| ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit) |                                       |                     |  |                     |                     |                     |                     | ]                   | February 2006                   |            |  |
|---|---------------------------------------|---------------------|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------------------|------------|--|
|   |                                       |                     | PE NUMBER AND TITLE 0604865A - Patriot PAC-3 Theater Missile Defense Acq |                     |                     |                     |                     |                     | - <b>EMD</b> PROJECT <b>01C</b> |            |  |
|   | COST (In Thousands)                   | FY 2005<br>Estimate | FY 2006<br>Estimate  | FY 2007<br>Estimate | FY 2008<br>Estimate | FY 2009<br>Estimate | FY 2010<br>Estimate | FY 2011<br>Estimate | Cost to<br>Complete             | Total Cost |  |
| 01C   | PATRIOT ADVANCED CAPABILITY (PAC) - 3 | 60408               | 0  | 0                   | 0                   | 0                   | 0                   | 0                   | 0                               | 211726     |  |

A. Mission Description and Budget Item Justification: Patriot is a mobile, Unit of Employment air defense system which uses guided missiles to simultaneously engage and destroy multiple target types at varying ranges. The Patriot Advanced Capability 3 (PAC-3) Upgrade Program is the last evolution of the phased materiel change improvement program to Patriot. The materiel changes will provide improved performance across the spectrum for system and threat intercept performance. In addition to modernization of the ground support equipment, funding resources the PAC-3 and Missile Segment Enhancement (MSE) missile design providing a high velocity, hit to kill, surface to air missile with the range, accuracy, and lethality necessary to effectively intercept and destroy tactical missiles with Nuclear Biological Chemical/High Explosive (NBC/HE) warheads and air breathing threats. The full capability will provide defense against short to medium range theater ballistic missiles (TBMs), cruise missiles (CMs), and unmanned aerial vehicles (UAVs) as part of the Ballistic Missile Defense (BMD) systems, a multi-layered Theater Air and Missile Defense Architecture. In support of achieving full air and missile defense capability, this PE funds the improvement of connectivity and situational awareness within the Battle Management Command, Control, Communications, Computers and Intelligence (BMC4I) through interaction and cooperation with the Air Defense Command and Control System to enable functionality with MEADS and other air defense systems. This PE is an integral part of the Program Executive Office (PEO) Missile and Space (MS) Integrated Air and Missile Defense (IAMD) Program.

Note: The FY06/07 budget combines the PAC-3/MEADS program based on a Milestone B decision 1 July 2004. The Army revised the MEADS acquisition strategy to combine management, development, and fielding of both the MEADS and Patriot systems. The Patriot/MEADS Combined Aggregate Program (CAP) will provide for the evolution of the Patriot/PAC-3 system to the MEADS objective system through the early incremental introduction of selected MEADS Major End Items. This approach provides for earlier fielding of enhanced air and missile defense capabilities across the currently fielded force to counter the evolving threat and leverage the knowledge gained in the development and fielding of the Patriot System into the MEADS program. The PAC-3 missile is the baseline missile for the MEADS system. The MSE missile, which provides for greater ranges, will be the objective missile for the system. PAC-3 RDTE funding has been combined with MEADS RDTE funding under PE 0604869A for FY 06 and beyond.

| Accomplishments/Planned Program              | FY 2005 | FY 2006 | FY 2007 |
|--|---------|---------|---------|
| Follow-on Block test program.                | 12533   | 0       | 0       |
| Evolutionary Development.                    | 21900   | 0       | 0       |
| Missile System Enhancement (MSE) Development | 25975   | 0       | 0       |
| Total  | 60408   | 0       | 0       |

Item No. 124 Page 1 of 3

## **ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)** February 2006 **BUDGET ACTIVITY** PE NUMBER AND TITLE **PROJECT** 5 - System Development and Demonstration 0604865A - Patriot PAC-3 Theater Missile Defense Acq - EMD 01C FY 2007 FY 2005 FY 2006 B. Program Change Summary Previous President's Budget (FY 2006) 61482 Current BES/President's Budget (FY 2007) 60408 Total Adjustments -1074 **Congressional Program Reductions** Congressional Rescissions Congressional Increases Reprogrammings -1074 SBIR/STTR Transfer

FY06/07 funds transferred to the Patriot/MEADS Combined Aggregate Program (CAP), PE 0604869A.

| 2005  | FY 2006       | FY 2007   | EX 2000   | EX. 2000  |  |   |   |   |
|-------|---------------|---|---|---|--|---|---|---|
|       |               | 1 1 2007  | FY 2008   | FY 2009   | FY 2010  | FY 2011   | To Compl  | Total Cost  |
| 51298 | 0             | 0   | 0   | 0   | 0  | 0   | 0   | 251298  |
| 0     | 284695        | 329583  | 459684  | 517049  | 592013   | 422005  | 0   | 2605029   |
| 32067 | 15957         | 10770   | 11051   | 11297   | 12227  | 12734   | CONT  | CONT  |
| 96990 | 483260        | 489067  | 472907  | 478795  | 0  | 0   | 0   | 2421019   |
| 0     | 0             | 0   | 89735   | 65296   | 429735   | 674386  | CONT  | CONT  |
| 79279 | 105888        | 264491  | 465214  | 353856  | 335490   | 301143  | 0   | 1905361   |
| 0     | 0             | 0   | 0   | 0   | 30471  | 476728  | 0   | 507199  |
| 63084 | 35587         | 26961   | 10132   | 0   | 0  | 0   | 0   | 135764  |
| 2438  | 19061         | 22039   | 59314   | 82656   | 82143  | 60979   | 0   | 328630  |
| 5848  | 5008          | 2527  | 2622  | 0   | 0  | 0   | 0   | 16005   |
| 10566 | 8289          | 15125   | 20914   | 33394   | 33239  | 25314   | 0   | 146841  |
| 19984 | 24480         | 41746   | 47995   | 50096   | 0  | 0   | 0   | 184301  |
| 1     | 5848<br>10566 | 0     284695       32067     15957       496990     483260       0     0       79279     105888       0     0       63084     35587       2438     19061       5848     5008       10566     8289 | 0     284695     329583       32067     15957     10770       496990     483260     489067       0     0     0       79279     105888     264491       0     0     0       63084     35587     26961       2438     19061     22039       5848     5008     2527       10566     8289     15125 | 0     284695     329583     459684       32067     15957     10770     11051       496990     483260     489067     472907       0     0     0     89735       79279     105888     264491     465214       0     0     0     0       63084     35587     26961     10132       2438     19061     22039     59314       5848     5008     2527     2622       10566     8289     15125     20914 | 0       284695       329583       459684       517049         32067       15957       10770       11051       11297         496990       483260       489067       472907       478795         0       0       0       89735       65296         79279       105888       264491       465214       353856         0       0       0       0       0         63084       35587       26961       10132       0         2438       19061       22039       59314       82656         5848       5008       2527       2622       0         10566       8289       15125       20914       33394 | 0       284695       329583       459684       517049       592013         32067       15957       10770       11051       11297       12227         496990       483260       489067       472907       478795       0         0       0       0       89735       65296       429735         79279       105888       264491       465214       353856       335490         0       0       0       0       30471         63084       35587       26961       10132       0       0         2438       19061       22039       59314       82656       82143         5848       5008       2527       2622       0       0         10566       8289       15125       20914       33394       33239 | 0       284695       329583       459684       517049       592013       422005         32067       15957       10770       11051       11297       12227       12734         496990       483260       489067       472907       478795       0       0       0         0       0       0       89735       65296       429735       674386         79279       105888       264491       465214       353856       335490       301143         0       0       0       0       30471       476728         63084       35587       26961       10132       0       0       0         2438       19061       22039       59314       82656       82143       60979         5848       5008       2527       2622       0       0       0         10566       8289       15125       20914       33394       33239       25314 | 0       284695       329583       459684       517049       592013       422005       0         32067       15957       10770       11051       11297       12227       12734       CONT         496990       483260       489067       472907       478795       0       0       0       0         0       0       0       89735       65296       429735       674386       CONT         79279       105888       264491       465214       353856       335490       301143       0         0       0       0       0       30471       476728       0         63084       35587       26961       10132       0       0       0       0         2438       19061       22039       59314       82656       82143       60979       0         5848       5008       2527       2622       0       0       0       0         10566       8289       15125       20914       33394       33239       25314       0 |

Comment: This PE is an integral part of the PEO, Missiles and Space Integrated Air and Missile Defense (IAMD) Program including Integrated Fire Control, JLENS, Patriot/MEADS Combined Aggregate Program (CAP), SLAMRAAM, JTAGS, SENTINEL, and on-going initiatives to achieve Single Integrated Air Picture (SIAP).

Adjustments to Budget Years

| ARMY RDT&E BUDGET ITEM JU                | February 2006  |       |         |
|--|--|-------|---------|
| BUDGET ACTIVITY                          | PE NUMBER AND TITLE                                  |       | PROJECT |
| 5 - System Development and Demonstration | 0604865A - Patriot PAC-3 Theater Missile Defense Acq | - EMD | 01C     |

D. Acquisition Strategy
The design objective of the Patriot system is to provide an element of an integrated Ballistic Missile Defense system capable of being modified to cope with the evolving threat. This strategy minimizes technological risks and provides a means of enhancing system capability through planned upgrades of deployed systems. The Patriot program consists of two interrelated acquisition programs - the Patriot PAC-3 Growth Program and the PAC-3 Missile Program. Growth Program modifications are grouped into configurations which are fielded in the same time frame as they technically mature to address emerging threats. However, incremental increases in performance are determined for each configuration in order to provide benchmarks for configuration testing and for the development of user doctrine and tactics. This incremental approach to fielding will continue through the CAP as Patriot is evolved to MEADS. The PAC-3 Missile Program focuses on developing, fabricating and testing the high velocity, hit to kill, surface to air missile and associated ground support equipment to provide essential increases in battle space, accuracy, lethality and firepower to counter and destroy evolving air defense threats. The missile performance is demonstrated through a series of flight tests and modeling and simulation activities. PAC-3 Block Evolutionary development efforts will further improve system interoperability, commonality, and capabilities against emerging and reactive threats. The Army has revised the MEADS acquisition strategy to combine management, development, and fielding of both the MEADS and Patriot systems. The Patriot/MEADS combined aggregate program will provide for the evolution of the Patriot/PAC-3 system to the MEADS objective system through the early introduction of the MEADS Major End Items (MEI). This approach provides for earlier fielding of enhanced air and missile defense capabilities across the currently fielded force to counter the evolving threat and allow for the knowledge that was