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|--|-------------|---------|---------|--------------|--|---------------|---------|---------|---------|------------------|------------------|------------|
| Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Navy | | | | | | | | | | Date: March 2019 | | |
| Appropriation/Budget Activity 1319: Research, Development, Test & Evaluation, Navy / BA 5: System Development & Demonstration (SDD) | | | | | R-1 Program Element (Number/Name) PE 0604221N / P-3 Modernization Program | | | | | | | |
| COST (\$ in Millions) | Prior Years | FY 2018 | FY 2019 | FY 2020 Base | FY 2020 OCO | FY 2020 Total | FY 2021 | FY 2022 | FY 2023 | FY 2024 | Cost To Complete | Total Cost |
| Total Program Element | 22.519 | 1.331 | 2.134 | 0.000 | - | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 25.984 |
| 3016: Fatigue Life Mgmt Program | 22.519 | 1.331 | 2.134 | 0.000 | - | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 25.984 |

A. Mission Description and Budget Item Justification

Fatigue Life Management Program is required to manage P-3/EP-3 inventory fatigue life and includes ongoing structural analysis, analyzing emergent structural issues, conducting engineering studies, assessing Fleet impact, and applying new technologies such as Non-Destructive Inspection techniques.

This program is funded under SYSTEM DEVELOPMENT AND DEMONSTRATION because it includes those projects that have passed Milestone B approval and are conducting engineering and manufacturing development tasks aimed at meeting validated requirement prior to full-rate production decision.

| | | | | | |
|---|----------------|----------------|---------------------|--------------------|----------------------|
| B. Program Change Summary (\$ in Millions) | FY 2018 | FY 2019 | FY 2020 Base | FY 2020 OCO | FY 2020 Total |
| Previous President's Budget | 1.361 | 2.134 | 0.001 | - | 0.001 |
| Current President's Budget | 1.331 | 2.134 | 0.000 | - | 0.000 |
| Total Adjustments | -0.030 | 0.000 | -0.001 | - | -0.001 |
| • Congressional General Reductions | - | - | | | |
| • Congressional Directed Reductions | - | - | | | |
| • Congressional Rescissions | - | - | | | |
| • Congressional Adds | - | - | | | |
| • Congressional Directed Transfers | - | - | | | |
| • Reprogrammings | - | - | | | |
| • SBIR/STTR Transfer | -0.030 | 0.000 | | | |
| • Rate/Misc Adjustments | 0.000 | 0.000 | -0.001 | - | -0.001 |

Change Summary Explanation

Technical: Not applicable.

Schedule: Not applicable.

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| Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy | | | | | | | | | | Date: March 2019 | | |
| Appropriation/Budget Activity 1319 / 5 | | | | | R-1 Program Element (Number/Name) PE 0604221N / P-3 Modernization Program | | | | Project (Number/Name) 3016 / Fatigue Life Mgmt Program | | | |
| COST (\$ in Millions) | Prior Years | FY 2018 | FY 2019 | FY 2020 Base | FY 2020 OCO | FY 2020 Total | FY 2021 | FY 2022 | FY 2023 | FY 2024 | Cost To Complete | Total Cost |
| 3016: Fatigue Life Mgmt Program | 22.519 | 1.331 | 2.134 | 0.000 | - | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 25.984 |
| Quantity of RDT&E Articles | | - | - | - | - | - | - | - | - | - | | |
| A. Mission Description and Budget Item Justification | | | | | | | | | | | | |
| Fatigue Life Management Program is required to manage P-3/EP-3 inventory fatigue life and includes ongoing structural analysis, analyzing emergent structural issues, conducting engineering studies, assessing Fleet impact, and applying new technologies such as Non-Destructive Inspection techniques. | | | | | | | | | | | | |
| B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each) | | | | | | | | FY 2018 | FY 2019 | FY 2020 Base | FY 2020 OCO | FY 2020 Total |
| Title: P-3/EP-3 Fatigue Life Management Articles: FY 2019 Plans: Fatigue Life Management Program: Manage P-3/EP-3 inventory fatigue life including conducting structural analysis, analyzing structural issues, conducting engineering studies, and assessing Fleet impact. Research, test and apply new Fatigue Inspection techniques to the P-3/EP-3 Fleet. FY 2020 Base Plans: N/A FY 2020 OCO Plans: N/A FY 2019 to FY 2020 Increase/Decrease Statement: The FY19 - FY20 funding request was reduced by \$2.134 million to account for the availability of prior year execution balances. | | | | | | | | 1.331 | 2.134 | 0.000 | 0.000 | 0.000 |
| | | | | | | | | - | - | - | - | - |
| Accomplishments/Planned Programs Subtotals | | | | | | | | 1.331 | 2.134 | 0.000 | 0.000 | 0.000 |
| C. Other Program Funding Summary (\$ in Millions) | | | | | | | | | | | | |
| Line Item | FY 2018 | FY 2019 | FY 2020 Base | FY 2020 OCO | FY 2020 Total | FY 2021 | FY 2022 | FY 2023 | FY 2024 | Cost To Complete | Total Cost | |
| • APN/0538: P-3 Series | 0.700 | 0.803 | 0.000 | - | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 4,910.963 | |
| Remarks | | | | | | | | | | | | |

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| Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy | | Date: March 2019 |
| Appropriation/Budget Activity 1319 / 5 | R-1 Program Element (Number/Name) PE 0604221N / <i>P-3 Modernization Program</i> | Project (Number/Name) 3016 / <i>Fatigue Life Mgmt Program</i> |
| D. Acquisition Strategy The Fatigue Life Management Program leverages off of prior work done under P-3 Service Life Extension Program (2451). The Anti-Surface Warfare Improvement Program Operational Requirements Documents 355-88-94 was approved 30 March 94. Work will be performed by Lockheed Martin Aeronautical Systems and other industry participants along with the Naval Air Systems Command Structural Engineering Dept, AIR-4.3. This program supports the 7 June 2003 CNO approved P-3/EP-3 Sustainment Bridge to Multi-Mission Maritime Aircraft. | | |
| E. Performance Metrics Successful application of system engineering processes. | | |

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|--|------------------------|--------------------------------|-------------|---------|------------|--|------------|-----------------|------------|---|------------|------------------|------------------|------------|--------------------------|
| Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Navy | | | | | | | | | | | | Date: March 2019 | | | |
| Appropriation/Budget Activity 1319 / 5 | | | | | | R-1 Program Element (Number/Name) PE 0604221N / P-3 Modernization Program | | | | Project (Number/Name) 3016 / Fatigue Life Mgmt Program | | | | | |
| Product Development (\$ in Millions) | | | | FY 2018 | | FY 2019 | | FY 2020 Base | | FY 2020 OCO | | FY 2020 Total | | | |
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Cost To Complete | Total Cost | Target Value of Contract |
| Systems Engineering | C/CPIF | LM : Marietta, GA | 11.924 | 0.748 | Jan 2018 | 1.528 | Jan 2019 | 0.000 | | - | | 0.000 | 0.000 | 14.200 | 14.245 |
| Subtotal | | | 11.924 | 0.748 | | 1.528 | | 0.000 | | - | | 0.000 | 0.000 | 14.200 | N/A |
| Management Services (\$ in Millions) | | | | FY 2018 | | FY 2019 | | FY 2020 Base | | FY 2020 OCO | | FY 2020 Total | | | |
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Cost To Complete | Total Cost | Target Value of Contract |
| Government Engineering Support | WR | NAWCAD : PAX RIVER, MD | 9.320 | 0.543 | Nov 2017 | 0.566 | Nov 2018 | 0.000 | | - | | 0.000 | 0.000 | 10.429 | 10.449 |
| Travel | WR | NAWCAD : PAX RIVER, MD | 1.005 | 0.040 | Oct 2017 | 0.040 | Oct 2018 | 0.000 | | - | | 0.000 | 0.000 | 1.085 | 1.085 |
| Prior Year costs no longer funded in FYDP | Various | Various : Various | 0.270 | 0.000 | | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 0.270 | - |
| Subtotal | | | 10.595 | 0.583 | | 0.606 | | 0.000 | | - | | 0.000 | 0.000 | 11.784 | N/A |
| | | | Prior Years | FY 2018 | | FY 2019 | | FY 2020 Base | | FY 2020 OCO | | FY 2020 Total | Cost To Complete | Total Cost | Target Value of Contract |
| Project Cost Totals | | | 22.519 | 1.331 | | 2.134 | | 0.000 | | - | | 0.000 | 0.000 | 25.984 | N/A |
| Remarks | | | | | | | | | | | | | | | |

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| Exhibit R-4, RDT&E Schedule Profile: PB 2020 Navy | | | | | | | | | | | | | | | | | | | | | | | Date: March 2019 | | | | | | |
|---|--|---|----|----|----|---------|----|----|----|---------|----|--|----|---------|----|----|----|---------|----|---|----|---------|------------------|----|----|---------|----|----|----|
| Appropriation/Budget Activity 1319 / 5 | | | | | | | | | | | | R-1 Program Element (Number/Name) PE 0604221N / P-3 Modernization Program | | | | | | | | Project (Number/Name) 3016 / Fatigue Life Mgmt Program | | | | | | | | | |
| Fatigue Life Mgmt Program | | FY 2018 | | | | FY 2019 | | | | FY 2020 | | | | FY 2021 | | | | FY 2022 | | | | FY 2023 | | | | FY 2024 | | | |
| | | 1Q | 2Q | 3Q | 4Q | 1Q | 2Q | 3Q | 4Q | 1Q | 2Q | 3Q | 4Q | 1Q | 2Q | 3Q | 4Q | 1Q | 2Q | 3Q | 4Q | 1Q | 2Q | 3Q | 4Q | 1Q | 2Q | 3Q | 4Q |
| Acquisition Milestones | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Milestones | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Systems Development | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hardware Development | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Software Development | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reviews | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Test & Evaluation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Technical Evaluation | | Inventory Fatigue Life Management/Sustainment | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Operational Evaluation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Production Milestones | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Contract Awards | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Deliveries | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2020DON - 0604221N - 3016 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| Exhibit R-4A, RDT&E Schedule Details: PB 2020 Navy | | | Date: March 2019 |
| Appropriation/Budget Activity 1319 / 5 | R-1 Program Element (Number/Name) PE 0604221N / <i>P-3 Modernization Program</i> | Project (Number/Name) 3016 / <i>Fatigue Life Mgmt Program</i> | |

Schedule Details

| Events by Sub Project | Start | | End | |
|--|---------|------|---------|------|
| | Quarter | Year | Quarter | Year |
| <i>Fatigue Life Mgmt Program</i> | | | | |
| Test & Evaluation: Technical Evaluation: Inventory Fatigue Life Management/ Sustainment | 1 | 2018 | 4 | 2019 |