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**NAWC CHINA LAKE**

**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.

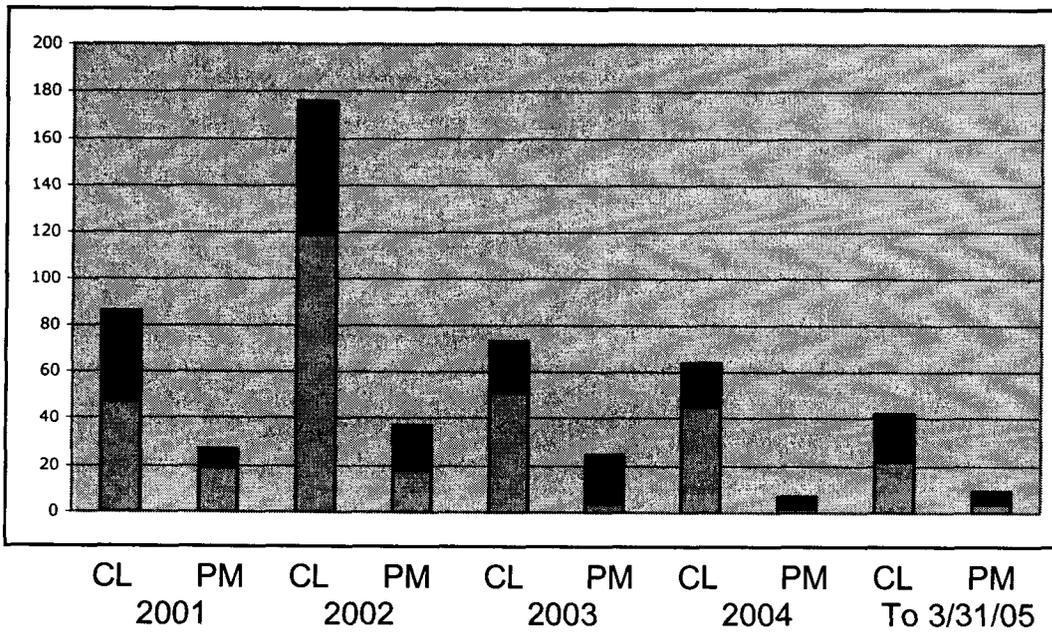


Figure 1. Hiring experience for FY 2001 to 3/31/05. The upper part of bar represents experienced scientists and engineers, the lower part recent graduates at the bachelors degree and above.

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.

NBVC - Point Mugu +  
China Lake  
(Rec# 184 & 190)

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

**From:** Shibley, Eileen P CIV BRAC [eileen.shibley@navy.mil]  
**Sent:** Wednesday, August 17, 2005 11:06 AM  
**To:** lester.farrington@wso.whs.mil  
**Cc:** Hamm, Walter B. Col BRAC  
**Subject:** Sensors, Elex, EW

Les,  
Providing following data, as requested.

From the Supplemental Capacity Data call, the following FTE numbers were certified for FY03 Technical workload in the DTAP area of Sensors, Electronics, and EW:

	China Lake	Point Mugu
Research	129.8	6.7
T&E	146.6	58.4
D&A	260.3	265.4
Total	536.7	330.5

During the Technical scenario data call TECH-0054, the number reported for Mugu is 368.

*Eileen P. Shibley*

DASN (IS&A)  
703-602-6424

NAWC - CHINA LAKE

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

**From:** Phil Arnold [phil@iwvisp.com]  
**Sent:** Friday, August 19, 2005 4:27 PM  
**To:** Farrington, Lester, CIV, WSO-BRAC; David.Epstein@wso.whs.mi  
**Cc:** Bill Porter  
**Subject:** Additional comments on BRAC recommendations

CA  
Rec #'s  
15 E 28

**Attachments:** Create a Naval Integrated Weapons.doc; Realign EW.doc; ATT391227.txt



Create a Naval Integrated Weap...    Realign EW.doc (23 ATT391227.txt (80 KB)    B)

David and Les,

Bill Porter and I have put together the attached papers to try to capture the principal arguments in the debates concerning the Naval Integrated RDATE Center and realignment of EW from Point Mugu to China Lake. We hope these more concise statements might be useful to you.

Phil

## **Create a Naval Integrated Weapons & Armaments Research, Development and Acquisition, Test and Evaluation Center at China Lake**

August 19, 2005

Does creating an integrated Weapons and Armament RDAT&E Centers make sense?

Yes:

- For the Navy it consolidates W&A work currently scattered.
- Focuses the limited funding for weapons
- Focuses the Navy's weapons expertise.
- Cost effective (saves more than \$50 million each year)

Is China Lake the right place?

Yes:

- China Lake has been the DOD Center of Excellence for Tactical Weapons,
- Highest Military Value
- Most complete staff, labs and ranges
- Not encroached, room to grow
- No environmental problems
- Largest restricted airspace in Country
- The location of choice for the Navy Center.

Issues: The major issue has been confusion over the personnel that operate the Pt. Mugu Sea Range. This has been resolved by all agreeing that the personnel needed to operate the Sea Range should remain at Pt. Mugu.

Other oft repeated issues raised are that people don't want to move, organizations don't want to lose the people, the numbers are wrong, Brain Drain, the cost is wrong, etc. The oft repeated arguments. No major TJCSG mistakes which would change the outcome.

Recommendation: That the BRAC Commission approve the realignments that establish the Naval Integrated Weapons & Armaments RDAT&E at China Lake

**REALIGNING EW RDAT&E FROM POINT MUGU TO CHINA LAKE:  
THE REAL ISSUE**

August 19, 2005

Issues of varying importance associated with Sensors, Electronic Warfare (EW) and Electronics have been addressed in testimony before the BRAC Commission and subsequent correspondence to the BRAC Commission professional staff. We believe the crux of the debate can be boiled down to one basic issue: the extent of long term military value versus the near term risk associated with short-term loss of human capital.

**Extent of Long Term Military Value**

**Claims by Advocates of Realignment:**

- Next generation combat aircraft represent significant steps forward in integrating the full electronic warfare (EW), sensors and weapons suite over earlier aircraft such as the retiring EA-6B. The EA-18G is a fully integrated EW weapon system in which two crewmen replace the four in the older EA-6B aircraft. Members of the integration team must work closely together to achieve the needed automation and to realize the potential improved capabilities. The JSF is an even more radical departure using common apertures and eliminating black boxes. Co-location enhances teamwork and reduces operating costs.

**Claim by Opponents of Realignment:**

- No improvement in capability or cost will be realized by co-locating the integration team.

**Risk Associated with Near-Term Intellectual Capital Loss:**

**Claim by Opponents of Realignment:**

- The majority of personnel choose not to move during previous realignments. Near-term loss of intellectual capital will be devastating to our forces engaging the enemy in Iraq and Afghanistan and other potential conflicts in the interim until a viable team could be assembled in China Lake.

**Claims by Advocates of Realignment:**

- Roughly a third of employees have chosen to move in past realignments, and one must plan that a majority of potential transferees will choose not to move. That is the cost of realignment. Of those who chose to move in the past, the great majority were senior people critical to the projects on which they worked and great success was achieved in past moves to Patuxent River and China Lake. Today's high cost of housing, traffic issues and other urban life penalties of the West Coast environment might increase the ratio of those choosing to move.

- Near-term loss of intellectual capital during planned transition period can be managed by allowing key team members to continue on site as employees, re-employed annuitants or contractors. The relocated team would be built from those who choose to transfer, experts at China Lake, and from recruitment of employees by China Lake. They point to the superior recruitment record of China Lake, which would enhance the long-term effectiveness of the EW effort independent of other military value enhancements.

**Recommendation.** BRAC Commission approve the DoD recommendation to realign Sensors, Electronic Warfare and Electronics RDAT&E from Point Mugu to China Lake.

**Create a Naval Integrated Weapons & Armaments Research, Development and Acquisition, Test and Evaluation Center at China Lake**

August 19, 2005

Does creating an integrated Weapons and Armament RDT&E Centers make sense?

Yes:

- For the Navy it consolidates W&A work currently scattered.
- Focuses the limited funding for weapons
- Focuses the Navy's weapons expertise.
- Cost effective (saves more than \$50 million each year)

Is China Lake the right place?

Yes:

- China Lake has been the DOD Center of Excellence for Tactical Weapons,
- Highest Military Value
- Most complete staff, labs and ranges
- Not encroached, room to grow
- No environmental problems
- Largest restricted airspace in Country
- The location of choice for the Navy Center.

Issues: The major issue has been confusion over the personnel that operate the Pt. Mugu Sea Range. This has been resolved by all agreeing that the personnel needed to operate the Sea Range should remain at Pt. Mugu.

Other oft repeated issues raised are that people don't want to move, organizations don't want to lose the people, the numbers are wrong, Brain Drain, the cost is wrong, etc. The oft repeated arguments. No major TJCSG mistakes which would change the outcome.

Recommendation: That the BRAC Commission approve the realignments that establish the Naval Integrated Weapons & Armaments RDT&E at China Lake

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

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**From:** Bill Porter [wbpmfp@iwvisp.com]  
**Sent:** Monday, August 08, 2005 7:32 PM  
**To:** Farrington, Lester, CIV, WSO-BRAC  
**Cc:** Phil Arnold  
**Subject:** BRAC Realignments To China Lake

**Attachments:** BRAC Recommendations Overview.doc; T&E Issues.doc; EW July 18. Rev



BRAC  
Recommendations Overview



T&E Issues.doc (29  
KB)



EW July 18. Rev  
(62 KB)

The Honorable Anthony Principi, Chair

Base Closure and Realignment Commission  
2521 South Clark Street, Suite 600  
Arlington, VA 22202

Dear Mr. Principi:

We wish to express our support for the BRAC recommendations made by the Secretary of Defense to create a Naval Integrated Weapons and Armaments RDT&E Center at China Lake and to realign the Sensors, Electronic Warfare and Electronics RDT&E from Point Mugu to China Lake. These forward looking recommendations fully support the BRAC goals to position the country's base infrastructure to meet our armed forces needs for the 21st century.

Issues have been raised concerning realignments from Pt. Mugu to China Lake. We sent papers on the issues to the Commission staff and to Philip Coyle. Mr. Coyle replied and suggested that we arrange for all Commissioners to receive our papers.

The papers are attached.

We thank you and all the Commission members for your commitment to a very important and difficult assignment.

Bill Porter  
Co-chair China lake Defense Alliance  
760-446-1034

--- Forwarded Message

From: Philip Coyle <martha.krebs@worldnet.att.net>  
Date: Wed, 03 Aug 2005 12:09:07 -0700  
To: Bill Porter <wbpmfp@iwvisp.com>  
Cc: Phil Arnold <phil@iwvisp.com>  
Subject: Re: BRAC Issues

Dear Bill: Many thanks for the attachments. I was unable to join the BRAC Commission staff when they visited China Lake due to a commitment to visit another base the same day outside of California. Also, given the time available, Commissioners have had to give priority to bases proposed to lose personnel due to realignment or closure, while the staff has visited bases proposed to gain.

Having visited China Lake several times over the years, I believe I have an appreciation for the fine work done at China Lake. When I was in the Pentagon and since, I have done my best to champion China Lake and other test ranges whose work is so vital. The quality and scope of the work at China Lake is world class. The people and facilities at China Lake are indeed impressive, and the people there can be justifiably proud of their work.

If you haven't already done so, please arrange for all Commissioners to receive your

DCN: 12279  
attachments. Since the staff already have these attachments, perhaps they could print them out for all Commissioners, and save you a few steps.

Thanks again and best regards,

Phil

July 29, 2005

**China Lake Defense Alliance Summary Comments to the Commission Staff  
on BRAC Recommendations Affecting China Lake**

After plowing through the issues and allegations on the Naval Integrated Weapons and Armaments RDT&E Center and the consolidated Sensors, Electronic Warfare and Electronics RDT&E Center, we think there can be a danger that the main thrusts of the recommendations can get lost in the details. At least, we were concerned that we might allow ourselves to get so caught up in the minutia that we would lose the big picture that the Technical Joint Cross Service group was painting. Hence, this paper.

To us, the best outcome of the BRAC assessments would have been recommendations for full joint service use of the existing service RDT&E centers, particularly in aviation where the services develop joint requirements and develop joint systems. In the arena of most interest to us, the recommendations to create integrated aircraft and weapon RDT&E centers in each service was the next best outcome in our opinion. At least at the service level, the assets would coalesce into capable, competent centers able to tackle the problems of applying advanced technology to the military problems of a difficult future. These centers would contribute to the transformation of our military capability for the new century. The Joint Cross Service Group's concerns about nurturing competition of ideas would be served by maintaining centers in each service.

This coalescing of capability is particularly needed in the Navy, which has scattered its weapon RDT&E capability at many facilities despite a long-term reduction in funds for research and technology and development of fewer new systems. One of the pillars of transformation is application of advance technology to meet new threats. Creating the integrated centers focuses resources, but more than that, it focuses the limited funding and supply of brainpower on the problems at hand.

Most people don't want to move, and most organizations don't want to lose people. Everybody is creative in finding reasons why something they see as unpleasant can't or shouldn't be done. During the Commission review phase of BRAC, we're sure that you've heard a hundred reasons why the recommendations shouldn't be accepted, or that the data calls weren't properly formulated or properly interpreted, or why their product is essential to the war effort, and so on. We suggest stepping back and asking the question for each major recommendation, "Does this make sense?" Not each nit, not each difficulty in implementing. Does forming integrated RDT&E centers make sense? If it does make sense, in our case is China Lake the place to form the integrated weapons and armaments center?

We think the answers to these questions for weapons and armaments are yes. If the answers are yes, the BRAC Commission should approve the recommendation and let the Navy fight out the details, and respond to the naysayers during implementation. There is no doubt that the implementation phase will have plenty of roadblocks and controversy,

but the big decision will have been made to create one integrated center, and the outcome will be an improved capability.

We believe that the Technical Joint Cross Service Group also had a vision for improved integration of the next generation combat aircraft by recommending the relocation of the Point Mugu electronic warfare capability to China Lake. China Lake's record speaks for itself in identifying key problems and creating effective, affordable solutions. This move brings problems that all realignments bring in dealing with a loss of intellectual capital. We strongly believe that the existing electronic warfare capability at China Lake shouldn't be overlooked, but we don't want to give the impression that Point Mugu's team isn't needed for the near term, particularly while the EA-6B remains our main electronic warfare asset.

We think that we should focus first on the long-term goals of BRAC, and if we do, the electronic warfare realignment not only makes sense, but plays an important part in supporting our future air warfare capability – transformation, if you will. We are certain that there are many mechanisms to support the present needs – maintaining personnel at Point Mugu during an extended transition, offering rehired annuitant positions, contracting, etc. while the team is building up in China Lake. The new team would be made up of Point Mugu personnel who move, China Lake electronic warfare experts who have been working in other areas after the work moved from the Lake to Point Mugu, and new hires at the journeyman and entry levels. Remember that China Lake has a superior recruitment record than Point Mugu for reasons discussed in earlier papers, also important for maintaining future capability.

The point is, at the end, if the recommendations hold, a full-spectrum, integrated RDAT&E center will be established at China Lake that is competent in all aspects of weapons and weapons technology, and fully capable of all aspects of aircraft weapon system integration including weapons, sensors, electronic warfare and mission avionics. The integration team will be operating at the very peak of software development competency, Level 5, as rated by the independent Software Engineering Institute at Carnegie Mellon Institute.

While it's important to examine every allegation and every assertion, the key is to decide what ultimately makes the most sense for the future. We believe that the recommendations of the Secretary of Defense for weapons and armaments and electronic warfare make the most sense for the future. Don't let issues such as Sea Range personnel stationing or near-term support of the EA-6B obscure the vision of a truly integrated Weapons and Armaments and Electronic Warfare RDAT&E Center to support the joint forces of the future.

## **Naval Integrated Weapons and Armaments RDAT&E Center Issues on Sea Range Staffing and Support**

August 1, 2005

### **Introduction**

The Technical Joint Cross Service Group (TJCSG) proposed and Secretary of Defense accepted creating an Integrated Weapons and Armaments Research, Development & Acquisition and Test & Evaluation Center in each service. The recommendation for the Navy was a complex one, affecting 10 bases and creating two specialty centers as well as the integrated center.

Ventura County challenged the recommendation in testimony at the Los Angeles Regional Hearing held by the BRAC Commission on July 14, 2005. The Ventura County challenge alleged significant military value and cost analysis errors, mostly based on an assumption that all or most of the Sea Range personnel and all of the equipment except instrumentation will be moved from the shore installations of the Sea Range to China Lake.

### **China Lake Defense Alliance Position**

The creation of an Integrated Weapons and Armaments RDAT&E Center consolidates human, laboratory and range RDAT&E assets instead of scattering them in enclaves around the country. Consolidation will save money, but more importantly, will efficiently focus the Navy's weapons technological resources at a site with the assets best able to produce advanced weapon systems for the future. Naval aviation weapon systems are one beneficiary of this recommended consolidation because, with the complementary recommendation to focus sensors, electronic warfare and electronics RDAT&E, a closely knit, co-located team will be established to support the fully integrated air combat platforms of the future – the EA-18G, Joint Strike Fighter and versatile uninhabited air vehicles with their weapons, sensors, electronic warfare and other avionics integrated by a close-knit team.

China Lake has the staff, laboratories and ranges to cover most of the needs of an integrated RDAT&E center, but the installation lacks a sea range. The Point Mugu Sea Range, the world's best offshore range, is a vital DOD asset for joint testing of weapons and platforms at sea and must be preserved. Personnel and equipment must be located on shore at Point Mugu and San Nicolas Island to support test needs for air and sea platforms as well as space launches at nearby Vandenberg Air Force Base. The issue is what can move to China Lake to realize greater efficiencies and improved coordination and what must stay at Point Mugu-San Nicolas Island.

The Navy and China Lake-Point Mugu technical managers have the best understanding of Sea Range needs, and they can and will sort out the work requirements during the BRAC implementation phase. They can make transfer decisions that will maintain the Sea Range's operational capability with an efficient division of labor and equipment

between China Lake and Point Mugu. We agree with the Navy official's answer to a General Accountability Office question reported in their July 2005 report on BRAC, "If the recommendation is approved, the Navy will decide the best way to manage the range, including the appropriate number of employees to retain at Point Mugu, during implementation."

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

The Ventura County witnesses made many allegations at the Los Angeles Regional Hearing concerning the percentage of people who will be willing to move, alleged cost errors, and a reference to transformation. Most of these allegations are without merit and don't need to be answered here. A detailed response to each allegation and assertion is contained in another paper submitted to the BRAC Commission Staff on July 28, 2005. Of course the assertion that people won't move is irrelevant since we agree that those personnel needed to operate the ranges should stay where they are.

**Assertions.** The range cannot function with all of its personnel located at China Lake. The test and evaluation function at the Sea Range covers a variety of missions beyond simply testing weapons with a variety of customers. It makes no sense to base the large patrol aircraft needed to support range operations at China Lake nor to merge the test squadron with the squadron at China Lake at an inland location far from the range.

#### **Responses.**

- It is correct that range operating personnel should not be moved from the range. At the present time there are 550 - 600 civil servants and military personnel at Point Mugu assigned to T&E operations, T&E support functions, or T&E management functions. We have made a cursory review of a possible personnel breakout between Point Mugu-San Nicolas Island and China Lake, and the split might be on the order of half at each location. However, it makes sense for the location assignments to be made after careful review and discussions between the technical managers at Point Mugu and China Lake. The decisions can best be made by the technical leadership most familiar with range operations in the context of the overall organization. These decisions should be the first order of business in the implementation phase after BRAC decisions are final.

- Although the Radar Reflectivity Laboratory is not part of the range organization at Point Mugu, we state for the record that we believe this facility should stay at Point Mugu for as long as it can meet the Navy and joint service needs. We don't advocate rebuilding facilities when it makes economic sense to leave them where they are and there aren't long-term military value benefits.

- We take no issue with the statement that the Sea Range has many customers other than weapons and armaments testing. For that matter, China Lake has customers in areas other than weapons and armaments and electronic warfare. Creation of an Integrated Weapons and Armaments RDAT&E Center doesn't preclude Point Mugu Sea

Range personnel from supporting all of the customers they presently serve. The issue is who and what needs to remain at Point Mugu to do the job.

- The several P-3S and C-130S aircraft perform a variety of missions – range safety, surveillance and clearance, target launches, telemetry, command destruct, photometrics, and logistics. While siting these aircraft at China Lake with the high performance test aircraft will provide cost savings by consolidating maintenance operations, it might make more sense to keep the large aircraft closer to their operating area. That decision, like locating T&E personnel, should be made by the China Lake-Point Mugu technical managers at the start of the implementation phase.

- VX-30 and VX-31 were established to support the missions of the two installations when China Lake and Point Mugu were realigned into the Naval Air Warfare Center Weapons Division. In the early years the F-14 was still operational and the test load at Point Mugu was larger than it is today. The VX-30 squadron is much smaller today, and if the two C-130 and three P-3 aircraft are excepted, there are only 6 F/A-18 aircraft of the oldest F/A-18A variety left in the squadron. VX-30 and VX-31 form a small test wing with a staff commanded by a Navy Captain. The administrative burden of an air wing staff is unneeded and costly. The more modern F/A-18 aircraft are stationed at China Lake in larger numbers with a heavier test and evaluation workload. Most tests on the Sea Range can be accomplished from China Lake based aircraft without refueling, but for longer endurance operations, refueling can be accomplished at the Point Mugu airfield from Air National Guard assets or by airborne tankers furnished by the Air National Guard. Merging VX-30 and VX-31 will save money and consolidate assets while eliminating the unnecessary air wing staff. If the decision is made to leave the P-3 and C-130 aircraft at Point Mugu, a detachment can remain there. If the Navy decides a wing organization is needed, the squadron at China Lake can be assigned to the larger test wing headquartered at Patuxent River.

- It is important that issues regarding Sea Range personnel and support not cause distraction from the primary purpose of creating the Naval Integrated Weapons and Armaments RDAT&E Center to consolidate and focus the Navy's scattered weapons and armaments assets.

In summary, range personnel and equipment are and should be based on T&E needs. A BRAC decision to form an Integrated Weapons and Armaments RDAT&E Center will not change the basic needs to support the Sea Range or any other functional element of the center. Decisions and assignments will be made by the Office of the Chief of Naval Operations (N4) in consultation with the Naval Air Systems Command and the management of the Naval Air Warfare Center Weapons Division. The analyses and final recommendations should be made by the China Lake and Point Mugu technical managers best qualified to make good decisions.

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

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.

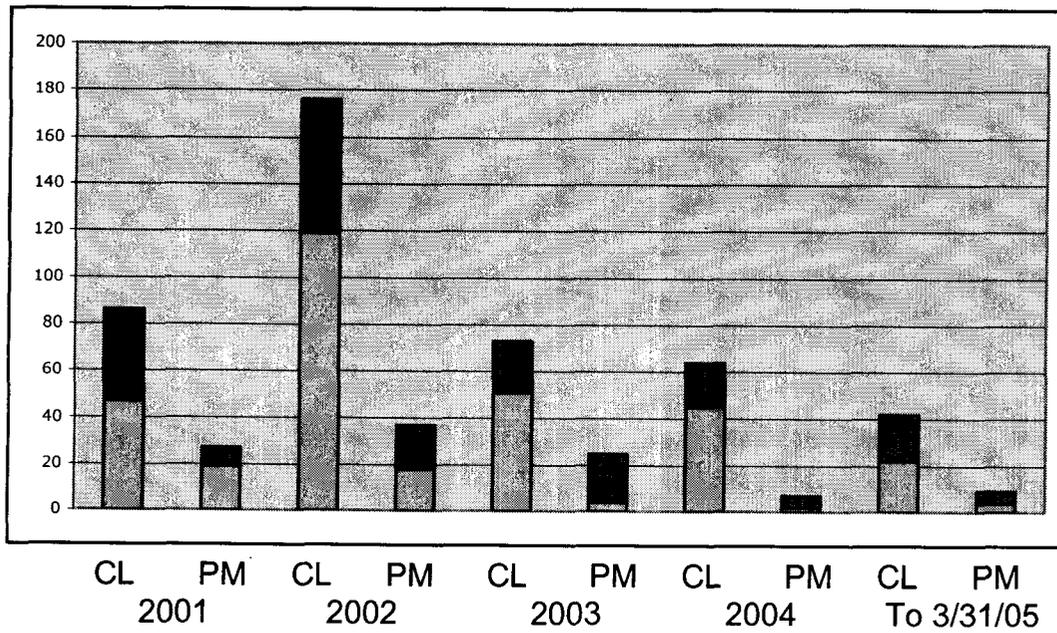


Figure 1. Hiring experience for FY 2001 to 3/31/05. The upper part of bar represents experienced scientists and engineers, the lower part recent graduates at the bachelors degree and above.

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 Aircraft Division is now a strong full spectrum center.
  - 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.

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

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**From:** Shibley, Eileen P CIV BRAC [eileen.shibley@navy.mil]  
**Sent:** Thursday, August 11, 2005 11:58 AM  
**To:** Farrington, Lester, CIV, WSO-BRAC  
**Subject:** News Review article from yesterday

Les,  
Not sure if you guys have seen this yet. It was published yesterday in the News Review, a local Ridgecrest paper.  
Eileen

# **NAVAIR supports Mugu realignment**

Adm. Massenburg endorses DoD plan to move jobs here from Pt. Mugu, elsewhere

By ADAM L. R. SUMMERS  
News Review Staff Writer

Naval Air Systems Command's top officer, Vice Adm. Walter B. Massenburg, voiced his support for the Department of Defense's recommendation to move thousands of positions from other bases - including Naval Air Station Pt. Mugu - to China Lake.

Massenburg expressed his support in response to an inquiry from the News Review last week regarding a growing number of reports that Navy officials were trying to influence the 2005 Defense Base Realignment and Closure Commission to scale back the realignment of Pt. Mugu, which is based at Naval Base Ventura County. The News Review received several reports that NAVAIR officials had made statements that - depending upon interpretation - could show bias on the officials' part toward preserving Pt. Mugu's present operations. But these reports could not be confirmed by first-hand sources.

Then our office received word that Rep. Bill Thomas had communicated similar concerns to Secretary of Defense Donald Rumsfeld. Although Thomas' office did not provide details of the communication, the congressman's staff confirmed that he had written a private letter to Rumsfeld in which he addressed reports of NAVAIR officers attempting to influence BRAC officials to scale back Pt. Mugu's realignment and asked the secretary to review the matter.

With confirmation of Thomas' letter, the News Review contacted Massenburg's public affairs office and requested an interview with him or his vice commander, Rear Adm. Michael Bachmann, a former commander of the Naval Air Warfare Center, Weapons Division.

The admirals denied the request for an interview, citing concerns that discussing the BRAC process while it is ongoing would be inappropriate, said NAVAIR Deputy Public Affairs Officer Bob Coble.

In a prepared statement approved by NAVAIR, Coble said "Vice Adm. Massenburg and Rear Adm. Bachmann continue to support both the department's recommendations concerning base realignment and closure as well as the BRAC Commission's deliberations within the BRAC process."

He pointed out that in all-hands briefings to personnel at China Lake and Pt. Mugu, Massenburg "started by affirming NAVAIR's commitment to the BRAC process and support of the BRAC Commission visits by providing complete, accurate and truthful information."

"We're pleased to hear that the commander, Naval Air Systems Command, supports the BRAC recommendations," said China Lake Defense Alliance Co-chair Phil Arnold.

Co-chair Bill Porter pointed out that he and other supporters of China Lake have long made the case that, given a level playing field in which military value and future capability were the factors used to judge bases, China Lake should receive an increase in its role in national defense.

For that reason, he said, he is glad that Massenburg has publicly affirmed NAVAIR's commitment to participate openly and fully with the BRAC Commission.

Thomas highlighted some of China Lake's advantages for national defense in a letter dated July 28 to Anthony Principi, chairman of the BRAC Commission.

In the letter, the congressman noted that China Lake shares with Edwards Air Force Base and Ft. Irwin "the largest overland complex of military-controlled airspaces in the country."

Bringing together a Naval Integrated Weapons Center of Excellence at China Lake will support the future of electronic warfare systems development as sophisticated electronic systems become increasingly integrated into military aircraft, Thomas said, pointing out that the next-generation Joint Strike Fighter has sophisticated sensors built into the airframe during production instead of sensors added separately as has been the case with older airframes.

China Lake also has the full support of the Ridgecrest community, he said, describing how the city's officials worked with a developer to move a proposed construction site for new apartments from its original location under the flight path to Armitage Field to another location that would not have the potential to encroach on military operations.

Thomas also countered previous claims that the city could not attract personnel from other parts of the country, pointing out the city's breadth of available housing, many amenities, access to retail shopping and close proximity to excellent recreational activities.

*Eileen P. Shibley*

DASN (IS&A)

703-602-6424

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

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**From:** Phil Arnold [phil@iwvisp.com]  
**Sent:** Monday, August 01, 2005 2:11 PM  
**To:** Farrington, Lester, CIV, WSO-BRAC; david.epstein@wso.whs.mil  
**Cc:** Bill Porter  
**Subject:** Last installment of [REDACTED]

**Attachments:** T&E Issues.doc; The Future Role of Electronic Warfare.v1.doc; BRAC Recommendations Overview.doc



T&E Issues.doc (30 KB) The Future Role of Electronic ... BRAC Recommendations Overvi

Les and Davis,

At last we have completed the attached papers which cover everything we intend to send unless you have questions or concerns. We hope they are useful. As a companion to the comments sent earlier on EW issues and the point by point commentary on the Ventura County BRAC Task Force testimony, we are attaching a short set of comments on Sea Range staffing and support and two other papers.

One is a paper given to us by a local contractor who is a former EW aviator who is much more qualified than Bill or I or most other people on where EW is going and how it affects the aircraft of the future and system integration in the future.

The short paper, "BRAC Recommendations Overview", was generated because of our concern that we might find ourselves losing sight of the big picture that the TJCSG and DOD were painting for BRAC. We don't want to get so absorbed in the pieces in responding to allegations that we lose sight of the larger objectives.

Bill Porter and I are considering making a trip to the DC area early next week. We don't want to be pests who waste your time when we know you're extremely busy, but we could stop be to answer any questions or address any concerns on your part. After you have a chance to scan the attachments, we'll give a call to see if a visit would be worthwhile for you.

Phil

## **Naval Integrated Weapons and Armaments RDAT&E Center Issues on Sea Range Staffing and Support**

August 1, 2005

### **Introduction**

The Technical Joint Cross Service Group (TJCSG) proposed and Secretary of Defense accepted creating an Integrated Weapons and Armaments Research, Development & Acquisition and Test & Evaluation Center in each service. The recommendation for the Navy was a complex one, affecting 10 bases and creating two specialty centers as well as the integrated center.

Ventura County challenged the recommendation in testimony at the Los Angeles Regional Hearing held by the BRAC Commission on July 14, 2005. The Ventura County challenge alleged significant military value and cost analysis errors, mostly based on an assumption that all or most of the Sea Range personnel and all of the equipment except instrumentation will be moved from the shore installations of the Sea Range to China Lake.

### **China Lake Defense Alliance Position**

The creation of an Integrated Weapons and Armaments RDAT&E Center consolidates human, laboratory and range RDAT&E assets instead of scattering them in enclaves around the country. Consolidation will save money, but more importantly, will efficiently focus the Navy's weapons technological resources at a site with the assets best able to produce advanced weapon systems for the future. Naval aviation weapon systems are one beneficiary of this recommended consolidation because, with the complementary recommendation to focus sensors, electronic warfare and electronics RDAT&E, a closely knit, co-located team will be established to support the fully integrated air combat platforms of the future – the EA-18G, Joint Strike Fighter and versatile uninhabited air vehicles with their weapons, sensors, electronic warfare and other avionics integrated by a close-knit team.

China Lake has the staff, laboratories and ranges to cover most of the needs of an integrated RDAT&E center, but the installation lacks a sea range. The Point Mugu Sea Range, the world's best offshore range, is a vital DOD asset for joint testing of weapons and platforms at sea and must be preserved. Personnel and equipment must be located on shore at Point Mugu and San Nicolas Island to support test needs for air and sea platforms as well as space launches at nearby Vandenberg Air Force Base. The issue is what can move to China Lake to realize greater efficiencies and improved coordination and what must stay at Point Mugu-San Nicolas Island.

The Navy and China Lake-Point Mugu technical managers have the best understanding of Sea Range needs, and they can and will sort out the work requirements during the BRAC implementation phase. They can make transfer decisions that will maintain the Sea Range's operational capability with an efficient division of labor and equipment

between China Lake and Point Mugu. We agree with the Navy official's answer to a General Accountability Office question reported in their July 2005 report on BRAC, "If the recommendation is approved, the Navy will decide the best way to manage the range, including the appropriate number of employees to retain at Point Mugu, during implementation."

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

The Ventura County witnesses made many allegations at the Los Angeles Regional Hearing concerning the percentage of people who will be willing to move, alleged cost errors, and a reference to transformation. Most of these allegations are without merit and don't need to be answered here. A detailed response to each allegation and assertion is contained in another paper submitted to the BRAC Commission Staff on July 28, 2005. Of course the assertion that people won't move is irrelevant since we agree that those personnel needed to operate the ranges should stay where they are.

**Assertions.** The range cannot function with all of its personnel located at China Lake. The test and evaluation function at the Sea Range covers a variety of missions beyond simply testing weapons with a variety of customers. It makes no sense to base the large patrol aircraft needed to support range operations at China Lake nor to merge the test squadron with the squadron at China Lake at an inland location far from the range.

### **Responses.**

- It is correct that range operating personnel should not be moved from the range. At the present time there are 550 - 600 civil servants and military personnel at Point Mugu assigned to T&E operations, T&E support functions, or T&E management functions. We have made a cursory review of a possible personnel breakout between Point Mugu-San Nicolas Island and China Lake, and the split might be on the order of half at each location. However, it makes sense for the location assignments to be made after careful review and discussions between the technical managers at Point Mugu and China Lake. The decisions can best be made by the technical leadership most familiar with range operations in the context of the overall organization. These decisions should be the first order of business in the implementation phase after BRAC decisions are final.

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Range personnel from supporting all of the customers they presently serve. The issue is who and what needs to remain at Point Mugu to do the job.

- The several P-3S and C-130S aircraft perform a variety of missions – range safety, surveillance and clearance, target launches, telemetry, command destruct, photometrics, and logistics. While siting these aircraft at China Lake with the high performance test aircraft will provide cost savings by consolidating maintenance operations, it might make more sense to keep the large aircraft closer to their operating area. That decision, like locating T&E personnel, should be made by the China Lake-Point Mugu technical managers at the start of the implementation phase.

- VX-30 and VX-31 were established to support the missions of the two installations when China Lake and Point Mugu were realigned into the Naval Air Warfare Center Weapons Division. In the early years the F-14 was still operational and the test load at Point Mugu was larger than it is today. The VX-30 squadron is much smaller today, and if the two C-130 and three P-3 aircraft are excepted, there are only 6 F/A-18 aircraft of the oldest F/A-18A variety left in the squadron. VX-30 and VX-31 form a small test wing with a staff commanded by a Navy Captain. The administrative burden of an air wing staff is unneeded and costly. The more modern F/A-18 aircraft are stationed at China Lake in larger numbers with a heavier test and evaluation workload. Most tests on the Sea Range can be accomplished from China Lake based aircraft without refueling, but for longer endurance operations, refueling can be accomplished at the Point Mugu airfield from Air National Guard assets or by airborne tankers furnished by the Air National Guard. Merging VX-30 and VX-31 will save money and consolidate assets while eliminating the unnecessary air wing staff. If the decision is made to leave the P-3 and C-130 aircraft at Point Mugu, a detachment can remain there. If the Navy decides a wing organization is needed, the squadron at China Lake can be assigned to the larger test wing headquartered at Patuxent River.

- It is important that issues regarding Sea Range personnel and support not cause distraction from the primary purpose of creating the Naval Integrated Weapons and Armaments RDAT&E Center to consolidate and focus the Navy's scattered weapons and armaments assets.

In summary, range personnel and equipment are and should be based on T&E needs. A BRAC decision to form an Integrated Weapons and Armaments RDAT&E Center will not change the basic needs to support the Sea Range or any other functional element of the center. Decisions and assignments will be made by the Office of the Chief of Naval Operations (N4) in consultation with the Naval Air Systems Command and the management of the Naval Air Warfare Center Weapons Division. The analyses and final recommendations should be made by the China Lake and Point Mugu technical managers best qualified to make good decisions.

The Future Role of Electronic Warfare  
And  
The Need for Integrated Development

Historically, EW has been centered towards self-protection equipment (platform centric) such as radar warning, expendables and/or jammers. Stand Off Jammers (SOJ) such as the EA6B and the retired EF-111 were developed to mask the strike force for increased protection against hostile missile guided radars. As such, EW equipment was developed for a specific function with very little to no integration of other avionics on-board. And in many events, interfered with own platform systems. This is no longer the case. Information Operations (IO) has been defined as a much broader field that encompasses traditional EW but also includes computer and network attacks, deception, denial, and collection of hostile force information. As well as protection of friendly force communications and tactical information that traditional EW could not execute alone. A System of Systems (SoS) concept or NetCentric Warfare where platform weapons sensors are not only highly integrated which provide sensor fusion and a more accurate, unambiguous situational awareness of the battle space but are also required to transmit and receive information among the multiple off-board sensors such as satellites, UAVs, Early Warning A/C like the E-2C, ground sensors, etc.

Modern military aircraft such as the EA-18G and Joint Strike Fighter (JSF) are much more capable and complex than prior generations and a great deal of internal communication and interaction take place constantly within a modern avionics system. This high functional integration makes it extremely difficult to develop and test individual functions since performance is situational and depends upon inputs from many other on and off-board sensors.

The primary EW platform for the future of Naval Aviation is the EA-18G. By 2009, the EA-18G will be as capable as the EA-6B ICAP III with future NetCentric capability enhancements planned out to 2015 when the EA-6B is to retire. For example, one of those enhancements is the integration of the Advanced Electronically Scanned Array (AESA) radar currently in development on the F/A-18 E/F at the Advanced Weapons Laboratory (AWL) in China Lake, CA, the primary integration facility for the E-18G and F/A-18 aircraft. The next phase of development planned for AESA on the EA-18G is the EW Upgrade that will not only continue to operate as an air-to-ground and air-to-air radar but also act as an additional radar warning receiver and jammer providing additional situational awareness and electronic attack capability to the battle space thus more of a major cog in NetCentric Operations.

The EA-18G, JSF, Maritime Multi-mission Aircraft and other modern platforms will become more costly and difficult to develop and evaluate because the traditional piece-meal development approach and integration of the individual sub-systems onto a platform conceal causes of early failures. Capturing the entire set of parameters that contribute to an event on a modern aircraft is extremely difficult and requires closely coordinated development and integration efforts identifying problems early. Communication protocols between individual sub-systems for correlation and coordinated display and

techniques must be an integral part of early development. Threat warning algorithms and jammer technique development are no longer isolated to a given sub-system but must be developed to perform synergistically with other on and off-board sensors. Behavior is observable at platform level but much less so in the form of individual functions, such as EW, therefore research, development, test and evaluation must respond with appropriate instrumentation and facilities to capture and analyze them.

The need for a co-located, integrated development and test capability is evident to modern platform testing. Acquisition authority, system developers and testers combined within a tightly formed group and working closely together can only facilitate early successes and help to eliminate costly schedule slippages.

Additionally, requirements of these modern platforms in NetCentric Warfare necessitate linking live and virtual facilities for realistic development and testing. Specifically when long-range precision weapons, controlled and autonomous UAVs and individual platform sensors and off-board fused sensor products are required to operate in a networked or system of systems environment. The synergy of cooperating using linked Hardware-in-the-Loop and Open-Air facilities are powerful from several perspectives. It provides the capability needed for developmental testing by realizing in real-time system performance, such as EW, and the quick turn-around during technique development and optimization using actual threat systems, for instance at ECR linked with an ECSEL. It offers an appropriate environment for developmental and operational testing, tactics development, specific mission rehearsal, quick reaction capability, and for operational experimentation with new platforms, systems, tactics and procedures. There are many possible and useful levels of laboratory and range integration and cooperation but even simple connectivity would allow an EW system developer early insight to critical parameters during initial test and integration.

As the Navy continues to drive towards System of Systems operations that require effects-based results, so should we strive to provide the integrated development and test capability that is, by nature, effects-based oriented.

July 29, 2005

**China Lake Defense Alliance Summary Comments to the Commission Staff  
on BRAC Recommendations Affecting China Lake**

We expect this to be the last commentary to you. We are most grateful for your patience and willingness to allow us to bring our thoughts forward. We know that your workload in reviewing and analyzing piles of data and hundreds of comments before making recommendations to the Commission are enormous. We appreciate your commitment to developing the best possible product.

After plowing through the issues and allegations on the Naval Integrated Weapons and Armaments RDT&E Center and the consolidated Sensors, Electronic Warfare and Electronics RDT&E Center, we think there can be a danger that the main thrusts of the recommendations can get lost in the details. At least, we were concerned that we might allow ourselves to get so caught up in the minutia that we would lose the big picture that the Technical Joint Cross Service group was painting. Hence, this paper.

To us, the best outcome of the BRAC assessments would have been recommendations for full joint service use of the existing service RDT&E centers, particularly in aviation where the services develop joint requirements and develop joint systems. In the arena of most interest to us, the recommendations to create integrated aircraft and weapon RDT&E centers in each service was the next best outcome in our opinion. At least at the service level, the assets would coalesce into capable, competent centers able to tackle the problems of applying advanced technology to the military problems of a difficult future. These centers would contribute to the transformation of our military capability for the new century. The Joint Cross Service Group's concerns about nurturing competition of ideas would be served by maintaining centers in each service.

This coalescing of capability is particularly needed in the Navy, which has scattered its weapon RDT&E capability at many facilities despite a long-term reduction in funds for research and technology and development of fewer new systems. One of the pillars of transformation is application of advance technology to meet new threats. Creating the integrated centers focuses resources, but more than that, it focuses the limited funding and supply of brainpower on the problems at hand.

Most people don't want to move, and most organizations don't want to lose people. Everybody is creative in finding reasons why something they see as unpleasant can't or shouldn't be done. During the Commission review phase of BRAC, we're sure that you've heard a hundred reasons why the recommendations shouldn't be accepted, or that the data calls weren't properly formulated or properly interpreted, or why their product is essential to the war effort, and so on. We suggest stepping back and asking the question for each major recommendation, "Does this make sense?" Not each nit, not each difficulty in implementing. Does forming integrated RDT&E centers make sense? If it does make sense, in our case is China Lake the place to form the integrated weapons and armaments center?

We think the answers to these questions for weapons and armaments are yes. If the answers are yes, the BRAC Commission should approve the recommendation and let the Navy fight out the details, and respond to the naysayers during implementation. There is no doubt that the implementation phase will have plenty of roadblocks and controversy, but the big decision will have been made to create one integrated center, and the outcome will be an improved capability.

We believe that the Technical Joint Cross Service Group also had a vision for improved integration of the next generation combat aircraft by recommending the relocation of the Point Mugu electronic warfare capability to China Lake. China Lake's record speaks for itself in identifying key problems and creating effective, affordable solutions. This move brings problems that all realignments bring in dealing with a loss of intellectual capital. We strongly believe that the existing electronic warfare capability at China Lake shouldn't be overlooked, but we don't want to give the impression that Point Mugu's team isn't needed for the near term, particularly while the EA-6B remains our main electronic warfare asset.

We think that we should focus first on the long-term goals of BRAC, and if we do, the electronic warfare realignment not only makes sense, but plays an important part in supporting our future air warfare capability – transformation, if you will. We are certain that there are many mechanisms to support the present needs – maintaining personnel at Point Mugu during an extended transition, offering rehired annuitant positions, contracting, etc. while the team is building up in China Lake. The new team would be made up of Point Mugu personnel who move, China Lake electronic warfare experts who have been working in other areas after the work moved from the Lake to Point Mugu, and new hires at the journeyman and entry levels. Remember that China Lake has a superior recruitment record than Point Mugu for reasons discussed in earlier papers, also important for maintaining future capability.

The point is, at the end, if the recommendations hold, a full-spectrum, integrated RDAT&E center will be established at China Lake that is competent in all aspects of weapons and weapons technology, and fully capable of all aspects of aircraft weapon system integration including weapons, sensors, electronic warfare and mission avionics. The integration team will be operating at the very peak of software development competency, Level 5, as rated by the independent Software Engineering Institute at Carnegie Mellon Institute.

While it's important to examine every allegation and every assertion, the key is to decide what ultimately makes the most sense for the future. We believe that the recommendations of the Secretary of Defense for weapons and armaments and electronic warfare make the most sense for the future. Don't let issues such as Sea Range personnel stationing or near-term support of the EA-6B obscure the vision of a truly integrated Weapons and Armaments and Electronic Warfare RDAT&E Center to support the joint forces of the future.



David Epstein	
Lester Farrington	

**BASE'S PRESENT MISSION:** China Lake's mission is to provide our Armed Forces with effective and affordable integrated warfare systems and life-cycle support to ensure battlespace dominance. It

- performs research, development, test, and evaluation (RDT&E), logistics, and in-service support for guided missiles, free-fall weapons, targets, support equipment, crew systems, and electronic warfare;
- integrates weapons and avionics on tactical aircraft;
- operates the Navy's western land and sea range test and evaluation complex;
- develops and applies new technology to ensure battlespace dominance.

It is the free world's leader in RDT&E of guided missiles, advanced weapons, and weapon systems.

**SECRETARY OF DEFENSE RECOMMENDATION:**

- **(Fleet Readiness Center – IND-19)** Realign Naval Air Warfare Center Weapons Division China Lake, CA, by disestablishing the Aircraft Intermediate Maintenance Department and relocating its maintenance workload and capacity for Aircraft (approximately 3 K DLHs), Aircraft Components (approximately 45 K DLHs), Fabrication & Manufacturing (approximately 6 K DLHs) and Support Equipment (approximately 16 K DLHs) to Fleet Readiness Center West, Naval Air Station Lemoore, CA.
- **(Create a Naval Integrated Weapons & Armaments Research, Development & Acquisition, Test & Evaluation Center – TECH-15)** Realign Naval Surface Warfare Center Crane, IN, by relocating all Weapons and Armaments Research, Development & Acquisition, and Test & Evaluation, except gun/ammo, combat system security, and energetic materials to Naval Air Weapons Station China Lake, CA.

Realign Naval Surface Warfare Center Indian Head, MD, by relocating all Weapons and Armaments Research, Development & Acquisition, and Test & Evaluation, except gun/ammo, underwater weapons, and energetic materials, to Naval Air Weapons Station China Lake, CA.

Realign Naval Air Station Patuxent River, MD, by relocating all Weapons and Armaments Research, Development & Acquisition, and Test & Evaluation, except the Program Executive Office and Program Management Offices in Naval Air Systems Command, to Naval Air Weapons Station China Lake, CA.

Realign Naval Base Ventura County, Point Mugu, CA, by relocating all Weapons and Armaments Research, Development & Acquisition, and Test & Evaluation to Naval Air Weapons Station China Lake, CA.

Realign Naval Weapons Station Seal Beach, CA, by relocating all Weapons and Armaments Research, Development & Acquisition, and Test & Evaluation, except underwater weapons and energetic materials, to Naval Air Weapons Station China Lake, CA.

Realign Naval Base Ventura County, Port Hueneme, CA, by relocating all Weapons and Armaments Research, Development & Acquisition, and Test & Evaluation, except weapon system integration, to Naval Air Weapons Station China Lake, CA.

Realign Naval Surface Warfare Center Dahlgren, VA, by relocating all Weapons & Armaments Research, Development & Acquisition, and Test & Evaluation, except guns/ammo and weapon systems integration to Naval Air Weapons Station China Lake, CA.

- **(Create an Integrated Weapons & Armaments Specialty Site for Guns and Ammunition – TECH-19)** Realign Naval Air Warfare Center Weapons Division China Lake, CA, by relocating gun and ammunition Research and Development & Acquisition to Picatinny Arsenal, NJ.
- **(Establish Centers for Fixed Wing Air Platform Research, Development & Acquisition, Test & Evaluation – TECH-24)** Realign Wright Patterson Air Force Base, OH, by relocating fixed wing related Live Fire Test and Evaluation to Naval Air Weapons Station China Lake, CA.
- **(Navy Sensors, Electronic Warfare, and Electronics Research, Development & Acquisition, Test & Evaluation – TECH-28):** Realign Naval Air Warfare Center, Weapons Division, Point Mugu, CA. Relocate the Sensors, Electronic Warfare (EW), and Electronics Research, Development, Acquisition, Test & Evaluation (RDAT&E) functions to Naval Air Warfare Center, Weapons Division, China Lake, CA.

**SECRETARY OF DEFENSE JUSTIFICATION:**

- **(Fleet Readiness Centers – IND - 19):** This recommendation realigns and merges depot and intermediate maintenance activities. It creates 6 Fleet Readiness Centers (FRCs), with 13 affiliated FRC Sites at satellite locations. FRC Mid-Atlantic will be located on NAS Oceana, VA, with affiliated FRC Sites at NAS Patuxent River, MD, NAS Norfolk, VA, and JRB New Orleans, LA. FRC East is located at Cherry Point, NC, with affiliated FRC Sites at MCAS Beaufort, SC, and MCAS New River, NC. The existing intermediate level activity associated with HMX-1 at MCB Quantico, VA, will also be affiliated with FRC East. FRC Southeast will be located on NAS Jacksonville, FL, and will have an affiliated FRC Site at NAS Mayport, FL. FRC West will be located on NAS Lemoore, CA, and will have FRC affiliated sites at NAS JRB Fort Worth, TX, and NAS Fallon, NV. FRC Southwest will be located on Naval Station Coronado, CA, and will have affiliated sites at MCAS Miramar, CA, MCAS Pendleton, CA, MCAS Yuma, AZ, and NAS Point Mugu, CA. FRC Northwest will be located on NAS Whidbey, WA, with no affiliated FRC Sites.

This recommendation supports both DoD and Navy transformation goals by reducing the number of maintenance levels and streamlining the way maintenance is accomplished with associated significant cost reductions. It supports the Naval Aviation Enterprise's (NAE's) goal of transforming to fewer maintenance levels, i.e., from 3 to 2 levels; and it supports the NAE's strategy of positioning maintenance activities closer to fleet concentrations when doing so will result in enhanced effectiveness and efficiency, greater agility, and allows Naval Aviation to achieve the right readiness at the least cost. This transformation to FRCs produces significant reductions in the total cost of maintenance, repair and overhaul plus the associated Supply system PHS&T (Packaging, Handling, Storage and Transportation) as well as reparable inventory stocking levels as a result of reduced total repair turn-around times, reduced transportation, lower spares inventories, less manpower, and more highly utilized infrastructure. It requires integration and collaboration between Depot level Civil Service personnel and Military Intermediate level Sailors and Marines. At those FRCs involving Marine Corps MALS (Marine Aviation Logistics Squadrons), because the MALS remain deployable commands, they will affiliate with their FRC organizations, but will remain operationally distinct and severable in all respects. The FRC D-level functions within the MALS fall under the Commanding Officer of each MALS. The FRC Commander is the provider of embedded depot personnel, as well as D-level technical and logistics support within the MALS. For all FRCs, there is a combined annual facility sustainment savings of \$1.1M; elimination of a total of 529,000 square feet of depot/intermediate maintenance production space and military construction cost avoidances of \$0.2M. This recommendation also includes a military construction cost of \$85.7M.

In addition to the actions described in this recommendation, there are four additional actions involved in the comprehensive merger of depot and intermediate maintenance: Naval Air Station Joint Reserve Base Willow Grove,

PA, Naval Air Station Corpus Christi, TX, Naval Air Station Brunswick, ME, and Naval Air Station Atlanta, GA. The actions at these installations are described in separate installation closure recommendations in the Department of the Navy section of the BRAC Report.

- **(Create a Naval Integrated Weapons & Armaments Research, Development & Acquisition, Test & Evaluation Center – TECH - 15)** This recommendation realigns and consolidates those facilities working in Weapons & Armaments (W&A) Research, Development & Acquisition, and Test and Evaluation (RDAT&E) into a Naval Integrated RDAT&E center at the Naval Air Warfare Center, China Lake, CA. Additional synergistic realignments for W&A was achieved at two receiver sites for specific focus. The Naval Surface Warfare Center, Dahlgren, VA, is a receiver specialty site for Naval surface weapons systems integration and receives a west coast site for consolidation. This construct creates an integrated W&A RDAT&E center in China Lake, CA, energetics center at Indian Head, MD, and consolidates Navy surface weapons system integration at Dahlgren, VA. All actions relocate technical facilities with lower overall quantitative Military Value (across Research, Development & Acquisition and Test & Evaluation) into the Integrated RDAT&E center and other receiver sites with greater quantitative Military Value.

Consolidating the Navy's air-to-air, air-to-ground, and surface launched missile RD&A, and T&E activities at China Lake, CA, would create an efficient integrated RDAT&E center. China Lake is able to accommodate with minor modification/addition both mission and lifecycle/sustainment functions to create synergies between these traditionally independent communities.

During the other large scale movements of W&A capabilities noted above, Weapon System Integration was specifically addressed to preserve the synergies between large highly integrated control system developments (Weapon Systems Integration) and the weapon system developments themselves. A specialty site for Naval Surface Warfare was identified at Dahlgren, VA, that was unique to the services and a centroid for Navy surface ship developments. A satellite unit from the Naval Surface Warfare Center, Port Hueneme, San Diego Detachment will be relocated to Dahlgren.

The Integrated RDAT&E Center at China Lake provides a diverse set of open-air range and test environments (desert, mountain, forest) for W&A RDAT&E functions. Synergy will be realized in air-to-air, air-to-ground, and surface launched mission areas.

This recommendation enables technical synergy, and positions the Department of Defense to exploit center-of-mass scientific, technical and acquisition expertise with weapons and armament Research, Development & Acquisition that currently

resides at 10 locations into the one Integrated RDAT&E site, one specialty site, and an energetics site.

- **Create an Integrated Weapons & Armaments Specialty Site for Guns and Ammunition (TECH – 19)** This recommendation realigns and consolidates those gun and ammunition facilities working in Weapons and Armaments (W&A) Research (R), Development & Acquisition (D&A). This realignment would result in a more robust joint center for gun and ammunition Research, Development & Acquisition at Picatinny Arsenal, NJ. This location is already the greatest concentration of military value in gun and ammunition W&A RD&A.

Picatinny Arsenal is the center-of-mass for DoD's Research, Development & Acquisition of guns and ammunition, with a workload more than an order of magnitude greater than any other DoD facility in this area. It also is home to the DoD's Single Manager for Conventional Ammunition. Movement of all the Services' guns and ammunition work to Picatinny Arsenal will create a joint center of excellence and provide synergy in armament development for the near future and beyond, featuring a Joint Packaging, Handling, Shipping and Transportation (PHS&T) Center, particularly important in this current time of high demand for guns and ammunition by all the services. Technical facilities with lower quantitative military value are relocated to Picatinny Arsenal.

This recommendation includes Research, Development & Acquisition activities in the Army and Navy. It promotes jointness, enables technical synergy, and positions the Department of Defense to exploit center-of-mass scientific, technical, and acquisition expertise within the weapons and armament Research, Development & Acquisition community that currently resides at this DoD specialty location.

- **Establish Centers for Fixed Wing Air Platform Research, Development & Acquisition, Test & Evaluation (TECH – 24)** The consolidation of all Fixed Wing Air Platform Survivability Live Fire T&E at China Lake is driven by the inefficiencies that currently exist between the two sites (Wright Patterson AFB and China Lake), and the potential savings afforded by establishing a single live fire test range for fixed wing air platforms. China Lake has this capability and has been doing similar work related to weapons lethality for many years. This action will increase efficiency by reducing overall manpower requirements while also reducing redundancies that exist across the Live Fire Testing domain.
- **Navy Sensors, Electronic Warfare, and Electronics Research, Development & Acquisition, Test & Evaluation (TECH – 28):** 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.

**MAIN FACILITIES REVIEWED:** NAWC Weapons Division HQ building where briefing was conducted, Michelson Laboratory, range testing facility

**INSTALLATION CONCERNS RAISED:**

- Significant concerns were expressed over both major realignment recommendation and the associated scenarios. In particular many base civilian employees believe that the Navy should conform to the SECDEF recommendations, whereas some of the military personnel suggested that the SECDEF recommendations were not consistent with the SECNAV desires and in fact may not have been reviewed at that level.
- As for the sensors/EW recommendation the predominant feeling among certain military personnel was that the 369 employees identified in the COBRA would remain at Pt. Mugu. NBVC. The other parts of sensors/EW would move to China Lake. Technical personnel at China Lake believe they are well equipped to handle the workload from NBVC and in fact are engaged in many EW projects geared toward future transformation weapons.
- As for the Weapons and Armament recommendation, the major point of confusion was that the scenario in the SECDEF recommendation did not adequately address the numbers and types of personnel that would have to remain at NBVC to support the sea range. There was universal agreement as to the fact that the Sea Range is a national asset, should remain in active use, and could not be safely or efficiently operated by China Lake personnel. In addition, there was total agreement as to the need to retain target launching and development at Pt. Mugu. We asked Navy BRAC and NBVC personnel to develop a revised COBRA and scenario that properly reflects the number and type of personnel that are required at each location.
- There seemed to be a fairly broad consensus that the C-130 and P-3 aircraft and their support should remain at Point Mugu to support the sea range. This would avert the need to build a new hanger at China Lake. There was widespread agreement that the F-18s should be consolidated at China Lake. However, the disposition of the EA-6Bs was quite contentious. Some meeting participants advocated moving the EA-6Bs to China Lake, whereas other said that since the Electronic Warfare (EW) work should remain at Pt. Mugu, the planes should also be kept there until the EA-6Bs are phased out at the end of the decade. It was recognized that the EA-6B expertise resides at Pt. Mugu. China Lake personnel pointed out that they are working on the next generation EW aircraft, the ER-18 Growler and it would be very beneficial to transition EW people at Point Mugu to work on this aircraft.
- We were consistently reminded that in 1992, a combined China Lake/Pt. Mugu command had emerged and that the two facilities were managed under the same leadership, reporting to NAVAIR. They had eliminated instances of dual management and had wrung out all possible duplication. Furthermore, NAVAIR

has already prescribed a goal of a ten percent reduction in operating costs by the beginning of FY 2007.

- We were told that the two principal scenarios were never part of the NAVAIR strategic plan. It is unknown what the intent of the TJCSG was in developing these two scenarios. This issue was never raised to “NAVAIR Corporate” to confirm that this scenario should be implemented. It was believed that the TJCSG was “gaming” the system.

#### **COMMUNITY CONCERNS RAISED:**

- Program Management personnel should be moved from Naval Air Station at Patuxent River, MD to NAWC China Lake. They said this would greatly reduce travel time between the PM offices and the RDT&E personnel. It would also reduce travel time and cost between the PM offices and the aircraft manufacturer, in Arizona. (However, the BRAC staff observes that there appears to have been a conscious Navy-wide decision to keep program managers near the acquisition community/hardware systems command, rather than at the field activities – a practice followed by both Army and the Air Force. Examples include C4ISR – SPAWAR San Diego, and Eglin AFB, Redstone Arsenal, and Wright Patterson AFB.
- Implement the two key realignment recommendations as detailed in the SECDEF recommendations.
- China Lake was rated as having the highest military value for the Weapons and Armaments RDT&E recommendation for research, acquisition, and T&E. And first in two of the three categories for the Sensors/EW and Electronics recommendation. The community said China Lake is the best site to locate for synergism, efficiency, etc.
- The infrastructure, to include water, sewer, schools, housing, and roads presents no insurmountable obstacles, and in fact the schools and their students perform at a level significantly higher than the State average. They pointed out that NAWC China Lake employment dropped nearly in half in the mid-1990s and the proposed growth at this time represents a relatively small increase from Ridgecrest’s peak population. They are already proactively planning for the growth.
- They did not object to the other recommendations, even those that represented employment reductions at NAWC China Lake (i.e., NAS Lemoore and Picatinny Arsenal.
- They pointed out that F-18 Growler is the Naval aviation system of the future and it makes no sense to divide that workforce, except they recognized the need to retain the Sea Range and supporting infrastructure at Pt. Mugu. They specifically did not advocate having NAWC personnel shuttling several times each week with their equipment to conduct tests.
- Although recruiting is not necessarily easy, they have a high retention rate and over 80% of the NAWC China Lake retirees stay in the community.
- Housing prices average about \$250k, significantly less than at NBVC.

- Shuttle flights between NBVC and NAWC China Lake operate several times per day and only take about 35 minutes. The planes hold about 15 passengers.
- The community observed that the Sensors and Electronic Warfare recommendation RDATE&E Consolidation at China Lake (Tech 0054), DOD used a 5.7% civilian personnel efficiency factor, resulted in a slow payback. They provided us with a revised COBRA that reflected a 15% efficiency factor and a payback in only six years, one-half of the DOD payback period. [However, the BRAC staff noted that GAO had recommended the consistent use of 5.6%.] This recommendation has a one-time cost of \$72.7 M and a NPV savings in 2025 of \$83.8 M.
- The community believes that the sea range is vital and is a critical joint service asset that must be preserved. The issue is how many people should be kept at Point Mugu to efficiently and effectively operate the sea range, including San Nicholas Island; range, target development and launching operations.

**REQUESTS FOR STAFF AS A RESULT OF VISIT: NA**

## Farrington, Lester, CIV, WSO-BRAC

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**From:** Bill Porter [wbpmfp@iwvisp.com]  
**Sent:** Sunday, August 07, 2005 3:24 PM  
**To:** Farrington, Lester, CIV, WSO-BRAC  
**Cc:** Phil Arnold  
**Subject:** Help??

Les,

We wanted you to see this email from Phil Coyle. Note the last paragraph. Is this something you could have the support staff do. We know you are on a 24/7 schedule and we don't want to burden you. Would you rather that we sent the attachments directly to the Commissioners.

We would like Coyle's email along with our original email and the attachments to go to each Commissioner.

What is the right email to use for a Commissioner?

Thanks.

Bill Porter  
760-446-1034  
760-384-8156(cell)

----- Forwarded Message

**From:** Phillip Coyle <martha.krebs@worldnet.att.net>  
**Date:** Wed, 03 Aug 2005 12:09:07 -0700  
**To:** Bill Porter <wbpmfp@iwvisp.com>  
**Cc:** Phil Arnold <phil@iwvisp.com>  
**Subject:** Re: BRAC Issues

Dear Bill: Many thanks for the attachments. I was unable to join the BRAC Commission staff when they visited China Lake due to a commitment to visit another base the same day outside of California. Also, given the time available, Commissioners have had to give priority to bases proposed to lose personnel due to realignment or closure, while the staff has visited bases proposed to gain.

Having visited China Lake several times over the years, I believe I have an appreciation for the fine work done at China Lake. When I was in the Pentagon and since, I have done my best to champion China Lake and other test ranges whose work is so vital. The quality and scope of the work at China Lake is world class. The people and facilities at China Lake are indeed impressive, and the people there can be justifiably proud of their work.

If you haven't already done so, please arrange for all Commissioners to receive your attachments. Since the staff already have these attachments, perhaps they could print them out for all Commissioners, and save you a few steps.

Thanks again and best regards,

Phil

Philip E. Coyle, III  
2139 Kew Drive  
Los Angeles, CA 90046  
Tel 323-656-6750  
Fax 323-656-6240  
E-mail Philip Coyle <martha.krebs@att.net>

8/8/2005

**From:** Bill Porter <wbpmfp@iwvisp.com>  
**Date:** Tue, 02 Aug 2005 15:02:29 -0700  
**To:** Phil Coyle <Martha.krebs@att.net>  
**Cc:** Phil Arnold <phil@iwvisp.com>  
**Subject:** BRAC Issues

Phil,

We hoped that you would have the chance to visit China Lake as you did Naval Base Ventura County. We know that the PT Mugu folks did a good job and their capabilities and facilities are impressive. We believe that you would also have found the people and facilities at China Lake impressive and that China Lake does have significant EW capability in R and D as well as the Electronic Combat Range (ECHO). This would have provided inputs from both sites for evaluation.

Of course, our view differs in many respects from that of our friends in Ventura County, but in others our views are similar. It would have been helpful to have in-depth discussions from each perspective.

We agree with our Ventura County counterparts that BRAC realignments must not jeopardize current Navy EW capability, and that the Sea Range must be staffed and have the equipment, including the range support aircraft stationed at Point Mugu. We also view BRAC as the means to assure that the Navy infrastructure is positioned to meet future needs, and that the DOD recommendations to consolidate weapons and armaments RDAT&E and aviation EW RDAT&E at China Lake would provide the best future capability.

We have attached 3 papers we sent to the Commission staff on the issues for your review. As you would expect, we feel very strongly about the issues as do our counterparts in Ventura County. If you have questions or would like more information about these issues from a China Lake Defense Alliance perspective please let us know.

Thanks for your consideration, and thanks for your commitment to the country in serving on the Commission.

VR

Bill Porter  
760-446-1034  
760-446-1034 (cell)

----- End of Forwarded Message

COMM. COYLE  
MUGU / CHINA LAKE

**From:** "Farrington, Lester, CIV, WSO-BRAC" <Lester.Farrington@wso.whs.mil>  
**Date:** Thu, 28 Jul 2005 00:05:58 -0000  
**To:** 'Philip Coyle' <martha.krebs@worldnet.att.net>, "jbilbray@kkbr.com" <jbilbray@kkbr.com>  
**Cc:** Epstein David B Ctr AF/ILEXR <DavidB.Epstein@pentagon.af.mil>, "Van Saun, David, CIV, WSO-BRAC" <David.VanSaun@wso.whs.mil>  
**Subject:** Point Mugu Visit

<<BASE VISIT REPORT-NBVC.doc>>

Phil and Jim:

Attached is the base visit report covering our visit to Point Mugu. My feeling right now is that we should support the DOD recommendation that moves parts of Point Mugu to China Lake (weapons & armaments and electronic warfare recommendations) while keeping the Sea Range open and supported. China Lake ranks very high in military value. Although the loss of intellectual capital could be an issue, I am confident that in this case since these two entities are under one Navy organization, it can be worked out. Also, it is clear that since China Lake is geared to meeting future EW and weapon system integration requirements, the move from Point Mugu makes sense.

We will get the Corona visit report to you shortly. Let me know if you have any questions or concerns.

Les Farrington

## Farrington, Lester, CIV, WSO-BRAC

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**From:** Epstein, David, CIV, WSO-BRAC  
**Sent:** Thursday, July 28, 2005 6:32 PM  
**To:** Farrington, Lester, CIV, WSO-BRAC; 'Philip Coyle'  
**Subject:** RE: Point Mugu Visit

Phil: You asked about moving costs. We have the original DOD COBRA. It is our understanding that an estimate is being made relative to the cost of replacing one or both of the two labs. Separate from that effort, I previously requested DOD to prepare a revised COBRA that uses the standard data to estimate the cost of the Corona-Mugu move, recognizing that DOD would need to pay for new construction, rather than rehab space. I would guess that this will change the NPV of the saving from \$360K (saving) to \$4.1 M (cost). And, I think this understates the cost and does not address the design of the section of the building to house the force machine.

Also, we expect to receive corrected COBRAs tomorrow on potential moves to China Lake and George.

David  
703 699-2947

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**From:** Farrington, Lester, CIV, WSO-BRAC  
**Sent:** Thursday, July 28, 2005 6:21 PM  
**To:** Epstein, David, CIV, WSO-BRAC  
**Subject:** FW: Point Mugu Visit

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**From:** Philip Coyle [mailto:martha.krebs@worldnet.att.net]  
**Sent:** Thursday, July 28, 2005 11:51 AM  
**To:** Farrington, Lester, CIV, WSO-BRAC; 'jbilbray@kkbr.com'  
**Cc:** Epstein David B Ctr AF/ILEXR; Van Saun, David, CIV, WSO-BRAC  
**Subject:** Re: Point Mugu Visit

Dear Les: Good job on the base visit report.

My only question on your base visit report is in the category, *Requests For Staff As A Result of Visit*. Is there a pending request for staff with regards the cost to move Corona, and its two big facilities to Point Mugu? And is there a pending request for staff with respect to the cost savings, or lack thereof, associated with certain Point Mugu/China Lake options? If not, fine.

Congressman Ken Calvert called me this morning to ask why you had put out a data call for information that would support moving Corona to China Lake? I told him I was not aware of such a data call, which I'm not. Have you put out a data call and if so what information is it that you have requested?

In that the DOD recommendations for Corona and Point Mugu are tied together, my feeling is that the Commission should vote on a staff recommendation to reject the DOD recommendations on Corona and NBVC in their entirety.

As you and David noted in one of your questions back to the Navy, the Corona move doesn't save any money. Did you ever get an answer from the Navy to that question?

7/28/2005

So Corona would be a move that disrupts an effective organization for nothing.

As we saw during our visit to Naval Base Ventura County, moving people and hardware from Point Mugu to China Lake, when to perform their work they would have to turn around and head back to Point Mugu, would actually cost more not less, sea going targets being a prime example.

Overall, I'm not sure if moving parts of any functions from Point Mugu to China Lake (or for that matter from China Lake to Point Mugu) would save much money either. For me, this one falls into the category of "Yes, it's possible, but why?" So far I haven't heard a compelling argument for moving any pieces or parts.

You say, "....while keeping the Sea Range open and supported." Neither the NAVY nor the DOD has proposed not keeping the sea range open and supported, so I don't understand why the BRAC Commission would comment on that. As we have heard from the Services and DOD, God isn't making anymore ocean-front property for weapons testing and training, and if we give it up we'll never get it back.

With respect to the relationship between Point Mugu and China Lake, they already operate as "one university with two campuses", with people moving back and forth between the two sites according to daily needs. The Navy deserves a lot of credit for this arrangement, and if the Navy wants to swing it one way or the other in the future they are free to do that. But I don't see it as a proper BRAC action to force the Navy to change this relationship when the Navy already has full control of both sites, they operate together under joint management, and can do what they want day-by-day or longer term. Unlike certain other Navy facilities we have visited around the country, very high level Navy leadership supported our base visit to NBVC and were quite candid about their needs.

As we heard, there is no "excess capacity" between the two sites, or certainly no "excess-excess capacity" as Admiral Gehman puts it, because the Navy squeezes it out. And to compete for customers, both sites have to be as efficient as possible under working capital fund costing.

In discussions, some of our Commissioners have described the BRAC process as a "real estate" process to point out that we shouldn't be getting into day-to-day operations. At Point Mugu there is no real estate to be turned over to the community, nor any other advantage to the community by moving people around so long as the bases stay the same. And the footprints of the bases at Point Mugu and China Lake are not proposed to physically change.

I'll be back in Washington before and after the hearings on August 11th, and available to discuss further at your convenience.

Thanks again and best regards,

Phil

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Los Angeles, CA 90046  
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7/28/2005



David Epstein	
Lester Farrington	

**BASE'S PRESENT MISSION:** China Lake's mission is to provide our Armed Forces with effective and affordable integrated warfare systems and life-cycle support to ensure battlespace dominance. It

- performs research, development, test, and evaluation (RDT&E), logistics, and in-service support for guided missiles, free-fall weapons, targets, support equipment, crew systems, and electronic warfare;
- integrates weapons and avionics on tactical aircraft;
- operates the Navy's western land and sea range test and evaluation complex;
- develops and applies new technology to ensure battlespace dominance.

It is the free world's leader in RDT&E of guided missiles, advanced weapons, and weapon systems.

**SECRETARY OF DEFENSE RECOMMENDATION:**

- **(Fleet Readiness Center – IND-19)** Realign Naval Air Warfare Center Weapons Division China Lake, CA, by disestablishing the Aircraft Intermediate Maintenance Department and relocating its maintenance workload and capacity for Aircraft (approximately 3 K DLHs), Aircraft Components (approximately 45 K DLHs), Fabrication & Manufacturing (approximately 6 K DLHs) and Support Equipment (approximately 16 K DLHs) to Fleet Readiness Center West, Naval Air Station Lemoore, CA.
- **(Create a Naval Integrated Weapons & Armaments Research, Development & Acquisition, Test & Evaluation Center – TECH-15)** Realign Naval Surface Warfare Center Crane, IN, by relocating all Weapons and Armaments Research, Development & Acquisition, and Test & Evaluation, except gun/ammo, combat system security, and energetic materials to Naval Air Weapons Station China Lake, CA.

Realign Naval Surface Warfare Center Indian Head, MD, by relocating all Weapons and Armaments Research, Development & Acquisition, and Test & Evaluation, except gun/ammo, underwater weapons, and energetic materials, to Naval Air Weapons Station China Lake, CA.

Realign Naval Air Station Patuxent River, MD, by relocating all Weapons and Armaments Research, Development & Acquisition, and Test & Evaluation, except the Program Executive Office and Program Management Offices in Naval Air Systems Command, to Naval Air Weapons Station China Lake, CA.

Realign Naval Base Ventura County, Point Mugu, CA, by relocating all Weapons and Armaments Research, Development & Acquisition, and Test & Evaluation to Naval Air Weapons Station China Lake, CA.

Realign Naval Weapons Station Seal Beach, CA, by relocating all Weapons and Armaments Research, Development & Acquisition, and Test & Evaluation, except underwater weapons and energetic materials, to Naval Air Weapons Station China Lake, CA.

Realign Naval Base Ventura County, Port Hueneme, CA, by relocating all Weapons and Armaments Research, Development & Acquisition, and Test & Evaluation, except weapon system integration, to Naval Air Weapons Station China Lake, CA.

Realign Naval Surface Warfare Center Dahlgren, VA, by relocating all Weapons & Armaments Research, Development & Acquisition, and Test & Evaluation, except guns/ammo and weapon systems integration to Naval Air Weapons Station China Lake, CA.

- **(Create an Integrated Weapons & Armaments Specialty Site for Guns and Ammunition – TECH-19)** Realign Naval Air Warfare Center Weapons Division China Lake, CA, by relocating gun and ammunition Research and Development & Acquisition to Picatinny Arsenal, NJ.
- **(Establish Centers for Fixed Wing Air Platform Research, Development & Acquisition, Test & Evaluation – TECH-24)** Realign Wright Patterson Air Force Base, OH, by relocating fixed wing related Live Fire Test and Evaluation to Naval Air Weapons Station China Lake, CA.
- **(Navy Sensors, Electronic Warfare, and Electronics Research, Development & Acquisition, Test & Evaluation – TECH-28):** Realign Naval Air Warfare Center, Weapons Division, Point Mugu, CA. Relocate the Sensors, Electronic Warfare (EW), and Electronics Research, Development, Acquisition, Test & Evaluation (RDAT&E) functions to Naval Air Warfare Center, Weapons Division, China Lake, CA.

**SECRETARY OF DEFENSE JUSTIFICATION:**

- **(Fleet Readiness Centers – IND - 19):** This recommendation realigns and merges depot and intermediate maintenance activities. It creates 6 Fleet Readiness Centers (FRCs), with 13 affiliated FRC Sites at satellite locations. FRC Mid-Atlantic will be located on NAS Oceana, VA, with affiliated FRC Sites at NAS Patuxent River, MD, NAS Norfolk, VA, and JRB New Orleans, LA. FRC East is located at Cherry Point, NC, with affiliated FRC Sites at MCAS Beaufort, SC, and MCAS New River, NC. The existing intermediate level activity associated with HMX-1 at MCB Quantico, VA, will also be affiliated with FRC East. FRC Southeast will be located on NAS Jacksonville, FL, and will have an affiliated FRC Site at NAS Mayport, FL. FRC West will be located on NAS Lemoore, CA, and will have FRC affiliated sites at NAS JRB Fort Worth, TX, and NAS Fallon, NV. FRC Southwest will be located on Naval Station Coronado, CA, and will have affiliated sites at MCAS Miramar, CA, MCAS Pendleton, CA, MCAS Yuma, AZ, and NAS Point Mugu, CA. FRC Northwest will be located on NAS Whidbey, WA, with no affiliated FRC Sites.

This recommendation supports both DoD and Navy transformation goals by reducing the number of maintenance levels and streamlining the way maintenance is accomplished with associated significant cost reductions. It supports the Naval Aviation Enterprise's (NAE's) goal of transforming to fewer maintenance levels, i.e., from 3 to 2 levels; and it supports the NAE's strategy of positioning maintenance activities closer to fleet concentrations when doing so will result in enhanced effectiveness and efficiency, greater agility, and allows Naval Aviation to achieve the right readiness at the least cost. This transformation to FRCs produces significant reductions in the total cost of maintenance, repair and overhaul plus the associated Supply system PHS&T (Packaging, Handling, Storage and Transportation) as well as reparable inventory stocking levels as a result of reduced total repair turn-around times, reduced transportation, lower spares inventories, less manpower, and more highly utilized infrastructure. It requires integration and collaboration between Depot level Civil Service personnel and Military Intermediate level Sailors and Marines. At those FRCs involving Marine Corps MALS (Marine Aviation Logistics Squadrons), because the MALS remain deployable commands, they will affiliate with their FRC organizations, but will remain operationally distinct and severable in all respects. The FRC D-level functions within the MALS fall under the Commanding Officer of each MALS. The FRC Commander is the provider of embedded depot personnel, as well as D-level technical and logistics support within the MALS. For all FRCs, there is a combined annual facility sustainment savings of \$1.1M; elimination of a total of 529,000 square feet of depot/intermediate maintenance production space and military construction cost avoidances of \$0.2M. This recommendation also includes a military construction cost of \$85.7M.

In addition to the actions described in this recommendation, there are four additional actions involved in the comprehensive merger of depot and intermediate maintenance: Naval Air Station Joint Reserve Base Willow Grove,

PA, Naval Air Station Corpus Christi, TX, Naval Air Station Brunswick, ME, and Naval Air Station Atlanta, GA. The actions at these installations are described in separate installation closure recommendations in the Department of the Navy section of the BRAC Report.

- **(Create a Naval Integrated Weapons & Armaments Research, Development & Acquisition, Test & Evaluation Center – TECH - 15)** This recommendation realigns and consolidates those facilities working in Weapons & Armaments (W&A) Research, Development & Acquisition, and Test and Evaluation (RDAT&E) into a Naval Integrated RDAT&E center at the Naval Air Warfare Center, China Lake, CA. Additional synergistic realignments for W&A was achieved at two receiver sites for specific focus. The Naval Surface Warfare Center, Dahlgren, VA, is a receiver specialty site for Naval surface weapons systems integration and receives a west coast site for consolidation. This construct creates an integrated W&A RDAT&E center in China Lake, CA, energetics center at Indian Head, MD, and consolidates Navy surface weapons system integration at Dahlgren, VA. All actions relocate technical facilities with lower overall quantitative Military Value (across Research, Development & Acquisition and Test & Evaluation) into the Integrated RDAT&E center and other receiver sites with greater quantitative Military Value.

Consolidating the Navy's air-to-air, air-to-ground, and surface launched missile RD&A, and T&E activities at China Lake, CA, would create an efficient integrated RDAT&E center. China Lake is able to accommodate with minor modification/addition both mission and lifecycle/sustainment functions to create synergies between these traditionally independent communities.

During the other large scale movements of W&A capabilities noted above, Weapon System Integration was specifically addressed to preserve the synergies between large highly integrated control system developments (Weapon Systems Integration) and the weapon system developments themselves. A specialty site for Naval Surface Warfare was identified at Dahlgren, VA, that was unique to the services and a centroid for Navy surface ship developments. A satellite unit from the Naval Surface Warfare Center, Port Hueneme, San Diego Detachment will be relocated to Dahlgren.

The Integrated RDAT&E Center at China Lake provides a diverse set of open-air range and test environments (desert, mountain, forest) for W&A RDAT&E functions. Synergy will be realized in air-to-air, air-to-ground, and surface launched mission areas.

This recommendation enables technical synergy, and positions the Department of Defense to exploit center-of-mass scientific, technical and acquisition expertise with weapons and armament Research, Development & Acquisition that currently

resides at 10 locations into the one Integrated RDAT&E site, one specialty site, and an energetics site.

- **Create an Integrated Weapons & Armaments Specialty Site for Guns and Ammunition (TECH – 19)** This recommendation realigns and consolidates those gun and ammunition facilities working in Weapons and Armaments (W&A) Research (R), Development & Acquisition (D&A). This realignment would result in a more robust joint center for gun and ammunition Research, Development & Acquisition at Picatinny Arsenal, NJ. This location is already the greatest concentration of military value in gun and ammunition W&A RD&A.

Picatinny Arsenal is the center-of-mass for DoD's Research, Development & Acquisition of guns and ammunition, with a workload more than an order of magnitude greater than any other DoD facility in this area. It also is home to the DoD's Single Manager for Conventional Ammunition. Movement of all the Services' guns and ammunition work to Picatinny Arsenal will create a joint center of excellence and provide synergy in armament development for the near future and beyond, featuring a Joint Packaging, Handling, Shipping and Transportation (PHS&T) Center, particularly important in this current time of high demand for guns and ammunition by all the services. Technical facilities with lower quantitative military value are relocated to Picatinny Arsenal.

This recommendation includes Research, Development & Acquisition activities in the Army and Navy. It promotes jointness, enables technical synergy, and positions the Department of Defense to exploit center-of-mass scientific, technical, and acquisition expertise within the weapons and armament Research, Development & Acquisition community that currently resides at this DoD specialty location.

- **Establish Centers for Fixed Wing Air Platform Research, Development & Acquisition, Test & Evaluation (TECH – 24)** The consolidation of all Fixed Wing Air Platform Survivability Live Fire T&E at China Lake is driven by the inefficiencies that currently exist between the two sites (Wright Patterson AFB and China Lake), and the potential savings afforded by establishing a single live fire test range for fixed wing air platforms. China Lake has this capability and has been doing similar work related to weapons lethality for many years. This action will increase efficiency by reducing overall manpower requirements while also reducing redundancies that exist across the Live Fire Testing domain.
- **Navy Sensors, Electronic Warfare, and Electronics Research, Development & Acquisition, Test & Evaluation (TECH – 28):** 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.

**MAIN FACILITIES REVIEWED:** NAWC Weapons Division HQ building where briefing was conducted, Michelson Laboratory, range testing facility

**INSTALLATION CONCERNS RAISED:**

- Significant concerns were expressed over both major realignment recommendation and the associated scenarios. In particular many base civilian employees believe that the Navy should conform to the SECDEF recommendations, whereas some of the military personnel suggested that the SECDEF recommendations were not consistent with the SECNAV desires and in fact may not have been reviewed at that level.
- As for the sensors/EW recommendation the predominant feeling among certain military personnel was that the 369 employees identified in the COBRA would remain at Pt. Mugu. NBVC. The other parts of sensors/EW would move to China Lake. Technical personnel at China Lake believe they are well equipped to handle the workload from NBVC and in fact are engaged in many EW projects geared toward future transformation weapons.
- As for the Weapons and Armament recommendation, the major point of confusion was that the scenario in the SECDEF recommendation did not adequately address the numbers and types of personnel that would have to remain at NBVC to support the sea range. There was universal agreement as to the fact that the Sea Range is a national asset, should remain in active use, and could not be safely or efficiently operated by China Lake personnel. In addition, there was total agreement as to the need to retain target launching and development at Pt. Mugu. We asked Navy BRAC and NBVC personnel to develop a revised COBRA and scenario that properly reflects the number and type of personnel that are required at each location.
- There seemed to be a fairly broad consensus that the C-130 and P-3 aircraft and their support should remain at Point Mugu to support the sea range. This would avert the need to build a new hanger at China Lake. There was widespread agreement that the F-18s should be consolidated at China Lake. However, the disposition of the EA-6Bs was quite contentious. Some meeting participants advocated moving the EA-6Bs to China Lake, whereas other said that since the Electronic Warfare (EW) work should remain at Pt. Mugu, the planes should also be kept there until the EA-6Bs are phased out at the end of the decade. It was recognized that the EA-6B expertise resides at Pt. Mugu. China Lake personnel pointed out that they are working on the next generation EW aircraft, the ER-18 Growler and it would be very beneficial to transition EW people at Point Mugu to work on this aircraft.
- We were consistently reminded that in 1992, a combined China Lake/Pt. Mugu command had emerged and that the two facilities were managed under the same leadership, reporting to NAVAIR. They had eliminated instances of dual management and had wrung out all possible duplication. Furthermore, NAVAIR

has already prescribed a goal of a ten percent reduction in operating costs by the beginning of FY 2007.

- We were told that the two principal scenarios were never part of the NAVAIR strategic plan. It is unknown what the intent of the TJCSG was in developing these two scenarios. This issue was never raised to “NAVAIR Corporate” to confirm that this scenario should be implemented. It was believed that the TJCSG was “gaming” the system.

#### **COMMUNITY CONCERNS RAISED:**

- Program Management personnel should be moved from Naval Air Station at Patuxent River, MD to NAWC China Lake. They said this would greatly reduce travel time between the PM offices and the RDT&E personnel. It would also reduce travel time and cost between the PM offices and the aircraft manufacturer, in Arizona. (However, the BRAC staff observes that there appears to have been a conscious Navy-wide decision to keep program managers near the acquisition community/hardware systems command, rather than at the field activities – a practice followed by both Army and the Air Force. Examples include C4ISR – SPAWAR San Diego, and Eglin AFB, Redstone Arsenal, and Wright Patterson AFB.
- Implement the two key realignment recommendations as detailed in the SECDEF recommendations.
- China Lake was rated as having the highest military value for the Weapons and Armaments RDT&E recommendation for research, acquisition, and T&E. And first in two of the three categories for the Sensors/EW and Electronics recommendation. The community said China Lake is the best site to locate for synergism, efficiency, etc.
- The infrastructure, to include water, sewer, schools, housing, and roads presents no insurmountable obstacles, and in fact the schools and their students perform at a level significantly higher than the State average. They pointed out that NAWC China Lake employment dropped nearly in half in the mid-1990s and the proposed growth at this time represents a relatively small increase from Ridgecrest’s peak population. They are already proactively planning for the growth.
- They did not object to the other recommendations, even those that represented employment reductions at NAWC China Lake (i.e., NAS Lemoore and Picatinny Arsenal.
- They pointed out that F-18 Growler is the Naval aviation system of the future and it makes no sense to divide that workforce, except they recognized the need to retain the Sea Range and supporting infrastructure at Pt. Mugu. They specifically did not advocate having NAWC personnel shuttling several times each week with their equipment to conduct tests.
- Although recruiting is not necessarily easy, they have a high retention rate and over 80% of the NAWC China Lake retirees stay in the community.
- Housing prices average about \$250k, significantly less than at NBVC.

- Shuttle flights between NBVC and NAWC China Lake operate several times per day and only take about 35 minutes. The planes hold about 15 passengers.
- The community observed that the Sensors and Electronic Warfare recommendation RDAT&E Consolidation at China Lake (Tech 0054), DOD used a 5.7% civilian personnel efficiency factor, resulted in a slow payback. They provided us with a revised COBRA that reflected a 15% efficiency factor and a payback in only six years, one-half of the DOD payback period. [However, the BRAC staff noted that GAO had recommended the consistent use of 5.6%.] This recommendation has a one-time cost of \$72.7 M and a NPV savings in 2025 of \$83.8 M.
- The community believes that the sea range is vital and is a critical joint service asset that must be preserved. The issue is how many people should be kept at Point Mugu to efficiently and effectively operate the sea range, including San Nicholas Island; range, target development and launching operations.

**REQUESTS FOR STAFF AS A RESULT OF VISIT: NA**



**TECH-0018**  
**Create a Naval Integrated Weapons &  
Armaments RDT&E Center of Excellence  
at China Lake**

16 August 2005



# Integrated Naval Weapons RDA T&E Center of Excellence at China Lake

- ROI Summary

One-Time Costs	Steady-State Savings	ROI Years	20 Year NPV
\$343.3	\$52.1M	7 years	\$343.3M

- Recommendation:

- Realigns and consolidates weapons and armaments related work from across the country into a single site to maximize efficiencies, achieve synergy, and save money (\$60M each year)
- All actions relocate weapons facilities with lower overall quantitative Military Value into the center with the highest Military Value (China Lake)
- Integrated Center at China Lake provides a diverse set of open-air range and test environments (desert, mountain, forest) for added synergy
- **Gaining community impacts:**
  - No encroachment or environmental issues
  - Infrastructure will support increased growth



Department of the Navy

## **Integrated Naval Weapons RDA T&E Center of Excellence at China Lake**

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- **Issues**
  - None. No deviation from the criteria.
- **Benefits:**
  - Creates a full-spectrum, integrated R&D T&E Center for the future that is synergistic and competent in all aspects of weapons and weapons technology
  - Puts the Navy on a parity with the USAF and USA
  - Positions DOD for Jointness in the Weapons arena while preserving needed service-specific sites and healthy competition
  - China Lake operates at the peak of software development competency, Level 5, as rated by the independent Software Engineering Institute at Carnegie Mellon Institute





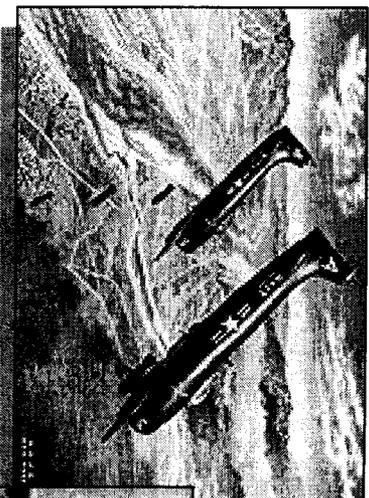
Department of the Navy

## China Lake Firsts

Paving the Way For Modern Weaponry

### First...

- Aircraft rockets in the U.S. inventory
- Air-to-air guided missile ever used in combat – Sidewinder
- Antiradar missile – Shrike
- Precision guided air-to-surface weapon – Walleye
- To develop plastic bonded explosives
- Real-time night display of targets
- To develop and test the concept for the Polaris missile
- To demonstrate an anti-satellite weapon





# MILITARY VALUE RANK

## Tech 15 or TJCSG TECH-0018DR, Integrated Weapons and 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

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

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**From:** Gilmer, Bradford NAVAIR [bradford.gilmer@navy.mil]  
**Sent:** Friday, August 05, 2005 1:22 PM  
**To:** lester.farrington@wso.whs.mil; david.epstein@wso.whs.mil  
**Subject:** Suggested wording

Les and David:

I was asked to forward to you proposed commission language to reflect our recommended changes to the 2 actions affecting Point Mugu. The numbers for Point Mugu and Port Hueneme in TECH18 below were derived from our proposed rewording slides sent previously. I could not address changes for the other activities.

### Recommended BRAC Commission Language

TECH18 - Weapons & Armament Center of Excellence – The Commission validates the Department’s recommendation to ‘Create a Naval Integrated Weapons & Armament Research, Development & Acquisition, Test & Evaluation Center’ by realigning and consolidating Weapons & Armament technical functions from multiple facilities to China Lake, CA. This action transfers 997 civilian billets to NAS China Lake, CA from the following sites: NSWC Crane, IN (193 positions), NSWC Dahlgren, VA (147 positions), NSWC Indian Head, MD (80 positions), NAWC Patuxent River, MD (94 positions), NAWC Point Mugu, CA (329 positions), NSWC Port Hueneme, CA (134 positions), and NSWC Seal Beach, CA (20 positions).

TECH54 - The Commission finds that the Department’s recommendation for ‘Navy Sensors, Electronic Warfare, and Electronics Research Development & Acquisition, Test & Evaluation’ is a stand-alone relocation that does not consolidate similar functions into a Center of Excellence, nor does it yield significant savings. The commission does not recommend approval of this recommendation and does recommend that the Navy retain capability in EW as a Specialty Site at Pt. Mugu, CA.

Bradford R. Gilmer

Deputy Director for Test and Evaluation

BRAC Certifier

(805) 989-8445

-----Original Message-----

8/11/2005

**From:** Gilmer, Bradford NAVAIR

**Sent:** Thursday, July 28, 2005 11:13

**To:** 'lester.farrington@wso.whs.mil'; 'david.epstein@wso.whs.mil'

**Cc:** Bangle, Marilyn NAVAIR; Rankin, Ellen NAVAIR; Honea, David "Wayne" NAVSEA; Gilmer, Bradford NAVAIR

**Subject:** RE: TECH18 rewording and associated perosnnel counts

Les and David:

We have completed the COBRA analysis that you requested. We ran 18 different cases for your consideration (enclosed).

<< File: COBRA Mugu\_PHD Runs R2.xls >>

The cases ran were for the Green, Green + Yellow, and Green + Yellow + Red functional variations; 0% , 5.5% and 15% personnel efficiency cases; and both NBVC alone and NBVC included with other TECH18 activities. The "Green" runs were based on the proposed rewording for the NBVC activities that we have enclosed again for completeness.

<< File: PHD BRAC RECOMMENDATIONS.doc >> << File: TECH18 Point Mugu Reword.ppt >>

We ran the different personnel efficiency cases to show the impact this assumption has on ROI. Clearly 15% is the only case that shows a reasonable ROI. When the GAO 5.5% number is used the ROI in most cases exceeds 20 years. We believe the 0% runs are closer to what can be achieved given the efficiencies already gained between the 2 sites.

For comparison purposes, we have included in the spread sheet the data from the TJCSG TECH18 COBRA run. For our comparative case (15% G+Y+R), we corrected the dynamic data to allow 100% of NBVC activity inputs, corrected the aircraft ramp space requirement, and added MILCON to handle additional personnel. We did not include MILCONS for new range operations center, target launch and recovery facilities, and their associated dynamic and recurring costs since we could not envision how to operate the sea range given the recommendation as proposed. These costs are substantial and would most likely drive the ROI to 20 years+.

If you have any questions, please call me at one of the numbers below.

Bradford R. Gilmer

Deputy Director for Test and Evaluation

BRAC Certifier

(805) 989-8445

Cell: (805) 816-5835

-----Original Message-----

**From:** Gilmer, Bradford NAVAIR

**Sent:** Tuesday, July 26, 2005 13:35

**To:** 'lester.farrington@wso.whs.mil'; 'david.epstein@wso.whs.mil'

**Cc:** Bangle, Marilyn NAVAIR; Rankin, Ellen NAVAIR; Honea, David "Wayne"  
NAVSEA

**Subject:** TECH18 rewording and associated perosnnel counts

Les and David:

As you requested, we submit proposed changes to the TECH18 action associated with the Nava Air Warfare Center, Weapons Division, Point Mugu. These changes do not include any personnel numbers from the Naval Surface Warfare Center, Port Hueneme Division. The enclosed file has 4 pages:

- (1) Proposed wording (approved by RDMLs Bachmann and Skinner on 12 July 05)
- (2) Personnel moving based on revised wording
- (3) Technical personnel not moving based on revised wording
- (4) Support personnel (both moving and not moving)

The personnel movements show numbers for both SEP03 and DEC04 on-board count baselines.

Later this week we will complete the cobra analyses associated with the Naval Base Ventura County (NBVC) portion of TECH18. We will look at 3 scenarios for:

- (1) Revised personnel and associated equipment/facilities associated with the above recommended revisions (revised green category)
- (2) Green item plus personnel and equipment/facilities associated with the "could move but why" yellow category.
- (3) Green and Yellow plus personnel and equipment/facilities "inextricably tied to sea range" red category.

These cobra runs will be performed on the SEP03 personnel baseline for comparison to present SECDEF recommendations.

If you have any questions or need to provide clarifications, please don't hesitate to call me at the numbers below.

Bradford R. Gilmer

Deputy Director for Test and Evaluation

BRAC Certifier

(805) 989-8445

• Suggested wording  
DCN: 12279

•  
• Cell: (805) 816-5835

<< File: TECH18 Reword - rev2.ppt >>