Advanced Aerospace Weapon System Applications Contract - Update

(b)(3):10 USC 424;(b)(6)

This briefing is classified

UNCLASSIFIED//~~FOUO~~

(b)(3):10 USC 424

History

- July 08 Supplemental appropriation tasked (b)(3):10 USC 424 to study "foreign advanced aerospace weapon threats from the present out to 40 years in the future"
  - $10M in FY08 funds provided in the appropriation
- Bigelow Aerospace won contract to study 11 technical areas
  - Emphasis is on unconventional technologies

(b)(3):10 USC 424

Aerospace Contract Status

- **Performance by Bigelow Aerospace Advanced Space Studies (BAASS) has been excellent and they are in full compliance with aerospace contract HHM402-08-C-0072:**
  - **extensive monthly status reports received**
  - **12 project management plans received and executed**
  - **26 detailed research reports (twice minimum requirement) received by 30 June 2009. Reviews of reports have been overwhelmingly positive.**
- **DIA has executed option year 1 with BAASS, subject to available funding.**

(b)(3):10 USC 424

Aerospace Contract Status (continued)

- $12 million for the continuation of this contract by (b)(3):10 USC 424 is in the FY10 defense budget
- Contracting officer extended contract through 30 September in order to use FY10 funds in option year 1. Extension was at no additional cost to the government.
- BAASS is operating "at risk" in option year 1 until FY10 funding arrives.

(b)(3):10 USC 424

Technical Report Review Results

Title	Author	Affiliation
Inertial Electrostatic Confinement Fusion	(b)(6)	
Pulse-Power-based Weaponry		
Space-time Modifications for Spacefight Applications		
Novel MEMS-based Biosensors		
Theory and Experiments of Invisibility Cloaking		
Wormholes in SpaceTime		
Gravity Wave Communication		
Superconductors in Gravity Research		
Antigravity for Aerospace Applications		
Field Effects on Biological Tissues		
Positron Aerospace Propulsion		
Vacuum Energy Applications		
Improved Statistical Approach to Drake Equation		
Maverick vs. Corporate Research Cultures		
Biosensors and BioMEMS		
Metamaterials for Aerospace Applications		
Warp Drives		
Controlling Devices without Limb Operated Interfaces		
Materials for Advanced Aerospace Platforms		
Metallic Glasses		
Programmable Matter		
Metallic Spintronics		
High Energy Laser Weapons		
Quantum Entanglement Communications		
Space Access: Where Been, Where Go		
Advanced Nuclear Propulsion for Deep Space		

Red – independent review
Green – Sandia National Laboratories

(b)(3):10 USC 424

Sample of Comments

- *Theory and Experiments of Invisibility Cloaking* (b)(6) – "this topic still evokes misunderstandings and confusion.... (b)(6) report does an excellent job of clearing some of this confusion and providing clear definitions of what constitutes true cloaking/invisibility. It also honestly discusses technological challenges to making a practical invisibility cloak." (b)(6)

- *Superconductors in Gravity Research* (b)(6) – "The theoretical breadth of the topic with which (b)(6) deals is vast, spanning Einstein's General Theory of Relativity, electromagnetism, superconductivity and quantum mechanics....Despite this, the author was able to succinctly deliver an absorbing and flavorful review of the topic without getting sidetracked into the erudite minutiae" – (b)(6)

- *Novel MEMS-based Biosensors* (b)(6) - As many recent US Academy of Sciences and other scholarly studies have shown, few persons in the decision-making areas of the government have sufficient background in BioMEMS from which to make intelligent decisions. As key customers of this study, the sponsors are well-served with (b)(6) survey. – (b)(6)

(b)(3):10 USC 424

Option Year 1 (FY10) Deliverables

- CLIN 1001 12 Monthly Status Reports
- CLIN 1002 12 Area Management Plans
  Delivery by: June 2010
  a) ~ 26 Worldwide Survey Technical Reports

(b)(6)

  b) 5-10 Top-Ranked Graduate School / Industry Experiments
  - propulsion, materials
- CLIN 1003 12 Technical Reports
  Delivery by: August 2010
  a) ~ 4-6 classified Technical Reports (supplements FY09 products)
  b) ~ 6-8 unclassified Technical Reports (on new specific research topics suggested by this year's products, to be chosen by DWO)
- CLIN 1004 1 Comprehensive Summary Report
  Delivery by: August 2010

FY10 $12M also covers BAASS overhead, staff, facilities, IT, security, databases, etc.

(b)(3):10 USC 424

Future Program Issues

- (b)(3):10 USC 424 will be transferring to (b)(3):10 USC 424 during FY10
- (b)(3):10 USC 424;(b)(6)
- If project continues past FY10, (b)(3):10 USC 424 recommends that the contract be moved out of DIA