

DEFENSE BASE CLOSURE AND REALIGNMENT COMMISSION

2521 SOUTH CLARK STREET

ARLINGTON, VA 22202

TELEPHONE: (703) 699-2950

DCN 5464



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**Executive Director:** Charles Battaglia

June 6, 2005

TO: [Clearinghouse@wso.whs.mil](mailto:Clearinghouse@wso.whs.mil)

FROM: BRAC Commission

SUBJECT: Request comment on included questions about closure, Ft Monmouth

1. The justification for the recommendation to "Relocate the US Army Military Academy Preparatory School to West Point, NY" states that this move "increases training to enhance coordination, doctrine development, training effectiveness and improve operational and functional efficiencies". Please discuss these improvements.
2. Part of the recommendation is to "Relocate the Joint Network Management System Program Office to Fort Meade, MD." What are the functions that these personnel perform, and what is the efficiency that will be gained from this movement?
3. Please elaborate on the functions and mission of people impacted by the recommendation to "Relocate Information Systems, Sensors, Electronic Warfare, and Electronics Research and Development & Acquisition (RDA) to Aberdeen Proving Ground, MD."
4. Are there any drawbacks to consolidating the PEO EIS functions at Ft. Belvoir?
5. An additional part of the recommendation is to: "Relocate the Budget/Funding, Contracting, Cataloging, Requisition Processing, Customer Services, Item Management, Stock Control, Weapon System Secondary Item Support, Requirements Determination, Integrated Materiel Management Technical Support Inventory Control Point functions for Consumable Items to Defense Supply Center Columbus, OH, and reestablish them as Defense Logistics Agency Inventory Control Point functions; relocate the procurement management and related support functions for Depot Level Repairables to Aberdeen Proving Ground, MD, and designate them as Inventory Control Point functions, detachment of Defense Supply Center Columbus, OH, and relocate the remaining integrated materiel management, user, and related support functions to Aberdeen Proving Ground, MD. How are these functions currently performed and organized? Can you please articulate the efficiencies which will be gained through this movement.

6. Please discuss the recommendation to "Realign Fort Belvoir, VA by relocating and consolidating Sensors, Electronics, and Electronic Warfare Research, Development and Acquisition activities to Aberdeen Proving Ground, MD, and by relocating and consolidating Information Systems Research and Development and Acquisition (except for the Program Executive Office, Enterprise Information Systems) to Aberdeen Proving Ground, MD" and the benefits from the justification that state: "The recommendation establishes a Land C4ISR Lifecycle Management Command (LCMC) to focus technical activity and accelerate transition." DEN 5464

7. Are there any concerns regarding the payback portion which states: "The total estimated one-time cost to the Department of Defense to implement this recommendation is \$822.3M. The net of all costs and savings to the Department of Defense during the implementation period is a cost of \$395.6M. Annual recurring savings to the Department after implementation are \$143.7M with a payback expected in 6 years."

8. Is there any additional information that you would like to communicate that might impact on these recommendations?

9. In unclassified terms, please name and describe all laboratory, test and certification facilities. Please note specifically: estimated time to newly construct each of those facilities to include time to achieve any required certifications; any certifications required; estimated cost to newly construct; length of time that old and new facilities would need to be co-operational before old facility could be "turned off".

10. In unclassified format, what support to legacy systems or technology will need to be reconstituted in Aberdeen?

11. In unclassified format, please note and discuss any unique features of the Ft. Monmouth installation itself, to include any support to outside organizations or agencies. Is the impact to these organizations discussed in the recommendation? If not, please describe any impacts like relocation or potential continued operation in place.

12. In unclassified format, describe the relationship between Ft. Monmouth, Ft. Dix, Lakehurst NAS and Willow Grove. Include descriptions of acreage, facilities, current Ft. Monmouth usage of that location, and average yearly hours or days of Ft. Monmouth use of that facility. How do recommendations regarding Willow Grove impact Ft. Monmouth activities?

13. There has been significant mention of the loss of intellectual capital. Given the current Ft. Monmouth workforce, on average, how many years of experience do senior system personnel have with that system? How long does it take, and what kind of training or education is required for someone to be considered a "system expert"? Is there any way to quantify the impact of the loss of this experience upon a system and the soldier?

14. Are any of the organizations in leased facilities on Ft. Monmouth? If so, name the organization and leased building.

15. How many engineering labs (Army) are there? How do they work with sister Service labs? DCN 5464

16. What is unique about the Ft. Monmouth installation itself?

17. Can the test bed area here be recreated at Aberdeen?

18. How do you (Ft. Monmouth) deal with technology transfers?

19. Why were the facilities at Natick and Adelphi not brought into an Army C4ISR recommendation?

20. Was Homeland Security/Homeland Defense taken into consideration as part of the Ft. Monmouth closure recommendation? If so, how? If not, why not?

21. What were the first and second choice locations ahead of Aberdeen? Why were they rejected? How was Aberdeen deemed the best facility?

22. In looking at the Technical recommendations, there are many joint C4ISR facilities, but no land C4ISR center. Why is there no such recommendation, and how does the recommendation to close Ft. Monmouth fit in with that rationale?

Regards,

R. Gary Dinsick  
Army Team Leader

### Table of Contents

Answer for Q#1. ....	2
Answer for Q#2. ....	2
Answer for Q#3. ....	2
Answer for Q#4. ....	3
Answer for Q#5. ....	3
Answer for Q#6. ....	4
Answer for Q#7. ....	5
Answer for Q#8. ....	5
Answer for Q#9. ....	5
Answer for Q#10. ....	8
Answer for Q#11. ....	8
Answer for Q#12. ....	9
Answer for Q#13. TBD .....	9
Answer for Q#14. ....	10
Answer for Q#15. ....	10
Answer for Q#16. TBD .....	11
Answer for Q#17. ....	11
Answer for Q#18. ....	12
Answer for Q#19. ....	14
Answer for Q#20. ....	14
Answer for Q#21. ....	14
Answer for Q#22. ....	16

SUBJECT: Request comment about closure, Ft Monmouth  
RE: PIMS Tasker # 0422

1. The justification for the recommendation to "Relocate the US Army Military Academy Preparatory School to West Point, NY" states that this move "increases training to enhance coordination, doctrine development, training effectiveness and improve operational and functional efficiencies". Please discuss these improvements.

Answer for Q#1.

By consolidating all Academy related training in one location, it encourages direct interaction and coordination of both instructors and staff. This coordination fosters consistency, standardization and training proficiency while eliminating excess capacity in institutional training installations. It also provides the same or better level of service at a reduced cost, and reduces instructor force requirements.

2. Part of the recommendation is to "Relocate the Joint Network Management System Program Office to Fort Meade, MD." What are the functions that these personnel perform, and what is the efficiency that will be gained from this movement?

Answer for Q#2.

The Joint Network Management Systems (JNMS) Program Office currently at Ft. Monmouth, NJ, is responsible for the Development and Acquisition (D&A) of the Information Systems hardware and software required to centrally manage various data networks deployed by the services in support of joint operations. The purpose of the H&SA JCSG Recommendation to co-locate the JNMS PO at Ft. Meade with other joint C4ISR D&A activities, e.g., the Defense Information Systems Agency (DISA) from Arlington, VA, the Joint Tactical Radio System (JTRS JPO) from Crystal City, VA and the DJC2 (Deployable Joint Command & Control System) from Panama City, FL is to bring together the D&A programs that provide core, common C4ISR capabilities to the services into a Joint C4ISR D&A Center that will integrate the currently separate pieces into a single interoperable system. As the JNMS provides the Joint network management capability, it is a key to the successful achievement of this objective.

3. Please elaborate on the functions and mission of people impacted by the recommendation to "Relocate Information Systems, Sensors, Electronic Warfare, and Electronics Research and Development & Acquisition (RDA) to Aberdeen Proving Ground, MD."

Answer for Q#3.

To support activities in Information Systems, Sensors, Electronic Warfare, and Electronics Research and Development & Acquisition (RDA), the following organizations will move to Aberdeen Proving Ground:

- Communications-Electronics Command (CECOM) Headquarters, Development and Acquisition Logistics Support, Software Engineering Center, from Ft. Monmouth and Ft. Belvoir

- Communications-Electronics Research Development and Engineering Center (CERDEC), from Ft. Monmouth, Night Vision Lab and its Development and Acquisition activities from Ft. Belvoir
- Program Executive Office for Intelligence, Electronic Warfare and Sensors (PEO IEW&S) from Ft. Monmouth and Ft. Belvoir.
- Program Executive Office for Command, Control, Communications - Tactical (PEO C3T) from Ft. Monmouth and Ft. Belvoir.
- Detachment of Army Research Institute (ARI), Ft. Knox.
- PM C3T from Redstone Arsenal.

4. Are there any drawbacks to consolidating the PEO EIS functions at Ft. Belvoir?

Answer for Q#4.

Consolidation of PEO Enterprise Information Systems (EIS) functions at Belvoir is a sound decision. PEO EIS develops business information systems. The proximity to the enterprise decision makers, system users, and the information- technology-rich National Capital Region is a decided plus for the Belvoir location. Rather than business systems, the consolidation at Aberdeen is focused on warfighting systems - from the processing of information at the sensor level on up to the information systems supporting the Joint Force Commander in theater. There is no net advantage to developing warfighting systems and business information systems at the same location.

5. An additional part of the recommendation is to: "Relocate the Budget/Funding, Contracting, Cataloging, Requisition Processing, Customer Services, Item Management, Stock Control, Weapon System Secondary Item Support, Requirements Determination, Integrated Materiel Management Technical Support Inventory Control Point functions for Consumable Items to Defense Supply Center Columbus, OH, and reestablish them as Defense Logistics Agency Inventory Control Point functions; relocate the procurement management and related support functions for Depot Level reparable to Aberdeen Proving Ground, MD, and designate them as Inventory Control Point functions, detachment of Defense Supply Center Columbus, OH, and relocate the remaining integrated materiel management, user, and related support functions to Aberdeen Proving Ground, MD. How are these functions currently performed and organized? Can you please articulate the efficiencies which will be gained through this movement?"

Answer for Q#5.

The functions mentioned in the question for both consumable items and depot level reparable are currently performed at Ft Monmouth by the Communications-Electronics Command (CECOM) Inventory Control Point. CECOM is one of the Army's three major inventory control points. These, along with their subordinate elements, are located at five different Army installations. Within DOD, there are 16 separate inventory control point locations (all Services), managing both consumable items and depot level reparable with DLA managing the vast majority of consumable items. This recommendation consolidates the management of the remaining DoD consumables to DLA as well as consolidates the procurement

management and its related support functions of all depot level reparable from the Services to DLA.

The moves described above result in numerous efficiencies and benefits. First, they assist the Army by helping the Army facilitate a full fence-line closure of Ft Monmouth. The movement of the remaining consumable item management functions and the transfer of depot level reparable procurement management from Ft Monmouth to Defense Supply Center Columbus, OH, contribute to the consolidation of these functions under one DoD manager - DLA. As a result, it eliminates duplication of effort and creates economies of scale by leveraging the buying power of the separate Services into just one Agency. Finally, according to the Army, the move of Army inventory control point functions to Aberdeen Proving Ground collocates them with the Army's C4ISR Life Cycle Management Command, which results in one location responsible for nearly all Army C4ISR research, development, acquisition and logistics functions.

6. Please discuss the recommendation to "Realign Fort Belvoir, VA by relocating and consolidating Sensors, Electronics, and Electronic Warfare Research, Development and Acquisition activities to Aberdeen Proving Ground, MD, and by relocating and consolidating Information Systems Research and Development and Acquisition (except for the Program Executive Office, Enterprise Information Systems) to Aberdeen Proving Ground, MD" and the benefits from the justification that state: "The recommendation establishes a Land C4ISR Lifecycle Management Command (LCMC) to focus technical activity and accelerate transition."

Answer for Q#6.

The Benefit of Forming a Land C4ISR Lifecycle Management Command (LCMC).

The Land C4ISR center will provide a capability for Network Centric Warfare, which is the defining transformational concept for future warfighting. The essential interoperability between air, land and maritime C4ISR networks does not mean that all forces should be equipped with the same systems. Interoperability can be achieved between systems, which have significantly different performance characteristics. Systems, which support the land component have a vastly different scale for communications, information sources to process, and levels of information requirements: thousands of nodes for vehicles, soldiers and sensors, compared to the number of ships or aircraft in maritime or air C4ISR. The environmental influence of terrain, and vegetation on communication, and the need for short distance, low probability of intercept and high jam resistance, is not shared with most ship to ship or aircraft to aircraft needs.

Realignments of C4ISR Activities. For realigning C4ISR activities, it is essential to have a consolidated development and acquisition center focused on Land C4ISR needs. It is even more essential to facilitate the land network science, technology and experimentation essential to develop capabilities for the future by bringing together the research assets of CERDEC from both Ft Monmouth and Ft. Belvoir along with the information systems research assets already at Aberdeen and the personnel from Ft. Knox who perform human systems research in networks.

7. Are there any concerns regarding the payback portion which states: "The total estimated one-time cost to the Department of Defense to implement this recommendation is \$822.3M. The net of all costs and savings to the Department of Defense during the implementation period is a cost of \$395.6M. Annual recurring savings to the Department after implementation are \$143.7M with a payback expected in 6 years."

Answer for Q#7.

The Army used certified data from Fort Monmouth that were collected at the data call in the last 24 months. Savings were described from the COBRA model. Any concerns pertaining to Fort Monmouth savings would derive from recent changes in personnel or facilities from the certified data established beyond what's archived in the data call. These changes to the best of our knowledge would cause small changes in payback period and would not cause the Army to reconsider the recommendation.

8. Is there any additional information that you would like to communicate that might impact on these recommendations?

Answer for Q#8.

Implementation of this recommendation will require careful planning, time phasing, incentives and recruitment to mitigate the potential loss of technical capability. Army will take active role in recruiting efforts to mitigate personnel loss.

9. In unclassified terms, please name and describe all laboratory, test and certification facilities. Please note specifically: estimated time to newly construct each of those facilities to include time to achieve any required certifications; any certifications required; estimated cost to newly construct; length of time that old and new facilities would need to be co-operational before old facility could be "turned off".

Answer for Q#9.

At Fort Monmouth, CECOM has several major laboratory, test and certification facilities. CERDEC has laboratories and facilities at Fort Monmouth and Fort Belvoir. All 64 CERDEC laboratory, test and certification facilities at Fort Monmouth are listed on the attached Excel spreadsheet entitled, "Facility Excel Spreadsheet Question 9 – CERDEC Fort Monmouth, At Fort Belvoir, CERDEC has 46 laboratory, test and certification facilities listed on the attached Excel spreadsheet entitled, "Facility Excel Spreadsheet Question 9 – CERDEC Fort Belvoir." CECOM major facilities are listed below.

#### Pulse Power Building

The Pulse Power Building/Star Wars Laboratory/Special Projects Office/Bldg 2702 was constructed under a now declassified "Black Program" and may cost \$50M+ and require 2.5 years to reconstruct. It is a classified high bay, shielded facility designed to support and advance high voltage applications and pulsed power technologies, and to advance microwave, laser system and plasma technologies.

65 engineers and other essential personnel are employed at this facility today, a comparable overlapping staff would be required at Aberdeen during a two (to possibly three) year co-operations period. Therefore, assuming no loss of personnel, it would take a minimum of 4.5 to 5 years to re-establish this laboratory and its operations at a new location

#### Software Engineering Laboratory and Test Facilities

The Software Engineering Center (SEC) has approximately 65,000 square feet of laboratory and test facilities. Each facility is a secure area, with open storage of classified material.

- Integrated Command, Control and Communications (C3) Lab. The SEC Integrated C3 Laboratory, completed in 2002, houses a testing center equipped with systems and software representative of those used by Warfighters. This facility is approximately 19,000 square feet.
- Integrated Avionics Lab. The Avionics Laboratory provides the resources for SEC software engineers to simulate actual avionics problems reported from the field, develop fixes, and test proposed solutions. This facility is approximately 3,500 square feet.
- Integrated Electronic Warfare Lab. The Integrated Electronic Warfare Lab provides the resources for SEC software engineers to perform Post Production Software Support for the Common Ground Station (CGS), Joint Tactical Terminal (JTT) and Commanders Tactical Terminals which are deployed to Military Intelligence Battalions, Brigades, Corps and Echelons-Above-Corps, as well as to Joint Service users. This facility is approximately 5,000 square feet.
- Integrated Intelligence and Electronic Warfare Lab. The SEC Integrated Intelligence and Electronic Warfare Lab provides the resources for SEC software engineers to simulate actual electronic warfare and signal intelligence problems reported from the field, develop fixes, and test proposed solutions. This facility is approximately 4,000 square feet.
- Integrated Satellite Communications Lab. The SEC Integrated Satellite Communications Lab provides software engineering support for the Defense Satellite Communications System, which is comprised of strategic earth terminals, planning, monitoring, and control systems. These systems are deployed at worldwide operation centers and earth terminal locations. This facility is approximately 5,000 square feet.
- Integrated Sensors Lab. The SEC Integrated Sensors Lab provides the resources for SEC software engineers to perform Post Production Software Support (PPSS) for the Guardrail Common Sensor Systems. This facility is approximately 5,000 square feet.
- Integrated Communication & Interoperability Lab. – The SEC Integrated Communication and Interoperability Lab is the central location for Replication, Distribution, Installation and Training (RDIT) for software products. This facility is approximately 11,000 square feet.

In addition to these existing facilities, the SEC has identified requirements for new laboratories to support emerging mission requirements. These facilities have been presented to the appropriate personnel at the Aberdeen Proving Ground and will be included in the planned new construction. These future facilities requirements are identified below.

- Logistics Modernization Program (LMP) / Joint Computer-Aided Logistics Systems (JCALS) Integration Lab. This facility requirement is estimated at approximately 6,500 square feet.
- Battle Command Software (S/W) Integration Lab. This facility requirement is estimated at approximately 2,500 square feet.
- Joint Tactical Radio System (JTRS) S/W Integration Lab. This facility requirement is estimated at approximately 1,500 square feet.
- Electronic Key Management System (EKMS) Testing Lab. EKMS is a high priority Joint program that provides the structure for electronic cryptographic key generation as well as the accountability of all COMSEC devices and materials. This facility requirement is estimated at approximately 1,000 square feet.
- Joint Network Node (JNN) Test Lab. JNN is a state-of-the-art, mission-critical communications systems (high speed, high capacity) to provide secure, highly reliable voice, data and video information exchange supporting both NIPRNET and SIPRNET throughout the tactical theater with support for network management and information assurance. This facility requirement is estimated at approximately 1,000 square feet.

SEC laboratory, test and certification facilities encompass the equipment and infrastructure needed to provide the software sustainment and development support required to keep C4ISR joint service equipment and technologies and associated missions operational. The total space requirement for those facilities is approximately 65,000 square feet. The total estimated replacement cost is between \$16M and \$17M. New construction time will be entirely dependent upon a milestone schedule which would include architectural design, contract award, and construction phases. Given the scope of this effort, the Army would estimate that it would take 12-18 months to construct new facilities at Aberdeen Proving Ground to meet these requirements.

SEC would require laboratory facility (as described above) and equipment redundancy during the transitional period. During that time, the Army would need a dual operating capability to provide uninterrupted support services. The Army expects that redundant operations would be required for an estimated period of 3-6 months.

10. In unclassified format, what support to legacy systems or technology will need to be reconstituted in Aberdeen?

Answer for Q#10.

Hardware, software and technology support to every C4ISR system in the Army inventory will need to be reconstituted in Aberdeen – over 51,000 nationally stock numbered items, including 6,000 major end items. As these systems are in constant use in Iraq, Afghanistan and around the world, reconstitution of the C4ISR mission at Aberdeen must be accomplished with no lapse in support to C4ISR legacy systems and technology and at a level sufficient to support current operating levels.

11. In unclassified format, please note and discuss any unique features of the Ft. Monmouth installation itself, to include any support to outside organizations or agencies. Is the impact to these organizations discussed in the recommendation? If not, please describe any impacts like relocation or potential continued operation in place.

Answer for Q#11.

Fort Monmouth has three unique, non-DoD tenants and two business partnership with nearby communities:

- The Federal Emergency Management Agency (FEMA) Region II Continuity of Operations Point (COOP) Alternative Operations Facility serves as a Disaster Field Office, Federal Radiological Emergency Response Center for New Jersey, Regional Operations Center and a COOP Site for the Emergency Relocation Group.
- The Federal Bureau of Investigation Information Technology Center, a secured facility. Subject to the resolution of funding, property acquisition and security issues, the FBI could potentially continue its operation in place.
- The Veteran's Administration Health Facility that handles in excess of 10,000 patients annually. The Fort Monmouth location provides veterans with "one-store" appointments and improves access to an under-served veteran population, reducing long distance travel for elderly and disabled veterans. Subject to the resolution of funding, property acquisition and security issues, this clinic could potentially continue its operation in place.
- Stevens Institute of Technology Hoboken, NJ, with campus just 50 miles from Fort Monmouth, serves as a C4ISR Urban Test Bed for wireless networks. This partnership can remain in place without Fort Monmouth.
- The Applied Communications and Information Networking (ACIN) program, which began in FY01, is a partnership between Drexel University, Sarnoff Corporation and CERDEC with top-level goal is to capitalize on wireless technology emerging from the commercial and consumer communications and networking industries by leveraging advances and influencing development efforts. In addition to the R&D efforts, the ACIN program has created a Center for Entrepreneurship (ACIN Center) located in Camden, New Jersey. The primary goal of the ACIN Center is to enable

communications and networking businesses that utilize information technology (IT) developed in ACIN R&D projects to be incubated and accelerated onto a rapid commercialization track. As a result of the ACIN efforts, several companies have joined the center fostering relationships with the Air Force, FAA, DISA, TSA, Coast Guard and NAVSEA. These programs can remain in place without Fort Monmouth.

12. In unclassified format, describe the relationship between Ft. Monmouth, Ft. Dix, Lakehurst NAS and Willow Grove. Include descriptions of acreage, facilities, current Ft. Monmouth usage of that location, and average yearly hours or days of Ft. Monmouth use of that facility. How do recommendations regarding Willow Grove impact Ft. Monmouth activities?

Answer for Q#12.

Please note this question should address "Warren Grove" Bombing Range, New Jersey, not "Willow Grove", Pennsylvania. The BRAC recommendation to close Willow Grove, Pennsylvania has no impact on Fort Monmouth activities.

Ft. Dix, Lakehurst Naval AES, McGuire Air Force Base and Warren Grove Bombing Range afford the engineers and scientists access to approximately 42,000 acres of land and over 200 miles of controlled restricted air space. Facilities include the Instrumentation Center, Sensor Fusion Center, Integration/Expo Center, Network Operation Center, Live/Virtual/Constructive Facility, Maintenance Facility, Weapons Vaults, Military Operations in Urban Terrain Facility and a Maneuver Area which features open terrain, wooded areas and rolling hills. Lakehurst Naval AES houses the CERDEC Flight Activity and provides 24/7 airfield operational capability and Visual and Instrumented Flight Rules (VFR/IFR) between 1,000 and 25,000 feet. In addition to flight operations, facilities include laser ranges and access to remote testing areas for air and ground communication projects. McGuire Air Force Base provides Air Traffic Control and facilities for large aircraft and has been utilized over the past two years with the Air Force's Command and Control Constellation Testbed utilizing the Paul Revere aircraft. Warren Grove Bombing Range is utilized to extend the maneuver areas of Fort Dix an additional 40 km.

13. There has been significant mention of the loss of intellectual capital. Given the current Ft. Monmouth workforce, on average, how many years of experience do senior system personnel have with that system? How long does it take, and what kind of training or education is required for someone to be considered a "system expert"? Is there any way to quantify the impact of the loss of this experience upon a system and the soldier?

Answer for Q#13. TBD

14. Are any of the organizations in leased facilities on Ft. Monmouth? If so, name the organization and leased building.

Answer for Q#14.

There are no organizations in leased facilities on Fort Monmouth.

15. How many engineering labs (Army) are there? How do they work with sister Service labs?

Answer for Q#15.

How many engineering labs (Army) are there?" There are six engineering Labs in the Army excluding Army Corps of Engineers (ACE), Engineer Research and Development Center (ERDC). The ERDC was excluded from BRAC due to a decision by Congress to exclude Civil Works from BRAC considerations, and ERDC has the DoD mission for Civil Works activity. The six Engineering Labs are;

- Armament RDEC , Picatinny, NJ
- Communications-Electronics RDEC, Fort Monmouth, NJ and Fort Belvoir, VA
- Edgewood Chemical Biological Center, Aberdeen Proving Ground (APG), MD
- Aviation and Missile RDEC, Redstone Arsenal, AL
- Soldier Systems Center, Natick, MA
- Tank Automotive RDEC, Warren, MI

All Centers remain except the Communications-Electronics RDEC, to be relocated to APG, MD. The Army Research Laboratory (ARL) and the Army Medical Research & Materiel Command (MRMC) also conduct engineering activities in addition to their primary activities in basic and applied research.

All six of the Engineering Centers, as well as ARL, fall under the management of the Army Research, Development and Engineering Command (RDECOM), Headquarters, APG, MD, which provides, along with ODASA(R&T), integration of investment strategies and oversight of R&D program execution across the Army Engineering Labs.

How do they work with sister Service labs? The Army engineering labs (and this includes the ACE ERDC), as well as ARL and MRMC, integrate their work with sister Service Labs through a combination of activities, including primarily the DoD Science & Technology (S&T) Reliance program, but augmented by other coordinating activities such as the annual Joint Army/Navy/NASA/AF (JANNAF) topical research symposia, and through joint working groups established by the Services in specific technical areas, e.g., energetic materials.

DoD S&T Reliance is a program run by the Services, the three DoD research agencies (DARPA, DTRA, and MDA), and OSD. Its stated mission is to "...strengthen cooperation [among the S&T Services and Agencies] by reducing redundant capabilities and eliminating unwarranted duplication [in S&T investments and activities]. It provides the framework for planning, documenting, and assessing the content of the DoD S&T program." This communication and integration is done at multiple levels of interactions, beginning with an annual, multi-day Comprehensive

Review and Assessment of the S&T programs by the Chief Scientists (referred to collectively as the “Defense Science & Technology Advisory Group”, or DSTAG) from all the Components under the direction of the Director for Defense Research & Engineering (DDR&E). In addition, the DSTAG meets on a biweekly basis to review S&T investment plans vis-à-vis ongoing and newly occurring requirements.

At the Laboratory level, there are 12 Defense Technology Area Panels (DTAPs) covering all the S&T investment areas within the DoD. These panels are comprised of senior scientists and engineers from all the Components, most of whom work in the DoD Laboratories and Centers. These panels bear the responsibility for meeting on a regular basis (typically quarterly) to discuss high-priority research programs within the Components and proposing new joint research efforts to be funded by one or more of the Components. These research programs are referred to as Defense Technology Objectives (DTOs), and a brief description of each DTO is captured in an annual publication called the “DTO Document”. These DTOs, as a collection, typically represent about 40% of the S&T funds invested by the Components, but cover essentially all major research areas of investment. Each year as DTOs complete, new ones are proposed, approved, and executed. There are about 400 active DTOs per year.

The panel meetings and DTO Document provide an excellent mechanism for communicating S&T investments and plans across the Services and Agencies. In addition, the Components review the DTOs, and supporting R&D programs, on a biennial basis through weeklong Technical Area Review and Assessment (TARA) meetings under the direction of DDR&E. These TARA are structured around the 12 DTAP technical areas and managed by the Chairs for the 12 DTAP panels. The Chairs for these Panels rotate among the Services and are filled at the SES level by R&D managers from the Components. In the alternate year the higher-level (DSTAG-level) Comprehensive Review and Assessment process occurs to better enable senior leadership to assess, plan, and adjust S&T investment strategies.

16. What is unique about the Ft. Monmouth installation itself?

Answer for Q#16. TBD

17. Can the test bed area here be recreated at Aberdeen?

Answer for Q#17.

The test beds at Ft. Monmouth can be replicated at the Aberdeen Proving Ground (APG). The Communications Electronics Research Development and Engineering Center (CERDEC) at Ft. Monmouth operates a Command, Control, Communications, Computer, Intelligence, Surveillance and Reconnaissance (C4ISR) “On-the-Move” test bed. This test bed is located at Ft. Dix, NJ and includes various tracked and wheeled vehicles equipped with prototype hardware battle command and communication systems. Emerging technology, which could be employed in the Future Combat System (FCS), is demonstrated at this test bed that includes various roads and trails through wooded and open areas. The area

includes radio-equipped towers that allow communications to the vehicles to be maintained. Testing has also included airborne assets (manned and unmanned) with communications relay capability and surveillance capability. Ft. Dix consists of 31,065 acres of land, of which 13,765 acres are range and impact area and 14,000 are classified as contiguous maneuver area. (Compared to Aberdeen Proving Ground's 72,000 acres.) Aberdeen Proving Ground (APG) has similar terrain features with the notable addition of having a shoreline and over water areas for proving out new technologies.

CERDEC also operates a C4 lab within the Myers Center that is similar to the Central technical Support Facility (CTSF) yet much smaller. This facility can be replicated most anywhere in which an environmentally controlled building is available and communications is available. APG has the land to accommodate this test bed.

Frequencies of many of the communications systems have been operated at APG in the past and there is a 20 year long history of testing Ft. Monmouth systems at APG. Given BRAC funds to replicate the capabilities at Ft. Monmouth; there appears to be no limitation on fully recreating the Ft. Monmouth test beds at APG.

18. How do you (Ft. Monmouth) deal with technology transfers?

Answer for Q#18.

At Fort Monmouth the Army deals with many aspects of technology transfer and the approach varies with the situation. All of this will continue at Aberdeen Proving Ground.

#### Technology Transferred into the Government

The Army uses one of five mechanisms to transfer technology into Fort Monmouth from the private sector or academia:

- Federal Acquisition Regulation (FAR)-based contracts coupled with the use of standard and specially drafted data rights clauses;
- Other Transaction Agreements (OTAs) (contractual arrangements outside the FAR and the Defense FAR Supplement) generally awarded to non-traditional defense contractors coupled with the utilization of specially drafted non-DFARS data rights clauses;
- Cooperative Research and Development Agreements (CRADAs), wherein the Government obtains information from its CRADA partners without providing monetary reimbursement; - approximately fourteen CRADAs per year are recorded.
- Army Venture Capital Initiative to attempt to locate, support, and transfer new technologies, typically from companies which have little or no previous experience with the DOD; and
- Mandatory licensing provisions in traditional FAR-based contracts, whereby the Government may not get access to the information but where we provide the information directly to the contractor(s) of our choice.
- The Small Business Innovative Research (SBIR) Program was established to provide small businesses and research institutions with opportunities to

participate in government-sponsored research and development. To date, in FY05, CECOM has realized a 450% return on its investment into the SBIR program. Since the inception of the SBIR Phase II Quality Awards, Team C4ISR has won nine annual awards.

By way of quantification, by far the greatest number of arrangements for technology transfer into the Government is FAR-based contracts. Fort Monmouth awards approximately 180 R&D contracts per year (approximately 200, counting those awarded using simplified acquisition procedures), all of which provide for delivery of technical information to the Government. Beyond that, many of CECOM non-R&D contracts, of which approximately another 180 are awarded per year (approximately 930, counting those awarded using simplified acquisition procedures), call for data deliveries. The technical data and computer software purchased enhances our C4ISR technology base and that of those contractors doing business with us who subsequently receive the information pursuant to conducting that business.

#### Technology Transferred out of the Government

The Army uses one of three mechanisms to transfer technology out of Government:

- CRADA is the most frequently used vehicle to accomplish such a transfer. The work performed under these agreements ranges from testing and suggesting changes to commercial equipment, assisting in the design and development of items for use on contracts where the contractor is supplying a product to sister services, or, as in the case of the Future Combat Systems program, where the end item will be used by the Army. This vehicle allows the Army to insert technology developed by our laboratories into systems managed by Government PEOs and PMs without the need for that PM to take the contractual risk of directing such use. The CRADA vehicle is also used to allow for our laboratories and CRADA partners to cooperatively test and jointly refine components and systems which are candidates for military use in a C4ISR test bed located at Fort Dix/McGuire AFB/Lakehurst Naval AES, NJ. Such early collaborative effort reduces development time and cost and promotes operational compatibility among a plurality of systems leading to a seamless interaction of all C4ISR elements, ultimately providing the battle commander with a decisive advantage.
- Homeland Defense. CECOM has established CRADA relationships with the State of New Jersey and the Port Authority of New York and New Jersey. The Army Corps of Engineers is also a party to some of these efforts which are directed at providing port, bridge and water security to the New York City environs; enhancing their communications capability; and providing computer security to New Jersey's defense apparatus. CECOM has been able to provide assistance *now* in areas where the Department of Homeland Security has yet to establish significant expertise or methodology.
- Patent Program. Several patented inventions have been licensed over the years, most recently last year to the largest magnet manufacturer in the

United States. Beyond patent licensing, however, many Fort Monmouth patents have been cited extensively by the United States Patent and Trademark Office for the purpose of teaching those inventions to other applicants for patent, thereby broadening the knowledge base of the inventive community by disseminating technology developed here, while at the same time, reducing the government's future exposure to costly patent litigation.

19. Why were the facilities at Natick and Adelphi not brought into an Army C4ISR recommendation?

Answer for Q#19.

Both Natick and Adelphi were considered as part of the Army's consolidations onto Aberdeen Proving Ground (APG). These installations have related missions that would have complemented the extensive RDTE facilities and missions already in place at APG. Both were fully studied and registered as potential BRAC scenarios. Natick and Adelphi were deleted in the final DoD BRAC reviews due to high one-time costs to implement and a slow payback period associated with each closure.

20. Was Homeland Security/Homeland Defense taken into consideration as part of the Ft. Monmouth closure recommendation? If so, how? If not, why not?

Answer for Q#20.

Yes. Military Departments and Joint Cross-Service Groups were required to consider all selection criteria in their analysis, giving priority to military value (the first four criteria). Military value criteria #2 and #3 require consideration of homeland defense missions and surge respectively.

Additionally, the Commanders of U.S. Northern Command and U.S. Pacific Command reviewed all recommendations and commented that the recommendations do not create an unacceptable risk to the accomplishment of our homeland defense or defense support of civil authorities missions.

21. What were the first and second choice locations ahead of Aberdeen? Why were they rejected? How was Aberdeen deemed the best facility?

Answer for Q#21.

DOD's first choice is indeed the final BRAC recommendation location at Aberdeen Proving Ground, MD. Other alternatives were examined that led to this conclusion. These alternatives included:

Alternative # 1. Consolidate research at Adelphi and consolidate Development and Acquisition at Fort Belvoir.

- Research: Consolidate Army Research in Information Systems Technology and Sensors, Electronics and EW at Adelphi MD. Realign these research functions from Ft. Monmouth, Ft Belvoir, APG, and WSMR to Adelphi. Realign Human Network research function from ARI at Fort Knox to Adelphi.

- Development and Acquisition: Consolidate Army Development and Acquisition (D&A) in Information Systems Technology and Sensors, Electronics and EW at Ft. Belvoir, VA. Realign these D&A functions from Ft. Monmouth, Redstone Arsenal and Crystal City (PM-ALTESS) to Ft. Belvoir.

Alternative # 2. Consolidate research at Adelphi, and consolidate Development and Acquisition at Aberdeen Proving Ground and Fort Belvoir.

- Research: Close Fort Monmouth, realign ARL Fort Knox, ARL Aberdeen, White Sands and Night Vision Lab, Fort Belvoir, by relocating and consolidating Information Systems, Sensors, Electronic Warfare, & Electronics, and Human Systems Research to ARL Adelphi
- Development and Acquisition: Realigns Fort Monmouth, Redstone Arsenal, by relocating and consolidating Information Systems and Sensors, Electronic Warfare, and Electronics Development and Acquisition to Aberdeen Proving Ground, MD. Retains at Ft. Belvoir current Development and Acquisition in Information Systems, Sensors, Electronic Warfare, and Electronics, and realigns PM ALTESS facility in Arlington to Ft. Belvoir.

These alternatives to construct a C4ISR center for the Army were thoroughly reviewed and approved by senior Army and OSD leadership.

Alternative #1 was rejected for several reasons: the small acreage at Adelphi restricted the amount of space available for necessary construction and would have required extensive and expensive high rise construction of office space, laboratory space, and even parking garages; the lack of available unoccupied office space at Ft. Belvoir required new construction of office space; and the recommendation to establish a consolidated C4ISR center for the Army would actually take one element now at Ft. Monmouth and break it into two (i.e., research (CERDEC) at Adelphi and D&A (CECOM, PEOs IEW&S and C3T) at Ft. Belvoir).

Alternative #2 was rejected largely for the same reasons: the acreage limitations at Adelphi and breaking up Ft. Monmouth into separate pieces. This alternative also had a net present value cost of \$94 M.

APG was deemed the best receiver of the Ft. Monmouth mission for two primary reasons: cost and synergy with other RDTE missions and activities at APG.

The BRAC recommendation to move the Ordnance Center and School from APG offers substantial office/admin space to house Ft. Monmouth personnel while minimizing new construction costs. This related BRAC recommendation, coupled with the base operations savings from closing Ft. Monmouth, allows a payback in only 6 years and has an annual recurring savings of \$144M.

APG is a full spectrum Research, Development & Acquisition, Test and Evaluation Army installation. With the BRAC recommendation to close Ft. Monmouth, the research and engineering functions for communications, electronics, night vision,

and chemical/biological defense will be co-located with the Army Research Laboratory's Weapons and Material Research and, Human Research Engineering Directorates as well as the HQ, Army Research, Development and Engineering Command. For D&A functions, 3 PEOs (including the Joint PEO for Chemical/Biological Defense) and subordinate program managers will be located at APG. The T&E capabilities that exist at APG today are complementary and can be readily expanded to provide direct support to additional C4ISR programs while in the early development stages of acquisition.

APG was favored by both the Army and the Technical Joint Cross Service Group (TJCSG) as the preferred site for the land C4ISR center. The Army's military value criteria assigned greater value for available land/buildable acres and multiple mission capabilities of its installations. By these criteria, APG scored significantly higher than Ft. Monmouth. (Annex 3, Section II on page B-44 for a full listing of the Army's military value scores.) The Army has a critical requirement to build a networked future force and the related technology areas coming together at APG will enable faster technology transition to meet the warfighter.

The TJCSG strategy was to create full spectrum R, D&A, T&E centers where feasible. The co-location of testing and evaluation facilities with the program managers and the researchers is a key part of the TJCSG recommendations. The TJCSG also recommended the creation of agile, diverse research capabilities and this is reflected in other BRAC recommendations as well. APG offers a solution to this strategy; Ft. Monmouth does not.

For completeness, a COBRA analysis was accomplished early in the deliberative process to examine the feasibility of consolidating the C4ISR center at Ft. Monmouth. This scenario was deleted from further consideration because its payback period exceeded 100 years, and that there was not sufficient land available at Ft. Monmouth to support extensive outdoor testing.

22. In looking at the Technical recommendations, there are many joint C4ISR facilities, but no land C4ISR center. Why is there no such recommendation and how does the recommendation to close Ft. Monmouth fit in with that rationale?

Answer for Q#22.

The recommendation closes Fort Monmouth and establishes the Army Land C4ISR Center at Aberdeen Proving Ground.