

**DRAFT**  
**DEFENSE BASE CLOSURE AND REALIGNMENT COMMISSION**

**SUMMARY SHEET**

**EGLIN AIR FORCE BASE, FLORIDA**

**INSTALLATION MISSION**

Air Force Materiel Command base. It is the home of the Air Force Development Test Center and its subordinate 46th Test Wing which flies numerous types of aircraft assigned to perform test and evaluation on aircraft armaments/weapons. Another subordinate unit is the 96th Air Base Wing which manages and maintains infrastructure resources. Tenant units include the USAF Air Warfare Center, 33rd Fighter Wing (F-15 aircraft), 9th Special Operations Squadron, and the Navy's Explosive Ordnance Disposal School. Eglin is also a joint use airfield with commercial passenger operations and has a Federal Bureau of Prisons minimum security prison camp.

**DOD RECOMMENDATION**

- Realign the Electromagnetic Test Environment (EMTE) with eight Electronic Combat (EC) threat simulator systems and two EC pod systems to Nellis Air Force Base Complex, NV
- Emitter-only systems to support Air Force Special Operations Command, the USAF Air Warfare Center, and Air Force Materiel Command Armaments/Weapons Test and Evaluation will be retained.

**DOD JUSTIFICATION**

- Air Force EC open air range workload requirements can be satisfied by one range.
- Capacity exists at Nellis to absorb EMTE's projected EC workload.

**COST CONSIDERATIONS DEVELOPED BY DOD**

• One-Time Costs	\$2.2M
• Net Savings During Implementation	\$6.3M
• Annual Recurring Savings	\$2.6M
• Break-Even Year	1999 (1 Year)
• Net Present Value Over 20 Years	\$31.4M

**DRAFT**

**MANPOWER IMPLICATIONS OF THIS RECOMMENDATION (EXCLUDES CONTRACTORS)**

	<u>Military</u>	<u>Civilian</u>	<u>Students</u>
<b>Baseline</b>	<b>7515</b>	<b>4041</b>	<b>0</b>
Reductions	0	0	0
Realignments	<u>27</u>	<u>25</u>	0
Total	27	25	0

**MANPOWER IMPLICATIONS OF ALL RECOMMENDATIONS AFFECTING THIS INSTALLATION (INCLUDES ON-BASE CONTRACTORS AND STUDENTS)**

<u>Recommendation</u>	Out		In		Net Gain (Loss)	
	<u>Military</u>	<u>Civilian</u>	<u>Military</u>	<u>Civilian</u>	<u>Military</u>	<u>Civilian</u>
Realign from Eglin to Nellis	(27)	(25)	0	0	(27)	(25)
Realign from Kirtland to Eglin	0	0	447	324*	447	324
<b>TOTAL</b>	<u>(27)</u>	<u>(25)</u>	<u>447</u>	<u>324</u>	<u>420</u>	<u>299</u>

\*Includes 103 contractor personnel.

**ENVIRONMENTAL CONSIDERATIONS**

- Environmental impact is minimal and ongoing restoration will continue.

**REPRESENTATION**

Governor:	Lawton Chiles
Senators:	Bob Graham Connie Mack
Representative:	Joe Scarborough



## DRAFT

### ECONOMIC IMPACT

- Potential Employment Loss: 85 jobs (52 Direct and 33 Indirect)
- Fort Walton Beach MSA Job Base: 86,772
- Percentage: 0.1 percent decrease
- Cumulative Economic Impact (1994-2001): 1.3 percent increase

### MILITARY ISSUES

- Relocation to Nellis Air Force Base was not determined considering alternate cross-service locations where lower costs or improvements to overall DOD capability might be achieved. According to the Test and Evaluation Cross-Service Group, sufficient capacity exists within the combined resources of China Lake and Edwards Air Force Base to absorb the workload. In February 1995 it was recommended that Air Force perform COBRA analysis for relocating all or some of this workload to China Lake and Edwards.

### COMMUNITY CONCERNS/ISSUES

- IMV, a community group supporting China Lake, in a letter to DBCRC March 17, 1995, expressed concern over Air Force's decision to move certain threat simulators to Nellis rather than to China Lake. Also concerned over absence of cross-servicing. (contact is Jack Connell-619-371-2722)
- Richard F. Gillis, president of Advanced Logistics Concepts, Inc., Destin, Florida made a presentation at the April 4 Birmingham hearing recommending that DBCRC analyze Air Force's decision to relocate portion of Eglin's electronic combat capability to Nellis. On April 8 we requested Air Force comments on Mr. Gillis' presentation.

### ITEMS OF SPECIAL EMPHASIS

- None.

Lester C. Farrington/Cross-Service/04/09/95 4:06 PM

# Document Separator

**BASE VISIT REPORT**

**EGLIN AIR FORCE BASE, FLORIDA**

**APRIL 20-21, 1995**

**LEAD COMMISSIONER:**

N/A-Staff Only Visit

**ACCOMPANYING COMMISSIONER:**

N/A-Staff Only Visit

**COMMISSION STAFF:**

Lester C. Farrington-Cross-Service Team  
Rick DiCamillo-Air Force Team

**LIST OF ATTENDEES:**

**Air Force Development Test Center-Eglin AFB**

MAJGEN Cranston-Commander  
LTCOL HEALD-Chief, Commander's Action Group  
CAPT Lisa Campbell-Chief of Protocol  
COL Stritmatter-Commander, 46th Test Wing  
LTCOL Higginbotham-Commander, 46th Test Squadron  
COL O'Brien-Commander, 96th Civil Engineer Group

**Edwards Air Force Base**

COL Heidenreich-412th Test Wing, Electronic Warfare Test Directorate

**Air Force Special Operations Command (AFSOC)**

BGEN Higham-Vice Commander  
COL Stevens  
COL Hunker  
COL Massey  
LTCOL Cowing

USAF Air Warfare Center (AWC)

COL Yates-Vice Commander  
COL Potter  
COL Dubois  
COL Holoviak  
LT COL Whitler  
COL Hughston  
LTCOL Sampson

**BASE'S PRESENT MISSION:**

An AFMC base that performs test and evaluation on aircraft armaments/weapons and electronic combat systems. Tenant units include the USAF Air Warfare Center and Special Operations Command.

**DOD RECOMMENDATION:**

Realign its Electromagnetic Test Environment (EMTE) and send 8 electronic threat simulators and 2 pod systems to Nellis AFB. Emitter-only systems to support Special Operations Command, Air Warfare Center and armaments/weapons test and evaluation to be retained.

**DOD JUSTIFICATION:**

Air Force electronic combat open air range workload requirements can be satisfied by one range. In addition, capacity exists at Nellis to absorb Eglin's projected electronic combat workload.

**MAIN FACILITIES REVIEWED:**

Facility Tour

Guided Weapons Evaluation Facility(GWEF)

Central Control Facility

Preflight Integration of Munitions and Electronic Systems (PRIMES)-Hangar 68

Simulator pod shop

Future site for Air Force Operational T & E Center (Moving from Kirtland)

Helicopter Range Tour

A-30 Threat Site

Several other threat sites and test areas

**KEY ISSUES IDENTIFIED**

1. New headquarters building and family housing will have to be constructed to accommodate AFOTEC. Facilities construction will cost \$26 million, which does not include any movement of equipment.

2. AFSOC concerned that the emitters that will remain at Eglin will not meet AFSOC's needs to evaluate their jamming capabilities. AFSOC can "live with the move" however, it will be more difficult and expensive for AFSOC to conduct operations.

AFSOC believes that having to deploy to the west means that:

- a. New electronic combat systems either will not be tested or will be delayed.
- b. There will be decreased training opportunities.
- c. Fewer assets will be available for war.
- d. Increased T & E costs will result ( \$2.7-3.0 million/yr. added O & M ).

AFSOC's bottom line is "decreased combat capability at higher costs".

3. AWC very concerned with the movement of electronic combat emitters to the west. Those emitters staying at Eglin are not "real" and AWC needs "real" assets to accomplish their mission. Following issues were presented :

- a. Increased Costs-\$1.1 million per year TDY; 25 additional people needed; and \$1.8 million increase in MILCON needed at Nellis.
- b. Loss of geographical terrain diversity.
- c. Reduced responsiveness to the testing process.
- d. Access to and capacity of Nellis range may be a problem.
- e. Data will not be adequate for several reasons.
- f. Nellis range operations will impede operationally realistic testing.

In summary AWC believes if proposed EMTE changes occur, testing will cost more, require more people and take more time. Moreover, AWC believes proposed EMTE changes are inconsistent with joint BRAC study findings and not supported by analysis of all factors.

**COMMUNITY CONCERNS RAISED:**

NONE at these meetings; however community has raised concerns over the move ( see Gen. Richard F. Gillis (USAF, Ret.) discussion and presentation at the Birmingham regional ).

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

N/A.

AGENDA  
FOR THE VISIT OF  
MR LES FARRINGTON  
MR RICK DICAMILLO

A/O 0800 hrs, 20 APR 95

THURSDAY, 20 APRIL 1995

- 1025 Arrive Okaloosa County Air Terminal, NW 791  
Greeted By: Lt Col Jim Heald
- Travel to Guided Weapons Evaluation Facility (GWEF) (Bldg 37)
- 1100 Arrive GWEF
- 1100-1200 Air Force Development Test Center Overview Briefing  
- Briefer: Maj Gen Cranston
- 1200-1205 Break
- 1205-1235 Electronic Combat Realignment Briefing  
- Briefer: Col Wes Heidenreich
- Working Lunch during briefing
- Other Attendees:  
Col Harry Strittmatter, Commander, 46 Test Wing  
Lt Col Jim Heald, Chief, AFDTIC Commander's Action Group  
Lt Col Bill Higginbotham, Commander, 46 Test Squadron  
Maj Bruce Stark, AFDTIC Executive Officer
- 1235-1240 Break
- 1240-1300 Depart Main Briefing Room for walking tour of the Guided  
Weapons Evaluation Facility (GWEF)  
- Tour Guide and Briefer: Mr Ron Russell, Director, Guided  
Weapons Evaluation Facility
- 1300 Depart for Bldg 380, Central Control Facility  
Escorted by: Col Harry Strittmatter
- 1305 Arrive Central Control Facility
- 1305-1325 Tour Central Control Facility/Special Programs Briefing  
- Tour Guide and Briefers: Ms Lynda Davila, Test Analyst,  
96th Communications-Computer Support Group
- 1325 Depart for PReflight Integration of Munitions and Electronic  
Systems--PRIMES (Hangar 68)
- 1330 Arrive PRIMES Facility
- 1330-1350 Tour PRIMES and see mission demonstration  
Briefer: Dave Schoch

1350 Depart from Hqs for Base Ops and Helo Tour

1400-1430 Depart on Helicopter Range Tour. Travel to A-30, Threat Site (overfly Okaloosa Island threat sites)  
Accompanied by: Col Harry Strittmatter  
Col Wes Heidenreich  
Lt Col Jim Heald  
Lt Col Bill Higginbotham

1430-1500 Tour A-30 Threat Site, Briefer: Lt Col Bill Higginbotham

1500-1545 Travel to Base Ops (overfly SWMR, Shallow Water Mine Range; B-70, Air-to-ground Bombing and Gunnery Range; C-74, Kinetic Energy Munitions Test Facilities; C-72, Hellfire Test Range; C-7, Hellfire Control Facility; C-80, ARENA Test Range; C-52, Air-to-ground Test Range; C-64, Chicken Little Warhead Test Range; C-52A, Seeker Test & Evaluation Facility, also known as Chicken Little; and D-51, Navy Explosive Ordnance Disposal School)

1545 Arrive Base Operations

1550 Travel to Bldg 961, Simulator Pod shop

1555-1605 See Pod Hardware (IHAWK, SADSVI, ARTIS)

1605 Depart Bldg 961 for Bldg 1, Rm 118

1610 Arrive Bldg 1

1610-1640 Presentation on AFOTEC siting  
Briefer: Brent Cambden

1640-1730 Discussion Time/Question and Answers  
Attendees:  
Col Harry Strittmatter  
Col Dave O'brien  
Lt Col Jim Heald  
Lt Col Bob Acosta  
Lt Col Bill Higginbotham  
Mr Ron Russel  
Mr Dave Schoch  
Mr Brent Cambden  
Mr Chris Snider

1730 Travel to Billeting, drive by possible AFOTEC BLDG site  
Personal Time

FRIDAY, 21 APRIL 1995

0730 Pick up from Billeting, travel to AFSOC, Hurlburt AFB  
Escorted by: Col Mike Buck  
Capt Lisa Campbell

0300 HQ AFSOC, Air Commando Briefing Room  
Greeted by: BGen. Jim Higham, Vice Commander, AFSOC

0800-0900 AFSOC presentation, questions and answers  
Briefed by: Col. Ian Huinker, 18th Flight Test Sq Commander

0900 Depart for USAF Air Warfare Center, Bldg 351

0930 Arrive USAFAWC, Bldg 351  
Greeted by: Col "Scud" Yates, Vice Commander, AWC

0930-1030 AWC presentation, questions and answers

1030 Depart for Okaloosa County Airport

1130 Depart on NW 1169

PROJECT OFFICER: Lt Col James R. Heald (Jim), AFDTCC/CCX  
Chief, Commander's Action Group  
Duty Phone: DSN 872-5471 (Commercial 904-882)  
Home Phone: (904) 897-3330  
FAX: DSN 872-9651

PROTOCOL OFFICER: Capt Lisa Campbell  
AFDTCC Chief of Protocol  
DUTY PHONE: (DSN) 872-3011/2197  
HOME PHONE: (904)  
CELLULAR: (904) 582-5001



# Document Separator

# WELCOME TO EGLIN AIR FORCE BASE



Home of the Air Force Development Test Center

200000 BG 8/95V



**OUR JOB IS TO**

**PUT THE**

**POWER**

**IN**

**GLOBAL REACH . . . GLOBAL POWER**



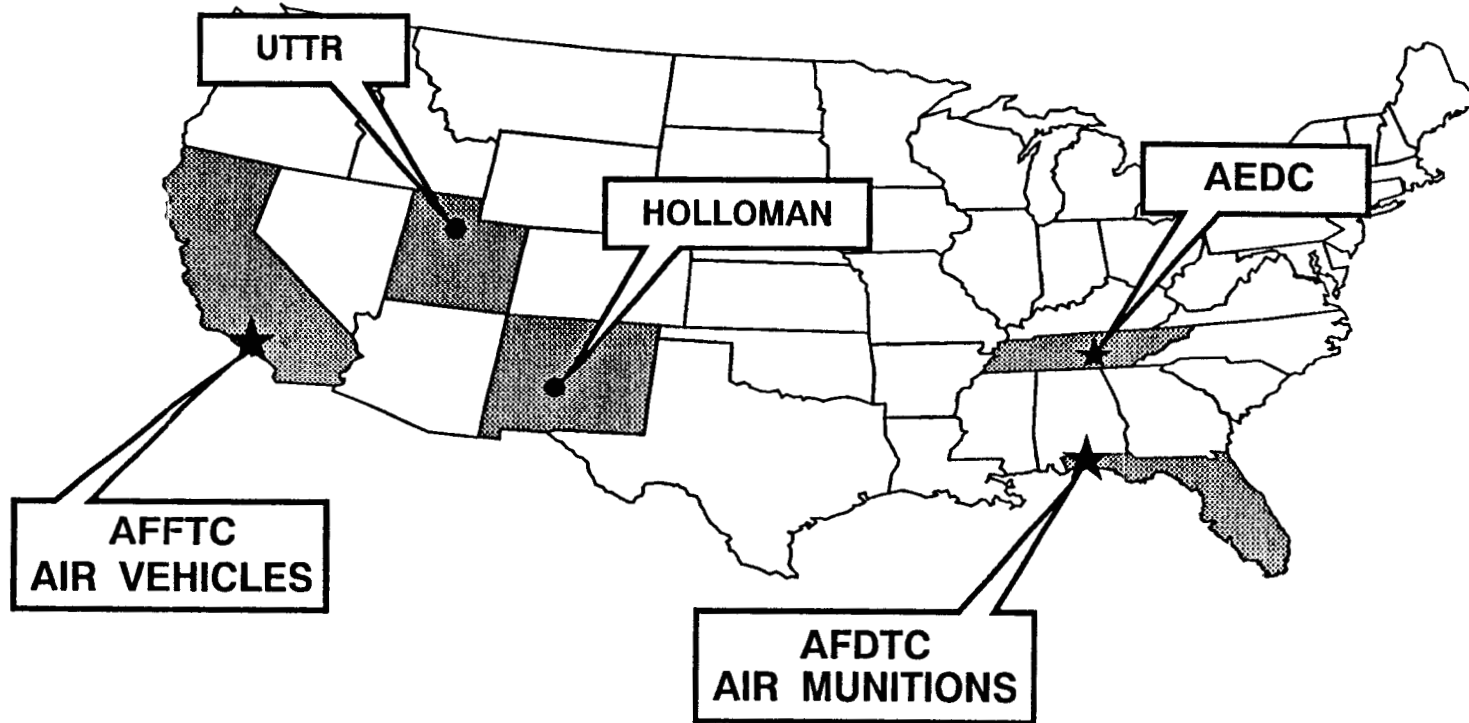
## EGLIN AT A GLANCE



- 
- **LARGEST AIR FORCE BASE**
  - **45 DOD ACTIVITIES**
    - AIR FORCE
    - ARMY
    - NAVY
  - **FEDERAL PRISON CAMP**
  - **COAST GUARD**

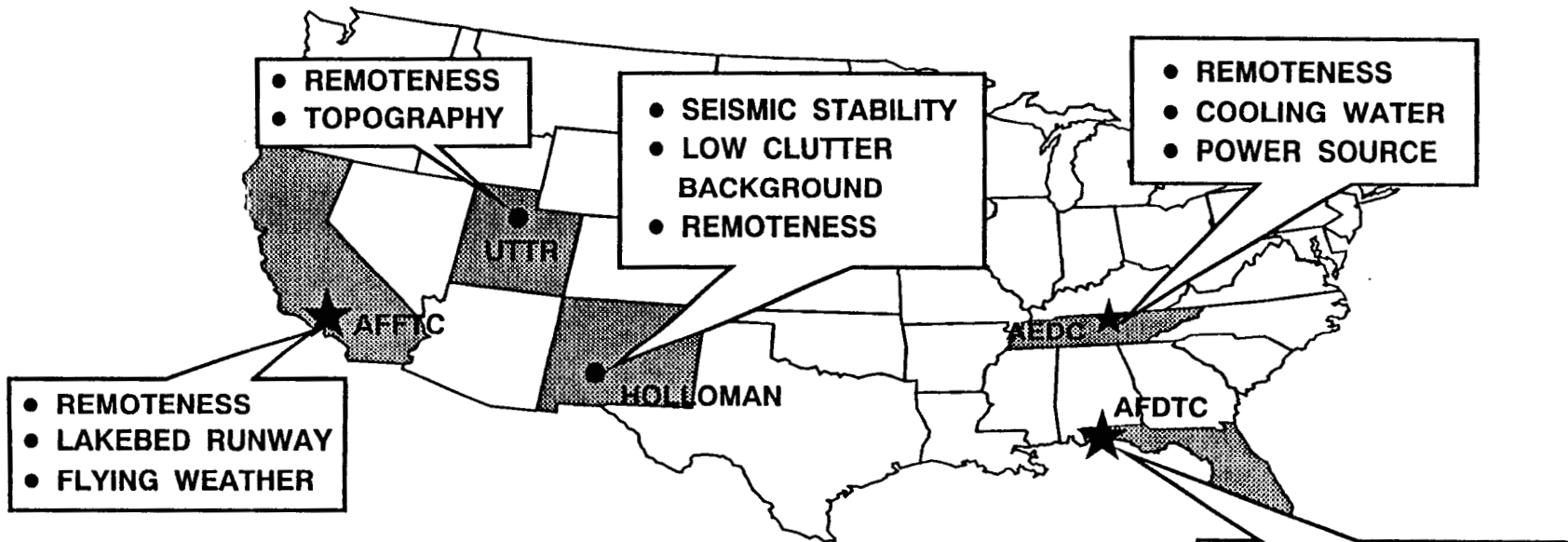


# AIR FORCE DEVELOPMENT TEST SITES





# AIR SYSTEMS DEVELOPMENT TEST SITES A DELIBERATE CHOICE



CAREFUL STUDY - DELIBERATE CHOICES	
• 1945	VON KARMAN
• 1951	DOOLITTLE, BOUNDY
• 1964-1968	DEMLER & KUCHEMAN NONNUCLEAR AIR ARMAMENT
• 1981-1989	SAB AND DEFENSE SCIENCE BOARD
• 1994	T&E BOARD OF DIRECTORS

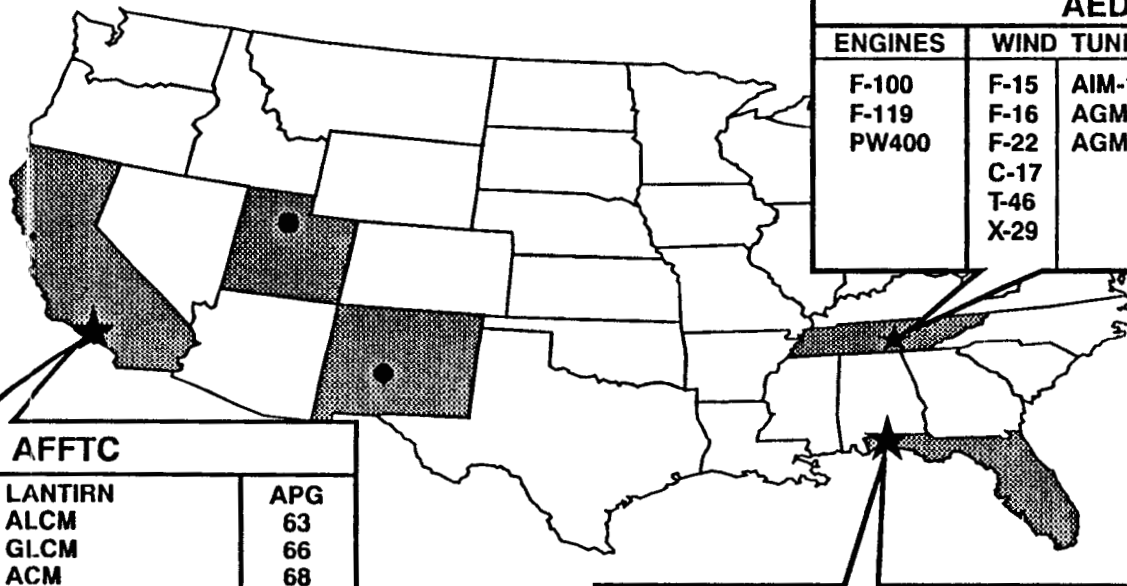
- AIR/LAND/SEA SPACE
- REMOTENESS
- CLIMATE
- TOPOGRAPHY



# USAF ACQUISITION PRODUCTS THE LAST 25 YEARS



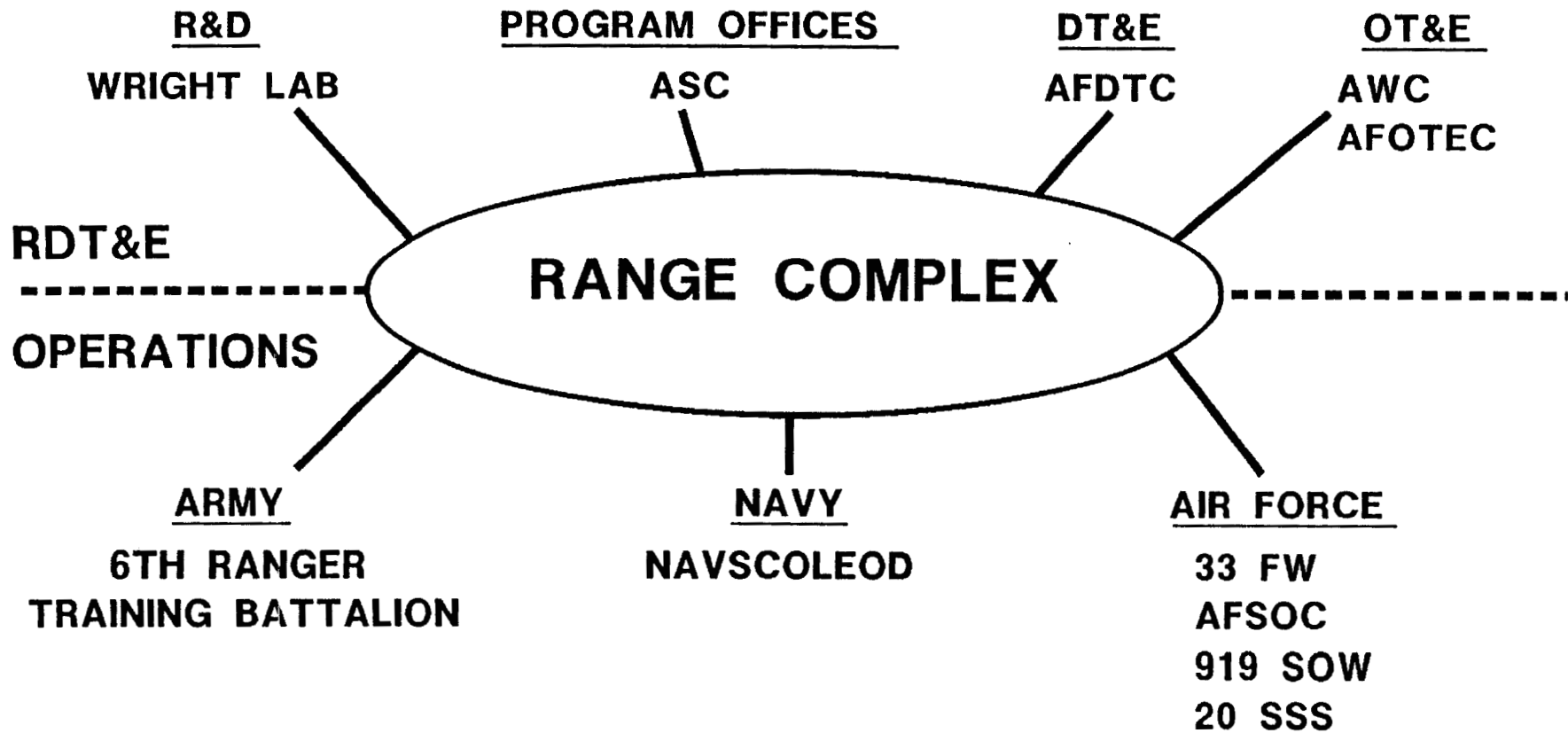
006702 BG 3/94V



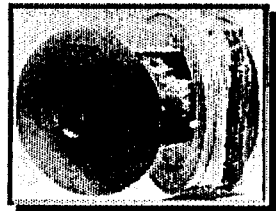
AEDC		
ENGINES	WIND TUNNEL	SPACE
F-100 F-119 PW400	F-15 F-16 F-22 C-17 T-46 X-29	AIM-120 AGM-65 AGM-130  PEACEKEEPER POSEIDON TRIDENT THAAD

AFFTC		
F-15	LANTIRN	APG
F-16	ALCM	63
YF-22/YF-23	GLCM	66
F-117	ACM	68
B-1	TACIT RAINBOW	70
B-2	TSSAM	
A-10		
C-17		
X-29		
X-31		
JSTARS		
AWACS		
MC-130		
AC-130		

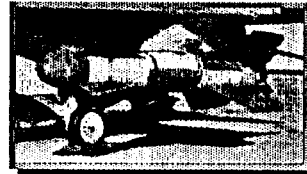
AFDTC		
GBU-10/12/15/24/27/28	CBU-52/58/71/87/89/97	ALQ-119/131/176/184
AGM-65	GAU-8	JSTARS
AGM-130	BLU-109	JTIDS
AGM-142	APG-63	HAVE NAP
AIM-120	ALR-56M	FLARES/CHAFF
AIM-9X	ALE-40/47	EXPENDABLES
	TEWS	GPS



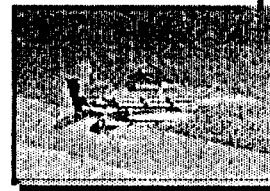
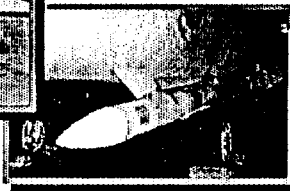




WRIGHT LAB



ASC



AFDTC



AWC

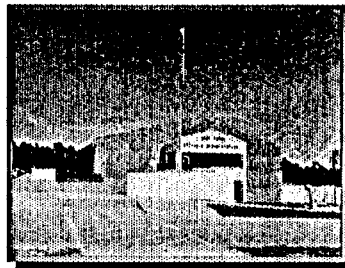
RDT&E  
OPERATIONS

**RANGE COMPLEX**

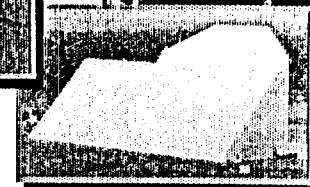
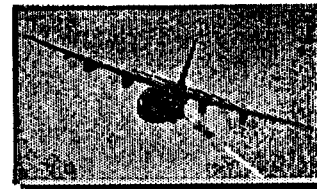
ARMY



NAVY



AIR FORCE





# EGLIN IS A BUSY PLACE FY94



TEST FACILITY HOURS	250,277
TEST & TNG SORTIES	57,760
FORMAL TNG CLASSES	491
PEOPLE TRAINED	9,894

## TEST USERS

AFDTC  
AWC  
AFOTEC  
NAVCOASTSYSCEN  
NAVSURWPNSCEN  
MICOM  
MSIC  
FSTC  
LOCKHEED  
OTI  
BRITISH AEROSPACE  
GERMAN MBB

ALLIED  
EC (BELGIANS, GERMANS,  
BRITISH, TURKS,  
CANADIANS, ITALIANS,  
& FRENCH)  
MUNITIONS TEST (BRITISH,  
ISRAELI, NORWEGIANS)  
OTHERS (ARMY, NAVY, FBI,  
CIA, ETC.)

## TRAINING USERS

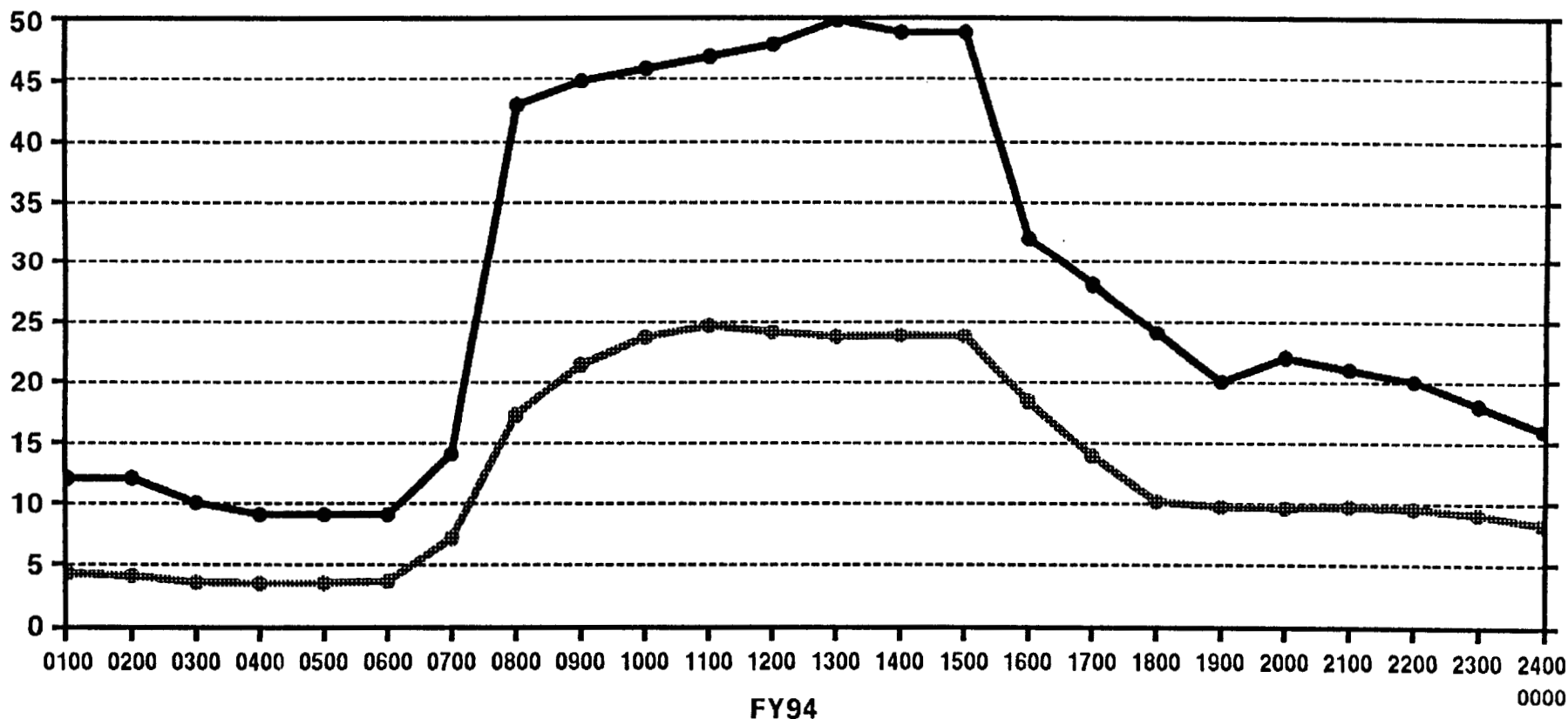
33d FW  
325th FW  
347th FW  
16th SOW  
919th SOW  
NATIONAL GUARD  
(AL, FL, IL, MD, MI)  
ARMY RANGERS  
NAVY EOD SCHOOL  
NAVY LAND SURVIVAL SCHOOL  
OTHERS (ARMY, NAVY,  
AIR FORCE, FOREIGN)



# EGLIN IS A 24 HOUR A DAY OPERATION



## SCHEDULED MISSION/ACTIVITIES



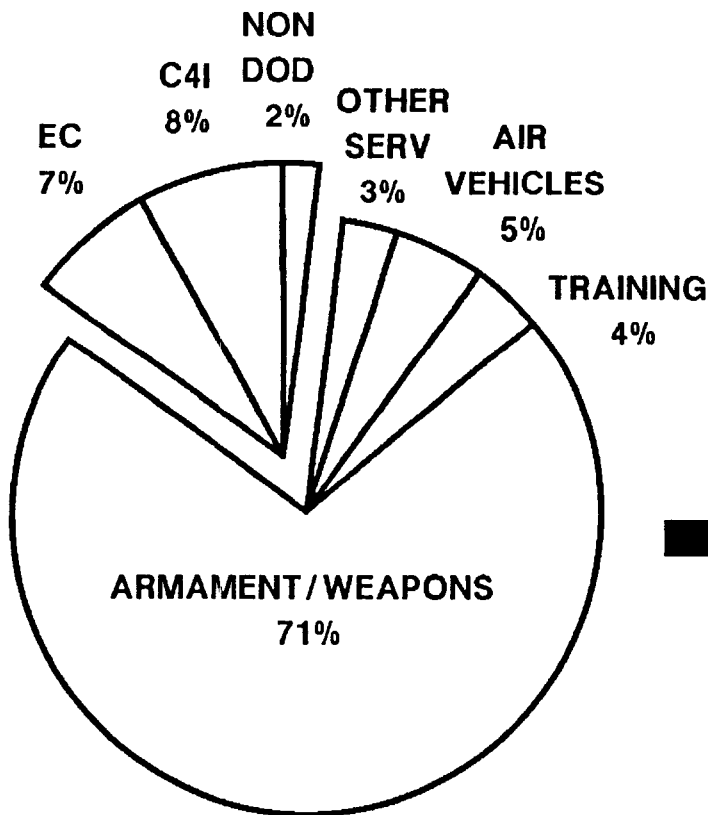
EXCLUDING WEEKENDS AND HOLIDAYS

■ MAXIMUM

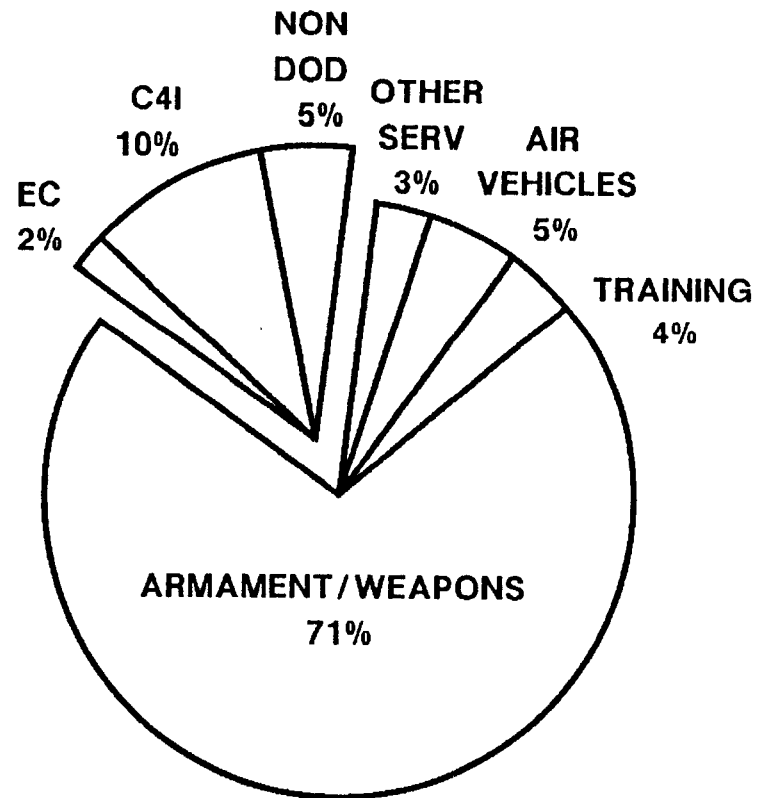
▣ AVERAGE



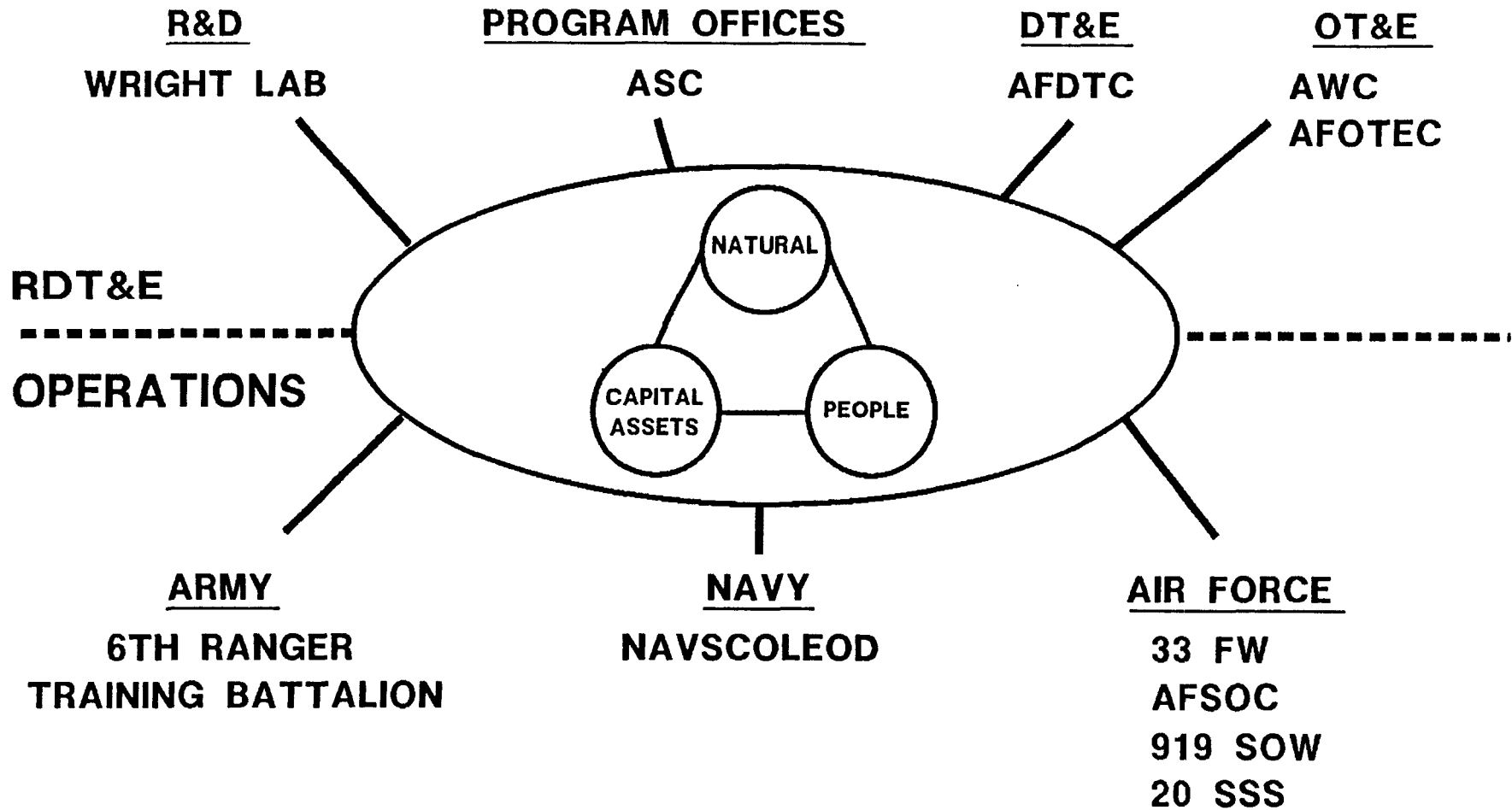
# CURRENT & PROJECTED BUSINESS OVERVIEW



**BRAC CERTIFIED DATA**



**FY2010 PROJECTED**



PEOPLE



CAPITAL ASSETS



TOTAL VALUE 12.8B

NATURAL RESOURCES



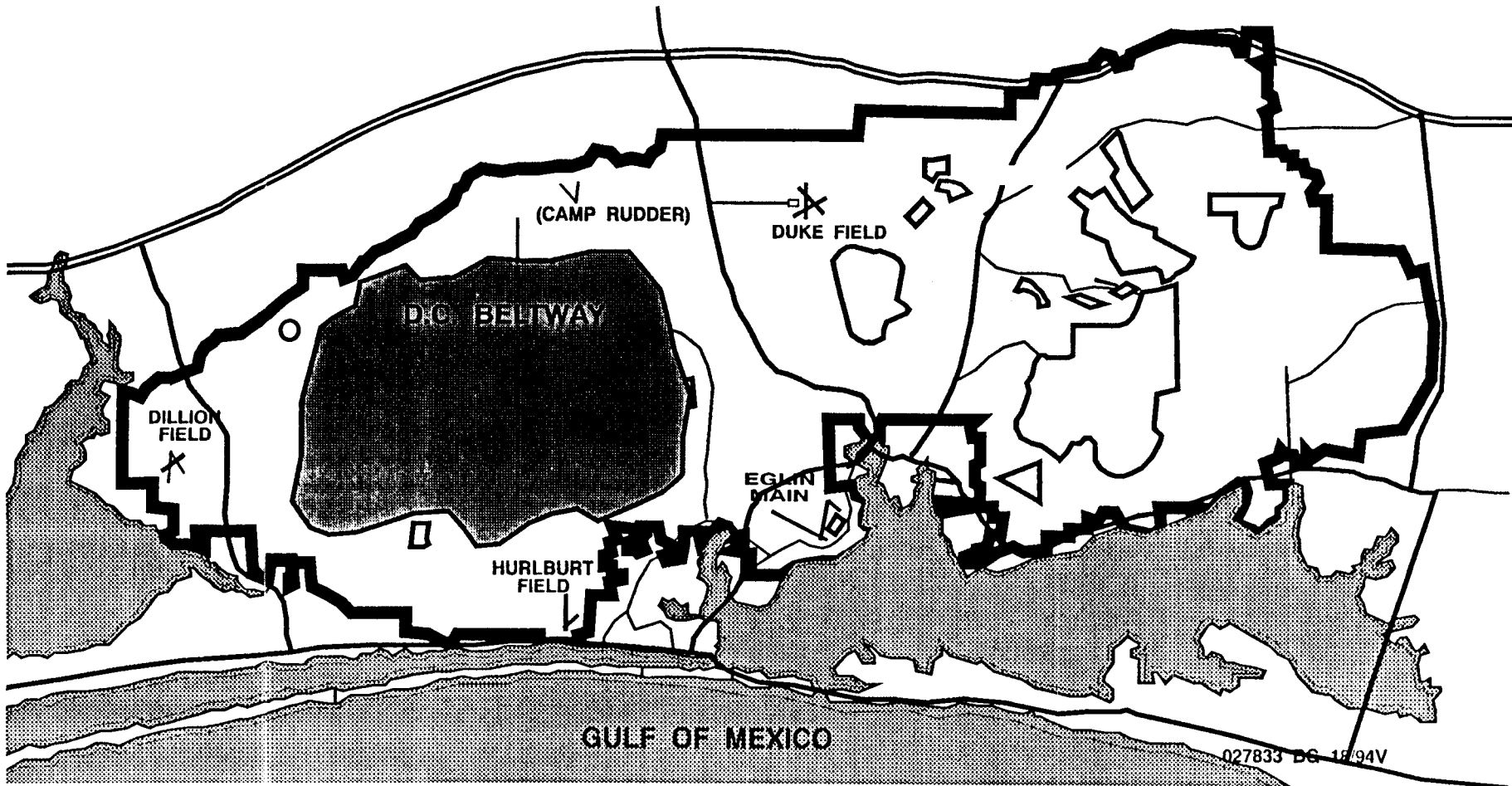
EGLIN'S KEY FEATURES





# EGLIN LAND RANGE

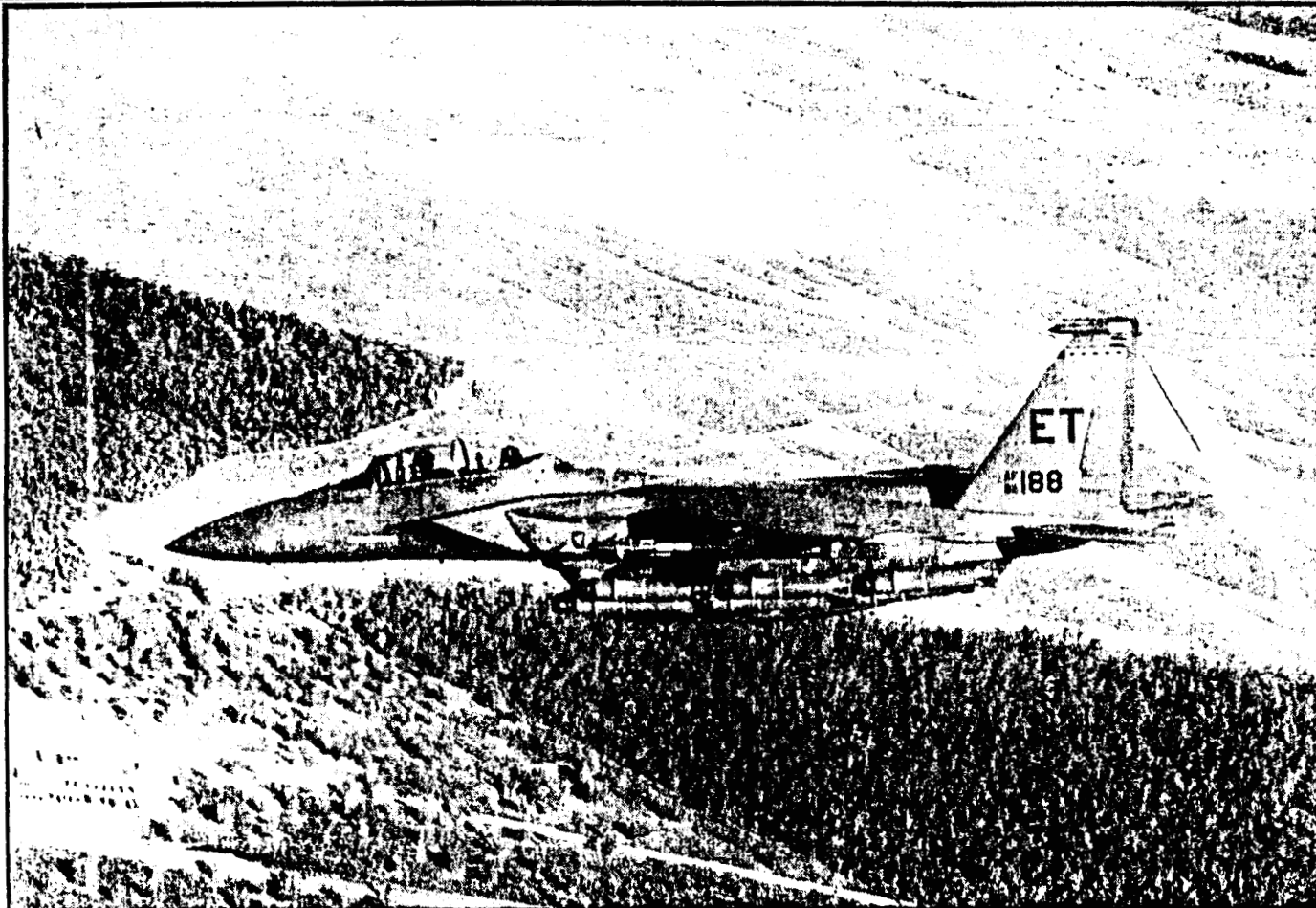
## 463,448 ACRES



027833 DG 18/94V



# EGLIN LAND RANGES



011106 BC 5/95



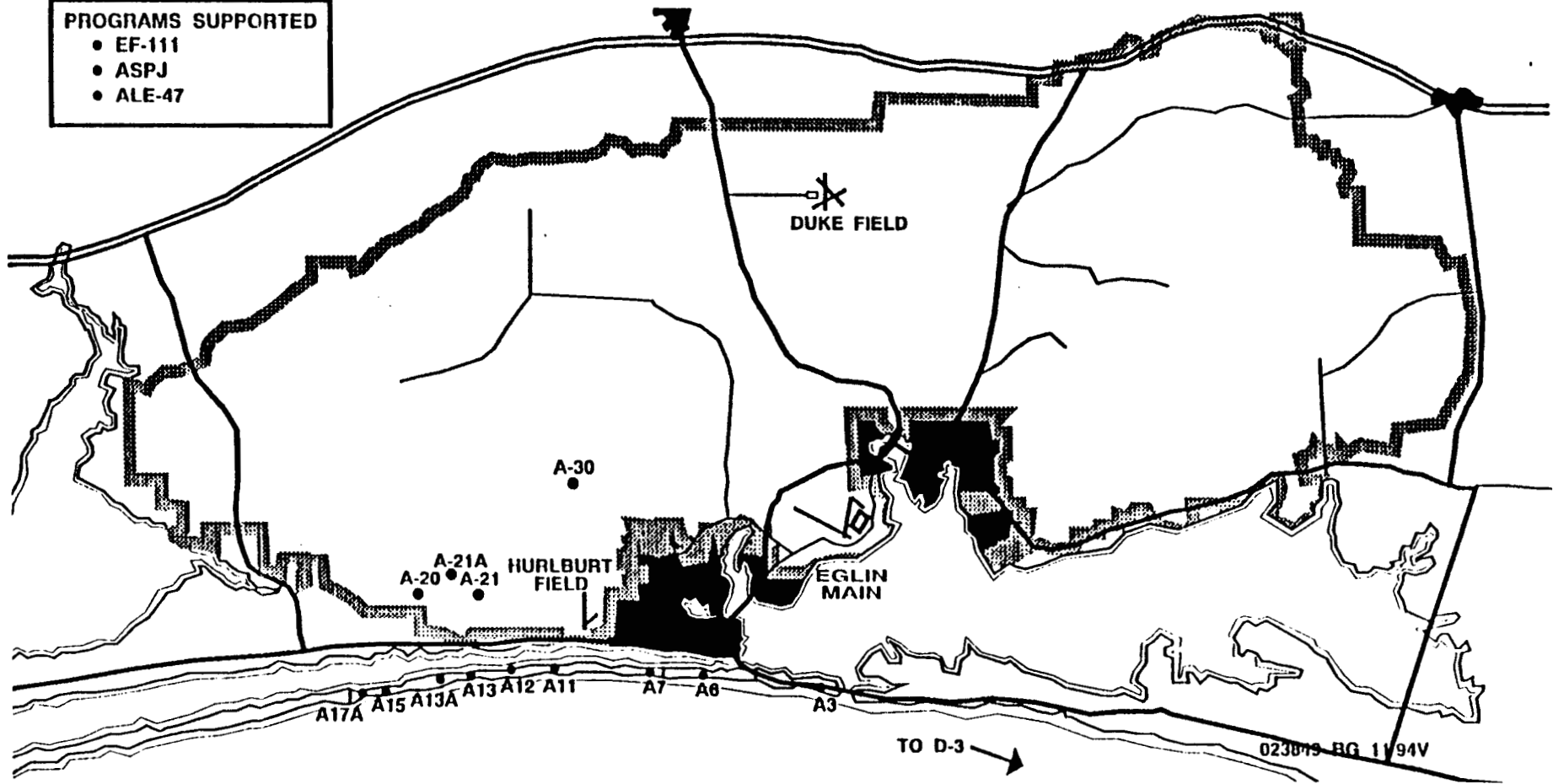


# ELECTROMAGNETIC TEST ENVIRONMENT (EMTE)



## PROGRAMS SUPPORTED

- EF-111
- ASPJ
- ALE-47





# AWARD WINNING ENVIRONMENTAL MANAGEMENT



**NATURE CONSERVANCY'S  
PRESIDENTS CONSERVATION  
AWARD (1993)**

**FLORIDA CHAPTER OF  
SIERRA CLUB CONSERVATION  
AWARD (1993)**

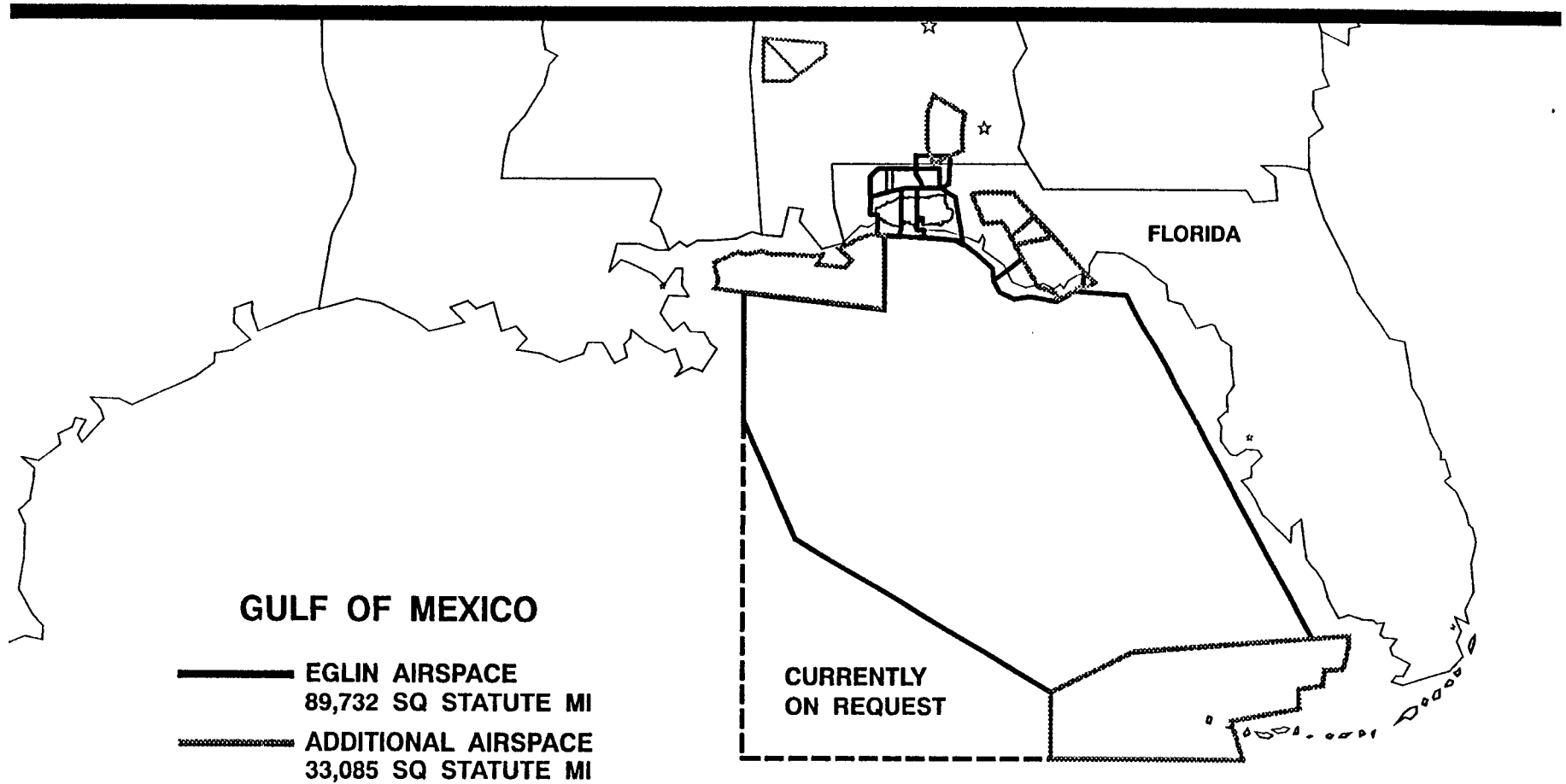


**DoD NATURAL RESOURCES  
CONSERVATION AWARD  
(1993)**



# AIRSPACE AVAILABLE WITHIN 48 HOURS

## 122,817 SQ STATUTE MILES TOTAL



0111M2 7/95V



# EGLIN AIRSPACE

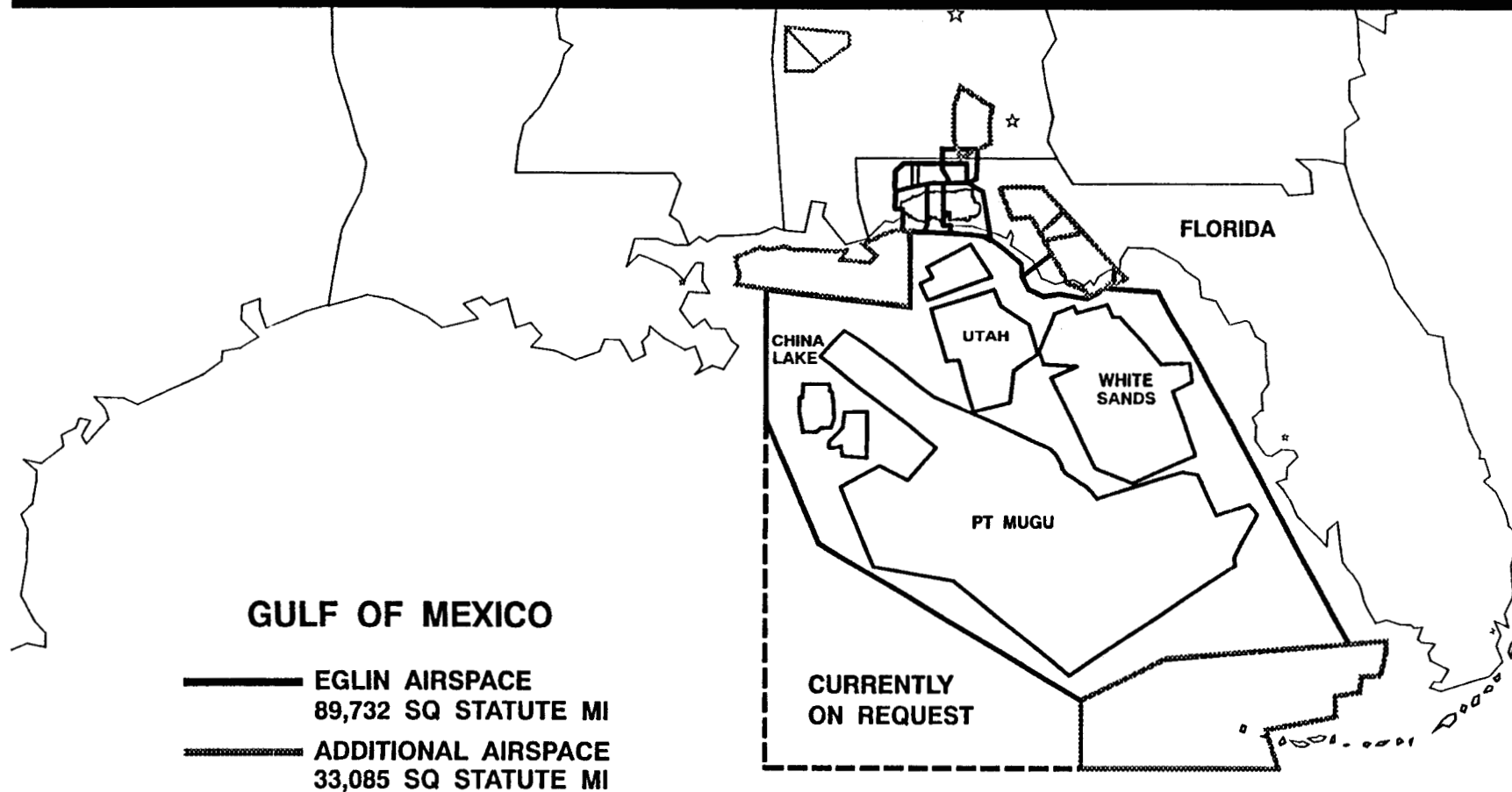


011106 EG-5/86



# AIRSPACE AVAILABLE WITHIN 48 HOURS

## 122,817 SQ STATUTE MILES TOTAL





# WEAPON REQUIREMENTS



INVENTORY  
OF  
WEAPONS

EGLIN LAND  
RANGES

EGLIN LAND &  
WATER RANGES



GUNS &  
AMMO

GRAVITY  
MUNITIONS

SMART/GUIDED  
WEAPONS

AIR-TO-AIR  
MISSILES

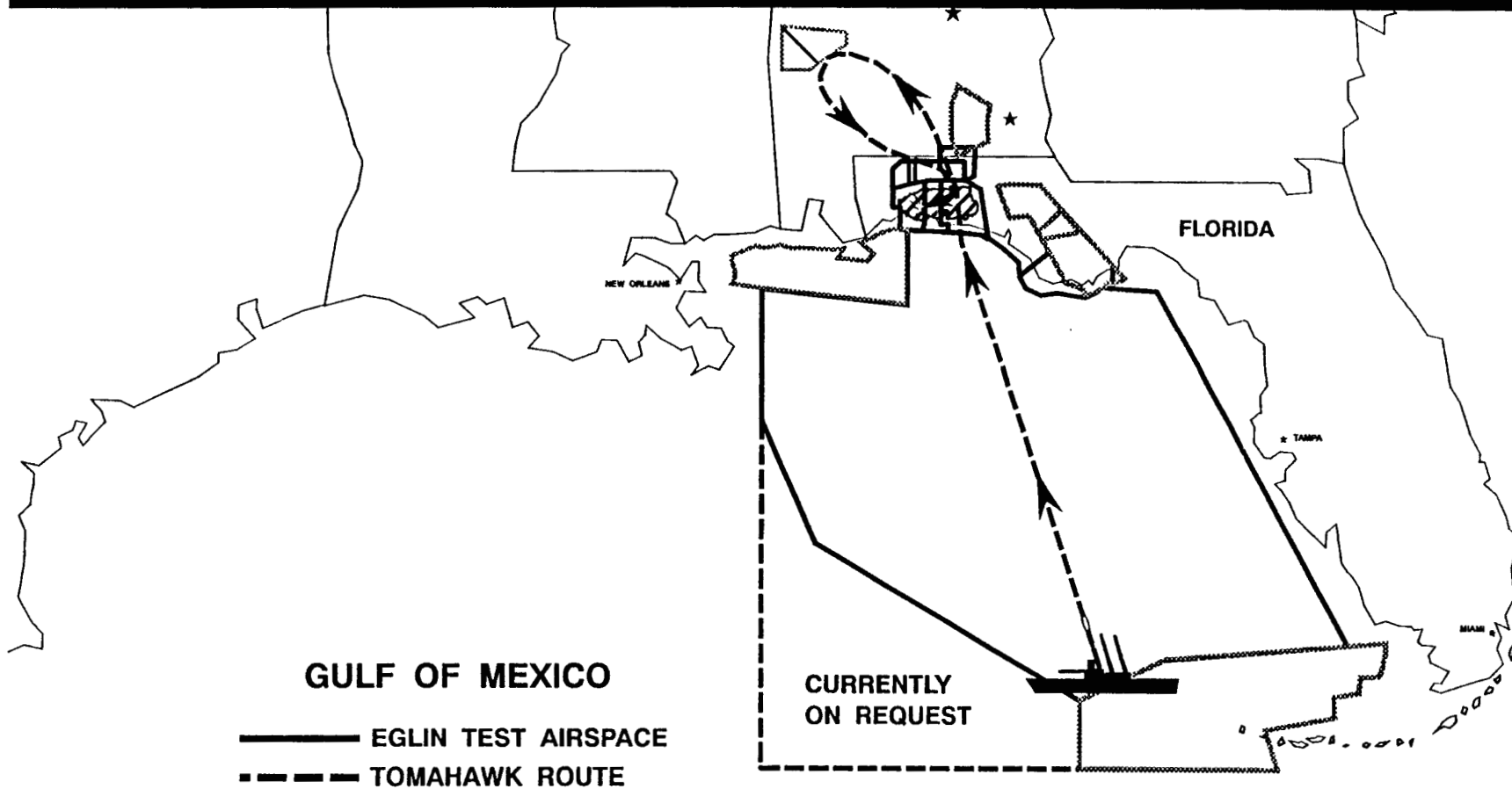
CRUISE  
MISSILES

THEATER  
MISSILES

DISTANCES REQUIRED FOR TESTING

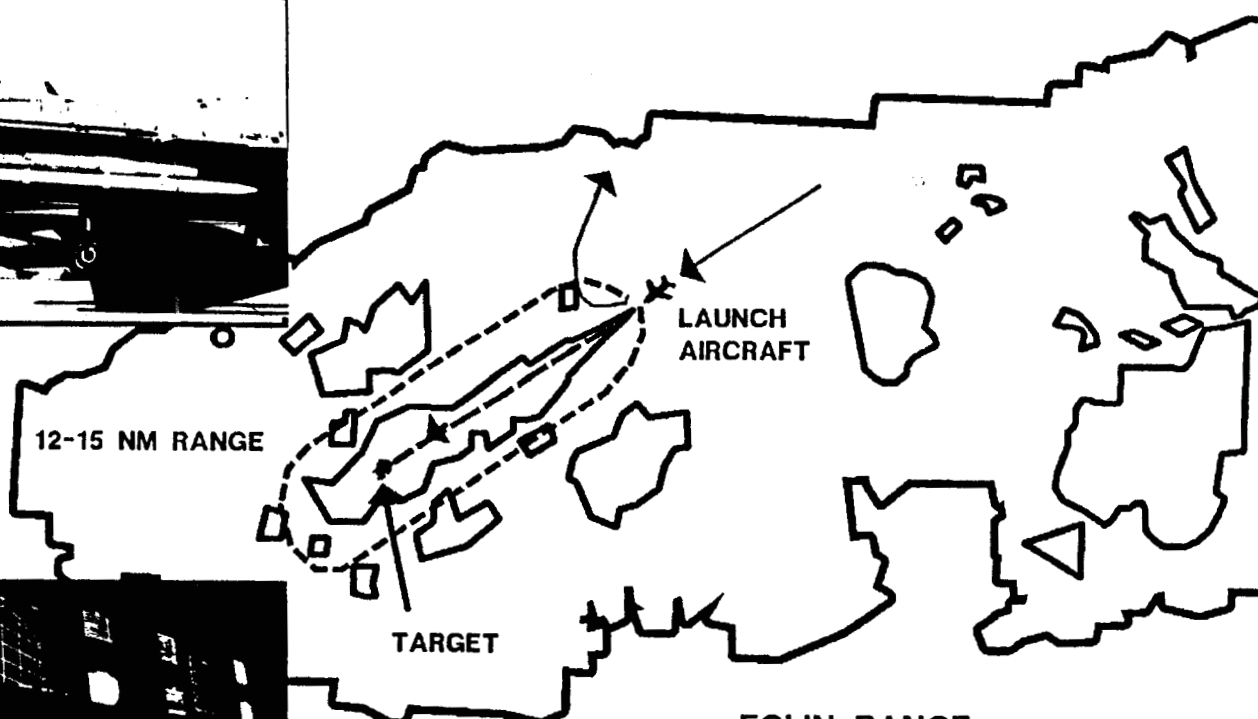
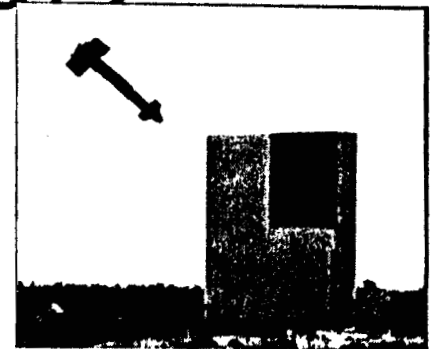


# TOMAHAWK PROFILE





# AIR-TO-SURFACE RANGE AGM-130C PROFILE

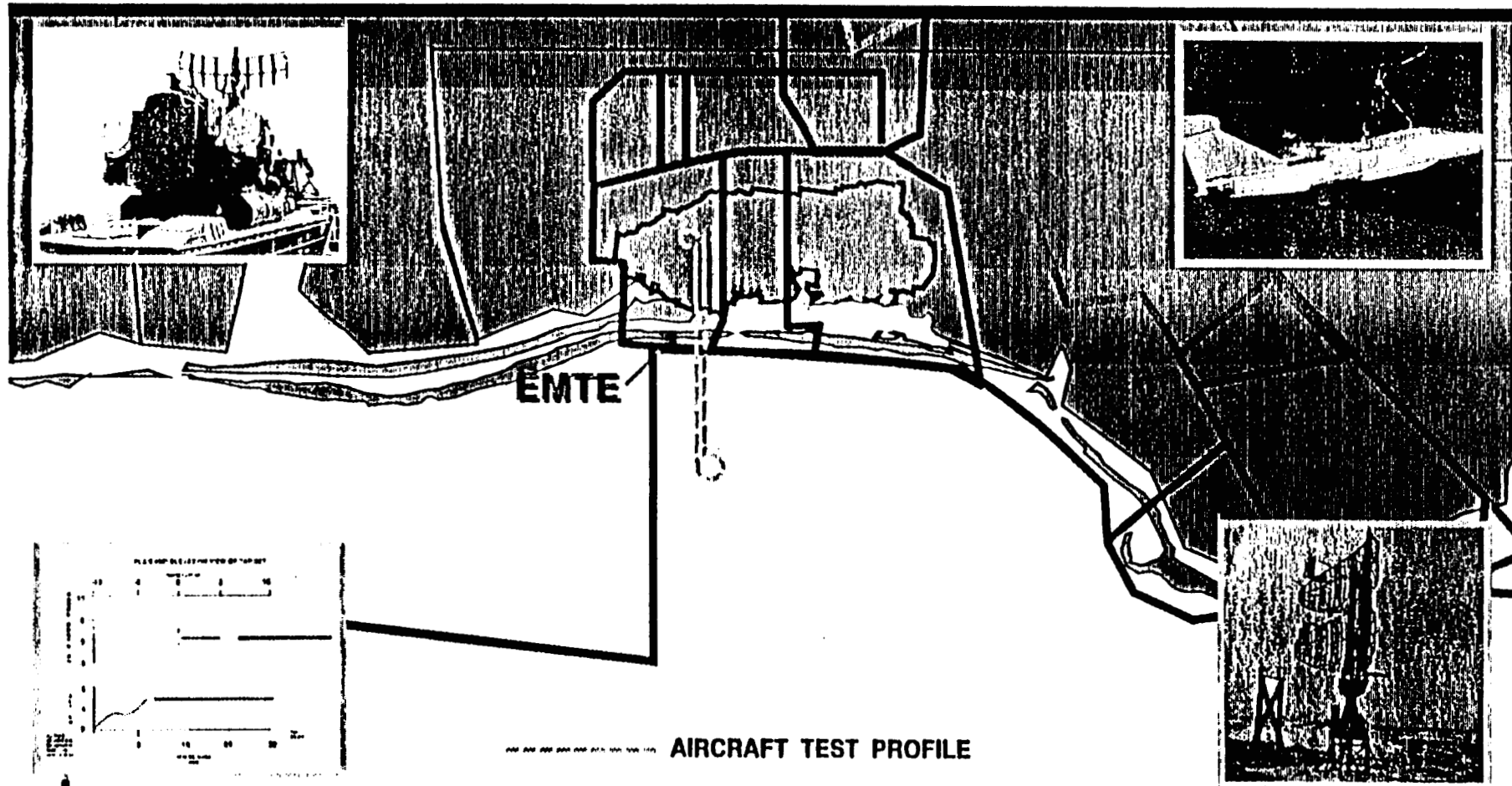


- EGLIN RANGE
- AGM-130 FLIGHT PATH
- ..... SAFETY FOOTPRINT





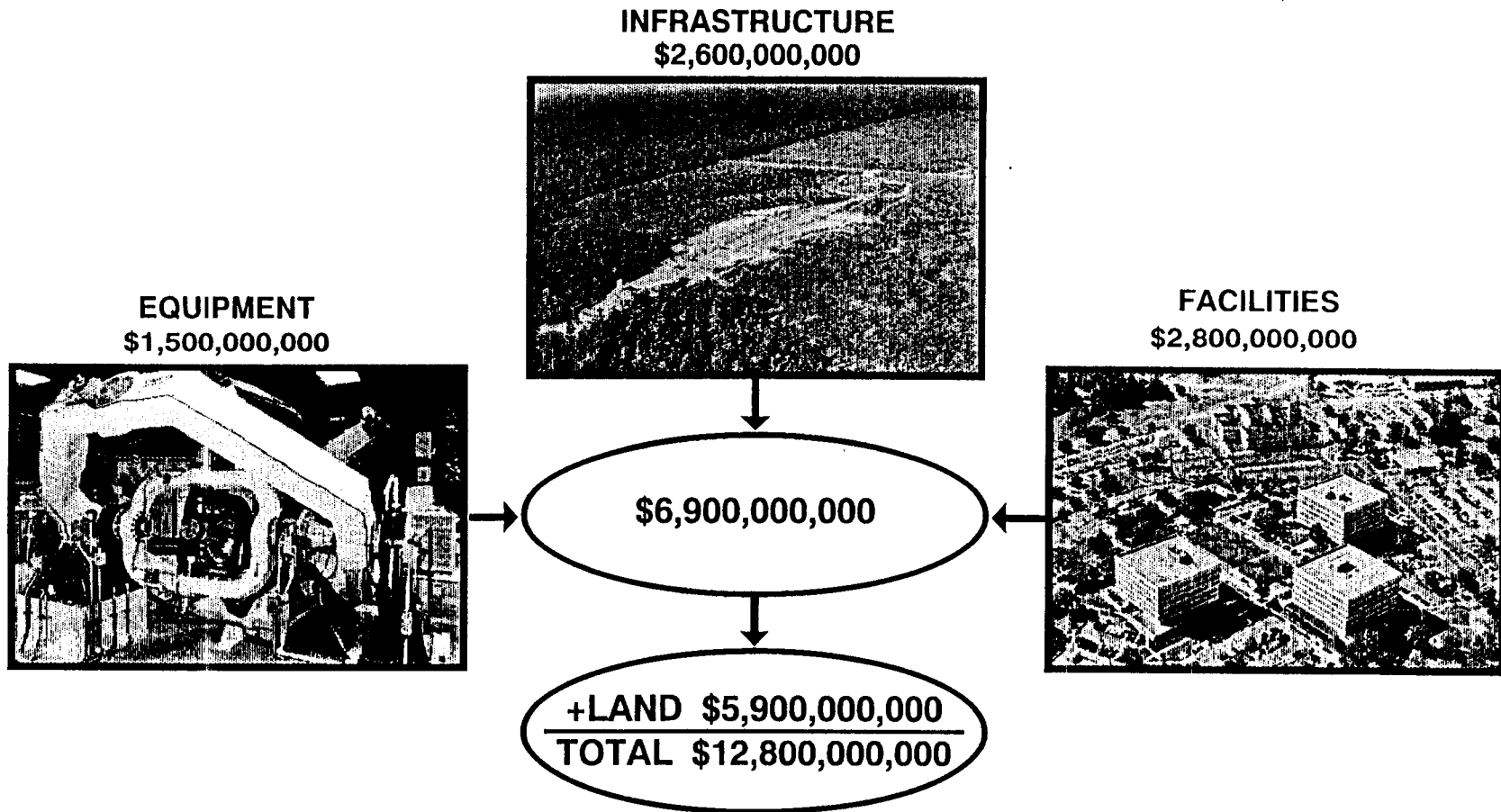
# OPEN AIR RANGE ELECTRONIC COMBAT PROFILE



011126 BG 6/95V

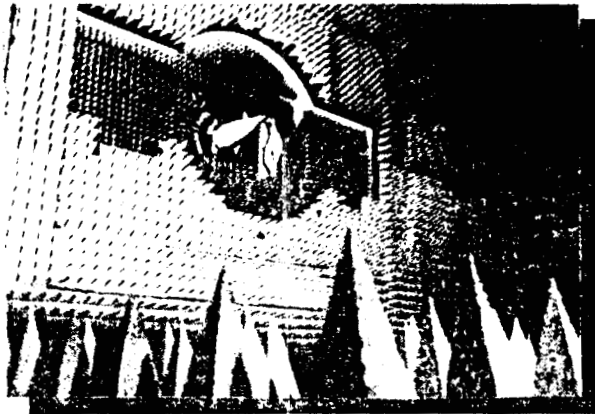


# CAPITAL ASSETS



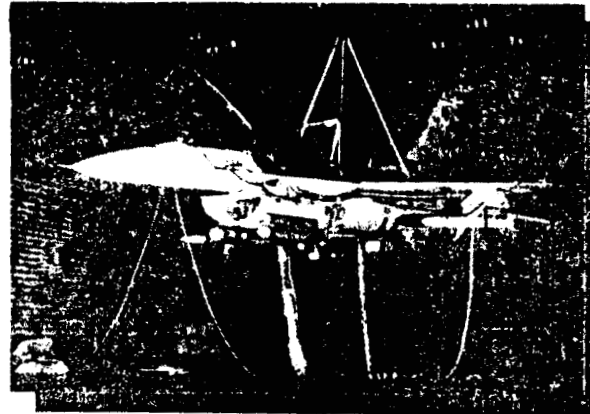


# CAPITAL ASSETS



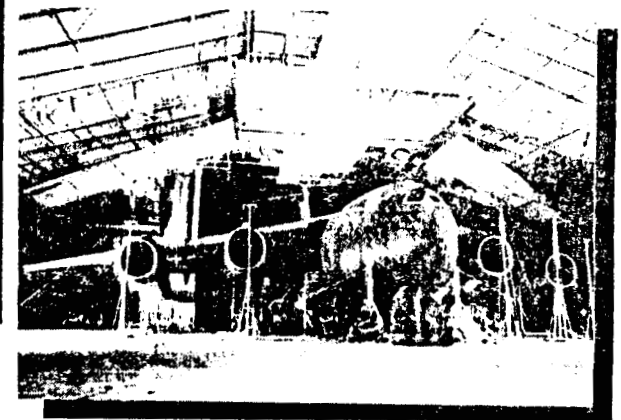
**GWEF**

**REPL VALUE: \$157.5M**



**PRIMES**

**REPL VALUE: \$195.7M**

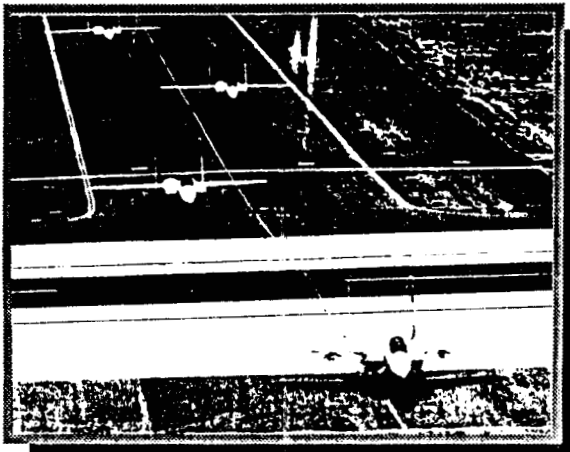


**CLIMATIC  
LAB**

**REPL VALUE: \$302.0M**



# AIRFIELD CAPACITY

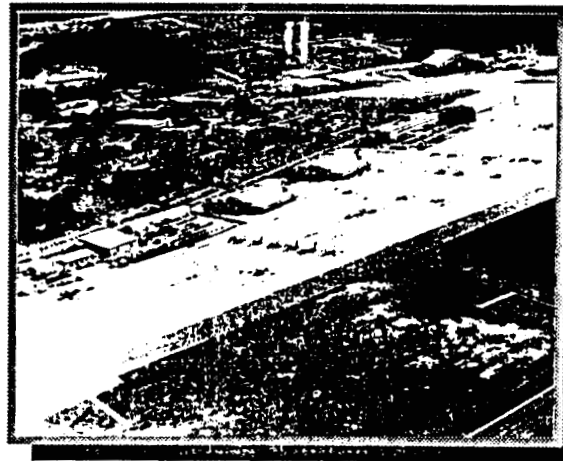


**ACTIVE RUNWAYS: 9\***

**- CONTROLLED: 4\***

**ASSAULT (DIRT) RUNWAYS: 3**

**\*INCLUDES HURLBURT FIELD**

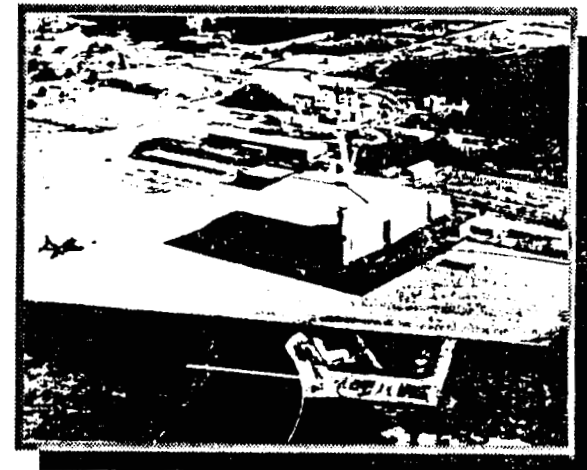


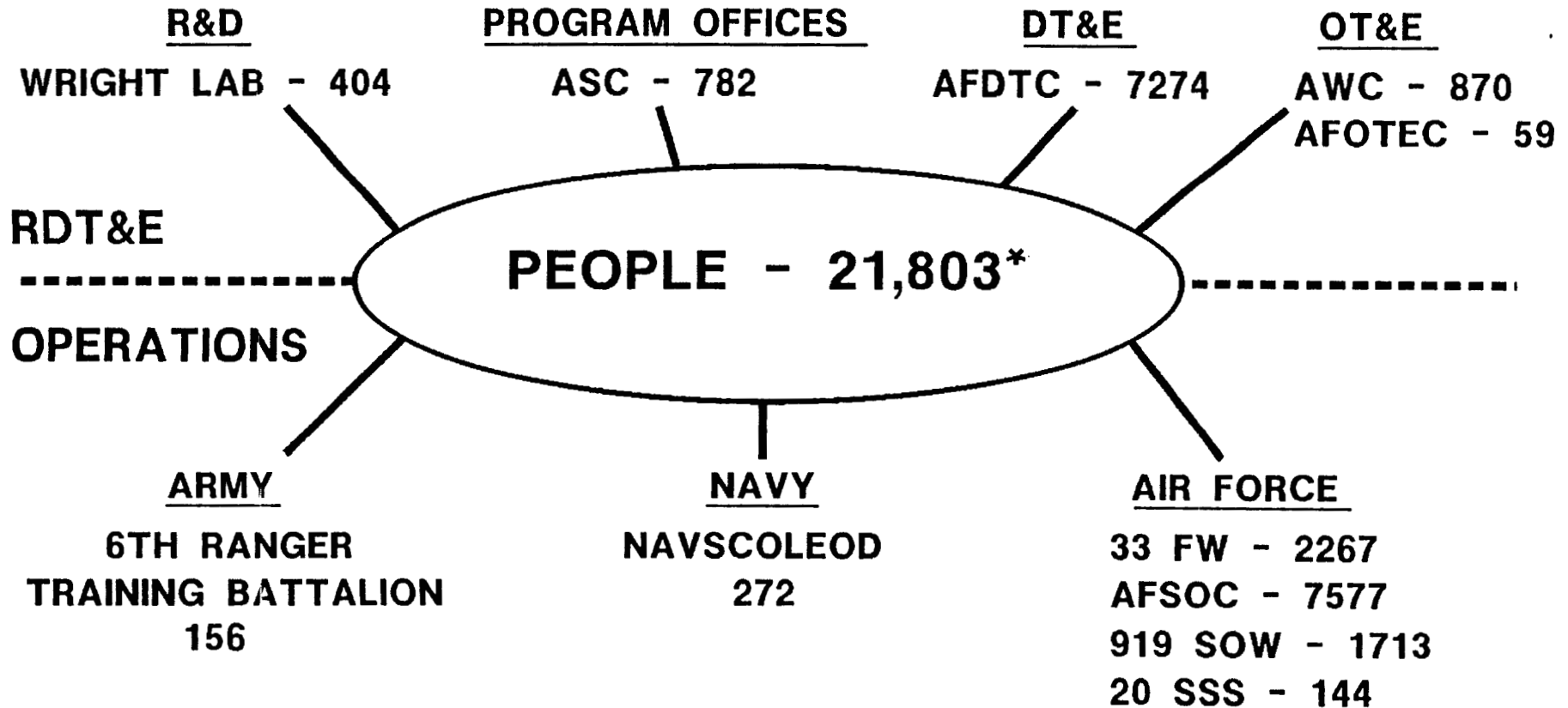
**TOTAL RAMP SPACE:  
8,495,213 SQ FT**

**CURRENTLY SUPPORTING 137 AIRCRAFT ASSIGNED**

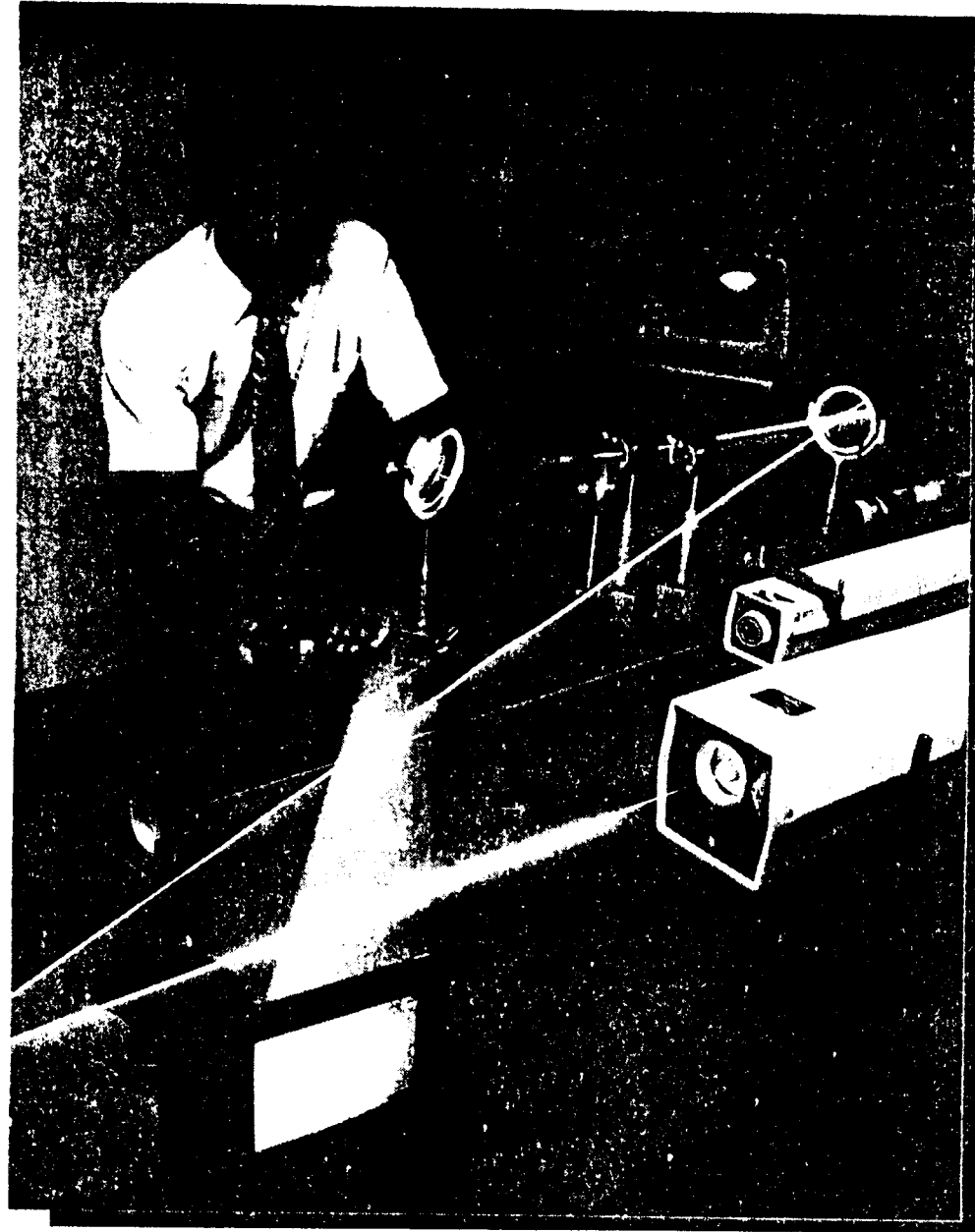
**HANGER SPACE: 768,844 SQ FT**

**WAREHOUSE SPACE:  
543,475 SQ FT**



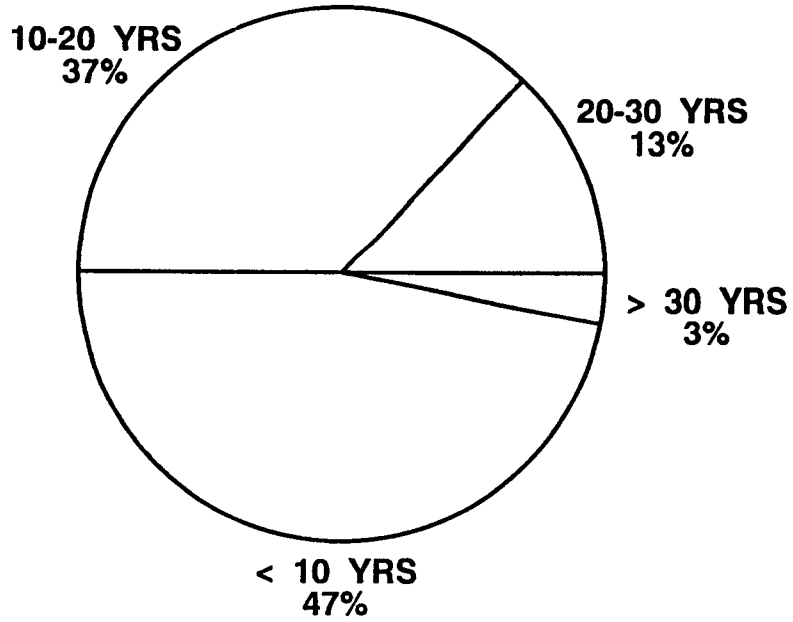


\* TOTAL INCLUDES 285 FROM ADDITIONAL ASSOCIATE UNITS

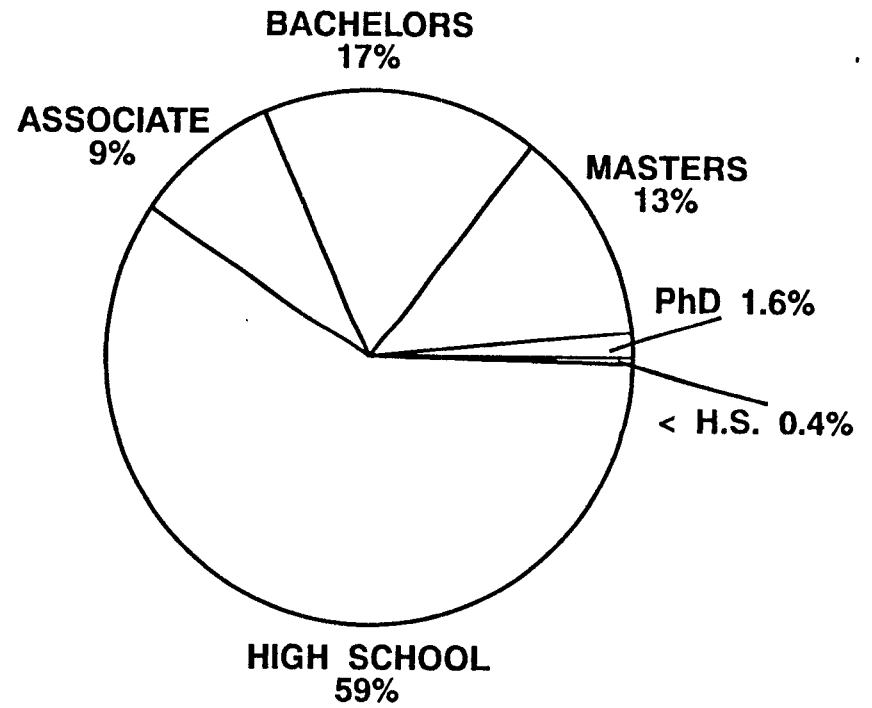




# PEOPLE



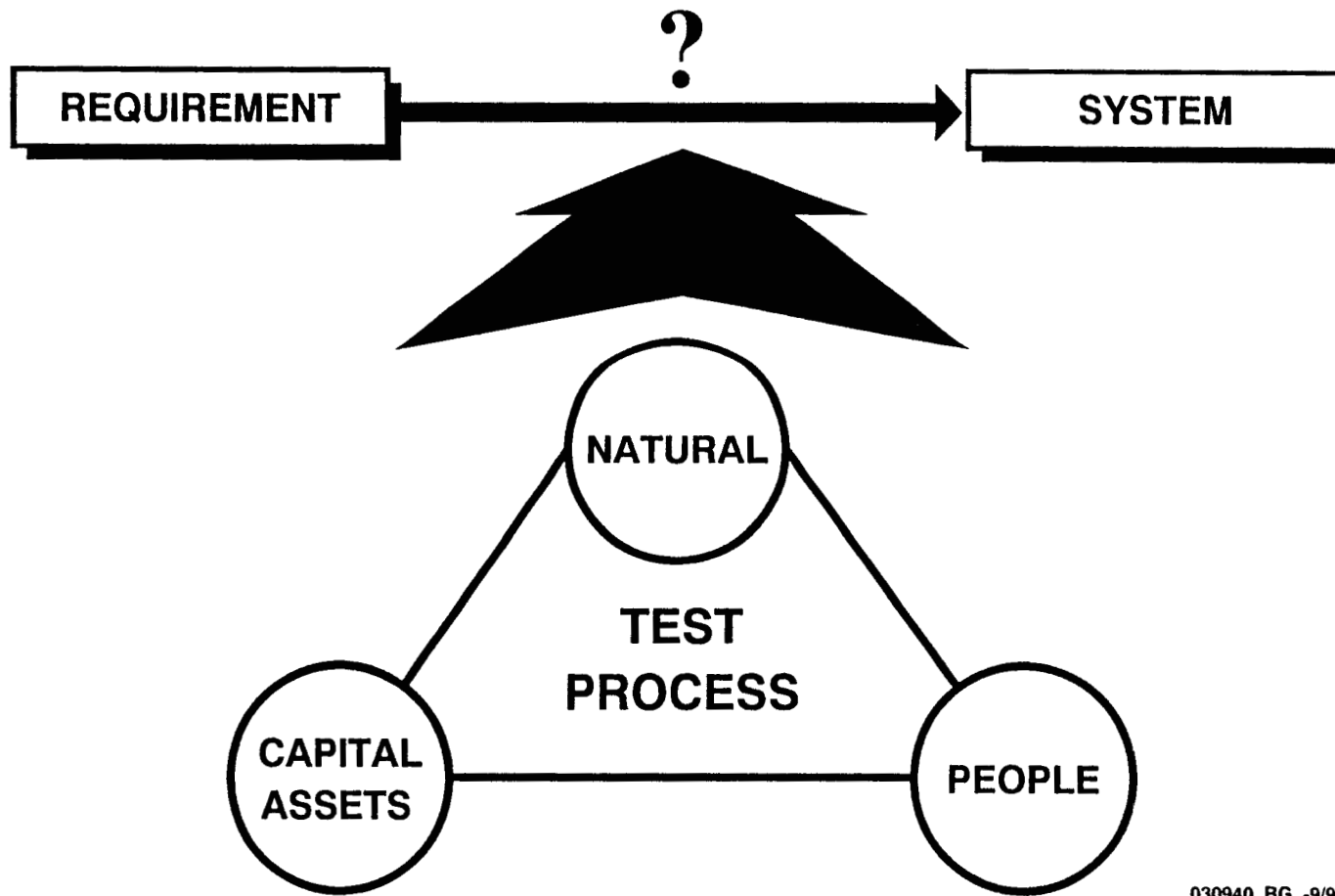
**EXPERIENCE**



**EDUCATION LEVEL**



# TEAM EGLIN PROVIDING WEAPONS THAT WORK







**TESTING ENSURES  
THE WARFIGHTER'S WEAPONS  
WORK-  
FIRST TIME . . . EVERY TIME!**



# T&E IS A SCIENTIFIC PROCESS



**HOW IS IT BUILT ?**

**MODELING &  
SIMULATION**

**MEASUREMENT  
TESTING**

**SYSTEM  
INTEGRATION  
TESTING**

**HOW DOES IT WORK ?**

**HARDWARE-IN-  
THE-LOOP  
(HWIL)  
TESTING**

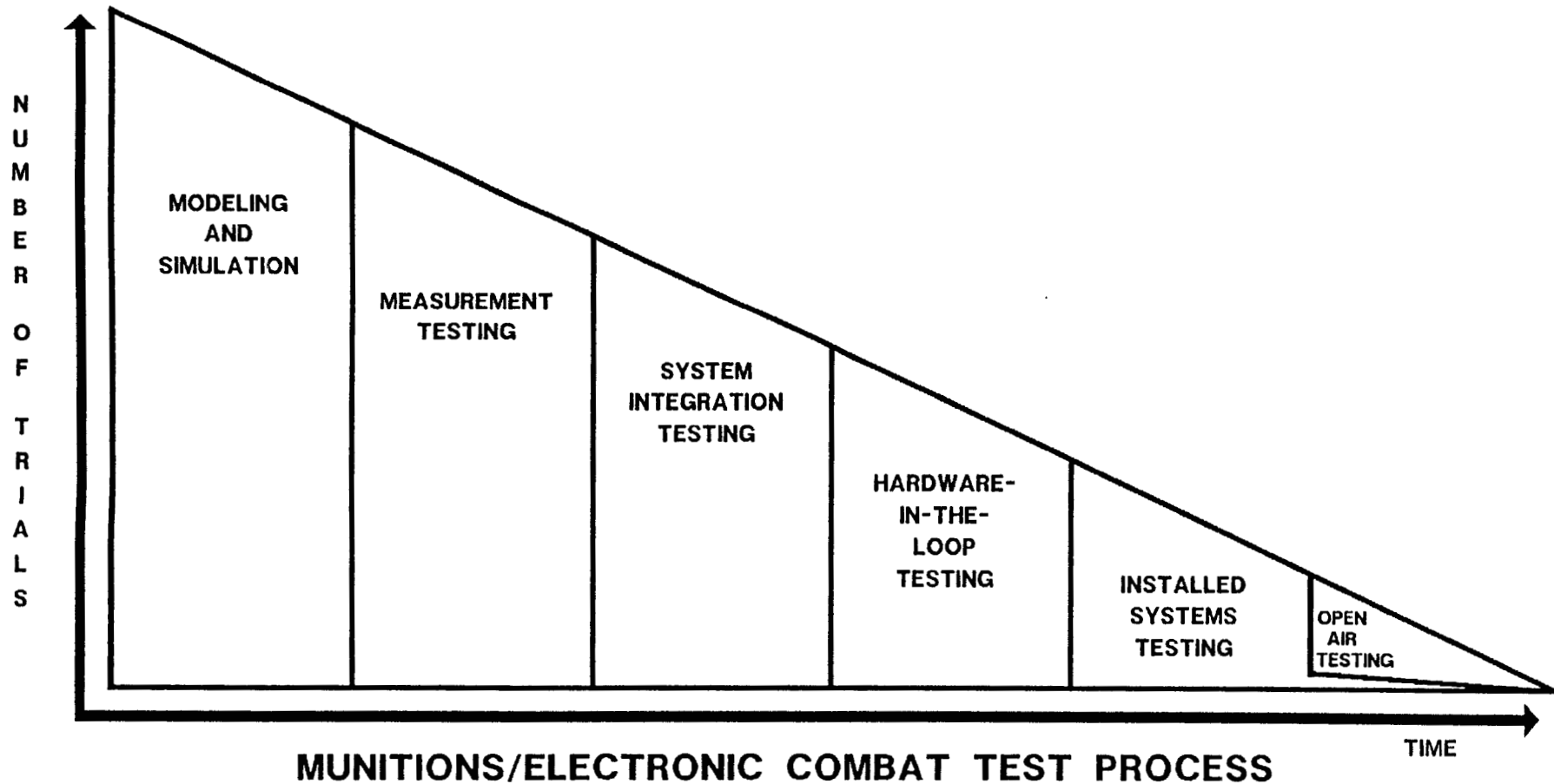
**INSTALLED  
SYSTEMS  
TESTING**

**IS IT  
EFFECTIVE?**

**OPEN AIR  
RANGE  
TESTING**

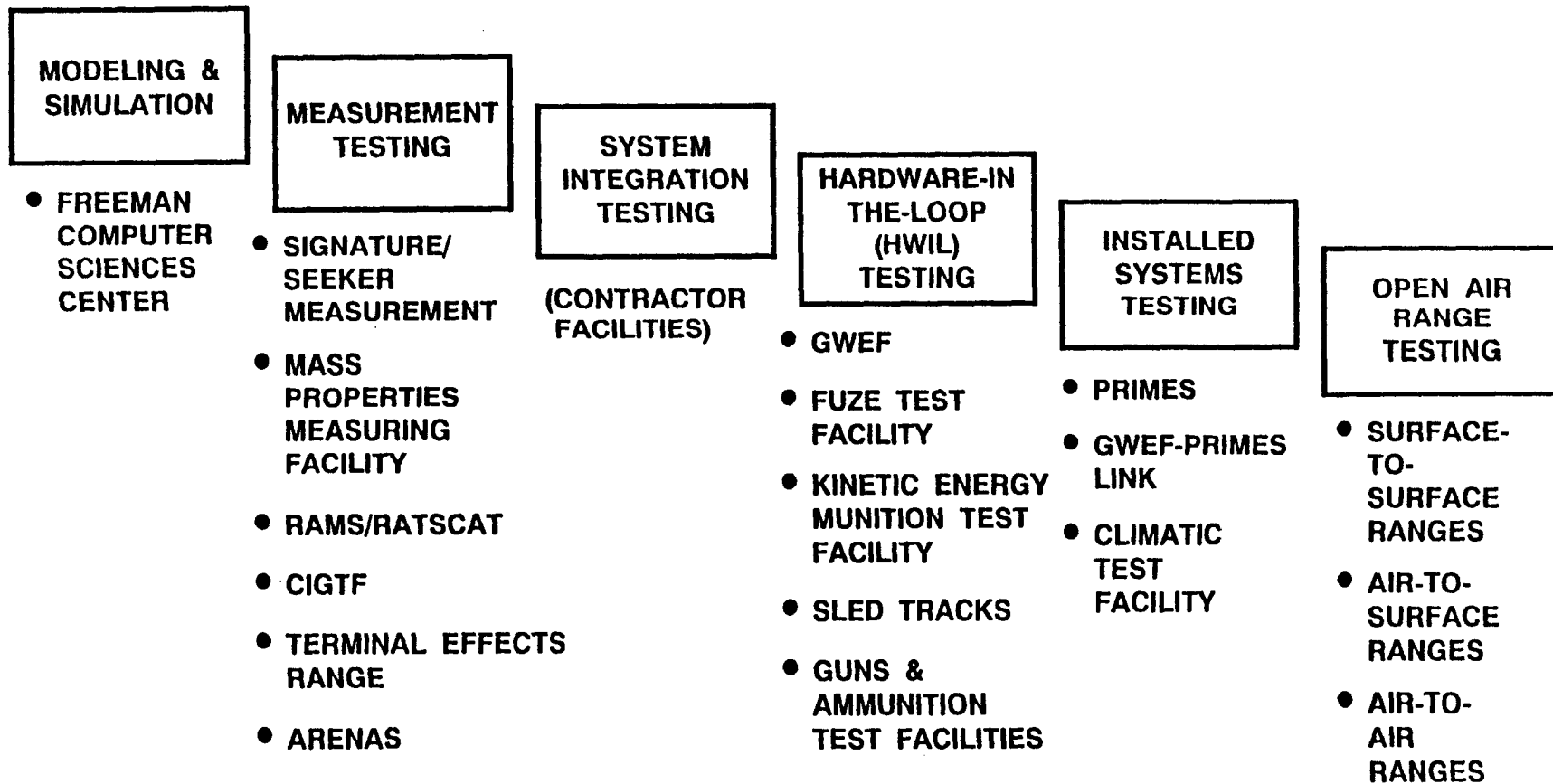


# TEST PROCESS





# MUNITIONS TEST PROCESS





# SYSTEMS IN DEVELOPMENT MUNITIONS



## CURRENT

AGM-130C  
AGM-130/IDL  
GBU-28  
LONGBOW  
JDAM I  
JSOW  
PATRIOT  
AMRAAM  
ASRAAM  
PGM COUNTERMEASURES  
SEEK EAGLE

## NEAR TERM

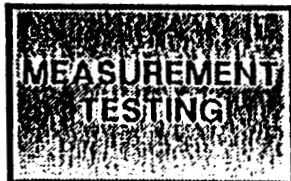
JDAM P3I  
F-22/AMRAAM P3I  
AIM-9X  
THAAD



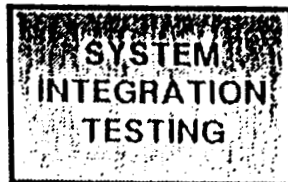
# ELECTRONIC COMBAT TEST PROCESS



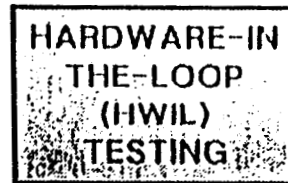
- FREEMAN  
COMPUTER  
SCIENCES  
CENTER



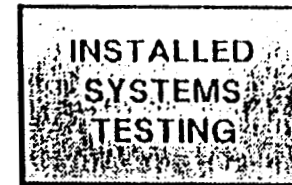
- SIGNATURE/  
SEEKER  
MEASUREMENT
- RAMS/RATSCAT



(CONTRACTOR  
FACILITIES)



- GWEF
- AFEWES
- REDCAP



- PRIMES



- EMTE



# SYSTEMS IN DEVELOPMENT CURRENT



## ELECTRONIC COMBAT

TESSA

EF-111A SIP

F-15 TEWS

MC-130/AC-130U  
JAMMING PODS

ALR-56M

ATRJ

F-15 RADAR (APG-63)

HARM TARGETTING SYSTEM

## C4I

JSTARS

JTIDS

AWACS

CIS

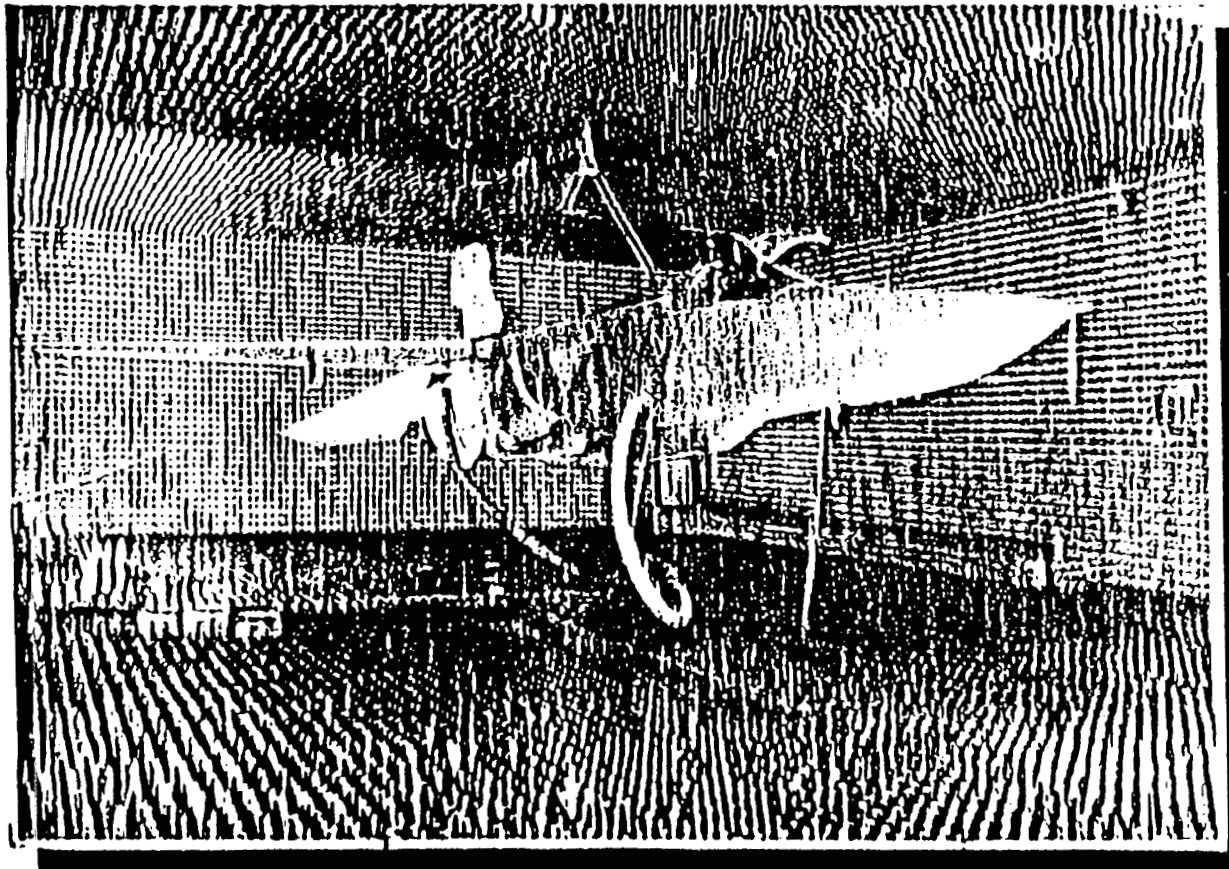
AFMSS

COMBAT SURVIVOR  
EVADER LOCATER



# INSTALLED SYSTEMS TESTING

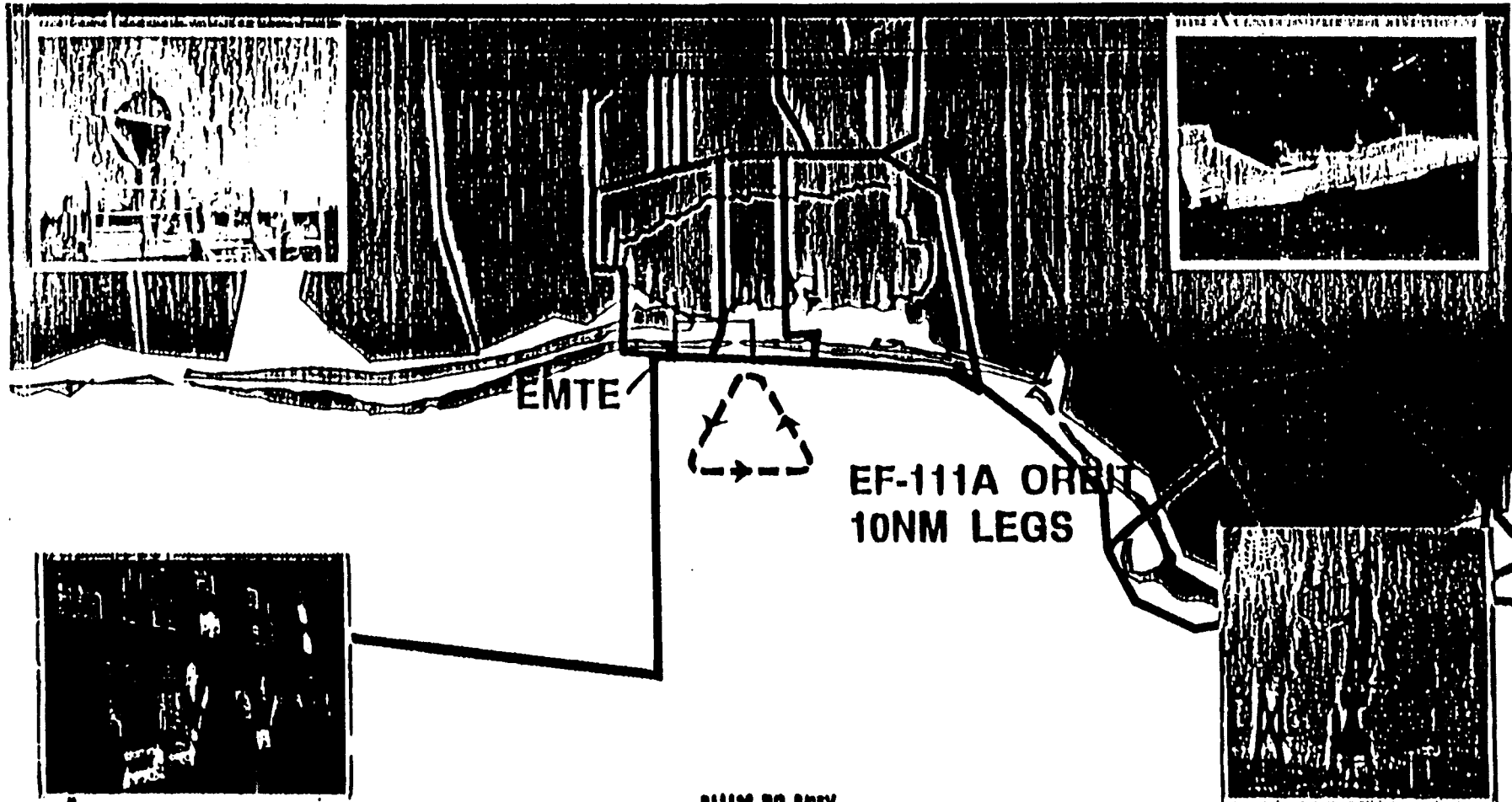
## EF-111A







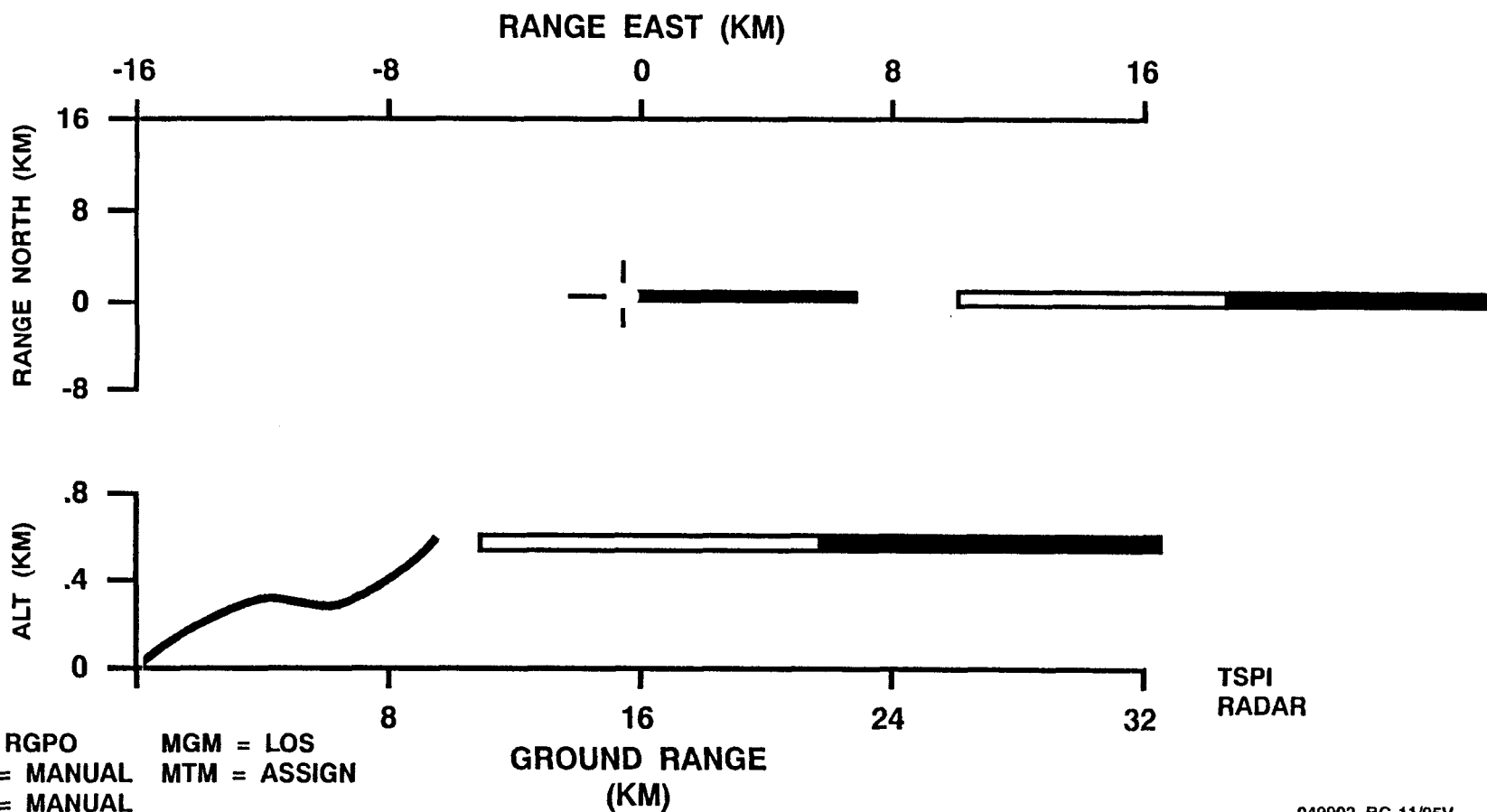
# EMTE RANGE EF-111A PROFILE



01120 00 0/05V



# MISS DISTANCE BOTTOM LINE IN EC TESTING





# SUPPORTING FUTURE WARFIGHTER NEEDS



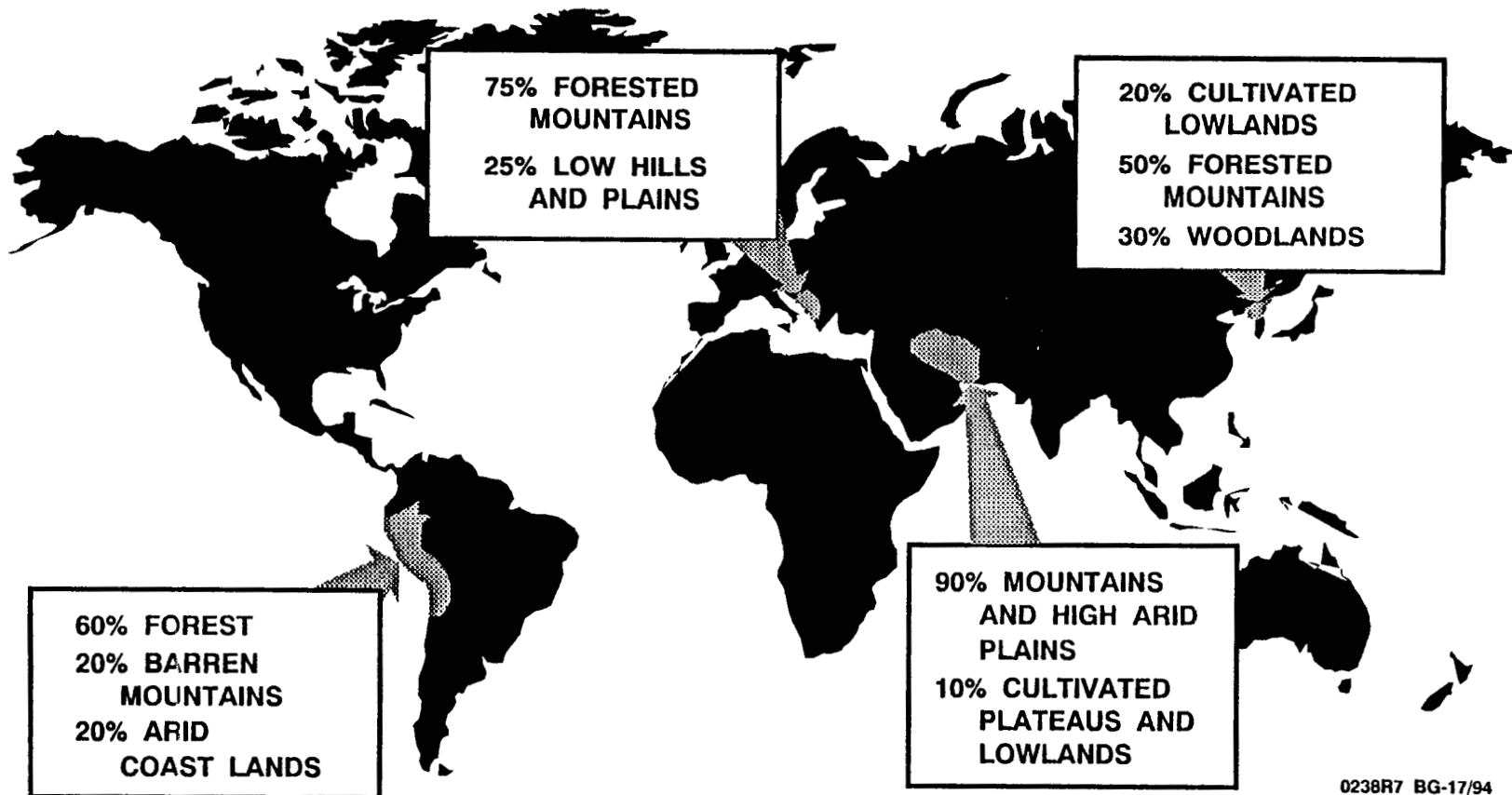
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## REPLICATE OPERATIONAL WORLD

- **NATURAL**
  - **PHYSICAL SPACE**
  - **CLIMATE**
  - **TERRAIN/VEGETATION**
  
- **CAPITAL ASSETS**
  - **CONTROLLED/ARTIFICIAL ENVIRONMENTS**
  - **PRECISION DATA/MEASUREMENT**



# OPERATIONAL FACTORS PHYSICAL ENVIRONMENT

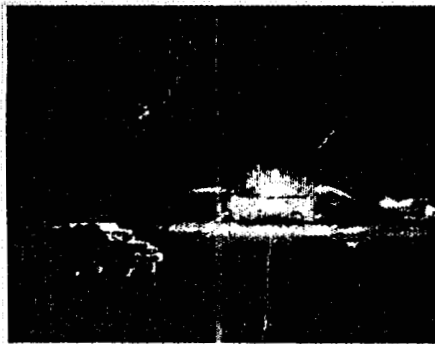




# REPLICATING THE OPERATIONAL WORLD



## SIMULATED ENVIRONMENTS



### ELECTROMAGNETIC

- ALL OBSCURANT
- ALL FREQUENCIES (DC - LIGHT)
- CLUTTER

### CLIMATIC

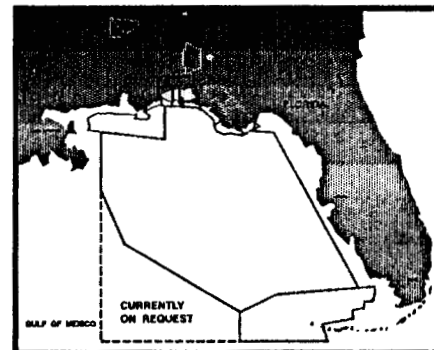
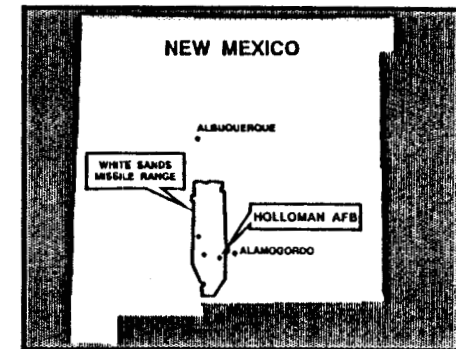
- 65 deg TO + 165 deg  
SNOW, RAIN, FOG  
DUST, SALT FOG



## OUTDOOR RANGES

### WSMR

- CLUTTER
- DESERT
- DRY



### EGLIN

- CLUTTER
- HIGH-HUMIDITY
- RAIN
- WATER/VEGETATION



# REPLICATING THE OPERATIONAL WORLD NATURAL ATTRIBUTES



- PROTECTED SPACE
  - ✓ GRAVITY WEAPONS (5x10)
  
  - ✓ PGM (10x50)
  - ✓ STANDOFF (50x150)
  - ✓ CRUISE (50x1000)
  - ✓ AIR-TO-AIR
    - ✓ SRM (10x10)
    - ✓ MRM (10x30)
    - ✓ LRM (50x150)
  - ✓ TMD
- TERRAIN
  - MOUNTAINS
  - ✓ FOREST/JUNGLE
  - ✓ LOWLAND (CULTIVATED)
  - DESERT
  - ✓ SEA
  - ✓ SWAMP/RIVERINE
- TEMPERATURE
  - > 95°F
  - ✓ 82°F - 95°F
  - ✓ < 32°F
- HUMIDITY (MOISTURE CONTENT)
  - ✓ ≥ 10 gm/cubic meters
  - ✓ ≥ 15 gm/cubic meters
  - ✓ ≥ 20 gm/cubic meters
- ✓ ● RAIN
- SNOW
- CEILING
  - ✓ ≤ 1,000 ft
  - ✓ 1,000-14,000 ft
  - ✓ ≥ 14,000 ft
- VISIBILITY
  - ✓ ≤ 1 mile
  - ✓ 1-3 miles
  - ✓ ≥ 3 miles



# REPLICATING THE OPERATIONAL WORLD CAPITAL ASSETS ATTRIBUTES

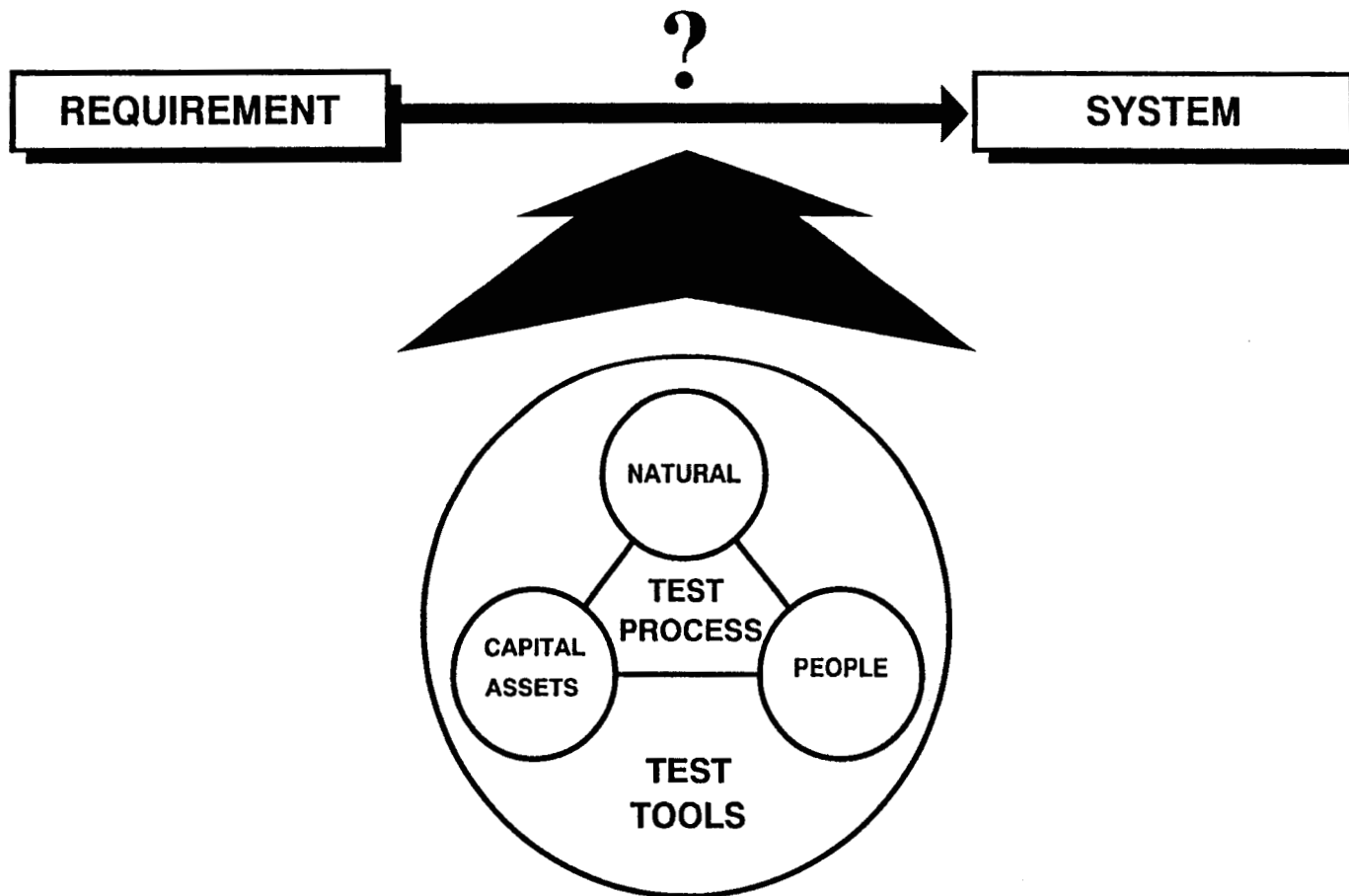


- TARGETS
  - AERIAL
    - FULL SCALE
    - SUB SCALE
  - MOBILE
    - ARMOR
    - VEHICLE
    - CRITICAL MOBILE TARGETS
  - SEA
- MODELING AND SIMULATION
- MEASUREMENT
  - PRECISION MEASUREMENT FAC
  - AIRBORNE
    - GUN BALLISTICS
    - EO
    - IR
    - MMW
  - GROUND
    - GUN BALLISTICS
    - EO
    - IR
    - MMW
    - WARHEAD PERFORMANCE
    - FUZE PERFORMANCE
- SYSTEMS INTEGRATION
  - GUIDANCE AND CONTROL
  - WARHEAD AND FUZE
  - AIRCRAFT WEAPON INTERFACE
- HWIL
  - EO
  - IR
  - RF
  - MMW
  - LASER
- INSTALLED SYSTEMS
  - EMC/EMI
  - CLIMATIC
  - ECCM
- OPEN AIR RANGE SUPPORT
  - TSPI
  - TM
  - DRONE CONTROL
  - CENTRAL CONTROL
    - SAR
  - ECM
    - GROUND
    - AIRBORNE
  - INSTRUMENTED IMPACT AREAS
    - GROUND
    - GROUND
    - SEA



## BOTTOM LINE

EGLIN HAS THE RESOURCES TO  
SUPPORT THE WARFIGHTER'S NEEDS



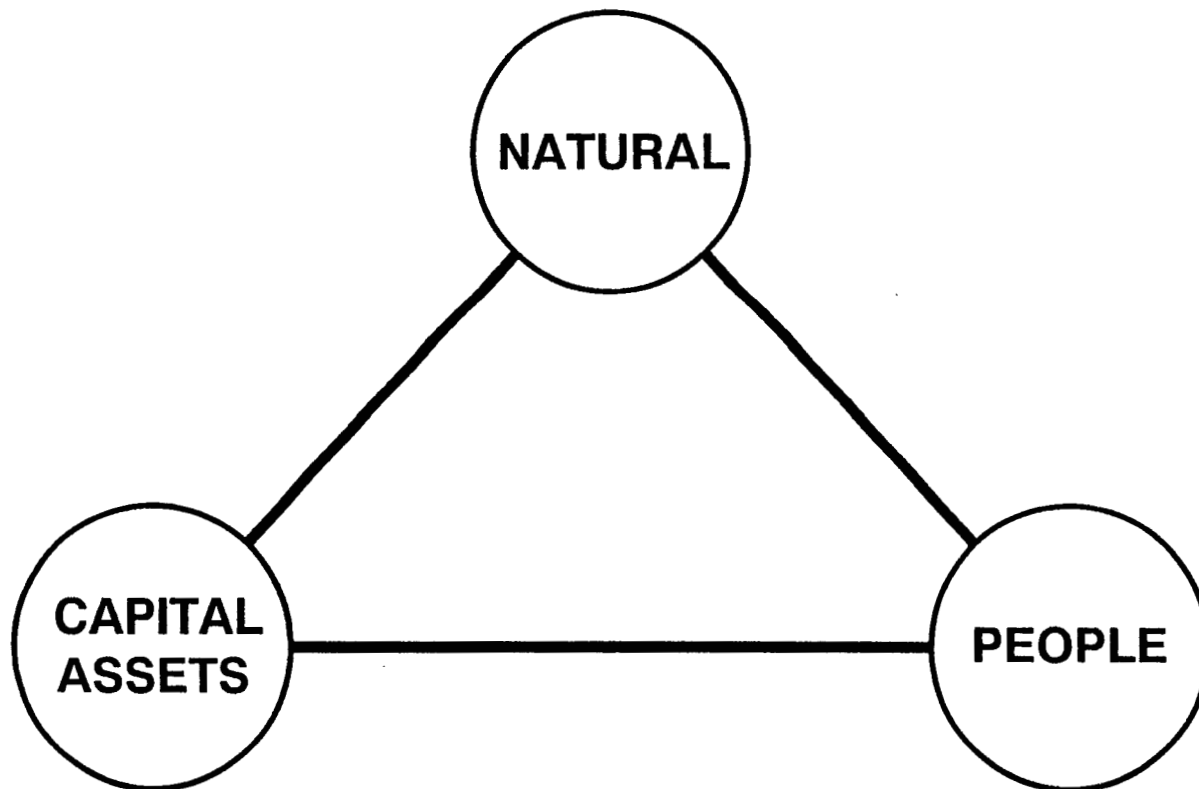




# THE BUSINESS CHALLENGE

REDUCE THE BURDEN ON DOD BUDGET  
WHILE PRESERVING CRITICAL RESOURCES

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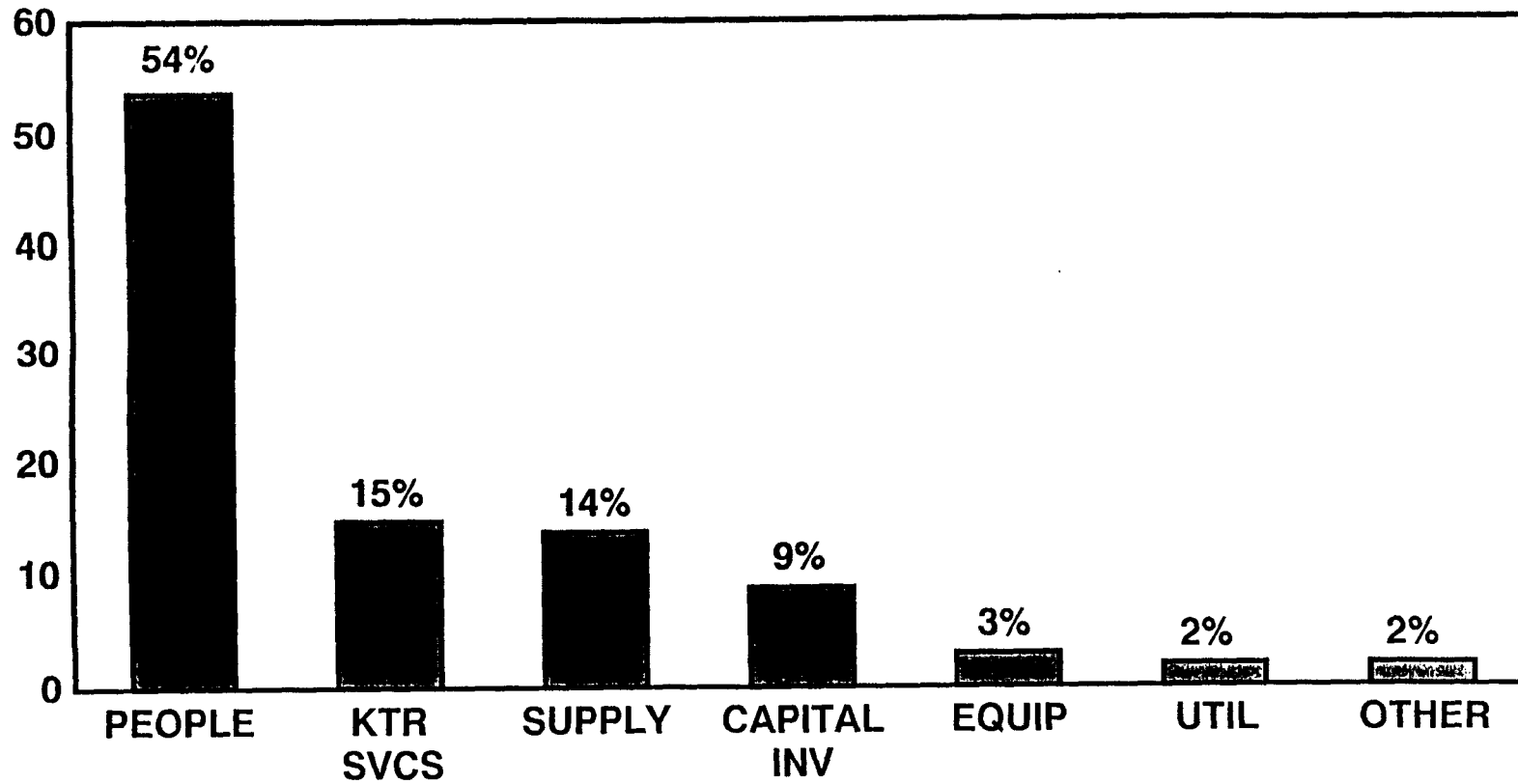




# FY95 AFDTC FUNDING

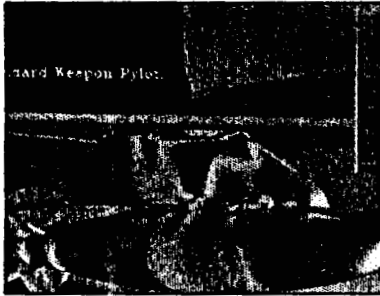
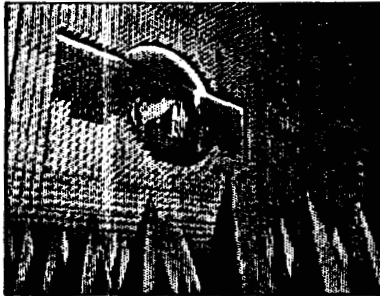


PERCENT





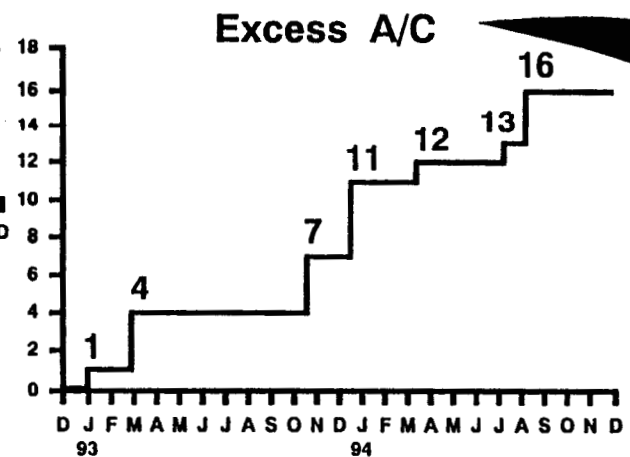
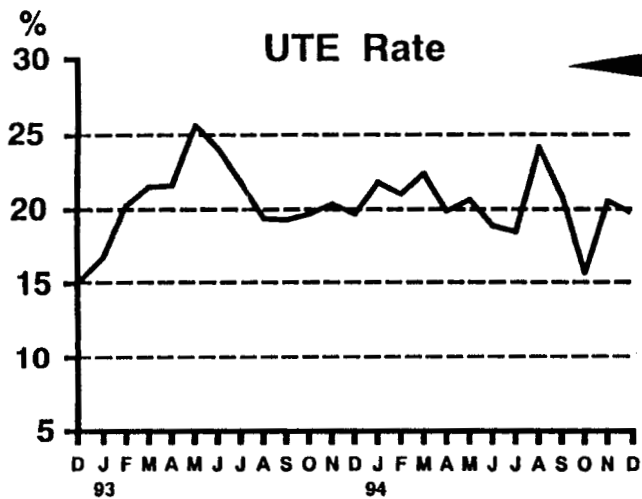
# TEST PARADIGMS FOR THE FUTURE



- **GROUND SIMULATION VICE FLIGHT TEST**
  - SAVES 175 SORTIES PER YEAR IN SUSTAINMENT TESTING
- **MODELING AND SIMULATION**
  - "BETTER TEST DESIGN" - UP TO 80% SORTIES SAVINGS IN SEEK EAGLE
- **TEST FLEET PRODUCTIVITY**
  - REDUCE FLEET BY 30% WHILE MAINTAINING OUTPUT



# Test Fleet Productivity



**Mil Pers \$**



# COMMUNITY IS PART OF TEAM EGLIN



**LINKED BY SHARED COMMON VALUES**



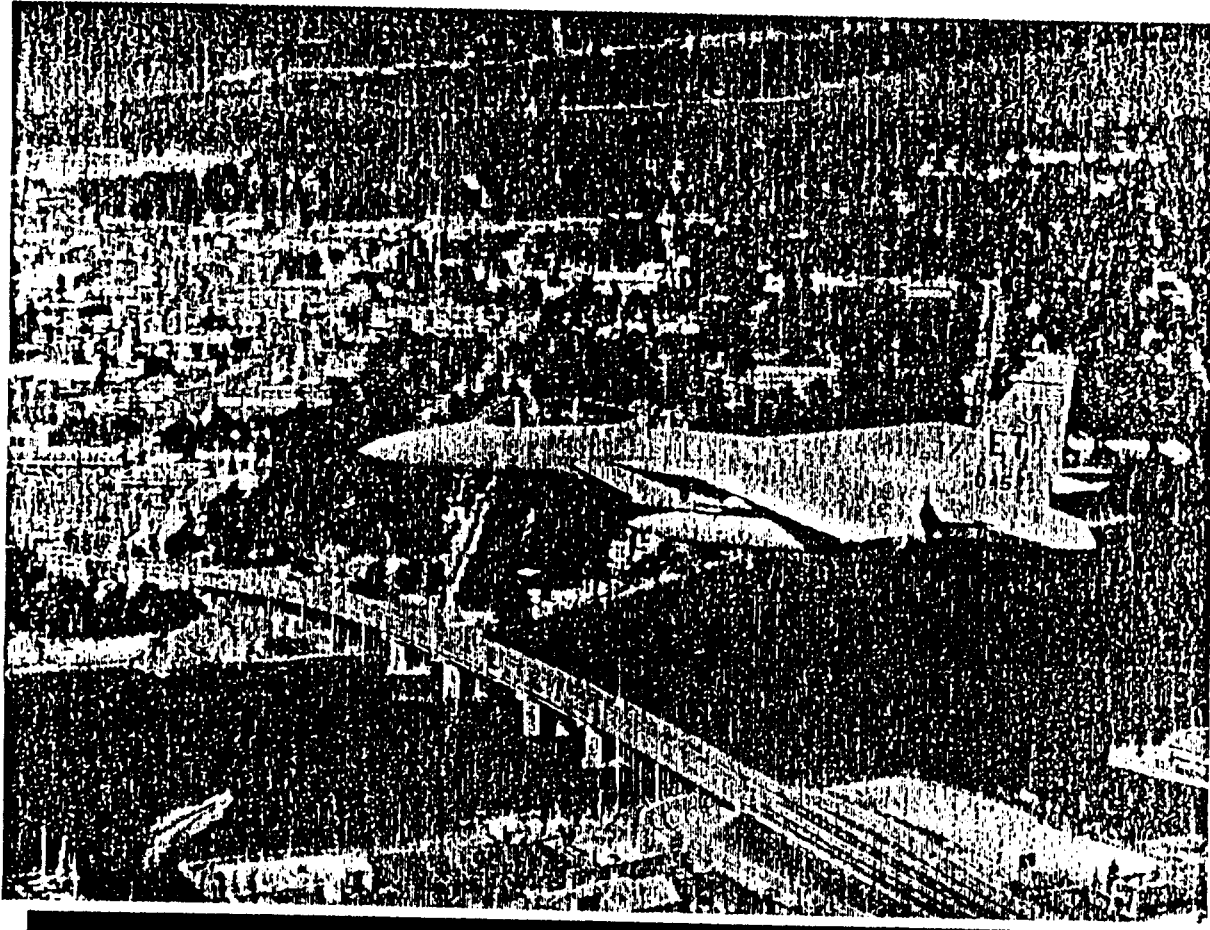
## CONCLUSION



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### EGLIN IS A STRONG LINK IN THE NATION'S SECURITY STRUCTURE

- DIVERSE MISSION - SCIENCE; DESIGN ENGINEERING; TEST & EVALUATION; AND OPERATIONAL TRAINING
- MOST COMPLETE MUNITIONS TEST COMPLEX IN DoD
- UNIQUE NATURAL RESOURCES - UNMATCHED SIZE AND PHYSIOGRAPHY WITH ROOM TO EXPAND
- STRONG COMMUNITY SUPPORT



# Document Separator



**ELECTRONIC COMBAT (EC)  
TEST AND EVALUATION (T&E) REALIGNMENT PROPOSALS**



**COL WES HEIDENREICH  
20 APRIL 1995**



# PURPOSE

**PROVIDE BRAC RATIONALE  
FOR EC T&E REALIGNMENT  
RECOMMENDATIONS**

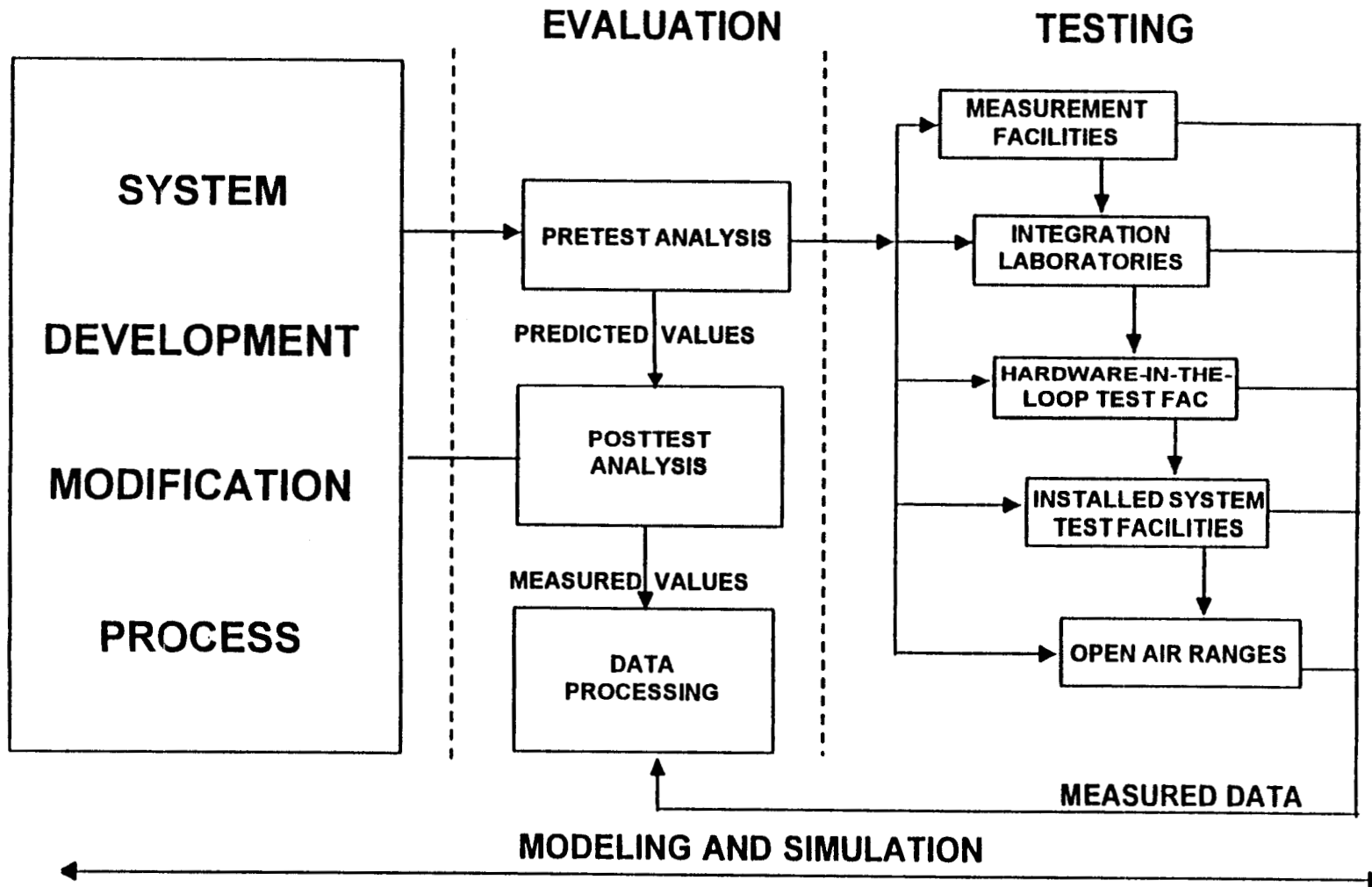


# OUTLINE

- **AF EC T&E CAPABILITIES**
- **REDCAP**
- **AFEWES**
- **EMTE**
- **SUMMARY**



# EW TEST PROCESS





# AIR FORCE EC T&E CAPABILITIES

- **MODELS AND SIMULATIONS**
  - » EGLIN, FL
  - » NELLIS RANGE COMPLEX, NV
  - » AFEWES, FT WORTH, TX
- **MEASUREMENT FACILITIES: HOLLOMAN AFB, NM**
- **INTEGRATION LABORATORY: EDWARDS AFB, CA**
- **HARDWARE-IN-THE-LOOP TEST FACILITIES**
  - » AFEWES, FT WORTH, TX
  - » REDCAP, BUFFALO, NY
- **INSTALLED SYSTEMS TEST FACILITY**
  - » EDWARDS AFB, CA
- **OPEN AIR RANGE**
  - » EGLIN AFB, FL
  - » NELLIS RANGE COMPLEX, NV



# PROPOSED EC REALIGNMENTS

- **HARDWARE-IN-THE-LOOP**
  - » **REAL-TIME ELECTROMAGNETIC DIGITALLY CONTROLLED ANALYZER AND PROCESSOR (REDCAP), BUFFALO, NY**
  - » **AIR FORCE ELECTRONIC WARFARE EVALUATION SIMULATOR (AFEWES), FT WORTH, TX**
- **OPEN AIR RANGE**
  - » **ELECTROMAGNETIC TEST ENVIRONMENT (EMTE), EGLIN AFB, FL**



# OUTLINE

- AF EC T&E CAPABILITIES
- REDCAP
- AFEWES
- EMTE
- SUMMARY





# REDCAP PROPOSAL

- RELOCATE APPROXIMATELY 50% OF REDCAP CAPABILITIES TO EDWARDS AFB, CA
- INTEGRATE HARDWARE-IN-THE-LOOP AND INSTALLED SYSTEMS TEST FACILITIES

*BRAC did not consider  
\$ 1.3 M to reconfigure  
Calepan facility to how it existed  
before AF*

*(floor in BAE) 700,000 MILCON at Edwards*

*2 M add*



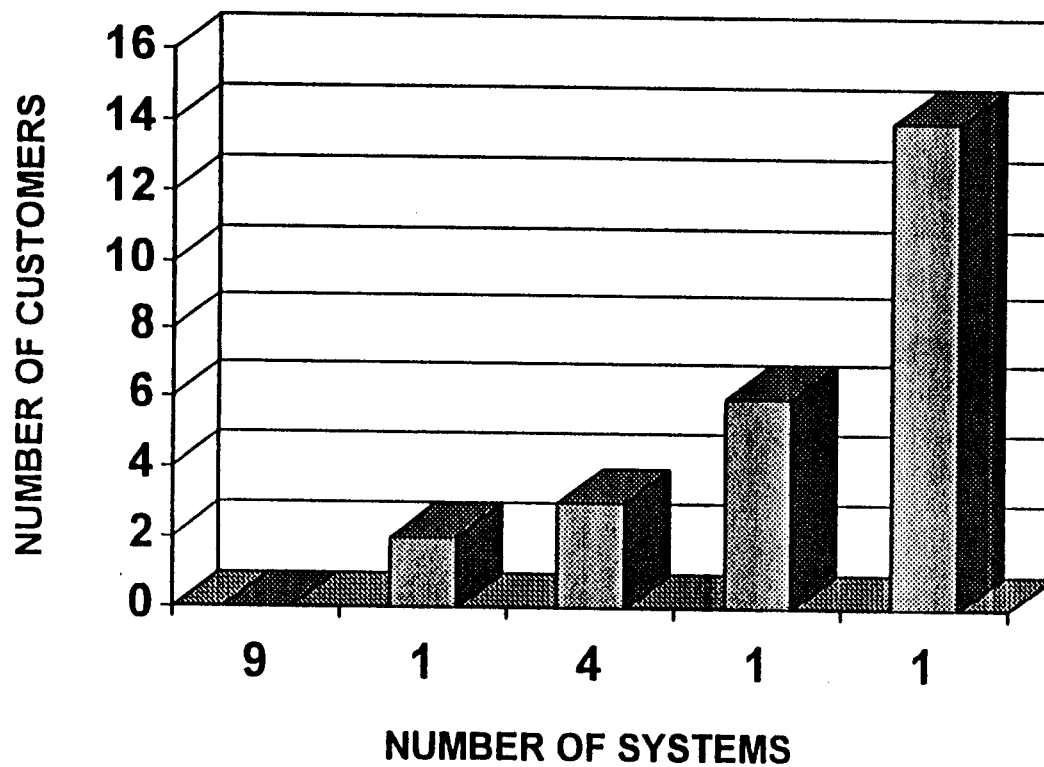


# REDCAP RATIONALE

- **LOW PROJECTED WORKLOAD (10% OF CAPACITY)**
- **BASIC INFRASTRUCTURE IS DUPLICATED AT OTHER T&E FACILITIES**
- **MOST TESTING CAN BE ACCOMMODATED ELSEWHERE**
- **INCREASES T&E CAPABILITIES FOR INTEGRATED AVIONIC SUITES**
- **SAVES I&M AND O&M FUNDS**
- **CO-LOCATES GROUND AND OPEN AIR CAPABILITIES FOR SYNERGISM**
- **NON-CORE T&E ACTIVITY**



# REDCAP UTILIZATION



1992-1994



# OUTLINE

- AF EC T&E CAPABILITIES
- REDCAP
- AFEWES
- EMTE
- SUMMARY





# AFEWES PROPOSAL

- **RELOCATE APPROXIMATELY 65% OF AFEWES CAPABILITIES**
  - » **RADIOFREQUENCY CAPABILITIES TO EDWARDS AFB, CA**
  - » **INFRARED CAPABILITIES TO EGLIN AFB, FL** *(complement GWEF)*
- **INTEGRATE HARDWARE-IN-THE-LOOP AND INSTALLED SYSTEMS TEST FACILITIES**

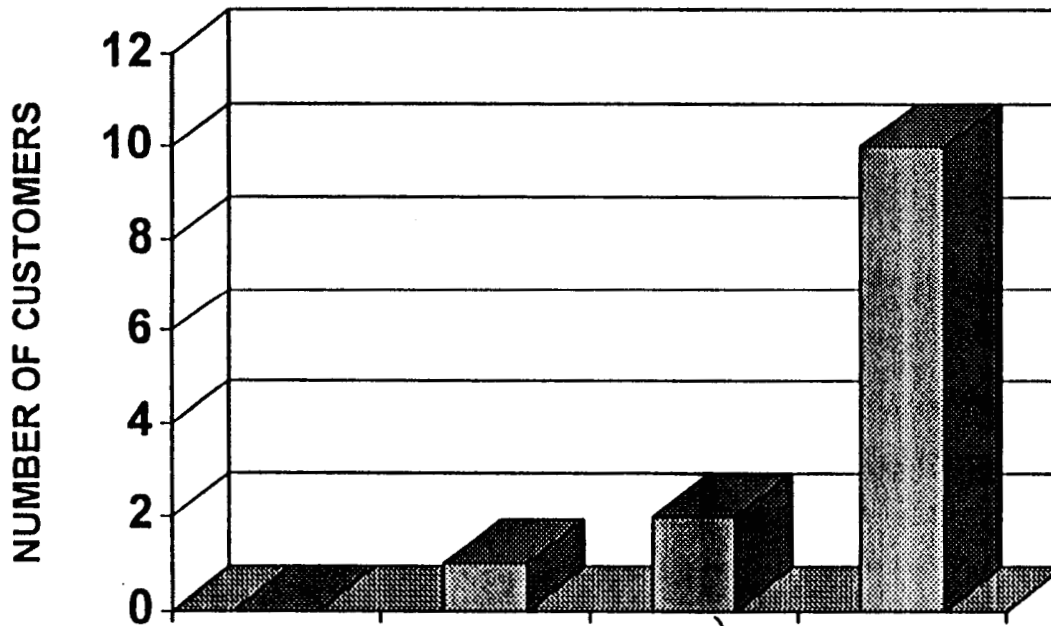


# **AFEWES RATIONALE**

- **LOW PROJECTED WORKLOAD (28% OF CAPACITY)**
- **BASIC INFRASTRUCTURE DUPLICATED ELSEWHERE**
- **MOST TESTING CAN BE ACCOMMODATED ELSEWHERE**
- **INCREASES T&E CAPABILITIES FOR INTEGRATED AVIONIC SUITES**
- **SAVES I&M AND O&M FUNDS**
- **CO-LOCATES GROUND AND OPEN AIR CAPABILITIES FOR SYNERGISM**
- **NON-CORE T&E ACTIVITY**



# AFEWES UTILIZATION FY 92-94



7  
Moehball

5  
5  
NUMBER OF SYSTEMS

1  
to Edwards

infrared lab \*  
(to GWEF) move 45% Dwyer  
\$ 6 M  
\* 2nd Miller  
(floor in BAF)



# OUTLINE

- AF EC T&E CAPABILITIES
- REDCAP
- AFEWES
- EMTE
- SUMMARY





# EMTE PROPOSAL

- **RELOCATE 10 THREAT SIMULATORS TO NELLIS RANGE COMPLEX**
- **RETAIN 12 EMITTER-ONLY SYSTEMS AT EGLIN FOR TRAINING AND MUNITIONS TESTING**
- **EXCESS REMAINING 28 SYSTEMS**





# EMTE RATIONALE

- **PROVIDES MORE OPERATIONALLY REALISTIC T&E CAPABILITIES**
- **MOST TESTING CAN BE ACCOMMODATED ELSEWHERE**
  - » **SYSTEMS ARE 90% DUPLICATIVE**
- **SAVES I&M AND O&M FUNDS**

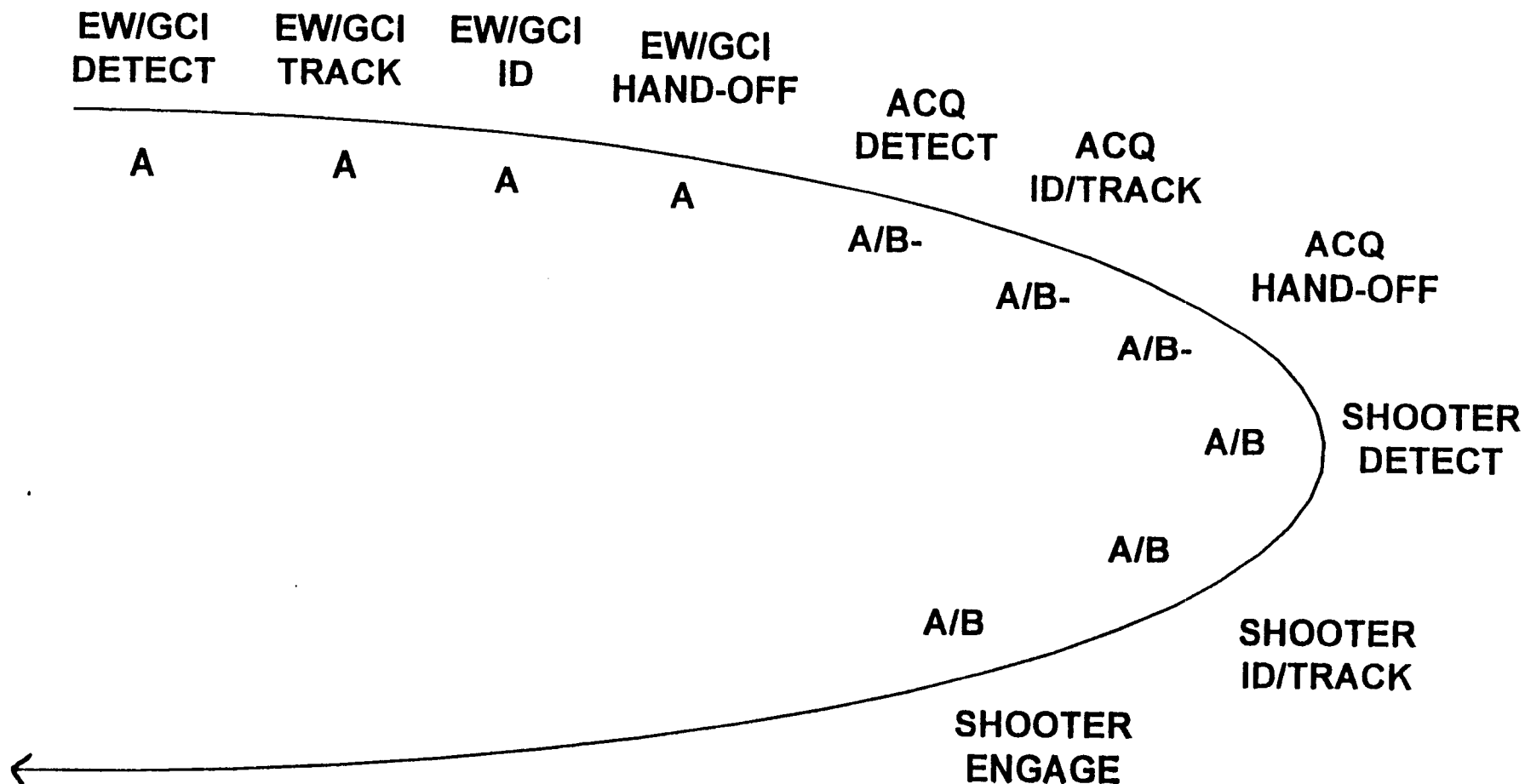


# AIR FORCE OPEN AIR EC RANGES

- **NELLIS RANGE COMPLEX, NV**
  - » **DESIGNATED AS A BRAC RECEIVER SITE**
- **ELECTROMAGNETIC TEST ENVIRONMENT (EMTE), EGLIN AFB, FL**
  - » **BRAC FUNCTIONAL VALUE = 65**



# ENGAGEMENT PROFILE



A - Nellis  
B - Eglin



## CAPABILITIES COMPARISON (TYPES/NUMBER)

### TYPE SIMULATOR

	<i>types of systems</i> → <b>A</b>	<i>number of systems</i> ← <b>B</b>
SHOOTERS	19/53	16/43
REC/REW	6/11	1/1
EW/ACQ/GCI	15/59	5/13
C <sup>2</sup>	27/125	0/0
ACFT	3/12	0/0
A/A MISSILES	5/10	0/0
<b>TOTAL</b>	<b>75/270</b>	<b>22/57</b>
<b>ACTUAL</b>	<b>86%</b>	<b>30%</b>

*86% are "actual" systems*

*30% of "actual" systems*



# ADVANTAGES

*in desert (Nellis)*

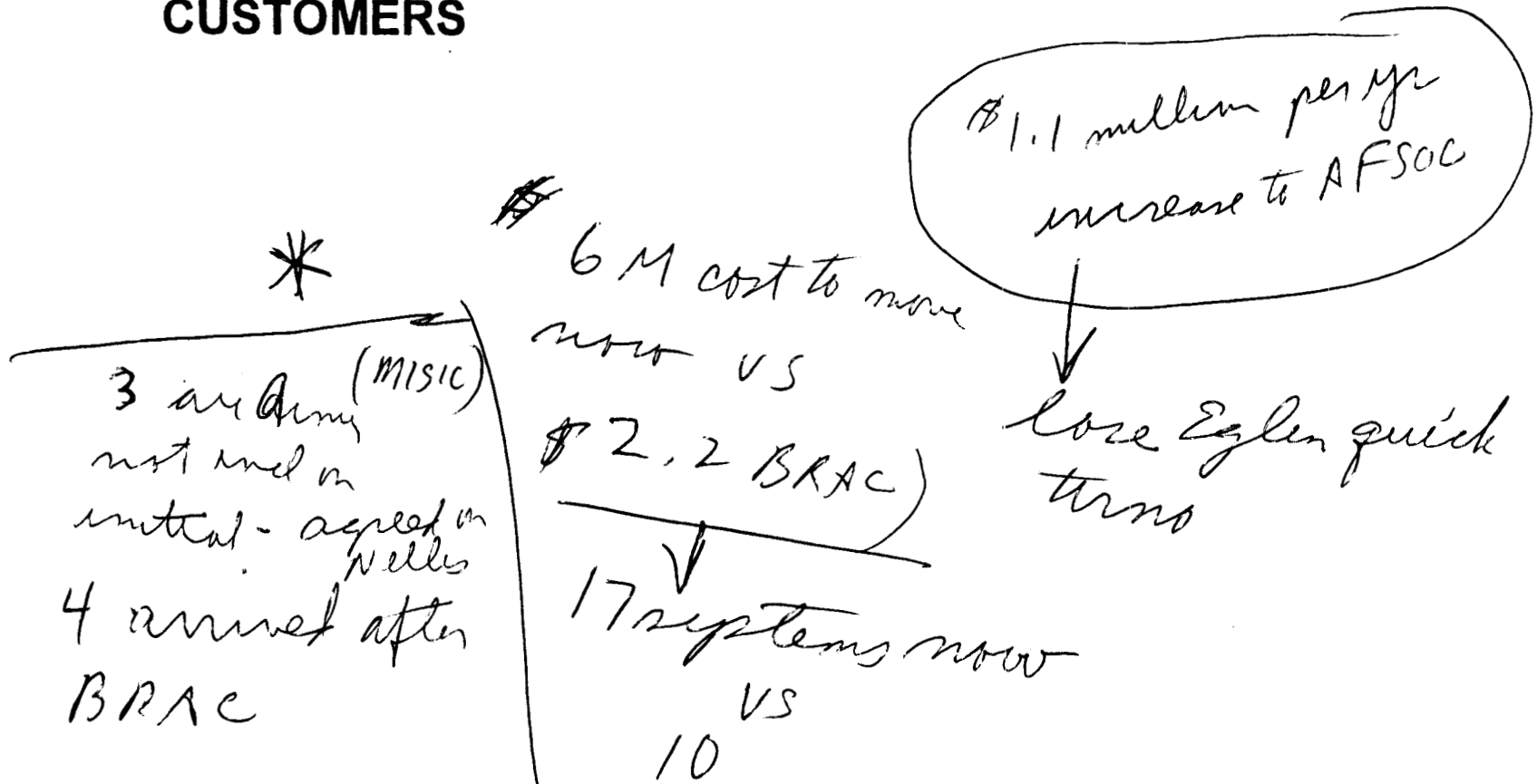
- SECURITY
- DEPTH AND BREADTH
- TYPES AND NUMBERS OF SYSTEMS
- NETTING
- PROXIMITY TO GROUND TEST CAPABILITIES
- DECREASED COSTS AND CONCERNS TO SOME CUSTOMERS



# DISADVANTAGES

(at Nellis)

- LIMITED VARIATION IN TOPOGRAPHY
- INCREASED COSTS AND CONCERNS TO SOME CUSTOMERS





# OUTLINE

- AF EC T&E CAPABILITIES
- REDCAP
- AFEWES
- EMTE
- SUMMARY





# SUMMARY

- **REALIGNMENT PROPOSALS REDUCE NUMBER OF ACTIVITIES SUPPORTING EC T&E**
- **CO-LOCATE HARDWARE-IN-THE-LOOP AND INSTALLED SYSTEMS TEST FACILITIES FOR INCREASED CAPABILITY TO EVALUATE INTEGRATED AVIONIC SUITES**
- **PROVIDES MORE OPERATIONALLY REALISTIC OPEN AIR TEST ENVIRONMENT**
- **SAVES OPERATIONS AND MAINTENANCE (O&M) AND IMPROVEMENT AND MODERNIZATION (I&M) FUNDS**





# PROJECTED COSTS/SAVINGS

*original  
COBRAS*

	<b>1-TIME COST</b>	<b>STEADY STATE SAVINGS</b>	<b>20 YEAR SAVINGS</b>
<b>REDCAP</b>	<b>\$1.7M</b>	<b>\$0.9M/YR</b>	<b>\$11M</b>
<b>AFEWES</b>	<b>\$5.8M</b>	<b>\$0.8M/YR</b>	<b>\$5.8M</b>
<b>EMTE</b>	<b>\$2.2M</b>	<b>\$2.6M/YR</b>	<b>\$31.4M</b>

# Document Separator



# **USAFAWC PERSPECTIVES ON PROPOSED EMTE CHANGES**

Lt Col Scott Sampson  
16 Test Squadron

18 Apr - 1



## OVERVIEW

- USAFAWC Mission
- USAFAWC Electronic Combat (EC) Testing
- Where USAFAWC Conducts EC Tests
- How USAFAWC Uses EMTE
- Impact On USAFAWC Of Moving EMTE
- Summary

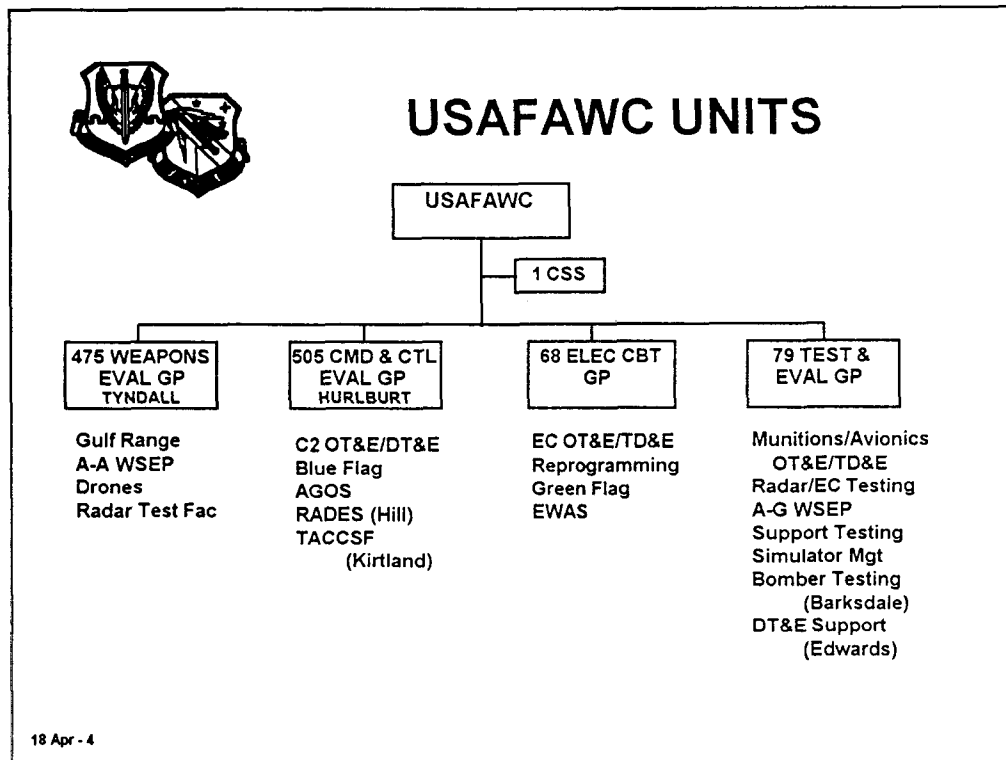
18 Apr - 2



## **USAFAWC MISSION**

**Air Combat Command Professionals  
Continuously Improving The Combat Air  
Force's Weapons, Systems, And Their  
Employment Through Testing, Training,  
And Evaluation**

18 Apr - 3



Most of the EC testing conducted on the Electromagnetic Test Environment (EMTE) open air range is performed by the 68th Electronic Combat Group. However, the four Groups work together on most of the tests. Note the Radar Test Facility is run by the 475th Weapons Evaluation Group. The 79th Test and Evaluation Group provides aircraft for EC tests and conducts operational tests of aircraft avionics, munitions, and radar. The 505th conducts operational tests of command and control capability.

A-A WSEP: Air-to-Air Weapon System Evaluation Program

C2: Command and Control

Blue Flag: Command and Control training exercise for senior commanders

AGOS: USAF Air Ground Operations School--Hurlburt AFB, FL

RADES: Radar Evaluation Squadron--Hill AFB, UT

TACCSF: Theater Air Command and Control Simulation Facility--Kirtland AFB, NM

Green Flag: Electronic combat employment exercise conducted at Nellis

EWAS: Electronic Warfare Aggressor Squadron

A-G WSEP: Air-to-Ground Weapon System Evaluation Program



## USAFAWC EC TESTING What We Test

- Radar Warning Receivers
- Countermeasures Dispensers (Chaff/Flare)
- Jamming Systems
- Lethal Suppression Of Enemy Air Defenses (SEAD) Systems
- CAF Aircraft EC Employment Tactics

18 Apr - 5



## USAFAWC EC TESTING

### Types Of EC Tests

- **Follow-On Test And Evaluations (FOT&E)**
  - EC System Software And Mission Data Updates
- **Tactics Development And Evaluation (TD&E)**
  - Fighter And Bomber Platforms
- **Operational Utility Evaluation (OUE)**
  - Demonstration Of Emerging EC Technology
- **Foreign Materiel Exploitations (FME)**
  - Assess Current Operational EC Capability
- **Electronic Warfare Aggressor Squadron (EWAS) Tests**
  - Assess Current Readiness Of Fielded EC Systems

18 Apr - 6

**FOT&E:** Used to refine the estimates made during initial operational test and evaluation, evaluate changes and verify correction of deficiencies, assist in tactics development, and to reevaluate the system to ensure that it continues to meet operational needs and retains its effectiveness and suitability in a new environment or against a new threat. Normally conducted by the using command.

**TD&E:** The formal portion of a Combat Air Forces tactics development program designed to fully exploit a system's capabilities. It includes the research, analysis, development, test, and evaluation of specific employment tactics against anticipated threats. The using command conducts TD&E using the same standards as FOT&E.

**OUE:** Applies to operational tests which are outside the scope of a normal OT&E test. OUEs are not limited to, but may be conducted to validate a concept or expand the mission of an existing (perhaps modified) weapon system to a different role or mission. Typically HQ USAF-directed and AFOTEC or MAJCOM conducted and are specifically limited in time and scope.

**FME:** Operational tests designed to assess current combat capabilities of all Combat Air Forces aircraft against newly acquired foreign threat systems.

**EWAS:** Squadron deploys to operational units and uses emitter simulators to assess current readiness of aircraft EC systems.





## USAFAWC EC TESTING

### Aircraft Supported

F-15	F-111F
F-16	C-130
RF-4C	EC-130
F-4G	U-2
A-10A	B-1B
EF-111A	B-52H
E-3A	

18 Apr - 7



## USAFAWC EC TESTING EC Systems Supported

- Radar Warning Receivers
  - ALR-46
  - ALR-56A/B/C
  - ALR-62V6
  - System 27
  - ALR-62V4
  - ALR-56M
  - ALR-69
  - AWACS ESM
- Lethal SEAD
  - HARM
  - HARM Targeting System (HTS)
  - Aircraft Launcher Interface Computer (ALIC)
  - APR-47
- Countermeasures Dispensers
  - ALE-20
  - ALE-40
  - ALE-45
  - ALE-47
- Jammers
  - ALQ-131
  - ALQ-135
  - ALQ-137
  - ALQ-184
  - ALQ-188
  - System 29
  - ALQ-99
  - ALQ-155
  - ALQ-172
  - ALQ-173
  - ALQ-175
  - ALQ-198
  - ALQ-161

18 Apr - 8

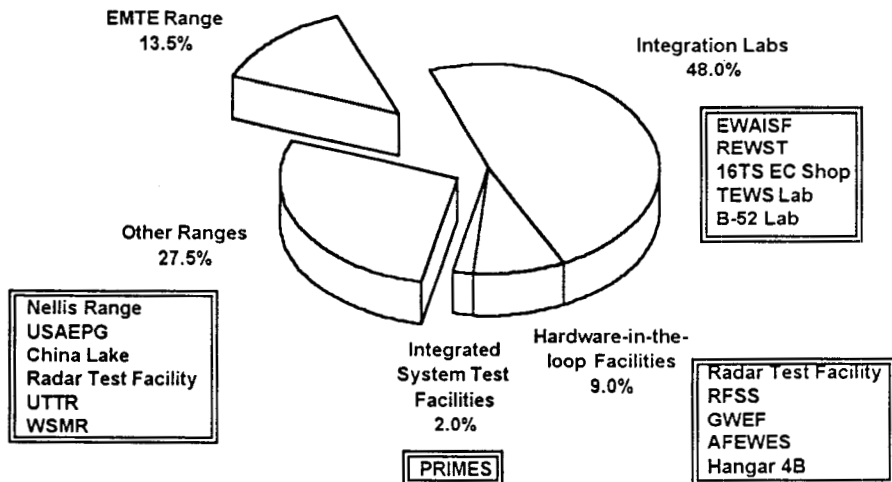
USAFAWC develops and tests mission data for the EC systems listed on the slide. We update and test this mission data on a recurring basis to counter routine threat changes and meet new operational requirements. We have a wartime mission to rapidly reprogram, test, and field mission data for the EC systems listed above to counter threat radar changes.

USAFAWC also conducts OT&E tests of the system software for the EC systems listed on the slide. We conduct these tests for recurring block cycle updates and make fielding recommendations. These tests continue throughout the life cycle of the weapon system.



## USAFAWC EC TESTING

Where USAFAWC Conducts EC Testing



18 Apr - 9

Values In Chart Are Percentage Of Time Expended On Each EC Test Activity In Relation To All USAFAWC EC Testing.

- USAEPG: United States Army Electronic Proving Grounds--Ft Huachuca, AZ  
UTTR: Utah Test Range--Hill AFB, UT  
WSMR: White Sands Missile Range--White Sands, NM  
PRIMES: Preflight Integration of Munitions and Electronic Systems--Eglin AFB, FL  
Radar Test Facility: Tyndall AFB, FL  
RFSS: Radio Frequency Simulation System--Redstone Arsenal, AL  
GWEF: Guided Weapons Evaluation Facility--Eglin AFB, FL  
AFEWES: Air Force Electronic Warfare Evaluation Simulator--Ft Worth, TX  
Hangar 4B: Wright Laboratories, Wright Patterson AFB, OH  
EWAISF: Electronic Warfare Avionics Integration Support Facility--Robins AFB, GA  
REWST: Reprogrammable Electronic Warfare Systems Test--Offutt AFB, NE  
16TS EC Shop: Eglin AFB, FL  
TEWS Lab: Tactical Electronic Warfare Suite Laboratory--Eglin AFB, FL  
EMTE: Electromagnetic Test Environment--Eglin AFB, FL  
B-52 Lab: Offutt AFB, NE



## **USAFAWC EC TESTING**

### **How USAFAWC Conducts EC Tests**

- **Aircraft EC Systems And Threat Radars Instrumented**
- **Conduct EC Tests In Operationally Realistic Environment**
- **Merge Inflight EC System Data With Threat Data**
- **Analyze Results To Determine Operational Performance**
- **Use Projectile Flyout Models To Analyze Self-Protection Effectiveness When Available**

18 Apr - 10



## **USAFAWC EC TESTING**

### **How USAFAWC Uses EMTE**

#### **Ground Tests**

- Typically 1 Versus 1
- Mission Data Evaluations For EC Systems
- Open/Closed Loop
- ECM Technique Optimization

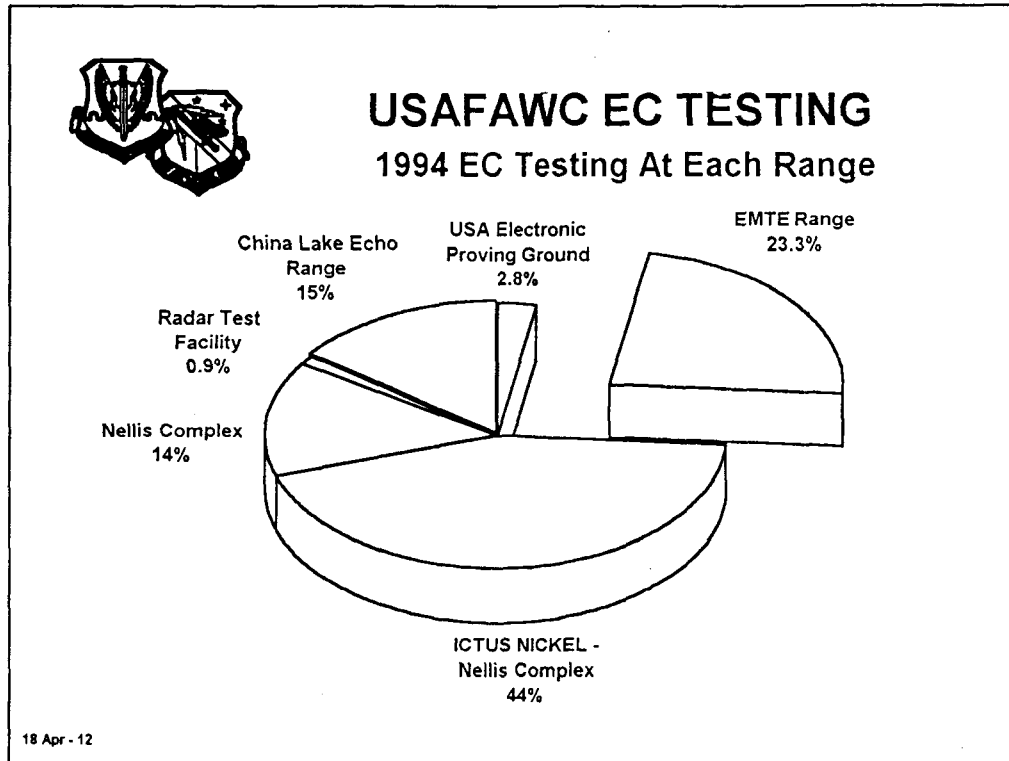
#### **Flight Tests**

- Typically 1 Versus Many
- Mission Data And System Software Evaluations
- EC Employment Tactics Evaluations
- Open/Closed Loop

18 Apr - 11

Open loop tests involve measuring the response of the radar or the EC system without examining projectile flyout.

Closed loop tests involve capturing threat radar tracking errors in response to EC systems and using these to inject into projectile flyout models to generate miss distance data.



This slide represents the open air test ranges where USAFAWC conducted EC tests in calendar year 1994. It also shows the percentage of our total EC open air range testing conducted at each range for CY94.

Radar Test Facility: Tyndall AFB, FL

China Lake: Navy Electronic Warfare Threat Environment Range

USAEPG: United States Army Electronic Proving Grounds--Ft Huachuca, AZ

EMTE: Electromagnetic Test Environment--Eglin AFB, FL

Nellis: EC Open Air Range at Nellis AFB, NV



## IMPACT OF EMTE MODIFICATION

### 17 EC Assets Projected To Move

- SA-2E
- SA-3
- SA-4
- SA-6
- SA-6M
- SA-6 Pod
- SA-8
- SA-11
- SA-11M
- IHawk Pod
- Roland
- Flycatcher
- Flapwheel
- Gundish (4)

- Most Valuable Threat Simulators Unavailable For Rapid Testing At EMTE
- AFMC Position Is Remaining 12 EC Assets Will Go Into Temporary Storage
- Capability To Support USAFAWC EC Tests Is A Concern

18 Apr - 13

The 12 remaining EC assets are simulators and signal sources only and their utility to support USAFAWC EC tests in future is a concern, particularly for ECM testing.

- Will incur cost to check them out each time they are brought out of storage.
- Threat operator support contract will likely go away if threats are in storage.
- Lead time required to prepare threats for test won't support mission requirements for Electronic Warfare Integrated Reprogramming (EWIR).
- Threat asset currency and quality will degrade due to lack of updates.



## **IMPACT OF MOVING EMTE USAFAWC Concerns**

- **Increased Costs**
- **Loss Of Environmental Diversity For EC Tests**
- **Reduced Responsiveness To PACER WARE**
- **Nellis EC Open Air Range Access And Capacity**
- **Data Adequacy**
- **Nellis EC Open Air Range Operations**

18 Apr - 14

Our concerns are detailed in subsequent slides.



AWC



## Increased Costs

- Increased TDY Costs: \$1.1M/Year
- Increased Manpower: 25 Additional People
- Increased Nellis MILCON: \$1.8M
- Other Unquantified Costs:
  - Potential Increased Range Costs
  - Increased Tanker Use
  - More Aircraft Operating Hours And Cost

18 Apr - 15

### TDY Cost Assumptions:

- All USAFAWC EC tests conducted at Nellis.
- Instrumented aircraft and maintenance provided by USAFAWC for all tests.

### Manpower:

- 25 additional manpower slots for maintenance and test personnel.



## Loss Of Environmental Diversity

- EC Tests Constrained To Single Topography
- EC Tests Constrained To Single Climatic Condition

18 Apr - 16

### Single topography:

- Nellis EC range only affords an overland test condition--no overwater test condition available. Topography environment at Nellis EC range has obstructions which impact line of sight for many operationally realistic flight profiles. This forces modification of profiles to higher altitudes.

- Terrain induced clutter on Nellis range also influences threat system tracking capabilities at low altitudes.

- Terrain bounce ECM technique is effected by surface reflectivity and vegetation (energy absorption characteristics) of terrain. The Nellis range does not offer the terrain conditions to accurately evaluate this technique over all realistic operational employment conditions.

### Single climatic condition:

- Humidity effects Electro-Optical tracking capabilities. The Nellis EC range presents only a low humidity test environment.



## Reduced Responsiveness To PACER WARE

- Nellis Range Access May Limit Ability To Support Electronic Warfare Integrated Reprogramming (EWIR) Process
- USAFAWC Wartime Mission Is To Rapidly Reprogram And Test EC Systems In Response To Threat Radar Changes
- Required Instrumented Aircraft Deployment To Nellis Range May Delay Mission Data Testing
- Range Priority To Support PACER WARE A Concern

18 Apr - 17

PACER WARE is the term for actual wartime reprogramming actions to update EC systems mission data.

USAFAWC has a wartime mission to rapidly reprogram, test, and field defensive mission data for the EC systems (listed on a previous slide) to counter threat radar changes.

The projected high utilization rate of the Nellis EC range, test priorities, competition with training exercises, and test time delays due to remote Nellis EC range raise concerns about capability to support PACER WARE at Nellis.



## Nellis EC Range Access And Capacity

- **Remote Site Access To Nellis Range Increases Test Time**
  - Reduces Responsiveness During Contingencies
- **Competition For Range Assets Will Increase Test Length**
  - Additionally Base Loading Concerns At Nellis (hangers, quarters, storage)
- **USAFAWC EC Test Workload Is Increasing (Not Decreasing)**
  - Nellis Range Capacity Requirements Reportedly Based On 78% Of All Recent EC Test Activity
- **Projected Nellis Range Capacity May Be Insufficient To Meet USAFAWC EC Test Requirements**

18 Apr - 18

### USAFAWC EC Test Workload Increasing:

- The requirement to conduct tests on the block cycle updates to the EC system software continues throughout the life cycle of the aircraft.
- The number of EC systems we support is increasing.
- The number of mission data sets for these EC systems is increasing to meet worldwide operational requirements.

### Nellis Range Capacity:

- Current daylight excess Nellis range capacity is reportedly 34%.
- Projected daylight excess Nellis range capacity for the proposed consolidation of EC test assets is reportedly 8%.
- The 8% excess capacity figure is reportedly based on a 78% reduction of EC test activity at all test centers.
- As stated above, USAFAWC EC test workload is increasing, not decreasing.
- Projected Nellis range capacity may be insufficient to meet our EC test requirements.



## Data Adequacy

- **Types Of Available Data Limited At Nellis Range**
  - Threat Radar Site Instrumentation Shortfalls
  - Limited Real-Time Projectile Flyout Capability
- **Quality Of Available Data At Nellis Range**
  - Consistency And Accuracy Of TSPI Data
- **Lengthy Data Turn-around Time At Nellis Range**
  - Data Transfer To USAFAWC Cumbersome
  - Impacts All Tests Especially PACER WARE

18 Apr - 19

Threat radar site instrumentation shortfalls: This refers to the ability to accurately measure and record threat radar system operating parameters and performance during all EC tests. This capability is necessary to provide accurate threat system target tracking data and operating parameters for post-mission comparison with actual aircraft position/orientation data (from TSPI) and the aircraft electronic warfare system instrumentation data. This data is essential to accurately determine electronic warfare measures of effectiveness such as tracking errors and missile miss distances.

TSPI is Time Space Position Information radar. These specialized radars track and record aircraft position during flight tests. We need precise aircraft position data, including orientation and aspect, for post-mission comparison with threat system target track data to accurately determine electronic warfare measures of effectiveness such as tracking errors and missile miss distances. The quality of TSPI data is based on the number of TSPI trackers used for a test to ensure continuous coverage, algorithms used to smooth the data, and other factors. The quality of Nellis TSPI data has not been very good in the past. This reduces confidence in test results and forces additional tests to obtain valid data.

Data turn-around: The amount of time it takes Nellis to provide test results (data) to customers is lengthy. The process to just transfer the data to the customer once all data reduction is completed normally takes a couple of weeks. This is not sufficient for our PACER WARE needs.



## Nellis EC Range Operations

- **Radio Frequency Allocation Restrictions**
  - Impairs Ability To Conduct Electronic Countermeasure (ECM) Tests
- **Nellis Range Airspace Limitations**
  - Limits Flight Profiles
  - Constrains Investigation Of Some Test Objectives
- **Chaff Restrictions Due To Proximity To Airline Corridors**
- **Increasing Regional Air Traffic Will Aggravate These Problems**
- **Deconfliction With Training Exercises**

18 Apr - 20

Nellis EC range airspace restrictions limit the flight test profiles aircraft can use. This impedes operationally realistic testing. It also constrains the evaluation of some test objectives such as maximum detection range of the threat system against the target aircraft and maximum detection range on the aircraft EC system for the threat radar.

Proximity of Nellis EC range to Goldstone space tracking and relay facilities impacts ability to obtain adequate radio frequency allocation to conduct EC tests.

Proximity of Nellis EC range to Los Angeles area FAA control corridors restricts deployment of chaff in support of EC tests.



## SUMMARY

### **If Proposed EMTE Change Occurs:**

- **USAFAWC EC Testing Will Be Negatively Impacted**
  - Testing Will Cost More, Require More People, And Take More Time

### **From USAFAWC Perspective The Proposed EMTE Changes Are:**

- **Inconsistent With Joint BRAC Study Findings**
- **Not Supported By Analysis Of All Factors**

18 Apr - 21

The benefit of this consolidation of EC test assets at the Nellis range is a small improvement in threat density. This change will not provide the capability to test against any new threats compared to our current capability. It would only afford the opportunity to test against a more dense array of threats. Generally, density is not a high priority for our open air testing. Density testing against EC systems is normally conducted using hardware-in-the-loop facilities. The disadvantages with this change identified in previous slides outweigh the benefit of the increase in threat density.



## QUESTIONS?

**POC:** Lt Col Scott Sampson or Lt Col Pete Strong  
**Organization:** 16 Test Squadron  
**Address:** 203 West D. Avenue, Suite 400  
Eglin AFB, FL 32542-6867  
**Phone:** DSN 872-4374/75 Commercial (904) 882-4374/75  
**FAX:** (904) 882-8346

18 Apr - 22



# Document Separator

# BRAC 95 PROPOSED REALIGNMENT OF EGLIN'S EMTE RANGE

AN AFSOC PERSPECTIVE

1

## OVERVIEW

- ◆ AFSOC History
- ◆ AFSOC Organization
- ◆ AFSOC Missions
- ◆ BRAC 95 Impacts

2

## AFSOC HISTORY

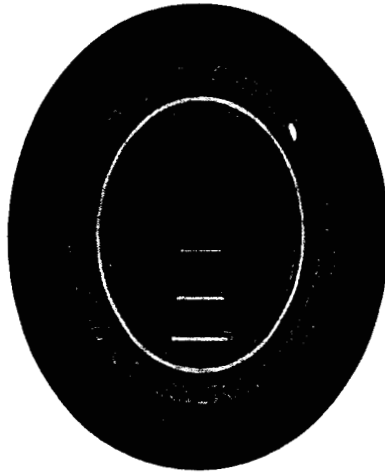
- ◆1943 "Wingate's Raiders"
- ◆1944 1st Air Commando Group
- ◆1945 Air Commandos Deactivated
- ◆1950 Air Commandos Reactivated  
For Korean War
- ◆1961 Special Air Operations  
Resurrected for Vietnam War

3

## HISTORY (CONT)

- ◆1975 1st SOW Established
- ◆1980 EAGLE CLAW (Iran)
- ◆1983 23rd Air Force Established
- ◆1983 URGENT FURY (Grenada)

4



◆ 1987 - USSOCOM Established and  
23 AF Became the Air Force  
Component of USSOCOM

5



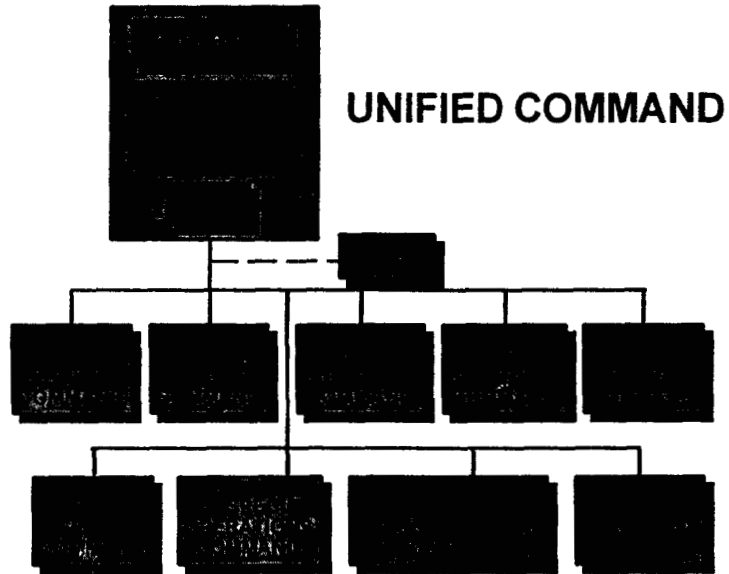
◆ May 1990 - AFSOC established as a  
Major Command

6

# RECENT AND CURRENT OPERATIONS

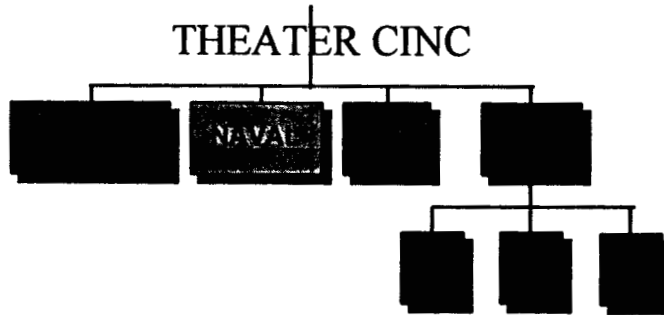
- ☆ 1989 - JUST CAUSE - PANAMA
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7



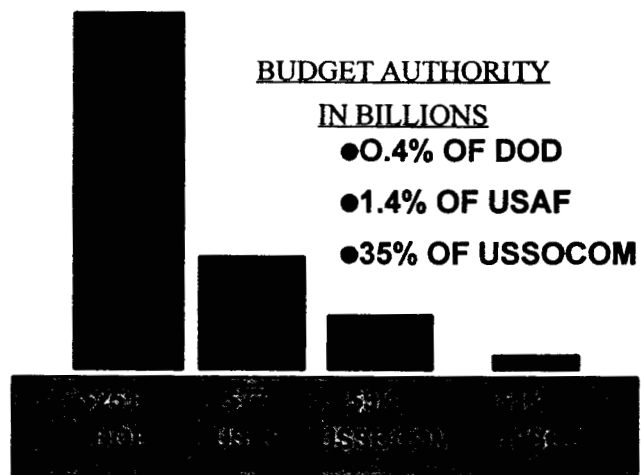
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# UNIFIED COMMAND



9

# FY 95 PERSPECTIVE



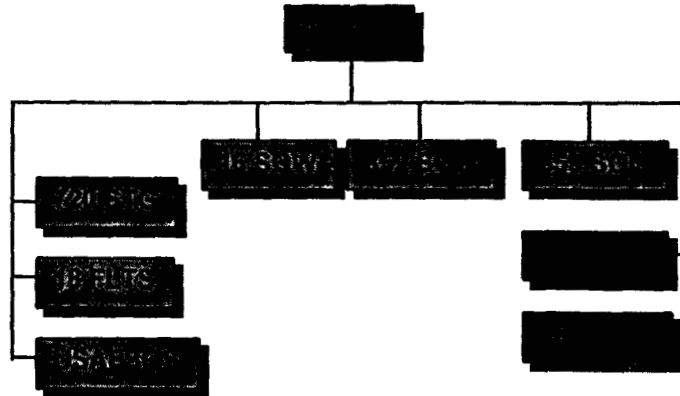
10

# STRENGTH

	UNITS	PEOPLE
ACTIVE DUTY		
CONUS	45	7527
OVERSEAS	14	1987
TOTAL ACTIVE DUTY	59	9514
AIR RESERVE COMPONENTS		
RESERVES	13	1473
NATIONAL GUARD	12	1001
TOTAL ARC	25	2474
TOTAL REPORTING TO AFSOC	84	11988

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## AIR FORCE SPECIAL OPERATIONS COMMAND



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## COLLATERAL SPECIAL OPS MISSIONS

- ◆ Humanitarian Assistance
- ◆ Counter Narcotics
- ◆ Personnel Recovery Operations

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## HOW DOES AFSOC ACCOMPLISH THESE SPECIAL MISSIONS?

- ◆ Motivated, highly trained personnel
- ◆ Extensively modified conventional aircraft designed to:
  - Avoid Detection
  - If Detected, Avoid Engagement

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## BRAC 95 IMPACTS ON AFSOC

17

## EMTE RANGE REALIGNMENT

- ◆ Impacts AFSOC in Two Ways:
  - OPERATIONAL
  - FINANCIAL

18

AFSOC

## OPERATIONAL IMPACTS

- ◆ Operational Tests for New or Upgraded EW Systems
  - Jammers
  - Threat Receivers
  - Expendables
- ◆ Tactics Development
- ◆ Operational Training

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## FINANCIAL IMPACT (FY95 \$)

- ◆ OT&E (7 of 10 top priority tests are EC tests)
  - 5 - 6 Additional Deployments per Year
  - \$300K per Deployment
  - \$1.5 Mil - \$1.8 Mil Additional each Year
- ◆ TD&E (Ramping up new TD&E Flight)
  - Most TD&Es will be EC oriented
  - Approximately 4 Deployments per Year (est)
  - \$300+K per Deployment (est)
  - \$1.2+ Mil Additional each Year (est)
- ◆ Potential Hidden Costs
  - Acquisition program schedule slips = \$\$\$\$
  - More dedicated test/tactics manpower required

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## OPERATIONAL FACTORS

- ◆ Limited Assets
  - Airframes
  - Aircrews
  - Maintenance Crews
- ◆ No Dedicated OT&E / TD&E Aircraft

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## WEAPON SYSTEM INVENTORY COMPARISON

<u>CONUS SOF ACFT</u>		<u>OTHER ACFT</u>	
AC-130H	8	F-15	689
AC-130U	13	F-16	625
HC-130	12	C-141	243
MC-130E	9	T-38	618
MC-130H	15	KC-135	316
MH-53J	24	B-52	136
MH-60G	10	C-130	199

- ◆ Limited SOF aircraft available for OT&E / TD&E

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## OTHER OPERATIONAL FACTORS

- ◆ Eglin vs Western Range
  - Combined Testing and Training
  - Tanker Requirements
- ◆ Other Considerations
  - DESERT STORM testing
  - Transient Time to Range
  - Contingency Planning
  - COMMANDO VISION Options

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## COMMANDO VISION

- ◆ PURPOSE:
  - Increase effectiveness of combat power available to all theater CINCs
  - Improve Joint SOF readiness
- ◆ METHOD:
  - Plan for the future
    - ◆ Increase opportunity for joint training
    - ◆ Establish a proactive stance to changing fiscal and political paradigms
    - ◆ Optimize a future force structure of AC-130U, Talon II, and CV-22
  - Reposture AFSOC
    - ◆ Support theater CINCs with rotational forces
    - ◆ Remission reserve units
      - Marry inherent strengths to appropriate mission

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## WHY COMMANDO VISION?

- ◆ Demand for SOF services skyrocketing
  - Tasking increased 100% since 1991
    - ◆ Africa
    - ◆ Bosnia
    - ◆ Turkey
    - ◆ Haiti
- ◆ TDY routinely exceeds 180 days per year
- ◆ Forces outside USSOCOM control resulted in major relocations
  - Europe forces: Germany → Alconbury → Mildenhall
  - Pacific forces: Philippines → Okinawa
- ◆ Future force structure provides new opportunities

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## WHAT VISION DOES

- ◆ VISION will:
  - Improve Joint SOF readiness
  - Bring optempo into accepted range
  - Limit AFSOC exposure to extended TDY
  - Build a proactive stance to limit adverse effects of changing political and military situations
  - Maintain CINCs' warfighting abilities by providing them with more efficient, flexible, and capable deployed forces

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## WHAT VISION IS

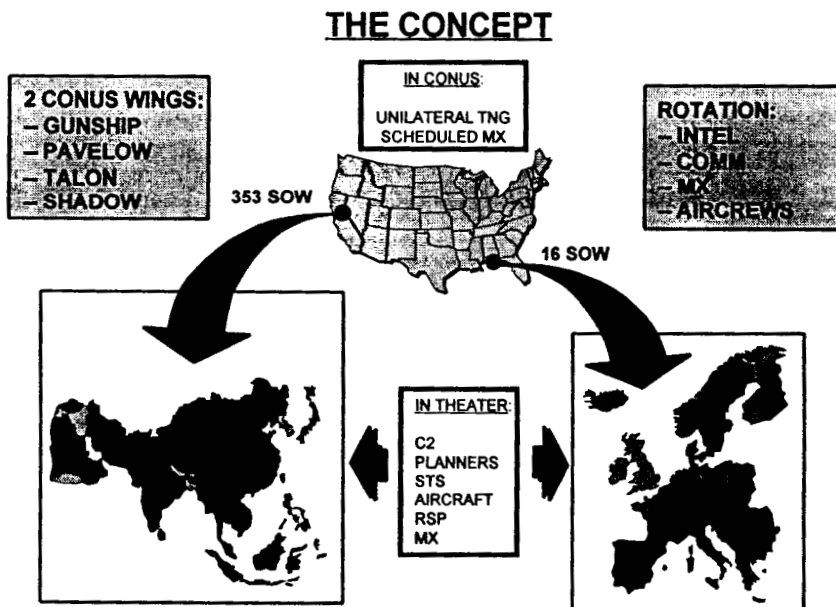
### ◆ Phase I

- Optimize AC / RC mix
  - ◆ Peacetime engagement optempo
  - ◆ Preserve wartime responsiveness
- Implementation began Oct 94

### ◆ Phase II

- Implements rotational theater support
  - ◆ Aircraft and SOGs remain in theater
  - ◆ Crew training in CONUS; cooperative engagement in theater
- Implementation hinges on acceptable west coast base
- Notional FY 98 initiation

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## WEST COAST WING: WHY BEALE AFB?

- ◆ Proximity to Army and Navy SOF teammates
- ◆ No airspace encroachment
- ◆ No local community encroachment
- ◆ 2 Wing infrastructure; 1 Wing present
- ◆ Excellent year round weather
- ◆ 23000 Acres available for training
- ◆ Proximity to live fire and ECM ranges
- ◆ Excess ramp space
- ◆ Excess maintenance shop space
- ◆ U-2 mission synergistic with intelligence intensive SOF mission

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## SUMMARY

- ◆ Having to Deploy to Western Range means:
  - New Systems Either Not Tested or Delayed
    - ◆ Increased Acquisition Costs
  - Decreased Training Opportunities
    - ◆ Can't go west everytime we need to train
    - ◆ Increased OPTEMPO Impact
  - Fewer Assets Available for War
  - Increased OT&E / TD&E Costs
    - ◆ \$2.7 -\$3.0+ Million Per Year Added O&M
- ◆ Bottom Line: **DECREASED COMBAT CAPABILITY AT HIGHER COSTS!**

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*... a step ahead in a changing world.*



31

# Document Separator

**BRAC 95  
PROPOSED REALIGNMENT OF  
EGLIN'S EMTE RANGE**

**AN AFSOC PERSPECTIVE**

1

**GOOD MORNING, GENTLEMEN.**

**I'M COL JON HUINKER, COMMANDER OF THE 18 FLTS WHICH HAS THE MISSION OF CONDUCTING OPERATIONAL TESTS AND EVALUATIONS AND TACTICS DEVELOPMENT FOR AIR FORCE SPECIAL OPERATIONS COMMAND.**

**- THE AFSOC MISSION: AMERICA'S SPECIALIZED AIR POWER, REMAINING A STEP AHEAD IN A CHANGING WORLD, DELIVERING SPECIAL OPERATIONS COMBAT POWER ANYTIME, ANYWHERE.**

**- WE SUPPORT THE VISION OF GLOBAL POWER AND GLOBAL REACH FOR AMERICA. WE ARE COMMITTED TO ACTIONS INVOLVING JOINT SPECIAL FORCES.**

**- IT IS OUR RESPONSIBILITY TO DEFEND THE UNITED STATES THROUGH CONTROL AND EXPLOITATION OF AIR AND SPACE.**

**- THIS IS THE JOB OF THE AIR FORCE SPECIAL OPERATORS:**

**– DELIVERING DEDICATED SPECIAL FORCES COMBAT POWER.**

**– THE RIGHT FORCES, THE RIGHT PLACE, THE RIGHT TIME.**

## HISTORY (CONT)

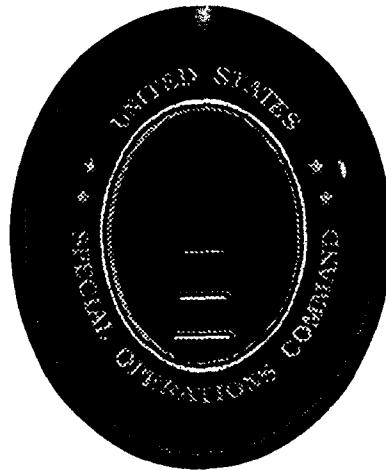
- ◆ 1975 1st SOW Established
- ◆ 1980 EAGLE CLAW (Iran)
- ◆ 1983 23rd Air Force Established
- ◆ 1983 URGENT FURY (Grenada)

4

**BY 1975 THE REMAINING AIR FORCE SPECIAL OPERATIONS FORCES AT HURLBURT FIELD WERE SUBORDINATED TO THE 1ST SPECIAL OPERATIONS WING. SINGLE SQUADRONS OF AIRCRAFT WERE ASSIGNED IN EUROPE AND THE FAR EAST. IN THE EARLY 1980's HOWEVER, THIS SITUATION CHANGED DRAMATICALLY FOLLOWING THE RESCUE ATTEMPT OF OUR HOSTAGES IN IRAN.**

**WITH A HEIGHTENED INTEREST IN SPECIAL OPERATIONS THE AIR FORCE CREATED THE 23 AIR FORCE, WHICH FUNCTIONALLY COMBINED ALL SPECIAL OPERATIONS AND RESCUE ASSETS.**

**FOLLOWING GRENADA...**



- ◆ 1987 - USSOCOM Established and 23 AF Became the Air Force Component of USSOCOM

5

**CONGRESS RECOGNIZED A CONTINUING AND GROWING NEED TO RESPOND TO THIS NEW TYPE OF CRISIS, AND IN 1987, USSOCOM WAS ESTABLISHED, A UNIQUE COMMAND UNITING THE SPECIAL OPERATIONS FORCES OF THE ARMY, AIR FORCE AND NAVY.**



◆ May 1990 - AFSOC established as a Major Command

6

**ACCORDINGLY, THE AIR FORCE EMPHASIZED ITS SPECIAL OPERATIONS COMMITMENT, AND ELEVATED 23RD AIR FORCE TO MAJOR COMMAND STATUS, THUS ESTABLISHING AFSOC, THE AIR FORCE SPECIAL OPERATIONS COMMAND.**

**THE TURN OF THE DECADE HAS SEEN SPECIAL OPERATIONS FORCES SUPPORTING EVERY MAJOR OPERATION INVOLVING THE UNITED STATES MILITARY....**

## RECENT AND CURRENT OPERATIONS

- ☆ 1989 - JUST CAUSE - PANAMA
- ☆ 1990 - DESERT SHIELD/STORM - KUWAIT
- ☆ 1991 - PROVIDE COMFORT - IRAQ
- ☆ 1992 - RESTORE HOPE - SOMALIA
- ☆ 1993 - PROVIDE PROMISE - BOSNIA
- ☆ 1993 - CONTINUE HOPE - SOMALIA
- ☆ 1994 - SUPPORT DEMOCRACY - HAITI
- ☆ 1994 - SUPPORT HOPE - RWANDA
- ☆ 1994 - UPHOLD DEMOCRACY - HAITI

7

### **- JUST CAUSE IN PANAMA:**

ACTION AGAINST GENERAL NORIEGA.

### **- DESERT SHIELD/STORM :**

FREEDOM FOR THE KUWAITI'S.

### **- FOLLOWING DESERT STORM:**

PROVIDE COMFORT ASSISTANCE FOR THE KURDS IN  
NORTHERN IRAQ.

### **- RESTORE HOPE:**

OUR INITIAL AC-130 GUNSHIP MISSIONS IN SOMALIA.

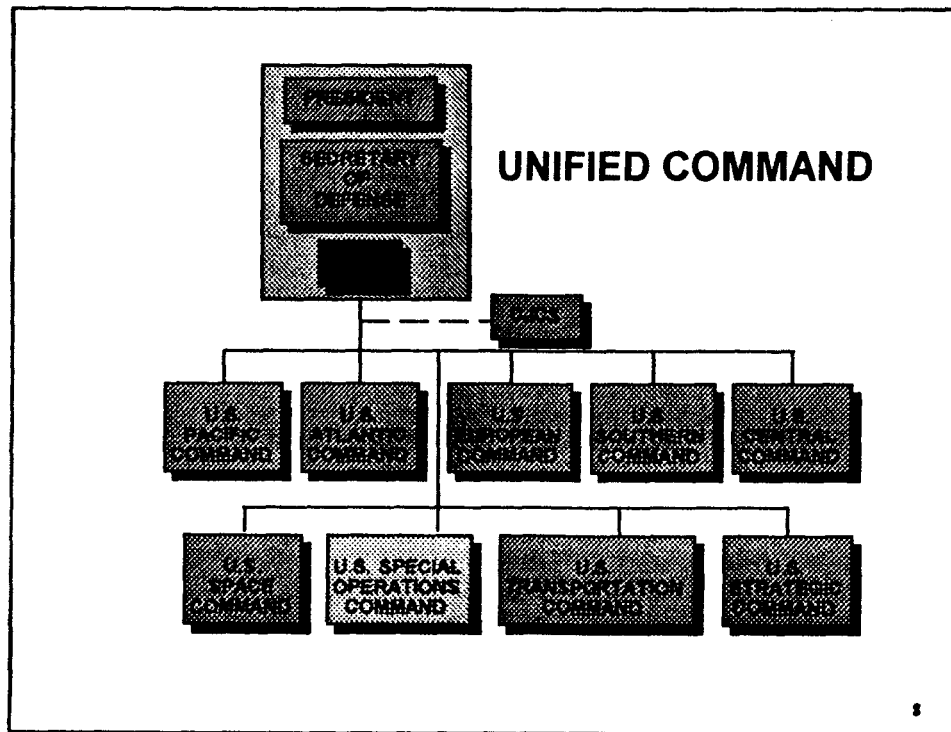
### **- FOR PROVIDE PROMISE:**

DEVELOPMENT OF THE MRE DELIVERY SYSTEM FOR BOSNIA.

### **- OPERATION CONTINUE HOPE:**

RECENTLY COMPLETED PEACE KEEPING EFFORTS IN  
SOMALIA.

### **- AFSOC PERSONNEL WERE ALSO HEAVILY INVOLVED WITH MISSIONS IN HAITI AND RWANDA DURING 1994.**



**THIS IS A REVIEW OF THE UNIFIED COMMAND STRUCTURE:**

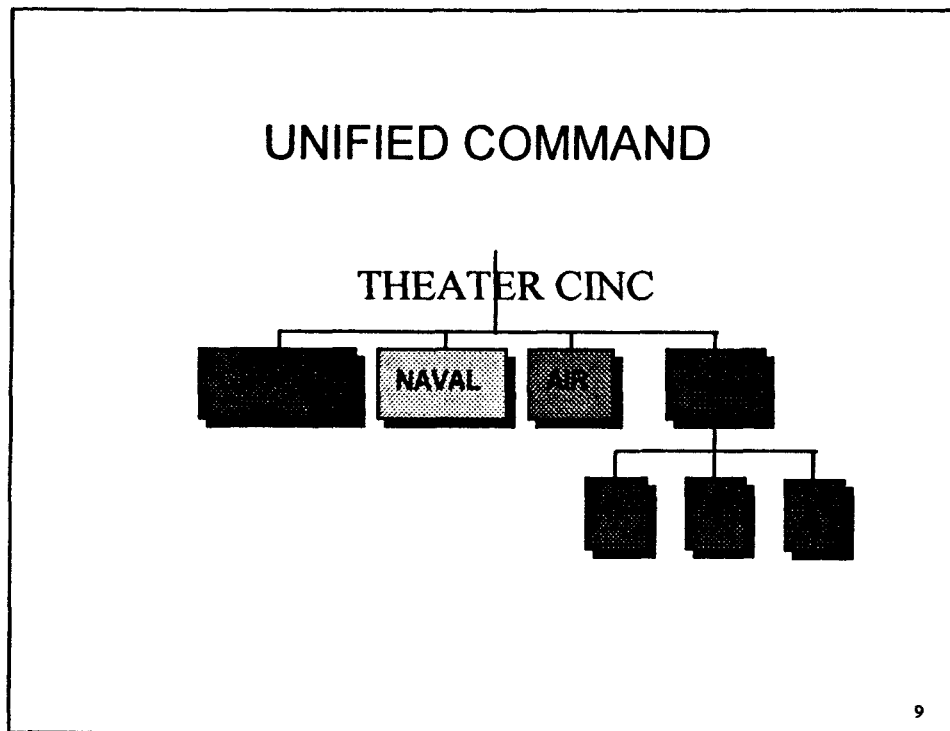
**THE NATIONAL COMMAND AUTHORITY GIVES TASKING TO THE NINE UNIFIED COMMANDS.**

**FIVE OF THESE COMMANDS, PACIFIC, ATLANTIC, EUROPEAN, SOUTHERN, AND CENTRAL, HAVE SPECIFIC THEATER RESPONSIBILITIES.**

**THE REMAINING FOUR, SPACE, SPECIAL OPERATIONS, TRANSPORTATION, AND STRATEGIC, SUPPORT THE THEATER COMMANDS AND HAVE WORLDWIDE RESPONSIBILITIES.**

**USSOCOM IS ONE OF THESE WORLDWIDE COMMANDS.**

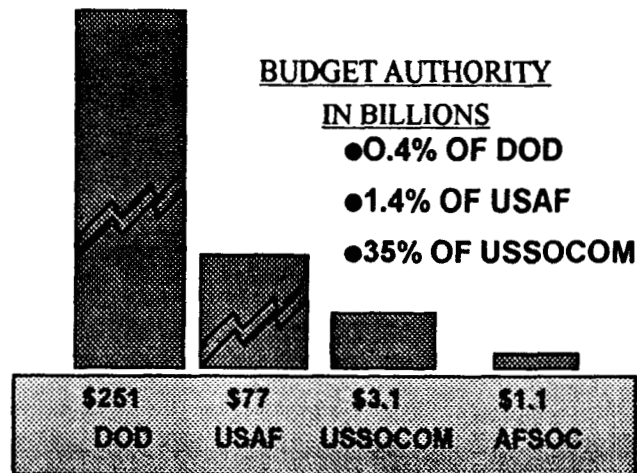




**IT IS IMPORTANT TO HIGHLIGHT THAT EACH THEATER COMMANDER HAS AN ARMY, NAVY, AND AIR FORCE SERVICE COMPONENT, AND A SUB-UNIFIED SPECIAL OPERATIONS COMMAND (SOC). IN WARTIME, THE SOC BECOMES THE JOINT FORCE SPECIAL OPERATION COMPONENT COMMAND, AND POSSESSES GROUND, NAVAL, AND AIR SPECIAL OPS ASSETS.**

**THIS ALLOWS SPECIAL OPERATIONS FORCES TO OPERATE UNDER A COMMAND STRUCTURE MAKING THE MOST EFFECTIVE USE OF OUR UNIQUE CAPABILITIES**

## FY 95 PERSPECTIVE



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**THIS IS A MACRO LOOK AT OUR FISCAL YEAR '95 BUDGET. AFSOC REPRESENTS ABOUT POINT FOUR PERCENT OF THE DOD BUDGET AND ABOUT A THIRD OF THE USSOCOM BUDGET.**

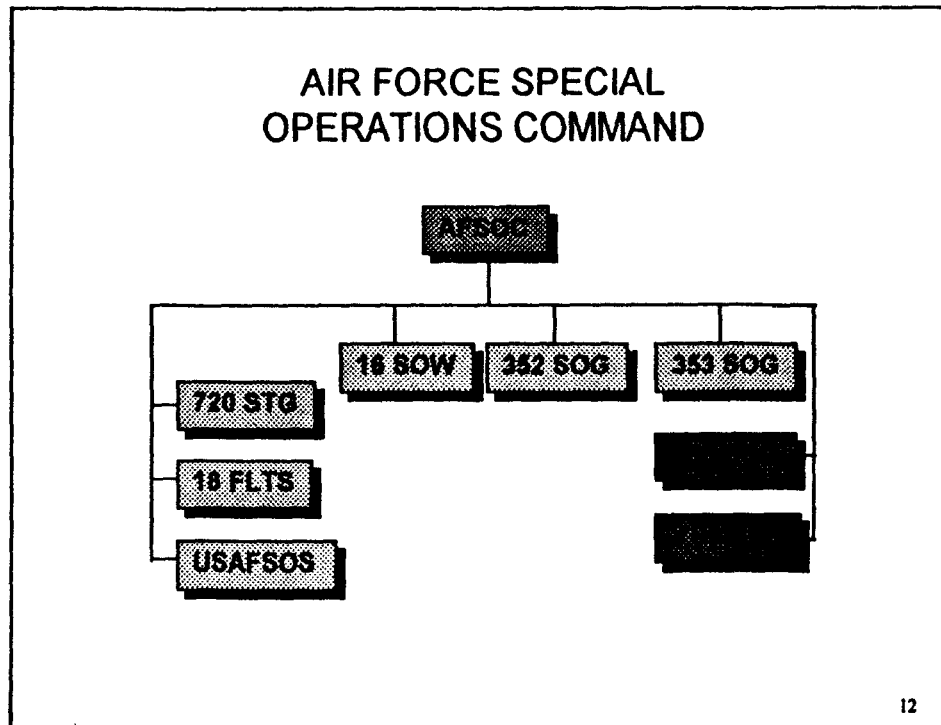
**CONSIDERING THE SUCCESS AND PREVALENT USE OF SOF, WE FEEL THE TAXPAYER RECEIVES AN EXCELLENT RETURN ON THE INVESTMENT...THE MOST "BANG FOR THE BUCK."**

## STRENGTH

	UNITS	PEOPLE
ACTIVE DUTY		
CONUS	45	7527
OVERSEAS	14	1987
TOTAL ACTIVE DUTY	59	9514
AIR RESERVE COMPONENTS		
RESERVES	13	1473
NATIONAL GUARD	12	1001
TOTAL ARC	25	2474
TOTAL REPORTING TO AFSOC	84	11988

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**AFSOC IS AUTHORIZED APPROXIMATELY 12,000 PEOPLE, BOTH MILITARY AND CIVILIAN, WHO ARE LOCATED THROUGHOUT THE WORLD. ABOUT 21 PERCENT ARE STATIONED OVERSEAS. PROJECTED END YEAR STRENGTH FOR 1999 IS 12,000. AS YOU SEE, MOST OF OUR GROWTH IS COMPLETE.**



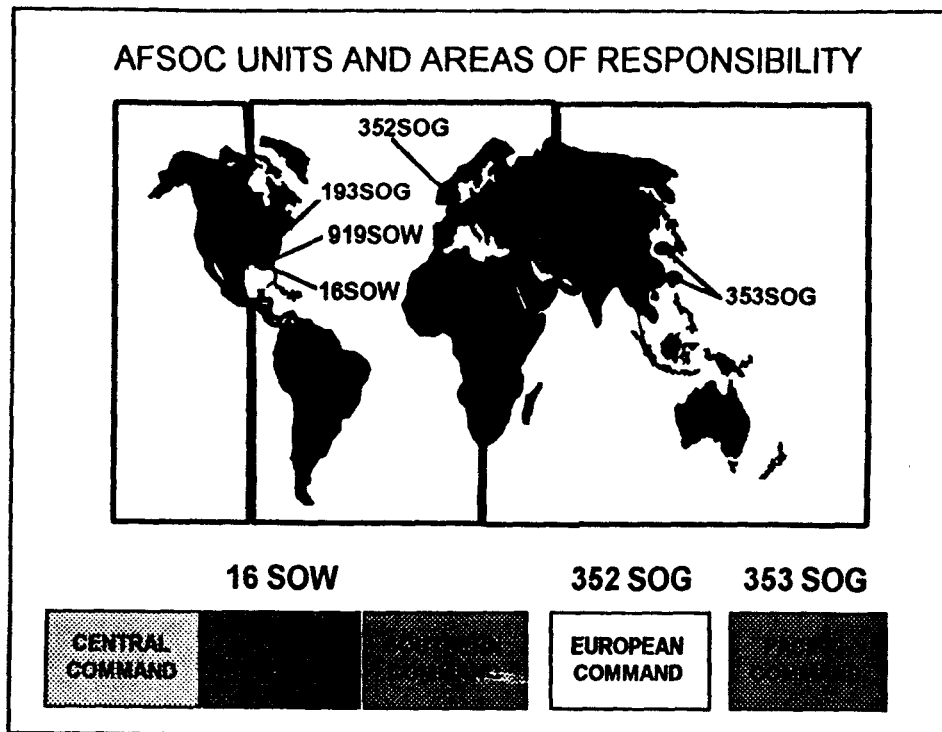
**WE ARE ORGANIZED INTO THREE OPERATIONAL FLYING UNITS (highlighted in grey) AND THREE PRIMARY SUPPORT UNITS (in yellow).**

**THERE ARE ALSO TWO AIR RESERVE COMPONENTS (in blue) THAT REPORT TO AFSOC...**

**THE 193D SPECIAL OPERATIONS GROUP OF THE PENNSYLVANIA AIR NATIONAL GUARD, IN HARRISBURG, OPERATES THE EC-130 COMMANDO SOLO, OUR PSYCHOLOGICAL OPERATIONS PLATFORM.**

**THE 919TH SPECIAL OPERATIONS WING OF THE AIR FORCE RESERVES AT DUKE FIELD, FL, FLIES THE AC-130 "A" MODEL SPECTRE GUNSHIP. THEY ARE CURRENTLY RETIRING THE "A" MODELS AND CONVERTING TO THE COMBAT SHADOW HC-130 AIRCRAFT. ITS MISSION IS NIGHT AIR-REFUELING SUPPORT.**

**BOTH OF THESE UNITS SUPPORT THE AFSOC MISSION BY ADDING 24 PERCENT TO OUR SPECIAL OPERATIONS FORCE STRUCTURE.**



**EACH OF OUR OPERATIONAL UNITS HAS A GEOGRAPHICAL ORIENTATION. THE SIXTEENTH SPECIAL OPERATIONS WING AT HURLBURT IS PRIMARILY RESPONSIBLE TO THE CENTRAL, ATLANTIC, AND SOUTHERN COMMANDS, BUT IT ALSO PROVIDES AUGMENTATION FORCES FOR AFSOC UNITS FORWARD DEPLOYED IN EUROPE AND THE PACIFIC.**

**THE 352D SPECIAL OPERATIONS GROUP IS LOCATED AT R. A. F. ALCONBURY, UNITED KINGDOM. THIS YEAR THEY ARE MOVING TO R. A. F. MILDENHALL. THIS GROUP IS RESPONSIBLE TO THE EUROPEAN COMMAND. THEY ARE CURRENTLY SUPPORTING OPERATIONS OVER NORTHERN IRAQ AND BOSNIA.**

**THE 353RD SOG IS LOCATED AT KADENA AB, OKINAWA WITH ITS HEADQUARTERS AND FIXED WING AIRCRAFT. THE HELICOPTERS ARE LOCATED AT OSAN AB, KOREA. THEY ARE RESPONSIBLE TO THE PACIFIC COMMAND.**

## AFSOC'S PRINCIPAL MISSIONS

- ◆ Unconventional Warfare (UW)
- ◆ Direct Action (DA)
- ◆ Special Reconnaissance (SR)
- ◆ Foreign Internal Defense (FID)
- ◆ Counter Terrorism (CT)

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**THESE ARE THE FIVE PRINCIPAL MISSIONS OF  
SPECIAL OPERATIONS CODIFIED BY PUBLIC  
LAW .**

**AFSOC SUPPORTS THE FIRST THREE MISSIONS;  
UNCONVENTIONAL WARFARE, DIRECT ACTION,  
AND SPECIAL RECONNAISSANCE**

## COLLATERAL SPECIAL OPS MISSIONS

- ◆ Humanitarian Assistance
- ◆ Counter Narcotics
- ◆ Personnel Recovery Operations

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**DUE TO MANY OF OUR INHERENT  
CAPABILITIES, AFSOC MAY BE TASKED TO  
SUPPORT THESE ADDITIONAL ASSIGNED  
COLLATERAL ACTIVITIES :**

## HOW DOES AFSOC ACCOMPLISH THESE SPECIAL MISSIONS?

- ◆ Motivated, highly trained personnel
- ◆ Extensively modified conventional aircraft designed to:
  - Avoid Detection
  - If Detected, Avoid Engagement

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**AS OPPOSED TO MOST FIGHTER & BOMBER TYPE AIRCRAFT, WE CAN'T OUTRUN THE THREAT IN OUR LARGE C-130 VARIANTS OR OUR HELICOPTERS. INSTEAD, OUR AIRCREWS RELY UPON VERY SOPHISTICATED HIGHLY TECHNICAL MODIFICATIONS TO FIRST DETERMINE WHERE THE THREAT IS BEFORE IT SEES US, THEN AVOID THE THREAT IF POSSIBLE.**

**IF IT ISN'T POSSIBLE TO AVOID THE THREAT, OUR AIRCREWS HAVE OTHER TECHNOLOGICAL OPTIONS TO AVOID THE ENGAGEMENT.**

**AS YOU CAN IMAGINE, IN ORDER TO ACCOMPLISH OUR MISSION, IT REQUIRES ALOT OF TRAINING BY HIGHLY MOTIVATED AND DEDICATED AIRCREWS WHO TRAIN TOGETHER AT EVERY OPPORTUNITY.**



**BRAC 95 IMPACTS ON AFSOC**

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**I'LL NOW DISCUSS THE PROBABLE IMPACTS  
ON AFSOC CAUSED BY BRAC 95'S  
REALIGNMENT OF EGLIN'S EMTE RANGE.**

## EMTE RANGE REALIGNMENT

- ◆ Impacts AFSOC in Two Ways:
  - OPERATIONAL
  - FINANCIAL

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**WE ANTICIPATE THOSE IMPACTS TO FALL INTO  
TWO MAIN CATEGORIES:**

**-- OPERATIONAL AND FINANCIAL**

## OPERATIONAL IMPACTS

- ◆ Operational Tests for New or Upgraded EW Systems
  - Jammers
  - Threat Receivers
  - Expendables
- ◆ Tactics Development
- ◆ Operational Training

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**THESE ARE THE MOST SIGNIFICANT OPERATIONAL IMPACTS.**

**WE USE THE EMTE RANGE TO CONDUCT MOST OF OUR OPERATIONAL TESTING FOR NEW OR UPGRADED ELECTRONIC WARFARE MODIFICATIONS. JAMMERS, THREAT RECEIVERS AND EXPENDABLES ARE EXAMPLES OF SYSTEMS WE WON'T BE ABLE TO TEST AGAINST THE EMITTERS LEFT BEHIND AT EGLIN.**

**WE'RE JUST BEGINNING TO RAMP UP TO CONDUCT TACTICS DEVELOPMENT FOR THE COMMAND'S WEAPON SYSTEMS. THE EMTE WAS AN INTEGRAL PART OF OUR PLAN HERE AS WELL.**

**OPERATIONAL TRAINING AGAINST REALISTIC THREATS IS ABSOLUTELY CRITICAL TO OUR ABILITY TO ACCOMPLISH OUR MISSION.**

**SINCE MOST OF OUR FLYING DOES NOT INVOLVE MUNITIONS TESTING, WE'RE NOT EVEN SURE WE WILL BE ALLOWED TO FLY AGAINST THESE EMITTERS. EVEN ASSUMING THAT WE ARE, THE EMITTERS LEFT BEHIND WILL PROVIDE NO FEEDBACK ON WHETHER OR NOT OUR COUNTERMEASURES ARE WORKING. THE POTENTIAL FOR DISASTER HERE IS OMINOUS.**

**OUR SOF AIRCREWS MAY NO LONGER HAVE THE BENEFIT OF THE BEST TECHNOLOGY COUPLED WITH THE BEST TRAINING THAT WE CURRENTLY ENJOY AS A RESULT OF OUR PROXIMITY TO THE EMTE.**

## FINANCIAL IMPACT (FY95 \$)

- ◆ OT&E (7 of 10 top priority tests are EC tests)
  - 5 - 6 Additional Deployments per Year
  - \$300K per Deployment
  - \$1.5 Mil - \$1.8 Mil Additional each Year
- ◆ TD&E (Ramping up new TD&E Flight)
  - Most TD&Es will be EC oriented
  - Approximately 4 Deployments per Year (est)
  - \$300+K per Deployment (est)
  - \$1.2+ Mil Additional each Year (est)
- ◆ Potential Hidden Costs
  - Acquisition program schedule slips = \$\$\$\$
  - More dedicated test/tactics manpower required

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## OPERATIONAL FACTORS

- ◆ Limited Assets
  - Airframes
  - Aircrews
  - Maintenance Crews
- ◆ No Dedicated OT&E / TD&E Aircraft

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**ONE OF THE PRIMARY REASONS THE REALIGNMENT OF EGLIN'S EMTE WILL CAUSE US SO MUCH OF A PROBLEM IS THAT AFSOC DOESN'T HAVE LARGE FLEETS OF AIRCRAFT.**

**WE DON'T HAVE DEDICATED TEST AIRCRAFT, OR FULL TEST AIRCREWS OR TEST MAINTENANCE CREWS.**

**AND FOR A VERY GOOD REASON...**

## WEAPON SYSTEM INVENTORY COMPARISON

<u>CONUS SOF ACFT</u>		<u>OTHER ACFT</u>	
AC-130H	8	F-15	689
AC-130U	13	F-16	625
HC-130	12	C-141	243
MC-130E	9	T-38	618
MC-130H	15	KC-135	316
MH-53J	24	B-52	136
MH-60G	10	C-130	199

◆ Limited SOF aircraft available for OT&E / TD&E

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**DESPITE OUR NUMEROUS ACCOMPLISHMENTS,  
WE'RE STILL A SMALL COMMAND.**

**EVERYTIME WE CONDUCT A TEST OR TACTICS  
DEVELOPMENT EFFORT, WE HAVE TO BORROW  
THE AIRCRAFT, MOST OF THE AIRCREW, AND  
THE MAINTENANCE CREW FROM THE  
OPERATIONAL SQUADRONS HERE AT  
HURLBURT.**

**AS YOU CAN SEE VERY CLEARLY ON THIS  
SLIDE, BORROWING AN AIRCRAFT OR TWO  
COULD REPRESENT A SIGNIFICANT LOSS IN  
OPERATIONAL CAPABILITY FOR THE AFFECTED  
WEAPON SYSTEM.**

**THE REST OF THE AIR FORCE MAY NOT HAVE  
THE SAME KIND OF PROBLEM.**

## OTHER OPERATIONAL FACTORS

- ◆ Eglin vs Western Range
  - Combined Testing and Training
  - Tanker Requirements
- ◆ Other Considerations
  - DESERT STORM testing
  - Transient Time to Range
  - Contingency Planning
  - COMMANDO VISION Options

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**AFSOC AT HURLBURT AND THE EGLIN RANGE COMPLEX REPRESENT A MARRIAGE MADE IN MILITARY HEAVEN.**

**ONE OF THE BIG FACTORS IN AFSOC'S CONTINUING ABILITY TO SERVE OUR NATION WELL IN ALL TYPES OF CONTINGENCY OPERATIONS HAS BEEN OUR PROXIMITY TO EGLIN'S EMTE RANGE WHERE WE CAN TWEAK OUR SYSTEMS AND CREWS RIGHT UP TO THE LAST MINUTE WITHOUT JEOPARDINZING OUR CAPABILITY TO RESPOND.**

**WITH LIMITED ASSETS, WE CAN CONDUCT TESTING AND TRAINING ON THE SAME MISSION BY SWAPPING CREW MEMBERS, AND WE USUALLY DO. DURING THE TIME BETWEEN TEST SORTIES HERE AT HURLBURT, WHICH CAN SOMETIMES BE A WEEK DEPENDING ON THE TEST, OUR OPERATIONAL SQUADRONS CAN TRAIN TO THEIR HEARTS CONTENT ON THE SAME AIRCRAFT USED FOR TESTING.**

**WE'RE SO CLOSE TO THE RANGE THAT OUR HELICOPTERS RARELY REQUIRE TANKER SUPPORT TO CONDUCT TESTING OR TACTICS DEVELOPMENT. NOT SO OUT WEST.**

**WE CONDUCTED SHORT NOTICE HIGH PRIORITY TESTS RIGHT UP TO THE LAST MINUTE IN PREPARATION FOR DESERT STORM. COULDN'T HAVE DONE IT IF WE HAD TO GO WEST.**

**TRANSIENT TIMES TO AND FROM THE WESTERN RANGE ARE SIGNIFICANT FOR OUR HELICOPTERS. PLAN ON A MINIMUM OF 4 DAYS ROUND TRIP UNLESS WE GET C5 AIRLIFT.**

**WITH THE EMTE'S CLOSE PROXIMITY, WE CAN EVALUATE THE THREAT, REPROGRAM AND FLIGHT TEST OUR ECM GEAR AND DEPLOY ANYWHERE IN THE WORLD WITH 72 HOURS NOTICE. NOT SO IF WE MUST GO WEST.**

**ONE OTHER ISSUE WHICH BEARS SOME CONSIDERATION IN THIS REVIEW IS COMMANDO VISION...**

## COMMANDO VISION

### ◆ PURPOSE:

- Increase effectiveness of combat power available to all theater CINCs
- Improve Joint SOF readiness

### ◆ METHOD:

- Plan for the future
  - ◆ Increase opportunity for joint training
  - ◆ Establish a proactive stance to changing fiscal and political paradigms
  - ◆ Optimize a future force structure of AC-130U, Talon II, and CV-22
- Reposture AFSOC
  - ◆ Support theater CINCs with rotational forces
  - ◆ Remission reserve units
    - Marry inherent strengths to appropriate mission

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### **COMMANDO VISION HAS ONE GOAL:**

INCREASE THE SOF CAPABILITY AVAILABLE TO ALL CINCS  
FOR PEACE AND WAR

### **VISION ATTEMPTS TO DEAL WITH AN UNCERTAIN FUTURE:**

REORGANIZES AFSOC TO BE PROACTIVE  
PLANS FOR THE ADDITION OF NEW AIRFRAMES

**VISION MAINTAINS CURRENT WARFIGHTING CAPABILITIES IN BOTH THEATERS, AND IT CAPITALIZES ON THE STRENGTHS OF OUR RESERVE COMPONENT.**

**COMMANDO VISION DOES, HOWEVER, ACCEPT RISK IN ORDER TO ACHIEVE THIS GOAL.**

**WE EXPECT DEMAND FOR SOF CAPABILITIES TO CONTINUE TO INCREASE AT A STEADY RATE.**

**WE UNDERSTAND THAT GROWTH OF THE FORCE IS NOT POSSIBLE IN THE CURRENT FISCAL CLIMATE.**

**WE KNOW THAT AT SOME POINT AS THE PARAMETERS CHANGE WE COULD REACH AN UNACCEPTABLE LEVEL OF RISK UNDER THIS CONCEPT.**



## WHY COMMANDO VISION?

- ◆ Demand for SOF services skyrocketing
  - Tasking increased 100% since 1991
    - ◆ Africa
    - ◆ Bosnia
    - ◆ Turkey
    - ◆ Haiti
- ◆ TDY routinely exceeds 180 days per year
- ◆ Forces outside USSOCOM control resulted in major relocations
  - Europe forces: Germany → Alconbury → Mildenhall
  - Pacific forces: Philippines → Okinawa
- ◆ Future force structure provides new opportunities

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**RECENT TRENDS HAVE DEMANDED A NEW WAY OF DOING BUSINESS.**

**JCS TASKING OF USSOCOM'S FORCES HAS INCREASED ALMOST 100% SINCE 1991. WE HAVE CONTRIBUTED FORCES FOR DEPLOYMENT IN VIRTUALLY EVERY RECENT CONTINGENCY.**

**TDY RATES FOR OUR PEOPLE ROUTINELY EXCEED 180 DAYS PER YEAR, AND IN THE GUNSHIP, ROUTINELY STRETCH TO AS MUCH AS 240 DAYS.**

**BOTH OUR OVERSEAS GROUPS HAVE BEEN RECENTLY RELOCATED.**

**ON A MORE POSITIVE NOTE, THE FIELDING OF NEW WEAPON SYSTEMS (CV-22) WILL PROVIDE US WITH FLEXIBILITIES UPON WHICH WE MUST CAPITALIZE.**

## WHAT VISION DOES

### ◆ VISION will:

- Improve Joint SOF readiness
- Bring optempo into accepted range
- Limit AFSOC exposure to extended TDY
- Build a proactive stance to limit adverse effects of changing political and military situations
- Maintain CINCs' warfighting abilities by providing them with more efficient, flexible, and capable deployed forces

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**COMMANDO VISION IMPROVES TRAINING WITH OUR NAVY SOF TEAMMATES AT SAN DIEGO AND OUR ARMY SOF TEAMMATES AT FT LEWIS. CURRENTLY, THOSE MEMBERS OF THE SOCOM TEAM SEE HURLBURT-BASED SOF AIR ON AN EXTREMELY LIMITED BASIS. A WEST COAST WING, OPTIMALLY LOCATED BETWEEN THE TWO, WILL ALLOW BETTER JOINT TRAINING.**

**COMMANDO VISION MITIGATES THE IMPACT OF INCREASING OPTEMPO BY MORE EQUITABLY DISTRIBUTING FORCE STRUCTURE AMONG THE THEATER CINCs.**

**BY CONSOLIDATING OVERSEAS UNITS, IT CREATES EFFECTIVELY LARGER UNITS FROM WHICH TO DRAW TDY DEPLOYMENTS.**

**BY REDUCING THE NUMBER OF PCS PERSONNEL OVERSEAS, IT LIMITS OUR PEOPLE'S EXPOSURE TO UNPLANNED UNIT MOVES. IT ALSO MAKES IT EASIER TO SHIFT EMPHASIS AS THE POLITICAL CLIMATE AND NATIONAL SECURITY POLICY CHANGE.**

**AND IT EMPLOYS A SEAMLESS TRANSITION TO AN INHERENTLY MORE FOCUSED, MORE CAPABLE FIGHTING FORCE FOR THE PACIFIC AND EUROPEAN THEATER CINCs.**

**VISION PROVIDES COMBAT READY AIRCRAFT AND PROFICIENT AIRCREWS TO THE THEATER, REFRESHED REGULARLY.**

## WHAT VISION IS

### ◆ Phase I

- Optimize AC / RC mix
  - ◆ Peacetime engagement optempo
  - ◆ Preserve wartime responsiveness
- Implementation began Oct 94

### ◆ Phase II

- Implements rotational theater support
  - ◆ Aircraft and SOGs remain in theater
  - ◆ Crew training in CONUS; cooperative engagement in theater
- Implementation hinges on acceptable west coast base
- Notional FY 98 initiation

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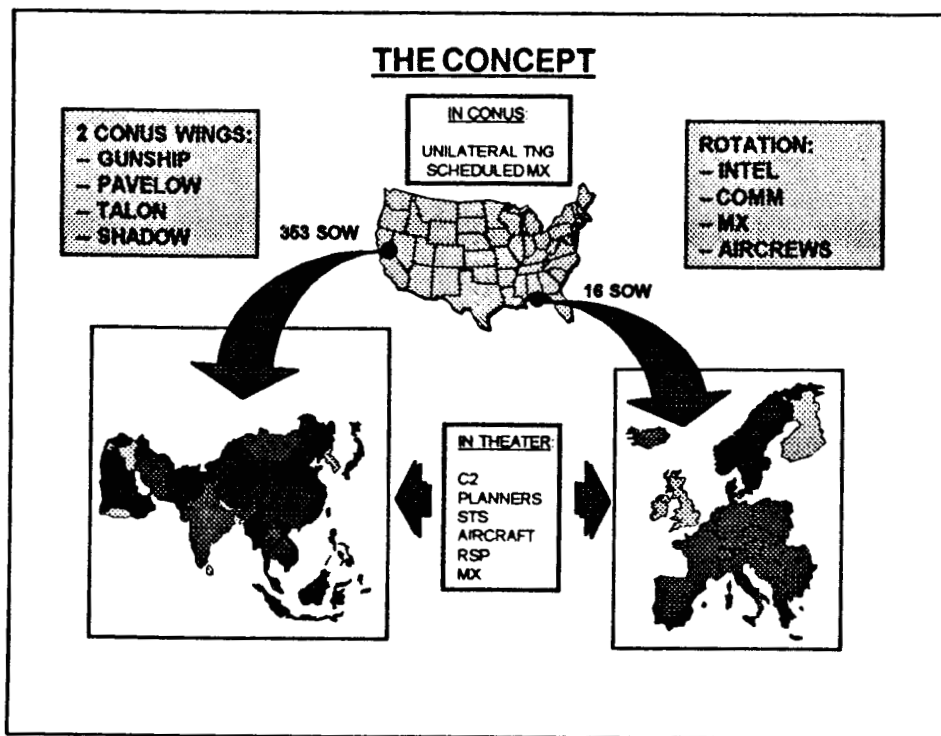
**COMMANDO VISION IS A TWO PHASED PLAN.**

**PHASE I IS UNDER WAY, WITH THE RETIRING OF THE AC-130A AND THE REMISSIONING OF OUR RESERVE 919 SOW WITH THE HC-130. LATER, THIS UNIT WILL BE RE-EQUIPPED WITH THE MC-130E COMBAT TALON I.**

**PHASE II INVOLVES SUPPLYING THEATERS WITH ROTATIONAL AIRCREWS WHO ARRIVE FULLY TRAINED, CURRENT, AND PROFICIENT, FROM TWO CONUS WINGS. THEY WILL FLY AIRCRAFT THAT ARE CONTINUALLY PRESENT IN THE THEATER, AIRCRAFT THAT ARE ONLY RETURNED TO THE CONUS WINGS WHEN SCHEDULED MAINTENANCE REQUIRES.**

**ITS IMPLEMENTATION IS DEPENDENT ON USSOCOM RECEIVING AN ACCEPTABLE WEST COAST LOCATION FROM WHICH TO DEPLOY ITS PACIFIC-ORIENTED FORCES.**

**PHASE II IS NOTIONALLY SCHEDULED FOR IMPLEMENTATION IN FY98.**



**THIS SLIDE REPRESENTS A GRAPHIC DEPICTION OF THE COMMANDO VISION CONCEPT.**

**AS YOU CAN TELL FROM THE MAP, OUR IDEAL LOCATION FOR A WEST COAST WING WOULD BE BEALE AFB, CALIFORNIA.**

## WEST COAST WING: WHY BEALE AFB?

- ◆ Proximity to Army and Navy SOF teammates
- ◆ No airspace encroachment
- ◆ No local community encroachment
- ◆ 2 Wing infrastructure; 1 Wing present
- ◆ Excellent year round weather
- ◆ 23000 Acres available for training
- ◆ Proximity to live fire and ECM ranges
- ◆ Excess ramp space
- ◆ Excess maintenance shop space
- ◆ U-2 mission synergistic with intelligence intensive SOF mission

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**BEALE IS OPTIMALLY LOCATED TO PROVIDE SUPPORT TO 1/3 OF OUR ARMY AND 1/2 OF OUR NAVY SOF TEAMMATES. IT IS WITHIN A FEW HOURS' FLYING TIME OF BOTH NSWG-1 AT SAN DIEGO AND THE 1 SFG AND RANGERS AT FT LEWIS, WA.**

**THE LOCAL COMMUNITY HAS ZONED THE AREA WITHIN 5 MILES OF BEALE AS A NO-ENCROACHMENT AREA.**

## SUMMARY

- ◆ Having to Deploy to Western Range means:
  - New Systems Either Not Tested or Delayed
    - ◆ Increased Acquisition Costs
  - Decreased Training Opportunities
    - ◆ Can't go west everytime we need to train
    - ◆ Increased OPTEMPO Impact
  - Fewer Assets Available for War
  - Increased OT&E / TD&E Costs
    - ◆ \$2.7 -\$3.0+ Million Per Year Added O&M
- ◆ Bottom Line: DECREASED COMBAT CAPABILITY AT HIGHER COSTS!

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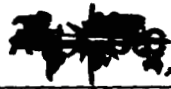
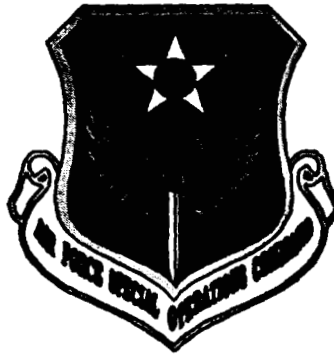
**WHEN ALL IS SAID AND DONE, AFSOC SEES NO VALUE ADDED TO THE PROPOSED REALIGNMENT OF EGLIN'S EMTE.**

**EVEN IF OUR TEST AND TACTICS FUNCTIONS WERE TO MOVE WEST AS PART OF COMMANDO VISION, THE EAST COAST WING (16 SOW) STILL LOOSES THE ABILITY TO TRAIN AGAINST REALISTIC THREATS WITHOUT HAVING TO DEPLOY.**

**IN THE FUTURE, IT WILL BE MUCH MORE DIFFICULT AND COSTLY TO REMAIN A STEP AHEAD IN A CHANGING WORLD.**

**THAT COMPLETES MY BRIEFING. I'LL BE HAPPY TO ENTERTAIN YOUR QUESTIONS.**

*... a step ahead in a changing world.*



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**IF THERE ARE NO FURTHER QUESTIONS, I'D  
LIKE TO THANK YOU FOR YOUR ATTENTION  
AND WISH YOU GOOD LUCK IN YOUR EFFORTS  
TO BE FAIR, EQUITABLE, AND WISE IN THIS  
DIFFICULT TASK.**

# Document Separator



# HQ AFOTEC BEDDOWN

EGLIN AFB, FLORIDA

# REQUIREMENT

- 95 BRAC MOVE OF HQ AFOTEC
- 648 PERSONNEL
- SPECIAL SECURITY VAULTS
- COMMAND PRESENTATION CENTER
- VTC
- TRAINING CLASS ROOMS
- FAMILY HOUSING UNITS

# SCOPE

• ADMIN @ 162 SF/PN	=	98,500 SF
• SECURITY VAULTS	=	10,000 SF
• PRESENTATION CEN	=	4,000 SF
• VTC/GRAPHICS	=	1,500 SF
• COMPUTER SYSTEMS	=	8,200 SF
• TRAINING ROOMS	=	2,500 SF
• OTHER	=	<u>7,300 SF</u>
• TOTAL SCOPE	=	132,000 SF

# SCOPE - HOUSING

- EGLIN-HURLBURT DEFICIT WILL BE 565 UNITS
- AFOTEC HAS 342 OFFICER AND 96 ENLISTED PERSONNEL
- WAITING LIST EXCEEDS 200
- PROGRAM FOR 65 UNITS

# COSTS

- HQ AFOTEC FACILITY \$20,177,000
- FAMILY HOUSING 65 UNITS \$ 6,102,000
- TOTAL COSTS \$26,279,000

# Document Separator

**Congress of the United States**  
**House of Representatives**  
Washington, DC 20515-0901

March 14, 1995

Colonel Vince Evans  
Director, Air Force Legislative Liaison  
B-322 Rayburn HOB  
Washington D.C. 20515

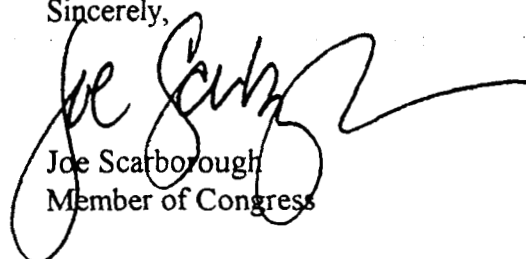
Dear Colonel Evans:

I am currently reviewing data on the Secretary of Defense's recommendation to the BRAC Commission concerning the consolidation of facilities to and from Eglin Air Force Base. To help assist me in my detailed analysis, I am submitting the following questions for an immediate reply:

1. What is the specific nomenclature for the 8 threat simulators and 2 EC pods scheduled to move west, and what is the specific nomenclature for the emitters that are proposed to remain in operational status at Eglin?
2. Is all of the Air Force Test and Evaluation Center, currently located at Kirtland AFB, to move to Eglin? Will this include EC related functions?
3. Please characterize number and magnitude of contracts administered by the AFOTEC contracting office at Kirtland AFB? What is the magnitude of direct contractor support of AFOTECS's Kirtland AFB offices?

If there are any questions concerning these matters, please contact Bart Roper of my staff at x4136. Thank you for your prompt attention.

Sincerely,



Joe Scarborough  
Member of Congress





Nomenclature of EMTE systems to remain operational at Eglin AFB

Track While Scan (TWS)-1

TWS-2

TWS-3

MLQ-T4

High Power Illuminating Signal Source (HPISS)

SADS IV-SS

SADS X

SADS XII-SS

SADS VIIIIR (CHICKEN LITTLE support)

WEST IB

WEST IC

WEST XA

QRC-554

The Secretary of Defense recommended to the Defense Base Closure and Realignment Commission that the AFOTEC at Kirtland AFB and all associated responsibilities be completely relocated to Eglin AFB. It is important to note that the AFOTEC itself does not have any EC-related functions.

Attached is a summary of the scope of contracts administered by the AFOTEC contracting office at Kirtland AFB. AFOTEC is supported by direct contractors on the order of 125 manyear equivalents. Also attached are copies of the relevant slides and talking points associated with the March 9, 1995, Base Closure Executive Group (BCEG) meeting minutes. Mr. Bart Roper of your staff requested we provide these with our response.

We appreciate your interest in this matter and trust the information provided is useful.

Sincerely

STEPHEN D. BULL, III  
Colonel, USAF  
Chief, Programs and Legislation  
Division  
Office of Legislative Liaison

Attachments

# Document Separator

**EGLIN  
A F B  
FLORIDA  
PROVIDING  
COMBAT  
CAPABILITIES**



**GULF RANGE**

**LAND 724 SQ MILES  
WATER 86,500 SQ MILES**

**FROM CONCEPT TO COMBAT**

Distribution limited to U.S. Government agencies and their contractors. Other requests for this

## Eglin AFB -

a full capability munitions team.

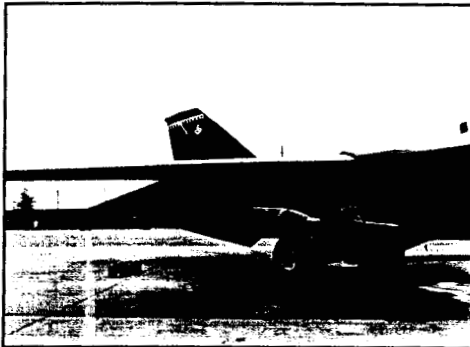
### TECHNOLOGY DEVELOPMENT

Wright Laboratory's Armament Division paves the way for the next generation munitions through research and technology demonstrations.

- Guidance and Control
- Warheads
- Fuzing
- Flight Mechanics
- Test Technologies
- Guns and Ammo



*Advanced Dispenser*



*GBU-28*

### SYSTEM ACQUISITION

Aeronautical Systems Division program offices harness technologies to design, develop, and produce systems that meet operational requirements.

- Air-to-Air Missiles
- Air-to-Surface Weapons
- Range Systems for Training and Testing
- Air Base Operability



*Gator Mines*

## FROM CONCEPT TO COMBAT - MUNITIONS



### DEVELOPMENT TEST AND EVALUATION

Air Force Development Test Center (AFDTC) possesses world-class test and evaluation facilities to support DOD munitions and electronic combat test and evaluation. Capabilities include fully instrumented land and water ranges, integration laboratories, hardware-in-the-loop simulations, and installed test facilities.



*Sensor Fuzed Weapon*

### OPERATIONAL TEST AND TACTICS DEVELOPMENT

The US Air Force Air Warfare Center, located at Eglin AFB, FL, serves as the technical focal point for the Air Combat Forces in electronic combat, armament and avionics, reconnaissance, aircrew training devices, and combat support. The Center is responsible for operational testing and evaluation of equipment and systems in use by the Air Combat Forces.

### COMBAT READY OPERATIONAL UNIT

Eglin AFB FL is home to the 33rd Fighter Wing. The "Nomads" were the first operational user of the Advanced Medium Range Air-to-Air Missile (AMRAAM).

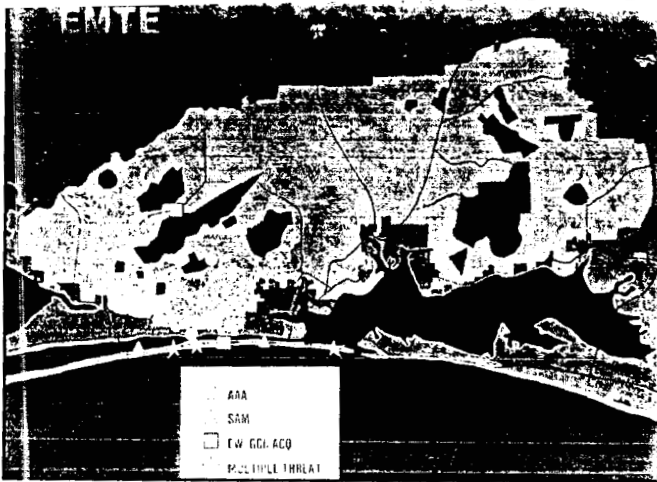


*Operational AMRAAM*

**...PERFORMANCE  
PROVEN DURING  
DESERT STORM...**

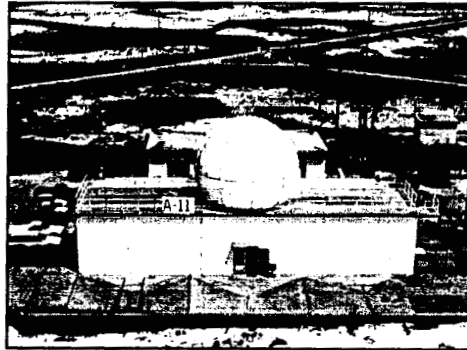


*AMRAAM Launch*

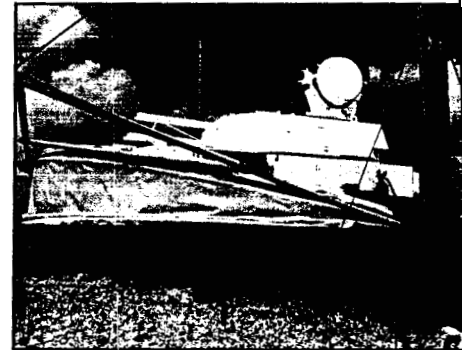


Threat Radar

The **EMTE** (Electromagnetic Test Environment) is an extensive open-air test range for the testing of electronic combat systems against a variety of Red, Blue, and Grey threat systems. A key DOD open-air test range, EMTE is co-located with the PRIMES facility and with potential for linkage to REDCAP and AFEWES to provide thorough, realistic development and operational testing.



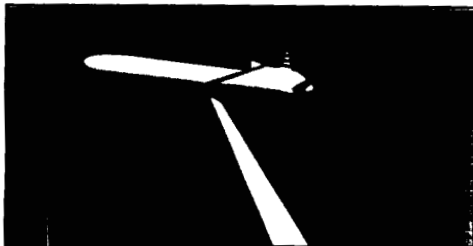
Simulated Air Defense Radar



Simulated AAA

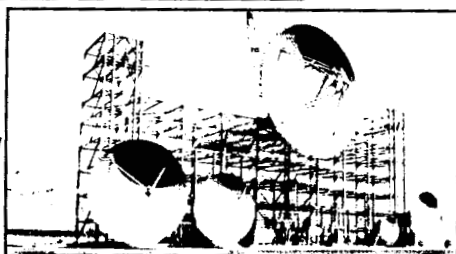
## ELECTRONIC COMBAT

The **RATSCAT** (Radar Target Back-Scatter) and **RAMS** (RATSCAT Advanced Measurement System) Facility is a special AFDTIC radar cross-section measurement capability operated by the 6585th Test Group at Holloman AFB, NM, which is a subordinate unit within AFDTIC.



RATSCAT

Advanced  
RCS  
Measurement

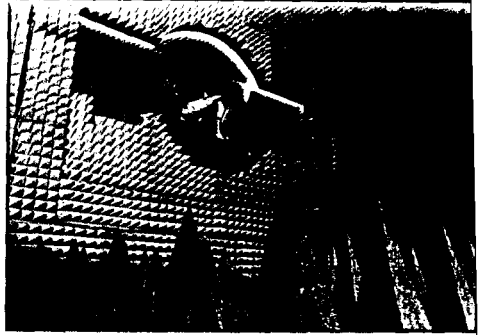


Air Force Electronic  
Warfare Evaluation  
Simulator

**AFEWES** (Air Force Electronic Warfare Evaluation Simulator) is a hardware-in-the-loop simulation designed to evaluate electronic combat systems performance against terminal threat systems.

**REDCAP** (Real-Time Digitally Controlled Analyzer Processor) is a hybrid simulation designed to model a dense hostile integrated air defense system. Electronic combat systems can be evaluated against manned hostile C3 and radar systems.

# SUPPORTING CAPABILITIES



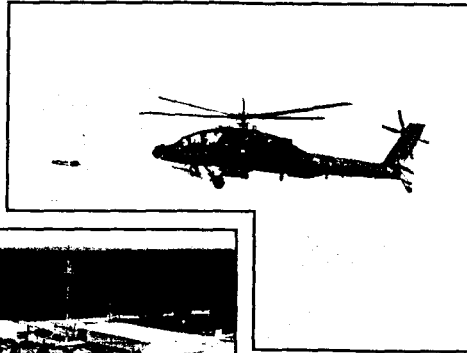
*Guided Weapons Evaluation Facility*

**GWEF** (Guided Weapons Evaluation Facility) Provides laboratory simulation test support for developing precision-guided weapon technology. It's the only facility of its kind in the free world able to test the complete spectrum of weapon seekers under one roof including millimeter wave, laser, infrared, radio frequency and electro-optical. The facility also has the unique ability to use digital, hardware in-the-loop, midcourse and counter-countermeasure simulations to evaluate weapons.

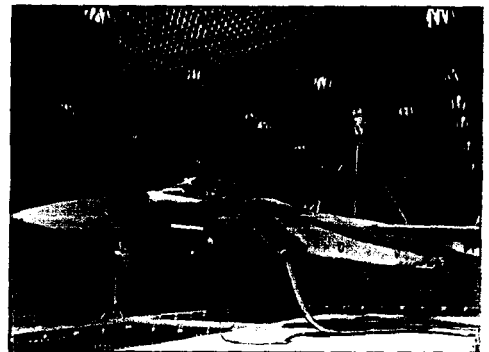
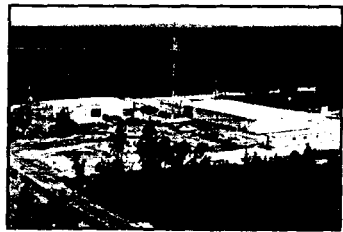


*Centra' Control Facility*

**CCF** (Central Control Facility) contains a full range of state-of-the-art computing capabilities including a CRAY Y-MP supercomputer integrated into a high-speed network of DEC VAX and Silicon Graphics front-ends and work stations. The CCF supports in-depth analyses and provides the capability for real-time control during test missions.



*Army Hellfire Missile Test Facility*

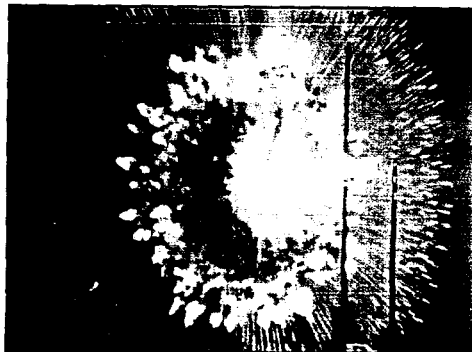


*Preflight Integration of Munitions and Electronics Systems*

**PRIMES** (Preflight Integration of Munitions and Electronics Systems) facility consists of a fighter-sized anechoic chamber test facility and six shielded laboratories providing secure, realistic testing in a controlled RF environment to support one-on-one and many-on-one tests in static or dynamic flight simulation conditions. PRIMES testing significantly lowers the cost of open-air testing.

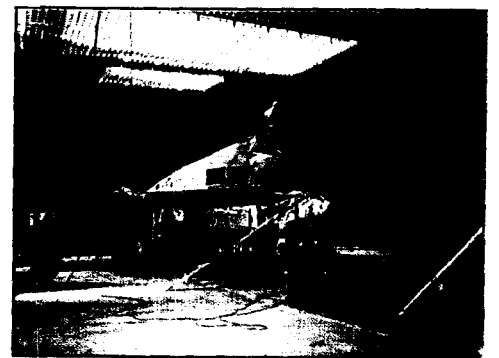


*Target Signature Measurement*



*Warhead Fragmentation Arena Test*

**ARENA TESTING** of fuzing, warhead lethality, guns/ammo, and other special purpose munitions is performed in indoor and outdoor test areas on the Eglin AFB land range.



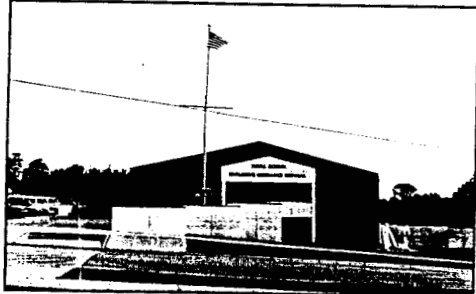
*F-117 In Climatic Laboratory*

The Eglin AFB complex contains a concentration of individual test areas encompassing a variety of environments with flexibility to conduct several tests simultaneously or use multiple areas for larger tests.

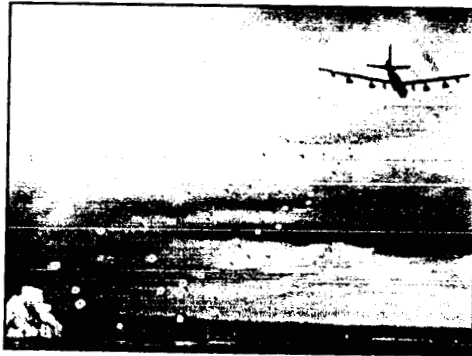


*Aircraft Gun Test Site*

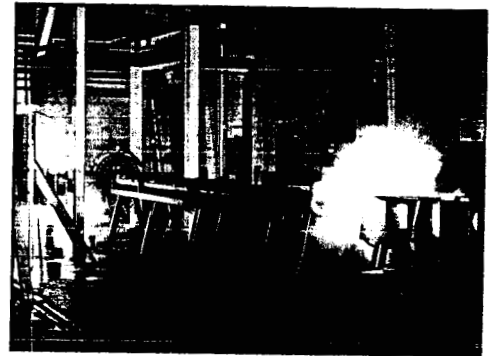
# POISED FOR THE FUTURE



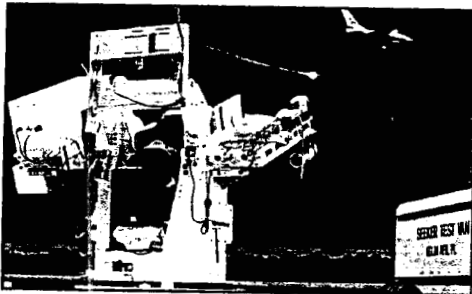
*Explosive Ordnance Disposal School  
(Navy)*



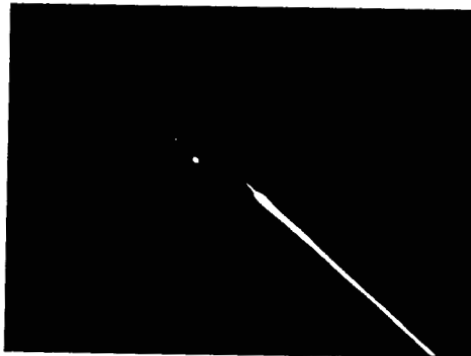
*B-52 Low Altitude Release*



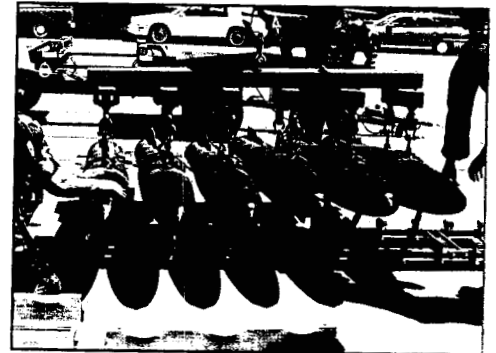
*Electric Gun*



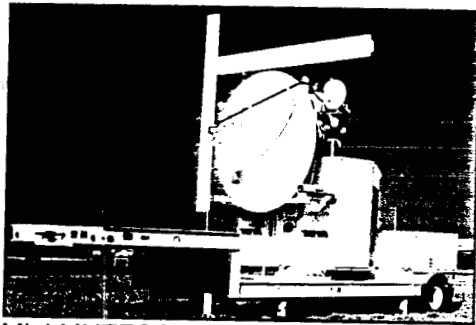
*Target Signature Test*



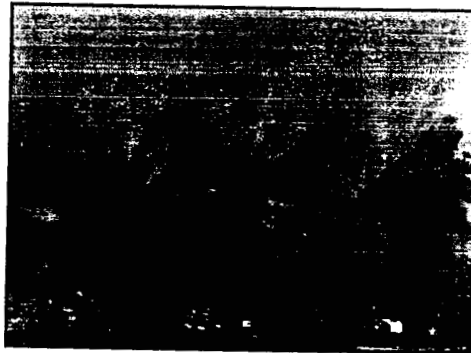
*Special Operations Training*



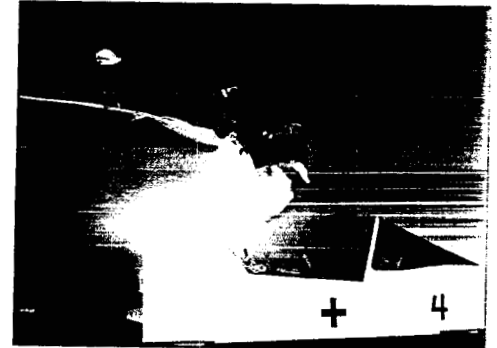
*Munitions Maintenance and Handling  
Six (6) Bomb Bar Beam*



*Mini MUTES Threat Radar Simulator*



*Self Protection Smoke Munition (Army)*



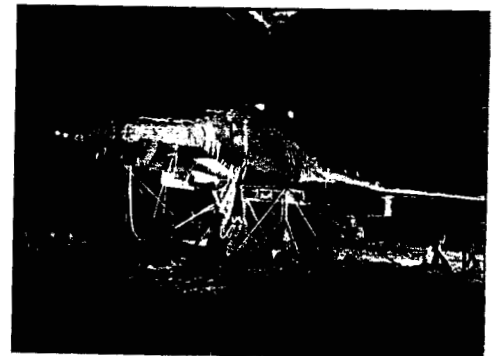
*ATF Ejection Seat*



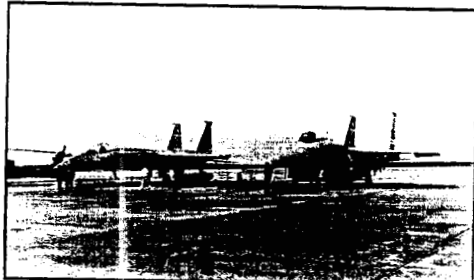
*Remotely Controlled Targets*



*Munitions Kill on Tank*



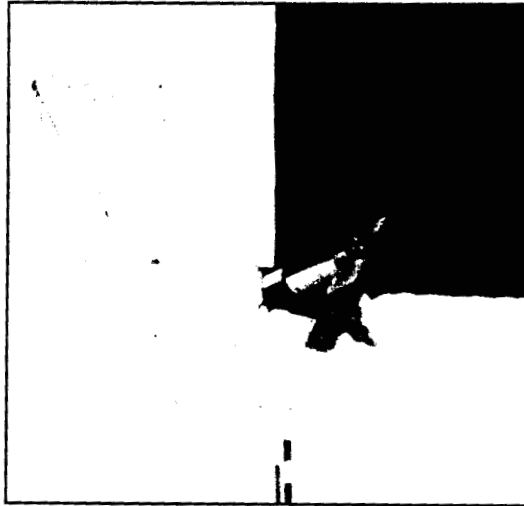
*B-1 Cold Soak In Climatic Laboratory*



*F-15's (Decoy on left)*

# EGLIN AFB FLORIDA

## ON TARGET FOR DOD!



AGM-130 DIRECT HIT

**For further information regarding the facilities,  
capabilities, services, and availability of the land  
and water ranges, contact 3246 Test Wing/XPX,  
DSN 872-5307, Commercial 904-882-5307.  
FAX: 904-882-9512**



# Document Separator

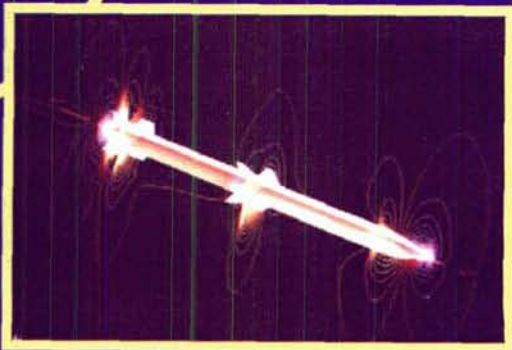
OPEN AIR RANGE TESTING



# "EGLIN AT A GLANCE"

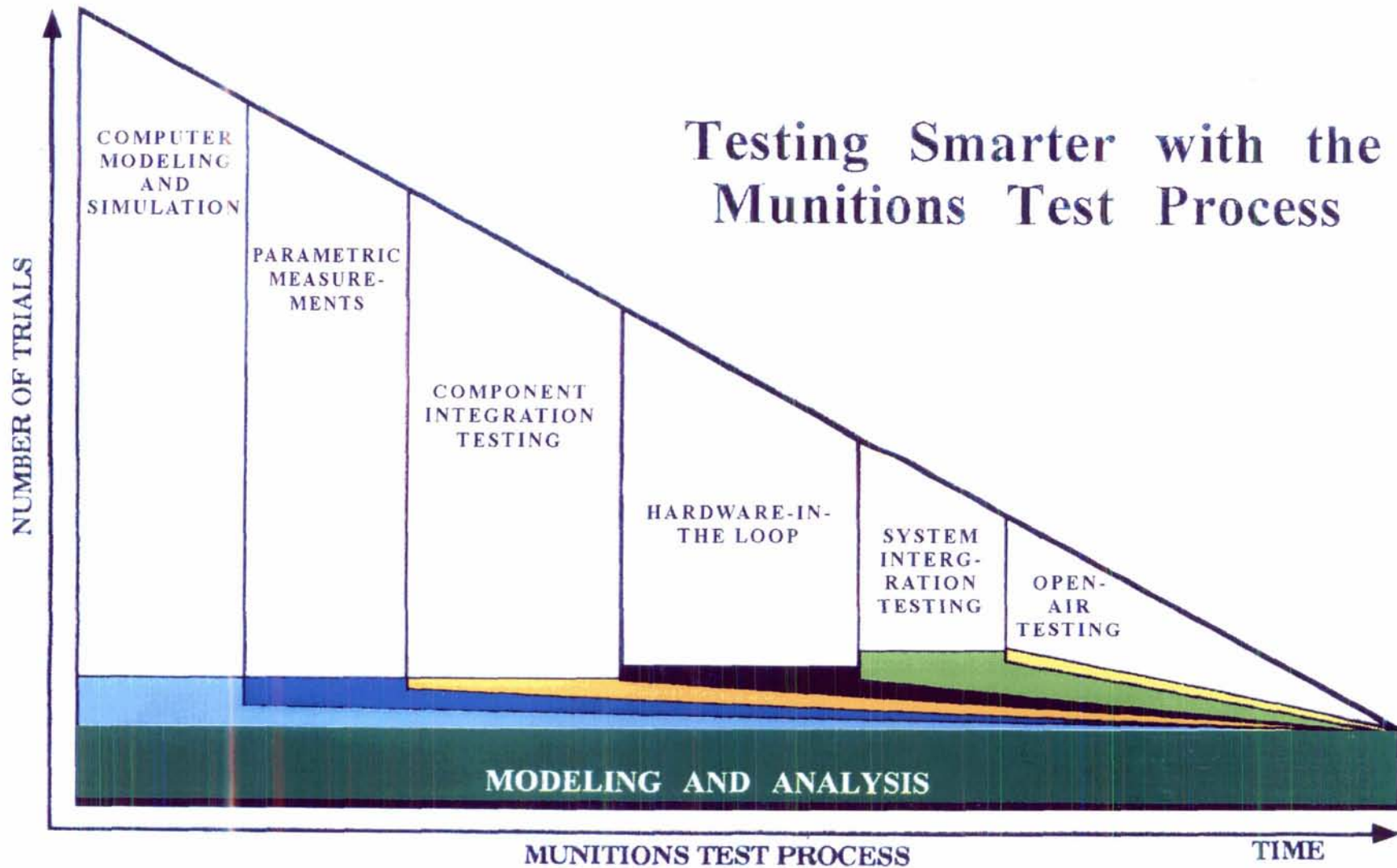
CAPABILITY = PROCESS + TOOLS

MODELING & SIMULATION





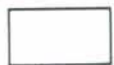
# Testing Smarter with the Munitions Test Process





# TEST PROCESS

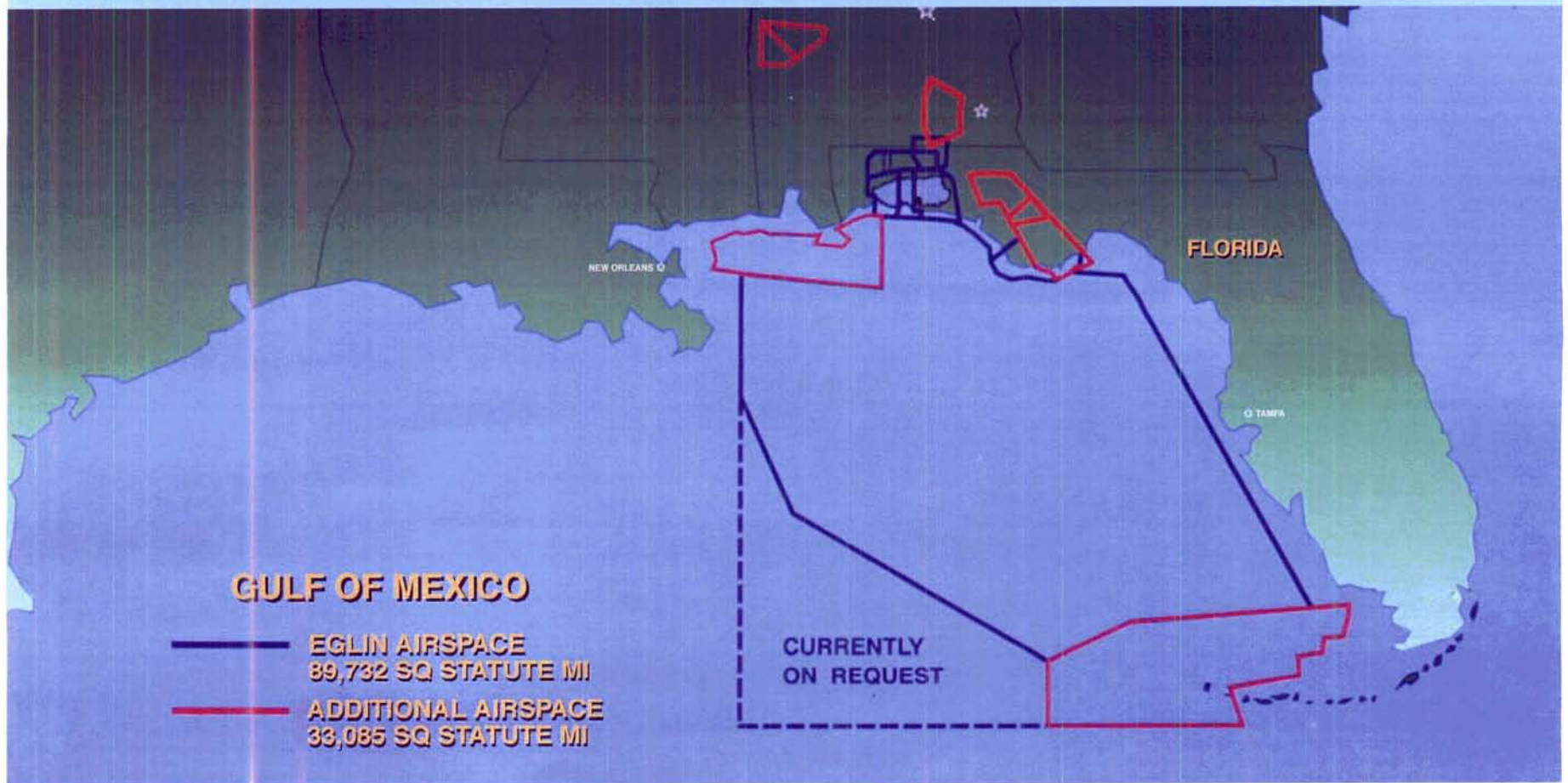
DIGITAL MODELS AND COMPUTER SIMULATIONS	MEASUREMENT TESTING	SYSTEM INTEGRATION TESTING	HARDWARE-IN-THE-LOOP-TESTING	INSTALLED SYSTEMS TESTING	OPEN AIR RANGE TESTING
<b>FREEMAN COMPUTER SCIENCES CENTER</b>	SIGNATURE/SEEKER MEASUREMENT	CONTRACTOR FACILITIES	GWEF	PRIMES	SURFACE-TO-SURFACE RANGES
	MASS AND PHYSICAL PROPERTIES	HYPERVELOCITY RESEARCH FACILITY	FUZE TEST FACILITY	GWEF-PRIMES LINK	AIR-TO-SURFACE RANGES
	RAMS/RATSCAT		KINETIC ENERGY MUNITIONS TEST FACILITY	CLIMATIC TEST FACILITY	GULF TEST RANGE
	CIGTF		GUN AND AMMUNITION TEST FACILITIES	BISS	EMTE
	ARENAS				



= Facilities to be visited/viewed



# AIRSPACE AVAILABLE WITHIN 48 HOURS 122,817 SQ STATUTE MILES TOTAL



## TEST & EVALUATION BUDGET

	<u>FY94</u>	<u>FY95</u>
INSTITUTIONAL FUNDING*	\$91	\$86
OPERATION & MAINTENANCE	<u>11</u>	<u>10</u>
AVIATION DEPOT LEVEL REPARABLES (AVDLRs)	\$102	\$96
TOTAL INSTITUTIONAL FUNDING	\$52	\$50
TOTAL INVESTMENT FUNDING	\$222	\$229
TOTAL CUSTOMER FUNDING*	\$45	\$20
TOTAL MILCON FUNDING	\$98	\$99
TOTAL MILITARY PAY*	<u>\$124</u>	<u>\$142</u>
OTHER FUNDING**	\$643	\$636
TOTAL AFDTC FUNDING		

## STATISTICS

<b>PERSONNEL</b>		
	AFDTC (PE65807 and 65708, only)*	
	MILITARY	1,144
	CIVILIAN	1,609
	CONTRACTOR	1,630
	TOTAL EGLIN*	
	MILITARY	16,137
	CIVILIAN	5,300
	CONTRACTOR	2,382
<b>AREA</b>		
	AIRSPACE scheduled by Eglin	89,732 sq statute miles*
	OVERLAND	3,044
	OVERSEA	86,688*
	ADDITIONAL SCHEDULABLE AIRSPACE	33,085 sq statute miles
	OVERLAND	8,025
	OVERSEA	25,060
	TOTAL AVAILABLE AIRSPACE	122,817 sq statute miles***

\* Includes 46TG located at Holloman AFB, NM.

\*\* Includes BOS, RPM, Minor Constuction, Environment Compliance, Wildlife, MFH, Training, Family Support, Child Care, Etc.

\*\*\* A request for an additional 33,350 sq. statute miles is being processed.



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## BASE

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3. GUNNERY BALLISTIC RANGE
4. COMPUTER SCIENCE CENTER
5. PREFLIGHT INTEGRATION OF MUNITIONS AND ELECTRONIC SYSTEMS (PRIMES)
6. MAIN BASE FLIGHTLINE

## RANGES

7. NAVY EXPLOSIVE ORDNANCE DISPOSAL (EOD) SCHOOL (D-51)
8. SEEKER TEST AND EVALUATION FACILITY (C-52)
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11. HELLFIRE CONTROL FACILITY (C-7) AND TEST RANGE (C-72)
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16. AIR-TO-GROUND BOMB TEST RANGE (B-75)
17. AIR-TO-GROUND BOMB AND GUNNERY TEST RANGE (B-70)
18. THREAT SITE (A-30)
19. HYPERVELOCITY RESEARCH FACILITY (A-15)
20. HURLBURT FIELD
21. BASE INSTALLATION SYSTEMS (BISS) (C-3)
22. GRADUATE ENGINEERING CENTER (GERC)



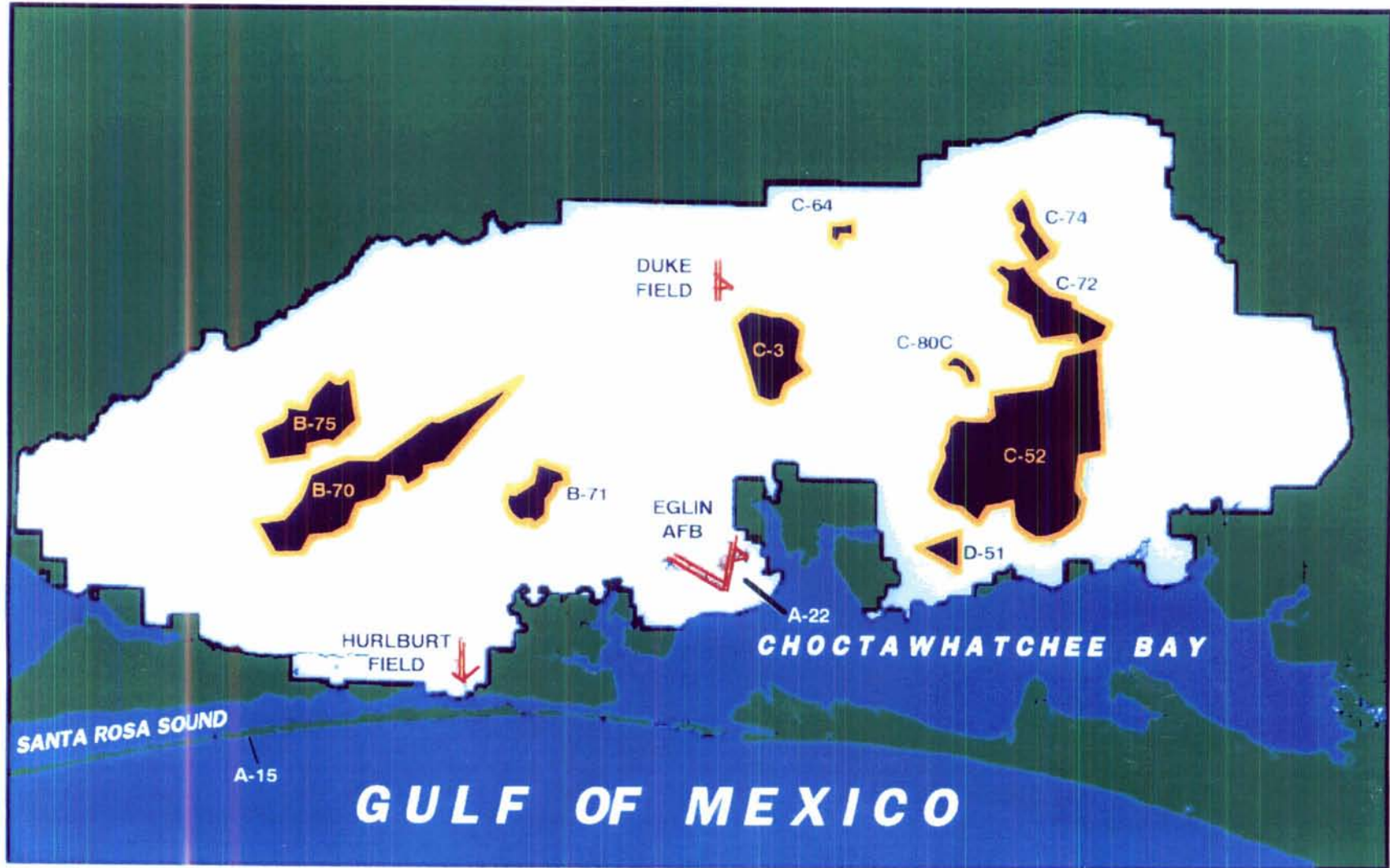


- 24. BASE MAPS
- 23. EGLIN ENVIRONMENTAL STEWARDSHIP

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## SUPPLEMENTAL INFORMATION

# EGLIN AIR FORCE BASE AUXILIARY FIELDS AND MAJOR TEST AREAS



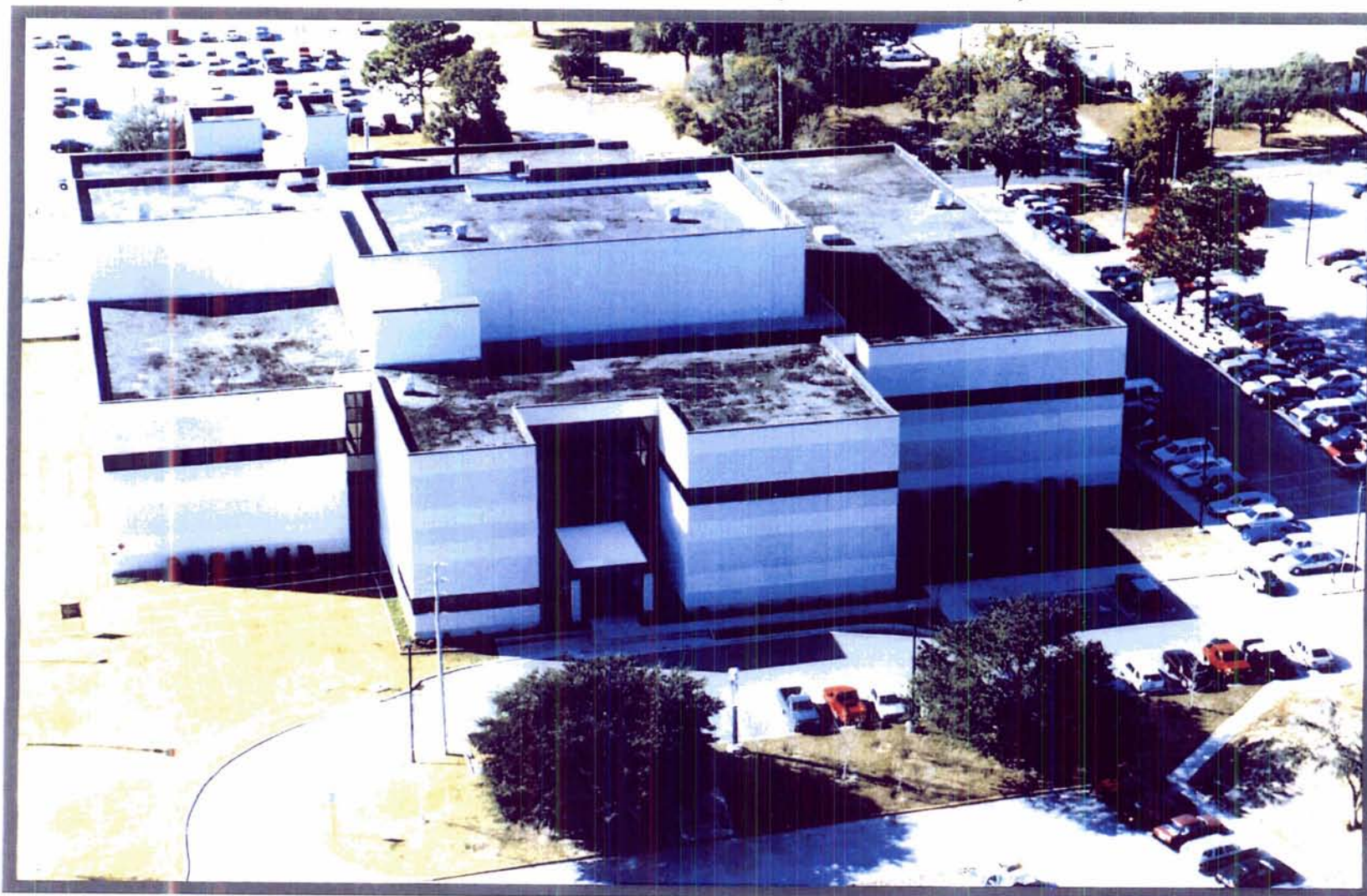
# GUIDED WEAPONS EVALUATION FACILITY (GWEF)

- **CAPABILITIES**
  - DIGITAL & HARDWARE-IN-THE-LOOP SIMULATION
  - CHARACTERIZATION & COUNTER-COUNTERMEASURE TESTING IN A SECURE FACILITY
  - MULTI-SPECTRAL
    - RADIO FREQUENCY (2-18 GHz)
    - INFRARED (2-5 $\mu$ ; 8-12 $\mu$ )
    - MILLIMETER WAVE (30-140 GHz)
- **TYPICAL ACTIVITIES/CUSTOMERS**
  - AMRAAM (ASC)
  - AGM-65 (ASC)
  - AGM-130 (ASC)

**HARDWARE-IN-THE-LOOP TESTING**



# GUIDED WEAPONS EVALUATION FACILITY (GWEF)



# McKINLEY CLIMATIC LABORATORY

- **CAPABILITIES**

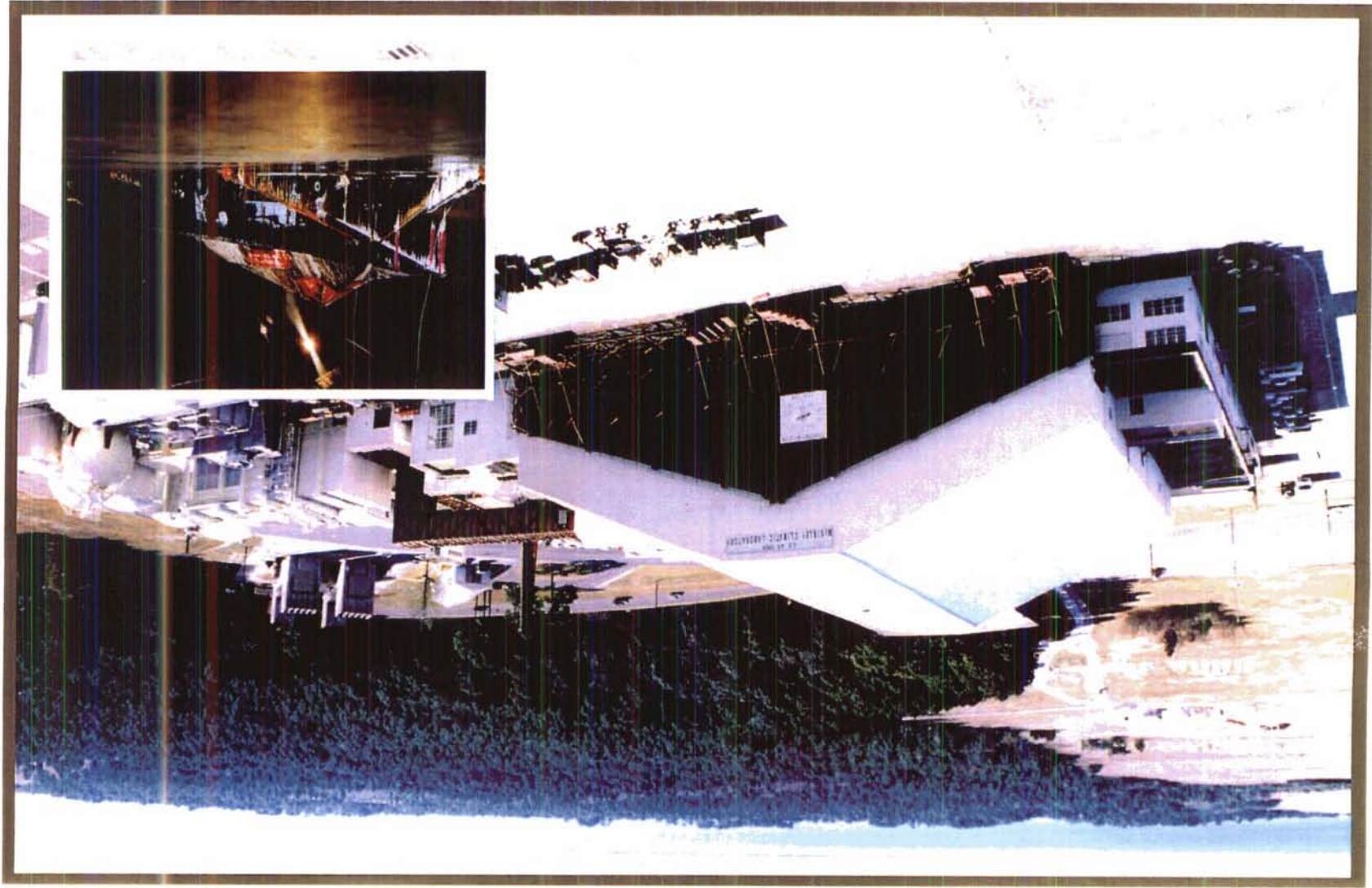
- LARGEST CLIMATIC TEST FACILITY IN WORLD (MAIN CHAMBER 55,000 ft<sup>2</sup>)
- ENVIRONMENTAL CONDITIONS FROM -65°F to +165°F
  - SIX TEST CHAMBERS PROVIDE WORLD-WIDE TEST CONDITIONS
  - ABILITY TO TEST ANY AIRCRAFT IN EXISTENCE
- AIRCRAFT ENGINES CAN BE OPERATED WHILE UNDERGOING EXPOSURE
- WEAPONS CAN BE OPERATED INCLUDING GUN-FIRE OR RELEASE OF MUNITIONS

- **TYPICAL ACTIVITIES/CUSTOMERS**

- PATRIOT MISSILE (ARMY)
- F-18 (NAVY)
- F-117A, CV-22, B-2, C-17 (AIR FORCE)
- SPACE SHUTTLE TILES (NASA)
- HH-65 DOLPHIN (DOT)

**INSTALLED SYSTEMS TESTING**





# McKINLEY CLIMATIC LABORATORY

# **GUNNERY BALLISTICS TEST RANGES (A-22, C-64, C-74L)**

- **CAPABILITIES**

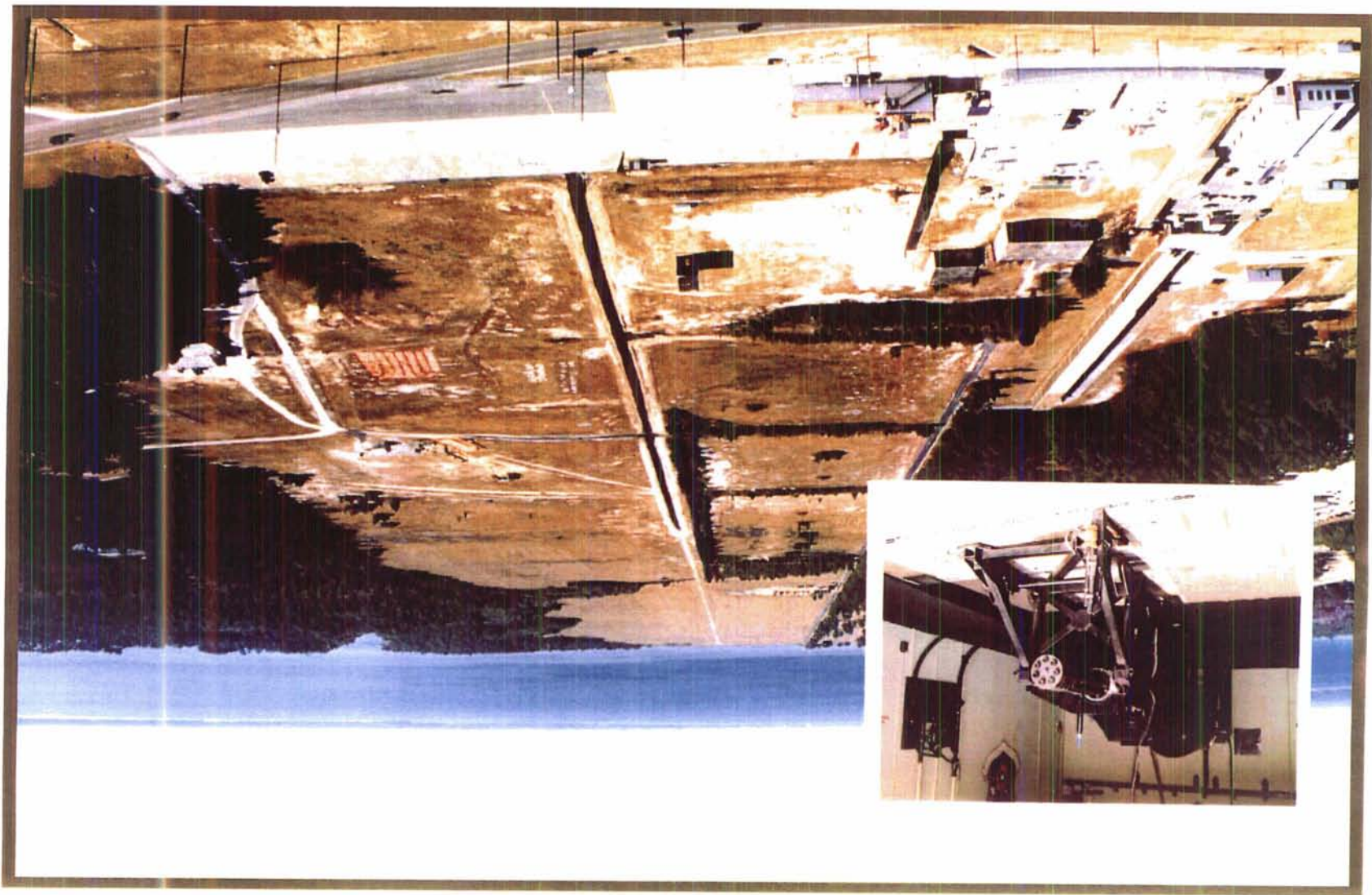
- EVALUATE PERFORMANCE OF THE FULL SPECTRUM OF AMMUNITION
  - INTERIOR AND EXTERIOR BALLISTICS
  - TERMINAL EFFECTS
  - BLAST CHARACTERIZATION
- ANALYZE PERFORMANCE OF GUN SYSTEMS
- FULLY INSTRUMENTED GAU-8/A 30MM AND M61A1 20MM GUNS AND SINGLE-SHOT BARRELS FOR 40,30,25,20 MM AND 0.50 CAL AMMUNITION
- FULLY INSTRUMENTED AIRCRAFT GUN RAMP TO SUPPORT ON-LINE TESTING OF AIRCRAFT GUN SYSTEMS

- **TYPICAL ACTIVITIES/CUSTOMERS**

- 30MM (GAU-8/A) MALFUNCTION INVESTIGATION (OO-ALC)
- 20MM MALFUNCTION INVESTIGATION (ARDEC, ARMY)
- 25, 40MM RDT&E (ASC/YH)

**HARDWARE-IN-THE-LOOP TESTING**





**GUNNERY BALLISTIC RANGE**  
**A-22**



# COMPUTER SCIENCES CENTER

## • CAPABILITIES

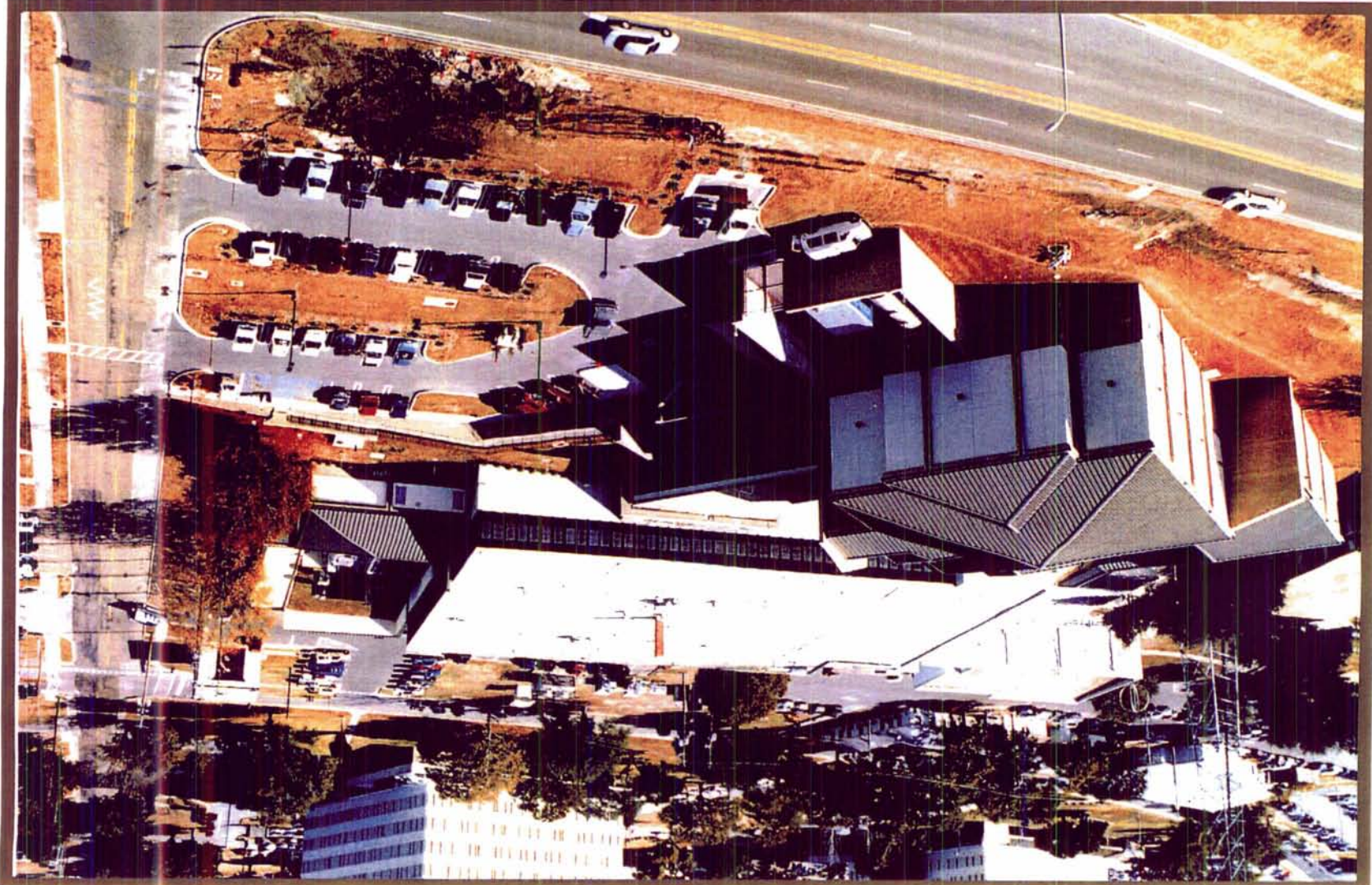
- REAL-TIME ANALYSIS AND TEST CONTROL SUPPORTING 2,000 MISSIONS/YEAR
  - 22% TELEMETRY DATA (FOR A TOTAL RATE OF 10 MBITS/SEC)
  - CONTROL AND SURVEILLANCE RADAR
- SECURE FACILITY CAN SUPPORT SPECIAL ACCESS REQUIRED (SAR) NEEDS
- CRAY SUPERCOMPUTER (RATED AT 800 MEGAFLOPS, 2 PROCESSORS)
  - COMPUTATION AND VISUALIZATION SYSTEM FOR MODELING AND SIMULATION EFFORTS
- DIGITAL COMMUNICATIONS SYSTEM
  - RANGE CONTROL, PILOT INTERFACE, AND ENCRYPTED TRANSMISSIONS

## • TYPICAL ACTIVITIES/CUSTOMERS

- FOREIGN MILITARY TEST ACTIVITIES (BRITISH, NORWEGIAN)
- MUNITIONS TEST ACTIVITIES (ASC, AWC, NAVY)
- ELECTRONIC COMBAT (AWC)
- C4I (ESC)

- DIGITAL MODELS & COMPUTER SIMULATIONS
  - MEASUREMENT FACILITY TESTING
    - OPEN AIR RANGE TESTING





**COMPUTER SCIENCES CENTER**



# **PREFLIGHT INTEGRATION OF MUNITIONS AND ELECTRONIC SYSTEMS (PRIMES) FACILITY**

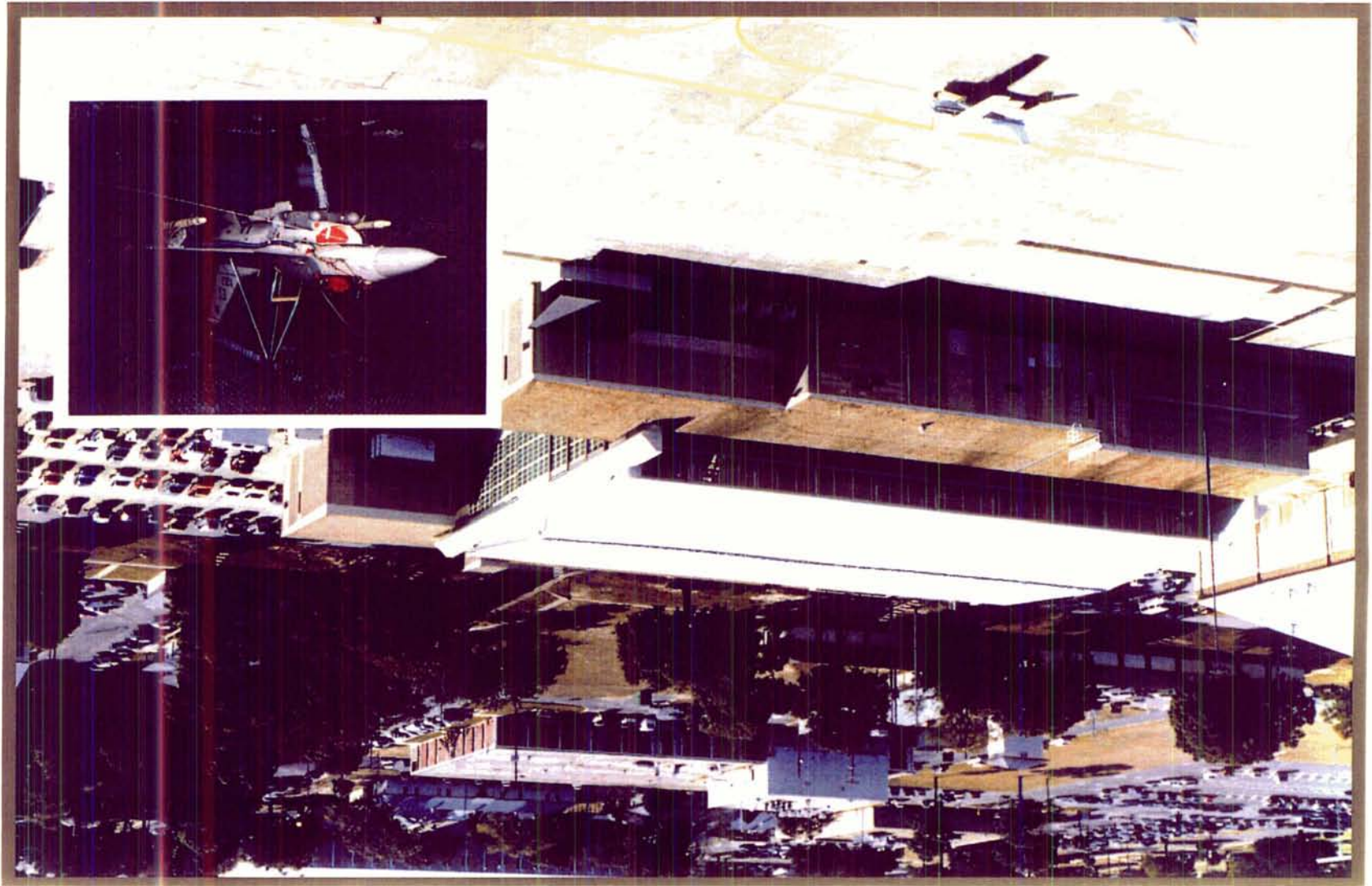
- **CAPABILITIES**

- **INSTALLED SYSTEMS TEST FACILITY**
  - **ELECTRONIC COMBAT SYSTEMS**
  - **MUNITIONS SYSTEMS**
- **DIVERSE TEST ENVIRONMENTS**
  - **F-111 SIZED ANECHOIC CHAMBER (106'x78'x30')**
  - **FLIGHTLINE TEST STATIONS AND SECURE LABORATORIES**
- **EXTENSIVE RF SIMULATION AND DATA COLLECTION CAPABILITIES**
  - **DENSE RF SIMULATION CAPABILITY (5 MILLION PPS FROM 50MHz-18GHz)**
  - **MULTIMEDIA DATA COLLECTION SYSTEMS (RATES TO 60MBYTES/SEC)**

- **TYPICAL ACTIVITIES/CUSTOMERS**

- **TEWS/AMRAAM (ASC)**
- **AIR-DEFENSE ANTI-TANK SYSTEM (ADATS) (CANADA)**
- **ATRJ (ARMY)**

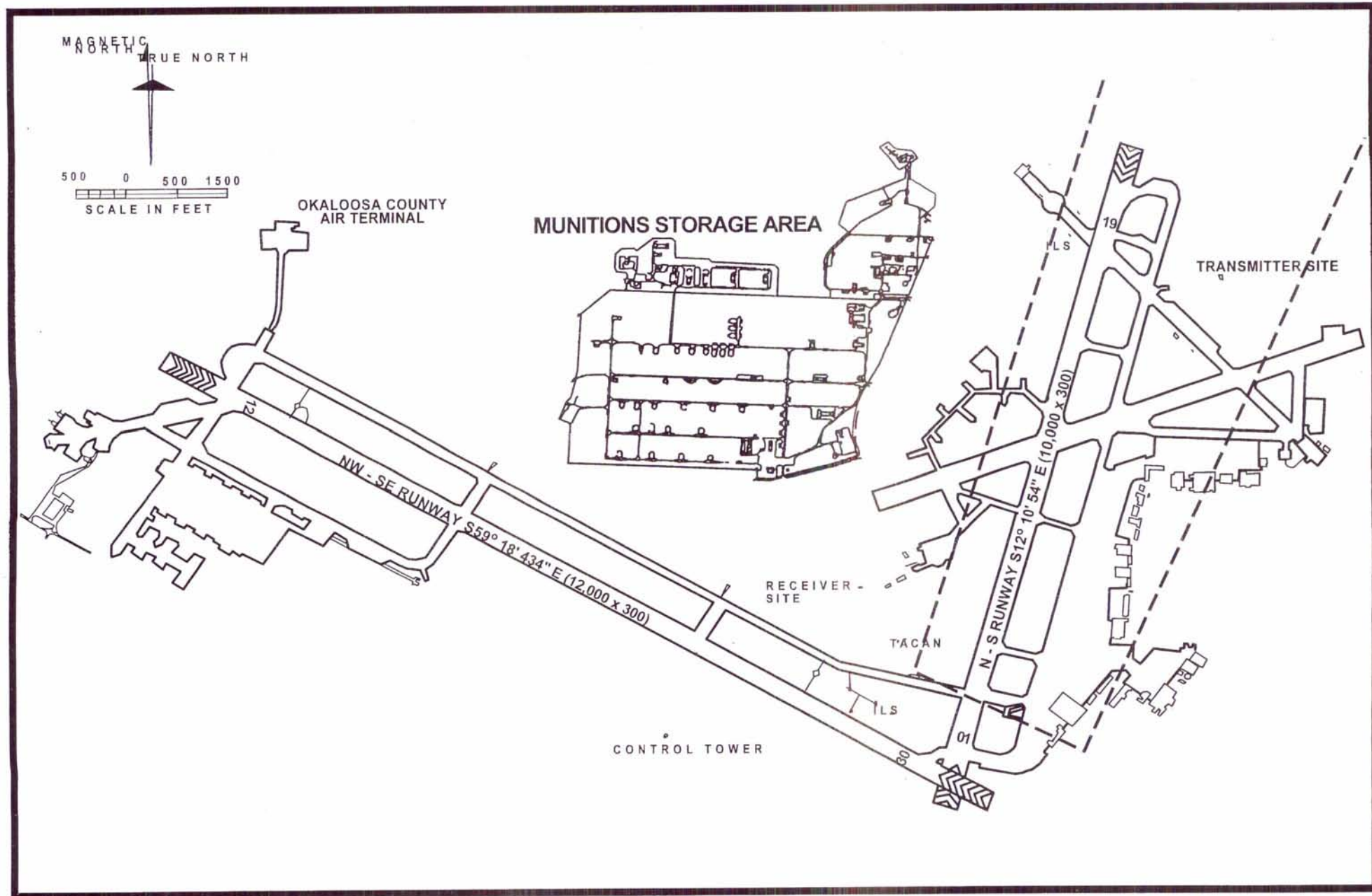
**INSTALLED SYSTEMS TESTING**

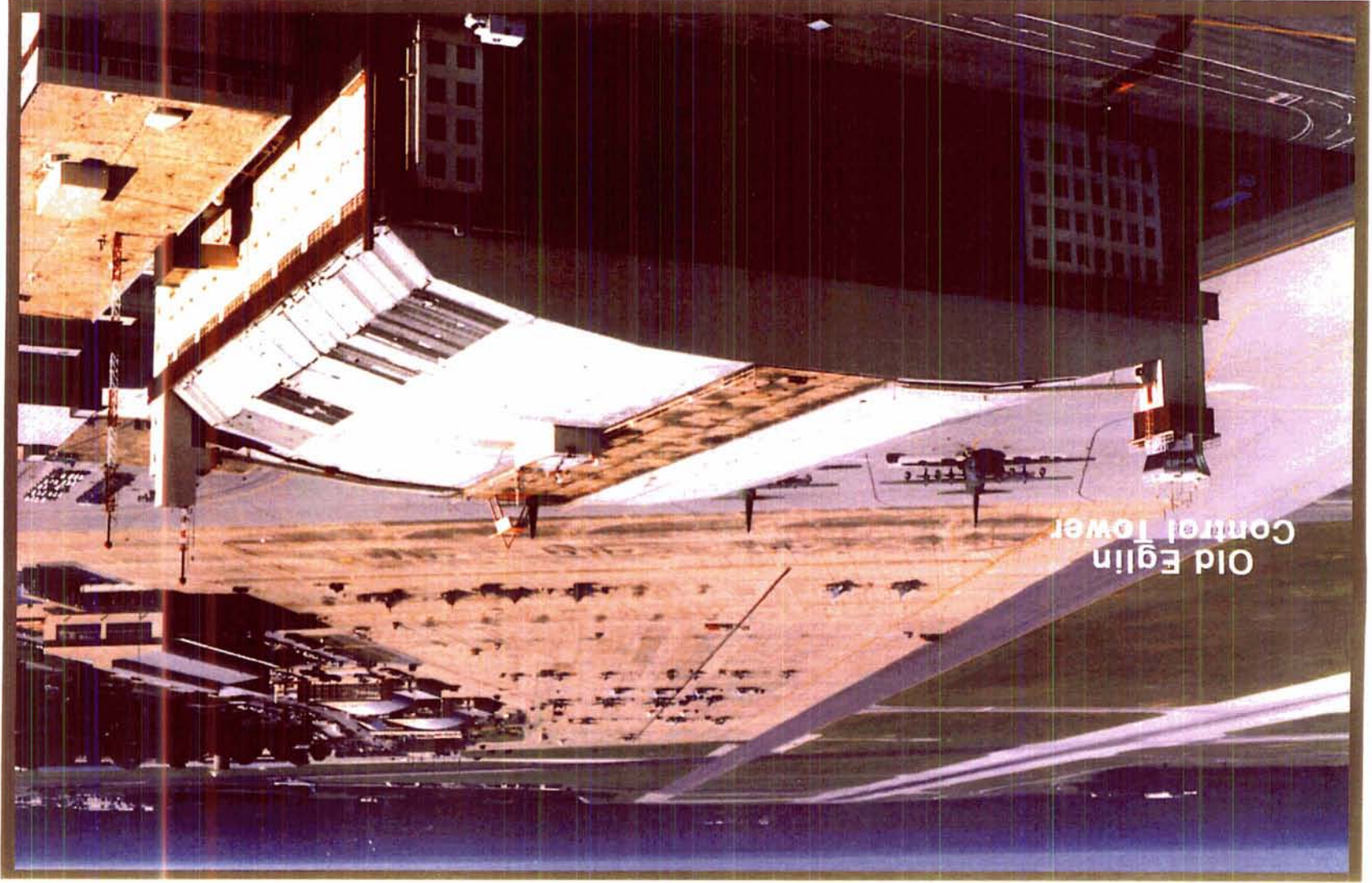


PRIMES TEST FACILITY



# EGLIN FLIGHTLINE AND MUNITIONS STORAGE AREA





Old Eglin  
Control Tower

MAIN BASE FLIGHT LINE



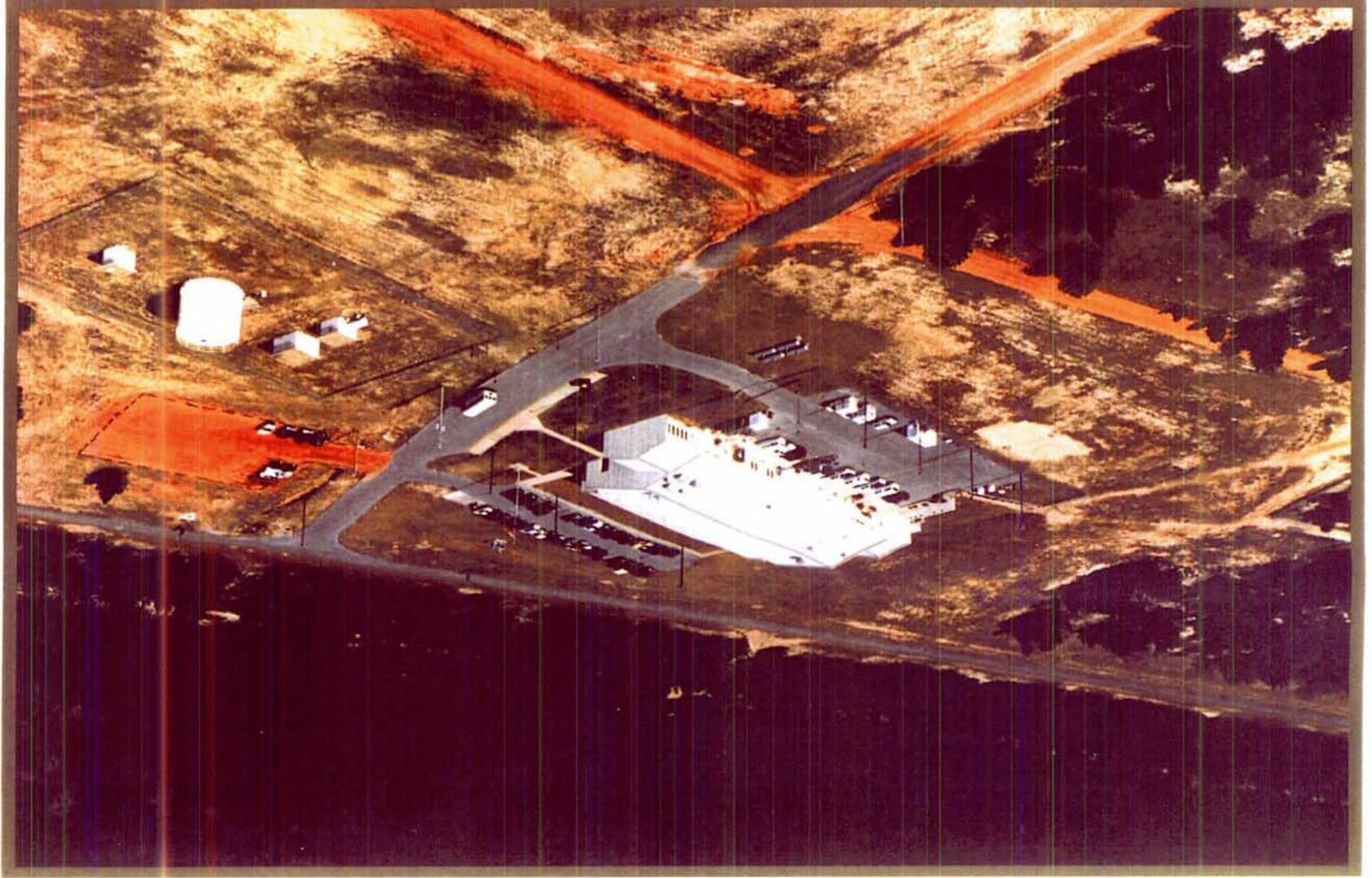
# **NAVY EXPLOSIVE ORDNANCE DISPOSAL (EOD) SCHOOL (D-51)**

- **CAPABILITIES**

- METHODS AND PROCEDURES FOR RECOVERY, EVALUATION, RENDERING SAFE, AND DISPOSAL OF SURFACE AND UNDERWATER, CONVENTIONAL, AND NUCLEAR EXPLOSIVE ORDNANCE
- TRAINING AID AND FACILITIES MAINTENANCE COMPOUND
- SIX HIGH EXPLOSIVE MAGAZINES
- FOUR TRAINING SEGMENTS
  - CORE DIVISION
  - DEMOLITION DIVISION
  - TOOLS AND METHODS DIVISION
  - BIOLOGICAL AND CHEMICAL DIVISION
- TRAINS APPROXIMATELY 1,200 STUDENTS ANNUALLY

- **TYPICAL ACTIVITIES/CUSTOMERS**

- TRAINING OF OFFICERS AND ENLISTED PERSONNEL OF THE US NAVY, MARINE CORPS, ARMY, AIR FORCE, AND SELECT INTERNATIONAL MILITARY STUDENTS



**NAVY EOD SCHOOL**



# SEEKER TEST & EVALUATION FACILITY (C-52A)

## JOINT USAF/USA PROGRAM

- **CAPABILITIES**

- SECURE STORAGE AND MAINTENANCE AREA FOR THREAT VEHICLE FLEET
- 300 FT TOWER TURNTABLE FACILITY PROVIDES HIGH QUALITY, CALIBRATED, VALIDATED TARGET SIGNATURE DATA
  - INFRARED (IR)
  - MILLIMETER WAVE (MMW)
  - DUAL MODE IR/MMW (35-95 GHz)
- VISIBLE / INFRARED TRIBAR TARGET

- **TYPICAL ACTIVITIES/CUSTOMERS**

- LONGBOW (ARMY)
- JSTARS, ATARS, JCCD (AIR FORCE)
- LOCAAS (WRIGHT LABS)
- CLASSIFIED VEHICLE EXPLOITATION (MSIC, DIA, CIA, TACOM, & AFMC)

MEASUREMENT FACILITY TESTING



# SEEKER TEST AND EVALUATION FACILITY C-52A



300' Tower And Turntable



# AIR-TO-GROUND TEST RANGE (C-52C/N)

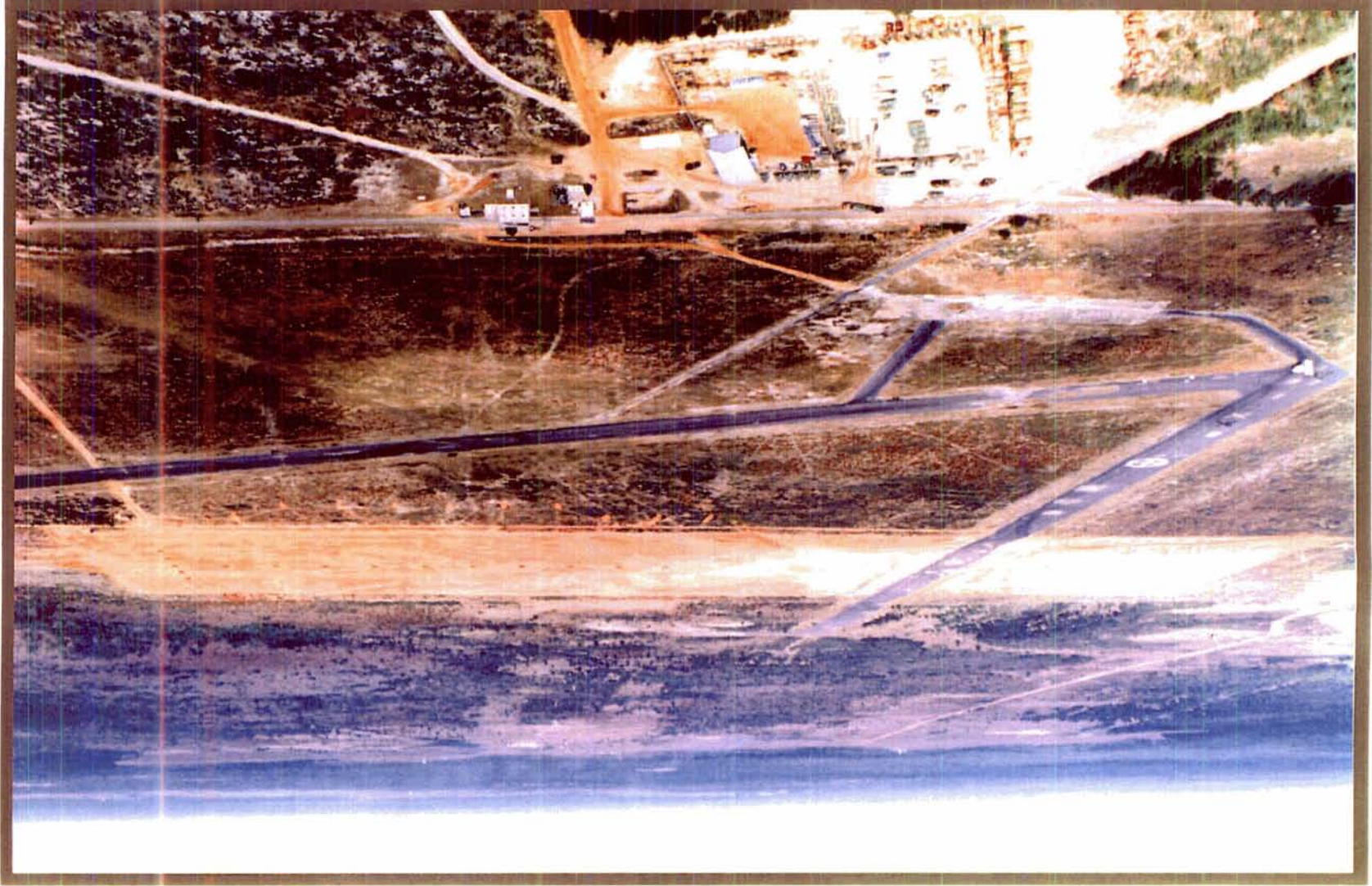
- **CAPABILITIES**

- AIR-TO-GROUND ROCKET TEST AREA (C-52C)
  - SMALL AIR-TO-GROUND MUNITIONS, INCENDIARY AND FLAME WEAPONS, AND FUZE FUNCTION
    - FLAME FUEL AREA
    - SUBMUNITIONS (CLAY) GRID
    - TWO AIRFIELD (ASPHALT) RUNWAY
- AIR-TO-GROUND BOMB, GUN, AND ROCKET TEST AREA (C-52N)
  - AIR-TO-GROUND HIGH EXPLOSIVE MUNITIONS PERFORMANCE
    - ASSAULT LANDING STRIP
    - SCORABLE TRAINING RANGE

- **TYPICAL ACTIVITIES/CUSTOMERS**

- SENSOR FUZED WEAPON (SFW), AGM-130 (ASC)
- TRIAL SEDGE III (BRITISH AIR FORCE)
- MK 82 BOMB/AIR SUITABILITY (ACC)

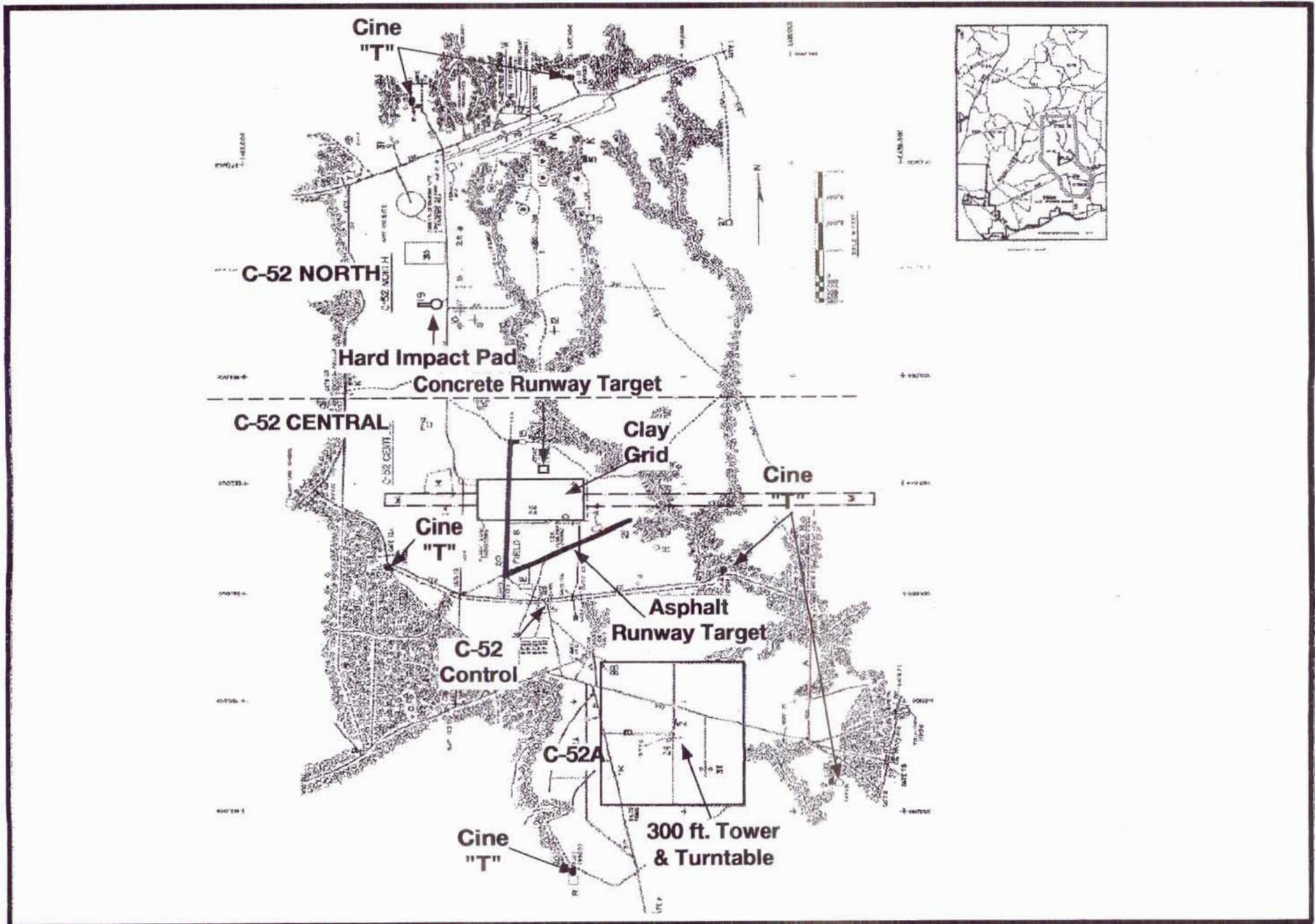
OPEN AIR RANGE TESTING



**AIR-TO-GROUND TEST RANGE**  
**C-52C/N**



# Air-To-Ground Bomb And Rocket Test Range (C-52)





AC-130



# ARENA TEST RANGES (C-80A,B,C)

- **CAPABILITIES**

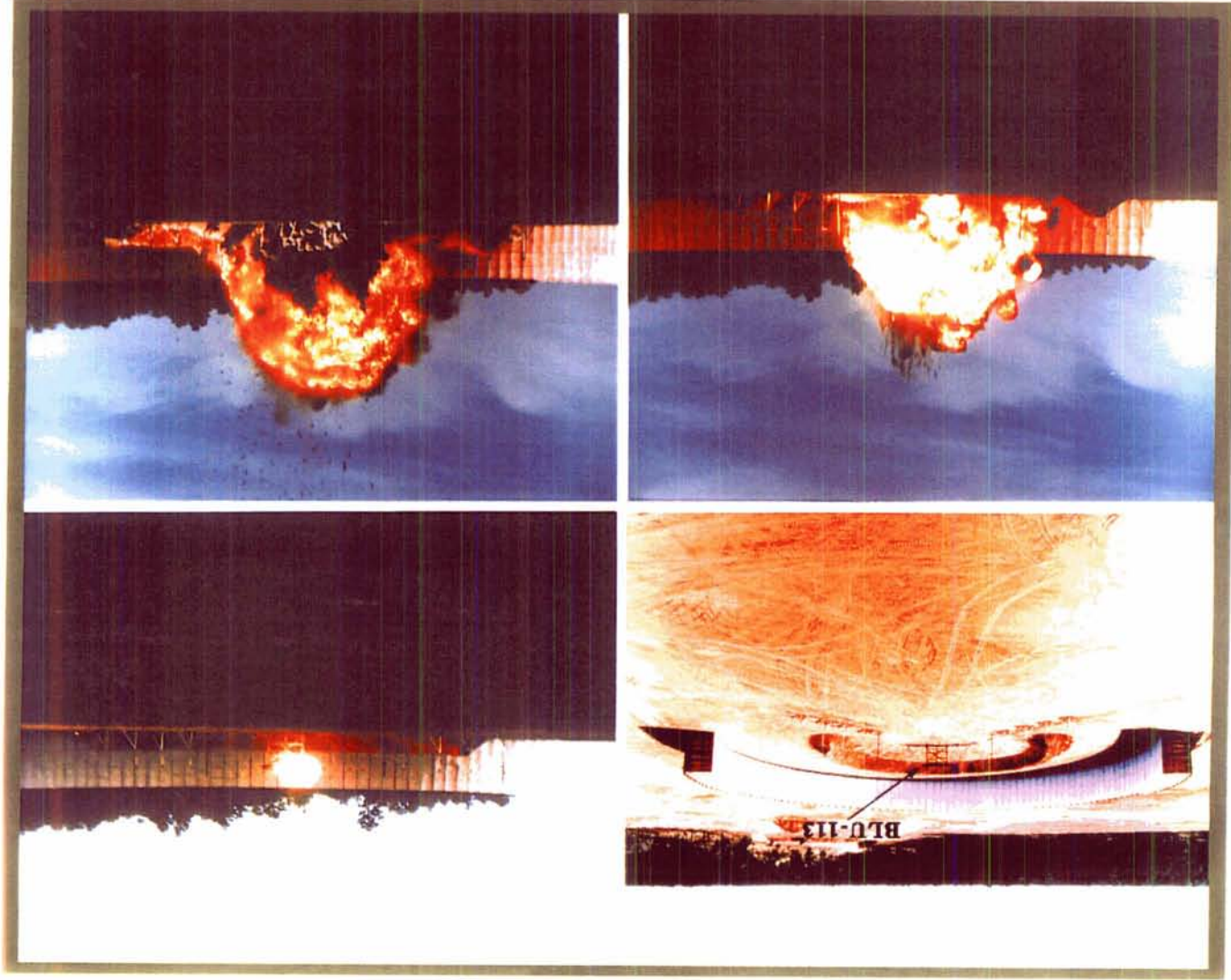
- **THREE TEST AREAS CAPABLE OF PERFORMING FRAGMENT AND HAZARD CLASSIFICATION TESTS OF ITEMS UP TO 4,500 lbs NET EXPLOSIVE WEIGHT (NEW)**
  - **CO-LOCATED FRAGMENT WEIGHING AND BLAST PRESSURE TRANSDUCER CALIBRATION FACILITY**
  - **TOTAL FRAGMENT RECOVERY OF MUNITIONS UP TO 8 lbs NEW**
  - **PARTIAL FRAGMENT RECOVERY OF MUNITIONS UP TO 4,500 lbs NEW**

- **TYPICAL ACTIVITIES/CUSTOMERS**

- **AGM-65G HAZARD CLASSIFICATION (ALC)**
- **HEAVY METALS WARHEAD ARENA TEST (WRIGHT LABS)**
- **FOREIGN WARHEAD EXPLOITATION TESTING (ARMY)**
- **AGM-130 HAZARD CLASSIFICATION (ASC/YH)**

**MEASUREMENT TESTING**

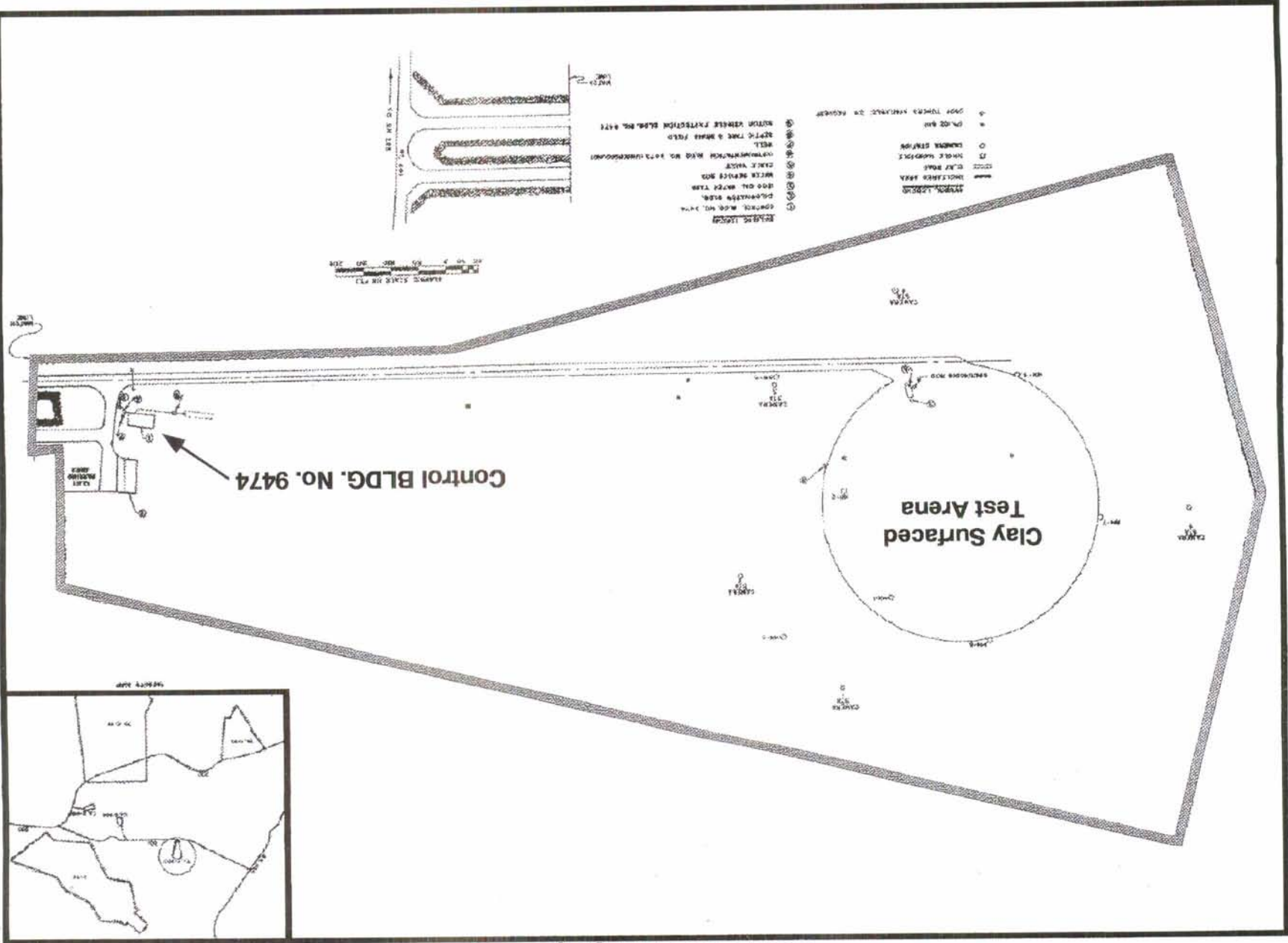
# ARENA TEST RANGE C-80



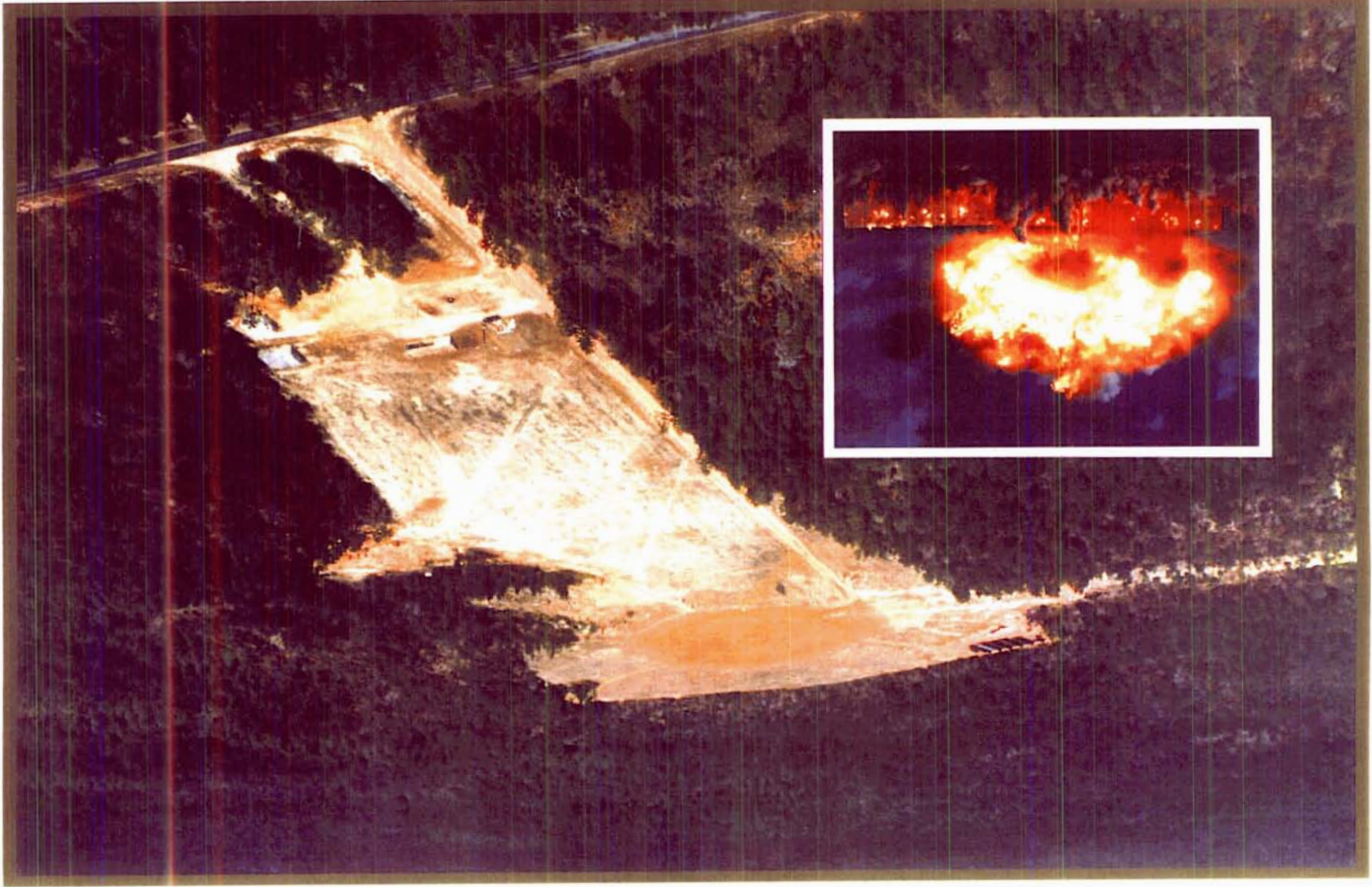
Fragmentation Test  
Time Sequenced Detonation



**Arena Test Range (C-80C)**



Lethality and Vulnerability Test Area



ARENA TEST RANGE  
C-80C

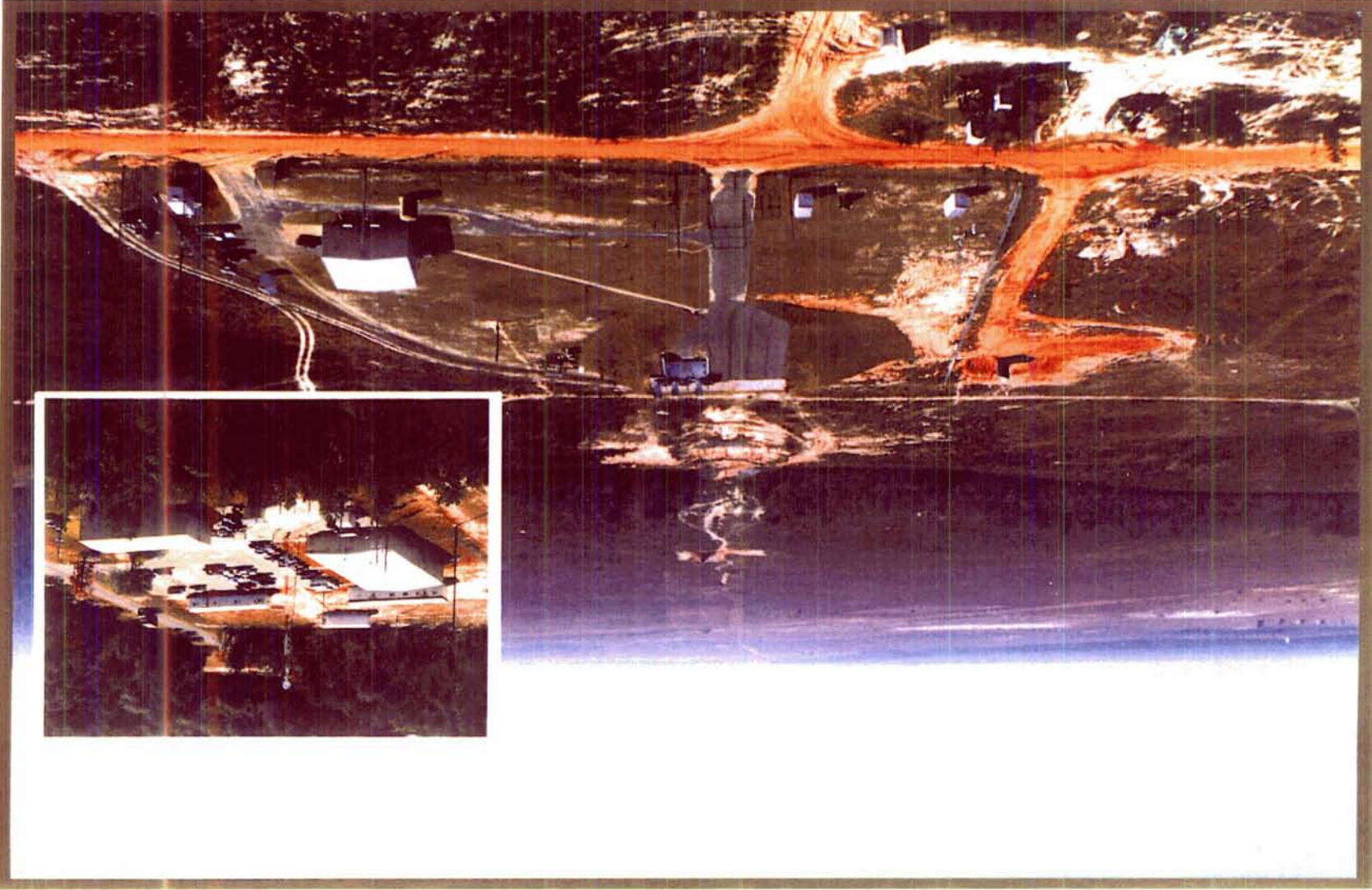


# HELLFIRE CONTROL FACILITY (C-7) & TEST RANGE (C-72)

- **CAPABILITIES**
  - **LAUNCH FACILITY**
    - **THREE PEDESTALS WITH 2 LAUNCH RAILS EACH WITH ABILITY TO ENVIRONMENTALLY CONDITION TEST ITEMS FROM -45°F to +145°F**
  - **INSTRUMENTATION**
    - **THREE REMOTE CONTROLLED VIDEO TRACKERS**
    - **DEDICATED TELEMETRY STATION WITH 100 FT TOWER**
    - **METEOROLOGICAL SYSTEM AND C-10 RADAR**
    - **REMOTE "CINE-Ts"**
  - **C-7 CONTROL FACILITY**
    - **ALL EVENTS CONTROLLED & MONITORED REMOTELY VIA TV NETWORK**
  - **THREE INSTRUMENTED TARGET AREAS (3,5,& 7 km FROM LAUNCH FACILITY)**
- **TYPICAL ACTIVITIES/CUSTOMERS**
  - **HELLFIRE, LONGBOW, HVWS, CAMMS (ARMY)**

- **INTEGRATION LABORATORY TESTING**
  - **OPEN AIR RANGE TESTING**

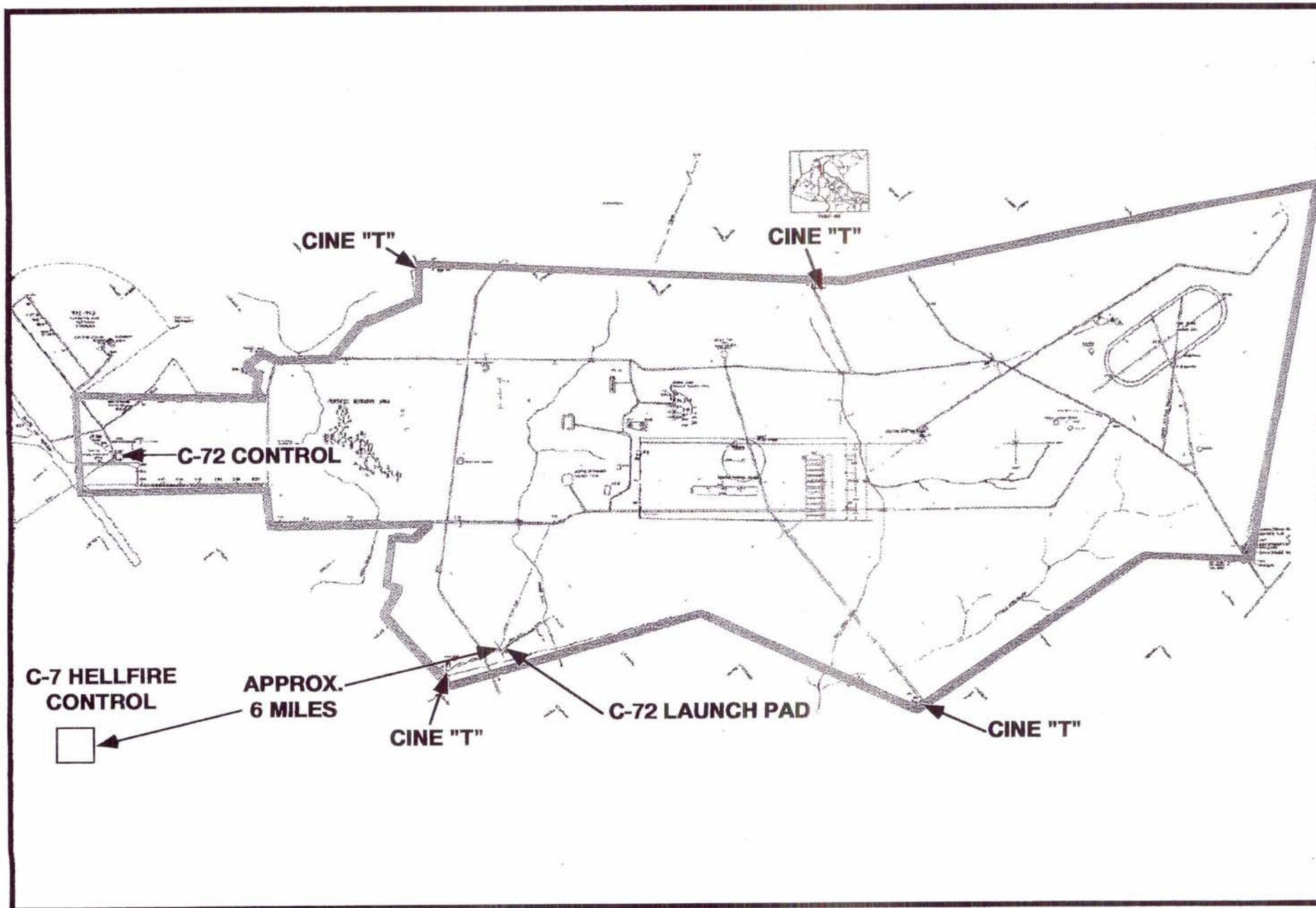
# HELLFIRE CONTROL FACILITY C-7 AND TEST RANGE C-72

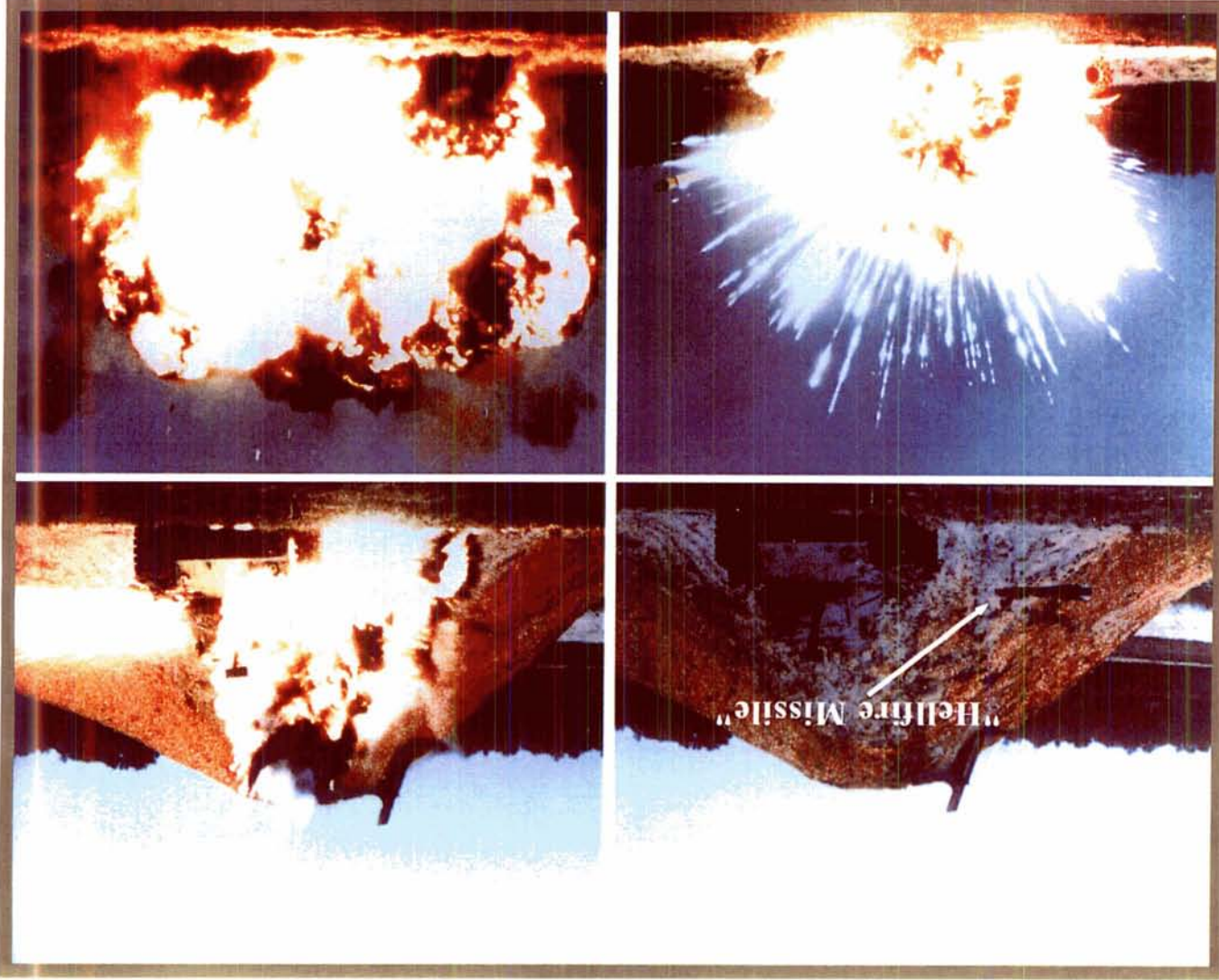


Missile Launch Area



# Hellfire Test Range (C-72)





**HELLFIRE TEST FACILITY**  
**C-72**

# **AIR-TO-GROUND TRAINING RANGE (C-62)**

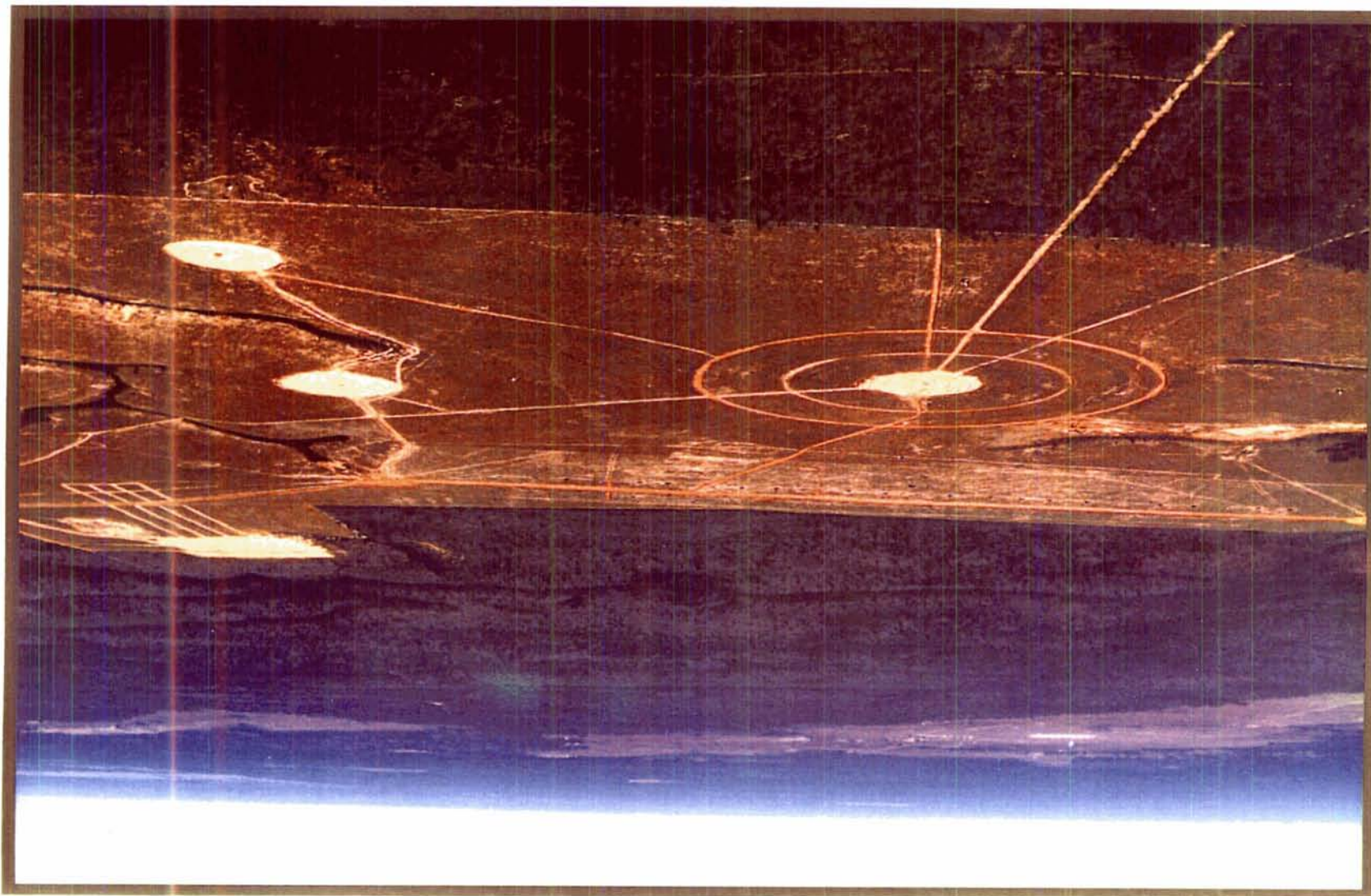
- **CAPABILITIES**

- TRAINING RANGE FOR PILOT QUALIFICATIONS IN DELIVERY OF STORES FROM HIGH-PERFORMANCE AIRCRAFT
  - APPROXIMATELY 1,290 ACRES OF CLEARED LAND
  - STABILIZED CLAY RUNWAY (5K BY 70') FOR ASSAULT LANDINGS AND TAKE-OFFS
- TWO PERMANENT 45 FT STEEL SCORING TOWERS
- METEOROLOGICAL EQUIPMENT
- VARIETY OF TARGETS

- **TYPICAL CUSTOMERS**

- AIR WARFARE CENTER / AIR COMBAT COMMAND (MOODY AFB)
- NAVY ATTACK SQUADRON
- AIR-TO-GROUND OPERATIONS SCHOOL
- 16TH SPECIAL OPERATIONS WING





**AIR-TO-GROUND TRAINING  
RANGE C-62**



# KINETIC ENERGY MUNITIONS TEST FACILITY (C-74)

- **CAPABILITIES**

- 2000 FT CONTINUOUS DUAL-RAIL LAUNCHER
- ABILITY TO TEST LIVE, FUZED MUNITIONS AGAINST A VARIETY OF TARGETS AT OPERATIONAL VELOCITIES (UP TO 3500 FPS)
- HEAVY LIFT CAPABILITY (UP TO 180 TONS) FOR TARGETS
- ENVIRONMENTAL CONDITIONING OF TEST ITEM (-65°F to +165°F)
- CO-LOCATED MUNITIONS STORAGE, BUILD-UP, AND ANALYSIS FACILITY
- INSTRUMENTATION TO RECORD VELOCITY, ACCELERATION, BLAST PRESSURE, AND CRITICAL TEST EVENTS

- **TYPICAL ACTIVITIES/CUSTOMERS**

- BLU-113 (GBU-28) WARHEAD, BLU-109, FMU-143 (ASC/YH)
- HARD TARGET WARHEAD, HARD TARGET ORDNANCE PACKAGE (WL)
- MULTIFUNCTION BOMB FUZE, I-800 HAVE NAP WARHEAD (ASC/XRI)
- MLRS REDUCED RANGE PRACTICE ROCKET (ARMY)

**MEASUREMENT TESTING**

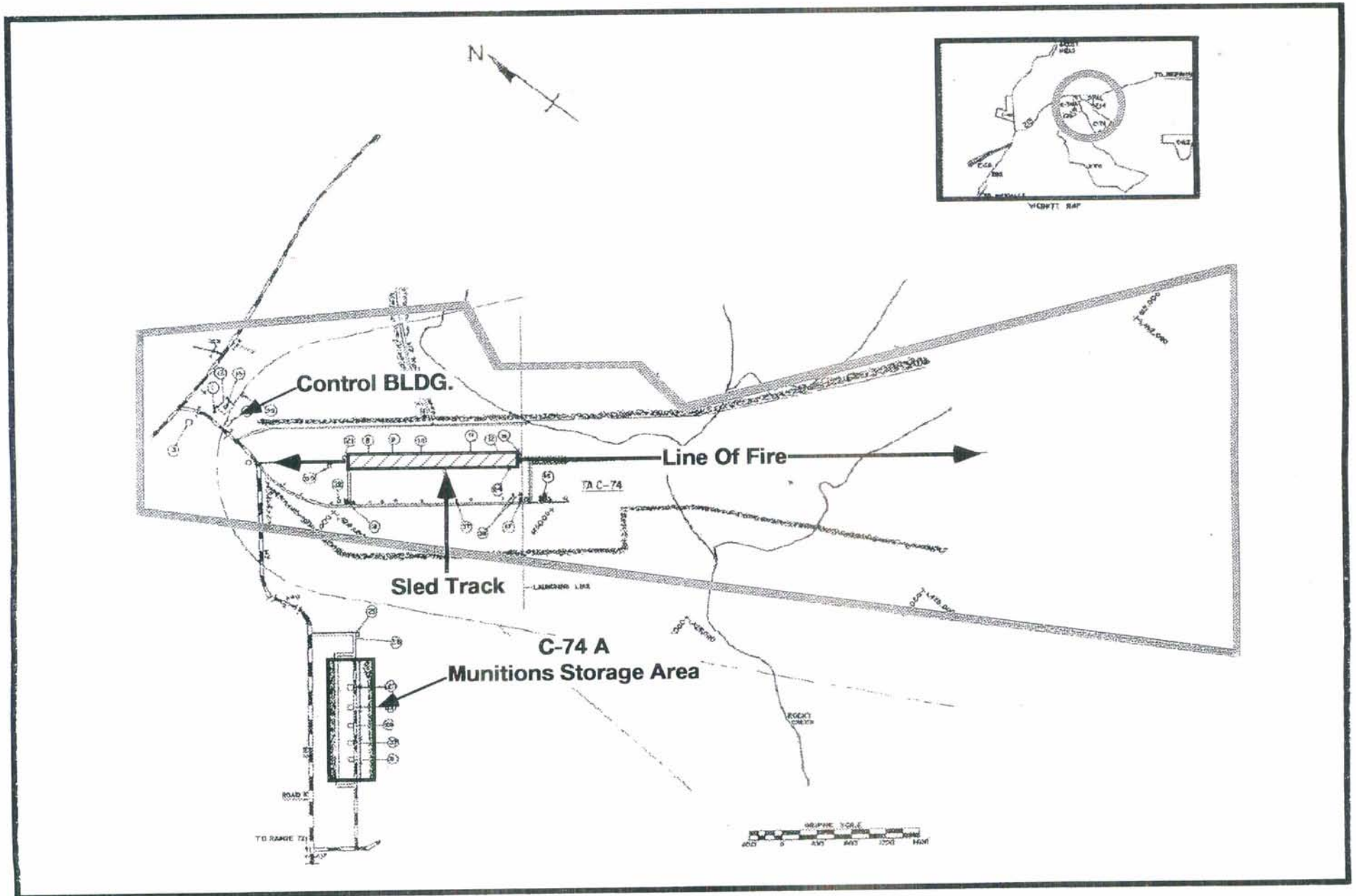




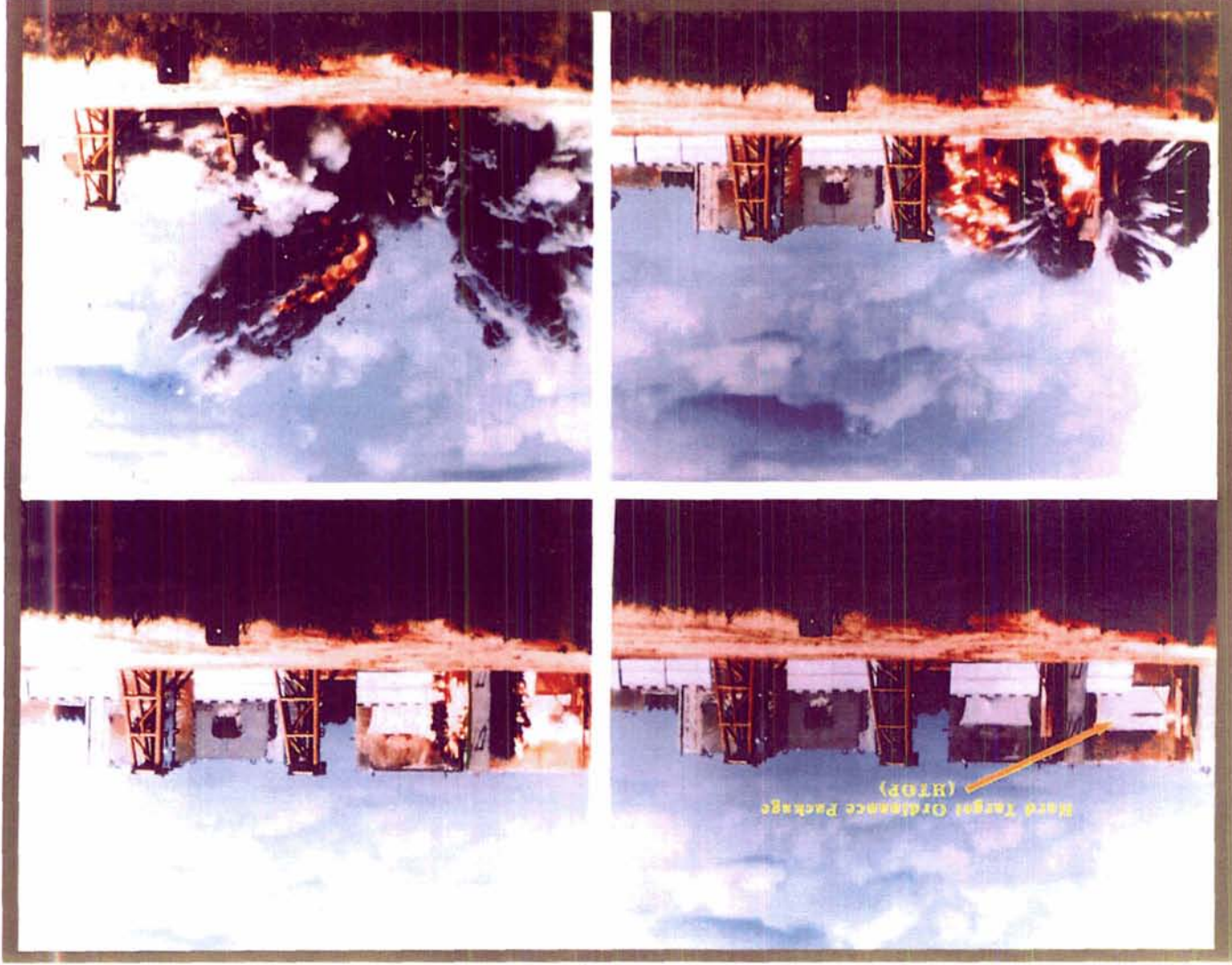
**KINETIC ENERGY MUNITIONS  
TEST FACILITIES C-74**



# KINETIC ENERGY MUNITIONS TEST FACILITY (C-74)



# KINETIC ENERGY MUNITIONS TEST FACILITIES C-74



Penetration Test



# CHICKEN LITTLE WARHEAD TEST RANGE (C-64)

## JOINT USAF/USA PROGRAM

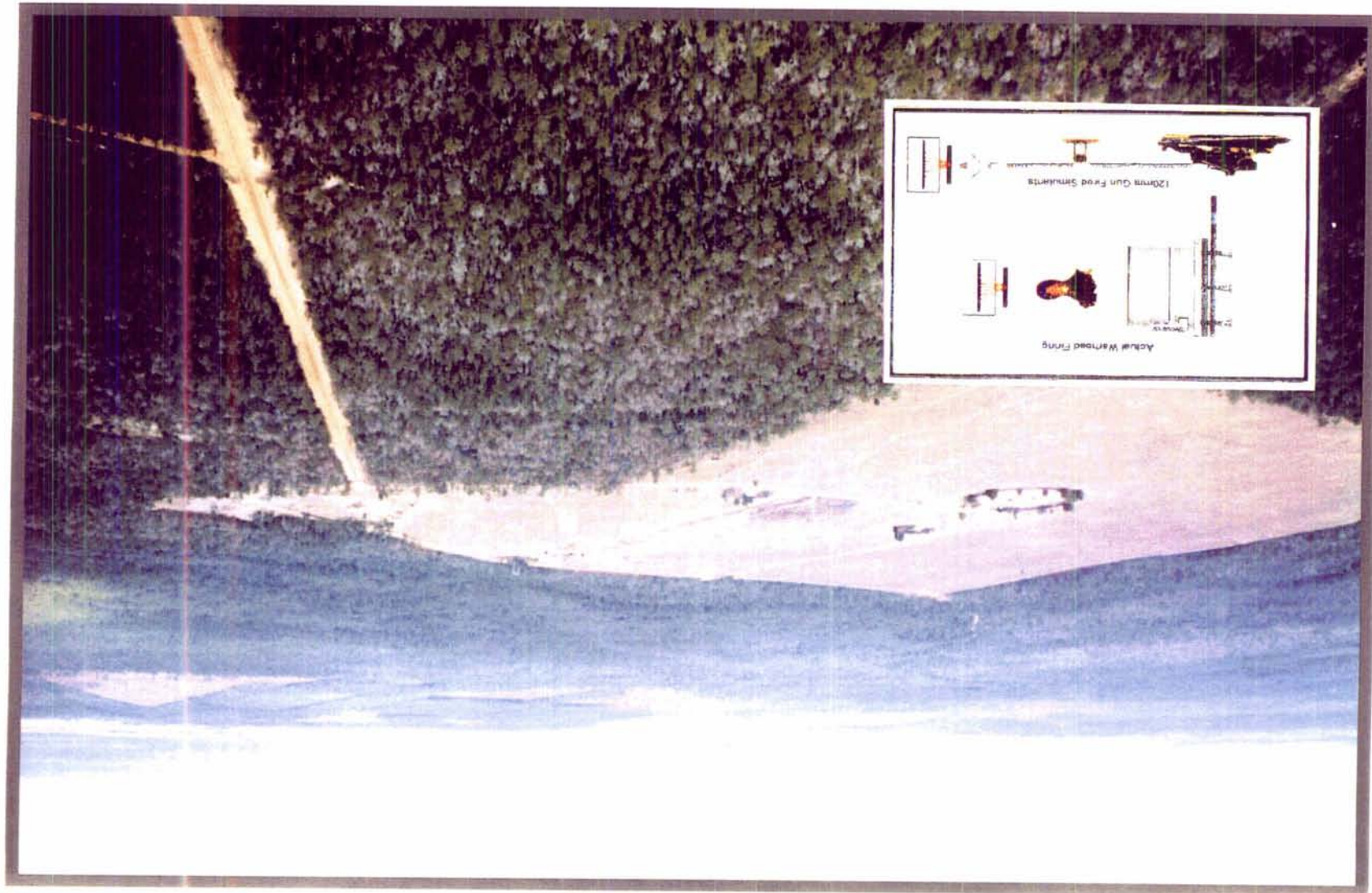
- **CAPABILITIES**

- TESTING AND EVALUATION OF BOTH SHAPED CHARGE AND EXPLOSIVELY FORMED PENETRATOR WARHEADS
  - LONG STANDOFF EXPLOSIVELY FORMED FRAGMENT RANGE
    - TERMINAL EFFECTS ANALYSIS OF MULTIPLE WARHEAD CLASSES
  - 125mm SMOOTH BORE GUN
    - INVESTIGATION OF TERMINAL PERFORMANCE OF PENETRATOR
  - DYNAMIC WARHEAD TEST FACILITY (800 FT MONORAIL TRACK)
    - INVESTIGATE EFFECTS OF DYNAMICS ON WARHEAD PERFORMANCE

- **TYPICAL ACTIVITIES/CUSTOMERS**

- ARMY CLASSIFIED PROGRAMS (SMART WEAPONS MANAGEMENT OFFICE)
- IR&D EVALUATION (ROCKWELL INTERNATIONAL)
- HELLFIRE (ARMY)
- HARM (NAVY)
- SENSOR FUSED WEAPON (ASC/YH)

MEASUREMENT TESTING



CHICKEN LITTLE WARHEAD  
TEST RANGE C-64



# DUKE FIELD

- **CAPABILITIES**

- DUKE RUNWAY 8,000 x 300 FEET WITH CABLES
- 919TH SPECIAL OPERATIONS WING
  - "READY NOW" FORCE CAPABLE OF CLOSE AIR SUPPORT, RECONNAISSANCE, INTERDICTION, AND ARMED ESCORT
  - FLIES AND MAINTAINS AC-130 GUNSHIPS
  - DISASTER RELIEF SUPPORT AND COMMUNITY AID
- 728TH AIR CONTROL SQUADRON
  - HIGHLY MOBILE RADAR SQUADRON
  - MESSAGE PROCESSING CENTER FOR SECURE DIGITAL DATA INTERFACE WITH E-3 AWACS AIRCRAFT
  - GATHERING AND PASSING AIR PICTURE AND BATTLE INFORMATION

- **TYPICAL ACTIVITIES/CUSTOMERS**

- TRAINING (AFRES)
- SPECIAL OPERATIONS MISSIONS (USAF & DoD)
- RADAR CONTROL (DESERT SHIELD/DESERT STORM)



**DUKE FIELD**



# AIR-TO-GROUND BOMB TEST RANGE (B-75)

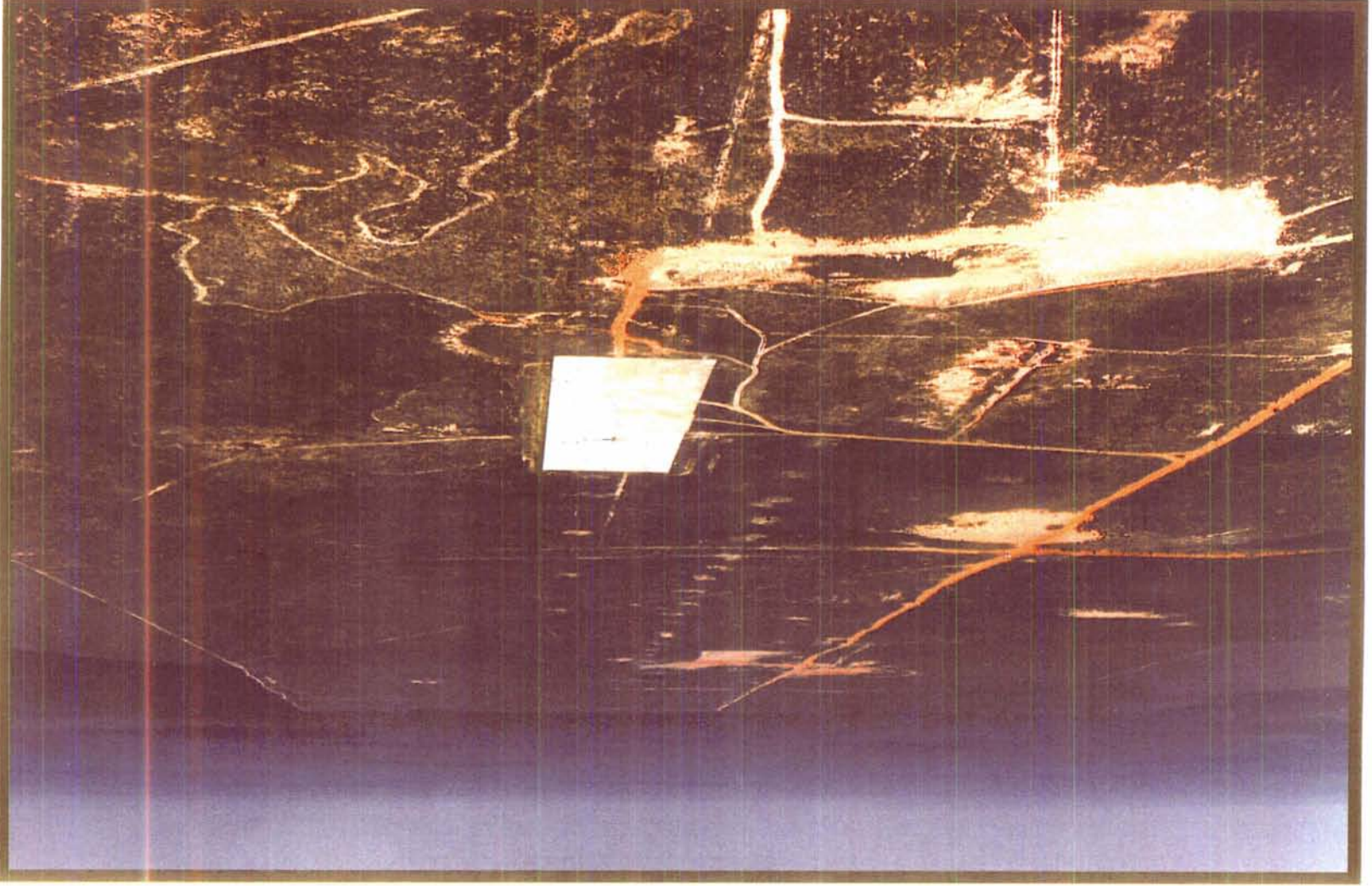
- **CAPABILITIES**

- AIR-TO-GROUND BOMBING, ROCKETRY, AND GUNNERY
- TWELVE CINETHEODOLITES
  - COMPLETE BALLISTIC INFORMATION
  - TIME, SPACE, POSITION INFORMATION (TSPI) ON HIGH-SPEED AIRCRAFT
- FIVE SPOTTING TOWERS FOR MUNITIONS SCORING
- TANK GUN RANGE
- WARSAW PACT RUNWAY TARGET

- **TYPICAL ACTIVITIES/CUSTOMERS**

- DURANDAL BLU-107/B (ASC)
- ADVANCED AND IMPROVED CRATERING WARHEADS (WRIGHT LABS)
- LIQUID REACTIVE MATERIALS DEMONSTRATION (WRIGHT LABS)

OPEN AIR RANGE TESTING



**AIR-TO-GROUND BOMB  
TEST RANGE B-75**



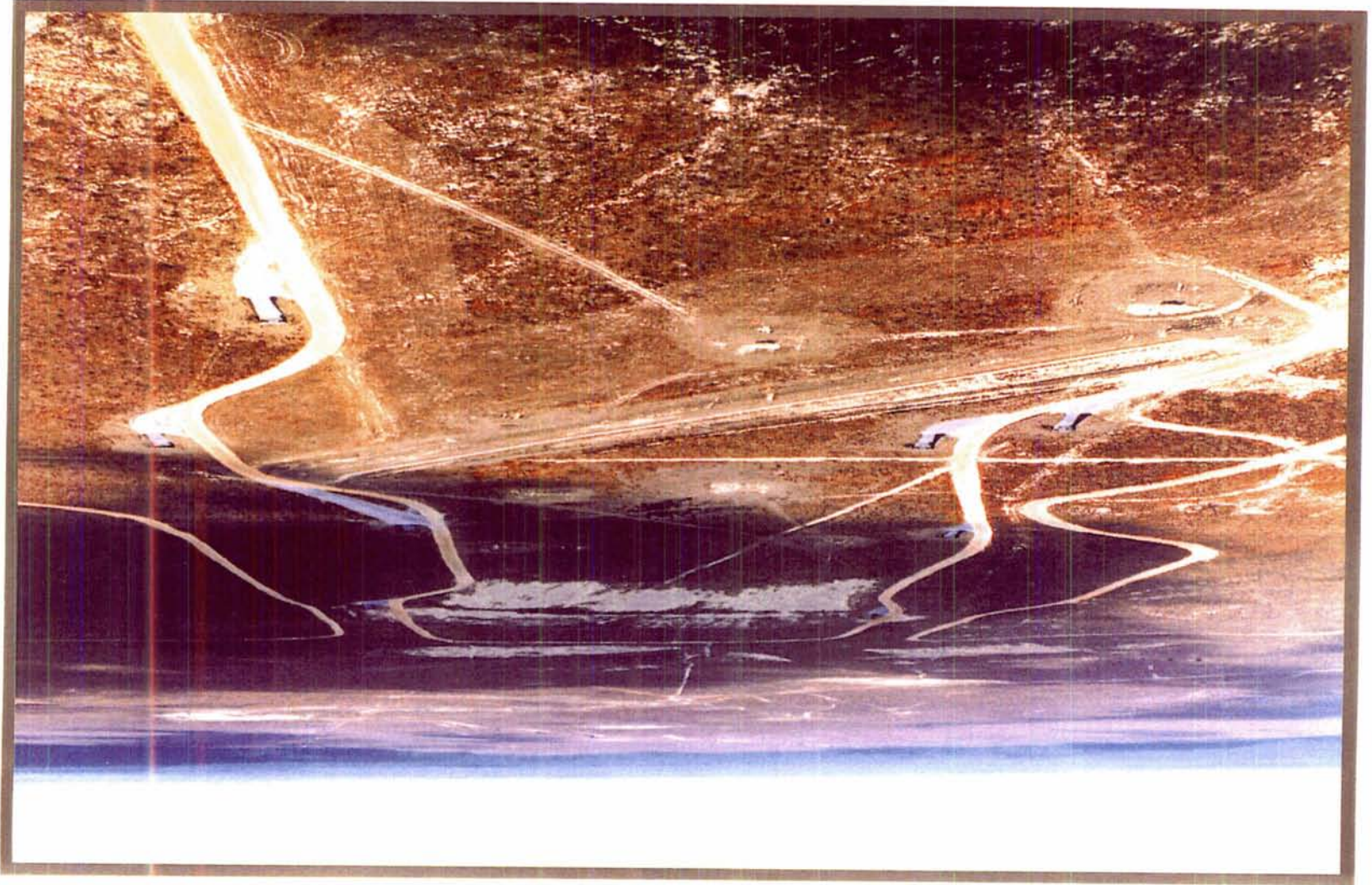
# ALABAMA NATIONAL GUARD TANK AREA (B-75)

- **CAPABILITIES**

- RAILROAD CARS WITH MOVING TARGETS
- POP-UP SILHOUETTES
- TANK YARD CO-LOCATED WITH TRAINING CENTER SOUTH OF B-75
  - COMPUTER CONTROLLED FROM TRAINING CENTER
- OBSERVATION TOWER AT NORTHEAST CORNER OF RANGE

**NOTE: ONLY USED WEEKENDS BUT NEGOTIATING WEEKDAY USE**

**NOTE 2: CURRENTLY NEGOTIATING TO SET UP A TANK MANEUVERING AREA NEAR CHOCTAW AIRFIELD WEST OF HIGHWAY 87**



TANK AREA B-75



# AIR-TO-GROUND BOMB AND GUNNERY TEST RANGE (B-70)

- **CAPABILITIES**

- ONLY OVERLAND SUPERSONIC WEAPONS DELIVERY RANGE EAST OF THE WHITE SANDS MISSILE RANGE
  - 13 MILES LONG, 1.25 MILES WIDE
  - MULTIPURPOSE (GROUND AND FLIGHT TEST)
  - LASER TESTING
- NAVY SHALLOW WATER MINE COUNTERMEASURES TEST POND

- **TYPICAL ACTIVITIES/CUSTOMERS**

- SEEK EAGLE (AFSEO)
- SENSOR FUSED WEAPON (ASC/YH)
- LIGHT WEIGHT SKAD (SURVIVAL KIT AIR DROPPABLE) (AFSEO)
- SHALLOW WATER TESTING (NAVY)

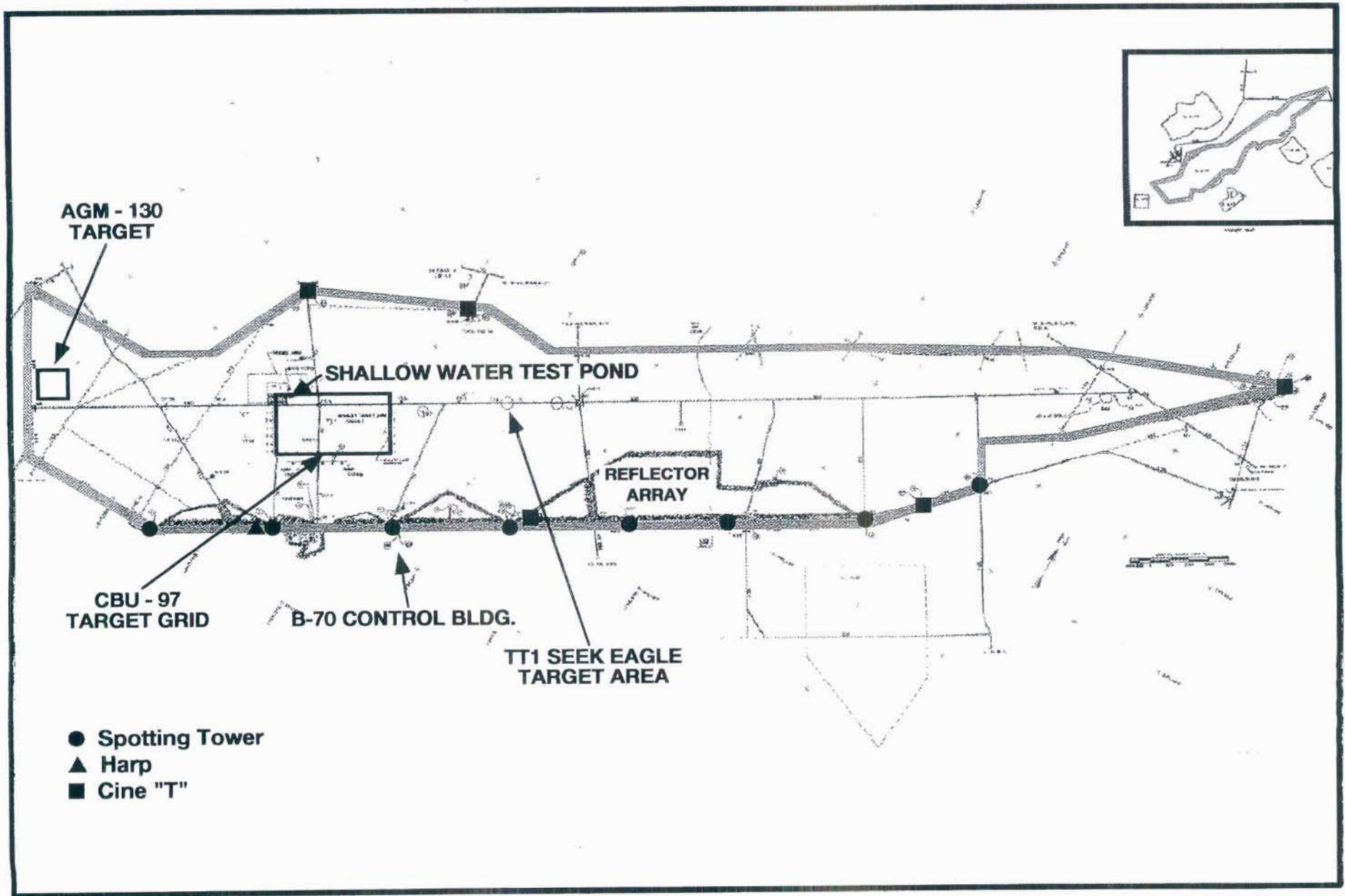
OPEN AIR RANGE TESTING

# AIR-TO-GROUND BOMB AND GUNNERY TEST RANGE B-70

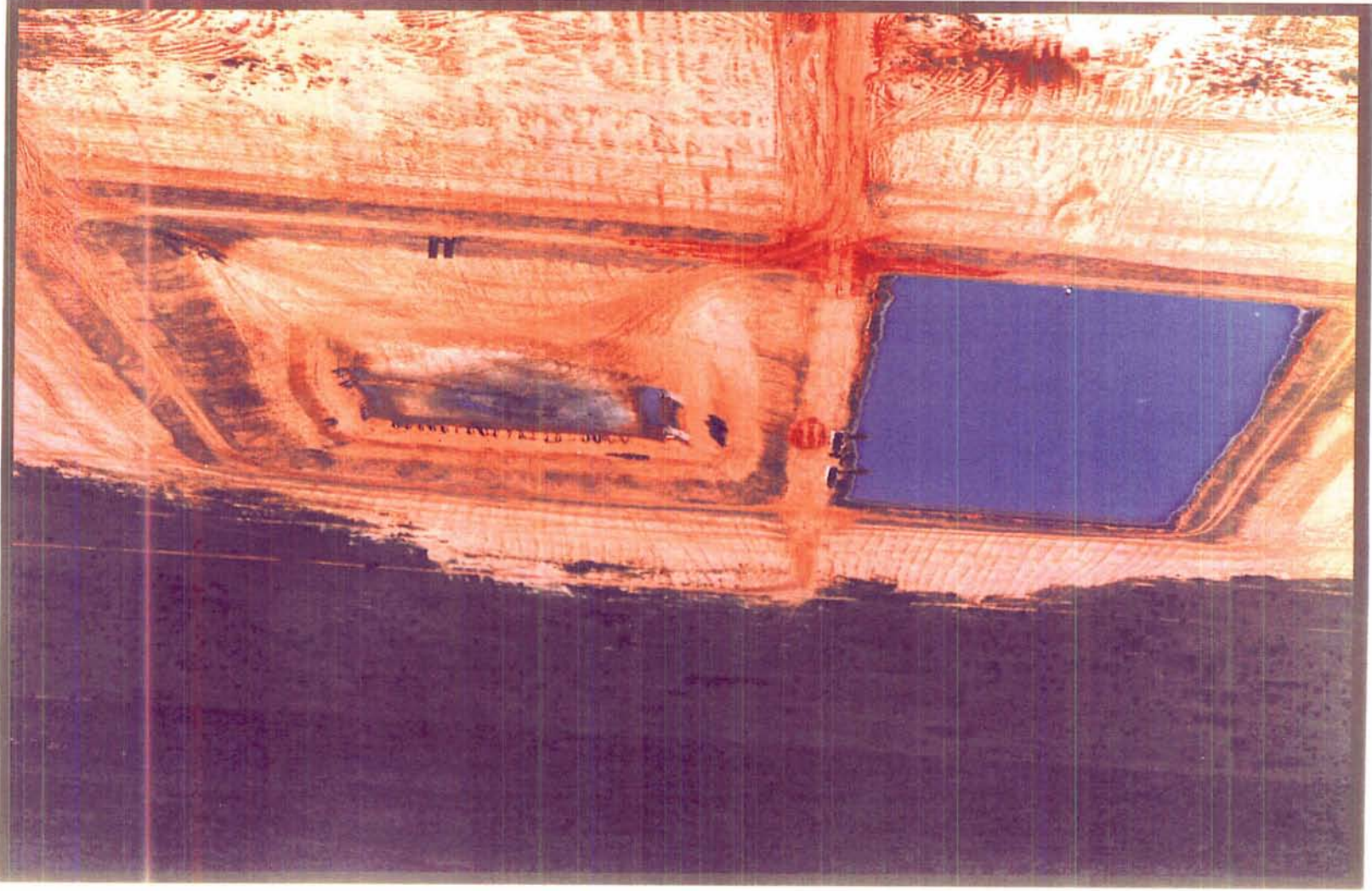




# Air-To-Ground Bomb And Rocket Test Range (B-70)







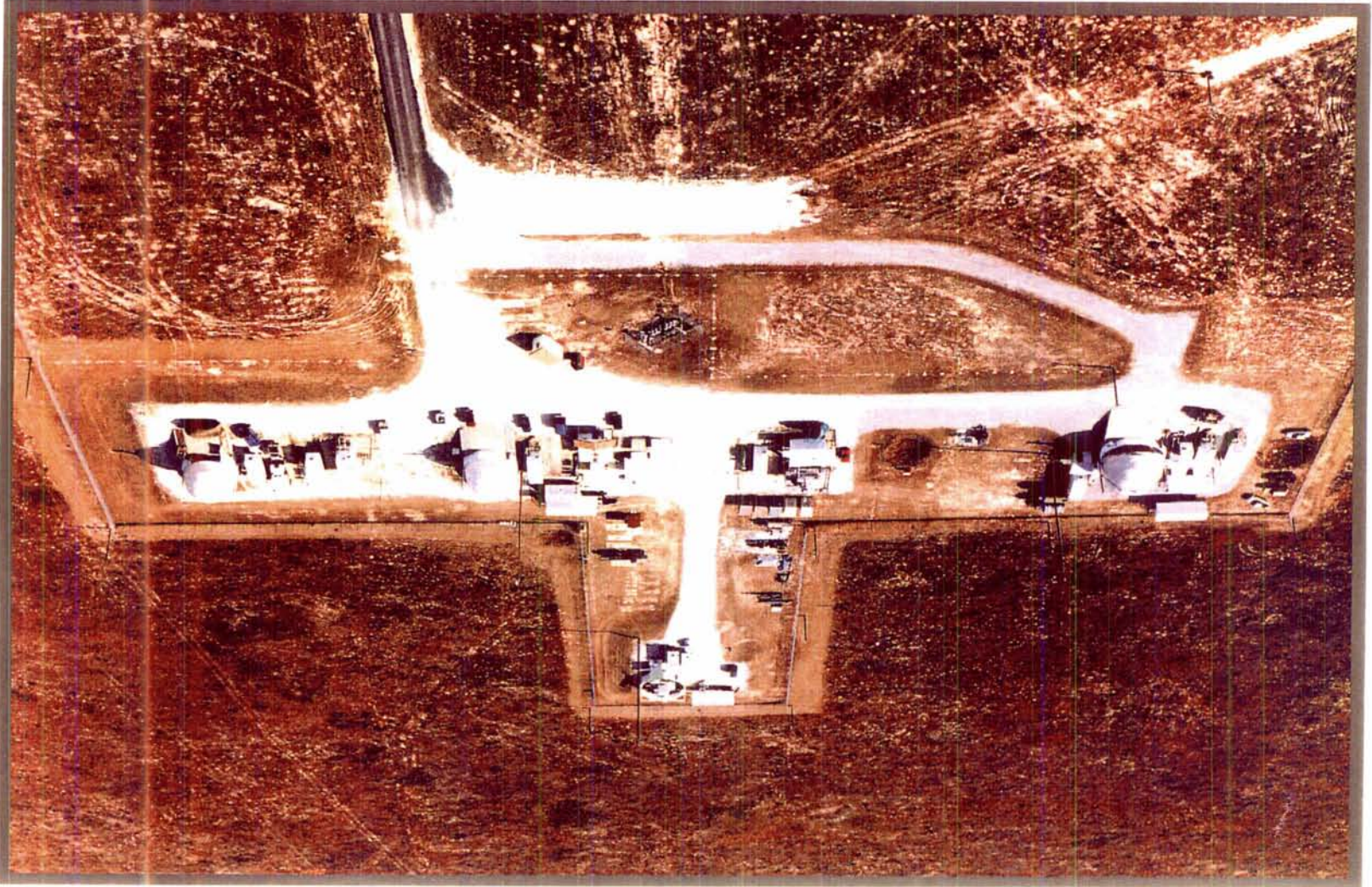
**SHALLOW WATER TEST SITE  
B-70**

## THREAT SITE A-30

- **CAPABILITIES**
  - EGLIN'S LARGEST EC TEST SITE
    - SADS - VIIIIR
    - WEST - XIC
    - XM - 40 (SIGNAL SOURCE ONLY)
    - FLYCATCHER
    - MPQ - 46 HAWK HIGH POWER ILLUMINATOR
    - TWO ROLANDS
      - ONE MOBILE SYSTEM
      - ONE FULLY INSTRUMENTED SYSTEM
- **TYPICAL ACTIVITIES/CUSTOMERS**
  - TEWS (AIR FORCE)
  - ECM (ELECTRONIC COUNTER MEASURES) (ARMY)
  - BELGIAN RWR
  - COUNTERMEASURES (NAVY)

OPEN AIR RANGE TESTING





**TREAT SITE A-30**

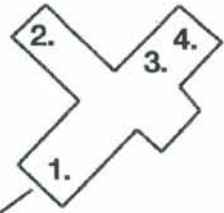
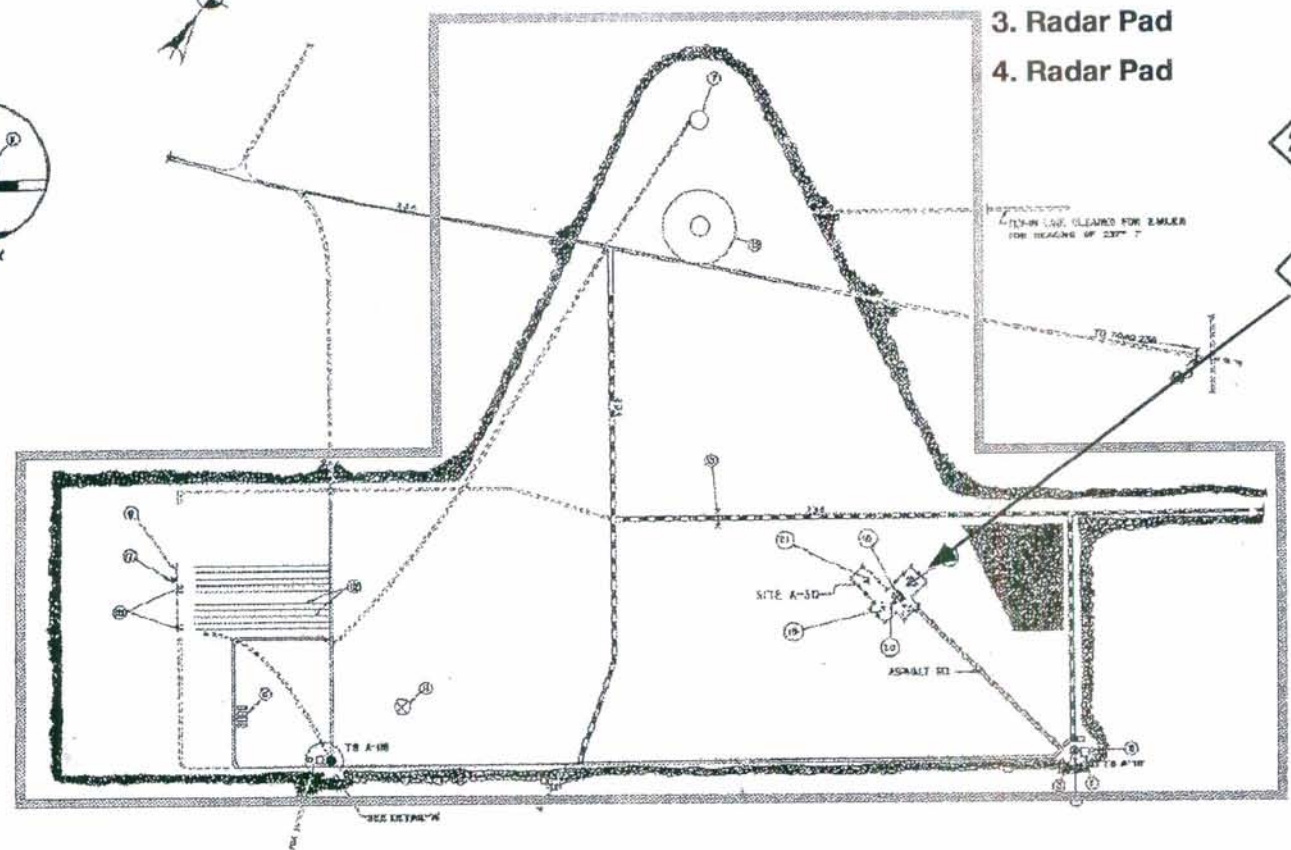


# Threat Site (A-30)

1. Radar Pad
2. Flycatcher And Data Van
3. Radar Pad
4. Radar Pad



VICINITY MAP



- SYMBOL LEGEND**
- PAVED ROAD
  - CLAY ROAD
  - SAND ROAD
  - UNCLEANED AREA
  - ABOVE GROUND BUILDING
  - OTHER STRUCTURE





A-30

ON-SITE OPERATIONAL THREAT



# **HYPERVELOCITY RESEARCH FACILITY (A-15)**

- **CAPABILITIES**

- ELECTRIC GUN TECHNOLOGY DEVELOPMENT FOR STRATEGIC AND THEATER MISSILE DEFENSE
- 6.3 LEVEL RESEARCH IN ELECTROMAGNETIC LAUNCHERS, ELECTROTHERMAL CHEMICAL GUNS, AND RAM ACCELERATORS
- EXPERIMENTAL PLASMA PROCESSING FACILITY

- **TYPICAL ACTIVITIES/CUSTOMERS**

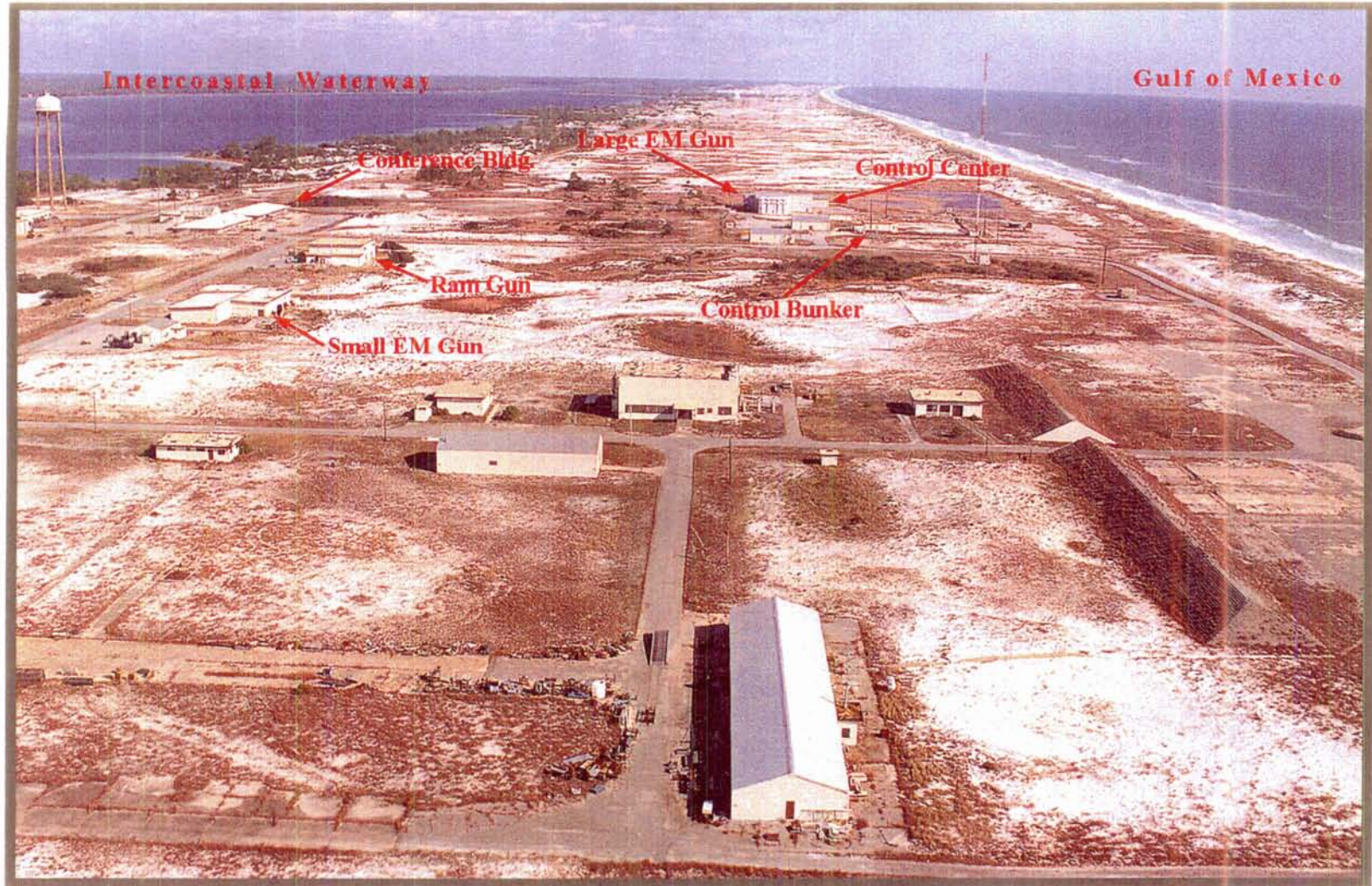
- ARMATURE RESEARCH (ARDEC)
- IN-BORE INSTRUMENTATION DIAGNOSIS (TECOM)
- PROPOSED LAUNCH SITE FOR TMD MISSILE INTERCEPTORS (THAAD, PATRIOT, P<sup>3</sup>I)

- **MODELING / SIMULATION**

- INTEGRATION LABORATORY TESTING
- OPEN AIR RANGE TESTING



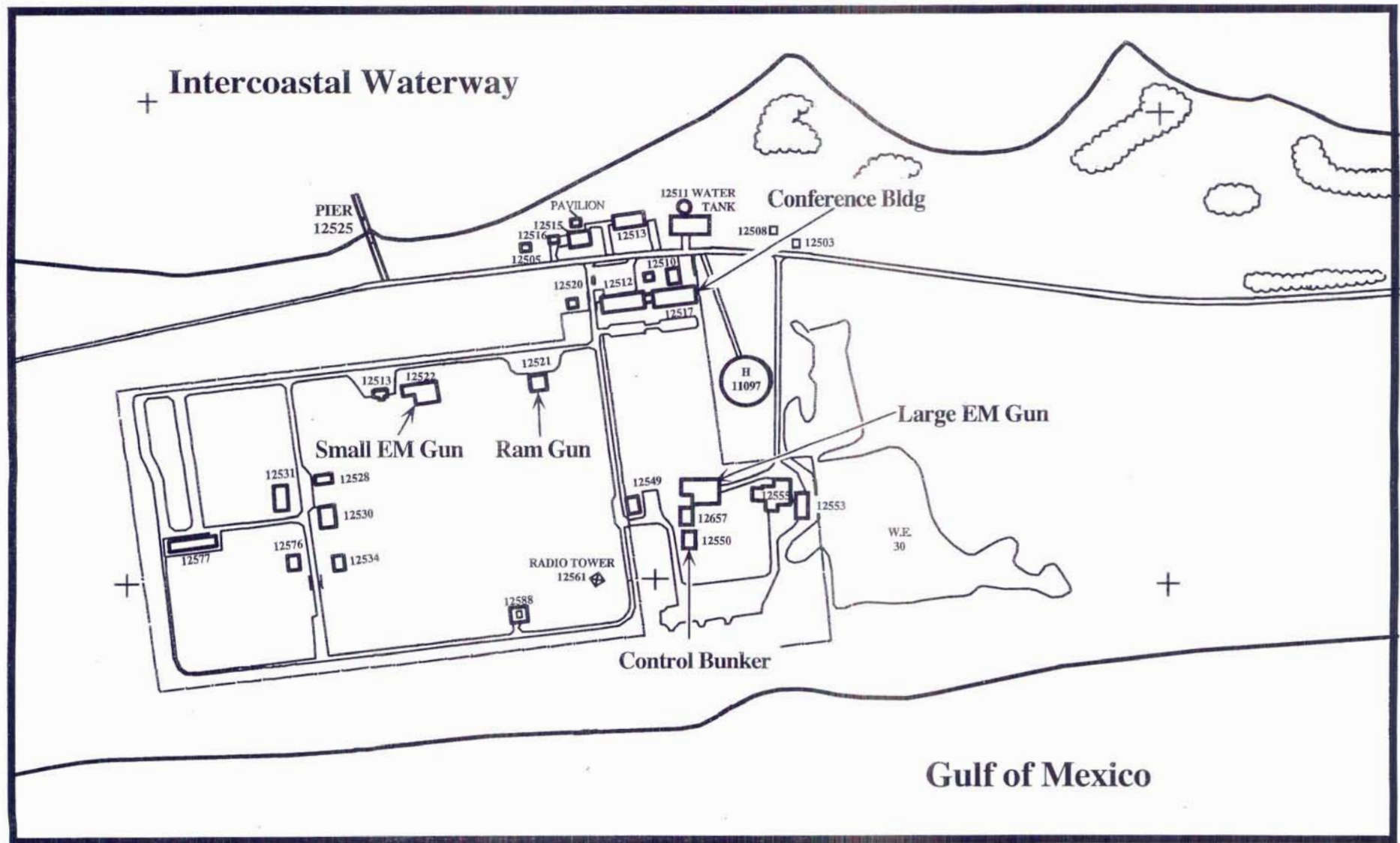
# HYPERVELOCITY RESEARCH FACILITY A-15



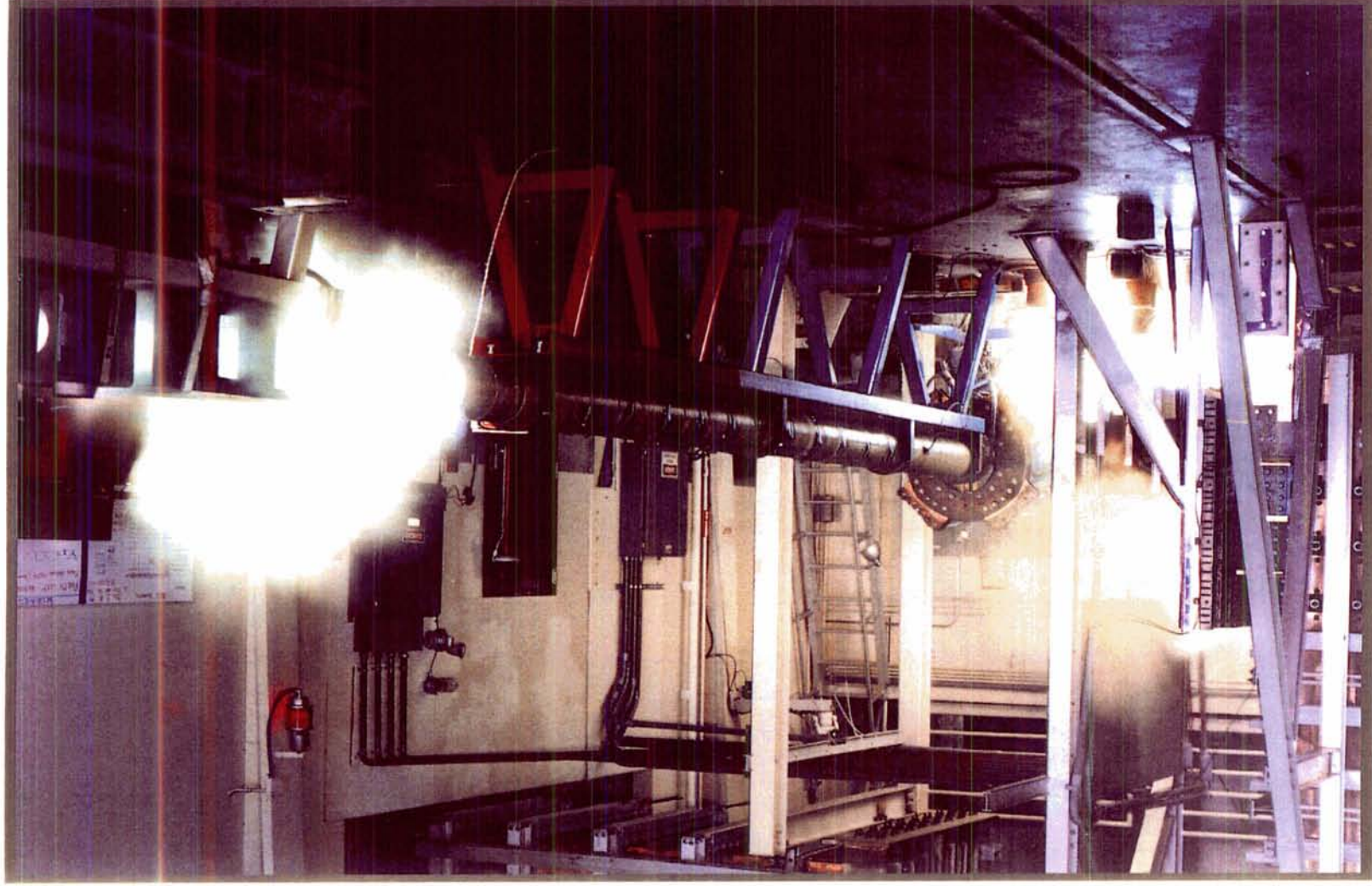
Proposed Army Theater Missile Defense/EM Gun Testing



# HYPERVELOCITY RESEARCH FACILITY (A-15)



# HYPERVELL CITY RESEARCH FACILITY A-15



Electromagnetic Gun



# HURLBURT FIELD

- **CAPABILITIES**

- HURLBURT RUNWAY 9,600 x 150 FEET
- AIR FORCE SPECIAL OPERATIONS COMMAND
  - WORLDWIDE DEPLOYMENT AND ASSIGNMENT TO REGIONAL UNIFIED COMMANDS
- 16TH SPECIAL OPERATIONS WING
  - UNCONVENTIONAL WARFARE
  - COUNTERINSURGENCY
  - PSYCHOLOGICAL OPERATIONS

- **TYPICAL ACTIVITIES/CUSTOMERS**

- SEARCH AND RESCUE (DESERT SHIELD/DESERT STORM)
- EMERGENCY EVACUATION COVERAGE (NAVY)
- CLOSE AIR SUPPORT (USAF)

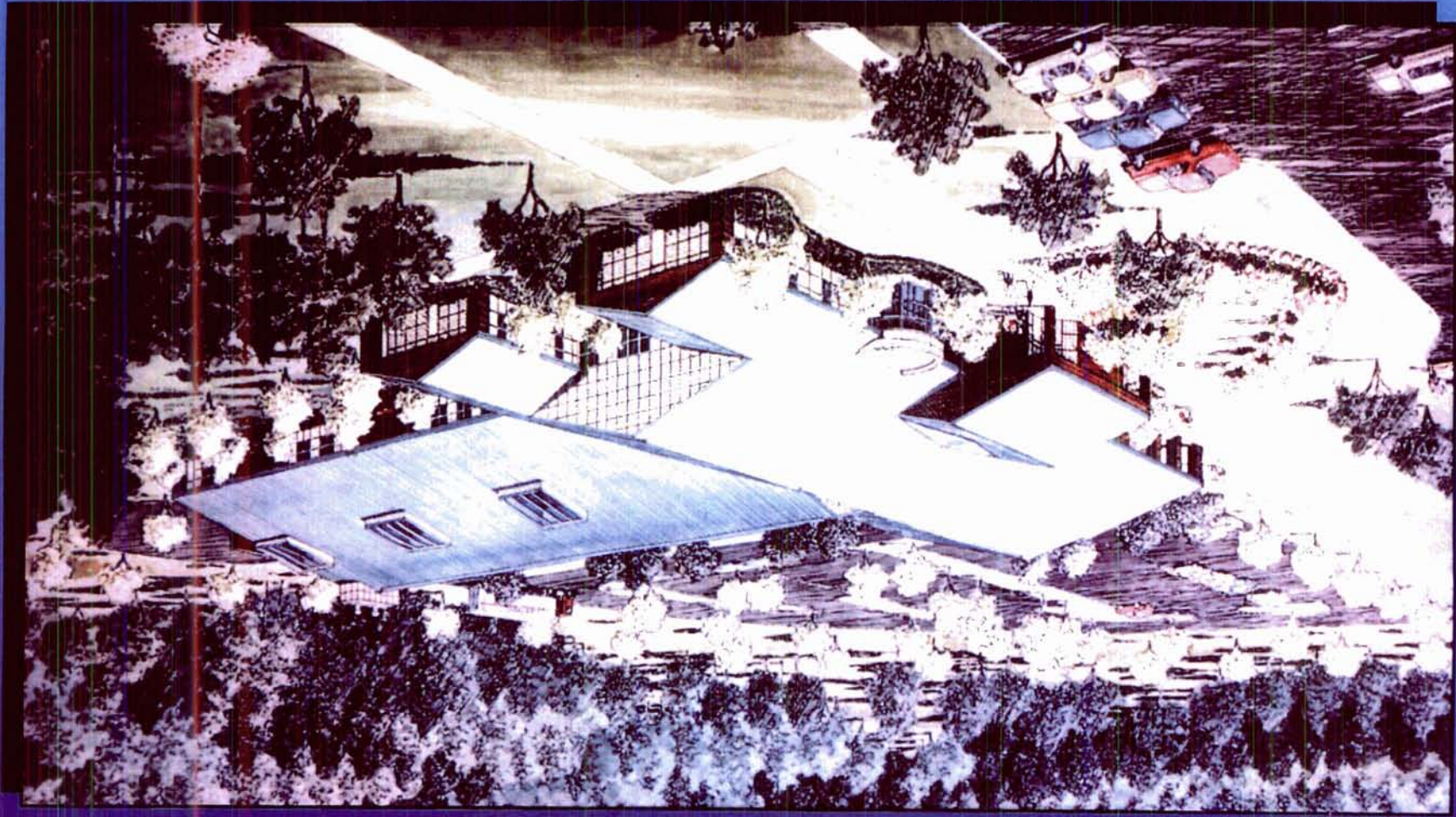


**HURLBURT FIELD**

# GRADUATE ENGINEERING AND RESEARCH CENTER (GERC)

- FACILITY
  - 45,000 SQ FT INITIALLY
  - OFFICES/CLASSROOMS
  - RESEARCH LABORATORIES
- GRADUATE PROGRAM
  - MASTERS AND DOCTORATE DEGREES
- CONTINUING EDUCATION
  - GRADUATE ELECTIVE COURSES
  - SHORT COURSES AND SEMINARS
  - LOCAL, STATE, NATIONAL, AND INTERNATIONAL OFFERINGS
- RESEARCH
  - WORLD CLASS FACILITIES AND EXPERTISE
- TECHNOLOGY TRANSFER
  - STATE AND FEDERAL INITIATIVES
  - OPPORTUNITIES FOR GERC AND STATE OF FLORIDA





**UNIVERSITY OF FLORIDA  
GRADUATE ENGINEERING RESEARCH CENTER (GERC)**



# **BASE INSTALLATION SECURITY SYSTEMS (BISS) (C-3)**

- **CAPABILITIES**
  - EVALUATE AND CERTIFY SECURITY SENSORS AND BASE SECURITY SYSTEMS
  - IMPROVE SYSTEM PERFORMANCE AND INSTALLATION TECHNIQUES
  - EVALUATE ENVIRONMENTAL EFFECTS ON SECURITY SYSTEMS
  
- **TYPICAL ACTIVITIES/CUSTOMERS**
  - VTW - 400 SENSOR (ESC/AVJ)
  - FIBER OPTIC INTRUSION DETECTION SYSTEM (ESC/AVJ)
  - RELOCATABLE SENSOR SYSTEM (ESC/AVJ)

**INSTALLED SYSTEMS TESTING**



**BISS**  
**C-3**



# EGLIN ENVIRONMENTAL STEWARDSHIP

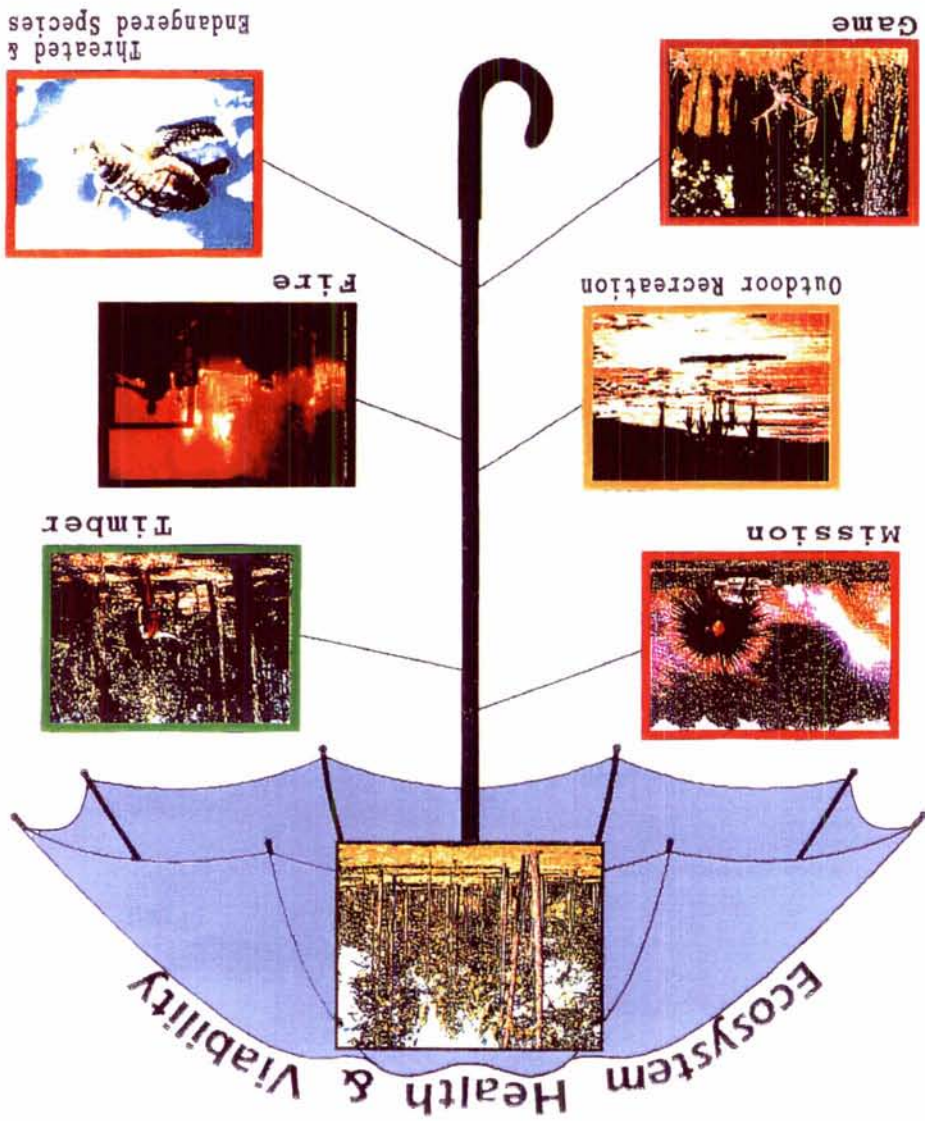
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## THE RESOURCE = UNIQUE

- **TREMENDOUS BIODIVERSITY**
  - ALMOST HALF OF 83 NATURAL RESOURCE COMMUNITIES IN FLORIDA
  - DEEP WELL DRAINED SAND PHYSIOGRAPHY
  - ROLLING SANDHILL RIDGES WITH 600 MILES OF CLEAR COOL SEEPAGE STREAMS OF HIGHEST QUALITY IN SOUTHEAST US
- **SANDHILL ECOSYSTEM LARGEST IN SOUTHEAST - 78% OF EGLIN**
  - LARGEST CONTIGUOUS OLD GROWTH LONG LEAF PINE
  - WORLD'S FOURTH LARGEST POPULATION OF ENDANGERED RED COCKADED WOODPECKER
  - 98% OF ENTIRE RANGE OF THE ENDANGERED OKALOOSA DARTER
  - HIGH DIVERSITY OF RARE HERPETOFAUNA
- **PRISTINE BARRIER ISLANDS FOR 20 MILES ALONG GULF OF MEXICO**
  - LARGEST INTACT POPULATION OF BEACH MICE IN NORTHWEST FLORIDA
  - 53% OF FLORIDA'S THREATENED SNOWY PLOVER
  - NESTING AREA FOR LOGGERHEAD AND GREEN SEA TURTLES

## THE PROGRAM = COMPREHENSIVE

- **GOAL - SUPPORT AIR FORCE TEST MISSION & DoD TRAINING ACTIVITIES**
  - RESPONSIBLE STEWARDSHIP UTILIZING INTEGRATED NATURAL RESOURCE MANAGEMENT
  - ENSURE ECOSYSTEM VIABILITY AND DIVERSITY
  - PROVIDE FOR COMPATIBLE MULTIPLE LAND-USE
- **NATURAL RESOURCES MANAGEMENT PLAN (NRMP) 93-97**
  - FIRST ECOSYSTEM NRMP IN DoD
  - PROVIDES STRATEGIC GUIDANCE FOR LONG RANGE ECOSYSTEM MANAGEMENT
  - INITIATES ON-GOING RESEARCH/MONITORING PROGRAMS TO ASSESS ECOSYSTEM IMPACT/HEALTH
  - EXTENSIVE COORDINATION WITH ACADEMIA AND CONSERVATION ORGANIZATIONS
  - TEST AREAS (CLEARED LAND) ARE ONE OF FOUR LAND CATEGORIES RECOGNIZED
- **PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT AND RANGE COMPREHENSIVE PLAN**
  - 18 MONTH \$2+ MILLION EFFORT TO FORMALLY DOCUMENT RANGE TEST CAPACITY AND COMPATIBILITY WITH THE ENVIRONMENT - EXPEDITE TESTING!
  - PROACTIVELY DOCUMENT RANGE-LAND USE TO PUBLIC IN ORDER TO AVOID ENCROACHMENT



# EGLIN ENVIRONMENTAL STEWARDSHIP

## THE RESULTS - TESTING AND ENVIRONMENT IN HARMONY

---

- AWARDED FLORIDA WILDLIFE FEDERATION 1994  
"LAND CONSERVATION OF THE YEAR AWARD"
- AWARDED SECRETARY OF DEFENSE AND AIR FORCE 1993  
"NATURAL RESOURCES CONSERVATION AWARD"
- AWARDED THE NATURE CONSERVANCY'S  
"PRESIDENT'S CONSERVATION ACHIEVEMENT AWARD FOR 1993"
- RECEIVED 1993 SIERRA CLUB OF FLORIDA  
"AWARD FOR EXCELLENCE IN ENVIRONMENTAL PLANNING"
- PERMITTED TO TAKE ENDANGERED RED-COCKADED WOODPECKER (RCW)  
IN SUPPORT OF TESTING
  - EXTENSIVE HABITATE ENLARGEMENT WITH ECOSYSTEM MANAGEMENT
  - FIVE YEAR MONITORING PROGRAM TO ASSESS TRENDS
- CONDUCTED MAJOR JOINT LOGISTICS OVER THE SHORE (JLOTS) EXERCISE  
WITH NO ADVERSE ACTION
  - COMPLETED INTENSIVE ENVIRONMENTAL ASSESSMENT
  - TRANSFERRED 3 MILLION GALLONS OF FUEL FROM SHIP TO BARRIER ISLAND AND OFF WITHOUT A SPILL

*"I WOULD SAY, WITHOUT HESITATION,  
THAT IT IS THE FINEST PUBLIC LAND  
MANAGEMENT PLAN I EVER READ"*

*THE NATURE CONSERVANCY*

*"THIS IS AN OUTSTANDING PLAN. IT IS  
FAR AND ABOVE THE BEST... FOR  
PUBLICALLY OWNED LAND"*

*SIERRA CLUB*











MAIN BASE

Printed by  
Eglin AFB Visual Info Tech Spt  
46th TW/TSTMV 904-882-4869

# Document Separator





# ELECTROMAGNETIC TEST ENVIRONMENT (EMTE) TEST SITES



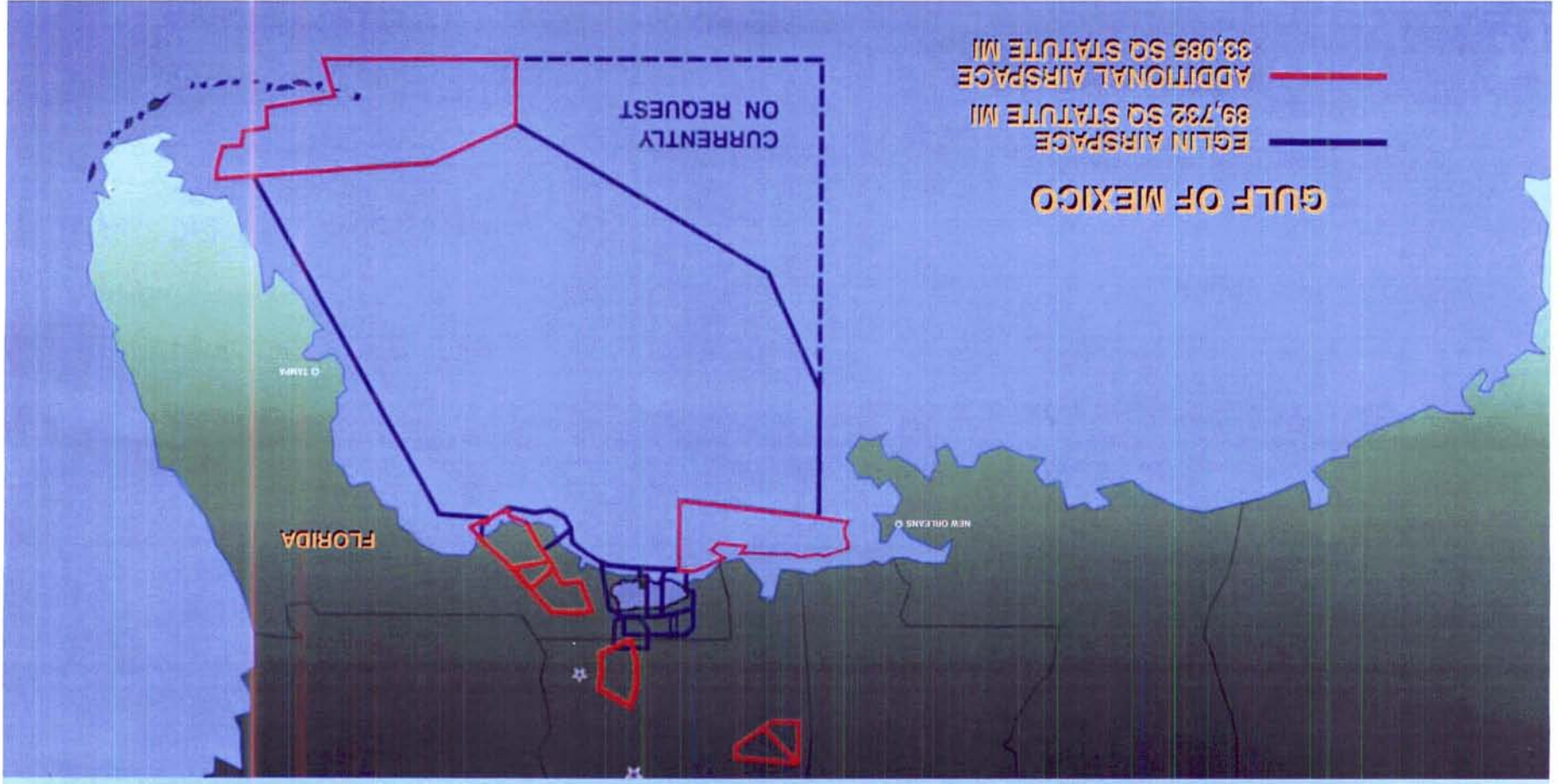
Air Force Development Test Center  
Eglin AFB, Florida



OPEN AIR RANGE TESTING







**AIRSPACE AVAILABLE WITHIN 48 HOURS  
122,817 SQ STATUTE MILES TOTAL**



## TEST & EVALUATION BUDGET

	<u>FY94</u>	<u>FY95</u>
INSTITUTIONAL FUNDING*	\$91	\$86
OPERATION & MAINTENANCE	<u>11</u>	<u>10</u>
AVIATION DEPOT LEVEL REPARABLES (AVDLRs)	\$102	\$96
TOTAL INSTITUTIONAL FUNDING	\$52	\$50
TOTAL INVESTMENT FUNDING	\$222	\$229
TOTAL CUSTOMER FUNDING*	\$45	\$20
TOTAL MILCON FUNDING	\$98	\$99
TOTAL MILITARY PAY*	<u>\$124</u>	<u>\$142</u>
OTHER FUNDING**	\$643	\$636
TOTAL AFDTC FUNDING		

## STATISTICS

### PERSONNEL

AFDTC (PE65807 and 65708, only)*		
MILITARY		1,144
CIVILIAN		1,609
CONTRACTOR		1,630
TOTAL EGLIN*		
MILITARY		16,137
CIVILIAN		5,300
CONTRACTOR		2,382

### AREA

AIRSPACE scheduled by Eglin		
OVERLAND	3,044	
OVERSEA	86,688	
ADDITIONAL SCHEDULABLE AIRSPACE		89,732 sq statute miles*
OVERLAND	8,025	
OVERSEA	25,060	
TOTAL AVAILABLE AIRSPACE		33,085 sq statute miles
		122,817 sq statute miles***

\* Includes 46TG located at Holloman AFB, NM.

\*\* Includes BOS, RPM, Minor Constuction, Environment Compliance, Wildlife, MFH, Training, Family Support, Child Care, Etc.

\*\*\* A request for an additional 33,350 sq. statute miles is being processed.



# TABLE OF CONTENTS

## TEST SITES

- 1. A-3
- 2. A-6
- 3. A-7
- 4. A-11
- 5. A-12
- 6. A-13A

## BASE

- 12. COMPUTER SCIENCES CENTER
- 13. ENVIRONMENTAL STEWARDSHIP

- 7. A-17
- 8. A-20
- 9. A-21/A-21A
- 10. A-30
- 11. B-10



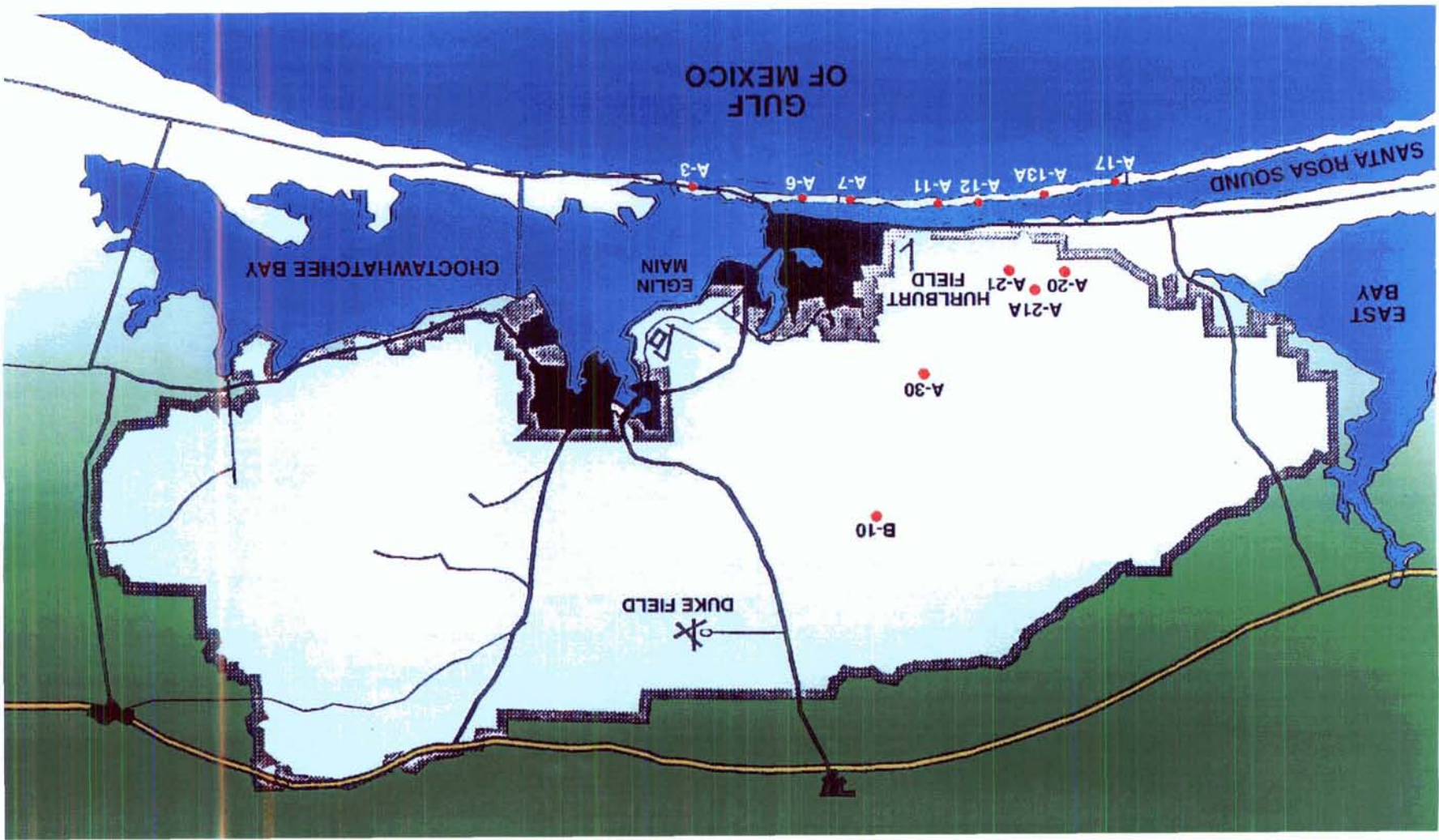
# ELECTROMAGNETIC TEST ENVIRONMENT (EMTE)

- **PURPOSE**
  - OPEN AIR FLIGHT TESTING (DT&E, OT&E, QT&E, TRAINING TACTICS) FOR ECM AND ECCM EFFECTIVENESS TESTING
  - PRINCIPLE USAF EC TEST AREA
- **MAJOR ASSETS**
  - 52 THREAT SYSTEMS; INCLUDING US, FOREIGN, SIMULATOR, AND SURROGATE SYSTEMS
  - 23 TEST SITES
  - 26 MULTIPURPOSE SUPPORT SYSTEMS / FACILITIES SHARED WITH ASTE
  - CO-LOCATED WITH PRIMES AND GWEF
- **PRINCIPLE CAPABILITIES**
  - EC ASSESSMENT AND EFFECTIVENESS
  - RADAR WARNING RECEIVER TESTING AND TRAINING

**OPEN AIR RANGE TESTING**



**ELECTROMAGNETIC TEST ENVIRONMENT  
(EMTE) TEST SITES**

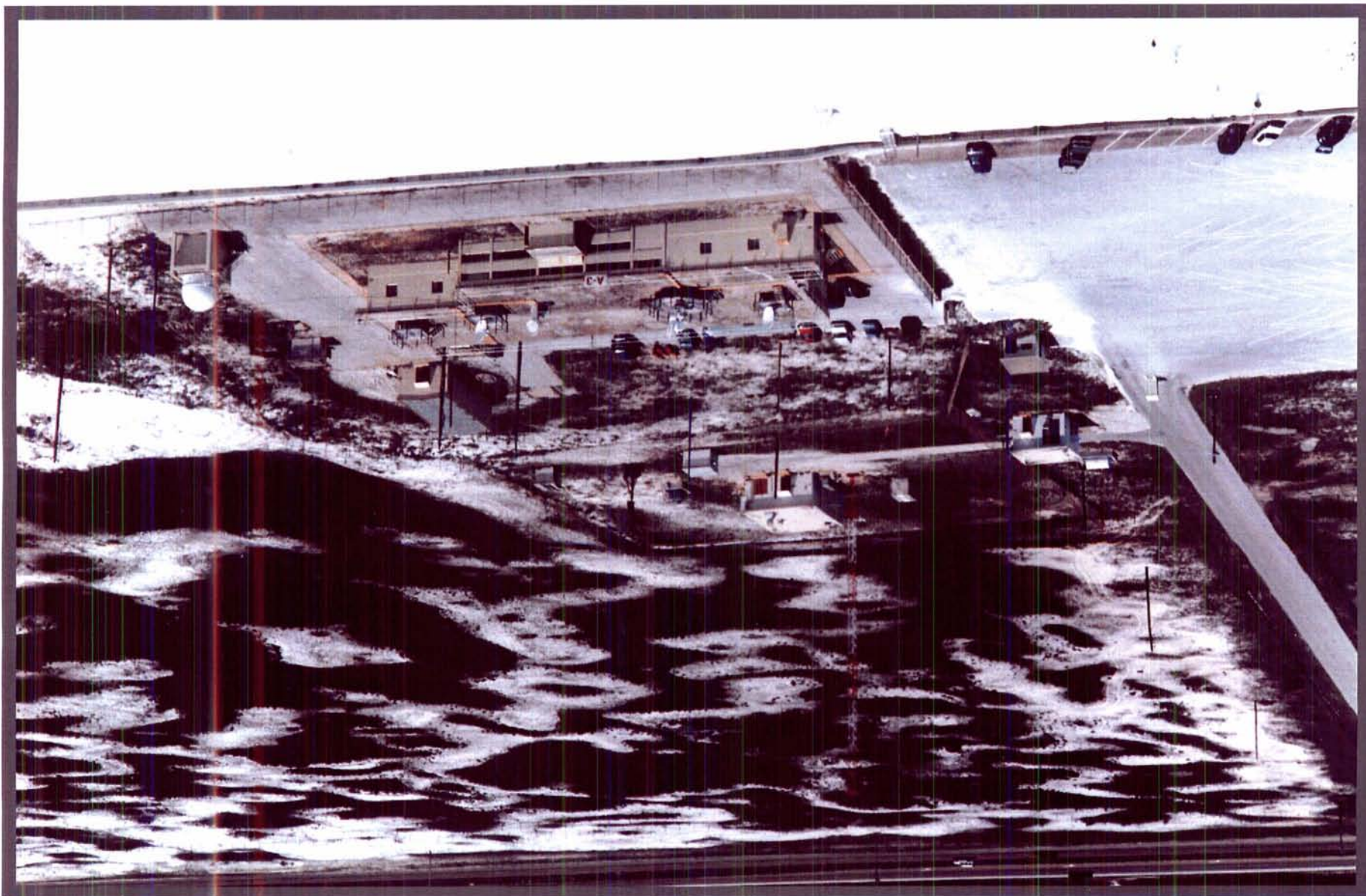




# TEST SITE A-3

- **PURPOSE**
  - MULTIPURPOSE TEST SITE
    - THREAT SIMULATORS FOR ECM EVALUATION
    - TSPI RADAR FOR AIRCRAFT TRACKING
  - RADIO LINKS FOR FLIGHT SAFETY
  
- **PRINCIPLE CAPABILITIES**
  - 2 SIMULATED THREAT SIGNAL SOURCES
    - SADS IV (SAM SYSTEM)
    - WEST IB/C (AAA SYSTEM)
  - 2 AN/MPS-19 TRACKING RADAR SYSTEMS
    - TIME-SPACE-POSITION INFORMATION (TSPI)
    - RADAR REFLECTIVITY DATA COLLECTION
  - UHF COMMAND GUIDANCE SYSTEM FOR DRONE CONTROL

**OPEN AIR RANGE TESTING**



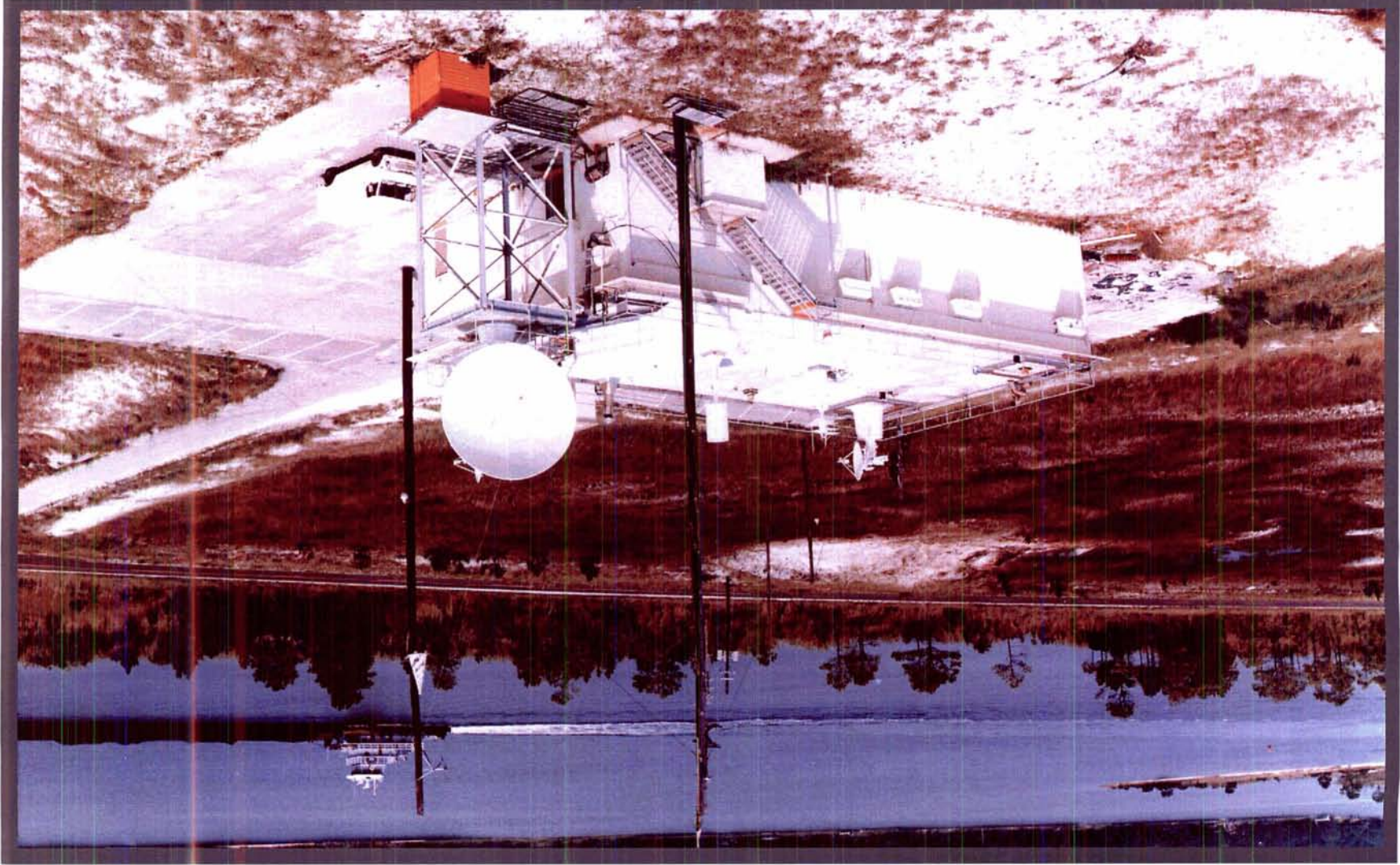
**TEST SITE A-3**



# FREQUENCY CONTROL AND ANALYSIS (FCA) FACILITY TEST SITE A-6

- **PURPOSE**
  - ENSURE RF INTERFERENCE-FREE OPERATIONS
  - RF MONITORING AND RECORDING
  - UHF AIR-GROUND COMMUNICATIONS
  
- **PRINCIPLE CAPABILITIES**
  - CHECK AND RECORD GROUND AND AIRBORNE EMITTER PARAMETERS PRIOR TO ECM TESTING
  - MONITOR, MEASURE, AND RECORD RF SPECTRUM

**OPEN AIR RANGE TESTING**



# FREQUENCY CONTROL AND ANALYSIS FCA FACILITY TEST SITE A-6



## TEST SITE A-7

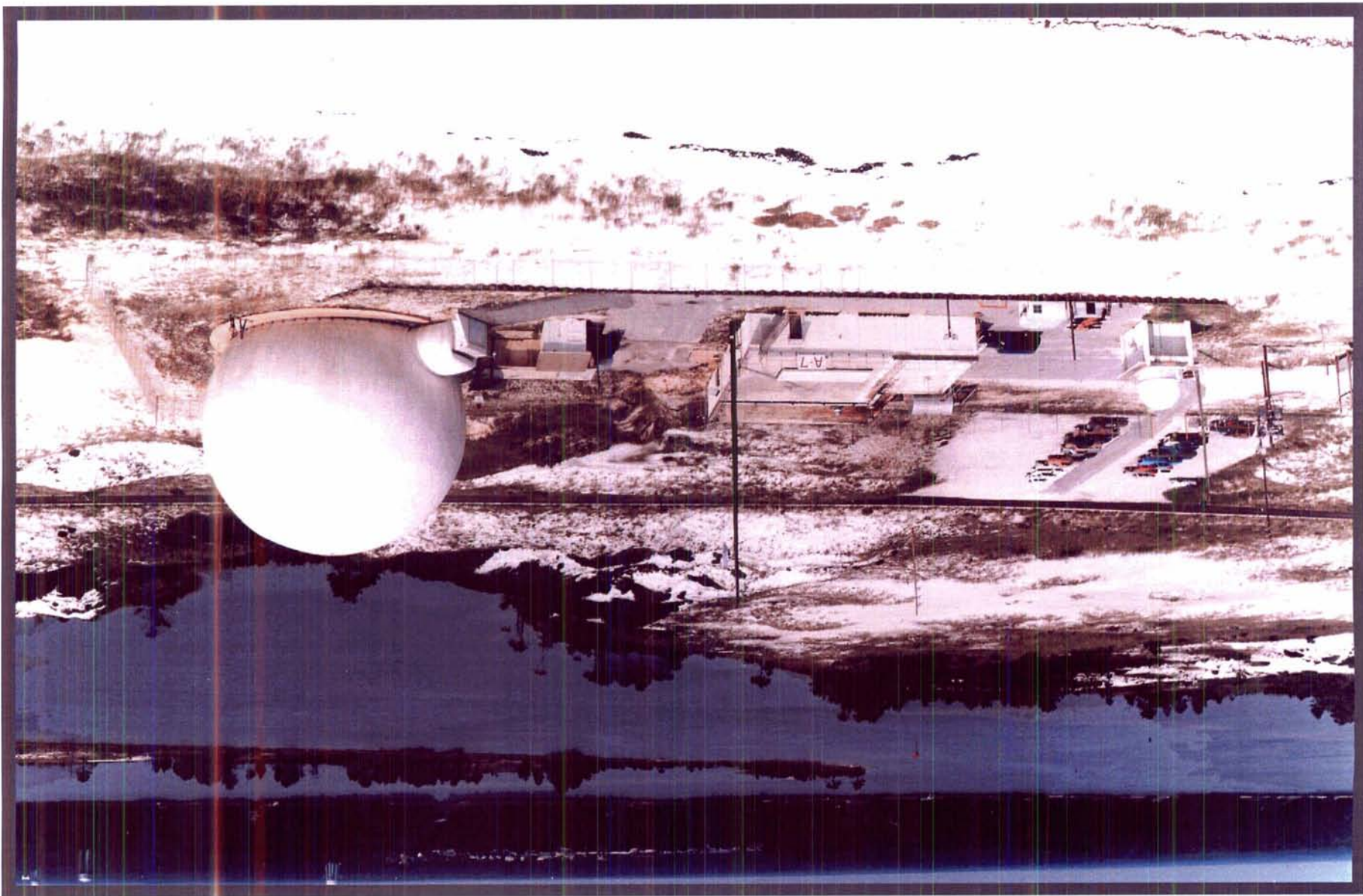
- **PURPOSE**

- REALISTIC FLIGHT TEST EVALUATIONS OF EC EQUIPMENT, TACTICS, AND TECHNIQUES AGAINST SIMULATED THREAT MISSILE SYSTEMS

- **PRINCIPLE CAPABILITIES**

- SADS I (SAM SIMULATOR)
- LOW POWER ILLUMINATOR SIGNAL SOURCE (LPISS)
- TRACK-WHILE-SCAN (TWS) SIMULATOR
- REAL TIME TSPI DATA VIA COMPUTER SCIENCES CENTER LINK

**OPEN AIR RANGE TESTING**



**TEST SITE A-7**



# TEST SITE A-11

- **PURPOSE**
  - REALISTIC FLIGHT TEST EVALUATIONS OF EC EQUIPMENT, TACTICS, AND TECHNIQUES AGAINST SIMULATED THREAT MISSILE SYSTEMS
  
- **PRINCIPLE CAPABILITIES**
  - SADS XI (SAM SIMULATOR)
  
  - SADS XI M (SAM SIMULATOR)
    - ONE-OF-A-KIND, SEMI-ACTIVE CLOSED-LOOP MISSILE SIMULATOR (CLS) AND MISSILE FLY-OUT SIMULATOR
  
  - SADS VI M (SAM SIMULATOR)
    - ONE-OF-A-KIND, SEMI-ACTIVE CLOSED-LOOP MISSILE SIMULATOR (CLS)
  
    - MISSILE FLY-OUT SIMULATOR
  
  - HIGH POWER ILLUMINATOR SIGNAL SOURCE (HPISS)
    - TARGET ILLUMINATOR SYSTEM

**OPEN AIR RANGE TESTING**



# TEST SITE A-11

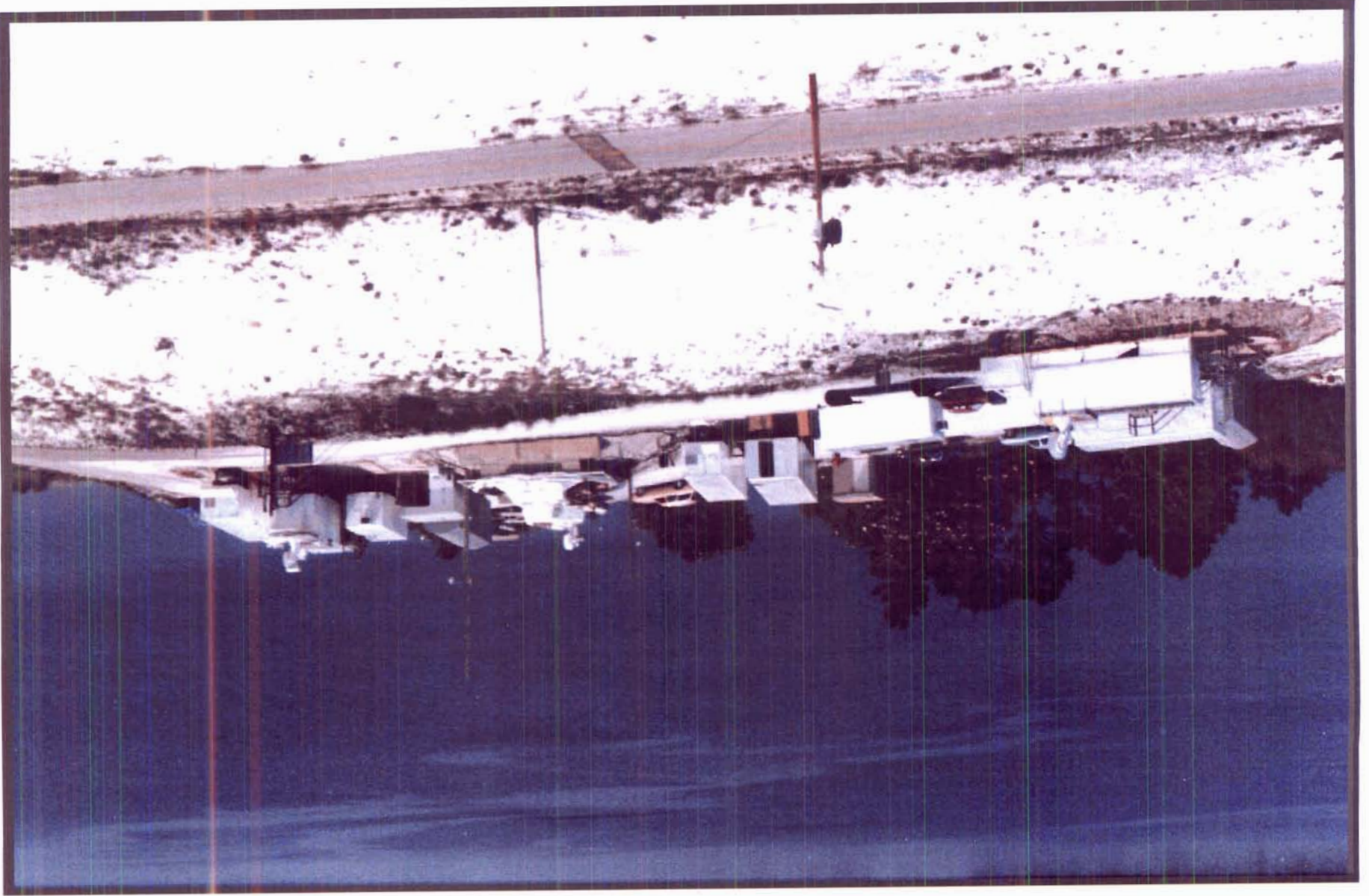


## TEST SITE A-12

- **PURPOSE**
  - OPERATING BASE FOR MOBILE AAA RADAR SYSTEMS, THREAT SIMULATORS, AND/OR CONTROL AND ACQUISITION RADARS
  
- **PRINCIPLE CAPABILITIES**
  - WEST I A, MOBILE FIRE CONTROL THREAT SIMULATOR
  - WEST X, MOBILE FIRE CONTROL THREAT SIMULATOR
  - WEST XI B, MOBILE THREAT SYSTEM
  - SPECIALIZED ECM TEST INSTRUMENTATION

**OPEN AIR RANGE TESTING**





**TEST SITE A-12**

# TEST SITE A-13A

- **PURPOSE**
  - REALISTIC FLIGHT TEST EVALUATIONS OF EC EQUIPMENT, TACTICS, AND TECHNIQUES AGAINST SIMULATED THREAT MISSILE SYSTEMS
  
- **PRINCIPLE CAPABILITIES**
  - 2 FIXED THREAT SIMULATORS
    - SADS III B (MEDIUM RANGE SAM)
    - SADS VIII (SHORT-MEDIUM RANGE SAM)
      - REAL-TIME CLOSED-LOOP MISSILE SIMULATION
  - MOBILE THREAT SIMULATOR
    - SADS V (SIGNAL SOURCE), RF SIMULATOR
  - SPECIALIZED ECM TEST INSTRUMENTATION

**OPEN AIR RANGE TESTING**





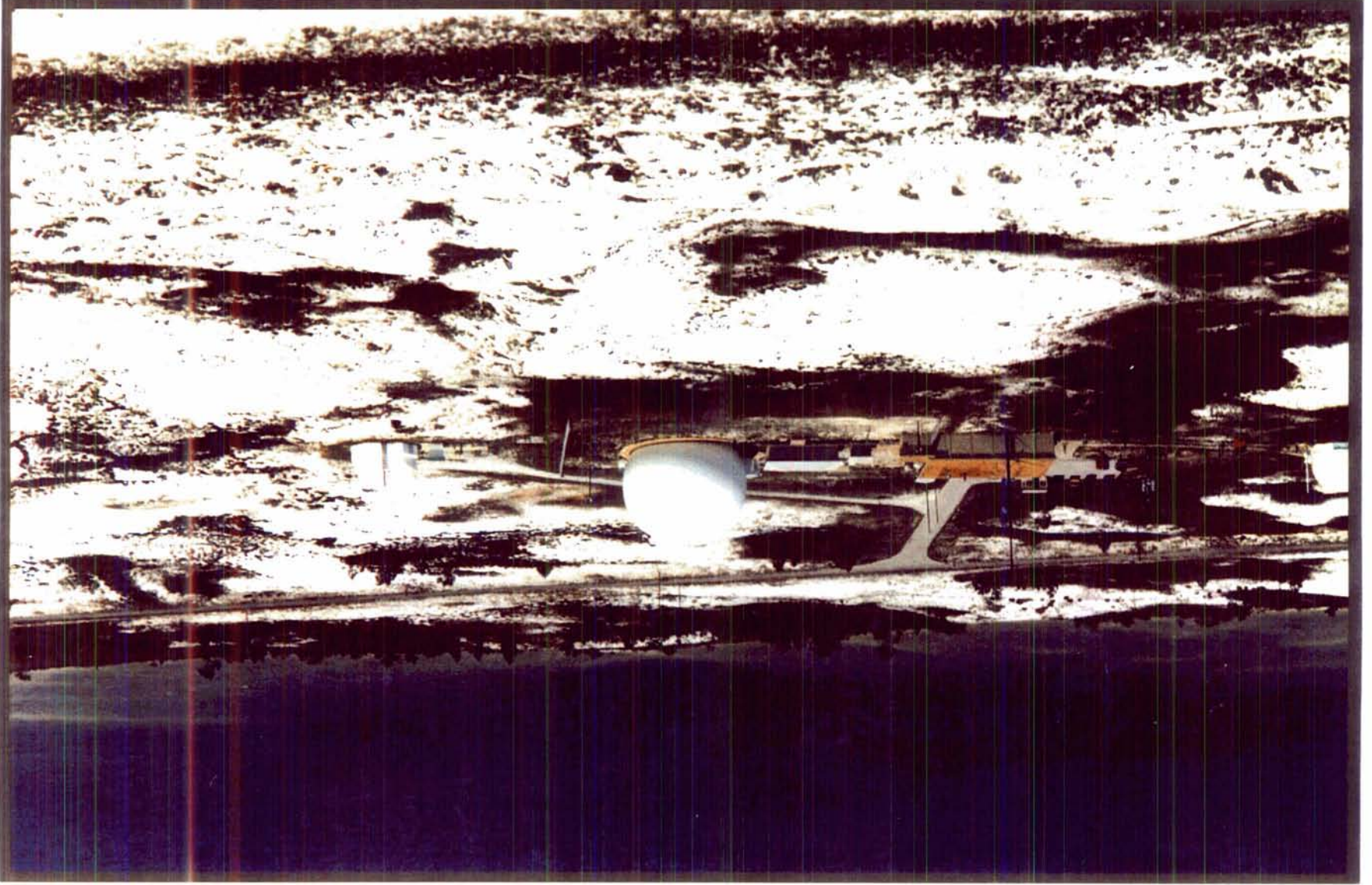
**TEST SITE A-13A**



# TEST SITE A-17

- **PURPOSE**
  - REALISTIC FLIGHT TEST EVALUATIONS OF EC EQUIPMENT, TACTICS, AND TECHNIQUES AGAINST SIMULATED THREAT MISSILE SYSTEMS
  
- **PRINCIPLE CAPABILITIES**
  - SADS II (MEDIUM RANGE SAM)
  - SADS II W, ELECTRONIC COUNTER-COUNTERMEASURE SUB-SYSTEM
  - INSTRUMENTED FOR TRANSMITTING DATA
    - SIMULATED MISSILE MISS-DISTANCE
    - TRACKING ERRORS
    - TSPI DATA
  - SPECIALIZED ECM TEST INSTRUMENTATION

**OPEN AIR RANGE TESTING**



**TEST SITE A-17**



## TEST SITE A-20

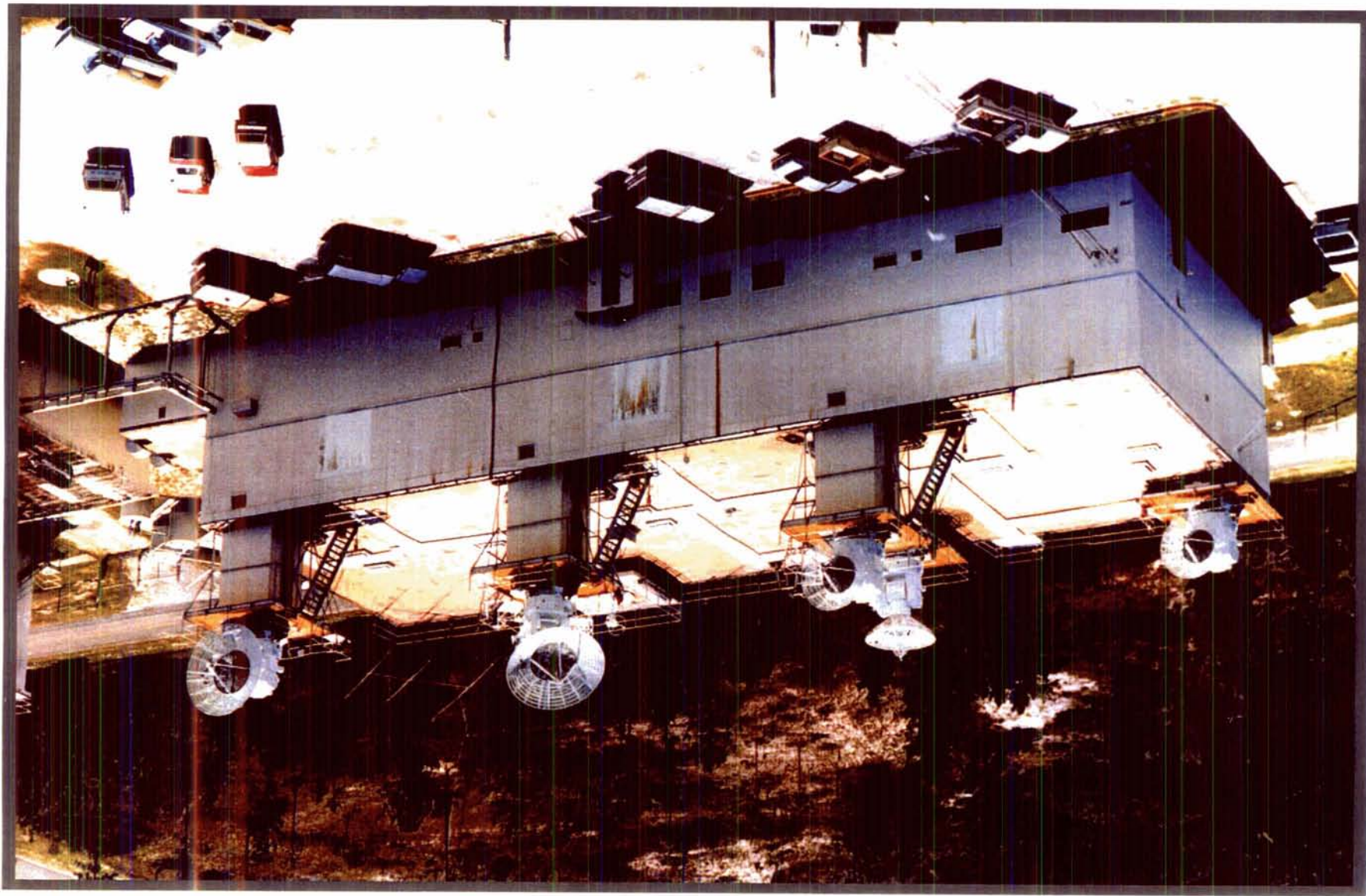
- **PURPOSE**

- MASTER TARGET TRACKING AND TSPI DATA SITE FOR EMTE AND ASTE
- MOST SOPHISTICATED SITE IN THE DEGREE OF INTEGRATION WITH OTHER EMTE INSTRUMENTED SYSTEMS

- **PRINCIPLE CAPABILITIES**

- REMOTE BACKUP FLIGHT CONTROL CENTER FOR CENTRAL CONTROL FACILITY (CCF)
- FOUR AN/FPS-16 TRACKING RADAR SYSTEMS
- ACCURATE AIRBORNE POSITION DATA OUT TO 500 NMI

**OPEN AIR RANGE TESTING**



**TEST SITE A-20**

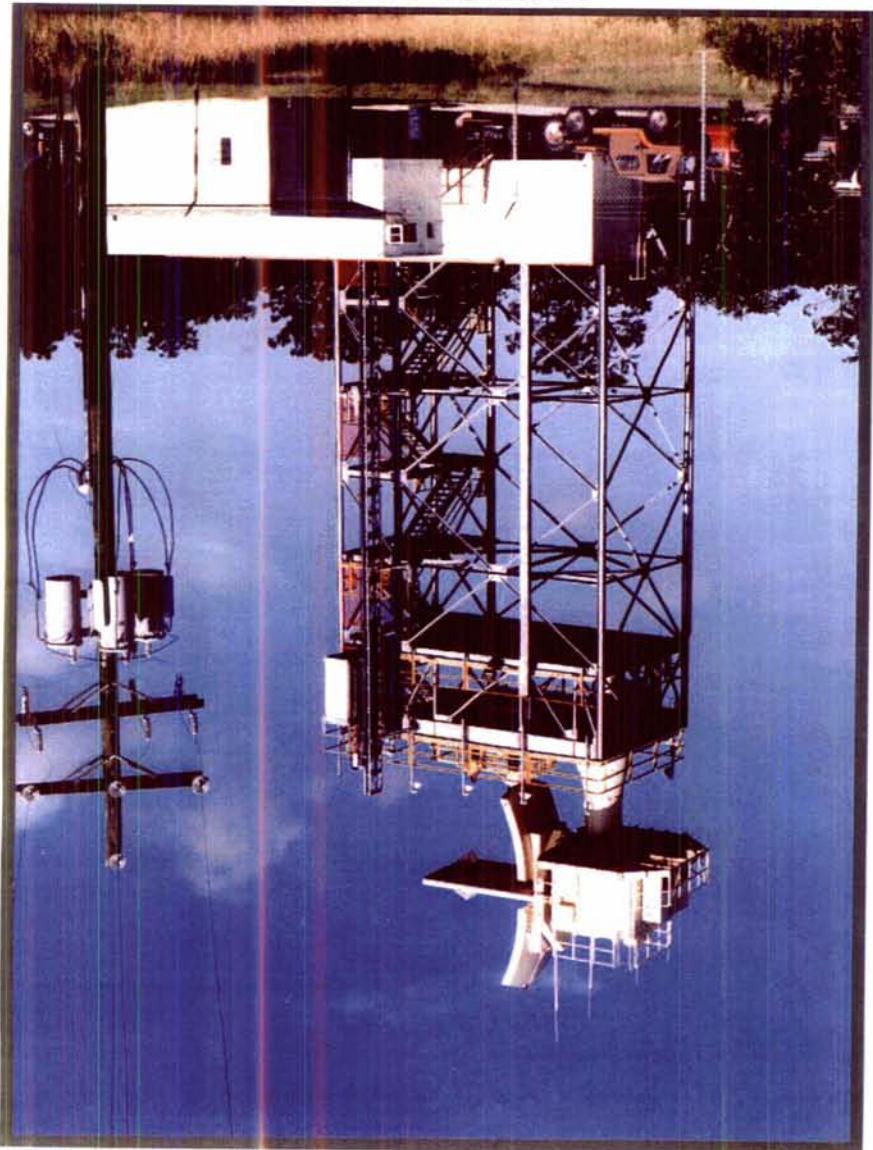


# TEST SITE A-21/A-21A

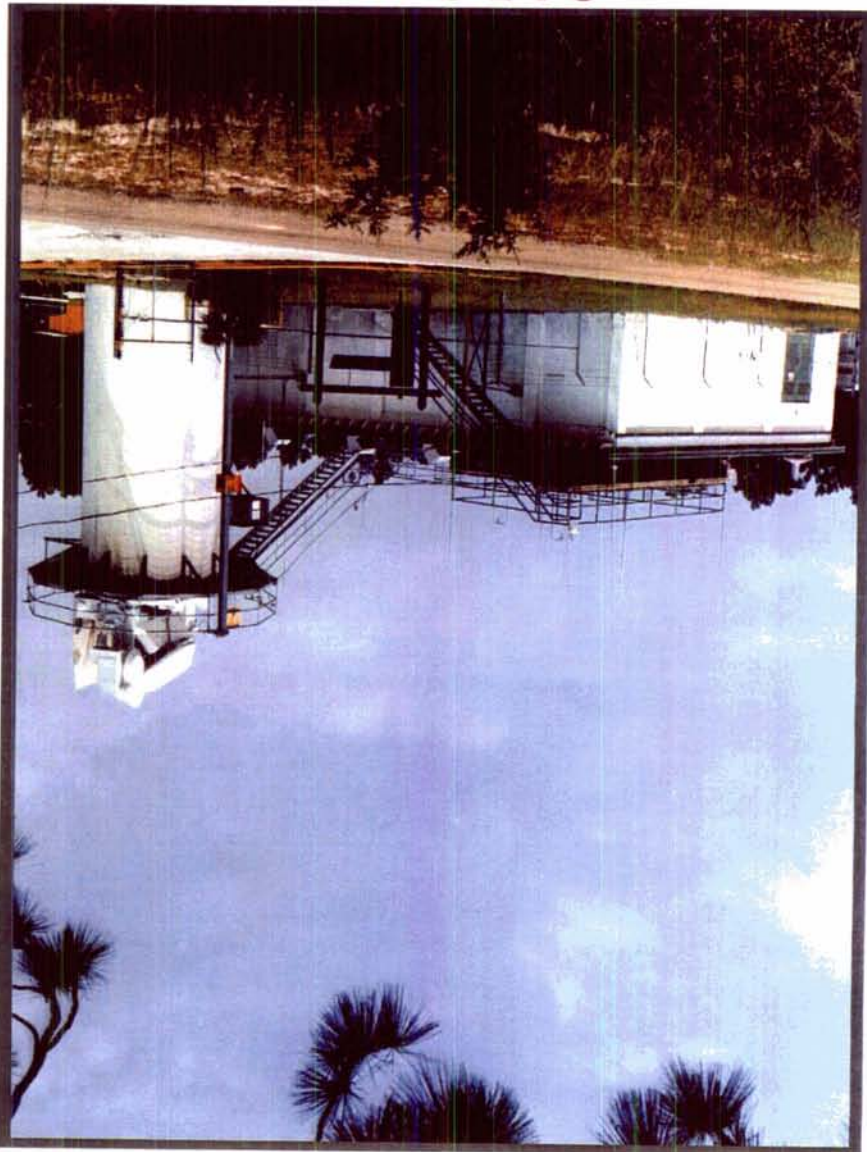
- **PURPOSE**
  - REALISTIC FLIGHT TEST EVALUATIONS OF EC EQUIPMENT, TACTICS, AND TECHNIQUES AGAINST SIMULATED THREAT MISSILE SYSTEMS
  
- **PRINCIPLE CAPABILITIES**
  - 2 SIMULATED THREAT SYSTEMS
    - SADS IV (MEDIUM RANGE SAM)
    - SADS X, SIGNAL SOURCE (NOT PICTURED)
      - EMITTER-ONLY SIMULATION OF TARGET TRACK RADAR
  - ACQUISITION SYSTEM
    - WEST XV
      - EARLY WARNING AND TARGET ACQUISITION RADAR
  - SPECIALIZED ECM TEST INSTRUMENTATION

**OPEN AIR RANGE TESTING**

**WEST XV**



**SADS IV**



**TEST SITE A-21/A21A**



# TEST SITE A-30

- **PURPOSE**

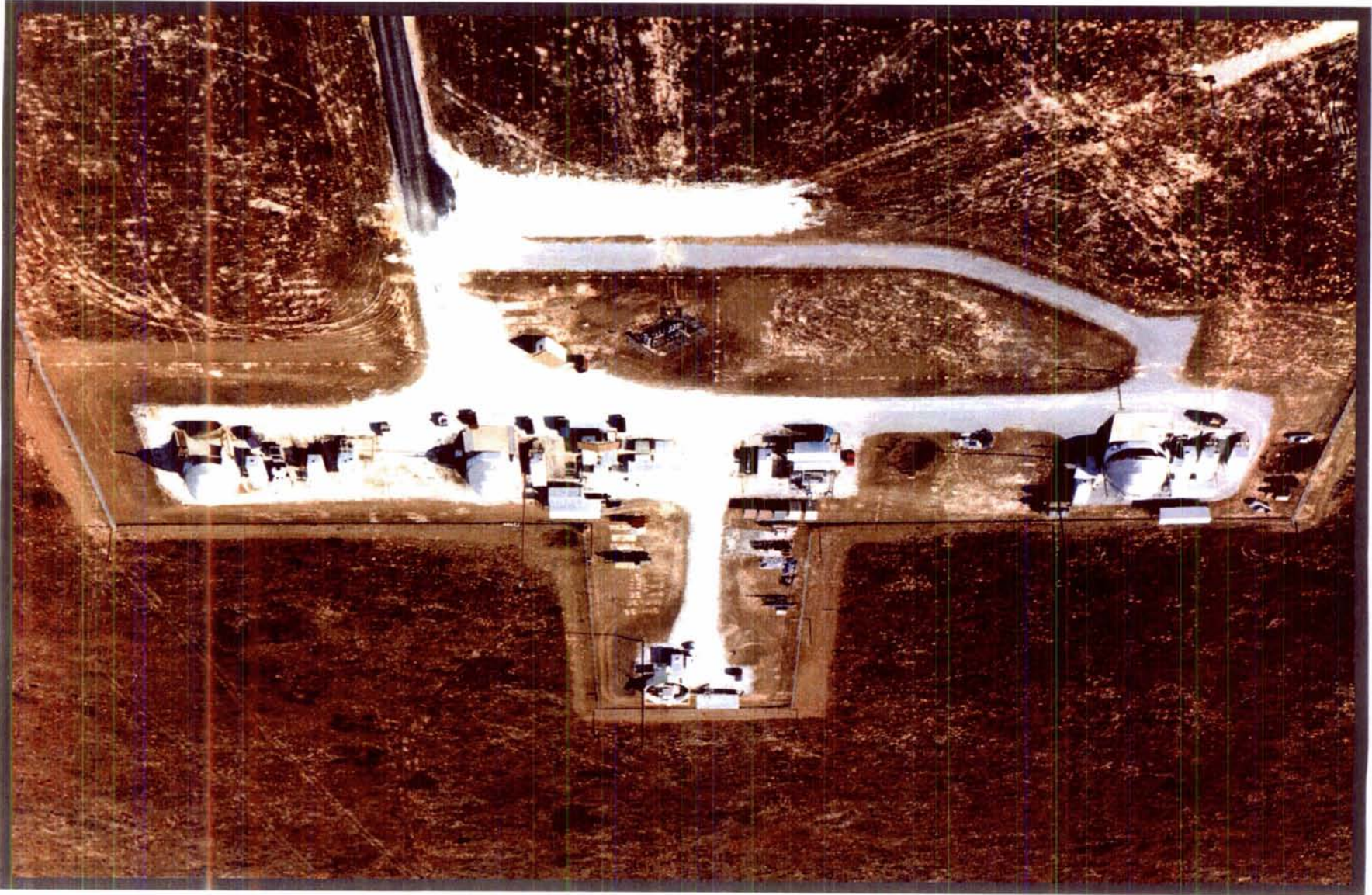
- MULTIPURPOSE THREAT SITE FOR MOBILE "VICTIM" RADAR SYSTEMS, THREAT SIMULATORS, AND/OR OTHER SYSTEMS AS REQUIRED.
- EGLIN'S LARGEST EC THREAT SITE

- **PRINCIPLE CAPABILITIES**

- SIMULATED THREAT SYSTEM
  - WEST X (AAA SYSTEM)
- REAL THREAT SYSTEMS
  - FLYCATCHER, MOBILE FIRE CONTROL RADAR
  - ROLAND (LOW ALTITUDE); BLUE/GRAY THREAT SYSTEM
  - WEST XI C, (AAA SYSTEM)
  - SADS VIII R
- EXTENSIVE GROUND TEST SCENARIO SIMULATIONS

**OPEN AIR RANGE TESTING**

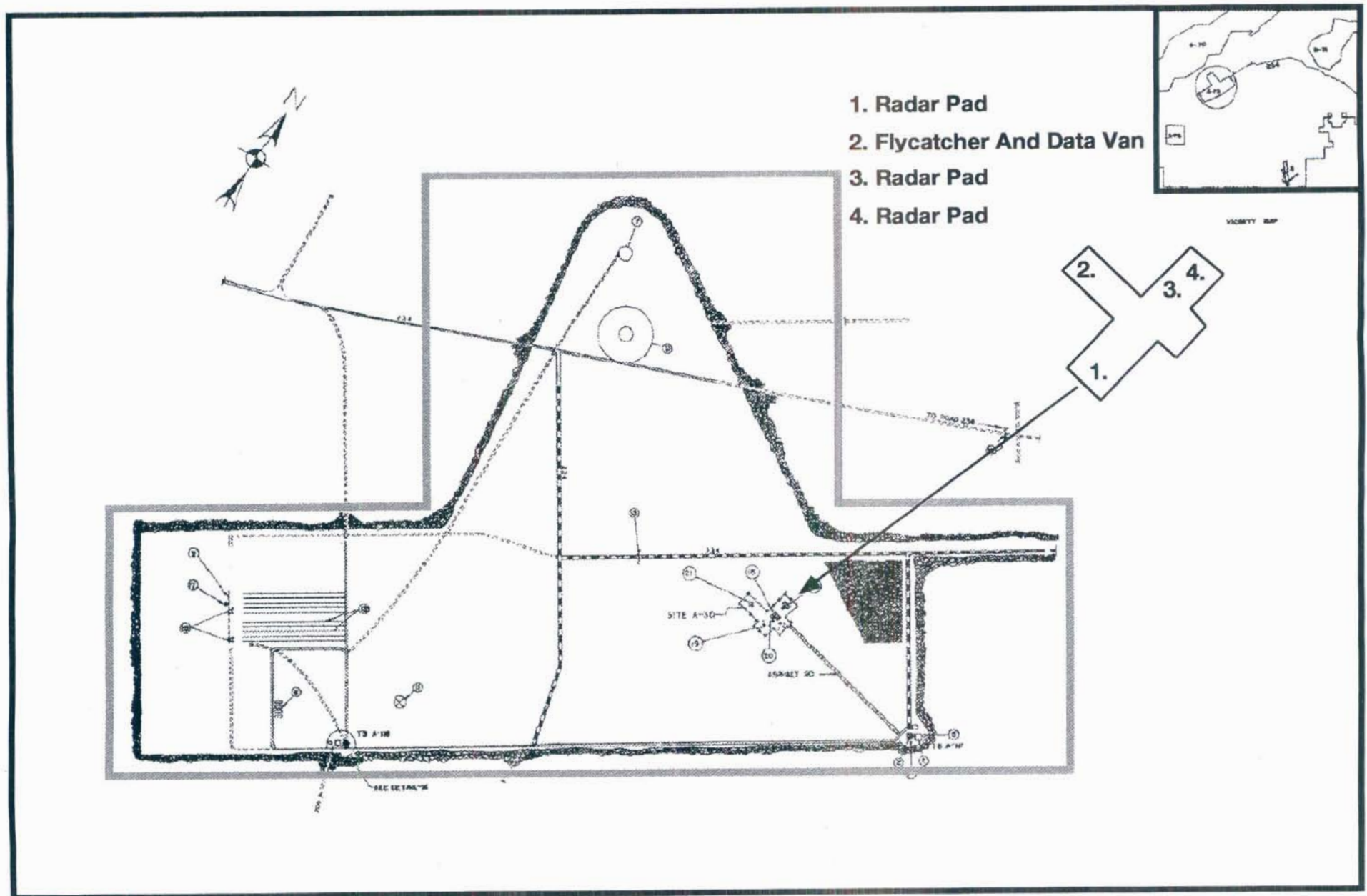




**TEST SITE A-30**



# Test Site A-30







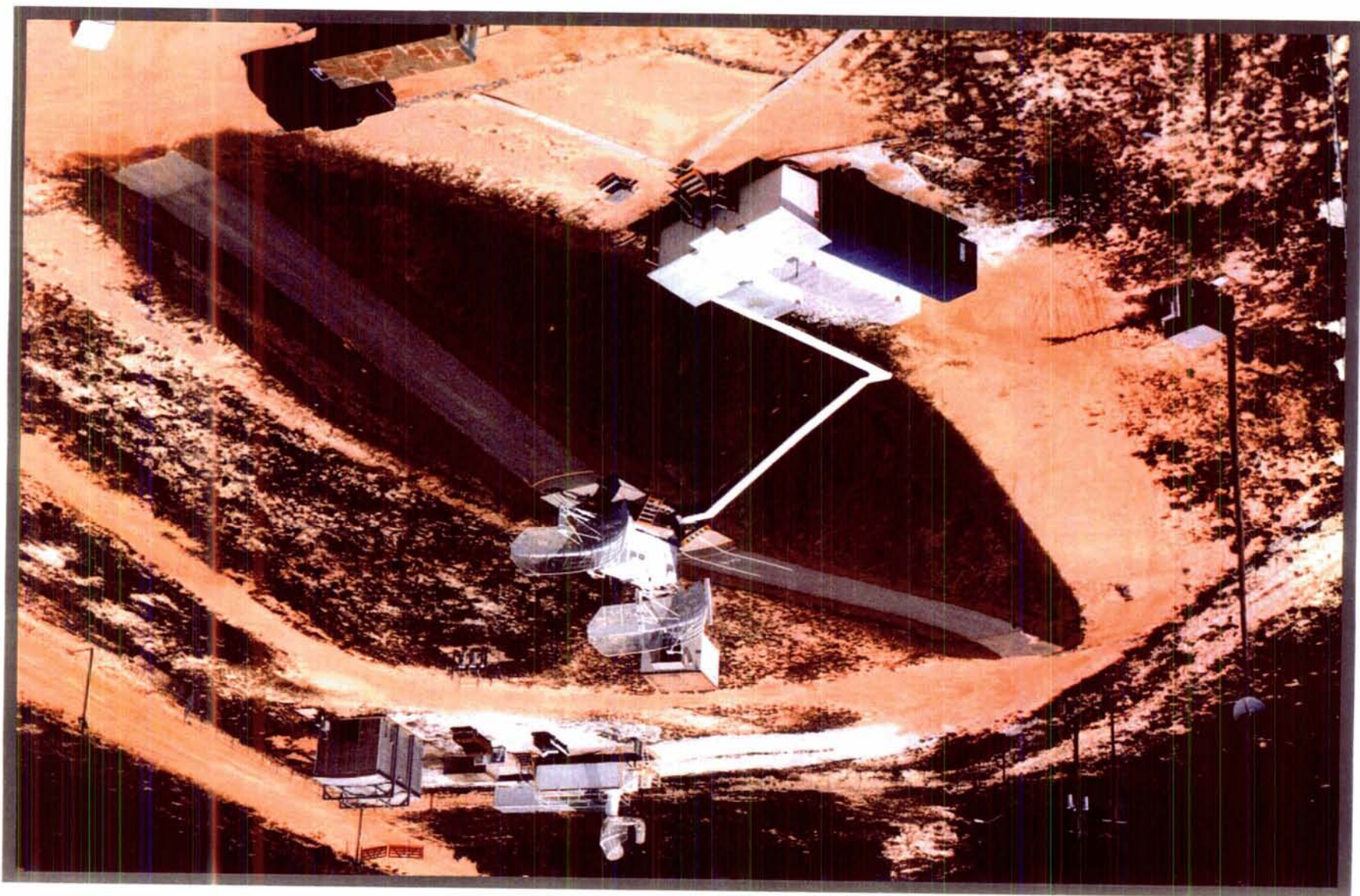
**TEST SITE A-30**

## TEST SITE B-10

- **PURPOSE**
  - REALISTIC FLIGHT TEST EVALUATIONS OF EC EQUIPMENT, TACTICS, AND TECHNIQUES AGAINST EARLY WARNING / ACQUISITION THREAT RADARS
  
- **PRINCIPLE CAPABILITIES**
  - EARLY WARNING / TARGET ACQUISITION RADARS
    - WEST IV, SIMULATED THREAT SEARCH
    - WEST V, EW/GCI SIMULATOR
    - WEST III R, THREAT SEARCH (NOT PICTURED)

**OPEN AIR RANGE TESTING**





**TEST SITE B-10**

# COMPUTER SCIENCES CENTER

- **PURPOSE**
  - REAL-TIME ANALYSIS AND AIRBORNE TEST CONTROL
  
- **PRINCIPLE CAPABILITIES**
  - SECURE FACILITY CAN SUPPORT SPECIAL ACCESS REQUIRED (SAR) NEEDS
  
  - CRAY SUPERCOMPUTER (RATED AT 800 MEGAFLOPS, 2 PROCESSORS)
    - COMPUTATION AND VISUALIZATION SYSTEM FOR MODELING AND SIMULATION EFFORTS
  
  - DIGITAL COMMUNICATIONS SYSTEM
    - RANGE CONTROL, PILOT INTERFACE, AND ENCRYPTED TRANSMISSIONS

**OPEN AIR RANGE TESTING**





**COMPUTER SCIENCES CENTER**



# EGLIN ENVIRONMENTAL STEWARDSHIP

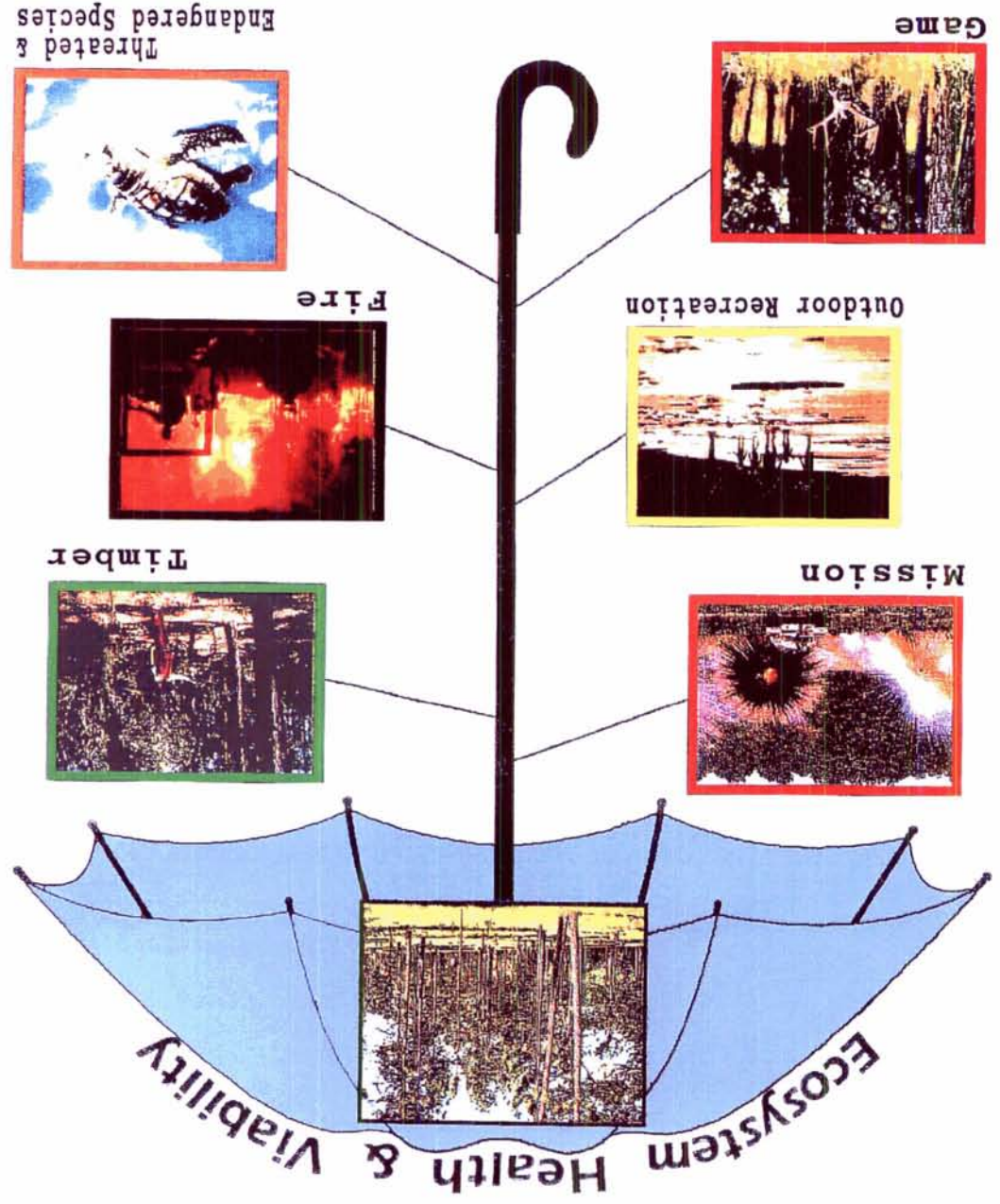
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## THE RESOURCE = UNIQUE

- **TREMENDOUS BIODIVERSITY**
  - ALMOST HALF OF 83 NATURAL RESOURCE COMMUNITIES IN FLORIDA
  - DEEP WELL DRAINED SAND PHYSIOGRAPHY
  - ROLLING SANDHILL RIDGES WITH 600 MILES OF CLEAR COOL SEEPAGE STREAMS OF HIGHEST QUALITY IN SOUTHEAST US
- **SANDHILL ECOSYSTEM LARGEST IN SOUTHEAST - 78% OF EGLIN**
  - LARGEST CONTIGUOUS OLD GROWTH LONG LEAF PINE
  - WORLD'S FOURTH LARGEST POPULATION OF ENDANGERED RED COCKADED WOODPECKER
  - 98% OF ENTIRE RANGE OF THE ENDANGERED OKALOOSA DARTER
  - HIGH DIVERSITY OF RARE HERPETOFAUNA
- **PRISTINE BARRIER ISLANDS FOR 20 MILES ALONG GULF OF MEXICO**
  - LARGEST INTACT POPULATION OF BEACH MICE IN NORTHWEST FLORIDA
  - 53% OF FLORIDA'S THREATENED SNOWY PLOVER
  - NESTING AREA FOR LOGGERHEAD AND GREEN SEA TURTLES

## THE PROGRAM = COMPREHENSIVE

- **GOAL - SUPPORT AIR FORCE TEST MISSION & DoD TRAINING ACTIVITIES**
  - RESPONSIBLE STEWARDSHIP UTILIZING INTEGRATED NATURAL RESOURCE MANAGEMENT
  - ENSURE ECOSYSTEM VIABILITY AND DIVERSITY
  - PROVIDE FOR COMPATIBLE MULTIPLE LAND-USE
- **NATURAL RESOURCES MANAGEMENT PLAN (NRMP) 93-97**
  - FIRST ECOSYSTEM NRMP IN DOD
  - PROVIDES STRATEGIC GUIDANCE FOR LONG RANGE ECOSYSTEM MANAGEMENT
  - INITIATES ON-GOING RESEARCH/MONITORING PROGRAMS TO ASSESS ECOSYSTEM IMPACT/HEALTH
  - EXTENSIVE COORDINATION WITH ACADEMIA AND CONSERVATION ORGANIZATIONS
  - TEST AREAS (CLEARED LAND) ARE ONE OF FOUR LAND CATEGORIES RECOGNIZED
- **PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT AND RANGE COMPREHENSIVE PLAN**
  - 18 MONTH \$2+ MILLION EFFORT TO FORMALLY DOCUMENT RANGE TEST CAPACITY AND COMPATIBILITY WITH THE ENVIRONMENT - EXPEDITE TESTING!
  - PROACTIVELY DOCUMENT RANGE-LAND USE TO PUBLIC IN ORDER TO AVOID ENCROACHMENT



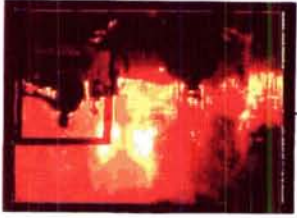
Threatened & Endangered Species



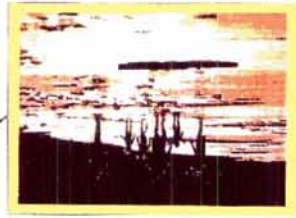
Game



Fire



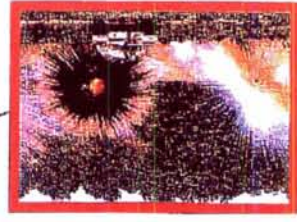
Outdoor Recreation



Timber



Mission



Ecosystem Health & Viability





# EGLIN ENVIRONMENTAL STEWARDSHIP

## THE RESULTS - TESTING AND ENVIRONMENT IN HARMONY

---

- **AWARDED THE NATURE CONSERVANCY'S  
"PRESIDENT'S CONSERVATION ACHIEVEMENT AWARD FOR 1993"**
  - CITED FOR PROGRAM DEVELOPMENT THAT INTEGRATED ECOSYSTEM MANAGEMENT AND MISSION OBJECTIVES
  - CITED FOR BREAKING DOWN ADMINISTRATIVE & LOGISTIC BARRIERS
- **RECEIVED 1993 SIERRA CLUB OF FLORIDA  
"AWARD FOR EXCELLENCE IN ENVIRONMENTAL PLANNING"**
- **PERMITTED TO TAKE ENDANGERED RED-COCKADED WOODPECKER (RCW)  
IN SUPPORT OF TESTING**
  - EXTENSIVE HABITATE ENLARGEMENT WITH ECOSYSTEM MANAGEMENT
  - FIVE YEAR MONITORING PROGRAM TO ASSESS TRENDS
- **CONDUCTED MAJOR JOINT LOGISTICS OVER THE SHORE (JLOTS) EXERCISE  
WITH NO ADVERSE ACTION**
  - COMPLETED INTENSIVE ENVIRONMENTAL ASSESSMENT
  - TRANSFERRED 3 MILLION GALLONS OF FUEL FROM SHIP TO BARRIER ISLAND AND OFF WITHOUT A SPILL

*"I WOULD SAY, WITHOUT HESITATION,  
THAT IT IS THE FINEST PUBLIC LAND  
MANAGEMENT PLAN I EVER READ"*

*THE NATURE CONSERVENCY*

*"THIS IS AN OUTSTANDING PLAN. IT IS  
FAR AND ABOVE THE BEST... FOR  
PUBLICALLY OWNED LAND"*

*SIERRA CLUB*



✓ 3/24



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# Document Separator



Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA95\AF\DDO\EMTEMOVE.CBR  
 Std Fctrs File : C:\COBRA95\AF\DDO\DEPOT.SFF

*Eglin AFB*

Starting Year : 1996  
 Final Year : 1998  
 ROI Year : 1999 (1 Year)

NPV in 2015(\$K): -31,423  
 1-Time Cost(\$K): 2,216

Net Costs (\$K)	Constant Dollars		1998	1999	2000	2001	Total	Beyond
	1996	1997						
MilCon	0	0	0	0	0	0	0	0
Person	30	-7	47	-36	-36	-36	-37	-36
Overhd	73	31	143	47	47	47	390	47
Moving	216	1	1,785	0	0	0	2,002	0
Missio	0	0	-789	-2,630	-2,630	-2,630	-8,679	-2,630
Other	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>319</b>	<b>25</b>	<b>1,187</b>	<b>-2,618</b>	<b>-2,618</b>	<b>-2,618</b>	<b>-6,324</b>	<b>-2,618</b>

	1996	1997	1998	1999	2000	2001	Total
<b>POSITIONS ELIMINATED</b>							
Off	0	0	0	0	0	0	0
Enl	0	0	0	0	0	0	0
Civ	0	0	0	0	0	0	0
TOT	0	0	0	0	0	0	0
<b>POSITIONS REALIGNED</b>							
Off	4	0	11	0	0	0	15
Enl	4	0	8	0	0	0	12
Stu	0	0	0	0	0	0	0
Civ	8	0	17	0	0	0	25
TOT	16	0	36	0	0	0	52

Summary:

-----  
 MOVE EMTE SIMULATORS AND EGLIN EC OAR TO NELLIS COMPLEX  
 MOVE PERSONNEL TO EDWARDS  
 CONTRACTOR SUPPORT TRANSFERS TO NELLIS COMPLEX  
 MAINTAINS 12 SYSTEMS AT EGLIN AS SIGNAL SOURCE ONLY  
 MCTHBALL ANY REMAINING SYSTEMS AT EGLIN

*Les,*

*I've looked this over and I couldn't find anything overly suspicious other than onetime moving cost.*

*Bob*

Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA95\AF\DDO\EMTEMOVE.CBR  
 Std Fctrs File : C:\COBRA95\AF\DDO\DEPOT.SFF

	Costs (\$K) Constant Dollars						Total	Beyond
	1996	1997	1998	1999	2000	2001		
MilCon	0	0	0	0	0	0	0	0
Person	86	48	239	156	156	156	840	156
Overhd	73	68	180	167	167	167	823	167
Moving	228	1	1,815	0	0	0	2,044	0
Missio	0	0	122	406	406	406	1,340	406
Other	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>388</b>	<b>117</b>	<b>2,356</b>	<b>729</b>	<b>729</b>	<b>729</b>	<b>5,048</b>	<b>729</b>

	Savings (\$K) Constant Dollars						Total	Beyond
	1996	1997	1998	1999	2000	2001		
MilCon	0	0	0	0	0	0	0	0
Person	56	56	191	191	191	191	877	191
Overhd	0	37	37	120	120	120	434	120
Moving	12	0	30	0	0	0	42	0
Missio	0	0	911	3,036	3,036	3,036	10,019	3,036
Other	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>68</b>	<b>92</b>	<b>1,169</b>	<b>3,347</b>	<b>3,347</b>	<b>3,347</b>	<b>11,372</b>	<b>3,347</b>

NET PRESENT VALUES REPORT (COBRA v5.08)  
 Data As Of 07:08 01/26/1995, Report Created 17:06 03/03/1995

Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA95\AF\DOD\EMTEMOVE.CBR  
 Std Fctrs File : C:\COBRA95\AF\DOD\DEPOT.SFF

Year	Cost(\$)	Adjusted Cost(\$)	NPV(\$)
----	-----	-----	-----
1996	319,506	315,201	315,201
1997	24,633	23,651	338,852
1998	1,186,652	1,108,840	1,447,692
1999	-2,618,353	-2,381,178	-933,486
2000	-2,618,353	-2,317,448	-3,250,934
2001	-2,618,353	-2,255,424	-5,506,358
2002	-2,618,353	-2,195,060	-7,701,418
2003	-2,618,353	-2,136,311	-9,837,729
2004	-2,618,353	-2,079,135	-11,916,864
2005	-2,618,353	-2,023,489	-13,940,353
2006	-2,618,353	-1,969,332	-15,909,686
2007	-2,618,353	-1,916,625	-17,826,311
2008	-2,618,353	-1,865,329	-19,691,640
2009	-2,618,353	-1,815,405	-21,507,045
2010	-2,618,353	-1,766,817	-23,273,862
2011	-2,618,353	-1,719,530	-24,993,393
2012	-2,618,353	-1,673,509	-26,666,902
2013	-2,618,353	-1,628,719	-28,295,621
2014	-2,618,353	-1,585,128	-29,880,749
2015	-2,618,353	-1,542,704	-31,423,453

Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA95\AF\DOD\EMTEMOVE.CBR  
 Std Fctrs File : C:\COBRA95\AF\DOD\DEPOT.SFF

(All values in Dollars)

Category	Cost	Sub-Total
-----	----	-----
Construction		
Military Construction	0	
Family Housing Construction	0	
Information Management Account	0	
Land Purchases	0	
Total - Construction		0
Personnel		
Civilian RIF	54,571	
Civilian Early Retirement	12,593	
Civilian New Hires	44,000	
Eliminated Military PCS	0	
Unemployment	9,396	
Total - Personnel		120,560
Overhead		
Program Planning Support	50,986	
Mothball / Shutdown	0	
Total - Overhead		50,986
Moving		
Civilian Moving	487,246	
Civilian PPS	0	
Military Moving	173,118	
Freight	13,181	
One-Time Moving Costs	1,371,000	
Total - Moving		2,044,546
Other		
HAP / RSE	0	
Environmental Mitigation Costs	0	
One-Time Unique Costs	0	
Total - Other		0
-----	-----	-----
Total One-Time Costs		2,216,093
One-Time Savings		
Military Construction Cost Avoidances	0	
Family Housing Cost Avoidances	0	
Military Moving	42,390	
Land Sales	0	
One-Time Moving Savings	0	
Environmental Mitigation Savings	0	
One-Time Unique Savings	0	
Total One-Time Savings		42,390
-----	-----	-----
Total Net One-Time Costs		2,173,703

*Need to find out what this is*

Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA95\AF\DOD\EMTEMOVE.CBR  
 Std Fctrs File : C:\COBRA95\AF\DOD\DEPOT.SFF

Base: EDWARDS, CA  
 (All values in Dollars)

Category	Cost	Sub-Total
-----	----	-----
Construction		
Military Construction	0	
Family Housing Construction	0	
Information Management Account	0	
Land Purchases	0	
Total - Construction		0
Personnel		
Civilian RIF	0	
Civilian Early Retirement	0	
Civilian New Hires	44,000	
Eliminated Military PCS	0	
Unemployment	0	
Total - Personnel		44,000
Overhead		
Program Planning Support	0	
Mothball / Shutdown	0	
Total - Overhead		0
Moving		
Civilian Moving	0	
Civilian PPS	0	
Military Moving	0	
Freight	0	
One-Time Moving Costs	0	
Total - Moving		0
Other		
HAP / RSE	0	
Environmental Mitigation Costs	0	
One-Time Unique Costs	0	
Total - Other		0
-----		
Total One-Time Costs		44,000
-----		
One-Time Savings		
Military Construction Cost Avoidances	0	
Family Housing Cost Avoidances	0	
Military Moving	0	
Land Sales	0	
One-Time Moving Savings	0	
Environmental Mitigation Savings	0	
One-Time Unique Savings	0	
-----		
Total One-Time Savings		0
-----		
Total Net One-Time Costs		44,000



Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA95\AF\DOD\EMTEMOVE.CBR  
 Std Fctrs File : C:\COBRA95\AF\DOD\DEPOT.SFF

Base: EGLIN, FL  
 (All values in Dollars)

Category	Cost	Sub-Total
<b>Construction</b>		
Military Construction	0	
Family Housing Construction	0	
Information Management Account	0	
Land Purchases	0	
<b>Total - Construction</b>		0
<b>Personnel</b>		
Civilian RIF	54,571	
Civilian Early Retirement	12,593	
Civilian New Hires	0	
Eliminated Military PCS	0	
Unemployment	9,396	
<b>Total - Personnel</b>		76,560
<b>Overhead</b>		
Program Planning Support	50,986	
Mothball / Shutdown	0	
<b>Total - Overhead</b>		50,986
<b>Moving</b>		
Civilian Moving	487,246	
Civilian PPS	0	
Military Moving	173,118	
Freight	13,181	
One-Time Moving Costs	1,371,000	
<b>Total - Moving</b>		2,044,546
<b>Other</b>		
HAP / RSE	0	
Environmental Mitigation Costs	0	
One-Time Unique Costs	0	
<b>Total - Other</b>		0
<b>Total One-Time Costs</b>		<b>2,172,093</b>
<b>One-Time Savings</b>		
Military Construction Cost Avoidances	0	
Family Housing Cost Avoidances	0	
Military Moving	42,390	
Land Sales	0	
One-Time Moving Savings	0	
Environmental Mitigation Savings	0	
One-Time Unique Savings	0	
<b>Total One-Time Savings</b>		<b>42,390</b>
<b>Total Net One-Time Costs</b>		<b>2,129,703</b>

*Reference earlier  
 comment*

Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA95\AF\DOD\EMTEMOVE.CBR  
 Std Fctrs File : C:\COBRA95\AF\DOD\DEPOT.SFF

Base: NELLIS, NV  
 (All values in Dollars)

Category	Cost	Sub-Total
-----	----	-----
<b>Construction</b>		
Military Construction	0	
Family Housing Construction	0	
Information Management Account	0	
Land Purchases	0	
<b>Total - Construction</b>		0
<b>Personnel</b>		
Civilian RIF	0	
Civilian Early Retirement	0	
Civilian New Hires	0	
Eliminated Military PCS	0	
Unemployment	0	
<b>Total - Personnel</b>		0
<b>Overhead</b>		
Program Planning Support	0	
Mothball / Shutdown	0	
<b>Total - Overhead</b>		0
<b>Moving</b>		
Civilian Moving	0	
Civilian PPS	0	
Military Moving	0	
Freight	0	
One-Time Moving Costs	0	
<b>Total - Moving</b>		0
<b>Other</b>		
HAP / RSE	0	
Environmental Mitigation Costs	0	
One-Time Unique Costs	0	
<b>Total - Other</b>		0
-----		
<b>Total One-Time Costs</b>		0
-----		
<b>One-Time Savings</b>		
Military Construction Cost Avoidances	0	
Family Housing Cost Avoidances	0	
Military Moving	0	
Land Sales	0	
One-Time Moving Savings	0	
Environmental Mitigation Savings	0	
One-Time Unique Savings	0	
-----		
<b>Total One-Time Savings</b>		0
-----		
<b>Total Net One-Time Costs</b>		0

Department : USAF  
Option Package : AFJ-5 (EC)  
Scenario File : C:\COBRA95\AF\DOD\EMTEMOVE.CBR  
Std Fctrs File : C:\COBRA95\AF\DOD\DEPOT.SFF

All Costs in \$K

Base Name	Total MilCon	IMA Cost	Land Purch	Cost Avoid	Total Cost
EDWARDS	0	0	0	0	0
EGLIN	0	0	0	0	0
NELLIS	0	0	0	0	0
Totals:	0	0	0	0	0

PERSONNEL SUMMARY REPORT (COBRA v5.08)  
 Data As Of 07:08 01/26/1995, Report Created 17:06 03/03/1995

Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA95\AF\DOD\EMTEMOVE.CBR  
 Std Fctrs File : C:\COBRA95\AF\DOD\DEPOT.SFF

PERSONNEL SUMMARY FOR: EDWARDS, CA

BASE POPULATION (FY 1996, Prior to BRAC Action):

Officers	Enlisted	Students	Civilians
-----	-----	-----	-----
728	3,754	0	3,876

PERSONNEL REALIGNMENTS:

From Base: EGLIN, FL

	1996	1997	1998	1999	2000	2001	Total
	----	----	----	----	----	----	----
Officers	4	0	11	0	0	0	15
Enlisted	4	0	8	0	0	0	12
Students	0	0	0	0	0	0	0
Civilians	8	0	17	0	0	0	25
TOTAL	16	0	36	0	0	0	52

TOTAL PERSONNEL REALIGNMENTS (Into EDWARDS, CA):

	1996	1997	1998	1999	2000	2001	Total
	----	----	----	----	----	----	----
Officers	4	0	11	0	0	0	15
Enlisted	4	0	8	0	0	0	12
Students	0	0	0	0	0	0	0
Civilians	8	0	17	0	0	0	25
TOTAL	16	0	36	0	0	0	52

BASE POPULATION (After BRAC Action):

Officers	Enlisted	Students	Civilians
-----	-----	-----	-----
743	3,766	0	3,901

PERSONNEL SUMMARY FOR: EGLIN, FL

BASE POPULATION (FY 1996, Prior to BRAC Action):

Officers	Enlisted	Students	Civilians
-----	-----	-----	-----
1,428	6,087	0	4,041

PERSONNEL REALIGNMENTS:

To Base: EDWARDS, CA

	1996	1997	1998	1999	2000	2001	Total
	----	----	----	----	----	----	----
Officers	4	0	11	0	0	0	15
Enlisted	4	0	8	0	0	0	12
Students	0	0	0	0	0	0	0
Civilians	8	0	17	0	0	0	25
TOTAL	16	0	36	0	0	0	52

TOTAL PERSONNEL REALIGNMENTS (Out of EGLIN, FL):

	1996	1997	1998	1999	2000	2001	Total
	----	----	----	----	----	----	----
Officers	4	0	11	0	0	0	15
Enlisted	4	0	8	0	0	0	12
Students	0	0	0	0	0	0	0
Civilians	8	0	17	0	0	0	25
TOTAL	16	0	36	0	0	0	52

BASE POPULATION (After BRAC Action):

Officers	Enlisted	Students	Civilians
-----	-----	-----	-----
1,413	6,075	0	4,016

Department : USAF  
Option Package : AFJ-5 (EC)  
Scenario File : C:\COBRA95\AF\DOD\EMTEMOVE.CBR  
Std Fctrs File : C:\COBRA95\AF\DOD\DEPOT.SFF

PERSONNEL SUMMARY FOR: NELLIS, NV

BASE POPULATION (FY 1996, Prior to BRAC Action):

Officers	Enlisted	Students	Civilians
-----	-----	-----	-----
891	6,317	0	1,064

BASE POPULATION (After BRAC Action):

Officers	Enlisted	Students	Civilians
-----	-----	-----	-----
891	6,317	0	1,064



Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA95\AF\DOD\EMTEMOVE.CBR  
 Std Fctrs File : C:\COBRA95\AF\DOD\DEPOT.SFF

	Rate	1996	1997	1998	1999	2000	2001	Total
CIVILIAN POSITIONS REALIGNING OUT		8	0	17	0	0	0	25
Early Retirement*	10.00%	1	0	2	0	0	0	3
Regular Retirement*	5.00%	0	0	1	0	0	0	1
Civilian Turnover*	15.00%	1	0	3	0	0	0	4
Civs Not Moving (RIFs)*+		1	0	2	0	0	0	3
Civilians Moving (the remainder)		5	0	9	0	0	0	14
Civilian Positions Available		3	0	8	0	0	0	11
CIVILIAN POSITIONS ELIMINATED		0	0	0	0	0	0	0
Early Retirement	10.00%	0	0	0	0	0	0	0
Regular Retirement	5.00%	0	0	0	0	0	0	0
Civilian Turnover	15.00%	0	0	0	0	0	0	0
Civs Not Moving (RIFs)*+		0	0	0	0	0	0	0
Priority Placement#	60.00%	0	0	0	0	0	0	0
Civilians Available to Move		0	0	0	0	0	0	0
Civilians Moving		0	0	0	0	0	0	0
Civilian RIFs (the remainder)		0	0	0	0	0	0	0
CIVILIAN POSITIONS REALIGNING IN		8	0	17	0	0	0	25
Civilians Moving		5	0	9	0	0	0	14
New Civilians Hired		3	0	8	0	0	0	11
Other Civilian Additions		0	0	0	0	0	0	0
TOTAL CIVILIAN EARLY RETIRMENTS		1	0	2	0	0	0	3
TOTAL CIVILIAN RIFs		1	0	2	0	0	0	3
TOTAL CIVILIAN PRIORITY PLACEMENTS#		0	0	0	0	0	0	0
TOTAL CIVILIAN NEW HIRES		3	0	8	0	0	0	11

\* Early Retirements, Regular Retirements, Civilian Turnover, and Civilians Not Willing to Move are not applicable for moves under fifty miles.

+ The Percentage of Civilians Not Willing to Move (Voluntary RIFs) varies from base to base.

# Not all Priority Placements involve a Permanent Change of Station. The rate of PPS placements involving a PCS is 50.00%

PERSONNEL IMPACT REPORT (COBRA v5.08) - Page 2/4  
 Date As Of 07:08 01/26/1995, Report Created 17:06 03/03/1995

Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA95\AF\DOD\EMTEMOVE.CBR  
 Std Fctrs File : C:\COBRA95\AF\DOD\DEPOT.SFF

Base: EDWARDS, CA	Rate	1996	1997	1998	1999	2000	2001	Total
<b>CIVILIAN POSITIONS REALIGNING OUT</b>								
Early Retirement*	10.00%	0	0	0	0	0	0	0
Regular Retirement*	5.00%	0	0	0	0	0	0	0
Civilian Turnover*	15.00%	0	0	0	0	0	0	0
Civs Not Moving (RIFs)*	10.00%	0	0	0	0	0	0	0
Civilians Moving (the remainder)		0	0	0	0	0	0	0
Civilian Positions Available		0	0	0	0	0	0	0
<b>CIVILIAN POSITIONS ELIMINATED</b>								
Early Retirement	10.00%	0	0	0	0	0	0	0
Regular Retirement	5.00%	0	0	0	0	0	0	0
Civilian Turnover	15.00%	0	0	0	0	0	0	0
Civs Not Moving (RIFs)*	10.00%	0	0	0	0	0	0	0
Priority Placement#	60.00%	0	0	0	0	0	0	0
Civilians Available to Move		0	0	0	0	0	0	0
Civilians Moving		0	0	0	0	0	0	0
Civilian RIFs (the remainder)		0	0	0	0	0	0	0
<b>CIVILIAN POSITIONS REALIGNING IN</b>								
Civilians Moving		8	0	17	0	0	0	25
New Civilians Hired		5	0	9	0	0	0	14
Other Civilian Additions		3	0	8	0	0	0	11
TOTAL CIVILIAN EARLY RETIRMENTS		0	0	0	0	0	0	0
TOTAL CIVILIAN RIFS		0	0	0	0	0	0	0
TOTAL CIVILIAN PRIORITY PLACEMENTS#		0	0	0	0	0	0	0
TOTAL CIVILIAN NEW HIRES		3	0	8	0	0	0	11

\* Early Retirements, Regular Retirements, Civilian Turnover, and Civilians Not Willing to Move are not applicable for moves under fifty miles.

# Not all Priority Placements involve a Permanent Change of Station. The rate of PPS placements involving a PCS is 50.00%

Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA95\AF\DOD\EMTEMOVE.CBR  
 Std Fctrs File : C:\COBRA95\AF\DOD\DEPOT.SFF

Base: EGLIN, FL	Rate	1996	1997	1998	1999	2000	2001	Total
CIVILIAN POSITIONS REALIGNING OUT		8	0	17	0	0	0	25
Early Retirement*	10.00%	1	0	2	0	0	0	3
Regular Retirement*	5.00%	0	0	1	0	0	0	1
Civilian Turnover*	15.00%	1	0	3	0	0	0	4
Civs Not Moving (RIFs)*	10.00%	1	0	2	0	0	0	3
Civilians Moving (the remainder)		5	0	9	0	0	0	14
Civilian Positions Available		3	0	8	0	0	0	11
CIVILIAN POSITIONS ELIMINATED		0	0	0	0	0	0	0
Early Retirement	10.00%	0	0	0	0	0	0	0
Regular Retirement	5.00%	0	0	0	0	0	0	0
Civilian Turnover	15.00%	0	0	0	0	0	0	0
Civs Not Moving (RIFs)*	10.00%	0	0	0	0	0	0	0
Priority Placement#	60.00%	0	0	0	0	0	0	0
Civilians Available to Move		0	0	0	0	0	0	0
Civilians Moving		0	0	0	0	0	0	0
Civilian RIFs (the remainder)		0	0	0	0	0	0	0
CIVILIAN POSITIONS REALIGNING IN		0	0	0	0	0	0	0
Civilians Moving		0	0	0	0	0	0	0
New Civilians Hired		0	0	0	0	0	0	0
Other Civilian Additions		0	0	0	0	0	0	0
TOTAL CIVILIAN EARLY RETIRMENTS		1	0	2	0	0	0	3
TOTAL CIVILIAN RIFs		1	0	2	0	0	0	3
TOTAL CIVILIAN PRIORITY PLACEMENTS#		0	0	0	0	0	0	0
TOTAL CIVILIAN NEW HIRES		0	0	0	0	0	0	0

\* Early Retirements, Regular Retirements, Civilian Turnover, and Civilians Not Willing to Move are not applicable for moves under fifty miles.

# Not all Priority Placements involve a Permanent Change of Station. The rate of PPS placements involving a PCS is 50.00%

Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA95\AF\DOD\EMTEMOVE.CBR  
 Std Fctrs File : C:\COBRA95\AF\DOD\DEPOT.SFF

Base: NELLIS, NV	Rate	1996	1997	1998	1999	2000	2001	Total
CIVILIAN POSITIONS REALIGNING OUT		0	0	0	0	0	0	0
Early Retirement*	10.00%	0	0	0	0	0	0	0
Regular Retirement*	5.00%	0	0	0	0	0	0	0
Civilian Turnover*	15.00%	0	0	0	0	0	0	0
Civs Not Moving (RIFs)*	10.00%	0	0	0	0	0	0	0
Civilians Moving (the remainder)		0	0	0	0	0	0	0
Civilian Positions Available		0	0	0	0	0	0	0
CIVILIAN POSITIONS ELIMINATED		0	0	0	0	0	0	0
Early Retirement	10.00%	0	0	0	0	0	0	0
Regular Retirement	5.00%	0	0	0	0	0	0	0
Civilian Turnover	15.00%	0	0	0	0	0	0	0
Civs Not Moving (RIFs)*	10.00%	0	0	0	0	0	0	0
Priority Placement#	60.00%	0	0	0	0	0	0	0
Civilians Available to Move		0	0	0	0	0	0	0
Civilians Moving		0	0	0	0	0	0	0
Civilian RIFs (the remainder)		0	0	0	0	0	0	0
CIVILIAN POSITIONS REALIGNING IN		0	0	0	0	0	0	0
Civilians Moving		0	0	0	0	0	0	0
New Civilians Hired		0	0	0	0	0	0	0
Other Civilian Additions		0	0	0	0	0	0	0
TOTAL CIVILIAN EARLY RETIRMENTS		0	0	0	0	0	0	0
TOTAL CIVILIAN RIFs		0	0	0	0	0	0	0
TOTAL CIVILIAN PRIORITY PLACEMENTS#		0	0	0	0	0	0	0
TOTAL CIVILIAN NEW HIRES		0	0	0	0	0	0	0

\* Early Retirements, Regular Retirements, Civilian Turnover, and Civilians Not Willing to Move are not applicable for moves under fifty miles.

# Not all Priority Placements involve a Permanent Change of Station. The rate of PPS placements involving a PCS is 50.00%

TOTAL APPROPRIATIONS DETAIL REPORT (COBRA v5.08) - Page 1/12  
 Data As Of 07:08 01/26/1995, Report Created 17:06 03/03/1995

Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA95\AF\DOD\EMTEMOVE.CBR  
 Std Fctrs File : C:\COBRA95\AF\DOD\DEPOT.SFF

ONE-TIME COSTS -----(\$K)-----	1996 ----	1997 ----	1998 ----	1999 ----	2000 ----	2001 ----	Total -----
CONSTRUCTION							
MILCON	0	0	0	0	0	0	0
Fam Housing	0	0	0	0	0	0	0
Land Purch	0	0	0	0	0	0	0
O&M							
CIV SALARY							
Civ RIF	18	0	36	0	0	0	54
Civ Retire	4	0	8	0	0	0	12
CIV MOVING							
Per Diem	25	0	45	0	0	0	70
POV Miles	2	0	3	0	0	0	5
Home Purch	55	0	99	0	0	0	154
HHG	38	0	68	0	0	0	107
Misc	3	0	6	0	0	0	10
House Hunt	21	0	37	0	0	0	58
PPS	0	0	0	0	0	0	0
RITA	30	0	53	0	0	0	83
FREIGHT							
Packing	3	0	7	0	0	0	10
Freight	1	1	1	0	0	0	3
Vehicles	0	0	0	0	0	0	0
Driving	0	0	0	0	0	0	0
Unemployment	3	0	6	0	0	0	9
OTHER							
Program Plan	22	16	12	0	0	0	51
Shutdown	0	0	0	0	0	0	0
New Hire	12	0	32	0	0	0	44
1-Time Move	0	0	1,371	0	0	0	1,371
MIL PERSONNEL							
MIL MOVING							
Per Diem	7	0	16	0	0	0	22
POV Miles	3	0	7	0	0	0	10
HHG	35	0	86	0	0	0	121
Misc	6	0	13	0	0	0	19
OTHER							
Elim PCS	0	0	0	0	0	0	0
OTHER							
HAP / RSE	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
Info Manage	0	0	0	0	0	0	0
1-Time Other	0	0	0	0	0	0	0
TOTAL ONE-TIME	288	17	1,911	0	0	0	2,216



TOTAL APPROPRIATIONS DETAIL REPORT (COBRA v5.08) - Page 2/12  
 Data As Of 07:08 01/26/1995, Report Created 17:06 03/03/1995

Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA95\AF\DOD\EMTEMOVE.CBR  
 Std Fctrs File : C:\COBRA95\AF\DOD\DEPOT.SFF

RECURRINGCOSTS	1996	1997	1998	1999	2000	2001	Total	Beyond
-----(\$K)-----	----	----	----	----	----	----	-----	-----
FAM HOUSE OPS	0	0	0	0	0	0	0	0
O&M								
RPMA	0	0	0	0	0	0	0	0
BOS	51	51	167	167	167	167	772	167
Unique Operat	0	0	0	0	0	0	0	0
Civ Salary	0	0	0	0	0	0	0	0
CHAMPUS	0	0	0	0	0	0	0	0
Caretaker	0	0	0	0	0	0	0	0
MIL PERSONNEL								
Off Salary	0	0	0	0	0	0	0	0
Enl Salary	0	0	0	0	0	0	0	0
House Allow	48	48	156	156	156	156	719	156
OTHER								
Mission	0	0	122	406	406	406	1,340	406
Misc Recur	0	0	0	0	0	0	0	0
Unique Other	0	0	0	0	0	0	0	0
TOTAL RECUR	100	100	445	729	729	729	2,831	729
TOTAL COST	388	117	2,356	729	729	729	5,048	729
ONE-TIME SAVES	1996	1997	1998	1999	2000	2001	Total	
-----(\$K)-----	----	----	----	----	----	----	-----	
CONSTRUCTION								
MILCON	0	0	0	0	0	0	0	
Fam Housing	0	0	0	0	0	0	0	
O&M								
1-Time Move	0	0	0	0	0	0	0	
MIL PERSONNEL								
Mil Moving	12	0	30	0	0	0	42	
OTHER								
Land Sales	0	0	0	0	0	0	0	
Environmental	0	0	0	0	0	0	0	
1-Time Other	0	0	0	0	0	0	0	
TOTAL ONE-TIME	12	0	30	0	0	0	42	
RECURRINGSAVES	1996	1997	1998	1999	2000	2001	Total	Beyond
-----(\$K)-----	----	----	----	----	----	----	-----	-----
FAM HOUSE OPS	0	0	0	0	0	0	0	0
O&M								
RPMA	0	0	0	0	0	0	0	0
BOS	0	37	37	120	120	120	434	120
Unique Operat	0	0	0	0	0	0	0	0
Civ Salary	0	0	0	0	0	0	0	0
CHAMPUS	0	0	0	0	0	0	0	0
MIL PERSONNEL								
Off Salary	0	0	0	0	0	0	0	0
Enl Salary	0	0	0	0	0	0	0	0
House Allow	56	56	191	191	191	191	877	191
OTHER								
Procurement	0	0	0	0	0	0	0	0
Mission	0	0	911	3,036	3,036	3,036	10,019	3,036
Misc Recur	0	0	0	0	0	0	0	0
Unique Other	0	0	0	0	0	0	0	0
TOTAL RECUR	56	92	1,139	3,347	3,347	3,347	11,329	3,347
TOTAL SAVINGS	68	92	1,169	3,347	3,347	3,347	11,372	3,347

TOTAL APPROPRIATIONS DETAIL REPORT (COBRA v5.08) - Page 3/12  
 Data As Of 07:08 01/26/1995, Report Created 17:06 03/03/1995

Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA95\AF\DOO\EMTEMOVE.CBR  
 Std Fctrs File : C:\COBRA95\AF\DOO\DEPOT.SFF

ONE-TIME NET ----(\$K)----	1996	1997	1998	1999	2000	2001	Total	
CONSTRUCTION								
MILCON	0	0	0	0	0	0	0	
Fam Housing	0	0	0	0	0	0	0	
O&M								
Civ Retir/RIF	22	0	45	0	0	0	67	
Civ Moving	178	1	322	0	0	0	500	
Other	37	16	1,422	0	0	0	1,475	
MIL PERSONNEL								
Mil Moving	38	0	93	0	0	0	131	
OTHER								
HAP / RSE	0	0	0	0	0	0	0	
Environmental	0	0	0	0	0	0	0	
Info Manage	0	0	0	0	0	0	0	
1-Time Other	0	0	0	0	0	0	0	
Lend	0	0	0	0	0	0	0	
TOTAL ONE-TIME	275	17	1,881	0	0	0	2,174	
RECURRING NET ----(\$K)----	1996	1997	1998	1999	2000	2001	Total	Beyond
FAM HOUSE OPS	0	0	0	0	0	0	0	0
O&M								
RPMA	0	0	0	0	0	0	0	0
BOS	51	15	130	47	47	47	339	47
Unique Operat	0	0	0	0	0	0	0	0
Caretaker	0	0	0	0	0	0	0	0
Civ Salary	0	0	0	0	0	0	0	0
CHAMPUS	0	0	0	0	0	0	0	0
MIL PERSONNEL								
Mil Salary	0	0	0	0	0	0	0	0
House Allow	-7	-7	-36	-36	-36	-36	-158	-36
OTHER								
Procurement	0	0	0	0	0	0	0	0
Mission	0	0	-789	-2,630	-2,630	-2,630	-8,679	-2,630
Misc Recur	0	0	0	0	0	0	0	0
Unique Other	0	0	0	0	0	0	0	0
TOTAL RECUR	44	7	-694	-2,618	-2,618	-2,618	-8,498	-2,618
TOTAL NET COST	319	25	1,187	-2,618	-2,618	-2,618	-6,324	-2,618

APPROPRIATIONS DETAIL REPORT (COBRA v5.08) - Page 4/12  
 Data As Of 07:08 01/26/1995, Report Created 17:06 03/03/1995

Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA95\AF\DOD\EMTEMOVE.CBR  
 Std Fctrs File : C:\COBRA95\AF\DOD\DEPOT.SFF

Base: EDWARDS, CA	1996	1997	1998	1999	2000	2001	Total
ONE-TIME COSTS	----	----	----	----	----	----	----
-----(\$K)-----							
CONSTRUCTION							
MILCON	0	0	0	0	0	0	0
Fam Housing	0	0	0	0	0	0	0
Land Purch	0	0	0	0	0	0	0
O&M							
CIV SALARY							
Civ RIFs	0	0	0	0	0	0	0
Civ Retire	0	0	0	0	0	0	0
CIV MOVING							
Per Diem	0	0	0	0	0	0	0
POV Miles	0	0	0	0	0	0	0
Home Purch	0	0	0	0	0	0	0
HHG	0	0	0	0	0	0	0
Misc	0	0	0	0	0	0	0
House Hunt	0	0	0	0	0	0	0
PPS	0	0	0	0	0	0	0
RITA	0	0	0	0	0	0	0
FREIGHT							
Packing	0	0	0	0	0	0	0
Freight	0	0	0	0	0	0	0
Vehicles	0	0	0	0	0	0	0
Driving	0	0	0	0	0	0	0
Unemployment	0	0	0	0	0	0	0
OTHER							
Program Plan	0	0	0	0	0	0	0
Shutdown	0	0	0	0	0	0	0
New Hires	12	0	32	0	0	0	44
1-Time Move	0	0	0	0	0	0	0
MIL PERSONNEL							
MIL MOVING							
Per Diem	0	0	0	0	0	0	0
POV Miles	0	0	0	0	0	0	0
HHG	0	0	0	0	0	0	0
Misc	0	0	0	0	0	0	0
OTHER							
Elim PCS	0	0	0	0	0	0	0
OTHER							
HAP / RSE	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
Info Manage	0	0	0	0	0	0	0
1-Time Other	0	0	0	0	0	0	0
TOTAL ONE-TIME	12	0	32	0	0	0	44



Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA95\AF\DOD\EMTEMOVE.CBR  
 Std Fctrs File : C:\COBRA95\AF\DOD\DEPOT.SFF

Base: EDWARDS, CA

ONE-TIME NET -----(\$K)-----	1996	1997	1998	1999	2000	2001	Total
CONSTRUCTION							
MILCON	0	0	0	0	0	0	0
Fam Housing	0	0	0	0	0	0	0
O&M							
Civ Retir/RIF	0	0	0	0	0	0	0
Civ Moving	0	0	0	0	0	0	0
Other	12	0	32	0	0	0	44
MIL PERSONNEL							
Mil Moving	0	0	0	0	0	0	0
OTHER							
HAP / RSE	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
Info Manage	0	0	0	0	0	0	0
1-Time Other	0	0	0	0	0	0	0
Land	0	0	0	0	0	0	0
TOTAL ONE-TIME	12	0	32	0	0	0	44

RECURRING NET -----(\$K)-----	1996	1997	1998	1999	2000	2001	Total	Beyond
FAM HOUSE OPS	0	0	0	0	0	0	0	0
O&M								
RPMA	0	0	0	0	0	0	0	0
BOS	51	51	167	167	167	167	772	167
Unique Operat	0	0	0	0	0	0	0	0
Caretaker	0	0	0	0	0	0	0	0
Civ Salary	0	0	0	0	0	0	0	0
CHAMPUS	0	0	0	0	0	0	0	0
MIL PERSONNEL								
Mil Salary	0	0	0	0	0	0	0	0
House Allow	48	48	156	156	156	156	719	156
OTHER								
Procurement	0	0	0	0	0	0	0	0
Mission	0	0	0	0	0	0	0	0
Misc Recur	0	0	0	0	0	0	0	0
Unique Other	0	0	0	0	0	0	0	0
TOTAL RECUR	100	100	323	323	323	323	1,491	323
TOTAL NET COST	112	100	355	323	323	323	1,535	323



Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA95\AF\DOD\EMTEMOVE.CBR  
 Std Fctrs File : C:\COBRA95\AF\DOD\DEPOT.SFF

Base: EGLIN, FL

ONE-TIME COSTS -----(\$K)-----	1996	1997	1998	1999	2000	2001	Total
CONSTRUCTION							
MILCON	0	0	0	0	0	0	0
Fam Housing	0	0	0	0	0	0	0
Land Purch	0	0	0	0	0	0	0
O&M							
CIV SALARY							
Civ RIFs	18	0	36	0	0	0	54
Civ Retire	4	0	8	0	0	0	12
CIV MOVING							
Per Diem	25	0	45	0	0	0	70
POV Miles	2	0	3	0	0	0	5
Home Purch	55	0	99	0	0	0	154
HHG	38	0	68	0	0	0	107
Misc	3	0	6	0	0	0	10
House Hunt	21	0	37	0	0	0	58
PPS	0	0	0	0	0	0	0
RITA	30	0	53	0	0	0	83
FREIGHT							
Packing	3	0	7	0	0	0	10
Freight	1	1	1	0	0	0	3
Vehicles	0	0	0	0	0	0	0
Driving	0	0	0	0	0	0	0
Unemployment	3	0	6	0	0	0	9
OTHER							
Program Plan	22	16	12	0	0	0	51
Shutdown	0	0	0	0	0	0	0
New Hires	0	0	0	0	0	0	0
1-Time Move	0	0	1,371	0	0	0	1,371
MIL PERSONNEL							
MIL MOVING							
Per Diem	7	0	16	0	0	0	22
POV Miles	3	0	7	0	0	0	10
HHG	35	0	86	0	0	0	121
Misc	6	0	13	0	0	0	19
OTHER							
Elim PCS	0	0	0	0	0	0	0
OTHER							
HAP / RSE	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
Info Manage	0	0	0	0	0	0	0
1-Time Other	0	0	0	0	0	0	0
TOTAL ONE-TIME	276	17	1,879	0	0	0	2,172

Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA95\AF\DOD\EMTEMOVE.CBR  
 Std Fctrs File : C:\COBRA95\AF\DOD\DEPOT.SFF

Base: EGLIN, FL

RECURRINGCOSTS	1996	1997	1998	1999	2000	2001	Total	Beyond
-----(\$K)-----	----	----	----	----	----	----	-----	-----
FAM HOUSE OPS	0	0	0	0	0	0	0	0
O&M								
RPMA	0	0	0	0	0	0	0	0
BOS	0	0	0	0	0	0	0	0
Unique Operat	0	0	0	0	0	0	0	0
Civ Salary	0	0	0	0	0	0	0	0
CHAMPUS	0	0	0	0	0	0	0	0
Caretaker	0	0	0	0	0	0	0	0
MIL PERSONNEL								
Off Salary	0	0	0	0	0	0	0	0
Enl Salary	0	0	0	0	0	0	0	0
House Allow	0	0	0	0	0	0	0	0
OTHER								
Mission	0	0	0	0	0	0	0	0
Misc Recur	0	0	0	0	0	0	0	0
Unique Other	0	0	0	0	0	0	0	0
TOTAL RECUR	0	0	0	0	0	0	0	0
TOTAL COSTS	276	17	1,879	0	0	0	2,172	0
ONE-TIME SAVES	1996	1997	1998	1999	2000	2001	Total	
-----(\$K)-----	----	----	----	----	----	----	-----	
CONSTRUCTION								
MILCON	0	0	0	0	0	0	0	
Fam Housing	0	0	0	0	0	0	0	
O&M								
1-Time Move	0	0	0	0	0	0	0	
MIL PERSONNEL								
Mil Moving	12	0	30	0	0	0	42	
OTHER								
Land Sales	0	0	0	0	0	0	0	
Environmental	0	0	0	0	0	0	0	
1-Time Other	0	0	0	0	0	0	0	
TOTAL ONE-TIME	12	0	30	0	0	0	42	
RECURRINGSAVES	1996	1997	1998	1999	2000	2001	Total	Beyond
-----(\$K)-----	----	----	----	----	----	----	-----	-----
FAM HOUSE OPS	0	0	0	0	0	0	0	0
O&M								
RPMA	0	0	0	0	0	0	0	0
BOS	0	37	37	120	120	120	434	120
Unique Operat	0	0	0	0	0	0	0	0
Civ Salary	0	0	0	0	0	0	0	0
CHAMPUS	0	0	0	0	0	0	0	0
MIL PERSONNEL								
Off Salary	0	0	0	0	0	0	0	0
Enl Salary	0	0	0	0	0	0	0	0
House Allow	56	56	191	191	191	191	877	191
OTHER								
Procurement	0	0	0	0	0	0	0	0
Mission	0	0	911	3,036	3,036	3,036	10,019	3,036
Misc Recur	0	0	0	0	0	0	0	0
Unique Other	0	0	0	0	0	0	0	0
TOTAL RECUR	56	92	1,139	3,347	3,347	3,347	11,329	3,347
TOTAL SAVINGS	68	92	1,169	3,347	3,347	3,347	11,372	3,347

APPROPRIATIONS DETAIL REPORT (COBRA v5.08) - Page 9/12  
 Data As Of 07:08 01/26/1995, Report Created 17:06 03/03/1995

Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA95\AF\DOD\EMTEMOVE.CBR  
 Std Fctrs File : C:\COBRA95\AF\DOD\DEPOT.SFF

Base: EGLIN, FL

ONE-TIME NET ----(\$K)-----	1996	1997	1998	1999	2000	2001	Total	
CONSTRUCTION								
MILCON	0	0	0	0	0	0	0	
Fam Housing	0	0	0	0	0	0	0	
O&M								
Civ Retir/RIF	22	0	45	0	0	0	67	
Civ Moving	178	1	322	0	0	0	500	
Other	25	16	1,390	0	0	0	1,431	
MIL PERSONNEL								
Mil Moving	38	0	93	0	0	0	131	
OTHER								
HAP / RSE	0	0	0	0	0	0	0	
Environmental	0	0	0	0	0	0	0	
Info Manage	0	0	0	0	0	0	0	
1-Time Other	0	0	0	0	0	0	0	
Land	0	0	0	0	0	0	0	
TOTAL ONE-TIME	263	17	1,849	0	0	0	2,130	
RECURRING NET ----(\$K)-----	1996	1997	1998	1999	2000	2001	Total	Beyond
FAM HOUSE OPS	0	0	0	0	0	0	0	0
O&M								
RPMA	0	0	0	0	0	0	0	0
BOS	0	-37	-37	-120	-120	-120	-434	-120
Unique Operat	0	0	0	0	0	0	0	0
Caretaker	0	0	0	0	0	0	0	0
Civ Salary	0	0	0	0	0	0	0	0
CHAMPUS	0	0	0	0	0	0	0	0
MIL PERSONNEL								
Mil Salary	0	0	0	0	0	0	0	0
House Allow	-56	-56	-191	-191	-191	-191	-877	-191
OTHER								
Procurement	0	0	0	0	0	0	0	0
Mission	0	0	-911	-3,036	-3,036	-3,036	-10,019	-3,036
Misc Recur	0	0	0	0	0	0	0	0
Unique Other	0	0	0	0	0	0	0	0
TOTAL RECUR	-56	-92	-1,139	-3,347	-3,347	-3,347	-11,329	-3,347
TOTAL NET COST	208	-75	710	-3,347	-3,347	-3,347	-9,200	-3,347

APPROPRIATIONS DETAIL REPORT (COBRA v5.08) - Page 10/12  
 Data As Of 07:08 01/26/1995, Report Created 17:06 03/03/1995

Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA95\AF\DOD\EMTEMOVE.CBR  
 Std Fctrs File : C:\COBRA95\AF\DOD\DEPOT.SFF

Base: NELLIS, NV ONE-TIME COSTS ----(\$K)-----	1996 ----	1997 ----	1998 ----	1999 ----	2000 ----	2001 ----	Total -----
CONSTRUCTION							
MILCON	0	0	0	0	0	0	0
Fam Housing	0	0	0	0	0	0	0
Land Purch	0	0	0	0	0	0	0
O&M							
CIV SALARY							
Civ RIFs	0	0	0	0	0	0	0
Civ Retire	0	0	0	0	0	0	0
CIV MOVING							
Per Diem	0	0	0	0	0	0	0
POV Miles	0	0	0	0	0	0	0
Home Purch	0	0	0	0	0	0	0
HHG	0	0	0	0	0	0	0
Misc	0	0	0	0	0	0	0
House Hunt	0	0	0	0	0	0	0
PPS	0	0	0	0	0	0	0
RITA	0	0	0	0	0	0	0
FREIGHT							
Packing	0	0	0	0	0	0	0
Freight	0	0	0	0	0	0	0
Vehicles	0	0	0	0	0	0	0
Driving	0	0	0	0	0	0	0
Unemployment	0	0	0	0	0	0	0
CTHER							
Program Plan	0	0	0	0	0	0	0
Shutdown	0	0	0	0	0	0	0
New Hires	0	0	0	0	0	0	0
1-Time Move	0	0	0	0	0	0	0
MIL PERSONNEL							
MIL MOVING							
Per Diem	0	0	0	0	0	0	0
POV Miles	0	0	0	0	0	0	0
HHG	0	0	0	0	0	0	0
Misc	0	0	0	0	0	0	0
CTHER							
Elim PCS	0	0	0	0	0	0	0
OTHER							
HAP / RSE	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
Info Manage	0	0	0	0	0	0	0
1-Time Other	0	0	0	0	0	0	0
TOTAL ONE-TIME	0	0	0	0	0	0	0





Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA95\AF\DOD\EMTEMOVE.CBR  
 Std Fctrs File : C:\COBRA95\AF\DOD\DEPOT.SFF

Base: NELLIS, NV

ONE-TIME NET -----(\$K)-----	1996	1997	1998	1999	2000	2001	Total	
CONSTRUCTION								
MILCON	0	0	0	0	0	0	0	
Fam Housing	0	0	0	0	0	0	0	
O&H								
Civ Retir/RIF	0	0	0	0	0	0	0	
Civ Moving	0	0	0	0	0	0	0	
Other	0	0	0	0	0	0	0	
MIL PERSONNEL								
Mil Moving	0	0	0	0	0	0	0	
OTHER								
HAP / RSE	0	0	0	0	0	0	0	
Environmental	0	0	0	0	0	0	0	
Info Manage	0	0	0	0	0	0	0	
1-Time Other	0	0	0	0	0	0	0	
Land	0	0	0	0	0	0	0	
TOTAL ONE-TIME	0	0	0	0	0	0	0	
RECURRING NET -----(\$K)-----	1996	1997	1998	1999	2000	2001	Total	Beyond
FAH HOUSE OPS	0	0	0	0	0	0	0	0
O&H								
RPMA	0	0	0	0	0	0	0	0
BOS	0	0	0	0	0	0	0	0
Unique Operat	0	0	0	0	0	0	0	0
Caretaker	0	0	0	0	0	0	0	0
Civ Salary	0	0	0	0	0	0	0	0
CHAMPUS	0	0	0	0	0	0	0	0
MIL PERSONNEL								
Mil Salary	0	0	0	0	0	0	0	0
House Allow	0	0	0	0	0	0	0	0
OTHER								
Procurement	0	0	0	0	0	0	0	0
Mission	0	0	122	406	406	406	1,340	406
Misc Recur	0	0	0	0	0	0	0	0
Unique Other	0	0	0	0	0	0	0	0
TOTAL RECUR	0	0	122	406	406	406	1,340	406
TOTAL NET COST	0	0	122	406	406	406	1,340	406

PERSONNEL, SF, RPMA, AND BOS DELTAS (COBRA v5.08)  
 Data As Of 07:08 01/26/1995, Report Created 17:06 03/03/1995

Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA95\AF\DOD\EMTEMOVE.CBR  
 Std Fctrs File : C:\COBRA95\AF\DOD\DEPOT.SFF

Base	Personnel		SF		
	Change	%Change	Change	%Change	Chg/Per
EDWARDS	52	1%	0	0%	0
EGLIN	-52	0%	0	0%	0
NELLIS	0	0%	0	0%	0

Base	RPMA(\$)			BOS(\$)		
	Change	%Change	Chg/Per	Change	%Change	Chg/Per
EDWARDS	0	0%	0	167,320	0%	3,218
EGLIN	0	0%	0	-119,970	0%	2,307
NELLIS	0	0%	0	0	0%	0

Base	RPMABOS(\$)		
	Change	%Change	Chg/Per
EDWARDS	167,320	0%	3,218
EGLIN	-119,970	0%	2,307
NELLIS	0	0%	0

RPMA/BOS CHANGE REPORT (COBRA v5.08)  
Data As Of 07:08 01/26/1995, Report Created 17:06 03/03/1995

Department : USAF  
Option Package : AFJ-5 (EC)  
Scenario File : C:\COBRA95\AF\DOD\EMTEMOVE.CBR  
Std Fctrs File : C:\COBRA95\AF\DOD\DEPOT.SFF

Net Change(\$K)	1996	1997	1998	1999	2000	2001	Total	Beyond
RPMA Change	0	0	0	0	0	0	0	0
BOS Change	51	15	130	47	47	47	339	47
Housing Change	0	0	0	0	0	0	0	0
TOTAL CHANGES	51	15	130	47	47	47	339	47

INPUT DATA REPORT (COBRA v5.08)  
 Data As Of 07:08 01/26/1995, Report Created 17:06 03/03/1995

Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA95\AF\DOD\EMTEMOVE.CBR  
 Std Fctrs File : C:\COBRA95\AF\DOD\DEPOT.SFF

INPUT SCREEN ONE - GENERAL SCENARIO INFORMATION

Model Year One : FY 1996

Model does Time-Phasing of Construction/Shutdown: Yes

Base Name	Strategy:
-----	-----
EDWARDS, CA	Realignment
EGLIN, FL	Realignment
NELLIS, NV	Realignment

Summary:

-----  
 MOVE EMT E SIMULATORS AND EGLIN EC OAR TO NELLIS COMPLEX  
 MOVE PERSONNEL TO EDWARDS  
 CONTRACTOR SUPPORT TRANSFERS TO NELLIS COMPLEX  
 MAINTAINS 12 SYSTEMS AT EGLIN AS SIGNAL SOURCE ONLY  
 MOTHBALL ANY REMAINING SYSTEMS AT EGLIN

INPUT SCREEN TWO - DISTANCE TABLE

From Base:	To Base:	Distance:
-----	-----	-----
EDWARDS, CA	EGLIN, FL	2,092 mi
EGLIN, FL	NELLIS, NV	1,940 mi

INPUT SCREEN THREE - MOVEMENT TABLE

Transfers from EGLIN, FL to EDWARDS, CA

	1996	1997	1998	1999	2000	2001
	----	----	----	----	----	----
Officer Positions:	4	0	11	0	0	0
Enlisted Positions:	4	0	8	0	0	0
Civilian Positions:	8	0	17	0	0	0
Student Positions:	0	0	0	0	0	0
Missn Eqpt (tons):	0	2	0	0	0	0
Suppt Eqpt (tons):	0	0	0	0	0	0
Military Light Vehicles:	0	0	0	0	0	0
Heavy/Special Vehicles:	0	0	0	0	0	0

INPUT SCREEN FOUR - STATIC BASE INFORMATION

Name: EDWARDS, CA

Total Officer Employees:	728	RPMA Non-Payroll (\$K/Year):	47,109
Total Enlisted Employees:	3,754	Communications (\$K/Year):	19
Total Student Employees:	0	BOS Non-Payroll (\$K/Year):	49,855
Total Civilian Employees:	3,876	BOS Payroll (\$K/Year):	0
Mil Families Living On Base:	64.0%	Family Housing (\$K/Year):	9,411
Civilians Not Willing To Move:	10.0%	Area Cost Factor:	1.00
Officer Housing Units Avail:	0	CHAMPUS In-Pat (\$/Visit):	0
Enlisted Housing Units Avail:	0	CHAMPUS Out-Pat (\$/Visit):	0
Total Base Facilities(KSF):	9,196	CHAMPUS Shift to Medicare:	20.9%
Officer VHA (\$/Month):	157	Activity Code:	19
Enlisted VHA (\$/Month):	165		
Per Diem Rate (\$/Day):	140	Homeowner Assistance Program:	No
Freight Cost (\$/Ton/Mile):	0.07	Unique Activity Information:	No

Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA95\AF\DOD\EMTEMOVE.CBR  
 Std Fctrs File : C:\COBRA95\AF\DOD\DEPOT.SFF

INPUT SCREEN FOUR - STATIC BASE INFORMATION

Name: EGLIN, FL

Total Officer Employees:	1,428	RPMA Non-Payroll (\$K/Year):	19,708
Total Enlisted Employees:	6,087	Communications (\$K/Year):	323
Total Student Employees:	0	BOS Non-Payroll (\$K/Year):	48,998
Total Civilian Employees:	4,041	BOS Payroll (\$K/Year):	0
Mil Families Living On Base:	34.0%	Family Housing (\$K/Year):	8,792
Civilians Not Willing To Move:	10.0%	Area Cost Factor:	1.00
Officer Housing Units Avail:	0	CHAMPUS In-Pat (\$/Visit):	0
Enlisted Housing Units Avail:	0	CHAMPUS Out-Pat (\$/Visit):	0
Total Base Facilities(KSF):	9,932	CHAMPUS Shift to Medicare:	20.9%
Officer VHA (\$/Month):	84	Activity Code:	21
Enlisted VHA (\$/Month):	57		
Per Diem Rate (\$/Day):	91	Homeowner Assistance Program:	No
Freight Cost (\$/Ton/Mile):	0.07	Unique Activity Information:	No

Name: NELLIS, NV

Total Officer Employees:	891	RPMA Non-Payroll (\$K/Year):	4,123
Total Enlisted Employees:	6,317	Communications (\$K/Year):	1,458
Total Student Employees:	0	BOS Non-Payroll (\$K/Year):	14,439
Total Civilian Employees:	1,064	BOS Payroll (\$K/Year):	0
Mil Families Living On Base:	25.0%	Family Housing (\$K/Year):	7,569
Civilians Not Willing To Move:	10.0%	Area Cost Factor:	1.00
Officer Housing Units Avail:	0	CHAMPUS In-Pat (\$/Visit):	0
Enlisted Housing Units Avail:	0	CHAMPUS Out-Pat (\$/Visit):	0
Total Base Facilities(KSF):	6,201	CHAMPUS Shift to Medicare:	20.9%
Officer VHA (\$/Month):	303	Activity Code:	65
Enlisted VHA (\$/Month):	187		
Per Diem Rate (\$/Day):	107	Homeowner Assistance Program:	Yes
Freight Cost (\$/Ton/Mile):	0.07	Unique Activity Information:	No

INPUT SCREEN FIVE - DYNAMIC BASE INFORMATION

Name: EDWARDS, CA

	1996	1997	1998	1999	2000	2001
	----	----	----	----	----	----
1-Time Unique Cost (\$K):	0	0	0	0	0	0
1-Time Unique Save (\$K):	0	0	0	0	0	0
1-Time Moving Cost (\$K):	0	0	0	0	0	0
1-Time Moving Save (\$K):	0	0	0	0	0	0
Env Non-MilCon Reqd(\$K):	0	0	0	0	0	0
Activ Mission Cost (\$K):	0	0	0	0	0	0
Activ Mission Save (\$K):	0	0	0	0	0	0
Misc Recurring Cost(\$K):	0	0	0	0	0	0
Misc Recurring Save(\$K):	0	0	0	0	0	0
Land (+Buy/-Sales) (\$K):	0	0	0	0	0	0
Construction Schedule(%):	0%	0%	0%	0%	0%	0%
Shutdown Schedule (%):	0%	0%	0%	0%	0%	0%
MilCon Cost Avoidnc(\$K):	0	0	0	0	0	0
Fam Housing Avoidnc(\$K):	0	0	0	0	0	0
Procurement Avoidnc(\$K):	0	0	0	0	0	0
CHAMPUS In-Patients/Yr:	0	0	0	0	0	0
CHAMPUS Out-Patients/Yr:	0	0	0	0	0	0
Facil ShutDown(KSF):	0					0.0%
						Perc Family Housing ShutDown:



Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA95\AF\DOD\EMTEMOVE.CBR  
 Std Fctrs File : C:\COBRA95\AF\DOD\DEPOT.SFF

INPUT SCREEN FIVE - DYNAMIC BASE INFORMATION

Name: EGLIN, FL	1996	1997	1998	1999	2000	2001
	----	----	----	----	----	----
1-Time Unique Cost (\$K):	0	0	0	0	0	0
1-Time Unique Save (\$K):	0	0	0	0	0	0
1-Time Moving Cost (\$K):	0	0	1,371	0	0	0
1-Time Moving Save (\$K):	0	0	0	0	0	0
Env Non-MilCon Reqcd(\$K):	0	0	0	0	0	0
Activ Mission Cost (\$K):	0	0	0	0	0	0
Activ Mission Save (\$K):	0	0	911	3,036	3,036	3,036
Misc Recurring Cost(\$K):	0	0	0	0	0	0
Misc Recurring Save(\$K):	0	0	0	0	0	0
Land (+Buy/-Sales) (\$K):	0	0	0	0	0	0
Construction Schedule(%):	0%	0%	0%	0%	0%	0%
Shutdown Schedule (%):	0%	0%	0%	0%	0%	0%
MilCon Cost Avoidnc(\$K):	0	0	0	0	0	0
Fam Housing Avoidnc(\$K):	0	0	0	0	0	0
Procurement Avoidnc(\$K):	0	0	0	0	0	0
CHAMPUS In-Patients/Yr:	0	0	0	0	0	0
CHAMPUS Out-Patients/Yr:	0	0	0	0	0	0
Facil ShutDown(KSF):	0					
		Perc Family Housing ShutDown:				0.0%

Name: NELLIS, NV	1996	1997	1998	1999	2000	2001
	----	----	----	----	----	----
1-Time Unique Cost (\$K):	0	0	0	0	0	0
1-Time Unique Save (\$K):	0	0	0	0	0	0
1-Time Moving Cost (\$K):	0	0	0	0	0	0
1-Time Moving Save (\$K):	0	0	0	0	0	0
Env Non-MilCon Reqcd(\$K):	0	0	0	0	0	0
Activ Mission Cost (\$K):	0	0	122	406	406	406
Activ Mission Save (\$K):	0	0	0	0	0	0
Misc Recurring Cost(\$K):	0	0	0	0	0	0
Misc Recurring Save(\$K):	0	0	0	0	0	0
Land (+Buy/-Sales) (\$K):	0	0	0	0	0	0
Construction Schedule(%):	0%	0%	0%	0%	0%	0%
Shutdown Schedule (%):	0%	0%	0%	0%	0%	0%
MilCon Cost Avoidnc(\$K):	0	0	0	0	0	0
Fam Housing Avoidnc(\$K):	0	0	0	0	0	0
Procurement Avoidnc(\$K):	0	0	0	0	0	0
CHAMPUS In-Patients/Yr:	0	0	0	0	0	0
CHAMPUS Out-Patients/Yr:	0	0	0	0	0	0
Facil ShutDown(KSF):	0					
		Perc Family Housing ShutDown:				0.0%

STANDARD FACTORS SCREEN ONE - PERSONNEL

Percent Officers Married:	76.80%	Civ Early Retire Pay Factor:	9.00%
Percent Enlisted Married:	66.90%	Priority Placement Service:	60.00%
Enlisted Housing MilCon:	80.00%	PPS Actions Involving PCS:	50.00%
Officer Salary(\$/Year):	78,668.00	Civilian PCS Costs (\$):	28,800.00
Off BAQ with Dependents(\$):	7,073.00	Civilian New Hire Cost(\$):	4,000.00
Enlisted Salary(\$/Year):	36,148.00	Nat Median Home Price(\$):	114,600.00
Enl BAQ with Dependents(\$):	5,162.00	Home Sale Reimburse Rate:	10.00%
Avg Unemploy Cost(\$/Week):	174.00	Max Home Sale Reimburs(\$):	22,385.00
Unemployment Eligibility(Weeks):	18	Home Purch Reimburse Rate:	5.00%
Civilian Salary(\$/Year):	46,642.00	Max Home Purch Reimburs(\$):	11,191.00
Civilian Turnover Rate:	15.00%	Civilian Homeowning Rate:	64.00%
Civilian Early Retire Rate:	10.00%	HAP Home Value Reimburse Rate:	22.90%
Civilian Regular Retire Rate:	5.00%	HAP Homeowner Receiving Rate:	5.00%
Civilian RIF Pay Factor:	39.00%	RSE Home Value Reimburse Rate:	0.00%
SF File Desc:	Depot Factors	RSE Homeowner Receiving Rate:	0.00%

Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA95\AF\DOD\EMTEMOVE.CBR  
 Std Fctrs File : C:\COBRA95\AF\DOD\DEPOT.SFF

STANDARD FACTORS SCREEN TWO - FACILITIES

RPMA Building SF Cost Index:	0.93	Rehab vs. New MilCon Cost:	0.00%
BOS Index (RPMA vs population):	0.54	Info Management Account:	0.00%
(Indices are used as exponents)		MilCon Design Rate:	0.00%
Program Management Factor:	10.00%	MilCon SIOH Rate:	0.00%
Caretaker Admin(SF/Care):	162.00	MilCon Contingency Plan Rate:	0.00%
Mothball Cost (\$/SF):	1.25	MilCon Site Preparation Rate:	0.00%
Avg Bachelor Quarters(SF):	256.00	Discount Rate for NPV.RPT/ROI:	2.75%
Avg Family Quarters(SF):	1,320.00	Inflation Rate for NPV.RPT/ROI:	0.00%
APPDET.RPT Inflation Rates:			
1996: 0.00% 1997: 2.90% 1998: 3.00%		1999: 3.00% 2000: 3.00% 2001: 3.00%	

STANDARD FACTORS SCREEN THREE - TRANSPORTATION

Material/Assigned Person(Lb):	710	Equip Pack & Crate(\$/Ton):	284.00
HHG Per Off Family (Lb):	14,500.00	Mil Light Vehicle(\$/Mile):	0.43
HHG Per Enl Family (Lb):	9,000.00	Heavy/Spec Vehicle(\$/Mile):	1.40
HHG Per Mil Single (Lb):	6,400.00	POV Reimbursement(\$/Mile):	0.18
HHG Per Civilian (Lb):	18,000.00	Avg Mil Tour Length (Years):	4.10
Total HHG Cost (\$/100Lb):	35.00	Routine PCS(\$/Pers/Tour):	6,437.00
Air Transport (\$/Pass Mile):	0.20	One-Time Off PCS Cost(\$):	9,142.00
Misc Exp (\$/Direct Employ):	700.00	One-Time Enl PCS Cost(\$):	5,761.00

STANDARD FACTORS SCREEN FOUR - MILITARY CONSTRUCTION

Category	UM	\$/UM	Category	UM	\$/UM
-----	--	----	-----	--	----
Horizontal	(SY)	0	OTHER	(SF)	0
Waterfront	(LF)	0	Optional Category B	( )	0
Air Operations	(SF)	0	Optional Category C	( )	0
Operational	(SF)	0	Optional Category D	( )	0
Administrative	(SF)	0	Optional Category E	( )	0
School Buildings	(SF)	0	Optional Category F	( )	0
Maintenance Shops	(SF)	0	Optional Category G	( )	0
Bachelor Quarters	(SF)	0	Optional Category H	( )	0
Family Quarters	(EA)	0	Optional Category I	( )	0
Covered Storage	(SF)	0	Optional Category J	( )	0
Dining Facilities	(SF)	0	Optional Category K	( )	0
Recreation Facilities	(SF)	0	Optional Category L	( )	0
Communications Facil	(SF)	0	Optional Category M	( )	0
Shipyard Maintenance	(SF)	0	Optional Category N	( )	0
RDT & E Facilities	(SF)	0	Optional Category O	( )	0
POL Storage	(BL)	0	Optional Category P	( )	0
Ammunition Storage	(SF)	0	Optional Category Q	( )	0
Medical Facilities	(SF)	0	Optional Category R	( )	0
Environmental	( )	0			

# Document Separator

COBRA REALIGNMENT SUMMARY (COBRA v5.08) - Page 1/2  
 Data As Of 11:35 05/02/95, Report Created 10:49 05/08/1995

EGLIN

Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA508\TEST\EMTEMOV1.CBR  
 Std Pctrs File : C:\COBRA508\TEST\DEPOTPIN.SFF

Starting Year : 1996  
 Final Year : 1998  
 ROI Year : 2000 (2 Years)

NPV in 2015(\$K): -42,114  
 1-Time Cost(\$K): 6,086

Net Costs (\$K)	Constant Dollars		1998	1999	2000	2001	Total	Beyond
	1996	1997						
MilCon	0	0	0	0	0	0	0	0
Person	30	-7	47	-36	-36	-36	-37	-36
Overhd	73	31	143	47	47	47	390	47
Moving	216	2,202	1,954	0	0	0	4,372	0
Missio	0	0	-1,289	-3,740	-3,740	-3,740	-12,509	-3,740
Other	0	1,500	0	0	0	0	1,500	0
<b>TOTAL</b>	<b>319</b>	<b>3,726</b>	<b>856</b>	<b>-3,728</b>	<b>-3,728</b>	<b>-3,728</b>	<b>-6,284</b>	<b>-3,728</b>

	1996	1997	1998	1999	2000	2001	Total
<b>POSITIONS ELIMINATED</b>							
Off	0	0	0	0	0	0	0
Enl	0	0	0	0	0	0	0
Civ	0	0	0	0	0	0	0
TOT	0	0	0	0	0	0	0

	1996	1997	1998	1999	2000	2001	Total
<b>POSITIONS REALIGNED</b>							
Off	4	0	11	0	0	0	15
Enl	4	0	8	0	0	0	12
Stu	0	0	0	0	0	0	0
Civ	8	0	17	0	0	0	25
TOT	16	0	36	0	0	0	52

Summary:

-----  
 MOVE 17 EMTE SIMULATORS AND EGLIN EC OAR TO NELLIS COMPLEX  
 MOVE PERSONNEL TO EDWARDS  
 CONTRACTOR SUPPORT TRANSFERS TO NELLIS COMPLEX  
 MAINTAINS 12 SYSTEMS AT EGLIN AS SIGNAL SOURCE ONLY  
 MOTHBALL ANY REMAINING SYSTEMS AT EGLIN

15  
 12 27  
 0

COBRA REALIGNMENT SUMMARY (COBRA v5.08) - Page 2/2  
 Data As Of 11:35 05/02/95, Report Created 10:49 05/08/1995

Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA508\TEST\EMTEMOV1.CBR  
 Std Fctrs File : C:\COBRA508\TEST\DEPOTFIN.SFF

	Costs (\$K) Constant Dollars						Total	Beyond
	1996	1997	1998	1999	2000	2001		
MilCon	0	0	0	0	0	0	0	0
Person	86	48	239	156	156	156	840	156
Overhd	73	68	180	167	167	167	823	167
Moving	228	2,202	1,984	0	0	0	4,414	0
Missio	0	0	122	406	406	406	1,340	406
Other	0	1,500	0	0	0	0	1,500	0
<b>TOTAL</b>	<b>388</b>	<b>3,818</b>	<b>2,525</b>	<b>729</b>	<b>729</b>	<b>729</b>	<b>8,918</b>	<b>729</b>

	Savings (\$K) Constant Dollars						Total	Beyond
	1996	1997	1998	1999	2000	2001		
MilCon	0	0	0	0	0	0	0	0
Person	56	56	191	191	191	191	877	191
Overhd	0	37	37	120	120	120	434	120
Moving	12	0	30	0	0	0	42	0
Missio	0	0	1,411	4,146	4,146	4,146	13,849	4,146
Other	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>68</b>	<b>92</b>	<b>1,669</b>	<b>4,457</b>	<b>4,457</b>	<b>4,457</b>	<b>15,202</b>	<b>4,457</b>



TOTAL ONE-TIME COST REPORT (COBRA v5.08)  
 Data As Of 11:35 05/02/95, Report Created 10:49 05/08/1995

Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA508\TEST\EMTEMOV1.CBR  
 Std Fctrs File : C:\COBRA508\TEST\DEPOTFIN.SFF

(All values in Dollars)

Category	Cost	Sub-Total
<hr/>		
Construction		
Military Construction	0	
Family Housing Construction	0	
Information Management Account	0	
Land Purchases	0	
Total - Construction		0
Personnel		
Civilian RIF	54,571	
Civilian Early Retirement	12,593	
Civilian New Hires	44,000	
Eliminated Military PCS	0	
Unemployment	9,396	
Total - Personnel		120,560
Overhead		
Program Planning Support	50,986	
Mothball / Shutdown	0	
Total - Overhead		50,986
Moving		
Civilian Moving	497,246	
Civilian PPS	0	
Military Moving	173,118	
Freight	13,181	
One-Time Moving Costs	3,741,000	
Total - Moving		4,414,546
Other		
HAP / RSE	0	
Environmental Mitigation Costs	0	
One-Time Unique Costs	1,500,000	
Total - Other		1,500,000
<hr/>		
Total One-Time Costs		6,086,093
<hr/>		
One-Time Savings		
Military Construction Cost Avoidances	0	
Family Housing Cost Avoidances	0	
Military Moving	42,390	
Land Sales	0	
One-Time Moving Savings	0	
Environmental Mitigation Savings	0	
One-Time Unique Savings	0	
<hr/>		
Total One-Time Savings		42,390
<hr/>		
Total Net One-Time Costs		6,043,703

TOTAL APPROPRIATIONS DETAIL REPORT (COBRA v5.08) - Page 1/3  
 Data As Of 11:35 05/02/95, Report Created 10:49 05/08/1995

Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA508\TEST\EMTEMOV1.CBR  
 Std Fctrs File : C:\COBRA508\TEST\DEPOTFIN.SFF

ONE-TIME COSTS -----(\$K)-----	1996	1997	1998	1999	2000	2001	Total
CONSTRUCTION							
MILCON	0	0	0	0	0	0	0
Fam Housing	0	0	0	0	0	0	0
Land Purch	0	0	0	0	0	0	0
O&M							
CIV SALARY							
Civ RIP	18	0	36	0	0	0	54
Civ Retire	4	0	8	0	0	0	12
CIV MOVING							
Per Diem	25	0	45	0	0	0	70
POV Miles	2	0	3	0	0	0	5
Home Purch	55	0	99	0	0	0	154
HHG	38	0	68	0	0	0	107
Misc	3	0	6	0	0	0	10
House Hunt	21	0	37	0	0	0	58
PPS	0	0	0	0	0	0	0
RITA	30	0	53	0	0	0	83
FREIGHT							
Packing	3	0	7	0	0	0	10
Freight	1	1	1	0	0	0	3
Vehicles	0	0	0	0	0	0	0
Driving	0	0	0	0	0	0	0
Unemployment	3	0	6	0	0	0	9
OTHER							
Program Plan	22	16	12	0	0	0	51
Shutdown	0	0	0	0	0	0	0
New Hire	12	0	32	0	0	0	44
1-Time Move	0	2,201	1,540	0	0	0	3,741
MIL PERSONNEL							
MIL MOVING							
Per Diem	7	0	16	0	0	0	22
POV Miles	3	0	7	0	0	0	10
HHG	35	0	86	0	0	0	121
Misc	6	0	13	0	0	0	19
OTHER							
Elim PCS	0	0	0	0	0	0	0
OTHER							
HAP / RSE	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
Info Manage	0	0	0	0	0	0	0
1-Time Other	0	1,500	0	0	0	0	1,500
TOTAL ONE-TIME	288	3,718	2,080	0	0	0	6,086

TOTAL APPROPRIATIONS DETAIL REPORT (COBRA v5.08) - Page 2/3  
 Data As Of 11:35 05/02/95, Report Created 10:49 05/08/1995

Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA508\TEST\EMTEMOV1.CBR  
 Std Fctrs File : C:\COBRA508\TEST\DEPOTFIN.SPF

RECURRINGCOSTS	1996	1997	1998	1999	2000	2001	Total	Beyond
----(\$K)----	----	----	----	----	----	----	----	----
FAM HOUSE OPS	0	0	0	0	0	0	0	0
O&M								
RPMA	0	0	0	0	0	0	0	0
BOS	51	51	167	167	167	167	772	167
Unique Operat	0	0	0	0	0	0	0	0
Civ Salary	0	0	0	0	0	0	0	0
CHAMPUS	0	0	0	0	0	0	0	0
Caretaker	0	0	0	0	0	0	0	0
MIL PERSONNEL								
Off Salary	0	0	0	0	0	0	0	0
Enl Salary	0	0	0	0	0	0	0	0
House Allow	48	48	156	156	156	156	719	156
OTHER								
Mission	0	0	122	406	406	406	1,340	406
Misc Recur	0	0	0	0	0	0	0	0
Unique Other	0	0	0	0	0	0	0	0
TOTAL RECUR	100	100	445	729	729	729	2,831	729
TOTAL COST	388	3,818	2,525	729	729	729	8,918	729
ONE-TIME SAVES	1996	1997	1998	1999	2000	2001	Total	
----(\$K)----	----	----	----	----	----	----	----	
CONSTRUCTION								
MILCON	0	0	0	0	0	0	0	
Fam Housing	0	0	0	0	0	0	0	
O&M								
1-Time Move	0	0	0	0	0	0	0	
MIL PERSONNEL								
Mil Moving	12	0	30	0	0	0	42	
OTHER								
Land Sales	0	0	0	0	0	0	0	
Environmental	0	0	0	0	0	0	0	
1-Time Other	0	0	0	0	0	0	0	
TOTAL ONE-TIME	12	0	30	0	0	0	42	
RECURRINGSAVES	1996	1997	1998	1999	2000	2001	Total	Beyond
----(\$K)----	----	----	----	----	----	----	----	----
FAM HOUSE OPS	0	0	0	0	0	0	0	0
O&M								
RPMA	0	0	0	0	0	0	0	0
BOS	0	37	37	120	120	120	434	120
Unique Operat	0	0	0	0	0	0	0	0
Civ Salary	0	0	0	0	0	0	0	0
CHAMPUS	0	0	0	0	0	0	0	0
MIL PERSONNEL								
Off Salary	0	0	0	0	0	0	0	0
Enl Salary	0	0	0	0	0	0	0	0
House Allow	56	56	191	191	191	191	877	191
OTHER								
Procurement	0	0	0	0	0	0	0	0
Mission	0	0	1,411	4,146	4,146	4,146	13,849	4,146
Misc Recur	0	0	0	0	0	0	0	0
Unique Other	0	0	0	0	0	0	0	0
TOTAL RECUR	56	92	1,639	4,457	4,457	4,457	15,159	4,457
TOTAL SAVINGS	68	92	1,669	4,457	4,457	4,457	15,202	4,457

TOTAL APPROPRIATIONS DETAIL REPORT (COBRA v5.08) - Page 3/3  
 Data As Of 11:35 05/02/95, Report Created 10:49 05/08/1995

Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA508\TEST\EMTEMOV1.CBR  
 Std Fctrs File : C:\COBRA508\TEST\DEPOTFIN.SFF

ONE-TIME NET	1996	1997	1998	1999	2000	2001	Total	
-----(\$K)-----	----	----	----	----	----	----	-----	
<b>CONSTRUCTION</b>								
MILCON	0	0	0	0	0	0	0	
Fam Housing	0	0	0	0	0	0	0	
<b>O&amp;M</b>								
Civ Retir/RIF	22	0	45	0	0	0	67	
Civ Moving	178	1	322	0	0	0	500	
Other	37	2,217	1,591	0	0	0	3,845	
<b>MIL PERSONNEL</b>								
Mil Moving	38	0	93	0	0	0	131	
<b>OTHER</b>								
HAP / RSE	0	0	0	0	0	0	0	
Environmental	0	0	0	0	0	0	0	
Info Manage	0	0	0	0	0	0	0	
1-Time Other	0	1,500	0	0	0	0	1,500	
Land	0	0	0	0	0	0	0	
<b>TOTAL ONE-TIME</b>	<b>275</b>	<b>3,718</b>	<b>2,050</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6,044</b>	
<b>RECURRING NET</b>								
-----(\$K)-----	----	----	----	----	----	----	-----	-----
FAM HOUSE OPS	0	0	0	0	0	0	0	0
<b>O&amp;M</b>								
RPMA	0	0	0	0	0	0	0	0
BOS	51	15	130	47	47	47	339	47
Unique Operat	0	0	0	0	0	0	0	0
Caretaker	0	0	0	0	0	0	0	0
Civ Salary	0	0	0	0	0	0	0	0
CHAMPUS	0	0	0	0	0	0	0	0
<b>MIL PERSONNEL</b>								
Mil Salary	0	0	0	0	0	0	0	0
House Allow	-7	-7	-36	-36	-36	-36	-158	-36
<b>OTHER</b>								
Procurement	0	0	0	0	0	0	0	0
Mission	0	0	-1,289	-3,740	-3,740	-3,740	-12,509	-3,740
Misc Recur	0	0	0	0	0	0	0	0
Unique Other	0	0	0	0	0	0	0	0
<b>TOTAL RECUR</b>	<b>44</b>	<b>7</b>	<b>-1,194</b>	<b>-3,728</b>	<b>-3,728</b>	<b>-3,728</b>	<b>-12,328</b>	<b>-3,728</b>
<b>TOTAL NET COST</b>	<b>319</b>	<b>3,726</b>	<b>856</b>	<b>-3,728</b>	<b>-3,728</b>	<b>-3,728</b>	<b>-6,284</b>	<b>-3,728</b>

PERSONNEL, SF, RPMA, AND BOS DELTAS (COBRA v5.08)  
 Data As Of 11:35 05/02/95, Report Created 10:49 05/08/1995

Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA508\TEST\EMTEMOV1.CBR  
 Std Fctrs File : C:\COBRA508\TEST\DEPOTFIN.SFF

Base	Personnel		SF		
	Change	%Change	Change	%Change	Chg/Per
EDWARDS	52	1%	0	0%	0
EGLIN	-52	0%	0	0%	0
NELLIS	0	0%	0	0%	0

Base	RPMA(\$)			BOS(\$)		
	Change	%Change	Chg/Per	Change	%Change	Chg/Per
EDWARDS	0	0%	0	167,320	0%	3,218
EGLIN	0	0%	0	-119,970	0%	2,307
NELLIS	0	0%	0	0	0%	0

Base	RPMABOS(\$)		
	Change	%Change	Chg/Per
EDWARDS	167,320	0%	3,218
EGLIN	-119,970	0%	2,307
NELLIS	0	0%	0



TOTAL MILITARY CONSTRUCTION ASSETS (COBRA v5.08)  
Data As Of 11:35 05/02/95, Report Created 10:49 05/08/1995

Department : USAF  
Option Package : AFJ-5 (EC)  
Scenario File : C:\COBRA508\TEST\EMTEMOV1.CBR  
Std Pctrs File : C:\COBRA508\TEST\DEPOTFIN.SPF

All Costs in \$K

Base Name	Total MilCon	IMA Cost	Land Purch	Cost Avoid	Total Cost
EDWARDS	0	0	0	0	0
EGLIN	0	0	0	0	0
NELLIS	0	0	0	0	0
Totals:	0	0	0	0	0

NET PRESENT VALUES REPORT (COBRA v5.08)  
 Data As Of 11:35 05/02/95, Report Created 10:49 05/08/1995

Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA508\TEST\EMTEMOV1.CBR  
 Std Fctrs File : C:\COBRA508\TEST\DEPOTFIN.SFF

Year	Cost (\$)	Adjusted Cost (\$)	NPV (\$)
-----	-----	-----	-----
1996	319,506	315,201	315,201
1997	3,725,633	3,577,069	3,892,270
1998	855,652	799,544	4,691,815
1999	-3,728,353	-3,390,632	1,301,183
2000	-3,728,353	-3,299,885	-1,998,702
2001	-3,728,353	-3,211,567	-5,210,269
2002	-3,728,353	-3,125,613	-8,335,882
2003	-3,728,353	-3,041,959	-11,377,841
2004	-3,728,353	-2,960,544	-14,338,385
2005	-3,728,353	-2,881,308	-17,219,693
2006	-3,728,353	-2,804,193	-20,023,885
2007	-3,728,353	-2,729,141	-22,753,027
2008	-3,728,353	-2,656,098	-25,409,125
2009	-3,728,353	-2,585,011	-27,994,136
2010	-3,728,353	-2,515,825	-30,509,961
2011	-3,728,353	-2,448,492	-32,958,453
2012	-3,728,353	-2,382,960	-35,341,414
2013	-3,728,353	-2,319,183	-37,660,597
2014	-3,728,353	-2,257,112	-39,917,709
2015	-3,728,353	-2,196,703	-42,114,413

TOTAL PERSONNEL IMPACT REPORT (COBRA v5.08)  
 Data As Of 11:35 05/02/95, Report Created 10:49 05/08/1995

Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA508\TEST\EMTEMOV1.CBR  
 Std Fctrs File : C:\COBRA508\TEST\DEPOTFIN.SFF

	Rate	1996	1997	1998	1999	2000	2001	Total
<b>CIVILIAN POSITIONS REALIGNING OUT</b>								
Early Retirement*	10.00%	1	0	2	0	0	0	3
Regular Retirement*	5.00%	0	0	1	0	0	0	1
Civilian Turnover*	15.00%	1	0	3	0	0	0	4
Civs Not Moving (RIFs)*+		1	0	2	0	0	0	3
Civilians Moving (the remainder)		5	0	9	0	0	0	14
Civilian Positions Available		3	0	8	0	0	0	11
<b>CIVILIAN POSITIONS ELIMINATED</b>								
Early Retirement	10.00%	0	0	0	0	0	0	0
Regular Retirement	5.00%	0	0	0	0	0	0	0
Civilian Turnover	15.00%	0	0	0	0	0	0	0
Civs Not Moving (RIFs)*+		0	0	0	0	0	0	0
Priority Placement#	60.00%	0	0	0	0	0	0	0
Civilians Available to Move		0	0	0	0	0	0	0
Civilians Moving		0	0	0	0	0	0	0
Civilian RIFs (the remainder)		0	0	0	0	0	0	0
<b>CIVILIAN POSITIONS REALIGNING IN</b>								
Civilians Moving		5	0	9	0	0	0	14
New Civilians Hired		3	0	8	0	0	0	11
Other Civilian Additions		0	0	0	0	0	0	0
<b>TOTAL CIVILIAN EARLY RETIRMENTS</b>								
		1	0	2	0	0	0	3
<b>TOTAL CIVILIAN RIFs</b>								
		1	0	2	0	0	0	3
<b>TOTAL CIVILIAN PRIORITY PLACEMENTS#</b>								
		0	0	0	0	0	0	0
<b>TOTAL CIVILIAN NEW HIRES</b>								
		3	0	8	0	0	0	11

\* Early Retirements, Regular Retirements, Civilian Turnover, and Civilians Not Willing to Move are not applicable for moves under fifty miles.

+ The Percentage of Civilians Not Willing to Move (Voluntary RIFs) varies from base to base.

# Not all Priority Placements involve a Permanent Change of Station. The rate of PPS placements involving a PCS is 50.00%

PERSONNEL YEARLY PERCENTAGES (COBRA v5.08)  
 Data As Of 11:35 05/02/95, Report Created 10:49 05/08/1995

Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA508\TEST\EMTEMOV1.CBR  
 Std Fctrs File : C:\COBRA508\TEST\DEPOTFIN.SFF

Base: EDWARDS, CA

Year	Pers Moved In		MilCon TimePhase	Pers Moved Out/Eliminated		ShutDn TimePhase
	Total	Percent		Total	Percent	
1996	16	30.77%	30.77%	0	0.00%	16.67%
1997	0	0.00%	69.23%	0	0.00%	16.67%
1998	36	69.23%	0.00%	0	0.00%	16.67%
1999	0	0.00%	0.00%	0	0.00%	16.67%
2000	0	0.00%	0.00%	0	0.00%	16.67%
2001	0	0.00%	0.00%	0	0.00%	16.67%
TOTALS	52	100.00%	100.00%	0	0.00%	100.00%

Base: EGLIN, FL

Year	Pers Moved In		MilCon TimePhase	Pers Moved Out/Eliminated		ShutDn TimePhase
	Total	Percent		Total	Percent	
1996	0	0.00%	66.67%	16	30.77%	30.77%
1997	0	0.00%	33.33%	0	0.00%	0.00%
1998	0	0.00%	0.00%	36	69.23%	69.23%
1999	0	0.00%	0.00%	0	0.00%	0.00%
2000	0	0.00%	0.00%	0	0.00%	0.00%
2001	0	0.00%	0.00%	0	0.00%	0.00%
TOTALS	0	0.00%	100.00%	52	100.00%	100.00%

Base: NELLIS, NV

Year	Pers Moved In		MilCon TimePhase	Pers Moved Out/Eliminated		ShutDn TimePhase
	Total	Percent		Total	Percent	
1996	0	0.00%	33.33%	0	0.00%	16.67%
1997	0	0.00%	16.67%	0	0.00%	16.67%
1998	0	0.00%	16.67%	0	0.00%	16.67%
1999	0	0.00%	16.67%	0	0.00%	16.67%
2000	0	0.00%	16.67%	0	0.00%	16.67%
2001	0	0.00%	0.00%	0	0.00%	16.67%
TOTALS	0	0.00%	100.00%	0	0.00%	100.00%

PERSONNEL SUMMARY REPORT (COBRA v5.08)  
 Data As Of 11:35 05/02/95, Report Created 10:49 05/08/1995

Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA508\TEST\EMTEMOV1.CBR  
 Std Fctrs File : C:\COBRA508\TEST\DEPOTFIN.SFF

PERSONNEL SUMMARY FOR: EDWARDS, CA

BASE POPULATION (FY 1996, Prior to BRAC Action):

Officers	Enlisted	Students	Civilians
728	3,754	0	3,876

PERSONNEL REALIGNMENTS:

From Base: EGLIN, FL

	1996	1997	1998	1999	2000	2001	Total
Officers	4	0	11	0	0	0	15
Enlisted	4	0	8	0	0	0	12
Students	0	0	0	0	0	0	0
Civilians	8	0	17	0	0	0	25
TOTAL	16	0	36	0	0	0	52

TOTAL PERSONNEL REALIGNMENTS (Into EDWARDS, CA):

	1996	1997	1998	1999	2000	2001	Total
Officers	4	0	11	0	0	0	15
Enlisted	4	0	8	0	0	0	12
Students	0	0	0	0	0	0	0
Civilians	8	0	17	0	0	0	25
TOTAL	16	0	36	0	0	0	52

BASE POPULATION (After BRAC Action):

Officers	Enlisted	Students	Civilians
743	3,766	0	3,901

PERSONNEL SUMMARY FOR: EGLIN, FL

BASE POPULATION (FY 1996, Prior to BRAC Action):

Officers	Enlisted	Students	Civilians
1,428	6,087	0	4,041

PERSONNEL REALIGNMENTS:

To Base: EDWARDS, CA

	1996	1997	1998	1999	2000	2001	Total
Officers	4	0	11	0	0	0	15
Enlisted	4	0	8	0	0	0	12
Students	0	0	0	0	0	0	0
Civilians	8	0	17	0	0	0	25
TOTAL	16	0	36	0	0	0	52

TOTAL PERSONNEL REALIGNMENTS (Out of EGLIN, FL):

	1996	1997	1998	1999	2000	2001	Total
Officers	4	0	11	0	0	0	15
Enlisted	4	0	8	0	0	0	12
Students	0	0	0	0	0	0	0
Civilians	8	0	17	0	0	0	25
TOTAL	16	0	36	0	0	0	52

BASE POPULATION (After BRAC Action):

Officers	Enlisted	Students	Civilians
1,413	6,075	0	4,016



Department : USAF  
Option Package : AFJ-5 (EC)  
Scenario File : C:\COBRA508\TEST\EMTEMOV1.CBR  
Std Fctrs File : C:\COBRA508\TEST\DEPOTFIN.SFF

PERSONNEL SUMMARY FOR: NELLIS, NV

BASE POPULATION (FY 1996, Prior to BRAC Action):

Officers	Enlisted	Students	Civilians
----- 891	----- 6,317	----- 0	----- 1,064

BASE POPULATION (After BRAC Action):

Officers	Enlisted	Students	Civilians
----- 891	----- 6,317	----- 0	----- 1,064

RPMA/BOS CHANGE REPORT (COBRA v5.08)  
Data As Of 11:35 05/02/95, Report Created 10:49 05/08/1995

Department : USAF  
Option Package : AFJ-5 (EC)  
Scenario File : C:\COBRAS08\TEST\EMTEMOV1.CBR  
Std Fctrs File : C:\COBRAS08\TEST\DEPOTFIN.SPF

Net Change(\$K)	1996	1997	1998	1999	2000	2001	Total	Beyond
RPMA Change	0	0	0	0	0	0	0	0
BOS Change	51	15	130	47	47	47	339	47
Housing Change	0	0	0	0	0	0	0	0
TOTAL CHANGES	51	15	130	47	47	47	339	47

INPUT DATA REPORT (COBRA v5.08)  
 Data As Of 11:35 05/02/95, Report Created 10:49 05/08/1995

Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRAS08\TEST\EMTEMOV1.CBR  
 Std Fctrs File : C:\COBRAS08\TEST\DEPOTFIN.SFF

INPUT SCREEN ONE - GENERAL SCENARIO INFORMATION

Model Year One : FY 1996

Model does Time-Phasing of Construction/Shutdown: Yes

Base Name	Strategy:
-----	-----
EDWARDS, CA	Realignment
EGLIN, FL	Realignment
NELLIS, NV	Realignment

Summary:

MOVE 17 EMTE SIMULATORS AND EGLIN EC OAR TO NELLIS COMPLEX  
 MOVE PERSONNEL TO EDWARDS  
 CONTRACTOR SUPPORT TRANSFERS TO NELLIS COMPLEX  
 MAINTAINS 12 SYSTEMS AT EGLIN AS SIGNAL SOURCE ONLY  
 MOTHBALL ANY REMAINING SYSTEMS AT EGLIN

INPUT SCREEN TWO - DISTANCE TABLE

From Base:	To Base:	Distance:
-----	-----	-----
EDWARDS, CA	EGLIN, FL	2,092 mi
EGLIN, FL	NELLIS, NV	1,940 mi

INPUT SCREEN THREE - MOVEMENT TABLE

Transfers from EGLIN, FL to EDWARDS, CA

	1996	1997	1998	1999	2000	2001
	----	----	----	----	----	----
Officer Positions:	4	0	11	0	0	0
Enlisted Positions:	4	0	8	0	0	0
Civilian Positions:	8	0	17	0	0	0
Student Positions:	0	0	0	0	0	0
Missn Eqpt (tons):	0	2	0	0	0	0
Suppt Eqpt (tons):	0	0	0	0	0	0
Military Light Vehicles:	0	0	0	0	0	0
Heavy/Special Vehicles:	0	0	0	0	0	0

INPUT SCREEN FOUR - STATIC BASE INFORMATION

Name: EDWARDS, CA

Total Officer Employees:	728	RPMA Non-Payroll (\$K/Year):	47,109
Total Enlisted Employees:	3,754	Communications (\$K/Year):	19
Total Student Employees:	0	BOS Non-Payroll (\$K/Year):	49,855
Total Civilian Employees:	3,876	BOS Payroll (\$K/Year):	0
Mil Families Living On Base:	64.0%	Family Housing (\$K/Year):	9,411
Civilians Not Willing To Move:	10.0%	Area Cost Factor:	1.00
Officer Housing Units Avail:	0	CHAMPUS In-Pat (\$/Visit):	0
Enlisted Housing Units Avail:	0	CHAMPUS Out-Pat (\$/Visit):	0
Total Base Facilities(KSF):	9,196	CHAMPUS Shift to Medicare:	20.9%
Officer VHA (\$/Month):	157	Activity Code:	19
Enlisted VHA (\$/Month):	165		
Per Diem Rate (\$/Day):	140	Homeowner Assistance Program:	No
Freight Cost (\$/Ton/Mile):	0.07	Unique Activity Information:	No

Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA508\TEST\EMTEMOV1.CBR  
 Std Fctrs File : C:\COBRA508\TEST\DEPOTFIN.SFF

INPUT SCREEN FOUR - STATIC BASE INFORMATION

Name: EGLIN, FL

Total Officer Employees:	1,428	RPMA Non-Payroll (\$K/Year):	19,708
Total Enlisted Employees:	6,087	Communications (\$K/Year):	323
Total Student Employees:	0	BOS Non-Payroll (\$K/Year):	48,998
Total Civilian Employees:	4,041	BOS Payroll (\$K/Year):	0
Mil Families Living On Base:	34.0%	Family Housing (\$K/Year):	8,797
Civilians Not Willing To Move:	10.0%	Area Cost Factor:	1.00
Officer Housing Units Avail:	0	CHAMPUS In-Pat (\$/Visit):	0
Enlisted Housing Units Avail:	0	CHAMPUS Out-Pat (\$/Visit):	0
Total Base Facilities(KSP):	9,932	CHAMPUS Shift to Medicare:	20.9%
Officer VHA (\$/Month):	84	Activity Code:	21
Enlisted VHA (\$/Month):	57		
Per Diem Rate (\$/Day):	91	Homeowner Assistance Program:	No
Freight Cost (\$/Ton/Mile):	0.07	Unique Activity Information:	No

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Name: NELLIS, NV

Total Officer Employees:	891	RPMA Non-Payroll (\$K/Year):	4,123
Total Enlisted Employees:	6,317	Communications (\$K/Year):	1,458
Total Student Employees:	0	BOS Non-Payroll (\$K/Year):	14,439
Total Civilian Employees:	1,064	BOS Payroll (\$K/Year):	0
Mil Families Living On Base:	25.0%	Family Housing (\$K/Year):	7,569
Civilians Not Willing To Move:	10.0%	Area Cost Factor:	1.00
Officer Housing Units Avail:	0	CHAMPUS In-Pat (\$/Visit):	0
Enlisted Housing Units Avail:	0	CHAMPUS Out-Pat (\$/Visit):	0
Total Base Facilities(KSP):	6,201	CHAMPUS Shift to Medicare:	20.9%
Officer VHA (\$/Month):	303	Activity Code:	65
Enlisted VHA (\$/Month):	187		
Per Diem Rate (\$/Day):	107	Homeowner Assistance Program:	Yes
Freight Cost (\$/Ton/Mile):	0.07	Unique Activity Information:	No

INPUT SCREEN FIVE - DYNAMIC BASE INFORMATION

Name: EDWARDS, CA

	1996	1997	1998	1999	2000	2001
1-Time Unique Cost (\$K):	0	1,500	0	0	0	0
1-Time Unique Save (\$K):	0	0	0	0	0	0
1-Time Moving Cost (\$K):	0	0	0	0	0	0
1-Time Moving Save (\$K):	0	0	0	0	0	0
Erv Non-MilCon Reqd(\$K):	0	0	0	0	0	0
Activ Mission Cost (\$K):	0	0	0	0	0	0
Activ Mission Save (\$K):	0	0	0	0	0	0
Misc Recurring Cost (\$K):	0	0	0	0	0	0
Misc Recurring Save (\$K):	0	0	0	0	0	0
Land (+Buy/-Sales) (\$K):	0	0	0	0	0	0
Construction Schedule(%):	0%	0%	0%	0%	0%	0%
Shutdown Schedule (%):	0%	0%	0%	0%	0%	0%
MilCon Cost Avoidnc(\$K):	0	0	0	0	0	0
Fam Housing Avoidnc(\$K):	0	0	0	0	0	0
Procurement Avoidnc(\$K):	0	0	0	0	0	0
CHAMPUS In-Patients/Yr:	0	0	0	0	0	0
CHAMPUS Out-Patients/Yr:	0	0	0	0	0	0
Facil ShutDown(KSP):	0					
		Perc Family Housing ShutDown:				0.0%

Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA508\TEST\EMTEMOV1.CBR  
 Std Pctrs File : C:\COBRA508\TEST\DEPOTFIN.SFF

INPUT SCREEN FIVE - DYNAMIC BASE INFORMATION

Name: EGLIN, FL

	1996	1997	1998	1999	2000	2001
1-Time Unique Cost (\$K):	0	0	0	0	0	0
1-Time Unique Save (\$K):	0	0	0	0	0	0
1-Time Moving Cost (\$K):	0	2,201	1,540	0	0	0
1-Time Moving Save (\$K):	0	0	0	0	0	0
Env Non-MilCon Reqd(\$K):	0	0	0	0	0	0
Activ Mission Cost (\$K):	0	0	0	0	0	0
Activ Mission Save (\$K):	0	0	1,411	4,146	4,146	4,146
Misc Recurring Cost (\$K):	0	0	0	0	0	0
Misc Recurring Save (\$K):	0	0	0	0	0	0
Land (+Buy/-Sales) (\$K):	0	0	0	0	0	0
Construction Schedule(%):	0%	0%	0%	0%	0%	0%
Shutdown Schedule (%):	0%	0%	0%	0%	0%	0%
MilCon Cost Avoidnc(\$K):	0	0	0	0	0	0
Fam Housing Avoidnc(\$K):	0	0	0	0	0	0
Procurement Avoidnc(\$K):	0	0	0	0	0	0
CHAMPUS In-Patients/Yr:	0	0	0	0	0	0
CHAMPUS Out-Patients/Yr:	0	0	0	0	0	0
Facil ShutDown(KSF):	0					0.0%
						Perc Family Housing ShutDown:

Name: NELLIS, NV

	1996	1997	1998	1999	2000	2001
1-Time Unique Cost (\$K):	0	0	0	0	0	0
1-Time Unique Save (\$K):	0	0	0	0	0	0
1-Time Moving Cost (\$K):	0	0	0	0	0	0
1-Time Moving Save (\$K):	0	0	0	0	0	0
Env Non-MilCon Reqd(\$K):	0	0	0	0	0	0
Activ Mission Cost (\$K):	0	0	122	406	406	406
Activ Mission Save (\$K):	0	0	0	0	0	0
Misc Recurring Cost (\$K):	0	0	0	0	0	0
Misc Recurring Save (\$K):	0	0	0	0	0	0
Land (+Buy/-Sales) (\$K):	0	0	0	0	0	0
Construction Schedule(%):	0%	0%	0%	0%	0%	0%
Shutdown Schedule (%):	0%	0%	0%	0%	0%	0%
MilCon Cost Avoidnc(\$K):	0	0	0	0	0	0
Fam Housing Avoidnc(\$K):	0	0	0	0	0	0
Procurement Avoidnc(\$K):	0	0	0	0	0	0
CHAMPUS In-Patients/Yr:	0	0	0	0	0	0
CHAMPUS Out-Patients/Yr:	0	0	0	0	0	0
Facil ShutDown(KSF):	0					0.0%
						Perc Family Housing ShutDown:

STANDARD FACTORS SCREEN ONE - PERSONNEL

Percent Officers Married:	76.80%	Civ Early Retire Pay Factor:	9.00%
Percent Enlisted Married:	66.90%	Priority Placement Service:	60.00%
Enlisted Housing MilCon:	80.00%	PPS Actions Involving PCS:	50.00%
Officer Salary(\$/Year):	78,668.00	Civilian PCS Costs (\$):	28,800.00
Off BAQ with Dependents(\$):	7,073.00	Civilian New Hire Cost(\$):	4,000.00
Enlisted Salary(\$/Year):	36,148.00	Nat Median Home Price(\$):	114,600.00
Enl BAQ with Dependents(\$):	5,162.00	Home Sale Reimburse Rate:	10.00%
Avg Unemploy Cost(\$/Week):	174.00	Max Home Sale Reimburs(\$):	22,385.00
Unemployment Eligibility(Weeks):	18	Home Purch Reimburse Rate:	5.00%
Civilian Salary(\$/Year):	46,642.00	Max Home Purch Reimburs(\$):	11,191.00
Civilian Turnover Rate:	15.00%	Civilian Homeowning Rate:	64.00%
Civilian Early Retire Rate:	10.00%	HAP Home Value Reimburse Rate:	22.90%
Civilian Regular Retire Rate:	5.00%	HAP Homeowner Receiving Rate:	5.00%
Civilian RIF Pay Factor:	39.00%	RSE Home Value Reimburse Rate:	0.00%
SF File Desc:	Final Factors	RSE Homeowner Receiving Rate:	0.00%



Department : USAF  
 Option Package : AFJ-5 (EC)  
 Scenario File : C:\COBRA508\TEST\EMTEMOV1.CBR  
 Std Pctrs File : C:\COBRA508\TEST\DEPOTFIN.SFF

STANDARD FACTORS SCREEN TWO - FACILITIES

RPMA Building SF Cost Index:	0.93	Rehab vs. New MilCon Cost:	0.00%
BOS Index (RPMA vs population):	0.54	Info Management Account:	0.00%
(Indices are used as exponents)		MilCon Design Rate:	0.00%
Program Management Factor:	10.00%	MilCon SIOH Rate:	0.00%
Caretaker Admin(SF/Care):	162.00	MilCon Contingency Plan Rate:	0.00%
Mothball Cost (\$/SF):	1.25	MilCon Site Preparation Rate:	0.00%
Avg Bachelor Quarters(SF):	256.00	Discount Rate for NPV.RPT/ROI:	2.75%
Avg Family Quarters(SF):	1,320.00	Inflation Rate for NPV.RPT/ROI:	0.00%
APPDET.RPT Inflation Rates:			
1996: 0.00%	1997: 2.90%	1998: 3.00%	1999: 3.00%
		2000: 3.00%	2001: 3.00%

STANDARD FACTORS SCREEN THREE - TRANSPORTATION

Material/Assigned Person(Lb):	710	Equip Pack & Crate(\$/Ton):	284.00
HHG Per Off Family (Lb):	14,500.00	Mil Light Vehicle(\$/Mile):	0.43
HHG Per Enl Family (Lb):	9,000.00	Heavy/Spec Vehicle(\$/Mile):	1.40
HHG Per Mil Single (Lb):	6,400.00	POV Reimbursement(\$/Mile):	0.18
HHG Per Civilian (Lb):	18,000.00	Avg Mil Tour Length (Years):	4.10
Total HHG Cost (\$/100Lb):	35.00	Routine PCS(\$/Pers/Tour):	6,437.00
Air Transport (\$/Pass Mile):	0.20	One-Time Off PCS Cost(\$):	9,142.00
Misc Exp (\$/Direct Empl):	700.00	One-Time Enl PCS Cost(\$):	5,761.00

STANDARD FACTORS SCREEN FOUR - MILITARY CONSTRUCTION

Category	UM	\$/UM	Category	UM	\$/UM
Horizontal	(SY)	0	other	(SF)	0
Waterfront	(LF)	0	Optional Category B	( )	0
Air Operations	(SF)	0	Optional Category C	( )	0
Operational	(SF)	0	Optional Category D	( )	0
Administrative	(SF)	0	Optional Category E	( )	0
School Buildings	(SF)	0	Optional Category F	( )	0
Maintenance Shops	(SF)	0	Optional Category G	( )	0
Bachelor Quarters	(SF)	0	Optional Category H	( )	0
Family Quarters	(EA)	0	Optional Category I	( )	0
Covered Storage	(SF)	0	Optional Category J	( )	0
Dining Facilities	(SF)	0	Optional Category K	( )	0
Recreation Facilities	(SF)	0	Optional Category L	( )	0
Communications Facil	(SF)	0	Optional Category M	( )	0
Shipyard Maintenance	(SF)	0	Optional Category N	( )	0
RDT & E Facilities	(SF)	0	Optional Category O	( )	0
PCL Storage	(BL)	0	Optional Category P	( )	0
Ammunition Storage	(SF)	0	Optional Category Q	( )	0
Medical Facilities	(SF)	0	Optional Category R	( )	0
Environmental	( )	0			

# Document Separator

ELECTRONIC COMBAT TEST FACILITIES

*Fernal Delits*

(SLIDE E-0)

WE ARE GOING TO NOW TALK ABOUT THREE INSTALLATIONS AS A GROUP BECAUSE OF THEIR INTERRELATIONSHIP TO ELECTRONIC COMBAT TESTING. THE THREE INSTALLATIONS ARE EGLIN, REDCAP AND AFEWES.

DOD PROPOSES CLOSING THE ELECTRONIC COMBAT TESTING FACILITIES AT AIR FORCE'S ELECTRONIC WARFARE EVALUATION SIMULATOR ACTIVITY, (AFEWES) FORT WORTH TEXAS, REAL-TIME DIGITALLY CONTROLLED ANALYZER PROCESSOR (REDCAP) BUFFALO, NEW YORK, AND MOVING THE ELECTROMAGNETIC TEST ENVIRONMENT AT EGLIN AIR FORCE

**BASE, FLORIDA. ALL OF THESE REALIGNMENTS WILL HAVE SIGNIFICANT IMPACT ON ELECTRONIC COMBAT TEST AND EVALUATION INFRASTRUCTURE.**

**THE CURRENT AIR FORCE ELECTRONIC TEST AND EVALUATION PROCESS USES TEST RANGE AND SIMULATION FACILITIES AT AFEWES, REDCAP AND EGLIN TO TEST NEW ELECTRONIC COMBAT EQUIPMENT AGAINST POTENTIAL THREATS BEFORE THAT EQUIPMENT IS FLOWN ON EGLIN'S OPEN AIR RANGE. THIS PROCESS ALLOWS EQUIPMENT TO BE TESTED ON THE GROUND BEFORE STARTING EXPENSIVE AIRBORNE TESTING. THE AIR FORCE IS PROPOSING TO DISESTABLISH THIS INFRASTRUCTURE AND DEVELOP A NEW**

**SIMULATION FACILITY AT EDWARDS AIR FORCE BASE AND  
FOCUS ITS OPEN AIR TESTING AT THE NELLIS AIR FORCE BASE  
COMPLEX.**

**A MAJOR ISSUE WITH TWO OF THESE INTERRELATED  
ELECTRONIC COMBAT REALIGNMENTS ( EGLIN AND AFEWES)  
IS COST. IN EACH CASE COSTS HAVE INCREASED OR COSTS  
HAVE BEEN SIGNIFICANTLY UNDERSTATED. OTHER ISSUES  
DEAL WITH ELECTRONIC LINKING AND TEST CAPABILITIES .**

**IN CONDUCTING OUR ANALYSES, WE RELIED HEAVILY ON TWO  
SOURCES--DOD'S BOARD OF DIRECTORS FOR TEST AND  
EVALUATION AND GEORGIA TECH RESEARCH INSTITUTE. THE**

**INDEPENDENT BOARD CONSISTS OF SENIOR LEVEL REPRESENTATIVES FROM ARMY, NAVY AND AIR FORCE AND HAS EXAMINED THE CONSOLIDATION OF ELECTRONIC COMBAT TESTING FACILITIES. GEORGIA TECH RECENTLY COMPLETED A COMPREHENSIVE ANALYSIS OF THE ELECTRONIC COMBAT INFRASTRUCTURE. IN ADDITION, WE OBTAINED DATA FROM AIR FORCE'S AIR WARFARE CENTER AND SPECIAL OPERATIONS COMMAND THAT SHOWED ADDITIONAL COSTS OF HAVING TO CONDUCT OPERATIONS AT NELLIS RATHER THAN EGLIN BASED ON THE PROPOSED MOVE.**

**THE TESTING COMMUNITY SUPPORTING THESE ELECTRONIC COMBAT FACILITIES HAVE DEMONSTRATED STRONG SUPPORT**



**FOR THE COMPLETION OF AN ELECTRONIC COMBAT MASTER PLAN IN ORDER TO ENSURE INFRASTRUCTURE CHANGES TO THE ELECTRONIC COMBAT FACILITIES ARE MADE IN THE MOST COST EFFECTIVE MANNER. ON JUNE 20, 1995, AIR FORCE PROVIDED THE COMMISSION WITH A DRAFT COPY OF THE AIR FORCE'S CONTRIBUTION TO THE MASTER PLAN. AIR FORCE HAS ADVISED THAT THE DOD MASTER PLAN IS CURRENTLY BEING DRAFTED BY THE BOARD OF DIRECTORS AND IS SCHEDULED TO BE COMPLETED PRIOR TO FISCAL YEAR 1997.**

**I WILL NOW DISCUSS EACH OF THE ELECTRONIC COMBAT TEST FACILITIES.**

**EGLIN AIR FORCE BASE, FLORIDA**

**(SLIDE E-1)**

**DOD RECOMMENDS THE REALIGNMENT OF EGLIN AIR FORCE  
BASE BY RELOCATING THE ELECTROMAGNETIC TEST  
ENVIRONMENT TO THE NELLIS AIR FORCE BASE COMPLEX. ALL  
OTHER ACTIVITIES AND FACILITIES ASSOCIATED WITH EGLIN  
ARE TO REMAIN OPEN.**

**(SLIDE E-2)**

**THE COSTS PROPOSED BY DOD HAVE INCREASED, BUT ARE STILL CONSIDERABLY BELOW STAFF FINDING THAT INDICATE THE MOVE WOULD BE COST INEFFECTIVE. THE SECOND ISSUE IS RANGE CONSOLIDATION. THE AIR FORCE PROPOSED CONSOLIDATION OF TESTING AT NELLIS. THE COMMUNITY IS CONCERNED WITH TESTING DELAYS AND POINTS OUT THAT EDWARDS IS ALSO INVOLVED CAUSING INCREASED COSTS. THE NELLIS/EDWARDS CONSOLIDATION DISMANTLES THE HIGHEST RATED ELECTRONIC TEST RANGE IN DOD. THE LAST ISSUE IS THE ELECTRONIC COMBAT MASTER PLAN THAT WAS**

**AGREED BY ALL AS NECESSARY PRIOR TO THE MOVEMENT OF  
TEST ASSETS.**

**(SLIDE E-3)**

**THE SCENARIO SUMMARY INDICATES A DOD-PROJECTED TWO-  
YEAR RETURN ON INVESTMENT, BUT AS PREVIOUSLY  
DISCUSSED THE INCREASED COSTS INDICATE THERE WILL  
NEVER BE A PAYBACK. THIS ENDS THE DISCUSSION ON EGLIN  
AFB. DO YOU HAVE ANY QUESTIONS?**

**REAL-TIME DIGITALLY CONTROLLED ANALYZER PROCESSOR**

**(SLIDE E-4)**

**THE DOD RECOMMENDATION IS TO DISESTABLISH AND  
RELOCATE REDCAP TO EDWARDS AIR FORCE BASE .**

**REDCAP IS A TEST FACILITY THAT SIMULATES AN ENEMY AIR  
DEFENSE SYSTEM IN ORDER TO MEASURE HOW EFFECTIVE  
AIRCRAFT CAN PENETRATE AN ENEMY'S AIRSPACE.**

**(SLIDE E-5)**

**ALTHOUGH THE CHART BEING DISPLAYED SHOWS THREE ISSUES, I WILL RESTRICT MY COMMENTS TO COST AND ESTIMATED WORKLOAD.**

**AS YOU CAN SEE , ESTIMATED ONE TIME COST TO CLOSE HAS INCREASED FROM \$1.7 to \$3.7 MILLION DUE TO ADDITIONAL MILITARY CONSTRUCTION AND MOVING COSTS ASSOCIATED WITH THE ACTION. BASED ON DOD'S RECOMMENDATION TO MOVE 44% OF THE TOTAL MISSION, COMMISSION STAFF FINDINGS ESTIMATE AN ACTUAL ONE TIME COST OF \$4.2**



**MILLION, WITH A PAYBACK PERIOD IN FIVE YEARS.**

**UTILIZATION WAS ESTIMATED AS VERY LOW BY THE AIR FORCE, WHILE THE COMMUNITY DIFFERED GREATLY AT 93 PERCENT. THE BOARD OF DIRECTORS AT 50/60 PERCENT FOR FY 94 AND 95.**

**(SLIDE E-6)**

**THE SCENARIO SUMMARY SHOWS THE PROS AND CONS, AND THE DIFFERENCE IN THE COST FACTORS PREVIOUSLY DISCUSSED. ARE THERE FURTHER QUESTIONS?**

**AIR FORCE ELECTRONIC WARFARE EVALUATION SIMULATOR**  
**ACTIVITY, FORT WORTH, TEXAS**

**(SLIDE E-7)**

**DOD RECOMMENDS THAT THE AIR FORCE ELECTRONIC  
WARFARE EVALUATION SIMULATOR ACTIVITY IN FORT  
WORTH BE DISESTABLISHED AND MOVED TO EDWARDS AIR  
FORCE BASE, CALIFORNIA. WORKLOAD AND SELECTED  
AFEWES EQUIPMENT WILL BE TRANSFERRED TO EDWARDS  
AND ANY REMAINING EQUIPMENT IS TO BE DISPOSED OF.**

**A FEWES IS A UNIQUE LABORATORY CREATED IN 1958 FOR TESTING THE EFFECTIVENESS OF AIRCRAFT DEFENSIVE COUNTERMEASURES. IT IS LOCATED WITHIN AIR FORCE PLANT 4 AND OPERATED BY LOCKHEED FORT WORTH COMPANY.**

**(SLIDE E-9)**

**I WOULD LIKE TO ADDRESS THREE ISSUES; COST, CAPABILITY AND ELECTRONIC DATALINKING. THE DOD BOARD OF DIRECTORS, GEORGIA TECH AND THE AFEWES COMMUNITY HAVE RAISED SIGNIFICANT CONCERN OVER THE COST TO MOVE AFEWES TO EDWARDS. STAFF BELIEVES THAT COSTS HAVE BEEN SIGNIFICANTLY UNDERSTATED BY AIR FORCE.**

**THE CURRENT ONE TIME COST ACCORDING TO AIR FORCE IS \$9 MILLION WITH A PAYBACK OF 13 YEARS. AS YOU CAN SEE ON THE CHART BEING DISPLAYED, AFTER APPLYING COMMISSION STAFF ESTIMATES, THE DISESTABLISHMENT OF AFEWES IS NOT COST EFFECTIVE.**

**RELOCATING AFEWES' CAPABILITIES POSES A MAJOR TECHNICAL RISK BECAUSE OF THE SYSTEM'S UNIQUE ABILITY TO FULLY EVALUATE AIRCRAFT PERFORMANCE IN A DENSE THREAT ENVIRONMENT.**

**ELECTRONIC DATALINKING AS AN ALTERNATIVE TO COLOCATING ON A MAJOR TEST RANGE HAS BEEN**

**DETERMINED BY GEORGIA TECH TO BE COST EFFECTIVE AND  
FEASIBLE. COMMISSION STAFF CONCURS WITH THIS  
ASSESSMENT.**

**(SLIDE E-10)**

**THE SCENARIO SUMMARY REPEATS THE ISSUES ON  
RELOCATION, EXCESS CAPACITY, AND LONG-TERM PAYBACK.  
THE THIRTEEN-YEAR ROI HAS BEEN SERIOUSLY QUESTIONED  
BY THE COMMISSION STAFF. DO YOU HAVE ANY FURTHER  
QUESTIONS?**

# Document Separator



# BASE ANALYSIS

## EGLIN AIR FORCE BASE, FL

**DOD RECOMMENDATION:** Realign Eglin AFB, FL by relocating electronic combat threat simulator and pod systems to Nellis AFB. Emitter-only systems at Eglin necessary to support Air Force Special Operations Command and Air Warfare Center, as well as armaments/weapons test and evaluation activities will be retained.

CRITERIA	DOD RECOMMENDATION
AIR FORCE TIERING	I
BCEG RANK	1/1
FORCE STRUCTURE	Air Force base that tests aircraft armaments/weapons and electronic combat systems.
ONE-TIME COSTS (\$ M)	6.1
ANNUAL SAVINGS (\$ M)	3.7
RETURN ON INVESTMENT	2000 (2 Years)
NET PRESENT VALUE (\$ M)	42.1
BASE OPERATING BUDGET (\$ M)	69
PERSONNEL ELIMINATED (MIL / CIV)	00/00
PERSONNEL REALIGNED (MIL / CIV)	27/25
ECONOMIC IMPACT (BRAC 95 / CUM)	+1.3%/+1.3%
ENVIRONMENTAL	Minimal impact

**ISSUES REVIEWED  
EGLIN AIR FORCE BASE, FL**

<p><b>COSTS</b></p> <p><b>CONSOLIDATION AT NELLIS</b></p> <p><b>ELECTRONIC COMBAT MASTER PLAN</b></p>	
---	--

**ISSUES**  
**EGLIN AIR FORCE BASE, FL**

ISSUE	DoD POSITION	COMMUNITY POSITION	R&A STAFF FINDINGS
<b>COSTS</b>	<ul style="list-style-type: none"> <li>• MILCON: None, studying now</li> <li>• Tanker: None</li> <li>• Special Ops.: None</li> <li>• One-Time cost: \$6.1 M</li> <li>• Return on Investment: 2 years</li> <li>• Net Present Value: \$42.1 M</li> </ul>	<ul style="list-style-type: none"> <li>• MILCON at receiving site (Nellis) not included</li> <li>• Tanker: \$1.4 M per year to get range time</li> <li>• Special Ops.: \$6.0 M/year add'l cost (travel/TDY, personnel, deployments, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>• MILCON: \$9.6 M, based on BOD study</li> <li>• Tanker: \$1.4 M per year additional cost.</li> <li>• Special Ops.: \$6.0 M (AF Air Warfare Center and Special Ops. Command)</li> <li>• One-Time cost: \$15.7 M</li> <li>• Return on Investment: Never</li> <li>• Net Present Value: Cost \$66.8M</li> </ul>
<b>CONSOLIDATION AT NELLIS</b>	<ul style="list-style-type: none"> <li>• One test range can do all</li> </ul>	<ul style="list-style-type: none"> <li>• Delays due to build-up</li> <li>• Requires Edwards AFB as well</li> </ul>	<ul style="list-style-type: none"> <li>• DOD Board of Directors rated Eglin highest rated EC range. In place, why risk move?</li> </ul>
<b>ELECTRONIC COMBAT MASTER PLAN</b>	<ul style="list-style-type: none"> <li>• Assigned to Board of Directors</li> </ul>	<ul style="list-style-type: none"> <li>• Congress requires prior to movement of electronic combat equipment</li> </ul>	<ul style="list-style-type: none"> <li>• Not mandated, but warrants concern</li> </ul>

## SCENARIO SUMMARY EGLIN AIR FORCE BASE, FL

<b>DoD RECOMMENDATION</b>	
<p>Realign Eglin AFB, FL by relocating electronic combat threat simulator and pod systems to Nellis AFB. Emitter-only systems at Eglin necessary to support Air Force Special Operations Command and Air Warfare Center, as well as armaments/weapons test and evaluation activities will be retained.</p>	
<p><b>One Time Costs (\$M): 6.1</b>  <b>Annual Savings (\$M): 3.7</b>  <b>Return on Investment: 2 years (2000)</b>  <b>Net Present Value (\$M): 42.1</b></p>	
<b>PRO</b>	<b>CON</b>
<ul style="list-style-type: none"> <li>• Reduce excess capacity</li> </ul>	<ul style="list-style-type: none"> <li>• Dismantles a highly rated EC test range</li> </ul>

# DEFENSE BASE CLOSURE AND REALIGNMENT COMMISSION

## SUMMARY SHEET

### EGLIN AIR FORCE BASE, FL

#### INSTALLATION MISSION

An Air Force Materiel base that performs test and evaluation of aircraft armaments/weapons and electronic combat systems. Tenant units include the Air Force Air Warfare Center and Special Operations Command.

#### DOD RECOMMENDATION

- Realign the Electromagnetic Test Environment (EMTE) by relocating eight Electronic Combat (EC) threat simulator systems and two EC pod systems from Eglin AFB to Nellis AFB, Nevada.
- Emitter-only systems to support Air Force Special Operations Command, the USAF Air Warfare Center, and AF Materiel Command Armament/Weapons test and evaluation activities will be retained.

#### DOD JUSTIFICATION

- AF EC open air range workload requirements can be satisfied by one range.
- Available capacity exists at the Nellis AFB complex to absorb EMTE's projected workload.
- To ensure AF retains the capability to effectively test and realistically train in the Armaments/Weapons functional category, necessary emitter-only threat systems will remain at Eglin AFB.

#### SIGNIFICANT ISSUES

1. Eglin community has raised issue over congressional direction in 1995 Defense Authorization Act that directed DOD to submit an EC Master Plan to the Congress before changing the EC test infrastructure. Similarly, Senate Appropriation Committees' FY 95 report directed DOD to

**DRAFT**

provide a study clearly demonstrating that electronic linking of hardware-in-the-loop EC test facilities was infeasible before consolidating these facilities.

- DOD has not yet complied with this congressional direction.. In fact, the Air Force has acknowledged that development of the Master Plan cannot be completed until after the results of BRAC 95 have been released. An overall plan on the direction to be taken on placement of electronic combat capabilities would help ensure that current and future electronic combat testing requirements will be met in the most cost effective manner.

2. Eglin community has expressed concern over Air Force cost estimates to close EC facilities. Community claims that one-time costs to move EMTE to Nellis, and REDCAP and AFEWES to Edwards total \$73 million versus \$14 million per Air Force. It was claimed that no savings will result from the moves. In addition, Eglin was rated by the Test and Evaluation Joint-Cross Service Group and the Test and Evaluation Board of Operating Directors as having the highest functional value among DOD's electronic combat test facilities. Nonetheless, Air Force elected to center EC testing in the Western United States.

- Moving electronic capability from Eglin to Nellis clearly demonstrate Air Force's intention to enhance the capabilities of the Southwest Range complex. However, the cost to move electronic combat testing to Nellis (from Eglin) and Edwards (from AFEWES and REDCAP) appear to be much greater than anticipated. More importantly though is the questionable rationale for dismantling a highly rated electronic combat testing activity (Eglin) and moving EC capability to a predominantly training activity (Nellis) that was not evaluated or rated during the BRAC 95 process.

3. China Lake community believes that EC threat simulators provide one opportunity for cross-servicing. In addition, both the physical facilities and capacity exists at China Lake to support the EC threat simulator systems from Eglin.

- The extent of interservicing during BRAC 95 has been minimal and disappointing. DOD decided not to direct interservicing; as a result each service retained excess test and evaluation capacity.

**DRAFT**



4. Air Force Special Operations Command and Air Warfare Center, users of the Eglin range, have expressed concern over movement of EC emitters to Nellis. These activities are concerned with the: (1) increased cost of testing , (an additional \$4 million per year), (2) lack of availability of the Nellis range, and (3) lack of operationally realistic testing at Nellis.

- Both of these organizations, while expressing concerns over the move to Nellis, are not precluded from meeting their testing and training requirements. The proposed EC changes are likely to result in increased testing and training costs, require more people and take more time.

5. The cost of the EC move has grown--initially 8 emitters and 2 pod systems were to move at a one-time cost of \$2.2 million; currently 17 simulators and 2 pod systems will move at a one-time cost of \$6 million..

#### **R&A STAFF SUMMARY COMMENT**

- Staff recommends rejection of the DOD recommendation. Staff believes it is essential that Air Force complete development of an electronic combat master plan before threat simulator and pod systems are moved. This analysis will ensure that current and future electronic combat requirements will be met in the most cost effective manner. Staff also believes the Secretary of Defense deviated substantially from military value criteria.

Les Farrington/Cross Service 6/4/95

**DRAFT**

# Document Separator

# IWV 2000

PARTNERSHIP  
FOR PROGRESS

Ridgecrest-Inyokern-China Lake, California

March 17, 1995

Please refer to this number  
when responding 950320-11

Commissioner J. B. Davis  
Base Closure and Realignment Commission  
1700 North Moore Street, Suite 1425  
Arlington, Virginia 22209

Dear General Davis,

I listened with interest to your question to Secretary Dalton at the Navy hearing on March 6, concerning an alternative disposition of the EC threat simulators recommended for realignment from Eglin AFB to Nellis AFB. At that time you asked if these threat simulators could be relocated to China Lake vice Nellis. The Navy's response provided by Mr. Nemfakos, was positive, subject to review of additional information on the simulators.

IWV 2000 is a community group supporting the Naval Air Warfare Center China Lake. Several of us in the organization have extensive backgrounds with the Navy at China Lake. My personal experience includes flight test experience on the China Lake Electronic Combat Range (ECR) with a variety of EW systems in A-4, A-7 and F/A-18 aircraft. I also have experience on various Nellis ranges. Based on this experience and our observations of the BRAC process the past year, we wish to provide you several comments and amplifying information relative to your question.

First, we are surprised and disappointed at the near total absence of cross-servicing evident in DoD's recommendations. We believe that the EC threat simulators you have questioned, provide one opportunity, however small, for cross-servicing.

Second, we have consulted with knowledgeable personnel currently involved with management of the China Lake ECR (formerly ECHO Range), and have been assured that both the physical facilities and operating capacity exist to support the Eglin EC threat simulator systems. Our investigation also indicates that Nellis is in fact the better choice for the two pod systems as Nellis is currently assigned aircraft modified to carry these pods. We further believe that the

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P.O. Box 2000, Ridgecrest, California 93556  
815 North Downs Street, Suite D  
(619) 371-BRAC (371-2722)  
Fax: 619-371-2724

assignment of the threat simulators to China Lake and the pod systems to Nellis, could provide the opportunity for greater cross-service utilization of the ranges and equipment in question.

In addition to the disposition of the 10 threat simulator systems addressed in the Air Force recommendations, there are an additional 37 systems which apparently are planned to remain at Eglin. Enclosure (1) provides a complete listing of these systems, two thirds of which show low or no usage during the most recent year for which we have data. As BRAC 95 is likely to be the last opportunity for realignment and reduction of excess capacity for some time to come, we believe it prudent to take a comprehensive look at all of these simulators.

Should you have any question concerning this matter or need additional information please do not hesitate to contact me or have your staff contact me at 619-371-2722.

Sincerely,



Jack P. Connell  
Executive Director

EGLIN LIST

EGLIN SYSTEM DESIGNATOR	EGLIN SITE LOCATION * PER 1990 MAP	FY93 EMTE USAGE*
SADS-1	A-7	MED
SADS-1 (SS)	B-1	
SADS-2	A-17A	HIGH
SADS-2 (SS)	B-1	
SADS-2W (SS)	A-17A	
SADS-3B	A-13A	HIGH
SADS-3 (SS)	B-1	
SADS-3C	A-13A	
SADS-4	A-21	MED
SADS-4 (SS)	A-3	
SADS-4B		LOW
SADS-4C		LOW
SADS-5 (SS)	A-13A	LOW
SADS-6M	A-11	LOW
HPISS	A-11	MED
LPISS	A-7	
SADS-8	A-13A	MED
SADS-8R	A-30	HIGH
SADS-11		MED
SATS	A-13	
TWS-1 (SS)	A-13A	
TWS-2 (SS)	A-13A	
TWS-3 (SS)	A-7	
WEST-1A (MOBILE)	A-12	MED
WEST-1B	A-3	
WEST-1C	A-3	
WEST-2	B-1	
WEST-3	B-1	
WEST-3A	B-1	
WEST-4	B-10	
WEST-4A	B-10	
WEST-4B	B-10	LOW
WEST-5	B-10	LOW
WEST-5B	B-10	
WEST-10	A-30	MED
WEST-10A	A-30	LOW
WEST-11B	A-30	MED
WEST-11C	A-30	MED
ORC-554	A-13	
FLYCATCHER	A-30	MED
MPQ-46 (I-HAWK)	A-13	MED
NIKE	A-13	LOW
MPQ-39 (HAWK)	A-13	
ROLAND		LOW
WEST-15		LOW
MMW JAMMER		
MLQ-T4 JAMMER		

\* BLANKS NOT REPORTED OR MARKED

NOTES

SADS=SIMULATED AIR DEFENSE SYSTEM

WEST= WEAPONS EFFECTIVENESS SIMULATED THREAT (SIGNAL SOURCES)

TWS=TRACK WHILE SCAN

SATS- SIMULATED AIRBORNE TRANSPONDER SYSTEM

# Document Separator



**SPEECH BY REPRESENTATIVE JOE SCARBOROUGH  
BEFORE THE BASE CLOSURE AND REALIGNMENT COMMISSION**

**JUNE 7, 1995**

MR. CHAIRMAN, MEMBERS OF THE COMMISSION, I THANK YOU FOR THE OPPORTUNITY TO COME BEFORE YOU TO TESTIFY IN OPPOSITION TO THE DoD'S PROPOSED CONSOLIDATION OF ELECTRONIC COMBAT TEST AND EVALUATION FACILITIES. IN MY VIEW, THIS PROPOSAL IS NOT ONLY FLAWED, BUT IT SERIOUSLY UNDERMINES THE INTENT OF THE LAW AS PASSED BY THE CONGRESS IN THE 1995 DoD AUTHORIZATION.

I WILL EXPLAIN THAT VIEW IN A MOMENT, BUT FIRST LET ME ASSURE YOU THAT NO ONE IS MORE APPRECIATIVE THAN I OF THE AWESOME RESPONSIBILITIES ENTRUSTED TO THIS COMMISSION. FISCAL REALITIES DEMAND THAT TOUGH DECISIONS BE MADE TO REDUCE THE COST BURDEN OF OUR NATION'S MILITARY INFRASTRUCTURE. AT THE SAME TIME, HOWEVER, THE WORLD SITUATION MAKES IT CLEAR THAT WE MUST SUSTAIN A STRONG NATIONAL DEFENSE POSTURE. I AM HERE TODAY BECAUSE I AM CONVINCED THAT THE DoD RECOMMENDATIONS FOR REALIGNMENT OF AIR FORCE INFRASTRUCTURE FOR ELECTRONIC COMBAT TEST & EVALUATION WILL NOT PRODUCE SAVINGS, AND WILL, IN FACT, ACTUALLY RESULT IN SERIOUS RISK TO THIS NATION'S WARFIGHTING CAPABILITIES.

I WILL NOT AMUSE THE COMMISSION BY SAYING THAT I AM HERE TODAY BECAUSE OF STRICTLY ALTRUISTIC MOTIVES. OF COURSE, MY DISTRICT WILL BE EFFECTED BY THE DECISIONS THAT YOU MAKE. HOWEVER, I WISH TO STRESS THAT THE NATION'S SECURITY IS ALSO EFFECTED, AND I WILL MAKE NO APOLOGIES FOR CONSTRUCTING MY ARGUMENTS AGAINST THE DoD RECOMMENDATIONS ON THAT BASIS.

LET ME BE CLEAR ON THIS POINT, ONLY ONE OF THE THREE EC UNITS ON THE BRAC LIST, SPECIFICALLY THE EC OPEN AIR RANGE AT EGLIN AFB, IS LOCATED IN MY DISTRICT. MY REMARKS, HOWEVER, WILL ALSO BE APPLICABLE TO THE NATION'S OTHER TWO FACILITIES: THE AIR FORCE ELECTRONIC WARFARE ENVIRONMENT SIMULATOR (AFEWES) FACILITY IN FORT WORTH, TEXAS: AND THE REAL-TIME DIGITALLY CONTROLLED ANALYZE PROCESSOR (REDCAP) FACILITY IN BUFFALO, NEW YORK.

I HAVE CAREFULLY STUDIED THE RECOMMENDATIONS AND SUPPORTING BRAC ANALYSIS PROVIDED BY THE DEPARTMENT OF DEFENSE. MY POSITION IN OPPOSITION TO THESE RECOMMENDATIONS WAS BASED UPON THE ANSWER TO THREE CRUCIAL QUESTIONS:

- 1) ARE THE DoD RECOMMENDATIONS ON ELECTRONIC COMBAT TEST AND EVALUATION FACILITIES CONSISTENT WITH THE 1995 DoD AUTHORIZATION BILL'S REQUIREMENT THAT AN EC CONSOLIDATION MASTER PLAN BE

SUBMITTED TO THE CONGRESS PRIOR TO ANY REORGANIZATION OF SUCH FACILITIES?

THE PLAN WAS REQUESTED BECAUSE NONE OF THE SERVICES WISHED TO CONSOLIDATE THEIR EC TEST FACILITIES AND ITS FORMULATION WAS DEEMED NECESSARY TO OVERCOME THE INTER-SERVICE DISPUTE ON THIS MATTER. THE ABSENCE OF THIS PLAN IS TROUBLING AND TAKING ACTION IN THIS AREA WITHOUT THE GUIDANCE THAT SUCH A PLAN WOULD PROVIDE IS, IN MY JUDGMENT, UNWISE.

2) DO THE PROPOSALS PROTECT THE NEEDS OF OUR WARFIGHTERS?

IN OTHER WORDS, WOULD CONSOLIDATION HAVE A MEASURABLE IMPACT ON THE QUALITY OF EC FACILITIES WHICH WOULD, IN TURN, IMPACT THE ABILITY OF OUR FORCES IN THE FIELD TO MEET A VARIETY OF COMBAT AND NON-COMBAT SITUATIONS IN WHICH ELECTRONIC WARFARE WOULD BE ENCOUNTERED.

3) DO THE PROPOSALS REDUCE THE COST TO THE TAXPAYER?

QUITE FRANKLY, ARE WE GETTING THE BEST DEAL, THE MOST BANG FOR THE BUCK? ARE THE SAVINGS THAT ANY PROPOSED CONSOLIDATION WOULD BRING SUFFICIENT AND SIGNIFICANT OR WOULD THEY ACTUALLY COST MORE IN BOTH

THE SHORT AND LONG TERM?

AS I HAVE PREVIOUSLY NOTED, THE DIRECTION TO DEVELOP AN EC MASTER PLAN WAS A RESULT OF DoD'S DEMONSTRATED INABILITY TO PURSUE JOINT CROSS-SERVICE REALIGNMENTS IN EC INFRASTRUCTURE. THE INTENT WAS TO MOTIVATE CROSS-SERVICE REDUCTIONS IN "T&E" INFRASTRUCTURE AND PROVIDE A CONTEXT WITHIN WHICH TO JUDGE DoD RECOMMENDATIONS IMPACTING ELECTRONIC COMBAT FACILITIES.

DoD BRAC DOCUMENTATION CLEARLY SHOWS THAT A RIGOROUS ANALYSIS PLAN TO PURSUE SUCH CROSS-SERVICE OPPORTUNITIES WAS APPROVED BY ALL SERVICE DEPARTMENTS. THIS PLAN WAS TO IDENTIFY THOSE FACILITIES MOST APPROPRIATE FOR CROSS-SERVICE CONSOLIDATION, WITH THE INTENTION BEING THAT SUCH ANALYSIS WOULD BE USED AS THE BASIS FOR FINAL BRAC RECOMMENDATIONS.

INEXPLICABLY, HOWEVER, THE OFFICE OF THE SECRETARY OF DEFENSE DECIDED NOT TO USE THE DATA REVEALED BY THE CROSS SERVICE CONSOLIDATION STUDY. INSTEAD, OSD OPTED TO PURSUE ANOTHER APPROACH WITHOUT ANY STATISTICAL ANALYSIS TO BACK IT UP.

CLEARLY, IN MY VIEW, THIS APPROACH IS UNEQUIVOCALLY NONCOMPLIANT

WITH THE INTENT OF THE EC MASTER PLAN CALLED FOR UNDER THE 1995  
NATIONAL DEFENSE ACT!

AS TO THE QUESTION OF MEETING THE NEEDS OF OUR WARFIGHTER'S, I WISH TO  
POINT OUT THAT DoD RANKED EGLIN'S EC OPEN AIR RANGE AS NUMBER ONE  
FOR MILITARY VALUE.

AGAINST THAT ASSESSMENT, THE OSD RECOMMENDATIONS TO CONSOLIDATE  
EC TEST FACILITIES AT NELLIS RANGE FAILED TO DEFINE A CRUCIAL CONCEPT.  
SPECIFICALLY, IT FAILED TO SHOW HOW ITS PROPOSAL FOR COMBINING AIR  
FORCE OPEN AIR RANGES COULD ACCOMMODATE THE NEEDS OF REAL WORLD  
EC OPERATIONS. ACCESSIBILITY OF THE NELLIS RANGE COMPLEX, DISTANCE  
OF THE RANGE FROM EDWARDS AFB AND OTHER KNOWN OBSTACLES APPEAR  
TO HAVE BEEN SIMPLY WISHED AWAY.

BASED ON THESE FACTS, IT SEEMS TO ME THAT WE ARE UNNECESSARILY  
PUTTING OUR PROVEN SUPPORT CAPABILITIES AT RISK FOR NO OBVIOUS  
RETURN. I ASK THE COMMISSION, WHAT IS THE PURPOSE IN FIXING SOMETHING  
THAT IS CLEARLY NOT BROKEN AND THAT HAS WORKED FOR SO LONG AT  
EGLIN?

THIS BRINGS ME TO THE REPORTED COST BENEFITS ASSOCIATED WITH THE  
CONSOLIDATION OF THE VARIOUS AIR FORCE RANGES.

THERE IS NO EVIDENCE TO SUGGEST THAT THERE WOULD BE ANY SIGNIFICANT SAVINGS TO THE TAXPAYER FROM THE PROPOSED CONSOLIDATION.

IN FACT, IT IS MORE LIKELY THAT THERE WOULD BE AN INCREASED COST BURDEN.

THIS CONCLUSION MAY BE DRAWN FROM THE FACT THAT THE COSTS OF DISMANTLING EGLIN WERE NOT ONLY UNDERESTIMATED, BUT THE INCREASE IN COSTS TO THOSE USING NELLIS FOR TESTING PURPOSES WERE IGNORED AS WELL. THE RESULT IS AN ESTIMATED COST SAVINGS BASED ON HIGHLY DUBIOUS ASSUMPTIONS.

GIVEN THESE CONSIDERATIONS, ONE IS LEFT WITH THE VERY STRONG IMPRESSION THAT THE SOLE OBJECTIVE OF DISMANTLING EGLIN'S EC TEST RANGE IS TO SOLVE AN AIR FORCE MATÉRIEL COMMAND "OPERATIONS AND MAINTENANCE" FUNDING ISSUE. THIS IS RATHER SURPRISING IN THAT THIS WILL COME EVEN AT THE EXPENSE OF PROCUREMENT PROGRAMS AND OTHER AIR FORCE COMMANDS SUCH AS AIR COMBAT COMMAND AND AIR FORCE SPECIAL OPERATIONS COMMAND.

MY CONCLUSION IS THAT NONE OF THE THREE EC "T&E" RECOMMENDATIONS REPRESENT TRUE REDUCTIONS IN INFRASTRUCTURE COST BURDENS. ALL WILL DISRUPT OUR ABILITY TO MEET THE NEEDS OF OUR FORCES IN THE FIELD, AND WILL ULTIMATELY SERVE TO UNDERMINE CONGRESSIONAL DIRECTIONS AS



LAI D OUT IN THE 1995 NATIONAL DEFENSE AUTHORIZATION ACT.

RESPECTFULLY, I STRONGLY URGE THE COMMISSION TO REJECT THE PROPOSED  
EC REALIGNMENTS. THIS WILL ALLOW CONGRESS TIME TO CAREFULLY REVIEW  
DOD'S EC MASTER PLAN BEFORE ANY CHANGES ARE MADE WHICH COULD  
SERIOUSLY EFFECT THIS NATION'S WAR FIGHTING CAPABILITY.

# Document Separator



THE DEFENSE BASE CLOSURE AND REALIGNMENT COMMISSION  
1700 NORTH MOORE STREET SUITE 1425  
ARLINGTON, VA 22209  
703-696-0504

April 8, 1995

ALAN J. DIXON, CHAIRMAN

COMMISSIONERS:  
AL CORNELLA  
REBECCA COX  
GEN J. B. DAVIS, USAF (RET)  
S. LEE KLING  
RADM BENJAMIN F. MONTROYA, USN (RET)  
MG JOSUE ROBLES, JR., USA (RET)  
WENDI LOUISE STEELE

Major General Jay Blume (Lt. Col. Mary Tripp)  
Special Assistant to the Chief of Staff  
for Base Realignment and Transition  
Headquarters USAF  
1670 Air Force Pentagon  
Washington, D.C. 20330-1670

68  
9504106

Dear General Blume:

I am forwarding an attached "Defense Support Initiative," presented at the April 4th Birmingham Regional Hearing by the Okaloosa County Economic Development Council, an attached "REDCAP Realignment: The Facts," presented to the Commission on April 7th, and an attached "America, Montana; Our Heritage, Our Future: Malmstrom," presented at the March 31st Great Falls Regional Hearing.

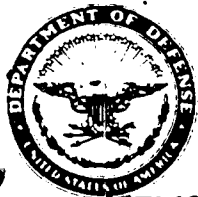
In order to assist the Commission in its review of this issue, I would appreciate your written comments on the alternatives presented no later than April 30, 1995. Thank you for your assistance in this matter.

Sincerely,

Francis A. Cirillo, Jr. PE  
Air Force Team Leader

Attachments

RT367



DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS UNITED STATES AIR FORCE



MEMORANDUM FOR BASE CLOSURE COMMISSION (Mr. Francis A. Cirillo, Jr.)

FROM: HQ USAF/RT

SUBJECT: Response to Request for Comments on Birmingham Regional Hearings and  
CALSPAN Presentation (RT Tasker 367)

The following comments are in response to the Birmingham Regional Hearings concerning the Electromagnetic Test Environment (EMTE) and CALSPAN's presentation on the Real-time Electronic Digitally Controlled Analyzer Processor (REDCAP) (see Attachment).

**Birmingham Regional Hearings**

**Point 1: Eglin's EMTE given a functional value of 65 (highest of all DoD EC ranges)**

Response 1: Functional values were determined on an activity basis versus the implied test facility basis. Thus, it is erroneous to say Eglin's EMTE received a functional value of 65. If EMTE was evaluated by itself it would have received a much lower value.

**Point 2: Air Force decided to dismantle EMTE and discontinue Eglin's EC leadership role**

Response 2: The Nellis Range Complex was recognized as DoD unique by the Test and Evaluation Joint Cross-Service Group (T&E (JCSG)). did not receive a functional value, and was identified as the first priority receiver site for Electronic Combat (EC) open air range (OAR) workload.

Of the EMTE threat simulators not required to move west, 12 would be retained in temporary storage for use during weapons testing. The remaining assets will be disposed of.

\* Not all of the Air Force Electronic Warfare Evaluation Simulator (AFEWES) and REDCAP assets will be moved. Workload requirements exist for only approximately 44% of AFEWES/REDCAP resources. Some AFEWES resources will be realigned to Eglin AFB

The Electronic Combat Integrated Test (ECIT) program is not part of the BRAC recommendations and did not count for (or against) either Edwards AFB or Eglin AFB during the BRAC analysis. It is an improvement and modernization effort (vs an existing capability) that has OSD and tri-Service commitment.

**Point 3: Reality of Air Force actions will increase cost of EC testing**

Response 3: The projected savings (\$48M over 20 years) of realigning EMTE, AFEWES, and REDCAP is, in fact, a conservative estimate, and the increased costs to EMTE users were recognized in calculating projected savings. Investments and Modernization (I&M) savings will

also be recognized, but were not included in estimates. Savings were projected at \$48M over 20 years prior to site visits. The results of the site surveys will be briefed by HQ AFMC on 2 May to the BCEG for approval. Once approved, this information will be available.

According to our inputs, Air Combat Command has decided not to relocate AWC west to accomplish EC Operational T&E. As recognized by the T&E JCSG, EMTE is not the best EC OAR within DoD. It is 90% duplicative of capabilities existing in the western US, and a large majority of EMTE resources will be disposed of (not re-created elsewhere). Today's era of declining military budgets demands that, in instances where two basically duplicative and underutilized facilities exist, workload be realigned preferably to an OAR that has appropriate facilities and capabilities.

CALSPAN's submittal on the Real-time Electronic Digitally Controlled Analyzer Processor (REDCAP)

**Points 1 & 2: The total facility is needed to perform REDCAP's mission, failure to move the entire facility and its capabilities will significantly degrade the Nation's Electronic Combat capabilities. There is no existing facility which is currently capable of housing REDCAP. Approved MILCON at ECITF is being added to house REDCAP prior to BRAC final determination. Instead of relocating, the JCSG policy to realign/consolidate can be implemented via electronic linkage of REDCAP to the ECITF at Edwards AFB and the ACETEF facility at Patuxent River, NAS at a much lower cost with no loss of capability.**

Responses 1& 2: The total REDCAP facility is not needed to support the nation's EC T&E mission. Nine of REDCAP's 16 major capabilities have not had a customer demand for the past three years. Only needed capabilities will be moved. No ECIT MILCON is being added to house REDCAP or AFEWES capabilities. The ECIT program is not affected by, and did not affect, BRAC recommendations. Space to house REDCAP and AFEWES capabilities is being investigated during ongoing site visits. The results of the site surveys will be briefed by HQ AFMC on 2 May to the BCEG for approval. Once approved, this information will be available.

False!  
← \$700K revised  
← 05/15

Although some REDCAP capabilities can be effectively utilized via linking to other facilities, other capabilities cannot be. The combined effect of linking various facilities create transport delays that cannot be tolerated by highly integrated electronic suites of future systems.

② The cost of maintaining a separate facility, with largely duplicative infrastructure, is not offset by linking. Anticipated linking may increase workload; however, not one customer has requested this capability since it was demonstrated in FY91 and 92.

**Point 3: REDCAP is being utilized at over 100% capacity. Projected workload of REDCAP is underrepresented. Projected workload was artificially defined as 72% of the FY92 & 93 average. FY92 & 93 were before REDCAP upgrades. Utilization in 94 and 95 increased by 400%. Anticipated linking will increase workload.**

Response 3: Only one of REDCAP's 16 capabilities (the off-line simulation capability) enjoys high current usage, and is by far, the basis for REDCAP's "400% increase in utilization in FY 94/5." Based upon customer usage, 14 of the other capabilities are used 21% or less than the off-line support capability, with 9 capabilities not used at all for the past 3 years.

BRAC utilization methodology (projected workload/demonstrated capacity) for an entire facility is a better indication of excess capacity than is a methodology which considers only the highest utilized capability within that facility (particularly when average utilization per capability is so low). Personnel at every test facility spend more time in pre-and post-test analysis than in actual test conduct. Analysis can be conducted anywhere and is people (not facility) dependent. Actual available test time is a facility limitation, and capabilities should be realigned to minimize excess capacity (test time) when able.

The military value of any test facility (not just REDCAP) stems from test preparation and data analysis, in addition to actual test time. Again, it is test time that determines actual utilization of a facility, including capacity/excess capacity. Test preparation and analysis limitations can normally be overcome by adding people, usually without having to add or expand a facility. A statement was made that actual workload always exceeds projected workload. Thus, it is not clear why 55% of REDCAP's capabilities had zero customer utilization for three years (FY92/3/4).

Ground testing is more important than ever in terms of implementing the EC test process in today's fiscally constrained environment. However, the same fiscal constraints dictate that T&E workload be combined, whenever possible, to avoid costs associated with unnecessary duplication and underutilized test resources. Most of the testing done at REDCAP can be conducted at other existing test facilities with excess capacity. We fully appreciate the costs and limitations associated with flight testing and do not envision replacing REDCAP capabilities with increased flight testing.

Points 4 & 5: AFFTC has no space to absorb this facility. AFFTC is currently modifying their MILCON to the ECITF to house REDCAP based on BRAC recommendation. **Estimated additional MILCON costs are \$6-7.8M for REDCAP alone. This does not include the additional people needed to operate the facility. REDCAP has the only modern operational Threat Integrated Air Defense System (IADS) simulation. There is no other place to test against the IADS. Not models, not ranges.**

Responses 4 & 5: Site visits will determine the capability at Edwards AFB to house REDCAP capabilities. As previously stated, the Air Force is not modifying the MILCON to the ECIT Program. ECIT is an improvement and modernization effort (vs an existing capability) that has OSD and tri-Service commitment to the upgrade and did not contribute to any BRAC



\* recommendation. Any MILCON requirement will probably be significantly less than REDCAP's projections, based upon the equipment expected to be moved.

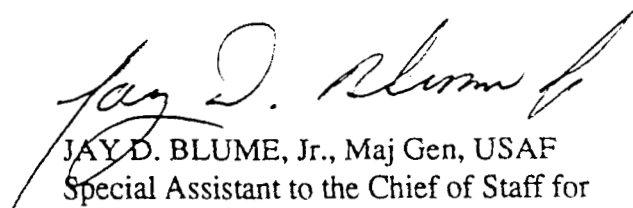
\* Other Integrated Air Defense Systems (IADS) test capability exists which can accommodate REDCAP's workload. This other capability already conducts IADS testing and, as such, has personnel possessing IADS experience and expertise.

**Point 6: This action incurs significant costs as demonstrated in the ROI analysis which follows in subsequent slides (7 slides total).**

\* Response 6: Although the cost to restore the existing REDCAP area is apparently a contractual requirement not foreseen by the T&E JCSG, the total costs to move and house those portions of REDCAP necessary to meet T&E needs will be accounted for. We can not comment on their derived figures without knowing the basis and supporting documentation upon which they were drawn. However, we expect the total costs will be much lower than the costs portrayed in their submittal. REDCAP capabilities to be moved will not require a new facility. We do not anticipate any problems with completion of the environmental impact analysis process.

The BRAC recommendation to disestablish REDCAP was made within the T&E JCSG consisting of OSD, Defense Agencies, and the services. The Air Force did not make a unilateral decision with respect to REDCAP. The results of the site surveys will be briefed by HQ AFMC on 2 May to the BCEG for approval. Once approved, this information will be available.

My staff and I are available to answer additional questions if necessary and are ready to provide additional assistance. AF/TE point of contact is Lt Col London. 697-1165. AF/RT point of contact is Maj Michael Wallace. 695-4667.

  
JAY D. BLUME, Jr., Maj Gen, USAF  
Special Assistant to the Chief of Staff for  
Realignment and Transition

Attachments:

1. Birmingham Regional Hearings Slides, 4 Apr 95
2. CALSPAN Presentation, 7 Apr 95

**Chairman Dixon:** Thank you, Mr. Kumpf.

**Mr. J. D. (Kumpf):** I'm pleased to have the opportunity to testify before you today to let you know how important the 301st Air Sea Rescue Squadron is to Patrick Air Force Base and to our community. Within weeks of my election to Congress, I sent a letter stating forth why it's important for the 301st to maintain at Patrick. I'm please that the Secretary has recommended the 301st be permanently stationed at Patrick Air Force Base. This is good for the U.S. military, for the members of the 301st, and for the U.S. taxpayer. In ... of restrained federal spending, and with our need to stretch every defense dollar as far as possible, leaving the 301st at Patrick simply makes good sense. Nearly 99 percent of the 301st missions take place at or north of Patrick Air Force Base. Also, Patrick is more centrally located than most Homestead making travel to other military bases around Florida faster and less costly. The 301st primary peacetime mission is space level and space... support. The close proximity of Patrick Air Force Base offers will best serve this nation's future. As clearly stated in the Secretary of Defense's recommendations, keeping the 301st at Patrick will help the military avoid objectionable costs associated with expensive (temper) to new regions, extensive scheduling difficulties, and the dislocation of the ... mission for its ... The Secretary estimates the savings \$1 million per year by keeping the 301st at Patrick. This is the bottom line. All areas of our Federal budget are under considerable pressure. We must take all the steps we can to reduce costs. This is an annual savings of \$1million that can be put to use in other areas of Defense budget. Finally, but not least, the vast majority of the reserves at fulltime employ of the 301st are residents of Central Florida. These men and women and their children are an important part of our community, and add to the pride and prestige of the area. They contribute to the well-being of our local economy. Our community has suffered in recent years (from) defense cuts and the removal of the 301st would be another setback for our local economy. Most importantly, they contribute to the identity and reputation of our community. Their removal would go ... economic-wise. It would be an unfortunate disruption of the families of the 301st and of the community that has been their home. The local community has opened their arms to the 301st Air-Sea Rescue Squad members and their families. This ...ness between the unit and the community contribute ... to the mission accomplishment of the 301st. In summary, I'm pleased with the Secretary's recommendation, and endorse it fully. It is in the best interest of the military, the taxpayer, and the local community.

**Chairman Dixon:** Thank you Mr. Kumpf. Now we have General Richard F. Gillis. General Gillis.

**General Richard F. Gillis (USAF, Ret.):** Chairman Dixon, Commissioners. I'm here to talk to you today on behalf of the Okaloosa County Economic Development Council about Eglin Air Force Base. Eglin is left on a combat range known as the EMTB or the Electromagnetic Testing Barn. In the joint service panel of deliberations when they gave functional ratings to all the electronic combat ranges, Eglin scored highest with 65, and you can see the scores of the functional value scores of the other electronic combat units. (next slide)

In spite of this, the Air Force chose to dismantle Eglin as an EMTB, and discontinue Eglin's role of leadership in electronic combat. The plan to establish Edwards Air Force Base as the electronic combat single face to the customer, who ( ...) simulators from Eglin's range to (Cobb's) Systems to the Nellis Range Complex and leave the remaining assets that they don't move there at the Eglin range in support of the weapons testing and training. They also plan to close Redcap, which is in New York and ... , which is in Fort Worth, which are Eglin-controlled sites, and move their assets to Edwards, and upgrade Eglin's ... and quake chamber, so they can accomplish the EC mission at Edwards, and Eglin now goes at a cost of \$140 million. (next slide)

The Air Force has stated and the facts people say that \$140 million over 20 years and have no adverse impact upon the Air Force Special Operations Command, Air Combat Command, or other users of Eglin's Electronic Combat Range. (next slide)

In reality, these actions are going to increase the costs of electronic combat testing for the following reasons: The cost of doing business is going to increase civilian pay and contractor costs -- contractor constis because of the distance between the Nellis Greens complex and Edwards, where they will be headquartered. The travel time, data reduction costs -- the data reduction capability of Edwards and at Nellis is quite inferior to what Eglin has right now, and, of course, all these costs are higher in the western U.S. than they are in northwest Florida. Temporary duty costs are going to increase dramatically for the Air Force Special Operations Command who now conducts their testing in more-or-less a local traffic pattern. The Warner Robins War Logistics Center will see increased ... costs, as will their combat command. In fact, the Air Force Special Operations Command estimates that they will spend an additional \$2.5 million a year when that ... is moved to the Nellis Range Complex. And, when it moves, there will be...tanker support required, because of the distance from the safety bases to the Nellis Range Complex. (next slide)

The Air Force has not computed in their costs of moving military construction program requirements. The Air Warfare Center, which is an air combat command unit at Eglin may have to move West, because of the ...EC mission's moving West -- that's really what the Air Warfare Center does. And it will certainly impact the stretch of operations command-east, electronic combat readiness, because you're quick reaction fixes as we had to do during Desert Storm will take much longer now because the point where we're required to test those things out in the Western U.S., as opposed to doing it at home on the Eglin Range. (next slide)

We would like to recommend, Chairman Dixon, that the Committee analyze the Air Force's decision on electronic combat to look at the total Air Force cost impact versus just to cost reduction of materiel command that the Air Force would realize. Look at the overall test and evaluation -- operational test and evaluation -- and electronic combat training impact on the Air Force that this move will require. And overall the soundness of this decision to dismantle the DOD electronic combat range, which has been rated highest in functional value in recreating in the Western United States in a time ... really defining military presence. That concludes our statement, sir.

**Chairman Dixon:** Thank you very much, General Gillis, for that fine presentation. Now we're pleased to have the distinguished Congressman from Orlando, my old friend, Congressman Bill McCollum. We're glad to have you here.

**Congressman Bill McCollum:** Mr. Chairman, I'm very glad to be here with you today. I'm here to represent the City of Orlando, the County of Orange, as well as the Economic Development Team, Commission of Southern Florida. And, I'm here on two installations. And, I know in five minutes, that's hard to discuss, but I've prepared a statement I'm going to submit, and as we used to do in Congress, I would submit it for the record, and I'm going to summarize it, and ... for the record.

**Chairman Dixon:** It will be reproduced (in for) the record.

**Congressman Bill McCollum:** There are two installations. The first installation is the Naval Research Laboratory Underwater Sound Reference Detach in Orlando, which is scheduled to be transferred to Newport, Rhode Island ... established in its present form. In short, this is a laboratory which conducts the calibration of standards of the Navy for sonar for all the underwater transducers. It's been doing this for years; it's fifty years old ... the old Bell Laboratories in WWII. The issue that I want to raise to your attention, is that I think there's substantial deviation in the decision of the Department of Defense to do what it's doing in this case, from three criteria on your -- your criteria. One of those is the criteria that involves the current and future mission and operational readiness. Another is the one that involves cost and manpower implications. The third one is return on investment. I'll put it very simply to you that the facility in Orlando is unique; it's a small facility. You have all civilian employees; about 105 of them; no active-leave military. There's a lake, called Lake Leesburg, which is one of two lakes that these tests are conducted on, and that lake is unique; it's spring-fed; it has a depth of 60 meters; there are a lot of other technicals that are in your material that you can look at. There is no other facility, no other lake, no other body of water in the continental United States capable of doing the kind of testing with the accuracy that it's done at this facility. And, I don't see any reference to any material which we've been given by the Navy that indicates that they've taken this into account, and what's that's going to do to operational readiness. I don't think the technical people looking at it fully realize or appreciate what they've got here. In addition to that, you've got fifty years of testing that's been done in this particular temperature and this particular condition to compare this sort of stuff with. And, I understand from the technicians involved that you simply can't start all over again somewhere else in a colder body of water and come up with the same kind of answers and the same attitude and ... they do. Plus, 10-to-20 percent of the personnel are the only ones that are going to move to Rhode Island when they go to this facility, and that's a lot of expertise that will be lost. I think that that's military value that's lost. We've got questions out to the Navy now; and the other issues on the dollars and cents we'll be able to present to you in much more detail through the process when we get those answers back.

I want to turn to the Nuclear Power School question, next, in Orlando, very briefly. Currently we are a closed Naval Training ... in Orlando. One of the components of closure was Nuclear Power School and the School A that supplements it, scheduled to move up to New London, CT. Last base closure, the decision was made not to close the subschool there; as a result of that, the cost of the move has increased dramatically. Originally it was projected to be \$46 million. The staff of last (the tanks commission add) another \$50 million, estimated \$96 million cost to move. It's turned out it's \$162 million. So the Navy now says, Let's move this to Charleston, S.C., and build a new building there, and school -- and all it's going to cost us \$147 million, giving \$15 million in savings. It's not good enough. They have no consideration of what is the obvious, which is to leave that portion of the Nuclear Power School of the Naval Training Center right where it is in Orlando today. It would save you \$140 billion plus, if you did that. There needs to be a COBRA analysis. I hope that your staff can encourage them to look at this, and see just what's there. Orlando's going to keep it's Navy Exchange when those bases close, because it's biggest money-revenue producer of the retirement community in the entire United States Navy. The recreational facilities are going to remain there; houses are going to be there; and the Nuclear Power School is one of the most modern facilities that the Navy has. The buildings are there; the community would like to keep it; and there's no savings involved in this. It was just going to be moved to New London where it makes sense where the rest of the Nuclear Navy is. Nuclear Navy is not in South Carolina. There are a couple of follow-on schools there that may save a little bit of money, but most of the follow-on schools are elsewhere. So, I would suggest that when we finish our look at this, and we want you to look at it, that you're going to want to add this on and look at redirecting and where it's being redirected to.

Last, I want to comment on something that's not on the list; I'm not going to talk about it today, but I'd just like to alert you to: We are a loser, and it's not on your list for us to look at, in Orlando of the Armstrong

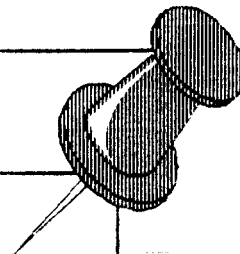
# ADVANCED LOGISTICS CONCEPTS, INC.

## SUBJECT:

Jim Owsley,

These are the slides I will be using for my 5 minute presentation 4 Apr in Birmingham.

Dick Gillis



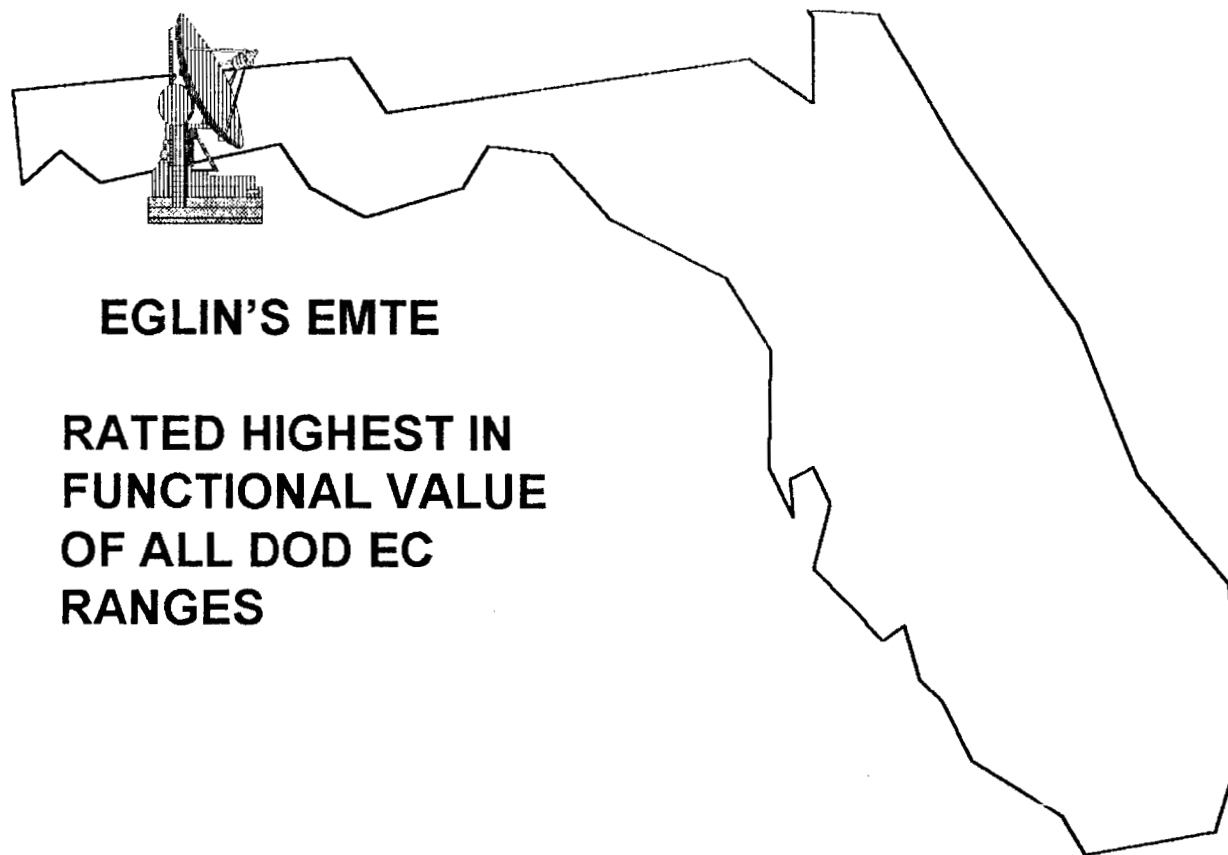
To: Jim Owsley

From : Richard F. Gillis

For information Call: 904 654 9504

At: Advanced Logistics Concepts, Inc.

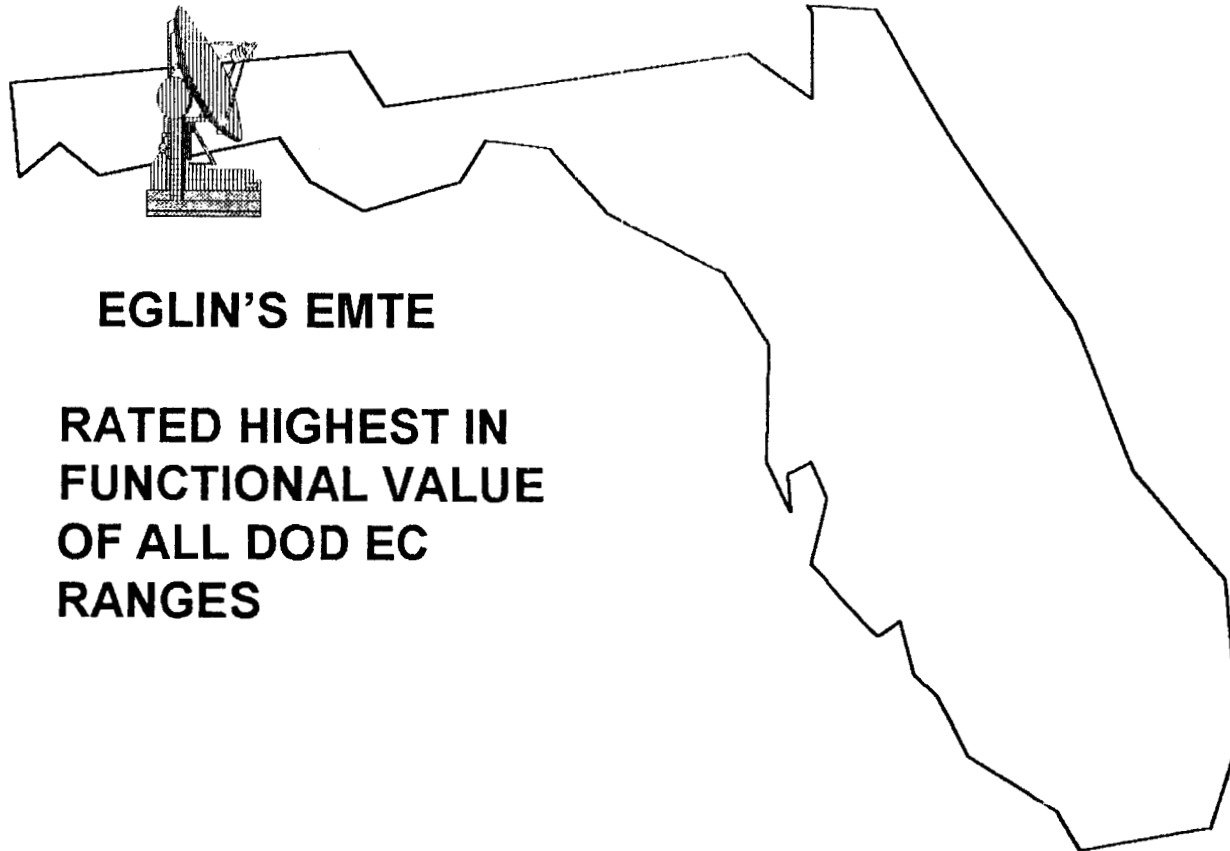
**OKALOOSA COUNTY ECONOMIC  
DEVELOPMENT COUNCIL  
DEFENSE SUPPORT INITIATIVE**



**EGLIN'S EMTE**

**RATED HIGHEST IN  
FUNCTIONAL VALUE  
OF ALL DOD EC  
RANGES**

# OKALOOSA COUNTY ECONOMIC DEVELOPMENT COUNCIL DEFENSE SUPPORT INITIATIVE



**EGLIN'S EMTE**

**RATED HIGHEST IN  
FUNCTIONAL VALUE  
OF ALL DOD EC  
RANGES**



# EDC/DSI

- T&E JOINT CROSS-SERVICE GROUP GIVES EGLIN'S EMTE A FUNCTIONAL VALUE OF 65
  - PT MUGU - 58
  - PAX RIVER - 53
  - EDWARDS - 52
  - CHINA LAKE - 47
  - USA EPG - 47
  - HOLLOMAN - 29
  - AFEWES - 17
  - CRANE - 17
  - REDCAP - 15

# EDC/DSI

- **HOWEVER AIR FORCE DECIDES TO DISMANTLE EMTE AND DISCONTINUE EGLIN'S EC LEADERSHIP ROLE**
  - ESTABLISH EDWARDS AS EC SINGLE FACE TO THE CUSTOMER
  - MOVE 8 SIMULATORS & 2 POD SYSTEMS TO NELLIS RANGE COMPLEX
    - » LEAVE REMAINING EMTE ASSETS FOR AFSOC TRAINING AND SUPPORT OF WEAPONS TESTING BUT WITHOUT UPGRADE FUNDING
  - CLOSE REDCAP & AFEWES & MOVE THEIR ASSETS TO EDWARDS
  - UPGRADE EDWARD'S BENEFIELD ANECHOIC CHAMBER TO ACCOMPLISH EC MISSION AT A COST OF \$140M

# EDC/DSI

- **AIR FORCE STATES THESE ACTIONS WILL :**
  - **SAVE \$48M OVER 20 YEARS**
  - **HAVE NO ADVERSE IMPACT ON AFSOC, ACC OR OTHER EMTE USERS**

# EDC/DSI

- **REALITY IS THAT THESE ACTIONS WILL:**
  - **INCREASE THE COST OF EC TESTING TO THE CUSTOMER**
    - » **COST OF DOING BUSINESS - CIVILIAN PAY, CONTRACTOR COSTS, DATA REDUCTION, etc, ARE HIGHER IN WESTERN U.S.**
    - » **TDY COSTS WILL INCREASE FOR AFSOC, WRALC & ACC**
    - » **TANKER SUPPORT WILL BE REQUIRED DUE TO DISTANCES BETWEEN STAGING BASES AND RANGES**

# EDC/DSI

- **REALITY (CONT)**
  - **CREATE ADDITIONAL MCP REQUIREMENTS**
    - » **AWC MAY HAVE TO MOVE WEST TO ACCOMPLISH ITS EC OT&E MISSION**
  - **IMPACT AFSOC'S EC READINESS**
    - » **QUICK REACTION EC FIXES, REQUIRED IN ALL CONTINGENCIES, WILL BE DELAYED**

# EDC/DSI

- **RECOMMEND BRAC ANALYZE AIR FORCE EC DECISION FOR:**
  - **TOTAL AIR FORCE COST IMPACT vs AFMC COST REDUCTION**
  - **OVERALL T&E, OT&E AND EC TRAINING IMPACT FOR THE AIR FORCE**
  - **SOUNDNESS OF THE DECISION TO DISMANTLE THE DOD EC RANGE RATED HIGHEST IN FUNCTIONAL VALUE AND RECREATE IT IN THE WESTERN US IN AN ERA OF DECLINING MILITARY BUDGETS**



# Document Separator



ECONOMIC SECURITY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE  
3300 DEFENSE PENTAGON  
WASHINGTON, DC 20301-3300



20 APR 1995

Mr. Ben Borden  
Defense Base Closure and  
Realignment Commission  
1700 N. Moore Street, Suite 1425  
Arlington, VA 22209

Dear Mr. Borden:

Enclosed is a response to a question for the record submitted to the Air Force by the Defense Base Closure and Realignment Commission. We are responding to the question due to its policy perspective.

I trust this information will be useful.

Sincerely,

R.L. Meyer  
Director  
Base Closure

Enclosure

cc: USAF/RT - Co. Mayfield



Question: The 1995 Defense Authorization Bill directed the Secretary of Defense to submit a Master Plan for the final disposition of all Electronic Combat (EC) facilities before relocating any EC equipment or making any EC realignments. How does the Department of Defense BRAC recommendations to move eight EC threat simulators and two EC pod systems from Eglin Air Force Base, as well as the movement of REDCAP and AFEWES equipment to Edwards Air Force Base, comply with this Congressional directive?

Answer: The BRAC 95 recommendations to consolidate certain Electronic Combat test and evaluation activities, including a realignment at Eglin AFB, were made pursuant to the requirements of the Defense Base Closure and Realignment Act of 1990, Section 2903. These recommendations, and the consequent elimination of underutilized infrastructure, are expected to generate a relatively high return on the front-end investment needed to implement the recommendations. The Department believes that making these cost-effective recommendations is not inconsistent with the FY 1995 Appropriations Committee Report language requesting the Department to justify any Electronic Combat test facility consolidations on economic grounds.

# Document Separator

# ADVANCED LOGISTICS CONCEPTS, Inc.

AEROSPACE AND LOGISTICS CONSULTANTS

RICHARD F. GILLIS, PRESIDENT

115 Garnet Place, Destin, FL 32541

Business (904) 654-9504

Fax (904) 654-6992

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Dear Chairman Dixon

We have studied the Air Force realignment recommendations to the Commission concerning REDCAP, AFEWES and Eglin's EMTE and we are convinced the Air Force is attempting to circumvent the intent of the 1995 National Defense Authorization Act. The 1995 Bill clearly directed DoD to deliver an Electronic Combat (EC) Master Plan to the Congress before making any changes to the current EC Test and Evaluation infrastructure. DoD has not delivered the EC Master Plan yet they are proposing that the BRAC Commission approve realignments in EC infrastructure that will inexorably alter the way EC testing is done in the future. We strongly urge you to disapprove the proposed EC realignments and allow the Congress to carefully review DoD's EC Master Plan before changes are made that could affect this Nation's future war fighting capability.

Sincerely,

## Background Paper on DoD's Proposed EC Realignments for BRAC '95

DoD has proposed closing the EC simulation facilities at REDCAP and AFEWES and dismantling the EMTE at Eglin. Approval of these realignments will dramatically change the EC Test and Evaluation infrastructure and commit the Air Force to one open air EC range for both T&E and training. This action is being proposed in direct opposition to the recommendations of the most knowledgeable people in DoD's EC community.

The current Air Force EC T&E process uses simulation facilities at REDCAP, AFEWES and Eglin to thoroughly test new EC equipment against potential threats before that equipment is flown on Eglin's open air EC range. This process allows equipment to be tested on the ground before starting expensive airborne testing. The simulation facilities at REDCAP, AFEWES and Eglin and Eglin's EMTE open air range have been proven to be effective in developing EC systems that have protected our air crews in combat. The Air Force is proposing to dismantle this infrastructure and develop a new simulation facility at Edwards AFB and center open air testing at the Nellis AFB range complex. This proposal purports to save \$48M over 20 years but in fact will cost the Air Force more money to test EC equipment than it is spending now and could dramatically affect the quality of EC testing in the future.

EC testing has been a controversial subject for many years and the Congress has taken direct interest in how our new EC equipment is tested because of the implications unrealistic testing could have on wartime combat readiness. In 1994, the Congress directed DoD to submit an EC master plan before proceeding to change the EC test infrastructure. This language in the 1995 Defense Authorization Act caused DoD to once again study the EC T&E process from a joint perspective. The two latest studies, the 1994 Board of Directors report and the 1994 Joint Cross Service Group, acknowledged that the premier EC T&E range in DoD was Eglin's EMTE and stated that if consolidation of EC T&E infrastructure was necessary, Eglin was the place to do it. The Air Force has chosen to disregard these recommendations and center EC testing in the Western U.S.

The Air Force proposal to the 1995 Commission seeks to circumvent the language in the 1995 Defense Authorization Act. If the Commission approves the Air Force recommendations, the Air Force will be free to change the EC T&E infrastructure without delivering an EC master plan or consulting with Congress. Considering that the proposed infrastructure changes will inexorably commit the Air Force to only one EC open air test range and forever prevent DoD from consolidating EC testing at its acknowledged most capable EC range, Eglin's EMTE, the reluctance of the Air Force to discuss this move with the Congress is most disturbing



The cost of changing the EC T&E infrastructure has been grossly understated by the Air Force. They claim the total cost will be \$2.3M. The latest estimate made subsequent to the announcement of their proposed realignments is \$16.1M to move eight simulators and two pod systems from Eglin to Nellis, close REDCAP and AFEWES and move some of their equipment to Edwards. Current estimates of the additional cost to the using commands to conduct testing at Edwards and Nellis vice Eglin is estimated at \$6M/year or \$120M over 20 years. These costs will wipe out the 20 year, \$48M savings the Air Force claimed for this realignment and actually increase the cost of EC testing to the Air Force by \$88M over the 20 year period.

The Air Force recommendations to the 1995 BRAC Commission should be disapproved because they lack merit. Following these recommendations will reduce the U.S. capability to conduct EC T&E, increase the annual cost of EC testing and require a significant expenditure to duplicate existing EC simulation and test facilities in the Western U.S.

## POINT PAPER ON EMTE VS NELLIS

The following points comparing the subject EC test capability is based on current and past experience of personnel who have used both ranges for DT&E, OT&E, and FOT&E. Comments are representative of government and industry familiar with both ranges. Some of the personnel were instrumental in helping develop these range capabilities and as such are intimately knowledgeable of the systems, instrumentation, data reduction, and operations.

### SCHEDULABILITY:

**Airspace:** EMTE has unlimited airspace with no major air corridors within 100 NM. Nellis is in very close to the major airways serving Los Angeles, Las Vegas, etc. In addition, the Nellis area has frequent sensitive test missions that occur and shut down the entire area without notice. This causes delays in completing ongoing EC tests which are always lower priority. Contractor personnel have spent entire weeks confined to quarters while only accomplishing one test mission. Security restrictions limit travel to/from the area easily to better utilize time.

**Frequency:** Both ranges have frequency restrictions due to commercial or other missions. Developmental EC testing requires the most restrictive control of the frequency bands which essentially means only one test can be scheduled at a time. If all tests are run at one range, the efficiency will greatly be limited since only one test can be scheduled at a time using the frequencies of interest. This means an EC test is not compatible with operational tests that use the same frequency spectrum. E.G. Space shuttle flights close down the Nellis EC testing for all bands of interest.

**Time on station:** Due to the limited base support or security restrictions many of the current EC test require tanker support or special permission to land close (within 10NM) of the Nellis EC threat systems. This logistics greatly impacts the days required to accomplish a required number of missions. No such restrictions exist at the EMTE. In fact, the aircraft are frequently on station with data collection starting within 5 minutes after take off. An F-15E flying from Edwards AFB with full conformal tanks can only stay on the Nellis range 30 minutes without a tanker. An F-16 from Nellis has only 27-28 minutes on the range. At Eglin both can stay over 1 1/2 hours.

**ACCESSIBILITY:** Special clearance are currently required to participate in testing at Nellis. Typically only one or less contractor personnel are allowed on the range to monitor system performance. This is a real problem during developmental tests when a team of experts (e.g. 10 - 15 people) is required to diagnose problems. A typical program such as the ALCOS-100 required at least one contractor/observer at each threat site during the initial six months of testing. Analysts were co-located with test managers and system engineers at Eglin to avoid common problems that never occur during development. The Nellis site appears to be a larger problem than the Edwards site. Contractors will have to have the right to access the site. The other successful EC program was run at Eglin and was completed in 23 Aug-1995.

**DATA REDUCTION/ANALYSIS:** This important feature requires high fidelity instrumentation for aircraft position and threat system tracking. The primary measure of effectiveness for EC evaluation is threat system tracking errors and simulated projectile/missile miss distance. Due to instrumentation problems that have existed for years the Nellis range personnel have opted to push only tracking error analysis since their miss distance simulation results are not good enough to compare dry (no EC) vs wet (EC) data. Both data products (when produced) are frequently not available for weeks or months after test missions. This results in analysts frustration evaluating mission data. Another major problem with the latency is the mission planning that is typically needed to correct problems seen during flight. Problems that could have been corrected with minor profile changes or sub-system replacement or reprogramming go un-noticed for several days/weeks while more missions are flown. The EMTE has always stressed data turn-around to meet user requirements. One case-- AFSOC flew missions in preparation for a foreign deployment. The data was not available until 60 days after the deployment was complete.

**Final Comment:** The AF is closing the door on EC as part of its defense capability. There is no plan to rebuild the EMTE. The result will cost many lives in the next MRC.

EGLIN AFB

From: HIGGINBOTHAM, LTC WILLIAM N.  
HIGGIN  
Dept: 46TS/CC

Date: 28-Mar-1995 04:49pm CST

Tel No: 904-882-5935

TO: NATION, H DOUGLAS ( NATION )  
TO: RODGERS, THOMAS N. ( RODGERS )  
TO: BALLARD, RONALD D. ( BALLARDR )  
TO: HIGDON, RONALD O. ( HIGDON )

Subject: EC Capability after move

Sirs,

For your information OG was tasked Friday to provide Col Strittmatter a paper listing our EC test capabilities after the BRAC moves. Attached is a copy of what we sent forward. I'm sorry we could not fully coordinate with all due to the quick turnaround tasking. Please let me know if there are any errors in what you see and I will correct. Thanks.

L/C Higginbotham

## BULLET BACKGROUND PAPER

ON

## EGLIN EC TEST CAPABILITY AFTER BRAC MOVES

Eglin's Electromagnetic Test Environment (EMTE) will be reduced to one each threat emitter for SA-2B, 2E, 1, 6, 9, 10, 11, FIRECAR, FIREWHEEL, PLAPWHEEL, GUNDISB

- Other systems will be transferred west or put in mothballs

Testing ~~will be able to do~~ with sample programs:

- Abbreviated Radar Warning Receiver Testing (only one emitter per threat)
  - Belgian Caspace
- Abbreviated Emitter-seeking Munitions Testing (no multiple threats of same emitter)
  - Early HARM Missile Development
- Munition Testing in the Presence of Electronic Counter Measures (ECM)
  - Joint Direct Attack Munition (JDAM)
  - LANTIRN Targeting Pods
- Susceptibility to Jamming Testing
  - Joint Stars Electronic Counter-Counter Measures (ECCK)

-- GPS Signal Modulation and Denial

Testing we will ~~not~~ be able to do with sample programs:

- Integrated Electronic Combat (EC) System Testing
  - F-15 Tactical Electronic Warfare Suite (TEWS) DT&E
  - US Army Apache Advanced Threat Radar Jammer DT&E
  - Turkish F-16 ALQ-178 DT&E
- Full Radar Warning Receiver (RWR) Testing (requiring threat density)
  - F-16 ALR-56M RWR DT&E
  - Advanced Radar Warning Receiver
- Full RF Precision Direction Finding Development (requiring threat density)
  - HARM Targeting System
  - E-3 AWACS Electronic Support Measures
- EC Jamming Effectiveness Testing
  - EF-111 System Improvement Program
- ECM Technique Development (including missile flyout and miss distance)
  - ALQ-131, -137, -184 ECM Pod Optimization (AWC)
  - E-52 ALQ-172 Defensive Avionics Suite (AWC)
- Hardware-in-the-loop Ground ECK Technique Development (Pole Testing)
  - Exploitation of SA-6
  - AC-130 Gunship ECK Development (AFSOC)
- ECK Emitter Development
  - British Triad Burnhamton Barrier and Tornado ECK
  - Combat Talon II Electronic Warfare Suite OOTEA (AFSOC)
  - MH-53E Pave Low III
- Countermeasure Effectiveness Testing (including missile fly-out and miss distance)
  - Future Countermeasures (Navy)
  - End Game Countermeasures (AWC)
  - Dual IR/RF Decoy
- Quick Reaction Jammer and RWR Software Reprogramming
  - Coronet Quick I and II
- Contingency Deployment ECK System Verification
  - AC-130 H/A (AFSOC/AFRES)
  - Combat Talon I and II (AFSOC)
- Radar Cross Section / Chaff Block Measurements
  - Air National Guard F-16
  - C-130 Radar Cross Section (NGB)
  - Defensive Avionics Assessment Program (AWC)

We are basically out of any business that requires more than one emitter of

a particular type. This includes all closed loop ECM testing, especially effectiveness testing and ECM technique evaluation measuring miss distances generated. This is most of the Electronic Combat testing being accomplished today.

This means that ~~we will no longer~~ be able to support the Electronic Combat needs of ~~the~~ and ~~ARSO~~. Attached is a letter from ARSOC listing their concerns with the move. It states the move "would result in a major impact to ability to support contingencies and would increase costs and schedule". Also attached is the staff summary sheet that details the specific losses in combat capability in response time, surge capabilities, and security as well as increases in the dollar cost for testing and training.

MAR 21 '95 08:43AM

F.C. 10

004-884-1018

18 FLTS/TEE (ECM)

Page 2 Job 083

Mar-20 Mon 11:14 1995

MEMORANDUM TO 46TW/OGD

9 Mar 95

ATTENTION: Lt Col Acosta

FROM: 18FLTS/TEE  
606 Cruz Ave  
Huribart Fld, FL 32544-5736

SUBJECT: BRAC Realignment Proposal for Eglin EMTE

1. The following are my personal thoughts on the impact on the Air Force, as a whole, of closing the EMTE at Eglin.

a. Closure of the Eglin EMTE will only benefit AFMC and not the Air Force.

- Closing the Eglin EMTE only transfers the funding burden from AFMC to the user commands (ie. ACC & AFSOC).

- Closing the Eglin EMTE increases total costs to the Air Force.

-- The claim is closure will save \$31.4M over 20 years.

- In actuality, it will save AFMC this money, but will cost AFSOC and USAFAWC more than this to conduct testing TDY. The cost to the 46 TW is unknown, but the 46 TW will also have to deploy its aircraft and personnel more. It will cost AFSOC a minimum of \$1.5M/yr in just deployment costs or \$30.0M over 20yrs. Although the exact cost to USAFAWC is unknown, it should be approximately \$2.5M/yr for \$50M/20yrs. These combined deployment costs total approximately \$8M with a net loss to the Air Force and tax payers of approximately \$48.6M.

- Per Diem costs will be increased due to numerous trips for test planning and data reduction from eastern bases to western test ranges.

- The western ranges can not easily absorb the additional testing now being conducted at Eglin. AFSOC may have to stand in long lines to gain access to the western ranges. These ranges are already operating at or near maximum capacity which is evidenced by the fact that a test has to have a very high priority in order to gain access to the Eglin and Western range in a timely manner.

- Putting all the ECM ranges in one place eliminates our ability to surge in a time of war such as DESERT SHIELD/STORM and PROVIDE PROMISE. The move will cause competition for range time between the services. During the military's preparations for DESERT STORM, the Navy primarily used the western ranges and the Air Force used the eastern range. Thus, the military was able to satisfy both service's surge requirements.



004-004-1018

18 FLT8/TEE (ECM)

Page 4 Job 068

Mar-20 Mon 11:16 1995

- Manpower utilization will be diminished. Currently the Test Directors are supplemented by approximately 3-7 other Test Directors from the unit who man the radars, CCF, etc at Eglin during the usual range time. During periods when this supplemental help is not on the range, these individuals are back in their offices managing their own tests. For example, the range mission may be for only one-two hours and the supplemental Test Directors only work on this test during those one-two hours and spend the rest of the 8-hour day working their own projects. When deployed to the western ranges, these supplemental Test Directors will be sitting idle a majority of the time. This shared manpower utilization when using the Eglin range is repeated throughout Hurlbert by the Test Agency, Wing Maintenance, and Wing Operations personnel. The inefficient utilization of manpower and aircraft during deployments is a critical consideration in each AFSOC decision to support testing when its units are already undermanned due to manning cut-backs.

- Aircraft utilization will be diminished. Currently, AFSOC aircraft are most efficiently utilized when they fly 5-hour missions in lieu of one-two hour test missions. At Eglin, the extra 3-4 hours after the test mission is completed are used for training students and continuation training. This efficiency will be lost in a deployed scenario since it is not cost effective to deploy multiple students and aircrew to the test site for training. In addition, the type of training required would not always be available at the deployed location.

- Scheduling efficiency of having spare aircraft and aircrews available locally would be lost when conducting testing from a deployed location.

- Timing efficiency is usually lost when deployed. The most efficient manner to test ECM systems is to conduct one flight per week with the remainder of the week being used to analyze the test data. This is done to insure the radars, flyout models, TEF, aircraft LXUs and software are performing as advertised. To fly the aircraft every day hoping that the equipment is operating properly (which it seldom does) risks thousands of dollars worth of range data being trash-can'd because some part of the test was not operating properly. There is always a tremendous amount of pressure to test every day when operational aircraft are deployed since commanders want their aircraft back home for other missions such as training, contingency deployments and other events such as JRTs.

- If the equipment has major failures, it could very easily result in suspension and expensive deployments back-and-forth to the test range. For example, the recent ALR-69 Class IV test being conducted separately by both AFSOC (on AFSOC aircraft) and USAF/AWC (on fighter aircraft) have been started and stopped numerous times since the tests started in Sept 94 due to software problems. Over 15 sorties were scheduled by each test agency. This would have required planning for a two to four week deployment by each agency depending on whether the plan was to fly every day or take time to analyze the data between missions to insure good data. AFSOC normally deploys with over 120 personnel to support these types of tests. This requires C-141 support to move the WREK kit and maintenance personnel at a cost of over \$200,000 per deployment. When the test is indefinitely delayed, like this ALR-69 test, multiple deployments would be required and those C-141 costs and the time and manpower to plan the deployment would be funded many more times wasting valuable time and money.

MAR 21 '95 08:43AM  
02/10/95 17:15

4-884-1018

18 FLTS/TRE (ECM)

Page 5 Job 083

Mar-20 Mon 11:18 1995

- Efficiency of being able to add other standby tests (ie. 14FLTS, USAFAWC, and 46 JW tests) to the schedule on short notice when a scheduled mission cancels at the last minute will be lost. Commands can not afford to have their aircraft deployed on a standby status awaiting the possible cancellation of another test mission.

c. Closure of the Eglin EMTE does not match the logic of the other BRAC realignments.

- All electronic management is being consolidated at the Warner-Robins Air Logistics Center, Ga. yet these systems will have to be deployed out west to be tested.

- USOCCOM, HQ AFSOC, SOW Depot (WB-ALC), 16 SOW (aircraft), 18 FLTS and USAFAWC are all co-located on the east coast to support testing and product management. This is in direct support of the Air Force Quality Integration Program.

- Hill AFB is one of the bases being considered for closure. Hill AFB is our primary deployment staging base for western tests. Nellis AFB has traditionally been unavailable due to limited aircraft parking and Edwards AFB is too far removed from the range creating fuel and flight time complications.

2. If you have any questions, please feel free to contact me at 4-3648.

*Jerry R. Cowing*  
JERRY R. COWING, Lt Col, USAF  
Chief, Electronic Combat Branch

current as of March 95

cc: Big 4  
D&A (165)  
CSEB

# FY95 F-15 FLYING HOUR RATE COMPARISON

## DOD CUSTOMERS

	Edlin		Edwards	
EEIC	QTY	COST	QTY	COST
Civilian Pay	27.89	651.19	94.25	2,922.00
Travel		5.00		0.00
Haz Waste		12.00		0.00
DLR		2,393.00		3,416.00
Equip Maint		414.00		95.00
Contr Eng & Tech Svcs		85.00		28.00
Misc Ctr Svc		41.00		0.00
AVPOL	1486	1,055.00	1553	1,103.00
Supplies		804.00		550.00
Equipment		35.00		0.00
Ground Fuel		6.00		0.00
Non-fly AVPOL		64.00		25.00
Inv Equip		4.00		0.00
Depot Maint		0.00		16.00
<b>TOTAL</b>		<b>5,569.19</b>		<b>8,165.00</b>

# FY95 F-15E FLYING HOUR RATE COMPARISON

## DoD CUSTOMERS

Edlin

Edwards

EEIC	QTY	COST	QTY	COST
Civilian Pay	20.81	461.98	76.12	2,360.00
Travel		5.00		0.00
Haz Waste		12.00		0.00
DLR		801.00		3,484.00
Equip Maint		406.00		95.00
Contr Eng & Tech Svcs		82.00		28.00
Misc Ctr Svc		39.00		0.00
AVPOL	2394	1,700.00	2050	1,456.00
Supplies		1,057.00		531.00
Equipment		42.00		0.00
Ground Fuel		7.00		0.00
Non-fly AVPOL		72.00		25.00
Inv Equip		5.00		0.00
Depot Maint		0.00		16.00
<b>TOTAL</b>		<b>4,683.98</b>		<b>7,995.00</b>

# FY95 F-16 FLYING HOUR RATE COMPARISON

## DOD CUSTOMERS

EEIC	EqIn	QTY	COST	Edwards	QTY	COST
Civilian Pay	16.84	368.64		84.3	2,613.00	
Travel		5.00			0.00	
Haz Waste		12.00			0.00	
DLR		1,174.00			1,401.00	
Equip Maint		293.00			0.00	
Contr Eng & Tech Svcs		56.00			79.00	
Misc Ctr Svc		40.00			0.00	
AVPOL	98.3	698.00		934	663.00	
Supplies		339.00			410.00	
Equipment		13.00			0.00	
Ground Fuel		3.00			0.00	
Non-fly AVPOL		18.00			25.00	
Inv Equip		1.00			0.00	
Depot Maint		0.00			18.00	
<b>TOTAL</b>		<b>3,020.64</b>			<b>5,207.00</b>	

# Document Separator



# United States Senate

WASHINGTON, DC 20510-0903

May 9, 1995

Florida refer to this number  
when responding 950509-18

The Honorable Alan J. Dixon  
Chairman  
Defense Base Closure and Realignment Commission  
1700 North Moore Street, Suite 1425  
Arlington, Virginia 22209

Dear Chairman Dixon:

We are writing concerning a matter of great importance to us, the State of Florida, and the United States Air Force.

We have carefully studied the Air Force recommendations for the realignment of Eglin Air Force Base's Electromagnetic Test Environment (EMTE), Real-time Digitally Controlled Analyzer Processor (REDCAP), and Air Force Electronic Warfare Environment Simulator (AFEWES) published on February 28, 1995 as part of the Defense Department's base closure and realignment list. We are very concerned that the Air Force's recommendations serve to undermine congressional direction to the Defense Department by circumventing the intent of Congress as expressed in the 1995 National Defense Authorization Act. The National Defense Authorization Act clearly directed the Department of Defense (DOD) to deliver an Electronic Combat (EC) Master Plan to Congress before making any changes to the current EC Test and Evaluation infrastructure. The Department of Defense has not yet delivered the EC Master Plan, however, it is proposing that the Base Closure and Realignment Commission (BRAC) approve realignments in EC infrastructure that are likely to inexorably alter the manner in which EC testing is performed in the future.

We acknowledge the prerogative that the BRAC Commission has with respect to making decisions related to our military's infrastructure which could have broader policy implications. However, a carefully conceived and thorough analysis by DOD in drafting an EC Master Plan would be in our country's best interest.

We strongly urge you to reject the Air Force's proposal for EC realignments. This will allow Congress time to carefully review DOD's EC Master Plan before any changes are made which could seriously affect this Nation's war fighting capability.

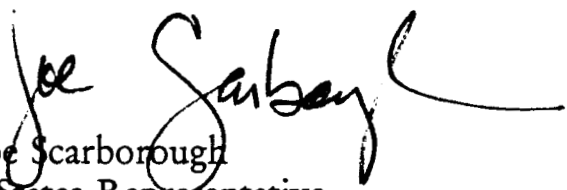
Sincerely,



Bob Graham  
United States Senator



Connie Mack  
United States Senator



Joe Scarborough  
United States Representative

# Document Separator

**MEMORANDUM**

TO: General (ret.) J. B. Davis, BRAC Commissioner

FROM: Senator Bob Graham

DATE: May 9, 1995

RE: FLORIDA BASE REALIGNMENT AND CLOSURE COMMISSION ISSUES

---

Thank you for returning my call today. I enjoyed the conversation and hope to get together with you sometime soon.

As you had requested, I am forwarding a short issue paper to you concerning the subject matter that we discussed. As I said, I believe that the issues that I am concerned about are based on merit and hope that you can assist in ensuring that these arguments get a fair hearing.

I thank you for your objective analysis and hard work as a commissioner, as well as your dedicated, patriotic service to our Nation.

Florida Issues  
May 9, 1995  
Page 2

ISSUES FOR CONSIDERATION

1. NAS Whiting Field: It is our understanding that several members of the Commission may be considering adding Whiting Field to its list of possible base closures. We have also been told that the BRAC may perform a site visit at Whiting, and that data calls have been made for analysis of consolidation and co location scenarios at Ft. Rucker.

- \* The Navy, Marine Corps and Coast Guard strongly support continued training at NAS Whiting Field.
- \* Co-locating the training operations at Rucker is not a fiscally viable option. The Navy has reports that it would result in high costs and protracted return on investment. Gains made would quickly evaporate due to student transfers (to and from Ft. Rucker between training phases) and military construction costs.
- \* Consolidation would be much more difficult to institute due to differences in Service requirements (sea versus land), training philosophy (fixed wing primary versus no fixed wing training), and personnel policies (officer versus non-commissioned officer).
- \* According to the Navy, consolidation would threaten its most needed training requirements -- extensive instrument time. Those who have flown in maritime environments know well the unique and extreme hazards associated with night operations at-sea (particularly onboard smaller vessels such as destroyers or frigates).
- \* The Navy has reliably analyzed its requirements and assets and made the correct decision to retain NAS Whiting Field. The Secretary of the Navy and Chief of Naval Operations see this issue as a safety, training, and fiscal issue.

2. NADEP Jacksonville:

- \* The Navy has repeatedly shown strong support for the retention of NADEP Jax for cost and strategic reasons.
- \* NADEP Jax has proven itself as an efficient and cost effective depot. It has prevailed in both private-public workload competitions (against GE for F-117 stealth fighter engines) and public-public competitions (against Air Force for J-52 engines).

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Page 3

- \* The GAO report is highly critical of the Air Force depot analysis. It does not raise questions about the Navy analysis. The Navy's analysis and recommendations are sound and should be honored.
- \* The Air Force, unlike the Navy, has yet to reduce its excess depot infrastructure. The Navy has already closed three of its NADEPs including NADEP Pensacola, FL. The Navy has "right-sized" and eliminated its excess capacity in the true spirit of BRAC.

3. Eglin AFB:

- \* Air Force BRAC analysis, in general, has been seriously questioned by the GAO. Our own analysis of the Test and Evaluation issue makes us question the Air Force's decision to move electronic warfare test and evaluation hardware out of Eglin.
- \* The Board of Director's Study clearly is supportive of Eglin's strengths as a Test and Evaluation center, should consolidation be necessary.
- \* The Defense Authorization Act for 1995 directed the Secretary of Defense to establish an electronic warfare Master Plan, before consolidating electronic warfare assets, in order to ensure that a thorough analysis is conducted in this area. The Air Force's BRAC recommendations act to circumvent this directive.
- \* Although the BRAC Commission is able make decisions in an independent fashion, the completion of the Master Plan would allow for a more thorough study in this area and ensure that DOD's plans are well thought out in the longterm.



# Avoiding nuclear war was a 'miracle'

CIA wrong about Soviet intent, Aspin says

By JOE WILLIAMS  
of the Journal Sentinel staff

Contradicting what U.S. intelligence believed during the Cold War, new evidence shows that Russian leaders were not as fearful as the Americans of initiating a nuclear war, former Defense Secretary Les Aspin said Wednesday.

"We missed what the Soviets thought about nuclear weapons very badly," Aspin said during a symposium at Marquette University. "We asserted that they believed what we believed — that nuclear weapons are dangerous to both sides, and therefore there is a mutual interest not to use them."

Aspin, who was appointed recently by President Clinton to head a commission to reassess the nation's intelligence agencies, said that belief led the U.S. military to build up a costly ar-

senal of conventional weapons so fighting would not have to escalate to a nuclear exchange.

But the Russians, we now know, didn't feel that way, he said.

"Those guys were going to go to nuclear weapons right from the outset — just push the button and away we go," Aspin said.

"The fact that we didn't have a nuclear war is a real miracle,

the likes of which we may never completely understand," he said.

While many technological aspects of U.S. intelligence abroad were extraordinarily good (photographs, communications, code cracking, etc.), Aspin said the CIA had more difficulty analyzing events and situations.

Among the mistakes Aspin said we now know we made:

■ Intelligence officials overestimated the size of the Soviet economy. By doing so, officials

vastly underestimated the percentage of the Soviet gross national product that was spent on its military.

■ Nuclear warheads were in Cuba long before intelligence forces knew, and Khrushchev had already delegated decisions about their use to a local commander.

"He didn't even have to report back to Moscow," Aspin said.

The Congressional Budget Office estimates a ground-based, terminal-phase interceptor system for total defense of the U.S. would cost \$48 billion. A constellation of 20 hydrogen-fluoride laser satellites would cost \$15 billion—including acquisition, launch and 10 years of operating and servicing—and would cover the globe. All components have passed tests during the last two decades. All we have to do is acquire and launch it after first abrogating the ridiculous ABM treaty.

HARRY THAYER  
KENSINGTON, CALIF.

### FALSE CLAIM ON BASE CLOSING

If Gen. John Shalikashvili is really concerned about the base-closing process not showing a profit (AW&ST Mar. 13, p. 28), he should check the integrity of the

studies used to determine the BRAC recommendations.

A perfect example is the USAF claim of saving \$48 million by moving Electronic Combat Testing from Eglin AFB, Fla., to the Western ranges. The big bucks required to overcome the shortfalls of Western EC development testing will outdistance \$48 million. The two pods slated for the big move are only half the test system. The other half will require about \$10 million to reimplement the capability. At least 3 hr. of flying time and a tanker are required out West to obtain the same amount of data gained in 1 hr. at Eglin.

If duplication and overcapacity existed, USAF could shut down Eglin's testing today, conduct it out West at no cost increase and never miss a milestone. USAF is using the BRAC process as justification to reinvent that which exists.

COL. JIM R. SHARP (USAF, RET.)  
NICEVILLE, FLA.

## Vets Deliver Medicine to Hanoi

■ HANOI—An American cargo plane piloted by two Vietnam War veterans touched down in Hanoi carrying the largest private humanitarian shipment to Vietnam since the end of the war in 1975.

The aircraft, an MD-11 cargo plane owned by U.S. transportation firm Federal Express, delivered 50 tons of medicines and

VETS...Pg. 17

KERRY...from Pg. 15

...sures to make terrorist murders punishable by death.

Kerry said he had problems with the legislation cited by the GOP.

"Only Jim Rappaport would get politics into this event the day after the tragedy. That is pathetic," Kerry said.

SCOT LEHIGH

# Extend this nuclear treaty, forever

The most successful arms-control agreement in the history of the world is about to expire. President Clinton's campaign for an indefinite extension of the Nuclear Non-Proliferation Treaty (NPT) is laudable despite a handful of nuclear cheaters and some glaring double standards that provide easy targets for critics among the nuclear have-nots.

Credited with preventing a nuclear free-for-all over the past 25 years, the NPT comes up for renewal at the United Nations in mid-May.

In the meantime, Clinton still has some arrows to dodge, all having to do with America's penchant for throwing the international law book at enemies while dropping the scales of justice if our friends are at fault.

The non-nuclear powers, 173 in all, signed the NPT in 1970, mostly because they never dreamed thermo-nuclear bombs would be within their reach, as they are for many today. In exchange, they received a pledge from the five nuclear powers—the U.S., USSR, China, France and Britain—to work "in good faith" toward disarmament and provide access to technology, like reactors.

Although Washington and Moscow no longer stand eyeball to eyeball at the threshold of conflict, and historic arms reductions are under way, today's nuclear stockpiles are far deadlier than in they were back in 1970.

Clinton has tried to curb NPT provisions that require access to technology; he demands that Russia

renege on its deal to sell generators to Iran, citing CIA reports arguing that Iran only wants to train new bomb scientists.

Even the International Atomic Energy Agency (IAEA), which enforces the NPT, endorses the sale. The IAEA insists Iran's use of the reactors can be effectively monitored—so long as Western powers adequately fund the IAEA and share intelligence.

Clinton is most vulnerable on America's under-the-table exemptions. The worst-kept secret in the world is that Israel, not a signatory to the NPT, has nuclear weapons. Yet Washington has not called down international wrath on this key ally, as it did when India, Pakistan and South Africa got nuclear weapons.

Ironically, the most immediate proliferation threat is the smuggling of weapons-grade nuclear materials out of the old Soviet bloc, and the NPT does not even apply to this small-scale pilfering. It is time for a new NPT codicil requiring police, border patrols, customs services and intelligence agencies of individual nations to coordinate efforts to halt the frightening nuclear black market.

If the NPT is renewed indefinitely, Clinton will claim—and will deserve—much credit. But it will be the result of geopolitics as much as U.S. diplomacy.

Non-nuclear nations hate to surrender a sovereign right to develop weapons of choice, but they would hate even more to have their neighbors develop the bomb first. The NPT has helped slow, if not completely stop that. It ought to be renewed, indefinitely.

# Kirtland argument concerns Eglin

## Test center with 800 workers at stake in BRAC debate

By Charles Ashby  
News Journal

Albuquerque, N.M., officials may have done too good a job questioning why the Air Force wants to close Kirtland Air Force Base, an Okaloosa County resident said Thursday.

It could lead to Eglin Air Force Base not getting the Air Force Operational Test and Evaluations Center and its 800 workers, said retired Air Force Maj. Gen. Dick Gillis.

GILLIS IS a member of the county's Economic Development Council that is working to protect Eglin.

At a base closure hearing in Albuquerque, New Mexico officials questioned how the Air Force could recommend closing Kirtland when it said the base was too important to be shut down during the last round of defense cutbacks

### MILITARY

The Air Force has said it will save \$62 million by closing the base, but Albuquerque officials claimed it will cost \$12 million a year to close it and move its operations elsewhere.

The comments Gillis heard at the hearing about the Air Force's recommendations were similar to those he's heard before.

AT THE SIX Defense Base Closure and Realignment Commission hearings Gillis has attended this month, he's heard the same theme about the Air Force's proposed realignments: They just don't make sense.

Both BRAC commissioners and those testifying at the hearings have raised questions.

"Basically, it would appear the Air Force picked which bases it

wanted to save, than backed into the data (to justify it)," Gillis said.

In Dallas, Texas officials Wednesday said it makes no sense to re-create an Air Force test range at bases out West when it already exists at a base near Fort Worth.

In Birmingham, Ala., on April 12, Gillis told the panel that moving a small electronic combat test range from Eglin, similar to the Eglin-controlled range at Fort Worth, to California and Nevada would cost far more than it would save.

GILLIS SAID the Air Force is going to have a tough time in the next two months justifying its recommendations to the commission.

The commission has criticized the Air Force's recommendations.

The commission, which is reviewing all the recommendations, will report its decision to President Clinton on the proposed closures and realignments by July 1.

PENSACOLA, FLA. NEWS JOURNAL 4-21-95

# Document Separator

# United States Senate

WASHINGTON, DC 20510-0903

May 12, 1995

Please refer to the number  
when responding 950522-7

The Honorable Alan J. Dixon  
Chairman  
Defense Base Closure and Realignment Commission  
1700 North Moore Street  
Suite 1425  
Arlington, Virginia 22209

Dear Alan:

We commend you and your fellow commissioners on the excellent work that the commission has done thus far in the base closure process. We Floridians entered the BRAC process knowing well that our military facilities are among the best and most militarily valuable in the world. Moreover, they are national assets on which our Nation depends heavily for its national security.

There remain three issues which we are deeply concerned about that the Commission will be considering in the next two months. We hope that you will carefully consider the following issues during your deliberations.

(1) Homestead ARB: Closing Homestead would be a strategic and military error. The recent strife in the Caribbean, particularly the Haiti operations, have served to enhance and highlight Homestead's strategic value. Clearly, it is in our Nation's best interest to have defense resources poised and ready in South Florida, considering the frequently unstable conditions that exist in the Caribbean region, including a hostile Cuba. Losing this valuable resource would undermine America's ability to react quickly and effectively to contingencies in Latin America. We urge you and your fellow commissioners to give careful consideration to Homestead's true military and strategic value, for we are confident you will recognize its important future and function in our national defense and foreign policy strategy.

(2) Eglin AFB: We remain concerned that the Air Force's recommendations to the Department of Defense with respect to weapons test and evaluation (T/E) lacks sufficient justification to warrant implementation. The 1995 National Defense Authorization Act directed the Defense Department to develop a master plan for T/E before consolidating or moving electronic warfare equipment. Moving Air Force T/E equipment in accordance with the Air Force's recommendations would undermine the intent of Congress to ensure that a comprehensive and cost-effective

weapons T/E plan is in place before consolidating or moving EC equipment and operations. Eglin AFB is a proven, cost-effective and efficient T/E center -- it is ideally suited for the mission of weapons T/E. Moving the simulators out of Eglin will seriously degrade the Air Force's capability to perform vital T/E functions. Therefore, we urge you and the members of your Commission to reject the Air Force's recommendations and allow the Defense Department to develop its comprehensive master plan.

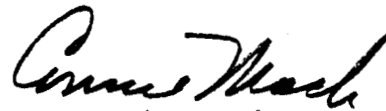
(3) Orlando Navy Nuclear Power Propulsion Training Center: The 1993 BRAC decision to relocate the training center to New London, Connecticut was projected to produce annual savings of, according to the 1993 Commission, approximately \$75.8 million after a one time cost of \$374 million. However, in this BRAC round, the Defense Department recommends a redirect of the training center to Charleston, South Carolina. We ask you and your fellow commissioners to carefully analyze the cost effectiveness of moving the training center from Orlando to Charleston. Should the costs associated with its relocation to, and its operation at, Charleston exceed the costs of keeping the training center in Orlando, we urge the Commission to redirect the 1993 decision to keep it at its present site.

We thank you for your superb leadership, fair judgement and dedicated service to America. We look forward to discussing this matter with you in the near future, and hope that you will contact us if we can assist you in any way.

Sincerely,



Bob Graham  
United States Senator



Connie Mack  
United States Senator

# Document Separator



# Congress of the United States

Washington, DC 20515

June 15, 1995

Chairman Alan Dixon  
Defense Base Realignment and Closure Commission  
1700 North Moore Street, Ste. 1425  
Arlington, VA 22209

Please refer to this number  
when responding 950620-51

Dear Mr. Chairman:

It is important that the BRAC Commission recognize the misinformation campaign being waged by those effected by the Air Force's decision to consolidate Electronic Warfare (EW) test capabilities at the Air Force Flight Test Center (AFFTC) and the Nellis Range Complex. Allegations of inadequate study, increased cost and destruction of the Electronic Warfare Test Process are inaccurate.

The Air Force, in concert with other services, has been studying EW test capability consolidation for almost ten years. Every comprehensive study that included the full EW test capabilities concluded that the best open air test capabilities, and therefore the best place to consolidate capabilities is within the Nellis Range Complex. Reliance, Role and Missions, AFMC's EW Consolidation and the tri-service Test and Evaluation Board of Directors' studies all concluded that the premier open air EW test capabilities were on the Nellis Range Complex. In the past, concerns about test capacity on the Nellis Range and political pressures precluded consolidation. Changes in force structure and strength no longer make capacity a major concern. The BRAC process has the potential to overcome political issues.

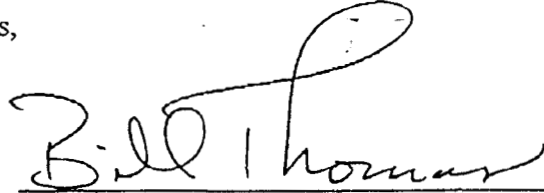
Consolidation of EW Ground test capabilities has been studied with equal fidelity. The Air Force's proposed consolidation is proven to be a cost effective way of preserving, not destroying, Hardware-in-the-Loop (HITL) elements of the EW Test process. Contractor-operated HITL facilities at AFEWES, Ft. Worth, TX and REDCAP, Buffalo, NY are antiquated, expensive to operate and support only a fraction of the EW system acquisition and upgrade programs. Electronic linking is touted as an alternative to physical consolidation. Although linking is conceptually attractive, it does not address the high cost of maintaining duplicative or marginal capabilities. Moving AFEWES and REDCAP to the AFFTC will bring together all EW Test process capability and expertise under one organization. Consolidation will eliminate the parochial "not invented here" attitude that often causes one test organization to discount another capability. It will also eliminate movement of EW systems around the country as they progress through the test process. Consolidation will greatly improve the ability to correlate data between steps of the EW test process. It will be synergistic with Navy operations at the China Lake Echo Range.

Contrary to much of the information appearing in the media, EW test capability consolidation to the AFFTC and the Nellis Range Complex is a cost effective solution to budget driven downsizing that will increase utilization of the test process and improve the quality of EW systems. It is not in the best interest of the Air Force, the DOD, or the American taxpayer to reject the DOD BRAC recommendations on EW consolidation.

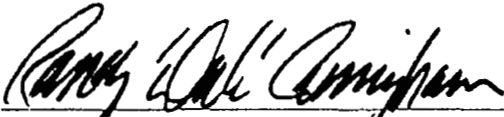
Best regards,



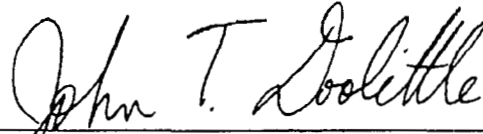
HOWARD P. "BUCK" MCKEON, MC



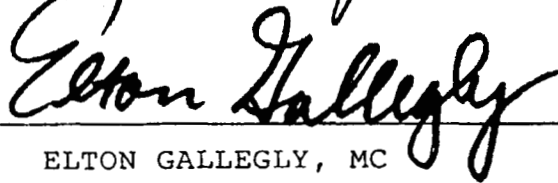
BILL THOMAS, MC



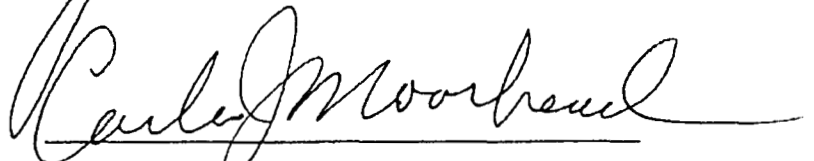
RANDY "DUKE" CUNNINGHAM, MC



JOHN DOOLITTLE, MC



ELTON GALLEGLY, MC



CARLOS MOORHEAD, MC

# Document Separator

# United States Senate

WASHINGTON, DC 20510

June 20, 1995

950620-54

The Honorable Alan Dixon  
Chairman  
Defense Base Closure and Realignment Commission  
1700 North Moore Street, Suite 1425  
Arlington, VA 22209

Dear Mr. Chairman:

We are writing to call your attention to a clear flaw in the Air Force recommendations for realigning electronic combat test facilities.

Electronic combat systems require extensive testing and refinement to produce the decisive victory and low loss of life enjoyed by Coalition Forces during Operation Desert Storm. This testing is dependent upon highly specialized test and evaluation facilities such as the Air Force Electronic Warfare Evaluation Simulator (AFEWES) in Fort Worth, Texas. Together with complementary facilities in Eglin AFB, Florida and Buffalo, New York, AFEWES has helped save countless lives and military equipment of inestimable value.

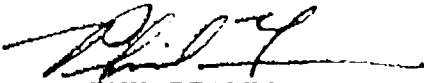
The increasing cost of combat aircraft and the proliferation of modern air defense systems to Third World nations makes it vital that our forces have electronic combat systems capable of protecting our aircraft from hostile forces. Unfortunately, the very test facilities that have helped assure that protection in the past have now been recommended for realignment by the Air Force. The Air Force maintains that relocating AFEWES (as well as the Eglin AFB and Buffalo facilities) will reduce cost while preserving capabilities, yet we believe a more realistic assessment would indicate that relocating these facilities will result in less test capability at increased cost.

The Air Force recommendations also violate the intent of Congress, which for several years has tried to improve DoD management of electronic combat test facilities. The 1995 Defense Authorization Act and 1995 Senate Appropriations Defense subcommittee report restrict DoD from realigning electronic combat test facilities until the Defense Department submits to Congress an electronic combat master plan and a hardware-in-the-loop data linking report. Despite the fact that neither of these Congressional requirements have been satisfied, the Air Force has opted to recommend the realignment of important elements of its electronic combat test and evaluation facilities.

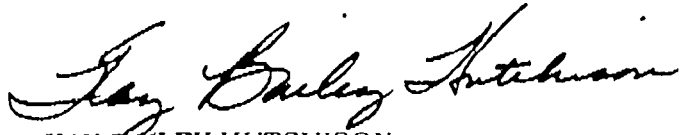
Letter to Chairman Dixon  
June 20, 1995  
Page 2

We believe the Air Force recommendations to the Defense Base Closure and Realignment Commission are not in the best interest of either our military forces or the U.S. taxpayer. We urge you to reject the Air Force AFEWES realignment proposal.

Yours respectfully,



PHIL GRAMM  
United States Senator



KAY BAILEY HUTCHISON  
United States Senator



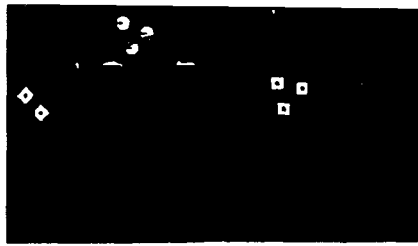
JOE BARTON  
Member of Congress



PETE GEREN  
Member of Congress

# Document Separator





# EC MONITOR

## DOD BRACC Recommendations Target EC Testing

The US Department of Defense's (DOD's) March 2 recommendations to the current Base Realignment and Closure Committee (BRACC) includes plans to move key elements of the Air Force's current electronic combat developmental test and evaluation (ECDT&E) capability to new locations at Nellis AFB, NV, and Edwards AFB, CA. The plan has contributed to a contentious final round of BRACC hearings.

The DOD recommendations propose to relocate 8 threat simulators and 52 government positions from the Electromagnetic Threat Environment (EMTE) range at Eglin AFB, FL, to the Nellis Range Complex. Currently Nellis serves as an electronic combat training range. According to the DOD, the estimated cost of this move is \$2.2 million.

The DOD also recommended moving the Real-Time Digitally Controlled Analyzer Processor (REDCAP) activi-

ty at Buffalo, NY, and the Air Force Electronic Warfare Environment Simulator (AFEWES) at Ft. Worth, TX, to the Air Force Flight Test Center at Edwards AFB. The DOD estimates the cost of moving AFEWES at \$5.8 million and the cost of moving REDCAP at \$1.7 million.

Criticism of the recommendations has been swift and vociferous. Skeptics argue that while the recommendations appear to suggest a coherent and inexpensive plan to consolidate Air Force open-air EC testing at Nellis and hardware-in-the-loop (HITL) testing at Edwards, the plans are inherently flawed for several reasons — and represent a walk to the executioner's block for EC testing.

First, critics say that while the concept of moving resources from Eglin to Nellis does not in itself threaten Air Force ECDT&E, the Air Force cannot possibly

move and then rebuild the EMTE capabilities at Nellis for the \$2.2 million figure submitted to the BRACC.

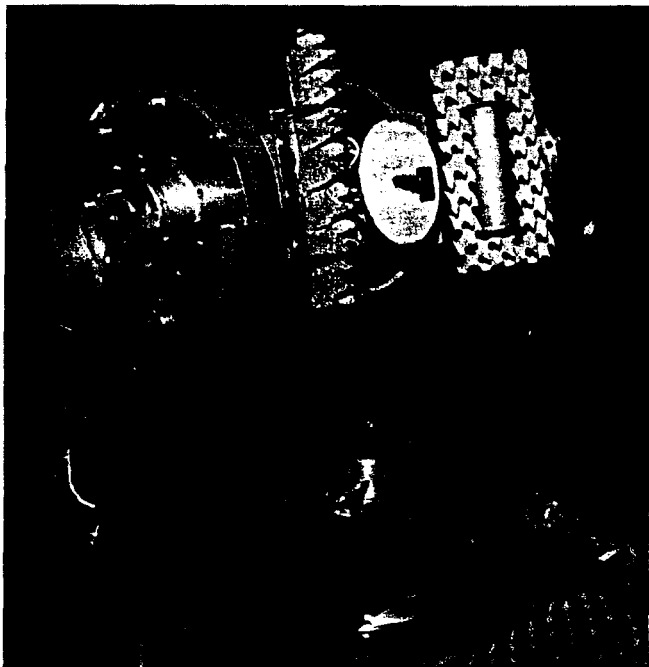
JED spoke with MG Richard Gillis, USAF (ret.), who has argued to the BRACC that the EMTE should remain at Eglin for several reasons. He has submitted itemized cost data to the BRACC indicating that the true cost of moving the EMTE equipment to Nellis and building the proper command and control facilities for the equipment is actually \$11 million. He argues that it is less expensive

to maintain the current capabilities of Eglin, where the command and control capabilities already exist.

Previous investigations of DOD ECDT&E consolidation appear to support Gillis's contentions. In 1994, the Board of Directors (vice chiefs for all the services) studied the issue of consolidating all DOD ECDT&E and found that the most capable range in the DOD was the EMTE at Eglin. Following that study, the Test and Evaluation Joint Cross Services Group, which recently studied the DOD ECDT&E consolidation issue for the BRACC, reached the same conclusion. This has led many to question why these findings were not part of the March 2 DOD recommendations, and also why the Air Force would want to dismantle what the DOD had twice identified as its most capable EC and munitions test range.

The cost to move the AFEWES and REDCAP resources also appears to be in doubt. Sources close to the two facilities, citing itemized estimates, contend that it would cost \$66.7 million to move AFEWES, rather than the \$5.8 million estimated by the DOD BRACC recommendations, and at least \$13.8 million to move REDCAP — not \$1.7 million. The sources explained that the Air Force estimates would only hold true if there were no plans to put the HITL equipment back into service once it was moved out west.

Critics contend that the reason for the discrepancies is that the Air Force did not request specific cost estimates until after the DOD recommendations had been submitted. According to a source familiar with the program, AFEWES contractor Lockheed-Ft. Worth Co. (Ft. Worth, TX) was not contacted by Air Force officials to determine the cost of moving AFEWES until March 22, three weeks after the DOD submitted its BRACC recommendations. Similarly, CALSPAN Corp. (Buffalo, NY), contractor for



Critics fear that by moving equipment from locations such as the EMTE at Eglin AFB, the DOD will cripple the EC Test Process. (USAF photo)

The

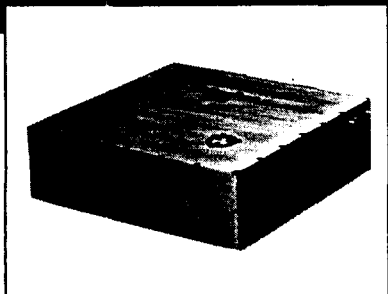
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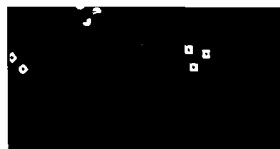


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FOR MORE INFORMATION CIRCLE 28 ON READER SERVICE CARD



REDCAP, was not asked to provide a similar cost estimate until March 21, according to industry sources.

Furthermore, congressional sources indicate that the Air Force has not identified the cost data that it used to provide the estimates for the EMTE, AFEWES and REDCAP DOD recommendations. An April Government Accounting Office (GAO) report on the DOD BRACC recommendations reached a similar conclusion about many Air Force cost estimates.

Congressional sources suspicious of Air Force intentions also indicated that under the current BRACC system, military value and operational cost savings are the major criteria by which the DOD recommendations are judged. They further stated that because of the high priority placed on cost savings over a given period of time, it is advantageous for the Air Force to underestimate the cost of the moves if it wants to ensure that the BRACC will accept the recommendations. In essence, not only are the up-front costs of a \$5.8 million move cheaper than a \$66.7 million move, but the payback will also occur significantly sooner.

However, the sources went on to say, if the Air Force underestimates the relocation costs too much, as has been alleged, then it will either have to "mothball" the equipment indefinitely or identify money elsewhere in its budget to put the equipment back into service. The sources added that, given the DOD funding climate, the former option seems more plausible.

What makes the "mothball" scenario even more likely, said other sources, is the lack of provision for moving enough of the experienced personnel who run the equipment. Concerning the EMTE, the DOD recommendation calls for the transfer of 52 government positions, mostly from the 46th Test Wing at Eglin — the people responsible for running the EMTE equipment. The sources argued that while the positions are being relocated to Nellis, it was likely that many of the technicians currently filling those positions would find other assignments at Eglin, since they are given that option. The sources therefore predicted that most of the positions will go to Nellis "empty." This brings into question where the Air Force plans to find the skilled person-

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## Meanwhile, the Navy Makes Its Own Bid for USAF Test Resources

While the DOD plan to consolidate USAF test resources has come under fire from the EC&E community, the Navy has made its own pitch to acquire the Eglin, AFEWES and REDCAP assets.

The alternative Navy proposal to the BRACC, made a month after the DOD had submitted its recommendations, suggests moving equipment from the Eglin EMTE range to the Navy's China Lake, CA, facility. REDCAP and AFEWES would be placed under a Navy contract managed by the Naval Air Warfare Center at Patuxent River, MD.

While details of the plan were sketchy at press time, sources indicated that the Navy proposed to move most infrared, EC and munitions testing from Eglin to its facilities at China Lake and Pt. Mugu in California. This proposal also included placing AFEWES and REDCAP under Navy management, since they are

also used by the Naval Air Test Center at Patuxent River.

A source of Navy concern appears to be the potential loss of AFEWES and REDCAP capabilities, which it also relies on for hardware-in-the-loop testing. The FY95 Defense Appropriations Conference Report provides \$3.5 million for a real-time data link between REDCAP and the Air Combat Environment Test and Evaluation Facility (ACETEF) at NAS Patuxent River. Sources indicate that the Navy is also considering a similar link between ACETEF and AFEWES.

Consequently, the BRACC has requested that the Air Force Development Test Center at Eglin readdress the possibility of joint EC and munitions testing, especially in regard to the 1994 Board of Directors study and the Test and Evaluation Joint Cross Services Group findings. — J. Knowles ■

nel necessary to operate the equipment, said the critics, who asserted that only Eglin currently has the expertise needed to run the EMTE.

With regard to REDCAP and AFEWES, the DOD recommendations make no provision to move any contractor jobs currently at these sites to Edwards, since the BRACC concerns itself only with government positions. Operation of both sites relies almost exclusively on a contractor work force, yet industry sources said the Air Force has not presented any plan outside of the BRACC recommendations to move the workforce. This includes approximately 50 CALSPAN personnel who directly maintain and operate REDCAP and 100 Lockheed-Ft. Worth personnel who perform the same functions for AFEWES. Sources indicated that the expertise required to operate the equipment does not exist anywhere else.

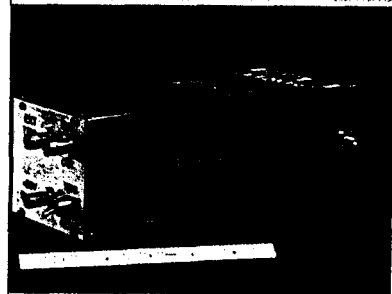
Finally, critics contend that if the DOD recommendations are approved by the BRACC and President Clinton, the plan would put Congress in a "Catch 22." Specifically, a FY95 Senate Appropriations Committee Report has

directed the Air Force to study electronic networking solutions prior to consolidating any HITL simulation facilities. The reason for the mandate is to explore the relatively inexpensive possibility of electronically linking REDCAP and AFEWES to Edwards rather than moving the sites. Similarly, Congress directed the DOD to submit an EC master plan for congressional approval before moving any simulation equipment out of Eglin. However, the final drafts of these studies are not due to be presented until after Congress is scheduled to vote on the BRACC recommendations.

The potential conflict between the BRACC and congressional mandates is a subject of debate. Air Force sources cited an unnamed congressional staffer, who assured the service that the mandates would still have to be met even if Congress passed the BRACC '95 legislation.

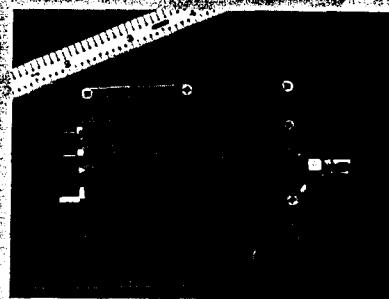
However, according to knowledgeable congressional sources contacted by JED, if the BRACC legislation were passed with the DOD recommendations, the legislation would take precedence over the mandates, since

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the BRACC is an actual bill rather than a committee mandate. The sources also added that it was extremely unlikely that the conflict would cause Congress to reject the BRACC '95 legislation, which involves approximately 140 other military installations besides the EC test facilities.

While the events seem confusing, the source of concern for many is that by allegedly failing to submit accurate cost data to cover the relocation of the equipment and failing to ensure that the specially trained personnel who currently operate the equipment will move with the EMTE, AFEWES and REDCAP resources, the Air Force Materiel Command and Air Force Test and Evaluation Directorate have not properly ensured that the equipment will ever be placed back into service once moved. Critics condemned what they saw as the negative effect the moves will have on the Air Force EC Test Process.

Skeptics suggested two reasons why the future of Air Force EC DT&E is in its current situation. At best, they say, the Air Force decided to implement a consolidation of EC DT&E equipment in a particularly careless manner. At worst, they suggest, the March 2 DOD recommendations were a deliberate effort by certain high-ranking elements in the Air Force acquisition community to weaken, if not kill, key elements of the service's EC Test Process in

hopes of lessening the cost of testing systems. Several sources pointed an accusing finger particularly at the F-22 System Program Office. The F-22 SPO did not respond to *JED* queries regarding these allegations.

However, retired USAF Lt Gen Howard Leaf, director of Air Force test and evaluation, did agree to address some of these concerns. "The Air Force is participating in the Base Realignment and Closure (BRAC) process and is responding to consolidation recommendations forwarded to the Office of the Secretary of Defense," said Leaf in a written response to *JED* queries. "Equipment and manpower positions that would be located under the BRAC recommendations and their receiving locations are being refined during site visits."

However, Leaf asserted that since "the majority of all Air Force developmental test and evaluation and a large portion of its operational test and evaluation are currently conducted at Edwards AFB and the Nellis Range Complex, command and control facilities sufficient for test and evaluation exist." Further, Leaf said, "Hiring of additional personnel and appropriate training will be accomplished if required."

The DOD BRAC proposals do not violate the intentions of Congress, Leaf said. "The Air Force has not moved any electronic warfare simulation

equipment, and thus has not violated congressional direction."

In conclusion, Leaf said, "The Air Force remains strongly committed to the electronic warfare test process and our ability to implement it. Costs associated with reactivating needed test and evaluation capabilities realigned by the BRAC process are borne by the BRAC; these funds are set aside for this purpose only."

At press time, the executive board of the BRACC was scheduled to meet with GAO and DOD officials to specifically address test and evaluation issues. It remained unclear whether the issues raised by critics of the DOD recommendations for EMTE, AFEWES and REDCAP facilities would be heard at that meeting. However, the GAO report already cited indicated that REDCAP and AFEWES facilities did not meet the minimum personnel requirements of facilities to be considered by the BRACC. — *J. Knowles* ■

## See the Big Picture On-Line

For more in-depth coverage of the issues raised in this article, see this month's *JED* On-Line at

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## Cutting Room Floor

### DOD BRACC Targets EC Testing

*Editor's note: This article is an expanded version of a story which appears in the May "EC Monitor."*

The US Department of Defense's (DOD's) March 2 recommendations to the current Base Realignment and Closure Committee (BRACC) includes plans to move key elements of the Air Force's current electronic combat developmental test and evaluation (ECDT&E) capability to new locations at Nellis AFB, NV, and Edwards AFB, CA. The plan has contributed to a contentious final round of the BRACC hearings.

The DOD recommendations propose to relocate 8 threat simulators and 52 government jobs from the Electromagnetic Threat Environment (EMTE) range at Eglin AFB, FL, to the Nellis Range Complex. Currently Nellis serves as an electronic combat training range. The estimated cost of this move is \$2.2 million.

The DOD recommendation also includes moving the Real-Time Digitally Controlled Analyzer Processor (REDCAP) activity at Buffalo, NY, and the Air Force Electronic Warfare Environment Simulator (AFEWES) at Ft. Worth, TX, to the Air Force Flight Test Center at Edwards AFB. The DOD estimates the cost of moving AFEWES at \$5.8 million and the cost of moving REDCAP at \$1.7 million.

Criticism of the recommendations has been swift and vociferous. Skeptics argue that while the recommendations appear to suggest a coherent and inexpensive plan to consolidate Air Force open-air EC testing at Nellis and hardware-in-the-loop (HITL) testing at Edwards, they are inherently flawed for several reasons -- and represent a walk to the executioner's block for EC testing.

To explain what capabilities this plan proposes to move, it is important to understand what functions this equipment provides. In the late 1980s, the Air Force came under fire for a number of troubled electronic combat (EC) procurement programs, most notably the ALQ-161A for the B-1B bomber. In response to such procurement problems, the DOD launched the EC Test Process, a plan to ensure that all DOD Systems Program Offices test their EC systems rigorously throughout their development. Congress endorsed the EC Test Process in the FY94 National Defense Authorization Act, thereby requiring any EC system under development to meet an "appropriate, rigorous and structured test and evaluation regime" before receiving authorization to proceed to the low-rate initial production stage. The language went on to list the types of testing facilities, which included computer simulation and modeling facilities; measurement facilities; system integration laboratories; simulated threat HITL test facilities, namely REDCAP and AFEWES, installed system test facilities; and open-air ranges such as the Air Force's EMTE.

First, critics say that while the concept of moving resources from Eglin to Nellis does not in itself threaten Air Force ECDT&E, the Air Force cannot possibly move and then rebuild the EMTE capabilities at Nellis for the \$2.2 million figure submitted to the BRACC. They argue that \$2.2 million would only cover the actual move itself and would make no provisions to add the extensive command and control facilities the critics charge Nellis would require to upgrade the range from a training facility to full ECDT&E capability.

JED spoke with MG Richard Gillis, USAF (ret.), who has argued to the BRACC that the EMTE should remain at Eglin for several reasons. He has submitted itemized cost data to the BRACC indicating that the true cost of moving

the EMTE equipment to Nellis and building the proper facilities for the equipment is actually \$11 million. He argues that it is less expensive to maintain the current capabilities of Eglin, where the EMTE command and control facilities already exist.

Previous investigations of DOD EC DT&E consolidation appear to support Gillis's contentions. In 1994, the Board of Directors (vice-chiefs for all the services) studied the issue of consolidating all DOD EC DT&E. According to the study, they found that the most capable range in the DOD was the EMTE at Eglin. It also concluded that the most cost-effective DOD plan for joint EC and munitions test consolidation would be to relocate the Navy's China Lake and Pt. Mugu, CA, facilities to Eglin. Following that study, the Test and Evaluation Joint Cross Services Group, which recently studied the DOD EC DT&E consolidation issue for the BRACC, reached the same conclusion. This has led many to question why these findings were not part of the current DOD recommendations, and also why the Air Force would want to dismantle the EMTE range, which the DOD twice identified as its most capable EC and munitions test range.

The cost to move the AFEWES and REDCAP resources also appears to be in doubt. Sources close to the two facilities, citing itemized estimates, contend that it would cost \$66.7 million to move AFEWES, rather than the \$5.8 million estimated by the DOD BRACC recommendations, and at least \$13.8 million to move REDCAP -- not \$1.7 million. The sources explained that, from a cost point of view, the Air Force estimates would only hold true if there were no plans to put the HITL equipment back into service once it was moved out west.

One reason for the discrepancies is that the Air Force allegedly did not request itemized estimates for moving the equipment until after the DOD recommendations were made. According to a source familiar with the program, AFEWES contractor Lockheed-Ft. Worth Co. (Ft. Worth, TX), was not contacted by Air Force officials to determine the specific costs of moving AFEWES until March 22, three weeks after the DOD submitted its BRACC recommendations. Similarly, CALSPAN Corp. (Buffalo, NY), contractor for REDCAP, was not asked to provide a similar cost estimate until March 21, according to industry sources.

Furthermore, congressional sources indicate that the Air Force has not identified the cost data that it used to provide the estimates for the EMTE, AFEWES and REDCAP DOD recommendations. They claim that if the Air Force cost data were available, they should have been provided to the BRACC information libraries in both the House and the Senate. They indicate that no breakdown of the EMTE, REDCAP and AFEWES cost estimates exists at those sites. An April Government Accounting Office report specifically concerned with the DOD recommendations to the BRACC finds a similar conclusion regarding many Air Force estimates.

Congressional sources suspicious of Air Force intentions also indicated that under the current BRACC system, military value and operational cost savings are the major criteria by which the DOD recommendations are judged. They further stated that because of the high priority placed on cost savings over a given period of time, it is advantageous for the Air Force to underestimate the cost of the moves if it wants to ensure that the BRACC will accept the recommendations. In essence, not only are the up-front costs of a \$5.8 million move cheaper than a \$66.7 million move, but the payback will also occur significantly sooner.

However, the sources went on to say, if the Air Force underestimates the relocation costs too much, as has been alleged, then it will either have to "mothball" the equipment indefinitely or identify money elsewhere in its budget to put the equipment back into service. The sources added that given the DOD funding climate, the former option seemed more plausible.

What makes the "mothball" scenario more likely for the EMTE, REDCAP and AFEWES equipment, said other sources, is the lack of provision for moving any of the experienced personnel who run the equipment. Concerning the EMTE, the DOD recommendation calls for the transfer of 52 government positions, mostly from the 46th Test Wing at Eglin -- the people responsible for running the EMTE equipment. The sources argued that while the positions are being relocated to Nellis, it was likely that many of the technicians currently filling those positions would find other assignments at Eglin, since they are given that option. The sources therefore predicted that most of the positions will go to Nellis "empty." This brings into question where the Air Force plans to find the skilled personnel necessary to operate the equipment, since many agree that within the Air Force, the current expertise needed to run the EMTE equipment resides only at Eglin.



With regard to REDCAP and AFEWES, the DOD recommendations make no provision to move any contractor jobs from REDCAP or AFEWES to Edwards, since the BRACC concerns itself only with government positions. Operation of both sites relies almost exclusively on a contractor work force. This includes approximately 50 CALSPAN personnel who directly maintain and operate REDCAP and 100 Lockheed personnel who perform the same functions for AFEWES. Critics argue that the expertise required to operate the equipment does not exist anywhere else. They also say that the Air Force has not come forward with any plan to move CALSPAN or Lockheed employees to Edwards. They say that if such a plan existed, it should have been discussed with the contractors. Currently, no such plan is known to exist.

Further clouding the issue of cost is the uncertainty surrounding the number of systems the Air Force plans to relocate. While the DOD recommendations cite 8 closed-loop simulators, Eglin sources contacted during the recent Dixie Crow Symposium provided a list of 10 systems slated to move as part of the recommendations. Meanwhile, another source has alleged that 17 systems have been identified following a site visit designed to determine which assets are to be removed. The same source provided *JED* with an internal Air Force document, dated March 28, from the 46th EC Test Squadron at Eglin. The document purports to list the capabilities that are to be removed from Eglin. These include:

- testing of integrated EC systems such as F-15 TEWS and the US Army's Advanced Threat Radar Jammer for the Apache
- full radar-warning-receiver (RWR) testing for programs which require high threat density, such as the F-16's ALR-56M and the Navy's ALR-67(V)3&4 Advanced Radar Warning Receiver
- full RF precision direction finding development such as the High-Speed Antiradiation Missile (HARM) Targeting System and E-3 AWACS electronic support measures
- EC jamming effectiveness testing for programs such as the EF-111 System Improvement Program
- electronic countermeasures (ECM) technique development for such programs as the ALQ-131, 137, 184 pod optimization and the B-52 ALQ-172 defensive avionics suite
- HITL ECM technique development for programs such as the exploitation of SA-8 surface-to-air-missiles and AC-130 Gunship ECM development
- ECM tactics development for Combat Talon II and MH-53J Pave Low III electronic warfare suites
- countermeasures effectiveness testing for the Navy and Air Force aircraft as well as dual infrared/RF decoys
- quick reaction jammer and RWR software reprogramming such as Coronet Quick I and II
- contingency deployment ECM system verification for aircraft such as AC-130 A/H and Combat Talon I and II
- radar cross section/chaff bloom measurements for programs such as Air National Guard F-16, C-130 radar cross section and defensive avionics assessment program.

The document goes on to say, "We are basically out of any business that requires more than one emitter of a particular type. This includes all closed-loop ECM testing, especially effectiveness testing and ECM technique evaluation measuring miss distances generated. This is most of the Electronic Combat testing being accomplished today." Critics are concerned that these Air Force EC DT&E testing capabilities will be lost if the DOD recommendations are approved.

Finally, critics contend that if the DOD recommendations are approved by the BRACC and President Clinton, the plan would put Congress in a "Catch 22." Specifically, a FY95 Senate Appropriations Committee Report directs the Air Force to study electronic networking solutions prior to consolidating any HITL simulation facilities. The reason for the mandate is to explore the relatively inexpensive possibility of electronically linking REDCAP and AFEWES to Edwards rather than moving the sites. Similarly, Congress directed the DOD to submit an EC master plan for congressional approval before moving any simulation equipment out of Eglin. However, the final drafts of these studies are not due to be presented until after Congress is scheduled to vote on the BRACC recommendations.

Following the DOD recommendations to the BRACC, the committee has until May 17 to hear any arguments concerning the DOD recommendation before it must present its final draft to President Clinton and Congress on July 1. The President must then accept or reject the plan in its entirety. The same is true for passage in Congress. If Congress is presented with a BRACC plan which includes the current recommendations, then it must decide whether to reject the entire BRACC '95 proposal or allow the recommendations to stand in defiance of its own mandates.

The potential conflict between the BRACC and congressional mandates is a subject of debate. Air Force sources cite

an unnamed congressional staffer, who assured the service that the mandates would still have to be met even if Congress passed the BRACC '95 legislation.

However, according to knowledgeable congressional sources contacted by *JED*, if Congress is presented with the current EMTE, AFEWES and REDCAP recommendations and passes the BRACC '95 legislation, the legislation would take precedence over the mandates, since the BRACC is an actual bill rather than a committee mandate. The sources also add that it was extremely unlikely that the conflict would cause Congress to reject the BRACC '95 legislation, which involves approximately 140 other military installations besides the EC test facilities.

With the congressional mandates in place, the inclusion of the EMTE, AFEWES and REDCAP in the DOD recommendation took many by surprise. Sources indicated that in light of the Test and Evaluation Joint Cross Service Group findings the DOD had only been giving serious consideration to consolidating range equipment between Eglin and the Navy's China Lake facility, not Nellis. However, sources allege that senior elements of the Air Force Materiel Command and the Test and Evaluation Directorate implemented their EMTE, AFEWES and REDCAP recommendations at the "11th hour." Such timing prevented any debate within the EC DT&E community concerning the wisdom of the moves.

For REDCAP and AFEWES, the April Government Accounting Office BRACC report already cited indicated that the two sites did not meet the minimum personnel requirements of the DOD base re-alignment guidelines and should not have been included in the DOD recommendations.

While the events seem confusing, the source of concern for many is that by allegedly failing to submit accurate cost data in the DOD recommendations and failing to ensure that the EMTE, AFEWES and REDCAP personnel will move with the equipment, the Air Force Materiel Command and the Air Force Test and Evaluation Directorate have not properly ensured that the EMTE, AFEWES and REDCAP equipment will ever be placed back into service once moved. Consequently, critics also condemn the negative effect the moves will have on the Air Force EC Test Process.

Skeptics suggest two reasons why the future of Air Force EC DT&E is in its current situation. At best, they say, the Air Force decided to implement a consolidation of EC DT&E equipment in a particularly careless manner. They allege that if the plan was to consolidate, it was underfunded, improperly staffed and, since the moves were added to the DOD recommendations at the 11th hour, the chance to debate the plan was never presented to the DOD EC DT&E community.

As an aside, sources added that, with only the F-22 coming down the road as a new program, the Air Force Flight Test Center at Edwards AFB is running out of missions for its Benefield Anechoic Facility. They added that moving EC HITL testing to Edwards will ensure the need for the facility, temporarily. However they allege that the Air Force plan does not account for who will run the equipment or how it will find the money to re-establish the full capabilities of REDCAP and AFEWES.

At worst, they suggest the March 2 DOD recommendations were a deliberate effort by certain high-ranking elements of the Air Force to weaken, if not kill, key elements of its EC Test Process.

Expounding on this second scenario, critics suggest that amid the shrinking defense budget, the battle between the acquisition and the testing elements of the Air Force has finally surfaced, with the acquisition elements in control. They suggested that the acquisitions camp finds the potentially costly price tag of testing (and retesting) too expensive for their constrained program budgets. Thus, System Program Offices (SPOs), especially the F-22, have sought to bypass currently mandated EC testing procedures in favor of their own programs in an effort to cut costs.

Last year, according to congressional sources, Congress requested that the F-22 System Program Office clearly define in an F-22 Electronic Combat Effectiveness Testing Report, what testing it planned to do at REDCAP and AFEWES. This plan, due March 1, had not been delivered at press time. The sources further allege that without REDCAP and AFEWES available to test the F-22 Integrated Electronic Warfare System (INEWS), Congress would be hard pressed to find an Air Force facility that could properly test the INEWS against simulated integrated air defense systems and missile threats -- leaving the SPO to find a way to test the system itself. The F-22 SPO did not respond to *JED* queries regarding these allegations.

Critics believe that if REDCAP and AFEWES are relocated to Edwards -- and are mothballed or lose capabilities due to the reasons cited above -- developmental EC systems testing would likely emphasize more expensive open-air testing, since that is the current focus of the Flight Test Center at Edwards. More importantly, critics argue that the costs associated with hardware fixes are extremely expensive once testing reaches the open air phase. They cite current Air Force efforts to fix ALQ-161A as an example.

However, retired USAF Lt Gen Howard Leaf, director of Air Force test and evaluation, did agree to address some of these allegations. "The Air Force is participating in the Base Realignment and Closure (BRAC) process and is responding to consolidation recommendations forwarded to the Office of the Secretary of Defense (OSD)," said Leaf in a written response to *JED* queries. "Equipment and manpower positions that would be located under the BRAC recommendations and their receiving locations are being refined during site visits."

However, Leaf asserted that since "the majority of all Air Force developmental test and evaluation and a large portion of its operational test and evaluation are currently conducted at Edwards AFB and Nellis Range Complex, command and control facilities sufficient for test and evaluation exist." Further, Leaf said, "Hiring of additional personnel and appropriate training will be accomplished if required."

The DOD recommendations do not violate the intentions of Congress, Leaf said. "The Air Force has not moved any electronic warfare simulation equipment, and thus has not violated congressional direction."

In conclusion, Leaf said, "The Air Force remains strongly committed to the electronic warfare test process and our ability to implement it. Costs associated with reactivating needed test and evaluation capabilities realigned by the BRAC process are borne by the BRAC; these funds are set aside for this purpose only."

At press time, the executive board of the BRACC was scheduled to meet with GAO and DOD officials to specifically address test and evaluation issues. It remained unclear whether the issues raised by critics of the DOD recommendations for EMTE, AFEWES and REDCAP facilities would be heard at that meeting. -- *J. Knowles*

### **ATRJ Gets New Manager**

MAJ Glenn J. Benecke has been named the new assistant project manager for the US Army's Advanced Threat Radar Jammer (ATRJ). Major Benecke replaces Cheryl Meier at the Army's Aviation Electronic Combat Office in St. Louis. Meier is leaving for a position at the Monsanto Corp.

Major Benecke previously served as an assistant professor of physics and research officer at the US Military Academy, West Point, NY. He commanded B Company, 1-13th Aviation Regiment at Ft. Rucker, AL. He also was an OH-58D and night vision goggle instructor pilot at Ft. Rucker. He also has served in Germany.

Major Benecke is a graduate of West Point and entered the Army as a second lieutenant in 1980. He will report to COL Roy Oler, project manager for aviation electronic combat. -- *S. Hardy*

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### **Last-Minute Switches on IEWCSS Teams**

EW companies vying for a piece of the US Army's Intelligence and EW Common Sensor System (IEWCSS) program did some last-minute pushing and shoving as the May 14 deadline for bids approached. As teams finally fell into place, the list of companies which decided not to bid proved almost as interesting as the roster of confirmed players.

Now entering its production phase, the IEWCSS is designed to provide a common suite of direction-finding and jamming equipment for US Army light and heavy ground combatants, as well as an airborne package carried aboard an EH-60 helicopter. The suite includes the TACJAM-A ESM and jamming system and the CHALS-X target locator, both of which are up for bid as part of the production program. Also on the block is a contract to integrate this equipment, as well as an ELINT unit from Condor Systems, into the three target platforms.

The surprising head of the list of IEWCSS spectators is Electrospace Systems Inc. Electrospace is the incumbent on

the program. Company officials, citing corporate policy, declined to comment. Other industry sources also offered no explanations for Electrospace's decision not to offer a bid.

Meanwhile, AEL and Lockheed Sanders, teamed in a joint venture for development of the TACJAM-A equipment, attempted to make separate deals with Electronics and Space Corp. and Loral, respectively, to pursue other portions of the program. However, AEL has dropped its outside deal for fear of conflict within the joint venture. Fresh off of receiving a \$24.9 million increment of a potential \$55.5 million contract (signed during the advanced development phase of the program) for six TACJAM-A ESM systems, the venture will pursue the TACJAM-A portion of the program.

Of course, some negotiations have proven more successful, and a line up of competitors has started to emerge. Two teams will pursue the integration phase of the program. One, led by Magnavox Electronic Systems Co. and including Motorola and California Microwave, has added a new partner. AAI Corp. has joined the team to handle the training aspects of the deal. This group will oppose a team of Loral and Lockheed Sanders.

For the TACJAM-A portion, the Sanders/AEL joint venture will see competition from Electronics and Space Corp. and potentially AlliedSignal (the latter company could not be contacted by press time). For the CHALS-X, incumbent Loral Federal Systems will face off against Electronics and Space Corp., with AlliedSignal again mentioned as a potential competitor. Loral Federal recently received an \$8.9 million modification to a previous contract for the CHALS-X.

Industry sources expect the Army to announce the winners this September - *S. Hardy*

### **B-2 Radar Test Set Pact Awarded**

Northrop Grumman Corp., prime contractor on the B-2 stealth bomber program, has awarded a \$2.8 million contract to AAI Corp. for development of the aircraft's radar test set. A separate contract for system production is expected to follow.

The system will test the B-2's position location transponders. Working with the aircraft's radar and the radar of other aircraft, enables air-to-air identification and navigations in all weather conditions - *S. Hardy*

### **Navy to Test Combat ID Solution this Summer**

The US Navy Space Command will bring a new, situational-awareness-based combat identification technology to the annual All-Service Combat Identification (ACID) exercise scheduled for August 27-September 16, 1995, at Camp Shelby, MI. Known as Situational Awareness Beacon with Reply (SABER), the UHF-based system relies on both GPS/SATCOM links and direct line-of-sight links to track the locations of friendly units, preventing fratricide through constant, accurate positional updates.

SABER is the first emerging technology confirmed for participation in the ACID exercise, although both the US Army, with its Battlefield Combat Identification System, and the Marine Corps, with its noncooperative VSX-2, are considering bringing their new systems to Camp Shelby (see this month's cover story on combat ID, p. 35). Held annually, the ACID exercise feeds new and existing combat identification systems into a small-scale battle demonstration to evaluate both technologies and methodologies. ACID itself is a specialized test group based at Eglin AFB, FL, and funded by the Pentagon's Joint Combat Identification Office (JCIDO).

While the other services have invested in direct, platform-to-platform cooperative identification systems, the Navy has approached the antifratricide problem from a different angle. According to the Naval Space Command's Commander Austin Boyd, "In the Navy, when we think fratricide, we tend to think, particularly from a shipboard point of view, of what's over the horizon - and that's different from the Army perspective of antifratricide, which is who is a kilometer to two kilometers in front of me? ... Or from an Air Force point of view, which is who is closing on me with a four to eight hundred-knot closure speed that I have to make a missile decision on in a few seconds?"

In January 1994, the Office of the Chief of Naval Operations, Space Systems Division, and the JCIDO funded the

development of SABER, which coordinates over-the-horizon, GPS-sourced information with a local, 27-MHz, UHF line-of-sight capability. Positions are displayed automatically in existing C2 systems (TAC-3, soon to be TAC-4) using the Joint Military Command Information Systems software (which is evolving into the Global Command and Control System standard). SABER beacons report unit positions once every 12 sec, the system network itself can update 100 positions every two minutes through a single 5-kHz UHF SATCOM channel.

The Navy developed SABER with shipboard applications in mind, but the cigar-box-sized unit has also provoked interest from the air and ground communities. According to Boyd, SABER recently completed a technical/operational evaluation at Little Creek Amphibious Base, VA, in which it tracked beacons attached to one P-3 aircraft, two seaborne vessels and two HMMWVs over the course of a week. For the ACID demonstration, he continued, the Navy is preparing to deploy about 30 beacons on Aegis cruisers, tanks, Bradley fighting vehicles, fighter aircraft and possibly a C-130, plus two C2 sites.

One particular "layer" of SABER that ACID will explore will be the "Don't Shoot Me" (DSM) net concept - the flip side of units' reporting position information to a central C2 center. In a DSM net, said Boyd, the C2 site (linked to a weapon system, possibly) could issue the coordinates of an impending strike, for instance, and request that any unit at that spot report back. - Z. Lum

### **Laser Warning Becomes International Priority**

The success of laser-guided smart weapons during Operation Desert Storm has sparked an interest in the development and acquisition of adequate warning systems. Judging from the array of equipment on display at the recent IDEX '95 conference in Abu Dhabi, countries around the world have not only attempted to meet their internal laser-related requirements, but appear ready to export their technologies to willing customers.

Most of the better-known laser warning systems come from NATO countries. Examples of these warners include the AVR-2 from Hughes Danbury Optical Systems of the US and the Common Opto-Electronic Laser Detection System (COLDS) from Daimler-Benz Aerospace of Germany. However, non-NATO countries have also tackled the problem of combating laser-guided weapons.

For example, Fotona of Slovenia exhibited the LIRD-1 and -1A laser irradiation detector and warner systems. The systems are designed to warn ground vehicle crews of radiation from pulsed laser rangefinders or laser illuminator/designators. The basic LIRD-1 consists of a Detector Head Unit and an Indicator Unit. The former consists of direct and indirect detection modules which provide 360° coverage. Signals picked up by the detector are passed to the Indicator Unit, which provides an audio warning and displays both the direction of the incoming radiation and the threat type.

The LIRD-1A adds automatic discharge of smoke grenades and a slightly modified Indicator Unit to the basic package. The timing of smoke grenade launching can be adjusted by the user, from 0.5 to 5 sec after initial detection. The user also may cancel smoke dispensing if the situation warrants.

According to Bozo Vukas, head of marketing and sales for the company (which recently changed its name from Iskra Electro-Optika), the LIRD 1 and -1A are particularly well suited to T-72 and T-55 tank applications. The LIRD-2M, not on display at the show, offers similar protection for surface ships.

Al Technique Corp. of Pakistan (Pvt) Ltd. also has addressed the protection of tanks built in the former Soviet Union. According to Dr. Badar Suleman, manager of R&D for the company, a US-led embargo of technology has forced Pakistan to develop an internal development capability to meet its defense needs. The Laser Threat Sensor (LTS) 1 represents one result. The system operates in the 0.8- to 1.06- $\mu$ m wavelength and provides 360° of coverage with 15° of resolution. Elevation covers -15° to 19°. The LTS 1 will distinguish between YAG laser rangefinders and target designators and can operate in conjunction with acoustic alarms, smoke generators and "other countermeasures." Pakistan's T-69 and T-59 tanks currently use the system, Dr. Suleman said.

Another country that has battled embargo, South Africa, also exhibited a home-grown laser warning system. Built by Avitronics, the LWS-200 Laser Warning System is available as a stand-alone capability or can be purchased as part of the company's Multi-Sensor Warning System. The LWS-200 can accommodate up to six sensors for 360°

detection of both direct and indirect laser emissions. The system's analyzer can discriminate among designator, beamrider or ranging laser sources for threat identification. The standard configuration covers the 0.6- to 1.8- $\mu\text{m}$  range, but extended frequency coverage is available. Sensitivity ranges from 20 W/m<sup>2</sup> at 0.9  $\mu\text{m}$  to 14 W/m<sup>2</sup> at 1.06  $\mu\text{m}$ . Ruby, GaAs, NdYAG and Raman Shifted lasers fall within the system's capabilities.

According to sources at Avitronics, the company initially developed the system for helicopters before expanding the range of applications to include ground vehicles and ships. For tanks, the company is investigating a turret-slewing capability.

Finally, the Russian Federation exhibited a laser countermeasures system, called the Shtora-1, which appeared to include a laser-warning capability. Billed as a "jamming and optical countermeasures" system, the Shtora-1 includes smoke grenades and an "optronic jammer." However, system specifications included a "range of received laser radiation" of 0.6 to 1.1  $\mu\text{m}$  and "elevation angle degree" of -5° to +25°. The system automatically dispenses smoke or activates the jammer, which operates in the 0.7- to 2.5- $\mu\text{m}$  range. Russian representatives at the display were not forthcoming with additional details. - *S. Hardy*

Return to [Home Page](#)

AFSOC

## OPERATIONAL IMPACTS

- ◆ Operational Tests for New or Upgraded EW Systems
  - Jammers
  - Threat Receivers
  - Expendables
- ◆ Tactics Development
- ◆ Operational Training

19

## FINANCIAL IMPACT (FY95 \$)

- ◆ OT&E (7 of 10 top priority tests are EC tests)
  - 5 - 6 Additional Deployments per Year
  - \$300K per Deployment
  - \$1.5 Mil - \$1.8 Mil Additional each Year
- ◆ TD&E (Ramping up new TD&E Flight)
  - Most TD&Es will be EC oriented
  - Approximately 4 Deployments per Year (est)
  - \$300+K per Deployment (est)
  - \$1.2+ Mil Additional each Year (est)
- ◆ Potential Hidden Costs
  - Acquisition program schedule slips = \$\$\$\$
  - More dedicated test/tactics manpower required

20



AWC



## Increased Costs

- Increased TDY Costs: \$1.1M/Year
- Increased Manpower: 25 Additional People
- Increased Nellis MILCON: \$1.8M
- Other Unquantified Costs:
  - Potential Increased Range Costs
  - Increased Tanker Use
  - More Aircraft Operating Hours And Cost

18 Apr - 15

### TDY Cost Assumptions:

- All USAFAWC EC tests conducted at Nellis.
- Instrumented aircraft and maintenance provided by USAFAWC for all tests.

### Manpower:

- 25 additional manpower slots for maintenance and test personnel.

# Document Separator

TANKER      \$ 1.4 M per yr.

60 sorties	x 4 hrs	x 6000	= \$ 1.4 M
(nominal # based MF16 efficiency @ Eglin)	(flight time incl. time on station)	CAF Handbook for oper. cost for KC-135 A/C	

SPECIAL OPS. (AFSOC)

Deployments OT&E	6 addtl. deployments x 300K per deployment	\$ 1.8
Tactical Dev + Eval	4 deployments per yr x 300K "	1.2
addtl manpower/ TOY costs	Training (cant do much with what's left at Eglin)	↓ 1.9

AWC

1.1

Increased TDY Cost

Not Included - Increased Manpower (25 people),  
Potential Increased Range Costs,  
Increased tanker costs, addtl  
aircraft operating hours & cost

?

6.0 M

AFSOC

## OPERATIONAL IMPACTS

- ◆ Operational Tests for New or Upgraded EW Systems
  - Jammers
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19

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AWC



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18 Apr - 15

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1.8  
1.2  

---

3.0 AFsOC testing

1.1 AWC

4.9

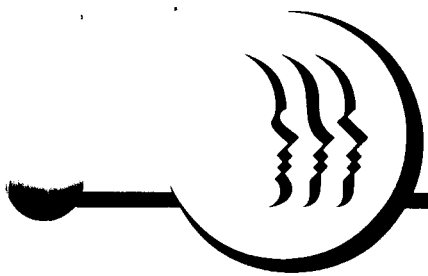
~~4.9~~  
1.9 training (cant do much AFsOC  
at Eglin)  

---

6.0

9.3 M.LCON / BOD backup at Nelby

Hegath Regency  
N S ave



Analysts Notes

FOCUS ON EXCELLENCE

(817) 777 2192 Dewey Tipton

EGLIN

added

MILCON \$ 9.6M (at Nellis 17 sims.) BOD (this was for current LT cheat simulations)

Tanker cost \$ 1.4M per year (60 sorties x 4 hrs x 6000 per hour tanker) from Edwards & wells  
+ AF handbook on oper cost for A/C KC-135  
R16 minimum sorties

TDV \$ 6 million per year (AFSOC + AWC) - Spec. ops at Nellis vs Eglin  
from Eglin F-16



AFEVIES

(8.9M one time cost)  
COBRA

One Time Cost \$ 20M

BOD says \$ 50-60 Million (100%)  
Community (contractor says) 44M (60%)  
(BOD says about 50%)

(2.1 Million  
in COBRA)

GH1 for MILCON

BOD says \$ 8M

300000  
6  
18,000,000

240  
6000  
1440000



16.1  
8.6

DOD Rec DOD Revision COMMISSION  
RECOMM

Analysts Notes

8  
16.1 M

move to ship 6.5  
milcon 9.6  
16.1



Recurring  
60 sorties YR x 4 hrs x 6000 =  
1.4 M  
X 20 YRS  
28 MILLION

tankers  
AF Openly Redeap  
Cost 6000 per hr

AFSOC + AWC

Gallies

34 systems ~~now~~  
to be moved

\$6M TDY X 20 = 120M  
(USED 88M conservative)

148M

INCREASED COSTS  
TO CONDUCT  
TRAINING AT NEILL IS  
VS EGLIN

*Adler*

# Document Separator

## ELECTRONIC COMBAT TEST FACILITIES

BRAC PROCESS IS NOT THE VEHICLE TO JUDGE  
FEASIBILITY OF CONSOLIDATION OF  
ELECTRONIC COMBAT TEST FACILITIES

DOD NEEDS TO DEVELOP AND **EXECUTE** THE  
MASTER PLAN OF INTEREST TO AUTHORIZING  
COMMITTEE

OPPORTUNITY FOR **CROSS-SERVICING**  
WILL BE LOST IF PLAN NOT DEVELOPED AND  
EXECUTED

AFEWES , REDCAP AND EGLIN HAVE WORKED  
WELL AND DISMANTLING THEM DOES NOT  
MAKE SENSE---MINIMAL REDUCTIONS IN  
EXCESS CAPACITY

EGLIN AND AFEWES REALIGNMENTS NOT COST  
EFFECTIVE WHEN CONSIDERING INCREASED  
BURDEN TO USERS TO MOVE OPERATIONS TO  
WEST

ELECTRONIC WARFARE/ELECTRONIC COMBAT  
CONSOLIDATION HAS BEEN A POLITICAL  
HOTBED FOR YEARS--EAST VS. WEST--  
SOUTHWEST TEST RANGE COMPLEX HAS BEEN  
FOCES OF THE DEBATE

**ARMY, NAVY AND AIR FORCE TOGETHER  
WITH STRONG OSD LEADERSHIP NEED TO  
WORK OUT THE MOST COST EFFECTIVE  
SOLUTION THAT MEETS CURRENT AND  
FUTURE TESTING NEEDS.**

AIR FORCE 'RAILROADING' ELECTRONIC  
COMBAT REALIGNMENTS THAT ARE NOT COST  
EFFECTIVE VIA THE BRAC PROCESS IS NOT THE  
ANSWER.

THE EGLIN AND AFEWES REALIGNMENT  
RECOMMENDATIONS NEED TO BE REJECTED.

# Document Separator

EMTE

COBRA REALIGNMENT SUMMARY (COBRA v5.08) - Page 1/2  
Data As Of 22:44 06/16/1995, Report Created 22:51 06/16/1995

Department : USAF  
Option Package : AFJ-5 (EC) Alt 1  
Scenario File : C:\COBRA95\CROSS\DBCRC\EGLIN001.CBR  
Std Fctrs File : C:\COBRA95\AF\DDO\STSURVEY\DEPOTFIN.SFF

Starting Year : 1996  
Final Year : 1998  
ROI Year : Never

NPV in 2015(\$K): 66,760  
1-Time Cost(\$K): 15,686

Net Costs (\$K)	Constant Dollars						Total	Beyond
	1996	1997	1998	1999	2000	2001		
MilCon	3,200	1,600	1,600	1,600	1,600	0	9,600	0
Person	30	-7	47	-36	-36	-36	-37	-36
Overhd	73	31	143	47	47	47	390	47
Moving	216	2,202	1,954	0	0	0	4,372	0
Missio	0	0	6,111	3,660	3,660	3,660	17,091	3,660
Other	0	1,500	0	0	0	0	1,500	0
<b>TOTAL</b>	<b>3,519</b>	<b>5,326</b>	<b>9,856</b>	<b>5,272</b>	<b>5,272</b>	<b>3,672</b>	<b>32,916</b>	<b>3,672</b>

	1996	1997	1998	1999	2000	2001	Total
<b>POSITIONS ELIMINATED</b>							
Off	0	0	0	0	0	0	0
Enl	0	0	0	0	0	0	0
Civ	0	0	0	0	0	0	0
TOT	0	0	0	0	0	0	0
<b>POSITIONS REALIGNED</b>							
Off	4	0	11	0	0	0	15
Enl	4	0	8	0	0	0	12
Stu	0	0	0	0	0	0	0
Civ	8	0	17	0	0	0	25
TOT	16	0	36	0	0	0	52

Summary:

-----  
MOVE 17 EMTE SIMULATORS AND EGLIN EC OAR TO NELLIS COMPLEX  
MOVE PERSONNEL TO EDWARDS  
CONTRACTOR SUPPORT TRANSFERS TO NELLIS COMPLEX  
MAINTAINS 12 SYSTEMS AT EGLIN AS SIGNAL SOURCE ONLY  
MOTHBALL ANY REMAINING SYSTEMS AT EGLIN

COMMISSION MODIFIED COBRA. ADDS MILCON AT NELLIS, MISC RECURRING COSTS FOR TANKERS AT NELLIS, & TDY COSTS AT EGLIN.

COBRA REALIGNMENT SUMMARY (COBRA v5.08) - Page 2/2  
 Data As Of 22:44 06/16/1995, Report Created 22:51 06/16/1995

Department : USAF  
 Option Package : AFJ-5 (EC) Alt 1  
 Scenario File : C:\COBRA95\CROSS\DBCRC\EGLIN001.CBR  
 Std Fctrs File : C:\COBRA95\AF\DDO\STSURVEY\DEPOTFIN.SFF

Costs (\$K) Constant Dollars								
	1996	1997	1998	1999	2000	2001	Total	Beyond
MilCon	3,200	1,600	1,600	1,600	1,600	0	9,600	0
Person	86	48	239	156	156	156	840	156
Overhd	73	68	180	167	167	167	823	167
Moving	228	2,202	1,984	0	0	0	4,414	0
Missio	0	0	7,522	7,806	7,806	7,806	30,940	7,806
Other	0	1,500	0	0	0	0	1,500	0
<b>TOTAL</b>	<b>3,588</b>	<b>5,418</b>	<b>11,525</b>	<b>9,729</b>	<b>9,729</b>	<b>8,129</b>	<b>48,118</b>	<b>8,129</b>

Savings (\$K) Constant Dollars								
	1996	1997	1998	1999	2000	2001	Total	Beyond
MilCon	0	0	0	0	0	0	0	0
Person	56	56	191	191	191	191	877	191
Overhd	0	37	37	120	120	120	434	120
Moving	12	0	30	0	0	0	42	0
Missio	0	0	1,411	4,146	4,146	4,146	13,849	4,146
Other	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>68</b>	<b>92</b>	<b>1,669</b>	<b>4,457</b>	<b>4,457</b>	<b>4,457</b>	<b>15,202</b>	<b>4,457</b>



INPUT DATA REPORT (COBRA v5.08)  
 Data As Of 22:44 06/16/1995, Report Created 22:51 06/16/1995

Department : USAF  
 Option Package : AFJ-5 (EC) Alt 1  
 Scenario File : C:\COBRA95\CROSS\DBCRC\EGLIN001.CBR  
 Std Fctrs File : C:\COBRA95\AF\DOD\STSURVEY\DEPOTFIN.SFF

INPUT SCREEN ONE - GENERAL SCENARIO INFORMATION

Model Year One : FY 1996

Model does Time-Phasing of Construction/Shutdown: Yes

Base Name	Strategy:
-----	-----
EDWARDS, CA	Realignment
EGLIN, FL	Realignment
NELLIS, NV	Realignment

Summary:

-----  
 MOVE 17 EMTE SIMULATORS AND EGLIN EC OAR TO NELLIS COMPLEX  
 MOVE PERSONNEL TO EDWARDS  
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 MAINTAINS 12 SYSTEMS AT EGLIN AS SIGNAL SOURCE ONLY  
 MOTHBALL ANY REMAINING SYSTEMS AT EGLIN

COMMISSION MODIFIED COBRA. ADDS MILCON AT NELLIS, MISC RECURRING COSTS FOR TANKERS AT NELLIS, & TOY COSTS AT EGLIN.

INPUT SCREEN TWO - DISTANCE TABLE

From Base:	To Base:	Distance:
-----	-----	-----
EDWARDS, CA	EGLIN, FL	2,092 mi
EGLIN, FL	NELLIS, NV	1,940 mi

INPUT SCREEN THREE - MOVEMENT TABLE

Transfers from EGLIN, FL to EDWARDS, CA

	1996	1997	1998	1999	2000	2001
	----	----	----	----	----	----
Officer Positions:	4	0	11	0	0	0
Enlisted Positions:	4	0	8	0	0	0
Civilian Positions:	8	0	17	0	0	0
Student Positions:	0	0	0	0	0	0
Missn Eqpt (tons):	0	2	0	0	0	0
Suppt Eqpt (tons):	0	0	0	0	0	0
Military Light Vehicles:	0	0	0	0	0	0
Heavy/Special Vehicles:	0	0	0	0	0	0

INPUT SCREEN FOUR - STATIC BASE INFORMATION

Name: EDWARDS, CA

Total Officer Employees:	728	RPMA Non-Payroll (\$K/Year):	47,109
Total Enlisted Employees:	3,754	Communications (\$K/Year):	19
Total Student Employees:	0	BOS Non-Payroll (\$K/Year):	49,855
Total Civilian Employees:	3,876	BOS Payroll (\$K/Year):	0
Mil Families Living On Base:	64.0%	Family Housing (\$K/Year):	9,411
Civilians Not Willing To Move:	10.0%	Area Cost Factor:	1.00
Officer Housing Units Avail:	0	CHAMPUS In-Pat (\$/Visit):	0
Enlisted Housing Units Avail:	0	CHAMPUS Out-Pat (\$/Visit):	0
Total Base Facilities(KSF):	9,196	CHAMPUS Shift to Medicare:	20.9%
Officer VHA (\$/Month):	157	Activity Code:	19
Enlisted VHA (\$/Month):	165		
Per Diem Rate (\$/Day):	140	Homeowner Assistance Program:	No
Freight Cost (\$/Ton/Mile):	0.07	Unique Activity Information:	No

Department : USAF  
 Option Package : AFJ-5 (EC) Alt 1  
 Scenario File : C:\COBRA95\CROSS\DBCRC\EGLIN001.CBR  
 Std Fctrs File : C:\COBRA95\AF\DDOD\STSURVEY\DEPOTFIN.SFF

INPUT SCREEN FOUR - STATIC BASE INFORMATION

Name: EGLIN, FL

Total Officer Employees:	1,428	RPMA Non-Payroll (\$K/Year):	19,708
Total Enlisted Employees:	6,087	Communications (\$K/Year):	323
Total Student Employees:	0	BOS Non-Payroll (\$K/Year):	48,998
Total Civilian Employees:	4,041	BOS Payroll (\$K/Year):	0
Mil Families Living On Base:	34.0%	Family Housing (\$K/Year):	8,792
Civilians Not Willing To Move:	10.0%	Area Cost Factor:	1.00
Officer Housing Units Avail:	0	CHAMPUS In-Pat (\$/Visit):	0
Enlisted Housing Units Avail:	0	CHAMPUS Out-Pat (\$/Visit):	0
Total Base Facilities(KSF):	9,932	CHAMPUS Shift to Medicare:	20.9%
Officer VHA (\$/Month):	84	Activity Code:	21
Enlisted VHA (\$/Month):	57		
Per Diem Rate (\$/Day):	91	Homeowner Assistance Program:	No
Freight Cost (\$/Ton/Mile):	0.07	Unique Activity Information:	No

Name: NELLIS, NV

Total Officer Employees:	891	RPMA Non-Payroll (\$K/Year):	4,123
Total Enlisted Employees:	6,317	Communications (\$K/Year):	1,458
Total Student Employees:	0	BOS Non-Payroll (\$K/Year):	14,439
Total Civilian Employees:	1,064	BOS Payroll (\$K/Year):	0
Mil Families Living On Base:	25.0%	Family Housing (\$K/Year):	7,569
Civilians Not Willing To Move:	10.0%	Area Cost Factor:	1.00
Officer Housing Units Avail:	0	CHAMPUS In-Pat (\$/Visit):	0
Enlisted Housing Units Avail:	0	CHAMPUS Out-Pat (\$/Visit):	0
Total Base Facilities(KSF):	6,201	CHAMPUS Shift to Medicare:	20.9%
Officer VHA (\$/Month):	303	Activity Code:	65
Enlisted VHA (\$/Month):	187		
Per Diem Rate (\$/Day):	107	Homeowner Assistance Program:	Yes
Freight Cost (\$/Ton/Mile):	0.07	Unique Activity Information:	No

INPUT SCREEN FIVE - DYNAMIC BASE INFORMATION

Name: EDWARDS, CA

	1996	1997	1998	1999	2000	2001
	----	----	----	----	----	----
1-Time Unique Cost (\$K):	0	1,500	0	0	0	0
1-Time Unique Save (\$K):	0	0	0	0	0	0
1-Time Moving Cost (\$K):	0	0	0	0	0	0
1-Time Moving Save (\$K):	0	0	0	0	0	0
Env Non-MilCon Reqd(\$K):	0	0	0	0	0	0
Activ Mission Cost (\$K):	0	0	0	0	0	0
Activ Mission Save (\$K):	0	0	0	0	0	0
Misc Recurring Cost(\$K):	0	0	0	0	0	0
Misc Recurring Save(\$K):	0	0	0	0	0	0
Land (+Buy/-Sales) (\$K):	0	0	0	0	0	0
Construction Schedule(%):	0%	0%	0%	0%	0%	0%
Shutdown Schedule (%):	0%	0%	0%	0%	0%	0%
MilCon Cost Avoidnc(\$K):	0	0	0	0	0	0
Fam Housing Avoidnc(\$K):	0	0	0	0	0	0
Procurement Avoidnc(\$K):	0	0	0	0	0	0
CHAMPUS In-Patients/Yr:	0	0	0	0	0	0
CHAMPUS Out-Patients/Yr:	0	0	0	0	0	0
Facil ShutDown(KSF):	0					
		Perc Family Housing ShutDown:				0.0%

Department : USAF  
 Option Package : AFJ-5 (EC) Alt 1  
 Scenario File : C:\COBRA95\CROSS\DBCRC\EGLIN001.CBR  
 Std Fctrs File : C:\COBRA95\AF\DDO\STSURVEY\DEPOTFIN.SFF

INPUT SCREEN FIVE - DYNAMIC BASE INFORMATION

Name: EGLIN, FL

	1996	1997	1998	1999	2000	2001
1-Time Unique Cost (\$K):	0	0	0	0	0	0
1-Time Unique Save (\$K):	0	0	0	0	0	0
1-Time Moving Cost (\$K):	0	2,201	1,540	0	0	0
1-Time Moving Save (\$K):	0	0	0	0	0	0
Env Non-MilCon Reqd(\$K):	0	0	0	0	0	0
Activ Mission Cost (\$K):	0	0	6,000	6,000	6,000	6,000
Activ Mission Save (\$K):	0	0	1,411	4,146	4,146	4,146
Misc Recurring Cost(\$K):	0	0	0	0	0	0
Misc Recurring Save(\$K):	0	0	0	0	0	0
Land (+Buy/-Sales) (\$K):	0	0	0	0	0	0
Construction Schedule(%):	0%	0%	0%	0%	0%	0%
Shutdown Schedule (%):	0%	0%	0%	0%	0%	0%
MilCon Cost Avoidnc(\$K):	0	0	0	0	0	0
Fam Housing Avoidnc(\$K):	0	0	0	0	0	0
Procurement Avoidnc(\$K):	0	0	0	0	0	0
CHAMPUS In-Patients/Yr:	0	0	0	0	0	0
CHAMPUS Out-Patients/Yr:	0	0	0	0	0	0
Facil ShutDown(KSF):	0	Perc Family Housing ShutDown:				0.0%

Name: NELLIS, NV

	1996	1997	1998	1999	2000	2001
1-Time Unique Cost (\$K):	0	0	0	0	0	0
1-Time Unique Save (\$K):	0	0	0	0	0	0
1-Time Moving Cost (\$K):	0	0	0	0	0	0
1-Time Moving Save (\$K):	0	0	0	0	0	0
Env Non-MilCon Reqd(\$K):	0	0	0	0	0	0
Activ Mission Cost (\$K):	0	0	1,522	1,806	1,806	1,806
Activ Mission Save (\$K):	0	0	0	0	0	0
Misc Recurring Cost(\$K):	0	0	0	0	0	0
Misc Recurring Save(\$K):	0	0	0	0	0	0
Land (+Buy/-Sales) (\$K):	0	0	0	0	0	0
Construction Schedule(%):	0%	0%	0%	0%	0%	0%
Shutdown Schedule (%):	0%	0%	0%	0%	0%	0%
MilCon Cost Avoidnc(\$K):	0	0	0	0	0	0
Fam Housing Avoidnc(\$K):	0	0	0	0	0	0
Procurement Avoidnc(\$K):	0	0	0	0	0	0
CHAMPUS In-Patients/Yr:	0	0	0	0	0	0
CHAMPUS Out-Patients/Yr:	0	0	0	0	0	0
Facil ShutDown(KSF):	0	Perc Family Housing ShutDown:				0.0%

INPUT SCREEN SEVEN - BASE MILITARY CONSTRUCTION INFORMATION

Name: NELLIS, NV

Description	Categ	New MilCon	Rehab MilCon	Total Cost(\$K)
SIMULATORS	OTHER	0	0	9,600

Department : USAF  
 Option Package : AFJ-5 (EC) Alt 1  
 Scenario File : C:\COBRA95\CROSS\DBCRC\EGLIN001.CBR  
 Std Fctrs File : C:\COBRA95\AF\DDO\STSURVEY\DEPOTFIN.SFF

STANDARD FACTORS SCREEN ONE - PERSONNEL

Percent Officers Married:	76.80%	Civ Early Retire Pay Factor:	9.00%
Percent Enlisted Married:	66.90%	Priority Placement Service:	60.00%
Enlisted Housing MilCon:	80.00%	PPS Actions Involving PCS:	50.00%
Officer Salary(\$/Year):	78,668.00	Civilian PCS Costs (\$):	28,800.00
Off BAQ with Dependents(\$):	7,073.00	Civilian New Hire Cost(\$):	4,000.00
Enlisted Salary(\$/Year):	36,148.00	Nat Median Home Price(\$):	114,600.00
Enl BAQ with Dependents(\$):	5,162.00	Home Sale Reimburse Rate:	10.00%
Avg Unemploy Cost(\$/Week):	174.00	Max Home Sale Reimburs(\$):	22,385.00
Unemployment Eligibility(Weeks):	18	Home Purch Reimburse Rate:	5.00%
Civilian Salary(\$/Year):	46,642.00	Max Home Purch Reimburs(\$):	11,191.00
Civilian Turnover Rate:	15.00%	Civilian Homeowning Rate:	64.00%
Civilian Early Retire Rate:	10.00%	HAP Home Value Reimburse Rate:	22.90%
Civilian Regular Retire Rate:	5.00%	HAP Homeowner Receiving Rate:	5.00%
Civilian RIF Pay Factor:	39.00%	RSE Home Value Reimburse Rate:	0.00%
SF File Desc:	Final Factors	RSE Homeowner Receiving Rate:	0.00%

STANDARD FACTORS SCREEN TWO - FACILITIES

RPMA Building SF Cost Index:	0.93	Rehab vs. New MilCon Cost:	0.00%
BOS Index (RPMA vs population):	0.54	Info Management Account:	0.00%
(Indices are used as exponents)		MilCon Design Rate:	0.00%
Program Management Factor:	10.00%	MilCon SIOH Rate:	0.00%
Caretaker Admin(\$/Care):	162.00	MilCon Contingency Plan Rate:	0.00%
Mothball Cost (\$/SF):	1.25	MilCon Site Preparation Rate:	0.00%
Avg Bachelor Quarters(\$/SF):	256.00	Discount Rate for NPV.RPT/ROI:	2.75%
Avg Family Quarters(\$/SF):	1,320.00	Inflation Rate for NPV.RPT/ROI:	0.00%
APPDET.RPT Inflation Rates:			
1996: 0.00% 1997: 2.90% 1998: 3.00%		1999: 3.00% 2000: 3.00% 2001: 3.00%	

STANDARD FACTORS SCREEN THREE - TRANSPORTATION

Material/Assigned Person(Lb):	710	Equip Pack & Crate(\$/Ton):	284.00
HHG Per Off Family (Lb):	14,500.00	Mil Light Vehicle(\$/Mile):	0.43
HHG Per Enl Family (Lb):	9,000.00	Heavy/Spec Vehicle(\$/Mile):	1.40
HHG Per Mil Single (Lb):	6,400.00	POV Reimbursement(\$/Mile):	0.18
HHG Per Civilian (Lb):	18,000.00	Avg Mil Tour Length (Years):	4.10
Total HHG Cost (\$/100Lb):	35.00	Routine PCS(\$/Pers/Tour):	6,437.00
Air Transport (\$/Pass Mile):	0.20	One-Time Off PCS Cost(\$):	9,142.00
Misc Exp (\$/Direct Employ):	700.00	One-Time Enl PCS Cost(\$):	5,761.00

STANDARD FACTORS SCREEN FOUR - MILITARY CONSTRUCTION

Category	UM	\$/UM	Category	UM	\$/UM
-----	--	----	-----	--	----
Horizontal	(SY)	0	other	(SF)	0
Waterfront	(LF)	0	Optional Category B	( )	0
Air Operations	(SF)	0	Optional Category C	( )	0
Operational	(SF)	0	Optional Category D	( )	0
Administrative	(SF)	0	Optional Category E	( )	0
School Buildings	(SF)	0	Optional Category F	( )	0
Maintenance Shops	(SF)	0	Optional Category G	( )	0
Bachelor Quarters	(SF)	0	Optional Category H	( )	0
Family Quarters	(EA)	0	Optional Category I	( )	0
Covered Storage	(SF)	0	Optional Category J	( )	0
Dining Facilities	(SF)	0	Optional Category K	( )	0
Recreation Facilities	(SF)	0	Optional Category L	( )	0
Communications Facil	(SF)	0	Optional Category M	( )	0
Shipyard Maintenance	(SF)	0	Optional Category N	( )	0
RDT & E Facilities	(SF)	0	Optional Category O	( )	0
POL Storage	(BL)	0	Optional Category P	( )	0
Ammunition Storage	(SF)	0	Optional Category Q	( )	0
Medical Facilities	(SF)	0	Optional Category R	( )	0
Environmental	( )	0			

Department : USAF  
Option Package : AFJ-5 (EC) Alt 1  
Scenario File : C:\COBRA95\CROSS\DBCRC\EGLIN001.CBR  
Std Fctrs File : C:\COBRA95\AF\DOD\STSURVEY\DEPOTFIN.SFF

EXPLANATORY NOTES (INPUT SCREEN NINE)

1. Add \$9.6M in MilCon at Nellis AFB for Simulators.
2. Added \$1.4M in activity mission recurring costs for tanker costs at Nellis ranges beginning in FY98.
3. Added \$6.0M for additional TDY costs at Eglin AFB to go to Nellis for tests.

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# Document Separator



Mr. Parker C. Horner  
Chief, Resources Division  
Air Force Test and Evaluation

HQ USAF/TER  
1850 Air Force Pentagon  
Washington, DC 20330-1650

(703) 693-6597  
DSN 223-6597  
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Date: 6/13/95

Cover + 15 Pages

**TO:**

Claudio Ackerman

**SUBJECT:**

BRAC Recommendations

Transmit to:

60550



**AF/TE**

## **USAF Concern**

- **Recommendations Are All Still Under Review -- Very Political Process -- Further Refinements Possible**
- **██████████ Manpower Savings at UTTR Are Under Review**
- **MILCON Requirements at AFFTC and Nellis AFB, NV Complex Still Under Review**

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# COMPARISON OF FUNCTIONAL VALUES ELECTRONIC COMBAT

SITE	ORIG FV SCORE	INTERIM SCORE	RM* FV SCORE
AFDTC-EGLIN	65	63	62
NAWCWPNS-PT MUGU	58	59	57
NAWCAD-PATUXENT	53	54	50
AFFTC-EDWARDS AFB	52	50	49
NAWC-CHINA LAKE & WSM	47	50	49
USA EPG	47	47	48
HOLLOMAN AFB	29	30	30
AFEWES-EGLIN AFB	17	17	17
NSWCCD-CRANE	17	17	17
RDCAP-EGLIN	15	15	15

\* "Reasonable-man"

## CHANGES:

- AFFTC AND CHINA LAKE NOW TIED
- NARROWED SPREAD AMONG TOP SIX
- DID NOT OTHERWISE CHANGE POSITIONS
  - Largest Change, original to final "RM": -6% (Pax)
  - Largest Change, interim to final "RM": -8% (Pax)

XBU-70

# Document Separator

## CONSOLIDATION OF ELECTRONIC COMBAT TEST AND EVALUATION FACILITIES

The committee recognizes the need for consolidating test and evaluation facilities, organizations, and resources in order to reduce infrastructure costs. The committee believes, however, that facilities should only be consolidated based on a master plan for future required electronic combat test capabilities.

Therefore, the committee directs the Secretary of Defense to develop a master plan for future consolidations of DoD-wide electronic combat test and evaluation assets. This master plan shall provide a statement of required electronic combat capabilities and a road map for consolidation of these activities. Because of its disappointment with the Department's response to last year's request for a master plan, the committee further directs that no fiscal year 1996 or prior year funds be used for transferring or consolidating electronic combat test and evaluation assets until this master plan is received and approved by the congressional defense committees.

*Proposed legislation for FY96  
Authorization Act -- (prepared by  
Egler community) 6/23/95*

# EMTE, RedCAP + AFEWES

- Background
  - How they came to be (ALQ-161)
  - Congressional Concerns
    - Why Authorization Language was written
- DOD EC Capability + Capacity
  - Navy OAR
  - Air Force OAR
  - Simulation
- AF plan to close EMTE, RedCAP + AFEWES ~~and~~ + move to Edwards + Nellis Range Com.
  - Costs (to duplicate PRIMES at BAF.)
  - Capability lost + limitations imposed
    - Data Reductions
    - Range time
    - Availability ~~is~~ (INGUS, Testing, ~~etc~~)
- why do this?
  - why not require DOD to develop a joint EC MASTER plan before quantitatively relinquishing EC infrastructure

Meeting w/ Dick Gillis 5/19/95  
Outline for input to DBCFC

# Document Separator

Joe J. Harrison  
4 Elkwood Court  
Shalimar, Florida 32579

May 2, 1995

Dear Mr. Owsley:

You do not know me; however, we have numerous mutual acquaintances. I retired from the Air Force in 1982 and have remained active in EC testing. My total experience in EC testing goes back to the late 1960s and covers every major facility in the nation.

Current DOD actions initiated by the Air Force, primarily AFMC, are based largely on interests other than EC. Many on the senior staff lack a detailed knowledge of how tests are conducted and what data is needed. During DESERT SHIELD and DESERT STORM we spent hundreds of hours optimizing both receiver and jammer settings using Eglin site A-30. Going back twenty years, I was here assigned to Hq SAC, optimizing ALT-28s in B-52s for LINEBACKER. Had we relied on Western data at that time, the B-52s would not have jammed the SA-2 Target Tracking Radars. Fortunately, there were some strong willed individuals who fought them and won, saving numerous aircraft and crews.

Eglin has major weaknesses and so does the AFEWES and REDCAP. However, when compared to the competition, they are the best. The key resource is knowledgeable people. The Air Warfare Center has, by far, the most skilled EC test engineers and AFDTC has a small group of range engineers who have a proven record of building good range facilities at rock bottom costs. These groups, working together, comprise the superior EC testing group in the world.

At a time when dollars are extremely hard to find, why are we building new support facilities? The ECIT will have little to offer which the PRIMES does not have today (except size), and the Navy has much the same in Maryland. Why not take all of these service test facilities and make them purple suit with one boss who can divide the dollars so as to maximize capability and minimize duplication? The competition for test facility control has been fierce for 25 years. One solution would be to close everything and move the whole business to North Dakota. Seriously, people may die and conflicts may be won or lost based on these decisions. Please, think long before dismantling proven capability -- even if it is less than optimum. We all lost friends in Southeast Asia who should be here with us today. The value of one life is beyond measure.



The following seventeen pages were prepared by engineers on base and edited by two retired officers working as support contractors. I have read it and can tell you that the information contained in it is accurate. You may find it interesting.

Respectfully,



Joe J. Harrison

TO: Mr. Owsley PHONE: \_\_\_\_\_

DEPT: \_\_\_\_\_ BLDG/RM \_\_\_\_\_

FROM: Joe Harrison PHONE: (904) 862-6229

FAX NO: (904) 862-6879

NUMBER OF PAGES TO FOLLOW: 19

COMMENTS:

The Air Force action, through the Base Realignment and Closure Commission (BRACC), to remove EC testing from Eglin could be a case of fraud, waste, and abuse. The cumulative cost increase to the Air Force exceeds \$500 million dollars in FY95 constant dollars over 20 years. The increase cost of EC testing in the West and the lost capabilities in the planned consolidation of Air Force EC test facilities will inevitably result in less testing and increased risks to Warfighters and weapon system development. The cost to the aircrews in peacetime and in combat will only become apparent too late to correct the error. The probable increased combat losses to warriors and equipment cannot be estimated here, but any increase is too much and inexcusable. Significant program development costs have been omitted. These omissions appear to be intentional so that a predetermined decision by key Air Force officials can be justified by erroneous data. To avoid this costly error, the EMTE move must be stopped and full funding restored to continue maintenance, operation, and modernization of the EMTE. Without this funding, Air Force readiness can be gravely degraded.

The Air Force submittal to the BRACC has cost estimates for a one-time cost to implement the Electromagnetic Test Environment (EMTE) relocation to Nellis Air Force Base (AFB) at \$2.2 million, an implementation savings of \$6.3 million, and a recurring savings after implementation of \$2.6 million per year. The estimated return on investment over 20 years is stated to be \$31.4 million (FY95 constant dollars). These BRACC cost submissions have serious omissions and lack reality. The submission addresses moving eight EMTE ground-based systems and two airborne systems. The eight systems in the BRACC submission were only "typical systems". The actual eight were not identified at the time.

Reality is military construction costs for the non-transportable systems' new buildings for the EMTE move is \$4.5 million. Other construction costs for transportable systems is another \$1.3 million. Estimated costs for tear-down, move, and set-up is another \$7 million. The nonrecurring, cumulative implementation cost of \$12.8 million reflects an error in the BRACC submission of over \$10.6 million. Even using the \$6.3 million implementation savings indicated in the BRACC submission, a deficit of \$4.6 million still results. No cost savings can accrue from the EMTE move.

The stated cost savings in the BRACC submission does not correctly portray the recurring cost outlay for the future operation and maintenance of the systems. (The Electronic Combat (EC) Process Action Team (PAT) was appointed by Air Force

Material Command (AFMC) to study, over several months, the feasibility of moving Eglin's EC capability West and providing recommendations to senior Air Force officials. The annual recurring costs, estimated by the EC PAT, were approximately \$3 million to operate and maintain only eight of the EMTE systems in the West. The annual \$2.6 million savings quoted in the BRACC submission appears to represent only the deletion of the EMTE funding required to annually operate and maintain the entire EMTE. It would appear that the entire EMTE can be operated and maintained for about the same cost as only eight systems in the West. Therefore, the \$31.4 million savings estimated in the BRACC submission may actually be a significant cost increase depending on the assumptions.

When other cost factors are included, the cost of the EMTE move becomes prohibitive. The BRACC Air Force submission projected the annual savings for 20 years. Projecting the cost increase per typical EC test mission in the West for 20 years yields a cost increase of \$468 million in FY95 constant dollars. By closing the EMTE to EC testing, the added 20 year cost for tanker support is \$72 million, prime contractor support is \$80 million, and keeping China Lake instead of the EMTE is \$50 million. Not included here are the added costs of simulator development, Air Warfare Center (AWC) and Air Force Special Operation Command (AFSOC) deployments, and increased operation and maintenance costs in the West.

These omissions were discussed in EC PAT meetings with users, but were still omitted. One can only wonder if these omissions were intentional to skew the cost and impacts in favor of the move. Further activities that support this theory are the activities by the same people who caused the omissions. Additional EMTE systems are now being added to the move West. The current number of EMTE systems being identified to move is 17. The people behind this are in AFMC and apparently have little regard for either of AWC and AFSOC mission requirements or added costs burdens. There is ample evidence that some key AFMC personnel are consciously withholding critical data from senior officials to get bad decisions that will benefit special interests.

The Air Force action, through the BRACC, to remove EC testing from Eglin could be a case of fraud, waste, and abuse. The cumulative cost increase to the Air Force exceeds \$500 million dollars in FY95 constant dollars over 20 years. The increase cost of EC testing in the West and the lost capabilities in the planned consolidation of Air Force EC test facilities will inevitably result in less testing and increased risks. The cost to the aircrews in peacetime and in combat will only become

apparent too late to correct the error. The probable increased combat losses to warriors and equipment cannot be estimated here, but any increase is too much and inexcusable. To avoid this costly error, the EMTE move must be stopped and full funding restored to continue maintenance, operation, and modernization of the EMTE. Without this funding, Air Force readiness can be gravely degraded.

The following discussion addresses questions and answers to flaws in the BRACC submission analytical process.

1. What is the added cost to the EC program offices to support tests in the West? What is the added cost to support this work load or the revised workload increase estimate? How many missions would be flown at Eglin AFB?

**Answer:** At one time, the EC PAT identified an additional 900 missions per year to support the added work test load in the West at an additional \$26,000 minimum per mission added cost for the F-15 TEWS. Assuming this increase applied to the typical test in the West (some will be higher or lower), the total cost increase could be \$23,400,000 per year for \$468 million over 20 years.

2. What is the cost of the additional tanker support per mission?

**Answer:** A conservative estimate for flight testing jets is \$1000 per engine. A tanker has four engines. Then \$4000 times 900 missions is \$3.6 million or \$72 million over 20 years.

3. How much more will program office prime contractor support costs increase due to delays in testing in the West?

**Answer:** A conservative estimate for Prime Contractor support is \$100,000 per person per year. A test initially requiring 14 missions but obtaining a 50% non-productivity rate becomes a 21 mission test. Out West, it is not unusual to fly once per week and not receive data until six months later. That would mean paying the Prime Contractor for about 3/4s of a year or \$75,000 per person. For the same test at Eglin, the missions would be completed in 21 weeks. Data would be provided in an additional four weeks. This 25 weeks equates to about half a year which would result in \$50,000 per person per test. The difference of \$25,000 per Prime Contractor per test times four persons per contractor test team is \$100,000 per test. From above, take 900 missions and divide by 21 missions per test yields about 40 tests total per year. Then 40 multiplied by \$100,000 is \$4,000,000

more per year in Prime Contractor costs or \$80 million over 20 years.

4. What will be the cost to bring the Western test ranges up to EMTE standards?

**Answer:** Undetermined, but it will not be cheap. It will involve infrastructure investments, military construction projects, better Time-Space-Position Information (TSPI) and instrumentation. Senior Air Force officials' statements that they are equivalent or better is unsubstantiated. Users indicate severe inadequacies in supporting tests in the West. A key point here is that more systems on an open-air range does not make it better, but it does make it more expensive to operate and maintain. Linking facilities and virtual reality are new technologies which promise to make large open-air flight test ranges obsolete. When this happens, the EMTE becomes the range of choice from a technical and cost perspective. Most flight test secure testing could be performed in aircraft sized anechoic chambers.

5. What is the cost of added resources and infrastructure to the West to support EC testing?

**Answer:** Undetermined, but it will not be cheap. Most, if not all, investments in the West will cost more than at Eglin due in part to regional economies.

6. When was the Air Force BRACC estimate prepared and by whom?

**Answer:** The best knowledge available indicates it was done after both the Board of Directors (BOD) and EC PAT failed to justify a cost savings to move Eglin's EC test capability West. It appears that there are people who will keep restudying these issues until they get the answer they want. These recurring studies impugn the integrity of the BRACC process by the Air Force's leadership because it is this misled leadership that has directed, participated in, and sponsored the BRACC submission. The BOD and the EC PAT findings were supposed to be correct and beyond reproach. The BRACC submission is different enough to cast a shadow of a cover up and/or incompetence somewhere in the process.

7. What is the added cost to accomplish the same test in the West as on the EMTE due to the added inefficiencies of testing in the West?

**Answer:** Answers to questions 1 and 3 above are approximations that incorporate only the higher cost for labor and resources and data processing lags while assuming equally efficient conduct of the missions. Testing EC in the West is not as efficient as testing EC at Eglin. A likely scenario is after the six months wait for data, the tester finds part-to-all of the test data is unusable. The options are more testing or inconclusive results. That yields either increased test costs or wasted money. Testers have come to Eglin to collect the data they were unable to in the West. Where will they go now?

8. What is the cost and impact to the warfighter?

**Answer:** Loss of life or equipment (aircraft), capture (POWs), or mission failure are the most serious. Other costs and impacts to the warfighter include: increased test costs, less training time available because of increased inefficiencies in testing, loss of surge capabilities, loss of AFSOC security for deployments to hostile areas, and less certainty of the outcome in combat.

9. How many of the Air Combat Command's (ACC) AWC, AFSOC, and Air Force Operational Test and Evaluation Center (AFOTEC) personnel currently located at Eglin AFB will eventually move West to support EC testing there? How much will that cost?

**Answer:** The Air Force would have you believe little-to-none. Faced with the cost increases cited above, what alternative is there but to move large segments of the AWC and AFSOC to the West? The costs will probably include a Military Construction Project (MCP) as a minimum. There remains the question of how many key civilians will not transfer.

I do not believe the BRACC cost justification to move EC West fully considered questions such those mentioned above.

Other inadequately considered factors are:

1. If Eglin's EC systems move, what EC testing would remain and would it be able to support the AWC and AFSOC?

**Answer:** The move would mean that Eglin could no longer support the EC needs of the AWC and AFSOC. It would adversely impact their capability to support contingencies, increase their costs and schedules to test and train, result in lost combat capability in response time, and reduce surge capabilities and security.

2. What useful data was (and was not) made available to testers at Eglin and out West during Desert Shield/Storm?



**Answer:** Eglin was able to supply most of the test data required prior to Desert Storm. AFSOC personnel have said privately that they did not get their Western test data until after the war.

3. What new threat systems became available at Eglin and in the West, during Desert Shield, were instrumented, used, and produced available and usable data for EC testing prior to Desert Storm?

**Answer:** Eglin acquired two new threat systems during Desert Shield and had them fully instrumented and producing data prior to the war. One of these threats was available in the West and to the best of our knowledge is still not usable to support DT&E testing.

4. Where is the Air Force BRACC analysis that shows how the Air Force plans to de-conflict issues dealing with air space, facilities, frequencies (and frequency interference) for both testing and training in the West?

**Answer:** Do not know of any. It probably exists as verbal responses that are of the "trust me" by Western folks.

5. Where is the Air Force BRACC analysis that identifies the impact of increased testing in the West? Can the existing facilities absorb the increased workload?

**Answer:** Do not know of any thorough analysis. The Air Force may say the EC PAT or BOD study did it, but they did not. The analysis was a "trust me" by the Western folks.

6. Where is the Air Force BRACC analysis that considers the cost, advantages, and disadvantages of moving Western EC test facilities to Eglin?

**Answer:** The BOD study showed the Department of Defense (DOD) could save \$50 million by consolidating China Lake at Eglin. It did not address consolidating Nellis Complex assets at Eglin or China Lake.

7. Where is the Joint Service BRACC analysis for consolidating EC testing?

**Answer:** The BOD study showed the DOD could save \$50 million by consolidating China Lake at Eglin. It did not address consolidating Nellis Complex assets at Eglin or China Lake. A later inter-servicing study that was initiated under BRACC by Navy proponents was indicating similar results. It showed that

Eglin's EC test capability was superior to China Lake's in capacity, technical capability, and was more cost effective.

8. Where is the long term environmental impact study to support the decision to move EC testing West?

**Answer:** Do not think there is one, but the Western ranges consist of large sections of privately owned land and are subject to reclamation through unfriendly environmental lawsuits by the owners or other parties. Eglin owns its land test areas.

9. The EC PAT prepared the P-Plan that stated Eglin's EC labor positions and responsibilities would be transferred to Edwards AFB. What evidence was provided to the BRACC that the Air Force EC testing needs can be better served by relocating Eglin's EC test positions and responsibilities at Edwards AFB?

**Answer:** None known. The Eglin EC move to Edwards AFB is to save Edwards. There is no other viable reason. The Edwards test expertise in EC testing is minimal while the EC personnel at Eglin can test at the collected EMTE, the Edwards EC tests will have to travel to either China Lake or Nellis to do their open-air range EC testing. This is a significant loss in test efficiency and increases test travel costs.

10. Why has the Air Force continued to actively pursue closing the EMTE in direct violation of Congressional direction and intent to the contrary?

**Answer:** Senior AFMC officials have been heard to say that it is to save Edwards AFB. The projected Edwards AFB workload is declining.

11. What Air Force studies have been done in the past year that support or do not support the Air Force's decision to consolidate EC testing in the West?

**Answer:** The BOD study, the EC PAT, and the Air Force BRACC input study. The first two did not justify the move. The third is a fabrication to justify predetermined decisions by AFMC and Headquarters, Air Force Test and Evaluation (AF/TE).

12. How does the Air Force plan to accomplish over water coastal penetration EC testing in the Nellis Complex?

**Answer:** They cannot.

13. What is the average time it takes all customers who test EC in the Nellis Complex to receive their reduced data products?

**Answer:** A history of months for most tests in the Nellis Complex is indicated, while the median time at Eglin is 2 days after receipt of request. The difference in time is a contributor to increased costs in the West. In addition, on-site real time quick look data is available at many EMTE threats. This allows customers to determine the effectiveness of the scenario before flying the next mission.

14. How often does the customer find errors in these data products and ask that they be redone?

**Answer:** The AWC and AFSOC users we have talked to indicate that it is expected.

15. What is the consensus of customer satisfaction for customers who test EC in the Nellis Complex and how was this answer obtained?

**Answer:** Not many AWC and AFSOC users we have talked to seem to be satisfied.

16. What analysis has been done to formulate a plan to bring the TSPI in the Nellis Complex up to Eglin's TSPI accuracies and consistency?

**Answer:** Don't know of any. What is known is that China Lake and the Nellis Complex ranges turn to Eglin's TSPI expertise to improve theirs.

17. How much money has been spent for EC facilities in the past three years in the Nellis Complex versus the EMTE, and what is the added value gained with the differential?

**Answer:** There is a about a ten-to-one funding differential. The value added is nil since Eglin could do the same work through linking test facilities for far less cost.

18. What comparisons have been made to instrument like EC systems/simulators, to equal fidelity, in the Nellis Complex versus the EMTE; what were the results; what was the cost differential; and when were the comparisons made to support the BRACC recommendation?

**Answer:** Do not know of any. The West just claims theirs are as good or better, but when challenged to prove it, they cannot.

19. How does the Air Force plan to solve the physical problems such as: multi-path, radio frequency congestion, mountains, Nellis AFB aircraft ramp space, work space and quarters for the added customers who will be doing the added EC testing in the Nellis Complex?

**Answer:** No known thought during the studies was given to these evolving problems.

20. Describe the new procedures to support EC flight test for Allied Countries who would have normally tested at Eglin, and describe the assurances that they will obtain the data they require for all their threats of interest.

**Answer:** Personnel from the Nellis Complex have claimed that they can accommodate allied flight test requirements. This is an overstated capability that is not going to be supportable. The EC PAT indicated that China Lake would take most of the Allied customers with Nellis taking the rest.

21. Describe how the Air Force intends to collect test data for environments other than those found in the West and provide the performance impacts on EC equipment when used in other environments.

**Answer:** They cannot if the EMTE closes.

22. Describe how the Air Force intends to implement the EC test process at test ranges in the West.

**Answer:** It will be very expensive, as one can see by reviewing Edwards budgets for Program Element (PE) 64256, Projects 6510 and 3321, in the Defense Budget requests.

23. Describe the scheduling impact on customers with lower priorities and how testing in the West will be made available to them so that they can complete their test on schedule and within budget.

**Answer:** It is unlikely this can be done for reasons stated above.

24. Explain why the Air Force ignored the findings of the Board of Operational Directors (BOOD), BOD, and the EC PAT which all stated there was no cost effective reason to move EC testing out of Eglin AFB.

**Answer:** Based on findings of the BOD and EC PAT and considering what is stated here in, we believe the reason is to save Edwards AFB.

25. Explain why it is not more economically feasible to move EC test assets at China Lake to Eglin AFB.

**Answer:** The BOD study indicated \$50 million could be saved by doing this. This savings was achieved using the Navy's cost model. When the result did not support China Lake, they cried foul.

26. Eglin is the only Air Force or Navy Base that has the principle facilities to support the complete EC and weapons test process -- the Guided Weapons Evaluation Facility (GWEF), the Preflight Integration of Munitions and Electronic Systems (PRIMES), the EMTE, and the Armament Systems Test Environment (ASTE). Describe how the lost synergism of these collocated facilities results in an overall test process improvement.

**Answer:** There is an over all loss of test capability by moving the EMTE assets. The GWEF is Hardware-in-the-Loop (HITL). The PRIMES is an Installed System Test Facility (ISTF). The EMTE and ASTE are open-air flight test ranges for EC and weapons testing, respectively. The EC and weapons test processes relies on these types of test assets to be a viable process. Removing the EMTE makes it more difficult and expensive to test EC and weapons in a high fidelity environment.

27. The EMTE has an EC ground test capability that allows the AWC and AFSOC warfighters to cost effectively and conveniently test their radar jammers against systems of interest. Describe the equivalent capability in the Nellis Complex.

**Answer:** There is not one in the Nellis Complex. China Lake claims their Slate Range does. A major strength of Eglin's ground test capability is its collocation with the warfighter. It is very easy and efficient for them to use the facility on a daily or periodic basis. The result is a very cost effective operation. The benefit to them is they can test their jammers against high fidelity threats under repeatable conditions to derive the intended countermeasures. The West can duplicate the capability, but the cost to the warfighter escalates significantly because of added travel costs. Test efficiency, however, declines significantly because of range access problems, resource non-availability, and lack of sufficient instrumentation on the radar under test.

28. Eglin has a premier data reduction and analysis computer facility whose people interact daily with Eglin facility developers and collocated customers. Describe the equivalent capability in the Nellis Complex or what it would cost to develop and operate an equivalent facility in the Nellis Complex.

**Answer:** Eglin's math lab is unique. For the Western ranges to produce the customer support required for data processing equal to that of Eglin, the Eglin math lab would have to either be duplicated in the West or the Western ranges would have to depend on Eglin to support their data processing needs. Either way, test costs would have to increase.

29. With the Air Force focus on quality of life issues, why has the Air Force ignored the quality of life of their combat weary warfighters at AFSOC? They are Temporary Duty (TDY) to combat locations as much as or more than any other Air Force unit yet the Air Force is now demanding they spend additional TDY to test and train in the West. Why?

**Answer:** No good can come of this. The added burden to AFSOC families is inexcusable. The effect on the capability for the AFSOC to accomplish its mission is significant. It degrades their ability to train, test, surge, and deploy. The result is it puts the crews at unnecessary added risk in combat. Spouse-to-spouse and parent-to-child relationships will suffer due to the added travel burden. Crew morale will be fully taxed. AFSOC normally deploys about 120 people for tests such as the ALR-69 Class IV test. This requires a C-141 to deploy maintenance personnel and equipment at a \$200,000 cost per deployment. If the test is indefinitely delayed and the test team is forced to return home only to redeploy later, the costs are multiplied by the deployments. The additional travel would be unnecessary, crews could spend the more time with their families, and the Air Force would save precious resources if the EMTE remained in place.

30. The Air Force BRACC submission stated that the EMTE assets were to continue to support weapons testing, AWC, and AFSOC. Why has the Air Force not funded the EMTE? How does the Air Force intend to retain a viable EMTE for weapons testing without funding? What weapons tests will the EMTE support?

**Answer:** Without funding, the EMTE can not remain viable. Any statement to the contrary is either said in ignorance or as glitter to appease the unknowing. It is doubtful that there will be enough weapons tests in the near term to allow the remaining

EMTE to survive. Without funding, the remaining EMTE support to the AWC and AFSOC is a sham.

31. Both Eglin and China Lake develop threat simulators. What are the development costs of Eglin's Simulated Air Defense System (SADS) X and SADS XII and China Lake's I-15 and I-30? What are the actual differences in test capabilities of these systems?

**Answer:** The best estimates available indicate that the SADS X and XII development costs are about \$3 million and \$5 million, respectively. The I-15 and I-30 development costs are about \$60 million and \$16 million, respectively. While the I-15 and I-30 systems have phased array antennas, serious deficiencies in their design approach limit their capability to provide a simulation with sufficient fidelity to perform realistic jammer tests against the intended threat. Without that capability, the I-15 and I-30 are useful for little more than signal sources. More importantly is the cost differences. They indicate the development approach taken by Eglin and China Lake. China Lake invests in premature simulator development while Eglin developments are in line with threat intelligence maturity and use novel technical approaches. Eglin's approach results in significant cost savings.

32. Some of the ground-based systems identified to move West are in buildings. For these systems to operate comparably, there will need to be Military Construction Programs (MCP) and the associated funding identified. What MCP is required, and what is the projected funding required? If no MCP is required, explain why not.

**Answer:** It is not technically practical to move the ground based missile simulations without a new building to house them. The ground based missile systems are very sensitive to ground clutter and multi-path effects, cable lengths predicated on the as installed configuration, and flight table isolation. For instance, the SADS XI/M employs a interference control fence to greatly limit multi-path and clutter returns arriving at angles within the test sector and at elevation angles less than five degrees. Eglin's flat terrain facilitates the fence effectiveness. In the West, the mountains will add unremovable clutter and multi-path effect in to the ground based missile. Because of these effects, there is high probability that the ground based missile systems will never be able to work correctly in the West, and that this important test capability will be permanently lost.



33. The following comparisons are made for the SADS X, SADS XII, I-15, I-30, and an instrumented threat.

Test Capabilities

(One-on-One)

Test Objective/Technique

Emitter

Only

SADS XII

I-15/30

Fully

Instrumented

Threat

Illumination

F\*

F

F

F

RCS/Clutter Signatures

--

F

--

F

Detection Ranges

--  
 F  
 P  
 F  
 ESM/RAW Gear Stimulus

F\*  
 F  
 F  
 F  
 ECM Response Monitor

--  
 F  
 --  
 F  
 RGPO

--  
 F  
 --  
 F  
 VGPO

--  
 F  
 --  
 F  
 LAT, Evasive Maneuvers

--  
 P  
 --  
 F  
 Chaff Technique/Deployment

--  
 F  
 --  
 F  
 Barrage Noise

--  
 F  
 --  
 F  
 Crosseye

--  
 P  
 --  
 F  
 Swept Spot

--  
 F  
 --

ARM	F
	--
	P
	P
	F
Active/Passive Decoys	--
	P
	--
	F
Multiple Target	--
	--
	--
	--
RB Masking	--
	F
	--
	F
Saturation	--
	--
	--
	--
Missile Flyout Sim	--
	F
	--
	F
Cross Pol	--
	?
	--
	F
Terrain Bounce	N/A
	N/A
	N/A
	N/A

Legend:

"F"  
= full test capability

"p"  
= partial test capability

"\*"  
= with optical track or external track info

"--"  
= no test capability

"?"  
= not clearly defined

"N/A"  
= not applicable

34. The following comparisons for Air Force tests in the West as compared to Eglin are made.

West vs. Eglin AFB

Value of	<u>Cost</u>	<u>Time</u>	<u>Test</u>
<u>Results</u>			
Air Force testers	Higher	Longer	
Less			
Contractors	Higher	Longer	
Less			
EF-111	Higher	Longer	
Less			
F-15 TEWS	Higher	Longer	
Less			
Radar Warning Receiver	Higher	Longer	
Less			
Jammers	Higher	Longer	
Less			

The Air Force's input to the BRACC concerning the move of Eglin AFB's EC test range (the EMTE) to the Nellis AFB area is seriously flawed. The cost savings identified in the BRACC submission cannot be substantiated. It appears that the primary (and perhaps only) factor considered was the cost of moving ten systems and their associated manpower reductions. Those Air Force BRACC costs omit the costs in the rest of the iceberg. Those are the added test costs for weapon system acquisition and to the warfighter. Finally, critical flaws in the Air Force's strategy exist that adversely effect the warfighters' capability to fight during future air operations supporting U.S. national interests when ordered by the President or the Congress.

# Document Separator

Congress of the United States  
House of Representatives  
Washington, DC 20515-0901

March 14, 1995

Colonel Vince Evans  
Director, Air Force Legislative Liaison  
B-322 Rayburn HOB  
Washington D.C. 20515

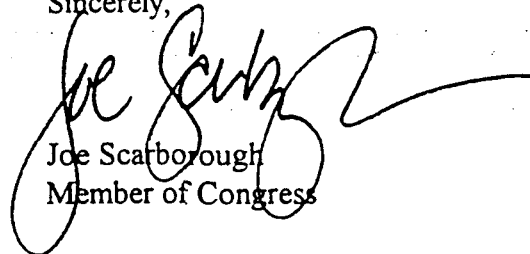
Dear Colonel Evans:

I am currently reviewing data on the Secretary of Defense's recommendation to the BRAC Commission concerning the consolidation of facilities to and from Eglin Air Force Base. To help assist me in my detailed analysis, I am submitting the following questions for an immediate reply:

1. What is the specific nomenclature for the 8 threat simulators and 2 EC pods scheduled to move west, and what is the specific nomenclature for the emitters that are proposed to remain in operational status at Eglin?
2. Is all of the Air Force Test and Evaluation Center, currently located at Kirtland AFB, to move to Eglin? Will this include EC related functions?
3. Please characterize number and magnitude of contracts administered by the AFOTEC contracting office at Kirtland AFB? What is the magnitude of direct contractor support of AFOTECS's Kirtland AFB offices?

If there are any questions concerning these matters, please contact Bart Roper of my staff at x4136. Thank you for your prompt attention.

Sincerely,



Joe Scarborough  
Member of Congress



SAFLLP/MAJOR SNYDER/CFM/77950/24 MAR 95  
moyer/bases95/eglinSCAR

MAR 24 1995

SAF/LLP  
1160 Air Force Pentagon  
Washington, DC 20330-1160

The Honorable Joe Scarborough  
House of Representatives  
Washington, DC 20515-0901

Dear Mr. Scarborough

This is in response to your letter of March 14, 1995, concerning the BRAC recommendation for Eglin Air Force Base (AFB), Florida, and the recommended relocation to Eglin AFB of the Air Force Operational Test and Evaluation Center (AFOTEC), currently located at Kirtland AFB, New Mexico.

In your letter, you requested the Air Force identify specific nomenclature for the emitters which were recommended to remain in operational status at Eglin AFB. The EMTE lists used during the Air Force's BRAC analysis were preliminary based upon general projections of what needed to be moved and what should remain at Eglin AFB. A follow-up site survey team will subsequently determine what will remain and what will move; therefore, the following listing may vary slightly from what will be finalized.

Nomenclature of EMTE systems to move

Simulated Air Defense System (SADS) VI-M

SADS VIII-R

SADS XI

SADS XI-M

Weapons Effectiveness Simulated Threat (WEST) X-R

WEST XI-R1

WEST XI-R2

Flycatcher

I-Hawk Airborne Pod

SADS VI Airborne Pod

*Denton 28 Mar*

COORD

AF/RT

Nomenclature of EMTE systems to remain operational at Eglin AFB

Track While Scan (TWS)-1

TWS-2

TWS-3

MLQ-T4

High Power Illuminating Signal Source (HPISS)

SADS IV-SS

SADS X

SADS XII-SS

SADS VIIIIR (CHICKEN LITTLE support)

WEST IB

WEST IC

WEST XA

QRC-554

The Secretary of Defense recommended to the Defense Base Closure and Realignment Commission that the AFOTEC at Kirtland AFB and all associated responsibilities be completely relocated to Eglin AFB. It is important to note that the AFOTEC itself does not have any EC-related functions.

Attached is a summary of the scope of contracts administered by the AFOTEC contracting office at Kirtland AFB. AFOTEC is supported by direct contractors on the order of 125 manyear equivalents. Also attached are copies of the relevant slides and talking points associated with the March 9, 1995, Base Closure Executive Group (BCEG) meeting minutes. Mr. Bart Roper of your staff requested we provide these with our response.

We appreciate your interest in this matter and trust the information provided is useful.

Sincerely

STEPHEN D. BULL, III  
Colonel, USAF  
Chief, Programs and Legislation  
Division  
Office of Legislative Liaison

Attachments

# FAX COVER SHEET

FROM: (702)382-7698

DATE: 8 May 1995

NAME: BRAC COMMISSION

OFFICE: -0504 EXT: 190

TO: (703) 696-0550

(PHONE NUMBER/COMPANY/CITY/STATE)

ATTN: MR LESTER C. FARRINGTON

### MESSAGE:

*Mr Farrington,*

*Per our phone conversation last Friday, I subsequently talked to Steve Ackerman and fax'd the AFEWES/REDCAP information to him.*

*Thanks.*

*Col Wes Heidenreich*

WESLEY J. HEIDENREICH, COL

TYPED/PRINTED NAME OF  
RELEASING OFFICIAL

Wesley J. Heidenreich

RELEASING OFFICIAL SIGNATURE

2

NUMBER OF PAGES (INCLUDING COVER)

Reference: Congressman Scarborough's letter, 14 Mar 95; and response by Col Stephen Bull,  
24 Mar 95; and the threat simulator list I developed, 21 Apr 95.

24 Mar	21 Apr	24 MAR	21 APR
<u>Remain</u>	<u>Emitter-Only</u>	<u>MOVE</u>	<u>TRANSFER</u>
TWS-1	SYSTEM 1 (1)	SAOS III M	SYSTEM 6
TWS-2	SYSTEM 1 (2)	SAOS VIII R	SYSTEM 7
TWS-3	SYSTEM 2	SAOS XI	SYSTEM 8
MLQ-7Y	NOT INCLUDED	SAOS XI M	SYSTEM 9
NP155	SYSTEM 4	WEST II R	SYSTEM 13
SAOS IV SS	SYSTEM 3	WEST XI R1	SYSTEM 14 (1)
SAOS X	SYSTEM 6	WEST XII R2	SYSTEM 14 (2)
SAOS VIII R	SYSTEM 5	FREGATVERA	SYSTEM 12
SAOS XII SS	SYSTEM 7	INAWIK P	SYSTEM 10
WEST IB	SYSTEM 8	SAOS IX P	SYSTEM 5
WEST IC	SYSTEM 9		
WEST IA	SYSTEM 10		
QAC-554	SYSTEM 11		

Please call if you have any further questions. Thanks.

Col Was Heidewich

DSN 525-7827, (POS) 275-7827

FAX X-2279

# Document Separator



SENT BY:TEST FOR THE BEST

: 1-30-95 : 15:53 : TECOM HQ. PA&E OPC-

9048829651:# 6/10



DEPARTMENT OF DEFENSE  
BOARD OF OPERATING DIRECTORS FOR TEST AND EVALUATION

Department of the Army  
HQ, U.S. Army Test and Evaluation Command  
Aberdeen Proving Ground, MD 21005-5055

Department of the Navy  
HQ, Naval Air Warfare Center  
Arlington, VA 22243-6000

Department of the Air Force  
HQ, Air Force Materiel Command  
Wright-Patterson AFB, OH 45433-5714



AMSTE-PL (5)

30 JAN 1995

MEMORANDUM FOR Mr. Gary Holloway, Chairman, Test and Evaluation Reliance and Investment Board, U.S. Army Test and Evaluation Command, Aberdeen Proving Ground, MD 21005-5055

SUBJECT: Initial Preparations for Development of an Electronic Combat (EC) Consolidation Master Plan

1. Reference memorandum, T&E Executive Agent 800, 29 Nov 94, SAB (encl 1).
2. Encl 1 is forwarded for your action. While development of the Master Plan cannot be completed until after the results of BRAC 95 have been released, the task should be initiated now by scoping the effort and developing a POA&M. You should be prepared to brief the POA&M at the next BoOD meeting scheduled for 23-24 Feb 95.
3. My staff POC is Mr. Francis Bartosik, DSN 298-1186...

Encl 1

*Richard W. Tragemann*  
RICHARD W. TRAGEMANN  
Major General, USA  
Chairman

CF:

RAADM William E. Newman, Commander, Naval Air Warfare Center, 1421 Jefferson Davis Highway, Arlington, VA 22243-6000

MG Francis C. Gideon, Jr., Director, Operations, HQ AFMC/DO, U.S. Air Force Materiel Command, 4225 Logistics Ave, Suite 2, Wright-Patterson AFB, OH 45433-5714

Commander, Naval Air Warfare Center Weapons Division, ATTN: 4K0000E/PO3C (Mr. George Smith), Point Mugu, CA 93042-3000

Commander, Air Force Development Test Center, AFDTIC/CA (ATTN: Dr. D. Stewart), Suite 117, 101 W. D. Avenue, Eglin AFB, FL 32542-5495

*cy: DA  
TWCA*



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# Document Separator

# ADVANCED LOGISTICS CONCEPTS, INC.

## SUBJECT:

Les Farrington,

Dick Gillis

per Dick Gillis 5/25  
KC10/KC135  
\$6,000 tanker cost  
per hr -  
18K for 3-hr.  
mission

Jim Owsley

From : Richard F. Gillis

Information Call: 904 654 9504

At: Advanced Logistics Concepts, Inc.

Pages: 9

My Fax Number : 904 654 6992

# **DOD ELECTRONIC COMBAT TESTING & EVALUATION**

- **BACKGROUND**

- **EC EQUIPMENT EXPENSIVE, COMPLEX & SOFTWARE INTENSIVE FORCE MULTIPLIER**
- **MUST TEST AGAINST MULTIPLE THREAT SYSTEMS WHICH ARE CONSTANTLY CHANGING**
- **THREAT SYSTEMS, SIMULATORS & ACTUAL FOREIGN EQUIPMENT, MUST REPRESENT EXPECTED ADVERSARY CONFIGURATION**
- **ACTUAL IADS & MULTIPLE AAA ENVIRONMENTS, MISSILES & GUNS, TOO EXPENSIVE TO DEPLOY - SIMULATION USED**
- **OAR TESTING INSTRUMENTATION MUST BE ACCURATE ENOUGH TO MEASURE EC CAUSED TRACKING ERRORS & MISSILE MISS DISTANCE**
- **TEST RESULTS MUST BE REPEATABLE TO ASSURE EC EFFECTIVENESS**

# **DOD ELECTRONIC COMBAT TESTING & EVALUATION**

- **BACKGROUND (CONT)**
  - **QUESTIONABLE EC TESTING RESULTS DELAYED DEVELOPMENT, PROCUREMENT & DEPLOYMENT**
    - » **ALSO RESULTED IN INEFFECTIVE SYSTEM DEPLOYMENTS - ALQ-161**
    - » **CAUSED CONGRESSIONAL CONCERNS DUE TO EC SYSTEMS COST vs EFFECTIVENESS**
  - **RESULTED IN CONGRESSIONAL DIRECTION TO DEVELOP REALISTIC EC TEST FACILITIES**
    - » **HARDWARE-IN -THE LOOP, MAN-IN-THE- LOOP SIMULATORS**
    - » **OARs WITH THREAT SIMULATORS AND ACTUAL EQUIPMENT THAT COULD PROVE EC EFFECTIVENESS**

# **DOD ELECTRONIC COMBAT TEST & EVALUATION**

- **BACKGROUND (CONT)**
  - **CONGRESSIONAL CONCERN DEMONSTRATED AGAIN IN 1995 DEFENSE AUTHORIZATION ACT**
    - » **DIRECTED DOD TO SUBMIT AN EC MASTER PLAN TO THE CONGRESS BEFORE CHANGING THE EC TEST INFRASTRUCTURE**
  - **SIMILARLY, SENATE APPROPRIATIONS COMMITTEE FY '95 REPORT**
    - » **DIRECTED DOD TO PROVIDE A STUDY CLEARLY DEMONSTRATING THAT ELECTRONIC LINKING OF HARDWARE-IN-THE-LOOP EC TEST FACILITIES WAS INFEASIBLE BEFORE CONSOLIDATING THESE FACILITIES**

# **DOD ELECTRONIC COMBAT TESTING & EVALUATION**

- **DOD EC TEST CAPABILITY**
  - **OARs**
    - » **EGLIN - DT&E, OT&E, TRAINING**
    - » **CHINA LAKE - OT&E**
    - » **NELLIS - TRAINING, OT&E, LIMITED DT&E**
  - **ISTFs - HITL INTEGRATION FACILITIES**
    - » **EGLIN - PRIMES**
    - » **PAX RIVER - ACETEF**
  - **HITL SIMULATION FACILITIES**
    - » **REDCAP - AIR DEFENSE PENETRATION**
    - » **AFEWES - TERMINAL EFFECTS (AAA DEFENSES)**
    - » **PT MUGU - LIMITED TERMINAL EFFECTS**
  - **EDWARDS HAS NO EC CAPABILITY**

# **DOD ELECTRONIC COMBAT TEST & EVALUATION**

- **RECOMMENDATIONS TO BRAC & COSTS**
  - **CLOSE EMTE, REDCAP & AFEWES**
    - » **EMTE EQUIPMENT TO NELLIS**
    - » **REDCAP & AFEWES EQUIPMENT TO EDWARDS**
  - **AF ESTIMATED COSTS & SAVINGS**
    - » **EMTE TO NELLIS - ONE TIME COSTS - \$6.2m  
SAVINGS \$48M**
    - » **REDCAP TO EDWARDS - ONE TIME COSTS - \$1.7M  
SAVINGS \$11M**
    - » **AFEWES TO EDWARDS - ONE TIME COSTS - \$5.8M  
SAVINGS \$5.8M**



# DOD ELECTRONIC COMBAT TEST & EVALUATION

- **RECOMMENDATIONS TO BRAC & COSTS**
  - **INDEPENDENT\* ESTIMATE OF COSTS & SAVINGS**
    - » **EMTE TO NELLIS - ONE TIME COSTS \$16.1M**  
**SAVINGS - NEG \$88M** *TDY Tanker costs*
    - » **REDCAP TO EDWARDS - ONE TIME COSTS \$13M**  
**SAVINGS - NEG \$9.1M** *\$ 44 M*
    - » **AFEWES TO EDWARDS - ONE TIME COSTS \$100M**  
**SAVINGS - NEG \$92M** *(112)*
  - \* **REDCAP BY CALSPAN, AFEWES BY LOCKHEED, EMTE BY OKALOOSA COUNTY EDC**

# **DOD ELECTRONIC COMBAT TEST & EVALUATION**

- **RECOMMENDATIONS TO BRAC -  
IMPLICATIONS**
  - **CAPABILITY LOST - UNREALISTIC AF BUDGET  
ESTIMATE TO RECREATE EMTE, REDCAP & AFEWES IN  
WESTERN US**
  - **LIMITATIONS IMPOSED**
    - » **DATA REDUCTION - EDWARDS/NELLIS  
CAPABILITIES ARCHAIC**
    - » **OAR RANGE TIME - REDUCED BY 2/3 W/O TANKERS  
DUE TO DISTANCE FROM EDWARDS TO NELLIS  
RANGE**
      - **IF TANKERS USED COSTS GO UP**
    - » **COMPETITION BETWEEN TESTERS & TRAINERS  
FOR NELLIS RANGE TIME**
  - **BOTTOM LINE - HIGHER COST TO  
TAXPAYERS/CUSTOMERS**

# **DOD ELECTRONIC COMBAT TEST & EVALUATION**

- **RECOMMENDATIONS TO BRAC**
  - **CIRCUMVENT WILL OF CONGRESS**
    - » **REPORTS & STUDIES CALLED FOR BY CONGRESS NOT DELIVERED**
    - » **CONGRESS LOSES OPPORTUNITY TO EVALUATE DOD PLAN BEFORE IRREVERSIBLE CHANGES MADE TO DOD EC TEST INFRASTRUCTURE**
  - **SHOULD BE DISAPPROVED AND CONGRESS GIVEN THE OPPORTUNITY TO STUDY DOD'S MASTER PLAN FOR EC**

# Document Separator

DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS UNITED STATES AIR FORCE



120 JUN 1995

MEMORANDUM FOR BASE CLOSURE COMMISSION (Mr. Francis A. Cirillo, Jr.)

FROM: HQ USAF/RT

SUBJECT: Electronic Combat (EC) Consolidation Response

This responds to your verbal tasker of June 20, 1995. We have responded with the information requested by Commissioner Davis during the briefing on REDCAP, AFEWES, EMTE, and the Nellis Complex. The draft EC Master Plan and a copy of an Air Force developed Tri-Service Test & Evaluation Activities slide are attached.

I trust this information will be responsive to your request. Maj Michael Wallace, 695-6766, is my point of contact.

A handwritten signature in cursive script, reading "Jay D. Blume, Jr.", written in black ink.

JAY D. BLUME, Jr., Maj Gen, USAF  
Special Assistant to the Chief of Staff  
for Realignment and Transition

Attachments:

1. Electronic Combat Consolidation Master Plan, Rev 0, 13 Jun 95 (Draft)
2. Tri-Service T&E Activities Slide

**DRAFT****ELECTRONIC COMBAT CONSOLIDATION MASTER PLAN****1.0 PURPOSE**

The purpose of this master plan is to delineate the process by which Department of Defense (DoD) Electronic Combat (EC) test resources will be consolidated. The primary goals of this consolidation plan are to save operations and maintenance (O&M), and improvement and modernization (I&M) funds while simultaneously minimizing impacts upon customers which utilize these resources. This plan is intended to satisfy requirements of the FY95 House Armed Services committee language, which call for its development. In this context, the term "EC" is used interchangeably with "Electronic Warfare," although the latter term is more inclusive, the congressional language specifies "EW."

**2.0 STRUCTURE**

This plan will delineate consolidations by the Army, Navy, and Air Force. The following information will be provided: a brief description of affected systems, timeline for the transfer, and list of the OPRs for the consolidation effort.

**3.0 SERVICE'S CONSOLIDATION EFFORTS****3.1 U.S. ARMY CONSOLIDATION EFFORTS**

U.S. Army right-sizing-reshaping process of FY94: Discontinuance of the U.S. Army Electronic Proving Ground (EPG), and transfer of EPG's mission and resources to the U.S. Army White Sands Missile Range (WSMR). This action eliminated 24 civilian authorizations. A cost avoidance of \$318K occurred for those positions which were vacant; a cost avoidance of \$518K (customer funding) and cost reduction of \$346K (institutional funding) occurred. These savings amount to approximately \$1.2M.

**Large Scale EW Aircraft**

Due to funding reductions and the approaching end of serviceable life of the two Navy King Crow (NKC-135A) aircraft, of which one aircraft was removed from service in September 1994. The remaining King Crow NKC-135A is scheduled to be removed from service in September 1995. After September 1995, the only large EW aircraft capable of providing high power Stand-Off Jamming (SOJ) support will be the Big Crow Aircraft (NKC-135E).

The current Big Crow capability has been identified as capable of taking over the King Crow mission; however, a single Big Crow NKC-135E cannot provide the two direction simultaneous jamming as required in certain scenarios. Therefore, a second aircraft is required.

Recent initiatives have been undertaken by the Navy AEGIS Program Office, the Navy Test and Evaluation Office, the Control Test and Evaluation Improvement Program (CTEIP), and the OSD T&E resource management organization. These initiatives along with concurrence of the

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Big Crow Program Office (BCPO) have resulted in the decision to outfit and reconfigure a second NKC-135E aircraft.

Total Navy requirements for the aircraft were stated at 621 to 823 flight hours over the FY 96-99 period. DoD wide requirements for that period range from just under 700 flight hours in FY 96 to nearly 1000 flight hours in FY 99.

The BCPO has identified a second NKC-135E aircraft TN #8050 which is scheduled to enter Phased Depot Maintenance (PDM) on 29 June 1995. While in PDM, #8050 will also be modified and upgraded to meet in initial IOC of April 1996 so as to support AEGIS test requirements. Upon final completion of this aircraft's modifications, it will have the same capabilities as the existing Big Crow NKC-135E aircraft.

It was concluded by the OSD Test and Evaluation community through the Test Resources Enhancement Committee (TERC) that the acquisition and outfitting of a second NKC-135E by the BCPO was essential. It will minimize interruption of EW and ECM support directed by DOT&E and service OTA's for the AEGIS Program and other vital programs. Consolidation of operations under BCPO will eliminate the duplicity of EW assets and fulfill ECM test requirements previously employing three large scale aircraft, 2 NKC-135 and 1 EC-124 aircraft. The EC-124 is used specifically for U.S. Navy training. An estimated of approximately \$7M per year will result from the consolidation of ECM testing aircraft under the Big Crow Program Office.

### 3.2 U.S. NAVY CONSOLIDATION EFFORTS

In 1991, in anticipation of the Defense Management Review (DMR), the Secretary of the Navy (SECNAV) approved a plan for major consolidation and realignment of Navy Research and Development (R&D) and Test and Evaluation (T&E) facilities and capabilities. Under this plan, the Navy disestablished a large number of existing R&D and T&E facilities and consolidated essential core capabilities into four full-spectrum warfare centers and a corporate laboratory. These commands, illustrated in Figure 1, include the:

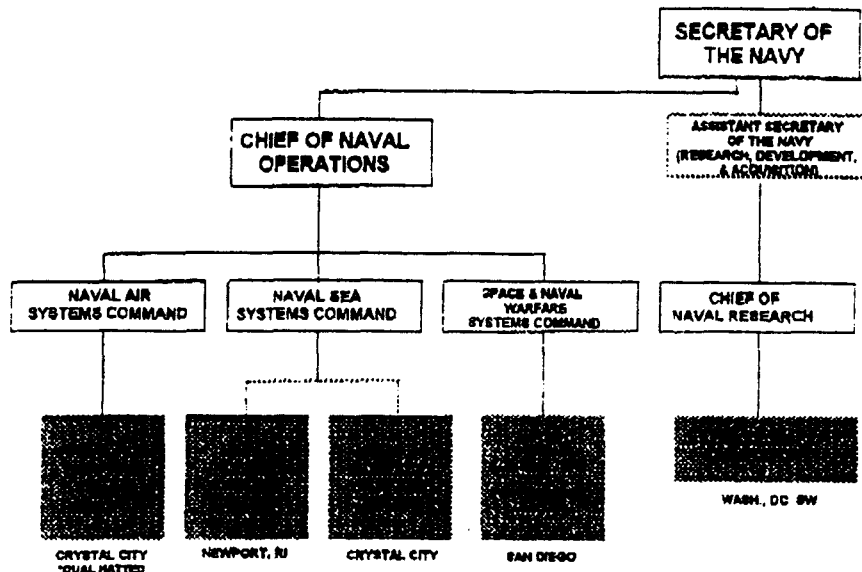
- Naval Air Warfare Center (NAWC) headquartered in Arlington, VA (Crystal City),
- Naval Undersea Warfare Center (NUSC) headquartered in Newport, RI,
- Naval Surface Warfare Center (NSWC) headquartered in Arlington VA (Crystal City),
- Naval Command, Control, and Ocean Surveillance Center (NCCOSC) headquartered in San Diego, CA, and
- Naval Research Laboratory (NRL) headquartered in Washington, DC.

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## DRAFT



Navy Consolidation — What We Have Done on Our Own Initiative  
Figure 1

Electronic Warfare (EW) R&D and T&E for both the Surface and Subsurface Navy have always been centered at NRL and at the Dynamic RCS measurement capability at NSWC, Carderock Division, MD, so little consolidation of EW T&E was required to support these Navy Warfare specialties.

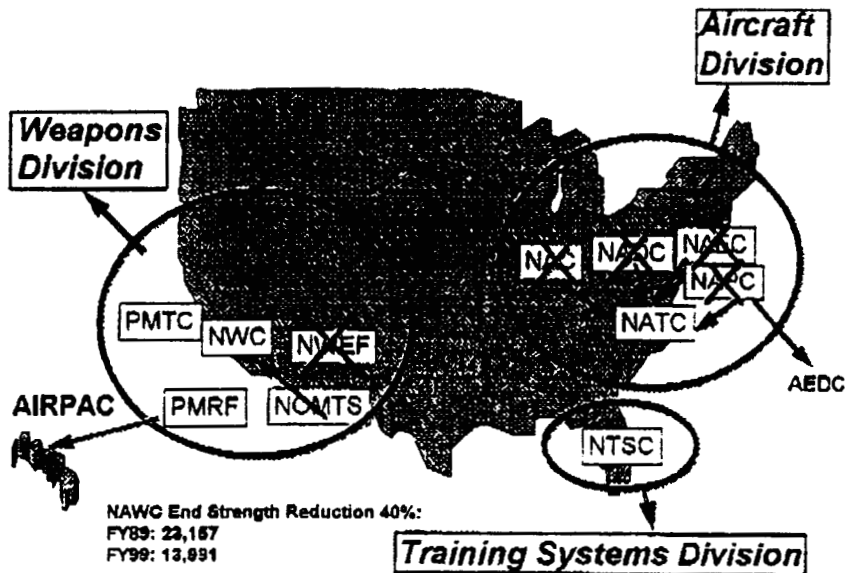
Navy consolidation resulted in the following NAWC organization to support Naval Aviation:

- Weapons Division (WD):
  - China Lake
  - Pt. Mugu
  - Det. White Sands
  - Det. Albuquerque
- Training Systems Division (TSD):
  - Orlando
- Aircraft Division (AD):
  - Patuxent River
  - Trenton
  - Indianapolis
  - Warminster
  - Lakehurst

The Navy's realignment initiative and the Base Realignment and Closure (BRAC) process have reduced the Navy infrastructure for T&E and in-service engineering from 30 facilities in 1989 to a projected 17 in 1995. After BRAC 95, the NAWC will be further reduced, as illustrated in figure 2, to:

**DRAFT**

- Weapons Division (WD):
  - China Lake
  - Pt. Mugu<sup>1</sup>
  - Det. White Sands
- Training Systems Division (TSD):
  - Orlando
- Aircraft Division (AD):
  - Patuxent River



NAWC T&E Closures/Consolidations/Realignments  
Figure 2

The mission of the NAWC is:

"To be the navy's full spectrum center for research, development, test & evaluation, engineering, and fleet support of maritime air platforms, autonomous air vehicles, missiles, weapons, and sensors used to conduct air warfare, and to be the principal Navy center for acquisition and product support of training systems."

### Primary EW T&E Capabilities in Naval Aviation

The mission of the NAWC includes providing infrastructure to support all EW T&E capability for Naval Aviation, particularly against the Naval and littoral warfare threat. The NAWC maintains one Open Air Range (OAR), one Installed System Test Facility (ISTF), one Hardware-in-the-Loop (HITL) facility, and three specialized Radar Cross Section (RCS) signature measurement facilities, each essential to the EW T&E process. These facilities include:

<sup>1</sup> Added for consideration for reduction/closure by BRAC 95.

**DRAFT**• **OAR:**

- The Navy's primary EW OAR is the Electronic Combat Range (ECR) at NAWC-WD, China Lake, CA. The ECR is the only major Navy free-space test facility for Airborne EW systems and tactics. It contains both shipboard and land-based air defense threats as well as blue and gray systems, and a central control room with integrated instrumentation, telemetry and tracking systems. The threat systems include actual threat systems, Emitter-Receiver-Processors (ERP), Emitter-Simulators (ES), and surrogate radar systems. The threat resources are used to conduct comprehensive technical testing, realistic operational evaluation, and tactics development for an aircraft or EW system. This testing is required to determine the ability of aircraft and EW systems to meet the operational requirements for which they were designed, and to support production decisions. The ECR is located on the 800 square-mile DoD withdrawn Randolung Wash/Mojave "B" area in southern California just west of Death Valley. The location offers dedicated airspace with minimum electromagnetic radiation interference in a region selected for its remoteness and relative absence of population. The ECR is a part of China Lake's range complex which consists of the land and overhead restricted air spaces R-2505, R-2506, R-2524 and R-2509.

• **ISTF:**

- The Navy's primary ISTF is the Air Combat Environment Test and Evaluation Facility (ACETEF) at NAWC-AD, Patuxent River. The ACETEF provides an ISTF centered around a tactical sized anechoic chamber and transport sized shielded hanger to conduct test and evaluation of complex, highly integrated, adaptive aircraft systems in a multi-spectral, realistic simulated combat environment. ACETEF provides sensor stimulation, aircraft simulation, and complex warfare analysis. The ACETEF provides a real-time secure test capability for red and blue closed loop, man-in-the-loop testing of the total weapon system including threat realistic radar signals, electro-optical signals, laser signals, communications and data-link signals, jamming and electronic countermeasures to stimulate the program vehicle, attached weapon systems and aircrew. The Electronic Combat (EC) Stimulation Branch provides sensor stimulation to a system under test through four functional laboratories. The Electronic Warfare Integrated Systems Test Laboratory (EWISTL) provides open-loop simulation of RF and EO/IR red/gray/blue weapon systems. The Threat Air Defense Lab (TADL) provides closed-loop simulation of red weapon systems. The Comm, Nav, IFF Lab (CNIL) provides open and closed-loop simulation of blue and red communications (voice, data link, sat comm.) and Identification Friend or Foe (IFF) signals. It also provides open-loop simulation of navigation signals such as the Global Positioning System (GPS). The Offensive Sensors Lab (OSL) provides simulators that generate IR targets for I ST and Targeting FLIR (TFLIR) and RF targets for tactical fire control radar. Dense and realistic threat environments are available in this facility for technical evaluation of a system integrated into a host platform.

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**DRAFT**• **HITL:**

- The Navy's primary EW HITL test facility is the Electronic Combat Simulation and Evaluation Laboratory (ECSEL) at NAWC-WD, Point Mugu, CA. The ECSEL is a comprehensive Naval anti-aircraft terminal threat HITL laboratory facility capable of simulating multiple threats in a closed loop, real time, dynamic environment. The facility simulates RF and IR signatures of the Naval threat in a secure enclosure. The key features of ECSEL are actual RF, real time, and man-in-the-loop testing with the capability to evaluate effectiveness in a dense background environment. ECSEL is used during EW system and technique development, EW system integration (with other EW systems), pre/post flight test support, and Fleet EW software support. ECSEL supports complete evaluation of EW systems and suites at the bench level using high density, high fidelity threat simulators. ECSEL works closely with NAWC-WD, Point Mugu Electromagnetic Systems Division to provide multi-spectral test of EW systems.

• **Dynamic RCS Range**

- The Atlantic Test Range (ATR) at Patuxent River is the Navy's primary Dynamic RCS measurement capability. They perform RCS, Jam to Signalation, and chaff bloom rate measurements of full size aircraft while in-flight. Pulse-to-pulse data collection to determine probability distribution function (PDF). Real-time RCS measurements, simultaneous multi-frequency measurements across 850 MHz -35 GHz, preflight-profile generation to minimize flight time. Real-time RCS measurements data products are polarplots and statistics (PDF) of eight signal sources. Post-processing data products include high resolution down-range profiles and 2-D ISAR imagery. The RCS measurements are made in an area of 2400 square miles of restricted airspace.

• **Outdoor Static RCS Range**

- The Junction Ranch Range at China Lake is the Navy's primary Outdoor Static RCS Measurement Facility. They operates both a Outdoor static Look-Down and a ground-bounce RCS measurement range capability. The look down range can perform measurements with a 10-degree look-down angle from antennas on a mountain peak to a 78-foot by 110-foot water site. The look-down angle to the 80-foot by 140-foot tilt deck can be varied from 5 to 32 degrees. Targets of up to 30-foot, 10,000-pound turntable on a tilt-deck or in the water site. The ground bounce range is a 4000 ft long range with target locations at 700 ft and 4000 ft. Target supports include a 40-foot, 500 lb pylon; 30,000 lb foam columns; and a 30-foot 100,000 lb. Near real-time processing to generate all typical RCS data products, such as RCS versus azimuth, ISAR images, global range and RCS plots, medians, etc. A unique feature of the Junction Ranch is its extremely quiet radio frequency environment.

• **Indoor Range**

- The Radar Reflectivity Laboratory at Point Mugu is the Navy's primary indoor static RCS measurement facility capable of measuring far-field RCS, and bistatic RCS

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measurements of full size missiles, small aircraft, ship models, and components. It has full processing capability to produce global RCS displays, high-resolution imaging, range Doppler plots, target signature modeling, background/clutter modeling and 3-D imaging. Targets size includes 30 feet long, 30 feet wide, up to 3000 lbs.

### Downsizing Navy EW T&E

The mission of each facility is unique within Navy and DoD EW T&E. There is virtually no duplication. Closure of any of these facilities cannot be considered without re-creating the entire capability at one of the other sites. Such a large cost for a small payback is prohibitive and would yield no payoff. Therefore, further physical consolidation of the Naval Aviation EW T&E infrastructure is not viable, nor a reasonable consideration for the Navy.

Downsizing in place has been a consideration for streamlining the Navy's EW T&E capability. The ability to downsize in place is always offset by the requirement to address changing threats and the introduction of advanced technology EW equipment and techniques. While some older T&E capabilities can be trimmed or eliminated, advanced capabilities must be developed which require new investment and manpower. Thus downsizing in place may not result in as significant net reduction in budget as otherwise expected, but does control the rate of growth.

Despite these pressures for growth, with reduced investment and MRTFB budgets, there has been considerable downsizing. Navy EW T&E investment for Aviation has been reduced \_\_% from 1989 to 1995, and will continue to decrease. The Major Range and Test Facility Base (MRTFB) for EW T&E has decreased \_\_%. Personnel have been drawn down \_\_%. Some specific downsizing initiatives taken or planned within Navy EW T&E facilities include:

### Navy EW T&E Resource Investment Strategy

In 1991, in response to the shrinking budget and evolving world threat environment, Navy T&E took another initiative. The Navy developed the U.S. Navy EW T&E Resource Investment Strategy to address the changing T&E needs of Navy EW systems. This Strategy is structured to meet current shortfalls and projected Navy EW T&E requirements, recognize the bounds of post-Cold War budgets and acknowledge the need for increased tri-Service Reliance to satisfy T&E shortfalls. The objective of this Strategy is to minimize development cost and time delays associated with fielding advanced threat T&E assets. To effectively meet the total Navy EW T&E requirement, the Navy will:

- Provide full coordination, through EW Reliance, with other Service programs and OSD resource programs such as the Central Test and Evaluation Investment Program (CTEIP), the Resource Enhancement Project (REP), and the Construction of a Radar that Operationally Simulates Signals Believed to Originate Within the Soviet Union (CROSSBOW-S) program.

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- Implement design-to-cost through acquisition or use of existing systems, subsystems or technology from all sources prior to committing limited Navy funds to expensive development. Specifically:
  - Implement inter-Service sharing of EW T&E resources.
  - Acquire available foreign threat systems (if supportable on a life-cycle cost basis).
  - Pursue OSD resources for timely acquisition or development and fielding of T&E assets to meet critical T&E requirements.
- Aggressively constrain the cost of Navy simulator developments, while ensuring threat resource designs meet specific T&E requirements for scheduled tests.
- Conduct an annual analysis of EW T&E needs resulting in a list of prioritized needs accompanied by proposed solutions.
- Coordinate requirements for life cycle support for EW T&E resources with the Navy MRTFB sponsor.
- Respond to priority Navy (and other Service) T&E requirements.

The Strategy is highly inter-dependent on Army and Air Force programs, the support of OSD T&E resource programs, and Foreign Materiel Programs. Reduction of EW T&E funding for any element of these resource programs directly impacts the Navy. All Service and DoD investment programs must reflect a coordinated investment strategy. Initiatives pursued through this EW T&E Investment Strategy will allow the Navy to continue to meet emerging requirements in a constrained budget climate.

**3.3 U.S. AIR FORCE CONSOLIDATION EFFORTS**

EC consolidation efforts for the Air Force include the transfer of the Electromagnetic Test Environment (EMTE) functions currently located at the Air Force Development Test Center (AFDTC) to the Nellis AFB range complex. The objective is to enhance the test capabilities and save funds by effecting an orderly and efficient transition of EC Test and Evaluation (T&E) responsibilities from Eglin AFB to Edwards AFB and the Nellis Range Complex. This plan provides for the transfer of EC Test Process management and execution: it involves transferring the Electronic Warfare (EW) Single Face To Customer (SFTC) office, Responsible Test Organization (RTO)/Participating Test Organization (PTO) responsibilities, and all EC T&E resource responsibilities including Modeling and Simulation, Hardware-in-the-Loop (HITL), Installed Systems Test Facility (ISTF) and Open Air Ranges (OAR). The result will be a single organization (the Air Force Flight Test Center (AFFTC)) for customers to turn to for aircraft and avionics (including EC systems/functions) test support. Currently, the following capabilities are identified for transfer, (a detailed transfer plan follows):

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- The Air Force Electronic Warfare Evaluation Simulator (AFEWES) located at Air Force Plant 4, Fort Worth, Texas.
- The Real-Time Electromagnetic Digitally Controlled Analyzer-Processor (REDCAP) located at CALSPAN Corp., in Buffalo, New York.
- The EMTE.
- All EW SFTC and EC RTO/PTO responsibilities

**3.3.1 Air Force Electronic Warfare Evaluation Simulator (AFEWES)**

The AFEWES is a comprehensive airborne and land based anti-aircraft terminal threat HITL laboratory facility capable of simulating multiple threats in both open and closed loop, real time, dynamic environments. The facility simulates RF and IR signatures of threats in a secure enclosure. The key features of AFEWES are actual RF/waveform, real time, and man-in-the-loop testing with the capability to evaluate effectiveness in a secure, dense background environment.

Those AFEWES capabilities for continued implementation of the EW Test Process will be transferred from the Air Force Plant 4 facility in Ft Worth, Texas to AFFTC. For the purposes of this plan, referral to AFEWES means more than short term management of the existing AFEWES program. It also means re-establishment of essential AFEWES capabilities at AFFTC and AFDTC - selected *parts* of AFEWES, not re-creating the *whole* AFEWES facility. While the Air Force remains committed to providing essential HITL capabilities in support of EW testing, those capabilities need not (and indeed, for cost purposes, should not) be physically separated from integration laboratories, ISTF, or OAR facilities.

Specific AFEWES capabilities slated for reconstitution include:

- IR Labs - Carco & Bendix (to be reconstituted at AFDTC)
- MEG - Basic and Advanced
- Reconfigurable AI & Development Facility
- Bus Snapshot Analyzer
- SA-6M & 11M
- SA-10
- JETS & JEDI
- TACAN/IFF
- Clutter Generator
- Vendor Documentation & Secured Storage
- Test Observation Center
- Waveguide Networks
- Test Director's System
- Test Equipment, Carts/Work Stations
- Power Distribution Units

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The timeframe for physically moving AFEWES capabilities is FY97 - FY01. Specific start and completion dates within this window will be driven by customer requirements.

Table 1 lists actions required to move the IR labs to AFDTC (Note: The IR labs moving to AFDTC is predicated on fielding the IR portion of the ECIT on schedule. The IR SAMS are to transition to AFFTC upon fielding ECIT's IR capability )

Table 2 lists required actions for moving essential AFEWES capabilities to AFFTC.

**DRAFT****TABLE 1****Time Phased Actions  
Concept of Operations - IR Lab (Eglin)**

<u>DESCRIPTION</u>	<u>AGENCY</u>	<u>SCHEDULE COMPLETION</u>	
		<u>START</u>	<u>DATE</u>
Develop Plan	46 TW/TSWG	1 Oct 96	1 Apr 98
Transfer Software	46 TW/TSWG	1 Oct 96	30 Sep 97
OJT for VITRO	46 TW/TSWG VITRO	1 Oct 97	30 Sep 98
Rehost Software in GWEF	46 TW/TSWG	1 Jan 97	30 Jan 98
ID GWEF Mods	46 TW/TSWG	1 Jul 97	1 Oct 97
Benchmark Testing	46 TW/TSWG VITRO	1 Oct 97	1 Apr 98
Label Equipment	46 TW/TSWG VITRO	1 Oct 97	1 Jan 98
Modify GWEF	46 TW/TS	1 Jan 98	1 Jul 98
Disassemble Equipment	46 TW/TSWG VITRO	1 Oct 98	1 Jan 99
Transport Equipment	46 TW/TSWG	1 Aug 98	1 Nov 98
Reassemble Equipment	46 TW/TSWG VITRO	1 Oct 98	1 Jan 99
Conduct V&V	46 TW/TSWG	1 Jan 99	1 Apr 99

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TABLE 2

Time Phased Actions  
 Concept of Operations - RF (Edwards)

<u>DESCRIPTION</u>	<u>AGENCY</u>	<u>SCHEDULE COMPLETION</u>	
		<u>START</u>	<u>DATE</u>
Site Visit	412 TW/EWWA	9 Oct 95	20 Oct 95
Develop Plan	412TW/EWWA	30 Oct 95	30 Sep 96
100% Ph 1 Design	412 TW/EWD	1 Oct 95	1 Feb 96
Phase 1 Construction	412 TW/EWD	1 Mar 96	10 Feb 97
Transfer Software	412 TW/EWWA	1 Oct 96	31 Mar 97
OJT	412 TW/EWWA	1 Oct 96	30 Sep 97
Benchmark Testing	412 TW/EWWA	1 Nov 96	1 Apr 97
Rehost Software in A PIC	412 TW/EWWA	1 Jan 97	30 Sep 97
ID/Label Equipment	412 TW/EWWA	1 Jun 97	31 Aug 97
Disassemble Equipment	412 TW/EWWA	1 Oct 97	1 Jan 98
Transport Equipment	412 TW/EW	1 Nov 97	31 Mar 98
Reassemble Equipment	412 TW/EWWA	1 Jan 98	30 Nov 98
Conduct V&V	412 TW/EWWA	1 Dec 98	31 Aug 99

### 3.3.2 Real-Time Electromagnetic Digitally Controlled Analyzer-Processor (REDCAP)

The Real-Time Electromagnetic Digitally Controlled Analyzer-Processor (REDCAP) is a HITL representation of several versions of an Integrated Air Defense System (IADS) that tests the effectiveness of EW/EC to counter multiple radars and C<sup>3</sup> nets to obtain the data that cannot be extrapolated from the results of single radar simulations. REDCAP provides RF HITL radars and data links, manned data fusion and weapons control posts, and manned interceptor stations in a multi-level-security building. The RF HITL simulations at REDCAP are Early Warning, Ground Controlled Intercept, Height Finder, and Airborne Early Warning (SUAWACS) radars, plus voice and data communication links.

REDCAP capabilities required for continued implementation of the EW Test Process will be relocated from the CALSPAN facility in Buffalo, New York to the AFFTC. For the purposes of this plan, referral to REDCAP means more than short term management of the existing REDCAP program. It also means re-establishment of essential REDCAP capabilities within the AFFTC - selected *parts* of REDCAP, not re-creating the *whole* REDCAP facility.

Specific REDCAP capabilities slated for reconstitution include:

- SCIF Gateway
- Remote Interface
- Reactive AI
- Off-line support
- SSDL
- UDL
- Classified material

The timeframe for physically moving REDCAP capabilities is FY97 - FY01. The schedule driver is an F-22 test scheduled for completion in FY 98/1. In any case, the dates within this window will be driven by customer requirements. As of 1 June 95, earliest date for equipment disassembly to begin is 1 Oct 97.

### 3.3.3 Electromagnetic Test Environment (EMTE)

The Air Force Development Test Center (AFDTC) is located on Eglin Air Force Base in northwest Florida.

AFDTC test and evaluation assets include 86,500 square miles of water test area and 724 square miles square miles of land space. EMTE resources are located within the available land area. The EMTE is complemented by airborne systems including instrumented aircraft, captive-carry seekers, and simulators for real-time measurement and analysis of electronic-counter measures (ECM)/electronic-counter-countermeasures (ECCM) environment. Specialized instrumentation for data collection and analysis is available, including support for real-time merging of multiple data streams. Test support includes DT&E/OT&E of ECM, ECCM, electronic support measures (ESM), RF/EO/IR signal measurement and analysis, and aircrew training.

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Approximately 90 percent of EW T&E capabilities at Eglin AFB are duplicative of those already existing within the AFFTC. Thus, the planned consolidation will focus the entire EW T&E process at Edwards AFB. For test resources, AFEWES and REDCAP resources and management would transfer to Edwards, future EC ISTF upgrades will (as already programmed) be made at the Avionics Test and Integration Complex (ATIC), and Air Force operational EC test resources will be centralized on the Nellis Range Complex. Additionally, responsibilities for RTO, PTO, test investment planning, initial and detailed test planning, and test conduct and reporting not be unnecessarily duplicated. Thus, customers having requirements to evaluate aircraft or avionics (including EC) systems/functions will have single focal point (within the Flight Test Center) to assist them in meeting all Test Process needs. EC test customers currently using AFDTIC resources are envisioned to transition westward over a two-year time frame, following T&E capabilities. The target for final EC testing at Eglin is two years after implementation date, i.e., 1 Oct 97, assuming a Programming Plan (PPlan) 94-04 implementation date of 1 Oct 95. All dates in Table 3 assume an implementation date of 1 Oct 95 for the aforementioned PPlan.

Specifically, 17 of the 69 threat systems currently active or in temporary storage on the EMTE will be relocated to the Western US for continued operation under this PPlan. Two of these 17 systems are airborne pods. Three of the ground-based threat simulators (and both airborne pods) represent threats which are not currently available on a permanent basis at the Nellis Range Complex. Generally, systems will transfer to the Nellis Range Complex for unique customer requirements and/or spares. Eleven emitter-only systems (Table 4) will be retained within the Armament Systems Test Environment at Eglin AFB to support weapons testing. Management responsibility for all remaining threat simulators will transfer to AFFTC to support spare parts/surplus requirements.

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**Table 3  
EMTE Milestones  
Time-Phased Actions**

<u>DESCRIPTION</u>	<u>AGENCY</u>	<u>SCHEDULE START</u>	<u>COMPLETION DATE</u>
Develop Plan	412 TW/EW	Apr 94	Jul 94
Coordinate PPlan	412 TW/EW	Jul 94	Sep 94
Administrative Management for new EC tests transfer to Edwards AFB	46TW 412 TW/EW	1 Jun 95	1 Jun 95
AFEWES, REDCAP management transfer to Edwards AFB	46 TW 412 TW/EW	1 Feb 96	1 Oct 97
EW SFTC transfer to Edwards AFB	AFDTC/DRI 412 TW/EW	1 Feb 96	1 Aug 96
EC RTO Transfer (Phase I) to Edwards AFB	AFDTC/DRI 46 TW/EC/LG/OG 412 TW/EW	1 Feb 96	1 Aug 96
Infrastructure Develop on Nellis Range Complex	412 TW/EW	1 Oct 95	1 Oct 97
Personnel transfer to Edwards AFB and Nellis Range Complex	AFDTC/DRI 46 TW/XPM 95 ABW/MSC 412 TW/EW	1 Feb 96	1 Oct 97
Threat System transfer to Nellis Range Complex	46TW/CC 46TW/TS 412 TW/EW	1 Jun 96	1 Dec 97
EC RTO Transfer (Phase II) to Edwards AFB	AFDTC/DRI 46 TW/EC/LG/OG 412 TW/EW	1 Aug 96	1 Dec 97

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**Table 4**  
**Emitter-only systems retained within**  
**the Armament Systems Test Environment at Eglin AFB**

QRC-554  
West XA  
SADS XSS  
SADS XII SS  
HPISS  
WEST 1B/1C  
TWS-1  
TWS-2  
TWS-3  
SADS IV SS  
AN/MLQ-T4



# Tri-Service T&E Activities

T&E Functional Area	AF*	Navy	Army
AV	AFFTC, Edwards	NAWC, Pax River NAWC, Pt Mugu NAWC, Indianapolis NAWC, China Lake NAWC, Dahlgren NAWC, Warminster	Yuma Proving Grounds ATTC, Ft Rucker AQTD, Edwards EPG, Ft Huachuca
A/W	AFDTC, Eglin	NAWC, Pax River NAWC-WD, China Lake NAWC-WD, Pt Mugu NAWC, WSMR NSWC, Crane NSWC, Dahlgren NSWC, Indian Head	WSMR YPG RTTC, Redstone
EC	AFFTC, Edwards Nellis Complex	NAWC-WD, China Lake NAWC-AD, Pax River NSWC, Crane NAWC, Indianapolis NAWC, Pt Mugu	WSMR EPG, Ft Huachuca
DoD/ National Facilities	AEDC, Arnold AFDTC, Holloman		

\* After Intra-AF Realignments

# Document Separator



DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS UNITED STATES AIR FORCE



**MEMORANDUM FOR BASE CLOSURE COMMISSION (Mr. Francis A. Cirillo, Jr.)**

**FROM: HQ USAF/RT**

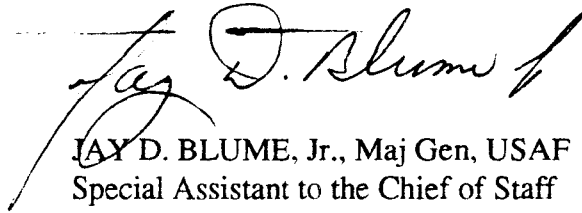
**SUBJECT: REDCAP & Electronic Combat (EC) Consolidation Response  
(RT Taskers 587 & 595)**

This responds to your verbal tasker of June 9, 1995 (950607-8) and FAX tasker of June 9, 1995 (950609-11). We responded to the questions on REDCAP, AFEWES, and EMTE posed by the DBCRC staff (Atchs 1-3). Additionally, we responded to Congressmen's Quinns questions regarding the relocation of REDCAP (Atchs 4-5).

We have heard references to the Board of Director (BOD) EC study and the FY95 Authorization Report requiring an EC Master Plan. We must state again that neither the EC BOD study nor the FY95 Authorization Report has any relation to the Air Force BRAC 95 process nor should they. The T&E JCSG process fully supports the EC consolidation actions to reduce excess T&E infrastructure and consolidate the currently fragmented EC test operations.

The Air Force believes that in aggregate full Electronic Combat consolidation achieved by the REDCAP, AFEWES, and Eglin (EMTE) recommendations provides the maximum operational benefit at a reasonable cost. However, each recommendation on a standalone basis is operationally sound and cost-effective.

I trust this information will be responsive to your request. Maj Michael Wallace, 695-6766, is my point of contact.

  
JAY D. BLUME, Jr., Maj Gen, USAF  
Special Assistant to the Chief of Staff  
for Realignment and Transition

**Attachments:**

1. Response to Mr. Ackerman's Questions for REDCAP Briefing, 14 Jun 95
2. Talking Paper on EC Consolidation
3. Information Paper On One Stop Shopping (OSS) Concept
4. Response to Congressman Quinn Letter to Mr Ackerman, 9 Jun 95
5. Point Paper on Congressman Quinn's Additional REDCAP Information

## ACRONYMS

AI	Airborne Interceptor
ATIC	Avionics Test Integration Complex
ECIT	Electronic Combat Integrated Test Capability
EW	Electronic Warfare
HITL	Hardware In The Loop
I&GTC	Integration and Generic Test Capability
ISTF	Installed System Test Facility
ROW	Rest of the World
LRU	Line Replaceable Unit
SFTC	Single Face to the Customer
SPO	System Program Office
SSDL	S-Band and IFF Data Link
SUT	System Under Test
TEMS	Test and Evaluation Mission Simulator
UDL	UHF Data Link

Evaluation (REDCAP) Briefing:  
June 14, 1995

1. What value is derived from locating the REDCAP's HITL mission with the ISTF facility at Edwards beyond logistical test efficiencies achieved from co-location?
2. Does the value derived exceed the cost efficiencies achieved from data linking?
3. What preparation costs, beyond the MILCON stated in the COBRA will be needed to configure the facility at Edwards, in order to make it compatible with the REDCAP's test simulation systems proposed to be transferred? Specifically, estimated contractor training costs, reconfigure Edwards facility, setup of test equipment, etc.
4. Will the "Man-in-the-Loop" capability of the REDCAP's HITL mission be transferred to Edwards or be disposed of?
5. Has a distributive interactive simulation network (DIS) capability between REDCAP and AFEWES to the BAF and the ACETEF been setup? Have any estimated costs been determined to create this capability?

Steve Ackerman/Analyst/Air Force Team  
Defense Base Closure and Realignment Commission

Mr. Ackerman's questions

1. **QUESTION:** What value is derived from locating the REDCAP's hardware-in-the loop (HITL) mission with the integrated system test facility (ISTF) facility at Edwards, beyond logistical test efficiencies achieved from collocation?

**ANSWER:** The EW Test Process recognizes that the flow of test activity from HITL to ISTF is an ITERATIVE one. A typical EW test doesn't just complete the HITL phase and then move on to the ISTF phase without several "regression" tests back in the HITL. Solving a difficult piece of EW systems integration work may require running HITL and ISTF concurrently. For programs such as the F-22, B-1B, B-2, and JAST, avionics are an integral part of the airframe and you cannot readily take these out and effectively test at REDCAP or AFEWES. Existing systems (such as F-16 RWR or jammer) are for the most part federated, that is they essentially operate independently and at best simply share information via a data bus. These systems can be tested at AFEWES and in some cases linked with other facilities such as REDCAP or ACETEF. But you do have the "logistics" cost of multiple systems and personnel. Most EW programs will not be able to afford to provide multiple test assets and personnel.

2. **QUESTION:** Does the value derived exceed the cost efficiencies achieved from data linking?

**ANSWER:** Yes, because as explained above, data linking cannot provide the required capability to test a fully integrated platform. Further, it is not a means of addressing future test facility requirements. Data linking can be useful for low transmission rate subjects, like target data information. It is of little use for tests requiring high data rate transmission, like SUTs with higher update rates exceeding the link bandwidths, or raw data conversion, signal encryption, and/or real time pulse-by-pulse events. AFEWES has been looking into injecting progressive time delays to see when miss-distance is affected by data latency, but this is not the same thing. Overlaying a simulation with another simulation (i.e, simulated time delays) in order to overcome the effects of data latency may prove useful, but it is a static fix to a dynamic problem, and may therefore be inappropriate to equate this fix with realism.

**3. QUESTION:** What preparation costs, beyond the MILCON stated in the COBRA, will be needed to configure the facility at Edwards, in order to make it compatible with the REDCAP's test simulation systems proposed to be transferred?

**ANSWER:** Minimal costs will be incurred in the areas mentioned, but as yet no specific amounts can be presented, due to the early phase of ECIT I&GTC program maturity.

**4. QUESTION:** Will the Man-in-the-Loop capability of the REDCAP's HITL mission be transferred to Edwards, or disposed of?

**ANSWER:** All REDCAP test assets will be transferred, but not all these assets will be reactivated at Edwards. Those not activated will be placed in storage. Those assets identified for reactivation will be done so within the new ECIT I&GTC. Edwards currently supports this type of testing capability in all three ATIC facilities, most notably in the TEMS. Man-in-the-loop capability will also be available at the open air range.

**5. QUESTION:** Has a distributive interactive simulation (DIS) network capability between REDCAP and AFEWES to the BAF and the ACETEF been set up? Have any estimated costs been determined to create this capability?

**ANSWER:** No, but the Defense Research Engineering Network will provide this capability. T-1 lines between the Nellis Open Air Complex and Edwards already exist. The current ECIT I&GTC architecture contains a firm requirement for DIS-standard connectivity to outside ATIC facilities. The ECIT Program will require the ability to encrypt the data streams both going and coming to the ATIC. Program costs will be developed by the I&GTC contractor as a result of the OPSEC defined during I&GTC Phase 1.



**TALKING PAPER  
ON  
EC CONSOLIDATION**

A basic idea behind the Air Force EC consolidation initiative is to facilitate the EW Test Process. This process recognizes the flow of test activity is an ITERATIVE one. For example, take the case of test activity transitioning from hardware-in-the-loop (HITL) to integrated system test facility (ISTF). A typical EW test doesn't just complete the HITL phase and then move on to the ISTF phase without several "regression" tests back in the HITL. Solving a difficult piece of EW systems integration work may require running HITL and ISTF concurrently. Collocation makes this iterative test process viable by making it possible for a single test staff to work on a controlled SUT configuration to perform iterative testing that is secure, repeatable, and cost-efficient. Correlation of test capabilities is another benefit. More than one SUT worked against some test capabilities, but not others. Bringing the bulk of test capabilities under one roof will help solve this problem. Finally, the availability of high value/cost SUTs must be considered. Most EW programs can't afford to provide dedicated test assets (ground crews, engineers, LRUs, aircraft) for testing that takes place simultaneously in multiple locations. Edwards collocation of EW test assets offers the opportunity for resource-strapped SPOs to accomplish testing with a minimal investment of time and money to meet demanding schedules.

Overlay this synergism with the near proximity of the Nellis Ranges, and similar benefits extend to the OAR arena. The idea is to have the customer support focus, i.e., the SFTC and EW Directorate, collocated with the test resources. It is an effort towards one stop EW customer support collocated with the test resources, under one roof as much as possible.

With respect to the FY 95 HASC Authorization Report, requiring an EC Master Plan for T&E prior to relocating any electronic testing assets, no significant problems are anticipated. The AFEWES, REDCAP, and EMTE relocations will be included as part of the development of the DoD EC Master Plan being drafted by the T&E Executive Agent and scheduled to be done prior to FY 97. The T&E JCSG process fully supports these actions to reduce excess T&E infrastructure and consolidates the currently fragmented EC test operations.

## **REDCAP MOVE**

The SCIF Gateway, Remote Interface, Reactive AI, OFF Line Support, SSDL, UDL, and Classified Material would move to Edwards under BRAC. These assets are identified for reactivation, and will be done within the new ECIT I&GTC - not like the original REDCAP layout. Minimal costs will be incurred in the areas mentioned, but as yet no specific amounts can be presented, due to the early phase of ECIT I&GTC program maturity. REDCAP assets that are reactivated will be operated by ATIC staff. Capabilities to be decommissioned will also move, but at no cost to BRAC.

REDCAP data structure and format can be successfully integrated within currently planned ECIT upgrades to the ATIC, not the other way around. Infrastructure for a test function like that currently done at REDCAP is already in place. Customers using this infrastructure for both HITL and OAR testing will have the advantage of correlation of systems, common data formats, common environmental generation, common data analysis computers, tools and instrumentation by default.

Little will be lost in decommissioning the identified equipment. Specifically, the EW, EW/HF, R1-R5 (radar simulations), Ground C2, System Control, Voice and Radar Switches already exist. Environmental generation capability is resident, so PEG isn't required. CVDL is the old REDCAP computers, and therefore not required in any case. SUAWACS passed SIMVAL in 1986, but has not had a paying customer we know of over the past three years.

REDCAP type man-in-the-loop capability is inherent in the aforementioned infrastructure. The Man-in-the-Loop capability for HITL testing will be maintained at Edwards, although it will be performed differently, using other simulation techniques/equipments. Edwards currently supports this type of testing capability in all ATIC facilities, most notably in the TEMS.

The capability simulated by the REDCAP IADS ~~includes~~ algorithm level C<sup>3</sup> netting simulation, man-in-the-loop, pulsed level RF generation with matching receivers and digital simulation capabilities. The ability to simulate the IADS command and control nodes in the lab to accurately portray command links originally was done on old, totally manual C<sup>2</sup> systems in order to identify operator saturation and inherent nodal time delays. The operator was an integral part of the processing path, and these delays often became quite large.

Changing world threats have impacted test facilities at differential rates, i.e. some facilities have been better able to adapt. What this means to test customers is some test facilities are progressively more attractive, more capable than others to support a given test program. Accordingly, our OAR capability became a more viable choice for IADS testing than REDCAP. What makes this so is the fact that newer generations of C<sup>2</sup> equipment are

more automated and the operator less of a factor throughout the IADS structure. Likewise, exact algorithms inherent in C<sup>2</sup> equipments are less of a factor since the time delays generated by older, manual systems are gone. REDCAP spent a lot of time and effort to implement exact algorithms of FSU equipments. Consequently, REDCAP cannot provide all the various nodal levels and functions found in the mix of FSU and European equipments currently deployed and being deployed in ROW countries that are potential threats. REDCAP can only provide these capabilities with first generation radars. Their C<sup>2</sup> equipments have been upgraded, but they are tailored to FSU capabilities and cannot perform the mix of various C<sup>2</sup> technologies and simulate non-FSU radars found in many potential threat countries.

HITL configurations can be done using stimulus from radar signal generators or ground mounted hardware under stimulation by actual radars. An extensive fiber optic network allows stimulating ground mounted SUTs and collecting SUT response. Reconfigurable C<sup>2</sup> and fiber optics communications enables simulation of many environments, much like in the lab. Utilizing models of a particular air defense environment allows for data analysis of any part of the results - with actual equipment at the same location with the same IADS structure. This ability to spot check results with real equipment will decrease overall cost and increase credibility of the results.

### ***AFEWES MOVE***

The following systems are slated for decommissioning:

SA-2	Software Development Facility
SA-3	Missile Development Facility
SA-4	Test Management Center 1
SA-4 w/C3	Test Management Center 2
SA-8	Test Management Center 3
SA-8 w/C3	Test Management Center 4
SA-10	Test Management Center 5
GUNDISH	Data Processing Facility
FLAPWHEEL	400 Hz Power Converters
LONG TRACK	Shield Rooms (10)
JB/FF/PDAI/SPIN	Air Handlers
SCAN	
Tactical C3	
COMM/DL	

None of the articles in the right column are required, as ATIC has current equivalent capabilities or previously planned to develop them under ECIT. Threat systems in the left column are redundant, will be redundant, or have no customer base. For example, the Tactical C<sup>3</sup> and COMM/DL have never been used by a paying customer. Systems to be decommissioned will be moved as well, but at no cost to BRAC. Should unforeseen problems arise, capabilities could be reconstituted as requirements demand.

The IR Labs are slated to go to AFDTTC. The IR threats will transition to AFFTC when the IR portion of ECIT is ready. The rest of the "keepers" are slated to go to the ATIC at AFFTC.

### ***EMTE MOVE***

The Air Force can't afford to continue operating two open air EW ranges. The RELIANCE study, Base Capabilities Study, Roles and Missions Study, and the BOD Study all had classified annexes which acknowledged a superior capability. Over \$1.5 billion has been invested in assets and infrastructure in this capability over 25 years. EMTE fields a very few systems not possessed at our other location. Twelve systems have been identified to remain operational at Eglin as emitter-only simulators for armament testing.

Under the EC consolidation concept, systems transferring from EMTE will supplement existing capacity/density. It will save the taxpayers the relatively large cost of operating a less capable, redundant range while providing customers the benefit of testing at a higher fidelity range. Movement of systems is slated to begin in FY97, so customers have time to modify their programs as necessary. The thrust should be on long term savings to the taxpayer. The relatively high cost savings realized by operating one open air range instead of two should outweigh relatively small cost increases to some individual programs.

### ***LINKING***

Data linking might help, but it isn't the complete answer. Data linking of the REDCAP and AFEWES facilities alone will not meet current SUT data flow requirements to provide a realistic test environment. Data linking of any EW test facilities is a means of optimization of the EW test process which, while appropriate in some cases, does not represent a universal solution. Further, it is not a means of addressing future test facility requirements, as the data transfer rates are likely to increase and will require encryption. Data linking can be useful for low transmission rate subjects, like target data information. It is of little use for tests requiring high data rate transmission, like SUTs with higher update rates (e.g. F-22) exceeding the link bandwidths, or raw data conversion, signal encryption,

and/or real time pulse-by-pulse events. AFEWES has been looking into injecting progressive time delays to see when miss-distance is affected by data latency, but this is not the same thing. Overlaying a simulation with another simulation (i.e, simulated time delays) in order to overcome the effects of data latency may prove useful, but it is a static fix to a dynamic problem, and may therefore be inappropriate to equate this fix with realism.

The Defense Research Engineering Network will provide this capability. We expect that Nellis and ATIC will be linked. T-1 lines between Nellis and Edwards already exist. The current ECIT I&GTC architecture contains a firm requirement for DIS-standard connectivity to outside ATIC facilities. The ECIT Program will require the ability to encrypt the data streams both going and coming to the ATIC. Program costs will be developed by the I&GTC contractor as a result of the OPSEC defined during I&GTC Phase 1.

**INFORMATION PAPER**  
**ON**  
**RELOCATION WEST: THE ONE STOP SHOPPING (OSS) CONCEPT**

**Objective:**

The One Stop Shopping (OSS) concept shows why relocation of current EC test facilities to a single western location is the best alternative for creating an EC Test Infrastructure that will meet the future test customer requirements. The OSS concept [as detailed in attached separate talking paper] broadens the assumptions made in the Hardware-In-The-Loop (HITL) Study (GTRI Report #A-1201 for AF/TER) [Executive Summary paper attached] methodology by including "real world" customer considerations in the Air Force EC test resource picture.

**Assumptions:**

The original four HITL Study assumptions are:

- For requirements derivation, current EC test facilities are considered to have never existed.
- The DoD acquisition process (as documented in DoD 5000.1) is sacred and must be supported by EC test infrastructure.
- Current Air Force capabilities were assessed (other Service asset assessments will be available at task completion.
- Cost and technical merit were the only distinguishing characteristics analyzed for collocation vs linking.

In addition to these assumptions, the OSS concept adds an additional assumption regarding customer satisfaction -- **customer satisfaction and cost are paramount when determining allocation of EC test resources, where the customers are defined as Air Force acquisition managers.**

**Fact of Life Considerations:**

Several factors have recently converged to make the OSS concept viable:

- (1) In the last five years with the dissolution of the Soviet Union, actual threat assets have become available.

(2) EC testing demands of the F-22 aircraft -- the first of the next generation, high speed, integrated avionics systems -- far exceeded any known capability within the DoD. Consequently, the Air Force has invested over \$200M to create the Electronic Combat Integrated Test Capability (ECIT) facility within the Avionics Test Integration Complex (ATIC) at Edwards AFB CA to support installed system testing -- a modification to the Benefield Anechoic Facility. The F-22 development program cannot meet cost and schedule requirements without the ECIT installed system test facility.

(3) Finally, prevailing fiscal constraints which have intensified from the DMR's of 1990 to the current downsizing initiatives have made both test infrastructure and weapon system program office budgets extremely austere and inelastic. Our challenge, therefore, has been to find a fiscally constrained solution to aircraft avionics (including EC) testing that maximizes available funds and is not disruptive to the EC test process.

The most effective course of action is to redirect more of the test process into ground test facilities in proximity of our most capable open air range; and to make ground testing as affordable as possible to the customer. With the proximity of the Edwards AFB and Nellis AFB open air ranges, anchored by the ATIC ground test complex, the critical HITL EC test facilities were the only outliers. Hence the recommendation to the BRAC Commission of moving AFEWES, REDCAP, and EMTE.

#### **Concept:**

The HITL Study did not attempt to measure customer satisfaction. Its focus was on deriving the best methods for applying hardware-in-the-loop facilities to the test and evaluation mission. First, the forty EC Test Infrastructure requirements were derived. Current Air Force ~~capabilities~~ were then assessed and shortfalls identified. Integration configurations of existing facilities were determined to help eliminate identified shortfalls. Technical merits and costs of the configuration implementations were judged to determine which is better: relocation, duplication, or electronic linking. Using cost/technical merits as the scale, the HITL Study finds that electronic linking is the best alternative. But the HITL Study only used test infrastructure cost and technical merit as its measuring stick. If **customer satisfaction and customer costs** are considered in an evaluation of implementation options, relocation to a single location for EC testing offers a better choice.



A single location, or the OSS concept, improves program manager satisfaction by reducing program costs, cost risk, scheduling risk, and technical risk; which in the aggregate reduces program risk and increases customer satisfaction.

- Program Costs. OSS cuts program costs due to the reduction in the number of aircraft sets that need to be created in order to evaluate the system under test. The F-22 SPO has estimated costs exceeding \$300M for an additional site deployment. A single location for EC testing creates synergies both in manpower and equipment, and potentially schedule, for the overall test program.
- Cost Risk. OSS reduces program cost and cost risk due to reduced subsystem quantities required to support testing.
- Scheduling Risk. Scheduling risk could be reduced by testing at a single location because relocation of test teams and equipment are reduced.
- Technical Risk. Customer technical risks could be reduced because a single location allows establishment of a center of excellence where national expertise can be pooled. The synergies of the program test teams and test organizations will be enhanced over time through seamless relationships, as well as results that are inherently better correlated. In addition, a coherent test process will continually revisit HITL and ISTF facilities to evaluate survivability and confirm observed results. Collocation enables such a coherent process.

#### **Conclusion:**

The HITL Study is correct in its findings given the four assumptions that were employed. But since customer satisfaction and customer costs are compelling evaluation criteria, relocation to a single location becomes the best alternative for the future Air Force EC Testing.

***THE HITL STUDY  
EXECUTIVE SUMMARY***

By  
Ken Haynes  
Jonathan Baliff

6/14/95

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Air Force T&E Office  
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17-631

# THE HITL STUDY EXECUTIVE SUMMARY

## *Objective*

This goal of this study was to determine how hardware-in-the-loop (HITL) facilities can best be utilized in future electronic warfare testing.

The specific rationale for the HITL Study was to answer the DoD IG report of October 1992 on Installed System Test Facilities (ISTF). This report essentially assumed that HITLs have no stand-alone value and were useful only to augment ISTFs. Moreover, the report concluded that electronic linking was neither a technically viable nor cost-effective means of facilitating this augmentation. The Air Force took exception to these claims and accepted an OSD action item of doing a study to determine the best way to employ HITLs. Thus the HITL Study was designed to provide the basis for subsequent Air Force investment and management decisions on HITL facilities, such as the current decision on the future of AFEWES and REDCAP.

## *Assumptions*

The following assumptions govern the application and interpretation of this study's results:

- HITLs were evaluated in the context of their utility for augmenting other facilities (including other HITLs).
- Requirements derivation was based upon fundamental principles (i.e., scientific method, DoD system acquisition process) and the functional characteristics of EC systems. Current test facilities were considered not to have existed for requirements derivation.
- Requirements derivation addressed other categories of EC test facilities (i.e., SILs, ISTFs, OARs) that might be augmented by HITLs, as well as the HITLs themselves.
- Only capabilities of current Air Force facilities were assessed in Phase I. The assessment of other service assets was deferred until Phase II.
- Collocation and electronic linking were compared as alternate means of augmentation on the basis of technical performance and cost.

## *Methodology*

The HITL Study is a requirements driven study. Objective One was to derive facility requirements for the *entire EC Test Infrastructure*. All other objectives, such as determining HITL integration with other facilities and comparing implementation costs and tradeoffs, follow the requirements derivation.

First Step: Derive EC Test Facility Requirements. This step consisted of determining the attributes of an ideal facility designed to test the functions of all EW systems. Techniques described in GTRI report A-1101 for AF/TER

"Methodology for Defining EC Test Facility Requirements"<sup>1</sup> were used extensively in the derivation of requirements. The scope of this task was not limited to HITL facilities, but also extended to those categories which might be augmented by HITL facilities (i.e., SILs, ISTFs, OARs). Even though the configuration of the system under test (SUT) was different for each of the four categories, the scenario and measures of effectiveness (MOE) from which test criteria are derived were the same for all.

Second and Third Step: Characterize Existing Facilities And Identify Deficiencies. In this step, the capabilities of existing facilities were compared to ideal facility attributes, as defined in Step 1. This comparison yielded the discrepancies between existing capabilities and requirements, removal of which would improve the application of the EW Test Process. The set of facilities chosen for comparison included representatives from all four categories, which represented the most important EW test assets of all three Services.

Fourth Step: Identify Integration Configurations For Facility Augmentation. In this step, facility combinations were postulated for the purpose of augmenting a facility and eliminating shortfalls. Because the study focused on the augmentation value of HITL facilities, each combination included one or more HITLs. As a first step, combinations of generic classes of facilities were identified. Ultimately, however, combinations of the specific facilities selected in Step 2 were postulated. These specific combinations were selected initially on the basis of technical judgment, but will be refined in Phase 2. In this step, discrepancies between ideal and actual facilities were mitigated by augmenting each facility in question with one or more HITL facilities, via one of the integration configurations (IC) postulated in Step 3. Some ICs were shown to have more value than others, based upon the number of discrepancies eliminated. While some discrepancies were readily eliminated by augmentation, others required upgrades to the original facility for their elimination.

Fifth Step: Compare Collocation And Electronic Linking As Means Of Integration. Step 4 proved HITL augmentation to be of value in eliminating deficiencies. This step compared three methods of achieving the ICs: *electronic linking*, in which the facilities were connected electrically to form a real-time, distributed network; *relocation*, in which the HITL facility (or parts thereof) were assumed moved to the same location as the facility being augmented; and *replication*, in which a copy of the HITL facility (or parts thereof) was constructed at the site of the facility being augmented, while the original HITL facility continued to operate in a stand-alone mode at the

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<sup>1</sup> For more information on this methodology, which employs the Scientific Method in conjunction with the DoD Acquisition Process, see GTRI Report A-1101 for AF/TER dated 10 DEC 1993: "Methodology for Defining EC Test Resources". This report is crucial to understanding the relationship and linkages between the EC Test Process and EC infrastructure requirements. The report also lays the groundwork for the HITL Study's 40 EC Test Requirements which the following example illustrates.

same location. These methods were compared in terms of both technical performance (by comparison to idealized integration) and cost.

### *Results*

Our findings were that REDCAP improved the performance of all other facilities—including AFEWES—in most test scenarios, by providing a many-on-many scenario generation capability for the distributed network, as well as early warning/C<sup>3</sup> and RED man-in-the-loop IADS functions not available elsewhere. By comparison, AFEWES proved only slightly less versatile; by virtue of its ability to provide realistic threat densities (including a greater variety of closed-loop threats), the capability for testing in the IR domain, and real-time simulation of aircraft-missile terminal encounters, all of which ISTFs and OARs lack, it is useful for augmenting many tests in other facilities.

For the composite HITL configuration, the integration of AFEWES and REDCAP approached the idealized HITL facility. Only the lack of certain upgrades (e.g., phase AOA interface, multi-sensor situation awareness test capability) preclude the realization of this goal. For the other composite configurations, augmentation by AFEWES and/or REDCAP eliminated most ISTF and OAR deficiencies.

There are a few deficiencies that cannot be eliminated by HITL augmentation without upgrades to one or more HITL facilities. The most important among these upgrades were (1) a phase AOA interface for all HITLs and ISTFs, (2) a comprehensive cockpit simulator interface to AFEWES (or some other facility in the network), and (3) dynamic, real-time environment monitoring/verification at all EC test facilities.

The results of the HITL Study show that the DoD IG's conclusions about HITL facilities were in error. First HITLs can indeed be used to augment the test capability of other facilities. Second, electronic linking is not only a technically viable alternative to collocation but also the most cost-effective means of achieving that augmentation (specifically, linking is technically equivalent to collocation and costs an order-of-magnitude less). Whereas transport delay may impose some constraints upon the test configuration, these can be accommodated and do not compromise the utility of linked facility combinations.

*Regarding Congressman Quinn's questions to Mr. Acherman dated 6/9/95:*

**1. QUESTION:** What are the skill levels and ~~quantities~~ <sup>number</sup> of people now working on REDCAP?

**ANSWER:** We cannot profess to have intimate and detailed knowledge of the skill levels of each staff member at REDCAP, the vast majority of which are contractors. However, some key REDCAP personnel have been associated with and trained at the Nellis Range Complex. The Air Force has played a primary role in building the credibility and fidelity REDCAP fields today. The knowledge at REDCAP only represents a small subset of the core IADS/EW expertise resident at Nellis.

**2. QUESTION:** What plans do you have to duplicate that staff or portion of the staff that you need?

**ANSWER:** Long term; we plan on utilizing the resident staff at the gaining organization. Short term; utilization of CALSPAN during the transition is under study.

**3. QUESTION:** Where is the consideration of the cost for relocating the needed staff?

**ANSWER:** See above answer.

**4. QUESTION:** What portion of the REDCAP do you plan to move and to where?

**ANSWER:** SCIF Gateway, Remote Interface, Reactive AI, OFF Line Support, SSDL, UDL, and Classified Material will be moved. All would move to Edwards under BRAC. REDCAP assets that are reactivated will be operated by ATIC staff. Capabilities to be decommissioned will also move, but at no cost to BRAC.

**5. QUESTION:** Of the systems you are not moving, many have not been used recently because they simulate the FSU capabilities and that the FSU is not considered a threat currently. If the FSU became a threat, or more likely, if the FSU exports these systems to areas of the world we consider hostile, how will you resurrect the ability to test against these systems?

**ANSWER:** Assuming that the FSU systems are once again threats, the ATIC will be able to simulate realistic test scenarios by a combination of ECIT upgrades and former REDCAP assets. Except for SUAWACS, all systems to be decommissioned will be available in storage at ECIT for reintegration as necessary..

**6. QUESTION:** Has anyone determined that the AFFTC infrastructure is compatible with REDCAP data structure and format?

**ANSWER:** REDCAP data structure and format can be successfully integrated within currently planned ECIT upgrades to the ATIC, not the other way around. The ECIT design, which will consider all open architecture data format standards, will be able to accommodate REDCAP assets.

**7. QUESTION:** If another ISTF test capability can accommodate REDCAP's workload, why isn't this workload being done at that capability now rather than utilizing REDCAP at close to 100% doing IADS testing?

**ANSWER:** REDCAP's capability will be integrated in the ECIT ISTF as a part of the workload projection. Separately, OAR range capabilities can meet the limited actual threat system evaluators required.

**8. QUESTION:** Is this other capability so underutilized that it can accommodate the nearly 100% workload from REDCAP?

**ANSWER:** REDCAP has a small number of paying customers, and the other (OAR) capability can absorb this relatively small workload.

**9. QUESTION:** Can this other capability simulate specific geographical locations such as IRAQ, North Korea, etc.?

**ANSWER:** Yes. In addition, the currently planned ECIT upgrades to the ATIC will be able to represent these geographic locations and more.



**10. QUESTION:** Customers use REDCAP to do Mission Level Assessment, which requires:

- Specific geographic locations
- Specific types and generations of threat equipment
- Specific locations for this equipment
- Specific and unique interconnects

Can this other capability accommodate the REDCAP's ability to do Mission Level Assessment?

**ANSWER:** Yes, in some cases completely and in some cases on a limited basis. To the extent this capability is dependent on REDCAP's off line simulation capability, the capability is the same, as this capability is slated to move. Additionally, the ATIC will have the capability to perform a variety of both DT&E and OT&E work on EW SUTs in both ISTF and HITL to include limited Mission Level Assessment against specific scenario IADS.

**11. QUESTION:** Has there been adequate allowances for the relative cost differences for testing at this other capability?

**ANSWER:** Yes. Movement of systems is slated to begin in FY 98, so customers have time to modify their programs if required. In any case, the thrust should be on long term savings to the taxpayer and not on individual program costs.

**12. QUESTION:** Can this other capability test systems and techniques that are just concepts, such as the cross section of an aircraft before the aircraft is built or a jammer before it is made flight worthy?

**ANSWER:** Yes, this capability exists today. In addition, the ATIC I&M programs currently underway in the ECIT will address test requirements for fused sensor testing of ~~planned/imaginary~~ SUTs in other spectra regions (example, RF and IR).

**13. QUESTION:** What value do test customers realize by testing their equipment or techniques against the "off line simulation capability"?

**ANSWER:** This is a question better suited for the customers to answer. Reduced acquisition risk, regressive/repeatable testing, test aircrew training, test scenario development at a more economic rate come to mind. As this capability has been and remains by far the most utilized of REDCAP's capabilities, one can only assume it is of far more value than any other REDCAP capability, singly or in combination.

**JACK QUINN**  
30th District, New York



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**MEMORANDUM TO: MR. STEVE ACKERMAN**

**FROM: Congressman Jack Quinn**

**SUBJECT: Redcap Hearing**

**DATE: 6/9/95**

Mr. Ackerman,

I have enclosed for your reference two pages of questions I would like to have answered by the Airforce Briefer at the upcoming Redcap Hearing.

Your assistance in this matter would be greatly appreciated.

Very truly yours,

*Jack Quinn*  
Jack Quinn  
Member of Congress

REDCAP is currently supported by a staff of on the order of 50 people.

- What are the skill levels and quantities of people now working on REDCAP?
- What plans do you have to replicate that staff or portion of the staff that you need?
- Where is the consideration of the costs for reselecting the needed staff?
- X What portions of REDCAP do you plan to move and to where?

- Of the systems you are not moving, many have not been used recently because they simulate the Former Soviet Union (FSU) capabilities and the FSU is not considered a threat currently. If the FSU becomes a threat or, more likely, if the FSU exports these systems to areas of the world we consider hostile, how will you resurrect the ability to test against those systems?

Col Heidenreich has stated that AFFTC includes infrastructure to support REDCAP, including scenario and environment generation capability, data analysis computers. Has anyone determined that this infrastructure is compatible with REDCAP data structures and formats?

In response to ERAC inquiries, General Blume stated:

"Other Integrated Air Defense Systems (IADS) test capability exists which can accommodate REDCAP's workload. This other capability already conducts IADS testing and, as such, has personnel possessing IADS experience and expertise."

- If another IADS test capability can accommodate REDCAP's workload, why isn't this work being done at that capability now rather than utilizing REDCAP at close to 100% doing IADS testing?
- Is this other capability so underutilized that it can accommodate the nearly 100% workload from REDCAP?
- Can this other capability simulate specific geographic locations such as Iraq, North Korea, etc.?
- Customers use REDCAP to do Mission Level Assessment, which requires:

Specific geographic locations  
Specific types and generations of threat equipment  
Specific locations for this equipment  
Specific and unique interconnections

These all need to be changed for different areas of interest.

Can this other test capability accommodate this requirement?

- Can this other capability test systems and techniques that are just concepts, such as the cross section of an aircraft before the aircraft is built or a jammer before it is made flight worthy?
- Has there been adequate allowance for the relative cost differences for testing at this other capability?

General Blume also stated:

"Only one of REDCAP's 16 capabilities (the off-line simulation capability) enjoys high current usage..."

- What value do test customers realize by testing their equipment or techniques against the "off line simulation capability".

**POINT PAPER  
ON  
CONGRESSMAN QUINN'S ADDITIONAL REDCAP INFORMATION**

Outsourcing: Why move REDCAP (and AFEWES) and insource an operation which has been outsourced for the last thirty years?

The activities associated with REDCAP will probably still be outsourced, as the Air Force already does so with many of its activities at Major Range and Test Facility Bases (MRTFBs). The only difference is that it will be located at AFFTC.

Return on Investment:

**MILCON** -- The \$6.2M cost addressed in Congressman Quinn's information package assumes that no facility exists at the receiving end. In reality, there is currently 14,000+ sq ft of shielded and secure space available in the IFAST Building at Edwards AFB CA. Projected workload will decrease this space over the next nine months only, and at least 10,000 - 12,000 sq ft will be available by mid-96, well ahead of any BRAC moves. The \$0.7M MILCON cost addressed by the Air Force details the required building upgrades.

**MOVING** -- Since the REDCAP equipment is not moving in its entirety, the \$6.5M figure given by Congressman Quinn must be questioned. The COBRA model includes tear-down, packing and shipping, and reassembly under the moving assumptions; whereas the Air Force estimate of \$1.7M assumed limited teardown and reassembly (based on site survey) with most of the cost in packing and shipping, but not of the entire contents. Equipment deemed surplus will be properly disposed of. Also, care should be exercised in using raw COBRA moving data due to the differences in volume and weight factors when doing the calculations.

**MISSION** -- The mission savings per year should approximate the Air Force figure of \$0.8M mainly due to the fact that not all of the equipment will be transferred directly to the Edwards AFB facility. Additionally, utility and computer maintenance costs will be amortized across existing contracts, and should not be considered as separate costs, as noted in Congressman Quinn's background information.

# Document Separator

**AF/TE**

**EC Test Process  
and  
BRAC**

**AN ENABLING STRATEGY  
“One Stop Shopping”**



**AF/TE**

## **Guiding Principles**

- OAR costs high
- Ground testing more affordable
  - Simulations increasing in fidelity
- Integrated avionics require integrated testing
- Collocation minimizes cost, schedule
  - “One stop shopping” for ground tests
  - Regional “one stop shopping” for OAR

**AF/TE**

## **EC Testing (Facts of Life)**

- Actual threat assets have become more readily available.
- EC testing demands of highly integrated weapon systems (F-22, JAST, etc..).
- Fiscal constraints: T&E infrastructure and weapon system program offices budgets extremely austere and inelastic

**AF/TE**

## **Synergisms for EC Testing**

### **Customer**

- Reduced logistics support costs
- Collocated with air vehicle/avionics testing
- Coordinated with current/future technology drivers

### **Test Infrastructure**

- Focused investment; reduced overhead costs
- Improved utilization of test resources

### **Customer and Test Infrastructure**

- Pooled technical expertise
- Increased test efficiencies

# Document Separator

ELECTRONIC COMBAT (EC)  
TEST AND EVALUATION (T&E) REALIGNMENT PROPOSALS



COL WES HEIDENREICH  
20 JUNE 1995



# PURPOSE

**PROVIDE BRAC RATIONALE  
FOR EC T&E REALIGNMENT  
RECOMMENDATIONS**



# PROPOSED EC REALIGNMENTS

- **HARDWARE-IN-THE-LOOP**
  - » **REAL-TIME ELECTROMAGNETIC DIGITALLY CONTROLLED ANALYZER AND PROCESSOR (REDCAP), BUFFALO, NY**
  - » **AIR FORCE ELECTRONIC WARFARE EVALUATION SIMULATOR (AFEWES), FT WORTH, TX**
- **OPEN AIR RANGE**
  - » **ELECTROMAGNETIC TEST ENVIRONMENT (EMTE), EGLIN AFB, FL**





# REDCAP PROPOSAL

- RELOCATE APPROXIMATELY 50% OF REDCAP CAPABILITIES TO EDWARDS AFB, CA
- INTEGRATE HARDWARE-IN-THE-LOOP, OPEN-AIR RANGE, AND INSTALLED SYSTEMS TEST FACILITIES

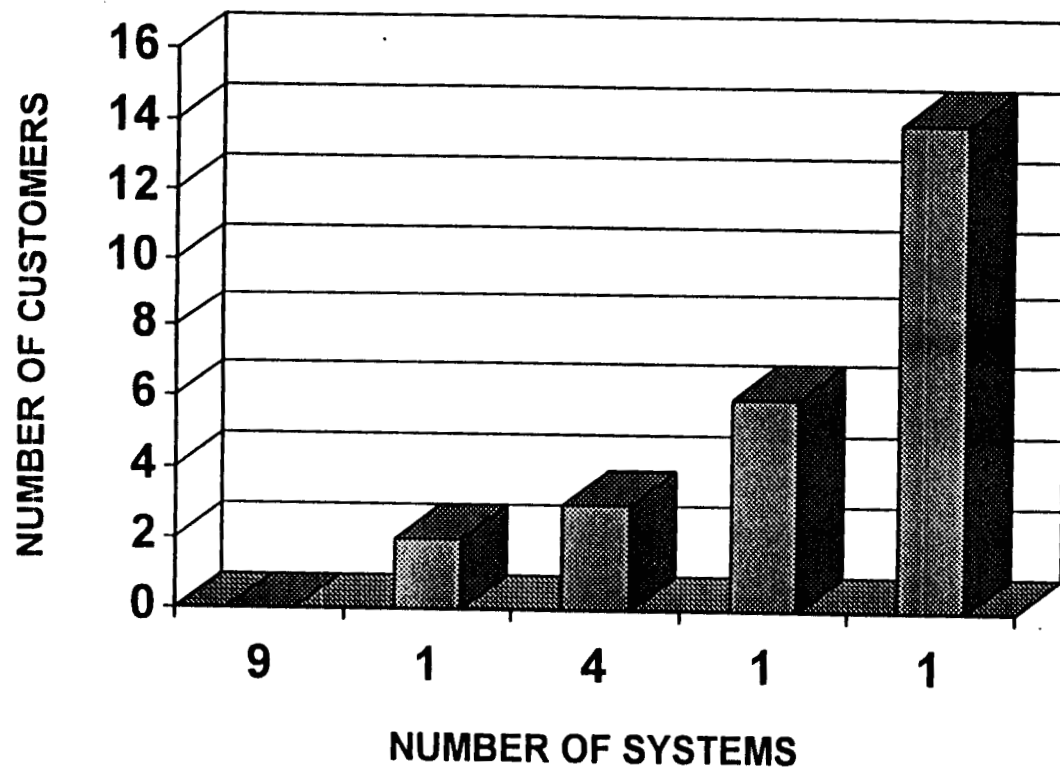


# REDCAP RATIONALE

- **LOW PROJECTED WORKLOAD (10% OF CAPACITY)**
- **BASIC INFRASTRUCTURE IS DUPLICATED AT OTHER T&E FACILITIES**
- **MOST TESTING CAN BE ACCOMMODATED ELSEWHERE**
- **INCREASES T&E CAPABILITIES FOR INTEGRATED AVIONIC SUITES**
- **SAVES I&M AND O&M FUNDS**
- **CO-LOCATES GROUND AND OPEN AIR CAPABILITIES FOR SYNERGISM**
- **NON-CORE T&E ACTIVITY**



# REDCAP UTILIZATION





# AFEWES PROPOSAL

- RELOCATE APPROXIMATELY 50% OF AFEWES CAPABILITIES
  - " RADIO FREQUENCY CAPABILITIES TO EDWARDS AFB, CA
  - " INFRARED CAPABILITIES TO EGLIN AFB, FL
- INTEGRATE HARDWARE-IN-THE-LOOP, OPEN-AIR RANGE, AND INSTALLED SYSTEMS TEST FACILITIES

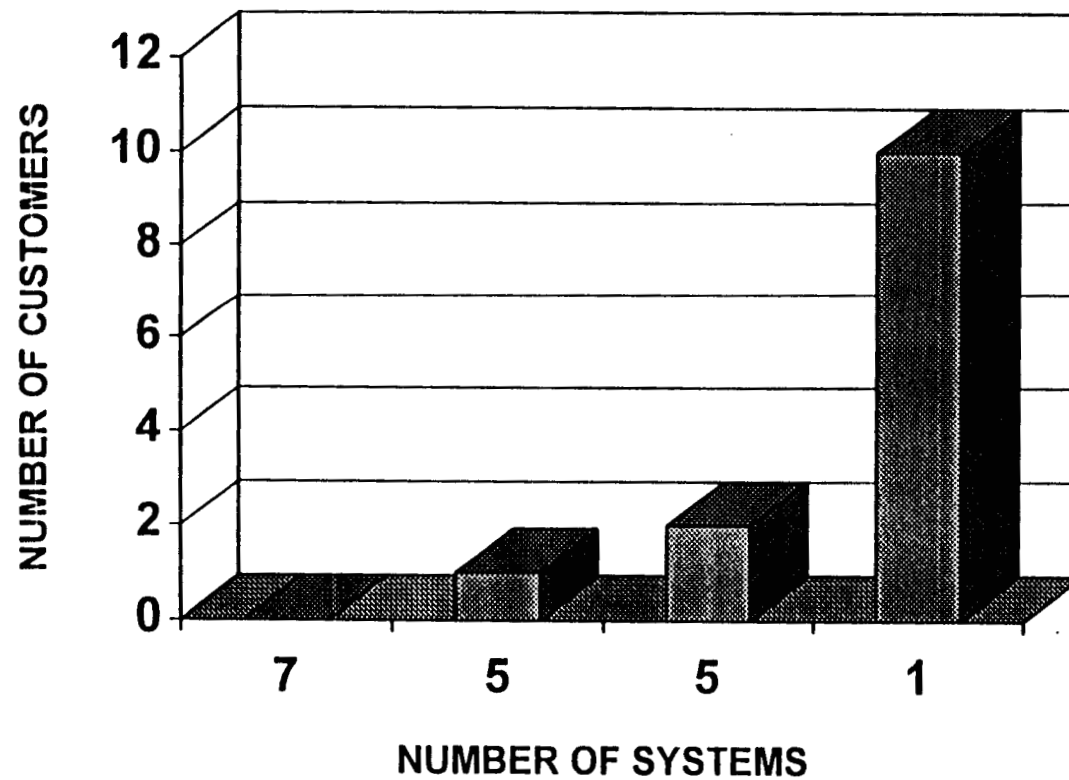


# **AFEWES RATIONALE**

- **LOW PROJECTED WORKLOAD (28% OF CAPACITY)**
- **BASIC INFRASTRUCTURE DUPLICATED ELSEWHERE**
- **MOST TESTING CAN BE ACCOMMODATED ELSEWHERE**
- **INCREASES T&E CAPABILITIES FOR INTEGRATED AVIONIC SUITES**
- **SAVES I&M AND O&M FUNDS**
- **CO-LOCATES GROUND AND OPEN AIR CAPABILITIES FOR SYNERGISM**
- **NON-CORE T&E ACTIVITY**



# AFEWES UTILIZATION FY 92-94





# EMTE PROPOSAL

- RELOCATE 17 THREAT SIMULATORS TO NELLIS RANGE COMPLEX
- RETAIN 12 EMITTER-ONLY SYSTEMS AT EGLIN FOR TRAINING AND MUNITIONS TESTING



# EMTE RATIONALE

- **PROVIDES MORE OPERATIONALLY REALISTIC T&E CAPABILITIES**
- **MOST TESTING CAN BE ACCOMMODATED ELSEWHERE**
  - » **SYSTEMS ARE 90% DUPLICATIVE**
- **SAVES I&M AND O&M FUNDS**





# AIR FORCE OPEN AIR EC RANGES

- **NELLIS RANGE COMPLEX, NV**
  - » **DESIGNATED AS A BRAC RECEIVER SITE**
- **ELECTROMAGNETIC TEST ENVIRONMENT (EMTE), EGLIN AFB, FL**
  - » **BRAC FUNCTIONAL VALUE = 65**



## CAPABILITIES COMPARISON (TYPES/NUMBER)

<u>TYPE SIMULATOR</u>	<u>A</u>	<u>B</u>
SHOOTERS	19/53	16/43
REC/REW	6/11	1/1
EW/ACQ/GCI	15/59	5/13
C <sup>2</sup>	27/125	0/0
ACFT	3/12	0/0
A/A MISSILES	5/10	0/0
TOTAL	75/270	22/57
ACTUAL	86%	30%



# SUMMARY

- **REALIGNMENT PROPOSALS REDUCE NUMBER OF ACTIVITIES SUPPORTING EC T&E**
- **CO-LOCATE HARDWARE-IN-THE-LOOP AND INSTALLED SYSTEMS TEST FACILITIES FOR INCREASED CAPABILITY TO EVALUATE INTEGRATED AVIONIC SUITES**
- **PROVIDES MORE OPERATIONALLY REALISTIC OPEN AIR TEST ENVIRONMENT**
- **SAVES OPERATIONS AND MAINTENANCE (O&M) AND IMPROVEMENT AND MODERNIZATION (I&M) FUNDS**

# Document Separator

## 1995 AIR FORCE BASE QUESTIONNAIRE

### Eglin AFB - AFMC

#### Section I

#### 1. Force Structure

##### I.1.A List of all on base NAF and non-Air Force activities:

	Unit or Activity:	Personnel Authorizations for FY93/4			
		Officer	Enlisted	Civilian	Total
I.1.A.1	6th Ranger Training Battalion	11	139	6	156
I.1.A.2	AAFES	-	-	333	333
I.1.A.3	Administration	-	-	2	2
I.1.A.4	Aero Club	-	-	7	7
I.1.A.5	Arts and Crafts	-	-	5	5
I.1.A.6	Billeting	-	-	64	64
I.1.A.7	Bowling Lanes	-	-	18	18
I.1.A.8	Child Development Ctr	-	-	28	28
I.1.A.9	DRMO	-	-	23	23
I.1.A.10	Defense Commissary Svc	-	-	95	95
I.1.A.11	Defense Criminal Investigative Svc	-	-	5	5
I.1.A.12	Defense Finance and Accounting Svc	-	-	46	46
I.1.A.13	Defense Investigative Svc	-	-	13	13
I.1.A.14	Defense Printing Svc	-	-	12	12
I.1.A.15	FAA Representative	-	-	1	1
I.1.A.16	Federal Prison Camp	-	-	149	149
I.1.A.17	Fitness Center	-	-	-	0
I.1.A.18	Ft Rucker Recreation Area	-	-	3	3
I.1.A.19	Golf Course	-	-	45	45
I.1.A.20	HRO	-	-	4	4
I.1.A.21	Jackson Guard	-	-	1	1
I.1.A.22	Library	-	-	1	1
I.1.A.23	Logistics	-	-	-	0
I.1.A.24	Marketing	-	-	2	2
I.1.A.25	NAFFMB	-	-	15	15
I.1.A.26	NCO Club	-	-	68	68
I.1.A.27	Officers Club	-	-	53	53

**1995 AIR FORCE BASE QUESTIONNAIRE**  
**Eglin AFB - AFMC**

I.1.A.28	Okaloosa County Schools	-	-	108	108
I.1.A.29	Outdoor Recreation	-	-	14	14
I.1.A.30	Recreation Center	-	-	1	1
I.1.A.31	US Coast Guard	-	30	-	30
I.1.A.32	US Postal Service	-	-	12	12
I.1.A.33	USA Corps of Engineers	-	-	10	10
I.1.A.34	USA Missile Command	-	-	1	1
I.1.A.35	USA Reprogramming & Analysis Team	-	-	4	4
I.1.A.36	USA Vet Detachment	1	1	-	2
I.1.A.37	USN Explosive Ordnance	20	104	13	137
I.1.A.38	Veterinary Clinic (same as USA Vet DET)	-	-	-	0
I.1.A.39	Youth Activities	-	-	16	16
<b>TOTAL:</b>					<b>1484</b>

**I.1.B Remote/Geographically Separated Units receiving more then 50% of Base Operational Support from the base:**

- I.1.B.1 **Supported Unit:** 16 Special Operations Wing      GSU      **GSU - Geographically Separated Unit**  
**Location:** Hurlburt Field, FL      **REM - Remote Unit**  
**Support provided:** Claims processing; Civilian pay; Information Mgt, CPO; Aircraft Maint; Audio-Visual; Comm; Confinement; Base Comprehensive Plan; Realty; Range Operations; Laundry; Medical; Personal Property Movement
- I.1.B.2 **Supported Unit:** 20 Surveillance Sq      GSU      **GSU - Geographically Separated Unit**  
**Location:** Site C-6, Eglin AFB, FL      **REM - Remote Unit**  
**Support provided:** Full Base Operations Support (BOS)
- I.1.B.3 **Supported Unit:** 313 Tech Trng Sq      GSU      **GSU - Geographically Separated Unit**  
**Location:** Corry Station, Pensacola FL      **REM - Remote Unit**  
**Support provided:** Social Actions; Police Services; Information Mgt; Confinement; Education Services; Finance; Health Services; Supply; Legal; Military Personnel; Contracting.
- I.1.B.4 **Supported Unit:** 502 LSS      GSU      **GSU - Geographically Separated Unit**  
**Location:** Eglin AFB Rec Site      **REM - Remote Unit**  
**Support provided:** Full BOS
- I.1.B.5 **Supported Unit:** 6 Ranger Bn      GSU      **GSU - Geographically Separated Unit**  
**Location:** Camp Rudder, FL      **REM - Remote Unit**  
**Support provided:** Full BOS

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**1995 AIR FORCE BASE QUESTIONNAIRE****Eglin AFB - AFMC**

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<b>I.1.B.6 Supported Unit:</b> 919 SOW	GSU	<b>GSU - Geographically Separated Unit</b>
<b>Location:</b> Duke Field, FL		<b>REM - Remote Unit</b>
<b>Support provided:</b> Full BOS		
<b>I.1.B.7 Supported Unit:</b> Coast Guard Station	GSU	<b>GSU - Geographically Separated Unit</b>
<b>Location:</b> Destin FL		<b>REM - Remote Unit</b>
<b>Support provided:</b> Full BOS		
<b>I.1.B.8 Supported Unit:</b> Fort Rucker	GSU	<b>GSU - Geographically Separated Unit</b>
<b>Location:</b> Eglin AFB Rec Site, FL		<b>REM - Remote Unit</b>
<b>Support provided:</b> Full BOS		

## 1995 AIR FORCE BASE QUESTIONNAIRE

### Eglin AFB - AFMC

#### 2. Operational Effectiveness

##### A. Air Traffic Control

ATCALs - Air Traffic Control and Landing Systems  
 NAS - National Airspace System

I.2.A.1 Some of the base ATCALs are officially part of the NAS.

I.2.A.2 Details for specific ATC facilities:

	(A.2) ATC Summary:		(A.3) Detailed traffic counts:				
	Type of Facility	Total Traffic Count	Civil Traffic Count	Military Traffic Count	ILS Traffic Count	PAR Traffic Count	Non-PAR Traffic Count
RAPCON	3	223984	86147	137837	13871	0	210113
Tower	3	208719	52325	156394	N/A	N/A	N/A

I.2.A.4 The primary instrument runway is designated 19

80000 operations were conducted this runway during calander year 1993

I.2.A.5 Known or potential airspace problems that may prevent mission accomplishment:

Records not kept for individual runways.

I.2.A.6 The base does Not experience ATC delays.

##### B. Geographic Location

I.2.B.1 Nearest major primary airlift customer: FORT BENNING distance 136 NM  
 Nearest major primary airdrop customer: FORT RUCKER distance 63 NM

I.2.B.2 Distance to foward deployment Air Bases:  
 Lajes AB: 2969 NM



## 1995 AIR FORCE BASE QUESTIONNAIRE

## Eglin AFB - AFMC

Rota AB: 4020 NM  
 Hickam AFB: 3880 NM  
 RAF Mildenhall: 4041 NM

	Class of Airfield:	Name	Distance from Base
I.2.B.3	Military airfield, runway $\geq$ 3,000ft	HURLBURT FLD	9
I.2.B.4	Military airfield, runway $\geq$ 8,000ft	HURLBURT FLD	9
I.2.B.5	Military airfield, runway $\geq$ 10,000ft	TYNDALL AFB	55
I.2.B.6	Military or civilian airfield, runway $\geq$ 3,000ft	Destin Airport	5
I.2.B.7	Military or civilian airfield, runway $\geq$ 8,000ft	Hurlburt Field	9
I.2.B.8	Military or civilian airfield, runway $\geq$ 10,000ft	Tyndall AFB	56
I.2.B.9	Civilian airfield, runway $\geq$ 8,000ft for capable of conducting short term operations		
		Dannley Field	111
I.2.B.10	Civilian airfield, runway $\geq$ 10,000ft for capable of conducting short term operations		
		Birmingham Airport	186

I.2.B.11 Other runways on base can be used for emergency landings.

### C. Training Areas (Special Use Airspace (SUA), Ranges, Military Training Routes (MTRs), Drop Zones (DZs), Military Operating Areas (MOAs))

I.2.C.1 Supersonic Air Combat Training (ACBT) MOAs and warning/restricted areas, with a minimum size of 4,200 sq NM, within 300 NM:

Area Name	Distance	Area Name	Distance	Area Name	Distance
W-151 A,B,C,D	69 NM	W-155 A,B	75 NM	W-470 A,B,C,D,E	137 NM
W-168A	269 NM	W-168 A,B,C	274 NM		

I.2.C.2 MOAs and warning/restricted areas, with a minimum size of 2,100 sq NM and an altitude block of at least 20,000 ft, within 200 NM:

Area Name	Distance	Area Name	Distance	Area Name	Distance
W-151A	33 NM	W-151 A,B,C,D	69 NM	W-155 A,B	75 NM
W-151B	76 NM	W-155B	90 NM	W-151D	115 NM
W-470 A,B,C,D,E	137 NM				

I.2.C.3 Low altitude MOAs and warning/restricted areas, with a minimum size of 2,100 sq NM and a floor no greater than 2,000 ft, within 600 NM:

Area Name	Distance	Area Name	Distance	Area Name	Distance
W-151A	33 NM	W-151 A,B,C,D	69 NM	W-155 A,B	75 NM

## 1995 AIR FORCE BASE QUESTIONNAIRE

## Eglin AFB - AFMC

W-151B	76 NM	W-155B	90 NM	W-151D	115 NM
W-470 A,B,C,D,E	137 NM	W-168A	269 NM	W-168 A,B,C	274 NM
W-92	281 NM	W-158A	338 NM	W-157A	341 NM
W-174A	343 NM	W-497A	364 NM	W-132A,B/W-134/W-157A	371 NM
W-174 A,B,C,D,F,G	373 NM	W-174B	384 NM	W-158B	390 NM
W-132 A,B	397 NM	W-157B	409 NM	W-497 A,B	431 NM
W-177A	432 NM	W-161A,B/W-177A,B	441 NM	W-497B	443 NM
W-157C	453 NM	W-602	458 NM	W-174D	470 NM
W-465 A,B,C,	500 NM	W-122J	517 NM	W-122I	520 NM
W-228C	549 NM	W-228 A,B,C,D	559 NM	W-122 D	562 NM
W-122 E	562 NM	W-122 A,B,C,D,E,F,G,H,I,	571 NM	W-122F	572 NM
W-122G	584 NM	W-228D	590 NM		

## I.2.C.4

Scorable range complexes / target arrays (capable of or having tactical targets, conventional targets, and strafe), within 800 NM:

Area Name	Distance	Area Name	Distance	Area Name	Distance
EGLIN C52	11 NM	EGLIN C62	18 NM	SHELBY EAST	132 NM
SHELBY WEST	136 NM	GRAND BAY	177 NM	TOWNSEND	262 NM
PINECASTLE	263 NM	AVON PARK BRAVO/FO	321 NM	AVON PARK CHARLIE/E	329 NM
CLAIBORNE	334 NM	POINSETT	366 NM	RAZORBACK	476 NM
CANNON	514 NM	JEFFERSON PROVING G	514 NM	ATTERBURY	528 NM
CHERRY POINT BT-11	575 NM	USAF DARE COUNTY	619 NM	NAVY DARE COUNTY	622 NM
McMULLEN	654 NM	FALCON	664 NM	SMOKEY HILL	744 NM
INDIANTOWN GAP	766 NM				

## I.2.C.5

Nearest electronic combat (EC) range and distance from base:

SHELBY EAST	132 NM
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## I.2.C.6

Nearest Air Combat Maneuvering Instrumentation (ACMI) range and distance from base:

GULFPORT MDS	110 NM
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## I.2.C.7

Nearest full-scale, heavyweight (live drop or inert) range and distance from base:

EGLIN C52	11 NM
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## I.2.C.8

Total number of slow routes (SR) / visual routes (VR) / instrument routes (IR) with entry points within:

Type of Route:	100 NM	150 NM	200 NM	400 NM	600 NM	800 NM
IR	8	13	16	49	77	116
SR	4	12	13	30	60	127
VR	9	17	24	58	102	170

## 1995 AIR FORCE BASE QUESTIONNAIRE

## Eglin AFB - AFMC

Total Routes:	21	42	53	137	239	413
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## Identify Routes:

IR-030 15 NM	IR-031 15 NM	IR-057 22 NM	SR-103 22 NM	SR-101 22 NM	IR-059 22 NM
SR-104 22 NM	SR-106 22 NM	IR-021 29 NM	VR-1082 32 NM	VR-1085 32 NM	VR-1084 32 NM
VR-1020 82 NM	IR-038 89 NM	IR-037 93 NM	IR-040 93 NM	VR-1023 93 NM	VR-1024 93 NM
VR-1021 93 NM	VR-1070 95 NM	VR-060 100 NM			
VR-1005 102 NM	SR-029 109 NM	IR-017 111 NM	VR-1017 111 NM	VR-1022 113 NM	VR-1083 117 NM
SR-069 124 NM	SR-071 124 NM	SR-070 124 NM	SR-072 124 NM	VR-1056 126 NM	IR-041 127 NM
VR-1067 127 NM	IR-063 127 NM	SR-039 128 NM	SR-031 130 NM	VR-1030 130 NM	IR-015 132 NM
SR-038 136 NM	VR-1065 141 NM	IR-032 144 NM			
VR-179 151 NM	SR-030 157 NM	VR-1054 164 NM	VR-1033 169 NM	VR-1031 172 NM	IR-016 178 NM
IR-044 185 NM	VR-1066 189 NM	VR-094 192 NM	IR-077 197 NM	VR-1014 197 NM	
VR-1072 207 NM	IR-066 208 NM	VR-1051 208 NM	VR-1050 208 NM	IR-067 208 NM	IR-069 209 NM
IR-019 213 NM	IR-046 217 NM	VR-1008 218 NM	SR-137 219 NM	IR-091 225 NM	SR-035 228 NM
SR-036 228 NM	SR-037 228 NM	SR-040 228 NM	VR-1002 231 NM	VR-1010 233 NM	VR-1097 236 NM
VR-1001 240 NM	VR-1006 241 NM	VR-1007 241 NM	IR-089 247 NM	VR-1004 249 NM	IR-070 251 NM
VR-1032 251 NM	VR-1052 255 NM	IR-020 257 NM	VR-1039 258 NM	IR-023 262 NM	VR-092 267 NM
VR-1016 267 NM	IR-047 270 NM	VR-1049 270 NM	IR-068 271 NM	IR-049 282 NM	VR-1098 282 NM
IR-051 282 NM	IR-050 282 NM	SR-102 284 NM	VR-1011 286 NM	IR-033 287 NM	VR-1009 288 NM
VR-1003 290 NM	VR-1196 293 NM	IR-042 294 NM	VR-1068 294 NM	IR-083 299 NM	SR-075 308 NM
IR-018 312 NM	IR-160 313 NM	IR-161 313 NM	IR-078 316 NM	IR-090 316 NM	IR-048 318 NM
VR-058 319 NM	VR-1059 324 NM	SR-166 325 NM	SR-073 326 NM	SR-074 326 NM	SR-238 327 NM
SR-105 330 NM	VR-095 331 NM	VR-097 334 NM	VR-1041 334 NM	VR-1055 334 NM	IR-036 335 NM
IR-055 342 NM	IR-002 348 NM	IR-075 351 NM	IR-079 355 NM	IR-080 355 NM	IR-074 358 NM
VR-088 364 NM	VR-1087 373 NM	VR-1088 373 NM	VR-1089 377 NM	IR-121 384 NM	VR-1103 384 NM
SR-059 388 NM	SR-060 388 NM	SR-062 388 NM	SR-225 388 NM	SR-061 388 NM	IR-081 394 NM
IR-157 401 NM	IR-174 401 NM	VR-106 402 NM	VR-087 408 NM	SR-218 412 NM	SR-219 412 NM
SR-222 412 NM	SR-221 412 NM	SR-220 412 NM	SR-226 412 NM	SR-229 412 NM	SR-231 412 NM
SR-230 412 NM	SR-237 412 NM	SR-232 412 NM	SR-227 412 NM	VR-1013 413 NM	IR-082 424 NM
IR-034 431 NM	IR-056 431 NM	IR-120 447 NM	VR-1102 447 NM	IR-022 450 NM	VR-1060 450 NM
VR-093 456 NM	IR-053 460 NM	SR-239 460 NM	VR-1040 462 NM	IR-035 465 NM	VR-1069 465 NM
IR-592 465 NM	IR-127 466 NM	VR-187 466 NM	IR-743 467 NM	VR-1743 467 NM	IR-164 472 NM
VR-1104 472 NM	IR-726 473 NM	VR-1726 473 NM	IR-012 477 NM	VR-1074 480 NM	SR-223 483 NM
SR-224 483 NM	VR-189 485 NM	VR-1182 493 NM	VR-188 497 NM	VR-1721 509 NM	SR-228 510 NM
VR-1668 514 NM	VR-085 516 NM	VR-086 516 NM	IR-129 518 NM	IR-721 522 NM	VR-1667 526 NM

UNCLASSIFIED

## 1995 AIR FORCE BASE QUESTIONNAIRE

## Eglin AFB - AFMC

VR-151	527 NM	VR-1679	527 NM	IR-618	528 NM	VR-619	528 NM	SR-871	529 NM	SR-872	529 NM
SR-873	529 NM	SR-874	529 NM	VR-1046	538 NM	SR-290	540 NM	SR-292	540 NM	VR-1546	541 NM
VR-1130	544 NM	VR-1043	545 NM	VR-615	546 NM	IR-142	552 NM	VR-073	554 NM	VR-096	555 NM
IR-723	556 NM	SR-270	562 NM	IR-762	564 NM	VR-1756	564 NM	VR-1120	569 NM	VR-1722	569 NM
IR-136	571 NM	VR-1061	571 NM	VR-1751	571 NM	IR-761	571 NM	VR-1631	572 NM	IR-608	574 NM
VR-1632	576 NM	VR-1633	576 NM	VR-1124	577 NM	SR-732	581 NM	SR-734	581 NM	SR-735	581 NM
IR-062	582 NM	SR-261	582 NM	IR-614	586 NM	SR-733	586 NM	VR-1635	586 NM	VR-1641	588 NM
VR-1642	588 NM	SR-738	595 NM	SR-737	597 NM	IR-502	598 NM	IR-504	598 NM	VR-104	599 NM
VR-1110	602 NM	VR-1752	603 NM	IR-166	605 NM	VR-1122	606 NM	IR-715	607 NM	SR-286	607 NM
IR-718	607 NM	VR-1058	608 NM	IR-117	609 NM	VR-1113	609 NM	VR-1128	609 NM	VR-1137	609 NM
IR-105	612 NM	SR-293	612 NM	IR-103	613 NM	IR-167	613 NM	IR-719	616 NM	VR-168	618 NM
VR-1146	619 NM	VR-143	620 NM	IR-123	621 NM	IR-720	621 NM	VR-152	622 NM	VR-1525	622 NM
IR-139	623 NM	IR-148	623 NM	VR-1145	624 NM	VR-1640	624 NM	IR-147	625 NM	SR-296	625 NM
SR-707	627 NM	SR-713	627 NM	SR-714	627 NM	SR-708	627 NM	SR-710	627 NM	SR-711	627 NM
VR-1139	628 NM	VR-158	630 NM	SR-867	631 NM	IR-527	632 NM	VR-1057	632 NM	VR-101	632 NM
VR-162	633 NM	VR-1758	633 NM	VR-1759	633 NM	SR-709	635 NM	SR-715	635 NM	SR-712	635 NM
IR-135	637 NM	VR-163	637 NM	VR-1143	638 NM	VR-1105	639 NM	VR-1152	639 NM	VR-118	639 NM
VR-156	639 NM	VR-1121	650 NM	VR-1106	652 NM	VR-1138	652 NM	SR-294	654 NM	SR-295	654 NM
VR-1123	655 NM	VR-159	656 NM	VR-1617	656 NM	VR-1638	656 NM	SR-815	659 NM	SR-822	659 NM
SR-816	659 NM	VR-1142	663 NM	VR-119	663 NM	VR-1144	663 NM	IR-149	664 NM	IR-714	666 NM
IR-760	666 NM	VR-1754	666 NM	VR-534	667 NM	VR-535	667 NM	VR-533	668 NM	SR-820	671 NM
SR-821	671 NM	SR-835	671 NM	IR-145	672 NM	IR-146	672 NM	VR-138	673 NM	VR-1755	673 NM
VR-1753	673 NM	VR-1140	680 NM	IR-171	682 NM	SR-808	682 NM	SR-807	682 NM	SR-806	682 NM
SR-804	682 NM	SR-803	682 NM	SR-802	682 NM	SR-617	682 NM	SR-616	682 NM	IR-182	682 NM
IR-124	687 NM	VR-186	687 NM	SR-817	692 NM	IR-181	696 NM	IR-183	696 NM	SR-205	699 NM
SR-774	700 NM	SR-618	701 NM	SR-619	701 NM	IR-175	702 NM	SR-818	702 NM	VR-1711	703 NM
VR-1712	703 NM	VR-1713	703 NM	SR-233	704 NM	SR-242	704 NM	SR-240	704 NM	VR-532	704 NM
SR-273	704 NM	SR-267	704 NM	SR-258	704 NM	SR-255	704 NM	SR-251	704 NM	SR-250	704 NM
SR-249	704 NM	SR-245	704 NM	SR-244	704 NM	SR-243	704 NM	SR-234	704 NM	SR-236	704 NM
IR-185	705 NM	SR-208	708 NM	VR-1709	708 NM	SR-217	709 NM	VR-1141	714 NM	VR-708	714 NM
VR-531	714 NM	VR-1757	723 NM	SR-773	727 NM	SR-280	729 NM	VR-704	730 NM	VR-705	730 NM
SR-206	736 NM	VR-511	740 NM	VR-544	743 NM	VR-541	749 NM	IR-169	750 NM	VR-552	754 NM
IR-180	756 NM	VR-1116	756 NM	IR-716	757 NM	SR-703	757 NM	SR-701	757 NM	SR-216	759 NM
SR-702	761 NM	SR-800	762 NM	SR-805	762 NM	SR-801	762 NM	VR-512	764 NM	SR-771	765 NM
SR-844	766 NM	SR-846	766 NM	SR-845	766 NM	IR-128	767 NM	IR-155	768 NM	IR-154	769 NM
IR-170	770 NM	IR-505	779 NM	VR-1117	784 NM	VR-1624	787 NM	VR-1625	787 NM	VR-545	789 NM

15-Feb-95

UNCLASSIFIED

1.08

## 1995 AIR FORCE BASE QUESTIONNAIRE

### Eglin AFB - AFMC

|SR-823 791 NM |IR-172 792 NM |IR-173 792 NM |IR-503 793 NM |IR-506 798 NM |VR-1522 798 NM |

**I.2.C.9** IR-429 is the closest 400 series Military Training Route (MTR) which leads into the Tactics Training Range Complex (TTRC). Point A is 1069 NM from the base.

**I.2.C.10** Total number of Air Refueling (AR) routes with anchor points for refueling anchors or air refueling control points (ARCPs) for refueling tracks within:

200 NM	300 NM	500 NM
4	13	39

**I.2.C.10.a** Routes and distance to route's control point:

Refueling Route	Distance	Refueling Route	Distance	Refueling Route	Distance	Refueling Route	Distance
AR-200	95 NM	AR-627	169 NM	AR-103	191 NM	AR-302 WEST	195 NM
AR-302 EAST	212 NM	AR-646	220 NM	AR-655	222 NM	AR-101 NORTH	229 NM
AR-216 NORTHEAST	232 NM	AR-615	238 NM	AR-716	244 NM	AR-108 WEST	247 NM
AR-101 SOUTH	293 NM						
AR-108 EAST	305 NM	AR-618	314 NM	AR-620	320 NM	AR-207NE NORTHEA	327 NM
AR-203 NORTHEAST	344 NM	AR-216 SOUTHWEST	352 NM	AR-633B	358 NM	AR-633A	375 NM
Racoon MOA	384 NM	AR-600	401 NM	AR-111 WEST	403 NM	AR-601	404 NM
AR-315 WEST	411 NM	AR-111 EAST	422 NM	AR-315 EAST	423 NM	AR-203 SOUTHWEST	426 NM
AR-207SW SOUTHW	438 NM	AR-328	440 NM	AR-455 EAST	443 NM	AR-313 NORTH	448 NM
AR-202AN ALTERNA	449 NM	AR-202N NORTH	452 NM	AR-617	459 NM	AR-202S SOUTH	462 NM
AR-455 WEST	462 NM	AR-638	467 NM				

**I.2.C.10b** The total number of refueling events within:

500 NM	700 NM
3593	5363

Track	Distance	Events	Track	Distance	Events	Track	Distance	Events	Track	Distance	Events
AR-302	195 NM	445	AR-101	229 NM	217	AR-216	232 NM	64	AR-108	247 NM	140
AR-203	344 NM	223	Racoon	384 NM	1829	AR-111	403 NM	303	AR-455	443 NM	372
AR-110	508 NM	596	AR-112	508 NM	360	AR-102	582 NM	10	AR-016	615 NM	157

**I.2.C.10c** The nearest concentrated receiver area (AR track with at least 500 events) is 384NM from the base."

**I.2.C.10d** Percentage of tanker demand in region: 27.0

Percentage of tankers based in region: 9.0

Tanker saturation within the region has been classified as tanker Poor

## 1995 AIR FORCE BASE QUESTIONNAIRE

## Eglin AFB - AFMC

I.2.C.11 Drop zones (DZs) listed in AMC Pamphlet 55-57 (9 Jun 94) within 150 NM with a minimum size of 700 by 1000 yards:

Name	Distance	Night?	Personnel?	Equipment?	Route Count	
					IR	SR
BIFF	54 NM	✓	✓		0	0
BILL BAG	52 NM	✓	✓		0	0
BRAVO	321 NM	✓	✓	✓	6	0
BRUSHY	333 NM	✓	✓	✓	0	0
BURMA SPECIAL N	15 NM				3	4
BURMA SPECIAL S	15 NM				3	4
CAVALIER NORTH	15 NM	✓	✓	✓	3	4
CAVALIER SOUTH	15 NM	✓	✓		3	4
CLERKIN	41 NM	✓	✓		0	0
ECHO CHARLIE	328 NM	✓	✓	✓	10	0
ELIZABETH WEST	10 NM	✓	✓	✓	3	4
FRYAR	134 NM	✓	✓	✓	4	6
GALLAHAD #1	273 NM				0	1
GERONIMO NORTH	334 NM		✓	✓	0	0
GERONIMO SOUTH	334 NM		✓	✓	0	0
GRAHAM	197 NM	✓	✓	✓	4	6
HARD LUCK	321 NM	✓	✓		8	0
HUNTER	291 NM		✓		0	0
JONES	248 NM	✓	✓	✓	6	0
KAREN	321 NM	✓	✓	✓	8	0
LOWRY LAKE	238 NM	✓	✓		2	0
MALLON	56 NM	✓	✓		0	0
MCKENNA	143 NM	✓	✓	✓	4	6
MITCHELL	110 NM	✓	✓	✓	0	0
NORTHFIELD E-W	334 NM	✓	✓	✓	2	1
NORTHFIELD S-N	334 NM	✓	✓	✓	0	0
OSCAR NOVEMBER	325 NM	✓	✓	✓	8	0
OSCAR QUEBEC	323 NM	✓	✓	✓	8	0
OSCAR QUEBEC REV	322 NM	✓	✓	✓	6	0
PAYNE	228 NM	✓	✓		0	0
PRESTON	279 NM		✓	✓	0	0
QUICK	262 NM	✓			0	0
REMAGEN	261 NM	✓	✓	✓	1	1

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REMAGEN REVERSE	261 NM	✓	✓		1	1
RIM	321 NM	✓	✓	✓	8	0
SANDY DOG	15 NM	✓	✓	✓	3	4
SHARON	330 NM	✓	✓	✓	0	0
SHAW, JOHN	325 NM	✓	✓		0	0
SHEILA	330 NM		✓	✓	0	0
SHELBY	139 NM	✓	✓	✓	0	3
SOUTH POLK	345 NM	✓	✓	✓	0	0
TAYLORS CREEK	262 NM	✓	✓	✓	1	1
THUNDERBOLT	291 NM	✓	✓		0	0
WHITE FALCON	22 NM	✓	✓		3	4

I.2.C.11.a

## Drop Zone

## Servicing Instrument and Slow Routes (IRs and SRs)

BRAVO	IR-034	IR-046	IR-047	IR-048	IR-049	IR-055			
BURMA SPECIAL N	IR-015	IR-057	IR-059	SR-101	SR-103	SR-104	SR-106		
BURMA SPECIAL S	IR-015	IR-057	IR-059	SR-101	SR-103	SR-104	SR-106		
CAVALIER NORTH	IR-015	IR-057	IR-059	SR-101	SR-103	SR-104	SR-106		
CAVALIER SOUTH	IR-015	IR-057	IR-059	SR-101	SR-103	SR-104	SR-106		
ECHO CHARLIE	IR-034	IR-036	IR-037	IR-038	IR-046	IR-047	IR-049	IR-050	IR-055
	IR-056								
ELIZABETH WEST	IR-015	IR-057	IR-059	SR-101	SR-103	SR-104	SR-106		
FRYAR	IR-077	IR-078	IR-089	IR-090	SR-038	SR-039	SR-069	SR-070	SR-071
	SR-072								
GALLAHAD #1	SR-038								
GRAHAM	IR-077	IR-078	IR-089	IR-090	SR-038	SR-039	SR-069	SR-070	SR-071
	SR-072								
HARD LUCK	IR-034	IR-046	IR-047	IR-048	IR-049	IR-050	IR-055	IR-056	
JONES	IR-034	IR-046	IR-047	IR-048	IR-049	IR-055			
KAREN	IR-034	IR-046	IR-047	IR-048	IR-049	IR-050	IR-055	IR-056	
LOWRY LAKE	IR-032	IR-033							
MCKENNA	IR-077	IR-078	IR-089	IR-090	SR-038	SR-039	SR-069	SR-070	SR-071
	SR-072								
NORTHFIELD E-W	IR-035	IR-036	SR-166						
OSCAR NOVEMBER	IR-034	IR-046	IR-047	IR-048	IR-049	IR-050	IR-055	IR-056	
OSCAR QUEBEC	IR-034	IR-046	IR-047	IR-048	IR-049	IR-050	IR-055	IR-056	
OSCAR QUEBEC REV	IR-034	IR-046	IR-047	IR-048	IR-049	IR-055			
REMAGEN	IR-023	SR-038							

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REMAGEN REVERSE	IR-023	SR-038							
RIM	IR-034	IR-046	IR-047	IR-048	IR-049	IR-050	IR-055	IR-056	
SANDY DOG	IR-015	IR-057	IR-059	SR-101	SR-103	SR-104	SR-106		
SHELBY	SR-029	SR-030	SR-031						
TAYLORS CREEK	IR-023	SR-038							
WHITE FALCON	IR-015	IR-057	IR-059	SR-101	SR-103	SR-104	SR-106		

I.2.C.12 Closest primary landing zone (LZ) listed in AMC Pamphlet 55-57 (9 Jun 94) with a minimum size of 3000 by 60 ft:

AUX FLD 6

14 NM

I.2.C.13 Nearest full scale drop zone(s) (minimum size 1000 by 1500 yds) which can be used for personnel drops or night equipment drops:

Name	Distance	Night?	Personnel?	Equipment?	Route Count	
					IR	SR
ELIZABETH WEST	10 NM	✓	✓	✓	0	0

I.2.C.14 Name and distance to ground force installation (US Army, USMC) with a restricted airspace capable of supporting tactical aircraft employment (floor no higher than 100 ft AGL, ceiling no lower than 3,00 ft AGL, minimum area 25000 sq NM>

FORT STEWART

268 NM



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#### D. Ranges

##### Ranges (Controlled/managed by the base)

**I.2.D.1** Ranges controlled or managed by the base:  
SEE ADDENDUM

Information relative to each range:

**RANGE: SEE ADDENDUM**

**I.2.D.2** Type of any associated airspace: R-2915, R-2918, R-2914, R-2919

**I.2.D.3** Distance from the base to the range: 5 NM

**I.2.D.4** Overall size of the range: 55,822,770 Acres

**I.2.D.4.a** Size of the impact area(s): 55,396,342 Acres

**I.2.D.4.b** Size of the restricted area in which the range lies: 1,144 Sq Mi

**I.2.D.4.c** Altitude ceiling of this restricted area: 50,000 ft

**I.2.D.5** The range shape or location DOES NOT prohibit efficient training

**I.2.D.6** Other types of restrictions that exist (i.e. limited hours, exercise only, etc):  
MINOR OR NONE

**I.2.D.7** Regular users (20 or more times /year) of the range:

1 FS
15 SOS
16 SOS
2 FS
20 SOS
307 FS
39 FTS
40 FTS
55 SOS
58 SOS
59 SOS
60 FS
68 FS
69 FS
711 SOS
8 SOS

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82 ATRS
83 FWS
85 FS
9 FS
95 FS

**I.2.D.8 Published availability of the range:**

24 HOURS A DAY, 7 DAYS A WEEK

Range scheduling statistics (yearly average from 1990 to 93.)

**I.2.D.8.a Hours scheduled:****I.2.D.8.b Hours used:****I.2.D.8.c Percent utilized:****I.2.D.9 The range has a full-scale weapons delivery capability as follows:**

Tests include sled track, arena, air to surface drops and missile launches from ground and aircraft, including the 86,500 sq mi over water ranges.

**I.2.D.9.a Associated restrictions:****I.2.D.10 The range has a special weapons delivery capability as follows:**

Includes HELLFIRE, Maverick, GBU 15 , AMRAAM, Tomahawk Cruise Missile, Sensor Fuzed Weapons.

**I.2.D.10.a Associated restrictions:****I.2.D.11 The range has an electronic warfare capability as follows:**

SEE ADDENDUM.

**I.2.D.11.a Associated restrictions:****I.2.D.12 List of Noise Sensitive Areas (NSAs) associated with the range:****I.2.D.13 There are no commercial / civilian encroachment problems associated with the range**

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**1995 AIR FORCE BASE QUESTIONNAIRE**  
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- I.2.D.14**      **The range has No problems with hazardous material / waste/ ordinance disposal**
- I.2.D.15**      **There are No MOUs, MOAs or LOAs associated with the range**
- I.2.D.16**      **It is possible to expand hours to increase the range utilization, volume can Not be expanded.**
- I.2.D.17**      **There are No planned range real property expansions.**

**Ranges (Used by the base)**

- I.2.D.18**      **The base uses other ranges on a regular basis**
- I.2.D.19**      **The mission and training is Not adversely impacted by training area airspace encroachment or other conflicts.**

**I.2.D.20**      **MOAs/bombing ranges/other training areas have scheduling restrictions/limitations as follows:**

**I.2.D.20.a**    **See ADDENDUM**

They are scheduled on a priority basis. Eglin's operational units, the 33 FW and the 919 SOW, use the Eglin test ranges for training. Training use of the prime test ranges is limited during normal test operations hours (0700-1700).

- I.2.D.21**      **MOAs/bombing ranges/other training areas have No projected scheduling restrictions/limitations.**
- I.2.D.22**      **No significant changes/restrictions/limitations effecting the scheduling of low level routes in progress.**

## 1995 AIR FORCE BASE QUESTIONNAIRE

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#### E. Airspace Used by Base

##### I.2.E.1 Airspaces scheduled or managed by the base:

Eglin A East and West	MOA
Eglin B	Other
Eglin C	MOA
Eglin D	MOA
Eglin E	MOA
Eglin F	MOA
R-2914 A	Restricted Area
R-2914 B	Restricted Area
R-2915 A	Restricted Area
R-2915 B	Restricted Area
R-2915C	Restricted Area
R-2918	Restricted Area
R-2919 A	Restricted Area
R-2919 B	Restricted Area
Rose Hill	MOA
W-151	Warning Area
W-470	Warning Area

##### Details for airspace scheduled or managed by the base:

##### Airspace: Eglin A East and West

- I.2.E.2 An environmental analysis has been conducted for this airspace.**
- I.2.E.2.a Status of the environmental analysis and supplement:**  
Environmental analysis was completed in the 1970s.
- I.2.E.2.b There are problems No associated with the environmental analysis.**
- I.2.E.2.c The current Description of Proposed Actions/Alternatives (DOPAA) does Not define base operations.**  
**The DOPAA was Not used in the latest environmental analysis and supersonic waiver.**  
**Explanation for any lack of reports:**
- I.2.E.3 There are No Noise Sensitive Areas associated with the airspace.**

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**1995 AIR FORCE BASE QUESTIONNAIRE**  
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- I.2.E.4** Commercial / civilian encroachment problems associated with the airspace:
- I.2.E.5** There are No planned expansions (including new airspace) to the base's special use airspace.
- I.2.E.6** There are No restrictions currently acting on this airspace
- I.2.E.7** Published availability of the airspace:  
1000' AGL to but not including FL180, occasionally to 200' AGL by NOTAM, 0600-2100 Mon-Fri.  
Range scheduling statistics (yearly average from 1990 to 93).
- I.2.E.7.a** Hours scheduled: 1,642 hrs
- I.2.E.7.b** Hours used: 1,367 hrs
- I.2.E.7.c** Reasons for non-use:  
Test/training requirements changed, weather cancellations, test item/aircraft not available.
- I.2.E.8** Utilization of the airspace can be increased.
- I.2.E.9** It is possible to expand volume to increase the airspace utilization, hours can Not be expanded.
- I.2.E.10** Description of the volume or area of the Airspace:  
76 sq miles, 1,000 ft AGL to but not including FL 180.
- I.2.E.11** 50.00 percent of the airspace is usable.  
**Airspace: Eglin B**
- I.2.E.2** An environmental analysis has been conducted for this airspace.
- I.2.E.2.a** Status of the environmental analysis and supplement:  
Environmental analysis was completed int the 1970s.
- I.2.E.2.b** There are problems No associated with the environmental analysis.
- I.2.E.2.c** The current Description of Proposed Actions/Alternatives (DOPAA) does Not define base operations.  
The DOPAA was Not used in the latest environmental analysis and supersonic waiver.  
Explanation for any lack of reports:

**1995 AIR FORCE BASE QUESTIONNAIRE****Eglin AFB - AFMC**

- I.2.E.3** There are No Noise Sensitive Areas associated with the airspace.
- I.2.E.4** Commercial / civilian encroachment problems associated with the airspace:
- I.2.E.5** There are No planned expansions (including new airspace) to the base's special use airspace.
- I.2.E.6** There are No restrictions currently acting on this airspace
- I.2.E.7** Published availability of the airspace:  
1000' AGL to but not including FL 180, 0600-2100 Mon-Fri, hrs of use intermittent, other by NOTAM.  
Range scheduling statistics (yearly average from 1990 to 93).
- I.2.E.7.a** Hours scheduled: 696 hrs
- I.2.E.7.b** Hours used: 492 hrs
- I.2.E.7.c** Reasons for non-use:  
Test/training requirements changed, weather cancellations, test item/aircraft not available.
- I.2.E.8** Utilization of the airspace can be increased.
- I.2.E.9** It is possible to expand hours and volume to increase the airspace utilization.
- I.2.E.10** Description of the volume or area of the Airspace:  
193 sq miles, 1,000 ft AGL to but not including FL 180.
- I.2.E.11** 98.00 percent of the airspace is usable.  
Airspace: Eglin C
- I.2.E.2** An environmental analysis has been conducted for this airspace.
- I.2.E.2.a** Status of the environmental analysis and supplement:  
Environmental analysis was completed in the 1970s.
- I.2.E.2.b** There are problems No associated with the environmental analysis.
- I.2.E.2.c** The current Description of Proposed Actions/Alternatives (DOPAA) does Not define base operations.

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The DOPAA was Not used in the latest environmental analysis and supersonic waiver.

Explanation for any lack of reports:

- I.2.E.3 There are No Noise Sensitive Areas associated with the airspace.
- I.2.E.4 Commercial / civilian encroachment problems associated with the airspace:
- I.2.E.5 There are No planned expansions (including new airspace) to the base's special use airspace.
  
- I.2.E.6 There are No restrictions currently acting on this airspace
  
- I.2.E.7 Published availability of the airspace:
  - 1000' AGL to but not including FL 180, 0600-2100 Mon-Fri, hours of use intermittent, other by NOTAM.
  - Range scheduling statistics (yearly average from 1990 to 93).
  - I.2.E.7.a Hours scheduled: 705 hrs
  - I.2.E.7.b Hours used: 512 hrs
  - I.2.E.7.c Reasons for non-use:
    - Test/training requirements changed, weather cancellations, test item/aircraft not available.
- I.2.E.8 Utilization of the airspace can be increased.
- I.2.E.9 It is possible to expand hours and volume to increase the airspace utilization.
- I.2.E.10 Description of the volume or area of the Airspace:
  - 126 sq miles, 1,000 ft AGL to but not including FL 180
- I.2.E.11 100.00 percent of the airspace is usable.  
Airspace: Eglin D
  
- I.2.E.2 An environmental analysis has been conducted for this airspace.
- I.2.E.2.a Status of the environmental analysis and supplement:
  - Environmental analysis was completed in the 1970s.

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**1995 AIR FORCE BASE QUESTIONNAIRE**  
**Eglin AFB - AFMC**

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- I.2.E.2.b** There are problems No associated with the environmental analysis.
- I.2.E.2.c** The current Description of Proposed Actions/Alternatives (DOPAA) does Not define base operations.  
The DOPAA was Not used in the latest environmental analysis and supersonic waiver.  
Explanation for any lack of reports:
- I.2.E.3** There are No Noise Sensitive Areas associated with the airspace.
- I.2.E.4** Commercial / civilian encroachment problems associated with the airspace:
- I.2.E.5** There are No planned expansions (including new airspace) to the base's special use airspace.
- I.2.E.6** There are No restrictions currently acting on this airspace
- I.2.E.7** Published availability of the airspace:  
1000' AGL to 3000' AGL, 0600-2100 Mon-Fri, hours of use intermittent, other by NOTAM.  
Range scheduling statistics (yearly average from 1990 to 93.
- I.2.E.7.a** Hours scheduled: 426 hrs
- I.2.E.7.b** Hours used: 316 hrs
- I.2.E.7.c** Reasons for non-use:  
Test/training requirements changed, weather cancellations, test item/aircraft not available.
- I.2.E.8** Utilization of the airspace can be increased.
- I.2.E.9** It is possible to expand hours and volume to increase the airspace utilization.
- I.2.E.10** Description of the volume or area of the Airspace:  
110 sq miles, 1,000 ft AGL to 3,000 ft AGL.
- I.2.E.11** 100.00 percent of the airspace is usable.  
Airspace: Eglin E
- I.2.E.2** An environmental analysis has been conducted for this airspace.



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- I.2.E.2.a**    **Status of the environmental analysis and supplement:**  
Environmental analysis was completed in the 1970s.
- I.2.E.2.b**    **There are problems No associated with the environmental analysis.**
- I.2.E.2.c**    **The current Description of Proposed Actions/Alternatives (DOPAA) does Not define base operations.**  
**The DOPAA was Not used in the latest environmental analysis and supersonic waiver.**  
**Explanation for any lack of reports:**
- I.2.E.3**    **There are No Noise Sensitive Areas associated with the airspace.**
- I.2.E.4**    **Commercial / civilian encroachment problems associated with the airspace:**
- I.2.E.5**    **There are No planned expansions (including new airspace) to the base's special use airspace.**
- I.2.E.6**    **There are No restrictions currently acting on this airspace**
- I.2.E.7**    **Published availability of the airspace:**  
Surface to but not including FL 180, 0600-2100, Mon-Fri, hours of use intermittent, other by NOTAM.  
**Range scheduling statistics (yearly average from 1990 to 93.**
- I.2.E.7.a**    **Hours scheduled:**    156 hrs
- I.2.E.7.b**    **Hours used:**        156 hrs
- I.2.E.8**    **Utilization of the airspace can be increased.**
- I.2.E.9**    **It is possible to expand hours and volume to increase the airspace utilization.**
- I.2.E.10**   **Description of the volume or area of the Airspace:**  
7 sq miles, surface to but not including FL 180.
- I.2.E.11**   **97.00 percent of the airspace is usable.**

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**1995 AIR FORCE BASE QUESTIONNAIRE**  
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**Airspace: Eglin F**

- I.2.E.2** An environmental analysis has been conducted for this airspace.
- I.2.E.2.a** Status of the environmental analysis and supplement:  
Environmental analysis was completed in the 1970s.
- I.2.E.2.b** There are problems No associated with the environmental analysis.
- I.2.E.2.c** The current Description of Proposed Actions/Alternatives (DOPAA) does Not define base operations.  
The DOPAA was Not used in the latest environmental analysis and supersonic waiver.  
Explanation for any lack of reports:
- I.2.E.3** There are No Noise Sensitive Areas associated with the airspace.
- I.2.E.4** Commercial / civilian encroachment problems associated with the airspace:
- I.2.E.5** There are No planned expansions (including new airspace) to the base's special use airspace.
- I.2.E.6** There are No restrictions currently acting on this airspace
- I.2.E.7** Published availability of the airspace:  
Surface to but not including FL 180, Mon-Fri, hours of use intermittent, other by NOTAM.  
Range scheduling statistics (yearly average from 1990 to 93).
- I.2.E.7.a** Hours scheduled: 277 hrs
- I.2.E.7.b** Hours used: 184 hrs
- I.2.E.7.c** Reasons for non-use:  
Test/training requirements changed, weather cancellations, test item/aircraft not available.
- I.2.E.8** Utilization of the airspace can be increased.
- I.2.E.9** It is possible to expand hours and volume to increase the airspace utilization.
- I.2.E.10** Description of the volume or area of the Airspace:

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7 sq miles, surface to but not including FL 180.

- I.2.E.11**     **97.00 percent of the airspace is usable.**  
**Airspace: R-2914 A**
- I.2.E.2**     **An environmental analysis has been conducted for this airspace.**
- I.2.E.2.a**    **Status of the environmental analysis and supplement:**  
 Environmental analysis was completed in the 1970s.
- I.2.E.2.b**    **There are problems No associated with the environmental analysis.**
- I.2.E.2.c**    **The current Description of Proposed Actions/Alternatives (DOPAA) does Not define base operations.**  
**The DOPAA was Not used in the latest environmental analysis and supersonic waiver.**  
**Explanation for any lack of reports:**
- I.2.E.3**     **There are No Noise Sensitive Areas associated with the airspace.**
- I.2.E.4**     **Commercial / civilian encroachment problems associated with the airspace:**
- I.2.E.5**     **There are No planned expansions (including new airspace) to the base's special use airspace.**
- I.2.E.6**     **There are No restrictions currently acting on this airspace**
- I.2.E.7**     **Published availability of the airspace:**  
 Surface to unlimited excluding airspace within R-2917, continuous for time of day and days of week.  
**Range scheduling statistics (yearly average from 1990 to 93.**
- I.2.E.7.a**    **Hours scheduled:**    4,931 hrs
- I.2.E.7.b**    **Hours used:**         3,691 hrs
- I.2.E.7.c**    **Reasons for non-use:**  
 Test/training requirements changed, weather cancellations, test item/aircraft not available.
- I.2.E.8**     **Utilization of the airspace can be increased.**

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- I.2.E.9** It is possible to expand volume to increase the airspace utilization, hours can Not be expanded.
- I.2.E.10** Description of the volume or area of the Airspace:  
450 sq miles, surface to unlimited.
- I.2.E.11** 98.00 percent of the airspace is usable.  
**Airspace: R-2914 B**
- I.2.E.2** An environmental analysis has been conducted for this airspace.
- I.2.E.2.a** Status of the environmental analysis and supplement:  
Environmental analysis was completed in the 1970s.
- I.2.E.2.b** There are problems No associated with the environmental analysis.
- I.2.E.2.c** The current Description of Proposed Actions/Alternatives (DOPAA) does Not define base operations.  
The DOPAA was Not used in the latest environmental analysis and supersonic waiver.  
Explanation for any lack of reports:
- I.2.E.3** There are No Noise Sensitive Areas associated with the airspace.
- I.2.E.4** Commercial / civilian encroachment problems associated with the airspace:
- I.2.E.5** There are No planned expansions (including new airspace) to the base's special use airspace.
- I.2.E.6** There are No restrictions currently acting on this airspace
- I.2.E.7** Published availability of the airspace:  
8500' to unlimited, continuous for both time of day and days of the week.  
Range scheduling statistics (yearly average from 1990 to 93).
- I.2.E.7.a** Hours scheduled: 215 hrs
- I.2.E.7.b** Hours used: 82 hrs
- I.2.E.7.c** Reasons for non-use:

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Test/training requirements changed, weather cancellations, test item/aircraft not available.

- I.2.E.8 Utilization of the airspace can be increased.**
- I.2.E.9 It is possible to expand hours and volume to increase the airspace utilization.**
- I.2.E.10 Description of the volume or area of the Airspace:**  
72 sq miles, 8,500 ft to unlimited
- I.2.E.11 95.00 percent of the airspace is usable.**  
**Airspace: R-2915 A**
- I.2.E.2 An environmental analysis has been conducted for this airspace.**
- I.2.E.2.a Status of the environmental analysis and supplement:**  
Environmental analysis was completed in the 1970s.
- I.2.E.2.b There are problems No associated with the environmental analysis.**
- I.2.E.2.c The current Description of Proposed Actions/Alternatives (DOPAA) does Not define base operations.**  
**The DOPAA was Not used in the latest environmental analysis and supersonic waiver.**  
**Explanation for any lack of reports:**
- I.2.E.3 There are No Noise Sensitive Areas associated with the airspace.**
- I.2.E.4 Commercial / civilian encroachment problems associated with the airspace:**
- I.2.E.5 There are No planned expansions (including new airspace) to the base's special use airspace.**
- I.2.E.6 There are No restrictions currently acting on this airspace**
- I.2.E.7 Published availability of the airspace:**  
Surface to unlimited, continuous for both time of day and days of the week.  
**Range scheduling statistics (yearly average from 1990 to 93.**
- I.2.E.7.a Hours scheduled: 8,107 hrs**

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- I.2.E.7.b** Hours used: 6,305 hrs
- I.2.E.7.c** Reasons for non-use:  
Test/training requirements changed, weather cancellations, test item/aircraft not available.
- I.2.E.8** Utilization of the airspace can be increased.
- I.2.E.9** It is possible to expand hours and volume to increase the airspace utilization.
- I.2.E.10** Description of the volume or area of the Airspace:  
238 sq miles, surface to unlimited.
- I.2.E.11** 100.00 percent of the airspace is usable.  
**Airspace: R-2915 B**
- I.2.E.2** An environmental analysis has been conducted for this airspace.
- I.2.E.2.a** Status of the environmental analysis and supplement:  
Environmental analysis was completed in the 1970s.
- I.2.E.2.b** There are problems No associated with the environmental analysis.
- I.2.E.2.c** The current Description of Proposed Actions/Alternatives (DOPAA) does Not define base operations.  
The DOPAA was Not used in the latest environmental analysis and supersonic waiver.  
Explanation for any lack of reports:
- I.2.E.3** There are No Noise Sensitive Areas associated with the airspace.
- I.2.E.4** Commercial / civilian encroachment problems associated with the airspace:
- I.2.E.5** There are No planned expansions (including new airspace) to the base's special use airspace.
- I.2.E.6** There are No restrictions currently acting on this airspace
- I.2.E.7** Published availability of the airspace:  
Surface to unlimited, continuous for both time of day and days of the week.

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**Range scheduling statistics (yearly average from 1990 to 93.**

**I.2.E.7.a Hours scheduled: 2,856 hrs**

**I.2.E.7.b Hours used: 2,199 hrs**

**I.2.E.7.c Reasons for non-use:**

Test/training requirements changed, weather cancellations, test item/aircraft not available.

**I.2.E.8 Utilization of the airspace can be increased.**

**I.2.E.9 It is possible to expand hours and volume to increase the airspace utilization.**

**I.2.E.10 Description of the volume or area of the Airspace:**

53 sq miles, surface to unlimited.

**I.2.E.11 95.00 percent of the airspace is usable.**

**Airspace: R-2915C**

**I.2.E.2 An environmental analysis has been conducted for this airspace.**

**I.2.E.2.a Status of the environmental analysis and supplement:**

Environmental analysis was completed in the 1970s.

**I.2.E.2.b There are problems No associated with the environmental analysis.**

**I.2.E.2.c The current Description of Proposed Actions/Alternatives (DOPAA) does Not define base operations.**

**The DOPAA was Not used in the latest environmental analysis and supersonic waiver.**

**Explanation for any lack of reports:**

**I.2.E.3 There are No Noise Sensitive Areas associated with the airspace.**

**I.2.E.4 Commercial / civilian encroachment problems associated with the airspace:**

**I.2.E.5 There are No planned expansions (including new airspace) to the base's special use airspace.**

**I.2.E.6 There are No restrictions currently acting on this airspace**

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- I.2.E.7**      **Published availability of the airspace:**  
8500' to unlimited, continuous for both time of day and days of week.  
**Range scheduling statistics (yearly average from 1990 to 93.**
- I.2.E.7.a**      **Hours scheduled:**    972 hrs
- I.2.E.7.b**      **Hours used:**            665 hrs
- I.2.E.7.c**      **Reasons for non-use:**  
Test/training requirements changed, weather cancellations, test item/aircraft not available.
- I.2.E.8**      **Utilization of the airspace can be increased.**
- I.2.E.9**      **It is possible to expand volume to increase the airspace utilization, hours can Not be expanded.**
- I.2.E.10**      **Description of the volume or area of the Airspace:**  
42 sq miles, 8500' to unlimited.
- I.2.E.11**      **100.00 percent of the airspace is usable.**  
**Airspace: R-2918**
- I.2.E.2**      **An environmental analysis has been conducted for this airspace.**
- I.2.E.2.a**      **Status of the environmental analysis and supplement:**  
Environmental analysis was completed in the 1970s.
- I.2.E.2.b**      **There are problems No associated with the environmental analysis.**
- I.2.E.2.c**      **The current Description of Proposed Actions/Alternatives (DOPAA) does Not define base operations.**  
**The DOPAA was Not used in the latest environmental analysis and supersonic waiver.**  
**Explanation for any lack of reports:**
- I.2.E.3**      **There are No Noise Sensitive Areas associated with the airspace.**
- I.2.E.4**      **Commercial / civilian encroachment problems associated with the airspace:**
- I.2.E.5**      **There are No planned expansions (including new airspace) to the base's special use airspace.**



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- I.2.E.6** There are No restrictions currently acting on this airspace
- I.2.E.7** Published availability of the airspace:  
Surface to unlimited, continuous for both time of day and days of the week.  
Range scheduling statistics (yearly average from 1990 to 93.
- I.2.E.7.a** Hours scheduled: 1,375 hrs
- I.2.E.7.b** Hours used: 881 hrs
- I.2.E.7.c** Reasons for non-use:  
Test/training requirements changed, weather cancellations, test item/aircraft not available.
- I.2.E.8** Utilization of the airspace can be increased.
- I.2.E.9** It is possible to expand hours and volume to increase the airspace utilization.
- I.2.E.10** Description of the volume or area of the Airspace:  
21 sq miles, surface to unlimited.
- I.2.E.11** 100.00 percent of the airspace is usable.  
**Airspace: R-2919 A**
- I.2.E.2** An environmental analysis has been conducted for this airspace.
- I.2.E.2.a** Status of the environmental analysis and supplement:  
Environmental analysis was completed in the 1970s.
- I.2.E.2.b** There are problems No associated with the environmental analysis.
- I.2.E.2.c** The current Description of Proposed Actions/Alternatives (DOPAA) does Not define base operations.  
The DOPAA was Not used in the latest environmental analysis and supersonic waiver.  
Explanation for any lack of reports:
- I.2.E.3** There are No Noise Sensitive Areas associated with the airspace.
- I.2.E.4** Commercial / civilian encroachment problems associated with the airspace:
- I.2.E.5** There are No planned expansions (including new airspace) to the base's special use airspace.

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- I.2.E.6** There are No restrictions currently acting on this airspace
- I.2.E.7** **Published availability of the airspace:**  
Surface to unlimited, continuous for both time of day and days of the week.  
**Range scheduling statistics (yearly average from 1990 to 93.**
- I.2.E.7.a** **Hours scheduled:** 1,375 hrs
- I.2.E.7.b** **Hours used:** 998 hrs
- I.2.E.7.c** **Reasons for non-use:**  
Test/training requirements changed, weather cancellations, test item/aircraft not available.
- I.2.E.8** **Utilization of the airspace can be increased.**
- I.2.E.9** **It is possible to expand hours and volume to increase the airspace utilization.**
- I.2.E.10** **Description of the volume or area of the Airspace:**  
62 sq miles, surface to unlimited.
- I.2.E.11** **100.00 percent of the airspace is usable.**  
**Airspace: R-2919 B**
- I.2.E.2** **An environmental analysis has been conducted for this airspace.**
- I.2.E.2.a** **Status of the environmental analysis and supplement:**  
Environmental analysis was completed in the 1970s.
- I.2.E.2.b** **There are problems No associated with the environmental analysis.**
- I.2.E.2.c** **The current Description of Proposed Actions/Alternatives (DOPAA) does Not define base operations.**  
**The DOPAA was Not used in the latest environmental analysis and supersonic waiver.**  
**Explanation for any lack of reports:**
- I.2.E.3** **There are No Noise Sensitive Areas associated with the airspace.**
- I.2.E.4** **Commercial / civilian encroachment problems associated with the airspace:**
- I.2.E.5** **There are No planned expansions (including new airspace) to the base's special use airspace.**

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- I.2.E.6**      **There are No restrictions currently acting on this airspace**
- I.2.E.7**      **Published availability of the airspace:**  
8500' ft to unlimited, continuous for both time of day and days of the week.  
**Range scheduling statistics (yearly average from 1990 to 93.**
- I.2.E.7.a**      **Hours scheduled:**    528 hrs
- I.2.E.7.b**      **Hours used:**            284 hrs
- I.2.E.7.c**      **Reasons for non-use:**  
Test/training requirements changed, weather cancellations, test item/aircraft not available.
- I.2.E.8**      **Utilization of the airspace can be increased.**
- I.2.E.9**      **It is possible to expand volume to increase the airspace utilization, hours can Not be expanded.**
- I.2.E.10**      **Description of the volume or area of the Airspace:**  
57 sq miles, 8500' to unlimited.
- I.2.E.11**      **100.00 percent of the airspace is usable.**  
**Airspace: Rose Hill**
- I.2.E.2**      **An environmental analysis has been conducted for this airspace.**
- I.2.E.2.a**      **Status of the environmental analysis and supplement:**  
Environmental analysis was completed in the 1970s.
- I.2.E.2.b**      **There are problems No associated with the environmental analysis.**
- I.2.E.2.c**      **The current Description of Proposed Actions/Alternatives (DOPAA) does Not define base operations.**  
**The DOPAA was Not used in the latest environmental analysis and supersonic waiver.**  
**Explanation for any lack of reports:**
- I.2.E.3**      **There are No Noise Sensitive Areas associated with the airspace.**
- I.2.E.4**      **Commercial / civilian encroachment problems associated with the airspace:**

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- I.2.E.5** There are No planned expansions (including new airspace) to the base's special use airspace.
- I.2.E.6** There are No restrictions currently acting on this airspace
- I.2.E.7** Published availability of the airspace:  
8000' to FL 230 or as assigned by ATC, 0600-1800, Mon-Fri, other times by NOTAM.  
Range scheduling statistics (yearly average from 1990 to 93).
- I.2.E.7.a** Hours scheduled: 1,239 hrs
- I.2.E.7.b** Hours used: 1,239 hrs
- I.2.E.8** Utilization of the airspace can be increased.
- I.2.E.9** It is possible to expand hours and volume to increase the airspace utilization.
- I.2.E.10** Description of the volume or area of the Airspace:  
640 sq miles, 8,000 ft to FL 230.
- I.2.E.11** 100.00 percent of the airspace is usable.  
Airspace: W-151
- I.2.E.2** An environmental analysis has been conducted for this airspace.
- I.2.E.2.a** Status of the environmental analysis and supplement:  
Environmental analysis was completed in the 1970s.
- I.2.E.2.b** There are problems No associated with the environmental analysis.
- I.2.E.2.c** The current Description of Proposed Actions/Alternatives (DOPAA) does Not define base operations.  
The DOPAA was Not used in the latest environmental analysis and supersonic waiver.  
Explanation for any lack of reports:
- I.2.E.3** There are No Noise Sensitive Areas associated with the airspace.

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- I.2.E.4** Commercial / civilian encroachment problems associated with the airspace:
- I.2.E.5** There are No planned expansions (including new airspace) to the base's special use airspace.
- I.2.E.6** There are No restrictions currently acting on this airspace
- I.2.E.7** Published availability of the airspace:  
Surface to unlimited, intermittent for both time of day and days of the week.  
Range scheduling statistics (yearly average from 1990 to 93.
- I.2.E.7.a** Hours scheduled: 6,735 hrs
- I.2.E.7.b** Hours used: 6,735 hrs
- I.2.E.8** Utilization of the airspace can be increased.
- I.2.E.9** It is possible to expand hours and volume to increase the airspace utilization.
- I.2.E.10** Description of the volume or area of the Airspace:  
9690 sq miles, surface to unlimited.
- I.2.E.11** 100.00 percent of the airspace is usable.  
Airspace: W-470
- I.2.E.2** An environmental analysis has been conducted for this airspace.
- I.2.E.2.a** Status of the environmental analysis and supplement:  
Environmental analysis was completed in the 1970s.
- I.2.E.2.b** There are problems No associated with the environmental analysis.
- I.2.E.2.c** The current Description of Proposed Actions/Alternatives (DOPAA) does Not define base operations.  
The DOPAA was Not used in the latest environmental analysis and supersonic waiver.  
Explanation for any lack of reports:

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- I.2.E.3** There are No Noise Sensitive Areas associated with the airspace.
- I.2.E.4** Commercial / civilian encroachment problems associated with the airspace:
- I.2.E.5** There are No planned expansions (including new airspace) to the base's special use airspace.

**I.2.E.6** There are No restrictions currently acting on this airspace

**I.2.E.7** Published availability of the airspace:

Surface to unlimited, intermittent for both time of day and days of the week.

**Range scheduling statistics (yearly average from 1990 to 93).**

**I.2.E.7.a** Hours scheduled: 4,431 hrs

**I.2.E.7.b** Hours used: 4,431 hrs

**I.2.E.8** Utilization of the airspace can be increased.

**I.2.E.9** It is possible to expand hours and volume to increase the airspace utilization.

**I.2.E.10** Description of the volume or area of the Airspace:

5226 sq miles, surface to unlimited.

**I.2.E.11** 100.00 percent of the airspace is usable.

#### Commercial Aviation Impact

**I.2.E.12** The base is Not joint-use (military/civilian).

**I.2.E.13** List of all airfields within a 50 mile radius of the base:

Airfield:	Airfield:
Andalusia OPP, AL	General Aviation
Brewton, AL	General Aviation
Chumuckla (Pvt), FL	Uncontrolled

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Coastal, FL	General Aviation
Collier (Pvt), FL	Uncontrolled
De Funiak Springs, FL	Uncontrolled
Destin/Ft Walton Beach, FL	General Aviation
DUM 2 (Pvt), FL	Uncontrolled
Eglin AF No 3, FL	Military
Ferguson, FL	Military
Floral, AL	Uncontrolled
Geneva, AL	Uncontrolled
Golden Harvest (Pvt), FL	Uncontrolled
Hurlburt Field, FL	Military
Logan, AL	Uncontrolled
NAS Pensacola, FL	Military
NAS Whiting, North, FL	Military
NAS Whiting, South, FL	Military
NOLF Bronson, FL	Military
NOLF Choctaw, FL	Military
NOLF Holley, FL	Military
NOLF Santa Rosa, FL	Military
NOLF Suafley, FL	Military
ODUM (Pvt), FL	Uncontrolled
Panama City/Bay Co Int, FL	Commercial
Pensacola Regional, FL	Commercial
Peter Prince, FL	General Aviation
Ranch (Pvt), FL	Uncontrolled
Shields, FL	Uncontrolled
Sikes, FL	General Aviation

**I.2.E.14** Civilian/commercial operators or other airspace users do Not pose scheduling, operational, or environmental constrains or limits.

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**F. Potential for Growth in Training Airspace (Area)**

- I.2.F.1**      **Expansion of training airspace is Not possible.**
- I.2.F.2**      **Current access will remain the same.**
- I.2.F.3**      **No reductions in training airspace are expected.**
- I.2.F.4**      **Current special use airspace and training areas meet all training requirements.**
- I.2.F.4.a**     **Deployed, off-station training is not required to meet training requirements.**

**G. Composite / Integrated Force Training**

- I.2.G.1**      **Nearest Active Duty or Reserve ground combat unit where joint training can be accomplished and that has impact areas capable of tactical employment:**  
                  **FORT RUCKER**  
                  63 NM from the base.
- I.2.G.2**      **DELETED**
- I.2.G.3**      **Nearest Naval unit where joint training can be accomplished:**  
                  **Cecil NAS, Jacksonville FL**  
                  250 mi from the base.
- I.2.G.4**      **Nearest Active Duty Air Force or ARC unit where dissimilar training can be accomplished:**  
                  **Dannelly Field, AL**  
                  110 mi from the base.
- I.2.G.5**      **DELETED**

**H. Missile Bases (AF Space Command)**

**Applies to missile bases only. Responses are classified.**

**I. Technical Training (Air Education and Training Command)**



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I.2.1 No technical training mission.

**J. Weather Data (AF Environmental Technical Applications Center)**

I.2.J.1 Percentage of time the weather is at or above (ceiling / visibility)

a. 200 ft / 1/2 mi:	b. 300 ft / 1 mi:	c. 1500 ft / 3 mi:	d. 3000 ft / 3 mi:	e. 3000 ft / 5 mi:
98.1	97.3	88.0	82.7	80.5

I.2.J.2 Crosswind component to the primary runway:

I.2.J.2.a Is at or below 15 knots 98.4 percent of the time

I.2.J.2.b Is at or below 25 knots 99.9 percent of the time

I.2.J.3 1 Days have freezing participation (mean per year).

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#### Section II

#### 1. Installation Capacity & Condition

##### A. Land

	Site	Description	Total Acreage	Acreage Presently Developed	Acreage Suitable for New Development
II.1.A.1	Bowman's Bayou Claus	Off-Site	7	6	
II.1.A.2	Cape San Blas	Off-Site	520	520	
II.1.A.3	Eglin AFB	Main Base	453,459	11,056	2,605
II.1.A.4	Field 10	Navy	173	173	
II.1.A.5	Field 3	Duke field	1,348	801	547
II.1.A.6	Field 6	Ranger camp	629	248	381
II.1.A.7	Field 9	Hurlburt Fld	6,634	6,634	
II.1.A.8	Redbay	Off-Site	1	1	
<b>TOTALS:</b>			<b>462,771</b>	<b>19,439</b>	<b>3,533</b>

##### B. Facilities

#### II.1.B.1 From real property records:

	Facility Category Code	Category Description	Units of Measure	(A) Required Capacity	(B) Current Capacity	Percentage (%) Cond Code 1	Percentage (%) Cond Code 2	Percentage (%) Cond Code 3	(C) Excess Capacity
II.1.B.1.a.i	121-122	Hydrant Fueling System Pits	EA	18	18	100.0	0.0	0.0	0
II.1.B.1.a.ii	121-122a	Consolidated Aircraft Support System	EA	0	0		0.0	0.0	0
II.1.B.1.b	131	Communications-Buildings	SF	N/A	84,225	98.0	0.0	2.0	N/A
II.1.B.1.c	141	Operations-Buildings	SF	N/A	399,909	94.0	1.0	5.0	N/A
II.1.B.1.c.i	141-232	Aerial Delivery Facility	SF	N/A		0.0	0.0	100.0	0
II.1.B.1.c.ii	141-753	Squadron Operations	SF	77,940	123,092	84.0	1.0	15.0	45,152
II.1.B.1.c.iii	141-782	Air Freight Terminal	SF	7,340	7,340	50.0	0.0	50.0	0
II.1.B.1.c.iv	141-784	Air Passenger Terminal	SF	0	0		0.0	0.0	0
II.1.B.1.c.v	141-785	Fleet Service Terminal	SF	0	0		0.0	0.0	0
II.1.B.1.d	171	Training Buildings	SF	N/A	261,710	92.0	0.0	8.0	N/A
II.1.B.1.d.i	171-211	Flight Training	SF	0	0		0.0	0.0	0
II.1.B.1.d.ii	171-211a	Combat Crew Trng Squadron Facility	SF	0	0		0.0	0.0	0
II.1.B.1.d.iii	171-212	Flight Simulator Training (High Bay)	SF	55,345	48,182	100.0	0.0	0.0	0
II.1.B.1.d.iv	171-212a	Companion Trng Program	SF	0	0		0.0	0.0	0
II.1.B.1.d.v	171-618	Field Training Facility	SF	28,540	30,126	100.0	0.0	0.0	1,586

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II.1.B.1.e	211	Maintenance Aircraft	SF	N/A	1,009,510	65.0	33.0	2.0	N/A
II.1.B.1.e.i	211-111	Maintenance Hanger	SF	220,360	261,307	32.0	68.0	0.0	40,947
II.1.B.1.e.ii	211-152	General Purpose Aircraft Maintenance	SF	146,000	243,812	58.0	36.0	6.0	97,812
II.1.B.1.e.iii	211-152a	DASH 21	SF	0	0		0.0	0.0	0
II.1.B.1.e.iv	211-153	Non-Destructive Inspection (NDI) Lab	SF	4,600	4,100	100.0	0.0	0.0	0
II.1.B.1.e.v	211-154	Aircraft Maintenance Unit	SF	78,700	81,226	53.0	46.0	1.0	2,526
II.1.B.1.e.vi	211-157	Jet Engine Insection and Maintenance	SF	82,796	101,169	100.0	0.0	0.0	18,373
II.1.B.1.e.vii	211-157a	Contractor Operated Main Base Supply	SF	0	0		0.0	0.0	0
II.1.B.1.e.viii	211-159	Aircraft Corrosion Control Hanger	SF	68,877	60,991	48.0	52.0	0.0	0
II.1.B.1.e.ix	211-173	Large Aircraft Maintenance Dock	SF	0	46,249	100.0	0.0	0.0	46,249
II.1.B.1.e.x	211-175	Medium Aircraft Maintenance Dock	SF	69,160	0		0.0	0.0	0
II.1.B.1.e.xi	211-177	Small Aircraft Maintenance Dock	SF	151,200	135,755	100.0	0.0	0.0	15,445
II.1.B.1.e.xii	211-179	Fuel System Maintenance Dock	SF	59,665	59,665	96.0	0.0	4.0	0
II.1.B.1.e.xiii	211-183	Test Cell	SF	32,311	7,451	100.0	0.0	0.0	24,860
II.1.B.1.f	212	Maint-Guided Missiles	SF	N/A	11,000	100.0	0.0	0.0	N/A
II.1.B.1.f.i	212-212	Missile Assembly (Build-Up) Shop	SF	0	0		0.0	0.0	0
II.1.B.1.f.ii	212-212a	Integrated Maintenance Facility (cruise Missiles)	SF	0	0		0.0	0.0	0
II.1.B.1.f.iii	212-213	Tactical Missile Maintenance Shop	SF	20,425	11,000	100.0	0.0	0.0	9,425
II.1.B.1.f.iv	212-220	Integrated Maintenance Facility	SF	0	0		0.0	0.0	0
II.1.B.1.g.	214	Maintenance-Automotive	SF	N/A	133,382	82.0	0.0	18.0	N/A
II.1.B.1.g.i	214-425	Trailer/Equipment Maintenance Facility	SF	105,955	105,955	81.0	0.0	19.0	0
II.1.B.1.g.ii	214-467	Refueling Vehicle Shop	SF	3,840	3,840	0.0	0.0	100.0	0
II.1.B.1.h	215-552	Weapons and Release Systems (Armament Sho	SF	20,575	20,575	73.0	27.0	0.0	0
II.1.B.1.i	216-642	Conventional Munitions Shop	SF	16,010	66,448	59.0	14.0	27.0	50,438
II.1.B.1.j	217	Maint-Electronics and Communications Equip	SF	N/A	132,352	90.0	2.0	8.0	N/A
II.1.B.1.j.i	217-712	Avionics Shop	SF	49,500	79,322	100.0	0.0	0.0	29,822
II.1.B.1.j.ii	217-712a	LANTIRN	SF	0	0		0.0	0.0	0
II.1.B.1.j.iii	217-713	ECM Pod Shop and Storage	SF	24,943	24,943	100.0	0.0	0.0	0
II.1.B.1.k.i	218-712	Aircraft Support Equipment Shop/Storage Facility	SF	47,357	47,357	100.0	0.0	0.0	0
II.1.B.1.k.ii	218-852	Survival Equipment Shop (Parachute)	SF	9,000	41,609	100.0	0.0	0.0	32,609
II.1.B.1.k.iii	218-868	Precision Measurement Equipment Lab	SF	14,654	14,654	100.0	0.0	0.0	0
II.1.B.1.l	219	Maintenance-Installation, Repair, and Ops	SF	N/A	160,445	82.0	0.0	18.0	N/A
II.1.B.1.m	310	Science Labs	SF	N/A	229,747	100.0	0.0	0.0	N/A
II.1.B.1.n	311	Aircraft RDT&E Facilities	SF	N/A	0		0.0	0.0	N/A
II.1.B.1.o	312	Missile and Space RDT&E Facs	SF	N/A	72,566	100.0	0.0	0.0	N/A
II.1.B.1.p	315	Weapons and Weapon Syst RDT&E Facilities	SF	N/A	984,295	87.0	10.0	3.0	N/A

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II.1.B.1.q	317	Elect Comm & Elect Equip RDT&E Facilities	SF	N/A	302,024	99.0	0.0	1.0	N/A
II.1.B.1.r	318	Propulsion RDT&E Facilities	SF	N/A	1,807	100.0	0.0	0.0	N/A
II.1.B.1.s.i	411-135	Jet Fuel Storage	BL	64,286	130,988	100.0	0.0	0.0	66,702
II.1.B.1.t	422	Ammunition Storage Installation & Ready Use	SF	N/A	135,990	97.0	0.0	3.0	N/A
II.1.B.1.t.i	422-253	Multi-Cubicle Magazine Storage	SF	14,974	14,974	100.0	0.0	0.0	0
II.1.B.1.t.ii	422-258	Above Ground Magazine	SF	28,698	28,698	100.0	0.0	0.0	0
II.1.B.1.t.iii	422-264	Igloo Magazine	SF	60,532	60,532	100.0	0.0	0.0	0
II.1.B.1.t.iv	422-265	Spare Inert Storage (Alternate Mission Equipmen	SF	24,687	24,687	84.0	0.0	16.0	0
II.1.B.1.t.v	422-275	Ancillary Explosives Facility (Holding Pad)	SF	4	4	100.0	0.0	0.0	0
II.1.B.1.u	441	Storage-Covered Depot & Arsenal	SF	N/A	0		0.0	0.0	N/A
II.1.B.1.v	442	Storage-Covered-Installation & Organ	SF	N/A	543,475	90.0	0.0	10.0	N/A
II.1.B.1.v.i	442-257a	Hydrazine Storage	SF	200	200	100.0	0.0	0.0	0
II.1.B.1.v.ii	442-258	LOX Storage	GA	8,277	8,277	96.0	0.0	4.0	0
II.1.B.1.v.iii	442-758	Base Warehousing Supplies and Equipment	SF	352,000	423,660	96.0	0.0	4.0	71,660
II.1.B.1.v.iv	442-758a	Base Warehousing Supplies and Equipment (W	SF	0	0		0.0	0.0	0
II.1.B.1.v.v	442-758b	Warehousing Supplies and Equipment (AGS Par	SF	0	0		0.0	0.0	0
II.1.B.1.w	510	Medical Center and/or Hospital	SF	N/A	260,062	9.0	91.0	0.0	N/A
II.1.B.1.x	530	Medical Laboratories	SF	N/A	2,040	100.0	0.0	0.0	N/A
II.1.B.1.y	540	Dental Clinics	SF	N/A	17,405	0.0	100.0	0.0	N/A
II.1.B.1.z	550	Dispensaries and/or Clinics	SF	N/A	4,188	64.0	0.0	36.0	N/A
II.1.B.1.aa	610	Administrative Buildings	SF	N/A	831,451	98.0	1.0	1.0	N/A
II.1.B.1.aa.i	610-144	Munitions Maintenance Administration	SF	10,794	13,949	100.0	0.0	0.0	3,155
II.1.B.1.aa.ii	610-144a	Munitions Line Delivery/Storage Section	SF	0	0		0.0	0.0	0
II.1.B.1.bb	721	Unaccompanied Enlisted (UEPH & VAQ)	PN	N/A	3,326	81.0	11.0	8.0	N/A
II.1.B.1.bb.i	721-312	Unaccompanied Enlisted Dorm	PN	2,197	1,832	75.0	15.0	10.0	365
II.1.B.1.cc	722	Dining Hall	SF	N/A	18,752	100.0	0.0	0.0	N/A
II.1.B.1.cc.i	722-351	Airman Dining Hall	SF	41,653	18,752	100.0	0.0	0.0	22,901
II.1.B.1.dd	724	Unaccompanied Officer Housing (OQ & VOQ)	PN	N/A	212	99.0	0.0	1.0	N/A
II.1.B.1.ee	730	Personnel Support and Services Facilities	SF	N/A	204,190	84.0	16.0	0.0	N/A
II.1.B.1.ff	740	Morale, Welfare, and Rec (MWR)-Interior	SF	N/A	686,030	91.0	3.0	6.0	N/A
II.1.B.1.gg	852-273	Acft Support Equipment Storage	SY	18,916	18,916	100.0	0.0	0.0	0

## II.1.B.2 From in-house survey:

Facility Category Code	Category Description	Units of Measure	Current Capacity	Percentage (%) Cond Code 1	Percentage (%) Cond Code 2	Percentage (%) Cond Code 3
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## 1995 AIR FORCE BASE QUESTIONNAIRE

## Eglin AFB - AFMC

II.1.B.1.a	111	Aircraft Pavement-Runway(s)	SY	1,214,135	44.0	56.0	0.0
II.1.B.1.b	112	Airfield Pavements-Taxiways	SY	941,688	100.0	0.0	0.0
II.1.B.1.c	113	Airfield Pavement-Apron(s)	SY	1,389,482	94.0	6.0	0.0
II.1.B.1.d	116-662	Dangerous Cargo Pad	SY	19,276	100.0	0.0	0.0
II.1.B.1.e	812	Elec Power-Trans & Distr Lines	LF	4,214,633	81.0	19.0	0.0
II.1.B.1.f	822	Heat-Trans & Distr Lines	LF	44,263	100.0	0.0	0.0
II.1.B.1.g	832	Sewage and Indust Waste Collection (Mains)	LF	659,235	100.0	0.0	0.0
II.1.B.1.h	842	Water-Distr Sys-Potable	LF	917,438	100.0	0.0	0.0
II.1.B.1.i	843	Water-Fire Protection (Mains)	LF	1,010	100.0	0.0	0.0
II.1.B.1.j	851	Roads	SY	5,974,400	94.0	6.0	0.0
II.1.B.1.k	852	Veh/Equip Parking	SY	1,715,520	96.0	4.0	0.0

## C. Family Housing (Facility Category Code 711)

## II.1.C.1 Capacity (housing Inventory)

II.1.C.1.a Number of adequate units from current DD Form 1410, line 18d:

2359

II.1.C.1.b Number of substandard units from current DD Form 1410, line 18e:

0

II.1.C.1.c Current deficit (-) or surplus units in validated Market Analysis:

-289

(includes E-1 - E3 requirements)

II.1.C.1.c.i A Market Analysis was Not used to answer the questions in Section II.1.C.

II.1.C.1.d FY95/4 projected net housing deficit (-) or surplus of units:

-309

(includes officers and enlisted extrapolated to FY95 if necessary, uses validated market analysis corrected to include realignment actions)

## II.1.C.2 Condition

II.1.C.2.a Number of adequate units meeting current whole-house standards of accommodation and state of repair:

1373

(includes projects programmed through FY95/4. Units meeting whole-house standards are those that were programmed after FY88)

II.1.C.2.a Number of adequate units requiring whole-house renovation or replacement:

986

(Units meeting whole-house standards are those that were programmed/ renovated after FY88).

II.1.C.2.a Number of new housing units projected to meet current deficit.

0

## 1995 AIR FORCE BASE QUESTIONNAIRE

### Eglin AFB - AFMC

- II.1.C.3** Percentage of military families living on base as compared to the total number of families (officer and enlisted) assigned to the base
- II.1.C.3.a** 16.0 percent of officer families live on base.
- II.1.C.3.b** 39.0 percent of enlisted families live on base.
- II.1.C.3.a** 34.0 percent of all military families live on base.

## 2. Airfield Characteristics

### II.2 Runway Table:

Primary Designation		Dimensions:		Cross Runway	Aircraft Arresting Systems (II.2.D)	
		Length	Width		Number	Types
12	Secondary	12000 ft	300 ft	Yes	4	BAK-12, BAK-9
18	Secondary	8000 ft	300 ft	No	2	E-5
19	Primary	10000 ft	300 ft	No	4	BAK-12, E-5

- II.2.A** There are 3 active runways.
- II.2.A.1** There are 1 cross (30 degrees from primary) runways.
- II.2.B** There are NO parallel runways.
- II.2.C** Dimensions of the primary runway (19).
- II.2.C.1** Length: 10,000 ft
- II.2.C.2** Width: 300 ft
- II.2.D** Dimensions of all secondary runways are in the runway table.
- II.2.E** The primary taxiway is 75 ft wide.
- II.2.F** Determination if PRIMARY PAVEMENTS can support aircraft operations based on latest Air Force Civil Engineering Support Agency (AFCESA) Pavement Evaluation Report or the procedures in AFM 88-24 (Airfield Flexible Pavement Evaluation).

An AFCESA Pavement Evaluation Report was used to complete this section.

				Primary Pavements			
Aircraft Group		Criteria		Runways	Taxiways	Aprons	
<b>II.2.F.1</b>	Fighter	F-15	61 Kips	300,000 Passes	Supports Now	Supports Now	Supports Now
<b>II.2.F.2</b>	Fighter	F-16C/D	37 Kips	300,000 Passes	Supports Now	Supports Now	Supports Now
<b>II.2.F.3</b>	Bomber	B-52	450 Kips	15,000 Passes	Supports Now	Supports Now	Supports Now
<b>II.2.F.4</b>	Bomber	B-1B	450 Kips	50,000 Passes	Supports Now	Supports Now	Supports Now
<b>II.2.F.5</b>	Tanker	KC-135R	320 Kips	50,000 Passes	Supports Now	Supports Now	Supports Now
<b>II.2.F.6</b>	Tanker	KC-10	550 Kips	15,000 Passes	Supports Now	Supports Now	Supports Now
<b>II.2.F.7</b>	Airlift	C-5B	800 Kips	50,000 Passes	Supports Now	Supports Now	Supports Now

## 1995 AIR FORCE BASE QUESTIONNAIRE

### Eglin AFB - AFMC

II.2.F.8     Airlift     C-141     325 Kips     50,000 Passes     Supports Now     Supports Now     Supports Now

II.2.G     Excess aircraft parking capacity for operational use.

II.2.G.1     The total usable apron space for aircraft parking is 748,484 Sq Yds.

II.2.G.1.a     Specifications for individual parking areas (irregularly shaped areas are approximated by rectangle).

Parking area name:	Dimensions (Equivalent Rectangle)		CURRENT USE DATA. (Type of Aircraft and which of the permanently assigned aircraft use the area.)	
Duke Field A	200 ft	425 ft	Neither	None
Duke Field B	1,315 ft	400 ft	Neither	None
Duke Field C	200 ft	1,550 ft	Neither	Contingency Parking
Duke Field D	2,720 ft	363 ft	Primary Aircraft	Parking
Eglin Main A	99 ft	149 ft	Primary Aircraft	Maintenance
Eglin Main B	96 ft	132 ft	Primary Aircraft	Maintenance
Eglin Main C	281 ft	144 ft	Primary Aircraft	Maintenance
Eglin Main D	101 ft	124 ft	Primary Aircraft	Maintenance
Eglin Main E	90 ft	119 ft	Primary Aircraft	Maintenance
Eglin Main F	1,684 ft	771 ft	Primary Aircraft	Parking
Eglin Main G	150 ft	469 ft	Primary Aircraft	Hot-Gun
Eglin Main H	540 ft	290 ft	Neither	None
Eglin Main I	290 ft	675 ft	Primary Aircraft	Parking
Eglin Main J	578 ft	2,870 ft	Primary Aircraft	Parking
Eglin Main K	379 ft	1,220 ft	Neither	Aero Club
Eglin Main M	196 ft	967 ft	Neither	None
Eglin Main N	158 ft	1,020 ft	Neither	None
Eglin Main O	316 ft	985 ft	Neither	None
Eglin Main L	917 ft	140 ft	Neither	None

II.2.G.2     Permanently assigned aircraft currently require 320,403 Sq Yds of parking space.

II.2.G.3     472,939 Sq Yds of parking space is available for parking additional non-transient aircraft.

II.2.G.4     The following factors limit aircraft parking capability:

Pattern of existing aprons could be reshaped, or reformed, for greater efficiency and consolidation of aircraft parking.

II.2.H     The dimensions of the (largest) transient parking area:     N/A    

II.2.I     Details of operational aircraft arresting systems on each runway are in the Runway Table (II.2)

II.2.J     There are No critical features relative to the airfield pavement system that limit its capacity:

## 1995 AIR FORCE BASE QUESTIONNAIRE

## Eglin AFB - AFMC

## 3. Utility Systems

II.3.A The overall system capacity and percent current usage for utility system categories:

Utility System	Capacity	Unit of Measure	Percent Usage
II.3.A.1 Water:	22.35 MG/D	MG/D - million gallons per day	35 %
II.3.A.2 Sewage:	2.717 MG/D		60 %
II.3.A.3 Electrical distribution:	117.0 MW	MW - million watts	49 %
II.3.A.4 Natural Gas:	68.40 MCF/D	MCF/D - million cubic feet per day	5 %
II.3.A.5 High temperature water/steam generation/distribution:	501.9 MBTUH	MBTUH - million British thermal units per hour	50 %

II.3.B Characteristics regarding the utility system that should be considered:

No.

## 4. Aircraft Maintenance Hangar Facilities

Specifications for general maintenance hangars and nose docks, excluding Depot and Test &amp; Evaluation facilities.

II.4.A.1 Facility number: 72 Hanger

Current Use: Corr Control

II.4.A.2 Size (SF): 31,552 SF

II.4.A.3-4 Largest aircraft the hanger/ nose dock can COMPLETELY enclose: C-130

DIMENSIONS:	Width	Height	Length
II.4.A.5 Door Opening:	152 ft	40 ft	
II.4.A.6 Largest unobstructed space inside the facility:	152 ft	40 ft	136 ft

II.4.A.1 Facility number: 102 Hanger

Current Use: Maint hgr

II.4.A.2 Size (SF): 38,340 SF

II.4.A.3-4 Largest aircraft the hanger/ nose dock can COMPLETELY enclose: C-119

DIMENSIONS:	Width	Height	Length
II.4.A.5 Door Opening:	112 ft	32 ft	
II.4.A.6 Largest unobstructed space inside the facility:	126 ft	32 ft	150 ft



## 1995 AIR FORCE BASE QUESTIONNAIRE

## Eglin AFB - AFMC

II.4.A.1 Facility number: 103 Hanger

Current Use: Maint Hgr

II.4.A.2 Size (SF): 38,440 SF

II.4.A.3-4 Largest aircraft the hanger/ nose dock can COMPLETELY enclose: C-119

DIMENSIONS:	Width	Height	Length
II.4.A.5 Door Opening:	112 ft	32 ft	
II.4.A.6 Largest unobstructed space inside the facility:	126 ft	32 ft	150 ft

II.4.A.1 Facility number: 110 Hanger

Current Use: Maint Hgr

II.4.A.2 Size (SF): 57,546 SF

II.4.A.3-4 Largest aircraft the hanger/ nose dock can COMPLETELY enclose: C-130

DIMENSIONS:	Width	Height	Length
II.4.A.5 Door Opening:	300 ft	46 ft	
II.4.A.6 Largest unobstructed space inside the facility:	300 ft	46 ft	100 ft

II.4.A.1 Facility number: 130 Hanger

Current Use: Maint Hgr

II.4.A.2 Size (SF): 129,776 SF

II.4.A.3-4 Largest aircraft the hanger/ nose dock can COMPLETELY enclose: B-52

DIMENSIONS:	Width	Height	Length
II.4.A.5 Door Opening:	275 ft	60 ft	
II.4.A.6 Largest unobstructed space inside the facility:	300 ft	60 ft	300 ft

II.4.A.1 Facility number: 138 Hanger

Current Use: Flight Sys Maint

II.4.A.2 Size (SF): 14,866 SF

II.4.A.3-4 Largest aircraft the hanger/ nose dock can COMPLETELY enclose: C-131

DIMENSIONS:	Width	Height	Length
II.4.A.5 Door Opening:	110 ft	30 ft	
II.4.A.6 Largest unobstructed space inside the facility:	110 ft	30 ft	80 ft

**1995 AIR FORCE BASE QUESTIONNAIRE**  
**Eglin AFB - AFMC**

II.4.A.1 Facility number: 421 Hanger

Current Use: Maint Hgr

II.4.A.2 Size (SF): 43,322 SF

II.4.A.3-4 Largest aircraft the hanger/ nose dock can COMPLETELY enclose: EB-57

DIMENSIONS:	Width	Height	Length
II.4.A.5 Door Opening:	80 ft	28 ft	
II.4.A.6 Largest unobstructed space inside the facility:	80 ft	28 ft	130 ft

II.4.A.1 Facility number: 920 Hanger

Current Use: Flight Sys Maint Hydrazine

II.4.A.2 Size (SF): 2,583 SF

II.4.A.3-4 Largest aircraft the hanger/ nose dock can COMPLETELY enclose: N/A

DIMENSIONS:	Width	Height	Length
II.4.A.5 Door Opening:	15 ft	10 ft	
II.4.A.6 Largest unobstructed space inside the facility:	60 ft	30 ft	41 ft

II.4.A.1 Facility number: 1318 Nose Dock

Current Use: Maint Dock DIMENSIONS FOR EACH OF 5 DOCKS IN BLDG

II.4.A.2 Size (SF): 57,408 SF

II.4.A.3-4 Largest aircraft the hanger/ nose dock can COMPLETELY enclose: B-1

DIMENSIONS:	Width	Height	Length
II.4.A.5 Door Opening:	90 ft	24 ft	
II.4.A.6 Largest unobstructed space inside the facility:	88 ft	24 ft	90 ft

II.4.A.1 Facility number: 1339 Hanger

Current Use: Maint Dock

II.4.A.2 Size (SF): 18,807 SF

II.4.A.3-4 Largest aircraft the hanger/ nose dock can COMPLETELY enclose: C-140

DIMENSIONS:	Width	Height	Length
II.4.A.5 Door Opening:	140 ft	24 ft	
II.4.A.6 Largest unobstructed space inside the facility:	140 ft	24 ft	80 ft

**1995 AIR FORCE BASE QUESTIONNAIRE**  
**Eglin AFB - AFMC**

II.4.A.1 Facility number: 1343 Hanger  
 Current Use: Main Dock

II.4.A.2 Size (SF): 33,998 SF

II.4.A.3-4 Largest aircraft the hanger/ nose dock can COMPLETELY enclose: EB-57

DIMENSIONS:	Width	Height	Length
II.4.A.5 Door Opening:	180 ft	24 ft	
II.4.A.6 Largest unobstructed space inside the facility:	180 ft	24 ft	80 ft

II.4.A.1 Facility number: 1345 Hanger  
 Current Use: Maint Dock

II.4.A.2 Size (SF): 36,968 SF

II.4.A.3-4 Largest aircraft the hanger/ nose dock can COMPLETELY enclose: EB-57

DIMENSIONS:	Width	Height	Length
II.4.A.5 Door Opening:	180 ft	24 ft	
II.4.A.6 Largest unobstructed space inside the facility:	180 ft	24 ft	80 ft

II.4.A.1 Facility number: 1385 Hanger  
 Current Use: Corr Control

II.4.A.2 Size (SF): 11,050 SF

II.4.A.3-4 Largest aircraft the hanger/ nose dock can COMPLETELY enclose: C-140

DIMENSIONS:	Width	Height	Length
II.4.A.5 Door Opening:	126 ft	30 ft	
II.4.A.6 Largest unobstructed space inside the facility:	80 ft	30 ft	126 ft

II.4.A.1 Facility number: 1386 Hanger  
 Current Use: Corr Control

II.4.A.2 Size (SF): 11,050 SF

II.4.A.3-4 Largest aircraft the hanger/ nose dock can COMPLETELY enclose: C-140

DIMENSIONS:	Width	Height	Length
II.4.A.5 Door Opening:	126 ft	30 ft	
II.4.A.6 Largest unobstructed space inside the facility:	80 ft	30 ft	126 ft

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II.4.A.1 Facility number: 3020 Hanger

Current Use: Maint Dock

II.4.A.2 Size (SF): 23,876 SF

II.4.A.3-4 Largest aircraft the hanger/ nose dock can COMPLETELY enclose: C-7

DIMENSIONS:	Width	Height	Length
II.4.A.5 Door Opening:	200 ft	34 ft	
II.4.A.6 Largest unobstructed space inside the facility:	200 ft	34 ft	90 ft

II.4.A.1 Facility number: 3025 Hanger

Current Use: Maint Hgr

II.4.A.2 Size (SF): 58,846 SF

II.4.A.3-4 Largest aircraft the hanger/ nose dock can COMPLETELY enclose: T-29

DIMENSIONS:	Width	Height	Length
II.4.A.5 Door Opening:	110 ft	26 ft	
II.4.A.6 Largest unobstructed space inside the facility:	110 ft	28 ft	300 ft

II.4.A.1 Facility number: 3029 Hanger

Current Use: Maint Dock

II.4.A.2 Size (SF): 22,373 SF

II.4.A.3-4 Largest aircraft the hanger/ nose dock can COMPLETELY enclose: C-7

DIMENSIONS:	Width	Height	Length
II.4.A.5 Door Opening:	200 ft	34 ft	
II.4.A.6 Largest unobstructed space inside the facility:	200 ft	34 ft	90 ft

II.4.A.1 Facility number: 3057 Hanger

Current Use: Maint Hgr

II.4.A.2 Size (SF): 33,834 SF

II.4.A.3-4 Largest aircraft the hanger/ nose dock can COMPLETELY enclose: C-9

DIMENSIONS:	Width	Height	Length
II.4.A.5 Door Opening:	110 ft	28 ft	
II.4.A.6 Largest unobstructed space inside the facility:	120 ft	34 ft	130 ft

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II.4.A.1 Facility number: 3087 Hanger

Current Use: Maint Dock

II.4.A.2 Size (SF): 23,409 SF

II.4.A.3-4 Largest aircraft the hanger/ nose dock can COMPLETELY enclose: C-130

DIMENSIONS:		Width	Height	Length
II.4.A.5	Door Opening:	160 ft	28 ft	
II.4.A.6	Largest unobstructed space inside the facility:	160 ft	48 ft	100 ft

II.4.A.1 Facility number: 3150

Current Use: Classified Airborne/Surface org use

II.4.A.2 Size (SF): 38,340 SF

II.4.A.3-4 Largest aircraft the hanger/ nose dock can COMPLETELY enclose: C-130

DIMENSIONS:		Width	Height	Length
II.4.A.5	Door Opening:	167 ft	35 ft	
II.4.A.6	Largest unobstructed space inside the facility:	40 ft	53 ft	170 ft

## 5. Unique Facilities

II.5.A Unique (one-of-a-kind) Air Force facilities which must be replaced if the base is closed:

A.1 Name or type of facility	A.2 Total square footage	A.3 Category code	A.4 Present use
6th Army Ranger Trng Battalion	150,260 SF	171-621	Training
BISS	9,217 SF	BELOW	CAT CODES: 730-838, 319-995, 442-75, 149-968. Base and Installation Security Systems Facility (BISS) evaluates base and installation security systems against a wide range of threat scenarios in a realistic operational environment.
Climatic Laboratory	159,381 SF	BELOW	CAT CODES: 319-995, 310-915, 310-926, 315-237, 821-117. Tests large articles with engines operating in environments ranging from -65 to +165 degrees F with 60 knot winds, clouds, salt spray, sand, dust, solar radiation, rain, and snow.
Computer Services Center	113,779 SF	310-916	Computer Services
EMTE	23,000 SF	BELOW	CAT CODES: 317-316, 312-477, 371-484, 315-237, 315-236. Electromagnetic Test Environment Complex (EMTE) supports developmental and operational agencies in the open air test and evaluation of electronic equipment against hostile defense systems.

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Fuze Test Facility	27,202 SF	BELOW	CAT CODES: 315-237, 149-968, 422-264, 319-995. An instrumented lab performing research, development, and engineering services tests.
GWEF	94,671 SF	315-237	Guided Weapons Evaluation Facility. Provides laboratory simulation test support for developing precision-guided weapon technology.
Gun Test Facility	20,303 SF	315-237	Conducts ground tests of gun and ammunition performance; development of boresighting procedures; depleted uranium projectile tests; armor plate penetration, projectile and fuze characteristics; and internal external, and terminal ballistics tests.
Hellfire Test Facility	12,943 SF	BELOW	CAT CODES: 317-316, 315-237, 315-236. Facility is a unique combination of remotely controlled instrumentation, data acquisition and control systems to support missile and electrooptical guided weapon testing.
High Explosive Test Area	9,044 SF	BELOW	CAT CODES: 171-471, 319-995, 315-237, 149-968. Used to conduct small scale explosive test to evaluate the explosive train, fuel air explosion, incendiary projectile experiments, plate penetration, projectile fuze arming distance, and more.
Naval School EOD	164,166 SF	171-621	EOD School
PRIMES	82,374 SF	315-237	Preflight Integration of Munition and Electronic Systems Facility. Consists a fighter sized anechoic chamber test facility and 6 shielded labs providing secure, realistic testing in a controlled environment to support dynamic flight simulation.
Sled Track Facility	10,557 SF	BELOW	CAT CODES: 319-951, 315-237, 319-995. Dual 2000 ft track is used to accurately deliver munitions vs realistic targets of various sizes, shapes, and densities.
Space Surveillance Complex	192,241 SF	141-454	Used to track objects in earth orbit.

## 6. Air Installation Compatible Use Zone (AICUZ) and Terminal Area Procedures

### Local/Regional Land Encroachment

#### II.6.A Percent current off base incompatible land use:

Runway Number	Area	Est Pop	Acres	Percent Incompatible Land Use	Percent Incompatible Land Use	PERCENT OF CURRENT LAND USE W/ FOLLOWING CATEGORIES						
						RES	COM	IND	PUB/SEMI	REC	OPEN/AG/LOW DEN	
II.6.A.1	1	CZ	0	318	0.0	Gen Compat	0.0	0.0	0.0	100.0	0.0	0.0
	12	CZ	0	207	0.0	Gen Compat	0.0	0.0	0.0	100.0	0.0	0.0

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II.6.A.2	19	CZ	0	199	0.0	Gen Compat	0.0	0.0	0.0	86.0	0.0	14.0
	30	CZ	0	318	0.0	Gen Compat	0.0	0.0	0.0	100.0	0.0	0.0
	1	APZ 1	0	345	0.0	Gen Compat	0.0	0.0	0.0	61.0	0.0	39.0
	12	APZ 1	0	345	0.0	Gen Compat	0.0	0.0	0.0	100.0	0.0	0.0
II.6.A.3	19	APZ 1	1,361	352	39.0	Sig Incompat	34.0	4.0	4.0	24.0	0.0	34.0
	30	APZ 1	0	345	0.0	Gen Compat	0.0	0.0	0.0	99.0	0.0	1.0
	1	APZ 2	0	482	0.0	Gen Compat	0.0	0.0	0.0	0.0	0.0	100.0
	12	APZ 2	0	482	0.0	Gen Compat	0.0	0.0	0.0	100.0	0.0	0.0
	19	APZ 2	627	482	6.0	Incompat	5.0	2.0	0.0	30.0	0.0	63.0
	30	APZ 2	0	482	0.0	Gen Compat	0.0	0.0	0.0	9.0	0.0	91.0

DNL Noise Contour	Est Pop	Acres	Percent Incompatible Land Use	Percent Incompatible Land Use	PERCENT OF CURRENT LAND USE W/ FOLLOWING CATEGORIES						
					RES	COM	IND	PUB/SEMI	REC	OPEN/AG/LOW DEN	
II.6.A.4	65-70	1,660	5,369	5	Gen Compat	4.0	1.0	0.0	1.0	0.0	94.0
II.6.A.5	70-75	1,772	3,368	5	Gen Compat	5.0	1.0	0.0	1.0	0.0	93.0
II.6.A.6	75-80	1,105	1,562	7	Incompat	6.0	1.0	0.0	1.0	0.0	92.0
II.6.A.7	80+	362	599	7	Incompat	5.0	1.0	2.0	0.0	0.0	92.0

**II.6.B Percent future off base incompatible land use:**

Runway Number	Area	Est Pop	Acres	Percent Incompatible Land Use	Percent Incompatible Land Use	PERCENT OF CURRENT LAND USE W/ FOLLOWING CATEGORIES						
						RES	COM	IND	PUB/SEMI	REC	OPEN/AG/LOW DEN	
II.6.B.1	1	CZ	0	318	0	Gen Compat	0.0	0.0	0.0	100.0	0.0	0.0
	12	CZ	0	207	0	Gen Compat	0.0	0.0	0.0	100.0	0.0	0.0
	19	CZ	0	199	0	Gen Compat	0.0	0.0	0.0	86.0	0.0	14.0
	30	CZ	0	318	0	Gen Compat	0.0	0.0	0.0	100.0	0.0	0.0
II.6.B.2	1	APZ 1	0	345	0	Gen Compat	0.0	0.0	0.0	61.0	0.0	39.0
	12	APZ 1	0	345	0	Gen Compat	0.0	0.0	0.0	100.0	0.0	0.0
	19	APZ 1	1,375	352	40	Sig Incompat	35.0	5.0	10.0	24.0	0.0	26.0
	30	APZ 1	0	345	0	Gen Compat	0.0	0.0	0.0	99.0	0.0	1.0
II.6.B.3	1	APZ 2	0	482	0	Gen Compat	0.0	0.0	0.0	0.0	0.0	100.0
	12	APZ 2	0	482	0	Gen Compat	0.0	0.0	0.0	100.0	0.0	0.0
	19	APZ 2	859	482	20	Sig Incompat	42.0	3.0	5.0	30.0	15.0	5.0
	30	APZ 2	0	482	0	Gen Compat	0.0	0.0	0.0	9.0	0.0	91.0

DNL Noise Contour	Est Pop	Acres	Percent Incompatible Land Use	Percent Incompatible Land Use	PERCENT OF CURRENT LAND USE W/ FOLLOWING CATEGORIES					
					RES	COM	IND	PUB/SEMI	REC	OPEN/AG/LOW DEN

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II.6.B.4	65-70	1,641	5,471	4	Gen Compat	5.0	1.0	0.0	3.0	1.0	90.0
II.6.B.5	70-75	1,982	3,354	8	Incompat	20.0	2.0	5.0	2.0	0.0	71.0
II.6.B.6	75-80	1,105	1,562	7	Incompat	6.0	1.0	1.0	1.0	0.0	91.0
II.6.B.7	80+	362	599	6	Incompat	5.0	1.0	2.0	0.0	0.0	92.0

**II.6.C** The most recent, publicly released AICUZ study is dated Dec 77

**II.6.D** Current AICUZ study's flying activities subsection does not reflect all currently assigned aircraft  
Subsection does Not reflect the number of daily flying operations conducted by all assigned aircraft  
Current AICUZ study's flight track figure/map does Not reflect current flight tracks.

**Explanation of areas where the current AICUZ study does not reflect the current situation:**

The Final Draft 1993 (to be retitled as 1994) Eglin AFB AICUZ is now before the Eglin Encroachment Committee. Following this coordination, public release is anticipated for Summer 1994.

**II.6.E** The AICUZ study was last updated on Aug 94

The study is no longer valid. Milestones for updateing the study:

**II.6.E.1** The Final Draft 1993 (to be retitled as 1994) Eglin AFB AICUZ is now before the eglin Encroachment Committee. Following this coordination, public release is anticipated for Summer 1994.

**II.6.F** Local governments have incorporated AICUZ recommendations into land use controls

**II.6.F.1** AICUZ recommended height restrictions.

Government name:	Types of controls in place	Types of encroachment limited:
Niceville	Federal Aviation Regulation (FAR) Part 77 and Building Codes	
Okaloosa County	Federal Aviation Regulation (FAR) Part 77 and Building Codes	
Valparaiso	Federal Aviation Regulation (FAR) Part 77 and Building Codes	

**II.6.G** Assessment of significant development (i.e., residential subdivision, shopping mall, or center, industrial park, etc.) existing or anticipated within any of the 7 AICUZ zones.

No significant development currently exists in any AICUZ zone.

No significant development is projected for any AICUZ zone.

No long range (20 year) development trends in the 7 AICUZ zones are evident.



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## II.6.H Population figures and projections:

## II.6.H.1 Communities in the vicinity of the installation.

Community Name	1960 Pop	1970 Pop	1980 Pop	1990 Pop	2000 Pop
Valparaiso	5975	6504	6142	6413	6900
Shalimar	754	578	390	350	495
Niceville	4517	4155	8543	11150	15200
Mary Esther	780	3192	3530	4194	4450
Ft Walton Beach	12147	19994	20829	21921	23000
Destin	0	1536	3672	8644	10000
Cinco Bayou	643	362	202	388	515

## II.6.H.3 County (ies) encompassing the installation.

Community Name	1960 Pop	1970 Pop	1980 Pop	1990 Pop	2000 Pop
Okaloosa	61175	88187	109920	154512	206400

## II.6.I All clear zone acquisition has been completed.

## II.6.J All existing on base facilities are sited in accordance with AICUZ recommendations.

All planned on base facilities will be sited in accordance with AICUZ recommendations.

## Air Space Encroachment

## II.6.K Noise complaints are received from off base residents.

## II.6.K.1 12.0 noise complaints per month (average) are received from off base residents.

## II.6.L The base has implemented noise abatement procedures as follows:

## II.6.L.1 Self-imposed noise abatement procedures include: quiet hours for flight and engine maintenance; reduced power settings on take-off and rapid climb to altitude consistent with safety; avoidance of populated area; minimum altitudes; etc.

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#### Section III

#### 1. Contingency and Deployment Requirements

Full mobilization, 24 hour capability assumed.

III.1.A.1 3 C-141 equivalent aircraft can be loaded or unloaded at one time.

Based on existing load crews, marshalling yards, build up areas, concurrent servicing, and material handling equipment (MHE). Assumes a 13-pallet load, a 2 hr, 15 min ground time.

III.1.A.1.a The limiting factor is MHE

III.1.A.1.b Current MHE: 3 K-Loaders, 1 Wide Body Loaders, 74 Forklifts, "0" 9 ton trucks, 16 Tugs, 60 Bobtails

III.1.A.2 13 C-141 equivalent aircraft can be refueled at one time.

Based on a 100,000 lb (15,625 gal) fuel load for each aircraft, use of existing personnel, equipment, and facilities. Assumes 2 hr, 15 min ground time.

III.1.B The base can land, taxi, park, and refuel widebody aircraft as follows:

Aircraft	Widebody Capabilities:				Remarks:
	Can land	Can taxi	Can park	Can refuel	
747					
C-5					
KC-10					

III.1.C The base has an operational fuel hydrant system:

III.1.C.1 The fuel hydrant system is available to transient aircraft.

III.1.C.2 18 hydrant pits are operational.

Description of base fuel hydrant system:

System Type:	Total Pumping Rate (GPM):	Number of Laterals:	Number of Usable Refueling Positions:	Number of SIMULTANEOUS aircraft refuelings of	
				Narrow	Widebody
Hydrant	2400	5	18	7	5

III.1.C.3 4 fuel storage tanks support the operational fuel hydrant system:

Storage tank Capacity:	Tanks with this capacity
50000	4

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III.1.C.4 The hydrant system is 1.0 miles from the bulk storage area.

III.1.C.5 4 pits are certified for hot pit operations.

III.1.D The base bulk storage facility is Not serviced by a pipeline.

III.1.D.3 No limitation on the max fill quantity.

Based on normal requirements in the Fuel Logistics Area Summary (FLAS) or Inventory Management Plan (IMP).  
Storage for others is excluded.

III.1.D.4 Other receipt modes available: Tank Truck/inter coastal barge

Number of offload headers: 10

10 tank trucks can be simultaneously offloaded

Tank cars can Not be offloaded.

III.1.D.5 10 refueling unit fillstands are available.

III.1.D.5.a 10 refuelers can be filled simultaneously.

III.1.D.6 Current dispensing capabilities as defined in AFR 144-1      sustained: 2000000  
   maximum: 2400000

III.1.D.7 The base is Not directly supported by an intermediate Defense Fuels Supply Point.

III.1.E Cat 1.1 and 1.2 munitions storage requirements and capacity.

III.1.E.1 Maximum NET EXPLOSIVE WEIGHT (NEW) storage capacity:

Square footage available (including physical capacity limit):

III.1.E.2 Normal installation mission storage requirement:

	Cat 1.1	Cat 1.2
Maximum NET EXPLOSIVE WEIGHT (NEW) storage capacity:	2161825	2161825
Square footage available (including physical capacity limit):	439820	43982
Normal installation mission storage requirement:	250909	597649

III.1.F The base has a dedicated hot cargo pad.

III.1.F.1 Access to the hot cargo pad is not limited.

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- III.1.F.2 The size of the hot cargo pad is 490,849 sq feet.
- III.1.F.3 The sited explosive capacity of the hot cargo pad is 25,000
- III.1.F.4 The hot pad access is taxi-on/taxi-off.
- III.1.F.5 The taxiway servicing the hot pad is 75 ft wide and has a pavement classification number (PCN) of 36.
- III.1.F.6 Aircraft using pad over the last 5 years:  
C-130, C-5, C-160, VC-10, DC9, B707, DC10, DC8, L188, C-135, C-141, A320, F-15, F-16, F-111, B52, and British Tornado.

III.1.G Proximity (within 150 NM) to mobilization elements.

III.1.G.1 The base is proximate to a ground force installation.

**Active ground force installations within 150 NM:**

CAMP SHELBY	143 NM
FORT BENNING	136 NM
FORT RUCKER	63 NM

III.1.G.2 The base is proximate to a railhead.

**Railheads within 150 NM:**

Albany - Acree	145 NM
Columbus - Fort Benning	137 NM
Gulfport - NCBC	133 NM
Mobile	79 NM
Panama City - Lynn Haven	49 NM
Waterford - Daleville	65 NM

III.1.G.3 The base is proximate to a port.

**Deep water ports within 150 NM:**

Gulfport	133 NM
Mobile	77 NM

III.1.H The base has a dedicated passenger terminal.

III.1.I The base has a dedicated deployment facility capable of handling DoD standardized cargo pallets.

III.1.J The base medical treatment facility routinely receives referral patients.

III.1.J.1 Facilities Receiving Referrals:	Types of Patients Referred:
ENT, Orthopedics, Psychiatry, and General Surgery	Pulmonology, Orthopedics, Urology, Neurology, Psychiatry, Ophthalmology and ENT

III.1.K No military medical facility in the catchment area (40 mile radius) have been designated for closure or realignment.

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**III.1.L Unique missions performed by the base medical facility:**

See Attached.

Unique medical missions include aeromedical staging facilities, environmental health laboratories, area dental laboratories, physiological training units, wartime taskings,

**III.1.M Base medical facilities project planned to begin before to 1999:**

See Attached

Facilities projects include military construction program (MCP) or Operations and Maintenance (O&M) alterations.

**III.1.M.1 The project has been approved.****III.1.M.2 Major MCP completed since 1989:**

FY 91 - Construct Hurlburt Field Clinic at a cost of \$4.5 million, completed in CY 92.

**III.1.N Base facilities have a total excess storage capacity of 30,000 sq ft.****III.1.N.1 Base facilities have a total covered storage capacity of 423,660 sq ft.****III.1.N.2 Breakout of the total covered storage capacity:**

Supply (warehousing, Individual Equipment Unit, Tool Issue, Base Service Store):	334,871 sq ft
Mobility storage:	48,000 sq ft
War Readiness Support Kits (WRSK) storage:	48,000 sq ft

**III.1.O 774 light military vehicles are on base.****III.1.P 693 heavy military and special vehicles are on base.**

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#### Section IV

#### 1. Base Budget

##### IV.1 Non-payroll portion of the base budget for prior years:

IV.1.A	xxx56	Environmental Compliance			FY 91 Total	FY 92 Total	FY 93 Total	FY 94 Total
	FY-94	Appropriation	Direct	Reimbursable				
		3400	1,129.00 \$sK	0.00 \$sK				1,129.00 \$sK
		xxx56 TOTALS:						1,129.00 \$sK
IV.1.B	xxx76	Real Property Maintenance A			FY 91 Total	FY 92 Total	FY 93 Total	FY 94 Total
	FY-93	Appropriation	Direct	Reimbursable				
		3400	11,041.00 \$sK	6,129.00 \$sK			17,170.00 \$sK	
	FY-94	Appropriation	Direct	Reimbursable				
		3400	7,268.00 \$sK	5,108.00 \$sK				12,376.00 \$sK
		xxx76 TOTALS:					17,170.00 \$sK	12,376.00 \$sK
IV.1.E	xxx95	Communications			FY 91 Total	FY 92 Total	FY 93 Total	FY 94 Total
	FY-94	Appropriation	Direct	Reimbursable				
		3400	300.00 \$sK	5.00 \$sK				305.00 \$sK
		xxx95 TOTALS:						305.00 \$sK
IV.1.F	xxx96	Base Operating Support			FY 91 Total	FY 92 Total	FY 93 Total	FY 94 Total
	FY-94	Appropriation	Direct	Reimbursable				
		3400	38,980.00 \$sK	7,323.00 \$sK				46,303.00 \$sK
		xxx96 TOTALS:						46,303.00 \$sK
IV.1.G	MFH	Military Family Housing			FY 91 Total	FY 92 Total	FY 93 Total	FY 94 Total
	FY-91	Appropriation	Direct	Reimbursable				
		3400	6,968.00 \$sK	302.00 \$sK	7,270.00 \$sK			
	FY-92	Appropriation	Direct	Reimbursable				
		3400	7,503.00 \$sK	300.00 \$sK		7,803.00 \$sK		
	FY-93	Appropriation	Direct	Reimbursable				
		3400	8,471.00 \$sK	322.00 \$sK			8,793.00 \$sK	
	FY-94	Appropriation	Direct	Reimbursable				
		3400	7,376.00 \$sK	325.00 \$sK				7,701.00 \$sK
		MFH TOTALS:			7,270.00 \$sK	7,803.00 \$sK	8,793.00 \$sK	7,701.00 \$sK

#### 2. Relocation Costs

IV.2 -Large, unusual items integral to the unit mission, but which cannot be moved as regular freight:

UNCLASSIFIED

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**1995 AIR FORCE BASE QUESTIONNAIRE**  
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**Total relocation costs: \$ 228,460.13 K**

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**Section IV/V Level Playingfield COBRA Data**

**One time closure costs: 1,805\$sM**

**Twenty year Net Present Value 427\$sM**

**Steady state savings 117\$sM per year**

**Manpower savings associated with closure 2,138**

**Return on Investment (years): 21**



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**1995 AIR FORCE BASE QUESTIONNAIRE****Eglin AFB - AFMC**

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**Section VI Economic Impact****Economic Area Statistics:****Fort Walton Beach, FL MSA****Total population: 153,000 (FY 92)****Total employment: 86,772 (FY 93)****Unemployment Rates (FY93/3 Year Average/10 Year Average)****6.2% / 6.5% / 6.2%****Average annual job growth: 1,661****Average annual per capita income: \$17,656****Average annual increase in per capita income: \$5.7%****Projected economic impact:**

<b>Direct Job Loss:</b>	<b>13,778</b>	
<b>Indirect Job Loss:</b>	<b>8,308</b>	
<b>Closure Impact:</b>	<b>22,086</b>	<b>( 25.5% of employment total)</b>
<b>Other BRAC Losses:</b>	<b>0</b>	
<b>Cumulative Impact:</b>	<b>22,086</b>	<b>( 25.5% of employment total)</b>

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#### Section VII

#### 1. Community Infrastructure

Describe the off-base housing situation.

- VII.1.A.1 Off-base housing is affordable
- VII.1.A.2 Units are available for families
- VII.1.A.2 Units are available for single members.
- VII.1.A.3 9.5 Percent of off-base housing was rated as unsuitable in the latest VHA survey
- VII.1.A.4 Median monthly cost of off-base housing based on latest VHA survey: \$689

Describe the transportation systems.

- VII.1.B.1 The base is NOT served by REGULARLY SCHEDULED, public transportation.
- VII.1.B.2 Distance to the nearest municipal airport with scheduled, commercial air traffic: 5 miles
- VII.1.B.2 Airport name: Okaloosa County Airport
- VII.1.B.3 Number of commercial air carriers available at the airport: 4
- VII.1.B.4 Average round trip commuting time to work: 38 minutes

Off-base public recreation facilities:

List ONLY THE NEAREST facility for each subcategory.

Facility Subcategory Type	Name of Nearest Facility	Distance to:	Drive Time		
			Hrs.	Min.	Min.
VII.1.C.1 Swimming pool	Playground Area YMCA	7		10	Min.
VII.1.C.2 Movie theater	Picture Show	4		10	Min.
VII.1.C.3 Public golf course	Ft Walton Beach Municipal	7		15	Min.
VII.1.C.4 Bowling lane	Playground Bowling Center	8		15	Min.
VII.1.C.5 Boating	A-1 Charter Service	25		30	Min.
VII.1.C.6 Fishing	Okaloosa Island Pier	15		25	Min.
VII.1.C.7 Zoo	The Zoo	25		45	Min.
VII.1.C.8 Aquarium	Gullarium	15		20	Min.
VII.1.C.9 Family theme park	Big Kahuna	8		20	Min.
VII.1.C.10 Professional sports	New Orleans Superdome	260	4	30	Min.
VII.1.C.11 Collegiate sports	Okaloosa Walton Community College	6		10	Min.

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VII.1.C.12	Camping facilities	Gannon Park	12		Hrs.	20	Min.
VII.1.C.13	Beaches (lake or ocean)	Ft Walton Beach	12		Hrs.	15	Min.
VII.1.C.14	Outdoor winter sports	Gatlinberg TN Ski Resort	567	11	Hrs.	30	Min.

## VII.1.D Nearest Shopping facility (two major anchor stores plus smaller retail outlets):

Santa Rosa Mall 20 min (15 Miles)

## VII.1.E Nearest Metropolitan center (population in excess of 100,000):

Pensacola FL 1 hrs 0 min (45 Miles)

## Local area crime rate:

VII.1.F.1 Violent crime rate (per 100,000) in the local area: (Note: The most current annual FBI Statistics Report used as the source document. Violent crime is defined as the sum of homicide, rape, robbery, felony assault, and simple assault.) 391

VII.1.F.2 Property crime rate (per 100,000) in the local area: (Note: The most current annual FBI Statistics Report used as the source document. Property crime is defined as the sum of auto theft, burglary, theft, and arson.) 3389

## 2. Education

VII.2.A The highest maximum allowed pupil to teacher classroom ratio, based on grades K - 12 and using local area ratios: 28 to 1

VII.2.B Local high schools offer a four-year English program.

VII.2.B Local high schools offer a four-year Math program.

VII.2.B Local high schools offer four-year Foreign Language programs.

VII.2.C Local high schools offer an Honors program.

VII.2.D 67.7 percent of high school students go on to either a two- or four-year college

VII.2.E There are opportunities for off-base education within 25 miles of the base.

VII.2.E.1 Opportunities for off-base VOCATIONAL/TECHNICAL TRAINING provided by the following institutions:

VII.2.E.2 Opportunities for off-base UNDERGRADUATE COLLEGE provided by the following institutions:

VII.2.E.3 Opportunities for off-base GRADUATE COLLEGE provided by the following institutions:

## 3. Spousal Employment

VII.3.A 37.0 percent of spouses are able to find employment (within 3 months) in the local community.

VII.3.B 12.0 percent of spouses find employment commensurate with job skills, work experience, and education.

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**VII.3.C** 6.2 percent unemployment in the local area (Department of Labor Statistics)

**VII.3.D** 4.8 percentage rate of job growth in the local area (Department of Labor Stastics)

**4. Local Medical Care**

**VII.4.A** Current ratio of active, non-federal physicians in the community: 4.7 physicians/1000 people

**VII.4.B** Current ratio of hospital beds in the community: 9.4 beds/1000 people

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**Section VIII****1. Air Quality - Clean Air Act**

**VIII.1.A** Air Quality Management District for the base: Northwest Florida District

**VIII.1.B** The base is NOT located within a maintenance or non-attainment area for pollutants.

**VIII.1.C** There are NO critical air quality regions within 100 kilometers of the base  
(Critical air quality regions are non-attainment areas, national parks, etc.)

**VIII.1.D** On- or off-base activities have NOT been restricted or delayed due to air quality considerations.

(Restrictions or delays may be imposed by a Metropolitan Planning Organization or similar organization and include restrictions to construction permits, restrictions to industrial facilities operating hours, High Occupancy Vehicle (HOV) rush hour procedures, etc.)

**VIII.1.D.1** The base has NOT been required to implement emissions reduction through special actions  
(i.e. carpooling or emissions credit transfer)

**VIII.1.E** Restrictions placed on operations by state or local air quality regulatory agencies:

**VIII.E.1 Aerospace Ground Equipment (AGE):**

- E.1.a** No state or local air quality regulatory agency Regulates or conditionally exempts the operation of portable internal combustion engine equipment, to include AGE.
- E.1.b** No state or local air quality regulatory agency Requires permits for such units.
- E.1.c** No state or local air quality regulatory agency Requires the base to modify the hours of operation of the AGE.
- E.1.d** No state or local air quality regulatory agency Requires retrofit controls for AGE.

**VIII.E.2 Infrastructure Maintenance / Public Works**

- E.2.a** No state or local air quality regulatory agency Regulates or conditionnaly exempts small activities or engines used for infrastructure maintenance (i.e., sewer cleaning, wood chipping, road repair, etc.).
- E.2.b** No state or local air quality regulatory agency Limits the hours of these activities.
- E.2.c** No state or local air quality regulatory agency Requires periodic fuel analysis or emission testing of equipment used to support these activities.
- E.2.d** No state or local air quality regulatory agency Requires emission offsets for these activities.

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#### VIII.E.3 Open Burn/Open Detonation

- E.3.a No state or local air quality regulatory agency Prohibits open burn / open detonation (OB/OD) or training
- E.3.b No state or local air quality regulatory agency Regulates or conditionally exempts OB/OD operations or training.
- E.3.c No state or local air quality regulatory agency Limits the number of detonations to keep an exemption.
- E.3.d No state or local air quality regulatory agency Requires periodic emission testing.

#### VIII.E.4 Fire Training

- E.4.a No state or local air quality regulatory agency Specifies requirements which exceed the fire training and/or controlled burn requirements for local public fire agencies where fire training activities that produce smoke are regulated or conditionally exempted.
- E.4.b No state or local air quality regulatory agency Prohibits fire training activities that produce smoke.

#### VIII.E.5 Signal Flares

- E.5 No state or local air quality regulatory agency Prohibits the use of signal flares for search and rescue training or operations.

#### VIII.E.6 Emergency Generators

- E.6.a No state or local air quality regulatory agency Regulates or conditionally exempts emergency operation of generators or engines.
- E.6.b No state or local air quality regulatory agency Limits the hours of emergency operation of generators.
- E.6.c No state or local air quality regulatory agency Requires periodic fuel analysis or emission testing of emergency generators.
- E.6.d No state or local air quality regulatory agency Requires an air quality operating permit if the emergency operation of the generators exceeds an exemption threshold.
- E.6.d No state or local air quality regulatory agency Requires emission offsets.

#### VIII.E.7 Short-term Activities

- E.7.a No state or local air quality regulatory agency Regulates or conditionally exempts short-term (12 months or less) activities (i.e., air shows, exercises, construction, or emergency actions).
- E.7.b No state or local air quality regulatory agency Limits the operation for short-term activities.
- E.7.c No state or local air quality regulatory agency Requires periodic fuel analysis, emission testing, or emission offsets.
- E.7.d No state or local air quality regulatory agency Prohibits any short-term activities.

#### VIII.E.8 Monitoring

- E.8 No state or local air quality regulatory agency Has continuous emissions monitoring requirements for sources at the base which exceed the Federal New Source Performance Standards requirements.

#### VIII.E.9 BACT/LAER

- E.9 No state or local air quality regulatory agency Has BACT/LAER emissions thresholds (excluding lead) that exceed the Federal Clean Air Act requirements.

## 2. Water - Potable

#### VIII.2.A The base potable water supply is On-base and the source is:

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Upper Floridan Aquifer

**VIII.2.B** There are no constraints to the base water supply.

**VIII.2.C** The base potable water supply does not constrain operations

(Contaminants or lack of water supply may restrict construction activities or operations through: facility siting options, well usage, construction, etc.)

**3. Water - Ground Water**

**VIII.3.A** Base or local community groundwater is contaminated.

**VIII.3.A.1** Nature of contamination. Shallow aquifer is not used for drinking water. Mostly fuels and solvents.

**VIII.3.A.2** The contaminated groundwater is Not a potable water source.

**VIII.3.B** The base is actively involved in groundwater remediation activities.

**VIII.3.C** 88 water wells exist at the base.

**VIII.3.D** No wells have been abandoned.

**4. Water - Surface Water**

**VIII.4.A** The following perennial bodies of water are located on base.

<b>VIII.4.A.1</b>	<b>Location</b>	<b>Surface area size</b>
	307 Lakes	1,000.00 Acres
	Choctawatchee Bay, East Bay, Santa Rosa Sound	1,000.00 Acres
	Yellow, East, Shoal Rivers	1,000.00 Acres

**VIII.4.A.2** These bodies receive water runoff or treated wastewater discharge from the base.

**VIII.4.A.3** The base is located within a specified drainage basin.

The base is involved in cooperative agreements regarding surface water quality

Agreements concern restoration and protection of water quality and associated living resources (e.g., Chesapeake Bay Program)?

**VIII.4.B** Special permits are required as follows:

Required only when jurisdictional wetlands are affected.

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(Special permits may required to conduct training/operations, or for construction projects on or near bodies of water)

**VIII.4.C** There is known contamination to the base or local community surface water

**VIII.4.C.1** Nature of the contamination: Cyanide release at one stormwater discharge point. Problem solved, discharge has been discontinued.

**VIII.4.C.2** The contaminated surface water is Not a potable water source.

#### 5. Wastewater

**VIII.5.A** Base wastewater is treated by On-Base facilities.

**VIII.5.B** The following 5 wastewater treatment facilities (industrial/domestic) are located on-base:

Duke Field "FLD" 3 (0.125 MGD)
Main Base (1.0 MGD)
Plew (1.5 MGD)
Ranger Camp "FLD 6" (0.072 MGD)
Site C-6 (0.02 MGD)

**VIII.5.C** There are No discharge violations or outstanding open enforcement actions pending.

#### 6. Discharge Points / Impoundments

**VIII.6.A** There any No National Pollutant Elimination System permits in effect.

**VIII.6.B** The base currently discharges treated wastewater ON-Base. Description of treated wastewater discharge location:

All treated effluent is applied to permitted land areas on base via spray irrigation.

**VIII.6.C** The base has No discharge impoundments.

**VIII.6.D** There are no discharge violations or outstanding discharge open enforcement actions pending.

#### 7. HAZARDOUS MATERIALS - Asbestos

**VIII.7.A** 100.0 percent of facilities have been surveyed for asbestos.



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**VIII.7.A.1 45.0 percent of the facilities surveyed are identified as having asbestos.**

**VIII.7.A.2 1 facilities are considered regulated areas or have restricted use due to friable asbestos.**

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#### 8. Biological - Habitat

##### VIII.8.A Ecological or wildlife management areas ON the base:

Entire base is a State of Florida Type II Wildlife Management Area.

##### Ecological or wildlife management areas ADJACENT TO the base:

The barrier island is on and adjacent to the base and is an important & significant ecological area.

##### VIII.8.A.1 Natural areas on or adjacent to the base are generally recognized as important ecological sites.

Barrier Island.

Sandhill ecosystem.

Steephead areas.

Wetlands (Seepage Bogs and Cypress Domes).

##### VIII.8.B The U.S. Fish and Wildlife Service has identified critical/sensitive habitats on base.

Okaloosa Darter streams.

##### VIII.8.C The base has a cooperative agreement for conducting a hunting and fishing program.

Cooperative agreements are between the base with the U.S. Fish and Wildlife Service and the State Fish and Game Department.

##### VIII.8.D The presence of these resources constrains CURRENT construction activities/operations:

The presence of these resources constrains FUTURE construction activities/operations:

To some degree. Activities requiring clearing of large areas of Longleaf Pine Sandhills would negatively impact conservation of the Red-Cockaded Woodpecker, Eastern Indigo Snake & Gofer Tortoise. Present mission compatible with conservation of resources

#### 9. Biological - Threatened and Endangered Species

##### VIII.9.A Threatened and/or endangered species identified on the base:

Species	Kingdom			Remarks	
Alabama Breakrush	Plant	Federa	Candidate	Threatened	
Alligator Snapping Turtle	Animal	Federa	Candidate	Threatened	Also State Species of Special Concern
Arctic Peregrine Falcon	Animal	Federa	Candidate	Threatened	Also State Listed Endangered
Atlantic Green Turtle	Animal	Federa	Candidate	Endangered	Also State Listed Endangered
Atlantic Loggerhead Turtle	Animal	Federa	Listed	Threatened	Also State Listed Threatened
Bachman's Sparrow	Animal	Federa	Candidate	Threatened	
Bachman's Warbler	Animal	Federa	Listed	Endangered	Also State Listed Endangered
Bald Eagle	Animal	Federa	Listed	Endangered	Also State Listed Threatened
Baltzell's Sedge	Plant	Federa	Candidate	Threatened	
Big yellow Milkwort	Plant	State	Listed	Threatened	
Bog Frog	Animal	Federa	Candidate	Threatened	Also State Species of Special Concern

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Bogbuttons	Plant	Federa	Candidate	Threatened	
Butterfly orchid	Plant	State	Listed	Threatened	
Butterwort (Unnamed)	Plant	State	Listed	Threatened	
Cardinal Flower	Plant	State	Listed	Threatened	
Catesby's Lily	Plant	State	Listed	Threatened	
Chapman's Aster	Plant	Federa	Candidate	Threatened	
Chapman's Butterwort	Plant	Federa	Candidate	Threatened	Also State Listed Endangered
Coyote-thistle Aster	Plant	Federa	Candidate	Threatened	
Crane-fly Orchid	Plant	State	Listed	Threatened	
Cruise's Golden Aster	Plant	Federa	Candidate	Threatened	Also State Listed Endangered
Curtiss' Sand Grass	Plant	Federa	Candidate	Threatened	Also State Listed Endangered
Drummond's Yellow-Eyed Grass	Plant	Federa	Candidate	Threatened	
Dwarf Palmetto	Plant	State	Listed	Threatened	
Eastern Indigo Snake	Animal	Federa	Listed	Threatened	Also State Listed Threatened
Ebony Spleenwort	Plant	State	Listed	Threatened	
Flatwoods Salamander	Animal	Federa	Candidate	Threatened	
Florida Anise	Plant	State	Listed	Threatened	
Florida Black Bear	Animal	Federa	Candidate	Threatened	Also State Listed Threatened
Florida Pine Snake	Animal	Federa	Candidate	Threatened	Also State Species of Special Concern
Florida Shield Fern	Plant	State	Listed	Threatened	
Foxtail Club Moss	Plant	State	Listed	Threatened	
Godfrey's Golden Aster	Plant	Federa	Candidate	Threatened	
Golden Fringed Orchid	Plant	State	Listed	Threatened	
Gopher Frog	Animal	Federa	Candidate	Threatened	Also State Species of Special Concern
Gopher Turtle	Animal	Federa	Candidate	Threatened	Also State Species of Special Concern
Gulf Spikemoss	Plant	State	Listed	Threatened	
Gulfcoast Lupine	Plant	Federa	Candidate	Threatened	Also State Listed Threatened
Harper's Yellow-eyed Grass	Plant	State	Listed	Threatened	
Heartleaf	Plant	State	Listed	Threatened	
Karst Pond Yellow-eyed Grass	Plant	State	Listed	Endangered	
Ladies Tresses	Plant	State	Listed	Threatened	
Large White Fringed Orchid	Plant	State	Listed	Threatened	
Large-leaved Jointweed	Plant	Federa	Candidate	Threatened	Also State Listed Threatened
Least tern	Animal	State	Listed	Threatened	
Magnolia Ashei	Plant	State	Listed	Endangered	
Mountain Laurel	Plant	State	Listed	Threatened	
Naked-stemmed Panic Grass	Plant	Federa	Candidate	Threatened	

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Netted Chain Fern	Plant	State	Listed	Threatened	
Okalosa Darter	Animal	Federa	Listed	Endangered	Also State Listed Endangered
Orange Azalea	Plant	State	Listed	Endangered	
Panhandle Lily	Plant	Federa	Candidate	Threatened	Also State Listed Endangered
Parrot Pitcher Plant	Plant	State	Listed	Threatened	
Perforate Reindeer Lichen	Plant	Federa	Proposed	Threatened	
Pineland Hoary Pea	Plant	Federa	Candidate	Threatened	Also State Listed Threatened
Pineland Wild Indigo	Plant	State	Candidate	Threatened	
Piping Plover	Animal	Federa	Listed	Threatened	Also State Listed Threatened
Pond Spicebush	Plant	Federa	Candidate	Threatened	
Prostate Club Moss	Plant	State	Listed	Threatened	
Pyramidal Magnolia	Plant	State	Listed	Endangered	
Rain Lilies	Plant	State	Listed	Threatened	
Red-cockaded Woodpecker	Animal	Federa	Listed	Endangered	Also State Listed Threatened
Rose Pogonia	Plant	State	Listed	Threatened	
Sand Spikemoss	Plant	State	Listed	Threatened	
Santa Rosa Beach Mouse	Animal	Federa	Candidate	Threatened	Also State Listed Endangered
Silky Camelias	Plant	State	Listed	Endangered	
Slender Club Moss	Plant	State	Listed	Threatened	
Southeastern American Kestral	Animal	Federa	Candidate	Threatened	Also State Listed Threatened
Southeastern Snowy Plover	Animal	Federa	Candidate	Threatened	Also State Listed Threatened
Southern Club Moss	Plant	State	Listed	Threatened	
Southern Grape Fern	Plant	State	Listed	Threatened	
Southern Three-Awn Grass	Plant	Federa	Candidate	Threatened	
Southern Yellow Fringeless Orchid	Plant	State	Listed	Threatened	
Spiny Pod	Plant	State	Listed	Endangered	
St Andrews Beach Mouse	Animal	Federa	Candidate	Threatened	Also State Listed Endangered
Swamp Honeysuckle	Plant	State	Listed	Threatened	
Sweet Pitcher Plant	Plant	State	Listed	Endangered	
Toothed Savory	Plant	Federa	Candidate	Threatened	
Trailing Arbutus	Plant	State	Listed	Endangered	
Water Spider Orchid	Plant	State	Listed	Threatened	
Water Sundew	Plant	State	Listed	Threatened	
West Florida Cow Lily	Plant	Federa	Candidate	Threatened	
West's Flax	Plant	Federa	Candidate	Threatened	
White-top Pitcher Plant	Plant	Federa	Candidate	Threatened	Also State Listed Endangered
Willow-leaved Meadowbeauty	Plant	Federa	Candidate	Threatened	

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Yellow Butterwort	Plant	State	Listed	Threatened	
Yellow Fringed Orchid	Plant	State	Listed	Threatened	
Yellow Meadowbeauty	Plant	State	Listed	Threatened	

## VIII.9.B Special Concern species identified on the base:

Species	Kingdom	State	Listed	Threatened	Remarks
Alligator Snapping Turtle	Animal	State		Special Concern	
Bog Frog	Animal	Federa		Special Concern	
Florida Pine Snake	Animal	State		Special Concern	
Gopher Frog	Animal	State		Special Concern	
Gopher Turtle	Animal	State		Special Concern	

## VIII.9.C The presence of these species constrains current or future construction activities or operations as follows:

See addendum for details. No impact is present on the current mission but threatened and endangered species can be a constraint on future missions.

## 10. Biological - Wetlands

## VIII.10.A Wetlands, estuaries, or other special aquatic features present on the base:

## VIII.10.A.1 Identification and type of wetland: Approximate acreage:

A variety of Wetlands. Cannot be broken down at this time.	27000
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## VIII.10.A.2 The base is involved in jointly-managed programs for protection of these resources.

## VIII.10.B The base has Not been surveyed for wetlands in accordance with established federally approved guidelines.

## VIII.10.C Part of the base is located in a 100-year floodplain.

## VIII.10.D The presence of these resources constrains current or future construction activities or operations as follows:

No current missions are precluded by wetland considerations. Wetlands and Floodplains are both taken into consideration in all project siting and the environmental impact analysis process. See addendum.

## 11. Biological - Floodplains

## VIII.11.A Floodplains are present on the base.

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VIII.11.A.1 Floodplains do Not constrain construction (siting) activities or operations.

VIII.11.A.2 Periodic flooding does Not constrain base operations.

#### 12. Cultural

VIII.12.A Historic, prehistoric, archaeological sites or other cultural resources located on the base:

VIII.12.A.1 Sites:

Significant status:

13 % of Eglin Reservation	691 Archeological sites, 61 significant, 148 potentially significant
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VIII.12.B 5 percent of the buildings on base are over 50 years old.

VIII.12.C No Historic Landmark/Districts, or NRHP properties are located on base.

VIII.12.C.1 Some properties have been determined to be or may be eligible for the NRHP.

VIII.12.C.2 Buildings and structures have not been surveyed for Cold War or other historical significance.

VIII.12.D The base has been archeologically surveyed.

VIII.12.D.1 13 percent of the base has been surveyed.

VIII.12.D.2 Archeological sites have been found.

VIII.12.D.3 Archeological collections are housed on base.

VIII.12.D.4 Native Americans or others use/identified sacred areas or burial sites on or near base:

Mound 8OK174

Mound 8WL13

Mound 8WL14

VIII.12.E The base has no agreements with historic preservation agencies.

Agreements include Programmatic Agreements and Memorandum of Agreements.

Historical preservation agencies include State Historical Preservation Officer or the Advisory Council on Historic Preservation.

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#### 13. Environmental Cleanup - Installation Restoration Program (IRP) and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

VIII.13.A A preliminary assessment of the installation has been performed.

VIII.13.A.1 53 IRP sites have been identified

VIII.13.A.2 No IRP sites extend off base.

VIII.13.A.3 All on-site remediation is estimated to be in place in 2006

VIII.13.B The installation is Not a National Priority List (NPL) site nor proposed as an NPL site.

VIII.13.C Federal Facility Agreements to clean up the base are in place.

Federal Facility Agreements include Interagency Agreements, Administrative Orders of Consent, and other agreements.

VIII.13.D There are no known uncontrolled or unregulated occurrences of specific contaminate types or sources.

Contaminate types and sources include landfills, medical wastes, radioactive wastes, etc.

VIII.13.E There are sites or SWMUs currently being investigated and remediated pursuant to RCRA corrective action.

SWMU - Solid Waste Management Units

RCRA - Resource Conservation and Recovery Act

VIII.13.E.1 43 sites are being investigated and remediated.

VIII.13.F The IRP does Not currently restrict construction (siting) activities/operations on-base.

#### 14. Compliance / IRP Costs (\$000)

VIII.14.A Expenditure Category	Current FY	FY + 1	FY + 2	FY + 3	FY + 4
Hazardous Waste Disposal/Remediation	\$500.000 K	\$700.000 K	\$700.000 K	\$700.000 K	\$700.000 K
IRP	\$10,100.000 K	\$13,900.000 K	\$7,900.000 K	\$13,800.000 K	\$8,900.000 K
Other(s) Specify:	\$5,300.000 K	\$6,500.000 K	\$9,100.000 K	\$2,000.000 K	\$11,200.000 K
Permits	\$100.000 K	\$100.000 K	\$100.000 K	\$100.000 K	\$100.000 K

#### 15. Other Issues

VIII.15.A Description of other activities which may constrain or enhance base operations:

LOCAL: See addendum.

STATE: See addendum.

FEDERAL: See addendum.

#### 16. Air Quality - Clean Air Act

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- VIII.16.A** Air Quality Control Area (AQCA) geographic region in which the base is located:  
Northwest Florida District
- VIII.16.B** Air quality regulatory agency responsible for the AQCA.: Florida Department of Environmental Protection
- VIII.16.B** Name and phone number of the AQCA program manager for issues pertaining to the base:  
Edwin Middleswart (904)444-8300

The EPA has designated the AQCA (or the specific portion of the AQCA containing the base) to be:

- |   |  |
|---|--|
| <b>VIII.16.C.1</b> In Attainment for Ozone                      | <b>VIII.16.C.2</b> In Attainment for Carbon Monoxide |
| <b>VIII.16.C.3</b> In Attainment for Particulate matter (PM-10) | <b>VIII.16.C.4</b> In Attainment for Sulfur Dioxide  |
| <b>VIII.16.C.5</b> In Attainment for Nitrogen Dioxide (Not NOx) | <b>VIII.16.C.6</b> In Attainment for Lead            |
- VIII.16.C.7** The EPA has Not proposed that any AQCA pollutant in ATTAINMENT be listed as NONATTAINMENT

- VIII.16.D.1** Ozone daily maximum hourly design value for the portion of the AQCA in which the base is located: 0.00 ppm
- VIII.16.D.2** Carbon monoxide 8 hour design value for the portion of the AQCA in which the base is located: 0.0 ppm
- VIII.16.D.3** Ozone Design value is 0.0% of NAAQS
- VIII.16.D.4** Carbon monoxide Design value is 0.0% of NAAQS

Air Quality Survey complete, No additional data required.



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**Section IX**