

CLASSIFICATION:

UNCLASSIFIED

| | | | | | | | | |
|--|--|---------|---------|---------|--|---------|---------------|---------|
| EXHIBIT R-2, RDT&E Budget Item Justification | | | | | | | DATE: | |
| | | | | | | | February 2004 | |
| APPROPRIATION/BUDGET ACTIVITY | | | | | R-1 ITEM NOMENCLATURE | | | |
| RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-7 | | | | | 0204229N Tomahawk Weapons System (TWS) | | | |
| COST (\$ in Millions) | | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 |
| Total PE Cost | | 97.284 | 76.524 | 28.776 | 18.262 | 13.409 | 13.067 | 13.328 |
| A0545 Tomahawk | | 97.284 | 76.524 | 28.776 | 18.262 | 13.409 | 13.067 | 13.328 |
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| A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: | | | | | | | | |
| <p>The Tomahawk Weapons System (TWS) provides the Tomahawk cruise missile attack capability against targets on land (Tomahawk Land Attack Missile (TLAM)). The TLAM can be fitted with either Conventional unitary warhead (TLAM/C), nuclear warhead (TLAM/N) or submunition dispenser (TLAM/D). This program ensures that the TWS exploits state-of-the-art technology to preserve the efficiency of this proven weapon system, and includes all missile development, mission planning system development, and submarine and surface ship weapons control system development:</p> <p>The Tactical Tomahawk (TACTOM) All-Up-Round missile development is a comprehensive baseline upgrade to the TWS that provides the tactical commander a quick reaction response capability as well as improved flexibility, accuracy, and lethality. The essential elements of TACTOM are upgrades to the guidance, navigation, control, and mission computer systems of the missile along with the associated Command and Control (C2) systems and weapons control systems upgrades. TACTOM will provide a UHF Satcom data link to enable the missile to receive in-flight mission modification messages, to transfer health and status messages, and to broadcast Battle Damage Indication (BDI) messages. TACTOM also includes a high anti-jam GPS receiver, navigation improvements and associated antenna systems. The Tomahawk program (A0545) also includes development of Torpedo Tube Launch (TTL) capability for submarines and Roadmap studies for warhead improvement.</p> <p>The Tomahawk Command and Control System (TC2S) Theater Mission Planning Center (TMPC) and Afloat Planning System (APS) (a shipboard version of TMPC) provide mission planning and employment support information for both the nuclear (TMPC only) and conventional TLAM, including the distribution of mission data and command information essential to TLAM employment via the Mission Distribution System (MDS) and associated communications infrastructure. Development of Tactical Tomahawk capabilities in TMPC/APS/MDS includes software development, integration, test, and delivery, including support for TECHEVAL and OPEVAL, training development, installation planning, and simulation/model development required by COMOPTEVFOR to offset live missile flights in TECHEVAL and OPEVAL. This project also includes development related to national and tactical imagery architectures, as well as software development to decrease mission planning time and increase the quality and accuracy of each mission for Block III and IV TLAM.</p> <p>The Tomahawk Weapons Control System provides launch capability for surface and submarine platforms. Development of the Tactical Tomahawk Weapons Control System (TTWCS) provides a common architecture to launch the Tactical Tomahawk and all variants in inventory. These efforts provide battle-group tactical flexibility and responsiveness while maximizing TWS wartime capability. TTWCS entered Engineering and Manufacturing Development (EMD) in FY99, with Phase A IOC (BLK III) in DEC 03, and Phase B IOC (TACTOM) planned to coincide with the AUR IOC in FY 2004.</p> | | | | | | | | |

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Exhibit R-2, RDTEN Budget Item Justification
(Exhibit R-2, page 1 of 11)

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| EXHIBIT R-2a, RDT&E Project Justification | | | | | | | DATE: February 2004 | |
| APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-7 | | PROGRAM ELEMENT NUMBER AND NAME 0204229N Tomahawk Weapons System (TWS) | | | PROJECT NUMBER AND NAME A0545 TOMAHAWK | | | |
| COST (\$ in Millions) | | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 |
| Project Cost | | 97.284 | 76.524 | 28.776 | 18.262 | 13.409 | 13.067 | 13.328 |
| RDT&E Articles Qty | | | | | | | | |

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The Tomahawk Weapons System (TWS) provides the Tomahawk cruise missile attack capability against targets on land (Tomahawk Land Attack Missile (TLAM)). The TLAM can be fitted with either Conventional unitary warhead (TLAM/C), nuclear warhead (TLAM/N) or submunition dispenser (TLAM/D). This program ensures that the TWS exploits state-of-the-art technology to preserve the efficiency of this proven weapon system, and includes all missile development, mission planning system development, and submarine and surface ship weapons control system development:

The Tactical Tomahawk (TACTOM) All-Up-Round missile development is a comprehensive baseline upgrade to the TWS that provides the tactical commander a quick reaction response capability as well as improved flexibility, accuracy, and lethality. The essential elements of TACTOM are upgrades to the guidance, navigation, control, and mission computer systems of the missile along with the associated Command and Control (C2) systems and weapons control systems upgrades. TACTOM will provide a UHF Satcom data link to enable the missile to receive in-flight mission modification messages, to transfer health and status messages, and to broadcast Battle Damage Indication (BDI) messages. TACTOM also includes a high anti-jam GPS receiver, navigation improvements and associated antenna systems. The Tomahawk program (A0545) also includes development of Torpedo Tube Launch (TTL) capability for submarines and Roadmap studies for warhead improvement.

The Tomahawk Command and Control System (TC2S) Theater Mission Planning Center (TMPC) and Afloat Planning System (APS) (a shipboard version of TMPC) provide mission planning and employment support information for both the nuclear (TMPC only) and conventional TLAM, including the distribution of mission data and command information essential to TLAM employment via the Mission Distribution System (MDS) and associated communications infrastructure. Development of Tactical Tomahawk capabilities in TMPC/APS/MDS includes software development, integration, test, and delivery, including support for TECHEVAL and OPEVAL, training development, installation planning, and simulation/model development required by COMOPTEVFOR to offset live missile flights in TECHEVAL and OPEVAL. This project also includes development related to national and tactical imagery architectures, as well as software development to decrease mission planning time and increase the quality and accuracy of each mission for Block III and IV TLAM.

The Tomahawk Weapons Control System provides launch capability for surface and submarine platforms. Development of the Tactical Tomahawk Weapons Control System (TTWCS) provides a common architecture to launch the Tactical Tomahawk and all variants in inventory. These efforts provide battle-group tactical flexibility and responsiveness while maximizing TWS wartime capability. TTWCS entered Engineering and Manufacturing Development (EMD) in FY99, with Phase A IOC (BLK III) in DEC 03, and Phase B IOC (TACTOM) planned to coincide with the AUR IOC in FY 2004.

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Exhibit R-2a, RDTE Project Justification
(Exhibit R-2a, page 2 of 11)

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| EXHIBIT R-2a, RDT&E Project Justification | | | DATE: February 2004 | | | | | | | | | | | | | | | | |
|---|---|---|----------------------------|--------|--|--|-------|-------|-------|--|--|--------|--------|--------|-------------------------|--|--|--|--|
| APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-7 | PROGRAM ELEMENT NUMBER AND NAME 0204229N Tomahawk Weapons System (TWS) | PROJECT NUMBER AND NAME A0545 TOMAHAWK | | | | | | | | | | | | | | | | | |
| (U) B. Accomplishments/Planned Program | | | | | | | | | | | | | | | | | | | |
| <table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;"></th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td>Tactical Tomahawk All Up Round/Subtotal Cost</td><td></td><td style="text-align: right;">55.626</td><td style="text-align: right;">40.364</td><td style="text-align: right;">16.487</td></tr><tr><td>RDT&E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table> | | | | | | | FY 03 | FY 04 | FY 05 | Tactical Tomahawk All Up Round/Subtotal Cost | | 55.626 | 40.364 | 16.487 | RDT&E Articles Quantity | | | | |
| | | FY 03 | FY 04 | FY 05 | | | | | | | | | | | | | | | |
| Tactical Tomahawk All Up Round/Subtotal Cost | | 55.626 | 40.364 | 16.487 | | | | | | | | | | | | | | | |
| RDT&E Articles Quantity | | | | | | | | | | | | | | | | | | | |
| <div style="border: 1px solid black; padding: 5px; min-height: 100px;"><p>Successfully completed second Tactical Tomahawk contractor flight test (DT-1). All performance parameters met or exceeded. Initiated government flight testing and successfully conducted four government TECHEVAL flights. Completed TECHEVAL. Initiated hardware/software design and integration of Tactical Tomahawk Torpedo-Tube Launch (TT-TTL) capability. Complete Government flight testing. Complete OPEVAL and IOC for Tactical Tomahawk. Continue hardware / software design and integration of Tactical Tomahawk Torpedo-Tube Launch (TT-TTL) capability. Conduct flight tests of TT-TTL. Initiate TACTOM Preplanned Product Improvement.</p></div> | | | | | | | | | | | | | | | | | | | |
| <table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;"></th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td>TACTOM Command and Control/Subtotal Cost</td><td></td><td style="text-align: right;">24.057</td><td style="text-align: right;">10.578</td><td style="text-align: right;">5.362</td></tr><tr><td>RDT&E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table> | | | | | | | FY 03 | FY 04 | FY 05 | TACTOM Command and Control/Subtotal Cost | | 24.057 | 10.578 | 5.362 | RDT&E Articles Quantity | | | | |
| | | FY 03 | FY 04 | FY 05 | | | | | | | | | | | | | | | |
| TACTOM Command and Control/Subtotal Cost | | 24.057 | 10.578 | 5.362 | | | | | | | | | | | | | | | |
| RDT&E Articles Quantity | | | | | | | | | | | | | | | | | | | |
| <div style="border: 1px solid black; padding: 5px; min-height: 100px;"><p>Continue the incorporation of new capabilities in Tomahawk Command and Control systems necessary for the employment of Tactical Tomahawk, supported Tactical Tomahawk Weapon System TECHEVAL, and continued development of related training and installation materials. Continue development of new capabilities in Tomahawk Command and Control systems necessary for the employment of Tactical Tomahawk, support Tactical Tomahawk Weapon System OPEVAL, and complete development of related training and installation materials. Continue imagery upgrades to Tomahawk Command and Control Systems.</p></div> | | | | | | | | | | | | | | | | | | | |

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|--|---|---|-------------------------------|-------|--|--|-------|-------|-------|---|--|--------|--------|-------|-------------------------|--|--|--|--|
| APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-7 | PROGRAM ELEMENT NUMBER AND NAME 0204229N Tomahawk Weapons System (TWS) | PROJECT NUMBER AND NAME A0545 TOMAHAWK | | | | | | | | | | | | | | | | | |
| (U) B. Accomplishments/Planned Program | | | | | | | | | | | | | | | | | | | |
| <table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 10%;"></th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td>TACTOM Weapons Control System/Subtotal Cost</td><td></td><td style="text-align: center;">12.263</td><td style="text-align: center;">12.243</td><td style="text-align: center;">6.927</td></tr><tr><td>RDT&E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table> | | | | | | | FY 03 | FY 04 | FY 05 | TACTOM Weapons Control System/Subtotal Cost | | 12.263 | 12.243 | 6.927 | RDT&E Articles Quantity | | | | |
| | | FY 03 | FY 04 | FY 05 | | | | | | | | | | | | | | | |
| TACTOM Weapons Control System/Subtotal Cost | | 12.263 | 12.243 | 6.927 | | | | | | | | | | | | | | | |
| RDT&E Articles Quantity | | | | | | | | | | | | | | | | | | | |
| <div style="border: 1px solid black; padding: 5px; min-height: 100px;">Completed OPEVAL for Phase 1A of Weapons Control System. Continue Phase 1B Land Based and Sea Based System Testing. Initiate TECHEVAL/OPEVAL for Phase 1B. Complete Phase 1B Land Based and Sea Based System Testing of Weapons Control System. Complete TECHEVAL/OPEVAL. Initiate development of Integrated Training Architecture for TTWS and TTNCT version 5 systems engineering efforts. Continue development of Tactical Tomahawk Weapons System Integrated Training Architecture, continue with version 5 software development.</div> | | | | | | | | | | | | | | | | | | | |
| <table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 10%;"></th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td>Precision Terrain Aided Navigation/Subtotal Cost</td><td></td><td style="text-align: center;">5.338</td><td style="text-align: center;">5.640</td><td style="text-align: center;">0.000</td></tr><tr><td>RDT&E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table> | | | | | | | FY 03 | FY 04 | FY 05 | Precision Terrain Aided Navigation/Subtotal Cost | | 5.338 | 5.640 | 0.000 | RDT&E Articles Quantity | | | | |
| | | FY 03 | FY 04 | FY 05 | | | | | | | | | | | | | | | |
| Precision Terrain Aided Navigation/Subtotal Cost | | 5.338 | 5.640 | 0.000 | | | | | | | | | | | | | | | |
| RDT&E Articles Quantity | | | | | | | | | | | | | | | | | | | |
| <div style="border: 1px solid black; padding: 5px; min-height: 100px;">Completed demonstration prototype of Precision Terrain Aided Navigation (PTAN) capability to demonstrate real-time operation. Initiate PTAN advanced technology risk reduction efforts to develop next generation PTAN prototypes and to integrate PTAN capability into the missile simulation labs.</div> | | | | | | | | | | | | | | | | | | | |
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| | | FY 03 | FY 04 | FY 05 | | | | | | | | | | | | | | | |
| Tactical Tomahawk Penetrator Capability/Subtotal Cost | | 0.000 | 7.699 | 0.000 | | | | | | | | | | | | | | | |
| RDT&E Articles Quantity | | | | | | | | | | | | | | | | | | | |
| <div style="border: 1px solid black; padding: 5px; min-height: 100px;">Initiate Roadmap studies for warhead improvement program, including penetration capability, lethality analysis and program development.</div> | | | | | | | | | | | | | | | | | | | |

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| EXHIBIT R-2a, RDT&E Project Justification | | DATE: February 2004 |
| APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-7 | PROGRAM ELEMENT NUMBER AND NAME 0204229N Tomahawk Weapons System (TWS) | PROJECT NUMBER AND NAME A0545 TOMAHAWK |

(U) C. PROGRAM CHANGE SUMMARY:

| | FY 2003 | FY 2004 | FY 2005 |
|---|---------|---------|---------|
| (U) Funding: | | | |
| Previous President's Budget: | 97.448 | 71.385 | 36.143 |
| Current President's Budget | 97.284 | 76.524 | 28.776 |
| Total Adjustments | -0.164 | 5.139 | -7.367 |
| Summary of Adjustments | | | |
| SBIR/STTR Transfer | -2.043 | | |
| Reprogrammings | 1.879 | | |
| Congressional Undistributed Adjustments | | -0.861 | |
| Congressional Increases | | 6.000 | |
| Economic Assumptions | | | -0.146 |
| Reprioritization | | | -7.221 |
| Subtotal | -0.164 | 5.139 | -7.367 |

(U) Schedule:

Successful completion of the first of two contractor TACTOM flight tests occurred in August 2002 which initiated the LRIP 1 contract award October 3, 2002. Favorable Operational Assessment from OPTEVFOR initiated the LRIP 2 contract award January 2003. Final Systems qualification and integration completed in 3QFY03. The TACTOM development flight program experienced four successful flights (2 from a surface combatant and 2 from a submarine) including 2 Live Fire Test and Evaluation detonations, one from each platform. All Key Performance Parameters and technical objectives were met, and in many cases exceeded. Formal TECHEVAL report submitted. OPEVAL started December 1, 2003. TACTOM IOC scheduled for May 2004, coinciding with delivery of the first LRIP missile. Milestone III and Full Rate Production Award scheduled for June 2004.

(U) Technical:

Not Applicable

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| APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-7 | | PROGRAM ELEMENT NUMBER AND NAME 0204229N Tomahawk Weapons System (TWS) | | | PROJECT NUMBER AND NAME A0545 TOMAHAWK | | | | |

(U) D. OTHER PROGRAM FUNDING SUMMARY:

| <u>Line Item No. & Name</u> | <u>FY 2003</u> | <u>FY 2004</u> | <u>FY 2005</u> | <u>FY 2006</u> | <u>FY 2007</u> | <u>FY 2008</u> | <u>FY 2009</u> | <u>To Complete</u> | <u>Total Cost</u> |
|--|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------------|-------------------|
| WPN BLI 210100 Tomahawk | 437.054 | 352.645 | 256.196 | 346.527 | 377.130 | 439.918 | 427.010 | 0.000 | 2636.480 |
| OPN BLI 525000 Surface Tomahawk Support Equipment | 49.299 | 60.953 | 68.600 | 67.193 | 40.771 | 33.688 | 31.869 | 450.369 | 802.742 |
| OPN BLI 525005 Surface Tomahawk Support Equipment Installation | 3.007 | 1.998 | 1.132 | 0.780 | 3.173 | 0.756 | 2.876 | | 13.722 |
| OPN BLI 525500 Submarine Tomahawk Support Equipment | 5.134 | 5.743 | 5.469 | 7.097 | 8.192 | 8.695 | 9.229 | 60.000 | 109.559 |
| OPN Spares BLI 902010 Initial Spares | 0.624 | 0.620 | 0.862 | 0.617 | 0.622 | 0.000 | 0.000 | | 3.345 |
| OPN Spares BLI 902090 Vendor Direct Spares | 0.629 | 0.633 | 0.987 | 0.641 | 0.647 | 0.639 | 0.638 | | 4.814 |
| Related RDT&E,N: Not Applicable | | | | | | | | | |

(U) E. ACQUISITION STRATEGY:

(U) D. ACQUISITION STRATEGY: In 1998, the Tomahawk Baseline Improvement Program (TBIP) transitioned to the Tactical Tomahawk program. This program is outlined in the Class Justification and Approval (CJ&A No AIR-22448) signed by the Under Secretary of the Navy on 29 May 1998. The acquisition strategy was to transition the Tomahawk Baseline Improvement Program (TBIP) to Tactical Tomahawk. The Tactical Tomahawk development program is a cost sharing contract between the Government and the Contractor to add capability to the missile. The department is pursuing a multi-year procurement contract for the full rate production years FY04 through FY08.

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| Exhibit R-3 Cost Analysis (page 1) | | | | | | | | DATE: | | | | |
| APPROPRIATION/BUDGET ACTIVITY | | | PROGRAM ELEMENT | | | PROJECT NUMBER AND NAME | | | | | | |
| RDT&E, N / BA-7 | | | 0204229N Tomahawk Weapons System (TWS) | | | A0545 TOMAHAWK | | | | | | |
| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY s 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 |
| Product Development | | | | | | | | | | | | |
| Primary Hardware Development | | | | | | | | | | | | |
| Tactical Tomahawk Program | | | | | | | | | | | | |
| All Up Round | C/CPFF | Raytheon, Tucson, AZ | 200.008 | 12.220 | 11/02 | 2.000 | 11/03 | | | | 214.228 | 214.228 |
| | C/FP | Honeywell, Minneapolis, MN | | 0.000 | | 3.000 | 01/04 | 0.000 | | | 3.000 | 3.000 |
| TTPV | SS/CPAF | Raytheon, Tucson, AZ | | 0.000 | | 2.000 | 11/03 | | | | 2.000 | 2.000 |
| TTL | SS/CPAF | Raytheon, Tucson, AZ | | 0.905 | 11/02 | 10.651 | 11/03 | 1.782 | 11/04 | 15.456 | 28.794 | 28.794 |
| Mission Planning System | SS/CPFF | ComGlobal, San Jose, CA | 16.841 | 11.503 | 12/02 | 3.933 | 12/03 | 2.025 | 12/04 | | 34.302 | 34.302 |
| | SS/CPFF | Boeing, St. Louis, MO | 0.650 | 2.175 | 12/02 | 2.103 | 12/03 | 0.000 | 12/04 | | 4.928 | 4.928 |
| | SS/CPFF | BAE Systems, San Diego, CA | 0.929 | 0.640 | 12/02 | 0.480 | 12/03 | 0.327 | 12/04 | 0.273 | 2.649 | 2.649 |
| Weapons Control System | C/CPAF | Lockheed, Valley Forge, PA | 89.043 | 5.790 | 12/02 | 7.746 | 12/03 | 4.737 | 12/04 | 4.419 | 111.735 | 111.735 |
| | | | | | | | | | | | | |
| Ship Integration | | | | | | | | | | | | |
| Launcher Integration | SS/CPAF | NAVSEA, Washington, DC | 20.043 | 0.545 | 12/02 | 4.140 | 12/03 | 0.529 | 12/04 | 2.300 | 27.557 | 27.557 |
| | | | | | | | | | | | | |
| Systems Engineering | | | | | | | | | | | | |
| All Up Round | C/FP | Raytheon, Tucson, AZ | 9.000 | 3.491 | 11/02 | 2.569 | 11/03 | 0.470 | 11/04 | | 15.530 | 15.530 |
| | SS/CPFF | UARC APL, Laurel, MD | 18.887 | 4.615 | 01/03 | 4.450 | 01/04 | 2.434 | 01/05 | | 30.386 | 30.386 |
| | C/FP | Boeing, St. Louis, MO | 3.000 | | | | | | | | 3.000 | 3.000 |
| Weapons Control System | SS/CPFF | URAC APL, Laurel, MD | 0.804 | 0.377 | 12/02 | 1.735 | 01/04 | 0.597 | 01/05 | 0.716 | 4.229 | 4.229 |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| All Product Development Costs, 1974 through TBIP Costs in 1998 | | | 2,176.447 | | | | | | | | 2,176.447 | 2,176.447 |
| Subtotal Product Development | | | 2,535.652 | 42.261 | | 44.807 | | 12.901 | | 23.164 | 2,658.785 | |
| Remarks: | | | | | | | | | | | | |

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Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 7 of 11)

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| Exhibit R-3 Cost Analysis (page 1) | | | | | | | | DATE: February 2004 | | | | |
|------------------------------------|------------------------|--------------------------------|--|------------|------------------|-------------------------|------------------|---------------------|------------------|------------------|------------|--------------------------|
| APPROPRIATION/BUDGET ACTIVITY | | | PROGRAM ELEMENT | | | PROJECT NUMBER AND NAME | | | | | | |
| RDT&E, N / BA-7 | | | 0204229N Tomahawk Weapons System (TWS) | | | A0545 TOMAHAWK | | | | | | |
| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY s 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 |
| Support (Development) | | | | | | | | | | | | |
| Development Support | | | | | | | | | | | | |
| All-Up-Round | WR | NSWC, Dahlgren VA | 10.765 | 0.816 | 11/02 | 0.820 | 11/03 | 1.086 | 11/04 | Continuing | Continuing | |
| | WR | NAWC-WD, China Lake, CA | 9.291 | 2.461 | 11/02 | 1.200 | 11/03 | 0.309 | 11/04 | Continuing | Continuing | |
| | WR | NSWC, Pt Hueneme, CA | 3.476 | 0.411 | 11/02 | 0.283 | 11/03 | 0.085 | 11/04 | Continuing | Continuing | |
| | WR | NAWC-AD, Pax River, MD | 4.177 | 0.802 | 11/02 | 0.632 | 11/03 | 0.312 | 11/04 | Continuing | Continuing | |
| | WR | NWAD, Corona | 1.278 | 0.000 | | 0.000 | | 0.077 | 11/04 | Continuing | Continuing | |
| | WR | NUWC, Newport, RI | 4.481 | 0.631 | 11/02 | 2.931 | 11/03 | 1.294 | 11/04 | Continuing | Continuing | |
| | SS/CPFF | SAIC, Arlington, VA | 6.557 | 0.682 | 12/02 | 2.048 | 12/03 | 1.049 | 12/04 | | 10.336 | 10.336 |
| | WR | NSWC, Indian Head, MD | 5.765 | 0.673 | 11/02 | 0.442 | 11/03 | 0.482 | 11/04 | Continuing | Continuing | |
| | WR | NSWC, Carderock, MD | 1.263 | 0.460 | 11/02 | 0.100 | 11/03 | 0.000 | | Continuing | Continuing | |
| | C/CPFF | Honeywell, Minneapolis, MN | 1.538 | 2.386 | 01/03 | 0.000 | | 0.000 | | | 3.924 | 3.924 |
| | Various | Various | 16.161 | 0.403 | 04/03 | 0.487 | 12/03 | 0.074 | 12/04 | Continuing | Continuing | |
| Weapons Control Systems | WR | NUWC, Newport, RI | 12.498 | 2.566 | 12/02 | 0.629 | 11/03 | 0.346 | | Continuing | Continuing | |
| | | | | | | | | | | | | |
| Software Development | | | | | | | | | | | | |
| Mission Planning Systems | SS/CPFF | Raytheon, Arlington, VA | 5.100 | | | | | | | | 5.100 | 5.100 |
| | SS/CPFF | Lockheed, Valley Forge, PA | 2.015 | 1.929 | 12/02 | 2.180 | 12/03 | 1.548 | 12/04 | 1.530 | 9.202 | 9.202 |
| | SS/CPFF | SAIC, Arlington, VA | 8.492 | 4.675 | 12/02 | 1.280 | 12/03 | 0.000 | 12/04 | 0.679 | 15.126 | 15.126 |
| | SS/CPFF | URAC APL, Laurel, MD | 8.546 | 4.246 | 12/02 | 2.429 | 01/04 | 1.514 | 01/05 | 2.965 | 19.700 | 19.700 |
| | | | | | | | | | | | | |
| Weapons Control Systems | WR | NSWC, Dahlgren VA | 19.627 | 4.585 | 12/02 | 2.977 | 12/03 | 1.461 | 12/04 | Continuing | Continuing | |
| | | | | | | | | | | | | |
| Subtotal Support | | | 121.030 | 27.726 | | 18.438 | | 9.637 | | Continuing | Continuing | |
| Remarks: | | | | | | | | | | | | |

R-1 SHOPPING LIST - Item No. 169

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Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 8 of 11)

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CLASSIFICATION:

| Exhibit R-3 Cost Analysis (page 2) | | | | | | | | DATE: February 2004 | | | | |
|------------------------------------|------------------------|--------------------------------|--|------------|------------------|-------------------------|------------------|---------------------|------------------|------------------|------------|--------------------------|
| APPROPRIATION/BUDGET ACTIVITY | | | PROGRAM ELEMENT | | | PROJECT NUMBER AND NAME | | | | | | |
| RDT&E, N / BA-7 | | | 0204229N Tomahawk Weapons System (TWS) | | | A0545 TOMAHAWK | | | | | | |
| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY s 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 |
| Developmental Test & Evaluation | SS/CPFF | Raytheon, Tucson, AZ | 23.457 | 17.296 | 11/02 | 6.356 | 11/03 | 1.946 | 11/04 | 3.834 | 52.889 | 52.889 |
| | WR | COMOPTEVFOR, VA | 2.233 | 0.579 | 12/02 | 0.434 | 12/03 | 0.125 | 12/04 | Continuing | Continuing | |
| | WR | NAWC, Pt Mugu Test Ctr, CA | 12.360 | 7.270 | 11/02 | 4.000 | 11/03 | 2.841 | 11/04 | Continuing | Continuing | |
| | WR | NOSC, San Diego CA | 1.275 | 0.575 | 11/02 | | | | | | 1.850 | |
| | WR | NUWC, Newport RI | 0.440 | 0.507 | 11/02 | 1.105 | 11/03 | 1.150 | 11/04 | Continuing | Continuing | |
| | SS/CPFF | URAC APL, Laurel MD | 0.692 | 0.590 | 12/02 | 0.320 | 12/03 | 0.126 | 12/04 | | 1.728 | 1.728 |
| | WR | NSWC, Dahlgren, VA | 0.807 | 0.454 | 11/02 | 0.672 | 11/03 | | 11/04 | Continuing | Continuing | |
| | WR | NSWC, Port Hueneme | | | | 0.352 | 11/03 | | | | 0.352 | |
| | | Various | 3.541 | 0.026 | 11/02 | 0.040 | 11/03 | 0.050 | 11/04 | Continuing | Continuing | |
| Subtotal T&E | | | 44.805 | 27.297 | | 13.279 | | 6.238 | | Continuing | Continuing | |
| Remarks: | | | | | | | | | | | | |
| Management | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Subtotal Management | | | 0.000 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.000 | |
| Remarks: | | | | | | | | | | | | |
| Total Cost | | | 2,701.487 | 97.284 | | 76.524 | | 28.776 | | Continuing | Continuing | |
| Remarks: | | | | | | | | | | | | |

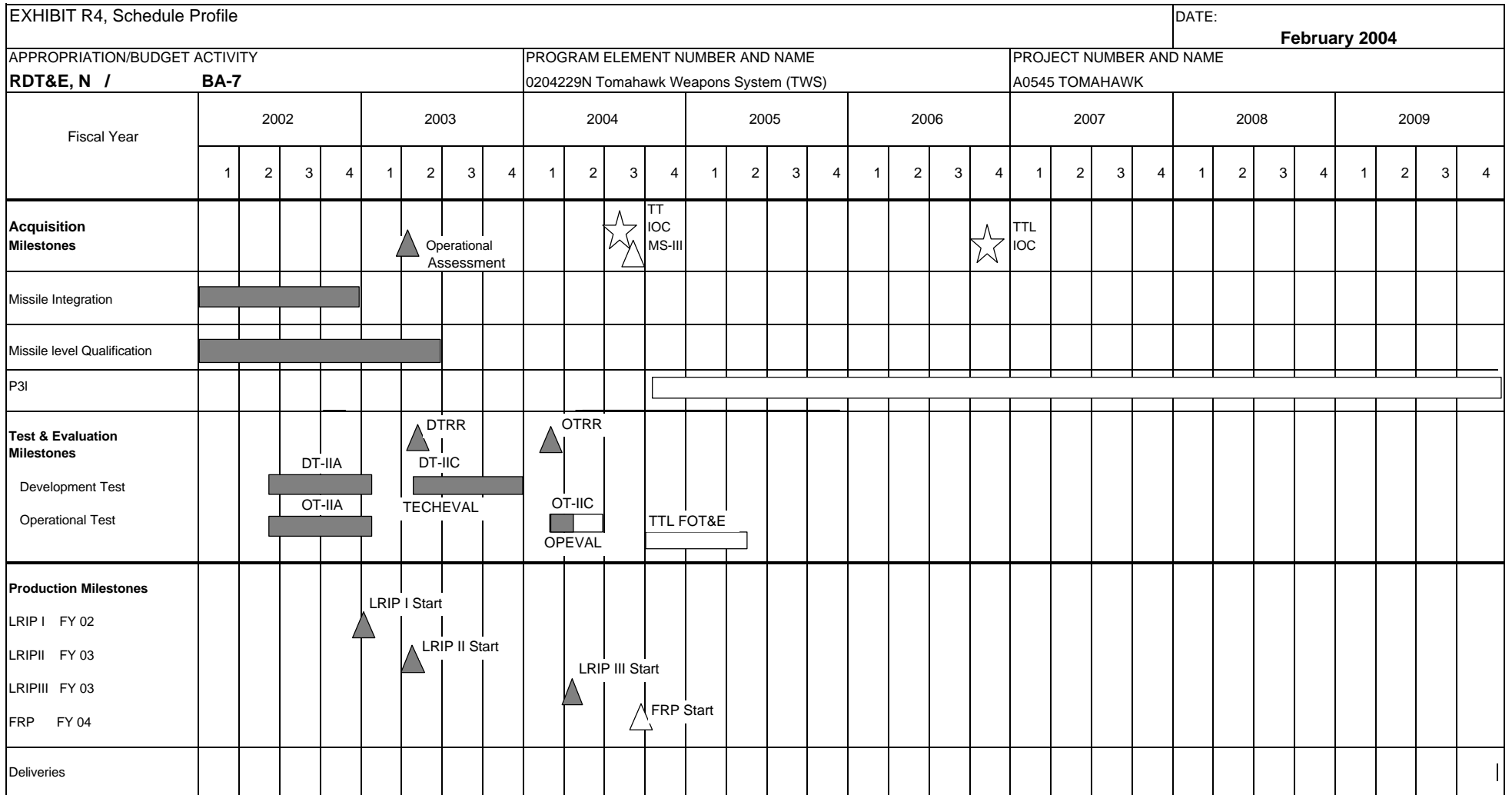
R-1 SHOPPING LIST - Item No. 169

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Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 9 of 11)

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Exhibit R-4a, Schedule Detail
(Exhibit R-4a, page 11 of 11)