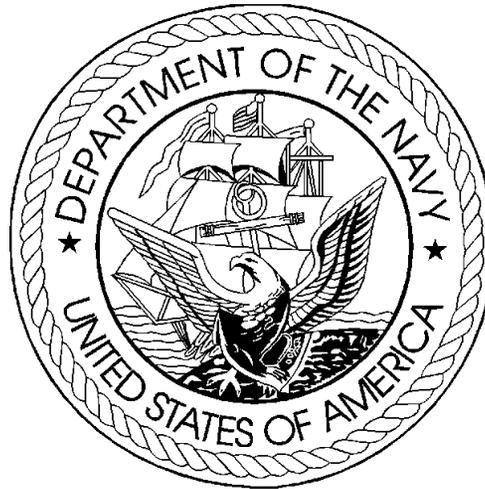


DEPARTMENT OF THE NAVY
FY 1999 AMENDED BUDGET ESTIMATES



JUSTIFICATION OF ESTIMATES
FEBRUARY 1998

WEAPONS PROCUREMENT, NAVY
BUDGET ACTIVITY 3

UNCLASSIFIED

Department of the Navy

FY 1999 Procurement Program

Exhibit P-1

APPROPRIATION: 1507N Weapons Procurement, Navy

DATE: 01/23/98

LINE NO	ITEM NOMENCLATURE	IDENT CODE	(DOLLARS) FY 1999 UNIT COST	TOA, \$ IN MILLIONS						S E C
				-----FY 1997-----		-----FY 1998-----		-----FY 1999-----		
				QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	
BUDGET ACTIVITY 03: Torpedoes and Related Equipment										

Torpedoes And Related Equipment										
23	3141 ASW Targets	A			4.1		.7		4.2	U
24	3145 Vertical Launched ASROC (VLA)	A		16	12.7		-		-	U
Mod Of Torpedoes And Related Equip										
25	3215 MK-46 Torpedo Mods	A			1.3		.3		.*	U
26	3225 MK-48 Torpedo ADCAP Mods	A			52.3		53.5		52.8	U
Support Equipment										
27	3301 Torpedo Support Equipment	A			20.7		24.9		24.2	U
28	3302 ASW Range Support	A			14.4		11.5		14.7	U
Destination Transportation										
29	2410 First Destination Transportation	A			2.6		1.8		2.0	U
TOTAL Torpedoes and Related Equipment					108.1		92.6		97.8	
* ITEMS UNDER \$50,000										

Weapons Procurement, Navy
Program and Financing (in Thousands of dollars)

Identification code	17-1507-0-1-051	Budget Plan (amounts for PROCUREMENT actions programed)			Obligations		
		1997 actual	1998 est.	1999 est.	1997 actual	1998 est.	1999 est.
Program by activities:							
Direct program:							
00.0101	Ballistic missiles	314,815	269,834	323,650	366,815	286,465	292,984
00.0201	Other missiles	830,648	618,864	832,908	926,354	600,517	740,014
00.0301	Torpedoes and related equipment	108,108	92,621	97,837	100,236	111,289	105,517
00.0401	Other weapons	36,636	85,022	27,232	34,966	73,804	39,515
00.0601	Spares and repair parts	41,809	21,422	45,918	47,140	31,335	46,165
00.9101	Total direct program	1,332,016	1,087,763	1,327,545	1,475,511	1,103,410	1,224,195
01.0101	Reimbursable program	21,000	74,800	74,800	243	95,800	74,800
10.0001	Total	1,353,016	1,162,563	1,402,345	1,475,754	1,199,210	1,298,995
Financing:							
Offsetting collections from:							
11.0001	Federal funds(-)	-21,000	-74,800	-74,800	-15,784	-74,800	-74,800
17.0001	Recovery of prior year obligations				-12,077		
Unobligated balance available, start of year:							
21.4002	For completion of prior year budget plans				-448,823	-311,568	-274,920
21.4003	Available to finance new budget plans	-16,000	-6,726		-16,000	-6,726	
21.4009	Reprogramming from/to prior year budget plan	-21,378					
22.1001	Unobligated balance transferred to other acco		6,726			6,726	
Unobligated balance available, end of year:							
24.4002	For completion of prior year budget plans				311,568	274,920	378,270
24.4003	Available to finance subsequent year budget	6,726			6,726		
25.0001	Unobligated balance expiring	21,378			21,378		
39.0001	Budget authority	1,322,742	1,087,763	1,327,545	1,322,742	1,087,763	1,327,545
Budget authority:							
40.0001	Appropriation	1,364,231	1,102,193	1,327,545	1,364,231	1,102,193	1,327,545
40.7601	Reduction pursuant to P.L. 105-56 (-), 8041		-21,230			-21,230	
41.0001	Transferred to other accounts (-)	-41,489			-41,489		
42.0001	Transferred from other accounts		6,800			6,800	
43.0001	Appropriation (adjusted)	1,322,742	1,087,763	1,327,545	1,322,742	1,087,763	1,327,545

Weapons Procurement, Navy
 Program and Financing (in Thousands of dollars)

Identification code	17-1507-0-1-051	Budget Plan (amounts for PROCUREMENT actions programed)			Obligations		
		1997 actual	1998 est.	1999 est.	1997 actual	1998 est.	1999 est.
Relation of obligations to outlays:							
71.0001	Obligations incurred				1,459,970	1,124,410	1,224,195
72.1001	Orders on hand, SOY				-37,434	-34,608	-34,608
72.4001	Obligated balance, start of year				3,286,784	2,765,572	2,270,295
74.1001	Orders on hand, EOY				34,608	34,608	34,608
74.4001	Obligated balance, end of year				-2,765,572	-2,270,295	-2,109,757
77.0001	Adjustments in expired accounts (net)				15,891		
78.0001	Adjustments in unexpired accounts				-12,077		
90.0001	Outlays (net)				1,982,170	1,619,687	1,384,733

Weapons Procurement, Navy
Object Classification (in Thousands of dollars)

Identification code	17-1507-0-1-051	1997 actual	1998 est.	1999 est.

Direct obligations:				
122.001	Transportation of things	2,566	2,008	2,028
125.101	Advisory and assistance services	23,256	24,591	24,701
	Purchases goods/services (inter/intra) Fed accounts			
125.303	Purchases from revolving funds	200,392	203,192	179,946
126.001	Supplies and materials	78,820	70,461	82,862
131.001	Equipment	1,170,477	803,158	934,658
		-----	-----	-----
199.001	Total Direct obligations	1,475,511	1,103,410	1,224,195
Reimbursable obligations:				
226.001	Supplies and materials	243	95,800	21,900
231.001	Equipment			52,900
		-----	-----	-----
299.001	Total Reimbursable obligations	243	95,800	74,800
		-----	-----	-----
999.901	Total obligations	1,475,754	1,199,210	1,298,995

Comparison of FY 1998 Program Requirements as Reflected
in the FY 1998 Budget with FY 1998 Program Requirements as
Shown in FY 1999 Budget (In Thousands of Dollars)

	FY 1998 Total Program Requirements <u>Per FY 1998 Budget</u>	FY 1998 Program Requirements <u>Per FY 1999 Budget</u>	Increase (+) or Decrease (-)
Ballistic Missiles	341,412	269,834	-71,578
Other Missiles	612,993	618,864	+5,871
Torpedoes and Related Equipment	95,715	92,621	-3,094
Other Weapons	59,230	85,022	+25,792
Spares and Repair Parts	26,943	21,422	-5,521
Subtotal Direct Program	1,136,293	1,087,763	-48,530
Reimbursable	74,800	74,800	-
Total Fiscal Year	1,211,093	1,162,563	-48,530

Explanation of Changes in FY 1998 Program Requirements

1. Ballistic Missiles (-\$71.6 million)
Decrease reflects Congressional undistributed and inflation reductions (-\$6.6 million) and a program reduction of 2 Trident II missiles (-\$65.0 million) to slow the production rate of Trident II missiles specifically earmarked for the D5 Backfit submarines.
2. Other Missiles (+\$5.9 million)
Changes include Congressional adjustments to JSOW (+\$5.0 million), Standard Missile (-\$15.4 million), Hellfire (+\$20.0 million), Penguin (+\$7.5 million), Aerial Targets (-\$7.0 million), ESSM (-\$5.0 million), Standard Missile Modifications (+\$15.3 million), and Weapons Industrial Facility (-\$4.5 million). Reprogrammings requiring Congressional approval include the SLAM-ER program (+\$9.0 million) and RAM (-\$2.0 million) are also part of the change. Adjustments also include Congressional undistributed general and inflation reductions (-\$17.0 million).
3. Torpedoes and Related Equipment (-\$3.1 million)
Changes include Congressional undistributed general and inflation reductions (-\$2.9 million) and a reprogramming requiring Congressional approval to the First Destination Transportation program (-\$0.2 million).
4. Other Weapons (+\$25.8 million)
Changes include Congressional adjustments for the Close-In-Weapons-System (+\$15.0 million), 5/54 Gun Mount Modifications (+\$10.0 million), and Pioneer (+\$3.0 million) and Congressional undistributed reductions (-\$2.2 million).
6. Spares & Repair Parts (\$-5.5 million)
Changes include adjustments for Congressional reductions (-\$5.0 million) and undistributed Congressional reductions (-\$.5 million).

Comparison of FY 1998 Financing as Reflected in the FY 1998 Budget
with FY 1998 Financing as Shown in FY 1998 Budget
(In Thousands of Dollars)

	FY 1998 Financing Per <u>FY 1998 Budget</u>	FY 1998 Financing Per <u>FY 1999 Budget</u>	Increase (+) Decrease (-)
Program Requirements (Total)			
Program Requirements (Direct)	(1,136,293)	(1,087,763)	(-48,530)
Program Requirements (Reimb)	(74,800)	(74,800)	
Less:			
Anticipated Reimbursements	74,800	74,800	-
Add:			
Unob bal avail, start of year to finance new budget plans		-6,726	-6,726
Unob bal transferred to other accts		6,726	6,726
Appropriation Adjusted	1,136,293	1,087,763	-48,530
Budget Authority:			
FY 1998 DoD Appropriations Act	1,136,293	1,102,193	-34,100
Reduct Pursuant to P. L. 105-56		-21,230	-21,230
Transferred from other accounts		6,800	+6,800
Appropriation (Adjusted)	1,136,293	1,087,763	-48,530

Explanation of Changes in Financing

The \$48.5 million change in program financing is the net result of Congressional specific (-\$34.1 million) and undistributed general reductions (-\$21.2 million); and Prior Approval Congressional reprogrammings associated with a more cost efficient procurement profile for the SLAM-ER program (+\$9.0 million), and funding from RAM (-\$2.0 million) and First Destination Transportation (-\$0.2 million) funding to fund emergent DOD requirements.

Comparison of FY 1997 Program Requirements as Reflected
in the FY 1998 Budget with FY 1997 Program
Requirements as Shown in FY 1999 Budget (In Thousands of Dollars)

	FY 1997 Total Program Requirements <u>Per FY 1998 Budget</u>	FY 1997 Total Program Requirements <u>Per FY 1999 Budget</u>	Increase (+) or Decrease (-)
Ballistic Missiles	316,332	314,815	-1,517
Other Missiles	844,202	830,648	-13,554
Torpedoes and Related Equipment	120,594	108,108	-12,486
Other Weapons	30,815	36,636	+5,821
Spares and Repair Parts	46,490	41,809	-4,681
Subtotal Direct Program	1,358,433	1,332,016	-26,417
Reimbursable	74,800	21,000	-53,800
Total Fiscal Year	1,433,233	1,353,016	-80,217

Explanation of Changes in FY 1997 Program Requirements

1. Ballistic Missiles (-\$1.5 million)

Change is a result of revised economic assumption reflected in the FY 1997 Supplemental Appropriation (-\$1.3 million) and minor below threshold reprogramming actions (-\$0.2 million).

2. Other Missiles (-\$13.6 million)

Change reflects a reduction to AMRAAM (-\$4.2 million) to fund the AEGIS Baseline Consolidation effort; and a net increase to fund additional MA-31 Aerial Target procurement (\$1.5 million). Adjustments were also associated with revised economic assumptions reflected in the FY 1997 Supplemental Appropriation (-\$3.6 million), and minor below threshold reprogramming actions.

3. Torpedoes and Related Equipment (-\$12.5 million)

Change reflects minor below threshold reprogrammings (-\$9.4 million), and reductions associated with the revised economic assumptions reflected in the FY 1997 Supplemental appropriation (-\$0.5 million). Reduction also include funding reprogrammed to support the AEGIS Baseline Consolidation effort (-\$2.5 million).

4. Other Weapons (+\$5.8 million)

Change reflects minor below threshold reprogrammings (+\$6.0 million) and revised economic assumption reflected in the FY 1997 Supplemental Appropriation (-\$0.1 million).

6. Spares & Repair Parts (-\$4.7 million)

Change reflects minor below threshold reprogrammings (-\$4.5 million) and revised economic assumptions reflected in the FY 1997 Supplemental Appropriation (-\$0.2 million).

Comparison of FY 1997 Financing as Reflected in the FY 1998 Budget
with FY 1997 Financing as Shown in FY 1999 Budget
(In Thousands of Dollars)

	FY 1997 Financing Per FY 1998 Budget	FY 1997 Financing Per FY 1999 Budget	Increase (+) Decrease (-)
Program Requirements (Total)	1,433,233	1,353,016	-80,217
Program Requirements (Direct)	(1,358,433)	(1,332,016)	(-26,417)
Program Requirements (Reimb)	(74,800)	(21,000)	(-53,800)
Less:			
Anticipated Reimbursements	-74,800	-21,000	-53,800
Add:			
Federal Funds (-):	-	-21,000	-21,000
Available to finance new budget plans	-	-16,000	-16,000
Reprogrammed from/to prior year budget plan:	-	-21,378	-21,378
Available to finance subsequent year budget:	-	6,726	+6,726
Unobligated balance expiring	-	21,378	+21,378
Appropriation Adjusted	1,358,433	1,322,742	-35,691
Budget Authority:			
FY 1997 DoD Appropriations Act	1,389,913	1,364,231	-25,682
Reduction pursuant to P.L. 104-208, 8037 (h)	-3,682	-	+3,682
Transferred from other accts	-	-	-
Transferred to other accounts	-27,798	-41,489	-13,691
Appropriation (Adjusted)	1,358,433	1,322,742	-35,691

Explanation of Changes in Financing

Primary changes in program financing are a result of reductions associated with revised economic assumptions reflected in the FY 1997 Supplemental Appropriation (-\$5.7 million), transfers to other accounts (-\$13.7 million), and funding reprogrammed for AEGIS Baseline Consolidation efforts (-\$6.7 million).

CLASSIFICATION: Unclassified

**WEAPONS PROCUREMENT, NAVY
BUDGET ITEM JUSTIFICATION SHEET (EXHIBIT P-40)**

DATE:
February 1998

BUDGET ACTIVITY:
BA-3: Torpedo and Related Equipment

P-1 ITEM NOMENCLATURE:
ASW Targets

LI # 314100
C3TG

		FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
Quantity								
Cost (In Millions)		4.1	0.7	4.2	3.7	4.8	16.4	16.2

ITEM DESCRIPTION/JUSTIFICATION

This line item funds:
MK 39 Mod 1 (Cost Codes TG002, TG832, TG842, TG852, TG862, and TG902).

The FY1994 Defense Authorization Conference directed the Navy to provide Congressional Defense Committees a plan on how the current ASW target programs could be expanded to include supporting MK48 and MK50 torpedoes and shallow water ASW training operations. ASN(RDA) submitted the ASW Target Plan on June 15, 1994 to the various Congressional defense committees; funding has been included in this WPN line item for the procurement of the MK 39 Mod 1, which will support these expanded requirements through the award of a competitive contract to be awarded in the 3rd QTR FY 97.

CLASSIFICATION: Unclassified

APPROPRIATION: Weapons Procurement, Navy	WEAPON SYSTEM COST ANALYSIS EXHIBIT (P-5)	DATE: February 1998
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BUDGET ACTIVITY: BA-3: Torpedo and Related Equipment	P-1 ITEM NOMENCLATURE: ASW Targets	SUBHEAD: C3TG
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COST CODE	ELEMENT OF COST	I/C	FY 1997		FY 1998		FY 1999			
			QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST		
TG002	MK39 Mod 1 - EMATT				1,000	\$3,409		\$0	1,125	\$2,868
TG800	Production Engineering					\$50		\$0		\$0
TG832	Production Engineering (In-house)					\$380		\$239		\$795
TG842	Quality Assurance					\$46		\$103		\$100
TG852	Product Improvement					\$42		\$77		\$80
TG862	Acceptance T & E					\$109		\$135		\$144
TG902	Production Engineering (Contractor)					\$72		\$105		\$165
						\$4,108		\$659		\$4,152

P-1 SHOPPING LIST LINE ITEM NO.	PAGE NO.
23	2

CLASSIFICATION: Unclassified

CLASSIFICATION: Unclassified

APPROPRIATION: Weapons Procurement, Navy	PROCUREMENT HISTORY & PLANNING (EXHIBIT P-5A)	DATE: February 1998
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BUDGET ACTIVITY: BA-3: Torpedo and Related Equipment	P-1 ITEM NOMENCLATURE: ASW Targets	SUBHEAD: C3TG
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COST CODE	FISCAL YEAR ELEMENT OF COST	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY	UNIT COST	SPECS AVAIL NOW WHEN	ARE SPEC REVISIONS REQUIRED?	IF YES, WHEN AVAILABLE
FY 1997											
TG002	MK39 Mod 1 - EMATT/ECPs	Sippican, Inc. Marion, MA	C/FFP	NAVSEA	Jun-97	Sep-98	1,000	\$2,495	Yes	No	
FY 1999											
TG002	MK39 Mod 1 - EMATT/ECPs	Sippican, Inc. Marion, MA	C/FFP-Option	NAVSEA	Oct-98	Oct-99	1,125	\$2,398	Yes	No	

REMARKS:

P-1 SHOPPING LIST NO.	PAGE NO.
23	3

CLASSIFICATION: Unclassified

EXHIBIT P-20, REQUIREMENTS STUDY	APPROPRIATION: Weapons Procurement, Navy	BA-3: Torpedo and Related Equipment	DATE: February 1998
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P-1 ITEM NOMENCLATURE: ASW Targets - MK 39 Mod 1	SUBHEAD: C3TG	Admin Leadtime (after Oct 1): 4	Prod Leadtime: 10
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	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
Buy Summary	1,000	0	1,125	1,125	1,125	1,250	1,250
Unit Cost	2.5	0	2.381	2.403	2.411	2.464	2.518
Total Cost	2,500	0	2,679	2,703	2,712	3,080	3,148
Asset Dynamics							
Beginning Asset Position	1,907	3,793	5,029	3,885	2,901	353	0
Deliveries from all prior year funding	3,600	3,300	0	0	0	0	0
Deliveries from FY 97 funding	0	35	965	0	0	0	0
Deliveries from FY 98 funding	0	0	0	0	0	0	0
Deliveries from FY 99 funding	0	0	0	1,125	0	0	0
Deliveries from subsequent years' funding	0	0	0	0	1,125	1,125	1,250
Other Gains	0	0	0	0	0	0	0
Combat Losses/Usage	0	0	0	0	0	0	0
Training Losses/Usage	-1,498	-1,999	-1,999	-1,999	-3,563	-3,563	-3,563
Test Losses/Usage	-96	-75	-90	-90	-90	-90	-90
Other Losses/Usage	-120	-25	-20	-20	-20	-20	-20
Disposals/Retirements/Attritions/Etc.	0	0	0	0	0	0	0
End of Year Asset Position	3,793	5,029	3,885	2,901	353	0	0
Inventory Objective or Current Authorized Allowance	885	885	3,763	3,673	3,673	3,673	3,673
Inventory Objective	Actual Training Expenditures	Other than Training Usage	Disposals (Vehicles/Other)	Vehicles Eligible for FY 98 Replacement	Aircraft: TOAI:	n/a	
Assets Rqd for Combat Loads: 775	FY 96 thru 30-Sep-1996: 793	FY 96 thru 30-Sep-1996: 130	FY 96 thru 30-Sep-1996:	Vehicles Eligible for FY 99 Replacement	PAA: TAI:	n/a	
WRM Rqmt:	FY 1995 839	FY 1995 105	FY 1995 0	Vehicle Augment:	Attrition Res:	0	
Pipeline: 500	FY 1994 912	FY 1994 100	FY 1994 0		BAI	0	
Other: 150	FY 1993 653	FY 1993 120	FY 1993 0		Inactive Inv:	0	
TOTAL: 1,425	3,197	455			Storage:	0	

REMARKS:
Starting in FY97, MK39 EMATT procurements represent MK39 Mod 1 instead of MK39 Mod 0.

P-1 SHOPPING LIST	
LINE ITEM NO.	PAGE NO.
23	6

CLASSIFICATION:

UNCLASSIFIED

BUDGET ITEM JUSTIFICATION SHEET

P-40

DATE:

February 1998

APPROPRIATION/BUDGET ACTIVITY

Weapons Procurement, Navy/ Torpedoes & Related Equipment, BA-3

P-1 ITEM NOMENCLATURE

Vertical Launch ASROC (C3DQ), LI# 314500

Program Element for Code B Items:

0204228N

Other Related Program Elements

	Prior Years	ID Code	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total
QUANTITY	390	A		13	17		0	0	0	0	0	0	420
COST (\$M)	\$227.3			\$9.5	\$12.7	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$249.5
Initial Spares (\$M)	\$2.3			\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$2.3
Total (\$M)	\$229.6			\$9.5	\$12.7	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$251.8
Unit Cost (\$M)	\$0.6			\$0.7	\$0.7	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.6

ITEM DESCRIPTION/JUSTIFICATION:

VLA provides an Intermediate range, quick-reaction, all weather, ASW capability for ships receiving the new Vertical Launching System. The VLA Missile utilizes the MK-46 MOD 5A(S) and MK-46 MOD 5A(SW) torpedo payload.

FOT&E tests were completed in September 1992 and Full Production authorized in January 1993.

Installation Data: These missiles will be a part of the ASW ordnance inventory to support combatants equipped with VLS (DD-963, DDG-51, CG-47 Class Ships).

P-1 SHOPPING LIST

CLASSIFICATION:

UNCLASSIFIED

CLASSIFICATION:

UNCLASSIFIED

WEAPONS SYSTEM COST ANALYSIS P-5						Weapon System			DATE: February 1998					
APPROPRIATION/BUDGET ACTIVITY Weapons Procurement, Navy/ Torpedoes & Related Equipment, BA-3					ID Code	P-1 ITEM NOMENCLATURE/SUBHEAD Vertical Launch ASROC, C3DQ, LI# 314500								
COST CODE	ELEMENT OF COST	ID Code	TOTAL COST IN THOUSANDS OF DOLLARS											
						FY 1997			FY 1998			FY 1999		
			QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
DQ003	<u>VLA Missiles</u>	A				17	594	10,096	0		0	0		0
DQ830	<u>Production Engineering (In-House)</u> <u>Production Engineering (Contractor)</u>							1,744 400			0 0			0 0
DQ860	<u>Acceptance Test & Evaluation</u> <i>Bosnia</i>							477			0			0
TOTAL								12,717			0			0

CLASSIFICATION:

UNCLASSIFIED

BUDGET ITEM JUSTIFICATION SHEET P-40										DATE: February 1998			
APPROPRIATION/BUDGET ACTIVITY Weapons Procurement, Navy/ Torpedoes & Related Equipment, BA-3							P-1 ITEM NOMENCLATURE Torpedo MK46 Mods, C3F5, LI# 321500						
Program Element for Code B Items: 0204228N							Other Related Program Elements						
	Prior Years	ID Code			FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total
QUANTITY SLEP	675	A			73	0	0	0	0	0	0	0	748
QUANTITY LHT	0	B			0	0	0	13	44	55	75	813	1000
(In Millions)	\$27.9				\$1.3	\$0.3	\$0.0	\$16.2	\$27.2	\$30.7	\$36.8	\$380.9	\$521.4
Initial Spares (\$M)					\$0.2	\$0.7	\$1.5	\$0.9	\$2.6	\$2.8	\$3.2		\$11.9
Total (\$M)	\$27.9				\$1.5	\$1.0	\$1.5	\$17.1	\$29.8	\$33.5	\$40.0	\$380.9	\$533.3
Unit Cost (\$M)	\$0.04				\$0.02	\$0.00	\$0.00	\$1.32	\$0.68	\$0.61	\$0.53	\$0.47	\$0.31
<p>ITEM DESCRIPTION/JUSTIFICATION:</p> <p>The MK46 is an in-service lightweight torpedo designed for launch from surface vessel torpedo tubes, VLA, and fixed/rotary wing aircraft. The product improvement program will improve effectiveness. (Asroc retired from active service 30 Sept 1997).</p> <p>Procurement of SLEP kits in FY94 through FY97 will provide improvements in warfighting capabilities in Bottom Avoidance, CCM Shallow, and Aft Seal.</p>													

UNCLASSIFIED

CLASSIFICATION:

UNCLASSIFIED

WEAPONS SYSTEM COST ANALYSIS						Weapon System			DATE:					
P-5						P-1 ITEM NOMENCLATURE/SUB 35674			February 1998					
APPROPRIATION/BUDGET ACTIVITY Weapons Procurement, Navy/ Torpedoes & Related Equipment, BA-3						ID Code			Torpedo MK46 Mods, C3F5, LI# 321500					
COST CODE	ELEMENT OF COST	ID Code	TOTAL COST IN THOUSANDS OF DOLLARS											
						FY 1997			FY 1998			FY 1999		
			QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
F5103	<u>SLEP Hardware</u>	A				73	12	905	0		0	0		0
F5830	<u>Production Engineering (In-House)</u>							382			211			15
F5860	<u>Acceptance Test & Evaluation</u>							41			30			0
F5900	<u>Production Engineering (Contractor)</u>							0			25			0
TOTAL						73	12	1,328	0	0	266	0	0	15

DD FORM 2446, JUN 86

P-1 SHOPPING LIST

CLASSIFICATION:

ITEM NO. 25

PAGE NO. 2

UNCLASSIFIED

CLASSIFICATION: UNCLASSIFIED

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: MK46 SLEP TYPE MODIFICATION: MODIFICATION TITLE: Bottom Avoidance/CCM Shallow Water/Aft Seal (F5103)

DESCRIPTION/JUSTIFICATION:

The Counter-Counter Measure (CCM) Shallow Water modification modifies algorithms and PWBs in the control group of the MK46 torpedo to improve performance against counter-measures in a shallow water environment. The Aft Seal modification provides an improved seal on the drive shaft of the MK46 torpedo to prevent water entry. The Bottom Avoidance modification provides search depth setting limitations on the MK46 torpedo to provide bottom avoidance in shallow water environments.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

	FY 1994 & Prior		FY 1995*		FY 1996		FY 1997**		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
FINANCIAL PLAN (IN MILLIONS)																									
<i>RD&E</i>																								0	0
<i>PROCUREMENT</i>																									0
INSTALLATION KITS	675	12,134	180	1,627	220	3,177	73	905																1,148	17,843
INSTALLATION KITS NONRECURRING																									0
EQUIPMENT																									0
EQUIPMENT NONRECURRING																									0
ENGINEERING CHANGE ORDERS																									0
DATA																									0
TRAINING EQUIPMENT																									0
SUPPORT EQUIPMENT																									0
OTHER		15,016		720		231		423		241		15													16,646
OTHER																									0
OTHER																									0
INTERIM CONTRACTOR SUPPORT		792		96		102		0		25															1,015
INSTALL COST																									0
TOTAL PROCUREMENT	675	27,942	180	2,443	220	3,510	73	1,328	0	266	0	15	0	0	0	0	0	0	0	0	0	0	0	1,148	35,504

CLASSIFICATION: **UNCLASSIFIED**

P3A (Continued)

INDIVIDUAL MODIFICATION (Continued)

MODELS OF SYSTEMS AFFECTED: MK46 SLEP

MODIFICATION TITLE: Bottom Avoidance/CCM Shallow Water/Aft Seal (F5103)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Firm Fixed Price Contract - Alliant Techsystems contracted by NAVSEA.**

ADMINISTRATIVE LEADTIME:

PRODUCTION LEADTIME: _____

CONTRACT DATES: PY: Apr-96

CY: Mar-97

DELIVERY DATE: PY: Feb-97

CY: Jan-98

(\$ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
PRIOR YEARS																								
FY 1995 EQUIPMENT																								
FY 1996 EQUIPMENT																								
FY 1997 EQUIPMENT																								
FY 1998 EQUIPMENT																								
FY 1999 EQUIPMENT																								
FY 2000 EQUIPMENT																								
FY 2001 EQUIPMENT																								
FY 2002 EQUIPMENT																								
FY 2003 EQUIPMENT																								
TO COMPLETE																								
Totals								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

INSTALLATION SCHEDULE: Input=Delivery to the Facility, Output=Facility providing to Fleet, ready for issue

	FY 1996 & Prior	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				TC	TOTAL
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In	450	150	150	150	88	87	20	20	20	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1148
Out	200	68	68	69	69	62	62	63	63	81	82	82	82	24	24	24	25	0	0	0	0	0	0	0	0	0	0	0	0	0	1148

P-3A

CLASSIFICATION:

UNCLASSIFIED

BUDGET ITEM JUSTIFICATION SHEET P-40										DATE: February 1998			
APPROPRIATION/BUDGET ACTIVITY Weapons Procurement, Navy/ Torpedoes & Related Equipment, BA-3							P-1 ITEM NOMENCLATURE MK48 ADCAP MODS TORPEDO (C3D1), LI# 322500						
Program Element for Code B Items: 0204228N							Other Related Program Elements						
	Prior Years	ID Code			FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total
QUANTITY MODS	0	A			135	139	104	104	95	90	82	59	1046
QUANTITY CBASS	0	B			0	0	0	0	0	25	55	966	1046
COST (\$M)	\$0.0				\$52.3	\$53.5	\$52.8	\$52.2	\$50.6	\$61.6	\$69.2	\$456.8	\$849.0
Initial Spares (\$M)					\$6.9	\$1.2	\$4.0	\$2.8	\$2.1	\$2.3	\$2.4		\$21.7
Total (\$M)	\$0.0				\$59.2	\$54.7	\$56.8	\$55.0	\$52.7	\$63.9	\$71.6	\$456.8	\$870.8
Unit Cost (\$M)	\$0.00				\$0.44	\$0.39	\$0.55	\$0.53	\$0.55	\$0.56	\$0.52	\$0.45	\$0.42

ITEM DESCRIPTION/JUSTIFICATION:

This line item procures Modification Kits for the MK48 ADCAP Torpedo. The MK48 ADCAP MODS program incorporates both a Guidance and Control (G&C) modification and a Torpedo Propulsion Upgrade (TPU) modification to the baseline ADCAP system.

The G&C Modification addresses the need to increase memory and processing capacity of the G&C hardware and to replace obsolete and sunset electronic component parts. The increased capacity is required for future advanced signal processing techniques that will be needed for performance upgrades in shallow water target detection/classification. The TPU addresses the Navy's operational requirement for a quieter ADCAP torpedo. These modifications will allow the MK48 ADCAP torpedo to operate effectively in adverse environments, thus enabling the MK48 ADCAP torpedo to counter enemy submarine threats into the 21st century.

RDT&E PE #0205632N, PU #V0366

CLASSIFICATION:

UNCLASSIFIED

WEAPONS SYSTEM COST ANALYSIS P-5						Weapon System			DATE: February 1998					
APPROPRIATION/BUDGET ACTIVITY Weapons Procurement, Navy/ Torpedoes & Related Equipment, BA-3					ID Code	P-1 ITEM NOMENCLATURE/SUBHEAD MK48 ADCAP MODS TORPEDO (C3D1), LI# 322500								
COST CODE	ELEMENT OF COST	ID Code	TOTAL COST IN THOUSANDS OF DOLLARS											
						FY 1997			FY 1998			FY 1999		
			QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
D1001	ADCAP MODS CBASS	A B				135	169	22,880 0	139	180	25,064 0	104	225	23,350 0
D1003	Support and Ancillary Equipment							2,593			2,513			2,864
D1830	Production Engineering (Contractor)							8,528			6,171			5,941
D1830	Production Engineering (In-House)							7,401			7,437			8,109
D1860	Acceptance Test & Evaluation (Contractor)							554			810			865
D1860	Acceptance Test & Evaluation (In-House)							10,357			11,523			11,684
TOTAL								52,313			53,518			52,813

CLASSIFICATION: UNCLASSIFIED

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: MK48 ADCAP MODIFICATION TITLE: MK48 ADCAP MODS Torpedo (D1001)

DESCRIPTION/JUSTIFICATION:

The Modification Kits for the MK48 ADCAP Torpedo allows the MK48 ADCAP torpedo to operate in adverse environments such as shallow water, thus enabling the MK48 ADCAP torpedo to counter enemy submarine threats into the 21st century.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: MS II approved in Jan 1993; MS III approved in Apr. 1996

FINANCIAL PLAN (IN MILLIONS)	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC	TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$		
<i>RDT&E</i>						16434		10275		7340		12162		8022		7189		14536		24794			100752	
<i>PROCUREMENT</i>																								
INSTALLATION KITS	0	0	88	12110	150	20014	135	16400	139	18022	104	16957	104	16797	95	16155	90	14174	82	13131	59	11359	1046	155119
INSTALLATION KITS NONRECURRING EQUIPMENT																								
EQUIPMENT NONRECURRING						2320																		2320
ENGINEERING CHANGE ORDERS																								
DATA																								
TRAINING EQUIPMENT																								
SUPPORT EQUIPMENT				3871		2657		2593		2513		2864		2875		2892		2518		1789		4262		28834
OTHER				28833		26229		21640		21101		22202		22020		21822		18567		14675		17893		214982
OTHER																								
OTHER																								
INTERIM CONTRACTOR SUPPORT				4964		5088		5200		4840		4397		4494		4593		3823		3611		6015		47025
INSTALL COST				0		0		6480		7042		6393		6001		5144		5105		4856		10353		51374
TOTAL PROCUREMENT	0	0	88	49778	150	56308	135	52313	139	53518	104	52813	104	52187	95	50606	90	44187	82	38062	59	49882	1046	499654

CLASSIFICATION: **UNCLASSIFIED**

P3A (Continued)

INDIVIDUAL MODIFICATION (Continued)

MODELS OF SYSTEMS AFFECTED: MK48 ADCAP

MODIFICATION TITLE: MK48 ADCAP MODS Torpedo

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: FPI - Northrop Grumman contracted by NAVSEA.

ADMINISTRATIVE LEADTIME: 3 Months

PRODUCTION LEADTIME: 16 Months

CONTRACT DATES: FY1997: Jan-97

FY1998: Jan-98

FY1999: Jan-99

DELIVERY DATE: FY1997: May-98

FY1998: May-99

FY1999: May-00

(\$ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total			
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
PRIOR YEARS																								0	0	
FY 1995 EQUIPMENT							88	3988																88	3988	
FY 1996 EQUIPMENT							55	2492	95	4401														150	6893	
FY 1997 EQUIPMENT									57	2641	78	3694												135	6335	
FY 1998 EQUIPMENT											57	2699	82	3968										139	6667	
FY 1999 EQUIPMENT													42	2033	62	3066								104	5099	
FY 2000 EQUIPMENT															42	2077	62	3134						104	5211	
FY 2001 EQUIPMENT																	39	1971	56	2893				95	4864	
FY 2002 EQUIPMENT																		38	1963	52	2745	90	4708			
FY 2003 EQUIPMENT																				82	4384	82	4384			
TO COMPLETE																							59	3223	59	3223
Totals							143	6480	152	7042	135	6393	124	6001	104	5143	101	5105	94	4856	193	10352	1046	51372		

INSTALLATION SCHEDULE: Input=Delivery to the Facility, Output=Facility providing to Fleet, ready for issue

	FY 1996 & Prior	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				TC	TOTAL
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In	0	14	21	48	60	43	43	32	34	34	33	34	34	35	35	29	25	26	27	26	25	26	27	24	24	24	24	23	23	193	1046
Out	0			14	21	48	60	43	43	32	34	34	33	34	34	35	35	29	25	26	27	26	25	26	27	24	24	24	24	239	1046

P-3A

CLASSIFICATION:

UNCLASSIFIED

BUDGET ITEM JUSTIFICATION SHEET P-40								DATE: February 1998					
APPROPRIATION/BUDGET ACTIVITY Weapons Procurement, Navy/Torpedo and Related Equipment								P-1 ITEM NOMENCLATURE Torpedo Support Equipment					
Program Element for Code B Items: LI #330100								Other Related Program Elements					
	Prior Years	ID Code			FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total
QUANTITY													
COST (In Millions)					\$20.7	\$24.9	\$24.2	\$23.9	\$22.7	\$24.6	\$25.8		\$166.9
<p>The Torpedo Support Equipment account procures various torpedo components required to ready weapons for Anti-Submarine Warfare forces afloat, Sub-Surface and Airborne to achieve and maintain a readiness posture sufficient to counter the enemy sub-surface threat. The objective of this line is to provide the fleet with ready exercise weapons for conducting training maneuvers which involve actually firing the torpedoes, and to maintain warshot inventories in an operational ready-for-issue status in support of combat ready deployment by anti-submarine warfare forces. After a torpedo is fired during a training exercise it is recovered and all expendable components such as batteries, cables, igniters (as well as various accessories required for air-launched torpedoes), must be replaced. These items as well as components such as exercise heads, fuel tanks, and exhaust valves which may be used more than once, but which are worn out or lost in service, are procured each fiscal year in quantities dependent upon the fleet training requirements and tempo of operations. The torpedoes requiring support are the MK46, MK46 SLEP, MK50, MK48 Mod 4 and ADCAP. In addition to components procurement, this account provides for production support and test/evaluation for these components and procurement of product improvement hardware and related equipment.</p>													

CLASSIFICATION:

UNCLASSIFIED

WEAPONS SYSTEM COST ANALYSIS P-5						Weapon System			DATE: February 1998					
APPROPRIATION/BUDGET ACTIVITY Weapons Procurement, Navy/Torpedo and Related Equipment						ID Code	P-1 ITEM NOMENCLATURE/SUBHEAD Torpedo Support Equipment/C3F8							
COST CODE	ELEMENT OF COST	ID Code	TOTAL COST IN THOUSANDS OF DOLLARS											
			FY 1996			FY 1997			FY 1998			FY 1999		
			QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
	PEO (UNDERSEA WARFARE)													
	Lightweight Support Equipment							\$1,585			\$4,835			\$6,060
	MK48/ADCAP Support Equipment							\$19,094			\$20,055			\$18,146
	Torpedo Support Equipment							\$20,679			\$24,890			\$24,206
TOTAL														

WEAPONS SYSTEM COST ANALYSIS P-5						Weapon System Lightweight Torpedo			DATE: February 1998					
APPROPRIATION/BUDGET ACTIVITY Weapons Procurement, Navy/Torpedo and Related Equipment					ID Code	P-1 ITEM NOMENCLATURE/SUBHEAD Torpedo Support Equipment/C3F8								
COST CODE	ELEMENT OF COST	IDENT CODE	TOTAL COST IN THOUSANDS OF DOLLARS											
						FY 1997			FY 1998			FY 1999		
			QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
F8001	Lightweight Support Equipment													
	MK46 Lead Dropper					0		\$0	1211	\$0.358	\$434	710	\$0.366	\$260
	MK46 Mod 5 Seawater Battery					0		\$0	1383	\$0.286	\$396	458	\$0.292	\$134
	MK46 Pressure Cylinder (Short)					0		\$0	675	\$0.450	\$304	402	\$0.460	\$185
	MK89 Mod 1 Suspension Bands					0		\$0	500	\$0.430	\$215	1200	\$0.448	\$538
	MK50 MK 33 Air Stabilizer					0		\$0	450	\$1.123	\$505	310	\$1.148	\$356
	MK50 MK 32 Air Stabilizer					0		\$0	400	\$1.842	\$737	371	\$1.883	\$698
	Sub-Total							\$0			\$2,590			\$2,170
F8002	Other Equipment Investment													
	Product Improvement Hardware							\$0			\$0			\$181
	ORDALT Procurement							\$506			\$0			\$784
	FES Replacement/Improvement							\$0			\$883			\$0
	Test Equipment Upgrade							\$0			\$0			\$1,447
	Sub-Total							\$506			\$883			\$2,412
F8830	Production Engineering - In House							\$875			\$810			\$936
F8840	Quality Assurance							\$0			\$180			\$207
F8850	Product Improvement							\$0			\$0			\$0
F8860	Acceptance T & E							\$204			\$175			\$162
F8900	Production Engineering - Contractor							\$0			\$197			\$173
TOTAL								\$1,585			\$4,835			\$6,060

CLASSIFICATION:

UNCLASSIFIED

WEAPONS SYSTEM COST ANALYSIS P-5						Weapon System Heavyweight Torpedo			DATE: February 1998					
APPROPRIATION/BUDGET ACTIVITY Weapons Procurement, Navy/Torpedo and Related Equipment					ID Code	P-1 ITEM NOMENCLATURE/SUBHEAD Torpedo Support Equipment/C3F8								
COST CODE	ELEMENT OF COST	ID Code	TOTAL COST IN THOUSANDS OF DOLLARS											
						FY 1997			FY 1998			FY 1999		
			QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
F8100	EXERCISE EXPENDABLES AND COMPONENT REPLACEMENT													
	TORPEDO WIRE COIL		0	\$0.000	\$0	500	\$2.500	\$1,250	0	\$2.553	\$0	0	\$2.553	\$0
	SUBMARINE WIRE COIL		500	\$2.000	\$1,000	0	\$2.044	\$0	750	\$2.087	\$1,565			
	FLEX HOSE (IMPROVED)		515	\$2.325	\$1,197	500	\$1.700	\$850	500	\$1.736	\$868			
	OTTO FUEL (1,000 lbs per unit)		392	\$5.340	\$2,093	285	\$6.880	\$1,961	295	\$7.031	\$2,074			
	IGNITER		0	\$0.136	\$0	0	\$0.139	\$0	1,000	\$0.141	\$141			
	PROPELLANT (Long)		0	\$0.500	\$0	1,500	\$0.565	\$848	500	\$0.577	\$288			
	UMBILICAL CABLE (IMPROVED)		330	\$5.865	\$1,935	410	\$5.988	\$2,455	377	\$6.120	\$2,307			
	ARMING DEVICE		0	\$0.000	\$0	0	\$0.000	\$0	0	\$0.000	\$0			
	SUBTOTAL							\$6,226			\$7,363			\$7,244
F8101	OTHER EQUIPMENT INVESTMENT													
	PRODUCT IMPROVEMENT							\$1,753			\$1,665			\$1,569
	FES REPLACEMENT/IMPROVEMENT							\$1,299			\$1,115			\$1,142
	PROPULSION FUEL TANK SUPPORT							\$830			\$857			\$793
	EXERCISE FUEL TANK UPGRADE PROGRAM							\$0			\$480			\$411
	ORDALT MATERIAL							\$3,335			\$3,269			\$2,420
	ORDALT INSTALLATION							\$2,025			\$1,791			\$1,377
	CHAMBER & VALVE RELOADS							\$462			\$496			\$459
	RECOVERY SYSTEMS							\$0			\$140			\$131
	TIES III EXERCISE SECTION UPGRADE							\$409			\$452			\$416
	TEST EQUIPMENT UPGRADE							\$126			\$127			\$121
	SUBTOTAL							\$10,239			\$10,392			\$8,839
	PRODUCTION SUPPORT													
F8833	PRODUCTION ENGINEERING (IN-HOUSE)							\$502			\$505			\$477
F8843	QUALITY ASSURANCE							\$1,580			\$1,313			\$1,179
F8863	ACCEPTANCE TEST & EVALUATION							\$547			\$482			\$407
TOTAL								\$19,094			\$20,055			\$18,146

UNCLASSIFIED

CLASSIFICATION:

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)					Weapon System Lightweight Torpedo		A. DATE February 1998			
B. APPROPRIATION/BUDGET ACTIVITY Weapons Procurement, Navy/Torpedo Support Equipment					C. P-1 ITEM NOMENCLATURE Torpedo Support Equipment				SUBHEAD C3F8	
Cost Element/ FISCAL YEAR	QUANTITY	UNIT COST (000)	LOCATION OF PCO	RFP ISSUE DATE	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWARD DATE	DATE OF FIRST DELIVERY	SPECS AVAILABLE NOW	IF YES WHEN AVAILABLE
<u>FY1996</u>										
MK46 Lead Dropper	228	\$0.367	NOC/IMSD		PD/FFP	Reisner Products Inc.	7/96	7/97	Yes	
MK46 Seawater Battery	460	\$0.286	NOC/IMSD		PD/FFP	Magne Volt, NC	7/96	7/98	Yes	
MK50 MK32 Air Stabilizer	374	\$2.051	NOC/IMSD		PD/FFP	Paranetics	9/96	9/98	Yes	
<u>FY 1998</u>										
MK46 Lead Dropper	1211	\$0.358	NUWC, Keyport		RC/FFP	Unknown	7/98	7/99	Yes	
MK46 Seawater Battery	1383	\$0.286	NUWC, Keyport		RC/FFP	Unknown	7/98	7/00	Yes	
MK46 Pressure Cylinder (Short)	675	\$0.450	NUWC, Keyport		RC/FFP	Unknown	7/98	7/00	Yes	
MK89 Mod 1 Suspension Band	500	\$0.430	NUWC, Keyport		RC/FFP	Unknown	7/98	7/00	Yes	
MK50 MK33 Air Stabilizer	450	\$1.123	NUWC, Keyport		RC/FFP	Unknown	7/98	7/00	Yes	
MK50 MK32 Air Stabilizer	400	\$1.842	NUWC, Keyport		RC/FFP	Unknown	7/98	7/00	Yes	
<u>FY1999</u>										
MK46 Lead Dropper	710	\$0.366	NUWC, Keyport		RC/FFP	Unknown	7/99	7/00	Yes	
MK46 Seawater Battery	458	\$0.292	NUWC, Keyport		RC/FFP	Unknown	7/99	7/01	Yes	
MK46 Pressure Cylinder (Short)	402	\$0.460	NUWC, Keyport		RC/FFP	Unknown	7/99	7/01	Yes	
MK89 Mod 1 Suspension Band	1200	\$0.448	NUWC, Keyport		RC/FFP	Unknown	7/99	7/01	Yes	
MK50 MK33 Air Stabilizer	310	\$1.148	NUWC, Keyport		RC/FFP	Unknown	7/99	7/01	Yes	
MK50 MK32 Air Stabilizer	371	\$1.883	NUWC, Keyport		RC/FFP	Unknown	7/99	7/01	Yes	
D. REMARKS										

UNCLASSIFIED

CLASSIFICATION:

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)					Weapon System Heavyweight Torpedo		A. DATE February 1998			
B. APPROPRIATION/BUDGET ACTIVITY Weapons Procurement, Navy/Torpedo Support Equipment					C. P-1 ITEM NOMENCLATURE Torpedo Support Equipment				SUBHEAD C3F8	
Cost Element/ FISCAL YEAR	QUANTITY	UNIT COST (000)	LOCATION OF PCO	RFP ISSUE DATE	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWARD DATE	DATE OF FIRST DELIVERY	SPECS AVAILABLE NOW	IF YES WHEN AVAILABLE
<u>FY1996</u>										
Igniter	1101	\$0.133	NOC/IMSD		PD/FFP	Qunatic Inc, CA	2/96	8/96	Yes	
Propellant (Long)	1000	\$0.500	NOC/IMSD		PD/FFP	Thiokol, MD	1/97	8/98	Yes	
<u>FY1997</u>										
Flex Hose (Improved)	515	\$2.325	NUWC, Keyport	3-Apr-97	RC/FFP	Entwistle, MA	9/97	8/98	Yes	
Sub Wire Coil	500	\$2.000	NUWC, Keyport	12-Mar-97	RC/FFP	Entwistle, MA	7/97	9/99	Yes	
Otto Fuel (1,000 lbs per unit)	392	\$5.340	Indian Head, MD		WR	Indian Head, MD	10/96	7/98	Yes	
Umbilical Cables (Improved)	330	\$5.865	NUWC, Newport		RC/FFP	Sea Con	7/97	5/98	Yes	
<u>FY1998</u>										
Flex Hose (Improved)	500	\$1.700	NUWC, Keyport		RC/FFP	Unknown	6/98	8/99	Yes	
Torpedo Wire Coil	500	\$2.500	NUWC, Keyport		RC/FFP	Unknown	6/98	9/00	Yes	
Otto Fuel (1,000 lbs per unit)	285	\$6.880	Indian Head, MD		WR	Indian Head, MD	1/98	7/99	Yes	
Propellant (Long)	1500	\$0.565	NUWC, Keyport		RC/FFP	Unknown	6/98	8/00	Yes	
Umbilical Cables (Improved)	410	\$5.988	NUWC, Keyport		RC/FFP	Unknown	6/98	5/99	Yes	
<u>FY 1999</u>										
Sub Wire Coil	750	\$2.087	NUWC, Keyport		RC/FFP	Unknown	6/99	7/01	Yes	
Flex Hose (Improved)	500	\$1.736	NUWC, Keyport		RC/FFP	Unknown	6/99	8/00	Yes	
Otto Fuel (1,000 lbs per unit)	295	\$7.031	Indian Head, MD		WR	Indian Head, MD	10/98	7/00	Yes	
Igniter	1000	\$0.141	NUWC, Keyport		RC/FFP	Unknown	6/99	8/01	Yes	
Propellant (Long)	500	\$0.577	NUWC, Keyport		RC/FFP	Unknown	6/99	8/01	Yes	
<p>D. REMARKS I: Umbilical Cable unit cost variations FY96-FY98</p> <p>The increase in unit cost for the Umbilical Cable from FY96-FY97 is attributed to the inclusion of 330 Receptacles and 500 Inserts in the FY97 unit price for Umbilical Cables, as well as First Article and Qualification Testing increases associated with a new vendor award. The FY96 P-5 and P-5a Umbilical Cable unit price does not include receptacles and inserts. Like FY97 procurement, the FY98 Umbilical Cable unit price includes 410 cables, 410 receptacles, and 500 inserts; thus, the unit price increase from FY97-FY98 is solely attributed to inflation (2.1%).</p>										

Exhibit P-20, Requirements Study		Approp Code/BA 1507/			Subhead C3F8		Date: February 1998		
P-1 Line Item Nomenclature Lightweight Torpedo Support Equipment LI # 330100		Admin Leadtime (after Oct 1): 7 months				Prod Leadtime: 17 months			
Project Uni F8001/MK46 Lead Droppers	NALC TW32	PY FY 1996	PY FY 1997	CY FY 1998	BY1 FY 1999	BY2 FY 2000	BY2+1 FY 2001	BY2+2 FY 2002	BY2+3 FY 2003
Buy Summary QTY		228	0	1,211	710	710	810	810	810
Unit Cost		\$0.367		\$0.358	\$0.366	\$0.374	\$0.382	\$0.391	\$0.399
Total Cost		\$84	\$0	\$434	\$260	\$265	\$310	\$316	\$323
Asset Dynamics									
Beginning Asset Position		906	551	267	1349	710	1282	1353	1424
SE deliveries from all prior year funding		0	0	228	0	0	0	0	0
Spares deliveries from all prior year funding		291	364	1,482	0	0	0	0	0
Deliveries from FY 1997 funding		0	0	0	0	0	0	0	0
Deliveries from FY 1998 funding		0	0	0	0	1,211	0	0	0
Deliveries from FY 1999 funding		0	0	0	0	0	710	0	0
Deliveries from FY 2000 funding		0	0	0	0	0	0	710	0
Deliveries from FY 2001 funding		0	0	0	0	0	0	0	810
Combat Losses/Usage		0	0	0	0	0	0	0	0
Training Losses/Usage		646	648	628	639	639	639	639	639
Test Losses/Usage		0	0	0	0	0	0	0	0
Other Losses/Usage		0	0	0	0	0	0	0	0
Disposals/Retirements/Attritions/etc.		0	0	0	0	0	0	0	0
End of Year Asset Position		551	267	1349	710	1282	1353	1424	1595
Inventory Objective/Current Authorized Allowance		1922	1915	1906	1917	1917	1917	1917	1917
Example:									
Inventory	Actual Training Expenditures	Other than Training Usage		Disposals (Vehicles/Other)					
	PY thru FY96: 646	PY thru FY96:		PY thru FY96:					
	FY95: 409	FY95:	0	FY95:	0				
	FY94: 490	FY94:	0	FY94:	0				
	FY93: 370	FY93:	0	FY93:	0				
TOTAL:									
REMARKS Training Losses/Usage: Item expended after each firing. Updated to reflect Sponsor-directed Non-Combat Expenditure Allocation (NCEA) firings. Lead droppers expended during MK46 EXTORP (tube, fixed wing, rotary wing) and REXTORP (fixed wing) firings.									

Exhibit P-20, Requirements Study		Approp Code/BA 1507/			Subhead C3F8		Date: February 1998		
P-1 Line Item Nomenclature Lightweight Torpedo Support Equipment LI # 330100		Admin Leadtime (after Oct 1): 7 months			Prod Leadtime: 17 months				
Project Uni F8001/Mk46 Seawater Battery	NALC TU44 PY FY 1996	PY FY 1997	CY FY 1998	BY1 FY 1999	BY2 FY 2000	BY2+1 FY 2001	BY2+2 FY 2002	BY2+3 FY 2003	
Buy Summary QTY	460	0	1,383	458	455	455	455	457	
Unit Cost	\$0.286	\$0.286	\$0.286	\$0.292	\$0.299	\$0.305	\$0.312	\$0.319	
Total Cost	\$132	\$0	\$396	\$134	\$136	\$139	\$142	\$146	
Asset Dynamics	0								
Beginning Asset Position	1146	786	609	688	297	1066	1133	1197	
Deliveries from all prior year funding	0	0	460	0	0	0	0	0	
Spares deliveries from all prior year funding	0	223	0	0	0	0	0	0	
Deliveries from FY 1997 funding	0	0	0	0	0	0	0	0	
Deliveries from FY 1998 funding	0	0	0	0	1,383	0	0	0	
Deliveries from FY 1999 funding	0	0	0	0	0	458	0	0	
Deliveries from FY 2000 funding	0	0	0	0	0	0	455	0	
Deliveries from FY 2001 funding	0	0	0	0	0	0	0	455	
Combat Losses/Usage	0	0	0	0	0	0	0	0	
Training Losses/Usage	360	400	381	391	391	391	391	391	
Test Losses/Usage	0	0	0	0	0	0	0	0	
Other Losses/Usage	0	0	0	0	223	0	0	0	
Disposals/Retirements/Attritions/etc.	0	0	0	0	0	0	0	0	
End of Year Asset Position	786	609	688	297	1066	1133	1197	1261	
Inventory Objective/Current Authorized Allowance	1141	1172	1386	1396	1396	1396	1396	1396	
Example:									
Inventory	Actual Training Expenditures	Other than Training Usage	Disposals (Vehicles/Other)						
	PY thru FY96: 360	PY thru FY96: 0	PY thru FY96: 0						
	FY95: 380	FY95: 0	FY95: 0						
	FY94: 490	FY94: 0	FY94: 0						
	FY93: 348	FY93: 0	FY93: 0						
TOTAL:									
REMARKS Training Losses/Usage: Item expended after each firing. Updated to reflect Sponsor-directed Non-Combat Expenditure Allocation (NCEA) firings. Other Losses/Usage: Repaid assets to Replen Spares (FY00). MK46 Seawater Battery expended during EXTORP (tube, fixed wing, rotary wing) firings.									

Exhibit P-20, Requirements Study		Approp Code/BA 1507/		Subhead C3F8		Date: February 1998		
P-1 Line Item Nomenclature		Admin Leadtime (after Oct 1): 7 months				Prod Leadtime: 17 months		
F8100/Mk46 Press Cyl (Short)	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
Buy Summary QTY	0	0	675	402	402	402	402	402
Unit Cost			\$0.450	\$0.460	\$0.470	\$0.480	\$0.491	\$0.502
Total Cost	\$0	\$0	\$304	\$185	\$189	\$193	\$197	\$202
Asset Dynamics								
Beginning Asset Position	2493	2133	1733	1352	961	1245	1256	1267
Deliveries from all prior year funding	0	0	0	0	0	0	0	0
Spares deliveries from all prior year funding	0	0	0	0	0	0	0	0
Deliveries from FY 1997 funding	0	0	0	0	0	0	0	0
Deliveries from FY 1998 funding	0	0	0	0	675	0	0	0
Deliveries from FY 1999 funding	0	0	0	0	0	402	0	0
Deliveries from FY 2000 funding	0	0	0	0	0	0	402	0
Deliveries from FY 2001 funding	0	0	0	0	0	0	0	402
Combat Losses/Usage	0	0	0	0	0	0	0	0
Training Losses/Usage	360	400	381	391	391	391	391	391
Test Losses/Usage	0	0	0	0	0	0	0	0
Other Losses/Usage	0	0	0	0	0	0	0	0
Disposals/Retirements/Attritions/etc.	0	0	0	0	0	0	0	0
End of Year Asset Position	2133	1733	1352	961	1245	1256	1267	1278
Inventory Objective/Current Authorized Allowance	1141	1172	1163	1173	1173	1173	1173	1173
Example:								
Inventory Objective	Actual Training Expenditures	Other than Training Usage	Disposals (Vehicles/Other)					
	PY thru FY96: 360	PY thru FY96: 0	PY thru FY96:					
	FY95: 727	FY95: 0	FY95: 0					
	FY94: 781	FY94: 0	FY94: 0					
	FY93: 0	FY93: 0	FY93: 0					
TOTAL:								
REMARKS Training Losses/Usage: Item expended after each firing. Updated to reflect Sponsor-directed Non-Combat Expenditure Allocation (NCEA) firings. MK46 Pressure Cylinder (Short) expended during EXTORP (tube, fixed wing, rotary wing) firings.								

Exhibit P-20, Requirements Study		Approp Code/BA 1507/		Subhead C3F8		Date: February 1998		
P-1 Line Item Nomenclature		Admin Leadtime (after Oct 1): 7 months				Prod Leadtime: 17 months		
F8001/MK89 Mod 1 Susp Bands	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
Buy Summary QTY	0	0	500	1,200	900	900	900	900
Unit Cost			\$0.430	\$0.448	\$0.458	\$0.468	\$0.478	\$0.489
Total Cost	\$0	\$0	\$215	\$538	\$412	\$421	\$430	\$440
Asset Dynamics								
Beginning Asset Position	1597	5771	5445	4795	4133	3971	4509	4747
Deliveries from all prior year funding	4500	0	0	0	0	0	0	0
Spares deliveries from all prior year funding	0	0	0	0	0	0	0	0
Deliveries from FY 1997 funding	0	0	0	0	0	0	0	0
Deliveries from FY 1998 funding	0	0	0	0	500	0	0	0
Deliveries from FY 1999 funding	0	0	0	0	0	1,200	0	0
Deliveries from FY 2000 funding	0	0	0	0	0	0	900	0
Deliveries from FY 2001 funding	0	0	0	0	0	0	0	900
Combat Losses/Usage	0	0	0	0	0	0	0	0
Training Losses/Usage	326	326	650	662	662	662	662	662
Test Losses/Usage	0	0	0	0	0	0	0	0
Other Losses/Usage	0	0	0	0	0	0	0	0
Disposals/Retirements/Attritions/etc.	0	0	0	0	0	0	0	0
End of Year Asset Position	5771	5445	4795	4133	3971	4509	4747	4985
Inventory Objective/Current Authorized Allow	4102	4438	4774	4786	4786	4786	4786	4786
Example:								
Inventory	Actual Training Expenditures	Other than Training Usage	Disposals (Vehicles/Other)					
	PY thru FY96: 326	PY thru FY96: 0	PY thru FY96: 0					
	FY95: 0	FY95: 0	FY95: 0					
	FY94: 0	FY94: 0	FY94: 0					
	FY93: 0	FY93: 0	FY93: 0					
TOTAL:								
REMARKS Training Losses/Usage: Item expended after each firing. Updated to reflect Sponsor-directed Non-Combat Expenditure Allocation (NCEA) firings. Suspension bands expend MK46/MK50 Warshot, EXTORP (rotary and fixed wing), and REXTORP (rotary and fixed wing) firings. Inventory Objective: FY96-97 using old bands for MK50 firings only; FY98-03 increase due to use of MOD 1 bands for all MK46 and MK50 firings.								

Exhibit P-20, Requirements Study			Approp Code/BA 1507/			Subhead C3F8		Date: February 1998		
P-1 Line Item Nomenclature Lightweight Torpedo Support Equipment LI # 330100			Admin Leadtime (after Oct 1): 7 months				Prod Leadtime: 17 months			
Project Uni	NALC 5W14	PY	PY	CY	BY1	BY2	BY2+1	BY2+2	BY2+3	
F8001/MK50 MK33 Air Stabilizer		FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Buy Summary QTY		0	0	450	310	295	160	160	160	
Unit Cost				\$1.123	\$1.148	\$1.173	\$1.199	\$1.225	\$1.252	
Total Cost		\$0	\$0	\$505	\$356	\$346	\$192	\$196	\$200	
Asset Dynamics										
Beginning Asset Position		250	250	217	59	0	291	442	578	
Deliveries from all prior year funding		0	0	0	0	0	0	0	0	
Spares deliveries from all prior year funding		0	87	0	100	0	0	0	0	
Deliveries from FY 1997 funding		0	0	0	0	0	0	0	0	
Deliveries from FY 1998 funding		0	0	0	0	450	0	0	0	
Deliveries from FY 1999 funding		0	0	0	0	0	310	0	0	
Deliveries from FY 2000 funding		0	0	0	0	0	0	295	0	
Deliveries from FY 2001 funding		0	0	0	0	0	0	0	160	
Combat Losses/Usage		0	0	0	0	0	0	0	0	
Training Losses/Usage		0	120	158	159	159	159	159	159	
Test Losses/Usage		0	0	0	0	0	0	0	0	
Other Losses/Usage		0	0	0	0	0	0	0	0	
Disposals/Retirements/Attritions/etc.		0	0	0	0	0	0	0	0	
End of Year Asset Position		250	217	59	0	291	442	578	579	
Inventory Objective/Current Authorized Allowance		578	737	776	777	777	777	777	777	
Example:										
Inventory	Actual Training Expenditures	Other than Training Usage		Disposals (Vehicles/Other)						
	PY thru FY96: 0	PY thru FY96:	0	PY thru FY96:	0					
	FY95: 0	FY95:	0	FY95:	0					
	FY94: 0	FY94:	0	FY94:	0					
	FY93: 0	FY93:	0	FY93:	0					
TOTAL:										
REMARKS MK33 Air Stabilizer expended during EXTORP rotary wing special firings and REXTORP rotary wing NCER firings.										

Exhibit P-20, Requirements Study			Approp Code/BA 1507/		Subhead C3F8		Date: February 1998		
P-1 Line Item Nomenclature Lightweight Torpedo Support Equipment LI # 330100			Admin Leadtime (after Oct 1): 7 months			Prod Leadtime: 17 months			
Project Uni	NALC CWDN	PY	PY	CY	BY1	BY2	BY2+1	BY2+2	BY2+3
F8001/MK50 MK32 Air Stabilizer		FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
Buy Summary QTY		374	0	400	371	408	400	400	400
Unit Cost		\$2.051		\$1.842	\$1.883	\$1.924	\$1.966	\$2.010	\$2.054
Total Cost		\$767	\$0	\$737	\$698	\$785	\$787	\$804	\$821
Asset Dynamics									
Beginning Asset Position		30	30	0	127	0	152	275	435
Deliveries from all prior year funding		0	0	374	0	0	0	0	0
Spares deliveries from all prior year funding		0	157	0	121	0	0	0	0
Deliveries from FY 1997 funding		0	0	0	0	0	0	0	0
Deliveries from FY 1998 funding		0	0	0	0	400	0	0	0
Deliveries from FY 1999 funding		0	0	0	0	0	371	0	0
Deliveries from FY 2000 funding		0	0	0	0	0	0	408	0
Deliveries from FY 2001 funding		0	0	0	0	0	0	0	400
Combat Losses/Usage		0	0	0	0	0	0	0	0
Training Losses/Usage		0	187	247	248	248	248	248	248
Test Losses/Usage		0	0	0	0	0	0	0	0
Other Losses/Usage		0	0	0	0	0	0	0	0
Disposals/Retirements/Attritions/etc.		0	0	0	0	0	0	0	0
End of Year Asset Position		30	0	127	0	152	275	435	587
Inventory Objective/Current Authorized Allowance		734	982	1043	1044	1044	1044	1044	1044
Example:									
Inventory	Actual Training Expenditures	Other than Training Usage		Disposals (Vehicles/Other)					
	PY thru FY96: 0	PY thru FY96:	0	PY thru FY96:	0				
	FY95: 0	FY95:	0	FY95:	0				
	FY94: 0	FY94:	0	FY94:	0				
	FY93: 0	FY93:	0	FY93:	0				
TOTAL:									
REMARKS MK32 Air Stabilizer expended during EXTORP fixed wing special firings and REXTORP fixed wing NCER firings.									

Exhibit P-20, Requirements Study		Approp Code/BA 1507/		Subhead C3F8		Date: February 1998		
P-1 Line Item Nomenclature Heavyweight Torpedo Support Equipment LI# 330100			Admin Leadtime (after Oct 1): 7 months			Prod Leadtime: 17 months		
Project Unit/Item F8100/Torpedo Wire Coil	PY FY 1996	PY FY 1997	CY FY 1998	BY1 FY 1999	BY2 FY 2000	BY2+1 FY 2001	BY2+2 FY 2002	BY2+3 FY 2003
Buy Summary QTY	0	0	500	0	1,000	870	580	600
Unit Cost	\$0.000	\$0.000	\$2.500	\$2.553	\$2.606	\$2.661	\$2.717	\$2.776
Total Cost	0	\$0	\$1,250	\$0	\$2,606	\$2,315	\$1,576	\$1,666
Asset Dynamics								
Beginning Asset Position	5551	4728	3805	2842	1994	1707	950	1192
Deliveries from all prior year funding	0	0	0	0	0	0	0	0
Deliveries from FY 1997 funding	0	0	0	0	0	0	0	0
Deliveries from FY 1998 funding	0	0	0	0	500	0	0	0
Deliveries from FY 1999 funding	0	0	0	0	0	0	0	0
Deliveries from FY 2000 funding	0	0	0	0	0	0	1,000	0
Deliveries from FY 2001 funding	0	0	0	0	0	0	0	870
Combat Losses/Usage	0	0	0	0	0	0	0	0
Training Losses/Usage	823	923	963	848	787	757	758	748
Test Losses/Usage	0	0	0	0	0	0	0	0
Other Losses/Usage	0	0	0	0	0	0	0	0
Disposals/Retirements/Attritions/etc.	0	0	0	0	0	0	0	0
End of Year Asset Position	4728	3805	2842	1994	1707	950	1192	1314
Inventory Objective/Current Authorized Allow	2709	2734	2598	2392	2302	2263	2263	2263
Example:								
Inventory	Actual Training Expenditures	Other than Training Usage	Disposals (Vehicles/Other)					
	FY96: 823	FY96: 0	FY96: 0					
	FY95: 849	FY95: 0	FY95: 0					
	FY94: 916	FY94: 0	FY94: 0					
	FY93: 1030	FY93: 0	FY93: 0					
TOTAL:								
REMARKS Training Losses/Usage: Reflect Sponsor-directed firings.								

Exhibit P-20, Requirements Study	Approp Code/BA 1507/		Subhead C3F8		Date: February 1998			
P-1 Line Item Nomenclature Heavyweight Torpedo Support Equipment LI# 330100		Admin Leadtime (after Oct 1): 7 months			Prod Leadtime: 17 months			
Project Unit/Item F8100/Submarine Wire Coil	PY FY 1996	PY FY 1997	CY FY 1998	BY1 FY 1999	BY2 FY 2000	BY2+1 FY 2001	BY2+2 FY 2002	BY2+3 FY 2003
Buy Summary QTY	0	500	0	750	750	750	750	750
Unit Cost		\$2.000	\$2.044	\$2.087	\$2.131	\$2.175	\$2.221	\$2.268
Total Cost	0	\$1,000	\$0	\$1,565	\$1,598	\$1,632	\$1,666	\$1,701
Asset Dynamics								
Beginning Asset Position	3517	2694	2779	1873	1556	795	811	827
Deliveries from all prior year funding	0	872	0	0	0	0	0	0
Deliveries from FY 1997 funding	0	0	0	500	0	0	0	0
Deliveries from FY 1998 funding	0	0	0	0	0	0	0	0
Deliveries from FY 1999 funding	0	0	0	0	0	750	0	0
Deliveries from FY 2000 funding	0	0	0	0	0	0	750	0
Deliveries from FY 2001 funding	0	0	0	0	0	0	0	750
Combat Losses/Usage	0	0	0	0	0	0	0	0
Training Losses/Usage	823	787	906	817	761	734	734	725
Test Losses/Usage	0	0	0	0	0	0	0	0
Other Losses/Usage	0	0	0	0	0	0	0	0
Disposals/Retirements/Attritions/etc.	0	0	0	0	0	0	0	0
End of Year Asset Position	2694	2779	1873	1556	795	811	827	852
Inventory Objective/Current Authorized	2516	2510	2484	2312	2229	2193	2193	2193
Example:								
Inventory	Actual Training Expenditures	Other than Training Usage	Disposals (Vehicles/Other)					
	FY96: 823	FY96: 0	FY96:					
	FY95: 849	FY95: 0	FY95: 0					
	FY94: 916	FY94: 0	FY94: 0					
	FY93: 1030	FY93: 0	FY93: 0					
TOTAL:								
REMARKS Training Losses/Usage: Reflect Sponsor-directed firings.								

Exhibit P-20, Requirements Study		Approp Code/BA 1507/		Subhead C3F8		Date: February 1998		
P-1 Line Item Nomenclature Heavyweight Torpedo Support Equipment LI# 330100			Admin Leadtime (after Oct 1): 7 months			Prod Leadtime: 17 months		
Project Unit/Item F8100/Flex Hose (Improved)	PY FY 1996	PY FY 1997	CY FY 1998	BY1 FY 1999	BY2 FY 2000	BY2+1 FY 2001	BY2+2 FY 2002	BY2+3 FY 2003
Buy Summary QTY	0	515	500	500	750	750	748	754
Unit Cost		\$2.325	\$1.700	\$1.736	\$1.772	\$1.809	\$1.847	\$1.886
Total Cost	0	\$1,197	\$850	\$868	\$1,329	\$1,357	\$1,382	\$1,422
Asset Dynamics								
Beginning Asset Position	0	982	2656	1920	1752	1610	1486	1584
Deliveries from all prior year funding	2305	2106	0	0	0	0	0	0
Deliveries from FY 1997 funding	0	0	0	515	0	0	0	0
Deliveries from FY 1998 funding	0	0	0	0	500	0	0	0
Deliveries from FY 1999 funding	0	0	0	0	0	500	0	0
Deliveries from FY 2000 funding	0	0	0	0	0	0	750	0
Deliveries from FY 2001 funding	0	0	0	0	0	0	0	750
Combat Losses/Usage	0	0	0	0	0	0	0	0
Training Losses/Usage	0	432	736	683	642	624	652	680
Test Losses/Usage	0	0	0	0	0	0	0	0
Other Losses/Usage	1323	0	0	0	0	0	0	0
Disposals/Retirements/Attritions/etc.	0	0	0	0	0	0	0	0
End of Year Asset Position	982	2656	1920	1752	1610	1486	1584	1654
Inventory Objective/Current Authorized Allow	2491	1851	2061	1949	1918	1956	1956	1956
Example:								
Inventory	Actual Training Expenditures	Other than Training Usage	Disposals (Vehicles/Other)					
	FY96: 823	FY96: 0	FY96: 0					
	FY95: 849	FY95: 0	FY95: 0					
	FY94: 916	FY94: 0	FY94: 0					
	FY93: 1030	FY93: 0	FY93: 0					
TOTAL:								
REMARKS Training Losses/Usage: Reflect Sponsor-directed firings for Improved Flex Hose. Other Losses/Usage: New item installed in Torpedo Mounted Dispenser (TMD) FY96 and introduced to Fleet in FY97. Prior Year usage reflects Standard Flex Hose firings; FY97-FY03 Training Losses/Usage reflects Improved Flex Hose firings only.								

F8100/Otto Fuel II	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
Buy Summary QTY (1,000 lbs. Per Unit)	123	392	285	295	300	400	400	400
Unit Cost	\$5.410	\$5.340	\$6.880	\$7.031	\$7.186	\$7.344	\$7.506	\$7.671
Total Cost	\$665	\$2,093	\$1,961	\$2,074	\$2,156	\$2,938	\$3,002	\$3,068
Asset Dynamics								
Beginning Asset Position	466	674	636	751	942	1054	1083	1012
Deliveries from Other Sources (Reclamation)	230	229	225	223	222	119	20	20
Deliveries from all prior year funding	473	154	123	0	0	0	0	0
Deliveries from FY 1997 funding	0	0	239	392	0	0	0	0
Deliveries from FY 1998 funding	0	0	0	0	285	0	0	0
Deliveries from FY 1999 funding	0	0	0	0	0	295	0	0
Deliveries from FY 2000 funding	0	0	0	0	0	0	300	0
Deliveries from FY 2001 funding	0	0	0	0	0	0	0	400
Combat Losses/Usage	0	0	0	0	0	0	0	0
Training Losses/Usage	495	421	472	424	395	385	391	399
Test Losses/Usage	0	0	0	0	0	0	0	0
Other Losses/Usage	0	0	0	0	0	0	0	0
Disposals/Retirements/Attritions/etc.	0	0	0	0	0	0	0	0
End of Year Asset Position	674	636	751	942	1054	1083	1012	1033
Inventory Objective/Current Authorized Allowance	1388	1317	1291	1204	1171	1175	1175	1175
Example:								
Inventory Objective	Actual Training Expenditures	Other than Training Usage	Disposals (Vehicles/Other)					
	FY96: 495	FY96: 0	FY96: 0					
	FY95: 440	FY95: 0	FY95: 0					
	FY94: 410	FY94: 0	FY94: 0					
	FY93: 445	FY93: 0	FY93: 0					
TOTAL:								
REMARKS Training Losses/Usage: Reflect Sponsor-directed firings. Deliveries from Other Sources: Adjusted to reflect reclaimed Otto fuel. FY01 decrease in reclamation due to the completion of Deep Stow.								

Exhibit P-20, Requirements Study		Approp Code/BA 1507/		Subhead C3F8		Date: February 1998		
P-1 Line Item Nomenclature Heavyweight Torpedo Support Equipment LI# 330100			Admin Leadtime (after Oct 1): 7 months			Prod Leadtime: 17 months		
Project Unit/Item F8100/Igniter	PY FY 1996	PY FY 1997	CY FY 1998	BY1 FY 1999	BY2 FY 2000	BY2+1 FY 2001	BY2+2 FY 2002	BY2+3 FY 2003
Buy Summary QTY	1,101	0	0	1,000	1,000	1,000	1,000	850
Unit Cost	\$0.133	\$0.136	\$0.139	\$0.141	\$0.145	\$0.148	\$0.151	\$0.155
Total Cost	\$146	\$0	\$0	\$141	\$145	\$148	\$151	\$132
Asset Dynamics								
Beginning Asset Position	8544	7721	6798	6936	6088	5301	5544	5786
Deliveries from all prior year funding	0	0	1,101	0	0	0	0	0
Deliveries from FY 1997 funding	0	0	0	0	0	0	0	0
Deliveries from FY 1998 funding	0	0	0	0	0	0	0	0
Deliveries from FY 1999 funding	0	0	0	0	0	1,000	0	0
Deliveries from FY 2000 funding	0	0	0	0	0	0	1,000	0
Deliveries from FY 2001 funding	0	0	0	0	0	0	0	1,000
Combat Losses/Usage	0	0	0	0	0	0	0	0
Training Losses/Usage	823	923	963	848	787	757	758	748
Test Losses/Usage	0	0	0	0	0	0	0	0
Other Losses/Usage	0	0	0	0	0	0	0	0
Disposals/Retirements/Attritions/etc.	0	0	0	0	0	0	0	0
End of Year Asset Position	7721	6798	6936	6088	5301	5544	5786	6038
Inventory Objective/Current Authorized Allow	2709	2734	2598	2392	2302	2263	2263	2263
Example:								
Inventory	Actual Training Expenditures	Other than Training Usage	Disposals (Vehicles/Other)					
	FY96: 823	FY96: 0	FY96: 0					
	FY95: 849	FY95: 0	FY95: 0					
	FY94: 916	FY94: 0	FY94: 0					
	FY93: 1030	FY93: 0	FY93: 0					
TOTAL:								
REMARKS Training Losses/Usage: Reflect Sponsor-directed firings. End Year Inventories include use of Chamber and Valves (C&V) that had Ignitor pre-installed.								

P-1 Shopping List Item No

Exhibit P-20, Requirements Study	Approp Code/BA 1507/		Subhead C3F8		Date: February 1998			
P-1 Line Item Nomenclature Heavyweight Torpedo Support Equipment LI# 330100			Admin Leadtime (after Oct 1): 7 months		Prod Leadtime: 17 months			
Project Unit/Item F8100/Propellant (Long)	PY FY 1996	PY FY 1997	CY FY 1998	BY1 FY 1999	BY2 FY 2000	BY2+1 FY 2001	BY2+2 FY 2002	BY2+3 FY 2003
Buy Summary QTY	1,000	0	1,500	500	1,000	500	1,000	1,000
Unit Cost	\$0.500	\$0.500	\$0.565	\$0.577	\$0.589	\$0.601	\$0.614	\$0.627
Total Cost	\$500	\$0	\$848	\$288	\$589	\$301	\$614	\$627
Asset Dynamics								
Beginning Asset Position	1338	1000	670	877	163	995	848	1172
Deliveries from all prior year funding	0	0	1,000	0	0	0	0	0
Deliveries from FY 1997 funding	0	0	0	0	0	0	0	0
Deliveries from FY 1998 funding	0	0	0	0	1,500	0	0	0
Deliveries from FY 1999 funding	0	0	0	0	0	500	0	0
Deliveries from FY 2000 funding	0	0	0	0	0	0	1,000	0
Deliveries from FY 2001 funding	0	0	0	0	0	0	0	500
Combat Losses/Usage	0	0	0	0	0	0	0	0
Training Losses/Usage	0	270	793	714	668	647	676	703
Test Losses/Usage	0	0	0	0	0	0	0	0
Other Losses/Usage	338	60	0	0	0	0	0	0
Disposals/Retirements/Attritions/etc.	0	0	0	0	0	0	0	0
End of Year Asset Position	1000	670	877	163	995	848	1172	969
Inventory Objective/Current Authorized A	1461	1837	2175	2029	1991	2026	2026	2026
Example:								
Inventory	Actual Training Expenditures	Other than Training Usage	Disposals (Vehicles/Other)					
	FY96: 823	FY96: 0	FY96: 0					
	FY95: 849	FY95: 0	FY95: 0					
	FY94: 916	FY94: 0	FY94: 0					
	FY93: 1030	FY93: 0	FY93: 0					
TOTAL:								
REMARKS Training Losses/Usage: Reflect Sponsor-directed firings; new item introduced to Fleet FY97. Prior Year expenditures reflect Short Grain Propellant firings; FY97-FY03 usage reflects Long Grain firings only. Other Losses/Usage: Reflect installations into Chamber and Valves (C&V), FY96-FY97.								

Exhibit P-20, Requirements Study	Approp Code/BA 1507/		Subhead C3F8		Date: February 1998			
P-1 Line Item Nomenclature Heavyweight Torpedo Support Equipment LI# 330100		Admin Leadtime (after Oct 1): 7 months			Prod Leadtime: 17 months			
Project Unit/Item F8100/Umbilical Cables (Impro	PY FY 1996	PY FY 1997	CY FY 1998	BY1 FY 1999	BY2 FY 2000	BY2+1 FY 2001	BY2+2 FY 2002	BY2+3 FY 2003
Buy Summary QTY	362	330	410	377	186	0	0	0
Unit Cost	\$3.248	\$5.865	\$5.988	\$6.120	\$6.254	\$6.392	\$6.533	\$6.676
Total Cost	\$1,176	\$1,935	\$2,455	\$2,307	\$1,163	\$0	\$0	\$0
Asset Dynamics								
Beginning Asset Position	0	0	1228	1442	1635	1916	2168	2223
Deliveries from all prior year funding	0	1267	362	0	0	0	0	0
Deliveries from FY 1997 funding	0	0	0	330	0	0	0	0
Deliveries from FY 1998 funding	0	0	0	0	410	0	0	0
Deliveries from FY 1999 funding	0	0	0	0	0	377	0	0
Deliveries from FY 2000 funding	0	0	0	0	0	0	186	0
Deliveries from FY 2001 funding	0	0	0	0	0	0	0	0
Combat Losses/Usage	0	0	0	0	0	0	0	0
Training Losses/Usage	0	39	148	137	129	125	131	136
Test Losses/Usage	0	0	0	0	0	0	0	0
Other Losses/Usage	0	0	0	0	0	0	0	0
Disposals/Retirements/Attritions/etc.	0	0	0	0	0	0	0	0
End of Year Asset Position	0	1228	1442	1635	1916	2168	2223	2087
Inventory Objective/Current Authorized All	2369	2369	2369	2369	2369	2369	2369	2369
Example:								
Inventory	Actual Training Expenditures	Other than Training Usage	Disposals (Vehicles/Other)					
	FY96: 0	FY96: 0	FY96: 0					
	FY95: 0	FY95: 0	FY95: 0					
	FY94: 0	FY94: 0	FY94: 0					
	FY93: 0	FY93: 0	FY93: 0					
TOTAL:								
REMARKS Training Losses/Usage: Reflect Sponsor-directed firings; new cable can be reused up to 5 times before replacement. Fleet introduction of new cable to be complete FY99.								

CLASSIFICATION:

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BUDGET ITEM JUSTIFICATION SHEET P-40								DATE: February 1998					
APPROPRIATION/BUDGET ACTIVITY Weapons Procurement, Navy BA 3 - Torpedoes and Related Equipment								P-1 ITEM NOMENCLATURE ASW Range Support/330200					
Program Element for Code B Items:								Other Related Program Elements					
	Prior Years	ID Code			FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total
QUANTITY													
COST (In Millions)					\$14.4	\$11.5	\$14.7	\$15.4	\$13.4	\$13.2	\$13.5		\$96.1
<p>The ASW Range support program provides training range equipment, weapon proofing range equipment, and Fleet support equipment for use on the Navy's underwater ranges. This equipment is used to instrument Fleet exercises and torpedo firings, ASW readiness assessment and ASW weapon production acceptance testing. The Weapon Fleet training ranges supported are Southern California Offshore Range (SCORE), Barking Sands Tactical Underwater Range/Barking Sands Underwater Range Extension (BARSTUR/BSURE), Atlantic Underwater Test and Evaluation Center (AUTEC) and Atlantic Fleet Weapons Training Facility (AFWTF). Test and Evaluation (T&E) ranges are Nanoose, Dabob Bay and Quinalt.</p> <p>F4001 - Pinger Exercise Components are placed in weapons and other underwater vehicles for tracking during training and T&E exercises, and to insure safe operation and movement of all craft and weapons on the ranges. In addition, pinger components are also procured to support the future Shallow Water Training Ranges at both coasts and Hawaii.</p> <p>F4003 - Recovery Equipment is used on T&E ranges for recovering weapons on or buried in the sea floor. Approximately \$20 million of hardware is recovered each year using these devices.</p> <p>F4004 - The T&E Range Equipment line provides for improvement and modernization of the Underwater Weapons Evaluation Facility; range equipment for YTT (Yard Torpedo Tender) and test crafts; portable tracking range components used at remote sites for testing requirements in different sea-bottom, littoral and cold water environments; and other range systems in support of weapon T&E operations.</p> <p>F4005 - The ASW Target MK 30 Mod 1 provides essential fleet ASW training on the Navy's underwater tracking ranges. The MK 30 Mod 1 is currently used at the BARSTUR - Hawaii, AUTEC- Bahamas, AFWTF - St. Croix, Virgin Islands and SCORE. ASW range support funds are used to procure components for the MK 30 that are consumed/expended during fleet in-water runs. These funds are also used to replace obsolete components and improve maintenance and reliability of the targets.</p> <p>F4006 - The stationary target components include the MK 28 Targets, the MK 69 Target, and the Over-the-Side (OTS) Target. MK 28 Targets are used for conducting Service Weapons Test (SWT) on in-service and advanced warshot torpedoes. The SWT is the only test the Navy has to verify the explosive chain of torpedoes. Funding is used to procure target systems and components expended during SWT operations in addition to improvement and modernization projects. The MK 69 is a bottom mounted stationary target and Over-the-side (OTS) is a surface deployed target used to test various weapon attributes during T&E exercises. These targets are needed to fill specific technical requirements for the MK 48 ADCAP and MK 50 torpedoes. Funding is used to procure components that improve operability and maintenance of the target.</p> <p>Production Engineering funds support efforts performed by a field activity or contractor during the production phase of these projects.</p>													

P-1 SHOPPING LIST

CLASSIFICATION:

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WEAPONS SYSTEM COST ANALYSIS							Weapon System			DATE:				
P-5										February 1998				
APPROPRIATION/BUDGET ACTIVITY						ID Code	P-1 ITEM NOMENCLATURE/SUBHEAD							
Weapons Procurement, Navy							ASW Range Support (83F4)							
BA 3 - Torpedoes and Related Equipment														
COST CODE	ELEMENT OF COST	ID Code	TOTAL COST IN THOUSANDS OF DOLLARS											
						FY 1997			FY 1998			FY 1999		
			QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
	<u>N85</u>													
F4001	Pinger Exercise Components							132			-			-
	<u>N86</u>													
F4001	Pinger Exercise Components							103			253			386
F4002	Proofing Pinger Components							206			-			-
F4003	Recovery Equipment							105			83			142
F4004	Test & Evaluation Range Equipment							286			222			373
F4005-30	MK30 Components							-			-			-
F4005-R	Stationary Target Components							187			-			-
F4006	Stationary Target Components							-			120			183
F4830	Production Engineering In-House							84			66			77
F4840	Quality Assurance - In-House							46			-			-
F4850	Product Improvement							94			52			59
F4860	Acceptance Test & Evaluation In-House							62			-			-
F4900	Production Engineering - Contractors							54			46			51
	<u>N87</u>													
F4001	Pinger Exercise Components							451			1,328			1,652
F4002	Proofing Pinger Components							901			-			-
F4003	Recovery Equipment							460			453			641
F4004	Test & Evaluation Range Equipment							1,252			1,267			1,759
F4005-30	MK30 Components							-			-			-
F4005-R	Stationary Target Components							820			-			-
F4006	Stationary Target Components							-			656			820
F4830	Production Engineering In-House							370			361			345
F4840	Quality Assurance - In-House							202			-			-
F4850	Product Improvement							413			284			267
F4860	Acceptance Test & Evaluation In-House							270			-			-
F4900	Production Engineering - Contractors							236			250			232
	<u>N88</u>													
F4001	Pinger Exercise Components							511			419			528
F4005-30	MK30 Components							-			-			-
F4830	Production Engineering In-House							78			68			68
F4840	Quality Assurance - In-House							52			-			-
F4850	Product Improvement							104			69			53
F4860	Acceptance Test & Evaluation In-House							26			-			-
F4900	Production Engineering - Contractors							60			54			67
SUBTOTAL RANGE Components							0			7,565			6,051	7,703

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BUDGET ITEM JUSTIFICATION SHEET							DATE:	
P-40							February 1998	
APPROPRIATION/BUDGET ACTIVITY					P-1 ITEM NOMENCLATURE			
Weapons Procurement, Navy					BLI 2410			
BA - 3 Torpedoes and Related Equipment					FIRST DESTINATION TRANSPORTATION (FDT) / 93TA			
		FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY								
COST (In Millions)		2.6	1.8	2.0	2.0	2.0	2.1	2.1

First Destination Transportation (FDT) provides for the movement of newly procured equipment and material from the contractor's plant to the initial point of receipt for subsequent shipment to its destination.

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WEAPONS SYSTEM COST ANALYSIS								DATE:			
P-5								February 1998			
APPROPRIATION/BUDGET ACTIVITY					P-1 ITEM NOMENCLATURE/SUBHEAD						
Weapons Procurement, Navy					First Destination Transportation (FDT) / 93TA						
BA 3 Torpedoes and Related Equipment											
COST CODE	ELEMENT OF COST	IDENT CODE	TOTAL COST IN THOUSANDS OF DOLLARS								
					FY 1997		FY 1998		FY 1999		
			QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST	
TA001	First Destination Transportation					2,554			1,764		1,979
			0		2,554			1,764		1,979	

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