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## BUDGET ITEM JUSTIFICATION SHEET

DATE

February 2005

## APPROPRIATION/BUDGET ACTIVITY

Other Procurement, Navy/

## P-1 ITEM NOMENCLATURE

## Budget Activity 4 - Ordnance Support Equipment

## Strategic Missile Systems Equipment (535800)

QUANTITY	FY 04	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11
Cost (in millions)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	\$102.8	\$101.5	\$108.1	\$106.8	\$130.6	\$113.0	\$134.2	\$165.6

The SSP funding in this P-1 line provides for the procurement of Strategic Weapons System (SWS) equipment for deployed SSBNs and shore support sites to support the TRIDENT II (D5) program.

## OTHER MATERIAL SUPPORT

A broad range of other material support equipment must be procured for deployed SSBNs, shore installations and contractor facilities. Included within this category are general and special purpose test equipment, launcher expendables, navigation principal items, test instrumentation in support of missile flight tests, and missile checkout equipment. Amounts included within this P-1 line for this category are subdivided as follows:

	FY 2004	FY 2005	FY 2006	FY 2007
		(\$000)		
Launcher and Handling Equipment	6,000	3,400	200	8,500
Fire Control Equipment	3,500	4,300	3,400	3,000
Navigation Equipment	2,800	1,600	1,700	1,400
Instrumentation/Missile Checkout Equipment	1,200	8,000	2,500	3,900
<b>Total</b>	<b>\$13,500</b>	<b>\$17,300</b>	<b>\$7,800</b>	<b>\$16,800</b>

Launcher and Handling Equipment: Funding in FY 2004 - FY 2007 is required to procure Launcher Expendables (namely, MK-74 Gas Generators and related production support).

Fire Control Equipment: Funding in FY 2004 - FY 2007 provides for procurement of MK-98 Mod 4 Fire Control System and Support Equipment replacement items onboard SSBNs and at shore sites and for implementation of Capital Maintenance Projects at the Naval Industrial Reserve Ordnance Plant (NIROP) in Pittsfield, MA; these projects are essential to correct environmental, safety, and energy conservation deficiencies.

Navigation Equipment: Funding is required in all years for replacement of worn or damaged items of inertial test equipment used at contractors' plants to support test, evaluation, and analysis of inertial instruments; and for procurement of critical components essential to maintain configuration control and equipment reliability.

Instrumentation/Missile Test Equipment: Funding in all years provides for shorebased and shipboard test instrumentation equipment in support of missile flight tests and for procurement of surface support equipment and items to satisfy replacement requirements generated by fleet-related tactical activities. The FY 2005 request also provided for procurement of, and upgrades to, telemetry and destruct systems essential to establishing a TRIDENT II (D5) flight test capability in the Pacific.

DD FORM 2454, JUL 88

P-1 SHOPPING LIST

ITEM NO. PAGE NO.

111

1

EXHIBIT P-40 BUDGET JUSTIFICATION SHEET

UNCLASSIFIED

## ALTERATIONS

Alterations to non-flying tactical hardware are continuing requirements for the Strategic Weapons System (SWS). Requirements primarily relate to shipboard investments in COTS/NDI SWS subsystem equipment, including periodic refresh cycles, to ensure continued reliable performance of the weapon system for its extended service life through FY 2042. Alterations (SPALTs) also entail the application of available technology to eliminate personnel safety hazards, correct design deficiencies, maintain system effectiveness by resolving equipment operability problems, achieve logistic economies, and provide for shipboard subsystem D5 life extension modernization efforts. SPALT estimates include both known alterations related to resolution of specific problems as well as calculated, formula-generated alterations based on recent experience. Amounts included in this P-1 line for alterations are subdivided as follows:

	FY 2004	FY 2005	FY 2006	FY 2007
	(\$000)			
Launcher and Handling Equipment	6,400	2,800	3,000	1,000
Fire Control Equipment	32,200	37,300	48,200	32,600
Navigation Equipment	24,800	25,400	32,000	36,600
Instrumentation/Missile Checkout Equipment	8,000	2,100	2,900	4,600
<b>Total</b>	<b>\$71,400</b>	<b>\$67,600</b>	<b>\$86,100</b>	<b>\$74,800</b>

Funds are required to procure formula-generated alterations to the Strategic Weapons System launcher and fire control subsystems: to inertial, non-inertial, and Electrostatically Supported Gyro Navigator (ESGN) navigation subsystem equipment on deployed SSBNs and installed at supporting shore facilities, including the TRIDENT Training Facility (TTF), Bangor, TTF, Kings Bay, the Ashore Navigation Center, and the Inertial System Test Laboratory; to test instrumentation used on SSBNs, support ships and at the Eastern Test Range, the TRIDENT Refit Facility (TRF), Bangor, and TRF, Kings Bay; and to missile handling equipment, missile test and readiness equipment, and surface support equipment. Installation of approved SPALTs is performed on a turnkey basis in conjunction with the procurement of equipment. Use of Commercial-off-the-Shelf/Non-Developmental Items (COTS/NDI) has been initiated and is being implemented in all subsystems, wherever possible.

In addition to providing for calculated Fire Control System modifications based on historical experience, funding in all years will allow for implementation of life-cycle cost control initiatives aimed at the integration of TRIDENT II SWS subsystem equipment into the Fire Control system, leveraging off of the MK-98 Mod 4 Fire Control design to implement the first phase of TRIDENT II Shipboard Systems Integration architecture. The product of these SWS integration efforts will be implementation of an affordable design to meet all operational requirements, while minimizing total ownership costs.

The FY 2004 through FY 2007 requests for Navigation equipment alterations will address aging and obsolescence issues by providing for procurement of an updated navigation system, employing an Interferometric Fiber Optic Gyroscope (IFOG) and capable of economically supporting the TRIDENT II SWS throughout its extended service life.

In addition to formula-generated alterations to Instrumentation/Missile Checkout equipment which are budgeted in all years, the FY 2004 through FY 2007 requests will support implementation of COTS-based alterations to the TRIDENT II M240R Data Recording System.

DD FORM 2454, JUL 88

P-1 SHOPPING LIST

ITEM NO. PAGE NO.

111

2

EXHIBIT P-40 BUDGET JUSTIFICATION SHEET



UNCLASSIFIED

## TRAINING SUPPORT EQUIPMENT

This category provides for procurement of, and alterations to, both tactical and non-tactical equipment required at submarine training facilities to train personnel in the operation and maintenance of launcher and handling, fire control, navigation, missile checkout, and test instrumentation subsystems. Each training facility consists of an integrated family of system and unit laboratories that interface with a central stimulation complex to provide complete and realistic training for replacement and off-crew personnel, both officer and enlisted, as required for manning of SSBNs and shore facilities. Funding in all years is budgeted to procure training-unique equipment required as the result of alterations to SWS tactical equipment.

In FY 2004 through FY 2007, funds are required for software and hardware design modification, lab documentation modification, facility modification, and design and system integration, as well as procurement and fabrication of all hardware needed to support MK-98 Mod 6 Fire Control subsystem training at both the TRIDENT Training Facility (TTF), Bangor, and at TTF, Kings Bay. The required effort includes upgrade of the 4-tube cluster to accommodate Mod 6 configuration and integration with the Missile Control Center (MCC) Lab, conversion of the MCC to Mod 6 training configuration, upgrade of documentation, upgrade of the single-tube lab to support Mod 6 training, and development, test, integration and installation of a Power Node Simulator and a PC-based Simulator. Funding in FY 2007 addresses the need for acquisition of upgrades to the Bangor and Kings Bay TTFs resulting from tactical changes in the TRIDENT II (D5) missile under the Life Extension (LE) program. Specifically called for are hardware and software efforts associated with support of D5LE Simulator equipment at both the East and West Coast sites.

	FY 2004	FY 2005	FY 2006	FY 2007
<b>Training Support Equipment</b>	<b>\$11,889</b>	<b>\$16,551</b>	<b>\$14,206</b>	<b>\$15,201</b>

## TRIDENT II (D5) BACKFIT

The Program of Record calls for a post-START II Submarine-Launched Ballistic Missile (SLBM) force of 14 TRIDENT SSBNs, all equipped with TRIDENT II (D5) missiles and based at two homeports (Kings Bay, GA, and Bangor, WA). This mandated 14-boat, all D5 force breaks down as follows:

10 SCN-Funded, New-Construction TRIDENT II Submarines: SSBNs 734-743, the last of which deployed in FY 1998.

2 OPN-Funded, TRIDENT I (C4) Equipped Submarines already Backfitted to TRIDENT II (D5) Capability: SSBNs 732 and 733, which have completed their concurrent Engineered Overhauls (EOHs) and D5 Backfits at Puget Sound Naval Shipyard (PSNS) and have deployed.

2 SCN-Funded, TRIDENT I (C4) Equipped Submarines to be Backfitted to TRIDENT II (D5) Capability: SSBN 730 has commenced its concurrent Engineered Refueling Overhaul (ERO) and D5 Backfit in FY 2005 and SSBN 731 will commence its ERO and D5 Backfit in FY 2006.

Funding in this cost category is required to procure and install shipboard tactical equipment needed to upgrade the first two designated D5 Backfit hulls (SSBNs 732 and 733) from C4 to D5 capability. (Since the second two Backfit hulls (SSBNs 730 and 731) will undergo their D5 modernization during concurrent EROs, they are therefore being financed with SCN funds beginning in FY 2002.)

	FY 2004	FY 2005	FY 2006	FY 2007
<b>TRIDENT II (D5) Backfit</b>	<b>\$6,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

ITEM NO. PAGE NO.

UNCLASSIFIED

WEAPON SYSTEM COST ANALYSIS								DATE:	
EXHIBIT (P-5) PROGRAM COST BREAKDOWN						February 2005			
APPROPRIATION/BUDGET ACTIVITY				P-1 ITEM NOMENCLATURE/SUBHEAD					
Other Procurement, Navy/ Budget Activity 4 - Ordnance Support Equipment				Strategic Missile Systems Equipment/34U9					
				Total Cost in Thousands of Dollars					
WEAPON SYSTEM COST ELEMENTS	Ident. Code	FY 04 Qty	Total Cost	FY 05 Qty	Total Cost	FY 06 Qty	Total Cost	FY 07 Qty	Total Cost
Other Material Support			13,500		17,300		7,800		16,800
Alterations			71,400		67,600		86,100		74,800
Training Support Equipment			11,889		16,551		14,206		15,201
TRIDENT II (D5) Backfit			6,000		0		0		0
Total			\$102,789		\$101,451		\$108,106		\$106,801