

AD-A128 448 DEPARTMENT OF THE NAVY JUSTIFICATION OF ESTIMATES FOR
FISCAL YEAR 1984 SU... (U) OFFICE OF THE COMPTROLLER
(NAVY) WASHINGTON DC JAN 83

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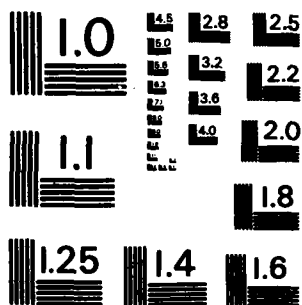
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DEPARTMENT OF THE NAVY
JUSTIFICATION OF ESTIMATES
FOR FISCAL YEAR 1984 (U)



SUBMITTED TO CONGRESS JANUARY 1983
PROCUREMENT

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SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) DEPARTMENT OF THE NAVY JUSTIFICATION OF ESTIMATES FOR FISCAL YEAR 1984 PROCUREMENT, OTHER PROCUREMENT, NAVY		5. TYPE OF REPORT & PERIOD COVERED FINAL FY 1984
7. AUTHOR(s) —		6. PERFORMING ORG. REPORT NUMBER —
9. PERFORMING ORGANIZATION NAME AND ADDRESS DEPARTMENT OF THE NAVY OFFICE OF THE COMPTROLLER NCBW 2 WASHINGTON DC 20350		8. CONTRACT OR GRANT NUMBER(s) —
11. CONTROLLING OFFICE NAME AND ADDRESS SAME AS 9		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS —
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) SAME AS 9		12. REPORT DATE JANUARY, 1983
		13. NUMBER OF PAGES 71
		15. SECURITY CLASS. (of this report) UNCLASSIFIED
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report) APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report) APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) PROCUREMENT OPN		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) THIS VOLUME CONTAINS JUSTIFICATION MATERIAL SUPPORTING THE PRESIDENT'S FISCAL 1984 BUDGET PRESENTATION TO CONGRESS CONCERNING PROCUREMENT; SPECIFICALLY, OTHER PROCUREMENT, NAVY TV		

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SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

Department of the Navy
Other Procurement, Navy

Justification of Estimates for Fiscal Year FY 1984

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Other Procurement, Navy

For procurement, production, and modernization of support equipment and materials not otherwise provided for, Navy ordnance and ammunition (except ordnance for new aircraft, new ships, and ships authorized for conversion); the purchase of not to exceed [three hundred and twenty-four] one vehicle required for physical security of personnel notwithstanding price limitations applicable to passenger carrying vehicles but not to exceed \$125,000 per vehicle and the purchase of not to exceed six hundred and forty-six passenger motor vehicles of which [two hundred and ninety-two] six hundred and five shall be for replacement only [including not to exceed 2 vehicles required for physical security of personnel notwithstanding price limitations applicable to passenger carrying vehicles but not to exceed \$100,000 per vehicle]; expansion of public and private plants, including the land necessary therefor, and such lands and interests therein, may be acquired, and construction prosecuted thereon prior to approval of title as required by section 355, Revised Statutes, as amended; and procurement and installation of equipment, appliances, and machine tools in public and private plants; reserve plant and Government and contractor-owned equipment layaway; [\$3,727,075,000] \$5,001,838,000 to remain available for obligation until September 30, [1985, distributed as follows: For ship support equipment \$543,689,000; for communications and electronics equipment \$1,481,798,000; for aviation support equipment, \$552,636,000; for ordnance support equipment, \$667,456,000; for civil engineering support equipment, \$172,837,000; for supply support equipment, \$81,224,000; and for personnel/command support equipment \$227,435,000] 1986. (10 U.S.C. 5012, 5031; 31 U.S.C. 1301; Department of Defense Appropriation Act, 1983; additional authorizing legislation to be proposed.)

Navy		TRODDEN	Carmack	Other Procurement, Navy		31 Jan 83	
Program and Financing (in thousands of dollars)				Summary			
Identification code		Budget plan (amounts for procurement actions programmed)			Obligations		
17-1810-0-1-051		1982 actual	1983 est.	1984 est.	1982 actual	1983 est.	1984 est.
Program by activities:							
Direct:							
1.	Ships support equipment	687,080	530,097	730,460	661,979	537,436	721,686
2.	Communications and electronics equipment	1,155,253	1,409,789	1,703,305	1,156,800	1,242,837	1,689,276
3.	Aviation support equipment	561,075	537,620	852,717	456,426	622,633	761,090
4.	Ordnance support equipment	826,694	694,534	992,297	802,977	741,751	816,947
5.	Civil engineering support equipment	111,063	172,576	234,662	60,553	198,413	230,479
6.	Supply support equipment	75,978	81,224	117,162	48,365	103,766	100,825
7.	Personnel and command support equipment	212,434	227,435	371,235	234,432	269,962	332,229
Total direct		3,629,577	3,653,275	5,001,838	3,421,532	3,716,798	4,652,532
Reimbursable program		33,935	40,000	40,000	4,809	53,789	50,000
10.0001	Total	3,663,512	3,693,275	5,041,838	3,426,341	3,770,587	4,702,532
Financing:							
Offsetting collections from:							
11.0001	Federal funds	-19,274	-16,000	-16,000	-16,752	-16,000	-16,000
13.0001	Trust funds	-13,831	-22,000	-22,000	-8,709	-22,000	-22,000
14.0001	Non-federal sources	-830	-2,000	-2,000	-1,100	-2,000	-2,000
17.0001	Recoveries of prior year obligations(-)				-8,559		
21.4001	Unobligated balance available, start of year:						
	For completion of prior year budget plans				-1,054,122	-1,245,915	-1,168,633
21.4002	Reprogramming from or to prior year budget plan	-46,562					
23.4001	Unobligated balance transferred to other accounts	13,400					
24.4001	Unobligated balance available, end of year				1,245,915	1,168,603	1,507,909
25.0001	Unobligated balance lapsing	33,162			33,162		
39.0001	Budget authority	3,629,577	3,653,275	5,001,838	3,629,577	3,653,275	5,001,838
Budget authority:							
40.0001	Appropriation	3,708,777	3,727,075	5,001,838	3,708,777	3,727,075	5,001,838
40.0002	Reduction pursuant to P.L. 97-377		-21,200			-21,200	
41.0001	Transferred to other accounts(-)	-79,200	-72,800		-79,200	-72,600	
42.0001	Transferred from other accounts		20,000			20,000	
43.0001	Appropriation (adjusted)	3,629,577	3,653,275	5,001,838	3,629,577	3,653,275	5,001,838
Relation of obligations to outlays:							
71.0001	Obligations incurred, net				3,399,780	3,730,587	4,662,532
72.4001	Obligated balance, start of year				4,076,890	4,806,333	5,296,820
74.4001	Obligated balance, end of year				-4,806,333	-5,296,820	-6,342,652
77.0001	Adjustments in expired accounts				35,040		
78.0001	Adjustments in unexpired accounts				-8,559		
90.0001	Outlays				2,696,618	3,240,100	3,616,700

Navy	TRODDEN	Carmack	Other Procurement, Navy	31 Jan 83
Object Classification (in thousands of dollars)				Summary
Identification code	17-1810-(-1-051)			
		1982 actual	1983 est.	1984 est.
Direct obligations:				
Other services:				
125.002	Purchases from industrial funds	45,864	48,897	48,897
125.003	Contracts	98,461	106,963	106,963
125.004	Other	50,597	55,175	55,179
126.001	Supplies and materials	722,358	786,814	786,814
131.001	Equipment	2,504,252	2,718,945	3,654,679
199.001	Total direct obligations	3,421,532	3,716,798	4,652,532
Reimbursable obligations:				
Other services:				
225.002	Purchases from industrial funds		560	560
225.003	Contracts		1,160	1,160
225.004	Other		600	600
226.001	Supplies and materials	809	9,200	9,200
231.001	Equipment	4,000	42,269	38,480
299.001	Total reimbursable obligations	4,809	53,789	50,000
999.901	Total obligations	3,426,341	3,770,587	4,702,532

Navy

TRODDEN

Carmack

Other Procurement, Navy

31 Jan 83

Program and Financing (in thousands of dollars)

1980 Fiscal year program

Identification code	17-1810-0-1-051	Budget plan (amounts for procurement actions programmed)			Obligations			
		1982 actual	1983 est.	1984 est.	1982 actual	1983 est.	1984 est.	
Program by activities:								
Direct:								
	1. Ships support equipment				21,075			
	2. Communications and electronics equipment				71,457			
	3. Aviation support equipment				14,550			
	4. Ordnance support equipment				17,023			
	5. Civil engineering support equipment				929			
	6. Supply support equipment				1,765			
	7. Personnel and command support equipment				16,086			
	Total direct				142,885			
	Reimbursable program				3,536			
10.0001	Total				146,421			
Financing:								
Offsetting collections from:								
11.0001	Adjustment to prior year federal fund orde				197			
13.0001	Adjustment to prior year trust fund orders				2,435			
14.0001	Adjustment to non-federal sources				-28			
17.0001	Recoveries of prior year obligations(-)				-2,573			
	Unobligated balance available, start of year:							
21.4001	For completion of prior year budget plans				-193,014			
21.4002	Reprogramming from or to prior year budget plan	-46,562						
23.4001	Unobligated balance transferred to other accounts	13,400			13,400			
25.0001	Unobligated balance lapsing	33,162			33,162			
40.0001	Budget authority							

Navy		TRGDEN	Carmack	Other Procurement, Navy			31 Jan 83		
Program and Financing (in thousands of dollars)							1981 Fiscal year program		
Identification code	17-1810-0-1-051	Budget plan (amounts for procurement actions programmed)			Obligations				
		1982 actual	1983 est.	1984 est.	1982 actual	1983 est.	1984 est.		
Program by activities:									
Direct:									
	1. Ships support equipment				86,052	27,188			
	2. Communications and electronics equipment				236,784	99,692			
	3. Aviation support equipment				71,674	29,700			
	4. Ordnance support equipment				139,886	28,572			
	5. Civil engineering support equipment				9,658	12,640			
	6. Supply support equipment				8,541	5,281			
	7. Personnel and command support equipment				82,238	20,411			
	Total direct				635,033	223,484			
	Reimbursable program				1,127	2,680			
10.0001	Total				636,160	226,164			
Financing:									
Offsetting collections from:									
11.0001	Adjustment to prior year federal fund orde				2,325				
13.0001	Adjustment to prior year trust fund orders				2,687				
14.0001	Adjustment to non-federal sources				-242				
17.0001	Recoveries of prior year obligations(-)				-5,986				
21.4001	Unobligated balance available, start of year				-861,108	-226,164			
24.4001	Unobligated balance available, end of year				226,164				
40.0001	Budget authority								

Navy

TRODDEN

Carmack

Other Procurement, Navy

31 Jan 83

Program and Financing (in thousands of dollars)

1982 Fiscal year program

Identification code		Budget plan (amounts for procurement actions programmed)			Obligations		
		1982 actual	1983 est.	1984 est.	1982 actual	1983 est.	1984 est.
Program by activities:							
Direct:							
	1. Ships support equipment	667,080			554,852	83,573	48,655
	2. Communications and electronics equipment	1,155,253			848,559	241,364	65,329
	3. Aviation support equipment	561,075			370,002	156,052	35,021
	4. Ordnance support equipment	826,694			646,068	124,279	56,347
	5. Civil engineering support equipment	111,063			49,966	53,745	7,352
	6. Supply support equipment	75,978			38,059	32,794	5,125
	7. Personnel and command support equipment	212,434			136,108	61,551	14,775
	Total direct	3,629,577			2,643,614	753,358	232,604
	Reimbursable program	33,935			146	21,109	12,680
10.0001	Total	3,663,512			2,643,760	774,467	245,284
Financing:							
Offsetting collections from:							
11.0001	Federal funds	-19,274			-19,274		
13.0001	Trust funds	-13,831			-13,831		
14.0001	Non-federal sources	-830			-830		
21.4001	Unobligated balance available, start of year					-1,019,751	-245,284
24.4001	Unobligated balance available, end of year				1,019,751	245,284	
39.0001	Budget authority	3,629,577			3,629,577		
Budget authority:							
40.0001	Appropriation	3,708,777			3,708,777		
41.0001	Transferred to other accounts(-)	-79,200			-79,200		
43.0001	Appropriation (adjusted)	3,629,577			3,629,577		

Navy	TRODDEN	Carmack	Other Procurement, Navy	31 Jan 83
Program and Financing (in thousands of dollars)				1983 Fiscal year program
Identification code	17-1810-0-1-051	Budget plan (amounts for procurement actions programmed)		Obligations
		1982 actual	1983 est.	1984 est.
Program by activities:				
Direct:				
1.	Ships support equipment	530,097		426,675 102,109
2.	Communications and electronics equipment	1,409,789		901,781 327,035
3.	Aviation support equipment	537,620		436,881 99,099
4.	Ordnance support equipment	694,534		568,900 60,692
5.	Civil engineering support equipment	172,576		132,028 32,214
6.	Supply support equipment	81,224		65,691 14,528
7.	Personnel and command support equipment	227,435		188,000 32,872
	Total direct	3,653,275		2,739,956 668,549
	Reimbursable program	40,000		30,000 7,320
10.0001	Total	3,693,275		2,769,956 675,869
Financing:				
Offsetting collections from:				
11.0001	Federal funds	-16,000		-16,000
13.0001	Trust funds	-22,000		-22,000
14.0001	Non-federal sources	-2,000		-2,000
21.4001	Unobligated balance available, start of year			-923,319
24.4001	Unobligated balance available, end of year			923,319 247,450
39.0001	Budget authority	3,653,275		3,653,275
Budget authority:				
40.0001	Appropriation	3,727,075		3,727,075
40.0002	Reduction pursuant to P.L. 97-377	-21,200		-21,200
41.0001	Transferred to other accounts(-)	-72,600		-72,600
42.0001	Transferred from other accounts	20,000		20,000
43.0001	Appropriation (adjusted)	3,653,275		3,653,275

Navy		TRODDEN	Carneck	Other Procurement, Navy	31 Jan 83		
Program and Financing (in thousands of dollars)				1984 Fiscal year program			
Identification code		17-1810-0-1-051		Budget plan (annual procurement actions program)		Obligations	
		1982 actual	1983 est.	1984 est.	1982 actual	1983 est.	1984 est.
Program by activities:							
Direct:							
	1. Ships support equipment			730,460			570,922
	2. Communications and electronics equipment			1,703,305			1,296,912
	3. Aviation support equipment			852,717			626,970
	4. Ordnance support equipment			992,297			699,908
	5. Civil engineering support equipment			234,662			190,913
	6. Supply support equipment			117,162			81,172
	7. Personnel and command support equipment			371,235			284,582
	Total direct			5,001,838			3,751,379
	Reimbursable program			40,000			30,000
10.0001	Total			5,041,838			3,781,379
Financing:							
Offsetting collections from:							
11.0001	Federal funds			-16,000			-16,000
13.0001	Trust funds			-22,000			-22,000
14.0001	Non-federal sources			-2,000			-2,000
24.4001	Unobligated balance available, end of year						1,260,459
40.0001	Budget authority			5,001,838			5,001,838

BUDGET ACTIVITY: 1 SHIP SUPPORT EQUIPMENT
SUMMARY OF BUDGET PLAN
(In Thousands)

BUDGET PLAN
(Amounts For Procurement Actions Programmed)

	FY 1982 ACTUAL	FY 1983 ESTIMATE	FY 1984 ESTIMATE	FY 1985 ESTIMATE	JUSTIFICATION PAGE
SHIPBOARD COMPONENTS	\$244,523	\$217,775	\$283,713	\$500,453	10
REACTOR PLANT EQUIPMENT	367,583	252,106	373,108	601,236	19
OTHER SUPPORT EQUIPMENT	74,974	60,216	73,639	98,599	20
TOTAL BUDGET PLAN	\$687,080	\$530,097	\$730,460	\$1,200,288	

Budget Activity 1 - Ships Support Equipment

(\$ In Thousands)
FY 1985 Estimate - \$1,200,288
FY 1984 Estimate - \$ 730,460
FY 1983 Estimate - \$ 530,097
FY 1982 Actual - \$ 687,080

Purpose and Scope of Work

Budget Activity 1 programs include Shipboard Components, Reactor Fuel and Components, support of the Deep Submergence, TRIDENT and Small Boat procurement programs, and procurement of Production Facilities and Equipment.

Shipboard components, as well as nuclear components and small boats, are procured for direct installation on Active Fleet ships as part of a planned maintenance replacement program or as part of an improvement program. These components are also procured to fill authorized stock requirements. Funding for the Deep Submergence Program is aimed at expanding the Navy's capability to live, work, explore and rescue in deep ocean areas. Funds are also required to provide plant equipment and other support equipment for the TRIDENT Refit Facility. Production and Plant equipment includes new and replacement machine tools and shop equipment for naval activities, operating forces and Shore Intermediate Maintenance Activities.

Ship Propulsion Equipment (P-1 Line Items 1-7)

(\$ In Thousands)	
FY 1984	FY 1985
\$37,243	\$110,314

These funds will provide for the procurement of equipment designed to improve the reliability, maintainability and durability of the LM 2500 Gas Turbine Engines introduced into the Fleet through the DD-963 and FFG-7 Class construction programs and the Allison 501K Gas Turbine engine introduced into the Fleet through the DD-963, DDG-993, and DD-997 Class ships. This will be accomplished through procurement of necessary modifications identified as a result of an on-going Component Improvement Program financed in the RDT&E appropriation. Waste Heat boilers installed on DD-963 Class ships have proven to be unreliable in service. Existing 1200 and 600 PSI Steam Plants require sufficient funds to modify and improve reliability, including procurement of fuel oil strainers, lube oil mods, overspeed trips, boiler safety valves, and lube oil strainers. Funds requested will also procure ME831-800 gas turbines fin stabilizer mods, main propulsion clutch mods, and auxiliary propulsors.

Generators and Pumps (P-1 Line Items 8-10)

(\$ In Thousands)	
FY 1984	FY 1985
\$15,092	\$19,372

These funds will provide for continuation of programs to replace obsolescent, unsupportable, underpowered and unreliable generators and pumps of various capacities and sizes. These programs also procure equipment to support programmed SHIPALTS. Types of equipment procured include a 500KW Motor Generator to support SSN-688 Class overhauls, 750KW Ship's Service Turbine Generators to support LPD overhauls, solid state frequency changers to support AD overhauls, 2500KW Ship's Service Turbine Generators to support AD/AS overhauls and funds to convert the DD-963 400HZ static frequency converter from water cooled to air cooled. Also included are trim and drain pumps for SSBNs, main feed pumps for

SSNs, fire pumps/ends/motors for CVs/CVNs, and main feed pumps for the surface ship advanced equipment repair program.

Air Compressors (P-1 Line Items 11-12)

(\$ In Thousands)	
FY 1984	FY 1985
\$ 4,790	\$ 5,219

These funds will provide for the procurement of higher capacity and more reliable high pressure air compressors than those currently installed in the Active Fleet. Oil free 20 and 13 1/2 Cubic feet/hour (CFH) Air Compressors are needed to support combat weapon system operations on combatants. Also being procured are 30 Cubic feet/hour Air Compressors which are essential to the operation of Liquid Oxygen Generating Plants on aircraft carriers in direct support of aircraft, and oil-free 30 cubic feet/hour air compressors to provide required additional capability for submarine tenders.

Propellers (P-1 Line Items 13-14)

(\$ In Thousands)	
FY 1984	FY 1985
\$ 9,849	\$10,083

These funds will provide for the procurement of Damped Propellers to reduce the noise signature on FBM and attack submarines and as replacements for those propellers currently installed as casualties occur. Funds are also required for replacement of blades, shafts and hubs in support of Active Fleet ships as damage or failure occurs as well as for support inventories for new classes of ships.

Navigation Equipment (P-1 Line Items 15-18)

(\$ In Thousands)	
FY 1984	FY 1985
\$35,545	\$48,778

These funds will procure Electrically Suspended Gyro Navigators (ESGN) which are programmed as replacement for MK-3 Ships Inertial Navigation System (SINS) on SSN-637 Class and SSNs 671 and 685; and as replacement for Dual Miniature Inertial Navigation System (DMINS) on SSN-688 Class ships. The improvement over the MK-3 SINS is in reliability, maintainability, availability and performance. The improvement over DMINS is in performance. Funds are

required beginning in FY 1985 for the CV/CVN navigation system which will replace the MK-3 SINS system. The improvement in this is in reliability, maintainability, and availability. Funds are also required for maintenance items and newly developed improvements such as the AN/WSN-5 Inertial Navigation Sets for CG/CGN/DDG Class ships.

Underway Replenishment Equipment (P-1 Line Item 19)

(\$ In Thousands)	
FY 1984	FY 1985
\$ 7,580	\$11,531

The equipment procured under this program is required to provide the Active Fleet with new or improved underway replenishment-at-sea capability. This equipment is used to transfer fuel, cargo, ammunition, and missiles by both alongside and vertical replenishment techniques. The equipment being procured is in support of the following objectives: personnel/equipment safety; reduction in maintenance costs; and reduction in alongside time, to minimize ship vulnerability to enemy action. Major equipment is air clutch winches, anti-slack devices, highline/ spanwire winches and saddle winches.

Periscopes (P-1 Line Items 20-22).

(\$ In Thousands)	
FY 1984	FY 1985
\$ 9,722	\$ 7,775

These funds will provide for the procurement of the Type 18 Periscope related material and other periscopes and accessories. The Type 18 periscope equipment includes eyepiece boxes and masts to set up an inventory of these parts based on actual/predicted failure rates and turn around times. Funds are required to provide Submarine Satellite Information Exchange reception capability on Type 18 periscopes.

Field change kits are being procured to implement approved changes on previously procured Type 18 Periscopes. Equipment to provide additional shore/tender based components for other type periscopes also is required to ensure that an issuable periscope is always available as a replacement for damaged units on SSN-594 and 637 Class ships. This requirement is based on past demand experience and repair turn around time. The Type 8B/8D Periscopes Modification Program will enable the modification of Type 8B/8D Periscopes to incorporate Electronic Surveillance Measure (ESM) capability on Fleet Ballistic Missile submarines. Funding will also provide for support and improvement of the Type 2 and 15 series periscopes for all Active Fleet submarines.

Other Shipboard Equipment (Ship Silencing) (P-1 Line Items 26-27).

(\$ In Thousands)	
FY 1984	FY 1985
\$15,272	\$27,403

The requested funds will provide for the procurement of equipment such as Glass Reinforced Plastic (GRP) Domes, electrical system mods, air reducing manifolds and noise/vibration monitor analyzers required to implement the militarily high priority Submarine Silencing Program on existing nuclear submarines and for the acoustic quieting of radiated noise and sonar self-noise for surface ships. The submarine silencing equipment incorporates technology developed under R&D programs for improving detection capability and reducing the detectability of the submarine. The surface ship silencing program will make use of the extensive silencing technology already developed under the Submarine Silencing program. FY 1984 and 1985 funding provides for the procurement of Hub devices, Masker Belts, Sonar Dome Baffles and Ship Service Turbine Generator Quieting Devices for FF-1052 Class ships; Orificial Resistive Devices, Masker Belts, and Sonar Dome Battlers for DD-963 Class ships; Masker Belts for FFG-7 Class ships; and PRAIRIE AIR for CVs.

Other Shipboard Equipment (TRIDENT) (P-1 Line Item 29).

(\$ In Thousands)	
<u>FY 1984</u>	<u>FY 1985</u>
\$16,476	\$75,664

Funding in this program provides for hull, mechanical and electrical equipment for the TRIDENT Training Facility (TRITRAFAC) and the TRIDENT Refit Facility (TRIREFFAC) located at the Naval Submarine Base, Bangor, WA. Beginning in FY 1985 similar funding is requested to outfit the TRITRAFAC and TRIREFFAC to be located at Kings Bay, GA. The TRIREFFAC is a dedicated shore support facility providing a full range of industrial support. Unlike many other programs, TRIDENT does not use tenders for industrial support, but rather depends upon the TRIREFFAC for a full range of maintenance functions. The facility consists of a consolidated waterfront complex including refit piers, a drydock, a wharf for outloading explosive hardware and missiles, a magnetic silencing facility for measuring submarine magnetic field signature, and various industrial shops and warehousing facilities. Also included is funding for alteration/modification kits for training equipment and tactical test hardware. Specific items included in the budget request are determined by procurement leadtimes, installation and checkout periods and equipment operational need dates.

Other Shipboard Equipment (Deep Submergence) (P-1 Line Item 30).

(\$ In Thousands)	
<u>FY 1984</u>	<u>FY 1985</u>
\$12,764	\$14,723

The requested funds will provide for the procurement of hardware to improve/modify Deep Submergence Vehicles to provide the Navy with the capability to rescue personnel from craft disabled on the ocean floor. It also will improve the capability to perform manned underwater search, inspection and recovery missions.

Other Shipboard Equipment (Ship Support Improvement) (P-1 Line Items 32, 38, 39, and 45).

(\$ In Thousands)	
FY 1984	FY 1985
\$20,527	\$13,576

These programs will procure critical, long lead time equipments assemblies and components to support the maintenance-limited LO-MIX classes of ships after delivery, provide for improvement in the material condition of Engineered Operating Cycle ships, achieve increased operational availability, and provide funds to upgrade facilities both ashore and afloat (industrial plant and tenders) in order to improve and expand intermediate level maintenance by the surface forces.

Shipboard maintenance will emphasize modular replacement with repairables being returned to Intermediate Maintenance Activities and Depot Overhaul Points for repair or rework and return to stock. Inherent in the Engineered Operating Cycle will be several intervening maintenance availabilities of extremely short duration for performing scheduled alterations and planned overhaul of installed equipment.

Other Shipboard Equipment (Minesweeping Equipment) (P-1 Line Items 33 and 35).

(\$ In Thousands)	
FY 1984	FY 1985
\$ 5,719	\$ 7,953

These programs will provide for extension of the useful service life of existing MSOs to FY 1991 and for the procurement of minesweeping cables necessary to counter moored and influence mines. Prior to the decision to defer the retirement of MSOs twenty-two of the twenty-five MSOs presently in the active Fleet were scheduled for retirement in FY 1985. FY 1984 funds will procure ship alteration material for the auxiliary boilers, high temperature smoke detectors, and galleys. The minesweeping equipment is needed due to the decision to defer the retirement of MSOs. FY 1984 and FY 1985 funds will also procure Q-3 and S-3 cables, controllers, minesweep wire, rattlebars, and mine neutralization system vehicle.

Other Shipboard Equipment (Safety Equipment) (P-1 Line Items 23, 41, and 43)

(\$ In Thousands)	
<u>FY 1984</u>	<u>FY 1985</u>
\$18,413	\$18,829

These funds supply shipboard personnel participating in fire fighting operations, fuel tank inspection, and other activities involving exposure of lungs to noxious substances with the latest available equipment in order to perform assigned tasks without risking personal injury; provide for the protection of personnel from exposure to nuclear weapons radiation; and provide ships of the Active Fleet with the capability to detect chemical warfare agents before ship contamination occurs. FY 1984 and FY 1985 funding will provide Halon 1301 Fire Fighting systems to complement the existing Aqueous Film Forming Foam/ Purple K Dry Chemical Powder hose reel systems in machinery spaces and Oxygen Breathing Apparatus Voice Amplifiers to improve communications between fire fighting team members; shielding which will be affixed to bulkheads and to cradles containing the individual weapons on CVs, SSN-688 Class, Non-FBM ASs and at shore facilities and will be composed of water extended polyethylene and aluminum; and chemical warfare directional detectors and chemical agent point detector systems.

Other Shipboard Equipment (Miscellaneous) (P-1 Line Items 24, 25, 28, 31, 34, 36, 37, 40, 42, 44, and 46).

(\$ In Thousands)	
<u>FY 1984</u>	<u>FY 1985</u>
\$74,721	\$129,233

These funds provide for the procurement of Combat System Command and Control Switchboards; equipment which will enable the Navy to comply with Federal law and DoD and Environmental Pollution Control regulations; replacement batteries for all active submersible craft/submarines; procurement and positioning of special equipment for merchant ships to provide them with the capability to perform Naval auxiliary roles; equipment to upgrade the air conditioning capacity on major combatants; gantry cranes for AFDMs; provision of specialized equipment to assure reliable repair of electronic modules at selected shore, surface and subsurface Fleet activities; acquisition of energy conservation systems, equipment and modifications developed through the Chief of Naval Operation's Energy Research and Development program for installation aboard ships in the Fleet; the Gas Management System for installation on board submarines which will reduce the submarine's vulnerability; and modifications/replacements for all equipment that is not in a specific category and which cost less than \$900,000 by category.

Reactor Plant Equipment (P-1 Line Items 47 and 48).

(\$ In Thousands)	
<u>FY 1984</u>	<u>FY 1985</u>
\$373,108	\$601,236

The FY 1984 and 1985 requests provide funds for the procurement of replacement reactor cores, power units and other reactor plant components and equipment. Replacement cores and power units are the assemblies of nuclear fuel and necessary associated structural and reactivity control equipment required for the periodic refueling of nuclear powered ships. The procurement of these units is accomplished by the Department of Energy (DOE). The DOE has developed production lines within the civilian nuclear industry to fabricate these units. The funds requested are required to meet the refueling needs of the Navy in a manner most efficient to the government as recommended by the DOE. The Reactor component line item includes the components, equipment, and material required to provide minimum support needed for the continued safe and reliable operation of naval nuclear propulsion plants. Funds are programmed for acquisition of replacement components for ship alterations, replenishment of stock spare components, and specialized equipment necessary for refueling of nuclear powered ships.

Ocean Engineering (P-1 Line Items 49-51).

(\$ In Thousands)	
<u>FY 1984</u>	<u>FY 1985</u>
\$19,991	\$39,732

These programs provide for the procurement of equipment to support safely the existing depth capabilities imposed on the working diver as well as mission duration; equipment to improve the Navy's diving capabilities and maintain sufficient levels of critical salvage items; and improved equipment developed as part of Swimmer Support Systems for Underwater Demolition Teams, SEAL Teams and Inshore Undersea Warfare Groups. FY 1984 and FY 1985 funds will procure the MK-14 Push - Pull System and the Deep Tool System; hardware which increases U.S. Navy operational surface supported maximum diving depth from 300 to 450 feet and salvage equipment such as hydraulic pullers, stato anchors, puller beach gear-legs, and synthetic line; and Low Influence Signature SCUBA, MK-VIII Swimmer delivery vehicle, gas transfer and storage systems, deck shelters, and rubber raiding craft.

Small Boats (P-1 Line Items 52-54).

(\$ In Thousands)	
<u>FY 1984</u>	<u>FY 1985</u>
\$27,211	\$29,594

Standard boats procured with these funds will be used to fill new or revised allowances, to replace obsolescent wooden boats now in service, and to replace boats of fiberglass or steel construction which are beyond economical repair. Types of boats to be procured with these funds include 26', 33' and 40' Personnel, 18', 22', 33', 40' and 50' Utility, 26' Motor Whaleboat, 14' Punt, 35' and 50' Workboat, 24' EOD Craft, and 40' Plane Personnel and Rescue boat. Torpedo Retriever Procurement will acquire 100' retrievers used for recovering spent torpedoes, missiles, small drones and mobile targets fired during Weapons System Acceptance Test.

Training Equipment (P-1 Line Item 55).

(\$ In Thousands)	
<u>FY 1984</u>	<u>FY 1985</u>
\$ 4,971	\$ 1,130

This program provides equipments for the support of initial training requirements developed through the Navy Training Plan process and sustaining training requirements developed by the Chief of Naval Education and Training.

Production Facilities Equipment (P-1 Line Items 56, 59 and 60).

(\$ In Thousands)	
<u>FY 1984</u>	<u>FY 1985</u>
\$20,754	\$27,553

These programs provide Industrial Plant Equipment and other plant equipment necessary to support Naval Sea Systems Command managed industrial facilities that are not industrially funded. Machine tools, industrial plant equipment and other plant equipment necessary to support Fleet operations, equipment for the TRIDENT Refit Facility, and calibration equipment for the intermediate and organizational maintenance levels are funded herein.

Spares and Repair Parts (P-1 Line Item 61).

(\$ In Thousands)	
<u>FY 1984</u>	<u>FY 1985</u>
\$ 712	\$ 590

This program provides for the procurement of initial spares and repair parts required to support components installed on-board ships of the Active Fleet.

BUDGET ACTIVITY 2: COMMUNICATIONS AND ELECTRONIC EQUIPMENT
SUMMARY OF BUDGET PLAN
(In Thousands)

BUDGET PLAN
(Amounts for Procurement Actions Programmed)

	1982 Actual	1983 Estimate	1984 Estimate	1985 Estimate	Justification Page
SHIP RADARS	\$ 69,429	\$ 162,598	\$ 133,717	\$ 185,665	23
SHIP SONARS (SURFACE SHIPS)	42,822	25,528	88,983	118,727	24
SHIP SONARS (SUBMARINES)	108,733	111,982	136,974	241,150	24
SHIP SONARS (GENERAL SUPPORT)	51,180	60,339	40,370	45,471	24
ANTI-SUBMARINE WARFARE ELECTRONICS (SURFACE SHIPS)	18,905	120,682	180,207	192,281	25
ANTI-SUBMARINE WARFARE ELECTRONICS (SUBMARINE)	9,387	8,994	7,928	16,905	25
ANTI-SUBMARINE WARFARE ELECTRONICS (AVIATION)	3,057	12,587	20,475	37,156	26
ANTI-SUBMARINE WARFARE ELECTRONICS (SURVEILLANCE)	137,214	123,417	99,719	134,462	26
ELECTRONIC WARFARE EQUIPMENT	57,702	56,694	83,636	201,588	26
RECONNAISSANCE EQUIPMENT	32,292	40,498	44,046	60,612	27
SUBMARINE SURVEILLANCE EQUIPMENT	153,471	140,597	18,206	36,880	28
OTHER SHIPBOARD ELECTRONIC EQUIPMENT	34,955	45,978	165,119	201,924	28
TRAINING EQUIPMENT	11,707	9,278	5,261	9,591	29
AVIATION ELECTRONIC EQUIPMENT	83,485	70,299	94,420	88,385	29
OTHER SHORE ELECTRONIC EQUIPMENT (COMMAND & CONTROL)	28,340	35,605	23,023	127,883	30
OTHER SHORE ELECTRONIC EQUIPMENT (MISCELLANEOUS)	30,034	53,432	68,025	51,183	30
SHIPBOARD COMMUNICATIONS	39,549	47,066	67,405	77,848	31
SUBMARINE COMMUNICATIONS	19,600	30,353	22,502	64,337	31
SATELLITE COMMUNICATIONS	50,702	38,694	71,322	70,740	32
SHORE COMMUNICATIONS	43,133	45,485	36,012	77,041	32
CRYPTOGRAPHIC EQUIPMENT	60,915	89,467	139,970	198,174	33
CRYPTOLOGIC EQUIPMENT	8,217	13,370	14,482	14,662	34
OTHER ELECTRONIC SUPPORT	9,105	19,468	17,431	7,436	35
SPARES AND REPAIR PARTS	51,319	47,378	124,072	119,860	35
 TOTAL BUDGET PLAN	 \$1,155,253	 \$1,409,789	 \$1,703,305	 \$2,379,961	

Budget Activity 2: Communications and Electronic Equipment

	(\$ in Thousands)
FY 1985 Estimate	\$2,379,961
FY 1984 Estimate	\$1,703,305
FY 1983 Estimate	\$1,409,789
FY 1982 Actual	\$1,155,253

Purpose and Scope of Work

Budget Activity 2 programs include the procurement of shipboard and shore communications and electronic equipment for the Active Fleet and training activities. Improved shipboard surface and air search radars are designed to enhance the military capability of combatant ships. Anti-Submarine Warfare Electronics equipment will furnish surface ships, submarines and special shore activities with equipment used for detection, tracking localization and classification of submarines. Special sonars are procured for employment in Fleet Ballistic Missile submarines. Also procured in this activity is equipment which will provide the Fleet the capability of deceiving, intercepting, and analyzing airborne, electro-magnetic and underwater radiation for the purpose of executing an effective surveillance and intelligence collection capability.

Justification of Funds:

Ship Radars (P-1 Line Items 62-69)

(\$ in Thousands)	
FY 1984	FY 1985
133,717	185,665

The FY 1984 and FY 1985 Ship Radar procurements provide the Active Fleet with detection, tracking and identification equipment to meet the challenge of high speed attack capabilities of low-flyers, anti-ship missiles and modern aircraft. Specific radars to be procured in FY 1984 and FY 1985 include the AN/SPS-67(V) radar (the modernized version of the AN/SPS-10 radar), the primary surface search radar in the Fleet (FY 1984 \$5.2 million; FY 1985 \$10.9 million); the AN/SPS-40 radar whose long-range goal is to increase the detection capability in hostile, cluttered, or low-flyer threat environments through improved system availability and automation techniques (FY 1984 \$18.0 million; FY 1985 \$19.3 million); the AN/SPS-48 radar, a three-coordinate air search radar whose primary function is to provide target position data to a weapon system (FY 1984 \$50.6 million; FY 1985 \$76.0 million); the AN/SPS-49 radar, a narrow beamed, very long-range two dimensional, air search radar (FY 1984 \$17.2 million; FY 1985 \$16.7 million); the Integrated Automatic Detection and Tracking System AN/SYS-() which provides the capability to correlate contact data from up to three radars, determine target tracks, and provide a single target output to the ship's command and decision system automatically (FY 1984 \$16.9 million; FY 1985 \$22.5 million); and the MK-23 Target Acquisition System, a rapid reaction, fully automatic, electronic counter-counter-measure capable radar system developed as the target acquisition system for the Improved Point Defense Surface Missile System (FY 1984 \$14.1 million; FY 1985 \$10.8 million). The FY 1984 and FY 1985 requests also include resources for procurement of various radar support items (FY 1984 \$11.7 million; FY 1985 \$29.5 million).

Ship Sonar (Surface Ships) (P-1 Line Items 70, 71 and 76)

(\$ in Thousands)	
<u>FY 1984</u>	<u>FY 1985</u>
88,983	118,727

\$9.0 million in FY 1984 are for procurement of AN/SQS-26 CX sonar improvements and \$33.3 million in FY 1985 are for initial procurement of the AN/SQS-26 CX/53A Adaptive Noise Canceller. \$73.2 million in FY 1984 and \$77.8 million in FY 1985 are for initial and follow-on procurement of the AN/SQS-53B Shipboard Kits. \$6.8 million in FY 1984 and \$7.7 million in FY 1985 are for procurement of emergency replacement windows and domes for the AN/SQS-26/53, AN/SOQ-23, AN/SOS-56 and AN/SQS-38 sonar systems.

Ship Sonars (Submarines) (P-1 Line Items 72-75 and 79)

(\$ in Thousands)	
<u>FY 1984</u>	<u>FY 1985</u>
136,974	241,150

These funds provide for continued procurement of AN/BQQ-5 modification kits required to upgrade previously procured and installed AN/BQQ-5 systems onboard SSN-594, SSN-637 and SSN-688 class submarines (FY 1984 \$109.6 million; FY 1985 \$122.2 million); procurement of a total of 27 BQQ-5 TB-16 towed arrays in FY 1984 thru FY 1986 utilizing a three year multi-year contracting approach (FY 1984 \$6.4 million, FY 1985 \$1.5 million); and procurement of AN/BQR-23 Improved Processors and Memory, AN/BQR-15 array modification shipalts, AN/BQQ-9 systems and various other alterations for installation on SSBN submarines (FY 1984 \$21.0 million; FY 1985 \$117.4 million).

Ship Sonars (General Support) (P-1 Line Items 77 and 78)

(\$ in Thousands)	
<u>FY 1984</u>	<u>FY 1985</u>
40,370	45,471

These funds procure upgrade equipment for the Transducer Repair Facilities including Towed Line Array (TLA) Plant Equipment for the TB-16, AN/SQR-18A(V)1, AN/SQR-18(A)V2, and AN/SQR-19; various BQR-20 series improvements; power supply kits for the AN/BQA-8; and engineering changes for the AN/BQS-14, AN/BQS-15, AN/BQA-8B and AN/BQQ-3 systems (FY 1984 \$3.1 million; FY 1985 \$5.6 million). This request also includes resources to continue procurement of TR-155 transducers for the AN/BQS-11/12/13 and AN/BQQ-5 sonars for use on SSN-594 and SSN-637 class submarines; new TR-313 transducers (formerly TR-227() transducers) for the AN/SQS-26 sonar; and Electronic Scanning Switches required to support replacement of unreliable mechanical switches with electronic switches on both surface ships and submarines (FY 1984 \$37.2 million; FY 1985 \$39.9 million).

Anti-Submarine Warfare Electronics (Surface Ships) (P-1 Line Items 80, 82 and 86-89)

(\$ in Thousands)	
FY 1984	FY 1985
180,207	192,281

The FY 1984 and FY 1985 resources provide for the procurement and support of major ASW Electronics Systems for installation on surface ships. This request includes procurement of AN/SQR-18A Sonar Post Beamformer Interface Cancellers (PIC) (FY 1984 \$4.3 million); a total of 52 AN/SLQ-25 (NIXIE) systems in FY 1984 and 62 systems in FY 1985 (FY 1984 \$11.0 million; FY 1985 \$13.9 million); AN/SQR-17 performance improvements and AN/SKR-4 Data Link Modifications required to receive the new JIFAR/DICASS frequencies (FY 1984 \$9.4 million; FY 1985 \$16.1 million); improvements to increase the service life of the AN/SQR-15 Towed Array Systems (FY 1984 \$1.3 million; FY 1985 \$1.3 million); 16 complete AN/SQR-19 systems with eight AN/UYQ-21 displays in FY 1984 and 15 complete systems with ten displays in FY 1985 (FY 1984 \$135.3 million; FY 1985 \$125.6 million); modification kits to upgrade the AN/SQR-18A systems to the AN/SQR-18A(V)1 configuration (FY 1984 \$18.9 million); and AN/SQR-18(V)2 critical angle tow systems which employ the AN/SQR-19 hoist for installation on non-variable depth sonar ships (FY 1985 \$35.3 million).

Anti-Submarine Warfare Electronics (Submarine) (P-1 Line Items 81 and 83)

(\$ in Thousands)	
FY 1984	FY 1985
7,928	16,905

\$5.7 million in FY 1984 and \$8.3 million in FY 1985 are for Submarine Acoustic Warfare Systems (SAWS) which provide an enhanced survival capability for submarines to use against enemy torpedoes and a means to reduce the effectiveness of enemy sensors. These resources provide for procurement of Modified AFT Signal Ejector (MASE) Launchers and AN/BLR-14 Engineering changes in FY 1984 and, commencing in FY 1985, Countermeasure Set Acoustic (CSA) MK-2 Mod 0 for use in SSN submarines. \$2.2 million in FY 1984 and \$8.6 million in FY 1985 are for the Acoustic Communications system, a multi-phase program that provides improved tactical acoustic communication systems for three primary Anti-Submarine Warfare platforms (aircraft, surface ships, and submarines). This provides a low data tonal system and voice capability for use in the development of tactics and during high priority missions. These resources also provide for procurement of AN/SSQ-86 Down-Link Communications Sonobuoys, AN/WOC-2A engineering changes, one-time procurement (FY 1984) of AN/BQC-1D Emergency Underwater Telephones, first production of the AN/WOC-6 Probe Alerts, AN/SSQ-71 buoys and associated support.

Anti-Submarine Warfare Electronics (Aviation) (P-1 Line Items 91 and 92)

(\$ in Thousands)	
FY 1984	FY 1985
20,475	37,156

These funds will procure reliability and operability improvement modifications to the AN/UYK-7 computer and provide for first production Fast Time Analyzer System modification kits ,both components of the Carrier ASW Module of the Carrier Combat Direction System (FY 1984 \$12.5 million; FY 1985 \$7.4 million). The request also includes resources to support procurement of various equipments to maintain the ASW Operations Center (ASWOC) operability (FY 1984 \$8.0 million; FY 1985 \$29.8 million).

Anti-Submarine Warfare Electronics (Surveillance) (P-1 Line Items 84, 85 and 90)

(\$ in Thousands)	
FY 1984	FY 1985
99,719	134,462

These funds will support both the SOSUS and the SURTASS programs. Specific items to be procured in SOSUS include training hardware, general processing equipment for use at the Naval Oceanographic Processing Facilities (NOPFs), upgrade equipment, cable, Light Undersea Components (LUSC) and electronics for classified projects (FY 1984 \$88.7 million; FY 1985 \$130.3 million). The funds requested for SURTASS will procure the final four sets of paper gram displays (FY 1984), additional array support equipment for the Array Maintenance Facilities and three (two in FY 1984 and one in FY 1985) complete arrays to serve as back-up to replace any operational arrays lost at sea (FY 1984 \$11.0 million; FY 1985 \$4.1 million).

Electronic Warfare Equipment (P-1 Line Items 93-101)

(\$ in Thousands)	
FY 1984	FY 1985
83,636	201,588

The FY 1984 and FY 1985 Electronic Warfare procurement provides the Fleet with systems that have the capability of detecting overt electromagnetic emissions through passive means. Specific systems to be procured include the AN/SLO-32, a family of modular shipborne electronic warfare equipments to be installed in most combatants and auxiliaries in the surface Navy. \$27.9 million in FY 1984 and \$24.5 million in FY 1985 procure modification kits for Expanded SLO-32 Computer Memory, electronic support measure (ESM) Sensitivity Improvement (Band 1 and 3) and AN/SLO-32(V)3 Isolation Improvement. Commencing in FY 1985, \$78.7 million will procure AN/SLO-32(V)3 systems for DD 963 class ships. The AN/SLO-17 system is for use on CV and CVN class ships to offer a variable and effective defense against simultaneous multi-threat, multi-axis ASM attack. \$9.5 million

in FY 1984 are for depot maintenance hardware, a partial AN/SLQ-17 for depot use and a simulation AN/SLQ-17(V)2 for a software support center. \$5.0 million in FY 1985 are for procurement of four Engineering Change Proposal (ECP) Modification kits for upgrading low power amplifier and signal processing functions. The AN/WLR-8 is a tactical ESM receiver featuring signal analysis capabilities for use onboard SSN-688 class submarines. \$6.9 million in FY 1984 and \$7.2 million in FY 1985 provide for field change kits to upgrade existing AN/WLR-8(V)2 equipments. Fleet Electronic Warfare Support Group (FEWSG) provides a realistic air, surface, and subsurface threat environment for Fleet Training and support of Operational Test and Evaluation of Electronic Systems. \$5.6 million in FY 1984 provides for procurement of two G/H band and eight I/J band microwave jammers to complete the outfitting of the AN/ULO-13(V) Vans. \$1.6 million in FY 1985 provides for procurement of power frequency range enhancements for four vans and five FEWSG communications appliques. \$26.7 million in FY 1984 and \$35.0 million in FY 1985 are for procurement of AN/SKR-7, STADD, AN/SLQ-34 systems and radar simulators. \$5.2 million in FY 1984 is for procurement of Communications Simulators and radar jammer buoys. \$22.6 million in FY 1985 will commence procurement of Radar Simulator I Buoys, Scenario Generators and HYBRID Systems. \$16.9 million in FY 1985 for procurement of the AN/SSQ-82 (MUTE), a shipboard emitter monitor and control system. In addition, \$1.7 million in FY 1984 and \$2.1 million in FY 1985 are for procurement of AN/ULQ-16(V) Video Processors and Reprogrammable Libraries. \$8.0 million in FY 1985 are for procurement of CHAFF BUOYs which are radar deception decoys.

Reconnaissance Equipment (P-1 Line Items 102-104)

(\$ in Thousands)	
FY 1984	FY 1985
44,046	60,612

These resources will provide the tactical capability to acquire, locate and track hostile targets at long Over-the-Horizon (OTH) ranges and provide timely tactical data to the Task Force Commander. \$10.2 million in FY 1985 is for procurement of COMBAT DF AN/SRS-1 systems. \$33.8 million in FY 1984 and \$43.7 million in FY 1985 is for procurement of OUTBOARD Phase I and OUTBOARD Phase II suites. \$10.3 million in FY 1984 and \$6.7 million in FY 1985 is for procurement of equipment for intelligence centers for the Amphibious Assault Ships (LHA) and commence procurement of a new plotter for the Naval Intelligence Processing System (NIPS).

Submarine Surveillance Equipment (P-1 Line Items 105-111)

(\$ in Thousands)	
FY 1984	FY 1985
18,206	36,880

These resources provide special equipment to support submarine surveillance operations. \$6.0 million in FY 1984 and \$5.2 million in FY 1985 are for procurement of critical automatic test equipment, repair test stations and test program sets for the AN/WLQ-4(V) Depot. \$5.2 million in FY 1985 is for procurement of two complete improved AN/BRD-7 systems. \$3.0 million in FY 1985 is for procurement of four AN/BQH-() acoustic recording systems for SSN-688 class submarines. \$2.5 million in FY 1984 will provide for procurement of five ECP's for improved Type 18 Periscope Antenna Systems and \$2.5 million in FY 1985 will procure ten improved systems. \$7.1 million in FY 1984 is for procurement of four AN/BLD-1 (Interferometer) systems and \$17.2 in FY 1985 are for procurement of ten systems. In addition, \$2.6 million in FY 1984 and \$3.8 million in FY 1985 are for procurement of unique equipments that are maintained in limited quantities for attack submarines and to procure 15 improved power supplies in each fiscal year for AN/WLR-8(V)2 system.

Other Shipboard Electronic Equipment (P-1 Line Items 112-120)

(\$ in Thousands)	
FY 1984	FY 1985
165,119	201,924

\$127.6 million in FY 1984 and \$102.0 million in FY 1985 provide for procurement of such items as improvements to the Navy Tactical Data System (NTDS) which permits major warships rapid integration of ship sensor information, analysis and display of tactical information and designation of weapon systems to force threats. \$23.0 million in FY 1984 and \$73.4 million in FY 1985 are for electronic equipment for the TRIDENT Training Facility (TRITRAFAC) and the TRIDENT Refit Facility (TRIREFAC). This request also includes resources to support procurement of equipment for the Armed Forces Radio and Television Service (AFRTS) which operates radio and television outlets for the shipboard information, training and entertainment of United States servicemen and their dependents at sea or abroad (FY 1984 \$7.6 million; FY 1985 \$9.7 million). \$3.4 million in FY 1984 and \$6.7 million in FY 1985 are for procurement of mine hunting sonars for Minesweeping Boats (MSBs), route survey sonars for Oceangoing Minesweepers (MSOs), and precise navigation equipment. \$6.7 million in FY 1985 is for procurement of equipment for the NAVSTAR Global Positioning System (GPS) a joint service program to provide a continuous, world-wide three-dimensional positioning/navigation capability to the operational forces. \$3.4 million in FY 1984 and \$3.1 million in FY 1985 are for procurement of the AN/USO-74, a Link-11 Data Terminal Set. FY 1984 and FY 1985 resources also provide for the procurement of field change kits for Receiver Systems of the Navigation Satellite System.

Training Equipment (P-1 Line Items 121-122)

(\$ in Thousands)	
FY 1984	FY 1985
5,261	9,591

The FY 1984 and FY 1985 requests are for procurement of equipment to satisfy initial training requirements developed through the Navy Training Plan process to give the Navy the capability to train officer, operator and maintenance personnel on new or significantly modified equipment for which no Navy training is currently available. It also satisfies requirements to expand the Navy training capability on existing equipment to meet heavier needs for trained personnel in the Fleet (FY 1984 \$5.3 million; FY 1985 \$9.6 million).

Aviation Electronic Equipment (P-1 Line Items 123-133)

(\$ in Thousands)	
FY 1984	FY 1985
94,420	88,385

The FY 1984 and FY 1985 requests are for the procurement of electronic equipment to support Naval and Marine aviation shore activities, shipboard aircraft control equipment and secure identification systems. The Marine Air Traffic Control and Landing System (MATCALS) will provide a fully automatic air traffic control and landing system. \$27.0 million in FY 1984 and \$32.9 million in FY 1985 are for procurement of three command and control subsystems in each fiscal year, one Air Traffic Control (ATC) Subsystem in FY 1984 and two in FY 1985, plus replacement equipment for the AN/TSQ-18. The Tactical Electronic Reconnaissance Processing and Evaluation System (TERPES) will process data obtained by the EA-6 aircraft to provide mission planning and briefing support. \$1.8 million in FY 1984 is for updating one system and \$2.2 million in FY 1985 is for procurement of a Reserve Unit system. \$19.6 million in FY 1984 and \$7.8 million in FY 1985 are for procurement of various modification kits including AN/SPN-43As for LPHs and LHAs to improve all aspects of air traffic control operations. \$15.4 million in FY 1984 and \$11.0 million in FY 1985 are for procurement of hardware, field changes, support items and reliability and maintainability improvements for Automatic Carrier Landing Systems (ACLS). \$5.3 million in FY 1984 are for procurement of 11 shore-based Tactical Air Navigation (TACAN) equipment, the basic navigation system used by the Navy. \$7.7 million in FY 1984 are for procurement of 21 ship based TACANs and \$3.4 million in FY 1985 are for procurement of 15 ship based TACANs. \$6.0 million in FY 1984 and \$21.2 million in FY 1985 are for procurement of 30 Brite Alpha Numeric Display Systems (BRANDS) that will display Surveillance Radar Targets correlated with aircraft identity in the High Ambient Light Environment of the Tower Cab plus various other equipments to support air navigation tactical communications, mobile air traffic control systems, EM communications, special instrumentation systems and ancillaries. \$6.2 million in FY 1984 will correct deficiencies and provide system modernization for the Fleet Area Control and Surveillance Facilities (FACSFACs) and \$4.3 million in FY 1985 will procure a Search Radar and provide Satellite Communications (SATCOM) capability. \$3.3 million in FY 1984 is for procurement of the standard and integrated communication system for maintaining essential air traffic control during emergency conditions a part of the Radar Air Traffic Control Facility (RATCF). \$.3 million in FY 1984 and \$2.7 million in FY 1985 are for procurement of position recorders for each Programmable Indicator Data Processor (PIDP) OD-152 display for operational air traffic control facilities. \$2.0 million in FY 1984 and \$2.9 million in FY 1985 are for procurement of a variety of field changes and modifications to the MK XII ADMS IFF system, a tri-service program to provide a universal air traffic control radar beacon system compatible with the National Airspace Program.

Other Shore Electronic Equipment (Command and Control) (P-1 Line Items 134-137 and 139)

(\$ in Thousands)	
<u>FY 1984</u>	<u>FY 1985</u>
23,023	127,883

These funds will procure electronic equipment for timely replacement of obsolete equipment of the Naval Space Surveillance System, an unalerted real-time detection of non-radiating satellites and other objects which pass through multistatic continuous wave radar beams (FY 1984 \$6.2 million; FY 1985 \$5.0 million). This request includes resources to support the Space System Processing System procurement of special computer hardware and software necessary to improve information processing and generation of highly classified reports for use by Operational Navy Commands (FY 1984 \$2.3 million; FY 1985 \$2.5 million). The Navy Command and Control System (NCCS) Ashore program provides for the coordination and integration of shore based command centers and their respective systems; resources will procure an Operational Support Group, Correlation Upgrade Systems, communication replacement equipment, and Automatic Test Equipment (FY 1984 \$14.0 million; FY 1985 \$6.6 million). FY 1984 and FY 1985 funds also provide for procurement of Radar System Simulation Units for the Multiple Unit Link Eleven Test and Operational Training System (MULTOTS) a transportable system to validate Link-11 interoperability on Tactical Data Systems equipped ships and aircraft. This request also includes resources to support procurement of the Over-the-Horizon Radar a wide-area active surveillance system (FY 1985 \$119.0 million).

Other Shore Electronic Equipment (Miscellaneous) (P-1 Line Items 138, 140-145)

(\$ in Thousands)	
<u>FY 1984</u>	<u>FY 1985</u>
68,025	51,183

\$2.7 million in FY 1984 and \$2.7 million in FY 1985 are for the Radiation Detection Indication and Computation Equipment Program (RADIAC) which procures instruments to detect and measure nuclear and ionizing radiation and convert these measurements into meaningful terms so that Navy personnel can adequately control personnel exposure to those radiations. \$4.6 million in FY 1984 and \$1.4 million in FY 1985 are for the continuing procurement of advanced, state-of-the-art electronic Intrusion Detection Systems (IDS) as part of the Navy's continuing efforts to improve the physical security of storage sites for both nuclear weapons and Arms, Ammunition and Explosives (AA&E) weaponry. \$49.8 million in FY 1984 and \$32.9 million in FY 1985 are for the procurement of General Purpose Electronic Test Equipment (GPETE) for initial outfitting of new or modified Fleet and shore electronic equipments. \$6.3 million in FY 1984 and \$8.5 million in FY 1985 are for the procurement of equipment required for the Integrated Combat System Test Facility (ICSTF) located in San Diego, California, the only permanent Navy test facility for integrated shipboard combat system certification and continuation engineering for modifications of combat systems in existing ships. \$2.1 million in FY 1984 and \$2.7 million in FY 1985 are for the procurement of a new generation of signal generators and oscillator calibrators capable of calibrating up to 18 GHz to support test equipment for FFG-7 and DD-963 class ships and TRIDENT

submarines and up to 40 GHz to support test equipment for SSN-637 and SSN-688 class submarines. \$1.7 million in FY 1984 and \$2.0 million in FY 1985 are for procurement of emergency field change kits and hardware devices to solve Electromagnetic Interference (EMI) problems in electronic systems and equipments throughout the operating forces. The FY 1984 and FY 1985 requests also include resources to support procurement of replacements for deteriorating and obsolete management equipments.

Shipboard Communications (P-1 Line Items 146-152)

(\$ in Thousands)	
<u>FY 1984</u>	<u>FY 1985</u>
67,405	77,848

\$6.3 million in FY 1984 and \$12.3 million in FY 1985 are for the High Frequency (HF) Shipboard Communications program, an updating of the capabilities of the current HF Communications Systems. FY 1984 and FY 1985 funds will procure AN/URT-23 transmitters, R-1051 receivers, modification kits for the URT-23's, AN/TRQ-35 HF Sounders and AN/URA-17E Comparator-Converters. Also, FY 1985 funds commence procurement of the OA-9122/SRC antenna coupler group. \$28.0 million in FY 1984 and \$24.1 million in FY 1985 are for the procurement of AN/WSC-3 (LOS) radios, an Ultra High Frequency (UHF) transceiver providing securable tactical voice communications aboard line-of-sight ships. \$10.3 million in FY 1984 and \$8.5 million in FY 1985 are for the procurement of 27 AN/SRC-47 Flight Deck Systems which provide a secure voice communications system for key personnel involved in aircraft operational support functions. \$1.6 million in FY 1985 are for procurement of 78 AN/URC-94 radios suitable for use on service crafts and boats. \$3.9 million in FY 1984 and \$3.9 in FY 1985 are for the procurement of portable specialized radios to support the unique air, sea and land environment of the Explosive Ordnance Disposal (EOD) and Navy Special Warfare (NSW) missions. \$10.5 million in FY 1984 and \$20.0 million in FY 1985 are for procurement of communication systems to automate message processing and distribution functions aboard ship. \$10.5 million in FY 1984 and \$7.5 million in FY 1985 are for procurement of multi-coupler interface components, antennas and various other items for the integration and completion of communication suites aboard ship.

Submarine Communications (P-1 Line Items 153-159)

(\$ in Thousands)	
<u>FY 1984</u>	<u>FY 1985</u>
22,502	64,337

These resources will procure communications equipment for Command and Control of the Fleet Ballistic Missile (FBM) Submarine Forces. \$9.8 million in FY 1984 and \$13.3 million in FY 1985 are for procurement of a variety of technical advances to address existing submarine communication problem areas. \$26.7 million in FY 1985 are for procurement of the Extremely Low Frequency Communication Program (Project ELF), a shore-to-ship communications system which will provide the capability to communicate with submarines at speed and depth.

\$2.2 million in FY 1984 and \$4.5 million in FY 1985 are for procurement of Low Frequency/Very Low Frequency (LF/VLF) communications station hardware, upgrades and high efficiency amplifiers. \$2.5 million in FY 1985 is for procurement of 45 free floating balloons, a store and forward relay for strategic communications with the SSBN's through a protracted nuclear war. \$2.6 million in FY 1984 and \$4.4 million in FY 1985 are for procurement of new precise Frequency time standards. \$4.3 million in FY 1985 are for procurement of Enhanced VERDIN processors. These requirements are part of the VERDIN VLF communications system. \$5.5 million in FY 1984 and \$8.8 million in FY 1985 are for procurement of equipment to enhance the capabilities of the existing SSN-688 class radio room. \$2.3 million in FY 1984 are for the procurement of enhanced communications equipment for operation in deployed POSEIDON Submarine radio rooms.

Satellite Communications (P-1 Line Items 161 and 162)

(\$ in Thousands)	
FY 1984	FY 1985
71,322	70,740

The FY 1984 and FY 1985 Satellite Communications procurement provides for adequate command, control and communications with ships and aircraft through the Ultra High Frequency (UHF) and Super High Frequency (SHF) bands. \$71.3 million in FY 1984 and \$70.7 million in FY 1985 are for the procurement of AN/WSC-3 SATCOM radio terminals, Demand Assigned Multiple Access (DAMA) systems, AN/WSC-6 SHF Terminals, Officer and Tactical Command Information Exchange Subsystems (OTCIKS) equipment, SHF terminal controllers, SHF Secure Voice units, Surveillance Towed Array System (SURTASS) modems, Tactical Data Information Exchange Subsystems (TADIKS), Shore gateway terminals, and Front-End Processors for the Common User Digital Information Exchange Subsystem (CUDIKS).

Shore Communications (P-1 Line Items 163-177)

(\$ in Thousands)	
FY 1984	FY 1985
36,012	77,041

\$1.4 million in FY 1984 and \$1.3 million in FY 1985 are for procurement of emergency generators and uninterruptible power systems (UPS) for installation at various Naval Communication activities worldwide. \$5.5 million in FY 1984 and \$19.1 million in FY 1985 are for procurement of equipment and field change kits to replace obsolete High Frequency (HF) assets used to enable Naval Telecommunications to be viable in the absence of satellite communications. \$2.4 million in FY 1984 are for procurement of replacement equipment for the Automatic Secure Voice Communications (AUTOSEVOCOM) network. \$1.0 million in FY 1984 and \$17.4 million in FY 1985 are for procurement of Tactical Digital Facsimile (TDF) with Meteorological Interface Units, Unit Level Circuit Switches (ULCS) and Advanced Narrowband Digital Voice Terminals (ANDVT). \$1.0 million in FY 1984 and \$2.8 million in FY 1985 are for the procurement of automated/semi-automated test equipments and manual upgrade components of the Defense Communication System (DCS) Technical Control Improvement Program (TCIP). \$2.8 million in FY 1984 and \$8.8 million in FY 1985 are for the procurement of Ashore Mobile Contingency Vans (AMCC),

a transportable platform for deployment to provide contingency communications. \$3.9 million in FY 1984 and \$9.7 million in FY 1985 are for procurement of replacement and upgrading of microwave facilities in the world-wide DCS. \$2.4 million in FY 1984 and \$6.3 million in FY 1985 are for procurement of the Defense Data Network (DDN). \$6.4 million in FY 1984 are for the procurement of Local Digital Message Exchange (LDMX) terminals, Naval Communications Processing and Routing System terminals and Remote Information Exchange Terminals (RIXT). \$1.2 million in FY 1984 and \$2.0 million in FY 1985 are for procurement of Automatic Digital Network (AUTODIN) Standard Remote Terminals (SRT). \$3.1 million in FY 1984 and \$4.2 million in FY 1985 are for procurement of low dollar value items to support numerous Naval Shore Telecommunications programs. \$5.0 million in FY 1984 and \$5.5 million in FY 1985 are for procurement of headquarters level highly portable satellite communications equipment to support certain components of the Rapid Deployment Joint Task Force (RDJTF).

Cryptographic Equipment (P-1 Line Items 178-196)

(\$ in Thousands)	
FY 1984	FY 1985
139,970	198,174

The FY 1984 and FY 1985 requests will procure sufficient secure voice equipment to provide secure voice protection to an additional share of Navy's identified critical narrowband/wideband secure voice requirements. \$29.7 million in FY 1984 and \$37.9 million in FY 1985 are for procurement of the Single Audio System (SAS), a system where all shipboard radio voice subscribers have access to either a plain or cryptographically covered circuit, on an as-required and programmed basis. The SAS will provide manual voice switching suites for smaller ships and an automated switching suite for larger ships requiring a switching capacity exceeding that provided by the manual switching. Both switching systems utilize a switch which is modularly expandable to suit the needs of various platforms. \$12.8 million in FY 1984 and \$29.1 million in FY 1985 are for procurement of the TSEC/KG-84, a general purpose key generator, capable of satisfying a wide variety of requirements and should serve as the future standard link encryption device for low to medium speed record and/or data systems. \$17.7 million in FY 1984 and \$20.1 million in FY 1985 are requested for TSEC/KY-57/58, a wideband, push-to-talk (half-duplex) tactical speech security equipment for use in VHF/UHF communications. \$5.9 million in FY 1984 and \$8.2 million in FY 1985 are for procurement of the TSEC/KY-65/75, a secure voice equipment designed to provide push-to-talk (half duplex) speech security for a variety of HF applications, primarily tactical radio. \$1.1 million in FY 1985 are for procurement of the TSEC/KYV-5, the Cryptographic module for the Advanced Narrowband Digital Voice Terminal (ANDVT) which satisfies requirements for secure narrowband communications which cannot be met by existing equipment. \$16.2 million in FY 1984 and \$11.3 million in FY 1985 are for procurement of the TSEC/KW-46. \$2.5 million in FY 1984 are for procurement of the TSEC/KG-72/KGV-14, a communications security portion of the Flight Deck Communications program. The TSEC/KG-72/KGV-14 will secure base station and personal (helmet radio) communications, respectively on ships that support aircraft. \$.8 million in FY 1984 and \$.8 million in FY 1985 are for procurement of the TSEC/KG-81, a full-duplex, high speed digital data encryption system for bulk-encryption of the most vital DCS links. \$7.9 million in FY 1984 and \$9.3 million in FY 1985 are for procurement of the TSEC/KG-58/KGV-6, required to secure Marine Corps Ultra High Frequency Multi-Channel Communications in the Position Location and

Reporting System (PLRS). \$15.7 million in FY 1984 and \$33.5 million in FY 1985 are for procurement of the TRITAC Crypto program, a series of cryptographic equipment for the AN/TCC-42 and SB-3865 switches. These equipments will be cryptographically compatible with the TSEC/KY-57/58, TSEC/KY-67 and TSEC/KYV-2(A). The TRI-TAC Crypto will provide for loop and trunk security for voice, data and record communications. \$16.0 million in FY 1984 and \$25.4 million in FY 1985 are for procurement of the TSEC/KY-67, a wideband push-to-talk (half-duplex) integrated secure Very High Frequency radio for the Marine Corps. The TSEC/KY-67 is used to provide security where equipment must be manpackable. The Marine Corps will employ the TSEC/KY-67 in tracked vehicles and in a manpack configuration where it's size and weight are advantageous. \$5.8 million in FY 1984 and \$5.5 million in FY 1985 are for procurement of the TSEC/KGV-11, a general purpose communications security module designed for use with wide spectrum communications. \$2.1 million in FY 1984 and \$3.1 million in FY 1985 are for procurement of items of relatively low dollar value to meet special operational requirements. \$3.5 million in FY 1984 are for procurement of the TSEC/KL-51, a Rapid Automatic Cryptographic Equipment (RACE) designed for off-line encryption/decryption of record messages manufactured by a NATO country. \$3.3 million in FY 1984 and \$6.1 million in FY 1985 are for procurement of Signal Security (SIGSEC) Support Center (SSC) equipment. \$6.8 million in FY 1985 are for procurement of the Afloat Transportable Command Control and Communications (C3) Protection Collection and Analysis System (TEES).

Cryptologic Equipment (P-1 Line Items 197-202)

(\$ in Thousands)	
FY 1984	FY 1985
14,482	14,662

These resources provide equipment to support Tactical Cryptologic missions and functions. \$2.6 million in FY 1985 are for the procurement of three Multi-User SI Comms (MUSIC) systems. \$5.3 million in FY 1984 and \$3.2 million in FY 1985 are for procurement of AN/SSQ-80 (V1/V2) Tactical Electronic Support Measure (ESM) Subsystems and AN/SSQ-80(V3) automated operator aids. \$2.4 million in FY 1985 are for procurement of AN/SSQ-80(V4) ELINT augment suites. \$3.2 million in FY 1984 and \$2.7 million in FY 1985 are for procurement of off-the-shelf items for use on Fleet units. \$2.2 million in FY 1984 are for procurement of off-the-shelf items to support units in the Continental United States (CONUS). \$.8 million in FY 1984 and \$1.2 million in FY 1985 are for procurement of five cryptologic field trainers. \$.4 million in FY 1985 are for procurement of two VHF/UHF modification. \$3.0 million in FY 1984 and \$2.2 million in FY 1985 are for procurement of four Mobile Systems Technical Data Facilities (MSTDF) systems.

Other Electronic Support (P-1 Line Items 203 and 206)

(\$ in Thousands)	
<u>FY 1984</u>	<u>FY 1985</u>
17,431	7,436

These resources will procure critical repairable equipments to support planned maintenance schedules and corrective maintenance actions for the FFG (LO-MIX) and DD Engineering Operation Cycle (EOC) Class ships; and dedicated test stations, industrial plan equipment and test jigs and fixtures for selected depot rework facilities in support of the new maintenance strategies for the FFG and DDEOC Class ships (FY 1984 \$17.4 million; FY 1985 \$7.4 million).

Spares and Repair Parts (P-1 Line Item 207)

(\$ in Thousands)	
<u>FY 1984</u>	<u>FY 1985</u>
124,072	119,860

FY 1984 and FY 1985 funds provide for the procurement of interim, contractor-supported electronic parts and assemblies. The Systems Command and Project Managers procure interim repair parts (IRPs) to support certain equipments which will become operational prior to Navy provisioning by the Ships Parts Control Center (SPCC) (FY 1984 \$124.1 million; FY 1985 \$119.9 million).

Budget Activity 3: AVIATION SUPPORT EQUIPMENT
SUMMARY OF BUDGET PLAN
(In Thousands)

Budget Plan (Amounts for Procurement Actions Programmed)					
	1982 Actual	1983 Estimate	1984 Estimate	1985 Estimate	Justification Page
SONOBUOYS	\$138,937	\$169,258	\$278,444	\$ 279,988	37
BOMBS	\$ 98,320	\$ 53,442	\$168,296	\$ 317,172	38
AIR LAUNCHED ROCKETS	\$ 25,622	\$ 14,453	\$ 24,644	\$ 53,541	38
AIRCRAFT MACHINE GUN AMMUNITION	\$ 10,310	\$ 16,761	\$ 32,059	\$ 120,098	39
BIGEYE CHEMICAL WEAPON	\$ -	\$ -	\$ 21,511	\$ 29,986	39
GATOR	\$ -	\$ -	\$ 24,924	\$ 40,992	39
MISCELLANEOUS ORDNANCE AND SUPPORT	\$103,680	\$ 73,352	\$108,129	\$ 122,504	40
WEAPONS RANGE SUPPORT EQUIPMENT	\$ 30,632	\$ 37,860	\$ 26,245	\$ 38,900	40
AIRCRAFT LAUNCHING AND RECOVERY EQUIPMENT	\$ 20,848	\$ 15,636	\$ 19,588	\$ 25,226	41
AIRBORNE MINE COUNTER- MEASURES EQUIPMENT	\$ 17,776	\$ 16,375	\$ 19,101	\$ 22,360	41
LAMPS MK III SHIPBOARD EQUIPMENT	\$ 39,690	\$ 80,088	\$ 76,759	\$ 116,592	41
SPARES AND REPAIR PARTS	\$ 13,780	\$ 21,602	\$ 21,554	\$ 31,579	42
OTHER AVIATION SUPPORT	\$ 61,680	\$ 38,793	\$ 31,463	\$ 43,569	42
TOTAL BUDGET PLAN	\$561,075	\$537,620	\$852,717	\$1,242,507	

Budget Activity 3: AVIATION SUPPORT EQUIPMENT

(\$ in Thousands)

FY 1985 Estimate -	\$ 1,242,507
FY 1984 Estimate -	\$ 852,717
FY 1983 Estimate -	\$ 537,620
FY 1982 Estimate -	\$ 561,075

Purpose and Scope of Work:

Budget Activity 3 finances the procurement of all air-delivered ordnance required for the Navy forces and Marine Air Wings, except guided missiles funded under the Weapons Procurement, Navy (WPN) appropriation. It also includes air launched, anti-submarine warfare (ASW) sensors, general support equipment associated with aircraft and other aviation support which includes ground electronics equipment, aircraft launching and retrieving equipment, photographic equipment, reconnaissance and electronic warfare processing and analysis equipment and miscellaneous other categories.

Justification of Funds:

Sonobuoys (Includes P-1 Line Item Nos. 208 - 217).

(\$ in Thousands)

<u>FY 1984</u>	<u>FY 1985</u>
278,444	279,988

The FY 1984 and FY 1985 Sonobuoy procurement has been computed considering the number of ASW carrier air groups and shore based ASW patrol squadrons to be supported, actual and planned peace-time usage for these forces and the necessary training allowance requirements. User aircraft include the S-3A, P-3, SH-2D, and SH-3 series. Specific sonobuoys to be procured in FY 1984 and FY 1985 include the AN/SSQ-36 Bathythermograph Sonobuoy an air dropped bathythermograph transmitting set that provides a vertical water temperature profile (FY 1984 \$4.5 million; FY 1985 \$8.2 million), the AN/SSQ-53 (DIFAR) a passive directional sonobuoy used during the target localization phase of the Air ASW Mission (FY 1984 \$107.5 million; FY 1985 \$121.9 million), the AN/SSQ-57 (Special Purpose) Sonobuoy, a calibrated AN/SSQ-41 sonobuoy used to obtain acoustic and sound pressure level data and to measure ambient noise (FY 1984 \$3.2 million; FY 1985 \$4.1 million), the AN/SSQ-62 (DICASS) Sonobuoy, an active directional sonobuoy (FY 1984 \$83.0 million; FY 1985 \$17.2 million), and the AN/SSQ-77 (VLAD) Sonobuoy, a passive directional sonobuoy utilizing a line array of omni-directional hydrophones and a DIFAR element. The directional beam patterns are formed from the line array to discriminate against noise and the DIFAR enables determination of the azimuthal bearing of detected sound (FY 1984 \$76.4 million; FY 1985 \$124.2 million). The FY 1984 and FY 1985 requests also include resources to support procurement of Signal Underwater Sound (SUS) devices and Sonobuoy Support Equipment required during production testing of sonobuoys and SUS devices.

(P-1 Line Item Nos. 218 - 220, 225).

(\$ in Thousands)	
<u>FY 1984</u>	<u>FY 1985</u>
168,296	317,172

These funds will procure the MK-81 thermally protected bomb, the MK-82 controlled fragmentation thermally protected bomb, the FMU-139/B electric fuze used on MK-80 series G. P. bombs, the FMU-124 fuze used exclusively with the AV-8A Harrier aircraft, the MK 15/BSU-49 retard fin and the BSU-33 high drag mode fin both for the MK-82 G. P. Bomb. \$19.0 million is requested in FY 1984 (\$28.5 million in FY 1985) for procurement of the MK-83 thermally protected G. P. Bomb. In FY 1985 \$81.1 million will fund the procurement of the MK-82 controlled fragmentation thermally protected G. P. Bomb. \$18.8 million in FY 1985 (\$49.5 million in FY 1985) will procure the FMU-139/B electric fuze. The remaining \$44.8 million in FY 1984 (\$24.9 million in FY 1985) is requested to procure various types of fins for these G.P. bombs as well as miscellaneous component parts and production support. \$9.9 million in FY 1984 (\$19.8 million in FY 1985) is for PAVEWAY III Low Level Laser Guided Bomb Kits, which will be used to provide terminal guidance to the MK-82 general purpose bomb. \$6.9 million in FY 1984 (\$57.5 million in FY 1985) is for WALLEYE, an air-to-surface TV guided glide bomb. The FY 1984 WALLEYE funds will procure extended range (ER) and data link (DL) hardware for the conversion of WALLEYE I weapons to the ER/DL configuration. The Practice Bombs procurement is \$10.3 million in FY 1984 (\$11.0 million in FY 1985) for the MK-76 and MK-106 Practice Bombs, \$29.4 million (\$25.3 million in FY 1985) for the MK-80 series inert bomb, \$9.6 million (\$4.3 million in FY 1985) for Bomb Dummy Units (BSU-20C, BDU-24 and BDU-36 inert bombs) for nuclear training, \$2.8 million (\$1.9 million in FY 1985) for Cartridge Simulant Units (CXU-3 and CXU-4 smoke signals), \$14.7 million (\$10.0 million in FY 1985) for ROCKEYE Practice Bomb, and \$2.3 million (\$2.9 million in FY 1985) for production support services.

Air Launched Rockets (P-1 Line Item Nos. 221 - 222).

(\$ in Thousands)	
<u>FY 1984</u>	<u>FY 1985</u>
24,644	53,541

\$9.3 million in FY 1984 and \$31.9 million in FY 1985 are for procurement of the air-to-ground Zuni 5.0" Wrap-around Fin Rocket system. \$15.3 million in FY 1984 and \$21.6 million in FY 1985 are for the 2.75" Folding Fin Rocket motor, (MK-66) and the WTU-1/B practice head.

Aircraft Machine Gun Ammunition (P-1 Line Item No. 224).

(\$ in Thousands)	
<u>FY 1984</u>	<u>FY 1985</u>
32,059	120,098

This category includes procurement of 20MM, 25MM and 30MM ammunition used with various aircraft (A-4, A-6, A-7, F-8, F-14 and AV-8) gun systems. \$2.0 million in FY 1984 and \$5.8 million in FY 1985 are requested for procurement of 20MM practice gun ammunition used with various aircraft (A-4, A-6, A-7, F-8, and F-14) gun systems for fleet training to maintain pilot proficiency. \$18.1 million in FY 1984, including \$.9 million for containers, and \$21.5 million in FY 1985 are requested for 25MM practice ammunition fired by the AV-8 (HARRIER) aircraft gun system. \$3.9 million in FY 1984 and \$77.6 million in FY 1985 is to procure 25MM HEI and API service ammunition for war reserve requirements for the AV-8. \$.1 million in FY 1984 and \$.7 million in FY 1985 is to provide for the procurement of 25MM Dummy Ammo for gun system qualifications and acceptance tests. \$13.6 million in FY 1985 funds is provided to procure 30MM Aden ammo for war reserve requirements. \$6.0 million in FY 1985 is requested for facilitization for the 25MM procurement. Included in this program is \$.8 million in FY 1984 and \$.8 in FY 1985 for production/engineering support of the 20/25MM ammunition procurements. In addition \$.2 million is provided in both FY 1984 and FY 1985 for 20MM/30MM ammunition pallets.

BIGEYE Chemical Weapon (P-1 Line Item No. 231).

(\$ in Thousands)	
<u>FY 1984</u>	<u>FY 1985</u>
21,511	29,986

The FY 1984 and FY 1985 funds provide for low rate initial production of the BIGEYE weapon. The BIGEYE is an air launched binary spray chemical bomb. It generates and delivers a persistent nerve agent from two non-toxic chemicals.

GATOR (P-1 Line Item No. 233).

(\$ in Thousands)	
<u>FY 1984</u>	<u>FY 1985</u>
24,924	40,922

The \$24.9 million in FY 1984 and \$41.0 million in FY 1985 is to procure GATOR CBU-78 500 pound bombs. The GATOR weapon consists of a MK-7 dispenser that contains a mixture of air-scatterable anti-tank and anti-personnel land mines.

Miscellaneous Ordnance and Support (P-1 Line Item Nos. 223, 226-230, 232, 234).

(\$ in Thousands)	
<u>FY 1984</u>	<u>FY 1985</u>
108,129	122,504

This procurement will include chaff decoy heads for electronic countermeasures, impulse cartridges, and other miscellaneous ordnance and support. \$1.3 million in FY 1984 and \$1.5 million in FY 1985 are requested for the Parachute Flare Program to procure the LUU-2 B/B parachute flare. \$31.9 million in FY 1984 and \$32.7 million in FY 1985 are for the procurement of impulse cartridges used for ejecting air-launched weapons and other cartridge actuated devices. \$5.0 million in FY 1984 and \$5.4 million in FY 1985 are requested for rocket motors and catapults used for ejecting aircrews from disabled aircraft. \$48.0 million in FY 1984 and \$49.6 million in FY 1985 are requested for procurement of airborne expendable countermeasures, including chaff, infrared flares and expendable jammers to meet training and war reserve (mobilization) requirements. \$12.0 million in FY 1984 and \$21.6 million in FY 1985 are requested for JATO (Jet-Assisted Take Off) rockets used to launched aircraft and targets and to propel sleds used in testing. The remaining \$10.0 million in FY 1984 and \$11.8 million in FY 1985 are requested for miscellaneous ordnance, including such items as Marine Location Markers, Smokey SAM Simulator, and Defense Nuclear Agency Material.

Weapons Range Support Equipment (P-1 Line Item No. 236-237).

(\$ in Thousands)	
<u>FY 1984</u>	<u>FY 1985</u>
26,245	38,900

The FY 1984 and FY 1985 funds are for the procurement of equipment to be used at the Atlantic Fleet Weapons Training Facility (AFWTF), Barking Sands Underwater Range (BSURE), Pacific Missile Range Facility (PMRF), and various Fleet Training Ranges. Fleet operational evaluations of air, surface and undersea weapons and training in the employment of these weapons are conducted at these locations. Equipment procured under this line item is used for collection, transmission, processing, and display of data generated by exercises on these ranges. Procurements in FY 1984 include the following: (1) \$1.9 million for System Replacement and Modernization, (2) \$2.2 million for upgrading the West Coast Tactical Aircrew Combat Training System (TACTS) at Yuma, and (3) \$17.8 million to procure a Cooperative Tracking System and a Data Collection System for the Mobile Sea Range. Other range equipment requirements in FY 1984 total \$3.0 million. Procurements in FY 1985 include the following: (1) \$5.0 million for a Range Electronic Warfare Simulator (REWS) to be used for surface and air Fleet Electronic Warfare (EW) training exercises, (2) \$16.7 million to procure an East Coast TACTS, (3) \$4.4 million for Surveillance Radar at Boardman, OR, (4) \$1.3 million for a Mobile Electronics Warfare Simulation at Marine Corps Air Station, Twenty-nine Palms, (5) \$3.2 million for Mobile Sea Range upgrading, (6) \$2.0 million to procure Barking Sands Tactical Underwater Range (BARSTUR) Hydrophone Replacement at PMRF, and (7) \$2.0 million for System Replacement and Modernization. Other range equipment requirements in FY 1985 total \$4.3 million. The FY 1984 Drone Control System funds will procure 25 Surface Target Command and Control Systems.

Aircraft Launching and Recovery Equipment (P-1 Line Item Nos. 239, 241 - 242).

(\$ in Thousands)	
<u>FY 1984</u>	<u>FY 1985</u>
19,588	25,226

Catapult, Arresting Gear, and Visual Landing Aids Support for the Navy's aircraft carriers, and the Marine Corps' Expeditionary Airfield (EAF) systems are funded under this program. \$3.7 million in FY 1984 and \$6.1 million in FY 1985 are for EAF support equipment to correct known deficiencies, to modernize the EAF equipment to enhance maintainability, reliability and safety of flight operations, and to keep pace with advanced aircraft requirements. \$15.6 million in FY 1984 and \$18.2 million in FY 1985 are for the procurement of major catapult, arresting gear and visual landing aids equipment for aircraft carriers and other aircraft capable ships. \$.3 million in FY 1984 and \$1.0 million in FY 1985 provide for service change kits and other support equipment for airfield arresting systems.

Airborne Mine Countermeasures Equipment (P-1 Line Item No. 247).

(\$ in Thousands)	
<u>FY 1984</u>	<u>FY 1985</u>
19,101	22,360

This program funds various mine countermeasure equipments operated by RH/CH-53D helicopters. The funds requested procure the AN/ASW-14 Minehunting Sonar (\$19.1 million for 7 systems in FY 1984 and \$22.4 million for 4 systems in FY 1985).

LAMPS MK III Shipboard Equipment (P-1 Line Item No. 248).

(\$ in Thousands)	
<u>FY 1984</u>	<u>FY 1985</u>
76,759	116,592

A multi-appropriation funded program, the LAMPS MK III shipboard equipment funded by OPN is that equipment which is to be installed in existing ships being backfitted with the LAMPS MK III weapon system. This equipment includes: (1) the AN/SQQ-28(V), an electronic sonar signal processing system; (2) the AN/SRQ-4, a shipboard terminal data transmission device; and (3) HLS, the shipboard helicopter landing system for the LAMPS MK III helicopter. Seven ship systems are budgeted in FY 1984 and fourteen in FY 1985.

Spares and Repair Parts (P-1 Line Item Nos. 254 - 255).

(\$ in Thousands)	
<u>FY 1984</u>	<u>FY 1985</u>
21,554	31,579

These items fund initial and replenishment spares. \$18.0 million in FY 1984 and \$25.2 million in FY 1985 are for initial spares, which are for the initial outfitting of end-items budgeted in Budget Activity #3. \$3.5 million in FY 1984 and \$6.3 million in FY 1985 are for procurement of replenishment, launch/recovery spares.

Other Aviation Support (P-1 Line Item Nos. 240, 244-246, 249-250, 253).

(\$ in Thousands)	
<u>FY 1984</u>	<u>FY 1985</u>
31,463	43,569

This procurement will include Aircraft Rearming Equipment, Meteorological Equipment, Other Photographic Equipment, Survival Equipment, REWSON, Stock Surveillance Equipment, and Aviation Support Equipment - Miscellaneous. The Aircraft Rearming Equipment program provides armament support equipment (ASE) and weapons support equipment (WSE). ASE is equipment utilized ashore and afloat to load and/or download air launched weapons and to perform maintenance on aircraft installed armament systems. WSE equipment is used, ashore and afloat, to transport and perform maintenance on weapons and explosive ordnance components. ASE and WSE is utilized to accomplish the improved rearming rate (IRR) of A-6, EA-6, A-7, F-4, F-14, F-18, and AV-8 aircraft. The use of this equipment permits the rapid weapons loading and reloading of strike aircraft with a minimum number of flight deck personnel. The Meteorological Equipment program finances the procurement of meteorological equipment required by the Navy to gather worldwide weather data, and to rapidly disseminate weather information to Navy and Marine Corps users. The information provided is required for weather forecasting, flight safety and planning fleet operations. The Navy, in addition to providing specialized weather service peculiar to its needs, coordinates services with the DOD and civilian weather agencies. Meteorological equipment to be procured in both FY 1984 and FY 1985 includes equipment for the high-speed dissemination of weather information and miscellaneous equipment to monitor and report weather conditions at sea and shorebased activities. Other Photographic Equipment funds the procurement of photographic equipment for all Navy, shore and seaborne photographic laboratories plus various intelligence activities (\$1.4 million in FY 1984 and \$1.6 million in FY 1985). The Survival Equipment program will finance procurement of the AN/PRC-112 Survival Radio (in FY 1984 \$16.6 million; in FY 1985 \$14.8 million), for use by aircrew men. This radio is being developed by the Air Force as part of a tri-service program and will replace the existing AN/PRC-90 survival radio currently in inventory. In FY 1984 \$.2 million (\$.5 million in FY 1985) is for the procurement of the PRC-103 Rescue Swimmer's Radio. This radio system

provides a voice actuated communication link between the Search and Rescue swimmer and the rescue helicopter. \$2.0 million in FY 1984 and \$2.5 in FY 1985 is requested to buy equipment in support of the REWSON (Reconnaissance, Electronic Warfare, Special Operations and Naval Intelligence) Program. Procurement includes: (1) readout equipment for ship and shore reconnaissance squadrons, (2) surface and subsurface photocollection equipment, (3) analytical equipment to support these collectors and (4) equipment of a photographic and analytic nature for use by ship combatants. The Stock Surveillance Equipment line provides funds for procurement of equipment needed to monitor, measure, and assess the condition of current Navy stocks of air-launched missiles and air-launched ordnance and ammunition. 80% of the funds support missile inventory quality evaluation (surveillance) efforts and 20% support air-launched ordnance evaluation, including bombs, rockets, and cartridge actuated devices. Material readiness factors such as reliability and serviceability are measured by this effort. In addition, OPN Budget Activity (B.A.) #3 funds procurement of headquarters and field collateral equipment, fleet telemetry (TM) equipment and capital maintenance of real property (\$1.7 million in FY 1984 and \$1.6 million in FY 1985) within the Miscellaneous Aviation Support Equipment program.

BUDGET ACTIVITY: 4 ORDNANCE SUPPORT EQUIPMENT
SUMMARY OF BUDGET PLAN
(In Thousands)

BUDGET PLAN
(Amounts For Procurement Actions Programmed)

	FY 1982 ACTUAL	FY 1983 ESTIMATE	FY 1984 ESTIMATE	FY 1985 ESTIMATE	JUSTIFICATION PAGE
SHIP GUN AMMUNITION	\$106,527	\$112,421	\$186,748	\$373,902	45
SHIP GUN SYSTEMS EQUIPMENT	70,971	37,150	31,269	71,664	46
SHIP MISSILE SYSTEMS EQUIPMENT	295,520	253,471	341,434	461,715	47
FEM SUPPORT EQUIPMENT	69,423	51,719	63,623	150,701	48
ASW SUPPORT EQUIPMENT	86,661	68,716	128,717	108,724	48
OTHER ORDNANCE SUPPORT EQUIPMENT	197,592	171,057	240,506	288,648	49
TOTAL BUDGET PLAN	\$826,694	\$694,534	\$992,297	\$1,455,354	

Budget Activity 4: Ordnance Support Equipment

(\$ In Thousands)

FY 1985 ESTIMATE - \$1,455,354
FY 1984 ESTIMATE - \$ 992,297
FY 1983 ESTIMATE - \$ 694,534
FY 1982 ACTUAL - \$ 826,694

Purpose and Scope of Work

Funds provided in this budget activity are for Ship Gun Ammunition, Ship Gun and Ship Missile Systems Equipment, Fleet Ballistic Missile and Anti-Submarine Warfare Support Equipment, Other Ordnance Support Equipment, and Other Expendable Ordnance.

Justification of Funds

Ship Gun Ammunition (Includes P-1 Line Items 255-262)

(\$ In Thousands)

FY 1984	FY 1985
\$186,748	\$373,902

The FY 1984 request of \$186.7 million and FY 1985 request of \$373.9 million for Ship Gun Ammunition is for procurement of three-inch ammunition, five-inch ammunition, 20MM ammunition for the Close-In Weapon System (CIWS), 76MM ammunition, five-inch guided projectile, and sixteen-inch ammunition. The primary mission for three-inch ammunition is surface to surface warfare. The 76MM ammunition is for use primarily against air targets but is also for use against surface and shore targets. The sixteen-inch ammunition is for use by battleships against surface and shore targets. The five-inch guided projectile will provide precisely accurate naval gunfire against targets ashore and at sea, and can be fired from MK-42 and MK-45 five-inch/54 caliber gun mounts.

Ship Gun Systems Equipment (Includes P-1 Line Items 263-266)

(\$ In Thousands)	
FY 1984	FY 1985
\$31,269	\$71,664

The FY 1984 request of \$31.3 million represents \$11.6 million for Gun Fire Control Equipment and \$19.7 million for Coast Guard Gun Systems. In FY 1985, the request of \$71.7 million represents \$41.2 million for Gun Fire Control Equipment and \$30.5 million for Coast Guard Gun Systems. The funds requested for Gun Fire Control Equipment are for the procurement of equipment and ordnance alterations to improve reliability and maintainability of Surface Gun Fire Control Systems MK-86 and MK-68/56. The funds for Coast Guard Gun Systems procure two MK-92 Mod 1 Fire Control Systems in FY 1984 and three systems in FY 1985 to be installed on Modernized WHEC (Hamilton Class) Coast Guard vessels.

Ship Missile Systems Equipment (Includes P-1 Line Items 267-278)

(\$ In Thousands)	
FY 1984	FY 1985
\$341,434	\$461,715

The FY 1984 request of \$341.4 million and the FY 1985 request of \$461.7 million represent Ship Missile Systems programs. The MK-92 Fire Control System request of \$5.2 million in FY 1985 will provide for improved readiness of the MK-92 system. The FY 1984 and FY 1985 requests of \$7.3 million and \$7.0 million respectively for Harpoon Support Equipment will be used to procure Ordnance Alterations including the Block 1C ORDALT. The SMS ORDALTS: Area Defense (TERRIER) request of \$89.5 million in FY 1984 and \$77.8 million in FY 1985 will provide for Ordnance Alterations for the TERRIER "M" program to improve the MK-76 Guided Missile Fire Control System, CG/SM-2 Combat Systems improvements for the Fire Control System Modifications, and New Threat Upgrade improvements

to the CG/SM-2 Combat System to provide for SM-2 (ER) Block II missile capability. The requests in FY 1984 and FY 1985 of \$61.5 million and \$125.2 million respectively for the SMS ORDALTS: Area Defense (TARTAR) program represent improvements to the CGN/SM-2 Weapon System including Fire Control Radar Mods, Weapons Direction (WDS MK-14), AN/SYR-1 Downlink Receiver, and Ancillary Modifications; and, in FY 1985, a Guided Missile Launching System MK-13 Mod 4. The SMS ORDALTS: Area Self-Defense request of \$18.4 million in FY 1984 and \$15.0 million in FY 1985 will provide air defense of selected ships by upgrading the NATO SEASPARROW Surface Missile System (NSSMS) and Basic Point Defense Surface Missile System (BPDSMS) including modifying the NSSMS to fire the RIM-7M Monopulse Missile, procurement of associated special test equipment and upgrading BPDSMS to incorporate specific improvements to increase system reliability. The \$1.2 million requested in FY 1984 and \$1.1 million requested in FY 1985 for Airborne ECM/ECCM will provide for equipment used to simulate projected enemy jamming tactics and techniques during Surface Warfare Systems ECCM/OCCM evaluations and Fleet exercises. The FY 1984 request of \$3.1 million and FY 1985 request of \$.6 million will provide training equipment for interface support and related material and test/replacement material for the TERRIER and TARTAR Missile Systems. The AEGIS Support Equipment request of \$77.7 million in FY 1984 and \$35.1 million in FY 1985 will provide shore based assets for the AEGIS Combat System/Educational Center to support the battle readiness of AEGIS cruisers including: AEGIS Combat System Center equipment; and AEGIS Educational Center equipment. The Surface TOMAHAWK Support Equipment request of \$68.0 million in FY 1984 and \$184.7 million in FY 1985 will procure the Surface Vertical Launching System (VLS), Common Weapons Control Systems (CWCS), and Armored Box Launchers for surface ships. The FY 1984 request of \$14.7 million and the FY 1985 request of \$10.0 million for the Submarine TOMAHAWK Support

Equipment program will procure modifications to the MK-117 Fire Control System for SSN 637 and 688 Class submarines to provide the platform necessary to launch the TOMAHAWK Cruise Missile.

FBM Support Equipment (Includes P-1 Line Items 279-285)

(\$ In Thousands)	
<u>FY 1984</u>	<u>FY 1985</u>
\$63,623	\$150,701

The FY 1984 request of \$63.6 million represents \$4.7 million for TRIDENT Platform Support Equipment and \$58.9 million for Strategic Missile Systems Equipment. The FY 1985 request of \$150.7 million represents \$72.4 million for TRIDENT Platform Support Equipment and \$78.3 million for Strategic Missile Systems Equipment. The funds requested for TRIDENT Platform Support Equipment provide for procurement of ordnance support and training equipment for TRIDENT refit and training facilities; equipment for acoustic noise measurement and DABOB Bay Range operations; and equipment in support of the Modernization Program. The Strategic Missile Systems Equipment request provides for the procurement of non-flying weapon system support and training equipments necessary for the successful mission accomplishment of the POSEIDON (C-3), TRIDENT I (C-4), TRIDENT I Backfit (C-4 B/F), and TRIDENT II (D-5) programs.

ASW Support Equipment (Includes P-1 Line Items 286-292)

(\$ In Thousands)	
<u>FY 1984</u>	<u>FY 1985</u>
\$128,717	\$108,724

In FY 1984, this item provides for the procurement of one All Digital Attack Center (ADAC) system for backfit on a SSN-594 Class submarine and three systems for the SSN 688-699 Class submarines, continued procurement of increased display/conversion systems for Over-The-Horizon targeting and initiates procurement of fire control modifications in support of the MK-48 Advanced

Capability (ADCAP) Torpedo. FY 1985 resources will complete the ADAC basic procurement with the purchase of 3 systems for SSN 688-699 Class submarines and will continue the procurement of modifications required to support the ADCAP Torpedo and Over-The-Horizon targeting. In addition, FY 1984 and FY 1985 resources will support procurement of various up-grades to submarine and surface torpedo tube equipment, Anti-Submarine Rocket (ASROC) launchers, various test equipments, and procurement of equipment to support the MK-113 Mod 9 Improvement program. These funds will also support procurement of 10 MK-116 Mod 5/6 systems in FY 1984 and FY 1985 respectively as well as provide for the procurement of Anti-Submarine Warfare torpedo exercise and shore support equipment, range equipment for Fleet Operational Readiness Accuracy Check Sites (FORACS) and Sensor Accuracy Check Sites (SACS), and test equipment to support Weapon System Accuracy Trials (WSAT).

Other Ordnance Support Equipment (Includes P-1 Line Items 293-305)

(\$ In Thousands)	
FY 1984	FY 1985
\$26,323	\$30,454

The FY 1984 request of \$26.3 million and the FY 1985 request of \$30.4 million for Other Ordnance Support Equipment are for various ordnance programs not budgeted under other sub-budget activities within this budget activity. Some of the major programs are: Explosive Ordnance Disposal Equipment, Unmanned Seaborne Targets, Stock Surveillance Equipment, and Ordnance Facilities Equipment. The request in both FY 1984 and FY 1985 for Explosive Ordnance Disposal Equipment provides for procurement of necessary EOD tools and equipment, required for both initial outfitting and replenishment of EOD units. These equipments provide ordnance location and safe disposal of unexploded ordnance. The request for Unmanned Seaborne Targets provides Surface Seaborne Targets

for Fleet training, with procurement of Septar Targets and Floating Automatic Scoring Target (FAST) hulls beginning in FY 1984 and continuing in FY 1985. The request in FY 1984 and FY 1985 for Stock Surveillance Equipment provides resources for determining safety, reliability, readiness, and service/shelf life of both stored and deployed Navy and Marine Corps tactical weapons and weapon systems and the causes for their degraded state. Funds requested for Ordnance Facilities Equipment provide for the procurement of production related equipment at various Weapon Stations, Ordnance Stations, and Government-Owned Contractor Operated Plants. Other programs included in the FY 1984 and FY 1985 request are Swimmer Weapons Systems, Anti-Ship Missile Decoy System, Calibration Equipment, Energy Conservation, Other Ordnance Training Equipment, and Ordnance Engineered Maintenance.

Other Expendable Ordnance (Includes P-1 Line Items 306-312)

(\$ In Thousands)	
FY 1984	FY 1985
\$124,219	\$169,415

The Small Arms and Landing Party Ammo request in FY 1984 and FY 1985 provides ammunition in support of active naval vessels, and for active and reserve special warfare forces including replacement of Non-Combat Expenditure Requirements (NCER), initial allowance for all approved active and reserve forces, and a Combat Reserve and/or Material Pipeline of ammunition quantities based on "Days of Support". The FY 1984 and FY 1985 request for Pyro and Demo Material provides pyrotechnics and demolition materials for all active naval vessels, amphibious and mobile construction battalions, harbor clearance units, cargo handling and port groups, naval security groups, and naval special warfare groups. The QUICKSTRIKE request in FY 1984 and FY 1985 provides for the procurement of the 2000 lb MK-65 case and service and non-service mines including the MK-57 Target Detecting Devices (TDDs) and associated safety and arming devices. The request for Fleet Mine Support Equipment in FY 1984 and FY 1985 provides for the procurement of material and production support services for the assembly of mines in stockpile. The request also provides for support of Fleet proficiency training, mine warfare and mine countermeasures training, and improved stockpile mine performance. The Shipboard Expendable

Countermeasures program provides for Anti-Ship Missile Decoys deployed from the MK-36 Decoy Launching System. The FY 1984 request provides for the Chaff Cartridge MK-182-1 and the FY 1985 request provides for SEA GNAT Decoys. Also included under Other Expendable Ordnance is \$6.2 million in FY 1984 and \$6.7 million in FY 1985 for Defense Nuclear Agency (DNA) material.

Spares and Repair Parts (Includes P-1 Line Item 313)

(\$ In Thousands)	
FY 1984	FY 1985
\$89,964	\$88,779

The funds requested consist of \$60.8 million in FY 1984 and \$66.4 million in FY 1985 for Initial Spare parts to support new end items, and \$29.2 million in FY 1984 and \$22.4 million in FY 1985 for replenishment spare parts consumed by the Fleet.

BUDGET ACTIVITY 5: CIVIL ENGINEERING SUPPORT EQUIPMENT
SUMMARY OF BUDGET PLAN
(In Thousands)

	Budget Plan (Amount for Procurement Actions Programmed)				Justification Page
	1982 Actual	1983 Estimate	1984 Estimate	1985 Estimate	
Passenger Carrying Vehicles	2,460	3,120	3,995	3,843	53
Trucks, Trailers, Construction and Maintenance Equipment	52,403	60,147	73,418	85,650	54
Amphibious and Specialized Equipment and Combat Construction Support Equipment	31,006	6,607	57,890	155,822	54
Fleet Hospitals	-	72,828	69,450	77,220	55
Other Equipment	25,194	29,874	29,909	67,203	55
Total Budget Plan	111,063	172,576	234,662	389,738	

(\$ in Thousands)

FY 1985 Estimate -	389,738
FY 1984 Estimate -	234,662
FY 1983 Estimate -	172,576
FY 1982 Actual -	111,063

Budget Activity 5: Civil Engineering Support Equipment

Purpose and Scope of Work

Funds provided under this budget activity are for the procurement of passenger carrying vehicles, trucks and trailers, construction, earthmoving, maintenance, fire fighting, weight handling, amphibious and specialized equipment, combat construction support equipment, telephone equipment, mobile utilities support equipment, fleet moorings, collateral equipment for the initial outfitting of Military Construction Projects, pollution control equipment, fleet hospitals, and occupational safety and health equipment. This equipment is procured for Navy-wide use by the Operating Forces and Shore Establishment exclusive of Industrial activities, except for general purpose passenger vehicles specifically excluded from the Industrial Fund Asset Capitalization Program. In addition, equipment used for construction of underwater facilities and public works shop equipment for three Construction Battalion Centers is provided for under this budget activity.

(\$ in Thousands)

FY 1984	FY 1985
\$ 3,995	\$ 3,843

Passenger Carrying Vehicles - (P-1 Line Item 314 & 315)

This category provides for all Navy passenger carrying vehicles which includes buses, sedans, armored sedans, and station wagons. The FY 1984 funds requested will provide for the replacement of 338 vehicles out of a total projected inventory of 4,648 and 7 vehicles to augment the current inventory. The FY 1985 program will provide for the replacement of 332 vehicles out of a total projected inventory of 4,670 with limited augmentation. This category does not include ambulances which are addressed below.

(\$ in Thousands)	
FY 1984	FY 1985
\$73,418	\$85,650

Trucks, Trailers, Construction and Maintenance Equipment - (P-1 Line Items 316-324)

This category includes trucks, trailers, crushing equipment, drilling equipment, earth moving equipment, generators, fire fighting equipment and weight handling equipment for the Naval Construction Force, Naval Shore Activities, and various other Operational Forces. The FY 1984 funds requested will provide for the replacement and limited augmentation of 1,431 trucks (including replacement of 81 ambulances) out of a total inventory of 18,842. The FY 1985 program will provide for the replacement of 1,490 trucks out of a total inventory of 18,868 with limited augmentation. In earth moving equipment, 163 units will be replaced out of a total inventory of 3,206. The 1985 program provides for 261 units of earth moving equipment out of a total inventory of 3,226. In addition, \$8.1 million provides for replacement and limited augmentation of 50 units of weight handling equipment in FY 1984 and \$12.3 million for 64 units in FY 1985.

(\$ in Thousands)	
FY 1984	FY 1985
\$57,890	\$155,822

Amphibious and Specialized Equipment (P-1 Line Item 325) and Combat Construction Support Equipment (P-1 Line Item 326)

These funds are required to provide the Fleet with equipment necessary to maintain a readiness to meet contingency requirements. Amphibious and Specialized Equipment to be procured in FY 1984 will include pontoon structures, power causeways, side loadable warping tugs, elevated causeways and other miscellaneous amphibious specialized equipment. The Amphibious and Specialized Equipment to be procured in FY 1985 will include Roll On/Roll off Discharge Facilities and various Offshore Bulk Fuel Systems in addition to more units of the same type of equipment procured in FY 1984. Included in the Amphibious and Specialized Equipment request is \$26.1 million in FY 1984 and \$59.1 million in FY 85 in support of the Maritime Prepositioned Ship program. Combat Construction Support Equipment consists of minor non-USN numbered equipment and Navy Stock Account investment items for initial outfitting of the Operating Forces.

(\$ in Thousands)	
FY 1984	FY 1985
\$69,450	\$77,220

Fleet Hospitals (P-1 Line Item 335)

Funds are provided for two 500 Bed Combat Zone and one 500 Bed Communications Zone Field Hospitals in support of the Rapid Deployment Joint Task Force. The FY 1985 Program provides for one 500 Bed Combat Zone, one 500 Bed and one 1,000 Bed Communications Zone Field Hospital. The Combat Zone and Communication Zone Hospitals consist of shelters, transportation equipment, medical equipment and other hospital support equipment, and will provide medical care for Navy and Marine Corps Personnel during wartime.

(\$ in Thousands)	
FY 1984	FY 1985
\$29,909	\$67,203

Other Equipment - (P-1 Line Items 327-334 and 336-337)

Other programs in Budget Activity 5 include Collateral Equipment (FY 1984 \$14.1 million and FY 1985 \$41.7 million) which provides equipment and furnishings to initially outfit Military Construction projects and to replace investment items within the Naval Material Command for Personnel Support Facilities. The Mobile Utilities Support Equipment Program (FY 1984 \$3.1 million and FY 1985 \$4.2 million) provides high quality steam for cold iron support to the fleet, and power for emergency shore operations, serious utility system deficiencies and delayed military construction. Modernization and expansion of Navy-owned telephone systems by replacing outmoded equipment that can no longer cope with increased traffic is funded at \$.7 million in FY 1984 and \$.5 million in FY 1985. Pollution control equipment (FY 1984 \$2.9 million and FY 1985 \$2.9 million) is for compliance with Clean Air Act and Clean Water Act Amendments, various Environmental Protection Agency Regulations and State Implementation Plans. Ocean Facilities Construction Equipment (FY 1984 \$1.4 million and FY 1985 \$1.4 million) is associated with strategic deterrence, anti-submarine warfare and other fleet underwater construction programs. Fleet Moorings (FY 1984 \$3.2 million) provides for four mooring systems in support of assault follow-on echelon ships of the Rapid Deployment Forces and two additional systems to upgrade existing moorings which have inadequate holding capacity. The FY 1985 program (\$6.5 million) provides for four additional mooring systems in support of assault follow-on echelon ships of the Rapid Deployment Force and six mooring systems for the Maritime Prepositioned Ships requirement in the Indian Ocean area. Other Civil Engineering Support Equipment (FY 1984 \$.9 million and FY 1985 \$5.1 million) includes \$.2 million in FY 1984 and \$.2 million in FY 1985 for Public Works Shop Equipment, \$.4 million in FY 1984 and \$.4 million in FY 1985 for Administrative Equipment, \$.1 million in FY 1984 for Test Equipment and \$.3 million in FY 1984 and \$.1 million in FY 1985 for specialized inspection equipment. Spares and Repair Parts (FY 1984 \$1.9 million and FY 1985 \$2.8 million) provides the initial outfitting of spares and repair parts for Civil Engineering Support Equipment. Occupational Safety and Health Equipment (FY 1984 \$1.7 million and FY 1985 \$2.0 million) is for the abatement of occupational safety and health hazards at Naval Shore activities.

BUDGET ACTIVITY 6: SUPPLY SUPPORT EQUIPMENT
SUMMARY OF BUDGET PLAN
(In Thousands)

Budget Plan

(Amounts for Procurement Actions Programmed)

	1982 Actual	1983 Estimate	1984 Estimate	1985 Estimate	Justification Page
Materials Handling					
Equipment and Systems	56,379	50,126	48,816	90,582	57
Productivity Programs	-	4,885	-	-	
Support Equipment	7,561	8,549	11,367	12,262	58
Classified Programs	12,038	17,664	56,979	57,473	58
Total Budget Plan	75,978	81,224	117,162	160,317	

Budget Activity 6 - Supply Support Equipment

(\$ in Thousands)

FY 1985 Estimate - 160,317
FY 1984 Estimate - 117,162
FY 1983 Estimate - 81,224
FY 1982 Actual - 75,978

Purpose and Scope of Work

This budget activity finances the procurement of forklift trucks and other materials handling equipment used at Navy installations and aboard ships, automated materials handling systems, investment type support equipment, productivity enhancing equipment, reprographics equipment, and pollution control equipment. In addition, financing for certain classified projects is included in this activity.

Justification of Funds

Materials Handling Equipment and Systems (P-1 Line Items Nos. 338-340)

(\$ in Thousands)	
<u>FY 1984</u>	<u>FY 1985</u>
48,816	90,582

These funds are requested to procure 1,054 forklift trucks in FY 1984 and 1,548 forklift trucks in FY 1985 which are needed for the cyclical replacement of equipments which have exceeded their economic life in use aboard ships and at shore activities. These overage equipments are more costly to maintain than to replace. As of the end of the FY 1984 funded delivery period, 25 percent of the total inventory of forklift trucks will be overage, based on a standard life expectancy of 11 years. The 1975 through FY 1984 budgets provided the first ten increments of a phased plan for reducing overage inventory to 20% ashore and zero afloat by the end of FY 1986. The original plan has been extended to FY 1990 due to funding limitations.

For Other Materials Handling Equipment the FY 1984 request represents the tenth increment of a phased equipment replacement program to attempt to reduce the significant level of overage warehouse tractors, cranes and other equipment in the inventory. The requested FY 1984 program increases the level of overage equipment in the inventory to 53 percent ashore and 15 percent afloat. Block obsolescence during the FY 1983 and FY 1984 periods prevents significant overage reduction.

The requested funds for the Automated Materials Handling Systems will provide for the installation of six Navy Integrated Storage Tracking and Retrieval Systems (NISTARS) in FYs 1984 and 1985. The NISTARS system automates certain warehouse functions and places the entire warehouse operation under positive management control and automation. It will improve the efficiency of labor and materials, as well as improve inventory accuracy. This system will produce sizeable savings as well as dramatically improve supply support responsiveness.

Support Equipment (P-1 Line Items Nos. 343-344)

(\$ in Thousands)	
<u>FY 1984</u>	<u>FY 1985</u>
11,367	12,262

Support equipment provides for the replacement of investment-type equipment. Included are duplicating (quick copy) equipment and many types of shop and office equipment for which repairs are no longer feasible.

The request for pollution control equipment provides funds for five bulk fuel installations in FY 1985. These projects provide Navy fuel farms with a comprehensive monitoring and control system and alarm which will respond to significant fuel level changes, permitting rapid response to problems such as oil spills. As most fuel terminals are located in environmentally sensitive areas near large bodies of water, any oil spill would generate considerable adverse publicity and a costly clean-up effort.

Classified Programs (P-1 Line Items Nos. 345-349)

(\$ in Thousands)	
<u>FY 1984</u>	<u>FY 1985</u>
56,979	57,473

Details of these programs are of a higher classification. Justification is provided separately.

BUDGET ACTIVITY 7: PERSONNEL AND COMMAND SUPPORT EQUIPMENT
SUMMARY OF BUDGET PLAN
(IN THOUSANDS)

BUDGET PLAN
(Amounts for Procurement Actions Programmed)

	1982 Actual	1983 Estimate	1984 Estimate	1985 Estimate	Justification Page
TRAINING EQUIPMENT	47,352	50,715	93,120	127,429	60
COMMAND SUPPORT EQUIPMENT	75,278	81,173	101,960	119,230	61
COMPUTER ACQUISITION PROGRAM	61,119	65,975	108,936	122,817	63
PRODUCTIVITY PROGRAMS	28,685	29,572	67,219	90,516	63
TOTAL BUDGET PLAN	212,434	227,435	371,235	459,992	

Budget Activity 7 - Personnel and Command Support Equipment

	(\$ in Thousands)
FY 1985	Estimate - 459,992
FY 1984	Estimate - 371,235
FY 1983	Estimate - 227,435
FY 1982	Estimate - 212,434

Purpose and Scope of Work

This budget activity finances the procurement of Training Equipment, Command Support Equipment, Computer Equipment and Productivity Investment Fund Programs.

Justification of Funds

Training Equipment (P-1 Line Items 350-375)

(\$ in Thousands)	
FY 1984	FY 1985
93,120	127,429

Surface training devices will provide maintenance, operator, team, and refresher training for new combat systems/capabilities being introduced into the fleet. Requested funding supports a variety of cost effective devices and spare parts including the Perry Class Pierside Combat System Team Trainer, Outboard Operator Team Trainer and a series of SQQ-89 Maintenance and Operator trainers.

The requested trainers in the sub-surface community will enhance capability to teach normal and emergency ship control procedures to improve skills and submerged ship handling proficiency; support land based training for submarine fire control/combat system attack center team training; provide simulated surfaced submarine piloting techniques; and provide a visual tactical targeting capability in submarine training attack centers to teach personnel to integrate information and make critical tactical decisions.

Initial Outfitting of spares and repair parts for training equipment is needed to support equipment from the time the equipment is officially on line until full support responsibility can be assumed by the supply system for routine replenishment.

The Battle Group tactical training enhancement to the Naval War Gaming System provides interactive, multi-threat operational situations in a simulated, yet realistic operational environment, so that command and major staff officers can study, plan and exercise skills requiring tactical decisions. The trainer will provide a capability to evaluate proposed, new, and/or existing U.S., allied and Soviet tactics and doctrine. It will support major fleet exercise planning, work-up training, reconstruction and evaluation.

Funding is required to procure Training Support Equipment (TSE) consisting of minor training aids and devices and logistic support equipment to support the education and training programs to supply the fleet with effectively trained personnel. TSE supports the mission of the Naval Education and Training Command, the U.S. Naval Academy, and the Naval War College. Equipments are screened for (1) safety, (2) operational necessity, and (3) resource savings (manpower, material, etc).

Training Device Modifications provide cost-effective enhancements to update the existing inventory of training devices. The modifications help maintain the training value of devices and keeps them compatible with equivalent changes made to the fleet operational equipments which these devices simulate. Training devices are requested to keep pace with the increasing changes.

Command Support Equipment (P-1 Line Items 376-382)

(\$ in Thousands)	
FY 1983	FY 1984
101,960	119,230

This funding provides for procurement of general support equipment required by Active and Reserve Command Activities, not otherwise provided for within the appropriation structure. This includes administrative and financial support equipment.

This request includes equipment needed for the Naval Intelligence Command and its field activities. It is a part of the General Defense Intelligence Program (GDIP) requirements. Further information on this program is classified. Additional details on this procurement request are contained in the Intelligence Justification Books being provided separately.

The requested funds will also provide for procurement of general support equipment required by shore activities and forces afloat under command of the fleet claimants. Organizations funded include the Commanders-in-Chief, U.S. Atlantic and Pacific Fleets and the Commander-in-Chief, U.S. Naval Forces, Europe.

In FY 1984 funding is included for acquisition of medical and dental equipment in support of direct health care delivery. These funds will support 23 regional medical centers, 8 hospitals, 8 regional medical clinics, 6 branch hospitals, 23 regional dental centers, 10 specialized medicine units, 5 training facilities, and 2 Headquarters units together with their branch facilities and comprise 382 individual activities. Funds are requested to replace existing worn-out, obsolete assets and to provide for the acquisition of new technological developments for a modern health care delivery system. This request contains funding to begin a phased program to extend the use of Computer Assisted Tomography to non-teaching hospitals and to allow a shift of clinical workload from the CHAMPUS program to Navy facilities.

Technology improvements have been dynamic in the past few years especially in X-ray, laboratory, dental, and monitoring equipment. The sophistication of this equipment coupled with inflation has resulted in a 100-300 percent increase in cost per unit of equipment from 1969 to this date. The X-ray, dental, and automated laboratory equipment requested is the state-of-the-art equipment recognized by the profession as minimum requirements.

Clinical medicine equipment also represents that equipment which is utilized in every ward, clinic, and doctor's office, and represents items such as monitoring systems, anesthesia machines, examination tables, electrocardiographs, and operating room tables.

Compliance with occupational/industrial health regulations require funding for new levels of workplace testing and personnel monitoring to identify hazardous conditions and examine personnel exposed on a frequent and routine basis. These requirements are designed to contain the high cost of disability claims and result in greater workforce productivity.

Funding for outdated medical and dental equipment aboard ships is included based on comprehensive surveys and readiness reports of those operating units.

This request also includes the procurement of scientific, technical and related (undersea) survey equipment used by the Oceanographer of the Navy in the collection, processing, and analysis of acoustical, geophysical, bathymetric, and navigational data through coastal and deep ocean surveys. These surveys provide the data with which undersea craft, whether they be employed as strategic deterrent or anti-submarine forces, can precisely navigate without relying upon vulnerable electronic navigation systems.

Computer Acquisition Program (P-1 Lines Items 383-391)

(\$ in Thousands)	
FY 1984	FY 1985
108,936	122,817

The Computer Acquisition Program (CAP) was established to optimize the procurement of general purpose Automatic Data Processing Equipment (ADPE) Navy-wide. CAP allows the Navy to negotiate the cost of purchases of leased ADP equipment with significant savings. This emphasizes the achievement of personnel and dollar savings through conversion of functions from manual to automated operations and to foster competitive acquisition of ADP equipment. The funding request reflects the consolidated ADPE procurement requirements of the Chief of Naval Operations (CNO) staff and command offices, the Atlantic and Pacific Fleets; personnel, manpower, and training support; supply support; environmental support; aviation support; facilities support; and specific projects such as Worldwide Military Command and Control System (WMCCS), TRIDENT, Shipboard Operational ADPE Program (SNAP) and the Naval Air Logistics Command Management Information System (NALCOMIS).

Productivity Programs (P-1 Line Items 392-394)

(\$ in Thousands)	
FY 1983	FY 1984
67,219	90,516

Manufacturing Technology (MT) is the technology advance that results from investigative efforts directed toward manufacturing productivity improvements. The objective of the MT program is reduction of weapon system procurement costs. The program consists of several individual projects selected primarily on the basis of return on investment, although breadth of application, time phasing, and application priority are also considered. In addition to reducing the cost of weapon systems acquisition, the MT program is expected to provide substantial commercial benefits enhancing the competitiveness of US industry in the international marketplace. Dissemination of these technologies to industry is provided by their involvement in the conduct of the projects, by informational exchange in cooperation with the Department of Commerce, and by the participation of industry associations in the DOD sponsored Manufacturing Technology Advisory Group.

The Productivity Enhancing Incentive Fund increases productivity and decreases operating costs at local commands by providing a means for direct and immediate acquisition of capital investment items. Attempts at investments for productivity improvement, particularly in areas with fast payback capital return potential, have traditionally been submerged due to administrative controls which preclude timely actions to exploit that potential. As a result, substantial gains in productivity were lost. To rectify this and to provide for productivity growth, OSD has directed the Navy to maintain a productivity enhancing investment account to fund fast payback capital investment proposals initiated by local commands. All projects will provide real savings to achieve payback within two years.

Funds requested for the Productivity Investment Fund are used to purchase, install and demonstrate improved general purpose equipment, tools and procedures. The objective of productivity investments is to apply capital investment in exchange for labor intensive and costly operations in government by investments in modern equipment, methods and labor savings devices. It also realizes a continuing stream of benefits through the reduction of recurring operating costs. Projects involve the replacement of old and outmoded equipment and procedures to reduce inefficiency and maintenance costs. This frequently implants new technology, as well, enabling growth in efficiency and solution of emerging problems in operations and logistics. The technology factor has been credited with a least 40% of all productivity growth over the past 5 decades of domestic experience.

Over the past two decades, essential Navy capital investments in modern equipment, facilities and processes have not been made, and the ability of the Navy to internally support the full scope of its mission essential systems has eroded to an insufficient level. Productivity investments directly address the unfunded backlog of compelling investment opportunities existing in the Navy.

FY 1984 Budget
Special Analysis
Consultants, Studies and Analyses
and Management Support Contracts
(Dollars in Thousands)

Appropriation: Other Procurement, Navy

	<u>FY 1982</u>	<u>FY 1983</u>	<u>FY 1984</u>
A. Experts and Consultants	<u>0</u>	<u>0</u>	<u>0</u>
1. Personnel Appointments			
a. Experts			
b. Consultants			
(1) Federal Advisory Committee Members			
(2) All Other Appointed Consultants			
2. Contract Consultants			
B. Contract Studies & Analysis	<u>300</u>	<u>321</u>	<u>1,571</u>
1. Consulting Services	-	-	-
2. Other	300	321	1,571
C. Professional and Management Services by Contract	<u>8,090</u>	<u>10,465</u>	<u>10,390</u>
1. Program Management Support	1,960	4,403	5,345
a. Consulting Services	106	885	882
b. Other	1,854	3,518	4,463
2. Policy Review and Development	<u>100</u>	<u>35</u>	<u>110</u>
a. Consulting Services	60	-	50
b. Other	40	35	60

	<u>FY 1982</u>	<u>FY 1983</u>	<u>FY 1984</u>
3. Specification Development	1,018	661	673
a. Consulting Services	775	85	100
b. Other	243	576	2,116
4. System Engineering	3,373	3,791	2,116
a. Consulting Services	170	-	150
b. Other	3,203	3,791	1,966
5. Technology Sharing/Utilization	60	60	79
a. Consulting Services	-	-	-
b. Other	60	60	79
6. Logistic Support Services	562	1,212	1,271
a. Consulting Services	-	150	-
b. Other	562	1,062	1,271
7. Technical Data Collection	234	150	162
a. Consulting Services	-	-	-
b. Other	234	150	162
8. Public Affairs and Advertising			
a. Consulting Services			
b. Recruit Advertising			
c. Other			
9. Other Professional, and Management Services by Contract	783	153	634
a. Consulting Services	-	-	-300
b. Other	783	153	334

	<u>FY 1982</u>	<u>FY 1983</u>	<u>FY 1984</u>
D. Contract Engineering Technical Services (CETS)	<u>790</u>	<u>2,079</u>	<u>6,135</u>
1. Contract Plant Services	450	1,245	4,045
2. Contract Field Services	340	834	1,662
3. Field Service Representatives	<u>-</u>	<u>-</u>	<u>428</u>
TOTAL	9,180	12,865	18,096
E. Summary			
1. Personnel Appointments	-	-	-
2. Contract Consulting Services	1,111	1,120	1,482
3. Other Contract Services	8,069	11,745	16,614
TOTAL	9,180	12,865	18,096

FY 1984 Budget Special Analyses
Consultants, Studies and Analysis, and
Management Support Contracts for the
OPN Appropriation

Narrative Justification

A. Experts and Consultants - No requirements

B. Contracts Studies and Analysis

a. Consulting Services - No requirements

b. Other - The resources identified support independent contractual effort in the SQS-53B programs incident to monitoring schedule and costs associated with the prime production contracts. The effort provides for review of procurement specifications, and subsequent recommendations on Engineering Change Proposals submitted by Navy labs and prime contractors which will effect the production contracts. Field engineering services are also included to investigate equipment/software problems in the fleet.

C. Professional and Management Services by Contract

1. Program Management Support

a. Consulting Services -

The resources identified provide for engineering services at the contractor's plant incident to evaluation and assessment of proposed changes to government specifications of the AN/SQR-18A. It further provides for on-site prime contractor engineering and technical services to advise during the Navy installation of alterations or new equipment required to support the AN/SQR-18A System.

b. Other - The resources identified support contractual effort in Communications and Electronic Equipment, Other Ordnance Equipment and Aviation Support Equipment programs incident to monitoring schedule and costs associated with the prime production contracts. The effort is required to aid the Project Manager in independent analysis and verification of field activity and Contractor Production Progress reports concerning production planning and progress reports concerning production planning and execution, cost estimating, and engineering investigations.

2. Policy review and Development

- a. Consulting services - Supports In-house efforts by initiating development of interface design specifications for integrating VLS with the ASW and TOMAHAWK and Surface Weapons System.
- b. Other - Provides necessary support in preparation and finalizing technical reports, graphic presentations and program assessment for Ordnance Support Equipment Program.

3. Specification Development

- a. Consulting Services - Provides support of in-house efforts in the evaluation and analyses of professional and management services in the Communications and Electronic Equipment program.
- b. Other - Provided resources of support services in the Aviation Support Equipment program in the performance of their mission.

4. System Engineering

- a. Consulting Services - Provides reliability, maintainability, availability and quality assurance engineering services in support of 5 inch Semi-Active Laser Guided Projectile (SALGP) program.
- b. Other - Production engineering efforts for the NATO SEASPARROW Surface Missile System (NSSMS) and Target Acquisition System (TAS) including performance reviews, ECP evaluation, hardware design and value engineering efforts. Other areas of effort support are systems engineering, technical data collection and continuous and final specification documentation of each system design.

5. Technology Sharing/Utilization

- a. Consulting Services - No requirements.
- b. Other - Provided technology support in the Communications and Electronic Equipment program.

6. Logistic Support Services

- a. Consulting Services - Provides support in the Communications and Electronic Equipment program.
- b. Other - Preparation of production management, program documentation and statements of work. Perform studies to determine impact of potential program changes on approved program plan.

7. Technical Data Collection

a. Consulting Services - No requirements.

b. Other - Collects technical data from systems response to select environmental scenarios. The data collection process provides data used to create data management and configuration management plans including ECP system upgrade actions and/or proposal.

8. Public Affairs and Advertising - No requirements.

9. Other Professional and Managements

a. Consulting Services - No requirements.

b. Other - Services required for investigation, evaluation and assessment of performance of existing rocket components and provide technical management support of overall procurement items.

D. Contract Engineering Technical Services (CETS)

1. Contract Plant Services - On site prime contractor engineering and technical service to advise during the Navy installation of alterations or new equipment required to support the AN/SQR-18A system.

2. Contract Field Services - Representatives who provide services for the installation of equipment. These services are required to support the installation, testing, check out and adjustment of equipment incidental to initial start up of hardware procured for ship alterations.

3. Field Service Representatives - No requirements.

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