

Advanced Aerospace Weapon System Applications Contract - Update



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

This briefing is classified
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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
<p>Inertial Electrostatic Confinement Fusion Pulse-Power-based Weaponry Space-time Modifications for Spaceflight 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</p>	(b)(6)	

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