

#### UNDER SECRETARY OF DEFENSE 5000 DEFENSE PENTAGON WASHINGTON, DC 20301-5000

#### MEMORANDUM FOR THE DEPUTY SECRETARY OF DEFENSE

SUBJECT: Senator Harry Reid's Request to Put the Advanced Aerospace Threat and Identification Program (AAITP) under Special Access Protection

In late October 2009, DIA completed the technical review of the program deliverables (Tab B) and provided USD(I) SAPCO the current status of the AAWSAP. The program manager and his leadership advised that they saw no justification for Special Access protections based on the content of the FY09 deliverables or the anticipated FY10 work. This recommendation is formally stated and outlined in the attached memorandum from (b)(3):10 USC 424;(b)(6) (Tab C).

Senators Reid and Inouye co-sponsored a \$10M earmark in the July 2008 supplemental to fund this DIA effort to look at potential future aerospace weapons threats. A \$12M earmark has been allocated to support the program in FY2010.

Based on the recommendation from DIA and my staff's review of the technical reports, I recommend against establishing a Special Access Program at this time.

James R. Clapper Jr.

Attachments: As stated

# Talking Points DepSecDef Meeting with Senator Harry Reid November 17, 2009

Topic: Senator Harry Reid's Request to Protect the Advanced Aerospace Weapon System Application Program as a Special Access Program

#### Background

- Early 2008: Senator Reid met (6)(3):10 USC 424;(b) a DIA analyst, at a technical conference.
- July 2008: Senators Reid and Inouye co-sponsored a \$10M earmark in the Supplemental Appropriation Bill to assess far-term foreign advanced aerospace threats to the United States. A \$12M earmark has been allocated to support the project in FY2010.
- August 2008: DIA learned of counter-intelligence concerns with Bigelow Aerospace, the parent company of Bigelow Aerospace Advance Space Studies. These concerns do not appear to be directly related to Advanced Aerospace Weapon System Application Program (AAWSAP).
- September 2008: DIA awarded the contract to the sole bidder, Bigelow Aerospace Advance Space Studies (Las Vegas, NV), to perform unclassified research in 11 technical areas and deliver technical reports on those areas by July 31, 2009.
  - (b)(3):10 USC 424;(b)(6) is the Program Manager for the AAWSAP. Its primary purpose is to investigate revolutionary advances in future aerospace technologies with emphasis on research of unconventional and revolutionary technologies.
    - Senator Reid's office refers to the AAWSAP as the Advanced Aerospace Threat and Identification Program.
- May 19, 2009: (b)(3):10 USC 424;(b)(6) met with Senator Reid about several issues, one of them being the AAWSAP. The project was briefly discussed and limited feedback was provided. (b)(3):10 USC 424;(b)(6) did not commit to SAP the program.
- June 24, 2009: Senator Harry Reid sent a letter to Deputy Secretary Lynn requesting that DoD put the Advanced Aerospace Weapon System Application Program (AAWSAP) under Special Access Protection (Tab A).
- July 31, 2009: DIA received all 26 papers, based on research in 12 technical areas.
- July October 2009: Bob Herbert, Senator Reid's personal staffer, made multiple phone calls to Marcel Lettre, PDASD/LA, inquiring on the status of our response to the June 24<sup>th</sup> letter.
- October 30, 2009: DIA completed quality reviews of all papers and provided an assessment to Lt. Gen. Burgess (Tab B). The papers are currently Unclassified//For Official Use Only.

- November 4, 2009: [(b)(3):10 USC 424;(b)(6)
   met with Senator Reid's personal staffer, Bob Herbert. Mr. Herbert relayed the Senator's impatience with the DoD's lack of response to the June 24<sup>th</sup> letter. [(b)()]

  (b)(3):10 USC 424;(b) assured Mr. Herbert that DIA would provide an assessment to OSD regarding classification of the project in the coming weeks.
  - November 13, 2009: (b)(3):10 USC 424;(b)(6) sent a memorandum to USD(I) SAPCO outlining the results of their official review of Senator Reid's Special Access Program request (Tab C). DIA can see no justification for Special Access Protections based on the content of the FY09 deliverables or the anticipated FY10 work.

#### **Key Talking Points**

- The FY09 deliverables for AAWSAP are for academic research and basic scientific research. The FY09 technical reports are being used to expand the FY10 research into the realm of scientific and technical intelligence.
- The current level of scientific capability does not appear to risk grave damage to national security if available information was revealed.
- Some topics may warrant "Secret" classification consistent with the subject matter being researched.
- The department has reviewed all available information regarding the FY10 research and finds no justification for applying Special Access Program protection at this time.

#### Attachments

Tab A
 Tab B
 Deputy Secretary Lynn
 October 30, 2009 Memorandum from (b)(3):10 USC 424;(b)(6)
 (b)(3):10 USC 424;(b)(6)
 Subject: Review of Advanced Aerospace Contract Deliverables
 November 13, 2009 Memorandum from (b)(3):10 USC 424;(b)(6) to USD(1) SAPCO, Subject: Review of Special Access Program Request

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

# United States Senate

WASHINGTON, DC 20510-7012 June 24, 2009

Honorable William Lynn III Deputy Secretary of Defense 1010 Defense Pentagon Washington, DC 20301-1010

Dear Secretary Lynn:

Beginning this past September, the U.S. Senate has mandated that the Defense Intelligence Agency assess far-term foreign advanced aerospace threats to the United States. The scope of program interest covers from the present out to forty years and beyond. In order to further our effort in recognizing emerging disruptive aerospace technologies, technical studies are being conducted in regard to advanced lift, propulsion, the use of unconventional materials and controls, signature reduction, weaponry, human interface and human effects.

Since the Advanced Aerospace Threat and Identification Program (AAITP) and study were first commissioned, much progress has been made with the identification of several highly sensitive, unconventional aerospace-related findings. Given the current rate of success, the continued study of these subjects will likely lead to technology advancements that in the immediate near-term will require extraordinary protection. Due to the sensitivities of the information surrounding aspects of this program, I require your assistance in establishing a Restricted Special-Access-Program (SAP) with a Bigoted Access List for specific portions of the AATIP.

In order to support this national effort, a small but highly specialized cadre of Department of Defense (DoD) and private sector individuals are necessary. These individuals must be specialized in the areas of advanced sciences, sensors, intelligence/counterintelligence, and advanced aerospace engineering. Given the likelihood that these technologies will be applied to future systems involving space flight, weapons, communications, and propulsion, the standard management and safeguarding procedures for classified information are not sufficient. Even the use of conventional SAP protocols will not adequately ensure that all aspects of the project are properly secured. Although not every aspect of AATIP requires Restricted SAP read-on, the following portions should be maintained at the Restricted SAP level:

- The methodology used to identify, acquire, study, and engineer the advanced technologies associated with AATIP.
  - o Specific methodologies used to study unconventional technology may require nuanced approaches that will undoubtedly be of significant interest if not a top priority for adversarial Foreign Intelligence Security Services (FISS).

o Undue attention by government, or private sector entities, not involved in AATIP or any international interest will directly or indirectly interfere with the daily AATIP mission and perhaps threaten the overall success of the program.

#### · Allocation of personnel, support, and oversight.

- o Due to the highly specialized nature of the personnel involved with AATIP, the overt acknowledgement of their participation in the program will lead to an unnecessary security and counterintelligence risk.
- Occasional assistance from specialized individuals within DoD, the scientific community, or academia may be necessary from time to time based on demonstrated subject matter expertise. Adequate protection of their identities or affiliation is critical to avoid unnecessary scrutiny.
- o Without the appropriate Restricted SAP protection, the cost associated with a compromise would be significantly higher than the cost associated with a properly administered Restricted SAP.
- o Protection of industry partnerships and participation is critical. Public awareness of an industry's AATIP affiliation may discourage that industry's further participation with the U.S. Government in this program.

#### Application and engineering.

- o The nuanced manner in which some of these technologies will be collected, engineered and applied by the U.S. may require senior level government approval. These decision makers must be afforded the necessary time to make strategic decisions by restricting access to the "big picture" or overall intent of the program to those on a strict Bigoted List.
- o Associated exotic technologies likely involve extremely sophisticated concepts within the world of quantum mechanics, nuclear science, electromagnetic theory, gravitics, and thermodynamics. Given that all of these have the potential to be used with catastrophic effects by adversaries, an unusually high degree of operational security and read-on discretion is required.

Due to the expertise required to carry out the objectives of this program, we will require a small, specialized group of DoD personnel, who are dedicated to performing the SAP-related functions and executing programmatic requirements within the program. It is essential that the Government & military personnel who are already involved with this program are assigned to further support this program in a Restricted SAP capacity (see Attachment 1). These individuals all currently possess the appropriate security clearances and are already providing unique support to AATIP.

Ultimately, the results of AATIP will not only benefit the U.S. Government but I believe will directly benefit DoD in ways not yet imagined. The technological insight and capability gained will provide the U.S. with a distinct advantage over any foreign threats and allow the U.S. to maintain its preeminence as a world leader.

Thank you in advance from your time and consideration of this request. If you or your staff have any questions, please contact (b)(6)

Sincerely,

HARRY REID

United States Senator

HR:rth

#### Attachment 1

Sponsoring Agency: Undetermined (DEPSECDEF)

Component-level SAP Central Office: Undetermined (DEPSECDEF)

Unclassified Nickname: Advanced Aerospace Threat Identification Program (AATIP)

Program Length: FY09-FY13 (Preliminary)

Program Funding: FY09-O&M, FY10-FY13-TBD

SAP Category Designation: Intelligence, DoD Acquisition

#### FY 10 Preliminary Bigoted List of Covernment Personnel:

- 1. Honorable William Lynn III, Deputy Secretary of Defense (Gov't)
- 2. Honorable Senator Harry Reid of Nevada (Gov't)
- 3. Honorable Senator Daniel Inouye of Hawaii (Gov't)

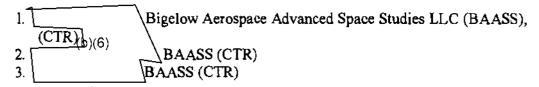
4. Robert T. Herbert (U.S. Senate)
5. (b)(3):10 USC 424;(b)(6)

7. ONI (USN)

6.

9. ONI (USMC)
10. Special Agent USDI (Gov't)

#### FY 10 Preliminary Bigoted List of Contractor Personnel funded under the AATIP:



This document contains information exempt from mandatory disclosure under the FOIA. Exemptions 1 and 5 apply.

#### **INFO MEMO**

U-429-09/(b)(3):10 USC 424	30 October 2009
FOR: (b)(3):10 USC 424	
FROM: (b)(3):10 USC 424;(b)(6)	Defense Intelligence Agency
SUBJECT: (U) Review of Advance	ced Aerospace Contract Deliverables
under the Advanced Aerospace W Bigelow Aerospace Advanced Spa made this request to USC 424 perso after your meeting with Senator Hi key technologies and physics conc vehicle research and development, prioritized list of technologies/con searches into foreign aerospace res (in the areas of lift, propulsion, con translation, materials, structural co interface, human effects, and arma experts in industry and/or academi	
DIA in FY 2009. The report titles were reviewed. Eight reviews wer five were performed by outside revat Sandia National Laboratories.	
	apers and concurs with the reviews. As the s were positive, some exceptionally so. Even
within the limitation of being able contract year, the quality hoped for publish them in coming weeks as I these studies may be of interest to laboratories, and/or defense indust	to conduct only unclassified research in the first

(U) Based on draft budget guidance, Congress apparently will fund the contract's	
option year one at \$12 million. In FY 2010, will use the 26 FY 2009	(b)(3):10 USC 424
technical reports in having BAASS evaluate potential adversary exploitation worldwide, select studies amenable to classified experimental verification by BAASS, and have BAASS conduct new classified and unclassified studies with select academic and industry partners. Deliverables are expected in late summer 2010.	
2 enclosures as stated	
(U) Prepared by: (b)(3):10 USC 424;(b)(6)	

# (U) FY 2009 Technical Reports

#### UNCLASSIFIED

Title	Author	Affiliation
Inertial Electrostatic Confinement Fusion	(b)(6)	
Pulse-Power-Based Weaponry	1	
Space-Time Modifications for Spaceflight Applications	1	
Novel MEMS-Based Biosensors		
Theory and Experiments of Invisibility Cloaking	]	
Wormholes in Space Time	]	
Gravity Wave Communication	]	
Superconductors in Gravity Research		
Antigravity for Aerospace Applications		
Field Effects on Biological Tissues	1	
Positron Aerospace Propulsion	]	
Vacuum Energy Applications		
Improved Statistical Approach to Drake Equation	1	
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		

 $Red-lndependent\ review.$ 

Green - Sandia National Laboratories review.

#### (U) Excerpts From Reviews

(U) All of the following review information and comments are UNCLASSIFIED.

Antigravity	for Aerospace Applications in 2050
(b)(6)	
	s provided an excellent overview of conventional approaches to pulation within the confines of Newtonian, relativistic and quantum
	his typical lucid style, he takes the time to add useful explanatory are especially enlightening for those for whom Relativity is not their
	e. In addition, his extensive technical appendix concerning such
of great bene	ueezed vacuum states, zero-point fluctuations and negative energy is fit.
	(b)(6)
_	al Approaches to Controlling External Devices in the Absence of ted Interfaces
(b)(6)	
interfaces. The the function of to exercise the (b)(6)	the control of robotics and machines by way of high technology neural the ultimate aim of such research is to allow an individual to control of a prosthetic or robot as an extension of his own body and mind or tought-based control over a mechanized environment. We find from current review that the state of the art is still quite far away from
achieving suc approaches.	ch control but strong efforts are being made on a number of
	(b)(6)
l	
On The Role	e of Superconductors in Gravity Research
(b)(6)	

Because of the author's involvement and activity in the field, it seems natural that he chose to write on this subject, and he is able to demonstrate not only a solid

accounts of own experis to the field, of being clo Despite his observer an 'sell' the re	ing of the research area, but is also able to provide his personal meetings with the prominent researchers. In addition, he describes his mental results, or lack thereof. Because of his own personal attachment I found the report to be somewhat captivating, as I felt a strong sense are to the research and hearing from the 'horse's mouth,' so to speak, involvement, [b)(6) point of view seems to be that of an impartial ad he does not appear to take sides, or seem to be trying to promote or search field. He does an excellent job of relaying a candid and survey of what, to me, seems to be a tantalizing yet controversial field
	(b)(6)
Metallic G	lasses: Status and Prospects for Aerospace Applications
glasses, the their mecha These prope case that th thermoplass	excellent and highly readable Survey report that defines Metallic advantages and disadvantages to other composite materials, and how inical properties are both alike and different from those of pure metals. The extremely strength, stiffness, and toughness. The author makes a processing capability meets and sometimes exceeds those of tic polymers, and traditional metals. Glass hybrid composites are found almost all cases to current materials in widespread use.
	(b)(6)
	Experiments of Invisibility Cloaking
(b)(6)	
exciting appunusual refunction published of This topic sthe concept preoccupying excellent jowhat consti	lescribes the background and recent advances in the sibility cloaking. This field recently emerged as one of the most plications of metamaterials – artificially structured media possessing reactive properties. (b)(6) is a pioneer in this field, having me of the first theoretical papers describing the possibility of cloaking. till evokes misunderstandings and confusion. That is not surprising: of invisibility (although not its technical implementation) has been an people for centuries if not millennia. (b)(6) report does an b of clearing some of this confusion and providing clear definitions of tutes true cloaking/invisibility. It also honestly discusses technological to making a practical invisibility cloak.

(	(b)(6)
Positron Ae	rospace Propulsion
(b)(6)	
the present si especially for in the area a policy for bo	aper is very exciting and provides new important information about tatus and prospects for positron energy production and storage, r space applications. It is recommended reading for both researchers and aerospace scientists. In addition, others interested in national th future energy and future space exploration should consider this to gain further insight into positron energy and propulsion.
	(b)(6)
Metamateria optical prope how such ma examples, he leaders in the in this area. mostly confirundoubtedly	Is are "materials beyond materials" with unusual electromagnetic or erties. The report by (b)(6) describes several possibilities sterials can be used for advanced aerospace applications. As often uses his own experiments. (b)(6) is one of the research e field of metamaterials and has built up a highly credible reputation Although the research area of metamaterials is still rather new and ned to proof-of-principle academic research at present, it will revolutionize photonics and lead to commercial applications that are
interesting jo	or the aerospace industry.
	(b)(6)
Biosensors a	and BioMEMS: A Survey of the Present Field
(b)(6)	

This paper reaches toward and achieves a laudable goal: making BioMEMS understandable and relevant. The author's contribution is important, because the number of current programs and projects in the US Government that are either touting the importance of, or making responses to research requests in 2009

numbers in the thousands. 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. Throughout the Survey, the author often introduces ancillary technologies that will enable further BioMEMS development, solve problems, or lead to alternative technologies. The survey is made more useful to the reader and the sponsor because of this.
(b)(6)
Metallic Spintronics (b)(6)
paper is concerned with an emerging technology known as spintronics ("spin-based electronics"). In this technology information is carried by moving or altering the spin of electrons, rather than by moving the charged particles themselves. (b)(6)  (b)(6)  has at least a dozen publications in the field of study in top-tier journals, and has won NSF grants to pursue the topic. As a result one must regard him as an expert in the subject and take his opinions seriously. In addition, the paper cites 97 references, which is quite a lot for a 10,000 word paper. Clearly, (b)(6) is giving an overview of the entire field rather than just supplying an incremental addition to it.
(b)(6)  Materials for Advanced Aerospace Platforms
The position (b)(6) takes at the first instant is that previous design methodologies have largely failed, because of a lack of appreciation of material property life cycles, which are clearly now known to be very different. If one is to examine, for example, in an attempt to reverse engineer materials and components possibly of interest, one might want to approach the "reverse" paradigm from first principles of materials in contexts of observed performance. (b)(6) at the beginning of the study subtly suggests that observed performanceor even

	(b)(6)
Metallic	Glasses: Status and Prospects for Aerospace Applications
0)(6)	
metallic out possi difficulti	to be a clear and even-handed evaluation of the pros and cons of bulk glasses (BMG) and composites employing them. The author clearly point ble advantages in processing while he equally clearly points out the es associated with inherent unstable shear band formation and ent lack of general ductility.
	(b)(6)
Theory:	and Experiments of Invisibility Cloaking
Theory :	and Experiments of Invisibility Cloaking
(b)(6)  Overall, invisibili	this is a nice qualitative description of the rapidly moving field of ty and cloaking and can serve as a good starting point for someone d in diving into the details of this new technology.
(b)(6)  Overall, invisibili	this is a nice qualitative description of the rapidly moving field of ty and cloaking and can serve as a good starting point for someone
(b)(6)  Overall, invisibili intereste	this is a nice qualitative description of the rapidly moving field of ty and cloaking and can serve as a good starting point for someone d in diving into the details of this new technology.  (b)(6)
(b)(6)  Overall, invisibili intereste	this is a nice qualitative description of the rapidly moving field of ty and cloaking and can serve as a good starting point for someone d in diving into the details of this new technology.
Overall, invisibili intereste:  State-of-(b)(6)  The techsthey additional interestes in the state in the stat	this is a nice qualitative description of the rapidly moving field of ty and cloaking and can serve as a good starting point for someone d in diving into the details of this new technology.  (b)(6)



U-09-2660/(b)(3):10 USC 424

# UNCLASSIFIED/\*\*FOUODEFENSE INTELLIGENCE AGENCY

WASHINGTON, D.C. 20340-5100



#### **INFO MEMO**

	1107   3 2003
OF DEFENSE FOR INTELLIGE	AMS, OFFICE OF THE UNDER SECRETARY
FROM: (b)(3):10 USC 424;(b)(6)	Defense Intelligence Agency
SUBJECT: (U) Review of Special Acces	ss Program Request
Agency (DIA) (b)(3):10 USC 424 Reid (enclosure 1) to establish a restricted Advanced Aerospace Weapon System Appendix Reid's letter as the Advanced Ae (AAITP). In reviewing the deliverables the fiscal year (FY) 2010, DIA cannot find	your request for the Defense Intelligence to evaluate a request from Senator Harry d special access program (SAP) for the pplication Program Contract, referred to in crospace Threat and Identification Program to date and looking ahead to planned production d adequate justification to establish a restricted
SAP.	(b)(3):10 USC 424
facility, and program employees were being research products will remain at the unclassified in the control original technical reports will be expanded focus on foreign research in a particular the classified at the secret level. Based on classified at the secret level.	during FY 2009 (the first year of the contractor had not established a secure ing vetted for clearances. In FY 2010, most assified level. However, four to six of the ed to included classified data. These reports will technology area and will likely be derivatively assification levels of current and projected ent grounds to classify this open program, invoke sures (ACCM), or establish a restricted SAP.
Department of Defense Regulation, D guidance: No reports produced thus f information obtained from previously	ogram by derivative means is impractical given poD 5200.1-R Information Security Program far have extracted, paraphrased, or restated classified material (para C3.1.1). Future reports ll be marked and protected according to the C3.1.2.1.1)

Information contained in the reports is not owned by, produced by or for, or under control of the U.S. government (para C2.3.1.1). DIA cannot identify any damage that

• (U/TOUC) Classifying the overall program by original means is inadvisable:

#### UNCLASSIFIED#FOUO

could result from unauthorized disclosure (para C2.3.1.3) of publically available information. Although the information can loosely be tied to one of the eligibility criteria for classification (scientific, technological, or economic matters relating to the national security (para C2.3.2.5)), DIA is prohibited from classifying basic scientific research, and its result, unless it <u>clearly</u> relates to national security (para C2.4.3.2). This requirement has not been met.

• (UATOUC) In the second paragraph of his letter, Senator Reid cites "the identification of several highly sensitive, unconventional aerospace-related findings" that will "require extraordinary protection." Although most of the unclassified reports discuss unconventional aerospace technologies, DIA is unaware of any report containing information sufficiently sensitive and vulnerable to require extra protection associated with either ACCM or a restricted SAP (paras C6.8.1.2 and C8.1.1.3). DIA assumes these statements are in reference to future phases of this program and highlight security and counterintelligence concerns that appear to be the main focus of Senator Reid's letter.

(Unresearch Pursuant to a request from the Office of	f the Under Secretary of Defense for		
Intelligence, Special Programs staff, (b)(3):10 USC 43	24;(b)(6) for the		
Advanced Aerospace Weapon System Application Program Contract, has forwarded draft			
copies of technical reports from the first year, which			
months. If you have questions about the contents o			
(b)(3):10 USC 424;(b)(6)	He will arrange to have (b)(3):10 USC 424;(b)(6)		
review the reports with your staff.			
(U) Prepared by: (b)(3):10 USC 424;(b)(6)			

**DEFENSE INTELLIGENCE AGENCY** Washington, D.C. 20340-0001 DIA ( **SUBJECT:** Review of Special Ac Date Received: 4 Nov 09 Date Logged-in: 5-Nov-09 09:26 TO: (b)(3):10 USC 424;(b)(6) INITIAL DATE Subject: Review of Special Access Request (b)(3):10 USC 424;(b) (b)(3):10 USC 424;(b)(6) POVONCO 12NOV09 Attached please revised subject info memo to OUSD(I) for your review and approval. This version incorporates CP comments. Very Respectfully, (b)(3):10 USC 424;(b)(6) 6 NOV Ned (b)(3):10 USC 424 to review 18th. (b)(3):10 USC 424;(b)(6) 11.13.09 90009 09-2660 PREVIOUS EDITION OBSOLETE DO NOT REMOVE FORM FROM PACKAGE DIA FORM 96-1 (04-08)

(b)(3):10 USC 424