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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2017 Army **Date:** February 2016

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| <b>Appropriation/Budget Activity</b><br>2040: <i>Research, Development, Test &amp; Evaluation, Army / BA 6: RDT&amp;E Management Support</i> | <b>R-1 Program Element (Number/Name)</b><br>PE 0605857A / <i>Environmental Quality Technology Mgmt Support</i> |
|--|--|

| COST (\$ in Millions)   | Prior Years | FY 2015 | FY 2016 | FY 2017 Base | FY 2017 OCO | FY 2017 Total | FY 2018 | FY 2019 | FY 2020 | FY 2021 | Cost To Complete | Total Cost |
|---|-------------|---------|---------|--------------|-------------|---------------|---------|---------|---------|---------|------------------|------------|
| Total Program Element   | -           | 2.512   | 3.186   | 2.130        | -           | 2.130         | 4.542   | 2.480   | 2.667   | 2.684   | -                | -          |
| 031: <i>Environmentally Sustainable Acquisition/Logistics</i> | -           | 2.250   | 2.914   | 2.020        | -           | 2.020         | 4.208   | 2.269   | 2.325   | 2.375   | -                | -          |
| 06I: <i>POLLUTION PREVENTION TECH SUPPORT</i>                 | -           | 0.262   | 0.272   | 0.110        | -           | 0.110         | 0.334   | 0.211   | 0.342   | 0.309   | -                | -          |

**A. Mission Description and Budget Item Justification**

This program resources environmental quality technology (EQT) related management support functions including support of research, development, test and evaluation required for EQT technical integration efforts at demonstration/validation test sites, technical information and activities, test facilities and general test instrumentation, and EQT requirement assessments. Funds required to support the management of technology transfer associated with technology demonstrated and validated as part of Army EQT projects are included in this program element. In addition, support to the Army weapon system acquisition community to address environmental quality requirements are included under the Environmentally Sustainable Acquisition/Logistics Program.

The Environmentally Sustainable Acquisition/Logistics project includes program management for developing acquisition strategies that both achieve system key performance parameters and sustain the environment without permanent and unacceptable change in the natural environment or human health from system concept refinement through disposal. It includes systematic consideration of environmental impacts, energy use, natural resources, installation impacts, economics, and quality of life. It provides support to the system acquisition community, e.g., program and project managers, to integrate environmental quality analyses into the system acquisition process. The goal is to resolve environmental quality issues related to weapon systems that are identified during design, development, testing, operation, or support to reduce Army environmental liabilities and total ownership costs and includes efforts to eliminate the use of hazardous and ozone-depleting materials from weapon systems and facilities and to ensure the availability of Halon 1301 to support weapon system fire suppression requirements.

The Pollution Prevention Tech Support project funds the management support costs to execute the Toxic Metals Reduction and Airborne Lead Reduction environmental quality technology programs.

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|--|--|

| <b>B. Program Change Summary (\$ in Millions)</b> | <b>FY 2015</b> | <b>FY 2016</b> | <b>FY 2017 Base</b> | <b>FY 2017 OCO</b> | <b>FY 2017 Total</b> |
|---|----------------|----------------|---------------------|--------------------|----------------------|
| Previous President's Budget                       | 2.611          | 3.186          | 3.402               | -                  | 3.402                |
| Current President's Budget                        | 2.512          | 3.186          | 2.130               | -                  | 2.130                |
| Total Adjustments                                 | -0.099         | 0.000          | -1.272              | -                  | -1.272               |
| • Congressional General Reductions                | -              | -              |                     |                    |                      |
| • Congressional Directed Reductions               | -              | -              |                     |                    |                      |
| • Congressional Rescissions                       | -              | -              |                     |                    |                      |
| • Congressional Adds                              | -              | -              |                     |                    |                      |
| • Congressional Directed Transfers                | -              | -              |                     |                    |                      |
| • Reprogrammings                                  | -              | -              |                     |                    |                      |
| • SBIR/STTR Transfer                              | -0.099         | -              |                     |                    |                      |
| • Adjustments to Budget Years                     | -              | -              | -1.272              | -                  | -1.272               |

**Change Summary Explanation**

FY17 reductions attributed to realignment to other higher priority Army programs.

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| <b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Army |                    |                |                |                     |  |                      |                |                |  | <b>Date:</b> February 2016 |                         |                   |
| <b>Appropriation/Budget Activity</b><br>2040 / 6                   |                    |                |                |                     | <b>R-1 Program Element (Number/Name)</b><br>PE 0605857A / <i>Environmental Quality Technology Mgmt Support</i> |                      |                |                | <b>Project (Number/Name)</b><br>031 / <i>Environmentally Sustainable Acquisition/Logistics</i> |                            |                         |                   |
| <b>COST (\$ in Millions)</b>                                       | <b>Prior Years</b> | <b>FY 2015</b> | <b>FY 2016</b> | <b>FY 2017 Base</b> | <b>FY 2017 OCO</b>   | <b>FY 2017 Total</b> | <b>FY 2018</b> | <b>FY 2019</b> | <b>FY 2020</b>   | <b>FY 2021</b>             | <b>Cost To Complete</b> | <b>Total Cost</b> |
| 031: <i>Environmentally Sustainable Acquisition/Logistics</i>      | -                  | 2.250          | 2.914          | 2.020               | -  | 2.020                | 4.208          | 2.269          | 2.325  | 2.375                      | -                       | -                 |
| Quantity of RDT&E Articles   | -                  | -              | -              | -                   | -  | -                    | -              | -              | -  | -                          |                         |                   |

**A. Mission Description and Budget Item Justification**

The Environmentally Sustainable Acquisition/Logistics (ESAL) project provides support to the system acquisition community to integrate environmental quality issues and concerns into the life cycle system acquisition process. To a much lesser extent, safety, occupational health and energy efficiency are also addressed. The focus of ESAL is on improving readiness, improving acquisition processes, reducing supportability burden, and minimizing total ownership cost. The Assistant Secretary of the Army for Installations, Energy and Environment has defined the functions of the ESAL project in coordination with the Army Acquisition Executive and the Assistant Secretary of the Army (Acquisition, Logistics, and Technology). This project provides direct support to the Army acquisition community to pursue environmental sustainability and comply with legal statutes, policies and regulations during the life cycle of Army materiel. ESAL helps the Army achieve compliance with its weapon systems, industrial base, field and deployed activities directed by international treaties, Federal statutes, Executive Orders, Department of Defense (DoD) and Army policies and regulations.

**B. Accomplishments/Planned Programs (\$ in Millions)**

|  | <b>FY 2015</b> | <b>FY 2016</b> | <b>FY 2017</b> |
|--|----------------|----------------|----------------|
| <b>Title:</b> Environmental Quality (EQ) Support   | 1.020          | 1.150          | 0.963          |
| <b>Description:</b> Provide EQ Support to Acquisition Programs   |                |                |                |
| <b>FY 2015 Accomplishments:</b><br>Provided support to Program Executive Officers and Program Managers (PEOs/PMs) to integrate Environmental Quality (EQ) considerations into systems engineering activities. This included fulfillment of National Environmental Policy Act requirements, definition of EQ technology needs to meet operational requirements, analysis of technical data to support implementation decisions, participation in technical and cost risk assessment activities, and assessment and revision of contractual and operational requirements for successful technology integration, operation and support. Analyzed impending legal statutes impacting production, operation and support of weapon systems. Assessed weapon system readiness impacts (e.g., production levels, training, operational tempo and maintenance activities) resulting from EQ issues affecting industrial base and garrisons. Provided Army acquisition community representation in select Office of the Secretary of Defense (OSD) and Department of the Army (DA) committees addressing environmental legislation and rulemaking. |                |                |                |
| <b>FY 2016 Plans:</b><br>Provide support to PEOs/PMs to integrate EQ considerations into systems engineering activities. This includes fulfillment of National Environmental Policy Act requirements, definition of EQ technology needs to meet operational requirements, analysis of technical data to support implementation decisions, participation in technical and cost risk assessment activities, and assessment   |                |                |                |

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| <b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Army   |  | <b>Date:</b> February 2016   |                |                |
| <b>Appropriation/Budget Activity</b><br>2040 / 6   | <b>R-1 Program Element (Number/Name)</b><br>PE 0605857A / <i>Environmental Quality Technology Mgmt Support</i> | <b>Project (Number/Name)</b><br>031 / <i>Environmentally Sustainable Acquisition/Logistics</i> |                |                |
| <b>B. Accomplishments/Planned Programs (\$ in Millions)</b>  |  | <b>FY 2015</b>   | <b>FY 2016</b> | <b>FY 2017</b> |
| <p>and revision of contractual and operational requirements for successful technology integration, operation and support. Analyze impending legal statutes impacting production, operation and support of weapon systems. Assess weapon system readiness impacts (e.g. production levels, training, operational tempo and maintenance activities) resulting from EQ issues affecting industrial base and garrisons. Provide Army acquisition community representation in select OSD and DA committees addressing environmental legislation and rulemaking.</p> <p><b>FY 2017 Plans:</b><br/>Will provide support to PEOs/PMs to integrate EQ considerations into systems engineering activities. This will include fulfillment of National Environmental Policy Act requirements, definition of EQ technology needs to meet operational requirements, analysis of technical data to support implementation decisions, participation in technical and cost risk assessment activities, and assessment and revision of contractual and operational requirements for successful technology integration, operation and support. Will analyze impending legal statutes impacting production, operation and support of weapon systems. Will assess weapon system readiness impacts (e.g., production levels, training, operational tempo and maintenance activities) resulting from EQ issues affecting industrial base and garrisons. Will provide Army acquisition community representation in select OSD and DA committees addressing environmental legislation and rulemaking.</p>   |  |  |                |                |
| <p><b>Title:</b> Environmental Quality (EQ) Technology Management</p> <p><b>Description:</b> Provide management support for Army EQ technology efforts.</p> <p><b>FY 2015 Accomplishments:</b><br/>Provided system acquisition support to the Army's EQ technology program and coordination of EQ-related systems' needs for expanded Research, Development, Test, and Evaluation (RDT&amp;E) efforts. Managed and oversaw technology integration efforts by Army Life Cycle Management Commands for weapon systems in all stages of design, procurement and operations/support. Coordinated RDT&amp;E requirements among members of the Army EQ Technology Teams, coordinated technology evaluations and operational requirements in support of weapon system platform integration, managed and oversaw test plan development, oversaw testing activities, and analyzed test results to support weapon systems engineering decision making.</p> <p><b>FY 2016 Plans:</b><br/>Provide system acquisition support to the Army's EQ technology program and coordination of EQ-related systems' needs for expanded RDT&amp;E efforts. Manage and oversee technology integration efforts by Army Life Cycle Management Commands for weapon systems in all stages of design, procurement and operations/support. Coordinate RDT&amp;E requirements among members of the Army EQ Technology Teams, will coordinate technology evaluations and operational requirements in support of weapon system platform integration, will manage and oversee test plan development, will oversee testing activities, and will analyze test results to support weapon systems engineering decision making.</p> <p><b>FY 2017 Plans:</b></p> |  | 0.835  | 0.865          | 0.659          |

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| <b>Appropriation/Budget Activity</b><br>2040 / 6  | <b>R-1 Program Element (Number/Name)</b><br>PE 0605857A / <i>Environmental Quality Technology Mgmt Support</i> | <b>Project (Number/Name)</b><br>031 / <i>Environmentally Sustainable Acquisition/Logistics</i> |                |                |
| <b>B. Accomplishments/Planned Programs (\$ in Millions)</b>   |  | <b>FY 2015</b>   | <b>FY 2016</b> | <b>FY 2017</b> |
| <p>Will provide system acquisition support to the Army's EQ technology program and coordination of EQ-related systems' needs for expanded RDT&amp;E efforts. Will manage and oversee technology integration efforts by Army Life Cycle Management Commands for weapon systems in all stages of design, procurement and operations/support. Will coordinate RDT&amp;E requirements among members of the Army EQ Technology Teams, will coordinate technology evaluations and operational requirements in support of weapon system platform integration, will manage and oversee test plan development, will oversee testing activities, and will analyze test results to support weapon systems engineering decision making.</p>   |  |  |                |                |
| <p><b>Title:</b> Ozone Depleting Substance Management</p> <p><b>Description:</b> Oversee Army efforts to manage the use/elimination of ozone depleting substances on Army weapon systems.</p> <p><b>FY 2015 Accomplishments:</b><br/>Oversaw Army efforts to manage the use/elimination of ozone-depleting substances on Army weapon systems. Monitored the Army's reserve of ozone-depleting substances that contained the Army's strategic supplies of Halon used for explosion and fire suppression systems and R-22 used in fielded environmental control units. Coordinated with Program Executive Officers and Program Managers (PEOs/PMs) to affect system replacement and retrofit to eliminate ozone depleting substances while minimizing greenhouse gases and obtained approval to require use of Halon in new contracts.</p> <p><b>FY 2016 Plans:</b><br/>Oversee Army efforts to manage the use/elimination of ozone-depleting substances on Army weapon systems. Monitor the Army's reserve of ozone-depleting substances that contains the Army's strategic supplies of Halon used for explosion and fire suppression systems and R-22 used in fielded environmental control units. Coordinate with PEOs/PMs to affect system replacement and retrofit to eliminate ozone depleting substances while minimizing greenhouse gases and to obtain approval to require use of Halon in new contracts.</p> <p><b>FY 2017 Plans:</b><br/>Will oversee Army efforts to manage the use/elimination of ozone-depleting substances on Army weapon systems. Will monitor the Army's reserve of ozone-depleting substances that contains the Army's strategic supplies of Halon used for explosion and fire suppression systems and R-22 used in fielded environmental control units. Will coordinate with PEOs/PMs to affect system replacement and retrofit to eliminate ozone depleting substances while minimizing greenhouse gases and to obtain approval to require use of Halon in new contracts.</p> |  | 0.395  | 0.410          | 0.398          |
| <p><b>Title:</b> Headquarters Army Environmental System (HQAES)</p> <p><b>Description:</b> Headquarters Army Environmental System (HQAES) support.</p> <p><b>FY 2016 Plans:</b></p>   |  | -  | 0.489          | -              |

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| <b>B. Accomplishments/Planned Programs (\$ in Millions)</b>   |  | <b>FY 2015</b>   | <b>FY 2016</b> | <b>FY 2017</b> |
| Support Headquarters Army Environmental System (HQAES) modifications recommended by Configuration Control Management Board in order to support network security worthiness. |  |  |                |                |
| <b>Accomplishments/Planned Programs Subtotals</b>   |  | 2.250  | 2.914          | 2.020          |
| <b>C. Other Program Funding Summary (\$ in Millions)</b><br>N/A   |  |  |                |                |
| <b>Remarks</b>  |  |  |                |                |
| <b>D. Acquisition Strategy</b><br>N/A   |  |  |                |                |
| <b>E. Performance Metrics</b><br>N/A  |  |  |                |                |

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| <b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Army |                    |                |                |                     |  |                      |                |                |  | <b>Date:</b> February 2016 |                         |                   |
| <b>Appropriation/Budget Activity</b><br>2040 / 6                   |                    |                |                |                     | <b>R-1 Program Element (Number/Name)</b><br>PE 0605857A / <i>Environmental Quality Technology Mgmt Support</i> |                      |                |                | <b>Project (Number/Name)</b><br>06I / <i>POLLUTION PREVENTION TECH SUPPORT</i> |                            |                         |                   |
| <b>COST (\$ in Millions)</b>                                       | <b>Prior Years</b> | <b>FY 2015</b> | <b>FY 2016</b> | <b>FY 2017 Base</b> | <b>FY 2017 OCO</b>   | <b>FY 2017 Total</b> | <b>FY 2018</b> | <b>FY 2019</b> | <b>FY 2020</b>   | <b>FY 2021</b>             | <b>Cost To Complete</b> | <b>Total Cost</b> |
| 06I: <i>POLLUTION PREVENTION TECH SUPPORT</i>                      | -                  | 0.262          | 0.272          | 0.110               | -  | 0.110                | 0.334          | 0.211          | 0.342  | 0.309                      | -                       | -                 |
| Quantity of RDT&E Articles   | -                  | -              | -              | -                   | -  | -                    | -              | -              | -  | -                          |                         |                   |

**A. Mission Description and Budget Item Justification**

This project provides RDTE Management Support for the demonstration and validation of weapon system pollution prevention technologies within the Army's Environmental Quality Technology program. The project increases operational sustainment and warfighter training capabilities by reducing soldier and worker health risks and environmental impacts that would otherwise result in restoration needs and compliance enforcement actions against installations while simultaneously increasing performance and standardization across the Army. This project provides for management of RDTE activities conducted under project 0603779A, Environmental Quality Technology Dem/Val (E21). The project expedites technology transition from the laboratory to operational use by supporting the demonstration of new materials and processes to fulfill the performance requirements outlined in Material Specifications, Depot Maintenance Work Requirements, Technical Manuals, Drawings and other technical data.

**B. Accomplishments/Planned Programs (\$ in Millions)**

|   | <b>FY 2015</b> | <b>FY 2016</b> | <b>FY 2017</b> |
|---|----------------|----------------|----------------|
| <b>Title:</b> Management of Army Environmental Quality Technology Programs  | 0.262          | 0.272          | 0.110          |
| <b>Description:</b> Manage and oversee the demonstration/validation of weapon system pollution prevention technologies within the Army's Environmental Quality Technology Program.  |                |                |                |
| <b>FY 2015 Accomplishments:</b><br>Managed and oversaw the demonstration/validation of two pollution prevention technology efforts: Toxic Metal Reduction in Surface Finishing of Army Weapon Systems, and Airborne Lead Reduction from Army Weapon Systems |                |                |                |
| <b>FY 2016 Plans:</b><br>Manage and oversee the demonstration/validation of two pollution prevention technology efforts: Toxic Metal Reduction in Surface Finishing of Army Weapon Systems, and Airborne Lead Reduction from Army Weapon Systems.           |                |                |                |
| <b>FY 2017 Plans:</b><br>Will manage and oversee the demonstration/validation of two pollution prevention technology efforts: Toxic Metal Reduction in Surface Finishing of Army Weapon Systems, and Airborne Lead Reduction from Army Weapon Systems.      |                |                |                |
| <b>Accomplishments/Planned Programs Subtotals</b>   | 0.262          | 0.272          | 0.110          |

**C. Other Program Funding Summary (\$ in Millions)**

N/A

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**C. Other Program Funding Summary (\$ in Millions)**

**Remarks**

**D. Acquisition Strategy**

N/A

**E. Performance Metrics**

N/A