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**Farrington, Lester, CIV, WSO-BRAC**

**From:** Phil Arnold [phil@iwvisp.com]  
**Sent:** Tuesday, July 19, 2005 12:07 PM  
**To:** Farrington, Lester, CIV, WSO-BRAC  
**Cc:** bill Porter  
**Subject:** Rebuttal to Ventura County BRAC Commission testimony

**Attachments:** EW Rebuttalv3.doc



EW Rebuttalv3.doc  
(53 KB)

Les,

The attachment is our response to the testimony by Ventura County at the hearing last week for your use. We also would like it entered into the record.

Thanks,

Phil

July 18, 2005

## **Sensors, Electronic Warfare, and Electronics RDAT&E Relocation from Point Mugu to China Lake**

### **Introduction**

The Technical Joint Cross Service Group's (TJCSG's) analysis led to a Secretary of Defense recommendation to relocate the electronic warfare (EW) and related RDAT&E functions from Point Mugu to China Lake. The TJCSG justifies the recommendation with the statement, "Consolidating the Sensors, EW, and Electronics RDAT&E functions at China Lake will eliminate redundant infrastructure between Point Mugu and China Lake and provide for the more efficient use of the remaining assets including the Electronic Combat Range and other integration laboratories at China Lake."

This recommendation has been challenged by the Ventura County Community with assertions that significant errors were made in calculating the costs of the move and that the operating forces would be adversely affected because of major losses of experienced technical experts residing at the Point Mugu site.

### **Summary of China Lake Defense Alliance Position**

BRAC has basically two purposes – (a) reduce excess base infrastructure, and (b) restructure the base infrastructure to best meet future needs. The China Lake Defense Alliance believes that the proposal to consolidate aircraft sensors, electronic warfare and electronics RDAT&E at China Lake supports both BRAC purposes. Consolidating weapons and armaments RDAT&E and combat aircraft system integration including electronic warfare at a single site will enhance both efficiency and effectiveness for a future in which aircraft weapons, sensors, electronic warfare and other mission avionics will be far more tightly integrated than with present combat aircraft systems.

At the present time the Navy's air weapon system integration site for combat aircraft except the EA-6B Prowler is located at China Lake. Electronic Warfare RDAT&E is now sited at two facilities - Point Mugu for most of the electronic warfare development and acquisition (D&A) including the EA-6B and China Lake for most of the sensors and electronics RDAT&E, some of the electronic warfare D&A, and all the sensors and electronic warfare range testing and evaluation.

The Navy has entered development of the EA-18G Growler aircraft, a highly integrated aircraft based on the F/A-18F platform-sensor-electronics suite which will replace the EA-6B. China Lake will be the systems integration center for the new aircraft. Flight testing at China Lake is scheduled to begin in late Fiscal Year 2006, and introduction into service will occur early in Fiscal Year 2009. The EA-6B will be phased out of service as

EA-18G aircraft are produced. The next generation fighter-attack aircraft, the Joint Strike Fighter, is also under development with a highly integrated avionics suite.

Consolidation of sensors, EW and electronics at China Lake will yield a tightly knit, fully integrated team prepared to support development, test, and engineering support for the Navy's combat aircraft. Weapons, sensors, electronic warfare suites, and the software that binds them together will be a fully integrated product for the future. The Technical Joint Cross Service Group had the vision to understand this in offering the recommendations for creation of a Naval Integrated Weapons and Armaments RDAT&E Center and a consolidated Sensors, EW and Electronics RDAT&E Center at China Lake.

By co-locating all elements of the team at one site, operating costs will be reduced, time wasting travel between sites will be eliminated, and superior products will be assured.

### **Responses to Ventura County Allegations**

**Allegation.** The TJCSG made significant errors in calculating the cost of a move to China Lake and the payoff that would be realized from such a move. The challenge to the costs and payoff summarized in the COBRA analysis was based on a series of assertions.

**Ventura County Assertions.** The China Lake and Point Mugu organizations have been streamlined over the years for maximum efficiency and no overlap of function. In fact, because of these efficiencies the personnel efficiency factor that should have been used would be zero, rather than the standard 15 percent. Industry has shown the value of maintaining an organization on more than one site to gain a high efficiency.

#### **China Lake Defense Alliance Response.**

- The claim that an organization at two sites will be as, or more, efficient than one consolidated at a single site strains credulity to the breaking point. In industry and government, when the size of work forces shrink and product integrity can be enhanced, company sites are consolidated. The present size of the combined work forces of China Lake and Point Mugu is the same as or less than that of China Lake alone in 1990.
- It is true that the Naval Air Warfare Weapons Division has worked hard to improve efficiency and eliminate redundancy by eliminating functional duplication between sites. The common management between China Lake and Point Mugu and contacts between technical personnel across the sites will be a factor in making a smooth transition for relocating personnel.

There is cross-communications between sites, for example on the High Speed Antiradiation Missile (HARM) threat files and the aircraft system integration teams at China Lake. China Lake is responsible for integrating the electronic warfare software into the total operational software packages. On the other hand,

face-to-face discussions between China Lake and Point Mugu requires travel between sites, either by shuttle aircraft or automobile. Aircraft and travel costs are significant, but the loss in time by technical and management personnel is more significant. A trip between sites will cost a half to a full day for each person involved. Co-located personnel would consume only the time involved for the discussions. This cost in time and efficiency is in addition to the \$ 3.8 million per year expended in shuttle aircraft costs and per diem costs for overnight trips.

- The standard personnel efficiency factor of 15 percent was not used by the TJCSG in calculating the cost/payoff time for the move. A factor of 5.7 percent was used without comment on the reason for this inconsistency. We understand that this figure was arrived at jointly by China Lake and Point Mugu management. Using a 15 percent factor, consistent with other similar consolidations, the payoff would be 6 years instead of the 12 years. One may argue over the precise value of the efficiency factor for the EW relocation, but it most certainly was more than zero, and acceptance of a departure from consistency in applying standard factors to the COBRA analysis calls in question analyses of all other realignments.

**Allegation. The move would result in an unacceptable loss of intellectual capital, putting our operating forces in danger.** In the opinion of the China Lake Defense Alliance this is a much more serious charge than the cost argument since it impinges on military value. There is no question that the Point Mugu EW team is highly qualified, and any moves associated with BRAC must not threaten the continuity of support for the EA-6B platform and EW capabilities of other Navy aircraft.

**Assertions.** The Point Mugu EW team is a highly capable, experienced team that is needed to support the EA-6B and other EW capabilities in the Navy. Attempting to move these people to China Lake would result in the loss of most of the team, thereby jeopardizing joint forces operating in Iraq and Afghanistan. The TJCSG ignored important points made by Point Mugu in responding to Question 47 of the data call. Experience in moving personnel from Warminster to Patuxent River in the 1990s showed that most urban personnel are not willing to move to a rural setting.

**Responses.** This argument bases its logic solely on meeting current capability needs and ignores the BRAC goal of positioning the military base infrastructure for the future. Consolidation of EW capability at China Lake would better position the Navy to meet future needs:

- China Lake is the tactical aircraft system integrator for the F/A-18, AV-8B, AH-1J, has the lead for China Lake-Point Mugu for EW on the Joint Strike Fighter Integrated Product Team, and will be responsible for integration of the next generation Navy EW platform, the EA-18G. Placing the full EW RDAT&E function at China Lake consolidates all of the EA-18G aircraft integration team. The EA-6B is being phased out of service starting in Fiscal Year 2009, about the time that the changeover to China Lake is scheduled in the BRAC recommendations. The EA-18E avionics system will be highly integrated with its EW pod

interacting with the aircraft sensor-avionics suite, including the Active Electronic Steered Array (AESA) radar. The radar itself will be an EW component. The entire weapons, system integration and test team including the Electronic Combat Range (Echo Range) operations would be integrated at one site, China Lake.

The Joint Strike Fighter and any future aircraft will use multiple shared airframe apertures instead of single boxes for avionics systems. The old way of constructing black boxes and sending them to be integrated into the aircraft is not feasible for the future. Attempting to preserve the dual site approach of today will seriously hamper the integration process. Now is the time to prepare for the future.

The transition from Point Mugu to China Lake will be managed to assure that current needs are fully met while bringing the long-term capability on line at acceptable cost.

- The present EW D&A team at Point Mugu is a senior group, and many members of the team will be retiring in the coming years. Bringing new scientists, engineers and technicians on board will be needed whether the team moves or not. The capability of the existing team must be retained insofar as possible while reconstituting its membership with the next generation engineers and technicians. The task, then, is one of managing the transition from the EA-6B to maintain a high competency for the present and near future, transitioning the needed capability for the EA-18G and follow-on platforms, and carrying forward into the future with a highly integrated, highly competent RDAT&E integrated weapons-avionics-EW team for the future.

Responsibility for implementing BRAC realignments lies with the Office of the Chief of Naval Operations (N-4). The Navy understands the importance of the EA-6B, and will not arbitrarily transfer the existing team to China Lake *en masse*, ignoring the losses of those who choose not to transfer. A transition plan will be developed that delays the move for some team members and provides temporary post-retirement employment for others as re-employed annuitants or contractors. In the next few years, as the EA-6B effort tails off and the EA-18G effort grows, the China Lake team will be built from Point Mugu transferees, engineers at China Lake, who have extensive EW and F/A-18 experience, and new hires.

- The responses to data calls, including Question 47, were reviewed by higher command, the Naval Air Systems Command (NAVAIR). NAVAIR officially supported the relocation from Point Mugu to China Lake.

One must not assume that China Lake and Ridgecrest have little to offer new employees. China Lake has been highly successful over the years, meeting its recruiting goals for both new entry and experienced scientists and engineers. The chart on the next page shows recruiting results for China Lake and Point Mugu since new hiring began in 2001. Ridgecrest offers an environment that can't be found in urban life – low cost housing, low crime, ten minute commute times to work, public safety that is the envy of any city,

and a friendly, relaxed atmosphere. At the same time “big box” merchants and other amenities are located there.

China Lake’s retention rate by Fiscal Year is shown in Table 1. If the BRAC recommendations are accepted, in just a few years, even before the last of the present EW experts retire, the Navy will have one integrated Center of Excellence for all aspects of air weapon systems that operates more efficiently and effectively than at the present two sites. The expertise will extend to weapons and armaments for surface platforms.

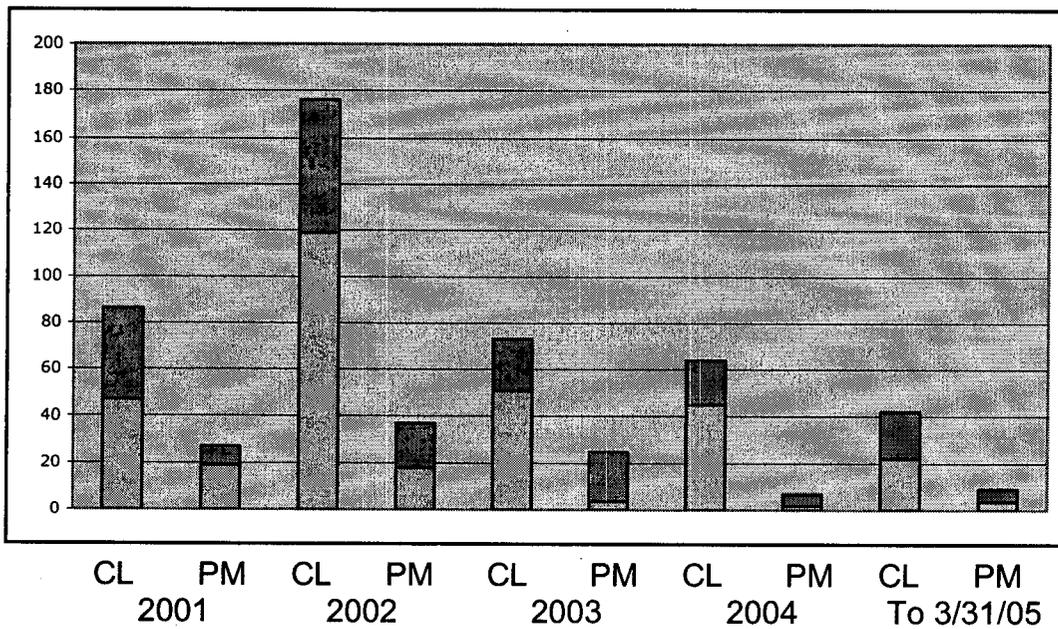


Figure 1. Hiring experience for FY 2001 to 3/31/05. The upper part of bar represents experienced scientists and engineers, the lower part recent graduates at the bachelors degree and above.

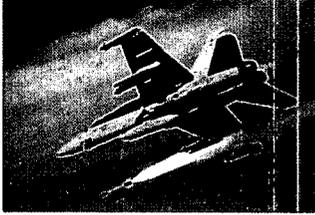
Fiscal Year	Retention Rate
Present	93.1 %
2004	93.9 %
2003	92.7 %
2002	93.4%
2001	92.9 %
2000	92.5 %
1999	89.9%
1998	86.5 %
1997	89.7 %
1996	88.7 %
1995	90.7 %

**Table 1. Retention Rates Since FY 1995.**

- The Warminster to Patuxent River experience was cited as an example to show that urban employees would not move to a rural area. As a matter of fact, this interesting example demonstrates the contrary, showing that consolidation can build a strong, full spectrum capability.
  - Data on moves of this type indicate that somewhere between 20 and 35 percent of the employees decide to move. Analysis of this data show a very low percentage of clerical and other lower paid employees choosing to move and a higher percentage of scientists and engineers. Experience has shown that 65 to 75 percent of those who move are skilled professionals and another 10 percent are technicians.
  - Prior to the consolidation, Patuxent River was a T&E base. The skilled R&D personnel who transferred from Warminster formed the cadre who transformed Patuxent River into a full spectrum RDT&E base.
  - The Naval Air Systems Command touts the realignments to Patuxent River as a success story, as well they should. In the military value rankings for aircraft and C4SI RDT&E, Patuxent River ranked high in the BRAC 2005 analyses.
  - At the time the realignment was announced, most Warminster personnel said they would never move. Enough moved, that by transition management, consolidating key people with talented personnel at Patuxent River, and hiring new people, the Naval Air Warfare Center Weapons Division is now a strong full spectrum center.
  - Warminster complained about loss of intellectual capital in the EP-3 move Patuxent River. The move was successfully accomplished.
  - A similar experience applies for the closure of the Naval Ordnance Laboratory in Corona around 1970 with the transfer of personnel and functions to China Lake.

The experience with the Warminster realignment and Naval Ordnance Laboratory closure are examples of the payoff in military value of realignment for consolidation of complementary capabilities.

**NAVAL AIR WEAPONS STATION  
CHINA LAKE**



China Lake Defense Alliance  
Ridgecrest, California  
July 2005  
BRAC Commission

7/8/05

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**OUR REQUESTS**

- Support Naval Integrated RDAT&E Center at China Lake Per DOD Recommendations
  - But reject decision to exempt Program Managers from move to China Lake
- Support relocating Sensors, Electronic Warfare and Electronics RDAT&E to China Lake
- Accept recommendations on aircraft intermediate maintenance and guns and ammunition

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**INTEGRATED RDAT&E CENTER  
MAKES SENSE**

- Meets criteria and SECDEF goals
- Scattering W&A across 10 bases
  - Wastes resources
  - Degrades focus
- Consolidating saves money
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- Highest military value
  - Most complete staff, laboratories and ranges
  - Full spectrum capability to support all aspects of weapons and armament RDAT&E
  - Not encroached, room to grow
- Cost Effective
- Community infrastructure can handle
- No environmental problems

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**MILITARY VALUE RANK**

WEAPONS & ARMAMENTS RDAT&E

ACQ		RESEARCH		T&E	
China Lake	0.4982	China Lake	0.5062	China Lake	0.6391
Dahlgren	0.4669	Indian Head	0.3336	Point Mugu	0.6238
Patuxent River	0.3660	Dahlgren	0.2834	Dahlgren	0.4055
Port Hueneme	0.3103	Patuxent River	0.1826	Patuxent River	0.1074
Indian Head	0.2782	Point Mugu	0.1770	Crane	0.0930
Point Mugu	0.2252	Crane	0.1754	Indian Head	0.0787
Crane	0.2292	Port Hueneme	0.1156	Port Hueneme	0.0622
Seal Beach	0.1424	Seal Beach	0.0375	Seal Beach	0.0564

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China Lake selection supports transformation:

- Joint service customers
- Combat aircraft-weapon integration - Level 5 rating by Software Engineering Institute
  - EA-18G EW aircraft and JSF on horizon
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**SEA RANGE IS VITAL**

- Critical joint service asset that must be preserved
- Issue is how many stay at Mugu-San Nicolas and what moves to China Lake

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- Everything doesn't need to stay at Point Mugu
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  - Other functions should go to China Lake as recommended by TJCSG per certified China Lake-Pt Mugu-Navy data
- Value in consolidating functions that aren't needed on the Sea Range premises

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If management is at RDAT&E Center:

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- Manager travel cost offset by reduced technical travel
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- Management at field locations successful at Eglin AFB, Redstone Arsenal, Wright Patterson AFB (Aircraft) and C4IS-SPAWAR San Diego
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**ELECTRONIC WARFARE SHOULD BE CONSOLIDATED AT CHINA LAKE**

- China Lake appropriate location for consolidation
  - Payoff in 6 years vice 12 years (TJCSG used wrong factor in calculations)
  - Split staff inefficient
- China Lake higher overall military value
  - EW competency
- Leverage transition from EA-6B to EA-18G
  - China Lake integration team
- Weapons, EW and platform integration are closely related
  - Co-location promotes synergism

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**SENSORS, EW & ELECTRONICS MILITARY VALUE**

Dev. & Acq.		Research		Test & Eval.	
Pt. Mugu	0.3495	China Lake	0.3594	China Lake	0.5610
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**COMMUNITY**

- "Navy town" can handle influx
- BRAC recommendations bring China Lake work force to pre-downsizing level
- Ready for proposed transfers and indirect growth
  - Basic resources in place
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**CONCLUSIONS**

We respectfully recommend Commission:

- Approve creation of Naval Integrated Weapons and Armaments RDAT&E Center at China Lake
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  - Resist proposals to truncate/reduce moves
- Approve relocation of Sensors, Electronic Warfare and Electronics RDAT&E to China Lake

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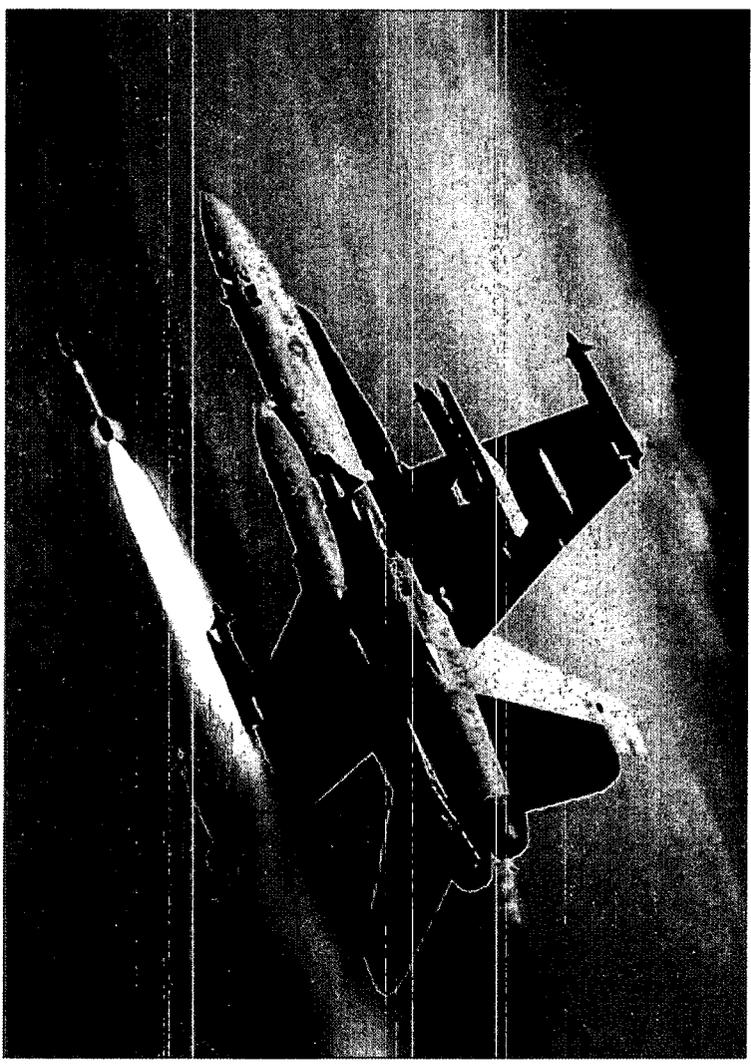
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# NAVAL AIR WEAPONS STATION CHINA LAKE



DCN: 5169

China Lake Defense Alliance  
Ridgecrest, California

July 2005

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