

Justification Review Document  
For Other Than Full and Open Competition

Technical Services: Technical and scientific support service for the two year study entitled 'The Cost of Basic Combat Training (BCT) Injuries'. The University of Massachusetts, Amherst will augment the Total Army Injury and Health Outcomes Database (TAIHOD) and Injury Epidemiology Section of the U.S. Army Research Institute of Environmental Medicine (USARIEM) Military Performance Division (MPD) to perform this project.

Authority: 10 U.S.C. 2304(-c)-(3)

Amount \$274,337.00 (including Option Year)

Prepared By:

[Redacted]

Contracting Officer Representative  
USARIEM

DSN: [Redacted]

Date Reviewed: 3 May 2010

Procuring Contracting Officer:

Vincenzo Valastro

DSN: [Redacted]

Date Reviewed: 3 May 2010

Technical Representative:

[Redacted]

Scientist/ TAIHOD Director  
USARIEM

DSN: [Redacted]

Date Reviewed: 3 May 2010

Requirements Representative:

[Redacted]

Scientist/ TAIHOD Director  
USARIEM

DSN: [Redacted]

Date Reviewed: 3 May 2010

Reviews: I have reviewed this justification and find it adequate to support other than full and open competition.

Acting Commander:

[Redacted]

USARIEM

Signature [Redacted]

DSN: [Redacted]

Date: 14 MAY 2010

Office of Chief Counsel:

[Redacted]

NSRDEC OCC

Signature [Redacted]

DSN: [Redacted]

Date: 30 JUNE 2010

## JUSTIFICATION AND APPROVAL FOR OTHER THAN FULL AND OPEN COMPETITION

1. **Agency and Contracting Activity:** United States Army Research Institute of Environmental Medicine (USARIEM), Military Performance Division

2. **Description of Action:** Approval of new contract

3. **Description of Supplies/Services:** Technical and scientific support service for the two year study entitled 'The Cost of Basic Combat Training (BCT) Injuries'. The identified scientific group will augment the Total Army Injury and Health Outcomes Database (TAIHOD) and Injury Epidemiology Section of the U.S. Army Research Institute of Environmental Medicine (USARIEM) Military Performance Division (MPD) to perform this project. The purpose of this project is to estimate the cost of injuries occurring during BCT to the U.S. Army and to further understand the factors associated with increased risk for BCT-related injury and high costs. This effort is a high visibility endeavor, which has the full support of the U.S. Army Medical Research and Materiel Command (MRMC), and the U.S. Army Training and Doctrine Command, Initial Military Training (TRADOC-IMT).

This study will identify predictors of injury during BCT and will determine if Army recruits injured during BCT differ from those who completed BCT free of injury with respect to:

- Risk of injury following BCT ("subsequent injury");
- Severity of subsequent injury;
- Delayed promotion relative to those not treated for injury during BCT;
- Likelihood of being evaluated for service-connected disability by the Army Physical Evaluation Board (PEB) prior to the end of the first enlistment term;
- Likelihood of separating from the Army after one enlistment term, and reason for separation;
- Likelihood of separating from the Army prior to the completion of one enlistment term, and reason for separation.

It will also be used to support an economic analysis to estimate the direct costs to the Army of injuries associated with BCT. The economic analyses, in turn, will support epidemiological analyses to describe higher vs. lower cost BCT-related injuries and predictors. From the population-based perspective of optimizing both health-promotion and cost-effectiveness, recommendations will be made as to the most strategic BCT injuries to target for prevention. This study will be conducted in 2 phases. The tasks associated with each phase are enumerated below.

## Phase 1:

- a. Technical Support services required include (but not limited to):
  1. Develop the analysis plan, listing all data elements (variables) that must be in the dataset.
  2. Prepare and submit applications for human subjects approval, which must be obtained from the UMASS and ENVIRON Institutional Review Boards and from the USARIEM Human Use Review Committee.
  3. Assess the project dataset prepared by USARIEM for completeness and internal consistency of the data.
- b. Scientific support services to include (but not limited to):
  1. Conduct descriptive analysis of the variables relating to the BCT cohort, identifying injuries, medical encounters, and costs.
  2. Identification of focal injuries and costs.
  3. Detailed descriptive report on BCT injury.

## Phase 2:

- a. Scientific support required include (but not limited to):
  1. Develop preliminary predictive regression models.
  2. Testing of predictive regression models of BCT Injury.
  3. Refine predictive regression models of BCT Injury.
  4. Report on predictive regression models (manuscript and/or Technical report) detailing the direct (actual dollar estimate) and indirect (attrition, disability, etc.) cost of BCT injuries.

**Total Cost of Study: \$274,337.00**

**4. Authority Cited: FAR 6.302-3 Expert Services**

**5. Reason of Authority Cited:** The Army has identified reduction of musculoskeletal injuries as a priority for current and future research efforts. Under the Army Technical Objective (ATO), 'Prediction and Reduction of Musculoskeletal Injuries in Training and Operational Environments', and the additional ATO 'Interventions to Enhance Warfighter Psychological Resilience' the USARIEM Injury Epidemiology Research Section has developed a comprehensive research program to accurately and extensively study BCT Injuries in the U.S. Army. The research program will use the TAIHOD, which is a high resolution epidemiologic research data repository that offers significant potential for identifying risk factors, adverse health outcomes, and evaluating intervention strategies, among deployed and non-deployed active-duty (AD) personnel. Funding and support of this multi-year study **was dependent upon** the Primary Investigator, MAJ Hill, identifying scientific experts who will augment his epidemiologic and military expertise, particularly in the areas of health policy, injury prevention, economic evaluation studies, and biostatistics

The identified scientists from UMASS and Environ have acquired a significant amount of knowledge concerning the intricacies of the TAIHOD database from successfully

completing 5 previous scientific projects for the Army using TAIHOD data. These previous efforts resulted in multiple peer-reviewed manuscripts and Army Technical Reports. Given the relatively small annual dollar amount attached to this contract (\$274,337.00 over 2 years), it is essential to award this contract to the identified group, as engaging a different group would significantly increase the risk to the government. This risk would be magnified in that we estimate that 12 months of this contract would be spent on training any new scientific group on tasks this identified group has mastered (knowledge of the TAIHOD, the TAIHOD SOP, approved access to the TAIHOD network, etc). As such, utilizing the identified group for this contract would eliminate all costs associated with the initial TAIHOD database learning curve/ramp-up time; therefore maximize the contract performance period for research specific tasks.

Given the overt complexities of the TAIHOD database, the restrictive timeline of the project, engaging a research group who is unfamiliar with the TAIHOD would exponentially increase the risk to the government with respect to fatal errors in data interpretation and development of risk mitigating interventions, thus hindering the Army's ability to reduce morbidity and mortality in the Warfighter. Moreover, the senior scientist identified has all required DoD security clearances and certificates, to include TAIHOD/USARIEM unique clearances, overall secret level clearance, Information Assurance (IA) training, Health Insurance Portability and Accountability Act (HIPAA) certifications, Collaborative Institutional Training Initiative (CITI) training, and Personally Identifiable Information (PII) training.

It is imperative that we maintain continuity of this research team (TAIHOD members and scientists from UMASS and Environ) to insure completion of this mission and prepare for additional efforts. Their advanced abilities in the areas of epidemiology, data integration, health policy, injury prevention, biostatistics, statistical analyses, and economic evaluation studies, are vital to the study's functionality. Moreover, the scientists identified have demonstrated their abilities to complete and deliver robust technical reports and peer-reviewed manuscripts that evaluated active-duty Army Soldiers. The doctoral-trained Environ senior research scientist has over 15 years experience in epidemiology, occupational and non-occupational injury, health intervention program evaluation and pharmaco-epidemiology, which is ideal for this study, given it will evaluate differences in BCT Soldiers military occupational specialties (MOS). The economist identified has earned a PhD in economics and has published over 30 manuscripts, technical reports, and book chapters on the economic impact of factors related to health, including injuries, use of medications, trends in healthcare delivery, and the ecological consequences of health policy and interventions.

They are located in close proximity to the Natick Soldier Systems Center. Moreover, they possess intimate knowledge of the TAIHOD database, are familiar with the daily operations of the Injury Research Section, and are uniquely qualified to support and fulfill this important study. Above all, the alteration of this study's configuration would hinder our ability to reduce BCT injuries, which will further jeopardize the Army's combat readiness, impeding our ability to develop interventions to counteract Warfighter BCT injuries.

We estimate that the probability of identifying researchers with the above mentioned skill sets, coupled with an intricate understanding of the complex data within the TAIHOD and their prior experience in studying the active-duty Army, is less than 10% of all the available research pool. Alteration of our research team configuration would result in TAIHOD inefficiency, extended study delays, and impact Soldier combat readiness. The resultant impact may ultimately impede our ability to develop interventions to counteract Warfighter injuries and other adverse health outcomes. Alterations of the research team configuration would result in unnecessary inefficiency, extended delays, and potentially a loss of previous secured financial and Army leader support.

**6. Efforts to Obtain Open Competition:** A competitive Request for Information (RFI) was posted on Fedbizzopps on March 8, 2010. At this time, we have no additional vendors who have responded to the scientific research support RFI, other than Environ, Inc. Given this, we request that the contract be awarded promptly. For future research projects that will require additional scientific support, we will continue our open-market research to solicit qualified vendors. Evaluation of the U.S. Army Research Laboratory's Army Research Office (ARO), RFIs, and follow-up RFP (Request for Proposals), will be performed. All proposals will be thoroughly and objectively reviewed and scored, per policy.

**7. Actions to Increase Competition:** See #6 above.

**8. Market Research:** Open market research has been conducted. No other equally qualified organization has been identified that has the replete skill-sets needed for this project.

**9. Interested Sources:** To date, no other sources have written to express an interest.

**10. Other Facts:**

- a. **Procurement History:** Environ, Inc. has been awarded more than 3 contracts by USARIEM over the past 10 years; the majority of these contracts have been sole source fixed price contracts for scientific expertise and effort. University of Massachusetts has a unique longstanding relationship with USARIEM, assisting with research that directly benefits the Army Warfighter.

**Unusual and Compelling Urgency:** Current Army Soldier Basic Training Injuries have been identified as a top priority for study and further understanding. Prompt strategic interventions are required, as injuries in Basic Training impact deployment readiness, as new recruits are deploying shortly after advanced individual training (AIT) in support of OIF/OEF. The scientists identified are subject matter experts on injury epidemiology and the economic impacts related to injury and have a thorough understanding of the complex TAIHOD data repository. They

will work with the Injury Epidemiology Section of USARIEM to study Army BCT injuries.

11. Technical Certification: I certify that the supporting data under my cognizance which are included in the justification are accurate and complete to the best of my knowledge and belief.

[Redacted]  
Scientist/ TAIHOD Director

Date: 11 May 2010  
Signature: [Redacted]

12. Requirements Certification: I certify that the supporting data under my cognizance which are included in the justification are accurate and complete to the best of my knowledge and belief.

[Redacted]  
Scientist/ TAIHOD Director

Date: 11 May 2010  
Signature: [Redacted]

13. Fair and Reasonable Cost Determination: I hereby determine that the anticipated cost to the Government for this contract action will be fair and reasonable.

Vincenzo Valastro  
Procuring Contracting Officer

Date: 6/30/10  
Signature: Vincenzo Valastro

14. Procuring Contracting Officer Certification: I certify that this justification is accurate and complete to the best of my knowledge and belief.

Vincenzo Valastro  
Procuring Contracting Officer

Date: 6/30/10  
Signature: Vincenzo Valastro

APPROVAL

Based on the foregoing justification, I hereby approve the procurement of the proposed Service of the 'The Cost of Basic Combat Training (BCT) Injuries', for a total of \$274,337.00. This procurement shall be executed on an other than full and open competition basis pursuant to the authority of 10 U.S.C. 2304 (c) (3) as implemented by 6.302-3: Industrial Mobilization; Engineering, Developmental, or Research Capability; or Expert Services, subject to availability of funds, and provided that the services and property herein described have otherwise been authorized for acquisition.

Date: 6/30/10

Signature: Vincenzo Valastro  
Vincenzo Valastro  
Contracting Officer  
US Army RDECOM CC  
Natick Contracting Division