ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)

February 2002

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - Engineering and manufacturing development	**0604641A - TACTICAL UNMANNED GROUND VEHICLE (TUGV)**	**E47**

COST (In Thousands)		FY 2001 Actual	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
E47	TAC UNMANNED GND VEH	288	1490	0	0	0	0	0	0	9079

A. Mission Description and Budget Item Justification: The Army has the lead for this joint service program. The development of a Tactical Unmanned Ground Vehicle (TUGV) is within the Family of Tactical Unmanned Vehicles (FTUV) within the OSD Joint Robotics Program. TUGV provides commanders the ability to see the battle space while at the same time reducing soldiers' exposure during dangerous reconnaissance, surveillance, target acquisition (RSTA) and Nuclear Biological and Chemical (NBC) detection missions. It also performs as a force multiplier, eliminates trickle-down combat information, reduces the "fog-of-war" and fills the brigade intelligence gap. Most importantly, the TUGV will provide brigade and battalion commanders necessary access to the correct level of combat intelligence. Unmanned systems, operating out front, provide a force multiplication capability where TUGVs report the nature of the terrain, find the enemy, locate obstacles, acquire targets, detect chemical vapors, and provide this information directly to those who need it the most -the battalion commander's battle staff. There will be at least two versions of the TUGV. A medium version, Tactical Unmanned Vehicle -Medium (TUV-M), will be developed for emerging requirements from the United States Marine Corps and U.S. Army Infantry Center for Scout/surveillance and engineer reconnaissance. Tactical Unmanned Vehicle -Light (TUV-L) will be a man-packable unit for intelligence collection and dissemination, and conducting remote/area/building reconnaissance. The platforms will include a minimum day/night audio/video, and accept a family of modular multi-sensor capabilities such as through-wall and countersniper sensors. Data will be produced in a format compatible with higher-level communications architecture. This PE supports the critical transition of Defense Advanced Research Project Agency (DARPA) and Army Research Laboratory (ARL) developed technologies to the Project Manager (PM) Unmanned Ground Vehicles/Systems so they can be assessed (maturity, supportability, operationally) during user appraisals, advanced concept technology demonstrations (ACTD) and, packaged and readied for incorporation into the TUV Engineering and Manufacturing Development (EMD) performance specifications. This system supports the Legacy-to-Objective transition path of the Transformation Campaign Path (TCP).

FY 2001 Accomplishments:

- 288 Study integration of Haaglunds flail technology on U. S. inventory platform. Procure spares and training for existing platform. Complete Phase II for design, integration, and fabrication of Viking system.

Total 288

FY 2002 Planned Program

- 1490 The Viking system will be in testing at APG getting safety release prior to ACTD. Additional testing at Tyndall Air Force Base is scheduled next, then the system ships to Ft. A.P. Hill for user training for the ACTD. From there the system ships back to Redstone for system hardening for live fire testing and the ACTD. In Sep 02, the system ships back to A.P. Hill for the ACTD.

Total 1490

B. Program Change Summary	FY 2001	FY 2002	FY 2003
Previous President's Budget (FY2002 PB)	297	0	0
Appropriated Value	300	1500	0
Adjustments to Appropriated Value	0	0	0
a. Congressional General Reductions	0	-10	0
b. SBIR/STTR	-9	0	0
c. Omnibus or Other Above Threshold Reductions	0	0	0
d. Below Threshold Reprogramming	0	0	0
e. Rescissions	-3	0	0
Adjustments to Budget Years Since FY2001 PB	0	0	0
Current Budget Submit (FY 2003 PB)	594	1490	0

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), Gladiator, and Viking. The Evolutionary Acquisition Strategy employed for this program by the Unmanned Ground Vehicles/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. Gladiator Concept Validation Models are under construction to validate requirements and develop tactics, techniques, and procedures for UGVs. TUV-M prototype systems will incorporate state-of-the-art sensors, actuation, communications, mission planning, and autonomous/semi-autonomous navigation technologies. The program utilizes a TUGV Integrated Product Team approach. The Gladiator and TUV-M products are expected to enter production in FY04 and FY05, respectively. The Engineering and Manufacturing Development phases will be funded using OSD PE 0604709D8Z funding. Viking acquisition will be accomplished through a two phased study, design, and fabricate program.

E. Schedule Profile	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Viking System PDR	2Q						
Viking System Testing		2-3Q					
Viking System ACTD		4Q					