

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

**February 2008**

| BUDGET ACTIVITY  |                     | PE NUMBER AND TITLE  |                     |                     |                     |                     |                     |                     |            |  |
|--|---------------------|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------|--|
| <b>4 - Advanced Component Development and Prototypes</b> |                     | <b>0603779A - Environmental Quality Technology - Dem/Val</b> |                     |                     |                     |                     |                     |                     |            |  |
| COST (In Thousands)                                      | FY 2007<br>Estimate | FY 2008<br>Estimate  | FY 2009<br>Estimate | FY 2010<br>Estimate | FY 2011<br>Estimate | FY 2012<br>Estimate | FY 2013<br>Estimate | Cost to<br>Complete | Total Cost |  |
| Total Program Element (PE) Cost                          | 23693               | 18580  | 5355                | 4814                | 4807                | 4914                | 5024                | Continuing          | Continuing |  |
| 035 NATIONAL DEFENSE CNTR FOR ENVIRO EXCELLENCE-NDCEE    | 5003                | 4763   | 4828                | 4814                | 4807                | 4914                | 5024                | Continuing          | Continuing |  |
| 04I TECHNOLOGIES TO REDUCE NON-HAZARDOUS WASTE           |                     |  |                     |                     |                     |                     |                     |                     | 4600       |  |
| 04J ENVIRONMENTAL COMPLIANCE TECHNOLOGY VALIDATION       |                     |  |                     |                     |                     |                     |                     |                     | 1433       |  |
| E12 TRANSPORTABLE DETONATION CHAMBER VALIDATION          |                     |  |                     |                     |                     |                     |                     |                     | 7859       |  |
| E14 ENVIRONMENTAL SECURITY INITIATIVE (CA)               |                     |  |                     |                     |                     |                     |                     |                     | 959        |  |
| E15 ARSENIC REMOVAL (CA)                                 | 1549                |  |                     |                     |                     |                     |                     |                     | 3465       |  |
| E16 ABERDEEN PG ASBESTOS CONVERSION FACILITY (CA)        |                     |  |                     |                     |                     |                     |                     |                     | 2491       |  |
| E17 ARMY ENVIRONMENTAL SOLUTIONS PROGRAM (CA)            | 968                 | 2396   |                     |                     |                     |                     |                     |                     | 5760       |  |
| E19 SUSTAINABLE INSTALLATIONS INITIATIVE (CA)            | 2083                |  |                     |                     |                     |                     |                     |                     | 5725       |  |
| E21 POLLUTION PREVENTION TECHNOLOGY DEM/VAL              |                     | 1287   | 527                 |                     |                     |                     |                     |                     | 1814       |  |
| E23 ENVIRONMENTAL MANAGEMENT SYSTEM (EMS) PILOT IN DOD   |                     | 2396   |                     |                     |                     |                     |                     |                     | 5749       |  |
| EN1 CASTING EMISSION REDUCTION PROGRAM (CERP)            |                     |  |                     |                     |                     |                     |                     |                     | 7571       |  |
| EN4 PLASMA ENERGY PYROLYSIS SYSTEM (PEPS)                | 968                 |  |                     |                     |                     |                     |                     |                     | 2310       |  |
| EN7 VANADIUM TECHNOLOGY PROGRAM                          | 1307                |  |                     |                     |                     |                     |                     |                     | 5620       |  |
| EP1 ENVIRONMENTAL QUALITY TECH DEM/VAL (CA)              | 11815               | 7738   |                     |                     |                     |                     |                     |                     | 29329      |  |

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BUDGET ACTIVITY

PE NUMBER AND TITLE

**4 - Advanced Component Development and Prototypes**

**0603779A - Environmental Quality Technology - Dem/Val**

**A. Mission Description and Budget Item Justification:** There is a broad application potential for environmental quality technology (EQT) to be applied to multiple Army weapon systems and installations. However, technology must be validated (total ownership cost and performance data identified) before potential users will consider exploiting it. Therefore, this program element includes projects focused on validating the general military utility or cost reduction potential of technology when applied to different types of infrastructure, military equipment or techniques. It may include validations and proof-of-principle demonstrations in field exercises to evaluate upgrades or provide new operational capabilities. The validation of technologies will be in as realistic an operating environment as possible to assess performance or cost reduction potential. EQT demonstration/validation is systemic; i.e., applies to a class of systems (e.g., tanks or aircraft) or to a Department of Army-wide, multiple site/installation problem (e.g., unexploded ordnance detection and discrimination). This program will address, and eventually resource, programs in each of the environmental quality technology pillars (restoration, conservation, compliance, and pollution prevention). Work must be endorsed by potential users and supported by a state-of-the-art assessment (i.e., technology is well-in-hand).

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**4 - Advanced Component Development and Prototypes**

**0603779A - Environmental Quality Technology - Dem/Val**

**B. Program Change Summary**

|  | FY 2007 | FY 2008 | FY 2009 |
|--|---------|---------|---------|
| Previous President's Budget (FY 2008/2009) | 24194   | 6149    | 5389    |
| Current BES/President's Budget (FY 2009)   | 23693   | 18580   | 5355    |
| Total Adjustments                          | -501    | 12431   | -34     |
| Congressional Program Reductions           |         | -119    |         |
| Congressional Rescissions                  |         |         |         |
| Congressional Increases                    |         | 12550   |         |
| Reprogrammings                             | 179     |         |         |
| SBIR/STTR Transfer                         | -680    |         |         |
| Adjustments to Budget Years                |         |         | -34     |

Change Summary Explanation:

FY 2008 - There were 6 congressional interest projects added (total \$12,550,000): Western Hemisphere Information Exchange Program (\$2,400,000), National Defense Center for Environmental Excellence(\$1,200,000), Integrated Mission Critical Environment, Safety and Occupational Health (ESOH) Technology and Regional Sustainability Solutions Program (\$2,400,000), Battlefield Plastic Biodiesel (\$1,650,000), Modifications to Modified Vaporous Hydrogen Peroxide (mVHP) for use against Toxic Industrial Chemicals/Materials (TICs/TIMs) (\$2,500,000) and Web-based Environmental Compliance Management System (\$2,400,000).

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

**February 2008**

|  |                  |  |                  |                  |                  |                  |                  |                              |            |
|--|------------------|--|------------------|------------------|------------------|------------------|------------------|------------------------------|------------|
| <b>BUDGET ACTIVITY</b><br><b>4 - Advanced Component Development and Prototypes</b> |                  | <b>PE NUMBER AND TITLE</b><br><b>0603779A - Environmental Quality Technology - Dem/Val</b> |                  |                  |                  |                  |                  | <b>PROJECT</b><br><b>035</b> |            |
| COST (In Thousands)  | FY 2007 Estimate | FY 2008 Estimate   | FY 2009 Estimate | FY 2010 Estimate | FY 2011 Estimate | FY 2012 Estimate | FY 2013 Estimate | Cost to Complete             | Total Cost |
| 035 NATIONAL DEFENSE CNTR FOR ENVIRO EXCELLENCE-NDCEE                              | 5003             | 4763   | 4828             | 4814             | 4807             | 4914             | 5024             | Continuing                   | Continuing |

**A. Mission Description and Budget Item Justification:** The National Defense Center for Environmental Excellence (NDCEE) was established by Congress in 1990 with a directive to "serve as a national leadership organization to address high priority environmental problems for the Department of Defense (DoD), other government organizations, and the industrial community." The NDCEE Program is a national resource for developing and disseminating advanced environmental technologies. The NDCEE is used to demonstrate environmentally acceptable technology to industry; validate new technology prior to transferring that technology; and assist in the training of potential users as part of that technology transfer process. The NDCEE is a DoD resource for environmental quality management and technology validation. This program is managed by the Army on behalf of the Office of the Assistant Deputy Under Secretary of Defense for Environment (ADUSD-E).

| <b>Accomplishments/Planned Program:</b>  | <u>FY 2007</u> | <u>FY 2008</u> | <u>FY 2009</u> |
|--|----------------|----------------|----------------|
| Management and operations of the NDCEE by the prime contractor.  | 2300           | 2300           | 2269           |
| Industrial base integration, operation of the NDCEE environmental technology facility, and environmental information analysis.                                       | 500            | 500            | 500            |
| Conduct demonstration/validation of environmentally acceptable technologies that enhance military readiness and reduce production, operating, and/or disposal costs. | 1975           | 1580           | 1784           |
| NDCEE Government program management during contract negotiations and execution and during project formulation, execution, and technology transfer.                   | 228            | 250            | 275            |
| Small Business Innovative Research/Small Business Technology Transfer Programs   |                | 133            |                |
| <b>Total</b>   | <b>5003</b>    | <b>4763</b>    | <b>4828</b>    |

**B. Other Program Funding Summary** Not applicable for this item.

**C. Acquisition Strategy** The NDCEE is a national asset focused on DoD applications that include technology transfer to appropriate DoD organizations. The NDCEE fosters an outreach program to describe its products and capabilities that include publication of results and participation in professional meetings, symposia, conferences, and appropriate coordination with industry. The management strategy for the NDCEE centers on a DoD Executive Advisory Board (EAB) chaired by the DoD NDCEE Executive Agent on behalf of the ADUSD (ESOH) and composed of senior DoD leadership to oversee NDCEE operations. The EAB is supported by an EAB Working Group (EABWG) that includes staff members from each of the offices represented on the EAB. The EABWG coordinates all NDCEE activities and reports back to the EAB Principals. The EABWG is, in turn, supported by a Technical Working Group (TWG) that addresses the details of NDCEE program execution. The contracting strategy of the NDCEE is based on using an NDCEE Contracting Officer's Representative to validate all the contractual portions of the NDCEE and by technical monitors (TM) to oversee the technical aspects of each

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BUDGET ACTIVITY

**4 - Advanced Component Development and Prototypes**

PE NUMBER AND TITLE

**0603779A - Environmental Quality Technology - Dem/Val**

PROJECT

**035**

contracted task. A prime contractor operates NDCEE test facility(s) to validate environmentally compatible technologies on a representative "shop floor". The NDCEE accounts for and conducts work for: (1) direct funded Army tasks; (2) reimbursable tasks from within DoD and from other Government agencies; and (3) Congressionally directed and funded tasks.

# ARMY RDT&E COST ANALYSIS (R3)

February 2008

| BUDGET ACTIVITY                                   |                        |  | PE NUMBER AND TITLE                                   |              |                    |              |                    |              |                    | PROJECT          |            |                          |
|---|------------------------|--|---|--------------|--------------------|--------------|--------------------|--------------|--------------------|------------------|------------|--------------------------|
| 4 - Advanced Component Development and Prototypes |                        |  | 0603779A - Environmental Quality Technology - Dem/Val |              |                    |              |                    |              |                    | 035              |            |                          |
| I. Product Development                            | Contract Method & Type | Performing Activity & Location                           | Total PYs 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 |
| Not applicable.                                   |                        |  |   |              |                    |              |                    |              |                    |                  |            |                          |
| Subtotal:   |                        |  |   |              |                    |              |                    |              |                    |                  |            |                          |
| II. Support Costs                                 |                        |  | Total PYs 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 |
| Technical Data                                    | C; CPFF                | Concurrent Technologies Corporation (CTC), Johnstown, PA | 7400  | 2800         | 2Q                 | 2800         | 2Q                 | 2769         | 2Q                 | Cont.            | Cont.      | Cont.                    |
| Subtotal:   |                        |  | 7400  | 2800         |                    | 2800         |                    | 2769         |                    | Cont.            | Cont.      | Cont.                    |
| III. Test And Evaluation                          |                        |  | Total PYs 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 |
| Development Testing                               | C; CPFF                | Concurrent Technologies Corp.                            | 2466  |              |                    |              |                    |              |                    |                  | 2466       | 2466                     |
| Development Testing                               | C; CPFF                | Concurrent Technologies Corp.                            | 10471   | 1975         | 2Q                 | 1713         | 2Q                 | 1784         | 2Q                 | Cont.            | Cont.      | Cont.                    |
| Subtotal:   |                        |  | 12937   | 1975         |                    | 1713         |                    | 1784         |                    | Cont.            | Cont.      | Cont.                    |
| IV. Management Services                           |                        |  | Total PYs 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 |

# ARMY RDT&E COST ANALYSIS (R3)

February 2008

| BUDGET ACTIVITY  |           |  | PE NUMBER AND TITLE  |             |    |             |    |             |    | PROJECT      |              |              |
|--|-----------|--|--|-------------|----|-------------|----|-------------|----|--------------|--------------|--------------|
| <b>4 - Advanced Component Development and Prototypes</b> |           |  | <b>0603779A - Environmental Quality Technology - Dem/Val</b> |             |    |             |    |             |    | <b>035</b>   |              |              |
| Program Management Support                               | Allotment | Office of the Assistant Sec Army (Installations and Environment) | 2995   | 228         | 4Q | 250         | 4Q | 275         | 4Q | Cont.        | Cont.        | Cont.        |
| Subtotal:  |           |  | 2995   | 228         |    | 250         |    | 275         |    | Cont.        | Cont.        | Cont.        |
| <b>Project Total Cost:</b>                               |           |  | <b>23332</b>   | <b>5003</b> |    | <b>4763</b> |    | <b>4828</b> |    | <b>Cont.</b> | <b>Cont.</b> | <b>Cont.</b> |