

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification

DATE: **February 2003**

APPROPRIATION/BUDGET ACTIVITY
RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-7

R-1 ITEM NOMENCLATURE
PE 0101221N Strategic Sub & Wpns Sys Spt

| COST (\$ in Millions) | FY 2002 | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 |
|--|---------|---------|---------|---------|---------|---------|---------|---------|
| Total PE Cost | 43.0 | 39.3 | 104.8 | 139.6 | 141.9 | 111.0 | 114.1 | 114.9 |
| J0951 TRIDENT II | 9.1 | | 29.6 | 30.3 | | 30.4 | | |
| SC004 TRIDENT Submarine System Improvement | 0.5 | 5.3 | 3.0 | 2.6 | | 3.5 | 3.4 | 3.5 |
| J2228 Technology Applications Program | 33.4 | 34.0 | 72.2 | 106.7 | | 108.0 | 107.6 | 110.7 |
| | | | | | | | | 111.4 |

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The TRIDENT II (D5) Submarine Launched Ballistic Missile (SLBM) provides the U.S. a weapon system with greater accuracy and payload capability as compared to the TRIDENT I (C4) system. TRIDENT II enhances U.S. strategic deterrence providing a survivable sea-based system capable of engaging the full spectrum of potential targets with fewer submarines. This Program Element supports investigations into new technologies which would help mitigate the program impact due to component obsolescence and a rapidly decreasing manufacturing support base. These efforts include Reentry System Applications and Guidance System Applications, Radiation Hardened Electronics Applications, and Strategic Propulsion Applications. Also included in this program element are efforts associated with the three year Enhanced Effectiveness (E2) Demonstration which is intended to demonstrate a near-term capability to steer a SLBM warhead to Global Positioning Satellite (GPS)-like accuracy. Finally, the TRIDENT Submarine System Improvement Program develops and integrates command and control improvements needed to maintain TRIDENT Submarine operational capability through the life cycle of this vital strategic asset. The program conducts efforts needed to maintain strategic connectivity, ensure platform invulnerability, and reduce lifecycle costs through Obsolete Equipment Replacement (OER) and commonality.

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY

RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-7

R-1 ITEM NOMENCLATURE
PE 0101221N Strategic Sub & Wpns Sys Spt

DATE: February 2003

B. (U) Program Change Summary:

| | EY 2002 | EY 2003 | EY 2004 | EY 2005 |
|---|---------|---------|---------|---------|
| Previous President's Budget: FY 2003 President's Controls): | 45.5 | 40.3 | 41.4 | 41.8 |
| Current President's Budget (FY 2004 President's Controls): | 43.0 | 39.3 | 104.8 | 139.6 |
| Total Adjustments: | -2.5 | -0.7 | 63.4 | 97.8 |
| Summary of Adjustments: | | | | |
| Congressional Undistributed Reductions | | | -0.8 | -0.5 |
| Reprogrammings | -1.2 | | -0.5 | -1.2 |
| SBIR Transfer | -0.9 | | | |
| Management Reform | -0.3 | -0.1 | | |
| Economic Assumptions/Various | | | -3.0 | -3.0 |
| Nuclear Posture Review Program Add | -0.1 | -0.6 | 67.7 | 102.5 |

- C. (U) Other Program Funding Summary: See enclosed R-2a for each individual project data.
- D. (U) Acquisition Strategy: See enclosed R-2a for each individual project data.

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RD&E Project Justification

DATE: **February 2003**

APPROPRIATION/BUDGET ACTIVITY
RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-7

PROJECT NUMBER AND NAME
TRIDENT II J0951

| COST (\$ in Millions) | FY 2002 | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 |
|-------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| Project Cost J0951 TRIDENT II | 9.1 | 0.0 | 29.6 | 30.3 | 30.4 | 0.0 | 0.0 | 0.0 |
| RD&E Articles Qty | | | | | | | | |

A. (U) MISSION DESCRIPTION AND BUDGET PROJECT JUSTIFICATION:

This project supports an Effectiveness Enhancement (E2) Demonstration, starting in FY 2004, which is intended to demonstrate a near-term capability to steer a SLBM warhead to Global Positioning Satellite (GPS)-like accuracy. There will be no redesign of internal navigation components, optimization of packaging, or warhead development. Existing electronics and instrumentation will be packaged in the at-extension portion of the reentry body (RB). This minimizes demonstration costs, and provides a point of departure for a potential follow-on SDD (System Design and Development) that would optimize for production of similar but smaller components develop appropriate payloads. In addition, modifications to the Missile, Guidance & Fire Control sections would be required to provide the necessary inertial measurement unit (IMU) alignment required for this application. Although the technology being developed applies to ballistic missiles in general, this demonstration is targeted to use TRIDENT II (D5). The demonstration is structured to use the existing D5 design to the maximum extent, and also use instrumentation already developed for reentry bodies (integrating it with control flaps for this new purpose). The demonstration will culminate in flight tests and will provide a final demonstration assessment report and recommended transition plan to the NAVY and STRATCOM in early FY 2007.

UNCLASSIFIED

EXHIBIT R-2a, RD1&E Project Justification

UNCLASSIFIED

APPROPRIATION/BUDGET ACTIVITY
RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-7

PROJECT NUMBER AND NAME
 TRIDENT II 40951

DATE:
 February 2003

B. (U) Accomplishments/Planned Program

| | FY 02 | FY 03 | FY 04 | FY 05 |
|------------------------------|-------|-------|-------|-------|
| SLBM Retargeting System(SRS) | | | | |
| RD1&E Articles Quantity | 9.1 | | | |

(U) FY 2002 PLAN

(U) (\$9.1) SRS: Efforts continued to complete phase three development required for deployment and final implementation of the SLBM Retargeting System Program in October 2003. Full obligation is complete.

| | FY 02 | FY 03 | FY 04 | FY 05 |
|---|-------|-------|-------|-------|
| Enhanced Effectiveness (E2) Demonstration | | | | |
| RD1&E Articles Quantity | | | 29.6 | 30.3 |

(U) FY 2004 PLAN

(U) (\$29.6) E2 Demonstration: Efforts begin in support of the three year program. Full obligation is projected by the 3rd quarter of the 1st year. FY 2004 efforts include:

- (U) Initiate and complete system design concepts and trades.
- (U) Finalize system level requirements and demonstration test objectives
- (U) Initiate and complete program plans and acquisition documentation
- (U) Initiate and complete design trade studies and system specifications and initiate detail design of:
 - o Fire Control software modifications
 - o Missile electronics modifications
 - o GPS preset data transfer
 - o Reentry body extension, heat shield, flaps, and cabling.
- (U) Finalize all hardware and software detail designs.
- (U) Identify GFE/GFI and long lead item procurement required.

(U) FY 2005 PLAN

(U) (\$30.3) E2 Demonstration: Efforts continue in support of the three year program. Full obligation is projected by the 3rd quarter of the 1st year. FY 2004 efforts include:

- (U) Procure, fabricate, and assemble hardware.
- (U) Complete Fire Control software build, test, and validation
- (U) Integrate guidance and reentry body components
- (U) Complete hardware component ground testing
- (U) Conduct interface testing
- (U) Conduct Flight Test Readiness Review

UNCLASSIFIED

UNCLASSIFIED

CLASSIFICATION:

| | | |
|---|------------------|---------------|
| EXHIBIT R-2a, RDT&E Project Justification | | DATE: |
| APPROPRIATION/BUDGET ACTIVITY | | February 2003 |
| RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-7 | | |
| PROJECT NUMBER AND NAME | TRIDENT II J0951 | |

| C. (U) Other Program Funding Summary: (Dollars in Thousands) | FY 2002 | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | Total | Total |
|--|---------|---------|---------|---------|---------|---------|---------|---------|----------|-------|
| | | | | | | | | | Complete | Cost |
| | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

D. (U) Acquisition Strategy:
 Contracts will be awarded to those sources who were engaged in the TRIDENT II (D5) development program and are currently engaged in the production and/or operational support of the deployed D5 Strategic Weapons Systems on the basis of Other Than Full and Open Competition pursuant to the authority of 10 U.S.C. 2304 (C) (1) and (3) implemented by FAR 6.302 -1, 3 4.

E. (U) Major Performers:
 Naval Surface Weapons Center, Dahlgren, VA. Efforts in support of Phase three development of SRS.
 Naval Surface Weapons Center, Dahlgren, VA. Efforts in support of E2 Demonstration
 General Dynamics Defense Systems, Pittsfield, Ma. Efforts in support of E2 Demonstration
 Lockheed Martin Missile & Space, Sunnyvale, Ca. Efforts in support of E2 Demonstration
 Charles Stark Draper Lab, Cambridge Ma. Efforts in support of E2 Demonstration

CLASSIFICATION:

UNCLASSIFIED

| | | | |
|--|--|--|-------------------------------|
| Exhibit R-3 Cost Analysis APPROPRIATION/BUDGET ACTIVITY RDTE: N / BA-7 | PROGRAM ELEMENT PE 0101221N Strategic Sub & Wpns Sys Spt | PROJECT NUMBER AND NAME TRIDENT II J0951 | DATE: February 2003 |
|--|--|--|-------------------------------|

| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 03 Cost | FY 03 Award Date | FY 04 Cost | FY 04 Award Date | FY 05 Cost | FY 05 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
|--------------------------------|------------------------|--------------------------------|----------------|------------|------------------|------------|------------------|------------|------------------|------------------|------------|--------------------------|
| Ancillary Hardware Development | SS / CPFF | GDSD / MA | 31.2 | | | | | | | Cont. | Cont. | TBD |
| | W/R | NSWC / VA | 69.3 | | | | | | | Cont. | Cont. | TBD |
| SSBN SWS MOD & Test Support | W/R | NSWC / VA | | 2.0 | 10/03 | | | 3.3 | 10/04 | | Cont. | TBD |
| SSBN SWS MOD & Test Support | SS / CPFF | GDSD / MA | | 2.3 | 10/03 | | | 3.1 | 10/04 | | Cont. | TBD |
| SSBN SWS MOD & Test Support | SS / CPFF | LNWESS/VA | | 2.0 | 10/03 | | | 2.0 | 10/04 | | Cont. | TBD |
| Test Missile Mods | SS / CPFF | LMMS/GA | | 5.3 | 10/03 | | | 2.4 | 10/04 | | Cont. | TBD |
| E2 Development System | W/R | NSWC / VA | | 1.0 | 10/03 | | | 1.5 | 10/04 | | Cont. | TBD |
| E2 Development System | SS/CPFF | LMMS/GA | | 16.0 | 10/03 | | | 16.5 | 10/04 | | Cont. | TBD |
| E2 Development System | SS / CPFF | CSDLMA | | 1.0 | 10/03 | | | 1.5 | 10/04 | | Cont. | TBD |
| Subtotal Product Development | | | 100.5 | 0.0 | | 29.6 | | 30.3 | | | | |

Remarks: All Contract types and individual costs per activity have not been determined yet.

| | | | | | | | | | | | | | |
|------------|--|--|-------|-----|--|------|--|------|--|--|-------|-------|-----|
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| Total Cost | | | 100.5 | 0.0 | | 29.6 | | 30.3 | | | Cont. | Cont. | TBD |

Remarks: