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

**February 2004**

| BUDGET ACTIVITY | PE NUMBER AND TITLE | PROJECT |
|---|---|---|
| **5 - System Development and Demonstration** | **0604641A - TACTICAL UNMANNED GROUND VEHICLE (TUGV)** | **E47** |

| COST (In Thousands) | FY 2003 Actual | FY 2004 Estimate | FY 2005 Estimate | FY 2006 Estimate | FY 2007 Estimate | FY 2008 Estimate | FY 2009 Estimate | Cost to Complete | Total Cost |
|---|---|---|---|---|---|---|---|---|---|
| E47 TAC UNMANNED GND VEH | 1146 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2873 |

**A. Mission Description and Budget Item Justification:** Tactical Unmanned Ground Vehicles (TUGVs) consist of a family of systems ranging from very large systems for assault or countermine, to very small man-portable units for close-in reconnaissance. This family of systems is being developed by the Robotic Systems Joint Project Office (RS JPO), under the OSD Joint Robotics Program. TUGV provides commanders the means to reduce risk and neutralize threats to soldiers and Marines by reducing their exposure during dangerous combat missions such as reconnaissance, surveillance, target acquisition, Nuclear Biological and Chemical (NBC) detection, crowd control, obstacle breaching, and countermine. It performs as a force multiplier, increases the commander's perspective on the battlespace, and fills the brigade/battalion intelligence gap. Robotic systems, operating out-front, provide force multiplication with the TUGVs reporting the nature of terrain, finding, locating and, in some cases, firing upon the enemy, locating obstacles, acquiring targets, detecting NBC agents, and providing this information to those who need it most, the battalion commander's battle staff. There will be a number of versions of TUGVs including a small-medium version for armed remoting of combat tasks for Marine and Army units. A man-portable system for intelligence collection and dissemination within buildings, tunnels, and sewers is also being developed for small unit commanders. Large assault systems mounted on tanks or bulldozers also fall within the family when designed for tactical employment, such as the Viking countermine system. This program element supports critical transition of Office of Naval Research Laboratory, Army Research Laboratory, and Defense Advanced Research Project Agency technology to the RS JPO for assessment during appraisals, Advanced Concept Technology Demonstrations (ACTD), and readiness for incorporation into System Development and Demonstration (SDD) performance specifications.

| **Accomplishments/Planned Program** | FY 2003 | FY 2004 | FY 2005 |
|---|---|---|---|
| Viking has completed basic safety and performance testing, and is participating in the Joint Area Clearance ACTD at Ft. A. P. Hill. Modifications for system hardening will be performed prior to live mine testing in conjunction with the ACTD. | 1146 | 0 | 0 |
| Totals | 1146 | 0 | 0 |

| **B. Program Change Summary** | FY 2003 | FY 2004 | FY 2005 |
|---|---|---|---|
| Previous President's Budget (FY 2004) | 1146 | 0 | 0 |
| Current Budget (FY 2005 PB) | 1146 | 0 | 0 |
| Total Adjustments | 0 | 0 | 0 |
| Congressional program reductions | | | |
| Congressional rescissions | | | |
| Congressional increases | | | |
| Reprogrammings | | | |
| SBIR/STTR Transfer | | | |
| Adjustments to Budget Years | | | |

**C. Other Program Funding Summary:** Not Applicable

**D. Acquisition Strategy:** The Tactical Unmanned Ground Vehicle (TUGV) program includes a family of products including the Man-Portable Robotic System (MPRS), the Tactical Unmanned Vehicle-Medium (TUV-M), and Viking. The Evolutionary Acquisition Strategy employed for this program by the Robotic Systems Joint Project Office requires Horizontal Technology Integration of emerging sensors, lasers, and command and control data link technologies to most effectively use limited resources. The first generation TUGVs will minimize risk and neutralize threats by enabling soldiers and Marines to perform dangerous scout/Reconnaissance, Surveillance, and Target Acquisition, targeting and combat support missions from a safer location. TUV-M prototype systems will incorporate state-of-the-art sensors, weapons, actuation, communications, mission planning, and semi-autonomous navigation technologies. The program utilizes a TUGV Integrated Product Team approach.