

BUDGET ITEM JUSTIFICATION SHEET

DATE  
February 2006

APPROPRIATION/BUDGET ACTIVITY Other Procurement, Navy Budget Activity 4 - Ordnance Support Equipment	P-1 ITEM NOMENCLATURE Strategic Missile Systems Equipment (535800)										
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QUANTITY	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
	\$101.4	\$106.7	\$111.1	\$147.0	\$125.4	\$144.7	\$171.3

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. Included are shipboard subsystem equipment modernization and technical refresh efforts associated with the TRIDENT II (D-5) life extension program. TRIDENT II SSBN hull life has been extended 15 years, extending system life to FY 2042.

**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 2005	FY 2006	FY 2007
Launcher and Handling Equipment	3,400	1,700	10,950
Fire Control Equipment	3,400	3,000	3,100
Navigation Equipment	1,600	6,250	450
Instrumentation/Missile Checkout Equipment	5,000	1,800	4,500
<b>Total</b>	<b>\$13,400</b>	<b>\$12,750</b>	<b>\$19,000</b>

Launcher and Handling Equipment: Funding in FY 2005 - FY 2007 is required to procure Launcher Expendables (namely, MK-74 Gas Generators and related production support).

Fire Control Equipment: Funding in FY 2005 - 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 shore based 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 2007 request includes a satellite communications replacement system for the INMARST Terminal B that will be supportable and current with existing satellite providers and addresses obsolescence issues and improves the Navy Mobile Instrumentation Ship (NIMIS) communications link.

## 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 equipments, 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 2005	FY 2006	FY 2007
	(\$000)		
Launcher and Handling Equipment	3,900	3,000	8,000
Fire Control Equipment	38,414	48,200	11,200
Navigation Equipment	29,000	32,000	43,000
Instrumentation/Missile Checkout Equipment	2,100	1,050	2,000
<b>Total</b>	<b>\$73,414</b>	<b>\$84,250</b>	<b>\$64,200</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 (TRF), Bangor, TRF, 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.

Launcher and Handling Equipment: Funding provides for launcher and handling equipment alterations to address aging and obsolescence issues. FY 2007 funding will provide for the Launcher Firing Unit System Upgrade to address a "single point failure" risk. The current Launcher Subsystem Firing Unit will not meet the SWS life requirements based on current evidence of system degradation due to aging and obsolescence. The upgraded firing system will provide system redundancy, end-to-end circuit testing, and maintain the demonstrated reliability of the firing unit through the end of the program.

Fire Control Equipment: 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.

Navigation Equipment: The FY 2005 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. FY 2007 request also allows continued Shipboard Systems Integration (Navigation Move to the Missile Control Center (MCC)). The Navigation-Move to MCC is a component of SSP's on-going strategy to integrate SWS shipboard systems for purposes of long-term program supportability and affordability. The elimination of Navigation work stations, electronic consoles, and other Navigation unique components will significantly reduce total program Navigation subsystem refurbishment costs and potentially reduce Navy MILPERS and training costs.

Instrumentation/Missile Equipment: In addition to formula-generated alterations to Instrumentation/Missile Checkout equipment which are budgeted in all years, the FY 2005 through FY 2007 requests will support implementation of COTS-based alterations to the TRIDENT II M240R Data Recording System.



**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, including those associated with D-5 life extension.

In FY 2005 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 2005	FY 2006	FY 2007
	(\$000)		
<b>Training Support Equipment</b>	<b>\$14,559</b>	<b>\$9,676</b>	<b>\$15,927</b>

**CONVENTIONAL TRIDENT MODIFICATION (CTM)**

Conventional TRIDENT Modification (CTM) adapts the TRIDENT II (D-5) missile system to provide an offensive precision strike capability delivering conventional (non-nuclear) effects at global ranges. CTM will fit existing D5 missiles with new reentry bodies equipped with aerodynamic controls, GPS-aided terminal guidance and a conventional payload. This funding will provide for production and procurement of Launcher System Hardware, production and procurement of Fire Control Hardware, and development of Fire Control software specific to CTM applications. Funds will also provide for the development of tactical software for the SSBNs and training software for installation at the two TRIDENT Training Facilities (TTF).

FY 2007, funds are required for On-Board Modifications of the Launcher and Fire Control Hardware (\$8.3M), Fire Control Software (2.8M) and Trainer Modifications (\$.9M). Outyear funds FY 2008 - FY 2010 are for Fire Control Hardware and Software development and installations.

	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
Conventional Trident Modification	\$0	\$0	\$12,000

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**WEAPON SYSTEM COST ANALYSIS  
EXHIBIT (P-5) PROGRAM COST BREAKDOWN**

**DATE:**  
February 2006

APPROPRIATION/BUDGET ACTIVITY Other Procurement, Navy Budget Activity 4 - Ordnance Support Equipment	WEAPON SYSTEM COST ELEMENTS	Ident. Code	P-1 ITEM NOMENCLATURE/SUBHEAD Strategic Missile Systems Equipment / 34U9 Total Cost in Thousands of Dollars						
			FY 05	FY 06	FY 07	Total			
			Qty	Cost	Qty	Cost	Qty	Cost	
	Other Material Support			13,400		12,750		19,000	
	Alterations			73,414		84,250		64,200	
	Training Support Equipment			14,559		9,676		15,927	
	Conventional Trident Modification			0		0		12,000	
	<b>Total</b>			<b>\$101,373</b>		<b>\$106,676</b>		<b>\$111,127</b>	

P-1 SHOPPING LIST  
ITEM NO. PAGE NO.

111 5

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WEAPON SYSTEM COST ANALYSIS  
EXHIBIT (P-5) PROGRAM COST BREAKDOWN

DATE:  
February 2006

APPROPRIATION/BUDGET ACTIVITY  
Other Procurement, Navy  
Budget Activity 4 - Ordnance Support Equipment

P-1 ITEM NOMENCLATURE/SUBHEAD  
Strategic Missile Systems Equipment / 34U9  
Total Cost in Thousands of Dollars

WEAPON SYSTEM COST ELEMENTS	Ident. Code	FY 08		FY 09		FY 10		FY 11	
		Qty	Total Cost	Qty	Total Cost	Qty	Total Cost	Qty	Total Cost
Other Material Support			33,800		17,575		34,300		23,160
Alterations			93,700		90,025		88,700		134,940
Training Support Equipment			9,515		11,757		19,618		13,233
Conventional Trident Modification			10,000		6,000		2,000		0
<b>Total</b>			<b>\$147,015</b>		<b>\$125,357</b>		<b>\$144,618</b>		<b>\$171,333</b>

P-1 SHOPPING LIST  
ITEM NO. PAGE NO.

111 6

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