engineering Computers	FY 1993			FY 1994			FY 1995		
		Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Scientific and Engineering Computers					1		1,290	1	413	413

**D. Activity Identification**  
NUWC Division, Newport

**ELEMENTS OF COST**

**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 and New London locations. By FY94, the current general purpose scientific and engineering computers will have an average installed age of 9 years. This places the equipment in its final phase of an 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 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.

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY95 President's Budget					
B. Component/Business Area/Date DoV/R&D	C. Line No. & Item Description 1043 VAX 6000 Upgrade	D. Activity Identification NUWC Division, Newport					
		FY 1993		FY 1994			
ELEMENTS OF COST		Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
VAX 6000 Upgrade					1	207	207
Narrative Justification:		<p>The NUWC Division Newport, Detachment Norfolk (NSCSES) currently utilizes 2 VAX 6430's and 1 VAX 6530 as part of the detachment's VAX cluster. These systems are utilized to perform scientific, engineering, configuration management, and office automation computing. The overall use of the VAX cluster is expected to grow substantially over the next few years particularly in the areas of configuration management and engineering applications due largely to the draw down of personnel. In order for the expected demand of computational requirements, we are proposing to upgrade existing equipment (memory/CPU). It has been determined that upgrading existing VAX 6000's is the most economical means to accommodate requirements.</p>					

**RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION**

(Dollars in Thousands)

**A. Budget Submission**  
FY95 President's Budget

**B. Component/Business Area/Date**  
DoNR&D

**C. Line No. & Item Description**  
L064 NUWC Information Technology Improvement Program (NITIP)

**D. Activity Identification**  
NUWC Division, Newport/Keyport

ELEMENTS OF COST	FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
NITIP				4		7,360	3		2,010

**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

**RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY95 President's Budget

**B. Component/Business Area/Date**  
DoD/R&D

**C. Line No. & Item Description**  
L076 Tech Data/Configuration Management System  
Processor Upgrade (TD/CMS)

**D. Activity Identification**  
NUWC DIVISION, Keyport

ELEMENTS OF COST	FY 1993		FY 1994		FY 1995						
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost					
TD/CMS				1	315	315				190	190

**Narrative Justification:**

The Technical Data/Configuration Management System (TD/CMS) is currently used by over 25 weapon and combat systems to provide support for configuration and logistics management. System supports management of hardware baselines and documentation, used to support maintenance, repair, analysis, design, manufacturing, and procurement of hardware and weapon systems. Continuous hardware modernization is valuable insurance against a loss of this computer resource. The modernization effort will increase system availability and reliability by 25%. An unscheduled computer shutdown could create a work stoppage in any of our shops and/or departments.

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY95 President's Budget					
B. Component/Business Area/Date DoD/R&D	C. Line No. & Item Description L077 Network Equipment Upgrade	FY 1993		FY 1994		FY 1995	
D. Activity Identification NUWC DIVISION, Keyport		Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
<b>ELEMENTS OF COST</b>							
Network Equipment Upgrade					1	400	400
<b>Narrative Justification:</b>		Provides Keyport with a fault tolerant network capable of sustaining network utilization over the corporate backbone at approximately 80% of the 100Mbps bandwidth provided by a Fiber Distributed Data Interface (FDDI) implementation. Aligns NUWC DIV Keyport for the next phase of network upgrades consisting of Broadband ISDN, of which asynchronous transfer (ATM) mode is a sub-element. Upgrade will sustain existing network activity, while migrating to a higher speed and more tolerable fiber optic network.					

**RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY95 President's Budget

**B. Component/Business Area/Date**  
DoN/R&D

**C. Line No. & Item Description**  
1023 Undersea Warfare Systems Analysis Projects (UWSAP)

**D. Activity Identification**  
NUWC Division, Newport

ELEMENTS OF COST	FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Analysis Project				1	600	600	1	765	765

**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 decisions must be carefully assessed in terms of these changes as well as in declining defense assets, the complex contribution of coordinated Naval assets, and the commitment to maintain technological superiority. Warfare Analysis plays a key role in terms of the identification of operational requirements, qualification of military shortfalls, cost benefit assessment of system alternatives, and formulation of effective investment strategies for systems acquisition and technology. The first step in conducting the required comprehensive warfare analysis was the Integrated Warfare Analysis Laboratory (IWAL) procured with capital funds in FY89-93. Additional requirements for human-in-the-loop training systems, real time distributed systems, and advanced methods for testing that combine computer simulation with on-range operations have been identified which require the further evolution to a distributed computing environment. The Undersea Warfare Systems Analysis Project (UWSAP) will provide this distributed computing environment, and provide:

- a massively parallel computer system capable of scalable growth
- neural net software / hardware coupled with artificial intelligence software that can generate and evaluate platform and force level tactics using the massively parallel computer faster and more exhaustively than currently possible
- software to begin restructuring current simulations to exploit parallel computers
- a means to more completely model environmental impact on forces

A scalable massively parallel computer system will provide the vehicle for significant improvements in simulation performance not possible with either serial or even vector (CRAY-type) processors. The Neural Net / Artificial Intelligence software coupled with parallel processors will permit the fast generation and evaluation of detailed platform level and force level tactics.



**RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY95 President's Budget

<b>B. Component/Business Area/Date</b> DoNVR&D	<b>C. Line No. &amp; Item Description</b> 1046 Submarine Sonar Performance Analysis Lab		<b>D. Activity Identification</b> NUWC Division, Newport	
	1		FY 1995	
<b>ELEMENTS OF COST</b>	<b>FY 1993</b>		<b>FY 1994</b>	
	<b>Quant</b>	<b>Unit Cost</b>	<b>Quant</b>	<b>Unit Cost</b>
Performance Analysis Lab	1	203		
		<b>Total Cost</b>	<b>Total Cost</b>	<b>Total Cost</b>
		203		200

**Narrative Justification:**

The Submarine Sonar Performance Analysis Laboratory will provide an integrated, state-of-the-art computing facility to support submarine sonar analysis. This facility will be integrated with the current Naval Undersea Warfare Center (NUWC) Division, Newport computing assets to provide the computing and graphics power required to perform complex, highly detailed sonar systems modeling. Performance analysis is provided in support of all Division sonar programs including BSY-1, BSY-2, and AN/BQC-5 sonar systems. The increased capability will enable effective modeling of vertical dimensionality of noise, inter-array processing, auto-detection/classification, and contract management.

Without this equipment the ability to provide the fidelity and level of complexity required for near and long term sonar performance modeling will be severely reduced. This will result in the inability to effectively and accurately model future combat systems performance as well as the inability of the Division to respond to an increasing number of analysis requests.

An alternative to purchase is to lease; however, it is not cost effective. This multi-year funded project is being pursued on the basis of new technology R&D, but by purchasing the equipment an annual cost avoidance of \$435K, effective as of April 1993, is anticipated.

RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY95 President's Budget						
B. Component/Business Area/Date DoD/R&D	C. Line No. & Item Description L056 Consolidated Automated Support System (CASS) Test Program Sets	D. Activity Identification NUWC DIVISION, Keyport						
		FY 1993	FY 1994					
ELEMENTS OF COST		Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	
Consolidated Automated Support System Test Program Sets						6	100	654
<b>Narrative Justification:</b> CASS sets will contain self-Diagnostics software to identify internal components operation improperly. NUWC Keyport will maintain spare parts to replace failed components and restore operations with minimum downtime. Software consists of test program sets that will enable the CASS systems to perform detailed failure analyses on CASS components for repair a NUWC Keyport.  Without this equipment, boards suspected of being defective are returned to vendor, increasing our costs and downtime.								

**RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY95 President's Budget

B. Component/Business Area/Date DoVR&D	C. Line No. & Item Description ____ ADP Equipment (>\$25K <\$100K)		D. Activity Identification NUWC Division, Newport/Keyport						
	FY 1993	FY 1994	FY 1995						
ELEMENTS OF COST	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost			
	ADP Equipment (>\$25K <\$100K)	9		572	16		849	42	

**Narrative Justification:**

The Naval Undersea Warfare Center Minor Automated Data Processing (ADP) projects focus on the ability of the Center to increase the productivity in the research and technology areas of undersea warfare. The projects can be broken down into several categories: data communications, data storage/retrieval, and data back-up. Projects from these three areas work collectively to enable the computer systems for the science and technology research to be used more effectively and efficiently. By networking different computer systems, and establishing the most effective communications network, several engineers can work simultaneously on a project without decreasing the efficiency or productivity of the systems or the engineers. With the optimum data storage and retrieval scenarios in effect, the utilization of existing computer assets can be maximized without having to increase the actual hardware assets. Current ADP computer systems may utilize incompatible hardware. With the proper communication protocol, the existing assets, which otherwise may be ineffective, may be used together in a network. The networks will also allow the accurate development, maintenance, and distribution of technical documentation which is a required portion of developing R&D projects.

NUWC's ADP projects also focus on upgrading existing assets in order that the science and technology projects/presentations will exceed or meet the current state-of-the-art standards. Another concern within the Center is maintaining the security associated with the research and development projects. Along with the high quality of work which must be produced, the security of an R&D project must be maintained. In order to achieve these goals, out of date ADP assets must be replaced. The replacement of NUWC ADP equipment will enable the scientists and engineers to research, design, develop and test work which reflects the current high technology, state-of-the-art work being researched and developed at the Naval Undersea Warfare Center while maintaining the security of the project as it is evolving.

**RESEARCH & DEV. CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY95 President's Budget

**B. Component/Business Area/Date**  
DoVR&D

**C. Line No. & Item Description**  
105Z Minor Construction

**D. Activity Identification**  
NUWC Division, Newport/Keyport

ELEMENTS OF COST	FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction	Var		500	Var		2,177	Var		1,904

**Narrative Justification:**

NUWC's minor construction program encompasses replacement of existing facilities, productivity enhancements, and construction to support environmental compliance issues.  
The bulk of our environmental minor construction focuses on upgrading piping systems and storage tanks to achieve environmental compliance.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION  
(\$ in Thousands)

A. FY 1995 President's Budget

C. L0001 CASS Test System - New Mission D. MCCOSC

B. DoM/R&D

Element of Cost	FY93			FY94			FY95			TOTAL COST
	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST	
Installation										
Testing										
Equipment				1		2,275	2		4,550	
TOTAL						2,275			4,550	

Narrative Justification: Consolidated Automated Support System (CASS), or AM/USM-636(V) as officially designed, is the next generation of Automatic Test Equipment (ATE). It is designed to efficiently test analog/digital hybrid circuit boards which are common in new system designs but that now require separate testers for digital and for analog. It can test Very Large Scale Integration (VLSI) and Application Specific Integrated Circuit (ASIC) components that are now becoming common in new systems but can't be tested with existing ATE.

The Navy has directed that CASS will be the Navy's standard ATE and that new systems acquisitions will include CASS support or require SECNAV approval for non-CASS ATE. Program Managers are directed to determine if and when it is economically practical to transition to CASS on existing systems and that new ATE shall not be acquired if the requirements can be satisfied by CASS.

Our Depot repair and ATE development functions are experiencing problems which require CASS solutions: (1) We have diagnostic requirements that can't be met with existing ATE. (2) We have obsolete ATE that require new ATE replacement (and corresponding Test Program Sets (TPS's) to operate) on existing systems that still have years left in their useful life. (3) We are tasked to provide ATE support for new systems and new technology coming into the fleet and therefore into the Depot. (4) We provide TPS development and maintenance support to the Intermediate Level activities receiving CASS equipment. (5) We are SPAWAR's center for ATE software development and require hardware to continue that support.

The CASS acquisitions, one unit in FY 1994 and two units in FY 1995, are based on currently identified system requirements and replacement of obsolete ATE in our Depot and ATE Development Lab. The FY 1994 CASS system will be shared to develop TPS's for new systems and obsolete ATE replacement and used as-required for Depot production testing as systems come on line. The FY 1995 CASS system acquisitions will support Depot operations and TPS development for transitioning systems requirements.

Failure to purchase CASS hardware/software will effectively take MCCOSC out of ATE TPS development on new systems within the next 2 to 4 years and reduce, almost totally, ATE support capabilities within the next 10 years. The Depot will continue to support Fleet repair requirements for as long as it can economically repair non-CASS supported systems. However, the cost of maintaining obsolete ATE will increase dramatically due to non-availability of parts and loss of personnel familiar with the systems. Furthermore, the Depot will no longer be capable of performing assigned functions on CASS (Navy-standard) systems without CASS diagnostic capability. Program Managers and Fleet Commanders will have to go to original equipment manufacturers for repair with little or no competition from other sources, increasing the cost to the Navy.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (A. FY 1995 President's Budget)

(\$ in Thousands)

B. DoM/R&D C. 10002 Non-ADP Equipment (> \$25,000 < \$500,000) D. MCCOSEC

Element of Cost	FY93			FY94			FY95		
	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST
Installation									
Testing									
Equipment	VAR		1,637	VAR		1,346	VAR		1,206
TOTAL			1,637			1,346			1,206

DESCRIPTION

This line supports the non-ADP general purpose equipment requirements of MCCOSEC research and development (R&D) and in-service engineering (ISE) centers. MCCOSEC has a population of approximately 5,000 scientists, engineers, and support personnel who manage technical programs with a total value of \$1.5 billion per year. This line item provides equipment necessary to perform the MCCOSEC mission, improve the quality and productivity of MCCOSEC's technology support to the Navy, and continues the goal to modernize non-ADP equipment inventories. This line item covers a myriad of non-ADP equipment items, including the following:

Video Surveillance	0%	16%	0%
Uninterrupted Power Supply	0%	4%	0%
Photographic/Film Processing	0%	5%	4%
Other Administrative/Operational Equipment	15%	27%	10%
Other Scientific/Technical Equipment (Spectrum Analyzers, Oscilloscopes, Spectrum Generators, Frequency Counters, Frequency Generators, etc.)	77%	50%	86%

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION  
(\$ in Thousands)

A. FY 1995 President's Budget

B. DoM/R&D

C. L0003 - ADP Hardware (> \$25,000 < \$100,000)

D. MCCOSC

Element of Cost	FY93			FY94			FY95		
	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST
Installation									
Testing									
Equipment	VAR		844	VAR		2,436	VAR		1,834
			.....			.....			.....
TOTAL			844			2,436			1,834

DESCRIPTION

This line supports the ADP general purpose equipment requirements of MCCOSC research and development (R&D) and in-service engineering (ISE) centers. MCCOSC has a population of approximately 5000 scientists, engineers, and support personnel who manage technical programs with a total value of \$1.5 billion per year. This line item covers a myriad of equipment which, in general, provides the following capabilities:

- (1) to realize technology gains where only theory existed;
- (2) to complete R&D/ISE with definitive results, making decision-quality information available, thereby reducing technology insertion risks;
- (3) to complete R&D/ISE sooner, enabling technical decisions earlier in the acquisition cycle, lowering costs and subsequent risks;
- (4) to replace manually operated/controlled equipment with computer-controlled equipment, with greater reliability, quality, productivity, & safety;
- (5) to add security/safety features to current capability, thereby gaining compliance with new regulations and avoiding risks of error and loss; and
- (6) to accomplish Navy initiatives for interconnectivity, driving the requirements for Local Area and Wide Area Network system implementation.

The acquisition of this equipment improves the quality and productivity of the MCCOSC's technology support to the Navy and continues the goal to modernize ADP equipment inventories to meet commercial standards of average expected useful life of 5-7 years.

Database Management/Peripheral/General Purpose ADP Equipment	64%	56%	52%
Personal Computers and Workstations	26%	12%	26%
Computer Network Equipment (controllers, fiber optic materials, and upgrades)	10%	24%	12%
CAD/CAM (electrostatic laser plotter, optical disk storage)	0%	6%	6%

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION  
(\$ in Thousands)

A. FY 1995 President's Budget

B. DoM/R&D

C. 10005 Computer System Upgrades - Replacement

D. MCCOSC

Element of Cost	FY93			FY94			FY95		
	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST
Installation									
Testing									
Equipment				1		352	1		152
TOTAL						352			152

Currently, the MCCOSC ROT&E Division Business System consists of multiple computers in a clustered environment. The buys are for system building block upgrades to a current computer system, including mass storage. This system would replace existing processors, mass storage, and magnetic tape backup systems. These procurements will support the many diverse groups currently running on the cluster. The groups are: Security, Personnel, Supply, Shipping, Receiving, Payroll & Budget. Benefits for the supported groups are increased processing capability because of the increased speeds available with the newer technology, higher capacity and faster access to mass storage for a system that consistently has I/O processing bottlenecks, and current technology backup systems, either digital analog tape (DAT) or BSM, on a faster I/O bus. Most importantly, the operating system would be compatible with existing software and would not require modifications. The current system does not provide the capability for additional growth. Additional capability is required to process workload from MCCOSC engineering centers converted to DBOF. If the system is not upgraded, the anticipated growth will result in excessively long response times for the users. Also the current systems are out of date, and are no longer manufactured. Excessed and used equipment was considered as an alternative. Both require additional power and air conditioning capacity that is not available without remodeling the existing facility. These procurements will result in reduced costs for: power consumption, air conditioning, and hardware maintenance. Due to the considerable costs for software development and maintenance, no other platforms were considered.



BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION  
(\$ in Thousands)

A. FY 1995 President's Budget

B. Doc/REQ

C. L0007 ADA Software Development System -  
New Mission

D. MCCOSC

Element of Cost	FY93			FY94			FY95			TOTAL COST
	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST	
Installation										
Testing										
Equipment	1		150	1		150	1		150	100
TOTAL										100

ADA is the Navy standard software programming language. The ADA software development system allows designers to transition high level requirements, architectures, and designs into programmable code.

It is planned to acquire workstations which will interact with the Rational ADA development system acquired in FY93. This will provide MCCOSC with the capability to meet mandated requirements for ADA conversion and development. The workstation network will permit downloading of coding and design information from the Rational, providing for the most efficient use of that system.

ADA is a complex higher order level language that requires structured design analysis in order to translate system requirements into executable code. Timing considerations in ADA software become manageable by use of the ADA software development system. The Navy has been mandated to use ADA as the standard development language. However, the complexity of the language structure is intimidating, sometimes resulting in non-functional and non-usable code.

In many instances, without the use of ADA development tools, programs have suffered failures in the transition of the current programming language into ADA. If this item is not procured, MCCOSC will continue to suffer delays and failures in meeting the mandated requirement to conform to ADA as the standard programming language. In addition, MCCOSC will not be able to effectively distribute the capability provided by the Rational system.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION  
(\$ in Thousands)

A. FY 1995 President's Budget

B. DoW/R&D

C. L0008 Supercomputer System - New Mission

D. MCCOSC

Element of Cost	FY95			FY94			FY95			TOTAL COST
	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST	
Installation										
Testing										
Equipment	VAR		250	VAR		1,000	VAR		2,000	
			-----			-----			-----	
TOTAL			250			1,000			2,000	

The MCCOSC RD7&E Div. Supercomputer System is an integral part of a secure signal processing facility. Scientists and engineers at over 40 different RD7&E activities in DoD will have access via the Defense Research & Engineering Network. High Performance Computing (HPC) & 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, pioneer cost reductions in these systems, and enhance the opportunity for commercialization of computational products by other sectors. This is an initiative by the Office of the Director of Defense Research and Engineering. In it, specific functions and applications fundamental to progress in science and technology areas of interest to DoD were assessed. The requirements were found to far exceed current DoD capabilities. The MCCOSC RD7&E Division response included purchase of a Tactical Advanced Computer (TAC-3) with a parallel processor. It will support development of tactical information integration and display technology via the TAC-3 contract. Commercial parallel and sequential computers were also considered. However, the TAC-3 meets the requirements, its computing power cannot be obtained elsewhere for the comparable price, and existing and planned TAC-3 installations in the Fleet are candidates for upgrades to parallel processing capability.

In FY94 and FY95 the current capability of the system will be increased. In addition, network access to the system and other DoD systems nationwide will be facilitated for MCCOSC scientists and engineers. In FY94 MCCOSC will purchase additional disks and/or memory, visualization workstation upgrades, and an archival storage system. In FY95 a parallel processor upgrade, visualization peripherals, high speed networks and other system enhancements will be acquired.

The alternative to increasing the capability of the current system is to purchase a new computer system to support MCCOSC and OOD projects. This solution would be far more expensive than leveraging the substantial investments already made by making additions to the capability of the system.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION  
(\$ in Thousands)

A. FY 1995 President's Budget

C. L0011 Database Engine Upgrade - New Mission (D. MCCOSC)

S. DoM/R&D

Element of Cost	FY93			FY94			FY95			TOTAL COST
	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST	
Installation									0	
Testing										
Equipment	2		95	1		160	1		160	
			95			160			160	
TOTAL			95			160			160	

This line item provides an upgrade of an existing database computer in support of increased corporate database applications.

The MCCOSC ROT&E Division (WR&E) database engine provides corporate information including accounting reports, procurement status, and labor reports to line and project managers. Currently, access to many databases is required to provide this data. The WR&E Data Administration Program project is setting up a corporate database which will provide data to: security, personnel, budget, and accounting personnel as well as to project managers. This development is a significant improvement to the current multiple data bases, and will also increase the functional requirements beyond the current capability of the database engine. The corporate database will eliminate the use of redundant database elements, increase accuracy of data, increase ease of use, and reduce operating expenses. The alternative to upgrading the existing database engine is to purchase new equipment. However, it is more cost-effective to upgrade the current equipment.

**BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION**  
(\$ in thousands)

A. FY 1995 President's Budget

B. DoM/R&D

C. L0012 Strapdown Naval Sys Eval Lab Upgrade - Replacement

D. MCC08C

Element of Cost	FY93			FY94			FY95			TOTAL COST
	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST	
Installation										
Testing										
Equipment							1		100	
TOTAL									100	

**Objectives:**  
To upgrade the control electronics of the Carco Three-Axis Rate Table, thereby improving the Strapdown Navigation System Development Laboratory's (SNDL) inertial navigation system evaluation and test capability. The upgrades will result in: increased laboratory reliability during inertial navigation systems test programs, more efficient test schedules, less test program equipment cost overruns, and test results which can be provided to the customers (test program sponsors) faster.

**Equipment:**  
Carco Three-Axis Rate Table. The current one requires upgraded control electronics. The Rate Table is a fully automated aircraft altitude and angular rate simulator that is the primary equipment used during static and dynamic testing of strapdown inertial navigation systems at SNDL. The rate table's control electronics consist of outdated and poorly constructed wire wrapped backplanes, analog and digital printed circuit boards containing numerous flaws, worn interconnection ribbon cables and connectors, and analog components that drift, requiring repeated calibrations. The current architecture of the electronics is very susceptible to failures through corrosion, and is sensitive to environmental changes such as temperature and humidity. The analog feedback control loop electronics are particularly sensitive, requiring frequent re-calibration to maintain the original specification levels of axis control and accuracy. Since 1983, the original purchase of the rate table, costing over \$300k, Carco technicians have serviced, repaired, and re-calibrated the electronics at least half a dozen times. The cost of an average service call is near \$10,000. Carco's new packages offer efficient designs which will improve reliability, increase service life, and eliminate the sensitivity of the electronics. This upgrade is more cost-effective than replacing the entire system, which costs over \$500,000.

A. FY 1995 President's Budget

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION  
(\$ in Thousands)

C. L0012 Strapdown Naval Sys Eval Lab Upgrade - B. MCCOSEC  
(CONT'D)

B. DoM/R&D

Element of Cost	FY93			FY94			FY95			TOTAL COST
	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST	
Installation										
Testing										
Equipment										
TOTAL										

The upgrade will consist of:  
 Removal and replacement of chassis display and keyboard electronics and multi-access digital readout chassis.  
 Installation of personal computer (PC) interface.  
 Refurbishment of amplifiers, power supply and torque motors.  
 There are no site preparation costs involved with the upgrades.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION  
(\$ in Thousands)

A. FY 1995 President's Budget

C. L0015 Network Backplane Upgrade - Replacement D. WCCOSC

S. DoM/R&D

Element of Cost	FY93			FY94			FY95			TOTAL COST
	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST	
Installation										
Testing										
Equipment				10		350	5		200	
TOTAL						350			200	

Narrative Justification: The WCCOSC In-Service Engineering West Coast Division (NISE West) network backplane handles traffic within segments of the data communication network. NISE West currently has eleven backplanes which are obsolete and cannot handle the high data rates required. NISE West routinely experiences slowdowns in network operations as traffic becomes bottlenecked.

Therefore, there is an urgent requirement for the purchase and installation of fifteen fiber optic concentrator upgrades over two years.

System crashes can result in an entire segment of NISE West being unable to access data for up to half a day. Each segment supports approximately 60 personnel. NISE West has been experiencing approximately two crashes per year per backplane. Each crash result in an estimated lost productivity cost of \$317,000.

The proposed acquisition is required to provide increased operating capability for users of the NISE West network and to upgrade obsolete network equipment to state of the art technology to support NISE West mission requirements.

The lack of connectivity, even for a short period of time, greatly impacts the operation of technical programs and other mission support. The acquisition satisfies the requirement in the most cost effective manner.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION  
(\$ in Thousands)

A. FY 1995 President's Budget

B. Dev/R&D  
C. L0016 - Off-the-Shelf Software (> \$25,000 and < \$100,000) D. MCCOSC

Element of Cost	FY93			FY94			FY95			TOTAL COST
	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST	
Installation										
Testing										
Equipment	VAR		161	VAR		170	VAR		520	
TOTAL			161			170			520	

DESCRIPTION  
FY 93  
FY 94  
FY 95

- a) Database License  
An INGRES database license is needed to provide access to existing database applications on the MCCOSC ROTBE Division Business Cluster, and to provide access on nodes of the Cluster. 81 0 0
- b) Quality Assurance  
This upgraded software is required to execute a development tools tracking system for software quality assurance. 0 0 30
- c) Other Administrative/Operational Software  
Natural Language software (for SUN/4 and VAX machines) provides an English language interface to the MCCOSC ROTBE Division corporate database, allowing personnel to query the database and produce reports without programmers, and will provide interface to the Defense Business Operations Fund (DBOF) financial system. 0 170 490
- d) Other Scientific/Technical Software  
COMDISCO Signal Processing Workstation software is becoming the industry standard for complex signal analysis of communications systems and maintenance support, with increased capabilities compared to other such tools. PATRAM software processes finite element models, providing the ability to conceptualize, develop and test products on computers before making expensive manufacturing and materials commitments. The models may include solid modeling, finite element modeling, graphics imaging, and more. It also eliminates tedious scanning of digital data and manual generation of stress contour plots. 80 0 0

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION  
(\$ in thousands)

A. FY 1995 President's Budget

B. DoM/RMD	C. L0018 INGRES Site Licenses - New Mission		D. MCCOSC						
	FY93		FY94		FY95		FY96		
Element of Cost	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST
INGRES Site License	1	96	96	1	100	100	50		50
TOTAL		96	96		100	100	50		50

JUSTIFICATION

The procurements are for commercial relational database licenses and software. Relational database software will provide the MCCOSC RDT&E Division with required interfaces to the MCCOSC corporate processing system for front end transaction input, storage, and reporting. The software is also critical in providing an interface to the Defense Civilian Payroll System, implemented in FY94. This software will allow the MCCOSC RDT&E Division to progress towards storage of corporate business data in a relational structure. It will simplify the maintenance of information, and will make the information more accessible to users. The only alternative to the procurement is the maintenance of the status quo, which will prevent the MCCOSC RDT&E Division from providing adequate responses to higher level information requirements. The relational database software is the only alternative which allows the MCCOSC RDT&E Division to interface with Corporate Information Management mandated systems.



BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION  
(\$ in Thousands)

A. FY 1995 President's Budget

B. Doc/R&D C. L0019 Software CASE Tools - New Mission D. MCCOSC

Element of Cost	FY93			FY94			FY95			FY96		
	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST
Installation												
Testing												
Equipment	1		125	1		40	1		20			
TOTAL			125			40			20			

DESCRIPTION

Computer Aided Software Engineering (CASE) tools are required to support Information Systems Re-Engineering at the MCCOSC ROTAE Division. Intergrated-CASE (I-CASE) tools were selected to reduce re-engineering costs and turn-around times and to enforce development and life cycle management standards. Toolsets were further selected to be Corporate Information Management (CIM) and Bob I-CASE compliant. The same toolsets will be used to evolve Information Systems maintenance at the MCCOSC ROTAE Division. The Toolsets are Information Definition Language (IDEF) compliant. Updates procured in FY 1994 will accommodate extensions of the IDEF to do cost analyses and support economic analyses in support of evolving CIM standards. In addition, add-ons will be required to support evolutions in operating systems and Relational Data Base Management Systems (RDBMS).

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION  
(\$ in Thousands)

A. FY 1995 President's Budget

B. DoM/R&D  
C. LO020 - Telecommunications Resources  
(> \$25,000 and < \$100,000)  
D. MCCOSC

Element of Cost	FY93			FY94			FY95			TOTAL COST	UNIT COST	TOTAL COST	UNIT COST	TOTAL COST
	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST					
Installation														
Testing														
Equipment				VAR		279			VAR		150			
TOTAL						279					150			

DESCRIPTION

(A) Super High Frequency Satellite Communications (SHF SATCOM) (non-IT)  
Two solid state radio power amplifiers are required to replace current wave tube ones that generate high noise, high heat, and have frequent failures. Also, two X-Band down converters are required to complete a second SHF SATCOM radio terminal which lacks the ability to independently track beacons and the downlink communications channel. Radio modems are needed also to interoperate with ships for on-air demonstrations and tests. New communications radios must be procured to comply with new Demand Assigned Multiple Access multiplexing technology, needed to support R&B projects.

(B) MCCOSC RDT&E Division Corporate Network (IT)  
Headend Management Controllers are needed to provide computer and terminal connections to nearly 4,000 people in 180 buildings, and to provide network connections to corporate and staff computing centers, scientific and engineering centers, and intra-center networking of testbeds and fleet evaluation exercises. These controllers will be used to control, redirect, and allocate data at the central hub of the MCCOSC RDT&E Division's computer network.

(C) Other Scientific/Technical Equipment (non-IT)  
State-of-the-art High Frequency communications equipment (including antenna couplers, controllers, and transceivers) will allow the MCCOSC RDT&E Division to keep pace with the latest commercial equipment and relationship to Navy applications. A Programmable Multi-Channel Filter is needed for support of the sensor transducer testing facility. The filter will reduce extraneous signal resources for enhanced examination of specific signal source characteristics. The filter will replace one which is 14 years old, for which replacement parts are no longer made.

(D) Other Administrative/Operational Equipment (non-IT)  
A video image processor will provide image enhancement to both standard black and white and color video signals.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION  
 (\$ in Thousands)

A. FY 1995 President's Budget

B. DoD/R&D  
 C. 10021 Modification of Command Local Systems (P. MCCOSC)  
 New Mission

Element of Cost	FY93			FY94			FY95		
	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST
Installation									
Testing									
Equipment				VAR		250	VAR		145
TOTAL						250			145

DESCRIPTION

Narrative Justification: Software development is required to support the internal requirements of the Command. Changing of MCCOSC activity financial systems from the Resource Management System (RMS) accounting system to the Defense Business Operations Fund (DBOF) requires changes and modifications to the existing Command local management information systems to provide timely and accurate information for activity management decisions, and to respond to customer and headquarters inquiries. The software modifications will allow tracking under the DBOF system of the status of funds, personnel, procurement of material, contracts, and management reports. This type of information is necessary to support the various project management systems distributed through the activity local area networks (LANs).

Without the software modifications, MCCOSC's ability to provide updated and accurate information and to properly manage a geographically dispersed activity upon conversion to DBOF will be adversely affected.

**BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION**  
 (\$ in Thousands)

A. FY 1995 President's Budget

B. DoM/R&D

C. L0022 Minor Construction - (>\$25,000 <300,000) D. MCCOBC

Element of Cost	FY93			FY94			FY95			TOTAL COST
	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST	QUANT	UNIT COST	TOTAL COST	
(Replacement/Productivity/New Mission)	VAR		2,000	VAR		1,100	VAR		1,710	
TOTAL			2,000			1,100			1,710	

**DESCRIPTION**

Minor Construction is used by the MCCOBC research, development, and in-service engineering centers to accommodate new requirements, modernize, and replace obsolete facilities. The centers are located in 18 sites throughout the nation and have 6.01 million square feet of laboratory, test bed, and office space. Minor Construction is used at MCCOBC activities to:

- modify existing space to provide suitable space to test and design new equipment for the forces afloat, often in a protected environment
- 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

**BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
**FY 1995 President's Budget**

**D. Activity Identification**  
Naval Research Laboratory

**C. Line No. & Item Description**  
0003c Non-ADP Equipment (New Mission)  
> \$500,000

Distributed Weapons Assessment Simulation

**B. Component/Business Area/Date**  
Department of the Navy/Research and Development

Element of Cost	FY 1993			FY 1994			FY 1995		
	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost
0003 Non-ADP Equipment (New Mission) > \$500,000							1	2,500	2,500
Distributed Weapons Assessment Simulation									

**Narrative Justification:**

The "From the Sea" strategy includes the innovative tailoring of Naval forces to meet operational requirements originating from deployments ranging from the Persian Gulf to the Balkan states. Assessment of likely threats, many of which employ western technology, faced in this littoral warfare environment require the use of modeling and simulation to provide specific response options. DoD's reliance on simulation and modeling to demonstrate new weapon concepts is the major driver behind Director, Defense Research & Engineering's (DDR&E) Synthetic Environments Thrust 6. The connection of dissimilar simulations from varying Laboratories and Warfare Centers using Advanced Distributed Simulation (ADS) via the Distributed Simulation Internet (DSI) is DoD's approach for conducting this assessment process.

NRL's Central Target Simulator (CTS) is the Navy's premier hardware in the loop simulation facility for conducting Electronic Warfare systems assessment against anti-ship missile (ASM) threats. Since 1980 CTS has successfully fulfilled its mission, operating as a stand alone facility. What is needed is a broadening of the facility's capability to include sophisticated (pulse doppler) anti-air missile threats in addition to ASM radars featuring parametric (frequency, Pulse Repetition Interval) agility and a move to establish connectivity with other Laboratories and Warfare Centers.

The proposed equipment will allow expansion of the current capability to include Aircraft Intercept (AI) radars in the technology assessment process. This equipment will also permit linkage to the DoD Wide DSI via the Distributed Interactive Simulation (DSI) Protocol. This increased capability brings with it the ability to participate in the broader Tri Service technology assessment process in which numerous simulators are merged to demonstrate weapon concepts.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1995 President's Budget										
B. Component/Business Area/Date	C. Line No. & Item Description 0003d Non-ADP Equipment (New Mission) > \$500,000 Moored Underwater Acoustics Source	FY 1993			FY 1994			FY 1995			Total Cost	
		Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost		
Department of the Navy/Research and Development												
Moored Underwater Acoustics Source								1	500			500

**Narrative Justification:**

A Moored Underwater Broadband Pulsed Acoustic Source System is a broadband pulsed, moored, autonomously controlled acoustic source system operating in 10-1000 Hz Band source levels of 200dB micro-pascal or greater for periods of 1-12 months is required. The system must operate both in shallow water and at full ocean depth and be capable of being recalled on the use of redundant acoustic release systems. A moored underwater sound source that emits pressure waves is needed to investigate acoustic properties of the open ocean. An underwater acoustic sound source capable of being moored for long periods of time is needed to make coherent phase measurements of the acoustic media. Such a source would need to have a self-contained power source capable of autonomously operating over many weeks or months. In addition, it must have a high probability of being recovered at the end of its deployment, so a reliable release and recovery mechanism must be incorporated. This procurement supports projects spanning the entire Acoustics Division.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1995 President's Budget							
B. Component/Business Area/Date	C. Line No. & Item Description 0004 Non-ADP Equipment >\$25,000<\$500,000	FY 1993			FY 1994		FY 1995		
		Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Unit Cost	Total Cost
D. Activity Identification Naval Research Laboratory									
Element of Cost									
0004 Non-ADP Equipment >\$25,000<\$500,000							63	100	6,359

**Narrative Justification:**

The Naval Research Laboratory spends more than half of its CPP equipment budget on non-ADP equipment costing between \$15K and \$500K. This investment provides the most impact to the greatest number of people and projects supported by the Laboratory. Items purchased vary from passenger vans and dump trucks for the Research and Development Services Division to oscilloscopes, spectrometers, waveform generators and microscopes for the research divisions.

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 the fact that the technology no longer supports current and projected requirements. The need to maintain an up-to-date equipment base encompasses all phases of NRL from management and infrastructure support to areas of science, technology, warfare systems, sensors research, materials and space technology. Research and development timetables and rapid equipment obsolescence require NRL to maintain its capital investment program. Use of inadequate equipment would result in higher costs, time delays and limit the Laboratory's ability to deal in an arena of advanced technology problems and taskings.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1995 President's Budget								
B. Component/Business Area/Date	C. Line No. & Item Description 00050 ADP Equipment (Replacement) >\$100,000 High Capacity, High Performance Memory System	FY 1993			FY 1994			FY 1995		
		Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost
Department of the Navy/Research and Development	D. Activity Identification Naval Research Laboratory									
Element of Cost										
High Capacity, High Performance Memory System								1	300	300
<p><b>Narrative Justification:</b></p> <p>The Navy has committed to the incorporation of the Space-Time Adaptive Array processing into the Next-Generation Airborne Early Warning (AEW) Radar. This is due to the success of NRL providing the technological leadership in this area. As part of this ongoing effort, NRL conducts laboratory demonstrations of this technology, using an Ironics computer. Because of the enormous amount of data which must be processed, these demonstrations take too long to complete in the time generally available. A transfer of data to a high capacity memory which is used by the IRONICS machine will greatly enhance processing speed to make some significant demonstrations near-real-time. This memory system has the ability to transfer up to 40 MG per second as a selectable uninterrupted block transfer operation. Since the Sun System has the capability of connecting VME (Versa Mod Europa) BUS interfaces, Radar Cross Section (RCS) and Inverse Synthetic Aperture Radar (SAR) imaging projects will be able to utilize this high capacity memory for near-real-time operations. Transferring 8mm tapes or Very Large Data System (VLDS) field collection tapes to the memory unit which then transfers to the array processor for processing time. The memory system will support Periscope processor for processing will significantly reduce the processing time. The memory system will support Periscope Detection, Inverse Synthetic Aperture Radar and Image Recognition Programs.</p>										



**BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
**FY 1995 President's Budget**

B. Component/Business Area/Date	C. Line No. & Item Description 0005p ADP Equipment (Replacement) >\$100,000 Silicon Graphics Power Challenge XL Computer	FY 1993			FY 1994			FY 1995		
		Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost
Department of the Navy/Research and Development										
Element of Cost										
Silicon Graphics Power Challenge XL Computer								1	200	200

**D. Activity Identification**  
Naval Research Laboratory

**Narrative Justification:**

Currently, as a shared user of off-site supercomputer resources, efficiency of NRL Marine Meteorology Division R&D suffers as external computer demands increase. To insulate vital Atmospheric Modeling, Weather on Target, Simulation and Visualization, and VOCAR programs from diminishing computer resources and to maintain the capability of responding quickly to sponsor priorities (6.2 and 6.3 programs), NRL Marine Meteorology Division requires an independent supercomputer resource for development of advanced numerical weather prediction models/data assimilation systems.

This item represents the third step of the planned capital improvement project for the visualization center. The first step was the procurement in FY93 of a SGI Crimson single processor graphics computer. The computer will be upgraded in FY94 to a baseline multiprocessor SGI Onyx Computer. The second step is necessary because of increased usage by researchers, and the award of a major Defense Modeling and Simulation Office (DMSO) project to NRL to incorporate environmental data into DoD simulation systems. Thus, the anticipated additional increase in usage of the visualization center and graphics resources requires a further expansion of processing, memory, and disk storage to maintain efficiency. This third step in FY95 covers the increase from two to six CPUs and adds an additional 20GBs of permanent disk storage. These upgrades will substantially increase the availability of efficient computing/graphics resources which are necessary to meet division requirements within stated schedules and to satisfy increasing customer (DMSO, ONR 6.2 and SPAWAR 6.3) requirements and for new work.

**BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

B. Component/Business Area/Date	C. Line No. & Item Description 0005q ADP Equipment (Replacement) >\$100,000 Scientific Data Analyzer	FY 1993			FY 1994			FY 1995		
		Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost
Department of the Navy/Research and Development										
Element of Cost										
Scientific Data Analyzer								1	119	119

**D. Activity Identification**  
Naval Research Laboratory

**Narrative Justification:**

In FY95, the Space Science Division will have three new satellite experiments in operation: USA (Unconventional Stellar Aspect), HARES (High Ionosphere Resolution Airglow/Auroral Spectrograph), and GINI (Global Imaging Monitor of the Ionosphere) projects on board the ARGOS (Advanced Research and Global Observation Satellite) Air Force STP-P91 Satellite. This procurement is intended primarily to address the data analysis requirements of these experiments; however, this resource will also be made available to other projects within the division. The data processing system for the ARGOS (Advanced Research Global Observation Satellite) experiment will make use of data center facilities currently being developed within Space Science Division. The analysis of ARGOS data will be computation, memory and input/output intensive and will require the use of the multi-processor, parallel computer systems expected to evolve from the current generation high performance, single processor 64-bit RISC (Reduced Instruction Set Computation) processors. The data analysis effort is expected to require almost 100% utilization of this system.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1995 President's Budget								
B. Component/Business Area/Date	C. Line No. & Item Description 0005r ADP Equipment (Replacement) >\$100,000 Secure Supercomputer	FY 1993			FY 1994			FY 1995		
		Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost
Department of the Navy/Research and Development										
Element of Cost										
Secure Supercomputer						0		1	625	625
<p><b>Narrative Justification:</b></p> <p>A secure supercomputer (in the GFLOP range) is needed on a 24 hour basis to handle Acoustics Division computing needs. This system would be compatible with the current unclassified Division supercomputer as well as smaller-class classified/unclassified systems. It would support all classified division work and would be accessible by all division users (both DC and SSC) via National Security Agency-approved network encryption devices. This procurement supports projects spanning the entire mission of the Acoustics Division.</p>										

**BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
**FY 1995 President's Budget**

**D. Activity Identification**  
Naval Research Laboratory

**C. Line No. & Item Description**  
0005s ADP Equipment (Replacement) >\$100,000  
Oceanographic Data Visualization & Display System

**B. Component/Business Area/Date**  
Department of the Navy/Research and Development

Element of Cost	FY 1993			FY 1994			FY 1995		
	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost
Oceanographic Data Visualization & Display System							1	189	189

**Narrative Justification:**

This equipment is required to make the state of technology graphics workstations available in the Ocean Sciences Branch and to increase efficiency by allowing researchers to take advantage of present-day data visualization and analysis techniques. Superposition, comparisons and analyses of oceanic dynamical events represented by large data bases from a variety of sources are required for the conduct of oceanographic research. Presently, these graphical display and analysis systems are not readily accessible by the scientists. This system will improve analysis capabilities of the following projects: (1) Kuroshio Extension experiment in-situ remote databases, (2) nonlinearwaves and bubbles; (3) small scale turbulence accelerated research initiative (ARI) and (4) forced upper ocean dynamics.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1995 President's Budget							
B. Component/Business Area/Date	C. Line No. & Item Description 0005t ADP Equipment (Replacement) >\$100,000 File Server/Archiver Connection to Cray Y- MP EL	FY 1993			FY 1994		FY 1995		
		Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Unit Cost	Total Cost
Department of the Navy/Research and Development									
Element of Cost									
File Server/Archiver Connection to Cray Y-MP EL							1	150	150
<p><b>Narrative Justification:</b></p> <p>The Central Computing Facility's File Server/Archiver (FS/A) system provides the laboratory computer users with a network accessible file storage system. In its archiver role, the system provides capabilities for long term file storage of critical, but infrequently accessed files. As a file server, it provides transparent file access, with files stored on the FS/A system appearing as local files on the user's different computer systems, and provides for the sharing of data, thus eliminating duplicate storage of files.</p> <p>The file server/archiver provides storage for the Cray Y-MP EL computer via a fiber distributed data interface. This path can be upgraded to high performance parallel interface to provide the fastest currently available speed. With a high performance parallel interface, this file server/archiver will be available to other high performance platforms on the laboratory. This will enhance the performance for the large file transfers that are necessary in simulation and visualization applications.</p>									

**BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
FY 1995 President's Budget

**B. Component/Business Area/Date**  
Department of the Navy/Research and Development

**C. Line No. & Item Description**  
0005u ADP Equipment (Replacement) >\$100,000  
Parallel Processing Subsystem

**D. Activity Identification**  
Naval Research Laboratory

Element of Cost	FY 1993			FY 1994			FY 1995		
	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost
Parallel Processing Subsystem							1	126	126

**Narrative Justification:**

This item is a Tactical Advanced Computer Sub-System that will provide high performance computing capability to the Tactical Oceanography Wide Area Network. It will support the development of high-fidelity Distributed Interactive Simulation complaint modelling programs that take advantage of real-time environment changes, thus providing realistic battlefield for Fleet training programs.

These sub-systems will enhance the Tactical Oceanography Wide Area Network (TOWAN) by providing high performance computing capability. The TOWAN local area network will be the basis for a Prototype Environment Server (PES). The PES project will include the development of Environmental Translation Models and the production and transmission of Protocol Data Units over the Defense Science Internet to continuously update environmental data to various other nodes on the Distributed Interactive Simulation (DIS) network. The systems will provide a high-performance development environment to add an interactive graphical front-end for TOWAN users over a wide area network on various heterogeneous workstations. It will also support the development of high-fidelity DIS-compliant simulation modelling programs that take advantage of the on-line environmental databases provided by the TOWAN system.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1995 President's Budget								
B. Component/Business Area/Date	C. Line No. & Item Description 0005v ADP Equipment (Replacement) >\$100,000 Optic Storage Subsystem	FY 1993			FY 1994			FY 1995		
		Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost
Department of the Navy/Research and Development	Optic Storage Subsystem									
Element of Cost										
Optic Storage Subsystem								1	150	150

D. Activity Identification  
Naval Research Laboratory

**Narrative Justification:**

This requirement is for an optical disk system which can provide both high-capacity on-line data storage and very high capacity, fast retrieval off-line/backup data storage. This requirement can be met by an optical disk storage jukebox and an optical tape drive. This procurement will occur in FY95 in anticipation of both the requirements of Space Science Division projects and the expected improvement in the price/performance/capacity of both the two-sided read/write optical disk storage technology and the newly developing optical tape storage technology. The system will provide support for all projects in the division. Data will be stored intermediate to project-owned storage and the Archive File Server operated by the NRL Research Computation Division.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1995 President's Budget								
B. Component/Business Area/Date	C. Line No. & Item Description	FY 1993			FY 1994			FY 1995		
		Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost
Department of the Navy/Research and Development	0008 ADP Equipment >\$25,000<\$100,000									
Element of Cost										
0008 ADP Equipment >\$25,000< \$100,000								75	51	3,838

D. Activity Identification  
Naval Research Laboratory

**Narrative Justification:**

At the core of much of the highly technical and sophisticated research accomplished at the Naval Research Laboratory are equally technical and sophisticated computer systems. NRL research divisions make use of a wide variety of computers to accomplish the objectives of R&D projects. The uniqueness and complexity of these projects requires equally unique and complex ADP support.

Investment in workstations to include PC and LAN hardware is necessary to meet external requirements, compensate for personnel reductions and to reduce operating costs. In addition, upgrades are required because manufacturers will not support obsolete operating systems/equipment. The items scheduled for purchase are the minimum necessary to meet daily R&D mission operating requirements, effectively manage R&D resources and meet customers R&D requirements. Examples of items to be purchased are ITD server system upgrades, silicon graphics, portable workstations and workstations upgrades, imaging processing systems, etc.



**BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION**  
(Dollars in Thousands)

**A. Budget Submission**  
**FY 1995 President's Budget**

**B. Component/Business Area/Date**

Department of the Navy/Research and Development

**C. Line No. & Item Description**

0019 Off the Shelf Software >\$25,000<\$100,000

**D. Activity Identification**

Naval Research Laboratory

Element of Cost	FY 1993			FY 1994			FY 1995		
	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost
0019 Off the Shelf Software >\$25,000<\$100,000							6	44	265

**Narrative Justification:**

The Naval Research Laboratory is a highly technical and sophisticated research center requiring state-of-the-art technology to satisfactorily accomplish its mission. Research and development timetables and rapid software obsolescence require NRL to maintain a minimum level in its capital investment program. Use of inadequate software would result in higher costs, time delays and limit the Laboratory's ability to deal with advanced technology problems and taskings. To avoid this impact, NRL invests in software to improve employee productivity, enhance the quality of research and control costs. Software purchases inevitably result in improved capability which is required to compensate for personnel reductions and to reduce operating costs.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (Dollars in Thousands)		A. Budget Submission FY 1995 President's Budget								
B. Component/Business Area/Date	C. Line No. & Item Description 0032 Minor Construction >\$25,000<\$300,000	FY 1993			FY 1994			FY 1995		
		Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost	Quan	Unit Cost	Total Cost
Department of the Navy/Research and Development										
Element of Cost										
0032 Minor Construction >\$25,000<\$300,000								5	300	1,500
<p><b>Narrative Justification:</b>            Minor construction funds will be used for the improvement and upkeep of the physical plant of the NRL. In FY95 the construction of a High Bay Research Lab and an addition to Acoustic Research Lab space are included in five projects planned.</p>										

**BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION**  
(\$ in thousands)

A. FY 1975 President's Budget

S. Sub/120 C. Line # Equipment (Replacement) D. NIFEC, Port Number  
1,001 (>25,000-9500,000)

Element of Cost	FY 1972			FY 1973			FY 1974			FY 1975		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Equipment				8	67.3	538	7	55.4	388	11	37.0	407
<b>TOTAL</b>												

**Narrative Justification:**

The Naval Facilities Engineering Service Center (NIFEC) 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 uncommanded repairs. Equipment requirements to support RM include high technology components for precision machinery, instrumentation and measurement. Cost/benefit analyses have been conducted which justify the purchase of these items in lieu of leasing. Equipment purchases will also support technology development for waterfront facilities, improve longevity of structures by providing means for application of corrosion protection, and otherwise help promote environmental quality and energy efficiency for the Naval shore Establishment.

**BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION** | A. FY 1995 President's Budget

B. DoR/R&D | C. Line #s | Minor Construction | P. SFERC, Port Numbers

Element of Cost	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Minor Construction				4	40.7	163	3	71.7	215	0	0.0	0
<b>TOTAL</b>												

**Narrative Justification:**

Minor Construction projects are necessary to meet environmental and safety regulations and to operate advanced water purification systems, systems for application of coating compounds in a marine environment, and testing facilities for waterfront technologies.

**BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION**  
(\$ in thousands)

A. FY 1995 President's Budget

B. Dem/Rtd  
C. Line # ADPE & TELCOM (1925,000-0500,000) D. WFESC, Part Number

Element of Cost	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
ADPE & TELCOM Resources				2	37.5	75	3	44.0	132	3	65.7	257
<b>TOTAL</b>												

**Narrative Justification:**

Information Management equipment expenditures are necessary to maintain the information processing and networking capability which are essential to the Naval Facilities Engineering Service Center (NFESC) delivery of high quality products to customers. Hardware expenditures will replace existing network components for general and special users, and maintain reliability of the engineering work stations. We must store internal business data to improve timeliness of business decisions, reduce duplication of effort in responding accurately to data requests from customers, and quickly summarize data for regulatory reports. This capability permits us to integrate workload management, plant property, security and other data elements. Timely delivery of these items will greatly assist the implementation of the new WFESC, which includes the former Naval Civil Engineering Laboratory (NCEL) under 0406-03 realignment mandate.

**BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION**  
(\$ in thousands)

JA. FY 1995 President's Budget

B. Datl/Rtd

C. Line #s

Software Procurement  
(1825,000-2560,000)

D. EFESC, Port Number

	FY 1992			FY 1993			FY 1994			FY 1995		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Amount of Cost												
Software Procurement(Off-The-Shelf)				2	50.0	100	2	50.0	100	2	50.0	100
<b>TOTAL</b>												

**Narrative Justification:**

The former Naval Civil Engineering Laboratory (NCEL) implemented its local area networks (LANs) in July 1989. The business application software is outdated and requires upgrading. Current software installation on the successor activity Naval Facilities Engineering Service Center (NFESC) LANs does not meet government standards on use, duplication or disclosure. The integrated networking capability provides for a base level of standardized support and an appropriate level of support for distinct categories of users to evolve naturally with hardware and software applications tailored to their needs. Off-the-shelf software will support the basic network and permit specialized engineering uses.

**DEFENSE BUSINESS OPERATIONS FUND - NAVY**

**FY 1995 CAPITAL BUDGET**

**INFORMATION SERVICES**

0408

BUSINESS AREA CAPITAL BUDGET SUMMARY

Department of the Navy  
Information Services  
(\$ in Millions)

Line #	Item Description	FY 1993 **		FY 1994		FY 1995	
		Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost
	ADP Equipment > \$25,000						
001	ADP Equipment (New Mission)				0.550		0.300
002	ADP Equipment (Replacement)				0.040		0.050
003	ADP Equipment (New Mission)				0.271		0.100
007	ADP Equipment (Replacement)		3.395				
008	ADP Equipment (Productivity)		2.300				
009	ADP Equipment (New Mission)		4.396				
	Subtotal ADP Equipment > \$25,000		10.091		0.861		0.450
	Off the Shelf Software > \$25,000						
004	Software (New Mission)				0.930		0.396
010	Software (New Mission)		2.257				
	Subtotal Off the Shelf Software > \$25,000		2.257		0.930		0.396
005	APTS Equipment > \$25,000				0.700		
	Subtotal APTS Equipment				0.700		
006	Minor Construction > \$25,000 but < \$100,000				0.050		
011	Minor Construction > \$25,000 but < \$100,000		0.052				
	Subtotal Minor Construction		0.052		0.050		
	Grand Total Capital Purchase Program		12.400		2.141		0.846

\*\* FY 93 represents CPP authority for the Data Processing installations business area only.  
FY 94 and FY 95 represent CPP authority for the Base Level Computing business area only.



BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (\$ in Thousands)			
	A. Budget Submission FY 95 President's Budget		
B. Component/Business Area/Date	C. Line No. & Item Description	D. Activity Identification	
Department of the Navy Information Services	001 L. 1 Upgrade	New Orleans/Washington	
FY 1995			
Element of Cost	Quantity	Unit Cost	Total Cost
END ITEM	0		300
Narrative Justification			

Len upgrades are required to expand communications capability and provide additional capacity. Failure to upgrade Lens will result in reduced access and limit ability to share information.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION (\$ in Thousands)			A. Budget Submission FY 95 President's Budget
B. Component/Business Area/Date Department of the Navy Information Services	C. Line No. & Item Description 1002 Miscellaneous Equipment	D. Activity Identification	
Element of Cost			FY 1995
END ITEM			Quantity Unit Cost Total Cost

Narrative Justification

Hardware replacements are required due to increasing downtime for maintenance. Unreliability impacts the ability to meet mission requirements in a timely manner.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION  
(\$ in Thousands)

	A. Budget Submission FY 95 President's Budget
B. Component/Business Area/Date Department of the Navy Information Services	C. Line No. & Item Description 003 Miscellaneous Equipment
	D. Activity Identification
Element of Cost	FY 1995
END ITEM	Quantity   Unit Cost   Total Cost   0     100

Narrative Justification

Equipment such as document scanners, printers, plotters, projection equipment etc. are required to meet mission requirements at various activities as workload increases and new requirements are identified.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION

(\$ in Thousands)

	A. Budget Submission FY 95 President's Budget			D. Activity Identification
B. Component/Business Area/Date		C. Line No. & Item Description		
Department of the Navy		004 Miscellaneous Software		
Information Services				
Element of Cost				
END ITEM				

FY 1995

Quantity Unit Cost Total Cost

396

Narrative Justification

Software to support network troubleshooting and analysis, desk top publishing etc. are needed to support customer requirements. The software to support Lan troubleshooting will reduce downtime thereby increasing reliability, aide in growth planning, and assist in Lan installation. The software is transportable and can be used in customer areas as well as in-house support.

**DEFENSE BUSINESS OPERATIONS FUND - NAVY**

**FY 1995 CAPITAL BUDGET**

**PRINTING AND PUBLICATION SERVICES**

0414

**CAPITAL BUDGET SUMMARY  
DEPARTMENT OF THE NAVY  
DEFENSE PRINTING SERVICE  
(DOLLARS IN MILLIONS)**

Line Number	Item Description	FY 1993		FY 1994		FY 1995	
		Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost
0004	1b. Non Automated Data Processing Equipment (>\$25,000<\$500,000)		\$1.2		\$10.0		\$10.0
0006	Production Equipment (Replacement)		\$4.7		\$1.3		\$1.3
0007	Print On Demand Systems (Productivity)		\$0.5		\$0.5		\$0.5
	Automated Document Management and Publishing Systems (New Mission)						
	Subtotal Non Automated Data Processing Equipment (>\$25,000<\$500,000)		\$6.4		\$11.8		\$11.8
0022	5a. Software Development (>\$100,000)		\$3.0		\$0.0		\$0.0
0029	Standard Automation (New Mission)		\$1.5		\$0.0		\$0.0
	Printing Resource Management Information Systems (Productivity)						
	Subtotal Software Development (>\$100,000)		\$4.5		\$0.0		\$0.0
0032	7. Minor Construction (>\$25,000<\$100,000)		\$0.7		\$0.6		\$0.6
	Minor Construction		\$0.7		\$0.6		\$0.6
	Subtotal Minor Construction (>\$25,000<\$100,000)		\$1.4		\$1.2		\$1.2
	Grand Total Capital Purchases Program		\$11.6		\$12.4		\$12.4

**CAPITAL PURCHASES JUSTIFICATION  
DEFENSE PRINTING SERVICE  
(DOLLARS IN MILLIONS)**

0004 - Non ADP Equipment (Under \$500K)

ELEMENT OF COST	FY 1993			FY 1994			FY 1995		
	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
Production Equipment							VAR		\$10.0
<b>TOTAL</b>									<b>\$10.0</b>

**Narrative Justification:** This request represents production equipment required to replace worn out or obsolete equipment currently in use in Defense Printing Service (DPS) components. Replacement production equipment is selected to increase operational productivity and efficiency and provide state-of-the-art service to DPS customers. High-speed and ultra high-speed duplicators, production publishers, 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.

**CAPITAL PURCHASES JUSTIFICATION  
DEFENSE PRINTING SERVICE  
(DOLLARS IN MILLIONS)**

0006 - Print on Demand Systems (Under \$500K)

ELEMENT OF COST	FY 1993			FY 1994			FY 1995		
	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
Print on Demand System							VAR		\$1.3
<b>TOTAL</b>									<b>\$1.3</b>

**Narrative Justification:** The Print on Demand Systems will provide for the output of digital engineering drawings and fully composed training and technical manuals. The development, installation and operation will provide a direct management network that connects data repositories of Defense Printing Service (DPS) offices and customers to expand and improve printing operations established by Defense Management Review Decision 998. The Technical Manual Publish on Demand System serves as the repository/warehouse for existing and new digital formats of the Defense activities technical manuals. This publish on demand system consists of VAX processors, optical disk juke boxes, Compact Disk- Read Only Memory output and specialized high speed electronic printing devices. The Engineering Drawing Print on Demand System is a production printer that produces hardcopy A, B, and C size drawings from a raster database at a speed of 24 "C" (17X22) size drawings per minute folded and collated. The system consists of an oversized electronic printer with a 14" optical player and a 386 PC loaded with file retrieval software. Production conversion devices for the scanning, quality assurance and writing to media for delivery of digital engineering drawings will be provided for Joint Engineering Data Management Information and Control Systems. The application of automated publishing and printing equipment reduces overhead costs, labor intensive warehousing requirements, high volume manual storage, out of stock occurrence, secondary printing, and outdated technical information. These requirements will ensure that users of Defense data receive current technical, logistics, and administrative data.



**CAPITAL PURCHASES JUSTIFICATION  
DEFENSE PRINTING SERVICE  
(DOLLARS IN MILLIONS)**

**0007 - Automated Document Management and Publishing Systems  
(ADMAPS) - NEW MISSION (Under \$500K)**

ELEMENT OF COST	FY 1993		FY 1994		FY 1995	
	Quantity	Unit Cost	Quantity	Unit Cost	Quantity	Unit Cost
ADMAPS						
TOTAL						\$0.5

**Narrative Justification:** The Automated Document Management and Publishing Systems (ADMAPS) consists of various composition/publishing equipment/software, electronic printers, media conversion devices, workstations, telecommunications and digital output devices. ADMAPS will provide new digital technical manuals, and a two-way conversion of technical drawings from the Computer Aided Design format, in support of various Defense programs.

**CAPITAL PURCHASES JUSTIFICATION  
DEFENSE PRINTING SERVICE  
(DOLLARS IN MILLIONS)**

00032 - Minor Construction (Under \$100K)

ELEMENT OF COST	FY 1993			FY 1994			FY 1995		
	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
Minor Construction							VAR		\$0.6
<b>TOTAL</b>									<b>\$0.6</b>

**Narrative Justification:** This represents numerous minor construction projects at the various Defense Printing Service (DPS) facilities/sites. Many of these sites were acquired through Defense Management Report Decision (DMRD) 988 from the Army, Air Force, and Defense Logistics Agency--some which require upgraded safety standards. Therefore, minor construction projects are required to bring these facilities up to standard and improve the 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 facilities 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.

**DEFENSE BUSINESS OPERATIONS FUND - NAVY**

**FY 1995 CAPITAL BUDGET**

**BASE SUPPORT**

0420

**BUSINESS AREA CAPITAL BUDGET SUMMARY**  
**Department of the Navy**  
**Base Support/Public Works Centers**  
**Date: January 1994**  
**(\$ in Millions)**

LINE	Item Description	FY 1993		FY 1994		FY 1995	
		Quant	Total Cost	Quant	Total Cost	Quant	Total Cost
0001	1a. Equipment - Replacement - Productivity - New Mission - >\$500,000	0	0.000	0	0.000	0	0.000
	Subtotal Equipment	0	0.000	0	0.000	0	0.000
	1b. Equipment - Replacement - Productivity - New Mission - >\$25,000<\$500,000 (FY 1993 \$15K)	185	8.701	568	20.533	651	23.649
	Subtotal Equipment	185	8.701	568	20.533	651	23.649
0002	2. Minor Construction (>\$25,000<\$100,000) (FY 1993 \$15K)	65	4.749	86	7.744	77	6.990
0003	3. ADPE & Telecomm >\$25,000 (FY 1993 \$15K)	0	0.000	73	3.060	56	2.507
0004	4. Software Development >\$25,000	0	0.000	0	0.000	0	0.000
0005	5. Management Improvement Initiatives >\$25,000	0	0.000	0	0.000	0	0.000
	<b>TOTAL (NOTE: FY 1993 \$15K)</b>	<b>250</b>	<b>13.450</b>	<b>727</b>	<b>31.337</b>	<b>784</b>	<b>33.146</b>

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION | A. FY 1995 Congressional  
 (\$ in Thousands)

B. Department of the Navy/Base Operations/Public Works Centers/January 1994 | C. 0001 Equipment Replacement | D. Public Works Centers

Element of Cost	FY 1993		FY 1994		FY 1995	
	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
Equipment						
TOTAL				651	36.33	23,649

Narrative Justification:

Equipment includes milling machines, band saws, sheet metal cutters/presses, welding machines, engine analyzers, materials handling (i.e. fork lifts), car/truck washers, generators, and telephone switches. Civil Engineering Support Equipment (CESE) includes trucks, trailers, crawler cranes, crane trucks, backhoes, passenger carrying vehicles (i.e. sedans/buses) and other vehicles incident to public works transportation functions. Environmental and pollution compliance equipment includes environmental lab equipment, above ground fuel storage containment units, portable environmental monitoring units, portable emergency shower units, oil skimmers, and spill containment booms and other equipment required to operate the PWC mission within state and federal environmental compliance standards. Administrative equipment includes automated filing systems, micro film/fiche readers, copiers and other administrative equipment incident to administrative functions.

PWC shop, CESE, environmental, and administrative equipment support 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 and effective environmental compliance which are directly related to unit costs.

Expansions and newly formed Centers have increased total inventories by more than 32% and have significantly increased the average age of our equipment inventories. The average age of contributed vehicles is approximately twice the age of current PWC fleets. As such, procurement objectives have been established for each category to replace equipment within guidance and at an average rate of 800 items annually. Delays/reductions in requested authorizations will result in lost budgeted cost improvements, resulting in higher unit costs to the customer.

BUSINESS AREA CAPITAL PURCHASES JUSTIFICATION

( \$ in Thousands )

B. Department of the Navy/Base Operations/Public Works Centers/January 1994

C. 0003 ADPE & Telecomm

D. Public Works Centers

Element of Cost	FY 1993			FY 1994			FY 1995		
	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost
ADPE Equipment							56	44.77	2,507
<b>TOTAL</b>								44.77	2,507

Narrative Justification:

ADP equipment purchases represent microcomputer networks, high speed printers, minicomputers, file/com servers, reader/printers, CD-ROM image plotters, retrieval systems, local area networks, and other hardware/software in support of the PWC Management Information System (PWC MIS).

Information Management hardware/software directly supports PWC MIS and provides automated information support to the PWC and customers. The system consists of applications designed to fulfill the management requirements of commercial accounting, budget and cost; production management, which includes controls for the production workforce; and all categories of work from receipt to completion in the Planning, Maintenance Engineering, Maintenance, Utilities and Transportation Departments. Equipment purchases in support of PWC MIS will replace overaged and obsolete equipment to ensure continuous system reliability and maintenance.

Expansions and newly formed Centers have increased total inventories significantly. As such, procurement objectives have been established to replace equipment within guidance and at an average rate of 70 items annually. Delays/reductions in requested authorizations will result in lost budgeted cost improvements, resulting in higher unit costs to the customer.