

CLASSIFICATION:**UNCLASSIFIED****EXHIBIT R-2, RDT&E BUDGET ITEM JUSTIFICATION**

DATE

February 2008

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

RD TEN/BA 4**0603502N/SURFACE AND SHALLOW WATER MINE COUNTERMEASURE**

| COST (In Millions) | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
|--|---------|---------|---------|---------|---------|---------|---------|
| Total PE Cost | 113.207 | 89.175 | 119.164 | 135.420 | 129.029 | 146.149 | 176.411 |
| 0260 / Remote Minehunting Systems | 5.492 | 0.000 | 0.000 | 25.612 | 25.908 | 33.531 | 34.124 |
| 1233 / Surface MCM Mid-life Upgrade | 18.853 | 27.702 | 25.251 | 15.754 | 14.050 | 20.604 | 25.664 |
| 2094 / Unmanned Underwater Vehicle | 24.583 | 12.743 | 30.090 | 41.328 | 40.160 | 53.375 | 77.375 |
| 2131 / Assault Breaching System | 34.880 | 34.443 | 44.011 | 30.128 | 29.197 | 18.678 | 13.888 |
| 3123 / SMCM UUV | 10.502 | 7.579 | 12.653 | 22.598 | 19.714 | 14.888 | 20.301 |
| 4025 / Expendable Mine Neutralization System | 12.873 | 6.708 | 7.159 | 0.000 | 0.000 | 5.073 | 5.059 |
| 9179C / Surface Navy integrated undersea tactical technology | 2.527 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 9967N / AN/SQQ-32 Mine Hunting Sonar Upgrade | 3.497 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

A. MISSION DESCRIPTION:

The program provides for developments to combat the threat of known and projected foreign mines against U.S. Naval and merchant shipping in harbors, channels, choke points, sea lines of communication and amphibious and other fleet operating areas. It develops: (1) organic remote minehunting capability for surface platforms; (2) the integration and improvement of systems and support for systems which will detect, localize, classify, and neutralize moored, bottom, and close-tethered mines for use in Mine Countermeasure (MCM) MCM-1 Class and other surface ships; (3) systems for neutralizing mines and light obstacles from shallow water, very shallow water, surf zones, and beach landing craft zones in support of amphibious operations; and (4) Unmanned Undersea Vehicle (UUV) systems for clandestine mine reconnaissance.

Congressional plus-up for the Surface Navy Integrated Undersea Tactical Technology (SNIUTT) was used to develop an AN/SQQ-32, AN/AQS-14, AN/AQS-24 and AN/AQS-20A sensor training module for a LAN-based Surface Network Embedded Analysis and Tactical Trainer (SNEATT).

Congressional plus-up for the AN/SQQ-32 Mine Hunting Sonar development for high frequency wide band.

(U) B. JUSTIFICATION FOR BUDGET ACTIVITY:

This program is funded under DEMONSTRATION AND VALIDATION because it develops and integrates hardware for experimental testing related to specific ship or aircraft applications.

CLASSIFICATION:**UNCLASSIFIED****EXHIBIT R-2, RDT&E BUDGET ITEM JUSTIFICATION (CONTINUATION)**

DATE

February 2008

APPROPRIATION/BUDGET ACTIVITY

RD TEN/BA 4

R-1 ITEM NOMENCLATURE

0603502N/SURFACE AND SHALLOW WATER MINE COUNTERMEASUR**B. PROGRAM CHANGE SUMMARY:**

| Funding: | FY 2007 | FY 2008 | FY 2009 |
|--|---------|---------|---------|
| Previous President's Budget | 116.124 | 91.122 | 103.798 |
| Current President's Budget | 113.207 | 89.175 | 119.164 |
| Total Adjustments | -2.917 | -1.947 | 15.366 |
| Summary of Adjustments: | | | |
| Congressional Undistributed Reductions | 0.000 | -0.586 | 0 |
| Economic Assumptions | 0 | 0 | -0.093 |
| Program Adjustment | 0.000 | -1.361 | 15.459 |
| SBIR Adjustments | -2.917 | 0.000 | 0.000 |
| Subtotal | -2.917 | -1.947 | 15.366 |

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|---|----------------|--|----------------|----------------|--|----------------|----------------|
| CLASSIFICATION: | | UNCLASSIFIED | | | | | |
| EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION | | | | | DATE February 2008 | | |
| APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 4 | | PROGRAM ELEMENT NUMBER AND NAME 0603502N/SURFACE AND SHALLOW WATER MINE COUNTERMEAS | | | PROJECT NUMBER AND NAME 0260/REMOTE MINEHUNTING SYSTEMS | | |
| COST (In Millions) | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
| Project Cost | 5.492 | 0.000 | 0.000 | 25.612 | 25.908 | 33.531 | 34.124 |
| RDT&E Articles Qty | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: | | | | | | | |
| <p>The AN/WLD-1(V)(1), Remote Minehunting System (RMS), consists of a diesel powered semi-submersible Remote Multi-Mission Vehicle (RMMV) that tows a Variable Depth Sensor (VDS, AN/AQS-20A). It also includes shipboard equipment consisting of a command control combat system, launch and recovery system, radio antennas and support equipment. RMS will operate from the DDG-51 Class Flight IIA ships (DDG-91-96) and Littoral Combat Ships (LCS). The system determines the presence or absence of mines to an acceptable level of confidence to enable ships to operate in or avoid specific areas. Future funding will be used to begin development of emerging technologies for incorporation into the AN/WLD-1(V)(1) Remote Minehunting System and Littoral Combat Ship (LCS) Reconfigurable Mission Capabilities (Multi-Mission - MM).</p> | | | | | | | |

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|---|---------|---|---------|---------|---------|---|---------|-----------------------|------------|------------------------|---------|---------|---------|---|---------|---------|---------|-------------------------|------------|--------------------|-------|--------|-------|-------|-------|-------|--------|--|--|--------------------|--------|-------|---------|---------|---------|---------|---------|--|--|
| EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION | | | | | | | | DATE February 2008 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 4 | | PROGRAM ELEMENT NUMBER AND NAME 0603502N/SURFACE AND SHALLOW WATER MINE COUNTER | | | | PROJECT NUMBER AND NAME 0260/REMOTE MINEHUNTING SYSTEMS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B. ACCOMPLISHMENTS/PLANNED PROGRAM: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th></th> <th>FY 2007</th> <th>FY 2008</th> <th>FY 2009</th> </tr> </thead> <tbody> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td style="text-align: right;">4.992</td> <td style="text-align: right;">0.000</td> <td style="text-align: right;">0.000</td> </tr> <tr> <td>RDT&E Articles Quantity</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> </tr> </tbody> </table> | | | | | | | | | | | FY 2007 | FY 2008 | FY 2009 | Accomplishments/Effort/Subtotal Cost | 4.992 | 0.000 | 0.000 | RDT&E Articles Quantity | 0 | 0 | 0 | | | | | | | | | | | | | | | | | | |
| | FY 2007 | FY 2008 | FY 2009 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Accomplishments/Effort/Subtotal Cost | 4.992 | 0.000 | 0.000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RDT&E Articles Quantity | 0 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| T&E: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FY 07: Conducted TECHEVAL. LRIP #1 decertified from test on DDG-96 in Jun 07. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | FY 2007 | FY 2008 | FY 2009 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Accomplishments/Effort/Subtotal Cost | 0.500 | 0.000 | 0.000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RDT&E Articles Quantity | 0 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Management: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FY 07: Updated documentation in support of Full Rate Production Decision. Travel. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C. OTHER PROGRAM FUNDING SUMMARY: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>Line Item No. and Name</th> <th>FY 2007</th> <th>FY 2008</th> <th>FY 2009</th> <th>FY 2010</th> <th>FY 2011</th> <th>FY 2012</th> <th>FY 2013</th> <th>To Complete</th> <th>Total Cost</th> </tr> </thead> <tbody> <tr> <td>2622 / OPN (LV064)</td> <td style="text-align: right;">0.000</td> <td style="text-align: right;">10.500</td> <td style="text-align: right;">2.749</td> <td style="text-align: right;">4.806</td> <td style="text-align: right;">4.512</td> <td style="text-align: right;">9.775</td> <td style="text-align: right;">10.811</td> <td></td> <td></td> </tr> <tr> <td>1600 /OPN (LCS MM)</td> <td style="text-align: right;">78.741</td> <td style="text-align: right;">0.000</td> <td style="text-align: right;">131.241</td> <td style="text-align: right;">234.673</td> <td style="text-align: right;">242.184</td> <td style="text-align: right;">252.298</td> <td style="text-align: right;">227.441</td> <td></td> <td></td> </tr> </tbody> </table> | | | | | | | | | | Line Item No. and Name | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 | To Complete | Total Cost | 2622 / OPN (LV064) | 0.000 | 10.500 | 2.749 | 4.806 | 4.512 | 9.775 | 10.811 | | | 1600 /OPN (LCS MM) | 78.741 | 0.000 | 131.241 | 234.673 | 242.184 | 252.298 | 227.441 | | |
| Line Item No. and Name | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 | To Complete | Total Cost | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2622 / OPN (LV064) | 0.000 | 10.500 | 2.749 | 4.806 | 4.512 | 9.775 | 10.811 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1600 /OPN (LCS MM) | 78.741 | 0.000 | 131.241 | 234.673 | 242.184 | 252.298 | 227.441 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D. ACQUISITION STRATEGY: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>The RMS(V)3 focused on a prototype development, and was competitively awarded to Lockheed Martin in August 1996. The RMS(V)4, officially designated the AN/WLD-1(V)(1), was awarded as a sole source contract to Lockheed Martin in 2002. MS C on 1 July 2005 authorized procurement of three (3) LRIPs in FY05. Conducted Operational Assessment in August 2006 to support FY06 (2nd) LRIP Decision. ASN(RDA) approved FY06 (2nd) LRIP up to 4 units. This decision was documented in Acquisition Decision Memorandum (ADM) dated 21 Sep 2006. Funding in FY 08 to procure one LRIP unit in support of LCS Program. OPEVAL rescheduled in 4th Qtr FY08 followed by FRPD in 2nd Qtr FY 09.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 4 | PROGRAM ELEMENT NUMBER AND NAME 0603502N/SURFACE AND SHALLOW WATER MINE COUNTERMEAS | | | | PROJECT NUMBER AND NAME 1233/Surface MCM Mid-life Upgrade | | |
| COST (In Millions) | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
| Project Cost | 18.853 | 27.702 | 25.251 | 15.754 | 14.050 | 20.604 | 25.664 |
| RDT&E Articles Qty | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

(1) AN/SQQ-32(V)4 High-Frequency, Wide Band (HFWB) is a technology upgrade to the SQQ-32 Towed Body which will incorporate HFWB technology into the detection sonar to address performance deficiencies against new mine threats in the littorals. This upgrade will be installed on MCM-1 Class ships with the SQQ-32(V)3 and will develop new transducer modules, fiber optic cable and modify topside processing and display software. 2) Mine Warfare and Environmental Decision Aids Library (MEDAL) is a software segment on the Global Command and Control System - Maritime (GCCS-M). MEDAL provides mine and mine warfare planning and evaluation tools and databases to the MCM Commander. (3) MCM Command Control, Communication, Computers and Intelligence (C4I) meet FORCEnet implementation standards; develop and maintain Mine Warfare (MIW) C4I Surveillance and Reconnaissance (C4ISR) architecture; identify and validate C4ISR shortfalls. 4) Develop and implement Mine Countermeasures Commander's Estimate of the Situation (MCM CES)*. 5) Battle Space Profiler (BSP) is used to optimize sonar setup (towed body depth and depression/elevation (D/E) angles), support mission planning based on predicted sonar performance, and adapt mission planning to changes in the environment and threats. Improvement to the BSP system will allow the BSP to become an in-situation real-time environmental data collection system and will allow sharing pertinent data such as MEDAL contact and environmental databases, as well as all Navigation information. 6) Unmanned Surface Sweep System (US3) is a magnetic/acoustic sweep system developed to sweep acoustic/magnetic influence mines from an unmanned surface platform deployed from the Littoral Combat Ship (LCS).

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| APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 4 | PROGRAM ELEMENT NUMBER AND NAME 0603502N/SURFACE AND SHALLOW WATER MINE COUNTER | PROJECT NUMBER AND NAME 1233/Surface MCM Mid-life Upgrade | |
| B. ACCOMPLISHMENTS/PLANNED PROGRAM: | | | |
| | FY 2007 | FY 2008 | FY 2009 |
| Accomplishments/Effort/Subtotal Cost | 0.321 | 0.000 | 0.000 |
| RDT&E Articles Quantity | 0 | 0 | 0 |
| PRODUCT DEVELOPMENT: BSP: Developed NAVO and NRL products into an integrated Battle Space Profiler (BSP) System. | | | |
| | FY 2007 | FY 2008 | FY 2009 |
| Accomplishments/Effort/Subtotal Cost | 0.050 | 0.000 | 0.000 |
| RDT&E Articles Quantity | 0 | 0 | 0 |
| SUPPORT: BSP: Developed logistics products, including sparing, training materials, and interactive technical manual. | | | |
| | FY 2007 | FY 2008 | FY 2009 |
| Accomplishments/Effort/Subtotal Cost | 0.106 | 0.000 | 0.000 |
| RDT&E Articles Quantity | 0 | 0 | 0 |
| MANAGEMENT: BSP: Provided program management support and travel for BSP program. | | | |
| | FY 2007 | FY 2008 | FY 2009 |
| Accomplishments/Effort/Subtotal Cost | 1.056 | 0.000 | 0.000 |
| RDT&E Articles Quantity | 0 | 0 | 0 |
| C4I/PRODUCT DEVELOPMENT: Continued MIW information system engineering effort. This effort to include the ongoing development of the MIW Command, Control, Communication, Computers and Intelligence, (C4I) Surveillance, Reconnaissance (C4ISR) Architecture, which documents the Information Exchange Requirements of the MIW community and serves as Architecture for all MIW Programs of Record as required by DODI 5000.2. Rev 2 Architecture will support FORCEnet objectives to define MIW C4I capability in 2015. | | | |
| | FY 2007 | FY 2008 | FY 2009 |
| Accomplishments/Effort/Subtotal Cost | 0.223 | 0.000 | 0.000 |
| RDT&E Articles Quantity | 0 | 0 | 0 |
| C4I/MANAGEMENT: C4I: Provided program management support and travel for MIW C4I program. | | | |

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| EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION (CONTINUATION) | | | | DATE February 2008 |
| APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 4 | PROGRAM ELEMENT NUMBER AND NAME 0603502N/SURFACE AND SHALLOW WATER MINE COUNTER | PROJECT NUMBER AND NAME 1233/Surface MCM Mid-life Upgrade | | |
| | | FY 2007 | FY 2008 | FY 2009 |
| Accomplishments/Effort/Subtotal Cost | | 0.262 | 0.364 | 0.093 |
| RDT&E Articles Quantity | | 0 | 0 | 0 |
| MCM CES/PRODUCT DEVELOPMENT: FY 07: Completed development of Build 0, testing for Build 0. FY 08: Begin Build 1 development, develop Build 1 modules, develop Engineering Development Model (EDM). Development of MEDAL EA and MCM CES Build 1 modules, integration of modules. FY 09: Conduct testing of Build 1 with MEDAL EA. | | | | |
| | | FY 2007 | FY 2008 | FY 2009 |
| Accomplishments/Effort/Subtotal Cost | | 0.559 | 0.600 | 0.060 |
| RDT&E Articles Quantity | | 0 | 0 | 0 |
| MCM CES/SUPPORT: Oversee technical integration of developed algorithms and models that have demonstrated their effectiveness in reducing the complexity of the MCM planning problem into a manageable set of options depending on the operational objective. Support effort to include communication with activities such as ONR and NSWC-PC to coordinate the incorporation of validated algorithms and models into MEDAL with the CES framework in order to effectively simplify the MCM planning problem for CSG and ESG staffs and therefore provide the speed, agility, adaptability, and flexibility required for modern MCM operations. | | | | |
| | | FY 2007 | FY 2008 | FY 2009 |
| Accomplishments/Effort/Subtotal Cost | | 0.100 | 0.000 | 0.100 |
| RDT&E Articles Quantity | | 0 | 0 | 0 |
| MCM CES/TEST AND EVALUATION: FY 07: Performed Test and evaluation of MCM CES tool. Completed testing of Build 0 EDM. FY 09: Complete testing of Build 1 with MEDAL EA. | | | | |
| | | FY 2007 | FY 2008 | FY 2009 |
| Accomplishments/Effort/Subtotal Cost | | 0.080 | 0.080 | 0.020 |
| RDT&E Articles Quantity | | 0 | 0 | 0 |
| MCM CES/MANAGEMENT: FY 07: Program management included overall technical guidance and leadership for the program. Other ongoing PM support includes oversight of financial and logistics efforts and adequate coordination with MEDAL. Other PM tasking to include briefings, demonstrations, and project planning as required. FY 08: Program management shall include overall technical guidance and leadership for the program. Other ongoing PM support includes oversight of financial and logistics efforts and adequate coordination with MEDAL. Other PM tasking to include briefings, demonstrations, and project planning as required. FY 09: Other PM tasking to include briefings, demonstrations, and project planning as required. | | | | |

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| APPROPRIATION/BUDGET ACTIVITY | | PROGRAM ELEMENT NUMBER AND NAME | | PROJECT NUMBER AND NAME |
| RD TEN/BA 4 | | 0603502N/SURFACE AND SHALLOW WATER MINE COUNTER | | 1233/Surface MCM Mid-life Upgrade |
| | | FY 2007 | FY 2008 | FY 2009 |
| Accomplishments/Effort/Subtotal Cost | | 5.387 | 6.201 | 1.771 |
| RDT&E Articles Quantity | | 0 | 0 | 0 |
| HFWB/PRODUCT DEVELOPMENT: | | | | |
| FY 07: Completed soundhead and transducer design; complete interface electronics design; telemetry processor hardware for towed body and shipboard cabling hardware; complete shipboard processor design; complete fiber optic telemetry interface design. | | | | |
| FY 08: Fiber optic tow cable for EDM; consoles hardware; shipboard equipment system integration and fiber optic and slip ring integration. Continue design and fabrication efforts; begin laboratory integration, testing and in-water component tests. | | | | |
| FY 09: Towed body; common navigation console and auxiliary equipment integration. | | | | |
| | | FY 2007 | FY 2008 | FY 2009 |
| Accomplishments/Effort/Subtotal Cost | | 2.400 | 4.198 | 0.500 |
| RDT&E Articles Quantity | | 0 | 0 | 0 |
| HFWB/SUPPORT: | | | | |
| FY 07: Developed beamforming and display software; modify existing software and integration of new software; Integrated Logistics Support (ILS): develop Initial Capabilities Documents (ICDs), installation packages, technical manual and training updates. | | | | |
| FY 08: Complete software requirements and configuration; software integration testings and ILS documentation. | | | | |
| FY 09: Complete documentation development and ILS documents. | | | | |
| | | FY 2007 | FY 2008 | FY 2009 |
| Accomplishments/Effort/Subtotal Cost | | 0.350 | 1.040 | 2.416 |
| RDT&E Articles Quantity | | 0 | 0 | 0 |
| HFWB/TEST AND EVALUATION: | | | | |
| FY 07: Completed in lab system integration and testing. | | | | |
| FY 08: Cabling testing; system integration lab test; tow cable and slip ring shock test and in water testing. | | | | |
| FY 09: Complete in water testing; at sea testing; operation assessment and Environmental Qualification testing (EQT). | | | | |
| | | FY 2007 | FY 2008 | FY 2009 |
| Accomplishments/Effort/Subtotal Cost | | 0.505 | 0.701 | 0.260 |
| RDT&E Articles Quantity | | 0 | 0 | 0 |
| HFWB/MANAGEMENT: | | | | |
| FY 07- FY 09: Provide program management support and travel for AN/SQQ-32 High Frequency Wideband (HFWB) Upgrade program. | | | | |
| | | FY 2007 | FY 2008 | FY 2009 |
| Accomplishments/Effort/Subtotal Cost | | 4.251 | 5.886 | 5.317 |
| RDT&E Articles Quantity | | 0 | 0 | 0 |
| MEDAL/PRODUCT DEVELOPMENT: | | | | |
| FY 07: Completed development and test of Build 11. | | | | |
| FY 08: Initiate development of Enterprise Architecture (EA) v.1. | | | | |
| FY 09: Complete IOC Build. Continue development and test of EA v.1. Initiate development of EA v.2. | | | | |

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| | FY 2007 | FY 2008 | FY 2009 | |
| Accomplishments/Effort/Subtotal Cost | 0.402 | 0.402 | 0.402 | |
| RDT&E Articles Quantity | 0 | 0 | 0 | |
| MEDAL/SUPPORT: Oversee technical integration of developed algorithms and models that have demonstrated their effectiveness with respect to their objectives. Support effort to include communication with activities such as applied labs, government activities, and designated contractors. Assist in providing the speed, agility, adaptability, and flexibility required for modern MCM operations. | | | | |
| | FY 2007 | FY 2008 | FY 2009 | |
| Accomplishments/Effort/Subtotal Cost | 0.500 | 0.250 | 0.750 | |
| RDT&E Articles Quantity | 0 | 0 | 0 | |
| MEDAL/TEST AND EVALUATION: Perform testing of all builds and baselines of MEDAL and MEDAL integration, test of Build 11, Test of MEDAL EA v1. | | | | |
| | FY 2007 | FY 2008 | FY 2009 | |
| Accomplishments/Effort/Subtotal Cost | 0.570 | 0.570 | 0.570 | |
| RDT&E Articles Quantity | 0 | 0 | 0 | |
| MEDAL/MANAGEMENT: Provide program management support and travel for MEDAL program. Program management shall include overall technical guidance and leadership for the program. Oversight of financial and logistics efforts and coordination with Navy and other DoD organizations and contractors as required to ensure successful execution of the program. As part of the systems engineering element of PM, communicate and coordinate with MIW C4ISR, ICWS, Organic MCM, Mainstreaming MIW, Expeditionary Warfare C4ISR, tactics development, long term planning, Naval Special Clearance Team (NSCT)-1, Assault Breaching Systems of Systems (ABSoS), LCS, and other programs as they relate to MEDAL and MIW Mission Planning, Evaluation, and C4ISR. Other PM tasking to include briefings, demonstrations, and project planning as required. | | | | |
| | FY 2007 | FY 2008 | FY 2009 | |
| Accomplishments/Effort/Subtotal Cost | 0.092 | 3.498 | 2.184 | |
| RDT&E Articles Quantity | 0 | 0 | 0 | |
| US3/PRODUCT DEVELOPMENT: FY 07: Office of Naval Research delivered prototype under terms of Technology Transition Agreement (TTA); initiation of Analysis of Alternatives (AoA). FY 08: Delivery of AoA; Initiation of capability production document; system development and demonstration effort. FY 09: Product improvement efforts. Hardware and Software Development for the Unmanned Surface Sweep System (US3). | | | | |

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| CLASSIFICATION: | | UNCLASSIFIED | | | | | | | |
| EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION (CONTINUATION) | | | | | | | | DATE February 2008 | |
| APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 4 | | PROGRAM ELEMENT NUMBER AND NAME 0603502N/SURFACE AND SHALLOW WATER MINE COUNTER | | | | PROJECT NUMBER AND NAME 1233/Surface MCM Mid-life Upgrade | | | |
| | | FY 2007 | | FY 2008 | | FY 2009 | | | |
| Accomplishments/Effort/Subtotal Cost | | 0.890 | | 2.047 | | 5.667 | | | |
| RDT&E Articles Quantity | | 0 | | 0 | | 0 | | | |
| US3/SUPPORT: | | | | | | | | | |
| FY 07: Engineering support for prototype system and accomplishments of key performance parameters. | | | | | | | | | |
| FY 08: Engineering and ILS support for required documentation to accomplish Milestone C. | | | | | | | | | |
| FY 09: Completion of Milestone C documentation; engineering support for test events. Support for programmatic and logistical documentation. | | | | | | | | | |
| | | FY 2007 | | FY 2008 | | FY 2009 | | | |
| Accomplishments/Effort/Subtotal Cost | | 0.168 | | 0.895 | | 3.898 | | | |
| RDT&E Articles Quantity | | 0 | | 0 | | 0 | | | |
| US3/TEST AND EVALUATION: | | | | | | | | | |
| FY 07: Risk Reduction Testing. | | | | | | | | | |
| FY 08: CT and DT planning. | | | | | | | | | |
| FY 09: Conduct DT testing in 3rd Qtr and OT testing in 4th Qtr. | | | | | | | | | |
| | | FY 2007 | | FY 2008 | | FY 2009 | | | |
| Accomplishments/Effort/Subtotal Cost | | 0.581 | | 0.970 | | 1.243 | | | |
| RDT&E Articles Quantity | | 0 | | 0 | | 0 | | | |
| US3/MANAGEMENT: | | | | | | | | | |
| FY 07: Program initiation; ACAT III designation. | | | | | | | | | |
| FY 08: Program support and management necessary to monitor contractor progress; review system capabilities; monitor cost and schedule; monitor contractor deliverables. | | | | | | | | | |
| FY 09: Complete Milestone C in 4th Qtr. | | | | | | | | | |
| C. OTHER PROGRAM FUNDING SUMMARY: | | | | | | | | | |
| Line Item No. and Name | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 | To Complete | Total Cost |
| 2622/OPN (LV075/LV078/LV080/LV830/LV900) | 23.357 | 12.070 | 13.719 | 42.966 | 40.754 | 36.021 | 8.902 | | |

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| CLASSIFICATION: | | UNCLASSIFIED | |
| EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION (CONTINUATION) | | | DATE February 2008 |
| APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 4 | PROGRAM ELEMENT NUMBER AND NAME 0603502N/SURFACE AND SHALLOW WATER MINE COUNTER | PROJECT NUMBER AND NAME 1233/Surface MCM Mid-life Upgrade | |
| <p>D. ACQUISITION STRATEGY:</p> <p>HFWB - Naval Surface Warfare Center, Panama City (NSWC, PC) will team with a ARL UT to design and develop the HFWB upgrade to the AN/SQQ-32.</p> <p>BSP - The system is being developed by NAVO, NRL and NSWC, PC. The improvements being incorporated into the BSP system are modifications to existing products Mine Warfare and Environmental Decision Aids Library (MEDAL) - requirements for MEDAL Builds are generated through a formal requirements process. Requirements conferences gather a list of candidate functions based on a logical sequence to fully implement the overall software architecture. The fleet is presented with a recommended list of candidate capabilities based on this program plan, doctrine, fleet comments, and technology. These capability items are then prioritized by the fleet representatives (coordinated by Commander Mine Warfare Command). The fleet inputs are then consolidated by COMINWARCOM into an overall list which is then presented to Navy leadership for pricing and final selection. The selection is based on price, risk, available funding, and possibly by other program factors (e.g., ensure that MEDAL supports other program delivery schedules). Selection balances immediate needs, long term objectives, technical maturity and other programmatic factors. A verification and validation process is applied to any algorithms, tactics, or models to be incorporated in the software. MEDAL development to include integration of data fusion techniques and incorporation of Data Access Layer (DAL) architecture to meet FORCENet requirements. Acquisition strategy for Mine Countermeasures Commander's Estimate of the situation (MCM CES) is to deliver the software module within MEDAL builds by implementing the CES framework into the MEDAL software.</p> <p>US3- The Unmanned Surface Sweep (US3) system effort will be transferred from ONR to PMS495 in FY07. PMS495 will award an SD&D contract to continue development of the system. It will be capable of sweeping mines in the littoral waters. The SD&D phase will include a milestone C LRIP decision in FY09 and then LRIP and a full rate production decision in FY10.</p> | | | |

| CLASSIFICATION: | | UNCLASSIFIED | | | | | | | | | | |
|--|------------------------|--|---------------|--------------|--------------------|--------------|-----------------------------------|--------------|--------------------|------------------|--------------|--------------------------|
| EXHIBIT R-3, RDT&E PROJECT COST ANALYSIS | | | | | | | | | | DATE | | |
| | | | | | | | | | | February 2008 | | |
| APPROPRIATION/BUDGET ACTIVITY | | PROGRAM ELEMENT NUMBER AND NAME | | | | | PROJECT NUMBER AND NAME | | | | | |
| RD TEN/BA 4 | | 0603502N/SURFACE AND SHALLOW WATER MINE COUNTERMEASU | | | | | 1233/Surface MCM Mid-life Upgrade | | | | | |
| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY Cost | FY 2007 Cost | FY 2007 Award Date | FY 2008 Cost | FY 2008 Award Date | FY 2009 Cost | FY 2009 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| BSP: Develop Bottom Sediment Classifier | WX | NRL | 0.258 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.258 | 0.000 |
| Develop Current Profiler | WX | NAVO | 0.000 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.000 | 0.000 |
| Develop Hydro-Optics Package | WX | NAVO | 0.000 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.000 | 0.000 |
| Systems Engineering and Integration | WX | NSWC PC | 0.100 | 0.206 | NOV-06 | 0.000 | | 0.000 | | 0.000 | 0.306 | 0.000 |
| System Development | WX | NSWC PC | 0.258 | 0.115 | NOV-06 | 0.000 | | 0.000 | | 0.000 | 0.373 | 0.000 |
| Subtotal Product Development | | | 0.616 | 0.321 | | 0.000 | | 0.000 | | 0.000 | 0.937 | 0.000 |
| Remarks: | | | | | | | | | | | | |
| Develop Logistics Products | WX | NSWC PC | 0.110 | 0.050 | NOV-06 | 0.000 | | 0.000 | | 0.000 | 0.160 | 0.000 |
| Subtotal Support Costs | | | 0.110 | 0.050 | | 0.000 | | 0.000 | | 0.000 | 0.160 | 0.000 |
| Remarks: | | | | | | | | | | | | |
| Program Management Support | CPFF | CACI | 0.050 | 0.030 | | 0.000 | | 0.000 | | 0.000 | 0.080 | 0.000 |
| Government Engineering Support | WX | NSWC PC | 0.080 | 0.010 | | 0.000 | | 0.000 | | 0.000 | 0.090 | 0.000 |
| Travel | PD | NAVSEA | 0.190 | 0.066 | | 0.000 | | 0.000 | | 0.000 | 0.256 | 0.000 |
| Subtotal Management Services | | | 0.320 | 0.106 | | 0.000 | | 0.000 | | 0.000 | 0.426 | 0.000 |
| Remarks: | | | | | | | | | | | | |
| Systems Engineering | WX | NSWC PC | 1.859 | 1.056 | NOV-06 | 0.000 | | 0.000 | | 0.000 | 2.915 | 0.000 |
| Subtotal C4I Production Development | | | 1.859 | 1.056 | | 0.000 | | 0.000 | | 0.000 | 2.915 | 0.000 |
| Remarks: | | | | | | | | | | | | |
| Software Development | CPFF | SAIC | 0.350 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.350 | 0.000 |
| Subtotal C4I Support | | | 0.350 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.350 | 0.000 |
| Remarks: | | | | | | | | | | | | |
| Program Management Support | CPFF | CACI | 0.218 | 0.045 | NOV-06 | 0.000 | | 0.000 | | 0.000 | 0.263 | 0.000 |
| Travel | PD | NAVSEA | 0.074 | 0.010 | NOV-06 | 0.000 | | 0.000 | | 0.000 | 0.084 | 0.000 |
| Government Engineering Support | WX | NSWC PC | 0.103 | 0.168 | NOV-06 | 0.000 | | 0.000 | | 0.000 | 0.271 | 0.000 |

| CLASSIFICATION: | | UNCLASSIFIED | | | | | | | | | | |
|---|------------------------|--|---------------|--------------|--------------------|--------------|-----------------------------------|--------------|--------------------|------------------|---------------|--------------------------|
| EXHIBIT R-3, RDT&E PROJECT COST ANALYSIS | | | | | | | | | | DATE | | |
| | | | | | | | | | | February 2008 | | |
| APPROPRIATION/BUDGET ACTIVITY | | PROGRAM ELEMENT NUMBER AND NAME | | | | | PROJECT NUMBER AND NAME | | | | | |
| RD TEN/BA 4 | | 0603502N/SURFACE AND SHALLOW WATER MINE COUNTERMEASU | | | | | 1233/Surface MCM Mid-life Upgrade | | | | | |
| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY Cost | FY 2007 Cost | FY 2007 Award Date | FY 2008 Cost | FY 2008 Award Date | FY 2009 Cost | FY 2009 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Program Management Support | Var | Various | 0.157 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.157 | 0.000 |
| SBIR Assessment | | | 0.019 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.019 | 0.000 |
| Subtotal C4I Management | | | 0.571 | 0.223 | | 0.000 | | 0.000 | | 0.000 | 0.794 | 0.000 |
| Remarks: | | | | | | | | | | | | |
| Systems Engineering | WX | NSWC PC | 0.814 | 0.262 | NOV-06 | 0.364 | NOV-07 | 0.093 | NOV-08 | 0.000 | 1.533 | 0.000 |
| Subtotal MCM CES Product Development | | | 0.814 | 0.262 | | 0.364 | | 0.093 | | 0.000 | 1.533 | 0.000 |
| Remarks: | | | | | | | | | | | | |
| Software Development | CPFF | SAIC | 0.110 | 0.559 | NOV-06 | 0.600 | NOV-07 | 0.060 | NOV-08 | 0.000 | 1.329 | 0.000 |
| Subtotal MCM CES Support | | | 0.110 | 0.559 | | 0.600 | | 0.060 | | 0.000 | 1.329 | 0.000 |
| Remarks: | | | | | | | | | | | | |
| Test and Evaluation | Var | Various | 0.000 | 0.100 | MAY-07 | 0.000 | | 0.100 | NOV-08 | 0.000 | 0.200 | 0.000 |
| Subtotal MCM CES Test and Evaluation | | | 0.000 | 0.100 | | 0.000 | | 0.100 | | 0.000 | 0.200 | 0.000 |
| Remarks: | | | | | | | | | | | | |
| Program Management Support | CPFF | CACI | 0.045 | 0.050 | NOV-06 | 0.050 | NOV-07 | 0.020 | NOV-08 | 0.000 | 0.165 | 0.000 |
| Government Engineering Support | WX | NSWC PC | 0.005 | 0.005 | NOV-06 | 0.005 | NOV-07 | 0.000 | | 0.000 | 0.015 | 0.000 |
| Travel | PD | NSWC PC | 0.044 | 0.025 | NOV-06 | 0.025 | NOV-07 | 0.000 | | 0.000 | 0.094 | 0.000 |
| Subtotal MCM CES Management | | | 0.094 | 0.080 | | 0.080 | | 0.020 | | 0.000 | 0.274 | 0.000 |
| Remarks: | | | | | | | | | | | | |
| Primary Hardware Development | WX | NSWC PC | 4.060 | 4.343 | NOV-06 | 5.951 | NOV-07 | 1.771 | NOV-08 | 0.000 | 16.125 | 0.000 |
| Primary Hardware Development | WX | ARL-UT | 0.000 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.000 | 0.000 |
| Tow Cable Development | WX | NSWC PC | 0.800 | 0.599 | NOV-06 | 0.000 | | 0.000 | | 0.000 | 1.399 | 0.000 |
| Ship Integration | WX | NSWC PC | 0.602 | 0.445 | NOV-06 | 0.250 | NOV-07 | 0.000 | | 0.000 | 1.297 | 0.000 |
| Subtotal HFWB Product Development | | | 5.462 | 5.387 | | 6.201 | | 1.771 | | 0.000 | 18.821 | 0.000 |
| Remarks: | | | | | | | | | | | | |

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| CLASSIFICATION: | | UNCLASSIFIED | | | | | | | | | | |
| EXHIBIT R-3, RDT&E PROJECT COST ANALYSIS | | | | | | | | | | DATE February 2008 | | |
| APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 4 | | PROGRAM ELEMENT NUMBER AND NAME 0603502N/SURFACE AND SHALLOW WATER MINE COUNTERMEASU | | | | | PROJECT NUMBER AND NAME 1233/Surface MCM Mid-life Upgrade | | | | | |
| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY Cost | FY 2007 Cost | FY 2007 Award Date | FY 2008 Cost | FY 2008 Award Date | FY 2009 Cost | FY 2009 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| HFWB Software Development | WX | NSWC PC | 1.317 | 1.400 | NOV-06 | 3.198 | NOV-07 | 0.250 | NOV-08 | 0.000 | 6.165 | 0.000 |
| HFWB Integrated Logistics Support | WX | NSWC PC | 0.350 | 1.000 | NOV-06 | 1.000 | NOV-07 | 0.250 | NOV-08 | 0.000 | 2.600 | 0.000 |
| Subtotal HFWB Support | | | 1.667 | 2.400 | | 4.198 | | 0.500 | | 0.000 | 8.765 | 0.000 |
| Remarks: | | | | | | | | | | | | |
| Developmental Test and Evaluation | WX | NSWC PC | 0.175 | 0.350 | NOV-06 | 1.040 | NOV-07 | 2.416 | NOV-08 | 0.000 | 3.981 | 0.000 |
| Subtotal HFWB Test and Evaluation | | | 0.175 | 0.350 | | 1.040 | | 2.416 | | 0.000 | 3.981 | 0.000 |
| Remarks: | | | | | | | | | | | | |
| Program Management Support | Var | Various | 0.268 | 0.290 | NOV-06 | 0.386 | JAN-08 | 0.150 | JAN-09 | 0.000 | 1.094 | 0.000 |
| Government Engineering Support | WX | NSWC PC | 0.150 | 0.200 | NOV-06 | 0.300 | NOV-07 | 0.100 | NOV-08 | 0.000 | 0.750 | 0.000 |
| Travel | PD | NAVSEA | 0.000 | 0.015 | NOV-06 | 0.015 | NOV-07 | 0.010 | NOV-08 | 0.000 | 0.040 | 0.000 |
| Subtotal HFWB Management | | | 0.418 | 0.505 | | 0.701 | | 0.260 | | 0.000 | 1.884 | 0.000 |
| Remarks: | | | | | | | | | | | | |
| Software Development | CPFF | SAIC | 6.716 | 4.251 | NOV-06 | 5.886 | NOV-07 | 5.317 | NOV-08 | 0.000 | 22.170 | 0.000 |
| Subtotal MEDAL Product Development | | | 6.716 | 4.251 | | 5.886 | | 5.317 | | 0.000 | 22.170 | 0.000 |
| Remarks: | | | | | | | | | | | | |
| Software Engineering | WX | SPAWAR | 0.000 | 0.182 | NOV-06 | 0.182 | NOV-07 | 0.182 | NOV-08 | 0.000 | 0.546 | 0.000 |
| Software Engineering | WX | NSWC PC | 0.000 | 0.220 | NOV-06 | 0.220 | NOV-07 | 0.220 | NOV-08 | 0.000 | 0.660 | 0.000 |
| Subtotal MEDAL Support | | | 0.000 | 0.402 | | 0.402 | | 0.402 | | 0.000 | 1.206 | 0.000 |
| Remarks: | | | | | | | | | | | | |
| Test and Evaluation | Var | Various | 0.000 | 0.500 | NOV-06 | 0.250 | NOV-07 | 0.750 | NOV-08 | 0.000 | 1.500 | 0.000 |
| Subtotal MEDAL Test and Evaluation | | | 0.000 | 0.500 | | 0.250 | | 0.750 | | 0.000 | 1.500 | 0.000 |
| Remarks: | | | | | | | | | | | | |

| CLASSIFICATION: | | UNCLASSIFIED | | | | | | | | | | |
|--|------------------------|--|---------------|--------------|--------------------|--------------|-----------------------------------|--------------|--------------------|------------------|--------------|--------------------------|
| EXHIBIT R-3, RDT&E PROJECT COST ANALYSIS | | | | | | | | | | DATE | | |
| | | | | | | | | | | February 2008 | | |
| APPROPRIATION/BUDGET ACTIVITY | | PROGRAM ELEMENT NUMBER AND NAME | | | | | PROJECT NUMBER AND NAME | | | | | |
| RD TEN/BA 4 | | 0603502N/SURFACE AND SHALLOW WATER MINE COUNTERMEASU | | | | | 1233/Surface MCM Mid-life Upgrade | | | | | |
| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY Cost | FY 2007 Cost | FY 2007 Award Date | FY 2008 Cost | FY 2008 Award Date | FY 2009 Cost | FY 2009 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Program Management Support | CPFF | CACI | 0.440 | 0.245 | NOV-06 | 0.245 | NOV-07 | 0.245 | NOV-08 | 0.000 | 1.175 | 0.000 |
| Government Engineering Support | WX | NSWC PC | 0.296 | 0.300 | NOV-06 | 0.300 | NOV-07 | 0.300 | NOV-08 | 0.000 | 1.196 | 0.000 |
| Travel | PD | NAVSEA | 0.139 | 0.025 | NOV-06 | 0.025 | NOV-07 | 0.025 | NOV-08 | 0.000 | 0.214 | 0.000 |
| SBIR Assessment | | | 0.054 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.054 | 0.000 |
| Program Management Support | Var | Various | 0.350 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.350 | 0.000 |
| Subtotal MEDAL Management | | | 1.279 | 0.570 | | 0.570 | | 0.570 | | 0.000 | 2.989 | 0.000 |
| Remarks: | | | | | | | | | | | | |
| Product Development | TBD | EDO | 0.000 | 0.000 | | 3.472 | NOV-07 | 2.000 | NOV-08 | 0.000 | 5.472 | 0.000 |
| Product Development | WX | NSWC PC | 0.000 | 0.092 | APR-07 | 0.026 | NOV-07 | 0.184 | NOV-08 | 0.000 | 0.302 | 0.000 |
| Subtotal US3 Product Development | | | 0.000 | 0.092 | | 3.498 | | 2.184 | | 0.000 | 5.774 | 0.000 |
| Remarks: | | | | | | | | | | | | |
| Engineering | TBD | EDO | 0.000 | 0.000 | | 0.257 | NOV-07 | 1.477 | NOV-08 | 0.000 | 1.734 | 0.000 |
| Integrated Logistics | TBD | EDO | 0.000 | 0.000 | | 0.355 | NOV-07 | 0.979 | NOV-08 | 0.000 | 1.334 | 0.000 |
| Engineering | WX | NSWC PC | 0.000 | 0.609 | NOV-06 | 1.300 | NOV-07 | 2.071 | NOV-08 | 0.000 | 3.980 | 0.000 |
| Integrated Logistics | WX | NSWC PC | 0.000 | 0.281 | NOV-06 | 0.135 | NOV-07 | 1.140 | NOV-08 | | 1.556 | 0.000 |
| Subtotal US3 Support | | | 0.000 | 0.890 | | 2.047 | | 5.667 | | 0.000 | 8.604 | 0.000 |
| Remarks: | | | | | | | | | | | | |
| Test and Evaluation | TBD | EDO | 0.000 | 0.000 | | 0.627 | NOV-07 | 1.559 | NOV-08 | 0.000 | 2.186 | 0.000 |
| Test and Evaluation | WX | NSWC PC | 0.000 | 0.168 | NOV-06 | 0.268 | NOV-07 | 2.339 | NOV-08 | | 2.775 | 0.000 |
| Subtotal US3 Test and Evaluation | | | 0.000 | 0.168 | | 0.895 | | 3.898 | | 0.000 | 4.961 | 0.000 |
| Remarks: | | | | | | | | | | | | |
| Contractor Management | TBD | EDO | 0.000 | 0.000 | | 0.323 | NOV-07 | 0.466 | NOV-08 | 0.000 | 0.789 | 0.000 |
| Government Management Support | Var | Various | 0.000 | 0.556 | NOV-06 | 0.622 | NOV-07 | 0.752 | NOV-08 | 0.000 | 1.930 | 0.000 |
| Travel | PD | NAVSEA | 0.000 | 0.025 | NOV-06 | 0.025 | NOV-07 | 0.025 | NOV-08 | 0.000 | 0.075 | 0.000 |
| Subtotal US3 Management | | | 0.000 | 0.581 | | 0.970 | | 1.243 | | 0.000 | 2.794 | 0.000 |

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| CLASSIFICATION: | | UNCLASSIFIED | | | | | | | | | | |
| EXHIBIT R-3, RDT&E PROJECT COST ANALYSIS | | | | | | | | | DATE February 2008 | | | |
| APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 4 | | PROGRAM ELEMENT NUMBER AND NAME 0603502N/SURFACE AND SHALLOW WATER MINE COUNTERMEASU | | | | | PROJECT NUMBER AND NAME 1233/Surface MCM Mid-life Upgrade | | | | | |
| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY Cost | FY 2007 Cost | FY 2007 Award Date | FY 2008 Cost | FY 2008 Award Date | FY 2009 Cost | FY 2009 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Remarks: | | | | | | | | | | | | |
| Total Cost | | | 20.561 | 18.853 | | 27.702 | | 25.251 | | 0.000 | 92.367 | 0.000 |
| | | | | | | | | | | | | |

CLASSIFICATION:

UNCLASSIFIED

EXHIBIT R-4, SCHEDULE PROFILE

DATE

February 2008

APPROPRIATION/BUDGET ACTIVITY

RD TEN/BA 4

PROGRAM ELEMENT NUMBER AND NAME

0603502N/SURFACE AND SHALLOW WATER MINE COUNTERMEASUR

PROJECT NUMBER AND NAME

1233a/MIW C4ISR

MIW C4ISR PROGRAM SCHEDULE

| | FY 2007 | | | | FY 2008 | | | | FY 2009 | | | | FY 2010 | | | | FY 2011 | | | | FY 2012 | | | | FY 2013 | | | |
|---|------------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|
| | 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 |
| Events | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MIW Information System Engineering Effort | ██████████ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MIW C4ISR Architecture Rev 2 | ██████████ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MHC/MCM LAN Integration | ██████████ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MIW FORCENet Implementation | ██████████ | | | | | | | | | | | | | | | | | | | | | | | | | | | |

CLASSIFICATION:

UNCLASSIFIED

EXHIBIT R-4, SCHEDULE PROFILE

DATE

February 2008

APPROPRIATION/BUDGET ACTIVITY

RDTEN/BA 4

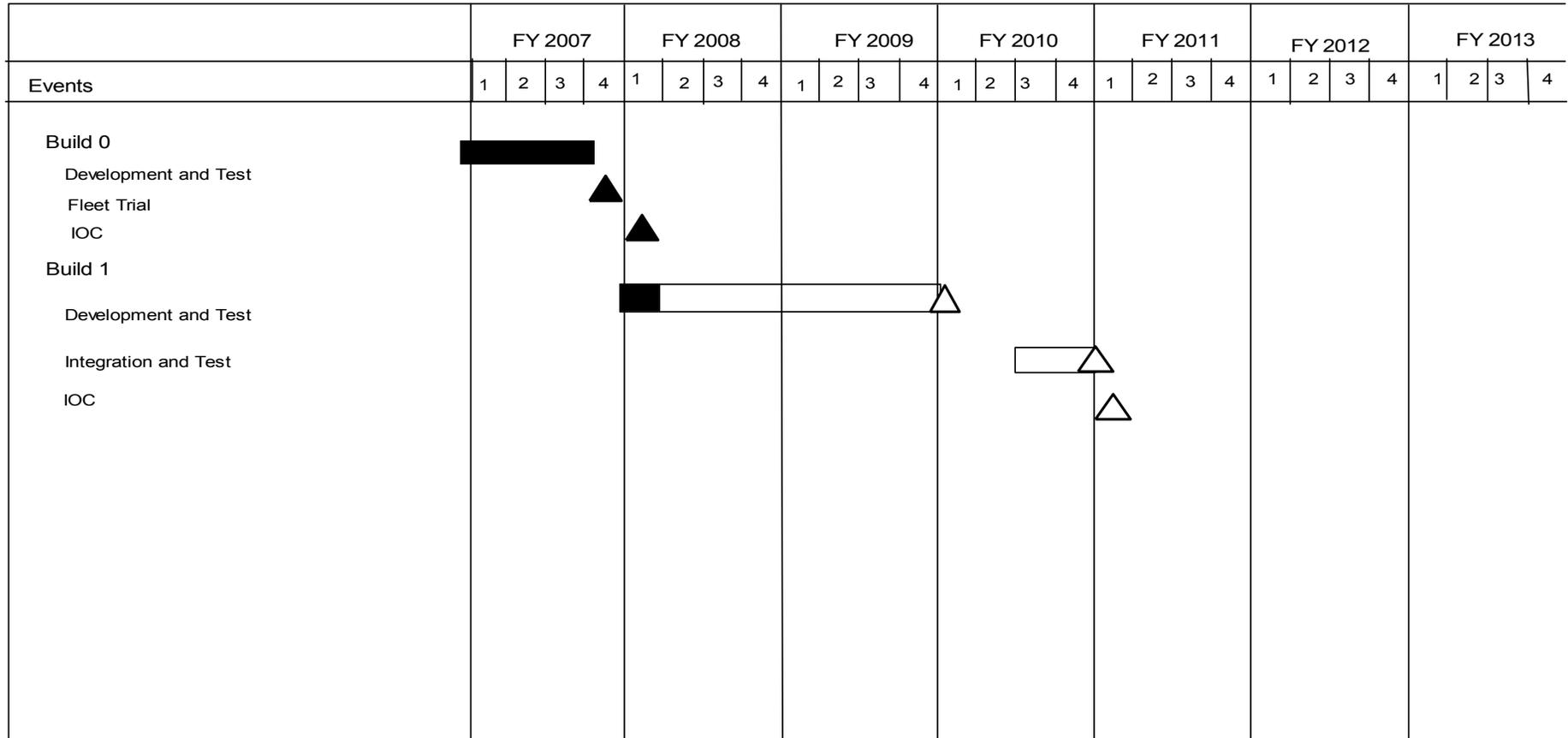
PROGRAM ELEMENT NUMBER AND NAME

0603502N/SURFACE AND SHALLOW WATER MINE COUNTERMEASURE

PROJECT NUMBER AND NAME

1233b/MCM CES

MCM CES PROGRAM SCHEDULE



CLASSIFICATION:

UNCLASSIFIED

EXHIBIT R-4, SCHEDULE PROFILE

DATE

February 2008

APPROPRIATION/BUDGET ACTIVITY

RD TEN/BA 4

PROGRAM ELEMENT NUMBER AND NAME

0603502N/SURFACE AND SHALLOW WATER MINE COUNTERMEASURE

PROJECT NUMBER AND NAME

1233c/HFWB Sonar Upgrade

AN/SQQ-32

HFWB SONAR UPGRADE PROGRAM SCHEDULE

| Fiscal Year | 2007 | | | | 2008 | | | | 2009 | | | | 2010 | | | | 2011 | | | | 2012 | | | | 2013 | | | |
|------------------------------|--------------------|---|------------|------------|------------|------------|------------|------------|------------------|---|---|---|---------------------|---|---|---|---------------------------|---|---|---|------|---|---|---|------|---|---|---|
| | 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 |
| Acquisition Milestones | | | CDR ▲ | | | | | | MS C / FRPD △ | | | | | | | | | | | | | | | | | | | |
| Development Phase | ██████████████████ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Test & Evaluation Milestones | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sub-System Integration | | | ██████████ | ██████████ | ██████████ | ██████████ | ██████████ | ██████████ | | | | | | | | | | | | | | | | | | | | |
| At-Sea Test | | | | | | | | | ▽▽ | | | | | | | | | | | | | | | | | | | |
| EQT Testing | | | ██████████ | ██████████ | ██████████ | ██████████ | ██████████ | ██████████ | | | | | | | | | | | | | | | | | | | | |
| Production Milestones | | | | | | | | | | | | | Contract Award △ | | | | HFWB Full Rate Production | | | | | | | | | | | |

CLASSIFICATION:

UNCLASSIFIED

EXHIBIT R-4, SCHEDULE PROFILE

DATE
February 2008

APPROPRIATION/BUDGET ACTIVITY
RD TEN/BA 4

PROGRAM ELEMENT NUMBER AND NAME
0603502N/SURFACE AND SHALLOW WATER MINE COUNTERMEASURE

PROJECT NUMBER AND NAME
1233d/MEDAL

MEDAL PROGRAM SCHEDULE

| Events | FY 2007 | | | | FY 2008 | | | | FY 2009 | | | | FY 2010 | | | | FY 2011 | | | | FY 2012 | | | | FY 2013 | | | |
|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|
| | 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 |
| Build 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Development and Test | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Integration and Test | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IOC | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Enterprise Architecture (EA) v.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Development and Test | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Integration and Test | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IOC | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EA v.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Development and Test | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Integration and Test | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IOC | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EA v.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Development and Test | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Integration and Test | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Development and Integration of GCCS-M 4.x hardware: | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M-class ships | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Expeditionary units | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

CLASSIFICATION:

UNCLASSIFIED

EXHIBIT R-4, SCHEDULE PROFILE

DATE

February 2008

APPROPRIATION/BUDGET ACTIVITY

RD TEN/BA 4

PROGRAM ELEMENT NUMBER AND NAME

0603502N/SURFACE AND SHALLOW WATER MINE COUNTERMEASURE

PROJECT NUMBER AND NAME

1233e/US3

US3 PROGRAM SCHEDULE

| | FY07 | | | | FY08 | | | | FY09 | | | | FY10 | | | | FY11 | | | | FY12 | | | | FY13 | | | |
|----------------------|------|---|---|---|----------------|---|---|---|---------------|------|---|---|-----------------|---|---|---|----------------------|---|---|---|------|---|---|---|------|---|---|---|
| | 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 |
| Program Milestones | | | | | | | | | MS C | ◇ | ◇ | | FRPD | ◇ | | | | | | | | | | | | | | |
| | | | | | | | | | | LRIP | | | | | | | | | | | | | | | | | | |
| Contracting Events | | | | | Development | △ | | | | | | | FRP Contract | △ | | | | | | | | | | | | | | |
| | | | | | Contract Award | | | | | | | | Award | | | | | | | | | | | | | | | |
| Major Test Events | | | | | | | | | CT | △ | | | DT | △ | | | OT | | | | | | | | | | | |
| System Development | | | | | | | | | SD&D Contract | | | | | | | | | | | | | | | | | | | |
| LRIP Production | | | | | | | | | | | | | LRIP Production | | | | | | | | | | | | | | | |
| Full Rate Production | | | | | | | | | | | | | | | | | Full Rate Production | | | | | | | | | | | |

CLASSIFICATION:

UNCLASSIFIED

EXHIBIT R-4, SCHEDULE PROFILE

DATE

February 2008

APPROPRIATION/BUDGET ACTIVITY

RD TEN/BA 4

PROGRAM ELEMENT NUMBER AND NAME

0603502N/SURFACE AND SHALLOW WATER MINE COUNTERMEASURE

PROJECT NUMBER AND NAME

1233f/BSP

BSP PROGRAM SCHEDULE

| | FY 2007 | | | | FY 2008 | | | | FY 2009 | | | | FY 2010 | | | | FY 2011 | | | | FY 2012 | | | | FY 2013 | | | |
|-------------------------------|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|
| | 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 |
| HW/SW Design and Development | ■ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Preliminary Design Review | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Critical Design Review | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Env., Shock, & Safety Testing | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EDM Installation & C/O | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IOC | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| CLASSIFICATION: | | UNCLASSIFIED | | | | | | |
| EXHIBIT R-4a, SCHEDULE DETAIL | | | | | | DATE February 2008 | | |
| APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 4 | | PROGRAM ELEMENT NUMBER AND NAME 0603502N/SURFACE AND SHALLOW WATER MINE COUNTERME | | | PROJECT NUMBER AND NAME 1233/Surface MCM Mid-life Upgrade | | | |
| Schedule Profile | | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
| BSP: HW/SW Design and Development | | 1Q-2Q | | | | | | |
| BSP: Critical Design and Review | | 1Q | | | | | | |
| BSP: Env., Shock & Safety Testing | | 2Q-3Q | | | | | | |
| BSP: EDM Installation & C/O | | 4Q | | | | | | |
| BSP: IOC | | | 1Q | | | | | |
| C4I: Information System Engineering Effort | | 1Q-4Q | 1Q-4Q | | | | | |
| C4I: C4ISR Architecture Rev 1 | | | | | | | | |
| C4I: C4ISR Architecture Rev 2 | | 1Q-4Q | 1Q-4Q | | | | | |
| C4I: MCM/MHC LAN Integration | | 1Q-4Q | 1Q-4Q | | | | | |
| C4I: FORCEnet Implementation | | 1Q-4Q | 1Q-4Q | | | | | |
| MCM CES: Build 0 Development and Test | | 1Q-3Q | | | | | | |
| MCM CES: Build 0 Fleet Trial | | 4Q | | | | | | |
| MCM CES: Build 0 IOC | | | 1Q | | | | | |
| MCM CES: Build 1 Development and Test | | | 1Q-4Q | 1Q-4Q | | | | |
| MCM CES: Build 1 Integration and Test | | | | | 3Q-4Q | | | |
| MCM CES: IOC | | | | | | 1Q | | |
| HFWB: Design | | 1Q-4Q | 1Q-2Q | | | | | |
| HFWB: PDR | | | | | | | | |
| HFWB: CDR | | 4Q | | | | | | |
| HFWB: Milestone C/FRPD | | | | 3Q | | | | |
| HFWB: Subsystem Integration | | 3Q-4Q | 1Q-4Q | 1Q-2Q | | | | |
| HFWB: At-SEA Test | | | | 1Q-2Q | | | | |
| HFWB: Contract Award | | | | | 1Q | | | |
| HFWB: Full Rate Production | | | | | 2Q-4Q | 1Q-4Q | 1Q-4Q | 1Q-4Q |
| | | | | | | | | |
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| CLASSIFICATION: | | UNCLASSIFIED | | | | | | |
| EXHIBIT R-4a, SCHEDULE DETAIL (CONTINUATION) | | | | | | DATE February 2008 | | |
| APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 4 | | PROGRAM ELEMENT NUMBER AND NAME 0603502N/SURFACE AND SHALLOW WATER MINE COUNTERME | | | PROJECT NUMBER AND NAME 1233/Surface MCM Mid-life Upgrade | | | |
| Schedule Profile | | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
| MEDAL: Build 11 Development and Test | | | | | | | | |
| MEDAL: Build 11 Integration and Test | | 1Q-4Q | | | | | | |
| MEDAL: Build 11 IOC | | 4Q | | | | | | |
| MEDAL: Enterprise Arch (EA) v.1 Development and Test | | 4Q | 1Q-4Q | 1Q-4Q | 1Q-2Q | | | |
| MEDAL: EA v.1 Integration and Test | | | | | 3Q-4Q | | | |
| MEDAL: EA v.1 IOC | | | | | | 1Q | | |
| MEDAL: EA v.2 Development and Test | | | | | 3Q-4Q | 1Q-4Q | 1Q-4Q | |
| MEDAL: EA v.2 Integration and Test | | | | | | | | 1Q-2Q |
| MEDAL: EA v.2 IOC | | | | | | | | 3Q-4Q |
| MEDAL: EA v.3 Development and Test | | | | | | | | 3Q-4Q |
| MEDAL: Dev. & Integration of GCCS hardware: MCM Class | | | 2Q-4Q | | | | | |
| MEDAL: Dev. & Integration of GCCS hardware: Expeditionary Units | | | 2Q-4Q | | | | | |
| US3: Milestone B | | | | | | | | |
| US3: Milestone C | | | | 4Q | | | | |
| US3: LRIP | | | | | 1Q | | | |
| US3: Full Rate Production Decision | | | | | 4Q | | | |
| US3: Development Contract Award | | | 1Q-2Q | | | | | |
| US3: LRIP Contract Award | | | | | 1Q | | | |
| US3: Full Rate Production Contract Award | | | | | | 1Q | | |
| US3: CT Testing | | | | 3Q-4Q | | | | |
| US3: DT Testing | | | | 3Q | | | | |
| US3: OT Testing | | | | 4Q | | | | |
| EDM Contract | | | 2Q-4Q | 1Q-4Q | 1Q-3Q | | | |
| LRIP Production | | | | | 1Q-4Q | 1Q-2Q | | |
| Full Rate Production | | | | | | 1Q-4Q | 1Q-4Q | 1Q-4Q |

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|--|----------------|--|----------------|----------------|---|----------------|----------------|
| CLASSIFICATION: | | UNCLASSIFIED | | | | | |
| EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION | | | | | DATE February 2008 | | |
| APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 4 | | PROGRAM ELEMENT NUMBER AND NAME 0603502N/SURFACE AND SHALLOW WATER MINE COUNTERMEAS | | | PROJECT NUMBER AND NAME 2094/Unmanned Underwater Vehicle | | |
| COST (In Millions) | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
| Project Cost | 24.583 | 12.743 | 30.090 | 41.328 | 40.160 | 53.375 | 77.375 |
| RDT&E Articles Qty | 0 | 0 | 0 | 0 | 2 | 0 | 1 |

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The November 2004 UUV Master Plan established Intelligence, Surveillance, and Reconnaissance (ISR), and clandestine Mine Countermeasures (MCM) as top priorities. The Mission Reconfigurable Unmanned Undersea Vehicle System (MRUUVS) will provide these capabilities to the warfighter. The MRUUVS Capability Development Document (CDD) for Increment 1 (MCM from 688 Class) was approved by the Joint Requirements Oversight Council (JROC) in June 2007.

Planning has begun for an evolutionary acquisition program to develop a modular, reconfigurable 21" MRUUVS for Phase 1 contract award in FY08. The MRUUVS will leverage technology developed under the AN/BLQ-11 Long-Term Mine Reconnaissance System (LMRS). To further mitigate risk before MS-B, the program will use the existing LMRS System to evolve subsystem capability in a phased approach. An advanced forward looking sonar, the Littoral Precision Underwater Mapping Array (LPUMA) will be used for mine detection, obstacle avoidance, and near-SSN maneuvering to include docking. LPUMA will leverage previous Navy investment in the high frequency sail array installed on attack submarines. The first payload developed by the MRUUVS program will support the MCM mission. Payloads to provide other capabilities will be initiated separately.

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| CLASSIFICATION: | | UNCLASSIFIED | |
| EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION | | | DATE February 2008 |
| APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 4 | PROGRAM ELEMENT NUMBER AND NAME 0603502N/SURFACE AND SHALLOW WATER MINE COUNTER | PROJECT NUMBER AND NAME 2094/Unmanned Underwater Vehicle | |
| B. ACCOMPLISHMENTS/PLANNED PROGRAM: | | | |
| | FY 2007 | FY 2008 | FY 2009 |
| Accomplishments/Effort/Subtotal Cost | 24.583 | 12.743 | 30.090 |
| RDT&E Articles Quantity | 0 | 0 | 0 |
| <p>21" MRUUVS - FY07 - Continued pre milestone B component development, capability demonstration, risk reduction, capability demonstration, and acquisition planning.</p> <p>FY08 - Completed the LMRS Launch and Recovery risk reduction/capability demonstration. Initiate Phase I development integration of LPUMA onto two existing EDM vehicles and incorporate Recovery Arm changes to meet SUBSAFE requirements. Develop the request for proposal. Source selection is planned for FY08 with a development contract award in the last quarter of FY08. In FY09, continue integration of LPUMA, development of SUBSAFE Recovery Arm, and initiate Phase II RF COMMS development.</p> <p>C. OTHER PROGRAM FUNDING SUMMARY: N/A</p> <p>D. ACQUISITION STRATEGY:</p> <p>A modular, reconfigurable 21" MRUUVS will be initiated with a Phase I contract planned for FY08. The MRUUVS will consist of a fully integrated vehicle with both forward and side look sonars for Mine Countermeasure, launched from a Los Angeles Class submarine with a recovery system. Navy labs will act as system integrator for Phase II. A contract will be awarded in FY 14 for Phase III, which delivers full CDD performance.</p> | | | |

| CLASSIFICATION: | | UNCLASSIFIED | | | | | | | | | | |
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| EXHIBIT R-3, RDT&E PROJECT COST ANALYSIS | | | | | | | | | | DATE February 2008 | | |
| APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 4 | | PROGRAM ELEMENT NUMBER AND NAME 0603502N/SURFACE AND SHALLOW WATER MINE COUNTERMEASU | | | | | PROJECT NUMBER AND NAME 2094/Unmanned Underwater Vehicle | | | | | |
| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY Cost | FY 2007 Cost | FY 2007 Award Date | FY 2008 Cost | FY 2008 Award Date | FY 2009 Cost | FY 2009 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| LPUMA Hardware Development | CPFF | University of Texas | 3.110 | 2.790 | FEB-07 | 2.010 | DEC-07 | 2.510 | DEC-08 | CONT | CONT | 0.000 |
| ADUUV Hardware Development | CPIF | Lockheed Martin | 30.770 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 30.770 | 0.000 |
| MRUUVS Hardware Development | CPAF | Boeing | 0.000 | 0.000 | | 2.935 | SEP-08 | 16.352 | DEC-08 | CONT | CONT | 0.000 |
| MRUUVS Risk Reduction | CPAF | Boeing | 4.085 | 12.089 | FEB-07 | 1.000 | MAR-08 | 0.000 | | CONT | CONT | 0.000 |
| ADUUV Hardware Development | Various | Various | 17.922 | 0.000 | | 0.000 | | 0.000 | | 17.922 | 35.844 | 0.000 |
| UUV P3I | Various | Various | 37.383 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 37.383 | 0.000 |
| Subtotal Product Development | | | 93.270 | 14.879 | | 5.945 | | 18.862 | | CONT | CONT | 0.000 |
| Remarks: | | | | | | | | | | | | |
| Systems Engineering | WX | Various | 7.234 | 1.607 | DEC-06 | 2.010 | DEC-07 | 1.552 | DEC-08 | 0.000 | 11.639 | 0.000 |
| Systems Engineering | WX | NUWC Newport | 35.389 | 3.637 | DEC-06 | 2.346 | DEC-07 | 3.651 | DEC-08 | CONT | CONT | 0.000 |
| Systems Engineering | WX | NSWC Carderock | 1.616 | 1.034 | JAN-07 | 0.000 | | 0.600 | DEC-08 | CONT | CONT | 0.000 |
| Systems Engineering | WX | NSWC Panama City | 1.252 | 0.212 | DEC-06 | 0.000 | | 0.400 | DEC-08 | CONT | CONT | 0.000 |
| Systems Engineering | CPFF | JHU/APL | 1.979 | 0.540 | DEC-06 | 0.700 | DEC-07 | 0.800 | DEC-08 | CONT | CONT | 0.000 |
| Subtotal Support Costs | | | 47.470 | 7.030 | | 5.056 | | 7.003 | | CONT | CONT | 0.000 |
| Remarks: | | | | | | | | | | | | |
| Operational Test Support | WX | COTF | 6.000 | 0.021 | NOV-06 | 0.000 | | 0.015 | DEC-08 | 0.000 | 6.046 | 0.000 |
| Test and Evaluation Support | WX | NUWC Keyport | 13.682 | 0.175 | NOV-06 | 0.000 | | 0.200 | DEC-08 | CONT | CONT | 0.000 |
| Subtotal Test and Evaluation | | | 19.682 | 0.196 | | 0.000 | | 0.215 | | CONT | CONT | 0.000 |
| Remarks: | | | | | | | | | | | | |
| Program Management Support | CPFF | Various | 54.714 | 2.340 | JAN-07 | 1.572 | NOV-07 | 3.860 | NOV-08 | CONT | CONT | 0.000 |
| Travel | | | 3.995 | 0.138 | OCT-06 | 0.170 | OCT-07 | 0.150 | OCT-08 | CONT | CONT | 0.000 |
| Subtotal Management Services | | | 58.709 | 2.478 | | 1.742 | | 4.010 | | CONT | CONT | 0.000 |
| Remarks: | | | | | | | | | | | | |
| LMRS | CPAF/IF | Boeing | 149.911 | 0.000 | | 0.000 | | 0.000 | | | 149.911 | 0.000 |
| LMRS | Various | Various | 43.622 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 43.622 | 0.000 |

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| CLASSIFICATION: | | UNCLASSIFIED | | | | | | | | | | |
| EXHIBIT R-3, RDT&E PROJECT COST ANALYSIS | | | | | | | | | DATE February 2008 | | | |
| APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 4 | | PROGRAM ELEMENT NUMBER AND NAME 0603502N/SURFACE AND SHALLOW WATER MINE COUNTERMEASU | | | | | PROJECT NUMBER AND NAME 2094/Unmanned Underwater Vehicle | | | | | |
| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY Cost | FY 2007 Cost | FY 2007 Award Date | FY 2008 Cost | FY 2008 Award Date | FY 2009 Cost | FY 2009 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Subtotal LMRS | | | 193.533 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 193.533 | 0.000 |
| Remarks: | | | | | | | | | | | | |
| Total Cost | | | 412.664 | 24.583 | | 12.743 | | 30.090 | | CONT | CONT | 0.000 |

CLASSIFICATION:

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| EXHIBIT R4, Schedule Profile | | | | | | | | | | | | | | | | | | | | DATE: February 2008 | | | | | | | | |
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| APPROPRIATION/BUDGET ACTIVITY | | | | | PROGRAM ELEMENT NUMBER AND NAME | | | | | | | | | | PROJECT NUMBER AND NAME | | | | | | | | | | | | | |
| RDT&E, N / | | | | | Surface & Shallow Water MCM, 0603502N | | | | | | | | | | Unmanned Undersea Vehicle 2094/2852 | | | | | | | | | | | | | |
| Fiscal Year | 2007 | | | | 2008 | | | | 2009 | | | | 2010 | | | | 2011 | | | | 2012 | | | | 2013 | | | |
| | 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 |
| 21" MRUUVS | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Risk Reduction / Acquisition Planning | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Phase I / TACDEVEX Development | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RFP | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Contract Award | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Design | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Integration | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Test | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Phase II Development | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RFP | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Contract Award | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Design | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Integration | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Test | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Phase III Development | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RFP | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* Not required for Budget Activities 1, 2, 3, and 6

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| CLASSIFICATION: | | UNCLASSIFIED | | | | | | |
| EXHIBIT R-4a, SCHEDULE DETAIL | | | | | | DATE February 2008 | | |
| APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 4 | | PROGRAM ELEMENT NUMBER AND NAME 0603502N/SURFACE AND SHALLOW WATER MINE COUNTERME | | | PROJECT NUMBER AND NAME 2094/Unmanned Underwater Vehicle | | | |
| Schedule Profile | | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
| Risk Reduction/ Acquisition Planning | | 1Q-4Q | 1Q | | | | | |
| Phase I / TACDEVEX Development | | | 2Q-4Q | 1Q-4Q | 1Q-4Q | 1Q-4Q | | |
| RFP | | | 2Q | | | | | |
| Contact Award | | | 4Q | | | | | |
| Design | | | 4Q | 1Q-4Q | | | | |
| Integration | | | | | 1Q-4Q | 1Q-2Q | | |
| Test | | | | | | 3Q-4Q | | |
| Phase II Development | | | | 1Q-4Q | 1Q-4Q | 1Q-4Q | 1Q-3Q | |
| RFP | | | | | | 1Q | | |
| Contract Award | | | | | | 3Q | | |
| Design | | | | 1Q-4Q | 1Q-4Q | 1Q-4Q | | |
| Integration | | | | | | | 1Q-4Q | |
| Test | | | | | | | | 1Q-4Q |
| Phase III Development | | | | | | | | 3Q-4Q |
| RFP | | | | | | | | 3Q |

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| CLASSIFICATION: | | UNCLASSIFIED | | | | | |
| EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION | | | | | DATE February 2008 | | |
| APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 4 | | PROGRAM ELEMENT NUMBER AND NAME 0603502N/SURFACE AND SHALLOW WATER MINE COUNTERMEAS | | | PROJECT NUMBER AND NAME 2131/Assault Breaching System | | |
| COST (In Millions) | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
| Project Cost | 34.880 | 34.443 | 44.011 | 30.128 | 29.197 | 18.678 | 13.888 |
| RDT&E Articles Qty | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

This program provides for a combination of U.S. Navy projects planned to counter the threat to amphibious landing forces from known and projected foreign land/sea mines, obstacles in the beach zone and surf zone approaches to amphibious assault areas. The Assault Breaching System (ABS) of Systems (Countermine/Counter Obstacle, Intelligence/Surveillance/Reconnaissance/Targeting (ISR/T), Precision Navigation/Virtual Marking/Integration, C4I/Data Fusion) provides a full assault breaching capability which is an essential element to the Ship To Objective Maneuver (STOM) Concept of Operations.

Far term - Counter Mine System (CMS) - will transition from a 6.3 S&T Concept Demonstration effort to a 6.4 development program after a concept decision/AoA in FY06.
 ISR/T - Coastal Battlefield Reconnaissance and Analysis (COBRA) is the ISR/T part of the ABS of systems. One system consists of two Airborne Payloads and one Post Mission Analysis Station. Under the umbrella of evolutionary acquisition, three increments of development are planned; Block I introduces a daytime, surface laid minefield and obstacle detection capability for the Beach Zone. Blocks II and III will incorporate technology being developed by 6.3.
 S&T. Block II adds a surfzone and night (darkness) detection capability. Block III adds a buried mine detection capability and on-board Near-Real-Time processing of Multi Spectral Imagery data.
 COBRA will be a modular payload architecture of and integrated with the MQ-8B Fire Scout Vertical Takeoff and Landing Unmanned Aerial Vehicle (VTUAV) and will serve as the "detect" mission module of the Littoral Combat Ship (LCS) Mine Warfare mission package.

Precision Navigation/Virtual Marking- The navigation effort involves requirements development and program planning to choose the navigational upgrades for the Landing Craft, Air Cushion (LCAC) and Landing Craft, Utility (LCU), and Amphibious Assault Vehicle (AAV) to enable the craft to safely navigate the neutralized assault lanes. A system of virtual or physical lane marking is to be developed to guide the assault craft through the neutralized assault lanes. OPN will fund the CRAFTALTS to upgrade the navigation systems.

LCU Navigation Upgrade: Modernized the navigation system to enable safe transit through the breached lane.
 LCAC Autopilot Upgrade: An integrated improvement to the LCAC (Service Life Extension Program (SLEP) navigation system for craft control that allows precise navigation and hovering within the breached lane. These software upgrades and backfits will occur during scheduled LCAC SLEPs.
 AAV Navigation Upgrade : Modernized the navigation system to enable precise transit through the breached lane.

Command, Control, Computers, Communications and Intelligence (C4I) - System will tie all of the above systems together under an integrated ABS architecture and also tie in with the integrated Mine Warfare architecture.

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| CLASSIFICATION: | | UNCLASSIFIED | |
| EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION | | | DATE February 2008 |
| APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 4 | PROGRAM ELEMENT NUMBER AND NAME 0603502N/SURFACE AND SHALLOW WATER MINE COUNTER | PROJECT NUMBER AND NAME 2131/Assault Breaching System | |
| B. ACCOMPLISHMENTS/PLANNED PROGRAM: | | | |
| | FY 2007 | FY 2008 | FY 2009 |
| Accomplishments/Effort/Subtotal Cost | 29.550 | 29.196 | 37.235 |
| RDT&E Articles Quantity | 0 | 0 | 0 |
| Product Development: FY 07: Refined Block I technology, transition ONR developed technology into Blocks II and III, and enable the capability to detect surface laid mines in the surf zone (day and night), detect buried mines, and near-real-time onboard processing. Precision Navigation/Virtual Marking- Develop precise navigational upgrades for the Landing Craft, Air Cushion (LCAC) and Landing Craft, Utility (LCU), and Amphibious Assault Vehicle (AAV) to enable the craft to safely navigate the neutralized assault lanes. Mine Threat Acquisition for R&D Development and Testing. FY 08: Countermine System Contract Awards; Conduct Contract Kick-off Meetings, System Readiness Reviews, and approve Preliminary Designs for CMS; and Procure long-lead time material for AAV Upgrades. FY 09: Exercising contract options for CMS and awarding COBRA Block II contract; and conducting system technical reviews on COBRA Block II and CMS. | | | |
| | FY 2007 | FY 2008 | FY 2009 |
| Accomplishments/Effort/Subtotal Cost | 0.527 | 0.583 | 0.999 |
| RDT&E Articles Quantity | 0 | 0 | 0 |
| Support: FY 07: Completed ABS Scalability study. FY 08: Precision Navigation/Virtual Marking - COTS technical analysis, product integration, market surveys, technical support in installation instructions. FY 09: ISR/T - Technical analysis, modeling and simulation. | | | |
| | FY 2007 | FY 2008 | FY 2009 |
| Accomplishments/Effort/Subtotal Cost | 0.170 | 0.165 | 0.206 |
| RDT&E Articles Quantity | 0 | 0 | 0 |
| Test and Evaluation: FY 07: Completed Commander Operational Test & Evaluation Forces Test Support, Arena testing. FY 08: CMS dart testing. Precision Navigation/Virtual Marking - Vehicle/crew compatibility testing, Intelligence/Surveillance/Reconnaissance/Targeting (ISR/T) - COBRA Block I Operational Assessment, Block II and III OPEVAL. FY 09: Complete Breaching System Effectiveness Simulation and ABS Effectiveness Tool. | | | |

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| CLASSIFICATION: | | UNCLASSIFIED | | | | | | | |
| EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION (CONTINUATION) | | | | | | | | DATE February 2008 | |
| APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 4 | | PROGRAM ELEMENT NUMBER AND NAME 0603502N/SURFACE AND SHALLOW WATER MINE COUNTER | | | | PROJECT NUMBER AND NAME 2131/Assault Breaching System | | | |
| | | FY 2007 | | FY 2008 | | FY 2009 | | | |
| Accomplishments/Effort/Subtotal Cost | | 4.633 | | 4.499 | | 5.571 | | | |
| RDT&E Articles Quantity | | 0 | | 0 | | 0 | | | |
| Management: FY 07: Technical Direction Agent/Design Agent (TDA/DA) Engineering Support of Milestone preparation, contract and acquisition documentation, Requirements Generation - Initial Capabilities Document (ICD), Capability Development Documents (CDD), Capability Production Documents (CPD). FY 08: Analysis of Material approvals and Functional needs analysis/functional solutions analysis. FY 09: Mine magazine inventory management and shipping, contract management and tests/studies, C4I/Data fusion. | | | | | | | | | |
| C. OTHER PROGRAM FUNDING SUMMARY: | | | | | | | | | |
| Line Item No. & Name | | | | | | | | | |
| Line Item No. and Name | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 | To Complete | Total Cost |
| 2624/OPN | 8.236 | 1.437 | 7.355 | 19.637 | 18.489 | 23.180 | 25.917 | | |
| 1600/OPN | 78.741 | 0.000 | 131.241 | 234.673 | 242.184 | 252.298 | 227.441 | | |
| 4225/WPN | | | | | | 46.118 | 50.774 | | |
| 4221/WPN | | | 2.786 | 24.522 | 47.353 | 45.261 | 10.701 | | |
| D. ACQUISITION STRATEGY: | | | | | | | | | |
| Countermine/Counter Obstacle (CM/CO) is a two phased approach, near term and far term solutions. The near term approach for CMCO is JDAM Assault Breaching System (JABS) and this effort has been completed. The far term solution is CMS, which transitioned from ONR in 2nd QTR 07 followed by MS B decision in 3rd QTR 07 and SD&D contract in 3rd Qtr 08. Intelligence/Surveillance/Reconnaissance/Targeting (ISR/T) - COBRA Block I will achieve MS C in 3rd QTR FY08, COBRA Block II technology will transfer from ONR and achieve MS B between 2nd/3rd Qtr FY09. COBRA Block III technology will transition in FY12 with a MS B decision scheduled for 2nd QTR FY12. Precision Navigation/Virtual Marking- The navigation upgrades for the Landing Craft, Air Cushion (LCAC) and Landing Craft, Utility (LCU) are in progress. AAV enhancements will be achieved through an ECP (PMA AAV (Marine Corps)) in 2 Qtr 08. | | | | | | | | | |

| CLASSIFICATION: | | UNCLASSIFIED | | | | | | | | | | |
|---|------------------------|--|----------------|---------------|--------------------|---------------|-------------------------------|---------------|--------------------|------------------|----------------|--------------------------|
| EXHIBIT R-3, RDT&E PROJECT COST ANALYSIS | | | | | | | | | | DATE | | |
| | | | | | | | | | | February 2008 | | |
| APPROPRIATION/BUDGET ACTIVITY | | PROGRAM ELEMENT NUMBER AND NAME | | | | | PROJECT NUMBER AND NAME | | | | | |
| RD TEN/BA 4 | | 0603502N/SURFACE AND SHALLOW WATER MINE COUNTERMEASU | | | | | 2131/Assault Breaching System | | | | | |
| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY Cost | FY 2007 Cost | FY 2007 Award Date | FY 2008 Cost | FY 2008 Award Date | FY 2009 Cost | FY 2009 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Primary Hardware Dev, COBRA | WX | Northrup Grumman | 82.528 | 6.492 | NOV-06 | 6.391 | NOV-07 | 7.959 | FEB-09 | 0.000 | 103.370 | 0.000 |
| Primary Hardware Dev, CMS | WX | Unknown | 0.000 | 13.150 | JUL-07 | 12.195 | DEC-07 | 16.105 | FEB-09 | 0.000 | 41.450 | 0.000 |
| Ancillary Hardware Dev, JABS | WX | Unknown | 8.100 | 1.122 | NOV-06 | 0.000 | | 0.000 | | 0.000 | 9.222 | 0.000 |
| Systems Engineering, COBRA | WX | NSWC PC | 0.000 | 3.291 | NOV-06 | 4.087 | NOV-07 | 5.082 | NOV-08 | 0.000 | 12.460 | 0.000 |
| Software Dev, COBRA | WX | NAVAIR | 0.423 | 2.875 | NOV-06 | 2.830 | NOV-07 | 3.518 | NOV-08 | 0.000 | 9.646 | 0.000 |
| Systems Engineering, CMS | WX | NSWC IH | 17.033 | 1.570 | NOV-06 | 1.545 | NOV-07 | 1.921 | NOV-08 | 0.000 | 22.069 | 0.000 |
| Training Dev, COBRA | WX | NSWC IH | 2.000 | 0.740 | NOV-06 | 0.735 | NOV-07 | 0.893 | NOV-08 | 0.000 | 4.368 | 0.000 |
| Tooling | WX | NSWC IH | 0.860 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.860 | 0.000 |
| ABS IPT/Test Assets/Proj Eng | WX | NSWC IH | 5.122 | 0.310 | NOV-06 | 0.305 | NOV-07 | 0.380 | NOV-08 | 0.000 | 6.117 | 0.000 |
| Precision Navigation & Marking | WX | NSWC IH | 0.000 | 0.000 | | 1.108 | NOV-07 | 1.377 | NOV-08 | 0.000 | 2.485 | 0.000 |
| Subtotal Product Development | | | 116.066 | 29.550 | | 29.196 | | 37.235 | | 0.000 | 212.047 | 0.000 |
| Remarks: | | | | | | | | | | | | |
| Note 1: Hardware contracts (COBRA, CMS, and JABS) will be processed through NSWC Panama City. | | | | | | | | | | | | |
| Note 2: Prior Year Cost include both US Marine Corp and US Navy funds. | | | | | | | | | | | | |
| Note 3: FY 08 RDT&E Costs are associated with completing COBRA Block I system testing and initiating COBRA Block II contract efforts. | | | | | | | | | | | | |
| Note 4: FY 09 RDT&E cost estimates are related to exercising COBRA Block II and CMS contract options. | | | | | | | | | | | | |
| Development Support Equipment | WX | NSWC PC | 12.631 | 0.357 | NOV-06 | 0.418 | NOV-07 | 0.793 | NOV-08 | 0.000 | 14.199 | 0.000 |
| Software Development | WX | NSWC PC | 8.037 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 8.037 | 0.000 |
| Integrated Logistics Support | WX | NSWC IH | 2.712 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 2.712 | 0.000 |
| Configuration Management | WX | NSWC PC | 3.744 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 3.744 | 0.000 |
| Technical Data | WX | NSWC PC | 2.588 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 2.588 | 0.000 |
| Studies & Analysis | WX | NSWC PC | 4.039 | 0.170 | NOV-06 | 0.165 | NOV-07 | 0.206 | NOV-08 | 0.000 | 4.580 | 0.000 |
| GFE | WX | NSWC PC | 0.400 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.400 | 0.000 |
| Subtotal Support Costs | | | 34.151 | 0.527 | | 0.583 | | 0.999 | | 0.000 | 36.260 | 0.000 |

| CLASSIFICATION: | | UNCLASSIFIED | | | | | | | | | | |
|--|------------------------|--|----------------|---------------|--------------------|---------------|-------------------------------|---------------|--------------------|------------------|----------------|--------------------------|
| EXHIBIT R-3, RDT&E PROJECT COST ANALYSIS | | | | | | | | | | DATE | | |
| | | | | | | | | | | February 2008 | | |
| APPROPRIATION/BUDGET ACTIVITY | | PROGRAM ELEMENT NUMBER AND NAME | | | | | PROJECT NUMBER AND NAME | | | | | |
| RD TEN/BA 4 | | 0603502N/SURFACE AND SHALLOW WATER MINE COUNTERMEASU | | | | | 2131/Assault Breaching System | | | | | |
| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY Cost | FY 2007 Cost | FY 2007 Award Date | FY 2008 Cost | FY 2008 Award Date | FY 2009 Cost | FY 2009 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Remarks: | | | | | | | | | | | | |
| Development Test & Evaluation | WX | NSWC IH | 29.618 | 0.170 | NOV-06 | 0.165 | NOV-07 | 0.206 | NOV-08 | 0.000 | 30.159 | 0.000 |
| Operational Test & Evaluation | WX | NSWC IH, PC | 8.655 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 8.655 | 0.000 |
| Tooling | WX | NSWC IH, PC | 0.700 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.700 | 0.000 |
| GFE | WX | NSWC IH, PC | 0.400 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.400 | 0.000 |
| | | | 0.000 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.000 | 0.000 |
| Subtotal Test and Evaluation | | | 39.373 | 0.170 | | 0.165 | | 0.206 | | 0.000 | 39.914 | 0.000 |
| Remarks: | | | | | | | | | | | | |
| Contractor Engineering Support | CPFF | CACI, Northrup Grumman | 4.667 | 0.710 | NOV-06 | 0.869 | NOV-07 | 1.075 | NOV-08 | 0.000 | 7.321 | 0.000 |
| Government Engineering Support | WX | NSWC IH | 22.685 | 1.600 | NOV-06 | 1.710 | NOV-07 | 2.206 | NOV-08 | 0.000 | 28.201 | 0.000 |
| Program Management Support | WX | NSWC IH, PC | 13.607 | 2.248 | NOV-06 | 1.848 | NOV-07 | 2.201 | NOV-08 | 0.000 | 19.904 | 0.000 |
| Travel | PD | NAVSEA | 0.977 | 0.075 | NOV-06 | 0.072 | NOV-07 | 0.089 | NOV-08 | 0.000 | 1.213 | 0.000 |
| Assessment/BTR | Various | Various | 1.434 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 1.434 | 0.000 |
| Subtotal Management Services | | | 43.370 | 4.633 | | 4.499 | | 5.571 | | 0.000 | 58.073 | 0.000 |
| Remarks: | | | | | | | | | | | | |
| Total Cost | | | 232.960 | 34.880 | | 34.443 | | 44.011 | | 0.000 | 346.294 | 0.000 |
| | | | | | | | | | | | | |

CLASSIFICATION:

UNCLASSIFIED

EXHIBIT R-4, SCHEDULE PROFILE

DATE
February 2008

APPROPRIATION/BUDGET ACTIVITY
RD TEN/BA 4

PROGRAM ELEMENT NUMBER AND NAME
0603502N/SURFACE AND SHALLOW WATER MINE COUNTERMEASURE

PROJECT NUMBER AND NAME
2131/Assault Breaching System

ABS PROGRAM SCHEDULE

| | FY 2007 | | | | FY 2008 | | | | FY 2009 | | | | FY 2010 | | | | FY 2011 | | | | FY 2012 | | | | FY 2013 | | | |
|---|--|---|---|---|------------------------------------|---|---|---|---------------------------|---|---|---|---|---|---|---|----------|---|---|---|------------------------------|---|---|---|-----------------------------|---|---|---|
| | 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 |
| Milestones | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ONR 6.3 Demo Efforts - Transition from ONR to PMS495 | CMS Exploration/Technology Demonstration 6.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CMS Acquisition/Development 6.4 | | | | | CMS System Development | | | | | | | | | | | | | | | | | | | | | | | |
| CDD Approved 1st Qtr FY08 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Countermine System (CMS) | Prep for MS B/Contract Award | | | | △ CMS Contract Award | | | | | | | | | | | | | | | | | | | | | | | |
| CMS System Design and Test | [Redacted] | | | | System Design/Platform Integration | | | | | | | | | | | | | | | | | | | | | | | |
| Countermine System Technical Reviews | | | | | ◇ Contract Kickoff | | | | ◇ SRR | | | | ◇ PDR | | | | ◇ CDR | | | | ◇ LRIP Decision Review | | | | ◇ FRP Decision Review | | | |
| Navigation/C4I Development | [Redacted] | | | | ISR/Nav/C4I System Development | | | | | | | | | | | | | | | | | | | | | | | |
| COBRA | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Block I | | | | | ◇ MSC | | | | Production (With Options) | | | | | | | | | | | | | | | | | | | |
| Block II | | | | | | | | | ◇ MSB | | | | SD&D Day/Night Capability, Surf/Beach Zones | | | | | | | | ◇ MSC | | | | Production | | | |

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| CLASSIFICATION: | | UNCLASSIFIED | | | | | | |
| EXHIBIT R-4a, SCHEDULE DETAIL | | | | | | DATE February 2008 | | |
| APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 4 | | PROGRAM ELEMENT NUMBER AND NAME 0603502N/SURFACE AND SHALLOW WATER MINE COUNTERME | | | PROJECT NUMBER AND NAME 2131/Assault Breaching System | | | |
| Schedule Profile | | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
| COBRA Block II Milestone B | | | | 2Q-3Q | | | | |
| COBRA Block I Procurement | | | | 1Q-4Q | 1Q-4Q | 1Q-4Q | 1Q-4Q | 1Q-4Q |
| COBRA Block II SD&D | | | | 3Q-4Q | 1Q-4Q | 1Q-4Q | 1Q-4Q | |
| COBRA Block I Milestone MS C | | | 3Q | | | | | |
| CMS System Development | | 1Q-4Q | 1Q-4Q | 1Q-4Q | 1Q-4Q | 1Q-4Q | 1Q-4Q | 1Q-4Q |
| CMS Contract Award | | | 3Q | | | | | |
| SRR - System Requirements Review | | | | 2Q | | | | |
| PDR - Preliminary Design Review | | | | 3Q | | | | |
| CDR - Critical Design Review | | | | | 3Q-4Q | | | |
| LRIP Decision Review | | | | | | | 3Q | |
| FRP Decision Review | | | | | | | | 3Q |
| ISR/NAV/C4I Development | | 1Q-4Q | 1Q-4Q | 1Q-4Q | 1Q-4Q | 1Q-4Q | 1Q-4Q | 1Q-4Q |

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| CLASSIFICATION: | | UNCLASSIFIED | | | | | |
| EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION | | | | | DATE February 2008 | | |
| APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 4 | | PROGRAM ELEMENT NUMBER AND NAME 0603502N/SURFACE AND SHALLOW WATER MINE COUNTERMEAS | | | PROJECT NUMBER AND NAME 3123/SMCM UUV | | |
| COST (In Millions) | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
| Project Cost | 10.502 | 7.579 | 12.653 | 22.598 | 19.714 | 14.888 | 20.301 |
| RDT&E Articles Qty | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: | | | | | | | |
| <p>The Surface Mine Countermeasure Unmanned Undersea Vehicle (SMCM UUV) provides for development of Unmanned Underwater Vehicles to support dedicated mine countermeasure operations, including buried mine detection. The UUV systems must have a small deployment footprint for rapid employment aboard various SMCM platforms. Equipment includes vehicles and associated systems support equipment. Potential P3I candidates include communications upgrades, on-board sonar processing and target recognition, command and control improvements, and other smaller tasks.</p> <p>In FY07, funding from PE 0603502N project 3102 was transferred to this project to fund an integrated UUV system vice a standalone sensor project.</p> | | | | | | | |

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| CLASSIFICATION: | | UNCLASSIFIED | | | | | | | | | | |
| EXHIBIT R-3, RDT&E PROJECT COST ANALYSIS | | | | | | | | | DATE February 2008 | | | |
| APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 4 | | PROGRAM ELEMENT NUMBER AND NAME 0603502N/SURFACE AND SHALLOW WATER MINE COUNTERMEASU | | | | | PROJECT NUMBER AND NAME 3123/SMCM UUV | | | | | |
| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY Cost | FY 2007 Cost | FY 2007 Award Date | FY 2008 Cost | FY 2008 Award Date | FY 2009 Cost | FY 2009 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| SMCM Incr. 2 Dev. | CPAF | Bluefin, Cambridge, MA | 0.000 | 6.406 | NOV-06 | 0.594 | JAN-08 | 0.607 | DEC-08 | CONT | CONT | 0.000 |
| SMCM Incr. 3 Dev. | TBD | TBD | 0.000 | 0.000 | | 2.470 | SEP-08 | 6.557 | DEC-08 | CONT | CONT | 0.000 |
| Software Development | WX | NSWC, Panama City, FL | 0.435 | 0.370 | NOV-06 | 0.000 | JAN-08 | 0.470 | DEC-08 | CONT | CONT | 0.000 |
| Subtotal Product Development | | | 0.435 | 6.776 | | 3.064 | | 7.634 | | CONT | CONT | 0.000 |
| Remarks: | | | | | | | | | | | | |
| Engineering Support | WX | NSWC, Panama City, FL | 0.042 | 2.844 | NOV-06 | 2.839 | DEC-07 | 2.108 | DEC-08 | CONT | CONT | 0.000 |
| Engineering Support | WX | NUWC, Newport, RI | 0.100 | 0.394 | NOV-06 | 0.993 | JAN-08 | 1.043 | DEC-08 | CONT | CONT | 0.000 |
| Engineering Support | WX | NUWC, Keyport | 0.000 | 0.000 | | 0.000 | | 0.000 | | | 0.000 | 0.000 |
| Ship Integration | | TBD | 0.000 | 0.000 | | 0.145 | JAN-08 | 1.322 | DEC-08 | CONT | CONT | 0.000 |
| Subtotal Support Costs | | | 0.142 | 3.238 | | 3.977 | | 4.473 | | CONT | CONT | 0.000 |
| Remarks: | | | | | | | | | | | | |
| Developmental Test & Evaluation | WX | CMWC, Corpus Christi, TX | 0.107 | 0.075 | NOV-06 | 0.064 | NOV-07 | 0.065 | DEC-08 | CONT | CONT | 0.000 |
| Government T&E Support | | Various | 0.189 | 0.205 | NOV-06 | 0.166 | JAN-08 | 0.195 | DEC-08 | CONT | CONT | 0.000 |
| Test and Evaluation | WX | COMOPTEVFOR | 0.000 | 0.085 | | 0.000 | | 0.000 | | 0.000 | 0.085 | 0.000 |
| Subtotal Test and Evaluation | | | 0.296 | 0.365 | | 0.230 | | 0.260 | | CONT | CONT | 0.000 |
| Remarks: | | | | | | | | | | | | |
| Program Management Support | CPFF | Various, Wash., DC | 0.154 | 0.123 | NOV-06 | 0.308 | JAN-08 | 0.286 | DEC-08 | CONT | CONT | 0.000 |
| Subtotal Management Services | | | 0.154 | 0.123 | | 0.308 | | 0.286 | | CONT | CONT | 0.000 |
| Remarks: | | | | | | | | | | | | |
| Total Cost | | | 1.027 | 10.502 | | 7.579 | | 12.653 | | CONT | CONT | 0.000 |

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| CLASSIFICATION: | | UNCLASSIFIED | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EXHIBIT R-4, SCHEDULE PROFILE | | | DATE February 2008 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 4 | PROGRAM ELEMENT NUMBER AND NAME 0603502N/SURFACE AND SHALLOW WATER MINE COUNTERMEASURE | | PROJECT NUMBER AND NAME 3123/SMCM UUV | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SMCM UUV Program Schedule | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | FY 2007 | | | | FY 2008 | | | | FY 2009 | | | | FY 2010 | | | | FY 2011 | | | | FY 2012 | | | | FY 2013 | | | | | | | |
| | 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 | 1 | 2 | 3 | 4 |
| SMCM Shallow & Deep Water UUV | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dual Frequency SAS Development | [Bar from FY 2007 Q1 to FY 2008 Q3] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dual Freq SAS Fleet Experimentation | [Bar from FY 2008 Q2 to FY 2011 Q4] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LFBB UUV Milestone B | [Triangle at FY 2008 Q3] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LFBB UUV Contract Award | [Triangle at FY 2009 Q1] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LFBB UUV Development | [Bar from FY 2009 Q1 to FY 2011 Q3] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LFBB UUV Milestone C | [Triangle at FY 2011 Q3] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LFBB UUV Production | [Bar from FY 2011 Q4 to FY 2013 Q4] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P3I | [Bar from FY 2010 Q2 to FY 2013 Q4] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| CLASSIFICATION: | | UNCLASSIFIED | | | | | | |
| EXHIBIT R-4a, SCHEDULE DETAIL | | | | | | DATE February 2008 | | |
| APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 4 | | PROGRAM ELEMENT NUMBER AND NAME 0603502N/SURFACE AND SHALLOW WATER MINE COUNTERME | | | PROJECT NUMBER AND NAME 3123/SMCM UUV | | | |
| Schedule Profile | | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
| Dual Frequency SAS Development | | 1Q-4Q | 1Q-3Q | | | | | |
| Dual Frequency SAS Fleet Experimentation | | | 3Q-4Q | 1Q-4Q | 1Q-4Q | 1Q-4Q | | |
| LFBB UUV Milestone B | | | 3Q | | | | | |
| LFBB UUV Contract Award | | | 4Q | | | | | |
| LFBB Development | | | 4Q | 1Q-4Q | 1Q-4Q | 1Q-3Q | | |
| LFBB Milestone C | | | | | | 4Q | | |
| LFBB Production | | | | | | 4Q | 1Q-4Q | 1Q-4Q |
| P3I | | | | | 2Q-4Q | 1Q-4Q | 1Q-4Q | 1Q-4Q |

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| CLASSIFICATION: | | UNCLASSIFIED | | | | | |
| EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION | | | | | DATE February 2008 | | |
| APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 4 | | PROGRAM ELEMENT NUMBER AND NAME 0603502N/SURFACE AND SHALLOW WATER MINE COUNTERMEAS | | | PROJECT NUMBER AND NAME 4025/Expendable Mine Neutralization System | | |
| COST (In Millions) | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
| Project Cost | 12.873 | 6.708 | 7.159 | 0.000 | 0.000 | 5.073 | 5.059 |
| RDT&E Articles Qty | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: | | | | | | | |
| <p>Expendable Mine Neutralization System (EMNS) is a replacement to the existing AN/SLQ-48 Mine Neutralization System (MNS). The current program replaces the MNS with EMNS on the 14 MCM Avenger Class Ships. EMNS will leverage off of on-going efforts in the Airborne Mine Countermeasures Program to develop an Airborne Mine Neutralization System (AMNS). Development of a deep water Neutralization vehicle for EMNS will occur in FY12 - FY13.</p> | | | | | | | |

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| CLASSIFICATION: | | UNCLASSIFIED | | | | | | | |
| EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION | | | | | | | DATE February 2008 | | |
| APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 4 | | PROGRAM ELEMENT NUMBER AND NAME 0603502N/SURFACE AND SHALLOW WATER MINE COUNTER | | | | PROJECT NUMBER AND NAME 4025/Expendable Mine Neutralization System | | | |
| B. ACCOMPLISHMENTS/PLANNED PROGRAM: | | | | | | | | | |
| | | FY 2007 | | FY 2008 | | FY 2009 | | | |
| Accomplishments/Effort/Subtotal Cost | | 8.077 | | 0.000 | | 0.000 | | | |
| RDT&E Articles Quantity | | 0 | | 0 | | 0 | | | |
| Award Development Contract for Expendable Mine Neutralization System (EMNS) integrator. Initiate hardware design and development to include launcher, control console, and MCM-1 Class ship integration. Modify software for use on an MCM-1 class ship. Integrate EMNS Engineering Development Model (EDM) aboard MCM-1 Class Ship. Award contract for Common Neutralizer support. Provide test articles and technical support throughout EMNS development. | | | | | | | | | |
| | | FY 2007 | | FY 2008 | | FY 2009 | | | |
| Accomplishments/Effort/Subtotal Cost | | 3.490 | | 2.538 | | 2.081 | | | |
| RDT&E Articles Quantity | | 0 | | 0 | | 0 | | | |
| Develop logistics products, including training materials and interactive technical manual. Provide Engineering support, including review for product development and ship integration. | | | | | | | | | |
| | | FY 2007 | | FY 2008 | | FY 2009 | | | |
| Accomplishments/Effort/Subtotal Cost | | 0.948 | | 3.968 | | 4.942 | | | |
| RDT&E Articles Quantity | | 0 | | 0 | | 0 | | | |
| EMNS developmental testing including environmental and shock testing, safety testing, and contractor testing. Develop Test and Evaluation Master Plan (TEMP) and test reports. Conduct DT/OT. | | | | | | | | | |
| | | FY 2007 | | FY 2008 | | FY 2009 | | | |
| Accomplishments/Effort/Subtotal Cost | | 0.358 | | 0.202 | | 0.136 | | | |
| RDT&E Articles Quantity | | 0 | | 0 | | 0 | | | |
| Provide program management support and travel for EMNS. | | | | | | | | | |
| C. OTHER PROGRAM FUNDING SUMMARY: | | | | | | | | | |
| Line Item No. and Name | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 | To Complete | Total Cost |
| EMNS | 0.000 | 0.000 | 7.518 | 15.076 | 11.540 | 8.137 | 0.000 | | |
| 262200 OPN | | | | | | | | | |
| EMNS | 0.000 | 0.000 | 3.030 | 6.581 | 9.021 | 9.391 | 9.579 | | |
| 422500 WPN | | | | | | | | | |

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| CLASSIFICATION: | | UNCLASSIFIED | |
| EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION (CONTINUATION) | | | DATE February 2008 |
| APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 4 | PROGRAM ELEMENT NUMBER AND NAME 0603502N/SURFACE AND SHALLOW WATER MINE COUNTER | PROJECT NUMBER AND NAME 4025/Expendable Mine Neutralization System | |
| <p>D. ACQUISITION STRATEGY:</p> <p>Based on the approved Common Neutralizer Strategy, the Archerfish neutralizer will be integrated on the MCM-1 Avenger Class Ships. EMNS will be executed as an ECP to AMNS. The acquisition strategy will be full and open competition for non-neutralizer hardware development and system integration with a directed contractual relationship with VCT (flight control software). The Navy will award a sole source contract to BAE Systems for Common Neutralizer support, integration, and hardware manufacturing/delivery. All EMNS neutralizer equipment and support will be provided by BAE Systems to the Navy. The Navy will provide these assets as GFE to the integration contractor.</p> | | | |

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| EXHIBIT R-3, RDT&E PROJECT COST ANALYSIS | | | | | | | | | | DATE | | |
| | | | | | | | | | | February 2008 | | |
| APPROPRIATION/BUDGET ACTIVITY | | PROGRAM ELEMENT NUMBER AND NAME | | | | | PROJECT NUMBER AND NAME | | | | | |
| RD TEN/BA 4 | | 0603502N/SURFACE AND SHALLOW WATER MINE COUNTERMEASU | | | | | 4025/Expendable Mine Neutralization System | | | | | |
| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY Cost | FY 2007 Cost | FY 2007 Award Date | FY 2008 Cost | FY 2008 Award Date | FY 2009 Cost | FY 2009 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Develop Technical and Acquisition Documentation | WX | NSWC PC | 1.203 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 1.203 | 0.000 |
| Hardware/Software Delevopment | CPIF | Lockheed Martin, Syr NY | 0.000 | 8.077 | JAN-07 | 0.000 | | 0.000 | | 0.000 | 8.077 | 0.000 |
| Common Neutralizer Development | C/CPIF | Raytheon, Portsmouth RI | 2.431 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 2.431 | 0.000 |
| Deep Water Neutralizer Development | WX | NSWC PC | 0.000 | 0.000 | | 0.000 | | 0.000 | | 0.300 | 0.300 | 0.000 |
| Deep Water Neutralizer Development | CPIF | BAE Systems | 0.000 | 0.000 | | 0.000 | | 0.000 | | 3.000 | 3.000 | 0.000 |
| Subtotal Product Development | | | 3.634 | 8.077 | | 0.000 | | 0.000 | | 3.300 | 15.011 | 0.000 |
| Remarks: | | | | | | | | | | | | |
| Develop Logistics Products | CPIF | Lockheed Martin, Syr NY | 0.000 | 0.808 | JAN-07 | 1.183 | OCT-07 | 0.594 | OCT-08 | 0.000 | 2.585 | 0.000 |
| Develop Logistics Products | WX | NSWC | 0.270 | 0.225 | OCT-06 | 0.091 | OCT-07 | 0.100 | OCT-08 | 0.000 | 0.686 | 0.000 |
| Engineering Support | CPIF | Lockheed Martin, Syr NY | 0.000 | 0.772 | JAN-07 | 0.327 | OCT-07 | 0.651 | OCT-08 | 0.000 | 1.750 | 0.000 |
| Engineering Support | WX | NSWC | 2.577 | 1.685 | OCT-06 | 0.937 | OCT-07 | 0.736 | OCT-08 | 0.000 | 6.284 | 0.000 |
| Deep Water Neutralizer ILS | CPIF | BAE Systemsd | 0.000 | 0.000 | | 0.000 | | 0.000 | | 0.277 | 0.277 | 0.000 |
| Deep Water Neutralizer ILS | WX | NSWC PC | 0.000 | 0.000 | | 0.000 | | 0.000 | | 0.205 | 0.205 | 0.000 |
| Deep Water Neutralizer Engineering | CPIF | BAE Systems | 0.000 | 0.000 | | 0.000 | | 0.000 | | 2.200 | 2.200 | 0.000 |
| Deep Water Neutralizer Engineering | WX | NSWC PC | 0.000 | 0.000 | | 0.000 | | 0.000 | | 0.860 | 0.860 | 0.000 |
| Subtotal Support Costs | | | 2.847 | 3.490 | | 2.538 | | 2.081 | | 3.542 | 14.847 | 0.000 |
| Remarks: | | | | | | | | | | | | |
| Develop TEMP | WX | NSWC PC | 0.100 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.100 | 0.000 |
| CT/DT | CPIF | Lockheed Martin, Syr NY | 0.000 | 0.058 | JAN-07 | 0.969 | OCT-07 | 2.029 | OCT-08 | 0.000 | 3.056 | 0.000 |
| CT/DT | WX | NSWC PC | 0.000 | 0.890 | OCT-06 | 2.124 | OCT-07 | 2.029 | OCT-08 | 0.000 | 5.043 | 0.000 |
| Operational Test & Evaluation | WX | COTF Norfolk, VA | 0.000 | 0.000 | | 0.875 | | 0.884 | OCT-08 | 0.000 | 1.759 | 0.000 |
| Common Neutralizer Testing | CPIF | Raytheon, Portsmouth RI | 0.874 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.874 | 0.000 |
| Common Neutralizer Test Sets | CPIF | Raytheon, Portsmouth RI | 2.103 | 0.000 | | 0.000 | | 0.000 | | 0.995 | 3.098 | 0.000 |
| Deep Water Neutralizer T&E | CPIF | BAE Systems | 0.000 | 0.000 | | 0.000 | | 0.000 | | 0.995 | 0.995 | 0.000 |
| Deep Water Neutralizer T&E | WX | NSWC PC | 0.000 | 0.000 | | 0.000 | | 0.000 | | 2.295 | 2.295 | 0.000 |
| | | | 0.000 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.000 | 0.000 |
| Subtotal Test and Evaluation | | | 3.077 | 0.948 | | 3.968 | | 4.942 | | 4.285 | 17.220 | 0.000 |

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| CLASSIFICATION: | | UNCLASSIFIED | | | | | | | | | | |
| EXHIBIT R-3, RDT&E PROJECT COST ANALYSIS | | | | | | | | | DATE February 2008 | | | |
| APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 4 | | PROGRAM ELEMENT NUMBER AND NAME 0603502N/SURFACE AND SHALLOW WATER MINE COUNTERMEASU | | | | | PROJECT NUMBER AND NAME 4025/Expendable Mine Neutralization System | | | | | |
| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY Cost | FY 2007 Cost | FY 2007 Award Date | FY 2008 Cost | FY 2008 Award Date | FY 2009 Cost | FY 2009 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Remarks: | | | | | | | | | | | | |
| Program Management Support | CPFF | CACI | 0.391 | 0.318 | OCT-06 | 0.162 | OCT-07 | 0.096 | OCT-08 | 0.000 | 0.967 | 0.000 |
| Travel | PD | NAVSEA | 0.090 | 0.040 | OCT-06 | 0.040 | OCT-07 | 0.040 | OCT-08 | 0.000 | 0.210 | 0.000 |
| Subtotal Management Services | | | 0.481 | 0.358 | | 0.202 | | 0.136 | | 0.000 | 1.177 | 0.000 |
| Remarks: | | | | | | | | | | | | |
| Total Cost | | | 10.039 | 12.873 | | 6.708 | | 7.159 | | 11.127 | 48.255 | 0.000 |

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EXHIBIT R-4, SCHEDULE PROFILE

DATE

February 2008

APPROPRIATION/BUDGET ACTIVITY

PROGRAM ELEMENT NUMBER AND NAME

PROJECT NUMBER AND NAME

RD TEN/BA 4

0603502N/SURFACE AND SHALLOW WATER MINE COUNTERMEASURE

4025/Expendable Mine Neutralization System

| Fiscal Year | 2007 | | | | 2008 | | | | 2009 | | | | 2010 | | | | 2011 | | | | 2012 | | | | 2013 | | | |
|---|------------|---|---|---|------------|---|---|---|------------|---|-----------------|---|------------|---|------------|---|------------|---|-------------|---|------------|---|---|---|------|---|---|---|
| | 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 |
| Acquisition Milestones | | | | | | | | | | | MS C △ | | | | FRPDR △ | | | | | | | | | | | | | |
| Common Neutralizer | ██████████ | | | | ██████████ | | | | ██████████ | | | | ██████████ | | | | ██████████ | | | | ██████████ | | | | | | | |
| Prototype Phase | ██████████ | | | | ██████████ | | | | ██████████ | | | | ██████████ | | | | ██████████ | | | | ██████████ | | | | | | | |
| EDM Contract Award | | | | ▲ | | | | | | | | | | | | | | | | | | | | | | | | |
| Significant Events | | | | | FDR △ | | | | CDR △ | | | | | | | | | | | | | | | | | | | |
| EDM Deliveries | | | | | | | | | | | 1, 2 △ | | | | | | | | | | | | | | | | | |
| Test & Evaluation Milestones | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Development Test | | | | | | | | | | | TECHEVAL □ | | | | | | | | | | | | | | | | | |
| Operational Test | | | | | | | | | | | | | | | | | | | OPEVAL □ | | | | | | | | | |
| Production Milestones | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LRIP FY08 | | | | | | | | | | | LRIP Start △ | | | | | | | | | | | | | | | | | |
| FRP FY09 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| CLASSIFICATION: | | UNCLASSIFIED | | | | | | |
| EXHIBIT R-4a, SCHEDULE DETAIL | | | | | | DATE February 2008 | | |
| APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 4 | | PROGRAM ELEMENT NUMBER AND NAME 0603502N/SURFACE AND SHALLOW WATER MINE COUNTERME | | | PROJECT NUMBER AND NAME 4025/Expendable Mine Neutralization System | | | |
| Schedule Profile | | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
| Contract Award | | | 1Q | | | | | |
| Common Neutralizer Development | | 1Q-4Q | 1Q | | | | | |
| Integration Development | | | 1Q-4Q | 1Q-4Q | 1Q | | | |
| Preliminary Design Review | | | 2Q | | | | | |
| Critical Design Review CDR | | | 4Q | | | | | |
| Contractor / Development Testing | | | | 1Q-2Q | | | | |
| EDM Installation and Checkout | | | 4Q | | | | | |
| TECHEVAL / OPEVAL | | | | 2Q-3Q | | | | |
| Milestone C | | | | 2Q | | | | |
| FRPDR | | | | | 1Q | | | |

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| CLASSIFICATION: | | UNCLASSIFIED | | | | | |
| EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION | | | | | DATE February 2008 | | |
| APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 4 | | PROGRAM ELEMENT NUMBER AND NAME 0603502N/SURFACE AND SHALLOW WATER MINE COUNTERMEAS | | | PROJECT NUMBER AND NAME 179C/Surface Navy integrated undersea tactical te | | |
| COST (In Millions) | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
| Project Cost | 2.527 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| RDT&E Articles Qty | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: | | | | | | | |
| <p>Congressional plus-up. - Surface Navy Integrated Undersea Tactical Technology (SNIUTT) Investigate development of an AN/SQQ-32, AN/AQS-14, AN/AQS-20A sensor training module for a LAN-based Surface Network Embedded Analysis and Tactical Trainer (SNEATT).</p> | | | | | | | |

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| CLASSIFICATION: | | UNCLASSIFIED | | |
| EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION | | | | DATE February 2008 |
| APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 4 | PROGRAM ELEMENT NUMBER AND NAME 0603502N/SURFACE AND SHALLOW WATER MINE COUNTER | PROJECT NUMBER AND NAME 9179C/Surface Navy integrated undersea tactical technolo | | |
| B. ACCOMPLISHMENTS/PLANNED PROGRAM: | | | | |
| | | FY 2007 | FY 2008 | FY 2009 |
| Accomplishments/Effort/Subtotal Cost | | 2.527 | 0.000 | 0.000 |
| RDT&E Articles Quantity | | 0 | 0 | 0 |

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| CLASSIFICATION: | | UNCLASSIFIED | | | | | |
| EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION | | | | | DATE February 2008 | | |
| APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 4 | | PROGRAM ELEMENT NUMBER AND NAME 0603502N/SURFACE AND SHALLOW WATER MINE COUNTERMEAS | | | PROJECT NUMBER AND NAME 967N/AN/SQQ-32 Mine Hunting Sonar Upgrade | | |
| COST (In Millions) | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
| Project Cost | 3.497 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| RDT&E Articles Qty | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: | | | | | | | |
| <p>Congressional plus-up. - AN/SQQ-32(V)3 is an aging sonar system (>15 yr.) requiring technological upgrades, eliminating parts obsolescence issues and equipment refreshment or refurbishment. Currently, Naval Sea Warfare Center Panama City is funded to upgrade only the detection capability of AN/SQQ-32(V)3. This add would be used in conjunction with the current effort to further research the upgrade to the detection sonar transducer and investigate and research the upgrade to the classification sonar aspect of the system. Additionally, funding would address modernizing and upgrading the sonar equipment console capability, design, and qualifying system equipment and equipments consoles to augment this upgrade. Funding research study to upgrade AN/SQQ-32(V)3 Classification Sonar, and to provide consultation regarding detection transducer development, and design and quality sonar operator equipment consoles applicable to High Frequency Wide Band (HFWB) program.</p> | | | | | | | |

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| CLASSIFICATION: | | UNCLASSIFIED | |
| EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION | | | DATE February 2008 |
| APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 4 | PROGRAM ELEMENT NUMBER AND NAME 0603502N/SURFACE AND SHALLOW WATER MINE COUNTER | PROJECT NUMBER AND NAME 9967N/AN/SQQ-32 Mine Hunting Sonar Upgrade | |
| B. ACCOMPLISHMENTS/PLANNED PROGRAM: | | | |
| | FY 2007 | FY 2008 | FY 2009 |
| Accomplishments/Effort/Subtotal Cost | 3.497 | 0.000 | 0.000 |
| RDT&E Articles Quantity | 0 | 0 | 0 |