

UNCLASSIFIED

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|--|----------------|------------------|-----------------------|--|------------------------|------------------|------------------|------------------|---------------------|------------------|------------|
| Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy | | | | | | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 7: Operational Systems Development | | | | R-1 ITEM NOMENCLATURE PE 0101226N: Submarine Acoustic War Dev | | | | | | | |
| COST (\$ in Millions) | FY 2009 Actual | FY 2010 Estimate | FY 2011 Base Estimate | FY 2011 OCO Estimate | FY 2011 Total Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate | Cost To Complete | Total Cost |
| Total Program Element | 7.150 | 7.181 | 6.815 | 0.000 | 6.815 | 6.993 | 7.100 | 7.282 | 7.378 | Continuing | Continuing |
| 1265: Sub Defensive Warfare | 7.150 | 7.181 | 6.815 | 0.000 | 6.815 | 6.993 | 7.100 | 7.282 | 7.378 | Continuing | Continuing |

A. Mission Description and Budget Item Justification

This project develops a Submarine Defensive Warfare System (SDWS) to improve the effectiveness and survivability of all classes of US Submarines. Next Generation Countermeasure (NGCM) efforts entail simulating and determining the effectiveness of new technologies and capabilities developed under the Future Naval Capabilities (FNC), Small Business and Innovative Research (SBIR), and other RDT&E initiatives. New and emerging hardware and software are rigorously evaluated in a representative acoustic environment through both digital and hardware-in-the-loop simulations, to determine their readiness for inserting this technology into the NGCM.

B. Program Change Summary (\$ in Millions)

| | | | | | |
|-------------------------------------|----------------|----------------|---------------------|--------------------|----------------------|
| | FY 2009 | FY 2010 | FY 2011 Base | FY 2011 OCO | FY 2011 Total |
| Previous President's Budget | 7.358 | 7.211 | 0.000 | 0.000 | 0.000 |
| Current President's Budget | 7.150 | 7.181 | 6.815 | 0.000 | 6.815 |
| Total Adjustments | -0.208 | -0.030 | 6.815 | 0.000 | 6.815 |
| • Congressional General Reductions | | -0.030 | | | |
| • Congressional Directed Reductions | | 0.000 | | | |
| • Congressional Rescissions | 0.000 | 0.000 | | | |
| • Congressional Adds | | 0.000 | | | |
| • Congressional Directed Transfers | | 0.000 | | | |
| • Reprogrammings | 0.000 | 0.000 | | | |
| • SBIR/STTR Transfer | -0.208 | 0.000 | | | |
| • Program Adjustments | 0.000 | 0.000 | 6.815 | 0.000 | 6.815 |

Change Summary Explanation

Technical: Not applicable.

Schedule: Not applicable.

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| Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy | | DATE: February 2010 |
| APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 7: Operational Systems Development | R-1 ITEM NOMENCLATURE PE 0101226N: Submarine Acoustic War Dev | |
| FY11 from previous President's Budget is shown as zero because no FY11-15 data was presented in President's Budget 2010. | | |

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|--|---------------------------|-----------------------------|--------------------------------------|--|---------------------------------------|-----------------------------|-----------------------------|--|-----------------------------|-----------------------------|--------------------------|
| Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy | | | | | | | | DATE: February 2010 | | | |
| APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i> | | | | R-1 ITEM NOMENCLATURE PE 0101226N: <i>Submarine Acoustic War Dev</i> | | | | PROJECT 1265: <i>Sub Defensive Warfare</i> | | | |
| COST (\$ in Millions) | FY 2009 Actual | FY 2010 Estimate | FY 2011 Base Estimate | FY 2011 OCO Estimate | FY 2011 Total Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate | Cost To Complete | Total Cost |
| 1265: <i>Sub Defensive Warfare</i> | 7.150 | 7.181 | 6.815 | 0.000 | 6.815 | 6.993 | 7.100 | 7.282 | 7.378 | Continuing | Continuing |
| Quantity of RDT&E Articles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| A. Mission Description and Budget Item Justification This project develops a Submarine Defensive Warfare System (SDWS) to improve the effectiveness and survivability of all classes of US Submarines. Next Generation Countermeasure (NGCM) efforts entail simulating and determining the effectiveness of new technologies and capabilities developed under the Future Naval Capabilities (FNC), Small Business and Innovative Research (SBIR), and other RDT&E initiatives. New and emerging hardware and software are rigorously evaluated in a representative acoustic environment through both digital and hardware-in-the-loop simulations, to determine their readiness for inserting this technology into the NGCM. | | | | | | | | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | | | | | | |
| | | | | | | | FY 2009 | FY 2010 | FY 2011 Base | FY 2011 OCO | FY 2011 Total |
| Sub Defensive Warfare <i>FY 2009 Accomplishments:</i> FY09 Continued to conduct countermeasure proofing and effectiveness analysis for designated torpedo at Weapons Analysis Facility (WAF). FY09 Continued integration of technology inserts <i>FY 2010 Plans:</i> FY10 Continue to conduct countermeasure proofing and effectiveness analysis for designated torpedo at Weapons Analysis Facility (WAF). FY10 Conduct Contractor Testing FY10 Continue integration of technology inserts | | | | | | | 7.150 | 7.181 | 6.815 | 0.000 | 6.815 |

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|--|----------------|----------------|--|------------------------|--------------------------|--|----------------------------|-------------------------|------------------------|-----------------------------|-------------------|
| Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy | | | | | | | DATE: February 2010 | | | | |
| APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i> | | | R-1 ITEM NOMENCLATURE PE 0101226N: <i>Submarine Acoustic War Dev</i> | | | PROJECT 1265: <i>Sub Defensive Warfare</i> | | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | | | | | | |
| | | | | | | FY 2009 | FY 2010 | FY 2011 Base | FY 2011 OCO | FY 2011 Total | |
| FY 2011 Base Plans: FY11 Continue to conduct countermeasure proofing and effectiveness analysis for designated torpedo at Weapons Analysis Facility (WAF). FY11: Milestone C and D/T Testing | | | | | | | | | | | |
| Accomplishments/Planned Programs Subtotals | | | | | | 7.150 | 7.181 | 6.815 | 0.000 | 6.815 | |
| C. Other Program Funding Summary (\$ in Millions) | | | | | | | | | | | |
| Line Item | FY 2009 | FY 2010 | FY 2011 Base | FY 2011 OCO | FY 2011 Total | FY 2012 | FY 2013 | FY 2014 | FY 2015 | Cost To Complete | Total Cost |
| • OPN/221000/221005: <i>Submarine Accoustic Warfare</i> | 19.876 | 13.439 | 20.739 | 0.000 | 20.739 | 21.151 | 21.494 | 21.876 | 22.215 | 0.000 | 203.190 |
| D. Acquisition Strategy | | | | | | | | | | | |
| <p>This project develops a Submarine Defensive Warfare System (SDWS) to improve the effectiveness and survivability of all classes of US Submarines. The integration of technology insertions into the Next Generation Countermeasure (NGCM) will continue through FY10. Contractor testing will be conducted in FY10 and Milestone C is planned for FY11.</p> <p>The proposed procurement will be through a full and open competition for the Engineering Manufacturing and Development(EMD) contract. One or multiple Cost Plus Fixed Fee (CPFF) contract(s) will be awarded in which the Offeror will be required to develop, test and produce the NGCM according to the Prime Item Performance Specification (PIPS). Anticipate contract award 2nd Qtr FY10.</p> | | | | | | | | | | | |
| E. Performance Metrics | | | | | | | | | | | |
| Milestone Reviews | | | | | | | | | | | |

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|---|-----------------------------------|---|-------------------------------|--|-------------------|---------------------|-------------------|--|-------------------|----------------------|----------------------------|-------------------|---------------------------------|
| Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy | | | | | | | | | | | DATE: February 2010 | | |
| APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i> | | | | R-1 ITEM NOMENCLATURE PE 0101226N: <i>Submarine Acoustic War Dev</i> | | | | PROJECT 1265: <i>Sub Defensive Warfare</i> | | | | | |
| Product Development (\$ in Millions) | | | | | | | | | | | | | |
| | | | | FY 2010 | | FY 2011 Base | | FY 2011 OCO | | FY 2011 Total | | | |
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Total Prior Years Cost | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Cost To Complete | Total Cost | Target Value of Contract |
| WAF ANALYSIS SYSTEM ENGINEERING | WR | NUWC NEWPORT, RI | 7.500 | 1.500 | Dec 2009 | 1.500 | Dec 2010 | 0.000 | | 1.500 | Continuing | Continuing | Continuing |
| NGCM SYSYTEM ENGINEERING | WR | NUWC NEWPORT, RI | 12.294 | 0.350 | Dec 2009 | 0.350 | Dec 2010 | 0.000 | | 0.350 | Continuing | Continuing | Continuing |
| NGCM DEVELOPMENT | C/CPAF | CONTRACTOR TBD | 1.200 | 4.906 | Feb 2010 | 4.540 | Feb 2011 | 0.000 | | 4.540 | Continuing | Continuing | Continuing |
| NGCM SYSTEM ENGINEERING | WR | NUWC KEPORT, WA | 0.620 | 0.050 | Feb 2010 | 0.050 | Dec 2010 | 0.000 | | 0.050 | Continuing | Continuing | Continuing |
| Subtotal | | | 21.614 | 6.806 | | 6.440 | | 0.000 | | 6.440 | | | |
| Remarks | | | | | | | | | | | | | |
| Management Services (\$ in Millions) | | | | | | | | | | | | | |
| | | | | FY 2010 | | FY 2011 Base | | FY 2011 OCO | | FY 2011 Total | | | |
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Total Prior Years Cost | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Cost To Complete | Total Cost | Target Value of Contract |
| ACQUISITION WORKFORCE | Various/ Various | Not Specified Not Specified | 0.036 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.000 | 0.036 | 0.036 |
| TRAVEL | WR | Not Specified Not Specified | 0.275 | 0.075 | Jan 2010 | 0.075 | Nov 2010 | 0.000 | | 0.075 | Continuing | Continuing | Continuing |
| | C/CPAF | TECH MARINE BURKE, VA | 0.250 | 0.300 | Feb 2010 | 0.300 | Feb 2011 | 0.000 | | 0.300 | Continuing | Continuing | Continuing |

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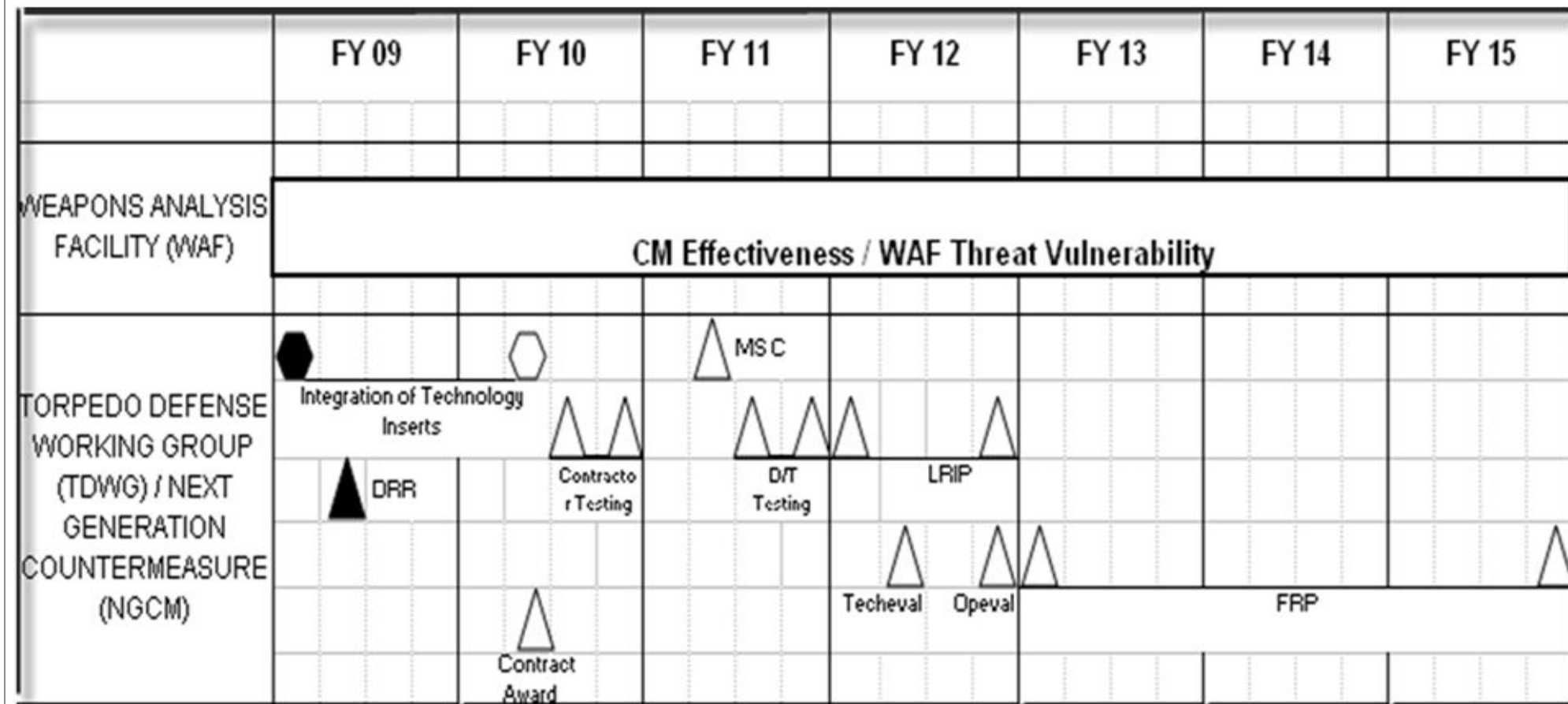
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| Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy | | | | | | | | | | | DATE: February 2010 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|------------------------|--------------------------------|------------------------|--------------|--|--------------|------------|---------------|--|---------------|----------------------------|------------|--------------------------|---------------------|------------------------|--------------------------------|------------------------|--------------|--|--------------|--|---------------|------------------|---------------|--------------------------|------------|--------------------------|------|------------|------|------------|------|------------|------|----------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|-----------------|--|--|-------|-------|--|-------|--|-------|--|-------|--|--|--|
| APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i> | | | | | R-1 ITEM NOMENCLATURE PE 0101226N: <i>Submarine Acoustic War Dev</i> | | | | PROJECT 1265: <i>Sub Defensive Warfare</i> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Management Services (\$ in Millions) <table border="1" style="width:100%; border-collapse: collapse; margin-top: 10px;"> <tr> <th rowspan="2">Cost Category Item</th> <th rowspan="2">Contract Method & Type</th> <th rowspan="2">Performing Activity & Location</th> <th rowspan="2">Total Prior Years Cost</th> <th colspan="2">FY 2010</th> <th colspan="2">FY 2011 Base</th> <th colspan="2">FY 2011 OCO</th> <th>FY 2011 Total</th> <th rowspan="2">Cost To Complete</th> <th rowspan="2">Total Cost</th> <th rowspan="2">Target Value of Contract</th> </tr> <tr> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> </tr> <tr> <td>PROGRAM MANAGEMENT SUPPORT</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td align="right" colspan="3">Subtotal</td> <td align="right">0.561</td> <td align="right">0.375</td> <td></td> <td align="right">0.375</td> <td></td> <td align="right">0.000</td> <td></td> <td align="right">0.375</td> <td></td> <td></td> <td></td> </tr> </table> | | | | | | | | | | | | | | Cost Category Item | Contract Method & Type | Performing Activity & Location | Total Prior Years Cost | FY 2010 | | FY 2011 Base | | FY 2011 OCO | | FY 2011 Total | Cost To Complete | Total Cost | Target Value of Contract | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | PROGRAM MANAGEMENT SUPPORT | | | | | | | | | | | | | | Subtotal | | | 0.561 | 0.375 | | 0.375 | | 0.000 | | 0.375 | | | |
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Total Prior Years Cost | FY 2010 | | FY 2011 Base | | FY 2011 OCO | | FY 2011 Total | Cost To Complete | Total Cost | Target Value of Contract | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PROGRAM MANAGEMENT SUPPORT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Subtotal | | | 0.561 | 0.375 | | 0.375 | | 0.000 | | 0.375 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Remarks | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1" style="width:100%; border-collapse: collapse; margin-top: 10px;"> <tr> <th rowspan="2">Project Cost Totals</th> <th>Total Prior Years Cost</th> <th colspan="2">FY 2010</th> <th colspan="2">FY 2011 Base</th> <th colspan="2">FY 2011 OCO</th> <th>FY 2011 Total</th> <th>Cost To Complete</th> <th>Total Cost</th> <th>Target Value of Contract</th> </tr> <tr> <td align="right">22.175</td> <td align="right">7.181</td> <td></td> <td align="right">6.815</td> <td></td> <td align="right">0.000</td> <td></td> <td align="right">6.815</td> <td></td> <td></td> <td></td> </tr> </table> | | | | | | | | | | | | | | Project Cost Totals | Total Prior Years Cost | FY 2010 | | FY 2011 Base | | FY 2011 OCO | | FY 2011 Total | Cost To Complete | Total Cost | Target Value of Contract | 22.175 | 7.181 | | 6.815 | | 0.000 | | 6.815 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Project Cost Totals | Total Prior Years Cost | FY 2010 | | FY 2011 Base | | FY 2011 OCO | | FY 2011 Total | Cost To Complete | Total Cost | Target Value of Contract | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 22.175 | 7.181 | | 6.815 | | 0.000 | | 6.815 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Remarks | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy | | | | DATE: February 2010 | | | |
| APPROPRIATION/BUDGET ACTIVITY | | R-1 ITEM NOMENCLATURE | | | PROJECT | | |
| 1319: Research, Development, Test & Evaluation, Navy | | PE 0101226N: Submarine Acoustic War Dev | | | 1265: Sub Defensive Warfare | | |
| BA 7: Operational Systems Development | | | | | | | |



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| Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy | | | DATE: February 2010 |
| APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i> | R-1 ITEM NOMENCLATURE PE 0101226N: <i>Submarine Acoustic War Dev</i> | PROJECT 1265: <i>Sub Defensive Warfare</i> | |

Schedule Details

| Event | Start | | End | |
|--------------------------------------|---------|------|---------|------|
| | Quarter | Year | Quarter | Year |
| DESIGN READINESS REVIEW (DRR) | 2 | 2009 | 2 | 2009 |
| INTEGRATION OF TECHNOLOGY INSERTIONS | 1 | 2009 | 2 | 2010 |
| CONTRACT AWARD | 2 | 2010 | 2 | 2010 |
| CONTRACTOR TESTING | 3 | 2010 | 4 | 2010 |
| MILESTONE C | 2 | 2011 | 2 | 2011 |
| D/T TESTING | 3 | 2011 | 4 | 2011 |
| LRIP | 1 | 2012 | 4 | 2012 |
| TECHNICAL EVALUATION | 2 | 2012 | 2 | 2012 |
| OPERATIONAL EVALUATION | 4 | 2012 | 4 | 2012 |
| FRP | 1 | 2013 | 4 | 2015 |

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