

**USAMMDA INFORMATION PAPER**

**PRODUCT: NON-CONTACT RESPIRATION MONITOR**

**DESCRIPTION:** A need exists for the medical aid man to determine non-invasively and remotely monitor the status of vital signs of military casualties while enclosed in chemical protective over-garments without exposing either the casualties or the aid man to a contaminated environment. The Non-Contact Respiration Monitor is an exceptionally small, lightweight, self-contained, and reliable monitor that can be attached to a gas mask filter canister, or incorporated into the gas mask, which senses the flow of air entering the gas mask, and indicates the state of casualty breathing, e.g. causes red or green light-emitting diodes to blink, or sets off other alarm mechanisms as necessary. This is a new capability for the medic, will be particularly useful in mass casualty situations for triage, and can be used reliably in high noise and vibration evacuation environments.

**PROGRAM RELEVANCE to the ARMY:** This product supports both the core mission of the Army and the Army Campaign Plan. Of the Army's core competencies, this product supports "Prompt Response," "Forcible Entry Operations," and "Sustained Land Dominance." It is a real-time physiological monitoring device to identify, locate, and diagnose injury; monitor casualty condition; and support triage on the battlefield. This product supports Future Operational Capabilities: MD-02-001 Clearing the Battlefield and MD-02-003 Medical Force Protection.

**ISSUES/ACTIONS:**

- A provisional patent was submitted to the patent office on 10 September 2003. It was assigned provisional patent number 60/501,403, and was advertised in the Federal Register on 9 January 2004.
- A second concept design was developed, and a new electronic circuit board is being designed.
- There are no major programmatic issues.
- Develop second-generation prototype, refine sensor function, and obtain consensus of need for device.
- Coordinate with the U.S. Army Medical Department Center and School to gain support for device, specific requirements, and obtain MAMP ranking.

**ADDITIONAL INFORMATION:**

**BPL #** 445

**DA PROJECT/TASK:** Trauma Management –  
PE/PROJ 643807/836DD

**SCHEDULE:**

MS A                      4QFY04

**MAMP RANK:** Not Available

**ARMY ORD:** Not Available

**For additional information, contact:** Applied Medical Systems, DSN 343-7582, Comm. 301-619-7582