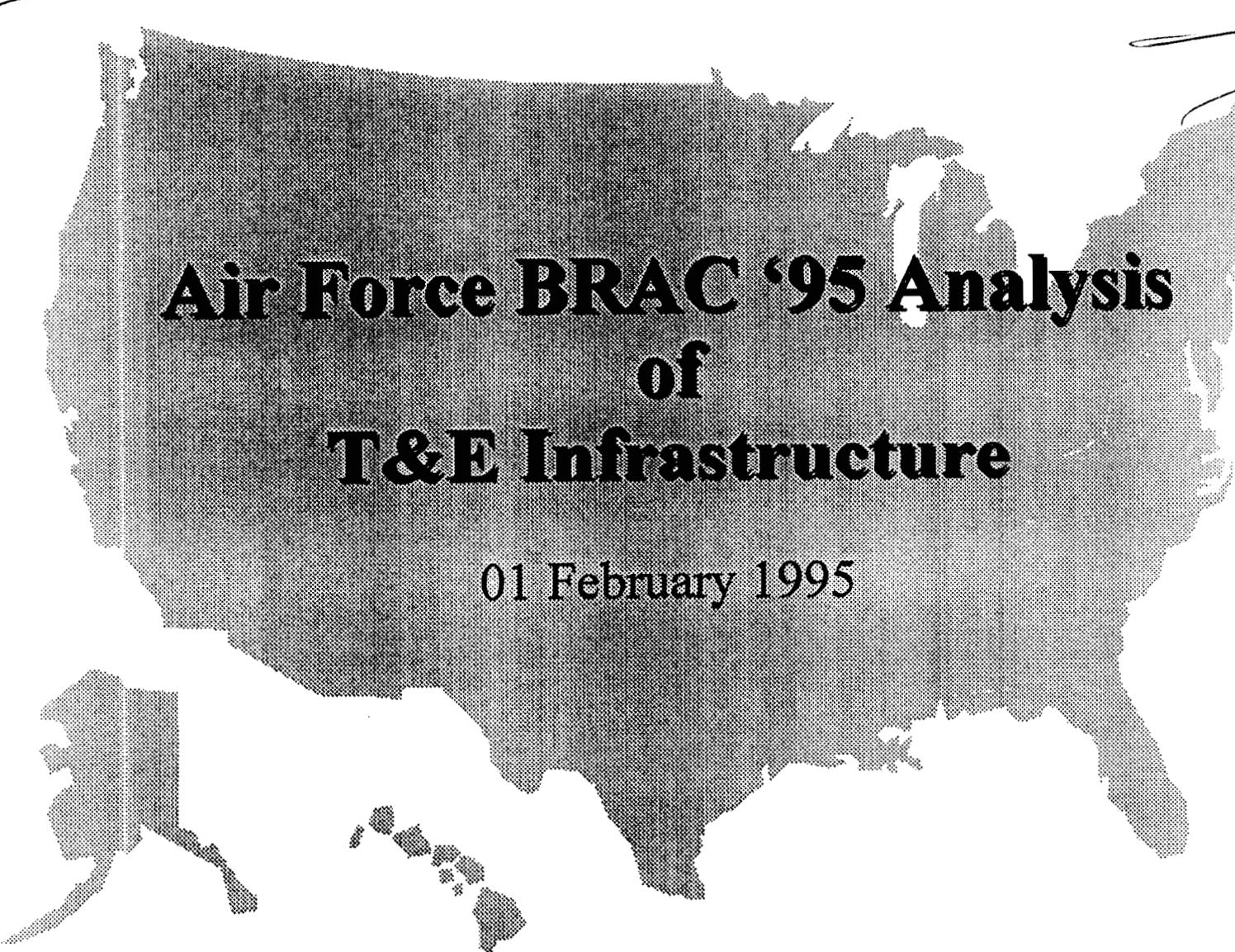


Meeting: 04/08/95  
9:00AM  
JCSG T4E

## Attendees:

- |    |   |                      |
|----|---|----------------------|
| 1  | Steve Ackerman - DBCRC AF Team          |                      |
| 2  | Jim Awely - BRAC                        | 703-696-0504 X182    |
| 3  | Glenn Profit - AF Rep to JCSG/4PT       | 210-652-4527         |
| 4  | LEONARD STARMAN - SUPPORT TO JCSG/4PT   | 703-695-0902         |
| 5  | Jim Boatright SAF                       | 703 693-             |
| 6  | Chuck Fox SAF/LL                        | 703 - 697-9153       |
| 7  | Lester C. FARRINGTON DBCRC-Joint X-Svc. | 703-696-0550 x190    |
| 8  | JAY D. BLUME JR. AF/RT                  | 703-698-8678         |
| 9  | H. GEN. W. W. LEAT AF/TE                | 703 697-4774         |
| 10 | FRANK CIRILLO DBCRC AF Team Lead        | 703-696-0504 x16     |
| 11 | BEN BORDEN                              | 111                  |
| 12 | Mark A. Pross DBCRC/AF Team             | (703) 696-0504 x.166 |
| 13 | CHRIS GOODE ADMIN                       | X142                 |
| 14 | LT Col George London AF/TER             | (703) 697-1165       |
| 15 | Parker Hester AF/TER                    | (703) 697-1165       |
| 16 | Col Dave McNierney AF/RTR               | (703) 695-6766       |
| 17 | Maj Michael Wallace AF/RTR              | (703) 695-4578       |
| 18 | ALEX YELVIN DBCRC NAVY TEAM             | 703 696 0504 x183    |
| 19 | Rick DiCamillo DBCRC AF TEAM            | 703-696-0504 ext 166 |
| 20 | BRYAN ECHOLS SAF/GEN                    | 703-697-6560         |
| 21 | Marcia Malcomb AF/RTR                   | (703) 695-4666       |
| 22 | Col Wayne Mayfield AF/RTR               | (703) 695-6766       |
| 23 | Dr. Dan Stewart AF Rep, T4E, JCSG       |                      |

*Capella*



# **Air Force BRAC '95 Analysis of T&E Infrastructure**

01 February 1995

*Page  
44  
From  
set 47*

## **Purpose**

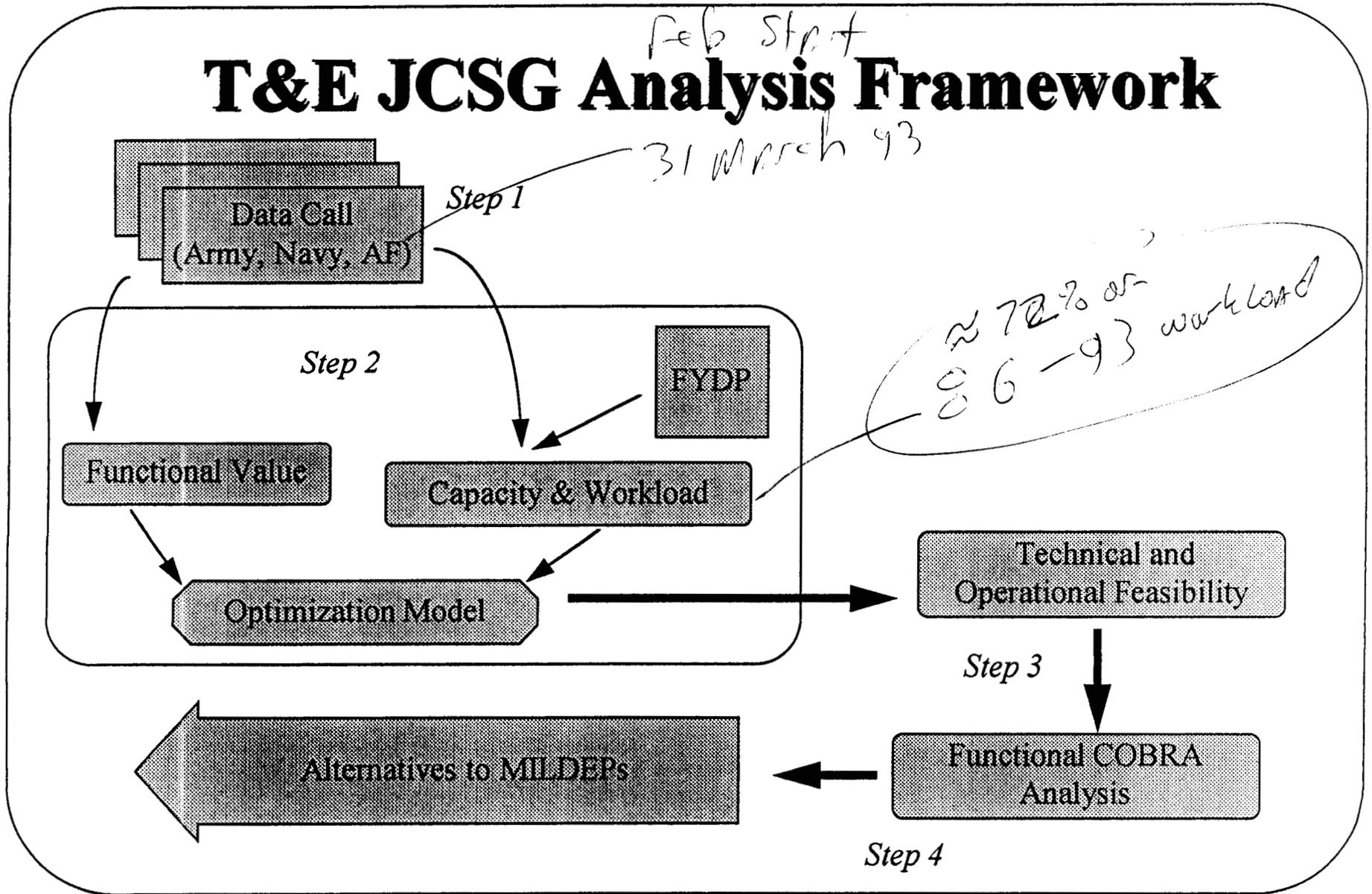
- Present Results of AF Analysis of T&E Realignment & Consolidation Opportunities
  - Intra-AF
  - Cross-Servicing

## **Overview**

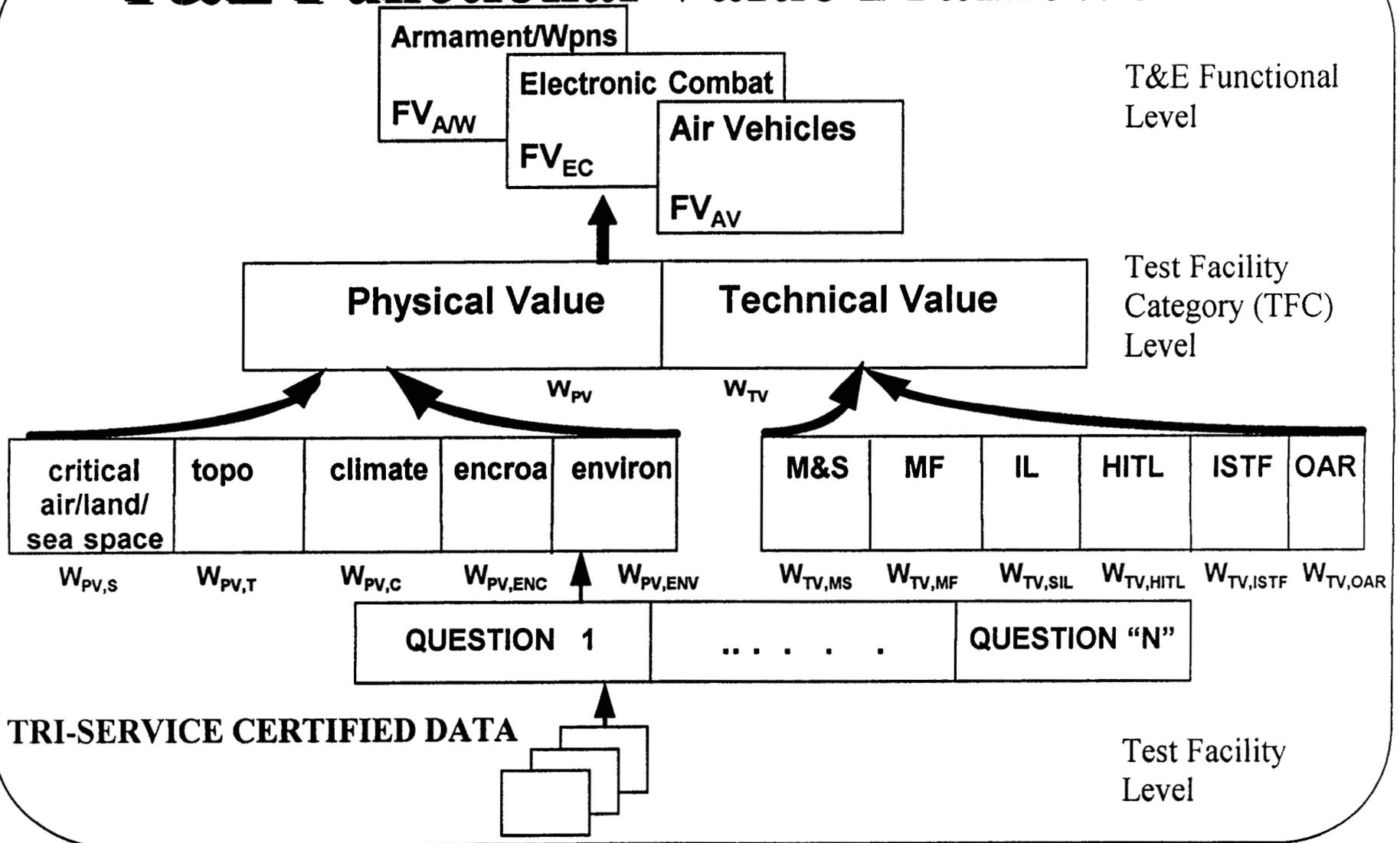
- **Part I: Intra-AF T&E Realignment/Consolidations**
  - Basis for Response to T&E JCSG Alternatives
- **Part II: Completion of T&E JCSG Analysis Plan**
  - Addresses T&E Co-Chair Alternatives
- **Part III: Analysis of RDT&E Alternatives for Armament/Weapons, Explosives, and Propulsion**
  - Addresses Lab JCSG Chair's Alternatives

## Background

- T&E JCSG Analysis Plan Was Jointly Developed and Approved by BRAC '95 Steering Group
  - Air Vehicles, Air Armament/Weapons and Electronic Combat
  - Test Facility Level
  - Functional COBRA Costs
- T&E JCSG Did Not Complete Analysis IAW Approved Plan
  - “Activity” (e.g. AFFTC, Edwards AFB) versus Test Facility (e.g. ACETEF Facility at Pax River) Focus
    - AF/TE Nonconcurrent
  - Activities Classified into “Core” and “Non-Core”
  - Realignment/Consolidations Between “Core” Activities Not Allowed
  - Steps 3 & 4 Deferred to MILDEPs



# T&E Functional Value Framework



*Focus of the study*

# Core/Non-Core T&E Activities

## Summary

<u>MILDEP</u>	<u>Activity (Location)</u>	<u>Core</u>	<u>Non-Core</u>	<u>Retained by Opt Model</u>	<u>Retained as "Core" by T&amp;E JCSG</u>	<u>Rationale</u>
AF	AFFTC (Edwards)	✓				
	AFDTC (Eglin)	✓				
	AEDC (Arnold)	✓				
	AFFTC (UTTR)	⊙		No	Yes	Cruise Missile Capability
	AFDTC (Holloman)	✓				
Navy	475 WEG (Tyndall)		⊙			
	AFEWES (Ft Worth)		⊙	Yes	No	Not MRTFB OAR (PI 3c)
	REDCAP (Buffalo)		✓			
	NAWC (Pax River)	✓				
	NAWC (China Lake)	✓				
	NAWC (Pt Mugu)	✓				
	NAWC (WSMR)	⊙		No	Yes	Unique Navy S-A Capability
	NAWC (Indianapolis)		✓			
	NAWC (Warminster)		✓			
	NSWC (Dahlgren)		⊙	Yes	No	Not MRTFB OAR (PI 3c)
Army	NSWC (Indian Head)		⊙	Yes	No	Not MRTFB OAR (PI 3c)
	NSWC (Crane)		⊙	Yes	No	Not MRTFB OAR (PI 3c)
	WSMR	✓				
	EPG	✓				
	YPG	⊙		No	Yes	Unique Army Rotary Wing
	RTTC		✓			
	ATTC - Ft Rucker		✓			
AQTD - Edwards		✓				

## Background (con't)

- T&E JCSG Co-Chairs Transmittal to MILDEPs Included Two Sets of Alternatives
  - Jointly Developed Alternatives, Supported By Joint Analysis, Addressing “Non-Core” Activities
  - Co-Chair Alternatives, With No Supporting Analysis, Addressing “Core” Activities
- Air Force Addressed Jointly Developed Alternatives In Its Intra-AF Analysis
  - Offered to Cross-Service Navy and Army in its Response
  - Did Not Respond to Co-Chair Alternatives Since No Supporting Analysis Provided

*Air Force Position - stick to the plan  
— NO zigging —*

## **Background (con't)**

- Since T&E JCSG No Longer Active, AF Completed T&E JCSG Analysis Plan, Using Certified Data
  - Results Identify Specific Alternatives for “Core” Activities
  - Addresses Co-Chairs Concerns Regarding Excess Capacity Among “Core” Activities
- AF Combined Results of Above Analysis With Lab JCSG Results to Address Lab JCSG Chair’s RDT&E Alternatives
  - Air-Launched Weapons, Propulsion, and Energetics

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# **Air Force BRAC '95 Analysis of T&E Infrastructure**

**\*Part I: Intra-AF Realignments/Consolidations**

\*Update of 12 Dec 94 Briefing for T&E JCSG Meeting, which was not held

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## **Purpose**

- Present Results of Air Force Base Installation Analysis for T&E
  - Intra-AF T&E Realignments/Consolidations
  - Integration of T&E JCSG Alternatives
  - Basis for Response to T&E JCSG

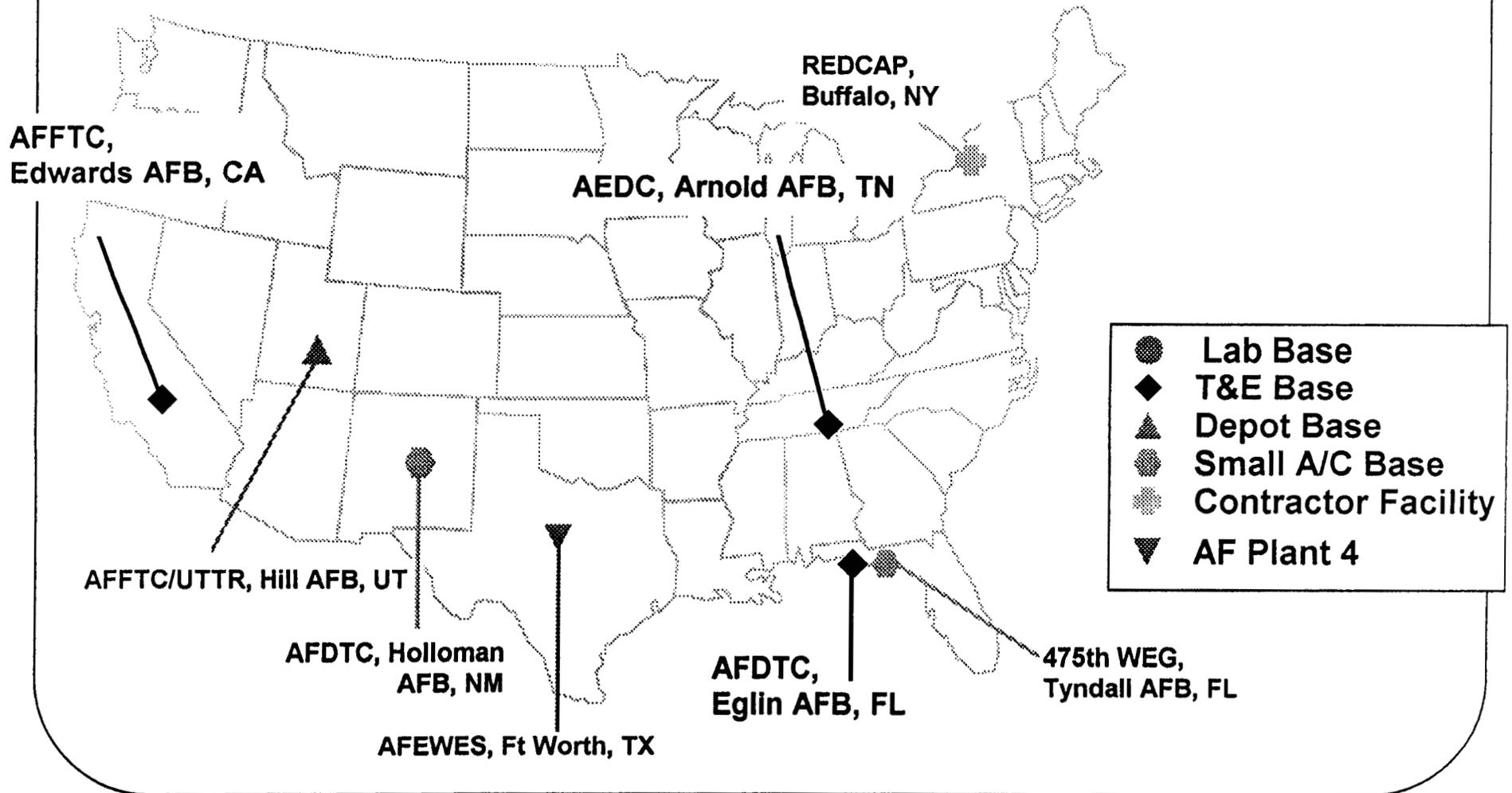
## **Part I: Outline**

- Scope
- Analysis Process
- Intra-AF Realignment
- JCSG Alternatives
- Summary

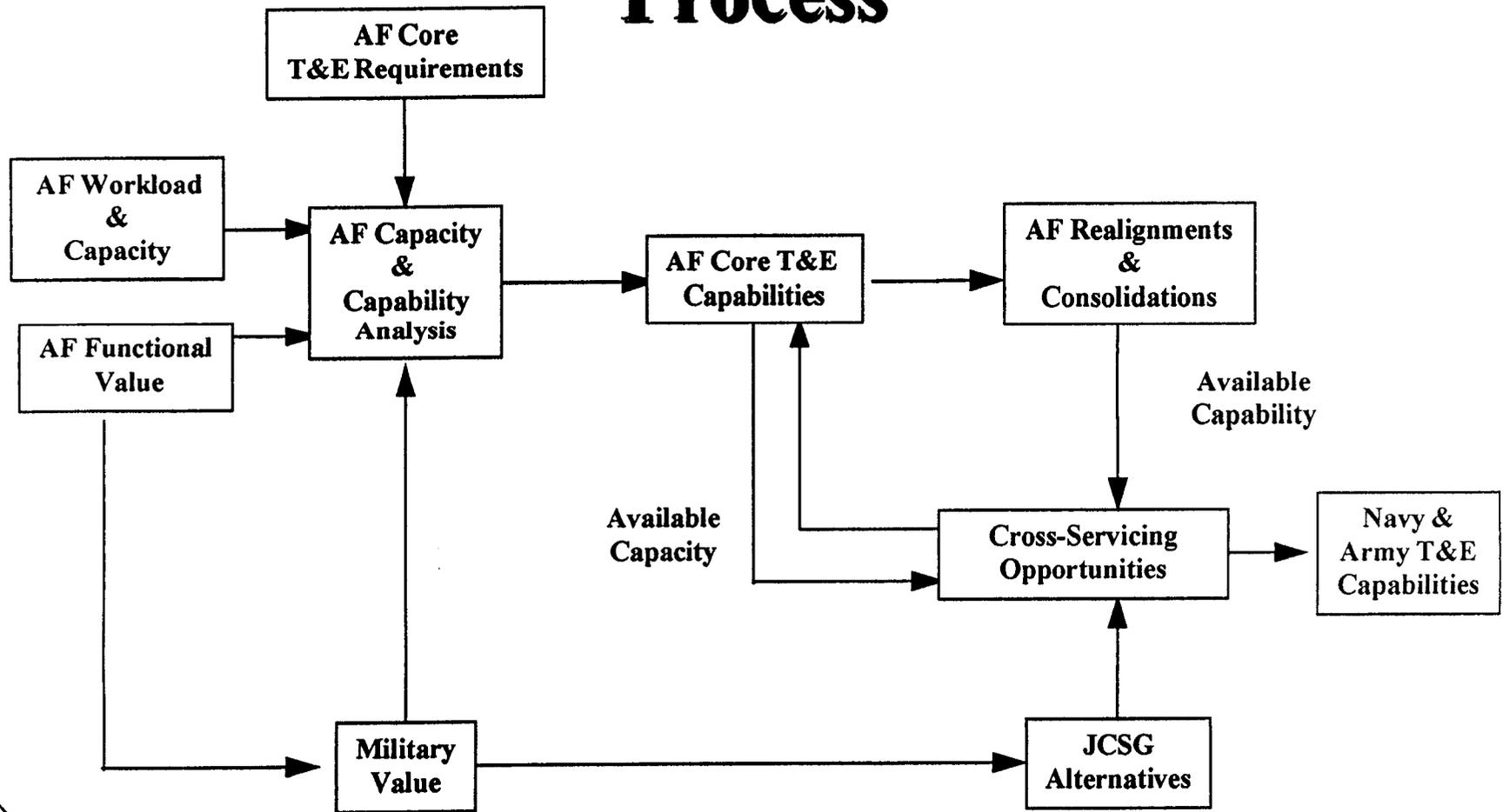
## **Scope**

- Focus of T&E JCSG Analysis on AF Primary Mission...Air Warfare
  - Air Vehicles
  - Air Armament/Weapons
  - Electronic Combat
- Other Services' Primary Missions Excluded
  - Navy: Surface and Subsurface Warfare
  - Army: Land Warfare

# Air Force T&E Locations



# AF T&E Analysis Process



# Capacity and Capability Analysis Capability Assessment

*F15/F16  
Radar Test Facility*

T&E Function	AFFTC @ Edwards	AFFTC @ UTTR	AFDTC @ Eglin	AFDTC @ Holloman	475 WEG @ Tyndall	AEDC @ Arnold	REDCAP @ Buffalo	AFEWES @ Ft Worth
Air Vehicle	F		(P)	(P)	(P)	(P)		
Armaments/ Weapons	<i>installed systems/fuel</i> P	(P)	F	(P)	(P)	(P)		
Electronic Combat	<i>Open Air res weapons work</i> P		<i>Open Air res weapons work</i> P	<i>Open Air res weapons work</i> (P)			<i>Hardware in the Loop</i> P	P

**F = Full Capability to Support All Six Test Facility Categories of the Acquisition/Test Process**  
**P = Partial Capability**  
 = Intra-AF Realignment/Consolidation Opportunities  
 = Geographically Constrained or Not Cost Effective to Move

## **AF Realignments & Consolidations** **Intra-AF Candidates**

- Air Vehicle
  - None
- Armaments/Weapons
  - AFFTC (UTTR) Capabilities
- Electronic Combat
  - REDCAP (Buffalo) and AFEWES (Ft Worth) Hardware-in-the-Loop Facilities/Workload
  - AFDTC/EMTE (Eglin) Open-Air Range Facilities/Workload

## **Armament/Weapons Realignment AFFTC (UTTR)**

- Realign UTTR from AFMC T&E Range to ACC Training Range
  - Retain Minimum Capability to Support Training Requirements and Large Footprint Weapons T&E (e.g., Cruise Missile)
    - Critical Air/Land Space
    - Mobile T&E Instrumentation/Support
  - Transfer Workload to AFDTC (Eglin) and AFFTC (Edwards)
  - Downsize Personnel to Satisfy New Requirements
  - Dispose of Remaining Equipment/Instrumentation
- Rationale
  - 82% of Current Missions are Training (Only 18% T&E)
  - Most of Current T&E Can Be Accomplished With Existing Core T&E Capabilities (AFDTC and AFFTC)
  - Requirement to Retain Air/Land Space

**Criteria IV & V**  
**AFFTC (UTTR) Realignment**

<u>1-Time</u> <u>Cost</u>	<u>20 YR</u> <u>NPV*</u>	<u>Steady</u> <u>State</u> <u>Savings</u>	<u>ROI</u> <u>(Years)</u>	<u>Gov't</u> <u>Pers</u> <u>Savings</u>
\$3.2M	(\$179.9M)	\$12.4M	0	104

\* ( ) Indicate Savings

## **Electronic Combat (EC) Realignment REDCAP/AFEWES/AFDTC (EMTE)**

- Realign REDCAP & AFEWES Hardware-In-The-Loop (HITL) and AFDTC/EMTE Open-Air-Range (OAR) Facilities
  - Move Workload and Required Equipment from REDCAP and AFEWES to AFFTC/BAF (Edwards) and AFDTC/GWEP (Eglin) Facilities
  - Move Required Threat Systems from AFDTC/EMTE (Eglin) to Nellis Complex
  - Disestablish REDCAP, AFEWES, and Dispose of Remaining Equipment
  - Retain Threat Emitters at AFDTC (Eglin) to Support AFSOC, AWC, and Armaments/Weapons T&E
- Rationale
  - Projected Workload/Requirement at REDCAP and AFEWES is 10% and 28% of their Respective Capacities
  - AF EC OAR Workload/Requirement Can Be Satisfied with One versus Two Ranges
  - Available Capacity at Existing Core AF T&E Activities to Absorb Workload

TEST Definition

## Criteria IV & V

### REDCAP/AFEWES/AFDTC (EMTE) Realignment

	<u>1-Time</u> <u>Cost</u>	<u>20 YR</u> <u>NPV*</u>	<u>Steady</u> <u>State</u> <u>Savings</u>	<u>ROI</u> <u>(Years)</u>	<u>Gov't</u> <u>Pers</u> <u>Savings</u>
REDCAP	\$1.7M	(\$11.0M)	\$0.9M	1 yr	2
AFEWES	\$5.8M	(\$5.8M)	\$0.8M	7 yrs	3
EMTE	\$2.2M	(\$31.4M)	\$2.6M	1 yr	0

*no cancellable cost - "Survey teams are out there"*

\* ( ) Indicate Savings

## **T&E JCSG Alternatives** **Overview**

- 13 Alternatives (14 Realignment Opportunities)  
Jointly Developed by T&E JCSG Evaluated by AF
  - 6 Air Vehicle
  - 5 Armament/Weapons
  - 3 Electronic Combat
- AF Activities Scored Highest Functional Value in Each T&E Functional Area
  - Selected as Preferred Receiver by Optimization Model

# T&E JCSG Alternatives Functional Values

## Air Vehicles

Activity	JCSG FV
AFFTC- Edwards	85
NAWC - Pax River	81
NAWC - Pt Mugu	69
AFDTC - Eglin	56
476WEG - Tyndall	49
UTTR - Hill	46
AQTD - Edwards	46
EPG - Ft Huachuca	44
NAWC - China Lake	43
YPG - Yuma	35
ATTC - Ft Rucker	34
AFDTC - Holloman	33
NSWC - Dahlgren	25
NAWC - Indianapolis	19
AEDC - Arnold	18
NAWC - Warminster	14

## Armaments/Weapons

Activity	JCSG FV
AFDTC - Eglin	82
NAWC - Pt Mugu	77
NAWC - Pax River	57
NAWC - China Lake	57
WSMR	50
AFDTC - Holloman	30
YPG - Yuma	29
NAWC - WSMR	25
RTTC - Redstone	21
NSWC - Dahlgren	17
AEDC - Arnold	16
NSWC - Indian Head	14
NSWC - Crane	13

## Electronic Combat

Activity	JCSG FV
AFDTC - Eglin	65
NAWC - Pt Mugu	58
NAWC - Pax River	53
AFFTC- Edwards	52
NAWC - China Lake	47
EPG - Ft Huachuca	47
AFDTC - Holloman	29
NSWC - Crane	17
AFEWES - Ft Worth	17
REDCAP - Buffalo	15

DON'T  
make sense

# **T&E JCSG Alternatives Air Vehicle**

<b>T&amp;E JCSG Alternative</b>	<b>Realignment Opportunity</b>	<b>Capability/ Capacity Fit</b>	<b>Recommendation</b>
TE-1 (AV)	Ft Rucker Rotary Wing	Yes	Cross-Service Army at Edwards
TE-2 (AV)	AQTD Edwards Rotary Wing	Yes	Retain at Edwards
TE-3 (AV)	Indianapolis Measurement/Integration	No	Do Not Cross-Service
TE-4 (AV)	Dahlgren Measurements	No	(No AF Involvement)
TE-5 (AV)	Warminster Digital Sims	No	(No AF Involvement)
TE-6 (AV)	Tyndall Radar Test Facility	Partial	Intra-AF Realignment

# **T&E JCSG Alternatives Armaments/Weapons**

<b>T&amp;E JCSG Alternative</b>	<b>Realignment Opportunity</b>	<b>Capability/ Capacity Fit</b>	<b>Recommendation</b>
TE-1 (AW)	Crane Ordnance Measurements	Yes	Cross-Service Navy at Eglin
TE-2 (AW)	Dahlgren Ordnance Measurements	Yes	Cross-Service Navy at Eglin
TE-3 (AW)	Indian Head Propulsion	Partial	Do Not Cross-Service Navy
TE-4 (AW)	Redstone Open Air Range	Yes	Cross-Service Army at Eglin
	Redstone Component Testing	Partial	Do Not Cross-Service Army

# **T&E JCSG Alternatives Electronic Combat**

<b>T&amp;E JCSG Alternative</b>	<b>Realignment Opportunity</b>	<b>Capability/ Capacity Fit</b>	<b>Recommendation</b>
* TE-1 (EC)	REDCAP, Buffalo NY	Partial	Intra-AF Realignment
* TE-2 (EC)	AFEWES, Ft Worth TX	Partial	Intra-AF Realignment
TE-3 (EC)	Crane Electromagnetics	No	(No AF Involvement)

\* "Requests for Data" Also Sent to the Navy

## **T&E JCSG Alternatives** **Recap**

- 14 Realignment Opportunities
  - 11 Identify AF As Potential Receiver
  - 3 Do Not Involve AF
- For 11 Realignments with AF As Potential Receiver
  - 3 Recommended for Intra-AF Realignments
    - 2 Evaluated for Cross-Servicing (w/Navy)
  - 5 Recommended for AF to Cross-Service
    - Capacity/Capability Fit (Beneficial to AF/DoD)
  - 3 Not Recommended for AF to Cross-Service
    - Partial to No Capability Fit (No Benefit to AF/DoD)
- Above Consistent with AF Core T&E Capabilities
  - Appear to have no TOA or End Strength Implications

## **T&E JCSG Alternatives** **Status**

- AF (as Losing Service) Issued “Requests for Data” for TE-1 (EC)/REDCAP and TE-2 (EC)/AFEWES to Navy and Evaluated Response (Not Cost-Effective)
  - No Request Made for TE-6 (AV)/Tyndall Radar Test Facility Since Predominantly AF Unique to F-15 & F-16
- Army Has Requested Data for All 4 of its T&E JCSG Alternatives (As Losing Service)
  - AF has Responded and Offered to Cross-Service 3 of 4 Opportunities Within Available AF Capability/Capacity
- Navy Has Not Requested Data for Any of its 7 T&E JCSG Alternatives to Date (As Losing Service)

## Criteria IV & V

### Evaluation of TE-1 (EC)/REDCAP & TE-2 (EC)/AFEWES

<u>T&amp;E JCSG Alternative</u>	<u>Potential Receiver Sites</u>	<u>1-Time Cost (\$M)</u>	<u>20 YR NPV* (\$M)</u>	<u>Steady State Savings (\$M)</u>	<u>ROI (Years)</u>	<u>Gov't Pers Savings</u>
TE-1 (EC)/REDCAP						
	** EDWARDS	1.7	(11.0)	0.9	1	2
	PAX	3.9	(7.3)	0.8	4	0
	PT MUGU	4.8	2.7	(0.1)	100+	2
TE-2 (EC)/AFEWES						
	** EDWARDS	5.8	(5.8)	0.8	7	3
	PAX	6.1	(0.9)	0.5	14	0
	PT MUGU	10.7	6.5	0.3	100+	2

\*\* Most Cost-Effective Option

\* ( ) Indicate Savings

## **Part I: Summary**

- AF Core T&E Capabilities/Workload to Support AF Mission Already Consolidated for Air Vehicles (AFFTC, Edwards AFB) and Armaments/Weapons (AFDTC, Eglin AFB) to Extent Possible with Few Exceptions
  - Exceptions Addressed in Intra-AF Realignment
- AF Core T&E Capability/Workload for Electronic Combat Fragmented
  - Consolidation to Minimum Number of Activities/Sites Addressed in Intra-AF Realignment
  - Two T&E JCSG Cross-Servicing Opportunities Evaluated with Navy (i.e. REDCAP and AFEWES), But Not Cost-Effective
- Significant Opportunities for Intra-Service Consolidation Exists Within Navy and Army
  - Presumably Will Be Addressed in their Intra-Service Analyses

# 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 ATTTC, 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 Realignment

## **Part I: Summary (cont'd)**

- T&E JCSG Alternatives Integrated Into AF Analysis and Opportunities for Cross-Servicing Being Evaluated
  - 2 Requests to Navy to Cross-Service AF
  - 3 Offers By AF to Cross-Service Army
  - No Requests from Navy to Cross-Service
- Intra-AF Consolidations of Core T&E Capabilities Eliminates All Excess Capacity Linked to Infrastructure Savings
  - Remaining Excess Represents “Sunk Costs” and Is Capacity Available for Future Workload/Surge and Cross-Servicing
- AF Already Providing Significant Cross-Servicing Using AF Core T&E Capabilities
  - AFFTC (Edwards AFB)
  - AFDTC (Eglin AFB)
  - AEDC (Arnold AFB)

## **AF Current Cross-Servicing**

- AFFTC (Edwards AFB CA)
  - Army's Rotary Wing AQTD at Edwards
  - NASA Flight Operations
  - Space Shuttle
- AFDTC (Eglin AFB FL)
  - Army's Hellfire Test Complex
  - Joint AF/Army Munitions T&E ("Chicken Little")
- AFDTC (Holloman AFB NM)
  - Central Inertial Guidance Test Facility (CIGTF)
  - High Speed Test Track (HSTT)
  - Flight Operations and Full Scale Aerial Target Support for Army's WSMR
- AEDC (Arnold AFB TN)
  - Wind Tunnels and Propulsion Facilities

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# **Air Force BRAC '95 Analysis of T&E Infrastructure**

Part II: Completion of JCSG Analysis Plan

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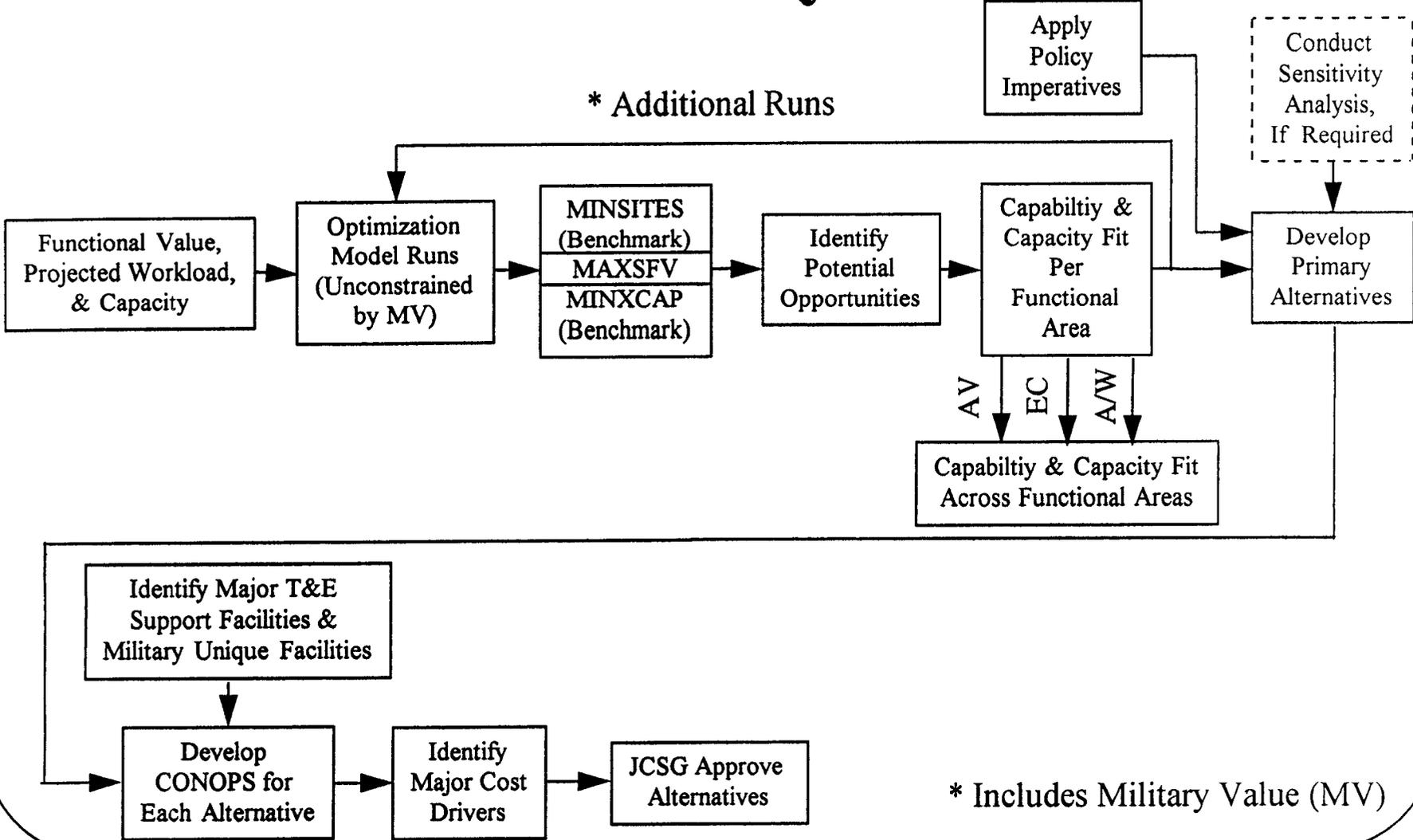
## **Purpose**

- Present Results of AF Analysis Based on Completion of T&E JCSG Analysis Plan
  - Identify Cross Servicing Opportunities Between T&E “Core” Activities for Each T&E Functional Area
  - Address T&E Co-Chairs Alternatives

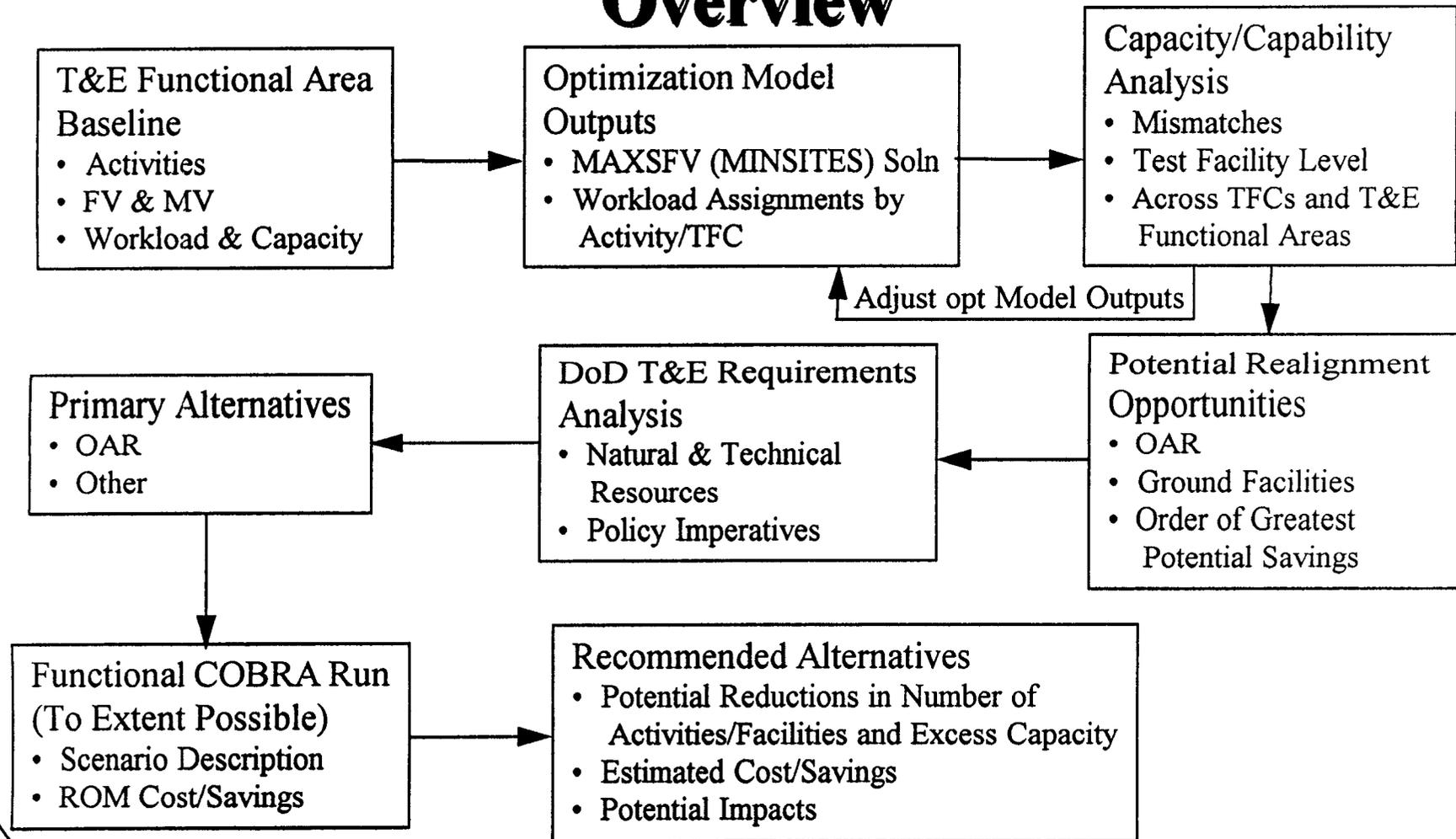
## **Part II: Outline**

- Background
- T&E JCSG Analysis Process
- T&E Functional Analysis/Results
  - Electronic Combat
  - Air Vehicle
  - Armament/Weapons
- T&E JCSG Co-Chair Alternatives
- Cost Analysis
- Summary

# T&E JCSG Analysis Process



# T&E Functional Analysis/Results Overview



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## **EC T&E Baseline** **DoD Workload (Test Hours)**

<u>Activity</u>	<u>Functional Value</u>	<u>DM&amp;S</u>	<u>MF</u>	<u>IL</u>	<u>HITL</u>	<u>ISTF</u>	<u>OAR</u>
AFDTC Eglin	65		2390			761	899
NAWC Pt Mugu	58		487	459	223		
NAWC Pax River	53		148			2843	
AFFTC Edwards	52			3088			758
NAWC China Lake	47		2311	1770			745
EPG	47	246	858				369
AFDTC Holloman	29		6091				
AFDTC AFEWES	17				2524		
NSWC Crane	17		4344				
AFDTC REDCAP	15				86		

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# Optimization Model Output (Test Hours)

## Electronic Combat

<u>Activity</u>	Functional						
	<u>Value</u>	<u>DM&amp;S</u>	<u>MF</u>	<u>IL</u>	<u>HITL</u>	<u>ISTF</u>	<u>OAR</u>
<b>AFDTC, Eglin AFB</b>	<b>65</b>		<b>2902</b>			<b>2202</b>	<b>1978</b>
<b>NAWC, Pt Mugu</b>	<b>58</b>		<b>98</b>	<b>850</b>	<b>420</b>		
<b>NAWC, Pax River</b>	<b>53</b>		<b>0</b>			<b>1402</b>	
<b>AFFTC, Edwards AFB</b>	<b>52</b>			<b>4467</b>			<b>112</b>
<b>NAWC, China Lake</b>	<b>47</b>		<b>0</b>	<b>0</b>			<b>0</b>
<b>EPG</b>	<b>47</b>	<b>246</b>	<b>1924</b>				<b>0</b>
<b>AFDTC, Holloman</b>	<b>29</b>		<b>8402</b>				
<b>AFDTC, AFEWES</b>	<b>17</b>				<b>2413</b>		
<b>NSWC, Crane</b>	<b>17</b>		<b>3303</b>				
<b>AFDTC, REDCAP</b>	<b>15</b>				<b>0</b>		

## Capability/Capacity Analysis for EC T&E Open Air Ranges

Mismatches: Nellis Range Complex, Eglin and China Lake Have Comparable Capabilities;  
Edwards Has No Threat Simulators, and EPG is Primarily a C<sup>3</sup> Test Capability

Before:

1 Facility at Eglin

1 Facility at China Lake

1 Facility at Edwards

1 Facility at EPG

4 Facilities

4 Activities

Capacity = 5860 Test Hours

Excess Capacity = 3089 Test Hours

After:

1 Facility at Eglin

Nellis Range Complex

1 Facility at Edwards

1 Facility at EPG

3 Facilities

3 Activities

Capacity = 4039 Test Hours

Excess Capacity = 1268 Test Hours

**Capability/Capacity Analysis for Electronic Combat T&E  
Adjusted Optimization Model Workload (Test Hours)**

<u>Activity</u>	Functional						
	<u>Value</u>	<u>DM&amp;S</u>	<u>MF</u>	<u>IL</u>	<u>HITL</u>	<u>ISTF</u>	<u>OAR</u>
<b>AFDTC, Eglin AFB</b>	<b>65</b>		<b>3000</b>			<b>761</b>	<b>963</b>
<b>NAWC, Pt Mugu</b>	<b>58</b>		<b>0</b>	<b>0</b>	<b>0</b>		
<b>NAWC, Pax River</b>	<b>53</b>		<b>0</b>			<b>6369</b>	
<b>AFFTC, Edwards AFB</b>	<b>52</b>			<b>3088</b>		<b>2610</b>	<b>1127</b>
<b>NAWC, China Lake</b>	<b>47</b>		<b>0</b>	<b>2229</b>			<b>0</b>
<b>EPG</b>	<b>47</b>	<b>246</b>	<b>1924</b>				<b>0</b>
<b>AFDTC, Holloman</b>	<b>29</b>		<b>8402</b>				
<b>AFDTC, AFEWES</b>	<b>17</b>				<b>0</b>		
<b>NSWC, Crane</b>	<b>17</b>		<b>0</b>				
<b>AFDTC, REDCAP</b>	<b>15</b>				<b>0</b>		

## **EC T&E**

# **Potential Realignment Opportunities**

- Non-Core (JCSG) Alternatives
  - TE-1 (EC): Realign HITL at AFDTC Buffalo (REDCAP)
  - TE-2 (EC): Realign HITL at AFDTC Ft Worth (AFEWES)
  - TE-3 (EC): Realign EM Effects MF at NSWC Crane
- Core
  - Core-1 (EC): Realign NAWC China Lake OAR to Nellis Range Complex and AFDTC Egin
  - Core-2 (EC): Realign NAWC China Lake RCS MF to AFDTC Holloman
- Additional Core
  - Realign Signature MF from NAWC Pt Mugu to AFDTC Egin
  - Realign Communications MF from NAWC Pax River to EPG
  - Realign IL from NAWC Pt Mugu to NAWC China Lake
  - Realign HITL from NAWC Pt Mugu to ISTF at NAWC Pax River
  - Realign OAR from EPG to AFFTC Edwards

## Recap Electronic Combat T&E

Option	Activities	Facilities	DoD Capacity (Test Hours)	DoD Excess Capacity (Test Hours)	Comments
Baseline	10	24	64909	33501	
Non-Core (JCSG) Alternatives	7 <30%>	22 <8%>	52284 <19%>	21244 <36%>	Non-Core Realigned
Core-1 (EC) (OAR)	7 <30%>	21 <12%>	50463 <22%>	19744 <40%>	Non-Core Realigned Plus OAR Consolidation
Core-2 (EC) (RCS MF)	7 <30%>	20 <17%>	46980 <28%>	16261 <51%>	Non-Core Realigned Plus OAR & RCS MF Consolidation
Add'l Alternatives *	6 <40%>	14 <42%>	43389 <33%>	12670 <62%>	Core and Non-Core Realigned

\* Maximum Reductions Achievable

<> = % Reduction

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## Armament/Weapons T&E Baseline DoD Workload (Test Hours)

<u>Activity</u>	<u>Functional Value</u>	<u>DM&amp;S</u>	<u>MF</u>	<u>IL</u>	<u>HITL</u>	<u>ISTF</u>	<u>OAR</u>
AFDTC Eglin	82	39,324	13,144		12,085	168	7,598
NAWC Pt Mugu	77	3,916	18,275	5,774	39,225		4,068
NAWC China Lake	57	12,065	45,387	7,594	1,357		2,169
NAWC Pax River	57					624	
WSMR	50		7,608				13,275
AFDTC Holloman	30		5,129				
YPG	29		127				2,055
NAWC WSMR	25						1,791
RTTC	21		30,089				786
NSWC Dahlgren	17		954				
AEDC Arnold	16		2,107				
NSWC Indian Head	14		2,196				
NSWC Crane	13		1,142				

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**Optimization Model Output**  
**Armament/Weapons Workload (Test Hours)**  
**MAXSFV (MINSITES)**

<u>Activity</u>	<u>Functional Value</u>	<u>DM&amp;S</u>	<u>MF</u>	<u>IL</u>	<u>HITL</u>	<u>ISTF</u>	<u>OAR</u>
AFDTC Eglin	82	55,305	29,523		18,611	443	16,036
NAWC Pt Mugu	77	0	59,481	11,916	34,056		11,609
NAWC China Lake	57	0	24,782	1,452	0		3,986
NAWC Pax River	57					349	
WSMR	50		396				111
AFDTC Holloman	30		11,221				
YPG	29		0				0
NAWC WSMR	25						0
RTTC	21		0				0
NSWC Dahlgren	17		0				
AEDC Arnold	16		755				
NSWC Indian Head	14		0				
NSWC Crane	13		0				

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## Capability/Capacity Analysis for Armament/Weapons T&E Open Air Range (cont'd)

- Mismatches:
- (1) Long Range, Over Land Test Hours at WSMR
  - (2) WSMR Warhead Test Hours are MF vice OAR
  - (3) WSMR Material Test Facility Mixture of TFC Hours (DM&S, MF, IL Testing vice OAR)

Before:

OAR at Eglin

OAR at WSMR

OAR at Pt Mugu

OAR at China Lake

OAR at YPG

OAR at RTTC

6 Ranges (12 Facilities)  
7 Activities (Including NAWC Desert Ship)  
Capacity = 56347 Test Hours  
Excess Capacity = 31222 Test Hours

After:

OAR at Eglin

OAR at WSMR  
(including NAWC Desert Ship)

2 Ranges (6 Facilities)  
3 Activities  
Capacity = 35567 Test Hours  
Excess Capacity = 10442 Test Hours

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**Capability/Capacity Analysis for Armament/Weapons T&E  
Adjusted Optimization Model Workload (Test Hours)**

<u>Activity</u>	<u>Value</u>	<u>DM&amp;S</u>	<u>MF</u>	<u>IL</u>	<u>HITL</u>	<u>ISTF</u>	<u>OAR</u>
<b>AFDTC Eglin</b>	<b>82</b>	<b>55,305</b>	<b>28,736</b>		<b>16,667</b>	<b>792</b>	<b>16,036</b>
<b>NAWC Pt Mugu</b>	<b>77</b>	<b>0</b>	<b>39,010</b>	<b>0</b>	<b>(1) 0</b>		<b>0</b>
<b>NAWC China Lake</b>	<b>57</b>	<b>0</b>	<b>13,609</b>	<b>13,368</b>	<b>0</b>		<b>0</b>
<b>NAWC Pax River</b>	<b>57</b>					<b>0</b>	
<b>WSMR</b>	<b>50</b>		<b>20,278</b>				<b>(2) 7,298</b>
<b>AFDTC Holloman</b>	<b>30</b>		<b>21,812</b>				
<b>YPG</b>	<b>29</b>		<b>0</b>				<b>0</b>
<b>NAWC WSMR</b>	<b>25</b>						<b>1,791</b>
<b>RTTC</b>	<b>21</b>		<b>0</b>				<b>0</b>
<b>NSWC Dahlgren</b>	<b>17</b>		<b>0</b>				
<b>AEDC Arnold</b>	<b>16</b>		<b>2,107</b>				
<b>NSWC Indian Head</b>	<b>14</b>		<b>0</b>				
<b>NSWC Crane</b>	<b>13</b>		<b>0</b>				

Note: (1) Plus 36,000 Test Hours (DM&S, MF, IL Combination)

(2) Plus 6,246 Test Hours (DM&S, MF, IL Combination)

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## **Armament/Weapons T&E Potential Realignment Opportunities**

- Non-Core (JCSG) Alternatives
  - TE-1 (A/W): MF Workload from NSWC Crane
  - TE-2 (A/W): MF Workload from NSWC Dahlgren
  - TE-3 (A/W): MF Workload from NSWC Indian Head
  - TE-4 (A/W): MF and OAR Workload from RTTC
- Core Alternatives
  - Core-1 (AW): OAR Workload from NAWC Pt Mugu, China Lake, and YPG to AFDTC Eglin and WSMR
- Additional Core
  - Realign Ground Facilities
    - Impacts Navy and Army Weapons R&D, Surface-to-Surface T&E, etc.

## Recap Armament/Weapons T&E

Options	Activities	Facilities	DoD Capacity (Test Hours)	DoD Excess Capacity (Test Hours)	Comments
Baseline (Adjusted)	13	79	549,291	270,236	
Non-Core (JCSG) Alternatives	9 <31%>	68 <14%>	495,823 <10%>	216,768 <20%>	Non-Core Realigned
Core-1 (A/W) OAR Realignment	9 <31%>	62 <22%>	476,231 <13%>	197,176 <27%>	Non-Core Realigned Plus MRTFB OAR Consolidation
Add'l Core Ground Facility Realignment *	6 <54%>	37 <53%>	359,594 <35%>	80,539 <70%>	Core and Non-Core Realigned

\* Maximum Reductions Achievable

<> = % Reduction

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## Air Vehicles T&E Baseline DoD Workload (Test Hours)

<u>Activity</u>	<u>Functional Value</u>	<u>DM&amp;S</u>	<u>MF</u>	<u>IL</u>	<u>HITL</u>	<u>ISTF</u>	<u>OAR</u>
AFFTC, Edwards	85	270	2360	69485		121	7583
NAWC, Pax River	81		27288	2275	112239	9553	7661
NAWC, Pt Mugu	69		327				1679
AFDTC, Eglin	58		4911				
476 WEG, Tyndall	47				1932		
UTTR, Hill	46						1940
AQTD, Edwards	46						1258
EPG, Ft Huachuca	44		398				277
NAWC, China Lake	43		1830				
YPG, Yuma	35		131				3404
ATTC, Ft Rucker	34						3776
AFDTC, Holloman	33		27530				
NSWC, Dahlgren	25		943				
NAWC, Indianapolis	19		16324	10046			
AEDC, Arnold	18		2569				
NAWC, Warminster	14	1003					

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## Optimization Model Output (Test Hours) Air Vehicles T&E

<u>Activity</u>	<u>Functional Value</u>	<u>DM&amp;S</u>	<u>MF</u>	<u>IL</u>	<u>HITL</u>	<u>ISTF</u>	<u>OAR</u>
AFFTC, Edwards	85	1273	3392	81806		1968	11998
NAWC, Pax River	81		30703	0	114171	7706	12246
NAWC, Pt Mugu	69		575				3334
AFDTC, Eglin	58		0				
476 WEG, Tyndall	47				0		
UTTR, Hill	46						0
AQTD, Edwards	46						0
EPG, Ft Huachuca	44		0				0
NAWC, China Lake	43		0				
YPG, Yuma	35		0				0
ATTC, Ft Rucker	34						0
AFDTC, Holloman	33		27985				
NSWC, Dahlgren	25		943				
NAWC, Indianapolis	19		21013	0			
AEDC, Arnold	18		0				
NAWC, Warminster	14	0					

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**Capability/Capacity Analysis for Air Vehicles T&E**

# Open Air Range

Mismatches: Cruise Missile Testing at UTTR

Before:

- OAD at Edwards
- OAD at Pax
- OAD at Pt Mugu
- OAD at UTTR
- OAD at EPG
- OAD at YPG
- OAD at Ft Rucker

7 Ranges (9 Facilities)  
8 Activities  
Capacity = 53761 Test Hours  
Excess Capacity = 26183 Test Hours

After:

- OAD at Edwards
- OAD at Pax
- OAD at UTTR

3 Ranges (4 Facilities)  
4 Activities  
Capacity = 30250 Test Hours  
Excess Capacity = 2672 Test Hours

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**Capability/Capacity Analysis for Air Vehicles T&E  
Adjusted Optimization Model Workload (Test Hours)**

<u>Activity</u>	<u>Functional Value</u>	<u>DM&amp;S</u>	<u>MF</u>	<u>IL</u>	<u>HITL</u>	<u>ISTF</u>	<u>OAR</u>
<b>AFFTC, Edwards</b>	<b>85</b>	<b>270</b>	<b>2360</b>	<b>71417</b>		<b>121</b>	<b>13395</b>
<b>NAWC, Pax River</b>	<b>81</b>		<b>27405</b>	<b>11065</b>	<b>130822</b>	<b>10496</b>	<b>9340</b>
<b>NAWC, Pt Mugu</b>	<b>69</b>		<b>0</b>				<b>0</b>
<b>AFDTC, Eglin</b>	<b>58</b>		<b>5238</b>				
<b>476 WEG, Tyndall</b>	<b>47</b>				<b>0</b>		
<b>UTTR, Hill</b>	<b>46</b>						<b>2217</b>
<b>AQTD, Edwards</b>	<b>46</b>						<b>2626</b>
<b>EPG, Ft Huachuca</b>	<b>44</b>		<b>0</b>				<b>0</b>
<b>NAWC, China Lake</b>	<b>43</b>		<b>2095</b>				
<b>YPG, Yuma</b>	<b>35</b>		<b>0</b>				<b>0</b>
<b>ATTC, Ft Rucker</b>	<b>34</b>						<b>0</b>
<b>AFDTC, Holloman</b>	<b>33</b>		<b>27677</b>				
<b>NSWC, Dahlgren</b>	<b>25</b>		<b>0</b>				
<b>NAWC, Indianapolis</b>	<b>19</b>		<b>0</b>	<b>0</b>			
<b>AEDC, Arnold</b>	<b>18</b>		<b>2569</b>				
<b>NAWC, Warminster</b>	<b>14</b>	<b>0</b>					

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## **Air Vehicles T&E Potential Realignment Opportunities**

- Non-Core (JCSG) Alternatives
  - TE-1 (AV): Realign Ft Rucker Rotary Wing OAR to YPG
  - TE-2 (AV): Realign AQTD Rotary Wing OAR to YPG
  - TE-3 (AV): Realign NAWC, Indianapolis ILs to Pax River and Realign NAWC, Indianapolis Product Quality Assurance MF to TBD
  - TE-4 (AV): Realign NSWC, Dahlgren EM Vulnerability MF to Pax River
  - TE-5 (AV): Realign NAWC, Warminster DM&S Centrifuge to Pax River
  - TE-6 (AV): Realign Tyndall RADAR Test HITL to Another Air Force Activity
- Core Alternative
  - Core-1 (AV): Consolidate OAR Workload into Three MRTFB Ranges: AFFTC Edwards, NAWC Pax River, and UTTR Hill
- Additional Core:
  - Sea Level Climatic Workload from Pt Mugu to McKinley Climatic Lab, Eglin

## Recap Air Vehicle T&E

Options	Activities	Facilities	DoD Capacity (Test Hours)	DoD Excess Capacity (Test Hours)	Comments
Baseline	16	51	509,612	190,499	
Non-Core (JCSG) Alternatives	10 <37%>	46 <10%>	486,210 <5%>	167,097 <12%>	Non-Core Realigned
Core-1 (AV) OAR Realignment	11 <31%>	43 <16%>	474,965 <7%>	155,852 <18%>	Non-Core Realigned Plus MRTFB OAR Consolidation
Add'l Alternative *	10 <37%>	42 <18%>	474390 <7%>	155604 <18%>	Core and Non-Core Realigned

\* Maximum Reductions Achievable

<> = % Reduction

# **T&E Functional Analysis/Results**

## **Recap**

- Realign DoD Air Vehicles T&E Into AFFTC (Edwards) and NAWC (Pax River), to Include Rotary Wing
  - Both Required to Satisfy DoD Requirements
- Realign DoD A/W OAR T&E Into AFDTC (Eglin) and Army WSMR
  - Both Required to Satisfy DoD Requirements
  - Retain Navy Ground Facilities to Support Weapons R&D
- Realign EC OAR T&E from NAWC (China Lake) to Nellis Complex and AFDTC (Eglin)
  - Combined with Consolidation of EC Ground Facilities at AV Principal Sites, Satisfies DoD Requirements
- Retain Required Specialty Sites to Support Above
  - AEDC
  - AFDTC (Holloman)
  - UTTR (Air/Land Space)

## **T&E JCSG Co-Chair Alternatives** **(22 Nov 94 Transmittal Memo)**

- Co-Chair Alternatives Address Either/Or Options Which Include Realignment of All T&E (AV, A/W, & EC) Between “Core” Activities
  - AFFTC (Edwards) vs NAWC (Pax River)
  - AFDTC (Eglin) vs NAWC (China Lake)
  - NAWC (Pt Mugu) to NAWC (China Lake) or AFDTC (Eglin)
  - Army Rotary Wing T&E (Ft Rucker & AQTD/Edwards) to AFFTC (Edwards) or NAWC (Pax River)
    - Only If Fixed Wing AV T&E Consolidated at One Site

## T&E JCSG Co-Chair Alternatives Assessment

Primary T&E Areas	Control Number	Proposed Realignment Alternative	Supported by Analysis	* Alternative Based on Analysis
AV (Rotary Wing)	T&E-1 T&E-4 T&E-7**	NAWC (Pax) to AFFTC (Edwards) AFFTC (Edwards) to NAWC (Pax) ATTC (Ft Rucker)/AQTD (Edwards) to AFFTC (Edwards) or NAWC (Pax)	No } No } Yes }	<ul style="list-style-type: none"> <li>• Realign to AFFTC (Edwards) and NAWC (Pax)</li> </ul>
AW & EC	T&E-2 T&E-3 T&E-6 T&E-5	AFDTC (Eglin) to NAWC (CL) NAWC (CL) to AFDTC (Eglin) NAWC (Pt Mugu) to AFDTC (Eglin) NAWC (Pt Mugu) to NAWC (CL)	No } Yes } Yes } No }	<ul style="list-style-type: none"> <li>• Realign NAWC (CL) and NAWC (PM) A/W into AFDTC (Eglin)</li> <li>• Realign NAWC (CL) EC OAR to Nellis Complex and AFDTC (Eglin)</li> </ul>

\* Based on Completion of T&E JCSG Analysis Plan

\*\* Only if Fixed Wing AV T&E Consolidated at One Site

## **Part II: Summary**

- Only Parts of T&E JCSG Co-Chair Alternatives Supported by Analysis of T&E JCSG Data
  - In All Cases, AF Preferred Receiver Site
- Significant Reductions in Excess Capacity Possible Through Implementation of T&E JCSG Alternatives for “Non-Core” Activities
  - Combined with Intra-Service Realignment Opportunities, Significantly More Reductions possible
- Significant Cost/Savings Possible By Implementing Alternatives for “Core” T&E Activities, as well as Further Reductions in Excess Capacity
  - OAR Alternatives Provide Greatest potential for Savings
  - Ground Facility Alternatives Offer Decreasing Potential for Savings, and Greatest impact on Other Mission Areas (e.g., S&T, R&D, ISE, etc.)

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# **Air Force BRAC '95 Analysis of T&E Infrastructure**

Part III: Analysis of RDT&E Alternatives for  
Armament/Weapons, Explosives, and Propulsion

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## **Air Launched Weapons RDT&E** **Background**

- LJCSG Chair Alternatives (29 Nov 94 Memo #4)
  - Proposes to Consolidate Fixed Wing, Air-Launched (A-A/A-S) Weapons at NAWC (China Lake)
  - AF Did Not Analyze Since Not Developed Jointly and No Supporting Analysis Provided
- OSD(ES) Clarification of DepSecDef's 7 Jan 94 Memorandum (27 Dec 94)
  - Expanded to Include Alternatives Provided by JCSG Chairs (vs Jointly Developed)
- LJCSG Chair Provided Supporting Analysis
  - Conceptual Approach for Integrating Lab (R&D) and T&E JCSG Results
  - Analysis Only Addressed Lab Activities
  - AF Proceeded with Evaluating R&D Portion of Alternatives Only
- Since No T&E Analysis Provided to Support RDT&E Alternative, AF Completed T&E Analysis for "Core" T&E Activities (See Part II)
  - Used Results, Along with LJCSG Data, to Address RDT&E Alternatives

# LJCSG RDT&E Integration Concept

	Labs				T&E Sites
		FV	FC	Load	
<b>Common Support Function(s)</b>					
	Lab A	↑		↗	T&E A
	Lab B				T&E B
	Lab C				T&E C
	Lab D				
<b>Common Support Function</b>					
	Lab A				T&E A
	Lab B				T&E B
	Lab C				T&E C
<b>Look Across Sub-Categories (Macro View)</b>					

## **LJCSG RDT&E Integration Concept (Analysis Ground Rules)**

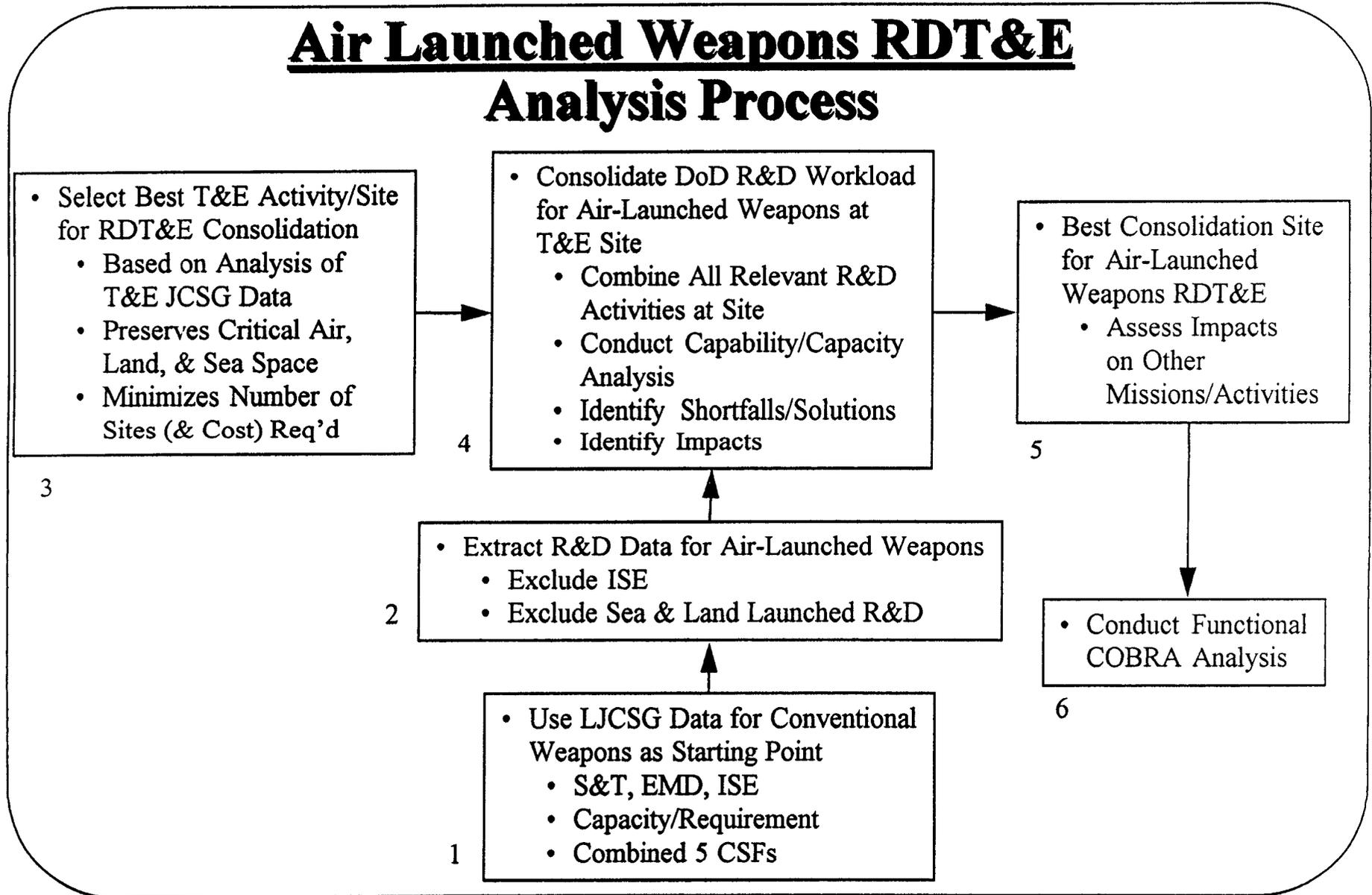
- Integrate RDT&E Functions
- Move Lab Activities to T&E Sites Due to Range Space
- Move From Lower to Higher Functional or Military Values
- Roll Up/Look For Activity/Installation Alternatives

## **Air Launched Weapons RDT&E**

### **Scope**

- RDT&E
  - Includes S&T and EMD (Excludes ISE)
- Fixed-Wing A-A/A-G Weapons
  - Surface-to-Surface T&E Excluded
  - Includes 5 CSFs
    - Conventional Missiles and Rockets
    - Guided Projectiles
    - Bombs
    - Guns/Ammo (Added)
    - Cruise Missile
  - Excludes Land, Sea, and Rotary-Wing Launched Weapons
- Lab Activities Include
  - 3 AF (1 Added)
  - 10 Navy (5 Added)
  - 4 Army (All Added)
- Energetics-Explosives Integral Part of Weapons RDT&E

## Air Launched Weapons RDT&E Analysis Process



**Air Launched Weapons RDT&E**  
**\*Best T&E Activity/Site**

	Requirement	AFDTC (Eglin)	NAWC (China Lake)
Functional Value		82	57
OAR Capacity (Test Hours)	N/A	16,036	3,986
A/W Flight Tests Per Year	N/A	582	118
Air Space (sq mi)	50,000	93,143	19,445
DoD Land Space (sq mi)	(1) 21,000	724	1693
Sea Space (sq mi)	50,000	91,998	None
Max Straight Line (nm)	A-A = 220	(2) 478	60
	A-S = 350	478	60
	S-A = 240	(2) 478	60

Note: (1) No activity meets 21,000 sq mi DoD Land Space Requirement  
 WSMR's 3,381 sq mi DoD Land Space is max  
 (2) Includes Theater Missile Defense Capability

\* Based on Part II T&E Analysis

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**DoD R&D Capacity/Requirement\* (Workyears)  
Analysis of LJCSG Data**

		<u>Land-Launched</u>	<u>Air-Launched</u>	<u>Sea-Launched</u>
Air Force	Activity			
	ASC/WL Eglin		1755/1124	
	ASC WPAFB		325/208	
	<b>AF Subtotal</b>		<b>2080/1332</b>	
Army	MRDEC Redstone	1941/1243	485/312	
	ARDEC Picatinny	1522/975	169/109	
	ARL APG	242/155	27/17	
	Benet (Army)	223/143		
	<b>Army Subtotal</b>	<b>3928/2516</b>	<b>681/438</b>	
Navy	NAWC Pt Mugu		12/7	11/8
	NAWC China Lake		608/390	607/388
	NAWC Pax River		9/6	3/2
	NSWC Dahlgren		72/47	652/417
	NSWC Indian Head		38/24	37/24
	NSWC Crane		46/30	12/7
	NAWC Indianapolis		14/9	2/1
	NSWC Pt Hueneme			21/14
	NSWC Louisville		4/3	36/23
	NCCOSC RDTE			9/6
	<b>Navy Subtotal</b>		<b>803/516</b>	<b>1390/890</b>
	<b>DoD Total</b>		<b>3928/2516</b>	<b>3564/2286</b>

\* Estimated Using Certified Data

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**Air-Launched Weapons RDT&E**  
**R&D Assessment**  
**(Functional Requirement/Excess Capacity)**

	Eglin	China Lake	Comments
Before Intra-Service Consolidations	1124/631	390/218  516/287 (Total Navy)	Eglin Can Absorb China Lake - But Not Vice Versa Eglin Can Absorb Total Navy Req't - But Not Vice Versa
After Intra-Service Consolidations	1332/423	608/0	Requires Second Navy Site to Accomodate 798 Work Years to Meet Total Navy Requirement

Note: - Eglin Has Full R&D Capability (i.e., Collocated Acquisition) vs  
 Partial Capability at China Lake (i.e., Acquisition at Crystal City)  
 - Even Assuming China Lake 100% Air-Launched, Eglin Short  
 Fall Only 147 Workyears versus 687 for China Lake

## **Air Launched Weapons RDT&E** **Recap**

- Eglin (vs China Lake) is Best Alternative for Consolidation of Fixed-Wing Air-Launched Weapons RDT&E
  - Based on Analysis of T&E and Lab JCSG Data
  - Full Capability and Capacity to Satisfy Requirements
  - Leverages Same RDT&E Resources to Support Collocated S&T, SPO, DT&E and Operational Test, Training and Tactics Development Users
  - Significant Joint and Cross-Servicing Activity Already in Place (e.g., AMRAAM, JDAM, LOCAAS, Hellfire Test Complex, Project Chicken Little, etc.)
- Energetics-Explosives RDT&E Treated as Integral Part of Weapons RDT&E
  - No Separate Analysis

## Energetics-Propulsion S&T Capabilities

Site	Solids		Liquids			
	Research Labs	Propellant Mix Capabilities	Mono & Bi-Propellants	Cryogenic Propellants	Electrics/Solar	High-Energy Density Materials
PL	Yes	Yes	Yes	Yes	Yes	Yes
CL	Yes	Yes	No	No	No	No
RTTC	Yes	UNK	No	No	No	No

PL = Phillips Lab (AF)  
 CL = China Lake (Navy)  
 RTTC = Redstone Technical Test Center (Army)

## **Air Launched Weapons RDT&E** **Summary (Cont'd)**

- Similar to T&E Analysis, Significant Opportunities Exist for Navy and Army for Intra-Service R&D Consolidation
  - Army Could Consolidate from 4 to 2 Activities
  - Navy Could Consolidate from 10 to 2 Activities
  - Air Force is Already Consolidated at 2 Locations (Could go to 1)

## ENERGETICS - PROPULSION T&E CAPABILITIES

Site	Replacement Value (\$M)	Ambient Facilities				Altitude	Altitude Facilities			
		Liquids		Solids			Liquids		Solids	
		No.	Thrust (lbf)	No.	Thrust (lbf)		No.	Thrust (lbf)	No.	Thrust (lbf)
PL	\$ 188.80	7	10,000 K	13	6,000 K	100 K ft	1	50 K	2	100 K
CL	\$ 19.59	1	300 K	8	1,500 K	-	0	-	0	-
RTTC	\$ 4.05	1	150 K	6	2,000 K*	-	0	-	0	-
AEDC	\$1,000.00	0	-	0	-	125 K ft	2	1,500 K	2	750 K

\* RTTC has a concrete pad for thrust of 10,000 K lbf, but not demonstrated and not instrumented

## **ENERGETICS - PROPULSION RECAP**

- AIR FORCE PL IS BETTER ALTERNATIVE FOR CONSOLIDATING ENERGETICS-PROPULSION THAN CHINA LAKE
  - FULL CAPABILITY AND CAPACITY TO SATISFY REQUIREMENTS
  - SIGNIFICANTLY HIGHER CAPITAL INVESTMENT THAN CHINA LAKE OR RTTC
- PL COMBINED WITH AEDC HAS CAPABILITY TO SATISFY TOTAL DOD REQUIREMENTS

## Summary

- AF Core T&E Capabilities/Workload Consolidated to Maximum Extent Possible Based on Intra-AF Analysis
  - Eliminates All Excess Capacity Linked to I/S Savings
  - Leaves Capability/Capacity For Cross-Servicing
  - T&E JCSG Cross-Servicing Opportunities Being Worked
- Completion of T&E JCSG Analysis Plan Shows That AF T&E Activities Are Preferred Consolidation Sites
  - Subset of T&E JCSG Co-Chair Alternatives
  - Significant Cost/Savings and Reductions in Excess Capacity Achievable Beyond T&E JCSG Alternatives
  - Could Have TOA and End Strength Implications

## **Summary (Cont'd)**

- Combined Lab/T&E Analysis of LJCSG Chair Alternative to Consolidate RDT&E of Conventional Weapons Shows Eglin Better Consolidation Site (versus China Lake)
  - Energetics-Explosives an Integral Part
- Similar Analysis for Energetics-Propulsion Shows PL(Edwards) Better Consolidation Site (versus China Lake)
  - Combined with AEDC, Provides Capability to Satisfy DoD Requirements
- Significant Opportunities for Intra-Navy and Intra-Army Consolidations
  - Intra-Service Consolidations Should Be a Prerequisite Before Inter-Servicing Considered

Document Separator

# DRAFT

## AIR FORCE UNDERGRADUATE PILOT TRAINING QUESTIONS

1. Please discuss the 10 Undergraduate Pilot Training (UPT) functional areas (flight screening, primary pilot, airlift/tanker, advanced bomber/fighter, strike/advanced E-2/C-2, advanced maritime/intermediate E-2/C-2, helicopter, primary and intermediate Naval Flight Officer (NFO), advanced NFO strike, and advanced NFO panel). How were they determined? How were they weighted?
2. Did you agree fully with the Joint Cross-Service Group's (JCSG) selection of functional areas? If not, why not?
3. How did the JCSG build and use these factors?
4. How did the JCSG use the Linear Programming Optimization Model as a tool to limit the number of feasible base closure alternatives?
5. In the JCSG/UPT Student Resource Calculation, the average functional value for the Air Force UPT bases resulted in the following tiering:

Columbus AFB	6.65
Vance AFB	6.50
Randolph AFB	6.46
Laughlin AFB	6.36
Reese AFB	6.08

The Air Force color coded Criteria I in its evaluation based on a standard deviation analysis of those averages. The Department of the Air Force's Analyses and Recommendations, Vol. V, on the other hand, ranks Columbus AFB, Laughlin AFB, Randolph AFB, and Vance AFB in Tier I. Do the functional scores represent your perception of the mission capability of the UPT bases?

6. The functional average of the highest Air Force UPT base was equivalent to the lowest ranking UPT base. What are the implications?
7. What did the Joint Cross-Service Group on Undergraduate Pilot Training (JCSG/UPT) do right? In your view, what, if anything, should the JCSG/UPT have done differently?
8. What is your view of how the Base Closure Executive Group (BCEG) used the JCSG alternatives to develop its closure recommendations?
9. To your knowledge, what did the Base Support Analysis Team (BSAT) do differently in its analysis compared with the Air Force's analysis?
10. The Defense Base Closure and Realignment Commission staff plans to conduct some excursions using the Linear Programming Optimization Model. Do you have any

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## DRAFT

suggestions regarding what the Commission staff should examine? What are your views on the following options:

- examining only Air Force bases;
  - excluding flight screening;
  - separating “flying training” factors from other factors, such as a 300 foot-wide runway; and
  - excluding Navy-unique functional areas?
11. In our excursions, do you recommend that we consider any other factors or change the relative weights in a way that more accurately reflects Air Force requirements?
  12. In your view, how far should the Commission go in defining base closure and realignment options in terms of selecting bases for closure and realignment of base functions?
  13. The Lubbock, Texas, community offered to purchase and then lease back to the Air Force Reese AFB family housing as well as a 40,000 square foot hangar at Lubbock International Airport. What is the status of these offers? [NOTE: The BCEG representative might want to discuss this issue.]
  14. The JCSG/UPT described UPT capacity in a certain way. Please compare the relative merits of various ways to describe the capacity of UPT bases, such as:
    - operations per hour;
    - the high-water peak pilot training rate (PTR);
    - FAA-normalized operations (an FAA formula or procedure that measures airport capacity, taking into account such factors as weather conditions, runway configuration, traffic mix (takeoffs/landings versus touch/go), and runway availability (i.e., night/day runways); and
    - differences in Navy versus Air Force operations.
  15. How can capacity analysis best account for factors that influence capacity historical data, but are not readily apparent, such as shortages in the following areas:
    - aircraft maintenance;
    - instructor pilots;
    - primary student graduates feeding into the next level; and
    - weather?

How do you account for the operational savvy of one base’s operations group commander versus another base’s commander?

16. Joint primary training is just a beginning in the process of “jointness.” How far can the Air Force and the other Services go in the following areas:

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## DRAFT

- consolidating similar functions on one base or base complex, such as conducting strike and bomber/fighter training at Columbus AFB or a NAS Meridian/Columbus AFB complex;
  - operating a Navy TA-4 squadron on an Air Force base;
  - consolidating all joint primary training in such western bases as NAS Kingsville, Laughlin AFB, Reese AFB, and Vance AFB to exploit favorable weather and airspace; and
  - consolidating all joint primary training in such eastern bases as at NAS Meridian, NAS Pensacola, NAS Whiting, and Columbus AFB to permit all helicopter training to be consolidated at Ft. Rucker, thus freeing up NAS Whiting to receive fixed-wing aircraft to exploit available auxiliary fields and airspace?
17. It appears the actual UPT bases selected for realignment or closure were service-specific selections not related to joint training or syllabus. Please discuss this selection process.
18. In your view, what is the best way to judge the quality of a base's airspace, for example:
- by functional area (primary versus strike and bomber/fighter);
  - by use versus control; or
  - by potential versus actual use?
19. Other UPT bases own or control more airspace than Reese AFB, but much of this airspace is unusable for UPT activities. Is Reese AFB down-graded because it lacks actual ownership and control of required airspace--even though access to the airspace it uses for UPT training activities is unimpeded and despite of the lack of an encroachment problem?
20. If we find, after correcting for factual errors, that Reese AFB scores improve placing it into the yellow/green areas, then how would you recommend the Commission proceed in selecting a UPT base for closure?
21. Is the Air Force ignoring a key quality of life indicator that (1) Reese AFB is the number one choice of assignment by student and instructor pilots in AETC, (2) Reese AFB's accessibility is enhanced by its proximity to a large international airport, and (3) Reese AFB offers clearly superior higher education opportunities?
22. Please discuss, in detail, the process used to analyze a potential NAS Meridian/Columbus AFB complex.
- What alternatives or "strawmen" did the JCSG/UPT consider?
  - What COBRA runs were performed to assess a potential NAS/Meridian/Columbus AFB complex?

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## **DRAFT**

- What cost advantages, if any, were considered (for example, NAS Meridian and Columbus AFB using joint targets and outlying fields and sharing excess capacity during runway maintenance)?
23. Should the Air Force transfer Columbus AFB to the Navy and move the Introduction to Fighter Fundamentals (IFF) training to Luke AFB?
  24. Did the JCSG/UPT consider NAS Meridian a potential transfer to the Air Force, which would allow the Air Force to close another UPT base?
  25. If Reese AFB is closed, then where is the Air Force planning to transfer joint Air Force and Navy primary training?
  26. A lot has been learned about conducting joint primary training at Reese AFB. How was this experience factored, weighted, or considered in the analysis to close a UPT base?
  27. What was the impact, if any, on Criterion I grading of Joint Primary Aircraft Training System (JPATS)-related issues?

Merrill Beyer and Mark Pross/Air Force Team and Jim Brubaker/Navy Team/April 7, 1995

**DRAFT**

**NAVY UNDERGRADUATE**  
**FLIGHT TRAINING**  
**OVERVIEW**



CDR TOM DONOVAN  
LCDR DAVE WALKER  
OPNAV N889

Joint Trng Cont  
@ Randolph  
wk of 19 MAR

# TRAINING PHILOSOPHY

— 2 different trng philosophies in N/WA  
— cultural differences

- USAF
  - ONE BASE SUPPORTS MULTIPLE TRAINING REQUIREMENTS <sup>T-37 < T-38</sup><sub>T-1</sub>

- BUILDING BLOCK/LOCK STEP APPROACH <sup>AS A CLASS</sup><sub>SOME EFFICIENCIES</sub>

- FLIGHT SCREENING

- USN <sup>Attitude/Altitude based</sup>

- PIPELINE SPECIFIC TRAINING BASES <sup>- Meridian ADV</sup><sub>- Whiting Prim</sub>  
<sub>- PCS Costing</sub>

- FLEXIBLE PROGRESSION <sub>- not lock step</sub>

- PREFLIGHT ADMINISTRATIVE SCREENING

6 was API class  
primary

# **USN TRAINING PHILOSOPHY**

- **AIRSPACE USE - VISUAL FLIGHT RULES (VFR) PROCEDURES**
- **AIRFIELD OPERATIONS:**
  - **VFR DEPARTURES**
  - **SPLIT RUNWAY OPERATIONS**
  - **BOX PATTERNS/CARRIER OPERATIONS**
- **EMPHASIS ON INSTRUMENT FLIGHT TRAINING**
- **NIGHT TRAINING - GEARED FOR SEA OPERATIONS**

# **USAF TRAINING PHILOSOPHY**

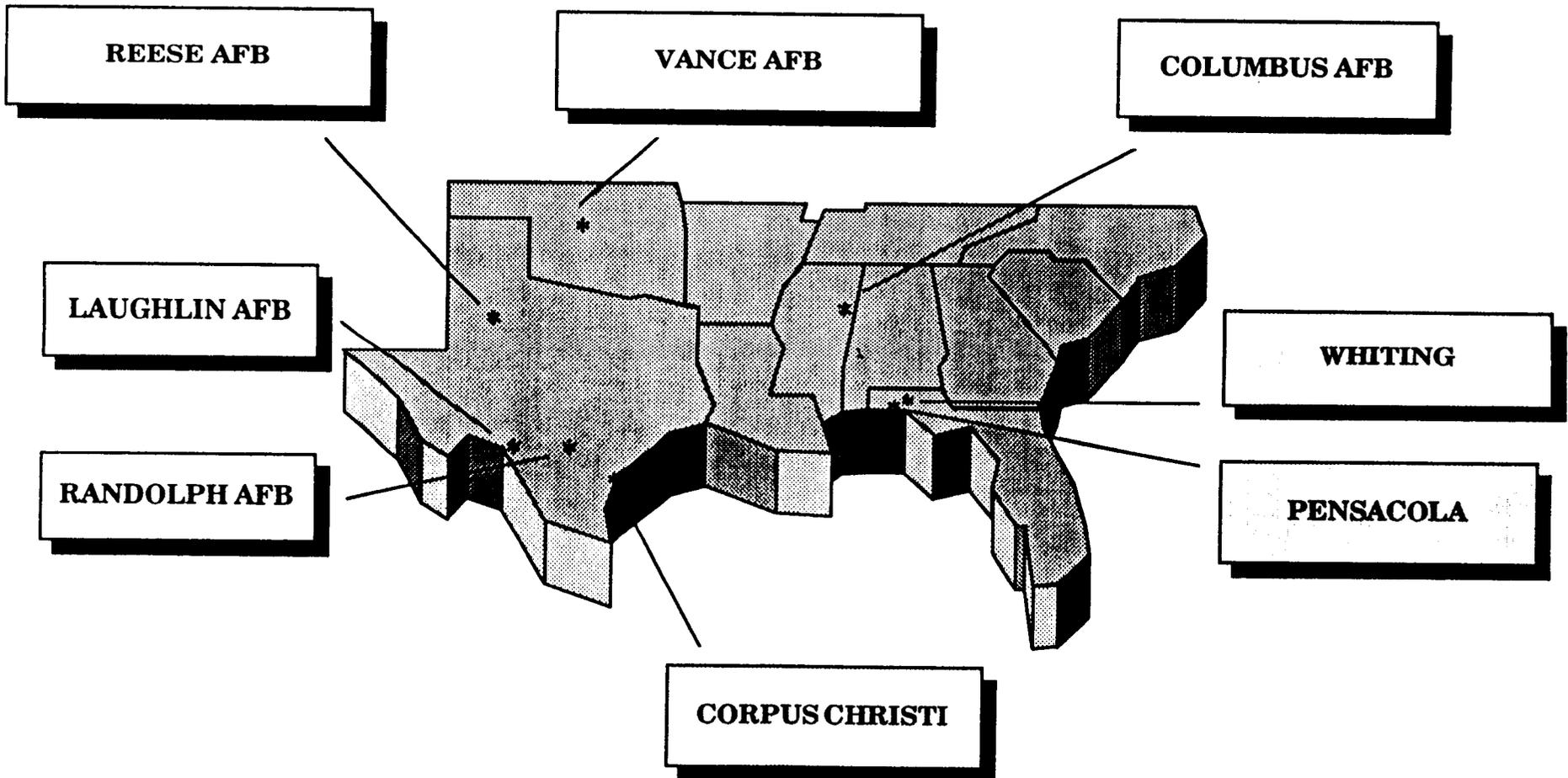
- **AIRSPACE USE - INSTRUMENT FLIGHT RULES (IFR) PROCEDURES**
- **AIRFIELD OPERATIONS:**
  - **IFR DEPARTURES**
  - **STANDARD OVERHEAD PROCEDURES**
- **EMPHASIS ON CONTACT AND FORMATION**
- **EMPHASIS ON DAYTIME OPERATIONS**

# **JOINT TRAINING PHILOSOPHY**

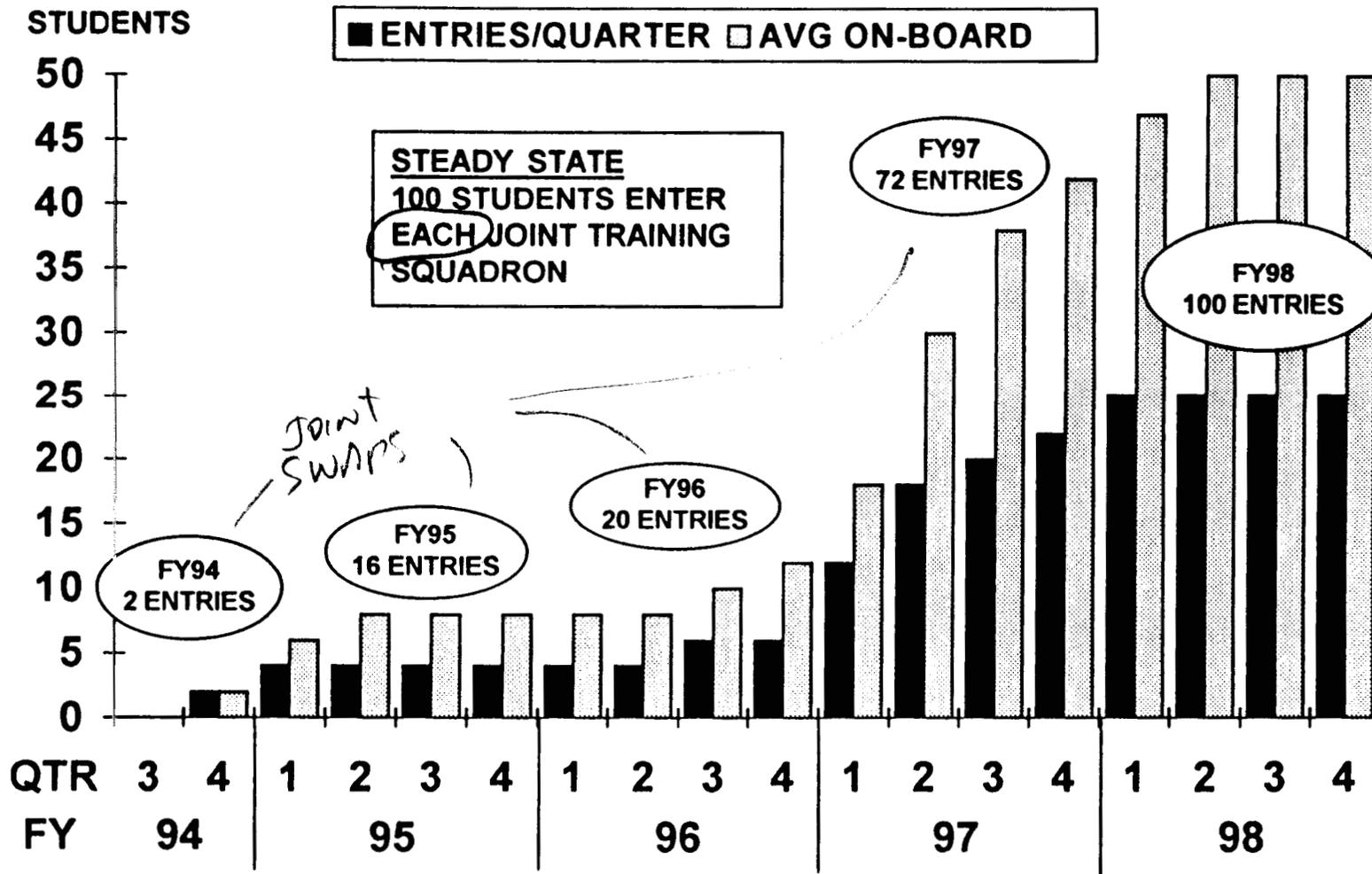
- AIRSPACE USE/AIRFIELD OPERATIONS
  - INSTRUMENT FLIGHT RULES
- EMPHASIS ON:
  - NIGHT
  - INSTRUMENT TRAINING
- AVERAGE SORTIE DURATION: 1.38 HRS

# JPATS

## AIR FORCE AND NAVY JPATS LOCATIONS



# STUDENT FLOW PLAN (PER SQUADRON)

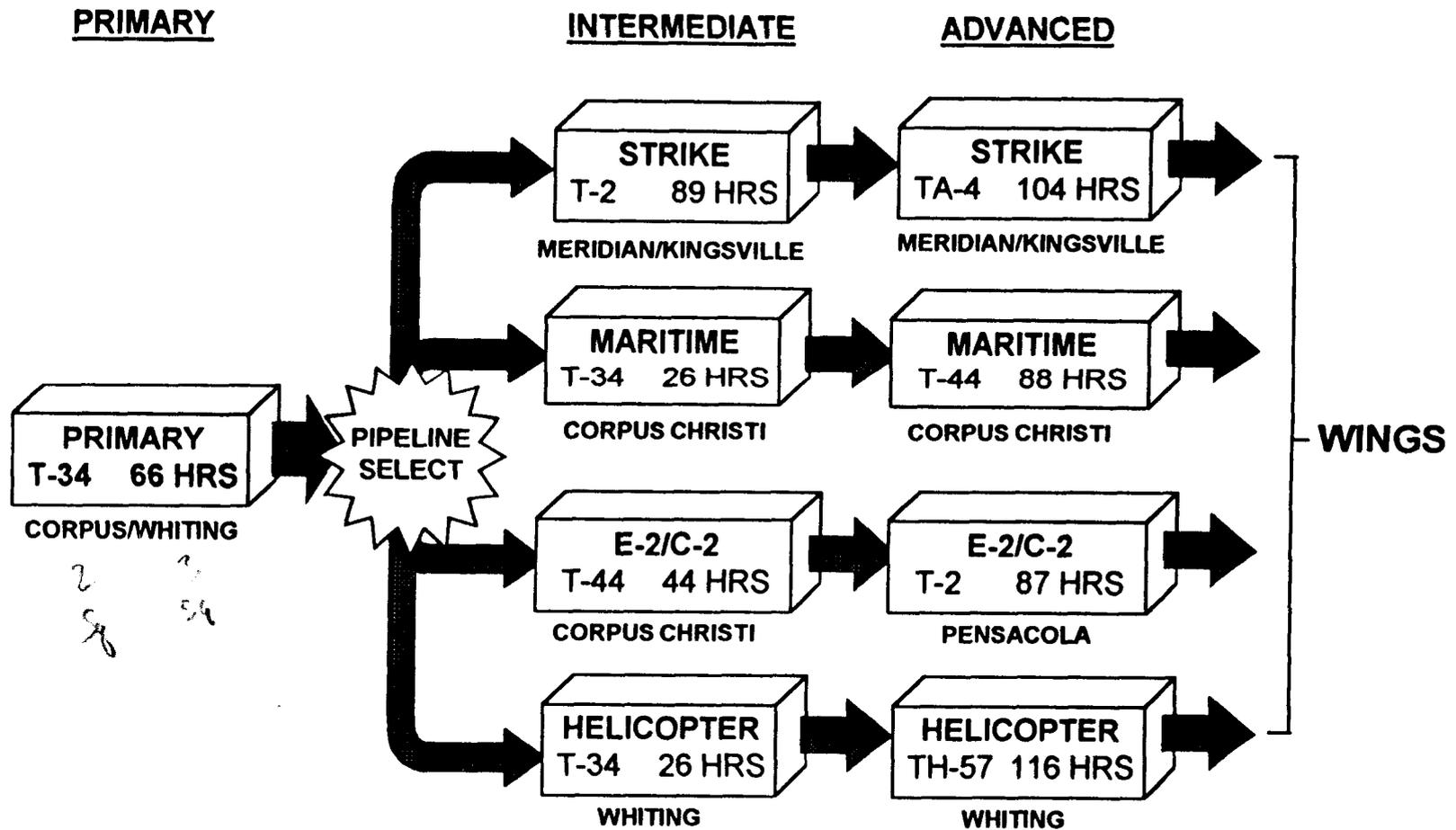


# JOINT FIXED-WING TRAINING

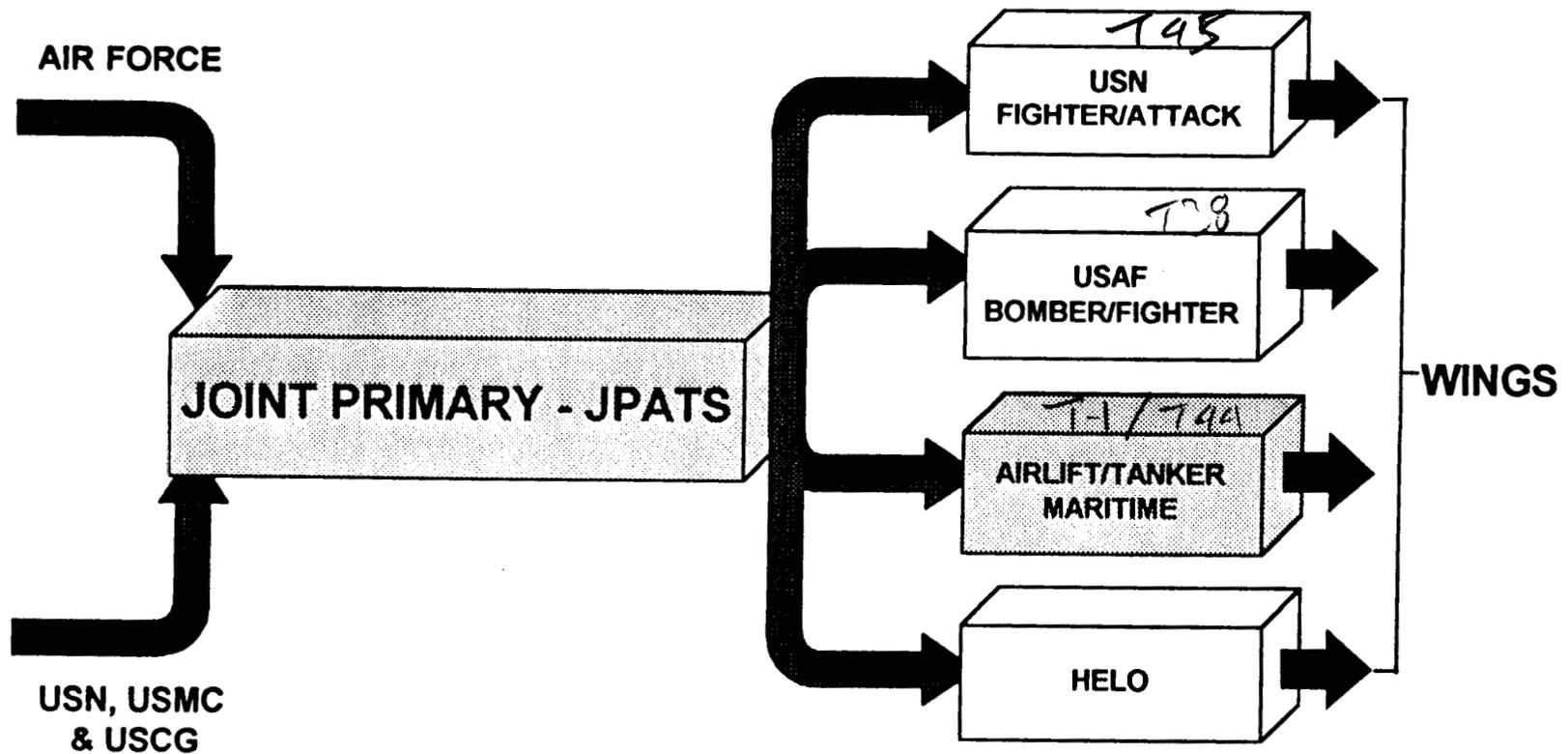
## SECDEF GUIDANCE:

- CONSOLIDATE INITIAL FIXED WING AIRCRAFT TRAINING AND TRANSITION TO A COMMON PRIMARY TRAINING AIRCRAFT
- ESTABLISH 4-TRACK FOLLOW-ON TRAINING (OPR: SECAF / OCR: SECNAV)

# USN PILOT TRAINING

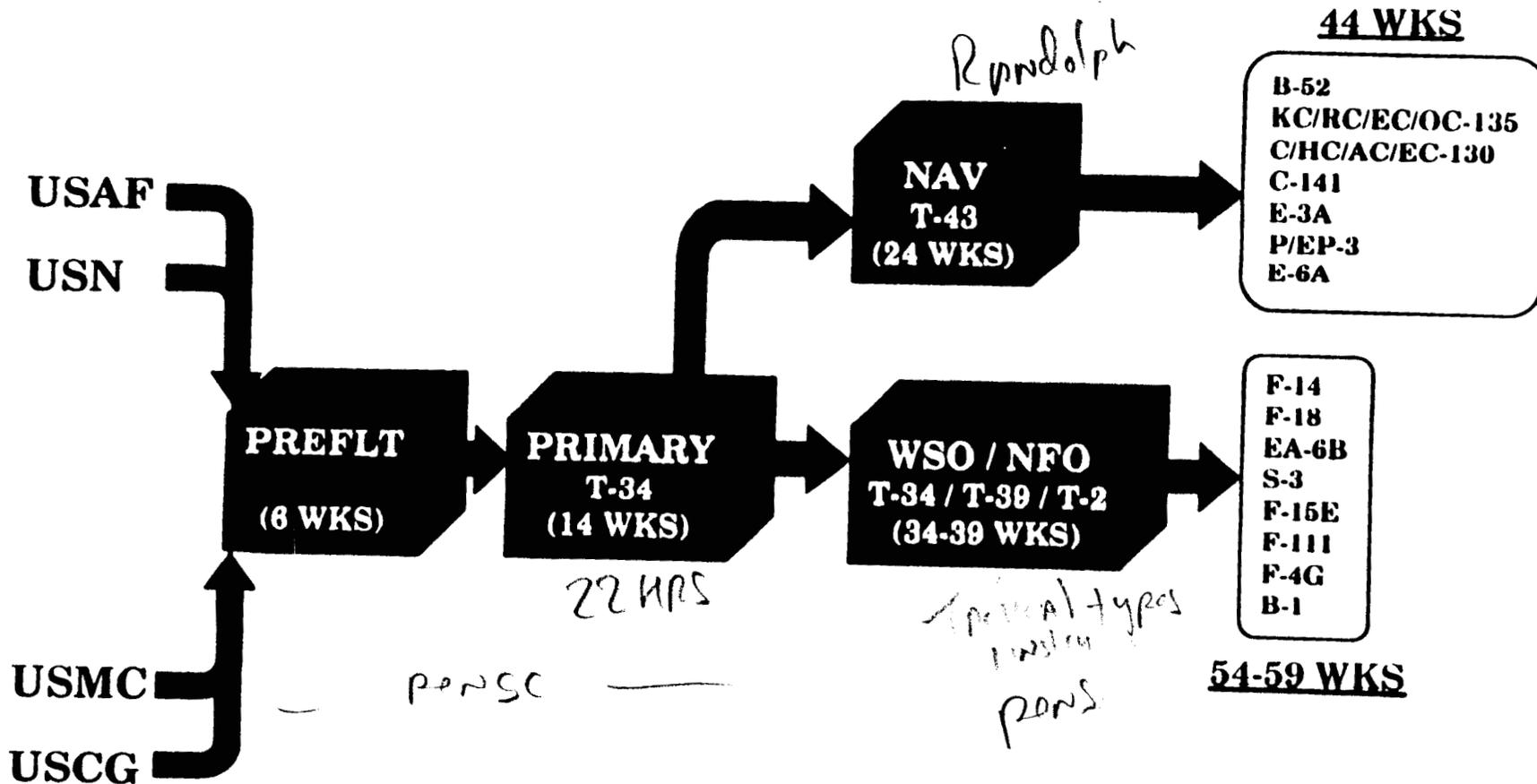


# JOINT TRAINING PROJECTION JPATS

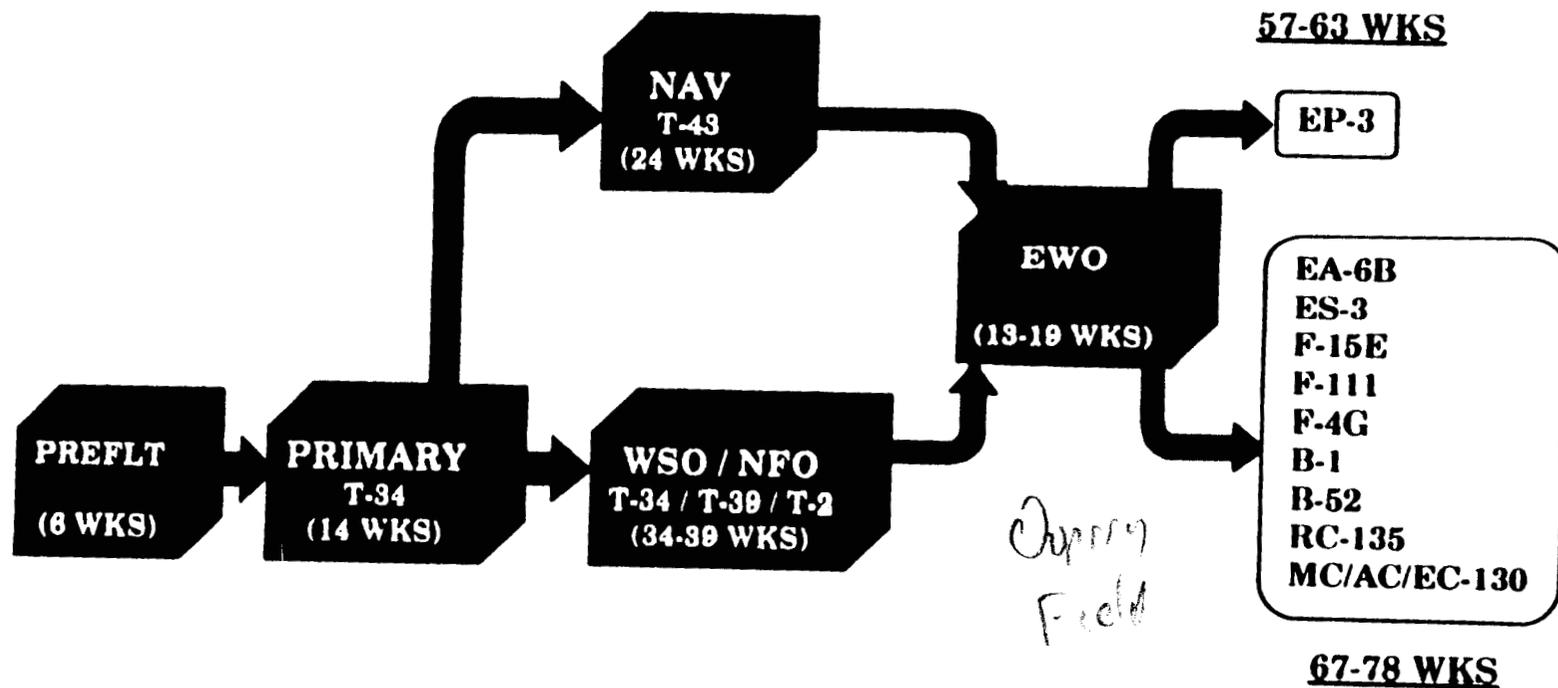


# JOINT NAVIGATOR TRAINING

*Start Oct 1, 95*



# JOINT ENTRY LEVEL EWO TRAINING





DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS UNITED STATES AIR FORCE

3D814  
OSD ERAC



05 APR 1995

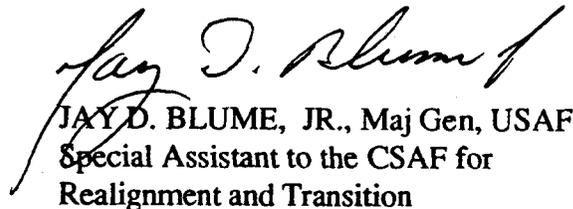
MEMORANDUM FOR BASE CLOSURE COMMISSION (Mr. Frank Cirillo)

FROM: HQ USAF/RT

SUBJECT: USAF BRAC '95 Depot Information

Attached are the revised workload laydown sheets referenced in our previous response to questions 78-04a and 78-04b. This information is also provided in response to your 31 March letter.

Questions pertaining to this data should be addressed to Lt Col Barry Pitcher in AF/LGM, DSN 225-5257 or Lt Col Louise Eckhardt, DSN 225-4578.

  
JAY D. BLUME, JR., Maj Gen, USAF  
Special Assistant to the CSAF for  
Realignment and Transition

Attachments:

1. OC-ALC worksheet
2. OO-ALC worksheet
3. SA-ALC worksheet
4. SM-ALC worksheet
5. WR-ALC worksheet



Center:	OO-ALC										
Commodity	OO	OO	OO	OO-ALC's	Losing	Com'dty	Gaining	OO	OO	OO	OO
Group	ALC's	ALC's	ALC's	New	Center's	Capacity	Center's	ALC's	ALC's	ALC's	ALC's
	Current	Current	Xfer'ng	Core	Original	Transfer	Gained	Cap	New	Original	New
	Cap	Core	Wkld	Wkld	Cap	Factor	Cap	Elim'ntd	Cap	MPC	MPC
<b>Aircraft:</b>											
TTB	469	543		543		80%	0	-170	639	469	639
Lt Combat	1381	691		691		80%	0	568	813	1870	1870
<b>Components:</b>											
Structures	311	241	863	1104	881	10%	86	-988	1299	311	1299
Hyd	41	13	-13	0	41	50%	7	41	0	41	41
Inst	192	124	-118	6	192	75%	89	185	7	192	192
Lnd Gear	1028	488		488		5%	0	454	574	1028	1028
Av Ord	419	104		104		10%	0	297	122	419	419
Avionics	511	430		430		30%	0	5	506	811	811
APUs	89	29		29		25%	0	55	34	89	89
Other	493	180		180		25%	0	281	212	1103	1103
<b>Engines:</b>											
Aircraft	101	102		102		25%	0	-19	120	101	120
<b>Missiles:</b>											
Strategic	746	674		674		50%	0	-47	793	746	793
Tactical	569	181		181		15%	0	356	213	569	569
<b>Gen Purpose:</b>											
Other	103	120		120		10%	0	-38	141	103	141
<b>Software:</b>											
Tactical	755	653		653		50%	0	-13	768	755	768
SE	313	241		241		50%	0	29	284	313	313
<b>Spec Int Items:</b>											
Bearings	20	5		5		10%	0	14	6	20	20
<b>Assoc Fab/Mfg:</b>											
	74	76	-9	67	8	5%	0	-5	79	63	79
<b>TOTALS</b>	<b>7615</b>	<b>4895</b>	<b>723</b>	<b>5618</b>	<b>1122</b>		<b>181</b>	<b>1006</b>	<b>6609</b>	<b>9003</b>	<b>10294</b>

Center: SA-ALC											
Commodity	SA	SA	SA	SA-ALC's	Losing	Com'dty	Gaining	SA	SA	SA	SA
Group	ALC's	ALC's	ALC's	New	Center's	Capacity	Center's	ALC's	ALC's	ALC's	ALC's
	Current	Current	Xfer'ng	Core	Original	Transfer	Gained	Cap	New	Original	New
	Cap	Core	Wkld	Wkld	Cap	Factor	Cap	Elim'ntd	Cap	MPC	MPC
<b>Aircraft:</b>											
TTB	1573	821		821		80%	0	607	966	3251	3251
Admin / Trainers	105	0		0		80%	0	105	0	795	795
<b>Components:</b>											
Structures	90	19	-19	0	90	10%	2	90	0	162	162
Hyd	1	1	-1	0	1	50%	1	1	0	1	1
Pnu	3	3	-3	0	3	50%	2	3	0	3	3
Inst	12	5	-5	0	12	75%	4	12	0	24	24
Lnd Gear	8	4		4		100%	0	3	5	15	15
Avionics	97	31	-31	0	97	30%	9	97	0	142	142
APUs	288	102		102		25%	0	168	120	559	559
Other	288	93		93		25%	0	179	109	443	443
<b>Engines:</b>											
Aircraft	5001	2626		2626		25%	0	1912	3089	7318	7318
<b>Missiles:</b>											
Strategic	109	57		57		25%	0	42	67	200	200
<b>Gen Purpose:</b>											
Munitions/Ord	3	2		2		25%	0	1	2	6	6
<b>Software:</b>											
Tactical	20	14		14		50%	0	4	16	26	26
SE	207	155	9	164	150	50%	5	14	193	241	241
<b>Spec Int Items:</b>											
TMDE	685	410		410		20%	0	203	482	978	978
<b>Assoc Fab/Mfg:</b>											
	417	120	15	135	16	5%	1	258	159	1058	1058
<b>TOTALS</b>	<b>8907</b>	<b>4463</b>	<b>-35</b>	<b>4428</b>	<b>369</b>	<b>7</b>	<b>22</b>	<b>3698</b>	<b>5209</b>	<b>15222</b>	<b>15222</b>

Center:	SM-ALC										
Commodity	SM	SM	SM	SM-ALC's	Losing	Com'dty	Gaining	SM	SM	SM	SM
Group	ALC's	ALC's	ALC's	New	Center's	Capacity	Center's	ALC's	ALC's	ALC's	ALC's
	Current	Current	Xfer'ng	Core	Original	Transfer	Gained	Cap	New	Original	New
	Cap	Core	Wkld	Wkld	Cap	Factor	Cap	Elim'ntd	Cap	MPC	MPC
<b>Aircraft:</b>											
TTB	819	441		441		80%	0	300	519	983	983
Lt Combat	1460	907		907		80%	0	393	1067	1520	1520
<b>Components:</b>											
<i>Structures</i>	<i>229</i>	<i>157</i>	<i>-157</i>	<i>0</i>	<i>229</i>	<i>10%</i>	<i>16</i>	<i>229</i>	<i>0</i>	<i>525</i>	<i>525</i>
<i>Hyd</i>	<i>485</i>	<i>352</i>	<i>135</i>	<i>487</i>	<i>213</i>	<i>50%</i>	<i>68</i>	<i>-88</i>	<i>573</i>	<i>805</i>	<i>805</i>
<i>Pnu</i>	<i>6</i>	<i>5</i>	<i>-5</i>	<i>0</i>	<i>6</i>	<i>50%</i>	<i>3</i>	<i>6</i>	<i>0</i>	<i>11</i>	<i>11</i>
<i>Inst</i>	<i>281</i>	<i>193</i>	<i>429</i>	<i>622</i>	<i>390</i>	<i>75%</i>	<i>322</i>	<i>-451</i>	<i>732</i>	<i>542</i>	<i>732</i>
<i>Avionics</i>	<i>457</i>	<i>334</i>	<i>-334</i>	<i>0</i>	<i>457</i>	<i>30%</i>	<i>0</i>	<i>457</i>	<i>0</i>	<i>870</i>	<i>870</i>
<b>Comm Elect:</b>											
Radar	702	430		430		10%	0	196	506	1235	1235
Radio	340	177		177		10%	0	132	208	734	734
Wire	214	118		118		10%	0	75	139	233	233
Nav Aids	279	165		165		10%	0	85	194	501	501
EO/NV	180	109		109		10%	0	52	128	215	215
Satellite Cont	173	32		32		10%	0	135	38	186	186
<b>Gen Purpose:</b>											
Ground Gens	101	62		62		15%	0	28	73	113	113
Other	61	0		0		10%	0	61	0	61	61
<b>Software:</b>											
Tactical	401	211		211		50%	0	153	248	452	452
SE	328	184	<i>-184</i>	<i>0</i>	<i>328</i>	<i>50%</i>	<i>92</i>	<i>328</i>	<i>0</i>	<i>358</i>	<i>358</i>
<b>Assoc Fab/Mfg:</b>											
	<i>513</i>	<i>354</i>	<i>21</i>	<i>375</i>	<i>46</i>	<i>5%</i>	<i>1</i>	<i>72</i>	<i>441</i>	<i>741</i>	<i>741</i>
<b>TOTALS</b>	<b>7029</b>	<b>4231</b>	<b>-95</b>	<b>4136</b>	<b>1669</b>		<b>501</b>	<b>1169</b>	<b>4866</b>	<b>10085</b>	<b>10275</b>

Center:	WR-ALC										
Commodity	WR	WR	WR	WR-ALC's	Losing	Com'dty	Gaining	WR	WR	WR	WR
Group	ALC's	ALC's	ALC's	New	Center's	Capacity	Center's	ALC's	ALC's	ALC's	ALC's
	Current	Current	Xfer'ng	Core	Original	Transfer	Gained	Cap	New	Original	New
	Cap	Core	Wkld	Wkld	Cap	Factor	Cap	Elim'ntd	Cap	MPC	MPC
<b>Aircraft:</b>											
TTB	2104	1349		1349		80%	0	517	1587	2104	2104
Lt Combat	1084	1267		1267		80%	0	-407	1491	1084	1491
<b>Components:</b>											
Structures	656	477	-353	124	485	10%	35	510	146	801	801
Inst	412	299	-42	257	99	75%	32	110	302	503	503
Lnd Gear	1	1		1		5%	0	0	1	2	2
Av Ord	1	1		1		10%	0	0	1	1	1
Avionics	1763	1280	365	1645	554	30%	110	-172	1935	2153	2153
Other	388	280		280		25%	0	59	329	463	463
<b>Missiles:</b>											
Tactical	18	13		13		15%	0	3	15	22	22
<b>Comm Elect:</b>											
Radar	2	1		1		10%	0	1	1	2	2
<b>Software:</b>											
Tactical	795	888		888		50%	0	-250	1045	1358	1358
SE	530	592	232	824	392	50%	116	-439	969	906	969
Assoc Fab/Mfg:	432	315	-55	260	32	5%	3	126	306	514	514
<b>TOTALS</b>	<b>8186</b>	<b>6763</b>	<b>147</b>	<b>6910</b>	<b>1562</b>		<b>295</b>	<b>57</b>	<b>8129</b>	<b>9913</b>	<b>10383</b>

# **UNDERGRADUATE PILOT TRAINING**



**MERRILL BEYER,, AIR FORCE TEAM  
JIM BRUBAKER, NAVY TEAM**

**MARCH 28, 1995**

Defense Base Closure and Realignment Commission

1

## **OVERVIEW**

- **USAF PILOT TRAINING**
- **FIXED-WING PILOT TRAINING AIRCRAFT**
- **UPT LOCATIONS/TYPICAL BASE**
- **JOINT PILOT AND NAVIGATOR/NFO TRAINING**
- **JPATS UPDATE**



Defense Base Closure and Realignment Commission

2

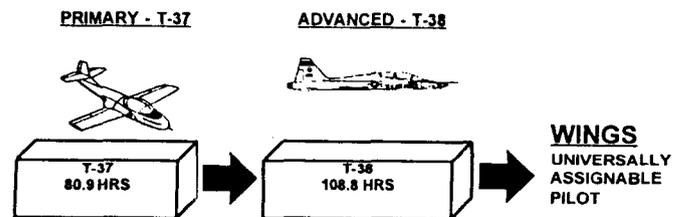
## **TRAINING PHASES FOR USAF PILOTS**

- **ENHANCED FLIGHT SCREENING**
- **UPT**
  - PRIMARY
  - ADVANCED
- **INTRODUCTION TO FUNDAMENTALS**
  - Bomber (IBF)
  - Fighter (IFF)
- **AIRCRAFT SPECIFIC RETRAINING UNITS (RTU)**
- **CONTINUATION TRAINING**

## **ENHANCED FLIGHT SCREENING**

- **SCREENING--NOT TRAINING per se**
  - No Better Pilot Aptitude Test
  - Cost avoidance
  - Navy does not screen
- **LOCATIONS**
  - HONDO
    - » No-Cost Airfield Lease
    - » ROTC and OTS Grads
  - USAF Academy Airfield
    - » Part of Airmanship Program
    - » Conducted in Senior Year
  - T-3 Flight Ops incompatible with UPT aircraft

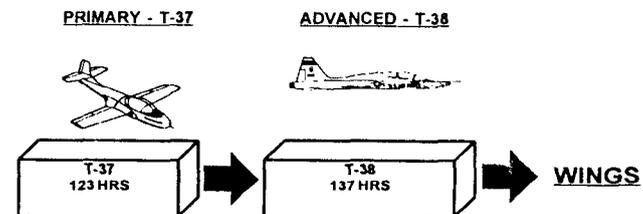
## GENERALIZED UPT



**NOTES:**

- *FOLLOWS FLIGHT SCREENING*
- *ALL TRAINING ACCOMPLISHED AT ONE BASE*
- *TRANSITIONING TO SPECIALIZED UNDERGRADUATE PILOT TRAINING (SUPT)*

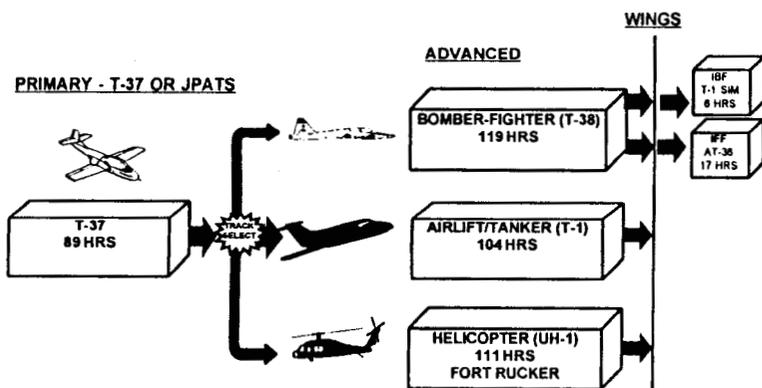
## EURO-NATO JOINT JET PILOT TRAINING (ENJJPT)--SHEPPARD AFB



**NOTES:**

- *FIGHTER-ORIENTED TRAINING (WILL NOT INCORPORATE T-1)*
- *INTERNATIONAL PROGRAM--NOT FOREIGN MILITARY SALES*
- *MEMBER COUNTRIES PAY FOR INFRASTRUCTURE*
- *MEMBER COUNTRIES OWN SOME AIRCRAFT*

## SPECIALIZED UPT

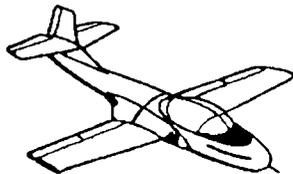


## OVERVIEW

- USAF PILOT TRAINING
- **FIXED-WING PILOT TRAINING AIRCRAFT**
- UPT LOCATIONS/TYPICAL BASE
- JOINT PILOT AND NAVIGATOR/NFO TRAINING
- JPATS UPDATE



### **PRIMARY TRAINER (T-37)**



- *FIRST AIRCRAFT FLOWN IN UPT*
- *TWIN-ENGINE JET*
- *SIDE-BY-SIDE SEATING*
- *UNPRESSURIZED*
- *TO BE REPLACED BY JPATS*

### **ADVANCED TRAINERS**



*T-38*

- *BOMBER-FIGHTER TRAINER*
- *TWIN-ENGINE SUPERSONIC JET*
- *TANDEM SEATING*



*T-1*

- *AIRLIFT-TANKER TRAINER*
- *TWIN-ENGINE JET*
- *FLIGHT DECK WITH SIDE-BY-SIDE SEATING AND JUMP SEAT*

## NAVY AIRCRAFT IN WHICH USAF STUDENTS TRAIN



### T-34

- PRIMARY TRAINER
- SINGLE-ENGINE TURBOPROP
- TANDEM SEATING
- UNPRESSURIZED
- TO BE REPLACED BY JPATS



### T-44

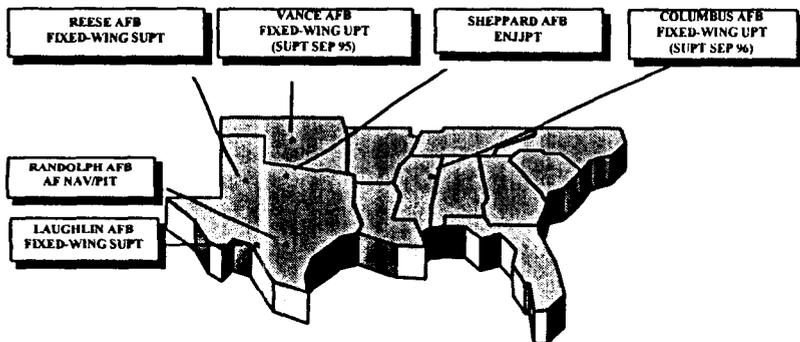
- ADVANCED MARITIME PATROL TRAINER
- TWIN-ENGINE TURBOPROP
- FLIGHT DECK WITH SIDE-BY-SIDE SEATING

## OVERVIEW

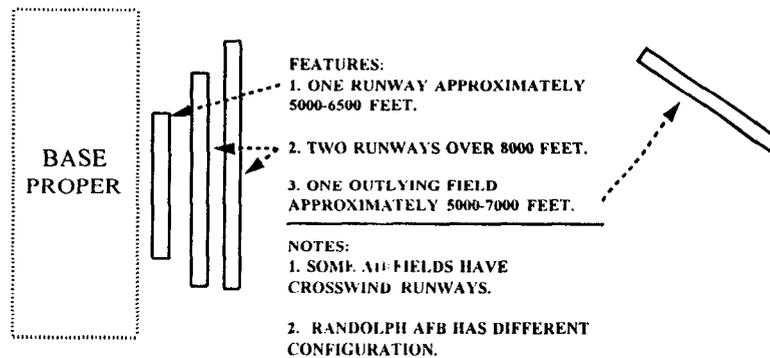
- USAF PILOT TRAINING
- FIXED-WING PILOT TRAINING AIRCRAFT
- UPT LOCATIONS/TYPICAL BASE
- JOINT PILOT AND NAVIGATOR/NFO TRAINING
- JOINT PRIMARY AIRCRAFT TRAINING SYSTEM (JPATS) UPDATE



## CURRENT USAF FLYING TRAINING LOCATIONS



## TYPICAL USAF PILOT TRAINING BASE

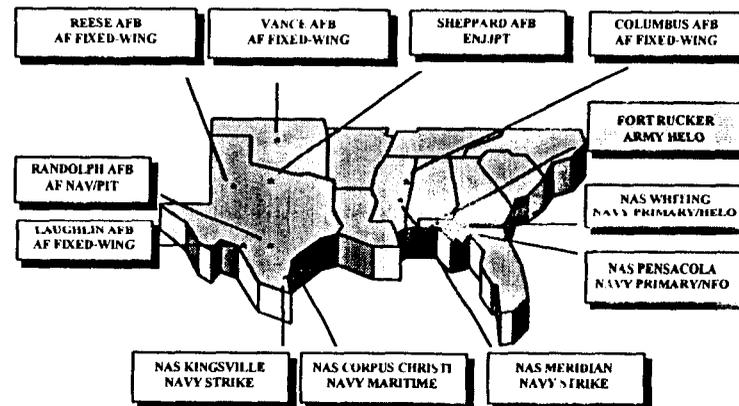


## OVERVIEW

- USAF PILOT TRAINING
- FIXED-WING PILOT TRAINING AIRCRAFT
- UPT LOCATIONS/TYPICAL BASE
- **JOINT PILOT AND NAVIGATOR/NFO TRAINING**
- JPATS UPDATE



## UPT BASES--ALL SERVICES



## **JOINT TRAINING: BACKGROUND**

- **APR 93: SECDEF TASKED SECAF, ASSISTED BY SECNAV, TO**
  - "CONSOLIDATE INITIAL FIXED-WING AIRCRAFT TRAINING FOR ALL SERVICES AND TRANSITION TO A COMMON PRIMARY TRAINING AIRCRAFT."
  - **GENERAL OFFICER/FLAG OFFICER GROUP:**  
DEVELOPED JOINT FIXED-WING TRAINING PLAN
  - **EXPANDED TASKING:**  
INCLUDE ADVANCED PILOT TRNG AND NAVIGATOR/  
NAVAL FLIGHT OFFICER (NFO) TRAINING
  - **SERVICE SECRETARIES APPROVED IN JUL 93**
- **OPERATORS CONTINUED TO REFINE PLAN**
  - **MODIFIED NAVIGATOR/NFO TRNG**
  - **SERVICE SECRETARIES APPROVED**
- **OCT 95: DEPUTY SECDEF APPROVED FIXED-WING PILOT TRAINING AND NAVIGATOR/NFO TRAINING PLANS**

Defense Base Closure and Realignment Commission

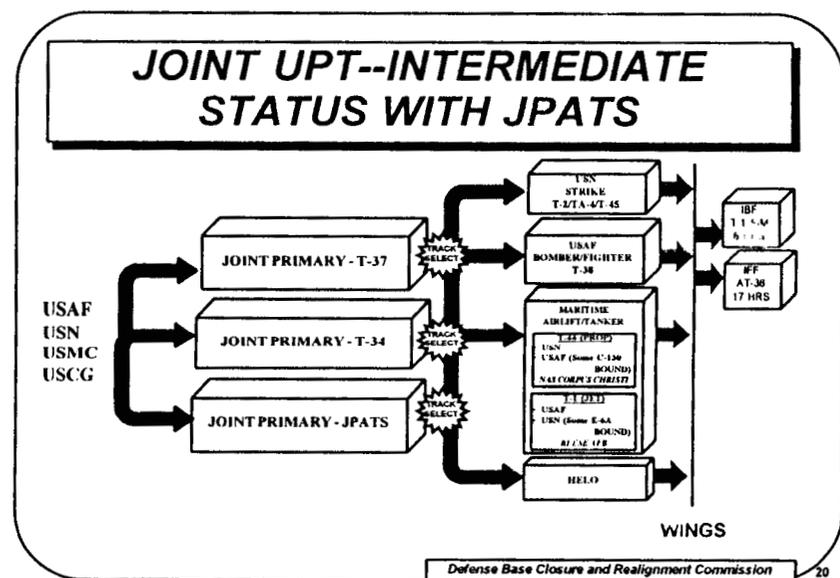
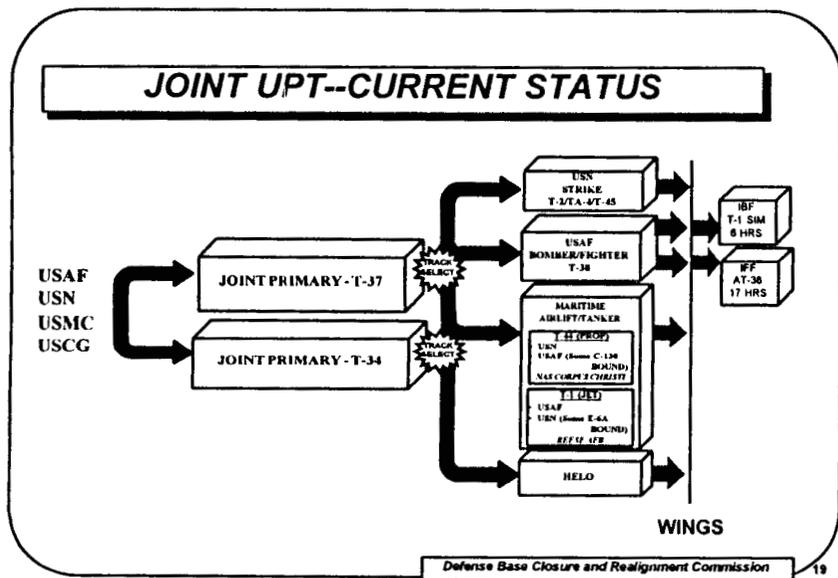
17

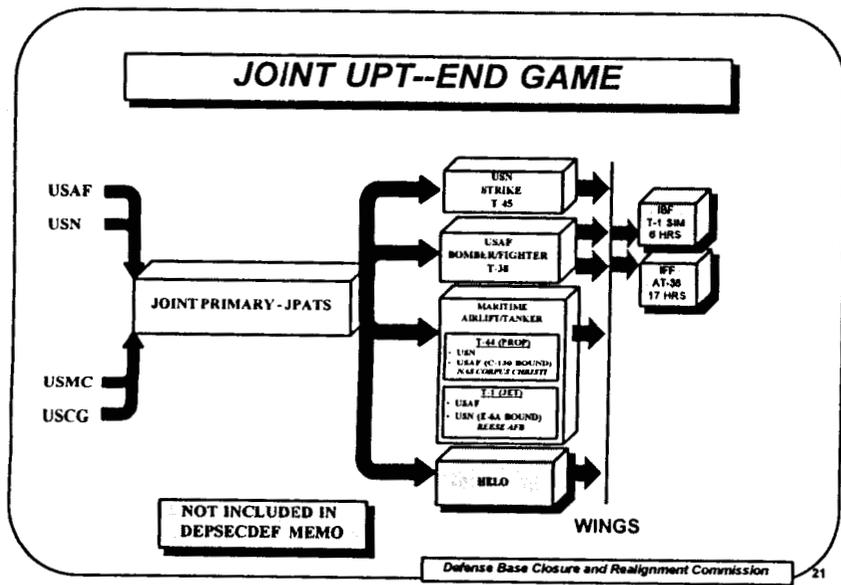
## **JOINT PILOT TRAINING**

- **PRIMARY:**
  - **35th FTS AT REESE AFB TEXAS AND VT-3 AT NAS WHITING FIELD FL**  
PROTOTYPE JOINT TRAINING SQUADRONS
  - **ROTATING SQUADRON COMMAND**
  - **BY FY 98: 100 STUDENTS CROSSFLOW ANNUALLY, 24 EXCHANGE INSTRUCTORS**
  - **OTHER SQUADRONS BECOME JOINT AS THEY TRANSITION TO JPATS**
- **AIRLIFT/TANKER/MARITIME PATROL:**
  - **STUDENT/INSTRUCTOR EXCHANGE**
  - **NAVY TO TRAIN ALL USAF TURBOPROP-BOUND STUDENTS (C-130)**
  - **USAF TO TRAIN ALL NAVY JET-BOUND STUDENTS (E-6)**
- **USAF FIGHTER/BOMBER AND USN STRIKE: NOT JOINT**

Defense Base Closure and Realignment Commission

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### OVERVIEW

- USAF PILOT TRAINING
- FIXED-WING PILOT TRAINING AIRCRAFT
- UPT LOCATIONS/TYPICAL BASE
- JOINT PILOT AND NAVIGATOR/NFO TRAINING
- JPATS UPDATE

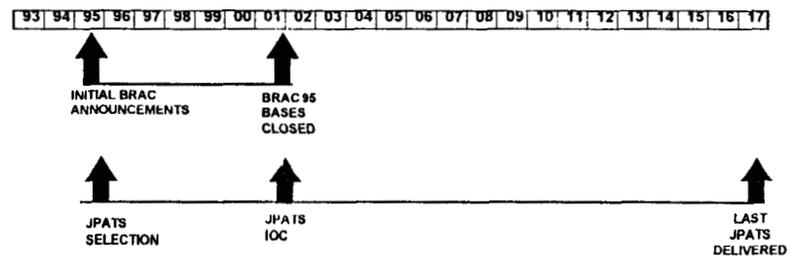


Defense Base Closure and Realignment Commission 22

### JPATS CONTENDERS (T-37/T-34 REPLACEMENT)

	NORTHROP/ EMBRAER SUPER TUCANO BRAZIL	BEECH/ PILATUS PC-9 MK II SWITZERLAND	GRUMMAN AGUSTA S 211A ITALY	ROCKWELL/ MBB RANGER 2000 GERMANY	VOUGHT/ FMA PAMPA 2000 ARGENTINA	LOCKHEED/ AERMACCI # MB 339 ITALY	CESSNA CITATIONJET USA
PLANFORM							
	AIRCRAFT DRAWN TO SCALE						
TAKEOFF WEIGHT (lb)	7,040	6,789	6,393	7,900	8,168	10,420	7,400
MAXIMUM SPEED	285	278	375	380	400	475	420
ENGINE(S)	P&W TURBOPROP	P&W TURBOPROP	P&W TURBOFAN	P&W TURBOFAN	GARRETT TURBOFAN	ROLLS-ROYCE TURBOJET	2 WILLIAMS TURBOFANS
MODEL IN PRODUCTION	EMB-312A/F	PC-9	S 211A (LIMITED)	(PROTO)	PAMPA (LOW RATE)	MB 339 (LIMITED)	(PROTO)
APPROX NO. BUILT	570	160	85	2	18	182	2
POTENTIAL GBTS CONTRACTORS: BRITISH AEROSPACE, CAE-LINK, HUGHES TRAINING SYSTEMS, LORAL DEFENSE SYSTEMS, MCDONNELL DOUGLAS TRAINING SYSTEMS							

### JPATS ACQUISITION SCHEDULE



#### NOTES:

- 711 AIRCRAFT BUY: DOESN'T INCLUDE ALL OF ENJJPT AIRCRAFT
- SERIES OF FIRM FIXED-PRICE CONTRACTS EXTENDING 4-5 YEARS EACH
- FIRST ORDER WILL BE FOR APPROXIMATELY 140 AIRCRAFT

## **USAF UPT CHANGES SINCE 1973**

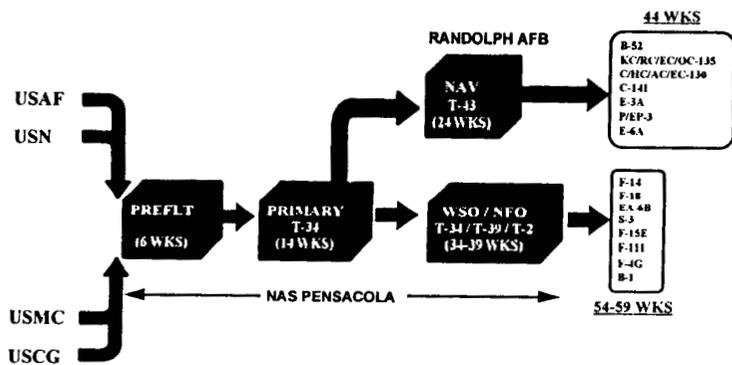
- **CLOSED OR REALIGNED FIVE UPT BASES**
- **STOPPED TRAINING IRANIANS**
- **ENJJPT TRAINING BEGUN**
- **TWO GENERATIONS OF FLIGHT SIMULATION CHANGES**
- **IFF TRAINING ABSORBED INTO UPT BASES**
- **T-46 TO REPLACE T-37 PURCHASED/CANCELLED**
- **SUPT AND T-1 ACQUISITION**
- **JOINT TRAINING**
- **ROTARY-WING TRAINING CHANGED MULTIPLE TIMES**
- **NAV TRAINING BASE CLOSED**
  - **NAV TRAINING "REALIGNED" THREE TIMES**

## **SUMMARY**

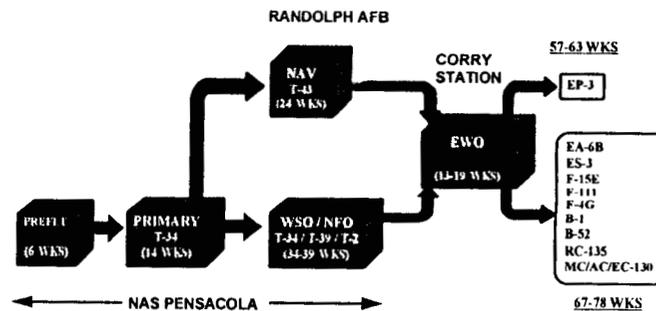


- **JOINT TRAINING IS CENTERPIECE OF UPT**
- **JPATS IS KEY TO CONSOLIDATED PRIMARY PILOT TRAINING**
- **TRAINING "VISION" IS STILL GROWING AND DEVELOPING**

## JOINT NAVIGATOR/NFO TRAINING-- END GAME



## JOINT ELECTRONIC WARFARE OFFICER (EWO) TRAINING--END GAME



Cir201k  
→

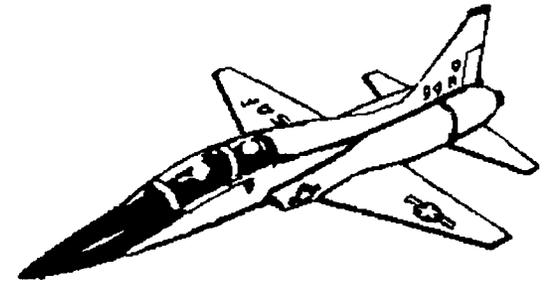
# ***AIR FORCE UNDERGRADUATE FLYING TRAINING***



***LT COL LEN JARMAN  
HQ USAF/XOOT  
28 FEB 95***

# ***OVERVIEW***

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- ***UFT LOCATIONS/TYPICAL BASE***
- ***FIXED-WING PILOT TRAINING AIRCRAFT***
- ***USAF PILOT TRAINING***
- ***JOINT PILOT AND NAVIGATOR/NFO TRAINING***
- ***JOINT PRIMARY AIRCRAFT TRAINING SYSTEM  
(JPATS) UPDATE***

# CURRENT USAF FLYING TRAINING LOCATIONS

REESE AFB  
FIXED-WING SUPT

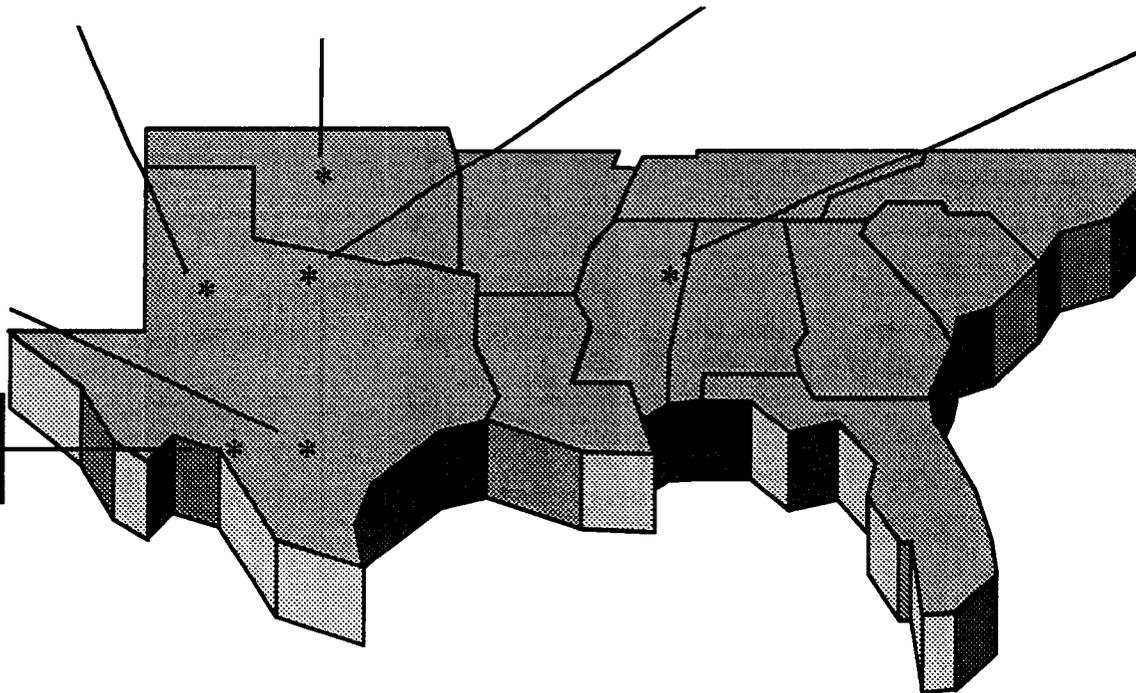
*special*  
VANCE AFB  
FIXED-WING UPT  
(SUPT SEP 95)

*allied*  
SHEPPARD AFB  
ENJJPT

*special*  
COLUMBUS AFB  
FIXED-WING UPT  
(SUPT SEP 96)

*no OPT*  
RANDOLPH AFB  
AF NAV/PIT

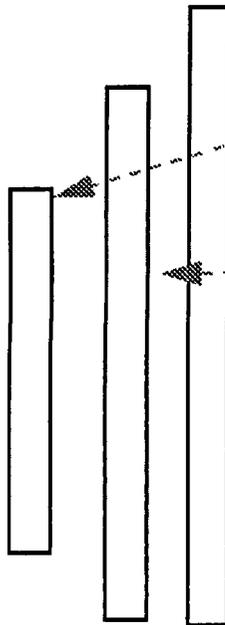
LAUGHLIN AFB  
FIXED-WING SUPT



# ***TYPICAL USAF PILOT TRAINING BASE***

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**BASE  
PROPER**



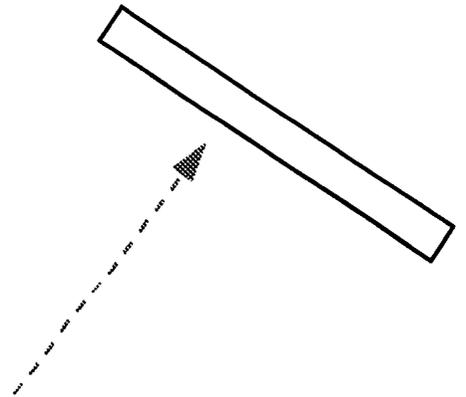
## **FEATURES:**

- 1. ONE RUNWAY APPROXIMATELY 5000-6500 FEET.**
- 2. TWO RUNWAYS OVER 8000 FEET.**
- 3. ONE OUTLYING FIELD APPROXIMATELY 5000-7000 FEET.**

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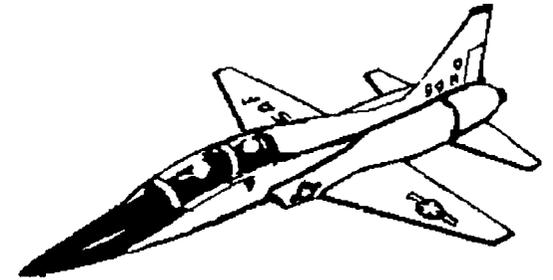
## **NOTES:**

- 1. SOME AIRFIELDS HAVE CROSSWIND RUNWAYS.**
- 2. RANDOLPH AFB HAS DIFFERENT CONFIGURATION.**



# ***OVERVIEW***

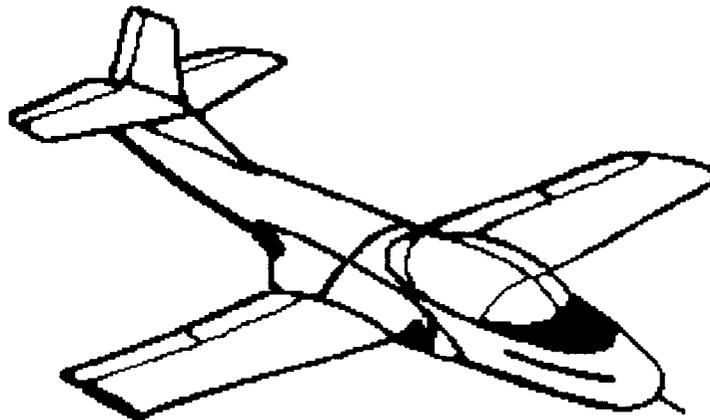
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- ***UFT LOCATIONS/TYPICAL BASE***
- ***FIXED-WING PILOT TRAINING AIRCRAFT***
- ***USAF PILOT TRAINING***
- ***JOINT PILOT AND NAVIGATOR/NFO TRAINING***
- ***JPATS UPDATE***

# ***PRIMARY TRAINER (T-37)***

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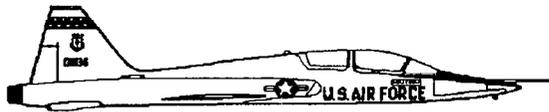


- ***FIRST AIRCRAFT FLOWN IN UPT***
- ***TWIN-ENGINE JET***
- ***SIDE-BY-SIDE SEATING***
- ***UNPRESSURIZED***
- ***TO BE REPLACED BY JPATS***

# *ADVANCED TRAINERS*

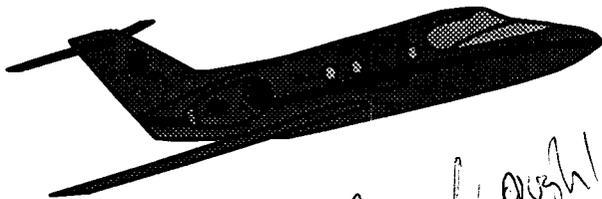
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*T-38*



- *BOMBER-FIGHTER TRAINER*
  - *TWIN-ENGINE SUPERSONIC JET*
  - *TANDEM SEATING*
- 

*T-1*



*Reese / L. Pugh*

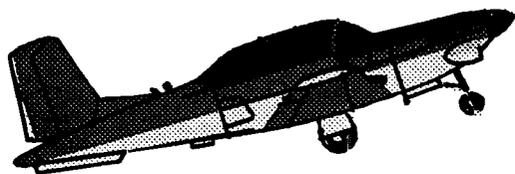
- *AIRLIFT-TANKER TRAINER*
- *TWIN-ENGINE JET*
- *FLIGHT DECK WITH SIDE-BY-SIDE SEATING AND JUMP SEAT*

*"Beach Jet"*

*IF Repas*

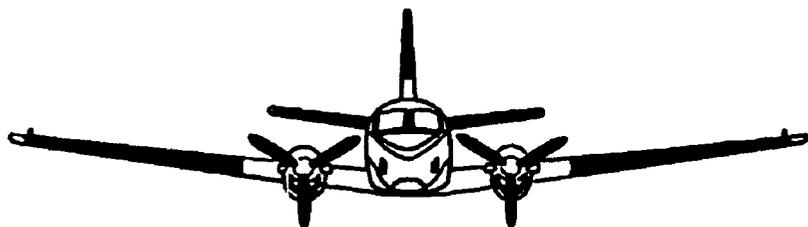
# ***NAVY AIRCRAFT IN WHICH USAF STUDENTS TRAIN***

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## ***T-34***

- ***PRIMARY TRAINER***
  - ***SINGLE-ENGINE  
TURBOPROP***
  - ***TANDEM SEATING***
  - ***UNPRESSURIZED***
  - ***TO BE REPLACED BY JPATS***
- 10000

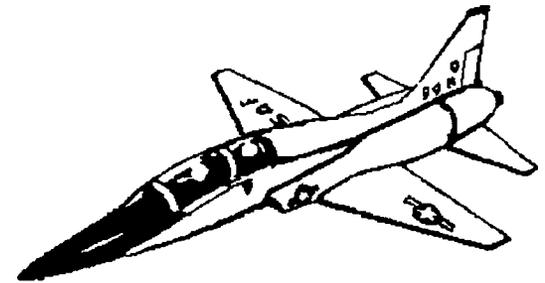


## ***T-44***

- ***ADVANCED MARITIME  
PATROL TRAINER***
  - ***TWIN-ENGINE TURBOPROP***
  - ***FLIGHT DECK WITH SIDE-BY-  
SIDE SEATING***
- Beech King Air

# ***OVERVIEW***

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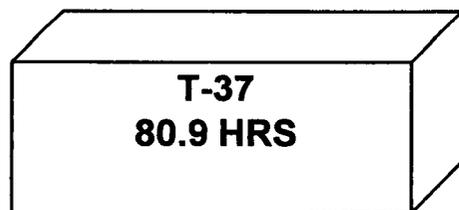
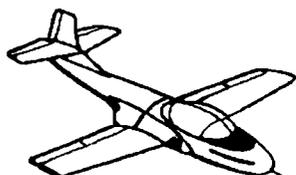


- ***UFT LOCATIONS/TYPICAL BASE***
- ***FIXED-WING PILOT TRAINING AIRCRAFT***
- ***USAF PILOT TRAINING***
- ***JOINT PILOT AND NAVIGATOR/NFO TRAINING***
- ***JPATS UPDATE***

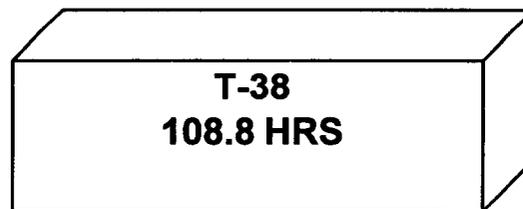
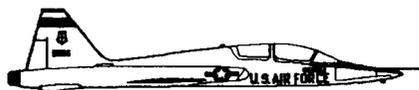
# ***GENERALIZED UPT***

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PRIMARY - T-37



ADVANCED - T-38



WINGS  
UNIVERSALLY  
ASSIGNABLE  
PILOT

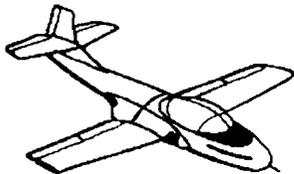
**NOTES:**

- ***ALL TRAINING ACCOMPLISHED AT ONE BASE***
- ***BEING REPLACED BY SPECIALIZED UNDERGRADUATE PILOT TRAINING (SUPT)***

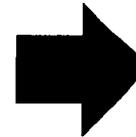
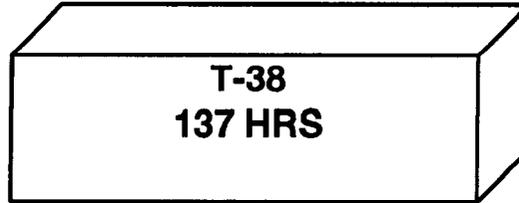
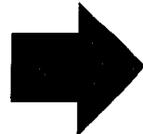
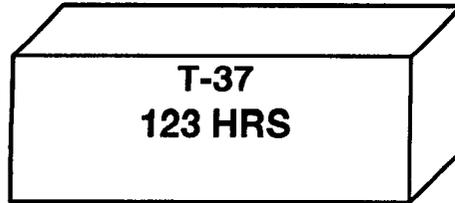
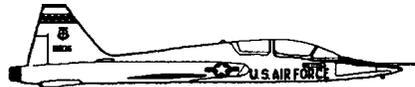
# ***EURO-NATO JOINT JET PILOT TRAINING (ENJJPT)--SHEPPARD AFB***

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**PRIMARY - T-37**



**ADVANCED - T-38**

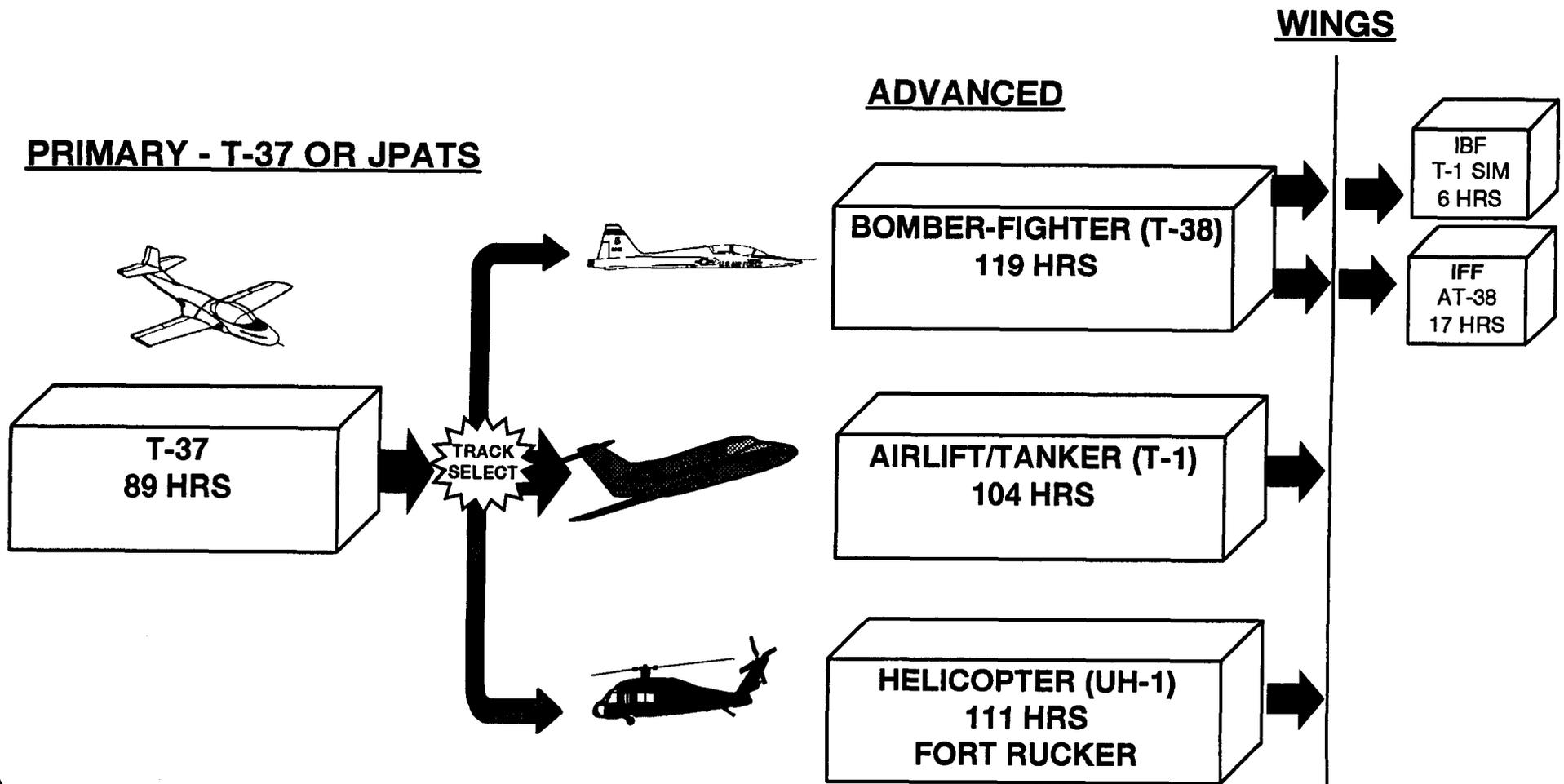


**WINGS**

***NOTES:***

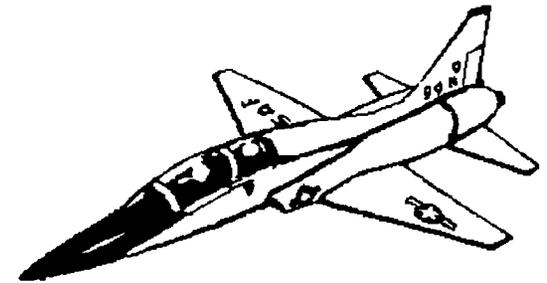
- ***FIGHTER-ORIENTED TRAINING (WILL NOT INCORPORATE T-1)***
- ***INTERNATIONAL PROGRAM--NOT FOREIGN MILITARY SALES***
- ***MEMBER COUNTRIES PAY FOR INFRASTRUCTURE***
- ***MEMBER COUNTRIES OWN SOME AIRCRAFT***

# ***SPECIALIZED UPT***



# ***OVERVIEW***

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- ***UFT LOCATIONS/TYPICAL BASE***
- ***FIXED-WING PILOT TRAINING AIRCRAFT***
- ***USAF PILOT TRAINING***
- ***JOINT PILOT AND NAVIGATOR/INFO  
TRAINING***
- ***JPATS UPDATE***

# ***UFT BASES--ALL SERVICES***

**REESE AFB  
AF FIXED-WING**

**VANCE AFB  
AF FIXED-WING**

**SHEPPARD AFB  
ENJJPT**

**COLUMBUS AFB  
AF FIXED-WING**

**RANDOLPH AFB  
AF NAV/PIT**

**LAUGHLIN AFB  
AF FIXED-WING**

**FORT RUCKER  
ARMY HELO**

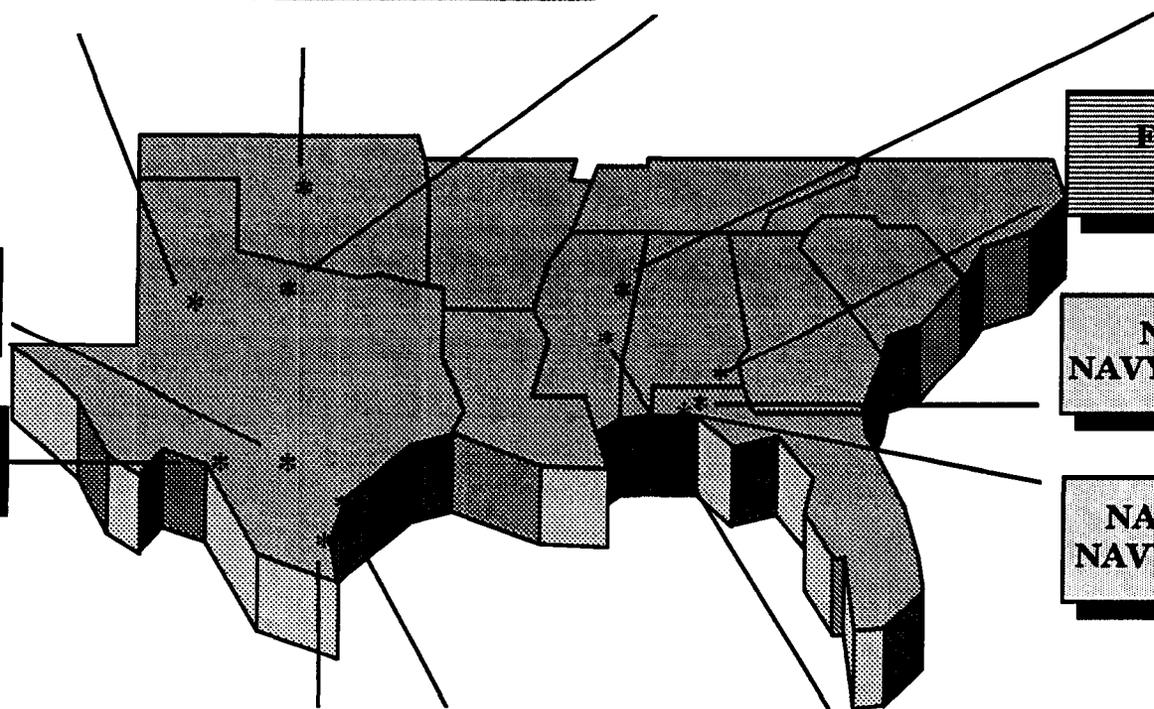
**NAS WHITING  
NAVY PRIMARY/HELO**

**NAS PENSACOLA  
NAVY PRIMARY/NFO**

**NAS KINGSVILLE  
NAVY STRIKE**

**NAS CORPUS CHRISTI  
NAVY MARITIME**

**NAS MERIDIAN  
NAVY STRIKE**



# ***JOINT TRAINING: BACKGROUND***

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- ***APR 93: SECDEF TASKED SECRETARY OF THE AIR FORCE, ASSISTED BY THE SECRETARY OF THE NAVY, TO “CONSOLIDATE INITIAL FIXED-WING AIRCRAFT TRAINING FOR ALL SERVICES AND TRANSITION TO A COMMON PRIMARY TRAINING AIRCRAFT.”***
  - ***GENERAL OFFICER/FLAG OFFICER GROUP DEVELOPED JOINT FIXED-WING TRAINING PLAN***
  - ***EXPANDED TASKING TO INCLUDE ADVANCED PILOT TRAINING AND NAVIGATOR/NAVAL FLIGHT OFFICER (NFO) TRAINING***
  - ***SERVICE SECRETARIES APPROVED IN JUL 93***
- ***OPERATORS CONTINUED TO REFINE PLAN***
  - ***MODIFIED NAVIGATOR/NFO TRAINING***
  - ***SERVICE SECRETARIES APPROVED***
- ***DEPUTY SECDEF APPROVED FIXED-WING PILOT TRAINING AND NAVIGATOR/NFO TRAINING PLANS IN OCT 98*** 4

# ***JOINT PILOT TRAINING***

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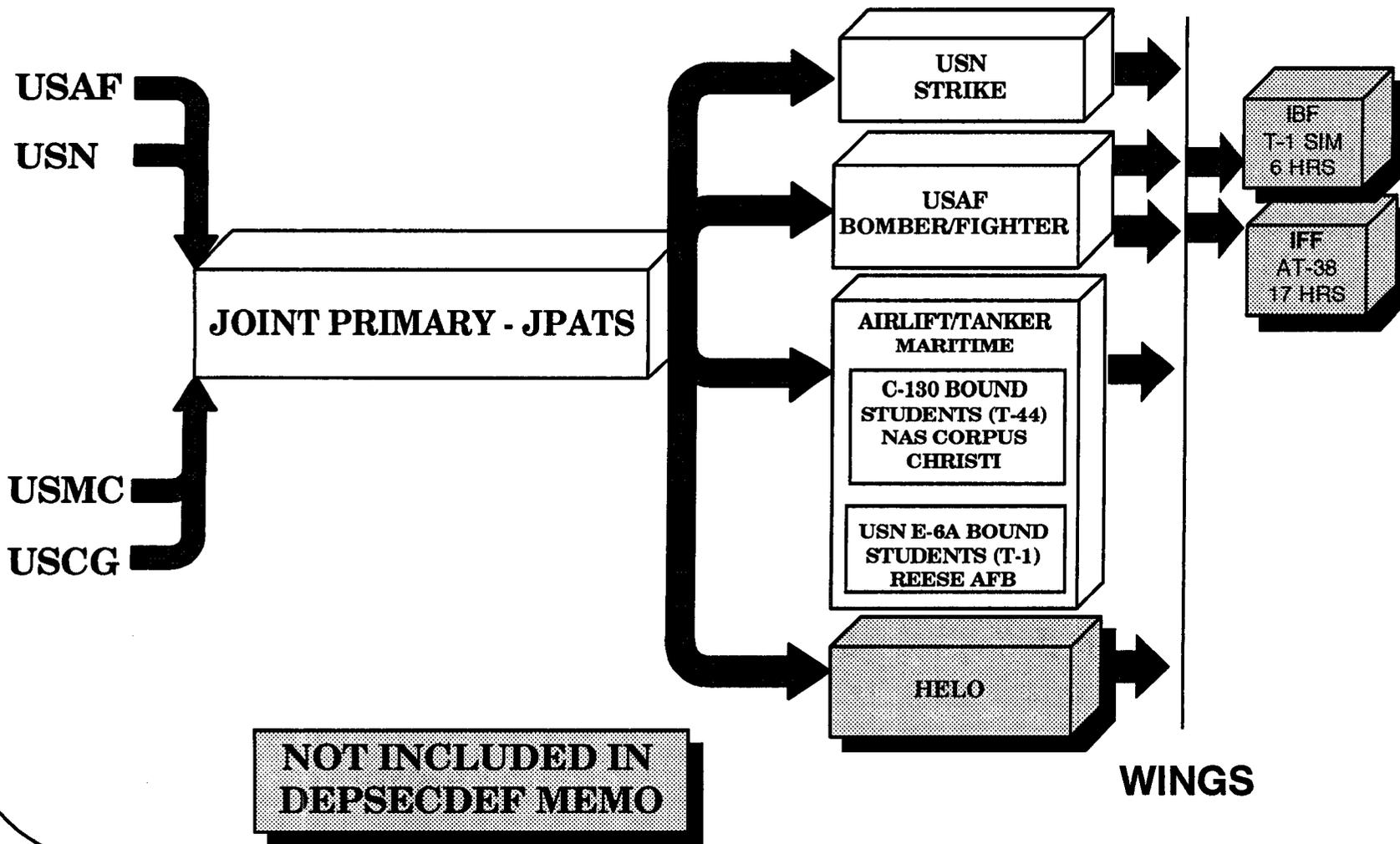
- ***PRIMARY:***

- ***35th FTS AT REESE AFB TEXAS AND VT-3 AT NAS WHITING FIELD FL BECAME PROTOTYPE JOINT TRAINING SQUADRONS***
- ***ROTATING SQUADRON COMMAND***
- ***BY FY 98: 100 STUDENTS CROSSFLOW ANNUALLY, 24 EXCHANGE INSTRUCTORS*** *≈ 1/2 Student Load* *1/2 instructor Load*
- ***OTHER SQUADRONS BECOME JOINT AS THEY TRANSITION TO JPATS***

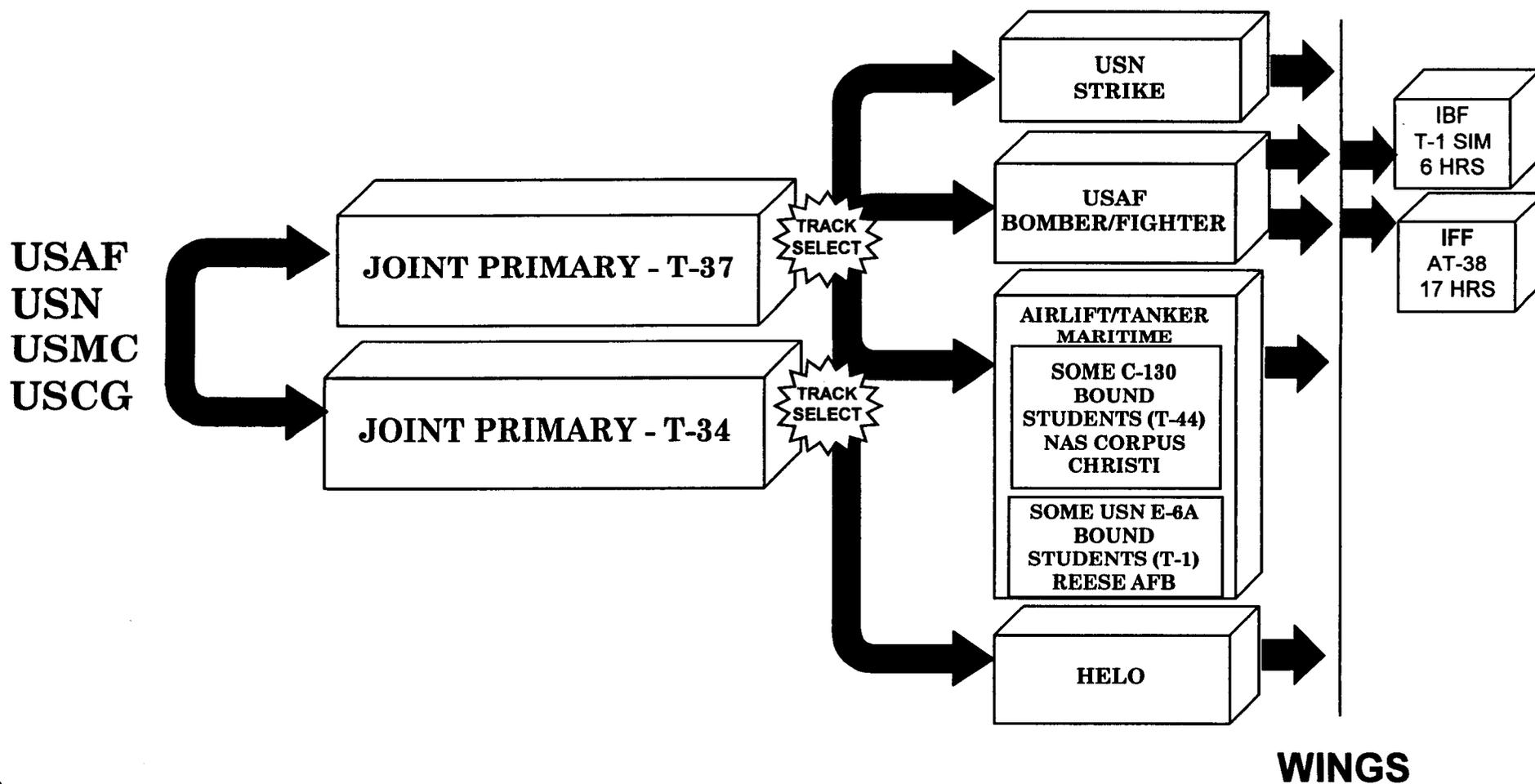
- ***AIRLIFT/TANKER/MARITIME PATROL:***

- ***STUDENT/INSTRUCTOR EXCHANGE***
- ***NAVY EVENTUALLY TRAINS USAF TURBOPROP-BOUND STUDENTS (C-130)***
- ***USAF EVENTUALLY TRAINS NAVY JET-BOUND STUDENTS (E-6)***

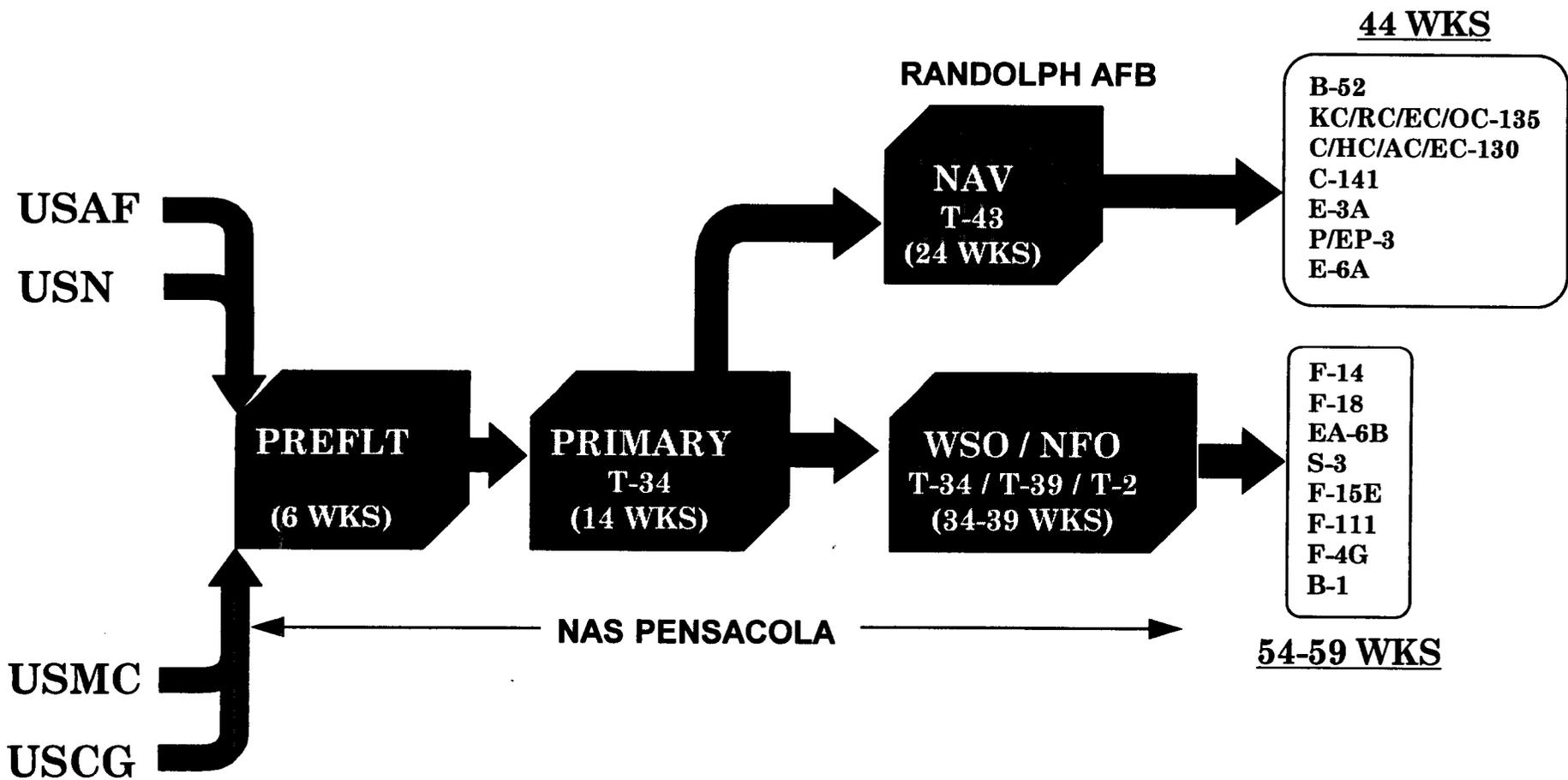
# JOINT UPT--END GAME



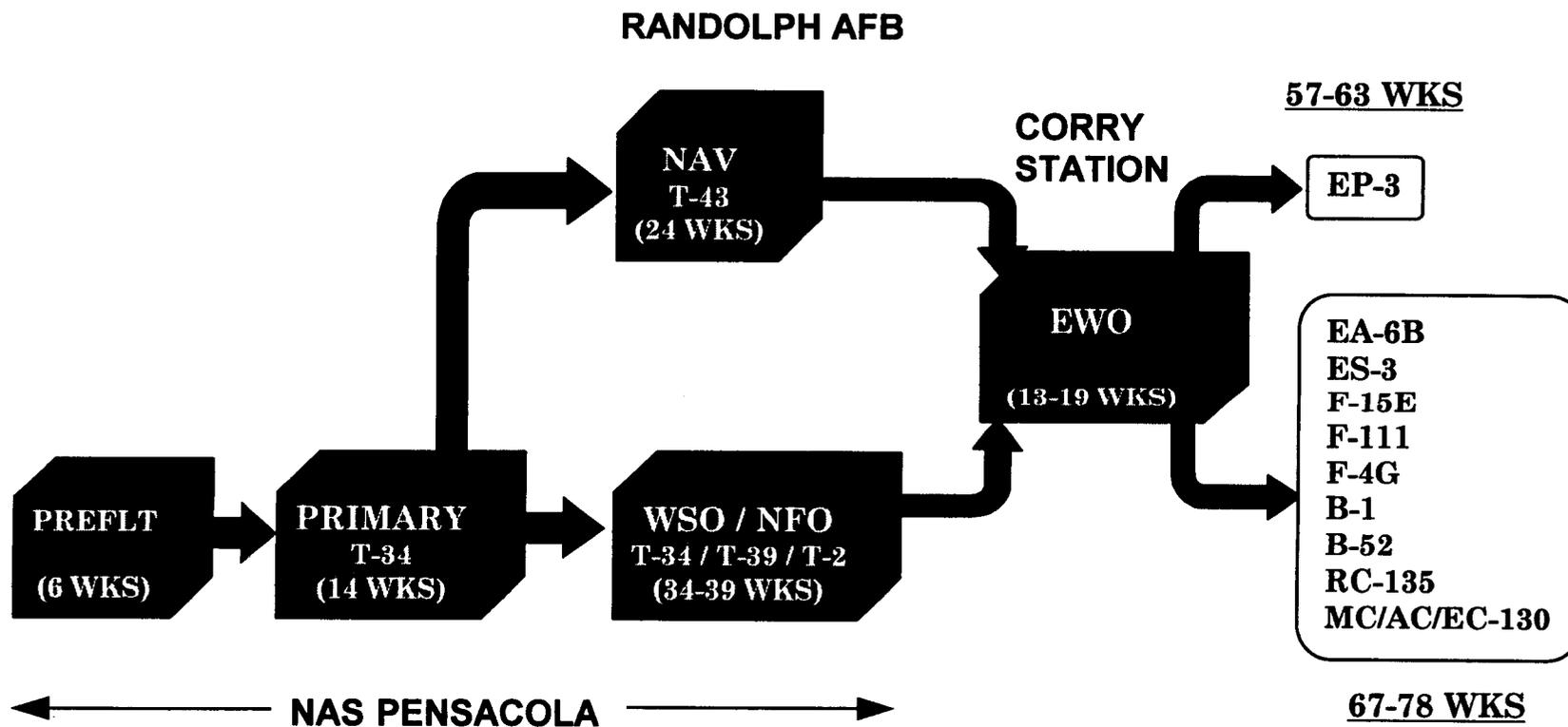
# JOINT UPT--CURRENT STATUS



# ***JOINT NAVIGATOR/NFO TRAINING-- END GAME***

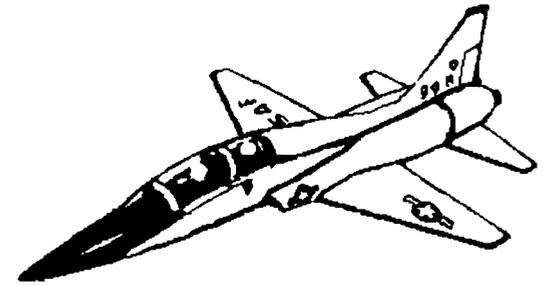


# ***JOINT ELECTRONIC WARFARE OFFICER (EWO) TRAINING--END GAME***



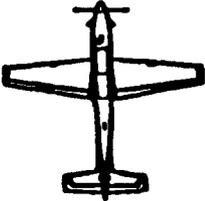
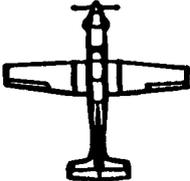
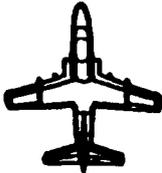
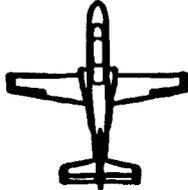
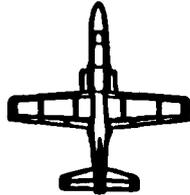
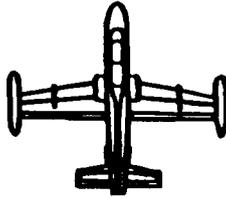
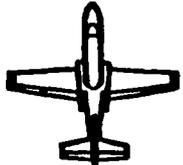
# ***OVERVIEW***

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- ***UFT LOCATIONS/TYPICAL BASE***
- ***FIXED-WING PILOT TRAINING AIRCRAFT***
- ***USAF PILOT TRAINING***
- ***JOINT PILOT AND NAVIGATOR/NFO TRAINING***
- ***JPATS UPDATE***

# JPATS CONTENDERS (T-37/T-34 REPLACEMENT)

	NORTHROP/ EMBRAER SUPER TUCANO BRAZIL	BEECH/ PILATUS PC-9 MK II SWITZERLAND	GRUMMAN/ AGUSTA S.211A ITALY	ROCKWELL/ MBB RANGER 2000 GERMANY	VOUGHT/ FMA PAMPA 2000 ARGENTINA	LOCKHEED/ AERMACCHI MB 339 ITALY	CESSNA CITATIONJET USA
PLANFORM							
----- AIRCRAFT DRAWN TO SCALE							
TAKEOFF WEIGHT (lb)	7,040	6,789	6,393	7,900	8,168	10,420	7,400
MAXIMUM SPEED	285	278	375	380	400	475	420
ENGINE(S)	P&W TURBOPROP	P&W TURBOPROP	P&W TURBOFAN	P&W TURBOFAN	GARRETT TURBOFAN	ROLLS-ROYCE TURBOJET	2 WILLIAMS TURBOFANS
MODEL IN PRODUCTION	EMB-312A/F	PC-9	S.211A (LIMITED)	(PROTO)	PAMPA (LOW RATE)	MB 339 (LIMITED)	(PROTO)
APPROX NO. BUILT	570	160	85	2	18	182	2

POTENTIAL GBTS CONTRACTORS: BRITISH AEROSPACE, CAE-LINK, HUGHES TRAINING SYSTEMS, LORAL DEFENSE SYSTEMS, McDONNELL DOUGLAS TRAINING SYSTEMS

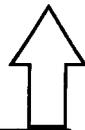
# ***JPATS ACQUISITION SCHEDULE***

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93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17
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**INITIAL BRAC  
ANNOUNCEMENTS**



**BRAC 95  
BASES  
CLOSED**



**JPATS  
SELECTION**



**JPATS  
IOC**



**LAST  
JPATS  
DELIVERED**

## ***NOTES:***

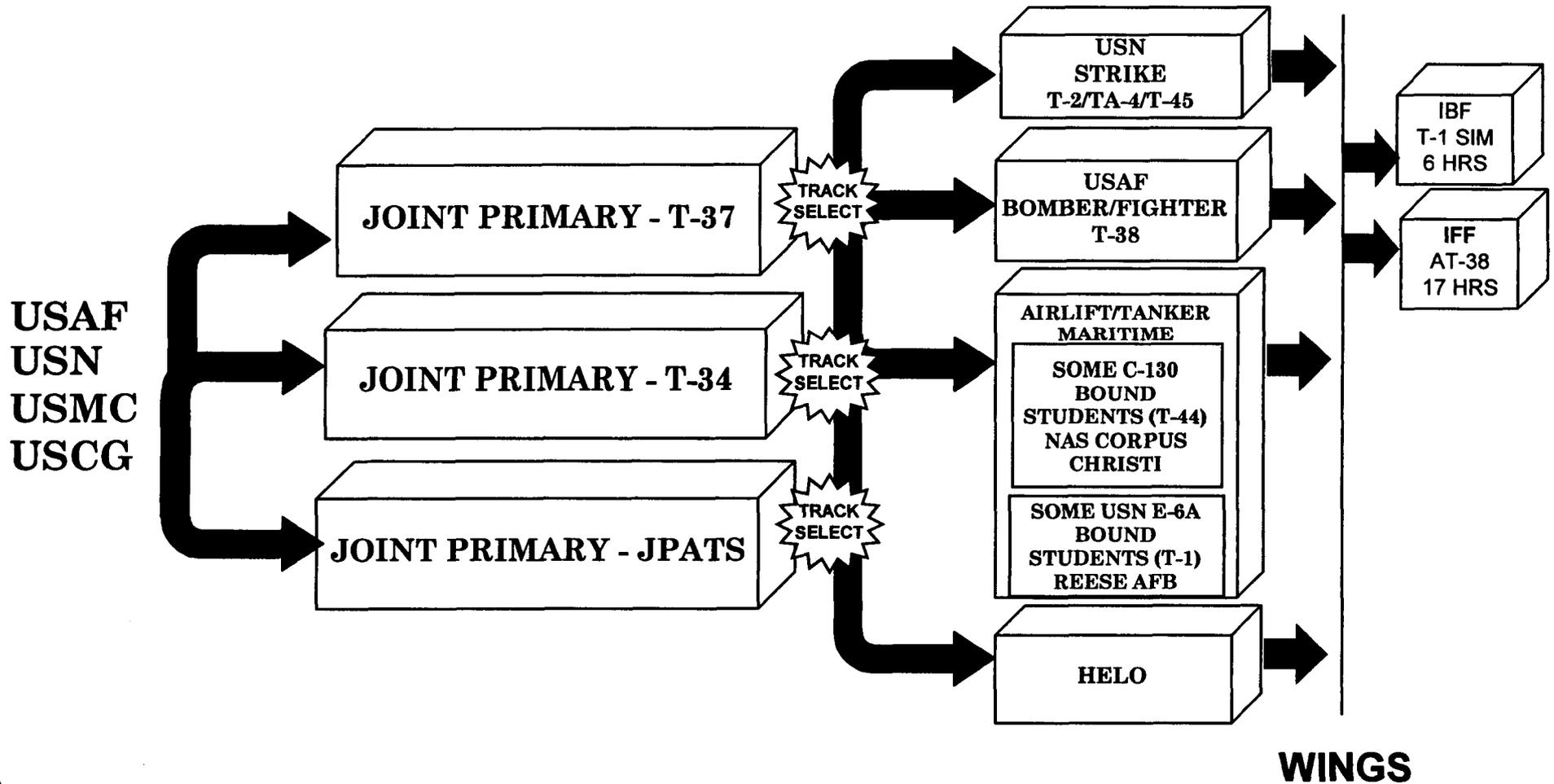
- 711 AIRCRAFT BUY: DOESN'T INCLUDE ALL OF ENJJPT AIRCRAFT***
- SERIES OF FIRM FIXED-PRICE CONTRACTS EXTENDING 4-5 YEARS EACH***
- FIRST ORDER WILL BE FOR APPROXIMATELY 140 AIRCRAFT***

# ***USAF UPT CHANGES SINCE 1973***

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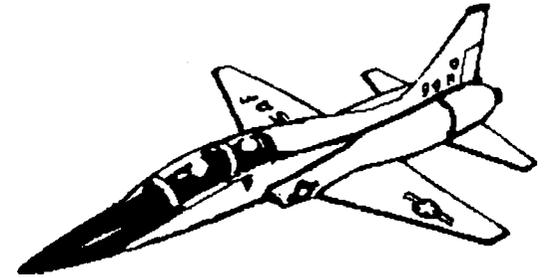
- ***CLOSED OR REALIGNED FIVE UPT BASES***
- ***STOPPED TRAINING IRANIANS***
- ***ENJJPT TRAINING BEGUN***
- ***TWO GENERATIONS OF FLIGHT SIMULATION CHANGES***
- ***IFF TRAINING ABSORBED INTO UPT BASES***
- ***T-46 TO REPLACE T-37 PURCHASED/CANCELLED***
- ***SUPT AND T-1 ACQUISITION***
- ***JOINT TRAINING***
- ***ROTARY-WING TRAINING CHANGED MULTIPLE TIMES***
- ***NAV TRAINING BASE CLOSED***
  - ***NAV TRAINING “REALIGNED” THREE TIMES***

# ***JOINT UPT--INTERMEDIATE STATUS WITH JPATS***



# ***SUMMARY***

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- ***JOINT TRAINING IS CENTERPIECE OF UFT***
- ***JPATS IS KEY TO CONSOLIDATED PRIMARY PILOT TRAINING***
- ***TRAINING “VISION” IS STILL GROWING AND DEVELOPING***

# UPT DISCUSSION

## 4/8/95

<u>Name</u>	<u>Position</u>	<u>Tele</u>
Franco Cirillo	DBCRC - AF Team Leader	703-696-0504x16
Mr Glenn Proffitt	AF Rep to UP7 JCSG	210 652-4527
Mr Jay Blumstein	AF/R7	703-693-8629
Col Chuck Fox	SAF/LL	703-697-8153
Jim Bont Righ	SAF	
Ben Barden	DBCRC - Dir R&A	703-696-0504
Mr Al Cornell	Commis - DBCRC	703-696-0504
David Lykes	DBCRC - <del>Chief SI</del> <sup>STAFF DIR</sup>	" " ;
Ed Brown	DBCRC Arm T.L.	" " ;
Alex Yelling	" N TL	" " ;
Jim Brubaker	" N Team	" " ;
Merrill Beyer	" AF Team	" " ;
Charles Smith	DBCRC - Exec Dir	" " ;
Bob Cook	DBCRC Interagency T.L.	" " ;
Lt Col Len Tharmin	AF/R7	703-695-0902
Mark Pross	DBCRC/AF Team	703 696-0504
Doyle Reedy	" / Navy Team	" " ;
<del>Michael Beyer</del>	<del>DBCRC/AF Team</del>	" "
<del>NEOL JIM BRUBAKER</del>	<del>DBCRC / NAVY TEAM</del>	
Elizabeth King	DBCRC - Legal counsel	703-696-0504
ED FLIPPEN	DBCRC - AIRSPACE	" "
Bob Bivins	DBCRC - COBRA	703 696-0504
BOB COOK	DBCRC - INTERAGENCY TEAM LEAD	" "
AUST YELUN	DBCRC NAVY TEAM	" " x183
Ed GERTER	DBCRC ARMY TEAM	x174
BRYAN Eckols	SAF/GCN	703-697-6540
Marcia Malcomb	AF/RTR	(703) 695-4666

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# MEMORANDUM

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**DATE:** April 8, 1995  
**TO:** Attendees at 8 April UPT Discussion  
**FROM:** Frank Cirillo, Air Force Team Leader  
**RE:** UPT Discussion Questions

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16. Joint primary training is just a beginning in the process of “jointness.” How far can the Air Force and the other Services go in the following areas:

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**DRAFT**



ECONOMIC SECURITY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE  
3300 DEFENSE PENTAGON  
WASHINGTON, DC 20301-3300



8 APR 1995

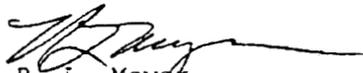
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Air Force Team Leader  
Defense Base Closure and Realignment Commission  
1700 N. Moore St., Suite 1425  
Arlington, VA 22209

Dear Mr Cirillo:

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I trust this information is useful.

Sincerely,

  
R. L. Meyer  
Director  
Base Closure

Attachment





PERSONNEL AND  
READINESS

OFFICE OF THE UNDER SECRETARY OF DEFENSE  
4000 DEFENSE PENTAGON  
WASHINGTON, D.C. 20301-4000



March 29, 1995

MEMORANDUM FOR DIRECTOR, BASE CLOSURE AND UTILIZATION

SUBJECT: Commission Questions for the Record

The response to your request for answers to the BRAC Commission questions for the record regarding the Joint Cross-Service Group's functional analyses is provided as Attachment One.



Louis C. Finch  
Chairman

Undergraduate Pilot Training Joint Cross-Service Group

Attachment:  
1. Qs & As



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ANSWER: The analysis did not restrict airspace credit to the volume a base owned or controlled.

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ANSWER: Assigning weights in the model was one of the Groups biggest challenges. All members agreed that airspace should be heavily weighted, so the discussion centered on what types of airspace to credit. In the end, the Group reached and implemented a consensus.

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ECONOMIC SECURITY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE  
3300 DEFENSE PENTAGON  
WASHINGTON, DC 20301-3300



8 APR 1995

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Defense Base Closure and Realignment Commission  
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**DRAFT**

AIR FORCE UNDERGRADUATE PILOT TRAINING QUESTIONS

1. Please discuss the 10 Undergraduate Pilot Training (UPT) functional areas (flight screening, primary pilot, airlift/tanker, advanced bomber/fighter, strike/advanced E-2/C-2, advanced maritime/intermediate E-2/C-2, helicopter, primary and intermediate Naval Flight Officer (NFO), advanced NFO strike, and advanced NFO panel). How were they determined? How were they weighted?
2. Did you agree fully with the Joint Cross-Service Group's (JCSG) selection of functional areas? If not, why not?
3. How did the JCSG build and use these factors?
4. How did the JCSG use the Linear Programming Optimization Model as a tool to limit the number of feasible base closure alternatives?
5. In the JCSG/UPT Student Resource Calculation, the average functional value for the Air Force UPT bases resulted in the following tiering:

Columbus AFB	6.65
Vance AFB	6.50
Randolph AFB	6.46
Laughlin AFB	6.36
Reese AFB	6.08

The Air Force color coded Criteria I in its evaluation based on a standard deviation analysis of those averages. The Department of the Air Force's Analyses and Recommendations, Vol. V, on the other hand, ranks Columbus AFB, Laughlin AFB, Randolph AFB, and Vance AFB in Tier I. Do the functional scores represent your perception of the mission capability of the UPT bases?

6. The functional average of the highest Air Force UPT base was equivalent to the lowest ranking Navy UPT base. What are the implications?
7. What did the Joint Cross-Service Group on Undergraduate Pilot Training (JCSG/UPT) do right? In your view, what, if anything, should the JCSG/UPT have done differently?
8. What is your view of how the Base Closure Executive Group (BCEG) used the JCSG alternatives to develop its closure recommendations?
9. To your knowledge, what did the Base Support Analysis Team (BSAT) do differently in its analysis compared with the Air Force's analysis?
10. The Defense Base Closure and Realignment Commission staff plans to conduct some excursions using the Linear Programming Optimization Model. Do you have any

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suggestions regarding what the Commission staff should examine? What are your views on the following options:

- examining only Air Force bases;
  - excluding flight screening;
  - separating “flying training” factors from other factors, such as a 300 foot-wide runway; and
  - excluding Navy-unique functional areas?
11. In our excursions, do you recommend that we consider any other factors or change the relative weights in a way that more accurately reflects Air Force requirements?
12. In your view, how far should the Commission go in defining base closure and realignment options in terms of selecting bases for closure and realignment of base functions?
13. The Lubbock, Texas, community offered to purchase and then lease back to the Air Force Reese AFB family housing as well as a 40,000 square foot hangar at Lubbock International Airport. What is the status of these offers? [NOTE: The BCEG representative might want to discuss this issue.]
14. The JCSG/UPT described UPT capacity in a certain way. Please compare the relative merits of various ways to describe the capacity of UPT bases. such as:
- operations per hour;
  - the high-water peak pilot training rate (PTR);
  - FAA-normalized operations (an FAA formula or procedure that measures airport capacity, taking into account such factors as weather conditions, runway configuration, traffic mix (takeoffs/landings versus touch/go), and runway availability (i.e., night/day runways); and
  - differences in Navy versus Air Force operations.
15. How can capacity analysis best account for factors that influence capacity historical data, but are not readily apparent, such as shortages in the following areas:
- aircraft maintenance;
  - instructor pilots;
  - primary student graduates feeding into the next level; and
  - weather?

How do you account for the operational savvy of one base’s operations group commander versus another base’s commander?

16. Joint primary training is just a beginning in the process of “jointness.” How far can the Air Force and the other Services go in the following areas:

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- consolidating similar functions on one base or base complex, such as conducting strike and bomber/fighter training at Columbus AFB or a NAS Meridian/Columbus AFB complex;
  - operating a Navy TA-4 squadron on an Air Force base;
  - consolidating all joint primary training in such western bases as NAS Kingsville, Laughlin AFB, Reese AFB, and Vance AFB to exploit favorable weather and airspace; and
  - consolidating all joint primary training in such eastern bases as at NAS Meridian, NAS Pensacola, NAS Whiting, and Columbus AFB to permit all helicopter training to be consolidated at Ft. Rucker, thus freeing up NAS Whiting to receive fixed-wing aircraft to exploit available auxiliary fields and airspace?
17. It appears the actual UPT bases selected for realignment or closure were service-specific selections not related to joint training or syllabus. Please discuss this selection process.
18. In your view, what is the best way to judge the quality of a base's airspace, for example:
- by functional area (primary versus strike and bomber/fighter);
  - by use versus control; or
  - by potential versus actual use?
19. Other UPT bases own or control more airspace than Reese AFB, but much of this airspace is unusable for UPT activities. Is Reese AFB down-graded because it lacks actual ownership and control of required airspace--even though access to the airspace it uses for UPT training activities is unimpeded and despite of the lack of an encroachment problem?
20. If we find, after correcting for factual errors, that Reese AFB scores improve placing it into the yellow/green areas, then how would you recommend the Commission proceed in selecting a UPT base for closure?
21. Is the Air Force ignoring a key quality of life indicator that (1) Reese AFB is the number one choice of assignment by student and instructor pilots in AETC, (2) Reese AFB's accessibility is enhanced by its proximity to a large international airport, and (3) Reese AFB offers clearly superior higher education opportunities?
22. Please discuss, in detail, the process used to analyze a potential NAS Meridian/Columbus AFB complex.
- What alternatives or "strawmen" did the JCSG/UPT consider?
  - What COBRA runs were performed to assess a potential NAS/Meridian/Columbus AFB complex?

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- What cost advantages, if any, were considered (for example, NAS Meridian and Columbus AFB using joint targets and outlying fields and sharing excess capacity during runway maintenance)?
23. Should the Air Force transfer Columbus AFB to the Navy and move the Introduction to Fighter Fundamentals (IFF) training to Luke AFB?
  24. Did the JCSG/UPT consider NAS Meridian a potential transfer to the Air Force, which would allow the Air Force to close another UPT base?
  25. If Reese AFB is closed, then where is the Air Force planning to transfer joint Air Force and Navy primary training?
  26. A lot has been learned about conducting joint primary training at Reese AFB. How was this experience factored, weighted, or considered in the analysis to close a UPT base?
  27. What was the impact, if any, on Criterion I grading of Joint Primary Aircraft Training System (JPATS)-related issues?

Merrill Beyer and Mark Pross/Air Force Team and Jim Brubaker/Navy Team/April 7, 1995

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ECONOMIC SECURITY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE  
3300 DEFENSE PENTAGON  
WASHINGTON, DC 20301-3300



8 APR 1995

Mr. Frank Cirillo  
Air Force Team Leader  
Defense Base Closure and Realignment Commission  
1700 N. Moore St., Suite 1425  
Arlington, VA 22209

Dear Mr Cirillo:

Attached are responses from the Joint Cross-Service Group on Undergraduate Pilot Training regarding questions for the record which were submitted to the Air Force by the Commission.

I trust this information is useful.

Sincerely,

  
R. L. Meyer  
Director  
Base Closure

Attachment





PERSONNEL AND  
READINESS

OFFICE OF THE UNDER SECRETARY OF DEFENSE  
4000 DEFENSE PENTAGON  
WASHINGTON, D.C. 20301-4000

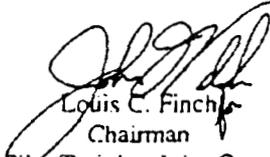


March 29, 1995

MEMORANDUM FOR DIRECTOR, BASE CLOSURE AND UTILIZATION

SUBJECT: Commission Questions for the Record

The response to your request for answers to the BRAC Commission questions for the record regarding the Joint Cross-Service Group's functional analyses is provided as Attachment One.



Louis C. Finch  
Chairman

Undergraduate Pilot Training Joint Cross-Service Group

Attachment:  
1. Qs & As



1. QUESTION: In evaluating the airspace available at each Undergraduate Training Base, did you concentrate on measuring only the volume of airspace owned or controlled by the base or did you take into consideration the usability of all the airspace available to the base for training?

ANSWER: The analysis did not restrict airspace credit to the volume a base owned or controlled.

2. QUESTION: Isn't usable or useful airspace a more valid measure than total airspace?

ANSWER: Usable or useful airspace is a key ingredient to the training mission. The existence of other special use airspace can add flexibility or the ability to accommodate expansion and/or mission changes.

3. QUESTION: Isn't it true that in the Joint Cross-Service Group, the Air Force argued with the Navy that heavily weighting total available airspace was an improper measure of capacity?

ANSWER: Assigning weights in the model was one of the Groups biggest challenges. All members agreed that airspace should be heavily weighted, so the discussion centered on what types of airspace to credit. In the end, the Group reached and implemented a consensus.



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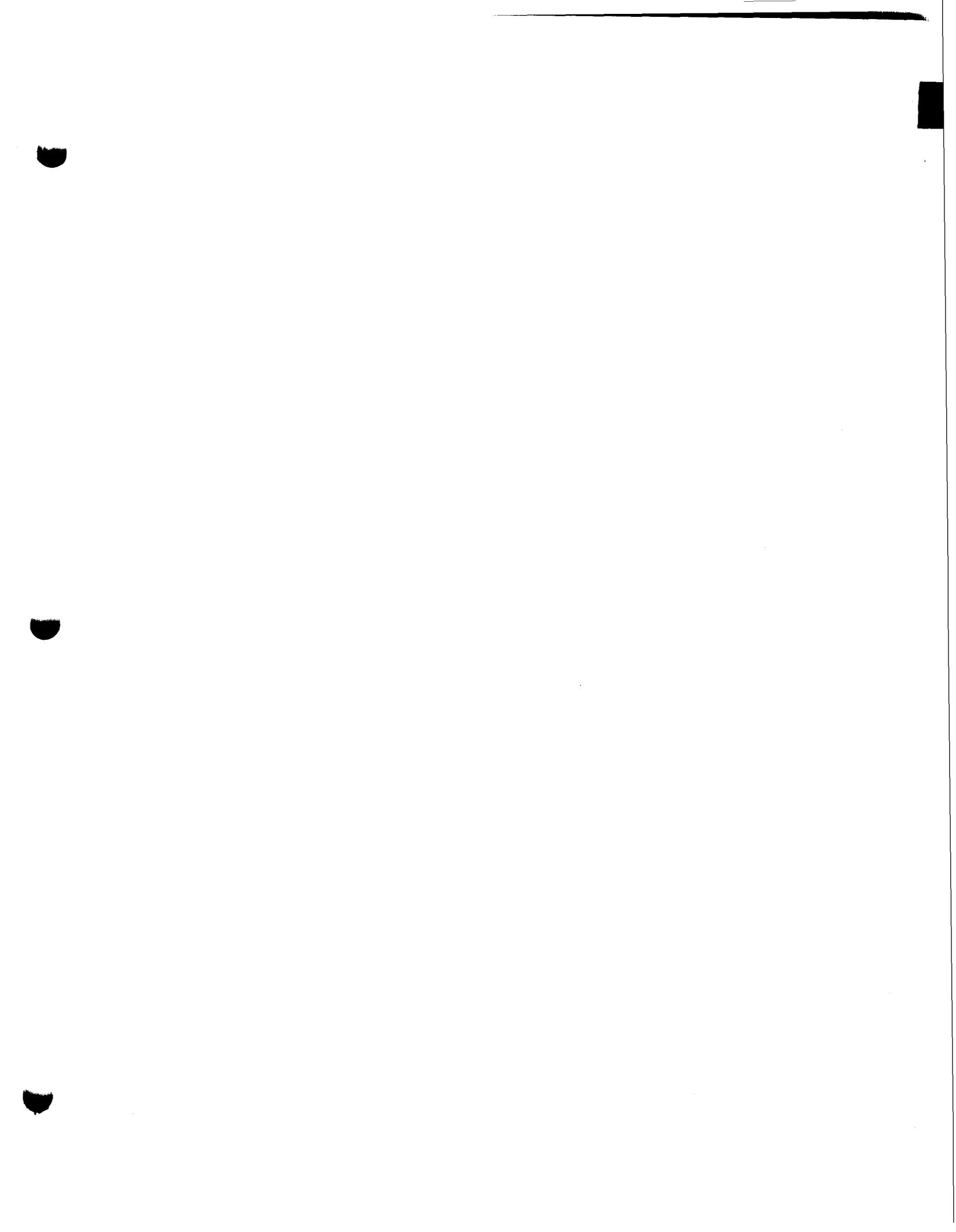
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**WORKING PAPERS**

**DEPOT MAINTENANCE STUDY**

**JANUARY 1994**

**WORKING PAPERS**



CIR 116

**DEFENSE BASE CLOSURE  
AND  
REALIGNMENT COMMISSION**

**DEPARTMENT OF DEFENSE  
DEPOT MAINTENANCE**

**ROGER P. HOUCK  
SENIOR TECHNICAL STAFFMEMBER  
FOR DEPOT MAINTENANCE**

## DEPOT MAINTENANCE

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### INTRODUCTION

The current U.S. political, economic, and military situation offers a unique, but limited, window of opportunity to make substantive changes in the Department of Defense's depot sizing, adjusting it to force structure changes which have resulted from the end of the Cold War. The current depot structure, which consists of approximately 30 facilities, is the product of a complex procurement and maintenance system that, for the most part, was founded in World War II and sustained by the Cold War for nearly 50 years. Because of a changing world and changing force structure requirements, DoD now finds itself with more depot maintenance capacity than is needed. Continued retention of this excess depot capacity--unneeded maintenance, overhaul, and modification facilities for requirements that have greatly diminished--is costly, and will begin to drain more defense dollars from the operating forces.

DoD has attempted for over 20 years to address cost-savings initiatives which, if implemented, would have resulted in a more cost-efficient, and less duplicative, depot structure. Since the early 1960s, the Services, DoD, and external agencies and commissions have undertaken numerous management initiatives, studies, and audits with recommendations for improving depot maintenance effectiveness and economies. These include standardizing cost accounting and reporting systems, increasing interservicing and competition, and varying degrees of depot maintenance modernization and centralization. Although these efforts resulted in some improvements--such as the Air Force's adopting its Integrated Weapon System Management and Technology Repair Center concepts--excess capacity, unnecessary duplication, and inefficiencies still exist.

How best to examine an enterprise that would rank in the top 30 companies of the Fortune 500 with the goal of identifying the best way to scale down that enterprise and reduce costs without degrading current or future capability to meet peacetime and wartime needs is the central problem. This problem of excess capacity within the DoD depot structure is a "national problem" because what we are talking about are genuine "national treasures" --facilities and a technical skillbase that has developed and matured for nearly a half century. The capabilities found within the DoD depot structure cannot simply be packed up and moved elsewhere without incurring some kind of degradation to our warfighting capabilities. The problem of excess capacity in the depot structure is further compounded by the growing evidence that the private sector's defense technological base is not being taken into consideration--the current DoD depot structure was established based on what the private sector either could or could not do; it is, therefore, essential that private sector capacity and capabilities be factored into any DoD strategic gameplan for reducing its depot structure. ✓

## CRITICALITY OF DEPOT MAINTENANCE

**Authority:** Department of Defense Directive 5100.1, Functions of the Department of Defense and Its Major Components, assigns the Army, Navy, Air Force, and Marine Corps, under their respective Secretaries, the responsibility for "providing logistic support for Service forces, including procurement, distribution, supply, equipment, and maintenance, unless otherwise directed by the Secretary of Defense." To meet the responsibility to maintain its equipment, each Service operates a depot maintenance system.

**Scope:** Depot maintenance is a vast undertaking that supports over 700,000 pieces of equipment, 36,000 combat vehicles, 660,000 wheeled vehicles, over 450 ships, and nearly 20,000 aircraft of over 100 different models. Maintenance of this equipment requires extensive shop facilities, specialized equipment, and highly skilled technical and engineering personnel to perform major overhaul of parts or completely rebuild parts. This includes reverse engineering, and manufacturing and remanufacturing of parts, modifications, testing, and reclamation. It also requires the flexibility to accommodate readiness changes and problems relating to safety of flight maintenance or inspection, scheduling maintenance to maintain alert capabilities, and particularly, the ability to surge to meet contingency requirements. The depot environment is a complex business enterprise, and is accomplished both within the military depots as well as within private industry. Maintenance at the military depots is considered "organic," while other maintenance is performed under contract to private industry.

The requirement to meet contingency requirements is embedded in law--Title 10 of the U.S. Code, Section 2484, requires DoD depots to "... maintain a logistics capability to insure a ready and controlled source of technical competence and resources necessary to insure effective and timely response to mobilization, national defense contingency situations, and other emergency requirements." This capability to meet contingency requirements is referred to as "core capability." In layman's terms, it is the amount and variety of skills required to be retained under government control in DoD depots to insure those operations can rapidly expand to effectively respond to emergencies. This ability to expand must encompass not only greater volumes of work, but also a sufficiently broad organic (military depot) industrial base capability to flexibly shift to other workloads, since wartime needs differ significantly from peacetime needs. ✓

**Proven Performance:** Organic depots are essential to the U.S.'s warfighting capability. They are the cornerstones of defense readiness. The combined strengths of the depots, shipyards, ordnance stations, and specialized depot maintenance activities have for over 50 years provided a responsive industrial base that has proven essential to the sustained application of land, sea, and airpower in peacetime and in war. They have provided U.S. fighting forces with the right kind of equipment, in first class condition, when and where needed. The record of organic support to our forces in Operations Desert Shield and Desert Storm provides an example. The J-4, the Joint Staff Director for Logistics, referred to the operation in the Gulf as a "100 hour ground war, with a 43-day air campaign, and an 18-month long logistics action." No less a military authority than Field Marshall Rommel is reputed to have stated, "Before the first shot is fired, logisticians have already determined the outcome of the battle." There are numerous examples where organic depots have proven their worth during crises. For example, during the period of buildup and

engagement in the Gulf War, the flexibility and direct management control the Air Force exercises over its organic depot maintenance system enabled it to accelerate the production of 10 percent of the critically needed C-5 airlift fleet that happened to be in depot maintenance when hostilities began. Air Force depots also accelerated 41 C-141s back into service to deploy and support U.S. forces half way around the world. In 1984, engine production at Oklahoma City Air Logistics Center was halted when a major section of its primary industrial facility was destroyed by fire. When industry was contacted regarding repair and overhaul of specific types of engines, it advised that due to facility, manpower, and tooling constraints, a minimum of six months would be required to produce the first engine. In response, personnel at Oklahoma City dismantled and reconstructed required portions of the engine repair line and produced its first engine in about 30 days. To cite yet another example, in 1988 the Oklahoma City Center responded to a serious problem rising from a private industry company unable to meet its contractual obligations on the C-135 fleet. The flexibility of the Air Force's depot system allowed it to increase its C-135 workload by 63 percent and complete an additional 31 C-135s to keep the fleet a full strength and in the air. There are numerous other examples--from all the services--in support of their argument that retention of this organic core capability is essential for U.S. readiness and warfighting requirements and that private industry cannot be relied upon to fulfill these requirements.

### **WHAT'S WRONG WITH DOD'S DEPOT MAINTENANCE SYSTEM?**

**It's Costly:** From FY 89, and projected through FY 97, DoD's annual maintenance budget is in the \$13 Billion range. About 70 percent of this expenditure is accomplished in DoD's depots and the balance by private contractors. While depot maintenance expenditures are projected to remain relatively stable through the end of the decade, the overall defense budget has declined, and the force structure and that force structure's operating tempo has declined significantly. Total U.S. defense spending by 1997 will be 40 percent less than it was in 1987. Total U.S. military strength will be reduced by about 25 percent between the years 1991 and 1997. Operations and Maintenance funding will be about 20 percent less in 1997 than it was in 1991. Thus, it is clear that while DoD's maintenance budget remains stable, other categories are in a period of steep decline. Readiness will, and should, be DoD's top priority; consequently, the downward pressure to cut defense maintenance spending will intensify. It was not until 1990 that DoD gave serious attention to this problem. In that year, the Deputy Secretary of Defense concluded that substantial opportunities existed to increase the efficiency and reduce the cost of the Department's depot maintenance activities while continuing to effectively conduct their maintenance mission. He directed the Services to develop near- and long-term plans for increased efficiency, including single-siting of workloads in the Air Force and Navy depots, and a plan for improved maintenance information management. In addition, he established a Defense Depot Maintenance Council to develop and implement strategies for increasing efficiency and reducing costs through streamlining, restructuring, and consolidating functions, while at the same time preserving the capability to ensure equipment and weapon system readiness.

**Excess Capacity:** The services, DoD, and GAO have studied the relationship of repair capability (people, equipment, and facilities) to requirements in great detail. There is consensus that there is excess capability, or excess capacity, within the DoD depot structure. Depending on the agency conducting the review, as well as the baseline or benchmark used, the excess capacity

figure ranges from 25 to 50 percent. Retention of this excess capacity--again, people, equipment, and facilities--is expensive, as it eats into the operating forces' budgetary requirements. Some agencies believe this estimate of excess capacity is conservative, for reasons which will be addressed later in this report. ✓

**Unnecessary duplicate capabilities/technologies:** The services have multiple and diverse product lines that they support. Duplicate capabilities exist in reverse engineering, manufacturing, remanufacturing, modification, and testing requirements. Despite efforts to single-site workloads, particularly in the Air Force and Navy, duplicate capabilities exist in airframe, engine, avionics, electronics, and most commodity groups. While some of these capabilities may be weapon system peculiar, the capital investment required to maintain these dual capabilities is substantial.

**No effective structure/process for implementing joint solutions:** A review of correspondence submitted to the Chairman of Joint Chiefs of Staff prior to submission of the 1993 Defense Base Closure and Realignment recommendations highlights this problem. In a 3 Dec 92 DepSecDef memorandum, the Services were directed to prepare integrated proposals, with cross-Service inputs, to streamline depot maintenance activities. Although the services' proposals for closure or realignment were consistent with one of the options in the JCS Consolidation Study for downsizing within service boundaries, it offered significantly less than expected with increased levels of interservicing. The correspondence stated, "In our judgment, the Services will not voluntarily agree to any significant increases in interservicing, either in ground systems, or fixed wing aviation. As a result, we will miss the opportunity to close some excess facilities via BRAC 93 and be forced to accept higher costs of doing business until decisions from BRAC 95, if it occurs, are implemented" The documents went on to add, "The Air Force and Navy are at an impasse on any increased level of interservicing in fixed wing aviation. This is the area of greatest excess capacity and additional savings potential." ✓

**Perception that Services Alone Will Not Fix Problem:** Numerous management initiatives, studies, and audits going back to the 1960s have offered recommendations to DoD and the services on how to make depot maintenance more effective and cost-efficient. Few, if any, of these recommendations have been implemented. Again, drawing upon correspondence between the Office of the Chairman, JCS and the J-4 staff, "The Air Force and Navy remain at an impasse on fixed wing aviation. This is the area where major savings and closures could be realized if an increased level of interservicing was conducted. It appears that breaking the impasse will occur only by direct negotiations between SECAF and SECNAV." ✓

**No Clear Methodology for Identifying "Core" Workload:** "Core" workload is the minimum essential organic depot maintenance skill and resource base which is retained in DoD depots to support contingency requirements. Clearly defining core requirements would appear essential to making key decisions on the future of the depot maintenance system. However, according to GAO, the services, despite DoD direction, have not yet made such a determination. GAO says that, while the services indicate they are working on this problem, none has yet sought approval of a methodology for defining its core requirement.

**No Definitive Methodology for Measuring Performance:** In 1990, the Joint Policy Coordinating Group on Depot Maintenance established the Joint Performance Measurement Group to implement and maintain the Defense Depot Maintenance Performance Measurement System. This system is intended to provide an improved set of performance indicators for depot level maintenance activities. Development and implementation of this system, however, has been slow with no approved system yet in place. Seven key areas of performance--effectiveness, efficiency, quality, capacity utilization, productivity, cost performance, and innovation--were identified. In January, 1993, the Joint Performance Measurement Group proposed eight new performance measures instead. These were due date performance, net operating results, throughput, inventory, operating expense, return on investment, flow day reduction, and unit cost. These eight criteria attempt to integrate two management concepts--the theory of constraints and competitive edges. Regardless of the nature of the performance measurement system ultimately implemented, the resulting output will only be as accurate and informative as the quality and consistency of the data that is input. Without the feedback afforded by the collection and analysis of improved performance indicators, it will be difficult for DoD to successfully achieve the required efficiencies and economies needed to cost-effectively manage its depot maintenance operations. ✓  
✓  
✓

**No Apparent Strategy for Simultaneous Drawdown of DoD Depots and Private Industry:**

It is clear that the DoD depot structure must be downsized to make it more effective and cost-efficient. What is not clear is that DoD has a gameplan or strategy for actively participating with private industry in its downsizing to insure that the defense industrial and technological base retains the capability to design, develop, produce, and sustain future U.S. weapon systems.

**OBSERVATIONS FROM DOD JOINT FIXED-WING AIRCRAFT STUDY**

In 1991, a DoD Study Group addressed the issue of consolidating the repair of fixed-wing aircraft assets within DoD. While the only real significant recommendation from that group was the consolidation of C-130s at Ogden Air Logistics Center and F-4s at Cherry Point Naval Air Depot, that study offered some observations on the "rush" to make depot maintenance a business. That group's comments and observations are offered within the context of this study: P u's

- Providing reliable support for military contingencies while balancing business objectives contains two contradictory objectives. In peacetime, the contradiction is minimum, whereas, in wartime or preparing to support a wide spectrum of military contingencies, the contradiction grows. The primary business of depot maintenance is not business--it is effective, unfailing, military support. However, the effective support of military contingencies also requires the efficient use of allotted resources. Therefore, obtaining the most capability or use from the defense dollar is and will remain a paramount objective of each service. L
- The ability to respond to the continuum of support requirements varying from peacetime to full scale combat has presented logisticians with a conflict between maintaining peacetime

efficiency and wartime effectiveness. At one end of the continuum is a logistics system sized to be highly efficient during peacetime, but unresponsive to the extreme demands of war. At the other end of the continuum is a system capable of supporting any contingency, yet highly inefficient during peacetime. The fiscal constraints of today's environment are forcing logistics support toward the peacetime end of the continuum; at risk is the ability of the system to respond to the wartime demand.

- The uncertainty of wartime demand promotes the premise that the depot system can not be placed on a par with a large commercial enterprise whose sole measure of success is financial profit, or return on investment.

- Barriers within the "system" which prevent the depots from operating to maximize business-like efficiency. These include:

(1) The organic depot maintenance system is often the "court of last resort" for the maintenance, overhaul, modification, or manufacture of many weapon systems and their subsystems and components.

(2) The vagaries in the art of long-range forecasting and engineering, coupled with a Byzantine contracting and acquisition process, keep the military depots occupied responding to unanticipated manufacturing and repair requirements, usually of a critical nature.

(3) The inability to divest "unprofitable" product lines or to eliminate contingency (mobilization) capacity, imposes an extraordinary burden on the organic depots. For example, crash/battle damage holding fixtures are held in reserve; in actuality, they are seldom used. In addition, across the aviation depots some 80 percent of exchangeable and/or repairable items are repaired in quantities of less than 40 units per year and in many cases represent technologies that are decades old.

(4) Legislated competition requirements for procurement actions.

(5) Inflexibility of the personnel system in hiring, firing, classification, and use of employees.

(6) Lack of financial flexibility to shift resources when needed.

(7) Inability to control planned workload requirements.

(8) Defining the "bottom line"--Performance Measurement Standards concerning many issues are being developed (investments, workload balancing, etc.), yet none of the standards will attempt to tie the cost of a non-operational aircraft into the performance equation. This increases the potential for driving the organic system to suboptimize and make decisions affecting production output without considering the cost of a decline in readiness.

(9) The general perception is the higher capacity utilization rate a depot has, the better. This is not true; in reality, 100 percent utilization will never be achieved and is counter to providing effective mission support.

The "master caution light" in the study was this--the primary purpose of the aviation depot system--to support military operations and contingencies--is being neglected in this age of fiscal reductions. The costs of supporting a military force for national security purposes are difficult to compare with those of a civilian enterprise. The purposes of the military and commercial systems are totally different.

## CAPACITY

**Terms Defined:** The following definitions are provided to assist the reader in understanding a discussion of capacity within DoD's depots:

**Capacity:** As defined in DoD 4151.15-H, capacity is the amount of workload, expressed in actual direct labor hours (DLH) that a facility can effectively produce annually on a single shift, 40-hour week basis while producing the product mix that a facility is designed to accommodate.

**Excess Capacity:** Capacity for which no requirement exists.

**Workload:** The amount of workload in direct labor hours (DLH) that a depot anticipates in a given fiscal year; this workload is expressed as funded (vice unfunded) workload.

**Capacity Index:** The amount of workload in direct labor hours that a depot can effectively produce annually on a single shift, 40-hour week basis.

**Utilization Index:** A computation of dividing workload by capacity index.  $= \frac{W}{C}$

**Capacity computation:** The DoD-approved formula for computing a depot's capacity is: Number of workstations times availability factor (.95) times annual productive hours (1615).

A **workstation** is the designated space of equipment/process usage than can be occupied consistently by one direct production worker to accomplish the assigned task on a full-time basis. It may include more than one location if the worker moves to other locations to accomplish the assigned task. The **availability factor** (.95) takes into account equipment downtime, power outages, etc. The **annual productive hours** (1615) represents annual paid hours (2080), minus indirect factors such as leave, training, and holidays.

**History of Capacity Measurement Process:** In 1990, a DoD study team was tasked to develop recommendations for a capacity measurement process which would portray comparable organic depot maintenance capacity and provide a basis for determining utilization. The emphasis was on developing methods that would result in comparable data to be used in future workload consolidation studies. The study concluded that the basic approach to capacity measurement

should be a refinement of the pre-1990 methodology. It also concluded that since capacity data is a broad indicator of relative size rather than a precise measure, it should be referred to as an "index." The basic formulas for computing capacity indices were developed to support peacetime and mobilization planning. Specific refinements to the pre-1990 capacity methodology were recommended to promote comparability, accommodate configuration changes, delete special consideration for bottlenecks, and include uncovered production areas. The study also recommended that DoD's policy of requiring 100 percent utilization in peacetime be reviewed. It acknowledged that while capacity in excess of requirements needs to be divested, some reserve capacity must be retained to support sound business practices and military necessities such as mobilization. One-hundred percent utilization, according to the study, is usually a costly approach. Rather than matching workload with capacity, facilities can operate at a more cost effective level by balancing flow with demand. The study recommended to DoD that the utilization policy be revised to recognize the need for reserve capacity and require a level of peacetime utilization that will insure that mobilization and contingency requirements can be met while operating in a cost effective manner.

**JCS Consolidation Study Definition of Capacity:** A JCS Depot Consolidation Study completed in January 1993 concludes that depot capacity is a function of the physical plant and personnel assigned, with the level of employment being the driving factor in the calculation. Therefore, the only variable in the capacity calculation formula is the number of work stations, which as defined, are not directly affected by personnel vacancies. The study adds, that from a purist's viewpoint, a reduction in personnel levels should only affect a depot's ability to perform up to its capacity. In reality, however (according to the Study), depots, when faced with a loss of manpower, elect not to use equipment and/or decrease shop configuration which results in reduced work positions and a lower computed capacity level.

**HO Air Force Material Command Comments on Capacity:** The capacity computation simply aligns equipment required to accomplish a function to a given workload mix and available manpower and is not an accurate index to apply to facility utilization. Therefore, capacity utilization is not an accurate measure of a depot's ability to realign shops and equipment to accomplish requirements. A more accurate comparison is workload accomplished in prior years with an adjustment for new facilities. For example, Oklahoma City Air Logistics Center produced approximately 12 million Direct Labor Hours of annual workload during the 1986-1987 timeframe, and is capable of performing at or above that level when unconstrained by manpower and funding."

**Recent Studies on Excess Capacity:**

**JCS Consolidation Study--The General Went Study:** This study was completed in January 1993 and concluded that DoD currently has 25 to 50 percent more depot capacity than the department will need in the future and unnecessary duplication exists throughout the individual service depots, especially when viewed across service boundaries. This particular study was considered "flawed" by the services, primarily because of methodology used. Excess capacity was identified by subtracting the planned FY 95 workload from the FY 87 capacity. FY 87 capacity figures were used since it was a peak year with larger overall employment and more

accurately reflected what work a depot facility could absorb during workload consolidation. The services' primary complaint against this study was that many depots have been reconfigured since 1987 to reflect a lower capacity. Consequently, in order to accept added workload, these depots will require reconfiguring to a larger capacity. Looking at the Air Force, the JCS study concluded that based on a FY 95 workload of 34 million DLH and a FY 87 capacity of 53.1 million DLH, there will be 19.1 million excess DLH. In other words, the Air Force's facilities would be operating at only 64 percent capacity which equates to 36 percent excess capacity. (Note: if the Air Force's workload at Aerospace Guidance and Metrology Center, Newark AFB, OH, is factored out--since it will close--the utilization rate would still be at only 62 percent, owing to Newark's relatively low (1.1 million DLH) workload.). Going back to the 19.1 million DLH excess, if one applies a standard Air Logistics Center loading of 6.6 million DLH as a standard configuration factor, this would equate to nearly three excess facilities.

**GAO Study:** The General Accounting Office has, over the years, conducted numerous studies on DoD depots. In testimony before the House of Representatives' Subcommittee on Readiness, on 6 May 93, GAO stated that the estimates of excess capacity outlined in the JCS Study were conservative. According to GAO, the DoD depot system is now sized and organized to support a Cold War threat. Sizing the depot system to accommodate this scenario has created excess capacity and unnecessary duplication. For example, this requirement resulted in the development of an Air Force depot system sized to support a sustained wartime or emergency surge to 160 percent of the peacetime workload. The long-standing excess capacity in the DoD depot system has been exacerbated by the end of the Cold War, a reduction of defense systems and equipment, retirement of less reliable and more maintenance-intensive systems, and the private sector's push for a greater share of the depot maintenance workload. DoD workload projections for FY 95 are now lower than those used in the JCS study--this was confirmed in data provided by the Army and the Navy, which told GAO that they had lowered by 1.8 million DLH and 1.7 million DLH, respectively, the workload projected through FY 95. GAO says that all of the services, except the Marine Corps, indicated that they anticipate the future depot workload estimates will continue to decline. GAO believes the JCS estimates were conservative also because the depot capacity estimates used in the analysis greatly understated DoD's ability to more cost-effectively use existing facilities and equipment to generate maintenance output. For example, JCS's methodology considered only the capability to conduct a single, 40-hour-per-week operation; understated the ability of the gaining depots to absorb additional workload, given the movement of equipment from losing depots and potential productivity gains achievable by increasing available manpower; and did not consider existing depot maintenance capacity in the private sector or military units. Additionally, after querying the services about increases in depot facilities and plant equipment since 1987, GAO found that overall depot industrial capacity has increased. For example, based on information provided by the services, since 1987 DoD has added 5.6 million square feet in industrial maintenance square footage valued at \$606 million and 31,563 pieces of equipment valued at \$1.5 Billion.

**Defense Depot Maintenance Council Corporate Business Plan:** The Defense Depot Maintenance Council (DDMC) was established in 1990 to advise the Assistant Secretary of Defense for Production and Logistics on depot maintenance management within DoD. It serves as a mechanism for coordinated reviews of DoD depot maintenance policies, systems, programs,

✓  
6/1/93  
7/1/69  
8/62

✓  
✓  
NOTE  
Demolition??

and activities and provides advice on initiatives for reducing costs. Each year, the DDMC publishes a Corporate Business Plan for a five year period, outlining DoD's strategy for increasing efficiency and productivity, while preserving the capability to insure weapon system readiness of U.S. fighting forces, and while streamlining, restructuring, and consolidating functions. The Corporate Business Plan also provides data on projected capacity and workload. Data contained in the FY 92-FY 95 edition indicates that the Air Force's five Air Logistics Centers will have a combined capacity of 38.6 million DLH in FY 97, and a projected workload of 30.2 million DLH. This results in an "excess capacity" of roughly 8.4 million DLH, or approximately one and one half excess facilities. However, if the FY 91 capacity (44.6 million DLH) is used as a benchmark (like the FY 87 benchmark in the JCS Study), the "excess capacity" then becomes 14.4 million DLH, or two full excess facilities. ✓

**Joint Staff Multi-Service Depot Capacity Review:** In December 1993, a DoD Joint Staff Multi-Service Depot Capacity Review was conducted prior to assist in the preparation of depot closure and realignment recommendations. This study used FY 91 capacity as the benchmark and compared it to projected workload requirements (i.e., budgeted end item/component and reimbursables FY 94-FY 99, reflecting a 60/40 organic/contract workload split.) This study concluded that FY 99 DoD aviation workload requirements will exceed FY 91 capacity by 14.6 million DLH. Specifically, for the Air Force, the FY 99 requirements exceeded the FY 91 capacity by 7.9 million DLH--this is slightly more than one Air Logistics Center equivalent.

**HQ USAF/LG Certified Data Capacity Projections:** HQ USAF/LG provided to the Defense Base Closure and Realignment Commission in 1993 copies of worksheets used in computing capacity and workload projections through FY 99. The Air Force's approach was to use FY 91 actual workload produced as the "new" capacity benchmark, since it allowed for facility divestiture, streamlining, personnel Reductions-in-Force, and other downsizing initiatives conducted during the years FY 87-FY 91. This data indicates that in FY 91 the five Air Logistics Centers produced 36.8 million DLH of work (this excludes the Aerospace Guidance and Metrology Center). The projected FY 99 workload is 26.4 million DLH--an excess of 10.4 million DLH. This would come very close to two full facilities excess. Based on continued downward projections of workload, it is very likely that "the numbers" would clearly indicate that two Air Logistics Centers could be closed. Closure of two of the facilities through the 1995 round of base closures could pose a problem for the entire system of ALCs; according to Acting Secretary of the Air Force Boatright, it would take the "system" a full eight to ten years to recover from the simultaneous closure of two facilities. ✓

**Summary of Excess Capacity Issue:** The DoD depot maintenance system undeniably has excess capacity. DoD admits this and appears committed to restructuring the system to eliminate the excess and produce savings through FY 97 of over \$6 billion through consolidation, downsizing, streamlining, interservicing, and competition. The real question is whether these measures will be adequate in themselves to redress the excess capacity problem. In this analyst's opinion, it will not. Only depot closures will produce the long-term savings that are required. The JCS Study and GAO both share this opinion.

see  
chart  
2

## DOD EFFORTS TO PROMOTE SAVINGS IN DEPOT SYSTEM

DoD's strategic blueprint or gameplan for achieving savings in its depot system and make the depots more efficient is contained in the Defense Depot Maintenance Council's Corporate Business Plan. Published annually and projecting depot activities through a five year period, the Plan outlines specific goals and objectives and provides annual updates on interservicing, competition, downsizing, capacity utilization, and streamlining initiatives. For the period covering FY 92-FY 97, the Plan identified savings of \$6.3 billion.

Near-term initiatives (\$3.2 billion) include downsizing of direct and indirect workforces, closure of facilities, cancellation of facility projects, and internal service consolidation of workloads.

Interservicing initiatives (\$0.1 billion) will result in greater economies of scale and savings are supposed to accrue from overhead reductions caused by interservicing.

Competition initiatives (\$1.7 billion) will result from an increased number of competitions, to include both public-public and public-private competition.

Improved capacity utilization (\$1.3 billion) will result from a redistribution of workloads within and among the services.

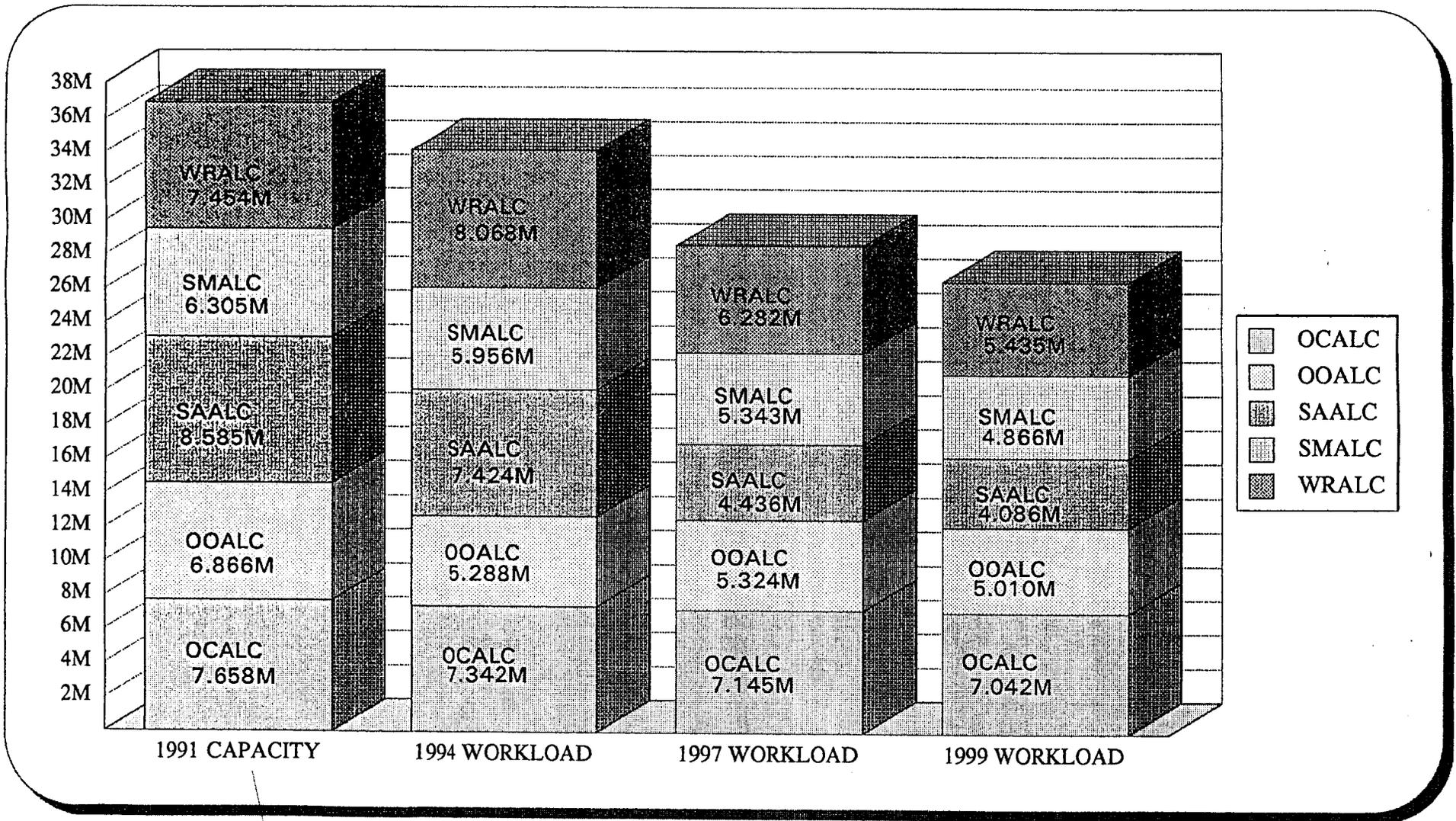
According to the JCS Depot Consolidation Study, it is highly unlikely that the Services will be able to meet these savings without taking actions which would severely affect readiness and the ability to go to war. The JCS Study acknowledges that some savings have been achieved through competition, interservicing, and capacity reduction; however, it cautions that the potential for continued success is limited without substantial new savings. Competition produces unit cost efficiencies and savings in depots, and the savings would increase if all services maximized the depot work they award competitively, vice the limited amounts seen thus far. Competition initiatives are projected to achieve savings of less than 2 percent of the total depot maintenance budget from FY 91 through FY 97. GAO reports that it and DoD audit agencies have not been able to substantiate much of the competition savings reported in the past. GAO also questions the services' ability to achieve cost reduction goals, in part because actual events have not supported DoD's assumption that competitions between the public and private sectors will reduce depot maintenance costs by an average of 20 percent for each work load that is competed. GAO further believes that the services' lower-than-expected savings can be attributed to declining workloads that have not only caused workloads to be eliminated from the program but also limited the amount of savings that were achieved on the workloads that remained in the program; unanticipated cost increases; and a certain amount of fixed costs that must be shifted to non-competed workloads when a competition results in the transfer of workload from the public to the private sector. Although the services plan to substantially expand the scope of their public-private competition programs during FY 93 and beyond, GAO questions whether these plans are realistic, especially in view of the difficulties the services have experienced with their competition programs during FY 92 and FY 93. Regarding interservicing, FY 91 interservicing efforts achieved only \$100,000 in savings. In FY 93, interservicing savings are projected to be

\$23.1 million, rising to \$29.2 million in FY 97. This magnitude of savings, according to JCS Study, will be possible only if the services interservice vastly more work than has previously attempted. Each service can argue that there is a ceiling on interservicing imposed by their ownership of unique platforms; however, the JCS Study claims that a significant amount of similarly and commonality, particularly at the engine and component level, makes interservicing potential much greater than the current 3 percent. Reducing capacity and workload, without reducing the number of depots, decreases expenditures for direct labor and variable overhead costs; however, it does not significantly decrease the costs of fixed overhead expenses. Only depot closures, according to the JCS Study, will result in substantial savings by eliminating the fixed overhead of depots closed. This cost of total fixed overhead is estimated to have consumed 28 percent of the FY 90 depot maintenance expenditures. While capacity reductions will decrease the costs for direct labor hours and variable overhead expenses, they will not significantly decreased the substantial fixed overhead burden. Reducing capacity without closing depots will push the estimated fixed overhead percentage of depot costs over 32 percent by FY 96. Thus, fixed overhead costs should be the prime area to reduce depot maintenance expenditures. The only way to effectively reduce these costs is to close depots. ✓

# AIR LOGISTICS CENTERS

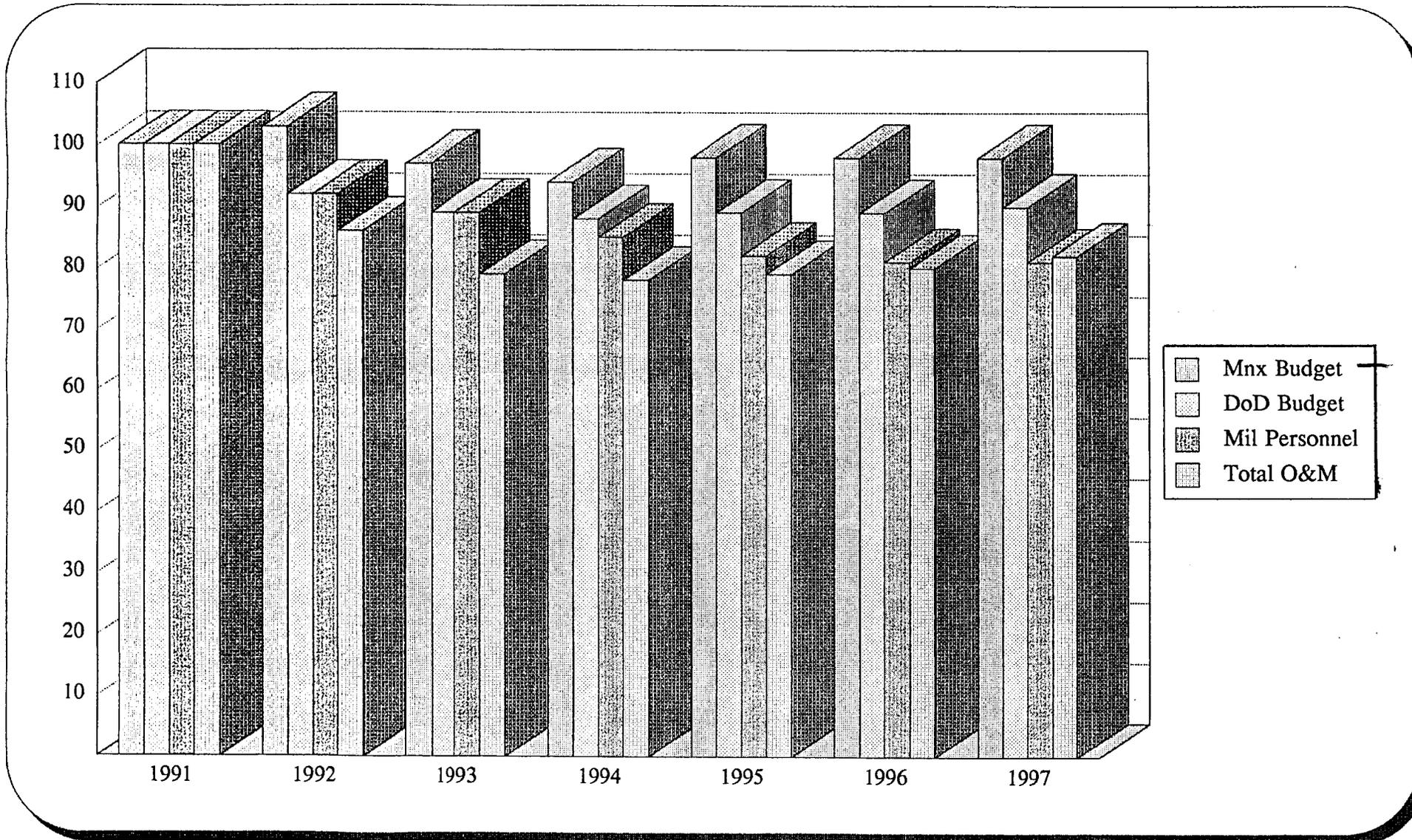
## 1991 - 1999 ESTIMATED FUNDED WORKLOAD VS. 1991 CAPACITY

(SOURCE: SAF/MII 21 JUN 93 LTR, USAF/LG DATA)

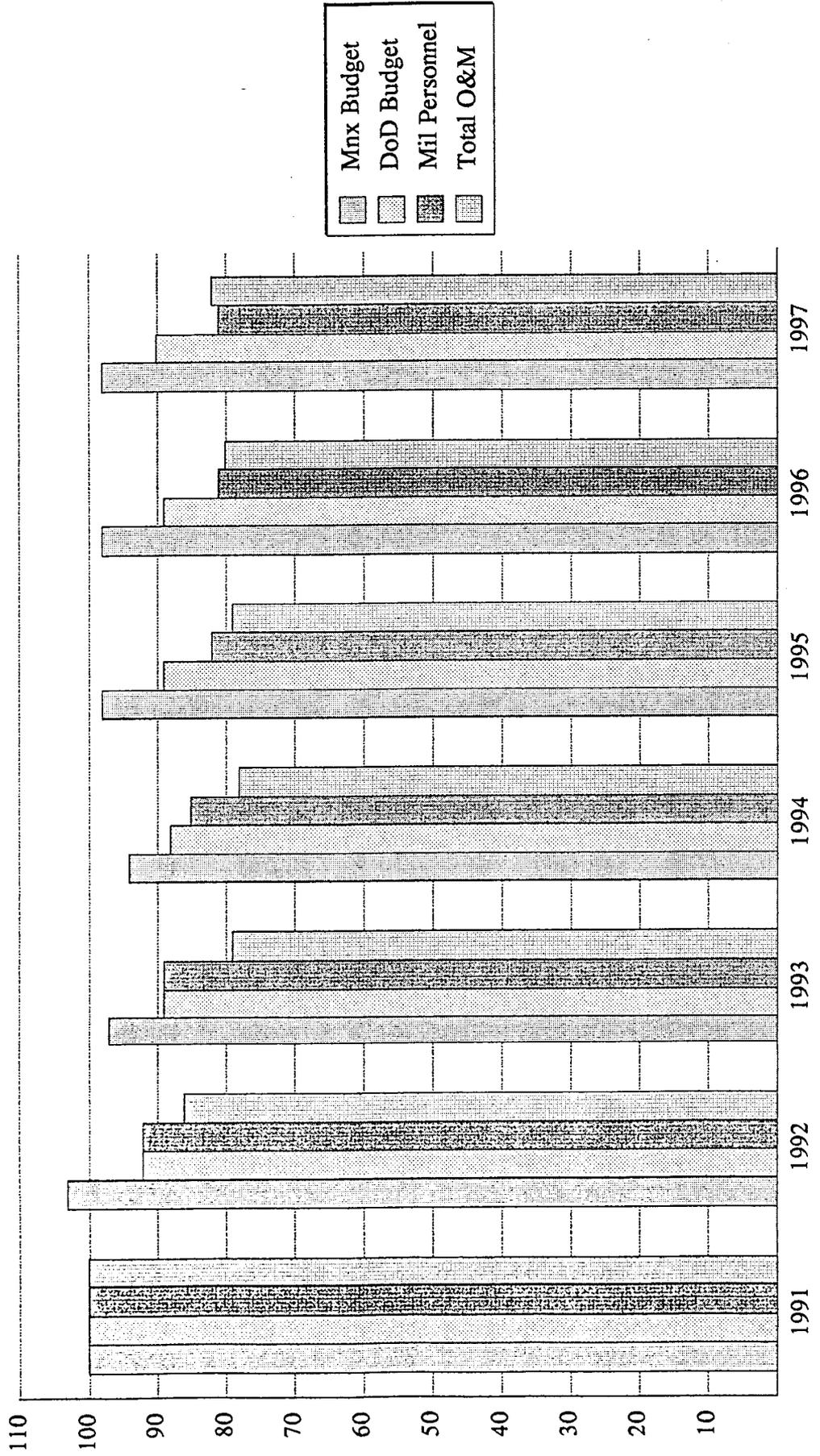


w/L?

DEFENSE PROGRAMS  
(PERCENT CHANGE FROM FY 91)  
(SOURCE: JCS DEPOT MAINTENANCE CONSOLIDATION STUDY)

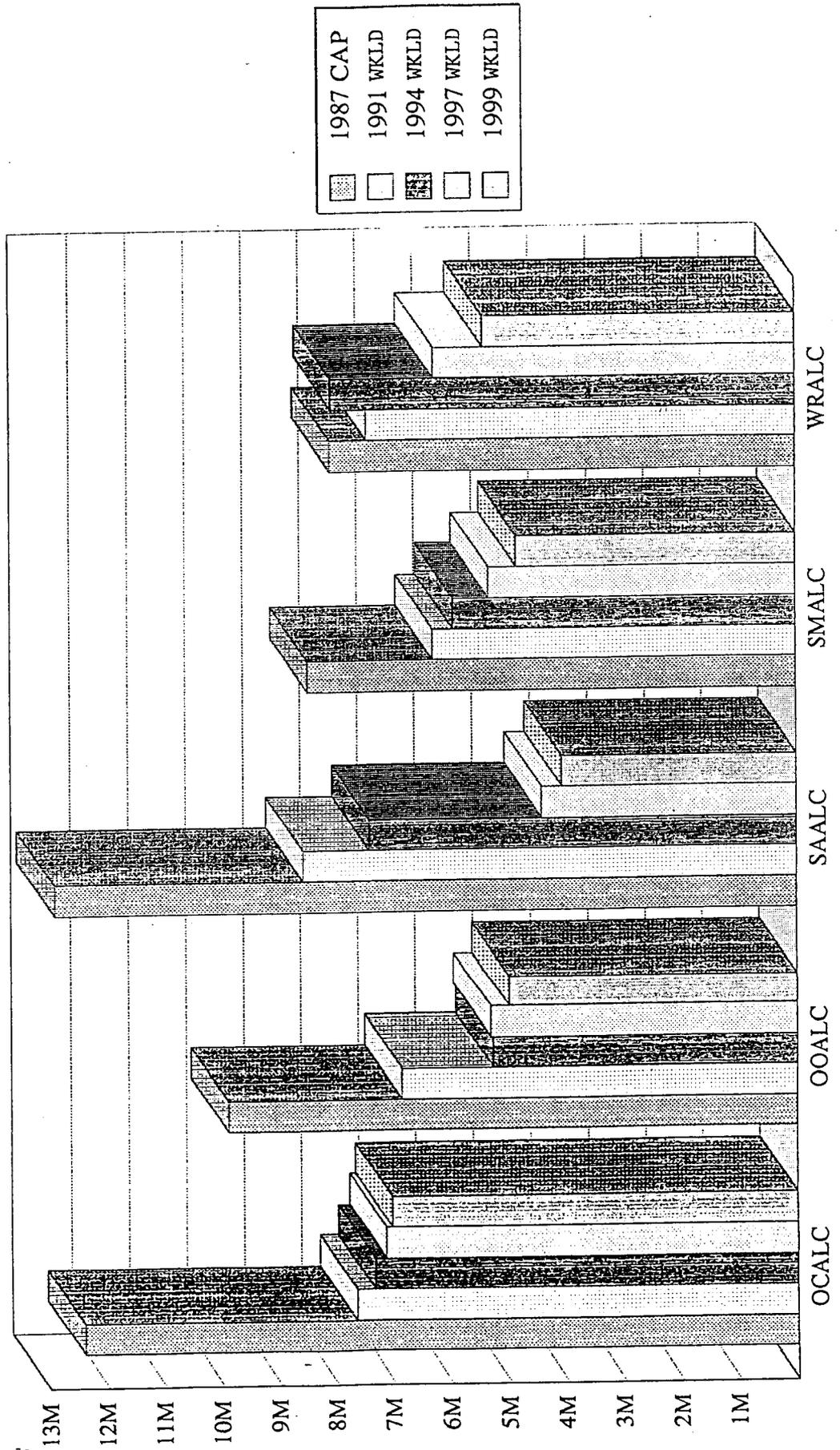


DEFENSE PROGRAMS  
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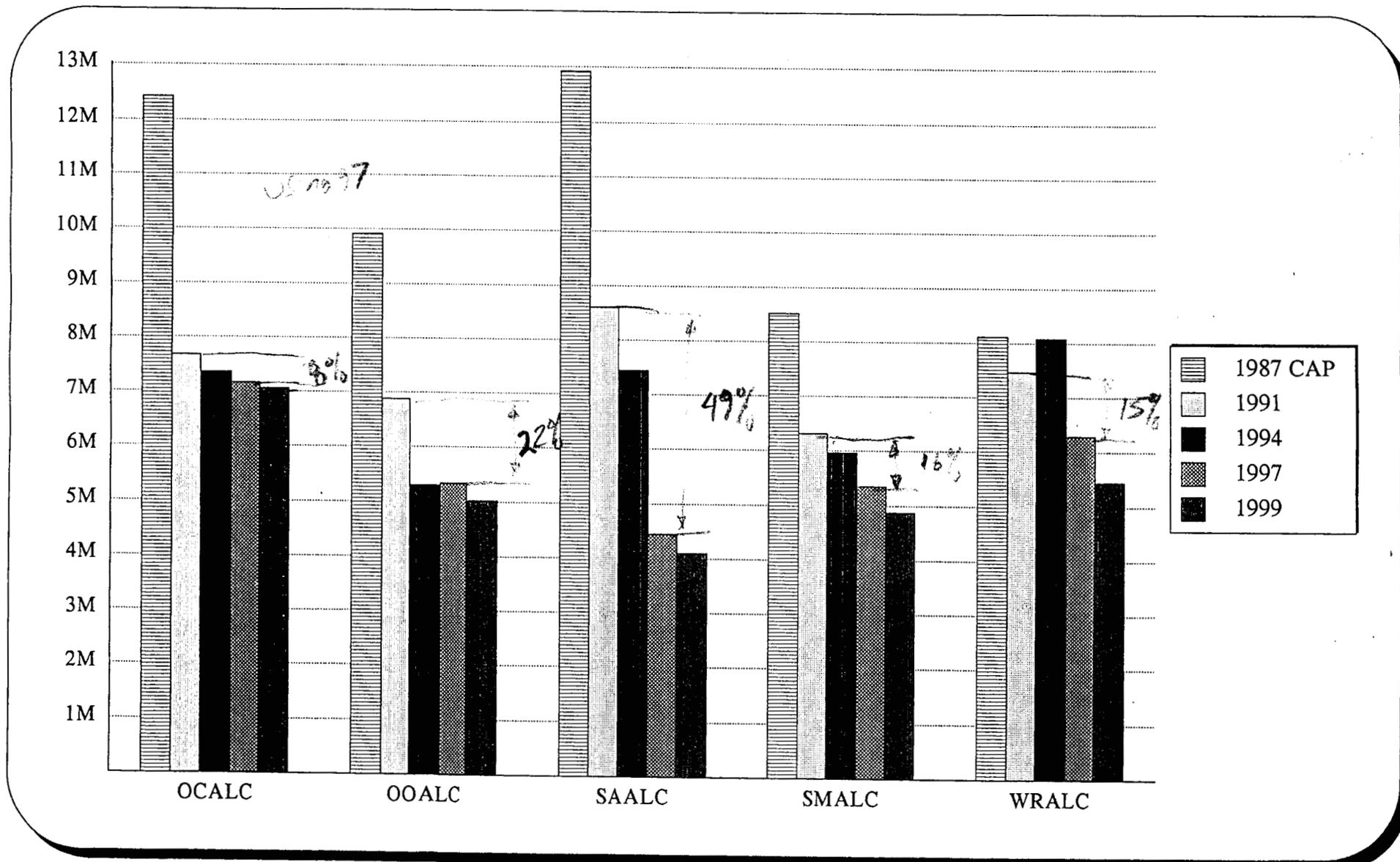


# AIR LOGISTICS CENTERS

## 1991 - 1999 WORKLOAD VS. 1987 CAPACITY



# AIR LOGISTICS CENTERS 1991 - 1999 WORKLOAD VS. 1987 CAPACITY





DEPARTMENT OF THE AIR FORCE  
WASHINGTON DC



OFFICE OF THE ASSISTANT SECRETARY

SAF/MII  
1660 Air Force Pentagon  
Washington, DC 20330-1660

21 JUN 1993

Honorable Jim Courter  
Chairman, Defense Base Closure and Realignment Commission  
1700 North Moore Street, Suite 1425  
Arlington, Virginia 22209

Dear Chairman Courter:

This responds to a June 21, 1993, verbal request from your staff for a copy of the raw data that was used to support the Depot Category mission specific standard deviations.

The information you requested (attached) is certified and was used in our process.

Hopefully this information will meet your analysis requirements. If your staff has any further questions, please have them contact us.

Sincerely,

JAMES F. BOATRIGHT  
Deputy Assistant Secretary of the Air Force  
(Installations)



DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS UNITED STATES AIR FORCE  
WASHINGTON DC



4 MAR 1993

REPLY TO  
ATTN OF:

AF/LGMM

SUBJECT:

HQ AFMC Base Questionnaire Responses

TO:

HQ USAF/XOOR

Attached are official responses to base closure questions on depot functions provided to AF/LGMM by HQ AFMC. The information appears correct to the best of our knowledge.

*Lindsey T. Williams*

Lindsey T. Williams Lt Col, USAF  
AF/LG Representative  
Base Closure Working Group

1 Atch  
Responses to  
Depot questions

UNFUNDED (UNCONSTRAINED) ORGANIC WORKLOAD - 000 hrs

FY	94	95	96	97	98	99
AGMC	1091	1112	1121	1009	1010	1010
OO	9064	9371	9459	9527	9639	9780
SA	6528	7046	7127	7099	7013	6959
SM	9166	8962	7123	5914	5673	5675
WR	7353	7121	6954	7124	6757	6759
	9960	9881	9395	8376	8051	7548

39049

ESTIMATED ORGANIC FUNDED WORKLOAD - 000 hrs

FY	Actual	94	95	96	97	98	99
AGMC	1666	884	867	863	757	737	727
OC	7658	7342	7309	7283	7145	7036	7042
OO	6866	5288	5496	5488	5324	5119	5010
SA	8585	7424	6990	5485	4436	4141	4086
SM	6305	5956	5554	5355	5343	4933	4866
WR	7454	8068	7707	7234	6282	5877	5435

29267

FY	94	95	96	97	98	99
Total Organic	43.338	43.85	41.374	39.259	38.359	37.558
Total Contract	13.829	12.847	12.532	11.186	10.656	10.804
Total	57.167	56.697	53.906	50.445	49.015	48.362
% To Be Organic	0.65	0.64	0.63	0.62	0.61	0.6
Adj Organic	37.159	36.286	33.961	31.276	29.899	29.017

Organic Adj Factor	0.86	0.83	0.82	0.80	0.78	0.77
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DOLLARS

FY	89	90	92
Funded Requirement	3106	2882	2181
Total Requirement	3259	3074	2328
% Funded	0.9531	0.9375	0.9369
Average % Funded	0.94		

\*\*\* FY91 not used due to DS/DS additional special funding

FY	94	95	96	97	98	99
Total Adj Factor	0.81	0.78	0.77	0.75	0.73	0.72



**DRAFT**  
**NOTES FOR DEPOT CONCEPT PAPER**

Internal  
Working  
Paper

**The Air Force's Perspective on Government Depots and Private Industry:**

**-Organic Depot Strengths:**

- short-notice wartime support
- support for very new and very old systems
- flexibility, depth, and breadth
- low volume repair

**-Contractor Strengths:**

- new technology
- expertise and technical competency
- cost advantage in high volume markets
- unique capabilities and specialized facilities

**- How Private Industry Can Maintain Its Strengths:**

- focus on design and prototyping opportunities
  - get Congress support to conduct prototype programs
- restructure corporate ops to focus on specific business segments
  - avoid substantial overhead penalties

-Air Force modernization initiatives through the 1980s have made Air Force ALCs the most effective and efficient depots in the world. \$1-3\$ billion invested in infrastructure; also, depot management structure was reorganized to focus on customer needs and flexible support for forces.

-Air Force already relies heavily on commercial sources for critical weapon system depot maintenance support. While the approximate 60/40 split in depot maintenance support levels between organic and contractor sources is generally accepted, these percentages are based only on classic bookkeeping methods. If you carefully track the actual amount of Air Force funds obligated for depot maintenance support, you can see the true split--only 42 percent of Air Force depot maintenance dollars are actually spent in organic depots, while a full 58 percent is spent in private industry. This is caused by a number of factors that consume organic depot funds in the commercial sector in addition to those used to obtain direct contract depot maintenance services. Some of these include: large sums spent for **interim contractor support** for systems that do not currently have an organic depot capability; even larger amounts spent in industry for systems under **lifetime contract logistics support**; money spent in industry to procure the parts, equipment, and other material used in organic depots; and a number of other smaller categories that all add together to produce this much higher ratio.

-Rationale for competing with private industry:

- Excess capacity in ALCs
- Takes into consideration investments in
  - plants
  - equipment
  - personnel
  - training
- Competitive process will reduce cost of depot maintenance.
  - efficiency of operations will be increased

-General Yates' Competition Strategy

- Sustain ALC work by competing with other services for **core** work
- Compete with industry for **non-core** work, which will drive down costs
  - each ALC will select significant workloads each year
    - "significant" is workload that would result in loss of people and facilities if competition is lost.

*Don't compete with each other*

- None of work up for competition has been done before by private industry

- Contractors in maintenance business are cost-competitive with ALCs
  - non-OEM bids have been within 10% of most award prices
  - all awards to industry have gone to non-OEMs
  - three awards have gone to small/small disadvantaged firms
  - OEMs are structured for a different market
  - OEM proposals have been nearly double depot and mnx contractor bids

- Firms specializing in modification and repair have done well; Original Equipment Manufacturers (OEM) have not--their overhead is too high

- Appears to support notion that USAF has probably one ALC excess;(scuttlebutt has it that he has directed that McClellan and Hill be reviewed for possible closure in 1995.)

● **1991-1997 Corporate Business Plan (Defense Depot Maintenance Council's Business "Blueprint")**

- DoD's roadmap for achieving savings in the depot structure:

- Projects \$6.3 billion in savings thru 1997

- called for in DMRD 908
- (COMMENT: GAO says these projections aren't realistic or achievable and that the numbers don't add up thus far--Audit Agencies cannot verify claimed savings thus far)

- Near term (\$3.2 billion)

- RIFs

--How many, when, what skills represented, on what basis selected?

- closure of facilities (through DBCRC)

--How will DoD orchestrate an integrated, cross-service approach to closures?

- cancel facility projects

--What is a "facility project" (i.e., is it MILCON, etc)

--What projects have been canceled and what were the dollar savings?

--What was basis for original facility project and rationale for cancellation.

- workload consolidation

--What process does DoD have to work the consolidation problem?

--What workloads will be consolidated and why?

--Where will the workloads be consolidated and when?

- Interservicing (\$134 million)

- gaining depot: greater economies of scale are supposed to accrue.

--What workloads will be interserviced, when, and at what savings?

--What is the total workload that is susceptible to interservicing?

- "overhead reductions" associated with reduced workloads and downsizing of facilities to eliminate overcapacity

--What "overhead" reductions have occurred?

--How does DoD define overhead?

- Competition (\$1.7 billion)

- Increased number of competitions are envisioned;

--A review of the competitions that have been canceled for any number of reasons suggests that the services may be overly optimistic about the amount of savings to be expected (GAO agrees).

- Improved capacity utilization (\$1.3 billion)

--much discussion in the CBP about better facility utilization, but how will it be executed, and when?)

--Precisely how will improved capacity utilization result?

- redistribution of workload

--If a workload is redistributed because a depot loses a competition, what happens to the workers and the workstations at the losing depot? (This is not made clear in the

CBP)

- divestiture of unneeded facilities
  - (Two opinions here--the services, especially USAF--say they're divesting themselves of facilities housing work stations; other "camp" (industry) says all that's being divested are empty warehouses and storage buildings).
  - What percentage of infrastructure will ultimately be divested?
- closure of some facilities
  - How much is "some"
  - On what basis are the facilities selected?

- **Factors and trends in depot maintenance environment**

- goals (Defense Depot Maintenance Council developed a "Depot Maintenance Vision Statement for 1995 and Beyond") ("World-Class Support" is the buzz-word; it portrays a depot structure that is lean and mean, can knock the socks off industry in level competitions, and achieves what the fixed-wing aviation study says can't be achieved--namely, a depot structure that is economically sound in peacetime and responsive in wartime)
- objectives
  - operate in a business-like environment
  - operate in a cost-effective manner
  - smaller, but more specialized facilities
  - Achieve highly state-of-the-art technology capability
- actions required to implement
  - consolidate
  - interservice
  - compete
  - downsize
  - close
  - implement process improvements
  - streamline
  - re-engineer
  - All of these have been coined to describe what is needed--comes back to question of whether these internal "fixes" alone will solve problem of excess capacity.

## Depot structure

- management
  - how "top-heavy" is the system? The support tail at the ALCs (McClellan for example) suggests that its extensive);
- operational (complex operational environment--not just a repair line)
- personnel and resources
  - why is it that an Output Per Paid ManDay of roughly 4 hours is considered acceptable?)
- environmental/safety
  - Communities will argue, have argued, that depots are too dirty to close and that reuse is virtually nil.
  - To what extent should this be a factor in closure recommendation process?
- business
  - is the business of depots supporting warfighters or is it "business"; the problem---sustaining a woefully inefficient, non-cost-effective system that performs magnificently in war, yet is inefficient and costly in peacetime...how best to balance the two?
- information technology
- Technological responsiveness

## • Depot maintenance funds

- O&M
- Procurement
- RDT&E
- DBOF

--DBOF is means by which DoD hopes to influence DoD managers and employees to provide better support at lowest cost.

--Supposed to insure better financial information that will support efforts to improve management and productivity, increase focus on cost and performance in support of customer, insure full financial responsibility by customer originator of the requirement

--DBOF is a way for DoD to align costs related to output

--Expanded use of cost accounting principles

--Expanded use of performance and activity-based budgeting

-DoD has made significant progress in reducing the depot maintenance workforce in a balanced manner with force structure reductions. At end of FY 87, the maintenance depots employed 155,000 civilians. The number of civilians employed in the depots at end of FY 93 is expected to be about 114,000, a reduction of 41,000 personnel representing a 26 percent decrease. 1993 proposed base closures were to reduce civilian employment at the depots by an additional 20,000 personnel.

-ALC Personnel Levels (CBP) (Even after lopping off the people at Newark, these numbers do not appear to support a significant reduction in the workforces at the depots). (The numbers were developed prior to the recommendations to close Newark and the NADEPs. While DoD goes down in personnel by roughly 28,000 from 1991 to 1997, USAF only loses about 3,000 or so--where are the cuts coming from?)

	91	92	93	94	95	96	97	
AF	31670	31059	30457	29865	29287	28721	28721	-10%
DoD	133267	124424	117288	109844	101014	102137	105815	-20%

• ALC Personnel Levels (CBP) (Direct and Indirect Civilians Only)

	91	92	93	94	95	96	97	
IC Hg	1143	1120	1098	1076	1054	1033	1033	*
OC	5566	5457	5351	5247	5145	5045	5045	-10%
SA	6056	5935	5816	5700	5586	5474	5474	-10%
SM	6737	6602	6470	6341	6214	6090	6090	-10%
WR	5446	5337	5230	5125	5023	4923	4923	-10%
	5898	5780	5664	5552	5441	5332	5332	-10%
Tot	30846	30231	29629	29041	28463	27897	27897	

• **Issues/Ideas/Things to Consider/Could be Considered:**

**-What's wrong in depot structure?:**

- excess capacity
- unnecessary duplicate capability
- duplicate investments in new technology
- no effective structure/process for implementing joint solutions
- no effective structure/process to optimize cost savings
- perceived by many that services will not solve the problem by themselves

- Current U.S. political, economic, and military situation offers a unique (but limited) window of opportunity to make substantive changes in depot sizing and management structure, adjusting it to force structure changes which have resulted from the end of the Cold War..

--To what extent can the Commission influence this process?

-Should not DoD be held accountable to actively participate in managing the downsizing of the defense industrial base in order to protect capabilities needed to design, develop, product, and sustain future US military equipment.

-- Emphasis would be on protecting capabilities, not specific companies; on preserving skills, not jobs; and on improving war-fighting capability, not buying un-needed equipment.

-Air Force procurement/depot maintenance is the product of a system that, for the most part, was founded in World War II and sustained by the Cold War. The looming threat of war with the Soviet Union created this system's main features--high-volume production, fast activation and retirement of weapons, and a constant search for the next modern aircraft. The end of the Cold War has forced the Air Force and commercial contractors to come to grips with the implications of reduced production volume, delayed weapon starts, and stretched-out weapon lives. Future procurement/depot maintenance will be a delicate balancing act, with military strength, industrial viability, and the edge of technology all weighed against the need for lower budgets. DepSecDef Perry has predicted that by 1997 total US defense spending will be roughly 40% less than it was in 1987; about 2/3 of this reduction has already occurred. Readiness is the top priority, so downward pressure on all other budget categories will be intense. Force structure is shrinking; modernization (procurement plus research and development funding) will be hit hard. For example, by 1997, the modernization budget, in real terms, will be only half of what it was at its peak in 1986. Current Administration strategy is to protect the technology base budget as much as possible, though that will mean reduced procurement of new weapons embodying such technology. Therefore, it is imperative that defense overhead be reduced so that optimal capability can be squeezed out of smaller budgets. Overcapacity and overhead at DoD makes a tempting target.

- Pentagon and private industry both agree there is significant overcapacity in repair and maintenance facilities within DoD, as well as within industry. Maintaining this overcapacity in DoD has driven up the cost of the military. Future DoD budgetary constraints will only further magnify the already-growing "tooth to tail" ration of defense spending.

--To what extent are we confronted with a "either cut depots and cut force structure scenario"?

- Trying to solve the depot problem simply by eliminating a facility could mean up to 20,000 votes lost with the stroke of a pen; consequently (and for good reason), elected representatives will fight like hell to save a depot in their district...

-Private sector involvement in depot maintenance isn't new. Equipment manufacturers have traditionally performed depot maintenance for a number of years after a new weapon system was fielded--until the design was stabilized, depot plant equipment and technical drawings procured, spare and repair parts inventories established, maintenance manuals developed, and maintenance personnel trained. While the underlying premise of "**interim contractor support**" is that such contractor maintenance is to be temporary, for some systems it has continued for many years. For example, on the B-1B, interim contractor support will continue for 17 or more years. For some systems such as the C-9 and KC-10, contractor maintenance was planned throughout the life of the system. Commercial contractors also perform other depot maintenance activities such as modifying and upgrading systems and equipment and repairing components of very complex systems and systems for which the equipment manufacturer owns proprietary rights to the technical data.

-Industry has expressed concern that cost overruns in government facilities are paid for by DoD. The government may be responsible for paying certain types of overruns by either public or private facilities which are due to scope of work increases not contained in the original work statements. Current policy stated in the Cost Comparability Handbook does not allow public agencies to finance competitive workload with non-competitive work, nor can a bidder knowingly include either a gain or a loss, bid on the margin or offer management discounts. In instances when losses do occur, the individual depots face the same risk as private concerns of becoming less competitive or being closed, since they must also spread losses via rate increases to all other customers. A Comptroller General Decision of Jan 87 concluded that while it is true that public funds are used to pay for any cost overruns at public facilities, this does not preclude meaningful competitions.

-Structuring competition and developing a level playing field agreed to by both private and public sectors have been very contentious. In general, commercial contractors contend that because of inherent differences in the structure, processes, accounting systems, and regulatory requirements of both sectors, it is not possible to achieve cost comparability and make public-private competition fair. The private sector asserts that DoD should identify minimum essential core requirements and contract out the remainder of the depot maintenance workload to private industry through private-private competition. The Defense Appropriations Act of 1993 attempted to address the comparability issue by requiring that when DoD competes depot maintenance and the production of components between DoD activities and private firms, the Defense Contract Audit Agency must certify that successful bids include comparable estimates of all direct and indirect costs. Certification is defined as an audit opinion that a proposal complies with the Cost Comparability Handbook issued by the Defense Depot Maintenance Council. The Handbook, which must be used by all depots when preparing proposals, requires the inclusion of all costs associated with proposed work. The objective of these audits is to detect

material understatements as a result of non-compliance with the Handbook.

-Cost-effective management of the defense depot maintenance system is first dependent on determining what workload capability must be retained in DoD--commonly referred to as core--and what can or should be contracted out to the private sector. While there has been a requirement that the services define their minimum essential core requirement for a number of years, the services have not yet done so. In effect, core requirements are currently defined by statute.

- An idea kicked around by General Carns is to remove depots from consideration of the Commission and let the "forces of the marketplace" determine their survival; however, would the problem not then become one of how to create a level playing field between military depots and private industry...?

--What are the prospects of depots being removed from consideration by the Commission?

--How would this be effected? By whom?

-General Carns has mentioned a possible solution--having military and private industry negotiate identical accounting systems under the auspices of an organization such as the American Institute of CPAs, so that all costs are being accounted for by both sides. Once rules have been agreed to, the policy would be that "any business you own, you keep"; however, all new work would go up for competition. If a military depot were to lose a bid to private industry, it would be required to terminate the work, release workers, and close workstations.

- Some in private industry argue that only closure of depots will produce the desired effect of competing for work. Government depots are not affected by market forces as quickly as private industry; the time taken to adjudicate a depot protest of an aware to industry would likely force an independent contractor to drop a bid. Government depots have time, but if private industry loses a contract, it must adjust quickly--there is no similar pressure on a government depot...

--There's probably a very strong counter-argument to this from the DoD depot community!!!

- From industry's perspective, if a depot underbids a contract, the taxpayer swallows the deficit without knowing it, but if industry makes the same mistake, the stockholder takes the loss and will either stop investing in aerospace or demand new management.

- Private industry (and others) say that the current 60% tooth-to-tail ratio maintained by the Air Force in the 1980s will have reversed by the time the service reaches its new force structure of 20 fighter wings; thus, unneeded support facilities will eat up even more of a shrunken defense depot; there is no way to preserve private industry without cuts to the depot system...

- Putting the Overhead Problem in Perspective (Air Force ALCs)

--FY 91 AFMC direct labor and total overhead rate.....\$49.66

---direct labor rate \$19.01

---total overhead rate \$30.65

----variable overhead (22% of overhead)

-----shop indirect labor

-----material/fuel

-----engineers/planners/schedulers (10%)

-----equipment repair-in-house

----fixed overhead (78% of overhead)

-----depreciation

-----engineers/planners/schedulers (90%)

-----G&A staff labor

-----utilities

-----communications

-----facility maintenance and repair

-----office supplies and equipment

- Study depot operations

-- how do the depots compute Capacity, determine cost-effectiveness, determine what workloads will be competed, integrate new process technologies, prepare bids on competed workloads;

-- What guidance has been passed to ALCs on how to implement the "future vision" depot?

- Definition of major issues:

--Capacity (DoD and private industry)

--Core workload (60/40 split)

--Competition (Public-private and public-public)

--DoD and private industrial base (determine capacity in both sectors)

--Interservicing

- identification of options

--Limit study to study of capacity issue

--Expand scope of study to include other issues as well

- Force structure must determine depot structure

- Depot Performance: Realistic measures for evaluation?

--Effectiveness (what are determinants of effectiveness)

--Quality (reject rate, customer complaints, warranties, etc)

--Productivity (how best to assess)

--Innovation

- Capacity Utilization
- Cost Performance

- Reserve capacity (essentially, anything above 85%); concept was developed and implemented to support Cold War scenario; with Cold War over, how should reserve capacity now be redefined, if at all?
- What should competition opportunities focus on? Ships and weapons system modernization and maintenance, as well as manufacture of related parts? Commodity groups?
- Do service acquisition strategies actively promote and facilitate competition
  - The entire acquisition process is currently under review by DoD
  - What will be the impact depot maintenance?
- Depot capital plans and investments
  - What has been spent and for what?
  - What do they plan on adding in the future?
  - Should there be a freeze on depot capital investments until 1995 closures determined?
- Source of repair determinations
  - What methodology used (particularly USAF).
- Posture planning and command balancing
  - How effectively have workloads been balanced and postured and what was the rationale behind it?
  - To what extent were workloads shifted to other depots simply because they needed the work?
  - McClellan a big "receiver" over the years, but not a "giver." Why?
- Process Improvements:
  - To what extent are depot production and repair lines designed for fast setup, quick turnaround, and optimum throughput?
  - To what extent have process improvements been uniformly introduced at depots?
- Fixed wing aviation consolidation (to USAF)
  - Is it feasible or not?
  - DoD Study recommended against it.
- What is private industry capacity and how much is there?
  - Is private industry capacity data readily available?
  - Would contractors charge government a fee for providing this data?
  - What is comprehensive commercial depot maintenance capacity and capability ?
  - How would surge capacity/capability be retained in the private sector?
- Are there instances where workloads are being transferred from contract to organic?
  - If so, does it make sense, and under what circumstances did it occur?

- There will always be a logistics tail; whether in private or public sector. The decision on where to shorten the tail should be based on an analysis of all relevant factors, including military necessity and best value.
- Should industry be given priority for modification and upgrade work since it more closely resembles product design and manufacturing, rather than maintenance.
  - Over the years, military depots have demonstrated an ability to perform modification work, something historically done in private industry.
  - Conversely, since maintenance does not resemble manufacturing, should maintenance should maintenance be performed only in depots?
- Repair process technology crossflow
  - How is DoD driving this process?
- Standardization of operations, processes, systems
- DMIF budget submissions
  - Go through entire DMIF process
- Investment requirements development
  - How are capital investments determined?
- Source selection authority for all competitions
- Plans, policies, decision-development activities relative to DMIF activities.
- Consolidated requisition of depot spares, bench stock
- Extent to which consolidated buys of new equipment occurs (such as machine tools) and extent to which data systems consolidation is effected.
- Each ALC currently has evening shift work force, ranging from high of 40% at Ogden for aircraft, to 04% at Oklahoma City for engines.
  - Should evening shift therefore be included in capacity computations?
- To determine full extent of infrastructure requirements, would it not be prudent to address and formulate a comprehensive national defense technology and industrial base policy that takes into consideration the essential role of government and the industrial sector.
- **Private Industry:** Designers, developers, integrators, and producers of commercial and defense aerospace products and weapons systems. Also has capability to support, overhaul, repair DoD's field products and to continually modify and upgrade through technology advancement.
- **Depots:** From private industry's perspective, depots exist for after-market support of fielded systems, and

even then they still rely upon technical design and integration skills of the private sector.

--Robins and others would argue this one??

- Commission has tough job. In regards to depots, it must weigh critical defense needs in a vastly changed global environment against the emotions of closing facilities in areas already hard hit by a slow economy.

- Private Industry: From their perspective, they have been devastated by downsizings, restructuring, mergers, acquisitions, closing of facilities

- Depots, from private industry's perspective, have retrenched, with government labs and depot maintenance facilities protecting their workforces, expanding their facilities, seeking new missions, and in some cases pulling back workloads previously accomplished in private sector.

--This is a claim made by at least two major contractors--Lockheed and Rockwell.

--Is the claim valid? If so, what workloads? ( I can only find one instance where work has moved)

- During Cold War, focus for support (maintenance) shifted from industry to depots:

--technology race with Soviets: needed to develop and field systems faster; depot-level maintenance had a lower level priority than building and fielding.

-- this made sense--industry could design and produce; military could maintain; each had sufficient work to make efforts efficient and affordable; government strategy based on planning and mobilization, a long-term global war scenario. Support was frequent and costly; systems not designed using integrated design, manufacturing, test, and maintenance teams of today; workloads were high.

- Workloads have diminished; To what extent should we rethink the whole concept of depot maintenance and retention of technical superiority.

--U.S. still must maintain technological superiority of the weapons retained in inventory and capability to do so resides primarily, if not wholly, in private sector.

- From private industry's perspective, government has spent/is spending billions to modernize facilities, duplicating capabilities that already exist within industry. Major quantities of workload are migrating from industry into government facilities in an effort to keep bases out of the closure process. Workloads include:

- depot-level maintenance
- modifications and upgrades to current systems
- manufacture of components already available in industry
- new designs

- Again, from private industry's perspective, tax dollars are being spent, with very little rationale, to modernize government facilities to keep them open; does this make sense when these capabilities duplicate those in an industry itself already riddled with excess capacity?

- Decisions should be based on best value and essential capabilities--not least cost and existing capacity.

- Concept of core workload should be critically examined with a view toward examining that work which must be performed in-house. Differing perceptions on what core is. General Carns, Air Force Vice Chief of Staff, says, "My guess is practically nothing is core." "I don't know of anything that you can't contract out for a price." "Core is work that the industry can't or won't do for a competitive price.

- To what extent does private industry offer a wider range of total life cycle capabilities than government depots?

- Should they be protected or do we face risk that they will cease to exist?

- Should DoD freeze all capital investments in depots and labs until defense requirements are evaluated against private sector capabilities already in existence?

- Should weapons systems programs now supported by industry remain so supported until a "needs vs capabilities" is completed?

- Should the Commission take a close look at DoD research and development activities?

--To what extent have their missions declined? Coupled with available industry capabilities, are there significant savings to be realized from their closure/consolidation?

- How are government depot sales prices computed?

--This goes to the heart of the competition issue.

--Are their prices artificial, not at all related to the cost of production at each individual depot.

--Adjustments come down from OSD and below, altering sales rates from the calculated break-even levels; how then, are profit and loss figures calculated?

## ● CAPACITY

- Formula recommended by Joint Logistics Center and incorporated in DoD 4151.15-H is:

**# of work positions X availability factor (.95) X annual productive hours (1615).**

- function of physical plant and personnel assigned, with level of employment being driving factor.

- Only variable in capacity formula is number of work positions, which as defined, is not directly affected by personnel vacancies.

- Went Study claims that, "from purists point of view, reduction in personnel should only affect depot's ability

to perform up to its capacity; in reality, when faced with loss of manpower, most depots elect not to use equipment and/or decrease shop configuration which results in reduced work positions and lower computed capacity levels.

- Reductions in workload attributed to projected decreases in force structure.
  - Can internal downsizing keep pace with force structure downsizing?

---Went Study says it cannot.

- Reductions in capacity attributed to services efforts to optimize their depots, with the largest single factor being across-the-board service reductions in depot maintenance personnel.

- To what extent is capacity utilization affected by:

- technology
- procedures
- facilities and equipment
- personnel reductions
- workload (command) balancing

- To what extent do workload projections change with each program and budget update?

- AFMC says 10% of its depot facilities will be abandoned by 1997

--Is "10%" enough, considering force structure and infrastructure added during '80's?

--There is some evidence that all that is being abandoned are empty warehouses, not facilities with workstations.

- Industry defines capacity as the amount of work that can be accomplished on a two-shift per day basis; why does DoD compute one-shift when, at least at the ALCS, there is also an evening shift--in fact, 40% of the aircraft work done at Hill is accomplished on the evening shift. This is capacity that is not being caught in the formula.....

- Does capacity utilization measure space utilization?

---a shop could have 120% capacity utilization but have excess space

---a shop could have 70% capacity utilization and have excess work positions but the space is used appropriately for the equipment on-hand

---a shop may have 70% capacity utilization and have NSN unique equipment that is not worked continuously due to workload mix, but space is used appropriately for equipment.

- Does low capacity utilization mean mechanics/workers are idle?

---work positions are manned only when funded by workload

- Does low capacity utilization mean there is excess capacity?

---peculiar support equipment that is needed to repair specific NSNs may not be used.

---some machines may have special fixtures for specific NSNs which require excessive time to change.

• **Workload (CBP)**

	91	92	93	94	95	96	97
AF	39881	37645	36790	Need	34464	32852	31661
DoD	147993	147698	138970	data	124304	121935	126010

• **Workload/Capacity by ALC (CBP)**

	87 (Capac)	91	92	93	94	95	96	97
OC	12400	7662	7072	7366	7007	6770	6644	6642
Utilizat		11291	7644	8064	8042	7862	7729	7729
OO	9900	68	93	91	87	86	86	86
Utilizat		6866	6875	6890	6171	6296	6045	6072
SA	12900	8165	7150	7947	7713	7196	7168	7168
Utilizat		84	96	87	80	87	84	85
SM	8500	8585	8193	7289	7417	7202	5998	5279
Utilizat		8935	8935	8935	8935	8935	8935	8935
Utilizat		96	92	82	83	81	67	59
Utilizat		6867	6495	6387	6268	6032	6028	6016
Utilizat		8596	7705	6819	7250	7250	7248	7248
Utilizat		80	84	94	86	83	83	83
Utilizat	8100	7474	7046	7151	7058	6605	6587	6142
Utilizat		7595	8075	7693	7486	7486	7486	7486
Utilizat		98	87	93	94	88	88	82

• **DoD Peacetime Workload by major commodity (DLH 000)**

	91	92	93	94	95	96	97
Acft	58798	53104	52890	49875	49545	47931	46992
Msls	5111	5217	4648	3962	3958	4172	4267
Ships	61064	65023	58776	56426	50752	50045	54979
Cbt Veh	5489	6841	7028	6374	5188	5228	5215
Automtv	2223	2498	2097	1959	1559	1486	1487
Constrn	80	127	104	238	262	274	298
C-E	8150	8215	7320	6958	6589	6508	6514
Ordnan	4356	4139	3839	3977	4197	4099	4051
GP	2662	2454	2199	2289	2190	2129	2144
Other	60	79	69	69	63	63	63

<b>Total</b>	147993	147698	138970	132128	124304	121935	126010
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**Organic software support (CBP)**

	91	92	93	94	95	96	97
Army	267	351	554	343	343	343	343
NAVAIR	180	192	221	210	212	232	196
NAVSEA	12	7	5	9	28	28	28
SPAWAR	18	16	15	15	15	15	15
AF	2447	2948	3379	3719	3397	3386	4017
USMC	67	67	73	84	87	99	111
<b>TOTAL</b>	2991	3581	4247	4380	4082	4103	4710

• **DoD Contract Peacetime Workload by major commodity (\$ in millions)**

	91	92	93	94	95	96	97
Acft	1,972.0	1,545.7	1,663.3	1,521.9	1,391.3	1,458.2	1,440.4
Msls	292.2	232.9	222.1	206.0	220.1	169.2	192.2
Ships	1,408.5	1,838.1	1,308.8	1,053.8	1,201.5	1,206.9	1,192.6
Cbt Veh	142.9	151.7	47.4	45.7	41.4	89.1	38.8
C-E	130.6	145.3	147.1	130.1	162.6	123.3	152.5
Man	42.0	17.7	21.1	7.2	11.6	5.1	5.6
Other	71.8	65.9	62.8	61.8	53.6	51.2	51.2
NAVSUP	169.4	239.4	202.0	138.1	190.7	147.4	144.0
	538.9	509.4	504.8	522.9	540.2	558.0	577.4
<b>TOTAL</b>	4,768.4	4,746.2	4,182.5	3,687.6	3,813.0	3,808.5	3,794.8

• **UNFUNDED (UNCONSTRAINED) ORGANIC WORKLOAD (AF WORKSHEETS)**

	91	94	95	96	97	98	99
AGMC		1091	1112	1121	1009	1010	1010
OC		9064	9371	9459	9527	9639	9780
OO		6528	7046	7127	7099	7013	6959
SA		9166	8962	7123	5914	5673	5675
SM		7353	7121	6954	7124	6757	6759
WR		9960	9881	9395	8376	8051	7548
<b>TOT</b>		43162	43493	41179	39049	38143	37731

● ESTIMATED ORGANIC FUNDING WORKLOAD (AF WORKSHEETS)

	91	94	95	96	97	98	99
AGMC	1666	884	867	863	757	737	727
OC	7658	7342	7309	7283	7145	7036	7042
OO	6866	5288	5496	5488	5324	5119	5010
SA	8585	7424	6990	5485	4436	4141	4086
SM	6305	5956	5554	5355	5343	4933	4866
WR	7454	8068	7707	7234	6282	5877	5435
TOT	38534	34962	33923	31708	29287	27843	27166

● ORGANIC/CONTRACT/ADJUSTED ORGANIC DATA (AF WORKSHEETS)

	94	95	96	97	98	99
TOTAL ORGANIC	43338	43850	41374	39259	38359	37558
TOTAL CONTRACT	13829	12847	12532	11186	10656	10804
TOTAL	57167	56697	53906	50445	49015	48362
% TO BE ORGANIC	0.65	0.64	0.63	0.62	0.61	0.60
ADJUSTED ORGANIC	37159	36286	33961	31276	29899	29017
ORG ADJUST FACTOR	0.86	0.83	0.82	0.80	0.78	0.77

• **ORGANIC/INDEX/UTILIZATION DATA (AF WORKSHEETS)**

	94	95	96	97	98	99
<b>ORGANIC WKLD</b>						
<b>CAP INDEX</b>						
<b>CAPACITY UTIL</b>						
<b>AGMC</b>	1091	1112	1121	1009	1010	1010
	1500	1197	1273	1022	1022	1022
	0.73	0.93	0.88	0.99	0.99	0.99
<b>OC</b>	9064	9371	9459	9527	9639	9780
	8940	8760	8628	8628	8628	8628
	1.01	1.07	1.10	1.10	1.12	1.13
<b>OO</b>	6528	7046	7127	7099	7013	6959
	7946	7714	7197	7205	7447	7447
<b>SA</b>	9166	8962	7123	5914	5673	5675
	9405	9405	9405	9405	9405	9405
	0.97	0.95	0.76	0.63	0.60	0.60
	7353	7121	6954	7124	6757	6759
	7520	7520	7518	7518	7518	7518
	0.98	0.95	0.92	0.95	0.90	0.90
<b>WR</b>	9960	9881	9395	8376	8051	7548
	7570	7569	7570	7570	7570	7570
	1.32	1.31	1.24	1.11	1.06	1.00
<b>AFMC TOTAL</b>	43162	43493	41179	39049	38143	37731
	42881	42165	41591	41348	41590	41590
	1.01	1.03	0.99	0.94	0.92	0.91

- **AFMC COMMENTS ON CAPACITY:**

"Capacity Index is Work Positions X Annual Productive Hours (1615) X Availability Factor (0.95). A work position is the equipment one worker utilizes on a single shift to accomplish the workload mix required. The computation simply aligns the equipment required to accomplish a function to a given workload mix and available manpower and is not an accurate index to apply to facility utilization. Therefore, capacity utilization is not an accurate measure of a depot's ability to realign shops and equipment to accomplish requirements. A more accurate comparison is workload accomplished in prior years with an adjustment for new facilities. For example, **Oklahoma City produced approximately 12 million DLH of annual workload during the 1986-1987 timeframe, and is capable of performing at or above that when unconstrained by manpower and funding.**"

The preceding statement regarding Oklahoma City (made by HQ AFMC in certified data provided to the Commission) essentially says what the Commission has said all alone--the ALCs (in this case, Tinker--has the capability to ramp back up to its 1987 capacity provided funding and people are available; the infrastructure is still there.....

- **DEPOT SAVINGS BY CATEGORY**

	91	92	93	94	95	96	97
Near-Tm	148.5	340.1	426.3	554.3	660.8	581.0	496.7
Intsvc	0.1	2.0	23.4	24.4	26.9	27.8	29.2
mpete	77.0	134.2	242.1	341.2	421.7	241.5	276.0
Utilizat	113.3	87.3	119.9	205.8	248.7	255.5	253.3

- **AIR FORCE SAVINGS BY CATEGORY**

	91	92	93	94	95	96	97
Near-Tm	44.2	68.0	105.0	109.0	109.0	112.7	116.5
Intsvc	0.0	1.7	11.6	13.0	13.5	14.6	15.6
Competition	14.1	68.8	110.5	176.6	241.7	162.0	169.6
Cap Utilizat	0.1	10.8	8.4	1.2	3.2	3.4	3.5

- **Air Force Near-Term actions**

- personnel reductions
- installation closures
- streamlining
- process improvements

- **Air Force Long-Term Strategy**

- Interservicing (overhead costs to be spread over larger workload base)
- Competition

- **Air Force Capacity Utilization Strategy**

- divestiture of unnecessary facilities and equipment
- detailed plans for reductions in equipment buys and divestitures

- equipment and facilities analyzed in relation to current and projected workloads and reserve capacity requirements

- **Industrial Process Improvement Program**

- Centers will be able to accomplish missions by using equipment for other facilities or by requiring less equipment based on new workload projections and/or process improvements

- **CORE**

- **DoD Core Definition:** An integral part of a depot maintenance skill and resource basis which shall be maintained within the depot activities to meet contingency requirements.

- **Air Force Core Definition:** The minimum essential organic depot maintenance capability necessary to support planned military contingencies

- Core Algorithm

- JCS-approved contingency scenario

- weapon system usage

- Compute depot requirements considering contractor capabilities

- determine minimum capabilities required

- facilities

- skills

- equipment

- compute minimum peacetime workload required to maintain depot infrastructure capable of supporting contingency scenario

- Current legislation restricts amount contracted out--40% of depot workload

- currently, 58% of dollars resides with industry (includes organic depot funds spent on contract supplies and services)

- **USAF COMPETITION SUMMARY**

1991

Program	SOR	AWARDEE	VALUE
F-16 Op Software	Ogden	Logicon	\$1.4M
TF33 Vanes	Ok City	Chromalloy	\$6.6M
T-56 gearbox	San Antonio	Standard Aero	\$7.8M
AN/TRC97A radio	Sacramento	Sacramento	\$2.9M
AN/TRC186 radio	Warner-Rob	Warner-Rob	\$3.8M

1992

Program	SOR	AWARDEE	VALUE
CSDs	Ok City	Ok City	\$3.0M
C-5 Speedline	San Antonio	San Antonio	\$35.0M
C-141 wingbox	Robins	Robins	\$62.0M
Landing Gear	Contract	Ogden	\$14.0M
Generators	San Antonio	Army	\$1.0M
C-18PDM	Contract	????	\$5.0M
MMIII Nu Hardness	Contract	????	\$7.0M
F-16 APG-68 radar	Contract	????	\$8.0M
MMIII Software	Ogden	????	\$7.0M

1993

Program	SOR	AWARDEE	VALUE
-135 refuel boom	Contract	Ok City	\$9.4M
F-16 Block 40	Ogden	Ogden	\$25.0M
F-16 APG66 radar	Ogden	Ogden/Hurley	\$3.0M
E-3 PDM/Mod	Ok City	Ok City	\$36.0M
Air Turbines	Contract/Ok City	Airborne/Ok City	\$7.7M
F-15/B-52/E-3 CSD	Ok City	Ok City	\$11.2M
Gyros	AGMC	Flight Electron	\$1.1M
Trucks	Contract	ATAP, Inc.	\$33.8M
AN/ALQ-155 PMS	Robins	Robins	\$5.3M
Transponder Bundle	Robins	Robins	\$20.6M
TF-30 turb blades	Contract	??????	\$0.04M
TF-30 airseal	Contract	??????	\$0.2M
TF-33 turbine spt	Contract	??????	\$1.0M
TF-33 exhaust case	Contract	??????	\$1.0M
TF-33 fan blade	Contract	??????	\$1.0M
Engine Containers	Contract	??????	\$0.2M
F-4C starter	San Antonio	??????	\$0.4M
Misc Aaft Wheels	Ogden	Ogden	\$7.0M
T-56 eng/gearbox	San Antonio	??????	\$36.0M
F-100 fuel control	San Antonio	??????	\$22.0M
25K/40K loaders	Contract	??????	\$7.0M
ALQ-131 II	Robins	??????	\$1.0M
APG-63 radar	Robins	??????	\$12.0M
C-130 Props	Robins	??????	\$5.0M

		1994	
am	SOR	AWARDEE	VALUE
B-52H PDM	Ok City	NA	?????
F-101/110	Ok City	NA	?????
T-56 Engine	San Antonio	NA	?????
C-5 PDM	San Antonio	NA	?????
F-111 E/F	Sacramento	NA	?????

- AIR FORCE PUBLIC-PUBLIC COMPETITION**

- One existing public-public competition

- T-56 engine program at San Antonio

- Core T-56 work: Air Force-Navy compete

- Non-core T-56 work: public-private competition

- SUMMARY OF SACRAMENTO ARMY DEPOT/SACRAMENTO ALC/TOBYHANNAH COMP**

GROUP	Depots	Date Sub	Award Date	Winner
Elect	TOAD-SM	1 Aug 92	15 Jan 93	TOAD (4.6M)
Head Ftg Veh	RRAD-SM	15 Feb 93	2 Aug 93	SM (3.7M)
Electro Optics	ANAD-SM	15 Apr 93	15 Oct 93	TBD
Radar	LEAD-SM	1 May 93	2 Aug 93	SM (3.5M)
Radio	TOAD-SM	1 Jun 93	30 Sep 93	TOAD (5.0M)
Gyro/Indicators	CCAD/SM	1 Jul 93	1 Oct 93	SM (1.2M)
Intel/Elect Warfare	TOAD-SM	2 Aug 93	1 Nov 93	TBD
TMDE/Radio	TOAD-SM	1 Sep 93	1 Dec 93	TBD
Wire/Data Com	TOAD-SM	1 Oct 93	1 Jan 94	TBD

- EXAMPLES OF BIDS--GOVERNMENT VS PRIVATE INDUSTRY**

Program	Government	Industry
C141 wingbox	128.6M (WR)	380M (Lockheed)
B-1 Offen Avion Test Kit	76,000 (OC)	745,000 (Boeing)
F-117 Components	38,400 (SM)	896,000 (Lockheed)
F-117 Components	38,400 (SM)	480,000 (Lockheed)
F-117 Components	54,600 (SM)	546,000 (Lockheed)
F-117 flir shroud	138,700 (SM)	1,825,000 (Lockheed)

McClellan's Advanced Composites Program Office supports all current and future Air Force weapon systems containing composite materials. ACPO is unique in DoD because of its advanced composites expertise and ability to perform in-house design, repair, analysis, manufacture, and testing of advanced composite structures. Due to ineffective contractor designs, the F-117 composite structures are incurring high cost of ownership and short service-life problems. Each Forward-Looking Infrared Radar (FLIR) shroud cost over \$25,000 (for production run of 52) and had such poor durability the aircraft was constantly in a MICAP situation. ACPO redesigned the part, designed and built new tooling and is manufacturing a more durable design at a cost of just \$1,900 each (for a production run of 52.). Total savings over the Lockheed cost is \$1.2 million. The 20D82 is one of the F-117 trailing edge parts that is failing and extremely costly to manufacture. Each contractor part costs over \$42,000 and takes 25 days to manufacture. Many F-117 aircraft have been grounded awaiting these parts. The ACPO redesigned the part, designed and built new tooling, reduced the manufacturing time from 25 to 5 days, and manufactured the parts at a cost of just \$7,700 each. Total savings for each production run of 13 is over \$456,000.

- **The Costs of Competing**
  - What are true costs of developing a competition package?
    - administrative costs
    - TDY costs
    - development of work package cost
    - preparation of RFP cost
    - review of work processes cost
    - preparation of bid cost
    - evaluation of bid cost
  
- **GROUPS AND ORGANIZATIONS: (Visits/Consults Probably Required)**
  - **Implementation Working Group**
    - Coordinates implementation of interservicing and consolidation decisions specified in both the Joint Service Business Plan and Corporate Business Plan
  - **Joint Service Competition Working Group**
    - Advises on depot maintenance workload competition issues--develops procedures and guidance for conducting public-public and public-private competition of maintenance workloads.
  - **Joint Performance Measurement Group--tasked to develop depot maintenance performance measurement system**
  - **Joint Logistics Systems Center--(WP): achieves corporate information management goals for DoD logistics business areas by managing design, development, implementation, and maintenance of an integrated DoD corporate logistics process system and facilitating development and implementation of improved business practices.**

- Directorate for Depot Maintenance:--planning, financial management, production workload planning, material management, quality control, performance measurement, production facilities

- Joint Policy Coordinating Group on Depot Maintenance--reviews commodity groups for interservicing
- Joint Depot Maintenance Analysis Group
- Defense Depot Maintenance Council
- DoD Maintenance Policy Office (Bob Mason's group)
- GAO (Donna Hevelin & Bob Myer)
- **PUBLICATIONS AND DOCUMENTS**
  - DoD 4151.15-H, DoD Maintenance Production Shop Capacity Measurement Handbook
  - DoD 4151.18, Maintenance of Military Material
  - Cost Comparability Handbook
  - FY 92, FY 93 Air Force Business Plan and Business Plan Update documents
  - Production Shop Capacity Measurement Handbook
  - DoD Instruction 4151.15, Depot Maintenance Program Policies
  - DoD Depot Study (Aug 93 timeframe) which can't yet be released.....???...???

#### Impact of two-level maintenance

	Pre-two-level	2-level
avion	82,500	236,800
engines	795	3500

#### ● COMPARISON OF ALCS AND NADEPS

- Cost per labor hour

USAF	USN
69.99	97.00

- Capital investments (FY 83-92)

USAF	USN
1.015B	546M

- Navy did not have capital improvements program prior to 1991

*AP Data*

- Annual throughput of aircraft

USAF	USN
903	450

- Organic component repairs

USAF	USN
800,000	209,000

- Aircraft fleets supported (FY91)

USAF	USN
8293	5813

*Maint only*

● **PHYSICAL COMPARISON OF ALCS AND NADEPS**

	Sq ft	Fac replace	Equip replace
Alameda	2.3M	246.0M	183.0M
Cherry Pt	1.5M	274.0M	350.0M
Jacksnvle	1.6M	393.5M	250.0M
Norfolk	2.3M	356.0M	297.0M
No. Island	2.5M	287.0M	288.0M
Sacola	1.7M	213.7M	218.0M
Total	11.9M	1.770.2B	1.586.0B
Okla City	4.9M	1.077B	485M
Ogden	3.6M	350.0M	628.0M
San Antonio	3.9M	363.0M	587.0M
Sacramento	3.8M	640M	401M
Warner-Rob	2.7M	221.0M	687.0M
AGMC	.5M	231.0M	475.0M
Total	19.4M	2.882B	3.263.0B

*2*



♦ **CURRENT DEPOT AND PROCUREMENT ENVIRONMENT**

- ✓ Founded in World War II and sustained by Cold War.
  - ✓ Main features were high volume production, fast activation and retirement of weapons, and constant search for next modern aircraft.
- ✓ End of Cold War forced Air Force and private industry to come to grips with implications of reduced production, delayed weapon starts, stretched-out weapon lives.
- ✓ Situation now requires delicate balancing act, with military strength, industrial viability, and edge of technology all weighed against need for lower budgets.
- ✓ Total US defense spending by 1997 will be 40% less than in 1987; 2/3 of way there.
- ✓ Readiness will be top priority--downward pressure on other budget categories intense.
  - ✓ Modernization will be hit hard--by 1997, it will be half of 1986 figure.
- ✓ Current Administration strategy is to protect technology base.
- ✓ Defense overhead must be reduced so that optimal capability can be squeezed out of smaller budgets--OVERHEAD/CAPACITY IN DEPOTS PRIME TARGET.
- ✓ DoD and private industry agree there is significant overcapacity in public depots, as well as private industry
  - ✓ Maintaining this overcapacity has driven up cost of military and further magnified the "tooth-to-tail" ratio

♦ **THE PROBLEM IN DOD DEPOT ENVIRONMENT**

- ✓ Excess capacity ranging from 25 to 50 percent.
- ✓ Unnecessary duplicate capabilities.
- ✓ Duplicate investments in new technologies.
- ✓ No effective structure or process for implementing joint solutions to joint problems.
- ✓ No effective structure or process for optimizing cost savings.
- ✓ Perception that services alone will not fix problem--20 years' of efforts failed.
- ✓ No clear methodology for identifying "core" workload.
- ✓ High overhead costs for depot maintenance--60 percent of costs are for overhead.
- ✓ No definitive methodology for measuring performance, quality, productivity.
- ✓ No apparent strategy for actively participating in managing downsizing of the defense industrial base (including private industry) to protect capabilities needed to design, develop, produce, and sustain future US military equipment.
- ✓ No apparent strategy for protecting capabilities, not specific companies; on preserving skills, not jobs; and on improving warfighting capability, not buying un-needed equipment.
- ✓ Intense pressure from private industry to shift work from public to private sector.

♦ **CAPACITY**

- ✓ Defined DoD 4151.15-H as *The amount of workload, expressed in actual direct labor hours (DLH), that a facility can effectively produce annually on a single shift, 40-hour week basis while producing the product mix that a facility is designed to accommodate.*
- ✓ Formula for computing capacity is: number of work stations X availability factor (.95%) X annual productive hours (1615).

- ✓ A function of physical plant (infrastructure and equipment) and personnel assigned, with level of employment being driving factor in the calculation.
- ✓ Only variable is number of work stations which, as defined, is not directly affected by personnel vacancies.
- ✓ *Went Study* claims that when faced with manpower losses, most depots elect not to use equipment and/or decrease shop configurations which results in reduced work positions and lower computed capacity levels.

✓ Questions for consideration:

- ✓ Does capacity utilization measure space utilization?
  - ✓ A shop can have 120% utilization but have excess space.
  - ✓ A shop can have 70% utilization and have excess work stations but the space is being used appropriately for the equipment on hand.
  - ✓ A shop may have 70% utilization and have NSN unique equipment that is not worked continuously due to workload mix, but space is used appropriately for equipment.
- ✓ Does low capacity utilization mean workers are idle?
  - ✓ Work positions are manned only when funded by workload.
- ✓ Does low capacity utilization mean there is excess capacity?
  - ✓ Peculiar equipment needed to repair specific NSNs may not be used.
  - ✓ Some equipment may have special fixtures for specific NSNs which require excessive time to change.
- ✓ *Reserve capacity*
  - ✓ What is it and how is it defined?
- ✓ What is *private industry capacity* and how much is there?
  - ✓ Is data readily available?
  - ✓ Would contractors charge a fee for providing this data?
  - ✓ How would surge capability be retained in private industry?
- ✓ Private industry defines capacity as the amount of work that can be accomplished on a two-shift-a-day basis.
  - ✓ Each ALC has an evening shift--why not included in computations?
- ✓ Reductions in depot workloads are attributed to force structure decreases.
  - ✓ Capacity reductions not likely to keep pace with force drawdown.
- ✓ To what extent is capacity utilization affected by technology and process improvements, procedural changes, facility and equipment investments, and workload, or command, balancing?

Table 1. AF ALC Workload vs 1987 Capacity  
(Source: DoD Corporate Business Plan)

	_87	_91	_92	_93	_94	_95	_96	_97
OO Wk		6,866	6,875	6,890	6,171	6,296	6,045	6,072
Cap	9,900	8,165	7,150	7,947	7,713	7,196	7,168	7,168
Util		84	96	87	80	87	84	85
OC Wk		7,662	7,072	7,366	7,007	6,770	6,644	6,642
Cap	12,400	11,291	7,644	8,064	8,042	7,862	7,729	7,729
Util	68	93	91	87	86	86	86	<b>86</b>
SA Wk		8,585	8,193	7,289	7,417	7,202	5,998	5,279
Cap	12,900	8,935	8,935	8,935	8,935	8,935	8,935	8,935
Util		96	92	82	83	81	67	59
SM Wk		6,867	6,495	6,387	6,268	6,032	6,028	6,016
Cap	8,500	8,596	7,705	6,819	7,250	7,250	7,248	7,248
Util		80	84	94	86	83	83	83
WR Wk		7,474	7,046	7,151	7,058	6,605	6,587	6,142
Cap	8,100	7,595	8,075	7,693	7,486	7,486	7,486	7,486
Util		98	87	93	94	88	88	82

	_94	_95	_96	_97	_98	_99
AGMC	1,091	1,112	1,121	1,009	1,010	1,010
OO	6,528	7,046	7,127	7,099	7,013	6,959
OC	9,064	9,371	9,459	9,527	9,639	9,780
SA	9,166	8,962	7,123	5,914	5,673	5,675
SM	7,353	7,121	6,954	7,124	6,757	6,759
WR	9,960	9,881	9,395	8,376	8,051	7,548
Total AF	43,162	43,493	41,179	39,049	38,143	37,731

Table 2. AFLC Unfunded (Unconstrained) Workload  
(Source: AF Worksheets)

	_91	_94	_95	_96	_97	_98	_99
AGMC	1,666	884	867	863	757	737	727
OO	6,866	5,288	5,496	5,488	5,324	5,119	5,010
OC	7,658	7,342	7,309	7,283	7,145	7,036	7,042
SA	8,585	7,424	6,990	5,485	4,436	4,141	4,086
SM	6,305	5,956	5,554	5,355	5,343	4,933	4,866
WR	7,454	8,068	7,707	7,234	6,282	5,877	5,435
Total	38,534	34,962	33,923	31,708	29,287	27,843	27,166

Table 3. AFLC Funded Workload  
(Source: Air Force Worksheets)

♦ **DOD EFFORTS TO PROMOTE SAVINGS IN DEPOT STRUCTURE**

✓ Laid out in Defense Depot Maintenance Council's *Corporate Business Plan*

✓ Projects \$6.3 billion in savings through FY97

✓ Near-term initiatives.....\$3.2 billion

✓ Interservicing.....\$0.1 billion

✓ Competition.....\$1.7 billion

✓ Improved capacity utilization.....\$1.3 billion

✓ **Near-term savings include:**

✓ Downsizing of direct and indirect workforce (*numbers not provided*)

✓ Closure of facilities (*what actions will DoD take to insure that an integrated cross-service approach is taken?*)

✓ Cancellation of "facility projects" (*what is a "facility project"?; what projects have been cancelled and at what dollar savings?*)

✓ Internal service consolidation of workloads (*what process does DoD have to insure services work the internal workload consolidation problem?*)

✓ **Interservicing of workloads**

✓ Savings from greater economies of scale (*what workloads will be interserviced and what is the total workload susceptible to interservicing?*)

✓ Savings will also accrue from overhead reductions caused by interservicing (*resulting from reduced workload and facility downsizings presumably*)

✓ **Competition**

✓ An increased number of competitions are envisioned by DoD (*GAO says DoD is overly optimistic based on number of competitions canceled*)

✓ **Improved capacity utilization**

✓ Redistribution of workloads within and among the services (*how will this redistribution of workload be accomplished and when?*)

✓ DoD's Vision Statement for World-Class Depots

✓ Lean and mean

✓ Competitive with private industry

✓ Economically efficient in peacetime and responsive in wartime.

✓ Operate in a cost-effective manner.

✓ Smaller and more specialized facilities.

✓ Achieve and maintain highly state of the art technological capabilities.

✓ DoD's perception of public depot strengths:

✓ Short-notice wartime support.

✓ Support for very new and very old weapon systems.

✓ Flexibility, depth, and breadth of support.

✓ Low-volume repair.

#### ♦ COMPETITION

✓ Legislatively mandated 60/40 split between public and private work.

✓ Cost-effective management of public depots is dependent on determining what must be retained in public depots--"core"--and what can be done in private sector.

✓ Services have not defined their minimum essential "core."

✓ DoD "Core" Definition: *"An integral part of a depot maintenance skill and resource base which shall be maintained within the depot activities to meet contingency requirements."*

✓ Air Force "Core" Definition: *"The minimum essential organic depot maintenance capability necessary to support planned contingencies."*

✓ Air Force Core Algorithm:

✓ JCS-approved contingency scenario.

✓ Weapon system usage.

✓ Compute depot requirements considering contractor capabilities.

✓ Determine minimum capabilities required--facilities, skills, equipment.

✓ Compute minimum peacetime workload required to maintain depot infrastructure capable of supporting contingency scenario.

✓ General Carns: *"My guess is practically nothing is core. I don't know of anything that you can't contract out for a price."*

✓ Does "core" then become work that industry can't or won't do for a competitive price?

✓ Private sector involvement in depot maintenance not a recent phenomenon...

✓ Traditionally performed maintenance on newly-fielded systems until design stabilized, plant equipment and drawings procured, spare and repair parts inventories established, manuals developed, and personnel trained.

✓ Premise of *"interim contractor support"* is that it will be temporary; however,

- ✓ support for B-1B will continue for 17 or more years.
- ✓ support for C-9 and KC-10 will continue for life of the systems.
- ✓ Modify and upgrade systems and equipment and repair components on complex systems and systems for which they own proprietary rights to tech data.

✓ Private industry

- ✓ Designers, developers, integrators, producers of commercial and defense aerospace products and weapon systems.
- ✓ Also capable of supporting, overhauling, repairing DoD's fielded products and to continually modify and upgrade these products through technology advancement.
- ✓ Devastated by downsizings, restructuring, mergers, acquisitions, closings..

✓ Private industry's perception of role of public depots:

- ✓ Exist solely for after-market support of fielded systems, and even then they still rely on technical design and integration skills of private sector.
- ✓ Public depots have retrenched, with government labs and depots protecting their workforces, expanding their facilities, seeking new missions, and in some cases pulling back workloads previously accomplished in private sector.
- ✓ Government is spending/has spent billions of dollars to modernize public depots, duplicating capabilities that already exist in private sector.
- ✓ Major quantities of workload migrating from private industry to public depots in an effort to keep public depots out of the closure process, including:
  - ✓ depot-level maintenance
  - ✓ modifications and upgrades to current systems
  - ✓ manufacture of components already available in private sector
  - ✓ development of new designs
- ✓ Tax dollars being spent, with very little rationale, to modernize government facilities to keep them open; *this does not make sense when these capabilities duplicate those in an industry already riddled with excess.*

✓ Structuring competition and developing level playing field highly contentious issue

- ✓ Private sector says inherent differences in structure, processes, accounting systems, and regulatory requirements of both sectors preclude achieving cost-comparability and making public-private competition fair.
- ✓ Private sector says DoD should identify minimum essential core requirements and contract out remainder of work through private-private competition.
- ✓ Defense Appropriations Act of 1993 attempted to address comparability issue by requiring Defense Contract Audit Agency certify that successful bids include comparable estimates of all direct and indirect costs.
  - ✓ "Certification" is compliance with Cost Comparability Handbook.

✓ Private industry says current 60% "tooth to tail" ratio maintained by Air Force ....

- ✓ will have reversed by time service reaches new force structure of 20 wings.
- ✓ unneeded public depots will eat up even more of shrunken defense budget.

✓ *No way to preserve private sector capabilities without closing public depots.*

- ✓ Air Force perspective on competition with private sector.
  - ✓ Air Force already relies heavily on private sector.
  - ✓ Traditional 60/40 split misleading; actual split is more like 42/58.
  - ✓ Competition strategy for Air Force will focus on
    - ✓ sustain ALC work by competing with other services for *core* work.
    - ✓ compete with private industry for *non-core* work, to drive down costs
  - ✓ None of work up for competition has been done before by private industry.
  - ✓ Non-Original Equipment Manufacturers (OEM) cost-competitive with ALCs
    - ✓ All awards to industry have gone to non OEMs.
    - ✓ 3 awards have gone to small/small-disadvantaged firms
  - ✓ OEMs are structured for a different market--their overhead is too high.
    - ✓ OEM bids have been nearly double ALC and small contractor bids.
  - ✓ Competition with private industry is smart thing to do because:
    - ✓ excess capacity in ALCs.
    - ✓ takes into consideration Air Force investments in plants, equipment, personnel, and training, particularly those made during 1980s.

- ✓ Vice Chief of Staff General Carns' thoughts on competition:
  - ✓ Remove depots from consideration of DBCRC and let "forces of the marketplace" determine their survival.
  - ✓ Have public depots and private industry negotiate identical accounting systems under auspices of American Institute of CPAs so that all costs included.
  - ✓ Once rules agreed upon, policy would be "any business you own, you keep; however, all new work would go up for competition."
  - ✓ If public depot loses competition, it will terminate workers/work stations.

◆ OTHER IDEAS AND ISSUES/ADDITIONAL COMMENTS

- ✓ Review DoD's actions/plan for achieving Corporate Business Plan objectives:
  - ✓ Consolidation
  - ✓ Interservicing
  - ✓ Competition
  - ✓ Downsizing
  - ✓ Closing of facilities
  - ✓ Implementation of process improvements
  - ✓ Streamlining and re-engineering
  - ✓ *These are all phrases used to describe what DoD is going to do fix the problem of excess capacity and growing financial burden of maintaining unneeded depots. I believe it would be beneficial to find out whether these are just "plans" that are offered up in hope that they will be forgotten or whether there is an office in DoD that is aggressively pursuing this.*

- ✓ The Air Logistics Center Structure
  - ✓ Management (*what is their overhead and how much of it has been eliminated?*)
  - ✓ Operations (*for example, how are source of repair determinations made?*)
  - ✓ Personnel and resources
  - ✓ Environmental issues
  - ✓ Business operations (*financial scrub, including DBOF*)
  - ✓ Information technology
  - ✓ Technological responsiveness
  - ✓ Overhead
    - ✓ For every \$50.00 in depot costs, \$31.00 goes for overhead--why?
  - ✓ What are realistic depot performance measurement standards?
    - ✓ Effectiveness
    - ✓ Quality
    - ✓ Productivity
    - ✓ Innovation
    - ✓ Flexibility
  - ✓ Capital plans and investments (*what has been spent and for what?*)
  - ✓ Should there be a freeze on capital investments until after 1995 round?
  - ✓ Posture, or command, balancing
  - ✓ What divestiture of facilities has occurred and total square footage involved?
  - ✓ Are there detailed plans for reductions in equipment buys and divestitures?
  - ✓ How are sales prices computed? (*Are the prices artificial, not at all related to the cost of production at the ALC?*)
  
- ✓ Projected impact of two-level maintenance
  
- ✓ Comparison of ALCs with Naval Aviation Depots (NADEPs)
  - ✓ Workload consolidation potential
  - ✓ "Cost of doing business" comparison
  - ✓ Physical plant comparison
  - ✓ Is there a basis for throughput and quality comparison?
- ✓ Private Industry Capacity
  - ✓ Without having the results of an analysis based on comprehensive private depot maintenance capacity and capability data, is private industry's recommendation to close public depots on a wholesale basis valid?
- ✓ Private Industry surge capability:
  - ✓ How expensive a proposition would this be?
- ✓ Private industry contends that it must be closely linked with the ultimate user (the military) to insure that needed or suggested improvements can be fed into the design process. What evidence is there to indicate that suggestions from the user are not being fed into the design process very effectively today in the current private industry/military relationship?
- ✓ Private industry contends that DoD should avail itself of "all that industry has to offer and concentrate on warfighting capabilities."
  - ✓ In contingencies, there is a need for rapid response from logistics infrastructure.

- ✓ Public depots provide that quick response.
- ✓ With depots under DoD control, on a moment's notice, they can increase output, change priorities, and dispatch field teams.
- ✓ DoD would argue that this is all an integral part of the services' warfighting capability.
- ✓ Private industry says it should have priority for modification and upgrade work because it more closely resembles product design and manufacturing rather than maintenance. On the other hand, would advocates of this argument be willing to accept the converse--that maintenance does not resemble manufacturing and therefore should not be performed by manufacturers?
- ✓ Capacity:
  - ✓ Air Force says interpretation of work stations is not uniform or standardized; what does this mean? Was this a reason for not using the FY 87 baseline?
  - ✓ Air Force says the 1987 methodology used to compute capacity was different from the method used today--that it allowed depot-specific sets of factors which could vary among the depots. Again, reason for not using FY 87?
  - ✓ Definitions of capacity, capacity utilization, capacity index, excess capacity, availability factor, annual productive hours, reserve capacity, funded workload, unfunded/constrained workload, will be included in study.
  - ✓ Study will include various types of bar and stacked charts to illustrate capacity, workload, and other comparative data.

◆ **POTENTIAL SOURCES OF INFORMATION/DATA**

- ✓ Joint Implementation Working Group
  - ✓ Coordinates implementation of interservicing and consolidation decisions specified in both Joint Service Business Plan and Corporate Business Plan
- ✓ Joint Service Competition Working Group
  - ✓ Advises on depot maintenance workload competition issues--develops procedures and guidance for conducting public-public and public-private competition of depot maintenance workloads.
- ✓ Joint Performance Measurement Group
  - ✓ Develops depot maintenance performance measurement system among others.
- ✓ Joint Logistics Systems Center
  - ✓ Achieves corporate information management goals for DoD logistics business areas by managing design, development, implementation, and maintenance of an integrated DoD corporate logistics process system and facilitating development and implementation of improved business practices.
- ✓ Joint Policy Coordinating Group on Depot Maintenance
- ✓ Joint Depot Maintenance Analysis Group
- ✓ Defense Depot Maintenance Council
- ✓ DoD Maintenance Policy Office (Bob Mason's office)
- ✓ General Accounting Office (Donna Heivelin and Bob Myer)



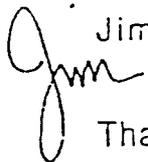


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Gregory R. England  
President

23 November 1993

Lt. Gen. Jim Fain  
Commander  
Aeronautical Systems Division  
Wright-Patterson AFB, Ohio 45433-6503

Jim,  


Thanks for the opportunity to dialogue with you, your staff and industry counterparts on several topics important to the U.S. Air Force and to industry. I trust that my comments were helpful to your objectives and would like to make several follow-up comments.

As you know, acquisition reform is an extremely complex matter with many players and a host of conflicting objectives. Frankly, it's not obvious to me that significant macro changes will be made during either of our tenures, even with the personal involvement of Bill Perry. Independent of much energy to change the overall system, however, your organization, working with the aerospace industry, can affect many current practices that are inhibitors to lean manufacturing (big M, from the executive suite to the factory floor and from the SECDEF to the field). You will find many individuals in the SPOs reluctant to range far afield from past practices so you will personally have to be involved as I have to be in my own organization. I heartily endorse your recommendation for a direct communicative link on acquisition issues.

In my judgment, the depot issue is being addressed and debated at a micro level that does a disservice to the Services, industry, and our Nation. Rather, this is a national policy issue that needs to go far beyond the arguments for or against a particular facility. In succeeding months I plan to frame this topic more appropriately and will dialogue with you along the way.

Lt. Gen. Jim Fain  
Page 2.

Commercial practices are of strategic importance to the Air Force. Industry that supports the USAF must have the flexibility to compete in the commercial marketplace and the USAF must be able to obtain goods and services at less cost.

The lean aircraft initiative is right on. You will probably find that by the time most of the data is compiled, many companies will already be well down the path. We have been actively working this process at Fort Worth for almost two years and are about to enter Phase III. In Phase III we are redesigning all of our business processes to make them far more efficient. My comment here is that industry does not see the same dedication on behalf of the Government. While we know that the military is reducing, it appears to us that the infrastructure is staying largely intact. That increases our task and at the same time detracts from the tip of the spear. My challenge to you at President's Day was intended to be an honest and forthright suggestion. That is, as the leader of ASC, it is your obligation to lead in this lean aircraft initiative. We in industry expect to see a lean customer.

The above subjects are complex and little progress has been made at reform. On the other hand, people in responsible positions with vision and determination can make a difference. I include both of us in that category and therefore will be pleased to work with you in bringing about meaningful changes. Keep in touch. Thanks for sponsoring President's Day.

*Best regards,  
Jim Fain*

# "PRESIDENT'S DAY" AT ASC (NOV 93)

General Fain's "Acquisition Reform" presentation:

- OVERSIGHT IS INCREASED - Once oversight gets in the picture, you are headed for failure - because the oversight always finds something and that creates the need for more oversight, and on and on.
- ACQUISITION SYSTEM ROLES & MISSIONS - Fain wants industry to help sell this set of definitions of roles and missions - and understand the interfaces. "We have to stop people from reaching down 23 levels into something they shouldn't be involved in."
- PRODUCT FOCUSED INTEGRATED PROGRAM - The model for management - every supervisor generates products for his subordinates - the subordinates are his customers. Fain characterizes this as a new way for management to view their role in an IPT environment.
- HIERARCHICAL RELATIONSHIPS - Product/customer concept described above applies to every level in the hierarchy. This is key to Fain's philosophy.
- NEW ACQUISITION ENVIRONMENT - Wants to talk about a change in the way we do our business.
- CURRENT ACQUISITION STRUCTURE

Both government and industry lack upfront overall planning - don't give the IPTs enough structure or metrics before they start working.

Technology Base is not being directed, does not feed our programs as well as it should. Still a lot of technology for technology's sake. In dem/val you have to prove you can integrate the technology.

Manufacturing Processes still not worked early enough - this is why we have EMD - to prove that we can build what we have designed for the price we said - only way to do this is to go back into the design process and get the risk out of your manufacturing processes.

- NEW ACQUISITION STRUCTURE - Presented as representing a position agreed to between he and Gen Yates.

Plan for a gap - (Post EMD) - i.e. no cost share in EMD - industry must make profits. Must be good business because we can't and shouldn't count on going straight to production. The only way we're going to get Congress to release up front money is to convince them that not every CE and Dem/Val will lead EMP and production.

GORDON R. ENGLAND - Gen Fain, do you really believe we're going to have another Dem/Val and EMD program this decade?

GEN FAIN - JAST will lead to an EMD Program. "I believe that if we in the Air Force/Navy/industry need to present to this administration a program that keeps the design teams together - that doesn't have to lead to production, i.e. we have to recognize the validity of the post-EMD Gap. If we do, the administration will accept the notion of having to fund our design teams.

ENGLAND - We have to get off the idea of using commercial parts. We have to adopt COMMERCIAL PRACTICES.

FAIN - I agree. Biggest issue is PRICE vs COST! How the government does it vs how commercial industry does it.

ENGLAND - We've studied this - the study was presented to Deutch and Perry.

FAIN - Studies don't cut it.

ENGLAND - Don't agree that we can set the depots aside - it is integral to our total problem. Fain's doesn't agree, thinks depots are NOT the heart of the problem of keeping our design teams together - "a minor factor at best." It is a problem but Fain doesn't feel it is significant

ADM BOWES - The world doesn't revolve around airplanes and design teams - it revolves around systems - really big systems of systems.

DICK HARDY (Boeing) - I agree that we have to plan for a gap before production, but I don't like JAST because we aren't starting with a requirement, we're just going to do technology.

FAIN - I agree JAST was ludicrous, but I think we have fixed it at the last minute - Adm Bowes and I agree that you have to know where you're going to go. I gave them a set of 15 "requirements" questions they had to answer before I could tell them what technologies I would have to work:

These drive the technologies we have to pursue:

Under weather	vs	thru weather
One man	vs	two man
Internal weapons	vs	external weapons
One engine	vs	two engine
VSTOL	vs	CTOL

HARDY - Have to focus on specific missions and objectives.

FAIN - "Gordon, if you look at what we're doing in JAST, you'll see that we'll be doing dem/val or EMDs but not at the level of F-22. They'll be different. We'll have to pursue 4 or 5 concepts. Can see us doing dem/val of common avionics or support equipment."

Navy is going to give Muellner an experienced acquisition one-star executive as his deputy.

In the ground attack environment for JAST, I don't see why we need to build an airplane - we're not inventing new aerodynamics - but we might need sub-scale demos.

JONES (Northrop) - We've done some time line analysis and its very short, no longer then 24 months, before we'll have to start significantly drawing down our design teams. Need careful economic modeling of the JAST concept to see if they will generate enough money to keep the design teams together. If it isn't you're going to have to develop a different strategy if your goal is to keep design teams together.

FAIN - We expect to come down to only 2 design teams for fighters - 2 for bombers, 2 for transports, etc.

We don't have a model that is sufficiently precise to determine how much money it takes to keep a design team together. We don't know if JAST is enough.

We can't keep going in to OSD and the Congress individually - we get thrown out. We'd be delighted to work with an industry IPT to try and address the issue raised by Mr. Jones although we have some legal issues about how we can work this.

JONES (Northrop) Volunteered to lead the IPT to develop an economic analysis of what is required to support a design team.

FAIN - Fine, we'll take that as an action item.

FAIN - Congress won't let us start CE (Concept Explorations) because they believe that once we start a CE we never quit until we get to production.

ASC has decided that our most important core values are

1. To acquire and manage fixed wing aero systems.
2. Propulsion
3. Weapons
4. Avionics integration

I'll give the core value list to Industry when it is finished.

I have 50% of my work force managing weapons and 50% managing common systems - avionics like GPS, training, etc. These common systems activities will be the first things to go if my workforce gets cut.

## DEPOT ISSUES

BLACKWELL (LASC) (plus many other presidents voiced concurrence) - depots are a much bigger issue. Vote among us and you'd see.

BOWES - The Navy isn't competing for depot work? (?Did he mean they've decided not to or that they can't compete?)

FAIN - The dollars available for industry to compete for depot work have actually increased.

BLACKWELL - But your RFPs prohibit us from doing the design and then competing for the mod line. The dollars aren't/cant go to the companies with the design teams.

CLUBB (TI) - How can we help sell this new acquisition structure to DoD and Congress.

FAIN - You've all been in to see Colleen Preston and we've all reinforced the impression that we're incompetent - industry complains about depots. AF about Navy. Navy about AF. We have to start talking as a coalition.

MATTICE - Industry has not been talking to the Chief and the AF leaders about this type of issue. You talk to them about specific programs, not about improving the collective process. Jim is on to something here. We need to work together to get the right type of Acquisition Reform.

FAIN - You've got to stop talking program specifics in the Pentagon. Talk to them about the acquisition process to get the Pentagon to focus on the issues they should be working on.

We ought to decide what we think OSD ought to deal with. What Congress ought to deal with - and then talk to them about that, not about things we don't want them to work on like program technical details.

SPONYOE (IBM) - I think Perry and Deutch are a first rate team so I disagree with your characterization of them. We ought to be working the kinds of issues raised in John Griffin's DBO work. We've backed away from it when we should be accelerating it.

FAIN - You misunderstood me. I want them to work on the right issues for their positions.

I want this group to agree on three-four issues that we want to put PATS on to go work.

LACKMAN (Rockwell) - What are we going to be able to do about funding stability.

FAIN - I've tried for years, but don't see how we're ever going to do that.

We all need to go to Washington with the same story for the next 6-8 months. We need to sell this new development process concept. Where we keep necking down from CE to D/V to EMD - so that we break the paradigm that if Congress gives us CE money it will continue forever.

BAIR - Why don't we think at the break about what specific actions the group would like to bring forth at the end of the day.

FAIN - You'll have to understand that you'll have to commit resources to this IPT/PAT. We won't work anything without a IPT. No more than 4 IPTs should come out of this meeting.

BOTTOM LINE

• Depots (i.e. depot type work) are not going to maintain our design teams but, I'll concede to Gordon that we need to keep it on our agenda.

• Can't foresee another major production for some considerable time - remember when we were planning for 72 F-22's per year - "we'll be lucky if we get to 12 per year."

GORDON ENGLAND'S POINT: We need to work on all their fronts - Congress, OSD, and Service Acquisition Commands.

OSD Regulation (Herman Report + others) - Fain doesn't like it, because it says all we need is for the government to change and everything will be ok. Gordon's point is that it was a thoughtful, useful study and while it doesn't have the whole answer, it should be used, not rejected.

FAIN - Believes that we in the bottom trapezoid have to start feeding actions to the upper trapezoid and triangle. We can't sit in the bottom and let them control our destiny.

ENGLAND - Then let's control some of our own actions - challenged Fain to make his SPOs stop requiring cost and pricing data beyond what is required by law. Said that 50% of what is requested is above what is required by law.

FAIN - Agreed to take this action if we in industry will manage our programs to show that we haven't lost our insight and ability to produce quality programs.

FAIN/ENGLAND will work this together. Fain assigned Col. Todd to look into this for a potential ASC Policy letter. Fain said that he is really surprised by what he finds some SPOs doing. When he finds a problem he sends out a policy letter. He will make these available to industry.

COL MIKE HARRISON - None of the seven commercial pilot practices programs received complete OSD concurrent.

ENGLAND - LAI doesn't work all of the full spectrum of industry/OSD/Congress.

FAIN - There have been 1000 reports in my lifetime - BUT I haven't seen a whole lot of change.

ENGLAND - There are efforts throughout industry and government by well-meaning people; we need all of them.

ADM BOWES - What Jim is trying to say is we've never gone up there together as AF/Navy/Industry representing the experience base - the people who have to execute the programs.

CLUBB - We need to clean up our programs first.

FAIN - No, we can't count on that - we can't wait for that.

FAIN - Irritates the hell out of me that we're just sitting here in our bottom trapezoid waiting for something to happen.

We've got to pull our trapezoid together in a congruent way! I want to see something - anything happen in the bottom trapezoid before we go forward.

ANTINUCCI (Martin-Marietta) - Suggest you get key advocates from middle and upper triangles involved in the process.

FAIN - Not my way but I'll bow to the group if this is a consensus. (Industry seemed to feel it was premature to do this.)

MATTICE - MDI 2 years old - nothing really new happened. Only real successes are F-22 and JDAM. Why?

Must focus on middle block - use the established decision process

FAIN - Must work on 6 of our top 10 Initiatives today; get some results; take results to middle block - main problem is we do not speak with unified voice.

ENGLAND - One key difference today - budget crashing down - some DoD persons highly interested in making change. The environment is ripe to try this approach.

FAIN - We've never had to be efficient before. Efficiency is now the single measure - we'll give up performance, we'll give up schedule.

HARDY - Peace is hell.

FAIN - Need data to do something in the bottom box - pick a bunch of horses and then ride them up to the middle box.

BOWES - We are moving out with the JACG to try to accomplish some of these things.

Acquisition Reform - This is the task we've been talking about all day long. This is the objective of recommendation No. 1 alone.

HARDY - Don't use this term as the focus for this groups activities.

YORK - If we use Acquisition Reform, this effort will be put on the shelf like all the other studies.

BLACKWELL - We need to answer Griffin's DBO questions. Put a logic together that fits within the money we think we're going to receive. What pisses us off about JAST is that we're just wandering around. We're spending B&P like mad and its just killing us.

FAIN - John Griffin presented an approach that was aligned with my Acquisition Reform thoughts. We need data to go upward - not impressions and stories.

BLACKWELL - We need the focus that Griffin's approach would give us - so that we're at least working the right issues.

FAIN - We can work them under JACG once we get some data.

MATTICE - You've got a list of 13 items from last year (MDI?) plus John Griffin's ideas plus John Halpin.

FAIN - I'm not sure we've done enough (or have enough to show) to have a story that can go forward. We can work a lot of things here to get credibility before we go up. Where can I show what ISO 9000 and MIL 499 have done to increase efficiency. Where is the data?

How can we tie this Group together to speak as one voice? I need to find out how we can do this legally.

ENGLAND - If we're already doing more than the law requires in cost/pricing data is our lower trapezoid, how can we go forward to OSD with a straight face and say we should be given relief to use commercial practices?

FAIN - We need a PAT to go forward to develop a plan to flush out the strawman we gave you for acquisition reform.

McCORD - Develop a list of things we as a team (services/industry) can do within the bottom box.

FAIN - We need an articulated plan.

JONES (Northrop) - The time line is too great - we can't wait for long to develop more data - we've got enough data - let's put it together.

FAIN - We're not ready quite yet, but when we get the data - fine time. John's approach - and then we have to go forward together, industry and services together.

And we need to continue to support LAI even though it is on a longer time line. It will give us date and credibility that we need.

ENGLAND - Challenge you to get as Lean as we are.

FAIN - We're going to have cuts, but maybe not as fast or in the areas you'd prefer.

ENGLAND - You've got to do it because it adds to your cost and our cost . . . and cost is cost.

BOWES - Agree, we want to reduce total cost within the government, industry, and the fleet.

SPONYOE - We haven't talked all day about software. Three services can't even agree on a methodology.

FAIN - ACTION ITEMS

1. FORM A PAT
2. WORK THIS OVERALL PLAN
3. IDENTIFY WHAT WE'VE ALREADY DONE
4. IDENTIFY ISSUES WE'VE DISCUSSED TODAY - LIST OF THINGS WE NEED TO WORK
  - Commercial practices
  - Software
5. How do we talk to each other more frequently - real legal issue (some 1970 law).

- Put the team on some type of schedule.
- Fain's lawyer says he can do this if he gives the PAT a specific task.
- Wants first report from PAT in one month by 15 December.

< CONFIRMATION REPORT >

11-30-1993(TUE) 10:48

[ RECEIVE ]

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## The Role of DOD Depots Within The Defense-Industrial Base

### PREMISE:

A basis of Depot Consolidation and competition decisions (as part of the Defense Industrial Base restructuring) should be the cost-efficiency of delivering the end product to the using Defense customer.

These critical depot work decisions require comparable and accurate total costs accumulated in accounting for the delivery of the final product

### ISSUES:

- I. What is a Depot? What does it cost to deliver Depot Products?
- II. How is it possible to identify all cost elements (regardless of source or organization) needed to deliver each Depot's final product?
- III. What is the basis for quantifying (costing) the total of all of these elements for each product delivered by either Depots or Industry. Are all "Depot" costs assigned to these Products?
- IV. Will BRACC consider work allocations to optimize depot and industry participation in satisfying user requirements?

## The Role of DOD Depots Within The Defense-Industrial Base

1. Depots have significant design/engineering/manufacturing/repair capabilities which range from activities defined as Core Capabilities to a wide range of related support, management, and administrative infrastructure.

1.1 What is a Depot? What is included in Depot costs?  
What is the actual cost of final products or services?

- 1.1.1 Functional (Supply, Maintenance, Manufacturing, etc.)
- 1.1.2 Geographical (Base boundaries, real estate, facilities)
- 1.1.3 Budget Sources (Appropriation Accounts)
- 1.1.4 Organizational (Service, Command, Directorates, Agencies)
- 1.1.5 Capabilities (Equipment, Critical Skills, etc.)
- 1.1.6 Cost Categories and Costs Included
- 1.1.7 Others (Cost Accounting Standards & Auditing Practices)

1.2 What are the Core Functions -- or Core Capabilities -- of each Depot?

- 1.2.1 Does the definition of "Core" differ between Services?
- 1.2.2 Do certain Core Capabilities reside only within Depots and not in the Private Sector? What are the differentiating criteria?
- 1.2.3 What excess or undesired Core Capability duplication exists between Depots and Industry in specific categories of tasks to be performed?

- Engineering Design?
- Major Mods?
- Weapon System Maintenance/Repair?
- Component Repair?
- Item Management?
- Supply and Distribution?

1.3 To what extent should the Public Defense Depot system and the Private Defense Industry maintain identical and duplicative core capabilities -- business, technical, and function?

- 1.4 From a national economic perspective, what overall level of nationalized Depot Industrial Capability is required or desired in the future from both a Defense as well as a national economic perspective?

2. Structuring Depot Maintenance competition and developing a level playing field for both the private and the public sectors remains a major challenge. Cost concerns impacting Industry-Depot competitions include:

- 2.1 Can all true and complete costs associated with a Depot activity be defined in terms of all that is required to support each program or product? Will all costs of all of the Depots programs sum to equal the total "Depot Cost" (or "Depot Operating Expense)?
- 2.2 How can the uncertainty in cost comparability -- and the ambiguity -- that currently exists in comparisons between Depots or in comparing Depot versus Industry costs be equalized? How can it be factored into decisions to optimize the Defense Industrial Base?
- 2.3 Does the current system of certification by the DCAA that each Depot's bid on each competitive project complies with the "Cost Comparability Handbook" of the Defense Depot Maintenance Council result in a level "playing field" between the public and private sectors? How should Depot rates be revised to reflect differences in the structure, processes, accounting systems, and regulatory requirements of both sectors?
- 2.4 An all-component definition of "What Is A Depot" is of critical importance in competitions, downsizing, or consolidation rationalization of the Defense Industrial Base

3. The continuing discrepancies in the Defense Business Operating Fund (DBOF) are an indication of problems of cost accountability and auditability in the Depot System (and DOD Product Support/Supply System) associated with multiple DOD organizations involved in the Defense Maintenance system.

3.1 How are costs allocated/assessed when multiple organizations are involved in receiving, producing, supporting, and delivering the Depot's product?

3.1.1 Depot host (Includes base support, etc.)

3.1.2 Major depot supporting tenants directly involved in the supply/maintenance workload (such as DLA, GSA, etc.)

3.1.3 Secondary tenants or geographically separated DOD entities (such as DCAA, DPRO, Civil Engineering, Real Estate Management, Computer Services, Financial and Cost Systems , etc.)

3.1.4 How are DBOF transfers documented and reconciled?

3.2 Is there an auditable process followed in determining cost impacts or cost-sharing contributions made by other tenants geographically located at the depot (e.g. Operational flying units, other defense agencies, etc.)?

3.3 Depot Costs must be segmented into major functions to properly identify costs associated with Depot Core competed and non-competed functions on a basis which permits comparisons with Industry in undertaking major tasks:

3.3.1 Depot maintenance (end items and components)

3.3.2 Major Mods

3.3.3 Engineering and Design Activities

3.3.4 Depot Manufacturing Activities

3.3.5 Product Support

3.3.6 Others

3.4 What changes in cost accounting visibility or cost information collection should be identified now by the Defense Services in order to provide objectivity in support of Defense Industrial Base decisions in FY 94-97?

4. The JCS Depot Maintenance Consolidation Study (page ES-2) stated:

"Closure of a significant number of depots will be necessary if we are to reduce excess capacity. We believe the only effective way to close depots is through the BRACC process".

Because substantial overcapacity exists throughout the Depot system (estimated by the January 1993 JCS Depot Maintenance Study to be as much as 50%), what methodology will the BRACC use to determine the priority in which Depot functions can be combined and Depots eliminated or downsized?

- 4.1 What additional information [on Costs, Industrial Capabilities, alternative public/private work splits, etc.] will be needed by BRACC in the future in their considerations of these Defense Industrial Base issues affecting optimization of the Depot system?
- 4.2 How can Industry assist in providing essential comparable data?
- 4.3 How many of the 37 major Army, Navy, and Air Force Depot activities located in the United States have specialized (core) critical capabilities which support unique military weapon system requirements -- and which capabilities cannot be provided by other Depots)?

5. In BRACC comparisons between Government Depots and Industry contractors, to what extent do you plan to reconcile the cost comparability of data (cost information) supplied from fundamentally different accounting systems? Some of the particularly difficult issues include:

5.1 Types of "overhead" which are readily identified in Industry (Government Contractor) costs but which are not acknowledged or identified on an equivalent basis by Depot organizations in "cost of work" calculations:

- 5.1.1 Employee fringe benefits and retirement
- 5.1.2 Personnel management
- 5.1.3 Depot "Self insurance" (e.g. fire loss, product liability)
- 5.1.4 Environmental Costs (current and future)
- 5.1.5 Depreciation of equipment
- 5.1.6 Others

5.2 Means of reconciliation of budgetary and expense information from separate (but co-located) agencies?

6. With the variety of tasks accomplished by both Industry and the different Depots (including current inter-service support), what measures of merit (e.g. Quality, Productivity, Cost-Effectiveness, etc.) should be used in comparing the "value" of private and public output:

- 6.1 Rank candidates and alternative Defense Industrial Base scenarios for evaluation of the future desired public-private mix of capabilities needed to perform depot maintenance and defense supply activities?
- 6.2 Provide a common cost accounting baseline to insure competitiveness can be calculated for work performed by the total (Public and Private) Defense Industrial Base?

7. How will the potential benefits of competition to undertake various depot workloads be considered?

7.1 Can the overall cost to DOD be minimized if duplicative Depot activities maintained by each Service in multiple depot locations be consolidated through inter-service support? Can other alternatives be regularly considered ?

7.2 Can inter-service questions be addressed on a Service-by-Service basis and what level of decision-making should be involved?

7.3 Will "competition" between Depots and Private Contractors be "ground ruled" as a factor in BRACC assessments. To what extent will work activities requiring Depot "Core" capabilities also be competed ?

7.4 Will private core capabilities (as well as public) be considered in the downsizing rationalization of the Defense Industrial Base?

7.5 To what extent can BRACC consider the various alternative cost saving approaches that have been proposed for centralizing indirect support activities (alternatives such as combining support "functions" in a single agency depot system)?

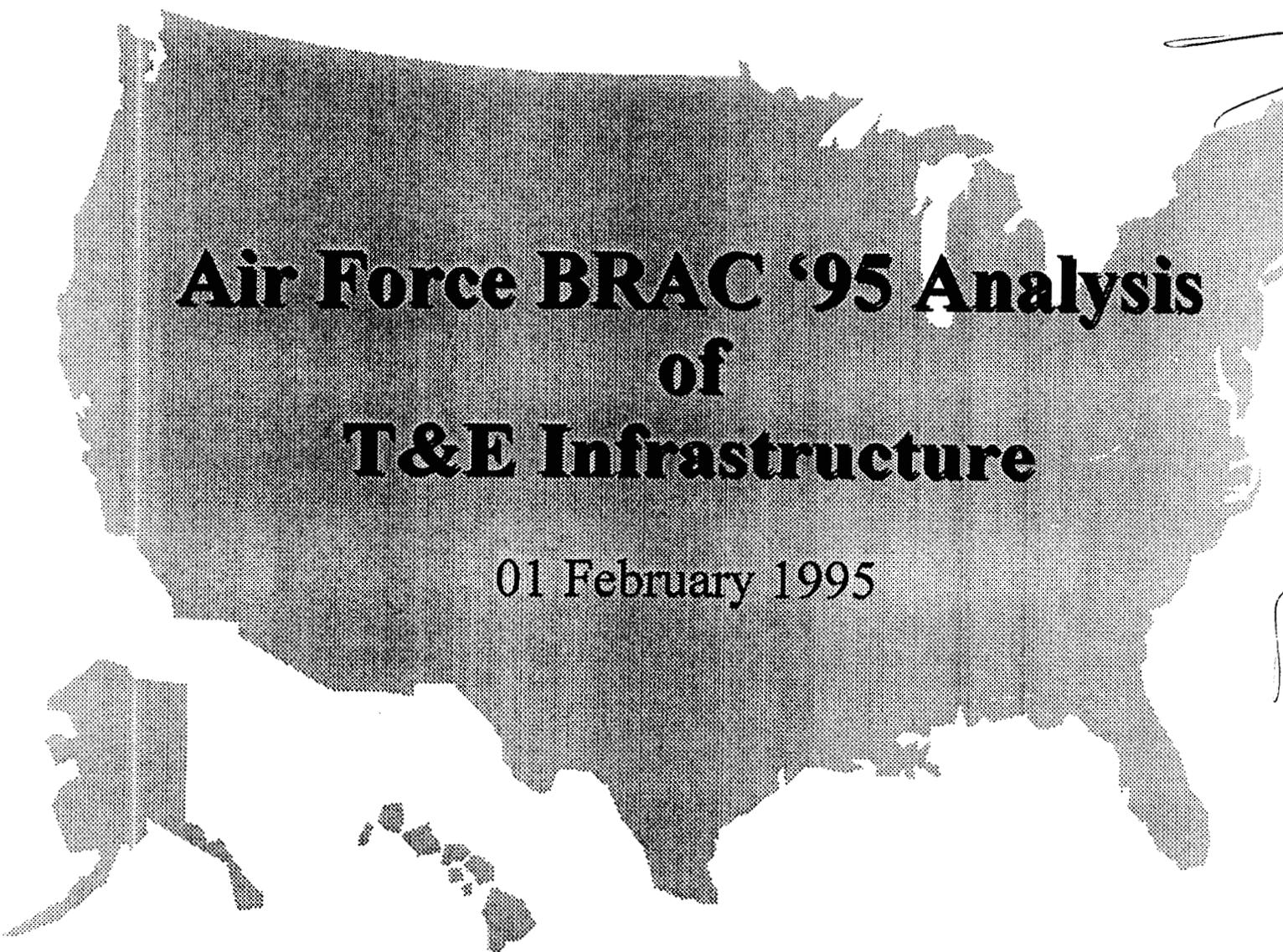
8. There are legislative restrictions that require specific considerations of the amount of work that can be competed/contracted out to industry (e.g. The FY 93 Authorization prohibits the military services from contracting out more than 40 percent of the depot-level "maintenance work" by non-federal employees.) How will considerations of these mandated legislative restrictions be weighted in the BRACC analyses?

Meeting: 04/08/95  
 9:00AM  
 JCSG T4E

Attendees:

- 1) Steve Ackerman - DBCRC AF Team
- 2) Jim Awely - BRAC 703-696-0504 X182
- 3) Glenn Profit - AF Rep to JCSG/UPT 210-652-4527
- 4) LEONARD JARMAN - Support to JCSG/UPT 703-695-0902
- 5) Jim Boatright SAF 703 693-
- 6) Chuck Fox SAF/LL 703 - 697-9153
- 7) LESTER C. FARRINGTON DBCRC-Joint X-Svc. 703-696-0550 x190
- 8) JAY D. BLUME JR. AF/RT 703-698-8678
- 9) H. GEN. H. W. LEAR AF/TE 703 697-4774
- 10) FRANK CIRILLO DBCRC AF Team Lead 703-696-0504 x16
- 11) BEN BORDEN ""
- 12) Mark A. Pross DBCRC/AF Team (703) 696-0504 x.166
- 13) CHRIS GOODE ADMIN X142
- 14) LT Col George London AF/TER (703) 697-1165
- 15) Parker Hester AF/TER (703) 697-1165
- 16) Col Dave McNierney AF/RTR (703) 695-6766
- 17) Maj Michael Wallace AF/RTR (703) 695-4578
- 18) ALEX YELVIN DBCRC NAM TEAM 703 696 0504 x183
- 19) Rick DiCamillo DBCRC AF TEAM 703-696-0504 ext 166
- 20) BRYAN ECHOLS SAF/GEN 703-697-6560
- 21) Marcia Malcomb AF/RTR (703) 695-4666
- 22) Col Wayne Mayfield AF/RTR (703) 695-6766
- 23) Dr. Dan Stewart AF Rep, T4E, JCSG

*CPelle*



**Air Force BRAC '95 Analysis  
of  
T&E Infrastructure**

01 February 1995

*Page  
44  
Final  
set up*

## **Purpose**

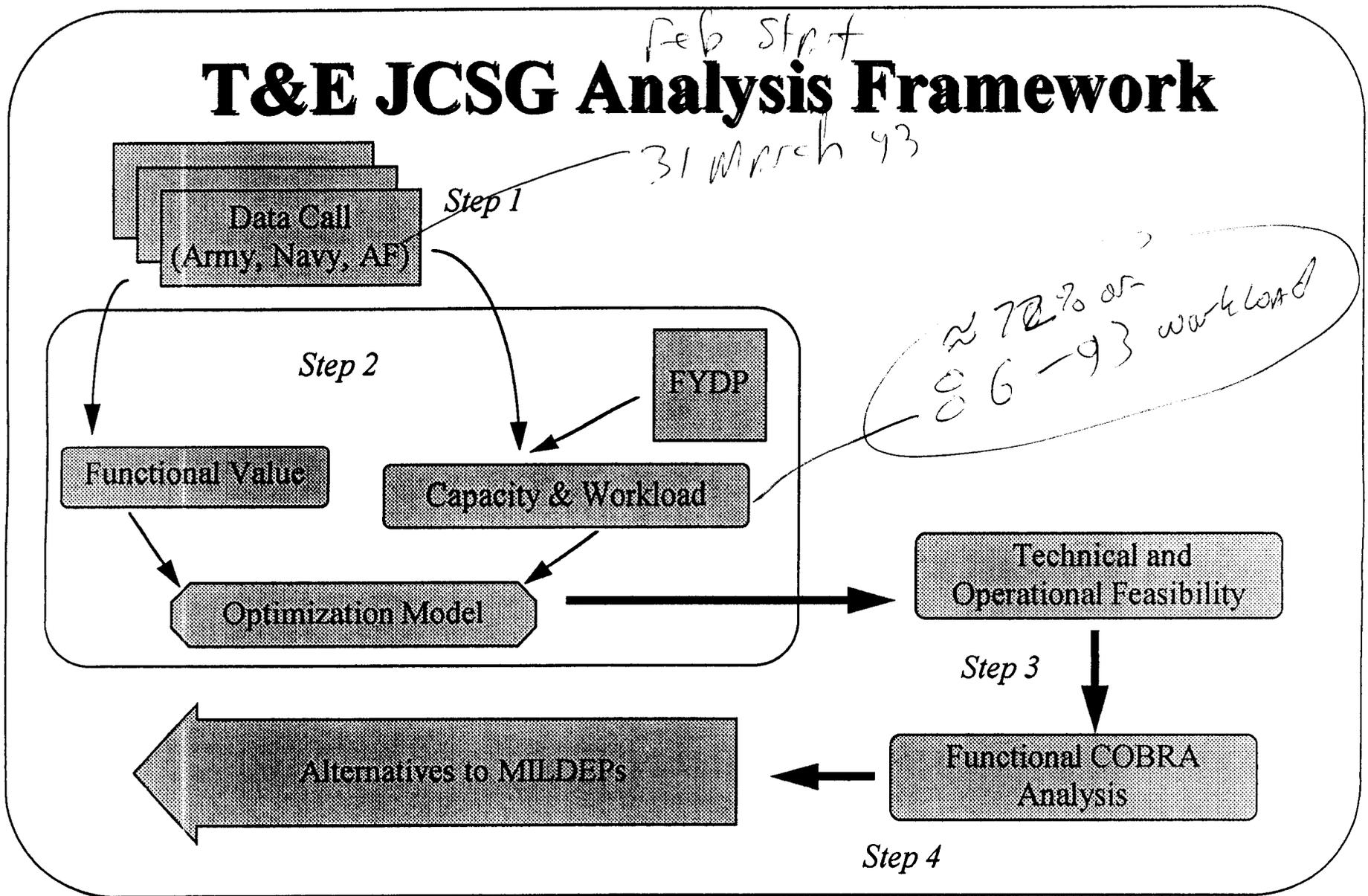
- Present Results of AF Analysis of T&E Realignment & Consolidation Opportunities
  - Intra-AF
  - Cross-Servicing

## **Overview**

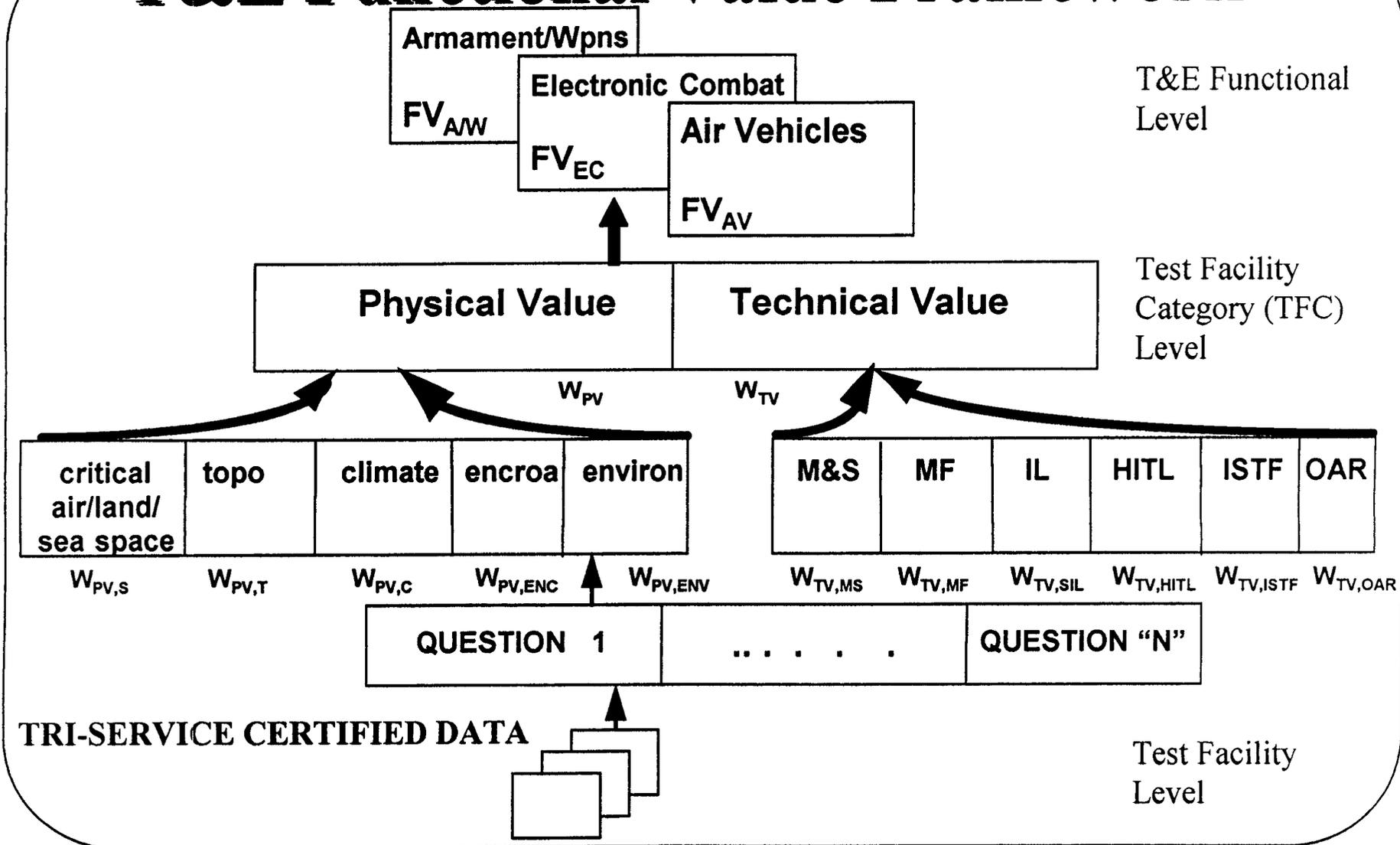
- **Part I: Intra-AF T&E Realignment/Consolidations**
  - Basis for Response to T&E JCSG Alternatives
- **Part II: Completion of T&E JCSG Analysis Plan**
  - Addresses T&E Co-Chair Alternatives
- **Part III: Analysis of RDT&E Alternatives for Armament/Weapons, Explosives, and Propulsion**
  - Addresses Lab JCSG Chair's Alternatives

## Background

- T&E JCSG Analysis Plan Was Jointly Developed and Approved by BRAC '95 Steering Group
  - Air Vehicles, Air Armament/Weapons and Electronic Combat
  - Test Facility Level
  - Functional COBRA Costs
- T&E JCSG Did Not Complete Analysis IAW Approved Plan
  - “Activity” (e.g. AFFTC, Edwards AFB) versus Test Facility (e.g. ACETEF Facility at Pax River) Focus
    - AF/TE Nonconcurrent
  - Activities Classified into “Core” and “Non-Core”
  - Realignment/Consolidations Between “Core” Activities Not Allowed
  - Steps 3 & 4 Deferred to MILDEPs



# T&E Functional Value Framework



*Focus of the study*

# Core/Non-Core T&E Activities

## Summary

<u>MILDEP</u>	<u>Activity (Location)</u>	<u>Core</u>	<u>Non-Core</u>	<u>Retained by Opt Model</u>	<u>Retained as "Core" by T&amp;E JCSG</u>	<u>Rationale</u>
AF	AFFTC (Edwards)	✓				
	AFDTC (Eglin)	✓				
	AEDC (Arnold)	✓				
	AFFTC (UTTR)	⊙		No	Yes	Cruise Missile Capability
	AFDTC (Holloman)	✓				
	475 WEG (Tyndall)		⊙	Yes	No	Not MRTFB OAR (PI 3c)
Navy	REDCAP (Buffalo)		✓			
	NAWC (Pax River)	✓				
	NAWC (China Lake)	✓				
	NAWC (Pt Mugu)	✓				
	NAWC (WSMR)	⊙		No	Yes	Unique Navy S-A Capability
	NAWC (Indianapolis)		✓			
	NAWC (Warminster)		⊙	Yes	No	Not MRTFB OAR (PI 3c)
	NSWC (Dahlgren)		⊙	Yes	No	Not MRTFB OAR (PI 3c)
Army	NSWC (Indian Head)		⊙	Yes	No	Not MRTFB OAR (PI 3c)
	NSWC (Crane)		⊙	Yes	No	Not MRTFB OAR (PI 3c)
	WSMR	✓				
	EPG	✓				
	YPG	⊙		No	Yes	Unique Army Rotary Wing
	RTTC		✓			
	ATTC - Ft Rucker		✓			
AQTD - Edwards		✓				

## Background (con't)

- T&E JCSG Co-Chairs Transmittal to MILDEPs Included Two Sets of Alternatives
  - Jointly Developed Alternatives, Supported By Joint Analysis, Addressing “Non-Core” Activities
  - Co-Chair Alternatives, With No Supporting Analysis, Addressing “Core” Activities
- Air Force Addressed Jointly Developed Alternatives In Its Intra-AF Analysis
  - Offered to Cross-Service Navy and Army in its Response
  - Did Not Respond to Co-Chair Alternatives Since No Supporting Analysis Provided

*Air Force Position - stick to the plan  
— NO zigging —*

## **Background (con't)**

- Since T&E JCSG No Longer Active, AF Completed T&E JCSG Analysis Plan, Using Certified Data
  - Results Identify Specific Alternatives for “Core” Activities
  - Addresses Co-Chairs Concerns Regarding Excess Capacity Among “Core” Activities
- AF Combined Results of Above Analysis With Lab JCSG Results to Address Lab JCSG Chair’s RDT&E Alternatives
  - Air-Launched Weapons, Propulsion, and Energetics

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# **Air Force BRAC '95 Analysis of T&E Infrastructure**

**\*Part I: Intra-AF Realignments/Consolidations**

\*Update of 12 Dec 94 Briefing for T&E JCSG Meeting, which was not held

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## **Purpose**

- Present Results of Air Force Base Installation Analysis for T&E
  - Intra-AF T&E Realignments/Consolidations
  - Integration of T&E JCSG Alternatives
  - Basis for Response to T&E JCSG

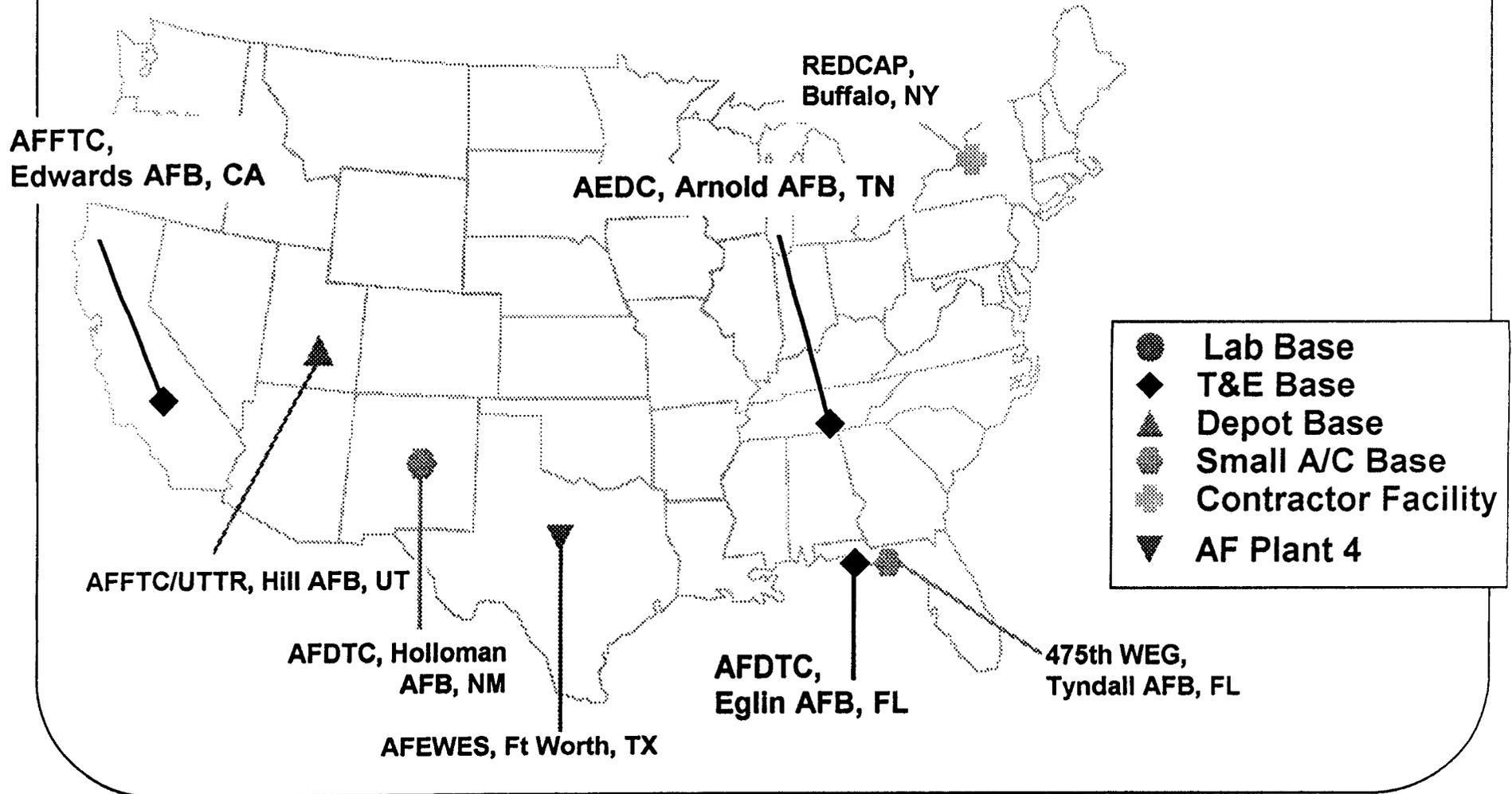
## **Part I: Outline**

- Scope
- Analysis Process
- Intra-AF Realignments
- JCSG Alternatives
- Summary

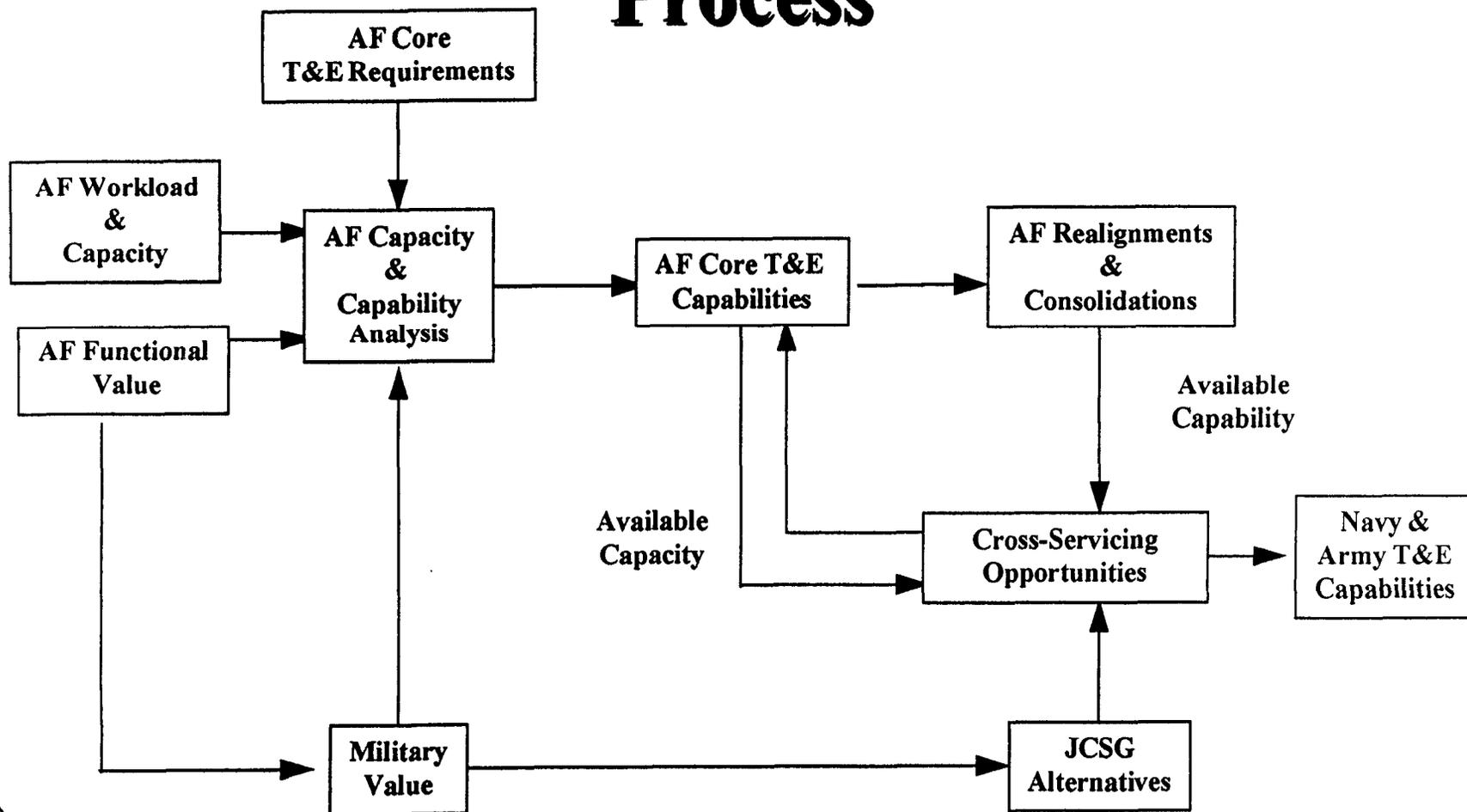
## Scope

- Focus of T&E JCSG Analysis on AF Primary Mission...Air Warfare
  - Air Vehicles
  - Air Armament/Weapons
  - Electronic Combat
- Other Services' Primary Missions Excluded
  - Navy: Surface and Subsurface Warfare
  - Army: Land Warfare

# Air Force T&E Locations



# AF T&E Analysis Process



# Capacity and Capability Analysis Capability Assessment

*F15/F16  
Kicker Test Facility*

T&E Function	AFFTC @ Edwards	AFFTC @ UTTR	AFDTC @ Eglin	AFDTC @ Holloman	475 WEG @ Tyndall	AEDC @ Arnold	REDCAP @ Buffalo	AFEWES @ Ft Worth
Air Vehicle	F		(P)	(P)	(P)	(P)		
Armaments/ Weapons		(P)	F	(P)	(P)	(P)		
Electronic Combat	<i>installed systems/facil</i> (P)		<i>operation</i> (P)	<i>responsibility</i> (P)			<i>Hardware in the loop</i> (P)	(P)

**F = Full Capability to Support All Six Test Facility Categories of the Acquisition/Test Process**  
**P = Partial Capability**  
 = Intra-AF Realignment/Consolidation Opportunities  
 = Geographically Constrained or Not Cost Effective to Move

## **AF Realignments & Consolidations** **Intra-AF Candidates**

- Air Vehicle
  - None
- Armaments/Weapons
  - AFFTC (UTTR) Capabilities
- Electronic Combat
  - REDCAP (Buffalo) and AFEWES (Ft Worth) Hardware-in-the-Loop Facilities/Workload
  - AFDTC/EMTE (Eglin) Open-Air Range Facilities/Workload

## **Armament/Weapons Realignment AFFTC (UTTR)**

- Realign UTTR from AFMC T&E Range to ACC Training Range
  - Retain Minimum Capability to Support Training Requirements and Large Footprint Weapons T&E (e.g., Cruise Missile)
    - Critical Air/Land Space
    - Mobile T&E Instrumentation/Support
  - Transfer Workload to AFDTC (Eglin) and AFFTC (Edwards)
  - Downsize Personnel to Satisfy New Requirements
  - Dispose of Remaining Equipment/Instrumentation
- Rationale
  - 82% of Current Missions are Training (Only 18% T&E)
  - Most of Current T&E Can Be Accomplished With Existing Core T&E Capabilities (AFDTC and AFFTC)
  - Requirement to Retain Air/Land Space

**Criteria IV & V**  
**AFFTC (UTTR) Realignment**

<u>1-Time</u> <u>Cost</u>	<u>20 YR</u> <u>NPV*</u>	<u>Steady</u> <u>State</u> <u>Savings</u>	<u>ROI</u> <u>(Years)</u>	<u>Gov't</u> <u>Pers</u> <u>Savings</u>
\$3.2M	(\$179.9M)	\$12.4M	0	104

\* ( ) Indicate Savings

## **Electronic Combat (EC) Realignment REDCAP/AFEWES/AFDTC (EMTE)**

- Realign REDCAP & AFEWES Hardware-In-The-Loop (HITL) and AFDTC/EMTE Open-Air-Range (OAR) Facilities
  - Move Workload and Required Equipment from REDCAP and AFEWES to AFFTC/BAF (Edwards) and AFDTC/GWEP (Eglin) Facilities
  - Move Required Threat Systems from AFDTC/EMTE (Eglin) to Nellis Complex
  - Disestablish REDCAP, AFEWES, and Dispose of Remaining Equipment
  - Retain Threat Emitters at AFDTC (Eglin) to Support AFSOC, AWC, and Armaments/Weapons T&E
- Rationale
  - Projected Workload/Requirement at REDCAP and AFEWES is 10% and 28% of their Respective Capacities
  - AF EC OAR Workload/Requirement Can Be Satisfied with One versus Two Ranges
  - Available Capacity at Existing Core AF T&E Activities to Absorb Workload

~~TEST~~ DEFINITION

## Criteria IV & V

### REDCAP/AFEWES/AFDTC (EMTE) Realignment

	<u>1-Time</u> <u>Cost</u>	<u>20 YR</u> <u>NPV*</u>	<u>Steady</u> <u>State</u> <u>Savings</u>	<u>ROI</u> <u>(Years)</u>	<u>Gov't</u> <u>Pers</u> <u>Savings</u>
REDCAP	\$1.7M	(\$11.0M)	\$0.9M	1 yr	2
AFEWES	\$5.8M	(\$5.8M)	\$0.8M	7 yrs	3
EMTE	\$2.2M	(\$31.4M)	\$2.6M	1 yr	0

*no ancillary cost - "survey teams are out there"*

\* ( ) Indicate Savings

## **T&E JCSG Alternatives** **Overview**

- 13 Alternatives (14 Realignment Opportunities)  
Jointly Developed by T&E JCSG Evaluated by AF
  - 6 Air Vehicle
  - 5 Armament/Weapons
  - 3 Electronic Combat
- AF Activities Scored Highest Functional Value in Each T&E Functional Area
  - Selected as Preferred Receiver by Optimization Model

# T&E JCSG Alternatives Functional Values

### Air Vehicles

Activity	JCSG FV
AFFTC- Edwards	85
NAWC - Pax River	81
NAWC - Pt Mugu	69
AFDTC - Eglin	56
476WEG - Tyndall	49
UTTR - Hill	46
AQTD - Edwards	46
EPG - Ft Huachuca	44
NAWC - China Lake	43
YPG - Yuma	35
ATTC - Ft Rucker	34
AFDTC - Holloman	33
NSWC - Dahlgren	25
NAWC - Indianapolis	19
AEDC - Arnold	18
NAWC - Warminster	14

### Armaments/Weapons

Activity	JCSG FV
AFDTC - Eglin	82
NAWC - Pt Mugu	77
NAWC - Pax River	57
NAWC - China Lake	57
WSMR	50
AFDTC - Holloman	30
YPG - Yuma	29
NAWC - WSMR	25
RTTC - Redstone	21
NSWC - Dahlgren	17
AEDC - Arnold	16
NSWC - Indian Head	14
NSWC - Crane	13

### Electronic Combat

Activity	JCSG FV
AFDTC - Eglin	65
NAWC - Pt Mugu	58
NAWC - Pax River	53
AFFTC- Edwards	52
NAWC - China Lake	47
EPG - Ft Huachuca	47
AFDTC - Holloman	29
NSWC - Crane	17
AFEWES - Ft Worth	17
REDCAP - Buffalo	15

*DON'T  
make sense*

# **T&E JCSG Alternatives Air Vehicle**

<b>T&amp;E JCSG Alternative</b>	<b>Realignment Opportunity</b>	<b>Capability/ Capacity Fit</b>	<b>Recommendation</b>
TE-1 (AV)	Ft Rucker Rotary Wing	Yes	Cross-Service Army at Edwards
TE-2 (AV)	AQTD Edwards Rotary Wing	Yes	Retain at Edwards
TE-3 (AV)	Indianapolis Measurement/Integration	No	Do Not Cross-Service
TE-4 (AV)	Dahlgren Measurements	No	(No AF Involvement)
TE-5 (AV)	Warminster Digital Sims	No	(No AF Involvement)
TE-6 (AV)	Tyndall Radar Test Facility	Partial	Intra-AF Realignment

# **T&E JCSG Alternatives Armaments/Weapons**

<b>T&amp;E JCSG Alternative</b>	<b>Realignment Opportunity</b>	<b>Capability/ Capacity Fit</b>	<b>Recommendation</b>
TE-1 (AW)	Crane Ordnance Measurements	Yes	Cross-Service Navy at Eglin
TE-2 (AW)	Dahlgren Ordnance Measurements	Yes	Cross-Service Navy at Eglin
TE-3 (AW)	Indian Head Propulsion	Partial	Do Not Cross-Service Navy
TE-4 (AW)	Redstone Open Air Range	Yes	Cross-Service Army at Eglin
	Redstone Component Testing	Partial	Do Not Cross-Service Army

# **T&E JCSG Alternatives Electronic Combat**

<b>T&amp;E JCSG Alternative</b>	<b>Realignment Opportunity</b>	<b>Capability/ Capacity Fit</b>	<b>Recommendation</b>
* TE-1 (EC)	REDCAP, Buffalo NY	Partial	Intra-AF Realignment
* TE-2 (EC)	AFEWES, Ft Worth TX	Partial	Intra-AF Realignment
TE-3 (EC)	Crane Electromagnetics	No	(No AF Involvement)

\* "Requests for Data" Also Sent to the Navy

## **T&E JCSG Alternatives** **Recap**

- 14 Realignment Opportunities
  - 11 Identify AF As Potential Receiver
  - 3 Do Not Involve AF
- For 11 Realignments with AF As Potential Receiver
  - 3 Recommended for Intra-AF Realignments
    - 2 Evaluated for Cross-Servicing (w/Navy)
  - 5 Recommended for AF to Cross-Service
    - Capacity/Capability Fit (Beneficial to AF/DoD)
  - 3 Not Recommended for AF to Cross-Service
    - Partial to No Capability Fit (No Benefit to AF/DoD)
- Above Consistent with AF Core T&E Capabilities
  - Appear to have no TOA or End Strength Implications

## **T&E JCSG Alternatives** **Status**

- AF (as Losing Service) Issued “Requests for Data” for TE-1 (EC)/REDCAP and TE-2 (EC)/AFEWES to Navy and Evaluated Response (Not Cost-Effective)
  - No Request Made for TE-6 (AV)/Tyndall Radar Test Facility Since Predominantly AF Unique to F-15 & F-16
- Army Has Requested Data for All 4 of its T&E JCSG Alternatives (As Losing Service)
  - AF has Responded and Offered to Cross-Service 3 of 4 Opportunities Within Available AF Capability/Capacity
- Navy Has Not Requested Data for Any of its 7 T&E JCSG Alternatives to Date (As Losing Service)

## Criteria IV & V

### **Evaluation of TE-1 (EC)/REDCAP & TE-2 (EC)/AFEWES**

<u>T&amp;E JCSG Alternative</u>	<u>Potential Receiver Sites</u>	<u>1-Time Cost (\$M)</u>	<u>20 YR NPV* (\$M)</u>	<u>Steady State Savings (\$M)</u>	<u>ROI (Years)</u>	<u>Gov't Pers Savings</u>
<b>TE-1 (EC)/REDCAP</b>						
	** EDWARDS	1.7	(11.0)	0.9	1	2
	PAX	3.9	(7.3)	0.8	4	0
	PT MUGU	4.8	2.7	(0.1)	100+	2
<b>TE-2 (EC)/AFEWES</b>						
	** EDWARDS	5.8	(5.8)	0.8	7	3
	PAX	6.1	(0.9)	0.5	14	0
	PT MUGU	10.7	6.5	0.3	100+	2

\*\* Most Cost-Effective Option

\* ( ) Indicate Savings

## **Part I: Summary**

- **AF Core T&E Capabilities/Workload to Support AF Mission Already Consolidated for Air Vehicles (AFFTC, Edwards AFB) and Armaments/Weapons (AFDTC, Eglin AFB) to Extent Possible with Few Exceptions**
  - Exceptions Addressed in Intra-AF Realignment
- **AF Core T&E Capability/Workload for Electronic Combat Fragmented**
  - Consolidation to Minimum Number of Activities/Sites Addressed in Intra-AF Realignment
  - Two T&E JCSG Cross-Servicing Opportunities Evaluated with Navy (i.e. REDCAP and AFEWES), But Not Cost-Effective
- **Significant Opportunities for Intra-Service Consolidation Exists Within Navy and Army**
  - Presumably Will Be Addressed in their Intra-Service Analyses

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## 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 Realignment

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## **Part I: Summary (cont'd)**

- T&E JCSG Alternatives Integrated Into AF Analysis and Opportunities for Cross-Servicing Being Evaluated
  - 2 Requests to Navy to Cross-Service AF
  - 3 Offers By AF to Cross-Service Army
  - No Requests from Navy to Cross-Service
- Intra-AF Consolidations of Core T&E Capabilities Eliminates All Excess Capacity Linked to Infrastructure Savings
  - Remaining Excess Represents “Sunk Costs” and Is Capacity Available for Future Workload/Surge and Cross-Servicing
- AF Already Providing Significant Cross-Servicing Using AF Core T&E Capabilities
  - AFFTC (Edwards AFB)
  - AFDTC (Eglin AFB)
  - AEDC (Arnold AFB)

## **AF Current Cross-Servicing**

- AFFTC (Edwards AFB CA)
  - Army's Rotary Wing AQTD at Edwards
  - NASA Flight Operations
  - Space Shuttle
- AFDTC (Eglin AFB FL)
  - Army's Hellfire Test Complex
  - Joint AF/Army Munitions T&E ("Chicken Little")
- AFDTC (Holloman AFB NM)
  - Central Inertial Guidance Test Facility (CIGTF)
  - High Speed Test Track (HSTT)
  - Flight Operations and Full Scale Aerial Target Support for Army's WSMR
- AEDC (Arnold AFB TN)
  - Wind Tunnels and Propulsion Facilities

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**Air Force BRAC '95 Analysis  
of  
T&E Infrastructure**

Part II: Completion of JCSG Analysis Plan

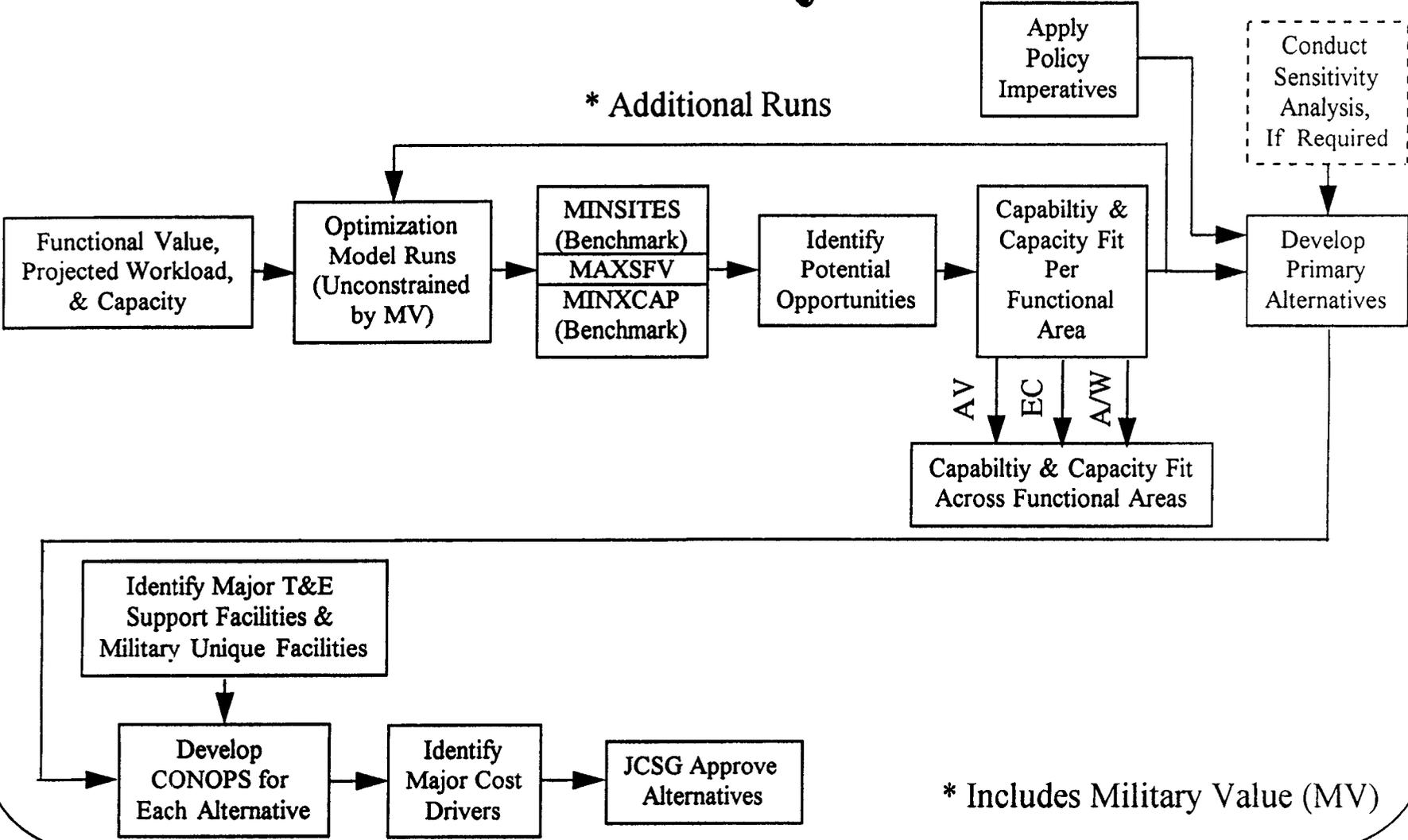
## **Purpose**

- Present Results of AF Analysis Based on Completion of T&E JCSG Analysis Plan
  - Identify Cross Servicing Opportunities Between T&E “Core” Activities for Each T&E Functional Area
  - Address T&E Co-Chairs Alternatives

## **Part II: Outline**

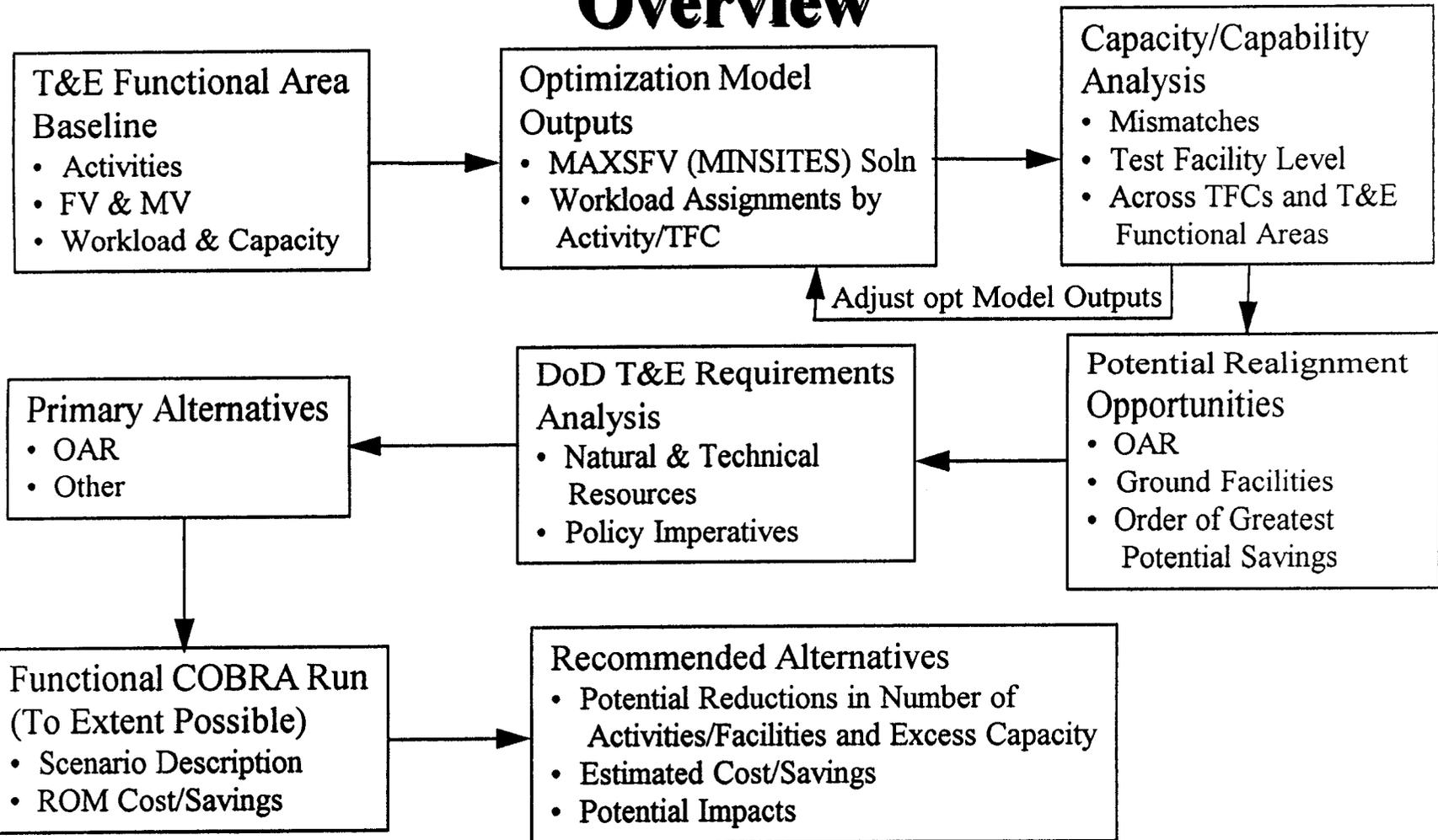
- Background
- T&E JCSG Analysis Process
- T&E Functional Analysis/Results
  - Electronic Combat
  - Air Vehicle
  - Armament/Weapons
- T&E JCSG Co-Chair Alternatives
- Cost Analysis
- Summary

# T&E JCSG Analysis Process



# T&E Functional Analysis/Results

## Overview



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## **EC T&E Baseline** **DoD Workload (Test Hours)**

<u>Activity</u>	<u>Functional Value</u>	<u>DM&amp;S</u>	<u>MF</u>	<u>IL</u>	<u>HITL</u>	<u>ISTF</u>	<u>OAR</u>
AFDTC Eglin	65		2390			761	899
NAWC Pt Mugu	58		487	459	223		
NAWC Pax River	53		148			2843	
AFFTC Edwards	52			3088			758
NAWC China Lake	47		2311	1770			745
EPG	47	246	858				369
AFDTC Holloman	29		6091				
AFDTC AFEWES	17				2524		
NSWC Crane	17		4344				
AFDTC REDCAP	15				86		

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# Optimization Model Output (Test Hours)

## Electronic Combat

<u>Activity</u>	Functional						
	<u>Value</u>	<u>DM&amp;S</u>	<u>MF</u>	<u>IL</u>	<u>HITL</u>	<u>ISTF</u>	<u>OAR</u>
<b>AFDTC, Eglin AFB</b>	<b>65</b>		<b>2902</b>			<b>2202</b>	<b>1978</b>
<b>NAWC, Pt Mugu</b>	<b>58</b>		<b>98</b>	<b>850</b>	<b>420</b>		
<b>NAWC, Pax River</b>	<b>53</b>		<b>0</b>			<b>1402</b>	
<b>AFFTC, Edwards AFB</b>	<b>52</b>			<b>4467</b>			<b>112</b>
<b>NAWC, China Lake</b>	<b>47</b>		<b>0</b>	<b>0</b>			<b>0</b>
<b>EPG</b>	<b>47</b>	<b>246</b>	<b>1924</b>				<b>0</b>
<b>AFDTC, Holloman</b>	<b>29</b>		<b>8402</b>				
<b>AFDTC, AFEWES</b>	<b>17</b>				<b>2413</b>		
<b>NSWC, Crane</b>	<b>17</b>		<b>3303</b>				
<b>AFDTC, REDCAP</b>	<b>15</b>				<b>0</b>		

## Capability/Capacity Analysis for EC T&E Open Air Ranges

Mismatches: Nellis Range Complex, Eglin and China Lake Have Comparable Capabilities;  
Edwards Has No Threat Simulators, and EPG is Primarily a C<sup>3</sup> Test Capability

Before:

1 Facility at Eglin

1 Facility at China Lake

1 Facility at Edwards

1 Facility at EPG

4 Facilities

4 Activities

Capacity = 5860 Test Hours

Excess Capacity = 3089 Test Hours

After:

1 Facility at Eglin

Nellis Range Complex

1 Facility at Edwards

1 Facility at EPG

3 Facilities

3 Activities

Capacity = 4039 Test Hours

Excess Capacity = 1268 Test Hours

**Capability/Capacity Analysis for Electronic Combat T&E  
Adjusted Optimization Model Workload (Test Hours)**

<u>Activity</u>	Functional						
	<u>Value</u>	<u>DM&amp;S</u>	<u>MF</u>	<u>IL</u>	<u>HITL</u>	<u>ISTF</u>	<u>OAR</u>
<b>AFDTC, Eglin AFB</b>	<b>65</b>		<b>3000</b>			<b>761</b>	<b>963</b>
<b>NAWC, Pt Mugu</b>	<b>58</b>		<b>0</b>	<b>0</b>	<b>0</b>		
<b>NAWC, Pax River</b>	<b>53</b>		<b>0</b>			<b>6369</b>	
<b>AFFTC, Edwards AFB</b>	<b>52</b>			<b>3088</b>		<b>2610</b>	<b>1127</b>
<b>NAWC, China Lake</b>	<b>47</b>		<b>0</b>	<b>2229</b>			<b>0</b>
<b>EPG</b>	<b>47</b>	<b>246</b>	<b>1924</b>				<b>0</b>
<b>AFDTC, Holloman</b>	<b>29</b>		<b>8402</b>				
<b>AFDTC, AFEWES</b>	<b>17</b>				<b>0</b>		
<b>NSWC, Crane</b>	<b>17</b>		<b>0</b>				
<b>AFDTC, REDCAP</b>	<b>15</b>				<b>0</b>		

## **EC T&E**

# **Potential Realignment Opportunities**

- Non-Core (JCSG) Alternatives
  - TE-1 (EC): Realign HITL at AFDTC Buffalo (REDCAP)
  - TE-2 (EC): Realign HITL at AFDTC Ft Worth (AFEWES)
  - TE-3 (EC): Realign EM Effects MF at NSWC Crane
- Core
  - Core-1 (EC): Realign NAWC China Lake OAR to Nellis Range Complex and AFDTC Egin
  - Core-2 (EC): Realign NAWC China Lake RCS MF to AFDTC Holloman
- Additional Core
  - Realign Signature MF from NAWC Pt Mugu to AFDTC Egin
  - Realign Communications MF from NAWC Pax River to EPG
  - Realign IL from NAWC Pt Mugu to NAWC China Lake
  - Realign HITL from NAWC Pt Mugu to ISTF at NAWC Pax River
  - Realign OAR from EPG to AFFTC Edwards

## Recap Electronic Combat T&E

Option	Activities	Facilities	DoD Capacity (Test Hours)	DoD Excess Capacity (Test Hours)	Comments
Baseline	10	24	64909	33501	
Non-Core (JCSG) Alternatives	7 <30%>	22 <8%>	52284 <19%>	21244 <36%>	Non-Core Realigned
Core-1 (EC) (OAR)	7 <30%>	21 <12%>	50463 <22%>	19744 <40%>	Non-Core Realigned Plus OAR Consolidation
Core-2 (EC) (RCS MF)	7 <30%>	20 <17%>	46980 <28%>	16261 <51%>	Non-Core Realigned Plus OAR & RCS MF Consolidation
Add'l Alternatives *	6 <40%>	14 <42%>	43389 <33%>	12670 <62%>	Core and Non-Core Realigned

\* Maximum Reductions Achievable

<> = % Reduction

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## Armament/Weapons T&E Baseline DoD Workload (Test Hours)

<u>Activity</u>	<u>Functional Value</u>	<u>DM&amp;S</u>	<u>MF</u>	<u>IL</u>	<u>HITL</u>	<u>ISTF</u>	<u>OAR</u>
AFDTC Eglin	82	39,324	13,144		12,085	168	7,598
NAWC Pt Mugu	77	3,916	18,275	5,774	39,225		4,068
NAWC China Lake	57	12,065	45,387	7,594	1,357		2,169
NAWC Pax River	57					624	
WSMR	50		7,608				13,275
AFDTC Holloman	30		5,129				
YPG	29		127				2,055
NAWC WSMR	25						1,791
RTTC	21		30,089				786
NSWC Dahlgren	17		954				
AEDC Arnold	16		2,107				
NSWC Indian Head	14		2,196				
NSWC Crane	13		1,142				

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**Optimization Model Output**  
**Armament/Weapons Workload (Test Hours)**  
**MAXSFV (MINSITES)**

<u>Activity</u>	<u>Functional Value</u>	<u>DM&amp;S</u>	<u>MF</u>	<u>IL</u>	<u>HITL</u>	<u>ISTF</u>	<u>OAR</u>
AFDTC Eglin	82	55,305	29,523		18,611	443	16,036
NAWC Pt Mugu	77	0	59,481	11,916	34,056		11,609
NAWC China Lake	57	0	24,782	1,452	0		3,986
NAWC Pax River	57					349	
WSMR	50		396				111
AFDTC Holloman	30		11,221				
YPG	29		0				0
NAWC WSMR	25						0
RTTC	21		0				0
NSWC Dahlgren	17		0				
AEDC Arnold	16		755				
NSWC Indian Head	14		0				
NSWC Crane	13		0				

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## Capability/Capacity Analysis for Armament/Weapons T&E Open Air Range (cont'd)

- Mismatches:
- (1) Long Range, Over Land Test Hours at WSMR
  - (2) WSMR Warhead Test Hours are MF vice OAR
  - (3) WSMR Material Test Facility Mixture of TFC Hours (DM&S, MF, IL Testing vice OAR)

Before:

OAR at Eglin

OAR at WSMR

OAR at Pt Mugu

OAR at China Lake

OAR at YPG

OAR at RTTC

6 Ranges (12 Facilities)  
7 Activities (Including NAWC Desert Ship)  
Capacity = 56347 Test Hours  
Excess Capacity = 31222 Test Hours

After:

OAR at Eglin

OAR at WSMR  
(including NAWC Desert Ship)

2 Ranges (6 Facilities)  
3 Activities  
Capacity = 35567 Test Hours  
Excess Capacity = 10442 Test Hours

**Capability/Capacity Analysis for Armament/Weapons T&E  
Adjusted Optimization Model Workload (Test Hours)**

<u>Activity</u>	<u>Value</u>	<u>DM&amp;S</u>	<u>MF</u>	<u>IL</u>	<u>HITL</u>	<u>ISTF</u>	<u>OAR</u>
AFDTC Eglin	82	55,305	28,736		16,667	792	16,036
NAWC Pt Mugu	77	0	39,010	0	(1) 0		0
NAWC China Lake	57	0	13,609	13,368	0		0
NAWC Pax River	57					0	
WSMR	50		20,278				(2) 7,298
AFDTC Holloman	30		21,812				
YPG	29		0				0
NAWC WSMR	25						1,791
RTTC	21		0				0
NSWC Dahlgren	17		0				
AEDC Arnold	16		2,107				
NSWC Indian Head	14		0				
NSWC Crane	13		0				

Note: (1) Plus 36,000 Test Hours (DM&S, MF, IL Combination)

(2) Plus 6,246 Test Hours (DM&S, MF, IL Combination)

## **Armament/Weapons T&E Potential Realignment Opportunities**

- Non-Core (JCSG) Alternatives
  - TE-1 (A/W): MF Workload from NSWC Crane
  - TE-2 (A/W): MF Workload from NSWC Dahlgren
  - TE-3 (A/W): MF Workload from NSWC Indian Head
  - TE-4 (A/W): MF and OAR Workload from RTTC
- Core Alternatives
  - Core-1 (AW): OAR Workload from NAWC Pt Mugu, China Lake, and YPG to AFDTC Eglin and WSMR
- Additional Core
  - Realign Ground Facilities
    - Impacts Navy and Army Weapons R&D, Surface-to-Surface T&E, etc.

## Recap Armament/Weapons T&E

Options	Activities	Facilities	DoD Capacity (Test Hours)	DoD Excess Capacity (Test Hours)	Comments
Baseline (Adjusted)	13	79	549,291	270,236	
Non-Core (JCSG) Alternatives	9 <31%>	68 <14%>	495,823 <10%>	216,768 <20%>	Non-Core Realigned
Core-1 (A/W) OAR Realignment	9 <31%>	62 <22%>	476,231 <13%>	197,176 <27%>	Non-Core Realigned Plus MRTFB OAR Consolidation
Add'l Core Ground Facility Realignment *	6 <54%>	37 <53%>	359,594 <35%>	80,539 <70%>	Core and Non-Core Realigned

\* Maximum Reductions Achievable

<> = % Reduction

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## Air Vehicles T&E Baseline DoD Workload (Test Hours)

<u>Activity</u>	<u>Value</u>	<u>DM&amp;S</u>	<u>MF</u>	<u>IL</u>	<u>HITL</u>	<u>ISTF</u>	<u>OAR</u>
AFFTC, Edwards	85	270	2360	69485		121	7583
NAWC, Pax River	81		27288	2275	112239	9553	7661
NAWC, Pt Mugu	69		327				1679
AFDTC, Eglin	58		4911				
476 WEG, Tyndall	47				1932		
UTTR, Hill	46						1940
AQTD, Edwards	46						1258
EPG, Ft Huachuca	44		398				277
NAWC, China Lake	43		1830				
YPG, Yuma	35		131				3404
ATTC, Ft Rucker	34						3776
AFDTC, Holloman	33		27530				
NSWC, Dahlgren	25		943				
NAWC, Indianapolis	19		16324	10046			
AEDC, Arnold	18		2569				
NAWC, Warminster	14	1003					

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## Optimization Model Output (Test Hours) Air Vehicles T&E

<u>Activity</u>	<u>Functional Value</u>	<u>DM&amp;S</u>	<u>MF</u>	<u>IL</u>	<u>HITL</u>	<u>ISTF</u>	<u>OAR</u>
AFFTC, Edwards	85	1273	3392	81806		1968	11998
NAWC, Pax River	81		30703	0	114171	7706	12246
NAWC, Pt Mugu	69		575				3334
AFDTC, Eglin	58		0				
476 WEG, Tyndall	47				0		
UTTR, Hill	46						0
AQTD, Edwards	46						0
EPG, Ft Huachuca	44		0				0
NAWC, China Lake	43		0				
YPG, Yuma	35		0				0
ATTC, Ft Rucker	34						0
AFDTC, Holloman	33		27985				
NSWC, Dahlgren	25		943				
NAWC, Indianapolis	19		21013	0			
AEDC, Arnold	18		0				
NAWC, Warminster	14	0					

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Capability/Capacity Analysis for Air Vehicles T&E

# Open Air Range

Mismatches: Cruise Missile Testing at UTTR

Before:

- OAR at Edwards
- OAR at Pax
- OAR at Pt Mugu
- OAR at UTTR
- OAR at EPG
- OAR at YPG
- OAR at Ft Rucker

7 Ranges (9 Facilities)  
8 Activities  
Capacity = 53761 Test Hours  
Excess Capacity = 26183 Test Hours

After:

- OAR at Edwards
- OAR at Pax
- OAR at UTTR

3 Ranges (4 Facilities)  
4 Activities  
Capacity = 30250 Test Hours  
Excess Capacity = 2672 Test Hours

**Capability/Capacity Analysis for Air Vehicles T&E  
Adjusted Optimization Model Workload (Test Hours)**

<u>Activity</u>	<u>Functional Value</u>	<u>DM&amp;S</u>	<u>MF</u>	<u>IL</u>	<u>HITL</u>	<u>ISTF</u>	<u>OAR</u>
AFFTC, Edwards	85	270	2360	71417		121	13395
NAWC, Pax River	81		27405	11065	130822	10496	9340
NAWC, Pt Mugu	69		0				0
AFDTC, Eglin	58		5238				
476 WEG, Tyndall	47				0		
UTTR, Hill	46						2217
AQTD, Edwards	46						2626
EPG, Ft Huachuca	44		0				0
NAWC, China Lake	43		2095				
YPG, Yuma	35		0				0
ATTC, Ft Rucker	34						0
AFDTC, Holloman	33		27677				
NSWC, Dahlgren	25		0				
NAWC, Indianapolis	19		0	0			
AEDC, Arnold	18		2569				
NAWC, Warminster	14	0					

## **Air Vehicles T&E Potential Realignment Opportunities**

- Non-Core (JCSG) Alternatives
  - TE-1 (AV): Realign Ft Rucker Rotary Wing OAR to YPG
  - TE-2 (AV): Realign AQTD Rotary Wing OAR to YPG
  - TE-3 (AV): Realign NAWC, Indianapolis ILs to Pax River and Realign NAWC, Indianapolis Product Quality Assurance MF to TBD
  - TE-4 (AV): Realign NSWC, Dahlgren EM Vulnerability MF to Pax River
  - TE-5 (AV): Realign NAWC, Warminster DM&S Centrifuge to Pax River
  - TE-6 (AV): Realign Tyndall RADAR Test HITL to Another Air Force Activity
- Core Alternative
  - Core-1 (AV): Consolidate OAR Workload into Three MRTFB Ranges: AFFTC Edwards, NAWC Pax River, and UTTR Hill
- Additional Core:
  - Sea Level Climatic Workload from Pt Mugu to McKinley Climatic Lab, Eglin

## Recap Air Vehicle T&E

Options	Activities	Facilities	DoD Capacity (Test Hours)	DoD Excess Capacity (Test Hours)	Comments
Baseline	16	51	509,612	190,499	
Non-Core (JCSG) Alternatives	10 <37%>	46 <10%>	486,210 <5%>	167,097 <12%>	Non-Core Realigned
Core-1 (AV) OAR Realignment	11 <31%>	43 <16%>	474,965 <7%>	155,852 <18%>	Non-Core Realigned Plus MRTFB OAR Consolidation
Add'l Alternative *	10 <37%>	42 <18%>	474,390 <7%>	155,604 <18%>	Core and Non-Core Realigned

\* Maximum Reductions Achievable

<> = % Reduction

# **T&E Functional Analysis/Results**

## **Recap**

- Realign DoD Air Vehicles T&E Into AFFTC (Edwards) and NAWC (Pax River), to Include Rotary Wing
  - Both Required to Satisfy DoD Requirements
- Realign DoD A/W OAR T&E Into AFDTC (Eglin) and Army WSMR
  - Both Required to Satisfy DoD Requirements
  - Retain Navy Ground Facilities to Support Weapons R&D
- Realign EC OAR T&E from NAWC (China Lake) to Nellis Complex and AFDTC (Eglin)
  - Combined with Consolidation of EC Ground Facilities at AV Principal Sites, Satisfies DoD Requirements
- Retain Required Specialty Sites to Support Above
  - AEDC
  - AFDTC (Holloman)
  - UTTR (Air/Land Space)

## **T&E JCSG Co-Chair Alternatives** **(22 Nov 94 Transmittal Memo)**

- Co-Chair Alternatives Address Either/Or Options Which Include Realignment of All T&E (AV, A/W, & EC) Between “Core” Activities
  - AFFTC (Edwards) vs NAWC (Pax River)
  - AFDTC (Eglin) vs NAWC (China Lake)
  - NAWC (Pt Mugu) to NAWC (China Lake) or AFDTC (Eglin)
  - Army Rotary Wing T&E (Ft Rucker & AQTD/Edwards) to AFFTC (Edwards) or NAWC (Pax River)
    - Only If Fixed Wing AV T&E Consolidated at One Site

## T&E JCSG Co-Chair Alternatives Assessment

Primary T&E Areas	Control Number	Proposed Realignment Alternative	Supported by Analysis	* Alternative Based on Analysis
AV (Rotary Wing)	T&E-1 T&E-4 T&E-7**	NAWC (Pax) to AFFTC (Edwards) AFFTC (Edwards) to NAWC (Pax) ATTC (Ft Rucker)/AQTD (Edwards) to AFFTC (Edwards) or NAWC (Pax)	No } No } Yes }	<ul style="list-style-type: none"> <li>• Realign to AFFTC (Edwards) and NAWC (Pax)</li> </ul>
AW & EC	T&E-2 T&E-3 T&E-6 T&E-5	AFDTC (Eglin) to NAWC (CL) NAWC (CL) to AFDTC (Eglin) NAWC (Pt Mugu) to AFDTC (Eglin) NAWC (Pt Mugu) to NAWC (CL)	No } Yes } Yes } No }	<ul style="list-style-type: none"> <li>• Realign NAWC (CL) and NAWC (PM) A/W into AFDTC (Eglin)</li> <li>• Realign NAWC (CL) EC OAR to Nellis Complex and AFDTC (Eglin)</li> </ul>

\* Based on Completion of T&E JCSG Analysis Plan

\*\* Only if Fixed Wing AV T&E Consolidated at One Site

## **Part II: Summary**

- Only Parts of T&E JCSG Co-Chair Alternatives Supported by Analysis of T&E JCSG Data
  - In All Cases, AF Preferred Receiver Site
- Significant Reductions in Excess Capacity Possible Through Implementation of T&E JCSG Alternatives for “Non-Core” Activities
  - Combined with Intra-Service Realignment Opportunities, Significantly More Reductions possible
- Significant Cost/Savings Possible By Implementing Alternatives for “Core” T&E Activities, as well as Further Reductions in Excess Capacity
  - OAR Alternatives Provide Greatest potential for Savings
  - Ground Facility Alternatives Offer Decreasing Potential for Savings, and Greatest impact on Other Mission Areas (e.g., S&T, R&D, ISE, etc.)

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# **Air Force BRAC '95 Analysis of T&E Infrastructure**

Part III: Analysis of RDT&E Alternatives for  
Armament/Weapons, Explosives, and Propulsion

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## **Air Launched Weapons RDT&E** **Background**

- LJCSG Chair Alternatives (29 Nov 94 Memo #4)
  - Proposes to Consolidate Fixed Wing, Air-Launched (A-A/A-S) Weapons at NAWC (China Lake)
  - AF Did Not Analyze Since Not Developed Jointly and No Supporting Analysis Provided
- OSD(ES) Clarification of DepSecDef's 7 Jan 94 Memorandum (27 Dec 94)
  - Expanded to Include Alternatives Provided by JCSG Chairs (vs Jointly Developed)
- LJCSG Chair Provided Supporting Analysis
  - Conceptual Approach for Integrating Lab (R&D) and T&E JCSG Results
  - Analysis Only Addressed Lab Activities
  - AF Proceeded with Evaluating R&D Portion of Alternatives Only
- Since No T&E Analysis Provided to Support RDT&E Alternative, AF Completed T&E Analysis for "Core" T&E Activities (See Part II)
  - Used Results, Along with LJCSG Data, to Address RDT&E Alternatives

# LJCSG RDT&E Integration Concept

	Labs				T&E Sites
		FV	FC	Load	
<b>Common Support Function(s)</b>					
	Lab A	↑		↗	T&E A
	Lab B				T&E B
	Lab C				T&E C
	Lab D				
<b>Common Support Function</b>					
	Lab A				T&E A
	Lab B				T&E B
	Lab C				T&E C
<b>Look Across Sub-Categories (Macro View)</b>					

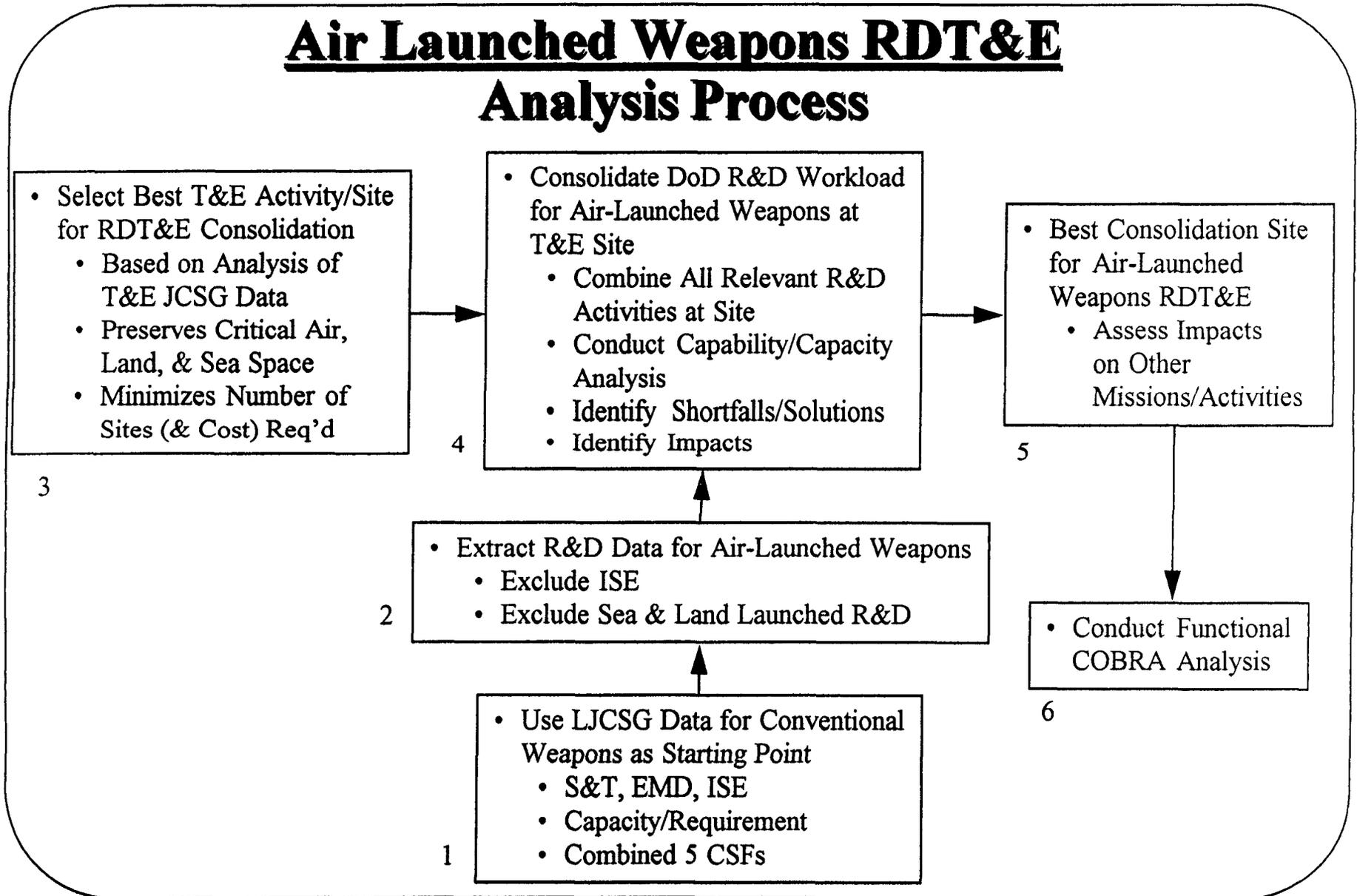
## **LJCSG RDT&E Integration Concept (Analysis Ground Rules)**

- Integrate RDT&E Functions
- Move Lab Activities to T&E Sites Due to Range Space
- Move From Lower to Higher Functional or Military Values
- Roll Up/Look For Activity/Installation Alternatives

## **Air Launched Weapons RDT&E** **Scope**

- RDT&E
  - Includes S&T and EMD (Excludes ISE)
- Fixed-Wing A-A/A-G Weapons
  - Surface-to-Surface T&E Excluded
  - Includes 5 CSFs
    - Conventional Missiles and Rockets
    - Guided Projectiles
    - Bombs
    - Guns/Ammo (Added)
    - Cruise Missile
  - Excludes Land, Sea, and Rotary-Wing Launched Weapons
- Lab Activities Include
  - 3 AF (1 Added)
  - 10 Navy (5 Added)
  - 4 Army (All Added)
- Energetics-Explosives Integral Part of Weapons RDT&E

## Air Launched Weapons RDT&E Analysis Process



## **Air Launched Weapons RDT&E**

### **\*Best T&E Activity/Site**

	Requirement	AFDTC (Eglin)	NAWC (China Lake)
Functional Value		82	57
OAR Capacity (Test Hours)	N/A	16,036	3,986
A/W Flight Tests Per Year	N/A	582	118
Air Space (sq mi)	50,000	93,143	19,445
DoD Land Space (sq mi)	(1) 21,000	724	1693
Sea Space (sq mi)	50,000	91,998	None
Max Straight Line (nm)	A-A = 220	(2) 478	60
	A-S = 350	478	60
	S-A = 240	(2) 478	60

Note: (1) No activity meets 21,000 sq mi DoD Land Space Requirement  
 WSMR's 3,381 sq mi DoD Land Space is max  
 (2) Includes Theater Missile Defense Capability

\* Based on Part II T&E Analysis

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**DoD R&D Capacity/Requirement\* (Workyears)  
Analysis of LJCSG Data**

		<u>Land-Launched</u>	<u>Air-Launched</u>	<u>Sea-Launched</u>
Air Force	<u>Activity</u>			
	ASC/WL Eglin		1755/1124	
	ASC WPAFB		325/208	
	<b>AF Subtotal</b>		<b>2080/1332</b>	
Army	MRDEC Redstone	1941/1243	485/312	
	ARDEC Picatinny	1522/975	169/109	
	ARL APG	242/155	27/17	
	Benet (Army)	223/143		
	<b>Army Subtotal</b>	<b>3928/2516</b>	<b>681/438</b>	
Navy	NAWC Pt Mugu		12/7	11/8
	NAWC China Lake		608/390	607/388
	NAWC Pax River		9/6	3/2
	NSWC Dahlgren		72/47	652/417
	NSWC Indian Head		38/24	37/24
	NSWC Crane		46/30	12/7
	NAWC Indianapolis		14/9	2/1
	NSWC Pt Hueneme			21/14
	NSWC Louisville		4/3	36/23
	NCCOSC RDTE			9/6
	<b>Navy Subtotal</b>		<b>803/516</b>	<b>1390/890</b>
<b>DoD Total</b>		<b>3928/2516</b>	<b>3564/2286</b>	<b>1390/890</b>

\* Estimated Using Certified Data

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**Air-Launched Weapons RDT&E**  
**R&D Assessment**  
**(Functional Requirement/Excess Capacity)**

	Eglin	China Lake	Comments
Before Intra-Service Consolidations	1124/631	390/218	Eglin Can Absorb China Lake - But Not Vice Versa
		516/287 (Total Navy)	Eglin Can Absorb Total Navy Req't - But Not Vice Versa
After Intra-Service Consolidations	1332/423	608/0	Requires Second Navy Site to Accomodate 798 Work Years to Meet Total Navy Requirement

Note: - Eglin Has Full R&D Capability (i.e., Collocated Acquisition) vs  
 Partial Capability at China Lake (i.e., Acquisition at Crystal City)  
 - Even Assuming China Lake 100% Air-Launched, Eglin Short  
 Fall Only 147 Workyears versus 687 for China Lake

## **Air Launched Weapons RDT&E** **Recap**

- Eglin (vs China Lake) is Best Alternative for Consolidation of Fixed-Wing Air-Launched Weapons RDT&E
  - Based on Analysis of T&E and Lab JCSG Data
  - Full Capability and Capacity to Satisfy Requirements
  - Leverages Same RDT&E Resources to Support Collocated S&T, SPO, DT&E and Operational Test, Training and Tactics Development Users
  - Significant Joint and Cross-Servicing Activity Already in Place (e.g., AMRAAM, JDAM, LOCAAS, Hellfire Test Complex, Project Chicken Little, etc.)
- Energetics-Explosives RDT&E Treated as Integral Part of Weapons RDT&E
  - No Separate Analysis

## Energetics-Propulsion S&T Capabilities

Site	Solids		Liquids			
	Research Labs	Propellant Mix Capabilities	Mono & Bi-Propellants	Cryogenic Propellants	Electrics/Solar	High-Energy Density Materials
PL	Yes	Yes	Yes	Yes	Yes	Yes
CL	Yes	Yes	No	No	No	No
RTTC	Yes	UNK	No	No	No	No

PL = Phillips Lab (AF)

CL = China Lake (Navy)

RTTC = Redstone Technical Test Center (Army)

## **Air Launched Weapons RDT&E** **Summary (Cont'd)**

- Similar to T&E Analysis, Significant Opportunities Exist for Navy and Army for Intra-Service R&D Consolidation
  - Army Could Consolidate from 4 to 2 Activities
  - Navy Could Consolidate from 10 to 2 Activities
  - Air Force is Already Consolidated at 2 Locations (Could go to 1)

## ENERGETICS - PROPULSION T&E CAPABILITIES

Site	Replacement Value (\$M)	Ambient Facilities				Altitude	Altitude Facilities			
		Liquids		Solids			Liquids		Solids	
		No.	Thrust (lbf)	No.	Thrust (lbf)		No.	Thrust (lbf)	No.	Thrust (lbf)
PL	\$ 188.80	7	10,000 K	13	6,000 K	100 K ft	1	50 K	2	100 K
CL	\$ 19.59	1	300 K	8	1,500 K	-	0	-	0	-
RTTC	\$ 4.05	1	150 K	6	2,000 K*	-	0	-	0	-
AEDC	\$1,000.00	0	-	0	-	125 K ft	2	1,500 K	2	750 K

\* RTTC has a concrete pad for thrust of 10,000 K lbf, but not demonstrated and not instrumented

## **ENERGETICS - PROPULSION RECAP**

- AIR FORCE PL IS BETTER ALTERNATIVE FOR CONSOLIDATING ENERGETICS-PROPULSION THAN CHINA LAKE
  - FULL CAPABILITY AND CAPACITY TO SATISFY REQUIREMENTS
  - SIGNIFICANTLY HIGHER CAPITAL INVESTMENT THAN CHINA LAKE OR RTTC
- PL COMBINED WITH AEDC HAS CAPABILITY TO SATISFY TOTAL DOD REQUIREMENTS

## Summary

- AF Core T&E Capabilities/Workload Consolidated to Maximum Extent Possible Based on Intra-AF Analysis
  - Eliminates All Excess Capacity Linked to I/S Savings
  - Leaves Capability/Capacity For Cross-Servicing
  - T&E JCSG Cross-Servicing Opportunities Being Worked
- Completion of T&E JCSG Analysis Plan Shows That AF T&E Activities Are Preferred Consolidation Sites
  - Subset of T&E JCSG Co-Chair Alternatives
  - Significant Cost/Savings and Reductions in Excess Capacity Achievable Beyond T&E JCSG Alternatives
  - Could Have TOA and End Strength Implications

## **Summary (Cont'd)**

- Combined Lab/T&E Analysis of LJCSG Chair Alternative to Consolidate RDT&E of Conventional Weapons Shows Eglin Better Consolidation Site (versus China Lake)
  - Energetics-Explosives an Integral Part
- Similar Analysis for Energetics-Propulsion Shows PL(Edwards) Better Consolidation Site (versus China Lake)
  - Combined with AEDC, Provides Capability to Satisfy DoD Requirements
- Significant Opportunities for Intra-Navy and Intra-Army Consolidations
  - Intra-Service Consolidations Should Be a Prerequisite Before Inter-Servicing Considered

Document Separator

# DRAFT

## AIR FORCE UNDERGRADUATE PILOT TRAINING QUESTIONS

1. Please discuss the 10 Undergraduate Pilot Training (UPT) functional areas (flight screening, primary pilot, airlift/tanker, advanced bomber/fighter, strike/advanced E-2/C-2, advanced maritime/intermediate E-2/C-2, helicopter, primary and intermediate Naval Flight Officer (NFO), advanced NFO strike, and advanced NFO panel). How were they determined? How were they weighted?
2. Did you agree fully with the Joint Cross-Service Group's (JCSG) selection of functional areas? If not, why not?
3. How did the JCSG build and use these factors?
4. How did the JCSG use the Linear Programming Optimization Model as a tool to limit the number of feasible base closure alternatives?
5. In the JCSG/UPT Student Resource Calculation, the average functional value for the Air Force UPT bases resulted in the following tiering:

Columbus AFB	6.65
Vance AFB	6.50
Randolph AFB	6.46
Laughlin AFB	6.36
Reese AFB	6.08

The Air Force color coded Criteria I in its evaluation based on a standard deviation analysis of those averages. The Department of the Air Force's Analyses and Recommendations, Vol. V, on the other hand, ranks Columbus AFB, Laughlin AFB, Randolph AFB, and Vance AFB in Tier I. Do the functional scores represent your perception of the mission capability of the UPT bases?

6. The functional average of the highest Air Force UPT base was equivalent to the lowest ranking UPT base. What are the implications?
7. What did the Joint Cross-Service Group on Undergraduate Pilot Training (JCSG/UPT) do right? In your view, what, if anything, should the JCSG/UPT have done differently?
8. What is your view of how the Base Closure Executive Group (BCEG) used the JCSG alternatives to develop its closure recommendations?
9. To your knowledge, what did the Base Support Analysis Team (BSAT) do differently in its analysis compared with the Air Force's analysis?
10. The Defense Base Closure and Realignment Commission staff plans to conduct some excursions using the Linear Programming Optimization Model. Do you have any

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suggestions regarding what the Commission staff should examine? What are your views on the following options:

- examining only Air Force bases;
  - excluding flight screening;
  - separating “flying training” factors from other factors, such as a 300 foot-wide runway; and
  - excluding Navy-unique functional areas?
11. In our excursions, do you recommend that we consider any other factors or change the relative weights in a way that more accurately reflects Air Force requirements?
  12. In your view, how far should the Commission go in defining base closure and realignment options in terms of selecting bases for closure and realignment of base functions?
  13. The Lubbock, Texas, community offered to purchase and then lease back to the Air Force Reese AFB family housing as well as a 40,000 square foot hangar at Lubbock International Airport. What is the status of these offers? [NOTE: The BCEG representative might want to discuss this issue.]
  14. The JCSG/UPT described UPT capacity in a certain way. Please compare the relative merits of various ways to describe the capacity of UPT bases, such as:
    - operations per hour;
    - the high-water peak pilot training rate (PTR);
    - FAA-normalized operations (an FAA formula or procedure that measures airport capacity, taking into account such factors as weather conditions, runway configuration, traffic mix (takeoffs/landings versus touch/go), and runway availability (i.e., night/day runways); and
    - differences in Navy versus Air Force operations.
  15. How can capacity analysis best account for factors that influence capacity historical data, but are not readily apparent, such as shortages in the following areas:
    - aircraft maintenance;
    - instructor pilots;
    - primary student graduates feeding into the next level; and
    - weather?

How do you account for the operational savvy of one base’s operations group commander versus another base’s commander?

16. Joint primary training is just a beginning in the process of “jointness.” How far can the Air Force and the other Services go in the following areas:

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- consolidating similar functions on one base or base complex, such as conducting strike and bomber/fighter training at Columbus AFB or a NAS Meridian/Columbus AFB complex;
  - operating a Navy TA-4 squadron on an Air Force base;
  - consolidating all joint primary training in such western bases as NAS Kingsville, Laughlin AFB, Reese AFB, and Vance AFB to exploit favorable weather and airspace; and
  - consolidating all joint primary training in such eastern bases as at NAS Meridian, NAS Pensacola, NAS Whiting, and Columbus AFB to permit all helicopter training to be consolidated at Ft. Rucker, thus freeing up NAS Whiting to receive fixed-wing aircraft to exploit available auxiliary fields and airspace?
17. It appears the actual UPT bases selected for realignment or closure were service-specific selections not related to joint training or syllabus. Please discuss this selection process.
18. In your view, what is the best way to judge the quality of a base's airspace, for example:
- by functional area (primary versus strike and bomber/fighter);
  - by use versus control; or
  - by potential versus actual use?
19. Other UPT bases own or control more airspace than Reese AFB, but much of this airspace is unusable for UPT activities. Is Reese AFB down-graded because it lacks actual ownership and control of required airspace--even though access to the airspace it uses for UPT training activities is unimpeded and despite of the lack of an encroachment problem?
20. If we find, after correcting for factual errors, that Reese AFB scores improve placing it into the yellow/green areas, then how would you recommend the Commission proceed in selecting a UPT base for closure?
21. Is the Air Force ignoring a key quality of life indicator that (1) Reese AFB is the number one choice of assignment by student and instructor pilots in AETC, (2) Reese AFB's accessibility is enhanced by its proximity to a large international airport, and (3) Reese AFB offers clearly superior higher education opportunities?
22. Please discuss, in detail, the process used to analyze a potential NAS Meridian/Columbus AFB complex.
- What alternatives or "strawmen" did the JCSG/UPT consider?
  - What COBRA runs were performed to assess a potential NAS/Meridian/Columbus AFB complex?

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- What cost advantages, if any, were considered (for example, NAS Meridian and Columbus AFB using joint targets and outlying fields and sharing excess capacity during runway maintenance)?
23. Should the Air Force transfer Columbus AFB to the Navy and move the Introduction to Fighter Fundamentals (IFF) training to Luke AFB?
  24. Did the JCSG/UPT consider NAS Meridian a potential transfer to the Air Force, which would allow the Air Force to close another UPT base?
  25. If Reese AFB is closed, then where is the Air Force planning to transfer joint Air Force and Navy primary training?
  26. A lot has been learned about conducting joint primary training at Reese AFB. How was this experience factored, weighted, or considered in the analysis to close a UPT base?
  27. What was the impact, if any, on Criterion I grading of Joint Primary Aircraft Training System (JPATS)-related issues?

Merrill Beyer and Mark Pross/Air Force Team and Jim Brubaker/Navy Team/April 7, 1995

**DRAFT**

**NAVY UNDERGRADUATE**  
**FLIGHT TRAINING**  
**OVERVIEW**



CDR TOM DONOVAN  
LCDR DAVE WALKER  
OPNAV N889

Joint Trng Ctr  
@ Randolph  
wk of 19 MAR

# TRAINING PHILOSOPHY

— 2 different trng philosophies in N/W — cultural differences

- USAF

- ONE BASE SUPPORTS MULTIPLE TRAINING REQUIREMENTS

T-37 < T-38  
T-1

- BUILDING BLOCK/LOCK STEP APPROACH

— AS A CLASS  
— SOME EFFICIENCIES

- FLIGHT SCREENING

- USN — Attitude/altitude based

- PIPELINE SPECIFIC TRAINING BASES

— meridian ADV  
— whitings prim  
— PCS costing

- FLEXIBLE PROGRESSION — not lock step

- PREFLIGHT ADMINISTRATIVE SCREENING

6 WKS API class  
primary

# **USN TRAINING PHILOSOPHY**

- **AIRSPACE USE - VISUAL FLIGHT RULES (VFR) PROCEDURES**
- **AIRFIELD OPERATIONS:**
  - **VFR DEPARTURES**
  - **SPLIT RUNWAY OPERATIONS**
  - **BOX PATTERNS/CARRIER OPERATIONS**
- **EMPHASIS ON INSTRUMENT FLIGHT TRAINING**
- **NIGHT TRAINING - GEARED FOR SEA OPERATIONS**

# **USAF TRAINING PHILOSOPHY**

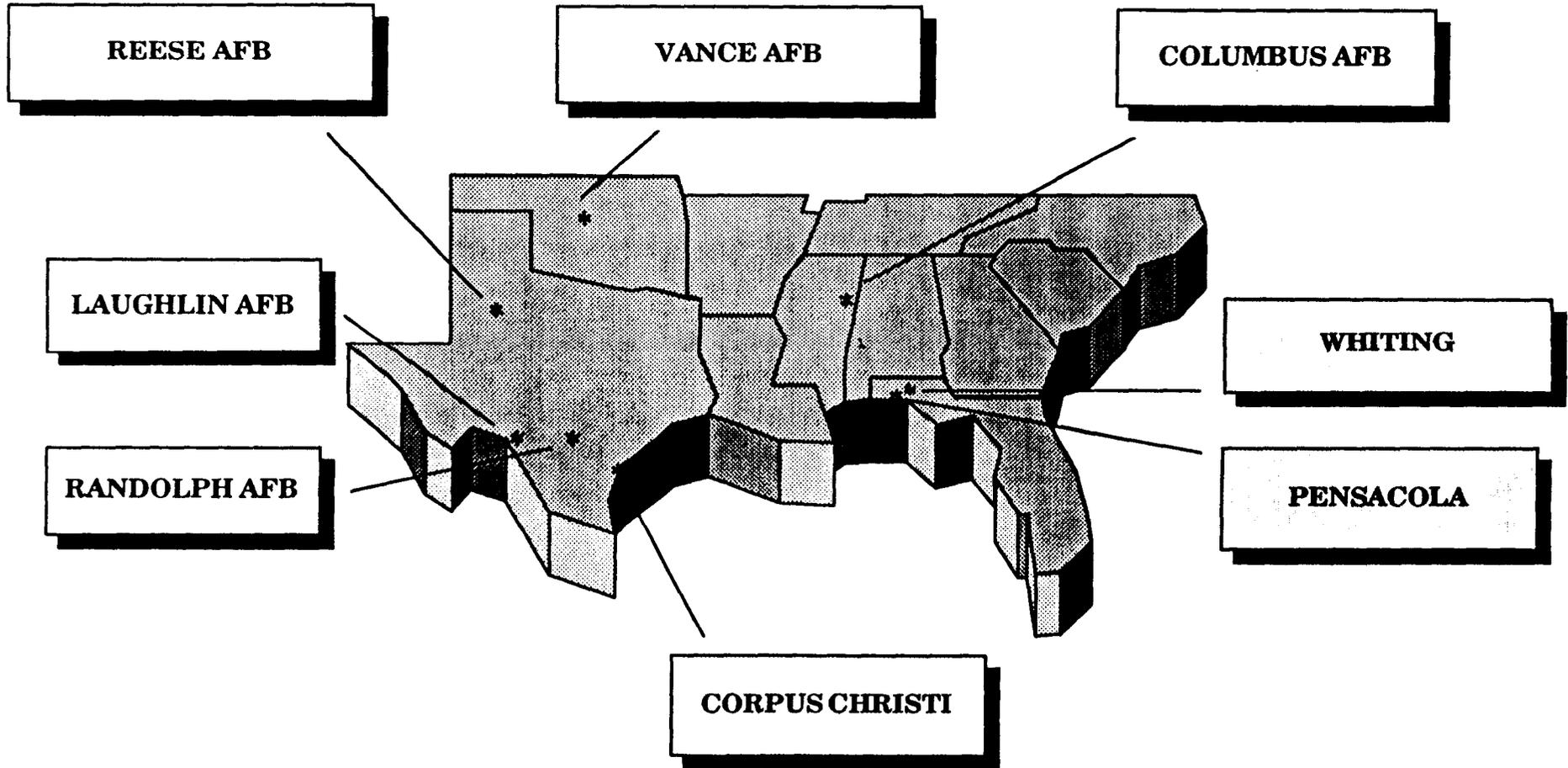
- **AIRSPACE USE - INSTRUMENT FLIGHT RULES (IFR) PROCEDURES**
- **AIRFIELD OPERATIONS:**
  - **IFR DEPARTURES**
  - **STANDARD OVERHEAD PROCEDURES**
- **EMPHASIS ON CONTACT AND FORMATION**
- **EMPHASIS ON DAYTIME OPERATIONS**

# **JOINT TRAINING PHILOSOPHY**

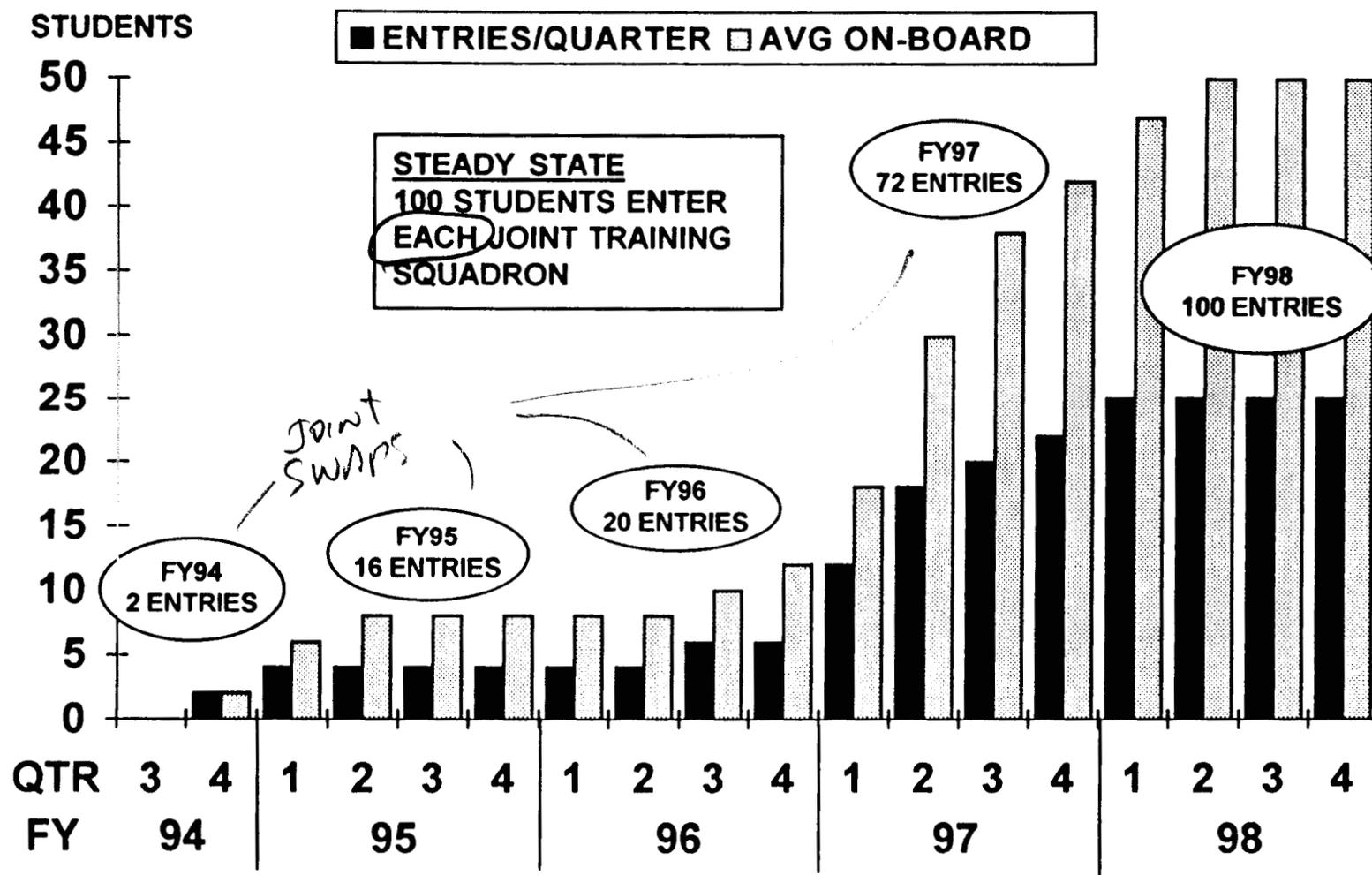
- **AIRSPACE USE/AIRFIELD OPERATIONS**
  - **INSTRUMENT FLIGHT RULES**
- **EMPHASIS ON:**
  - **NIGHT**
  - **INSTRUMENT TRAINING**
- **AVERAGE SORTIE DURATION: 1.38 HRS**

# JPATS

## AIR FORCE AND NAVY JPATS LOCATIONS



# STUDENT FLOW PLAN (PER SQUADRON)



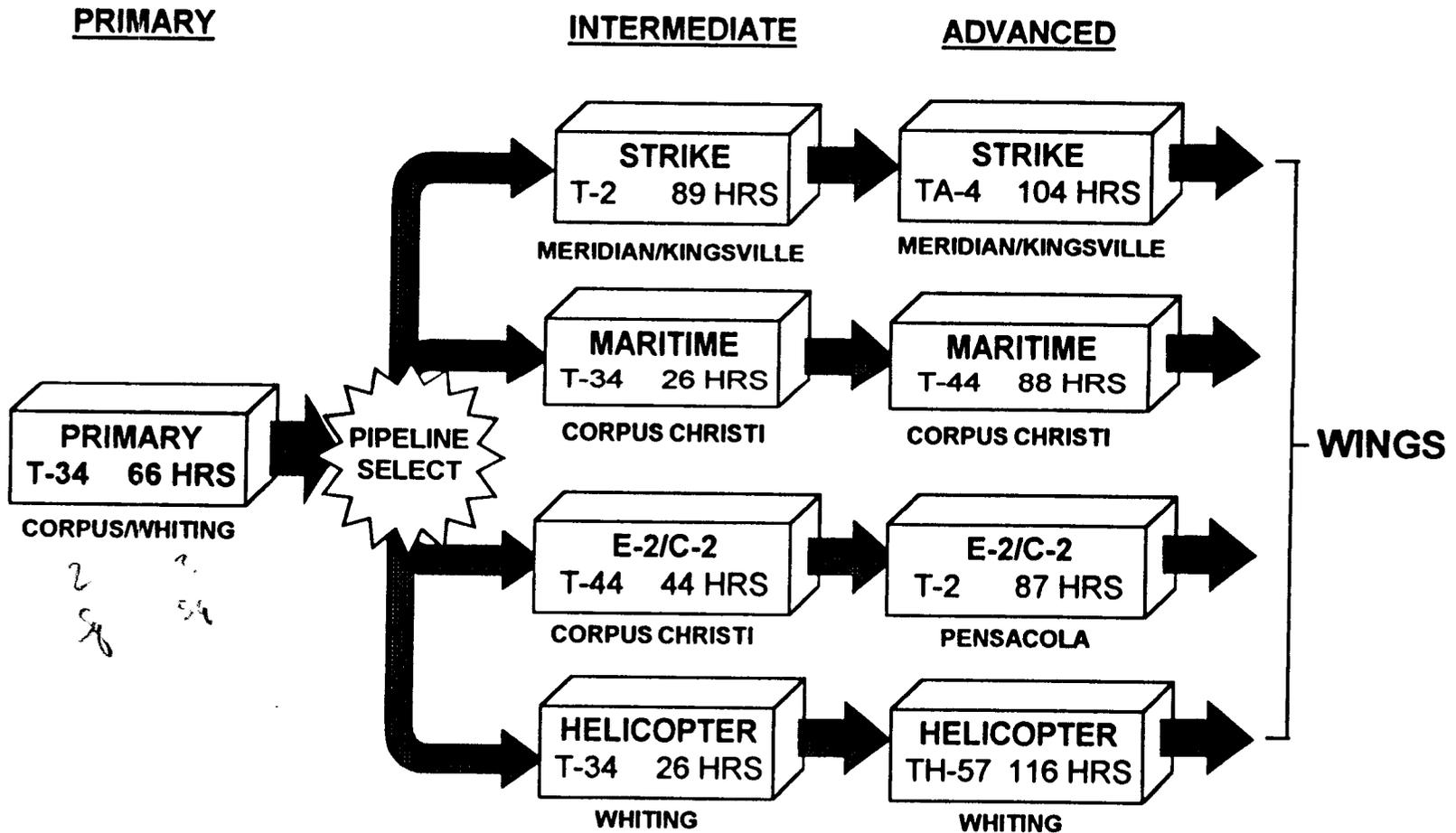
100 eA  
5VC  
200

# JOINT FIXED-WING TRAINING

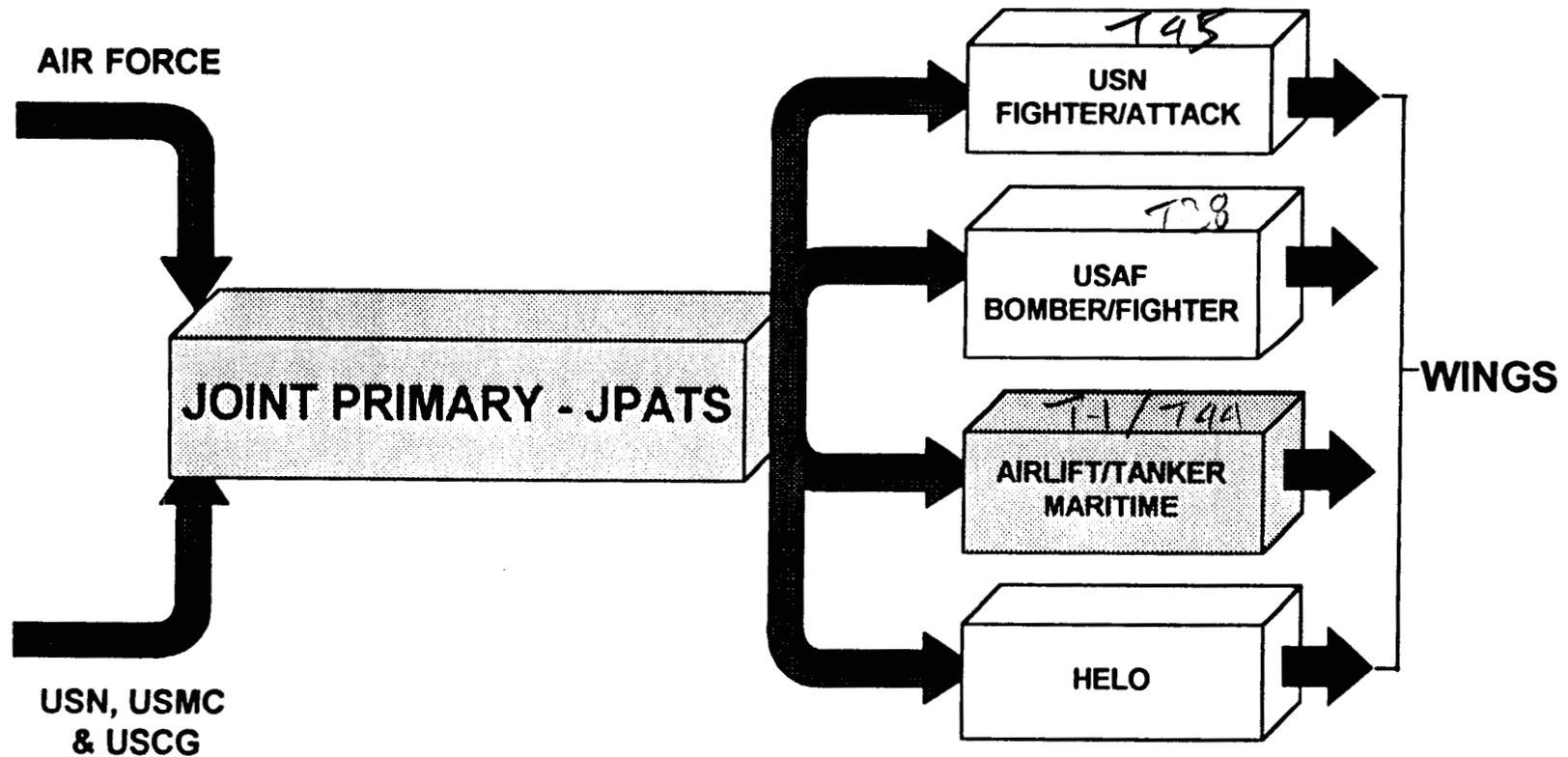
## SECDEF GUIDANCE:

- CONSOLIDATE INITIAL FIXED WING AIRCRAFT TRAINING AND TRANSITION TO A COMMON PRIMARY TRAINING AIRCRAFT
- ESTABLISH 4-TRACK FOLLOW-ON TRAINING (OPR: SECAF / OCR: SECNAV)

# USN PILOT TRAINING

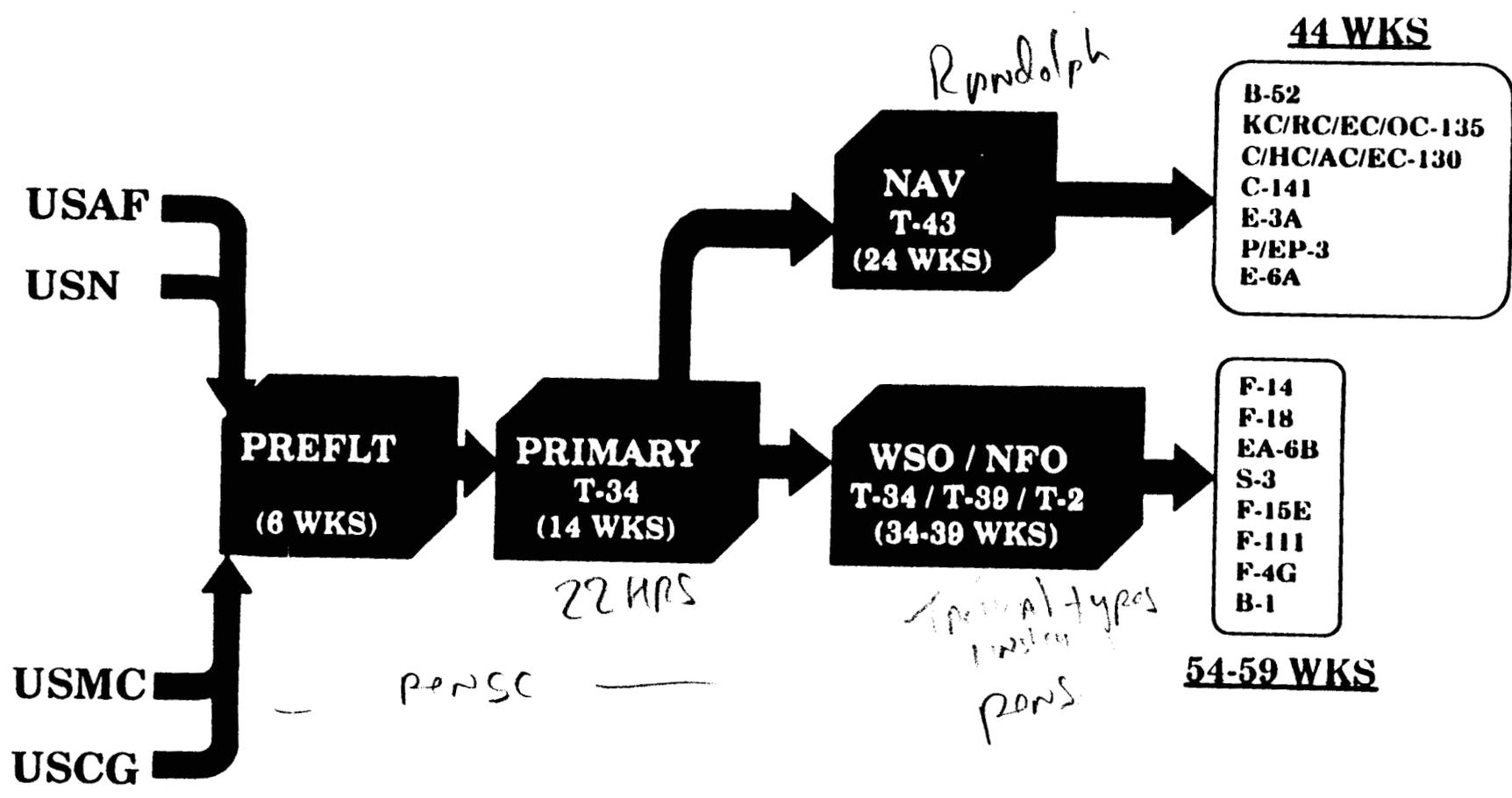


# JOINT TRAINING PROJECTION JPATS

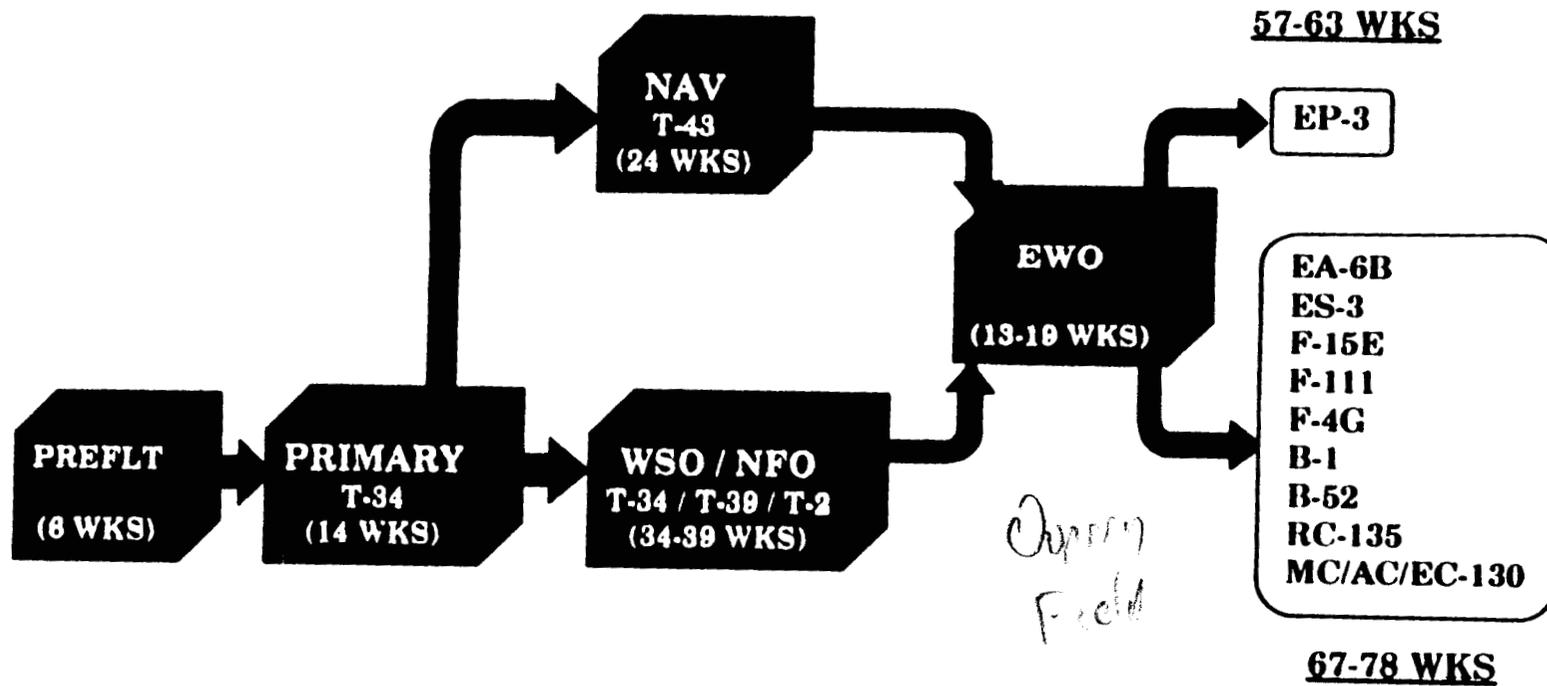


# JOINT NAVIGATOR TRAINING

*Start Oct 1, 95*



# JOINT ENTRY LEVEL EWO TRAINING





DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS UNITED STATES AIR FORCE

3D814  
OSD EPAC



05 APR 1995

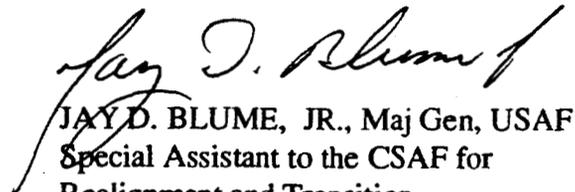
MEMORANDUM FOR BASE CLOSURE COMMISSION (Mr. Frank Cirillo)

FROM: HQ USAF/RT

SUBJECT: USAF BRAC '95 Depot Information

Attached are the revised workload laydown sheets referenced in our previous response to questions 78-04a and 78-04b. This information is also provided in response to your 31 March letter.

Questions pertaining to this data should be addressed to Lt Col Barry Pitcher in AF/LGM, DSN 225-5257 or Lt Col Louise Eckhardt, DSN 225-4578.

  
JAY D. BLUME, JR., Maj Gen, USAF  
Special Assistant to the CSAF for  
Realignment and Transition

Attachments:

1. OC-ALC worksheet
2. OO-ALC worksheet
3. SA-ALC worksheet
4. SM-ALC worksheet
5. WR-ALC worksheet

Center:		OC-ALC									
Commodity	OC	OC	OC	OC-ALC's	Losing	Com'dty	Gaining	OC	OC	OC	OC
Group	ALC's	ALC's	ALC's	New	Center's	Capacity	Center's	ALC's	ALC's	ALC's	ALC's
	Current	Current	Xfer'ng	Core	Original	Transfer	Gained	Cap	New	Original	New
	Cap	Core	Wkld	Wkld	Cap	Factor	Cap	Elim'ntd	Cap	MPC	MPC
<b>Aircraft:</b>											
TTB	2279	2023		2023		80%	0	-101	2380	2301	2380
Cmd & Ctrl	289	512		512		80%	0	-313	602	607	607
<b>Components:</b>											
<i>Structures</i>	403	334	-334	0	403	10%	33	403	0	434	434
<i>Hyd</i>	171	121	-121	0	171	50%	61	171	0	544	544
<i>Pnu</i>	107	61	8	69	10	50%	4	26	81	341	341
<i>Inst</i>	227	264	-264	0	227	75%	198	227	0	712	712
<i>Avionics</i>	218	93		93		30%	0	109	109	218	218
<i>Other</i>	594	131		131		25%	0	440	154	817	817
<b>Engines:</b>											
Aircraft	2497	2307		2307		25%	0	-217	2714	4912	4912
Bs & Vs	155	76		76		10%	0	66	89	529	529
<b>Software:</b>											
<i>Tactical</i>	238	325		325		50%	0	-144	382	240	382
<i>SE</i>	455	299	-57	242	86	50%	29	170	285	455	455
<b>Spec Int Items:</b>											
Bearings	10	15		15		10%	0	-8	18	62	62
TMDE	3	0		0		20%	0	3	0	4	4
<i>Assoc Fab/Mfg:</i>	162	97	28	125	15	5%	1	15	147	294	294
<b>TOTALS</b>	7808	6658	-740	5918	912		326	846	6962	12470	12691





Center:	SM-ALC										
Commodity	SM	SM	SM	SM-ALC's	Losing	Com'dty	Gaining	SM	SM	SM	SM
Group	ALC's	ALC's	ALC's	New	Center's	Capacity	Center's	ALC's	ALC's	ALC's	ALC's
	Current	Current	Xfer'ng	Core	Original	Transfer	Gained	Cap	New	Original	New
	Cap	Core	Wkld	Wkld	Cap	Factor	Cap	Elim'n'td	Cap	MPC	MPC
<b>Aircraft:</b>											
TTB	819	441		441		80%	0	300	519	983	983
Lt Combat	1460	907		907		80%	0	393	1067	1520	1520
<b>Components:</b>											
Structures	229	157	-157	0	229	10%	16	229	0	525	525
Hyd	485	352	135	487	213	50%	68	-88	573	805	805
Pnu	6	5	-5	0	6	50%	3	6	0	11	11
Inst	281	193	429	622	390	75%	322	-451	732	542	732
Avionics	457	334	-334	0	457	30%	0	457	0	870	870
<b>Comm Elect:</b>											
Radar	702	430		430		10%	0	196	506	1235	1235
Radio	340	177		177		10%	0	132	208	734	734
Wire	214	118		118		10%	0	75	139	233	233
Nav Aids	279	165		165		10%	0	85	194	501	501
EO/NV	180	109		109		10%	0	52	128	215	215
Satellite Cont	173	32		32		10%	0	135	38	186	186
<b>Gen Purpose:</b>											
Ground Gens	101	62		62		15%	0	28	73	113	113
Other	61	0		0		10%	0	61	0	61	61
<b>Software:</b>											
Tactical	401	211		211		50%	0	153	248	452	452
SE	328	184	-184	0	328	50%	92	328	0	358	358
<b>Assoc Fab/Mfg:</b>											
	513	354	21	375	46	5%	1	72	441	741	741
<b>TOTALS</b>	<b>7029</b>	<b>4231</b>	<b>-95</b>	<b>4136</b>	<b>1669</b>		<b>501</b>	<b>1169</b>	<b>4866</b>	<b>10085</b>	<b>10275</b>

Center: WR-ALC											
Commodity	WR	WR	WR	WR-ALC's	Losing	Com'dty	Gaining	WR	WR	WR	WR
Group	ALC's	ALC's	ALC's	New	Center's	Capacity	Center's	ALC's	ALC's	ALC's	ALC's
	Current	Current	Xfer'ng	Core	Original	Transfer	Gained	Cap	New	Original	New
	Cap	Core	Wkld	Wkld	Cap	Factor	Cap	Elim'ntd	Cap	MPC	MPC
<b>Aircraft:</b>											
TTB	2104	1349		1349		80%	0	517	1587	2104	2104
Lt Combat	1084	1267		1267		80%	0	-407	1491	1084	1491
<b>Components:</b>											
Structures	656	477	-353	124	485	10%	35	510	146	801	801
Inst	412	299	-42	257	99	75%	32	110	302	503	503
Lnd Gear	1	1		1		5%	0	0	1	2	2
Av Ord	1	1		1		10%	0	0	1	1	1
Avionics	1763	1280	365	1645	554	30%	110	-172	1935	2153	2153
Other	388	280		280		25%	0	59	329	463	463
<b>Missiles:</b>											
Tactical	18	13		13		15%	0	3	15	22	22
<b>Comm Elect:</b>											
Radar	2	1		1		10%	0	1	1	2	2
<b>Software:</b>											
Tactical	795	888		888		50%	0	-250	1045	1358	1358
SE	530	592	232	824	392	50%	116	-439	969	906	969
<b>Assoc Fab/Mfg:</b>											
	432	315	-55	260	32	5%	3	126	306	514	514
<b>TOTALS</b>	<b>8186</b>	<b>6763</b>	<b>147</b>	<b>6910</b>	<b>1562</b>		<b>295</b>	<b>57</b>	<b>8129</b>	<b>9913</b>	<b>10383</b>

# UNDERGRADUATE PILOT TRAINING



MERRILL BEYER, AIR FORCE TEAM  
JIM BRUBAKER, NAVY TEAM

MARCH 28, 1995

Defense Base Closure and Realignment Commission 1

## OVERVIEW

- **USAF PILOT TRAINING**
- **FIXED-WING PILOT TRAINING AIRCRAFT**
- **UPT LOCATIONS/TYPICAL BASE**
- **JOINT PILOT AND NAVIGATOR/NFO TRAINING**
- **JPATS UPDATE**



Defense Base Closure and Realignment Commission 2

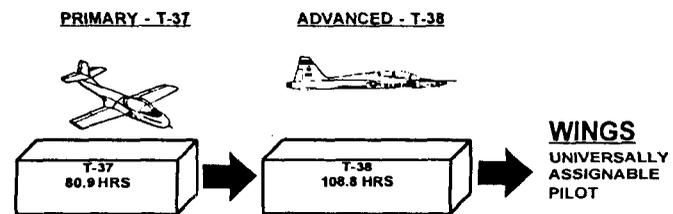
## **TRAINING PHASES FOR USAF PILOTS**

- **ENHANCED FLIGHT SCREENING**
- **UPT**
  - **PRIMARY**
  - **ADVANCED**
- **INTRODUCTION TO FUNDAMENTALS**
  - **Bomber (IBF)**
  - **Fighter (IFF)**
- **AIRCRAFT SPECIFIC RETRAINING UNITS (RTU)**
- **CONTINUATION TRAINING**

## **ENHANCED FLIGHT SCREENING**

- **SCREENING--NOT TRAINING per se**
  - **No Better Pilot Aptitude Test**
  - **Cost avoidance**
  - **Navy does not screen**
- **LOCATIONS**
  - **HONDO**
    - » **No-Cost Airfield Lease**
    - » **ROTC and OTS Grads**
  - **USAF Academy Airfield**
    - » **Part of Airmanship Program**
    - » **Conducted in Senior Year**
  - **T-3 Flight Ops incompatible with UPT aircraft**

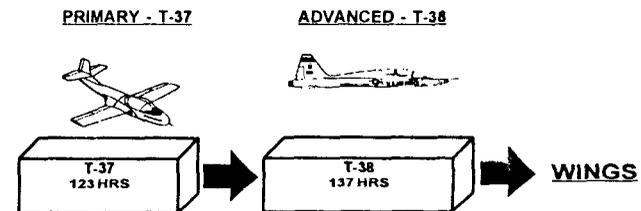
## GENERALIZED UPT



**NOTES:**

- *FOLLOWS FLIGHT SCREENING*
- *ALL TRAINING ACCOMPLISHED AT ONE BASE*
- *TRANSITIONING TO SPECIALIZED UNDERGRADUATE PILOT TRAINING (SUPT)*

## EURO-NATO JOINT JET PILOT TRAINING (ENJJPT)--SHEPPARD AFB

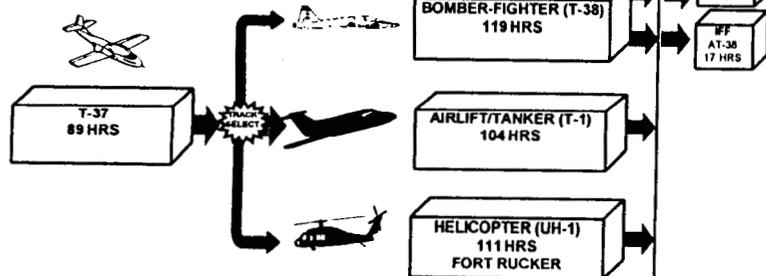


**NOTES:**

- *FIGHTER-ORIENTED TRAINING (WILL NOT INCORPORATE T-1)*
- *INTERNATIONAL PROGRAM--NOT FOREIGN MILITARY SALES*
- *MEMBER COUNTRIES PAY FOR INFRASTRUCTURE*
- *MEMBER COUNTRIES OWN SOME AIRCRAFT*

## SPECIALIZED UPT

PRIMARY - T-37 OR JPATS



Defense Base Closure and Realignment Commission

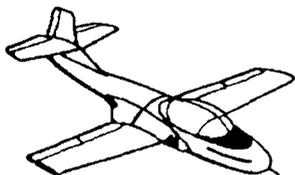
## OVERVIEW

- USAF PILOT TRAINING
- **FIXED-WING PILOT TRAINING AIRCRAFT**
- UPT LOCATIONS/TYPICAL BASE
- JOINT PILOT AND NAVIGATOR/NFO TRAINING
- JPATS UPDATE



Defense Base Closure and Realignment Commission

### **PRIMARY TRAINER (T-37)**



- **FIRST AIRCRAFT FLOWN IN UPT**
- **TWIN-ENGINE JET**
- **SIDE-BY-SIDE SEATING**
- **UNPRESSURIZED**
- **TO BE REPLACED BY JPATS**

### **ADVANCED TRAINERS**



**T-38**

- **BOMBER-FIGHTER TRAINER**
- **TWIN-ENGINE SUPERSONIC JET**
- **TANDEM SEATING**



**T-1**

- **AIRLIFT-TANKER TRAINER**
- **TWIN-ENGINE JET**
- **FLIGHT DECK WITH SIDE-BY-SIDE SEATING AND JUMP SEAT**

## NAVY AIRCRAFT IN WHICH USAF STUDENTS TRAIN



### T-34

- PRIMARY TRAINER
- SINGLE-ENGINE TURBOPROP
- TANDEM SEATING
- UNPRESSURIZED
- TO BE REPLACED BY JPATS



### T-44

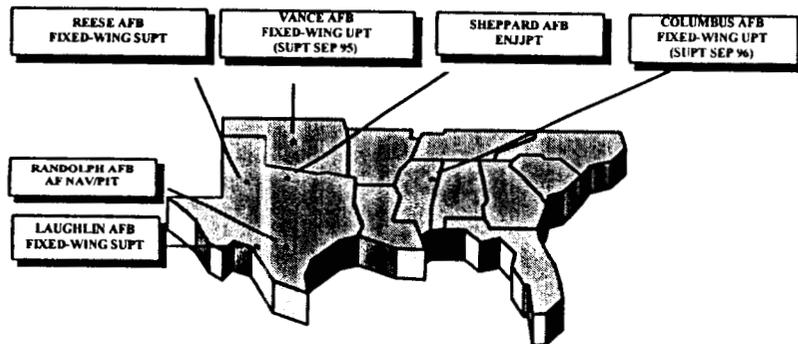
- ADVANCED MARITIME PATROL TRAINER
- TWIN-ENGINE TURBOPROP
- FLIGHT DECK WITH SIDE-BY-SIDE SEATING

## OVERVIEW

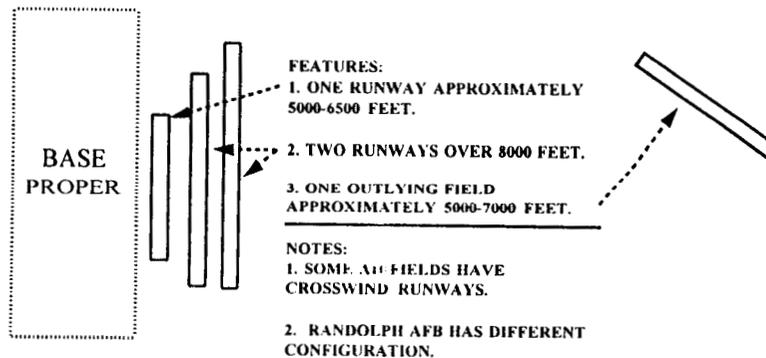
- USAF PILOT TRAINING
- FIXED-WING PILOT TRAINING AIRCRAFT
- UPT LOCATIONS/TYPICAL BASE
- JOINT PILOT AND NAVIGATOR/NFO TRAINING
- JOINT PRIMARY AIRCRAFT TRAINING SYSTEM (JPATS) UPDATE



## CURRENT USAF FLYING TRAINING LOCATIONS



## TYPICAL USAF PILOT TRAINING BASE

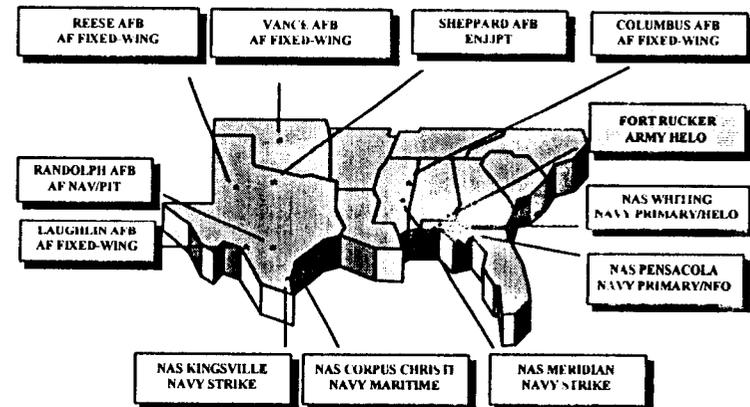


## OVERVIEW

- **USAF PILOT TRAINING**
- **FIXED-WING PILOT TRAINING AIRCRAFT**
- **UPT LOCATIONS/TYPICAL BASE**
- **JOINT PILOT AND NAVIGATOR/NFO TRAINING**
- **JPATS UPDATE**



## UPT BASES--ALL SERVICES

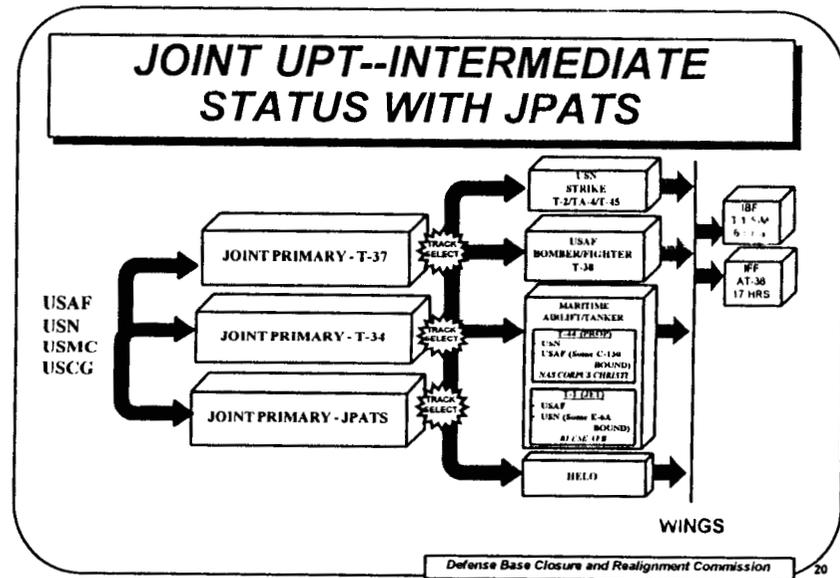
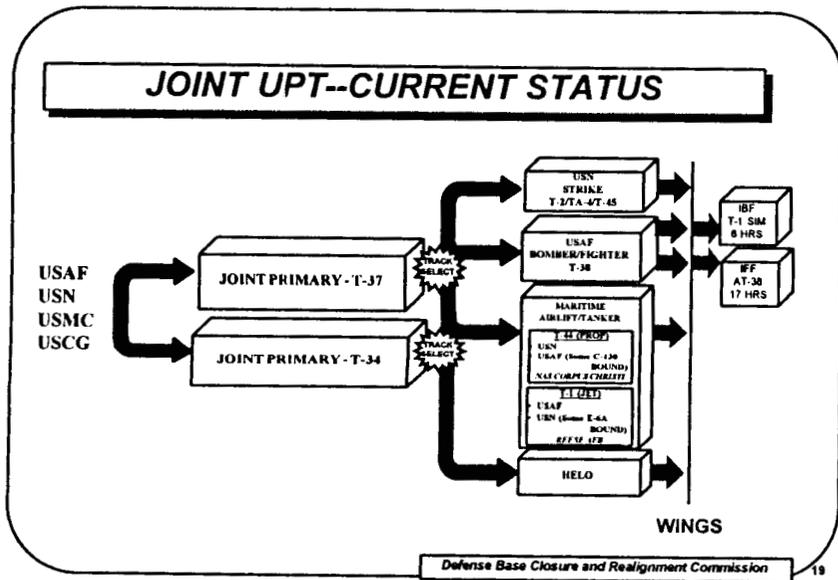


## JOINT TRAINING: BACKGROUND

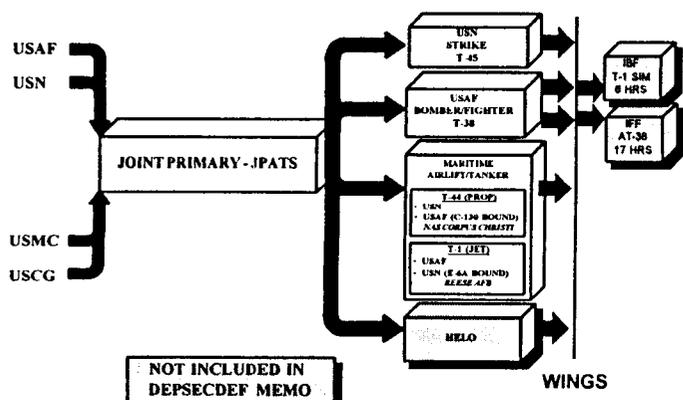
- **APR 93: SECDEF TASKED SECAF, ASSISTED BY SECNAV, TO**
  - "CONSOLIDATE INITIAL FIXED-WING AIRCRAFT TRAINING FOR ALL SERVICES AND TRANSITION TO A COMMON PRIMARY TRAINING AIRCRAFT."
  - **GENERAL OFFICER/FLAG OFFICER GROUP:**  
DEVELOPED JOINT FIXED-WING TRAINING PLAN
  - **EXPANDED TASKING:**  
INCLUDE ADVANCED PILOT TRNG AND NAVIGATOR/  
NAVAL FLIGHT OFFICER (NFO) TRAINING
  - **SERVICE SECRETARIES APPROVED IN JUL 93**
- **OPERATORS CONTINUED TO REFINE PLAN**
  - **MODIFIED NAVIGATOR/NFO TRNG**
  - **SERVICE SECRETARIES APPROVED**
- **OCT 95: DEPUTY SECDEF APPROVED FIXED-WING PILOT TRAINING AND NAVIGATOR/NFO TRAINING PLANS**

## JOINT PILOT TRAINING

- **PRIMARY:**
  - **35th FTS AT REESE AFB TEXAS AND VT-3 AT NAS WHITING FIELD FL**  
PROTOTYPE JOINT TRAINING SQUADRONS
  - **ROTATING SQUADRON COMMAND**
  - **BY FY 98: 100 STUDENTS CROSSFLOW ANNUALLY, 24 EXCHANGE INSTRUCTORS**
  - **OTHER SQUADRONS BECOME JOINT AS THEY TRANSITION TO JPATS**
- **AIRLIFT/TANKER/MARITIME PATROL:**
  - **STUDENT/INSTRUCTOR EXCHANGE**
  - **NAVY TO TRAIN ALL USAF TURBOPROP-BOUND STUDENTS (C-130)**
  - **USAF TO TRAIN ALL NAVY JET-BOUND STUDENTS (E-6)**
- **USAF FIGHTER/BOMBER AND USN STRIKE: NOT JOINT**



## JOINT UPT--END GAME



## OVERVIEW

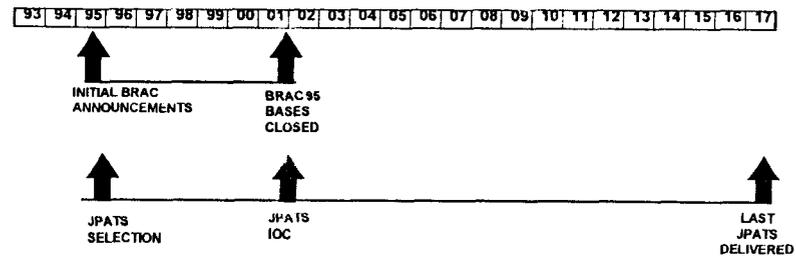
- USAF PILOT TRAINING
- FIXED-WING PILOT TRAINING AIRCRAFT
- UPT LOCATIONS/TYPICAL BASE
- JOINT PILOT AND NAVIGATOR/INFO TRAINING
- JPATS UPDATE



## JPATS CONTENDERS (T-37/T-34 REPLACEMENT)

	NORTHROP/ EMBRAER SUPER TUCANO BRAZIL	BEECH/ PILATUS PC-9 MK II SWITZERLAND	GRUMMAN/ AGUSTA S.211A ITALY	ROCKWELL/ MBB RANGER 2000 GERMANY	VOUGHT/ FMA PAMPA 2000 ARGENTINA	LOCKHEED/ AERMACCI # MB 339 ITALY	CESSNA CITATIONJET USA
PLANFORM							
	AIRCRAFT DRAWN TO SCALE						
TAKEOFF WEIGHT (lb)	7,040	6,789	6,393	7,900	8,168	10,420	7,400
MAXIMUM SPEED	285	278	375	380	400	475	420
ENGINE(S)	P&W TURBOPROP	P&W TURBOPROP	P&W TURBOFAN	P&W TURBOFAN	GARRETT TURBOFAN	ROLLS-ROYCE TURBOJET	2 WILLIAMS TURBOFANS
MODEL IN PRODUCTION	EMB-312AF	PC-9	S.211A (LIMITED)	(PROTO)	PAMPA (LOW RATE)	MB 339 (LIMITED)	(PROTO)
APPROX NO. BUILT	570	160	85	2	18	182	2
POTENTIAL GBTS CONTRACTORS: BRITISH AEROSPACE, CAE-LINK, HUGHES TRAINING SYSTEMS, LORAL DEFENSE SYSTEMS, McDONNELL DOUGLAS TRAINING SYSTEMS							

## JPATS ACQUISITION SCHEDULE



### NOTES:

- 711 AIRCRAFT BUY: DOESN'T INCLUDE ALL OF ENJJPT AIRCRAFT
- SERIES OF FIRM FIXED-PRICE CONTRACTS EXTENDING 4-5 YEARS EACH
- FIRST ORDER WILL BE FOR APPROXIMATELY 140 AIRCRAFT

## **USAF UPT CHANGES SINCE 1973**

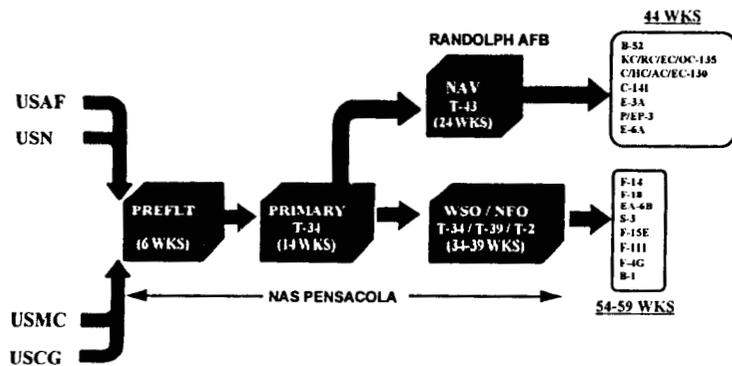
- **CLOSED OR REALIGNED FIVE UPT BASES**
- **STOPPED TRAINING IRANIANS**
- **ENJJPT TRAINING BEGUN**
- **TWO GENERATIONS OF FLIGHT SIMULATION CHANGES**
- **IFF TRAINING ABSORBED INTO UPT BASES**
- **T-46 TO REPLACE T-37 PURCHASED/CANCELLED**
- **SUPT AND T-1 ACQUISITION**
- **JOINT TRAINING**
- **ROTARY-WING TRAINING CHANGED MULTIPLE TIMES**
- **NAV TRAINING BASE CLOSED**
  - **NAV TRAINING "REALIGNED" THREE TIMES**

## **SUMMARY**

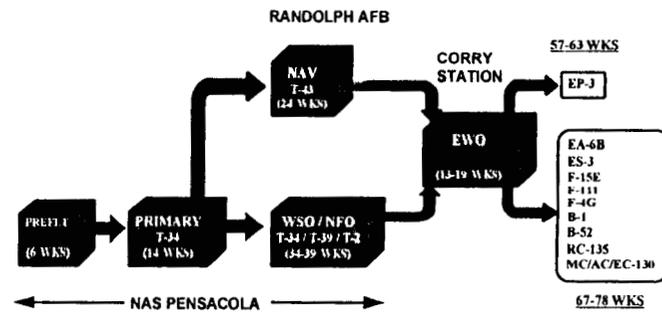


- **JOINT TRAINING IS CENTERPIECE OF UPT**
- **JPATS IS KEY TO CONSOLIDATED PRIMARY PILOT TRAINING**
- **TRAINING "VISION" IS STILL GROWING AND DEVELOPING**

## JOINT NAVIGATOR/NFO TRAINING-- END GAME



## JOINT ELECTRONIC WARFARE OFFICER (EWO) TRAINING--END GAME



*Cirilla*  
→

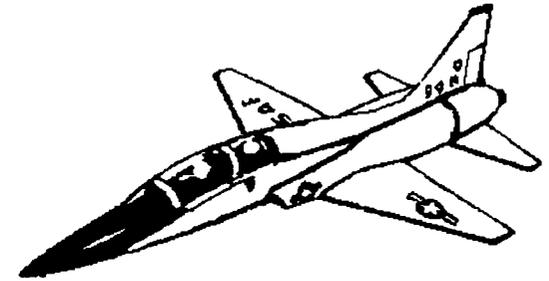
# ***AIR FORCE UNDERGRADUATE FLYING TRAINING***



***LT COL LEN JARMAN  
HQ USAF/XOOT  
28 FEB 95***

# ***OVERVIEW***

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- ***UFT LOCATIONS/TYPICAL BASE***
- ***FIXED-WING PILOT TRAINING AIRCRAFT***
- ***USAF PILOT TRAINING***
- ***JOINT PILOT AND NAVIGATOR/INFO TRAINING***
- ***JOINT PRIMARY AIRCRAFT TRAINING SYSTEM  
(JPATS) UPDATE***

# CURRENT USAF FLYING TRAINING LOCATIONS

REESE AFB  
FIXED-WING SUPT

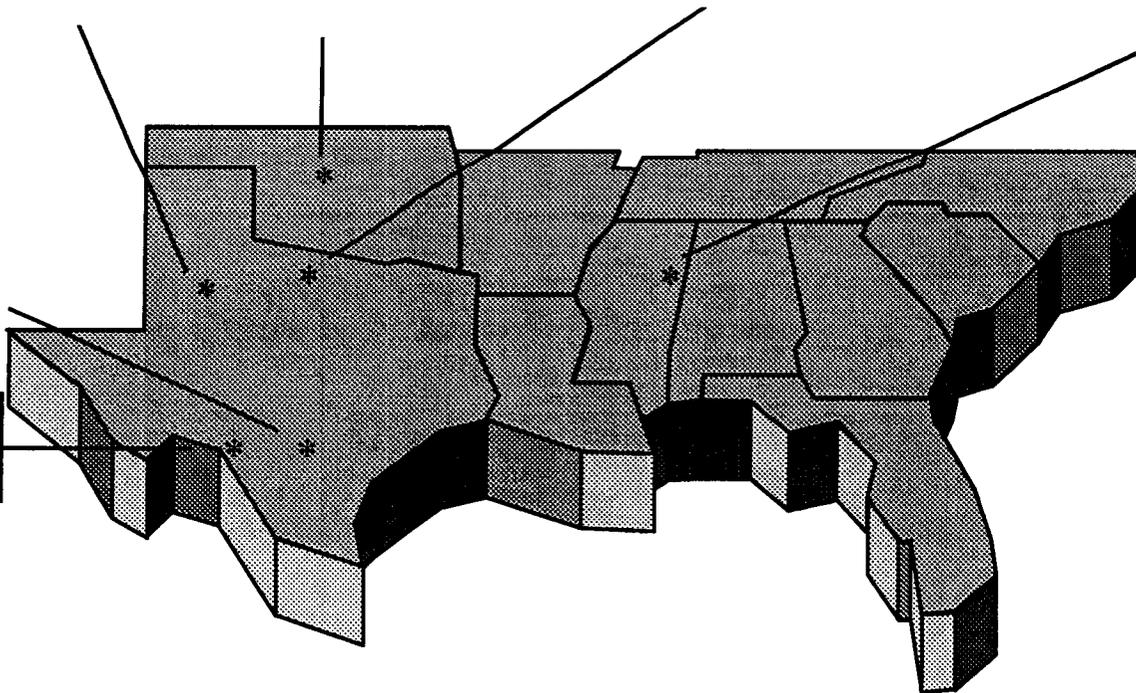
*special*  
VANCE AFB  
FIXED-WING UPT  
(SUPT SEP 95)

*allied*  
SHEPPARD AFB  
ENJJPT

*special*  
COLUMBUS AFB  
FIXED-WING UPT  
(SUPT SEP 96)

*no opt*  
RANDOLPH AFB  
AF NAV/PIT

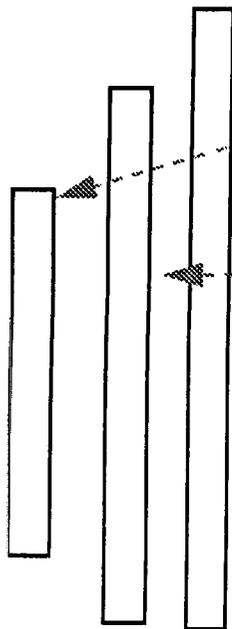
LAUGHLIN AFB  
FIXED-WING SUPT



# ***TYPICAL USAF PILOT TRAINING BASE***

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**BASE  
PROPER**



## **FEATURES:**

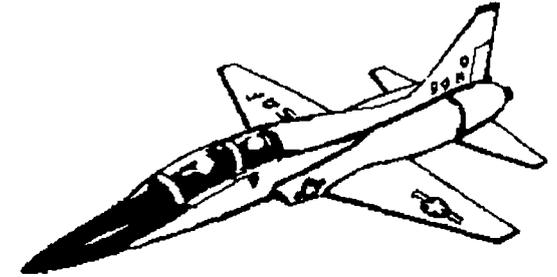
- 1. ONE RUNWAY APPROXIMATELY 5000-6500 FEET.**
  - 2. TWO RUNWAYS OVER 8000 FEET.**
  - 3. ONE OUTLYING FIELD APPROXIMATELY 5000-7000 FEET.**
- 

## **NOTES:**

- 1. SOME AIRFIELDS HAVE CROSSWIND RUNWAYS.**
- 2. RANDOLPH AFB HAS DIFFERENT CONFIGURATION.**

# ***OVERVIEW***

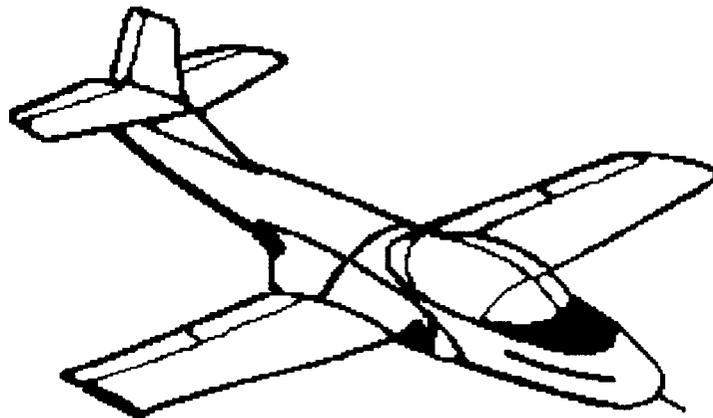
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- ***UFT LOCATIONS/TYPICAL BASE***
- ***FIXED-WING PILOT TRAINING AIRCRAFT***
- ***USAF PILOT TRAINING***
- ***JOINT PILOT AND NAVIGATOR/INFO TRAINING***
- ***JPATS UPDATE***

# ***PRIMARY TRAINER (T-37)***

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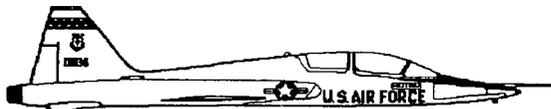


- ***FIRST AIRCRAFT FLOWN IN UPT***
- ***TWIN-ENGINE JET***
- ***SIDE-BY-SIDE SEATING***
- ***UNPRESSURIZED***
- ***TO BE REPLACED BY JPATS***

# ADVANCED TRAINERS

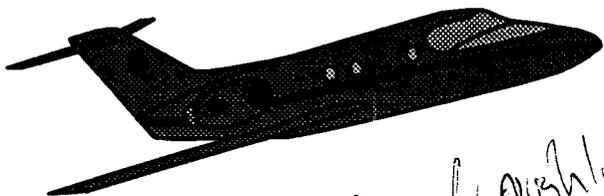
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## T-38



- **BOMBER-FIGHTER TRAINER**
  - **TWIN-ENGINE SUPERSONIC JET**
  - **TANDEM SEATING**
- 

## T-1



*Boeing / Lockheed*

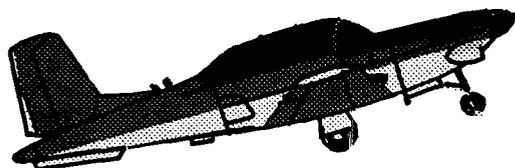
- **AIRLIFT-TANKER TRAINER**
- **TWIN-ENGINE JET**
- **FLIGHT DECK WITH SIDE-BY-SIDE SEATING AND JUMP SEAT**

*"Boeing Jet"*

*IF Repas*

# *NAVY AIRCRAFT IN WHICH USAF STUDENTS TRAIN*

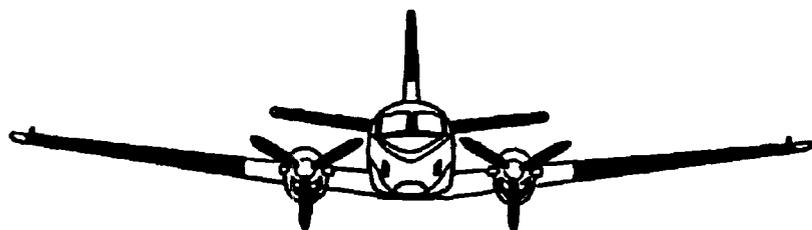
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## *T-34*

- *PRIMARY TRAINER*
  - *SINGLE-ENGINE  
TURBOPROP*
  - *TANDEM SEATING*
  - *UNPRESSURIZED*
  - *TO BE REPLACED BY JPATS*
- 

2 10000



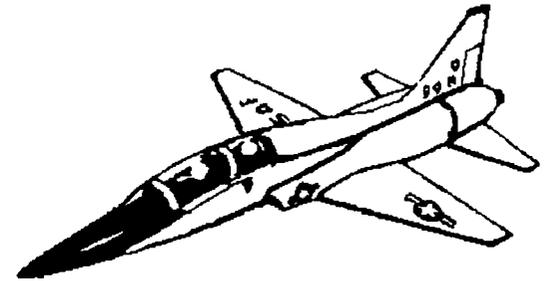
## *T-44*

- *ADVANCED MARITIME  
PATROL TRAINER*
- *TWIN-ENGINE TURBOPROP*
- *FLIGHT DECK WITH SIDE-BY-  
SIDE SEATING*

Beech King Air

# ***OVERVIEW***

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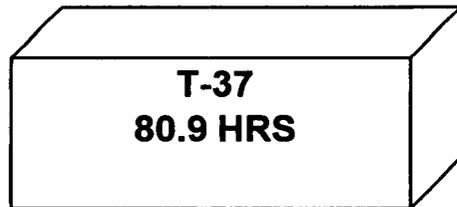
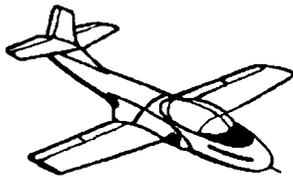


- ***UFT LOCATIONS/TYPICAL BASE***
- ***FIXED-WING PILOT TRAINING AIRCRAFT***
- ***USAF PILOT TRAINING***
- ***JOINT PILOT AND NAVIGATOR/INFO TRAINING***
- ***JPATS UPDATE***

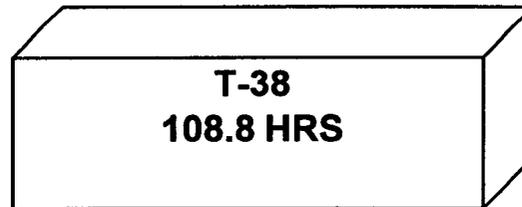
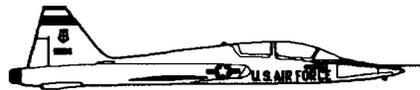
# ***GENERALIZED UPT***

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PRIMARY - T-37



ADVANCED - T-38



**WINGS**  
**UNIVERSALLY**  
**ASSIGNABLE**  
**PILOT**

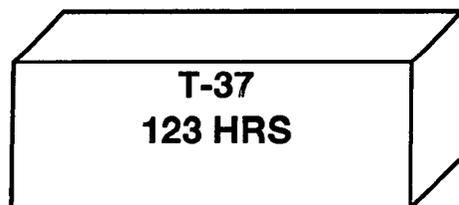
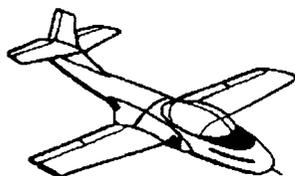
**NOTES:**

- ***ALL TRAINING ACCOMPLISHED AT ONE BASE***
- ***BEING REPLACED BY SPECIALIZED UNDERGRADUATE PILOT TRAINING (SUPT)***

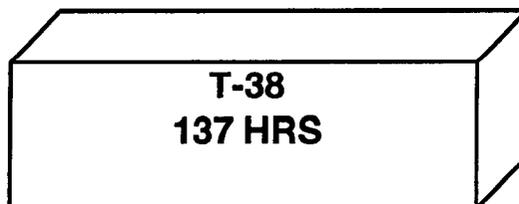
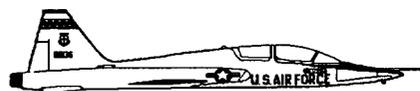
# ***EURO-NATO JOINT JET PILOT TRAINING (ENJJPT)--SHEPPARD AFB***

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**PRIMARY - T-37**



**ADVANCED - T-38**



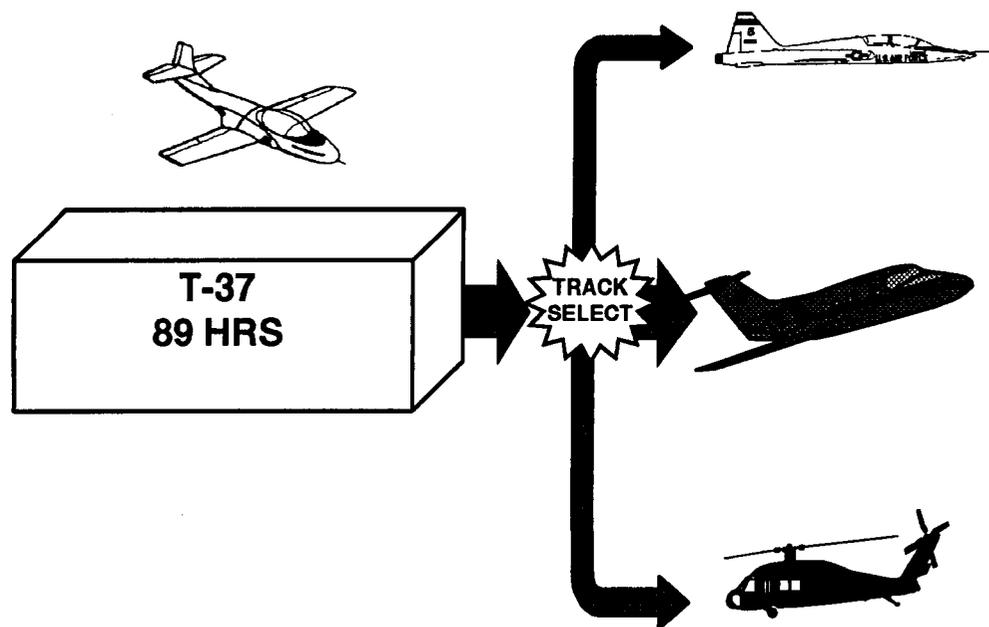
**WINGS**

## ***NOTES:***

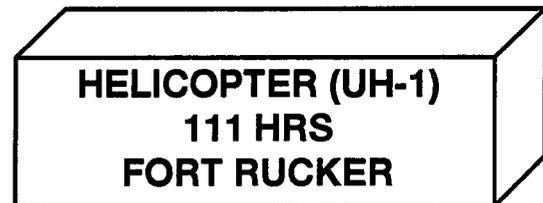
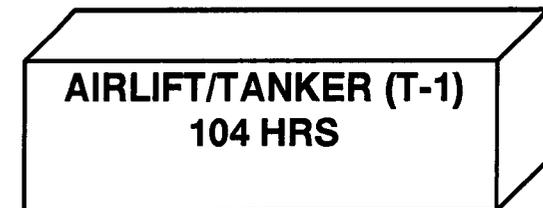
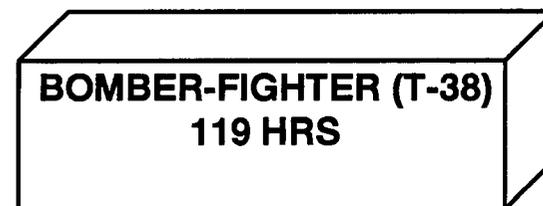
- FIGHTER-ORIENTED TRAINING (WILL NOT INCORPORATE T-1)***
- INTERNATIONAL PROGRAM--NOT FOREIGN MILITARY SALES***
- MEMBER COUNTRIES PAY FOR INFRASTRUCTURE***
- MEMBER COUNTRIES OWN SOME AIRCRAFT***

# ***SPECIALIZED UPT***

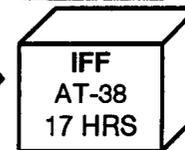
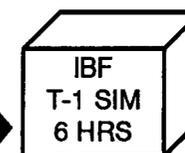
## PRIMARY - T-37 OR JPATS



## ADVANCED

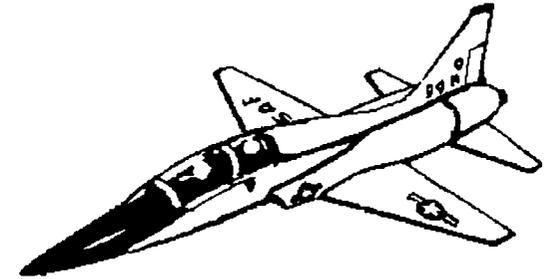


## WINGS



# ***OVERVIEW***

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- ***UFT LOCATIONS/TYPICAL BASE***
- ***FIXED-WING PILOT TRAINING AIRCRAFT***
- ***USAF PILOT TRAINING***
- ***JOINT PILOT AND NAVIGATOR/INFO  
TRAINING***
- ***JPATS UPDATE***

# *UFT BASES--ALL SERVICES*

**REESE AFB**  
**AF FIXED-WING**

**VANCE AFB**  
**AF FIXED-WING**

**SHEPPARD AFB**  
**ENJJPT**

**COLUMBUS AFB**  
**AF FIXED-WING**

**RANDOLPH AFB**  
**AF NAV/PIT**

**LAUGHLIN AFB**  
**AF FIXED-WING**

**FORT RUCKER**  
**ARMY HELO**

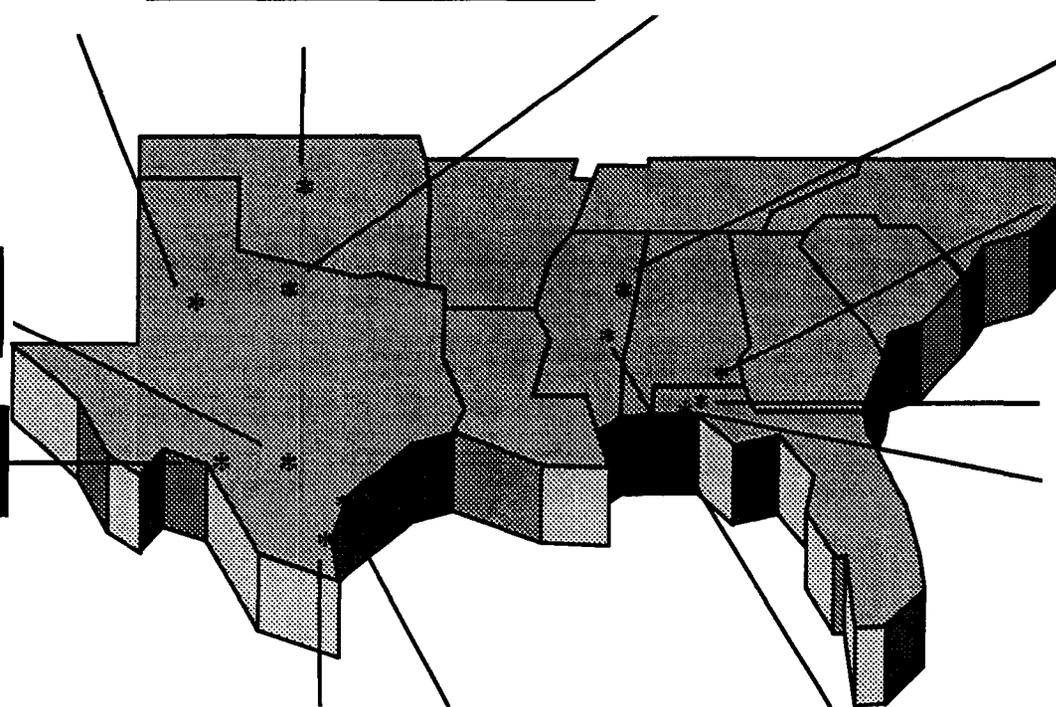
**NAS WHITING**  
**NAVY PRIMARY/HELO**

**NAS PENSACOLA**  
**NAVY PRIMARY/NFO**

**NAS KINGSVILLE**  
**NAVY STRIKE**

**NAS CORPUS CHRISTI**  
**NAVY MARITIME**

**NAS MERIDIAN**  
**NAVY STRIKE**



# ***JOINT TRAINING: BACKGROUND***

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- ***APR 93: SECDEF TASKED SECRETARY OF THE AIR FORCE, ASSISTED BY THE SECRETARY OF THE NAVY, TO “CONSOLIDATE INITIAL FIXED-WING AIRCRAFT TRAINING FOR ALL SERVICES AND TRANSITION TO A COMMON PRIMARY TRAINING AIRCRAFT.”***
  - ***GENERAL OFFICER/FLAG OFFICER GROUP DEVELOPED JOINT FIXED-WING TRAINING PLAN***
  - ***EXPANDED TASKING TO INCLUDE ADVANCED PILOT TRAINING AND NAVIGATOR/NAVAL FLIGHT OFFICER (NFO) TRAINING***
  - ***SERVICE SECRETARIES APPROVED IN JUL 93***
- ***OPERATORS CONTINUED TO REFINE PLAN***
  - ***MODIFIED NAVIGATOR/NFO TRAINING***
  - ***SERVICE SECRETARIES APPROVED***
- ***DEPUTY SECDEF APPROVED FIXED-WING PILOT TRAINING AND NAVIGATOR/NFO TRAINING PLANS IN OCT 98*** 4

# ***JOINT PILOT TRAINING***

---

- ***PRIMARY:***

- ***35th FTS AT REESE AFB TEXAS AND VT-3 AT NAS WHITING FIELD FL BECAME PROTOTYPE JOINT TRAINING SQUADRONS***

- ***ROTATING SQUADRON COMMAND***

- ***BY FY 98: 100 STUDENTS CROSSFLOW ANNUALLY, 24 EXCHANGE INSTRUCTORS*** *≈ 1/2 Student Cond* *1/2 instructor Cond*

- ***OTHER SQUADRONS BECOME JOINT AS THEY TRANSITION TO JPATS***

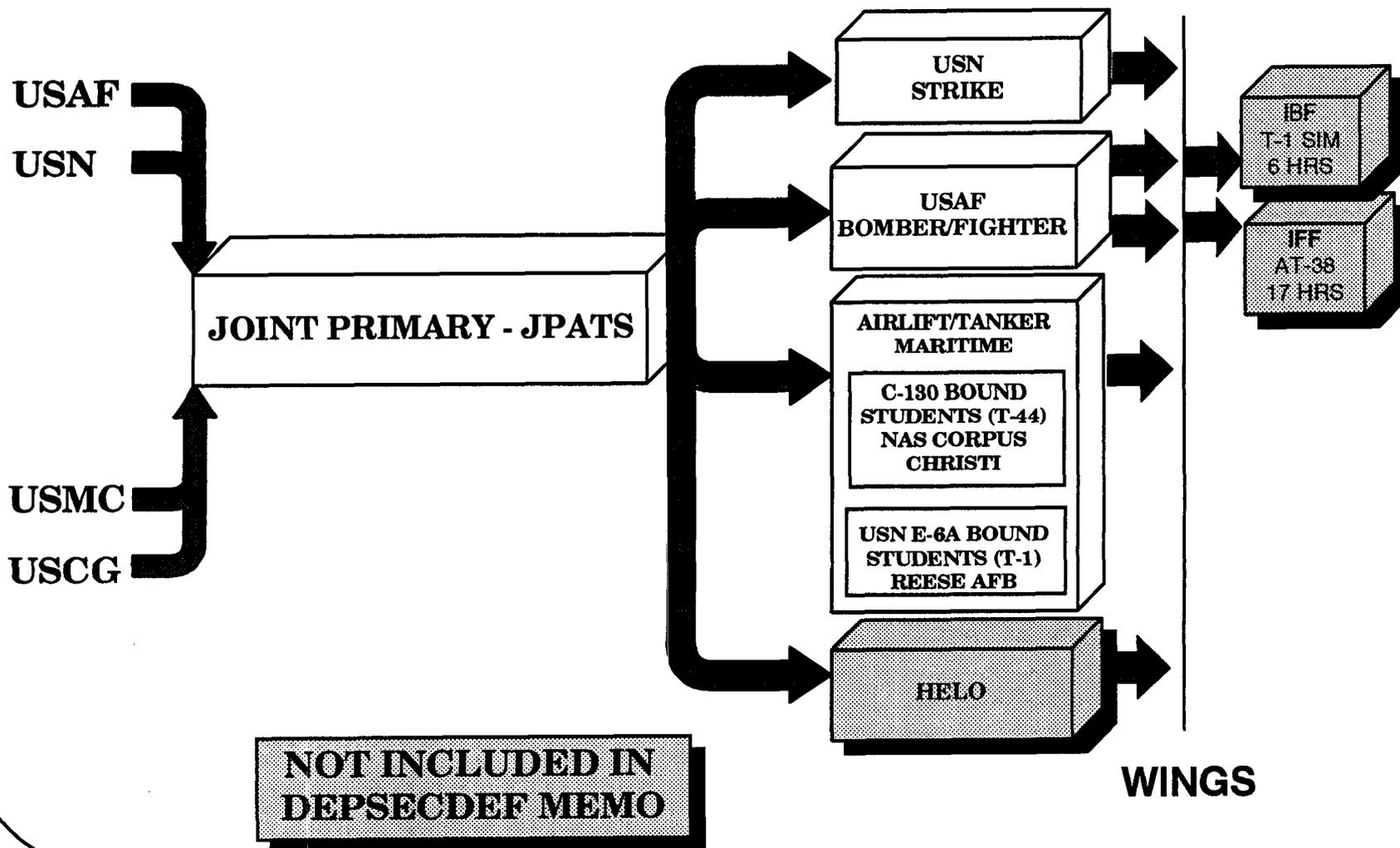
- ***AIRLIFT/TANKER/MARITIME PATROL:***

- ***STUDENT/INSTRUCTOR EXCHANGE***

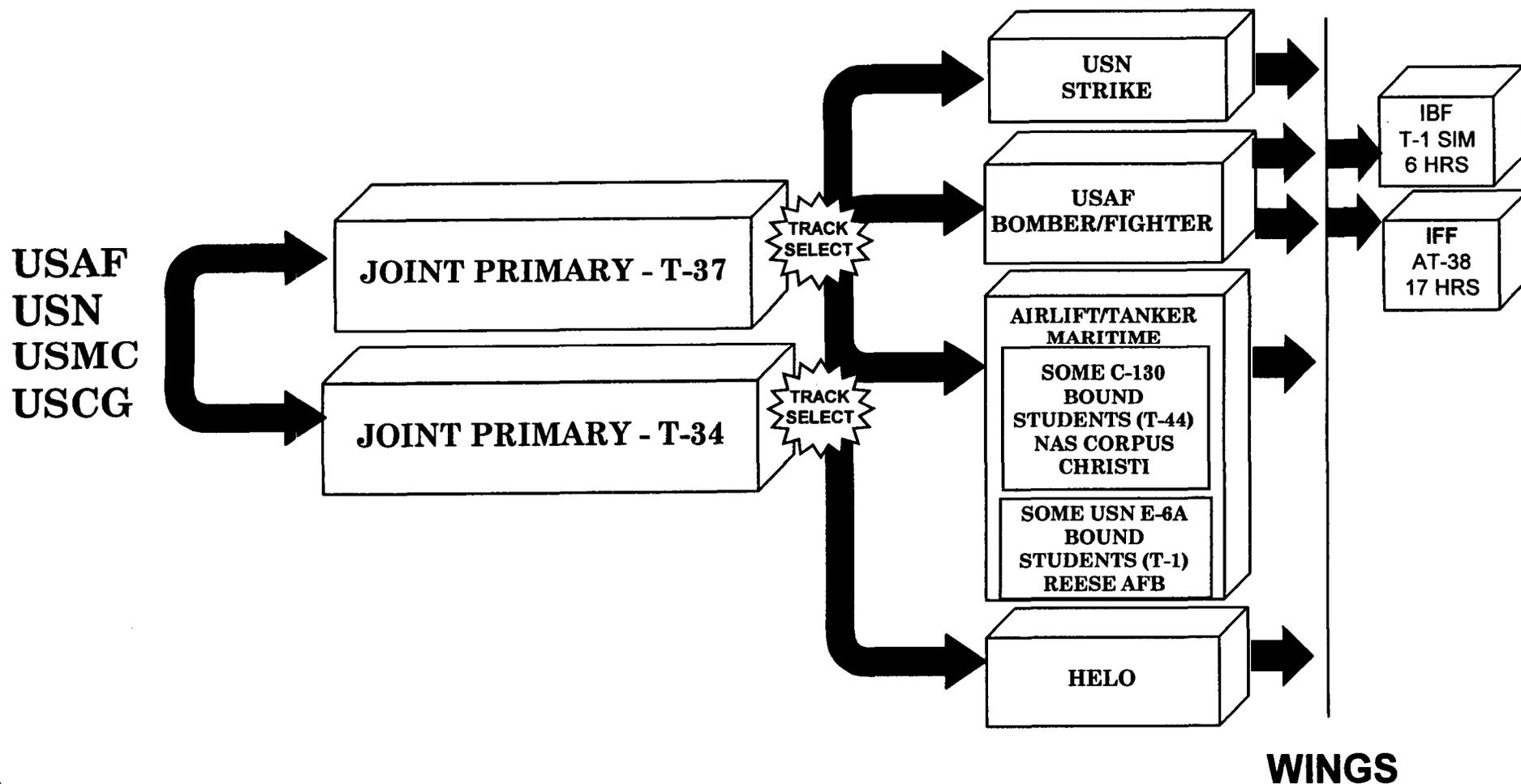
- ***NAVY EVENTUALLY TRAINS USAF TURBOPROP-BOUND STUDENTS (C-130)***

- ***USAF EVENTUALLY TRAINS NAVY JET-BOUND STUDENTS (E-6)***

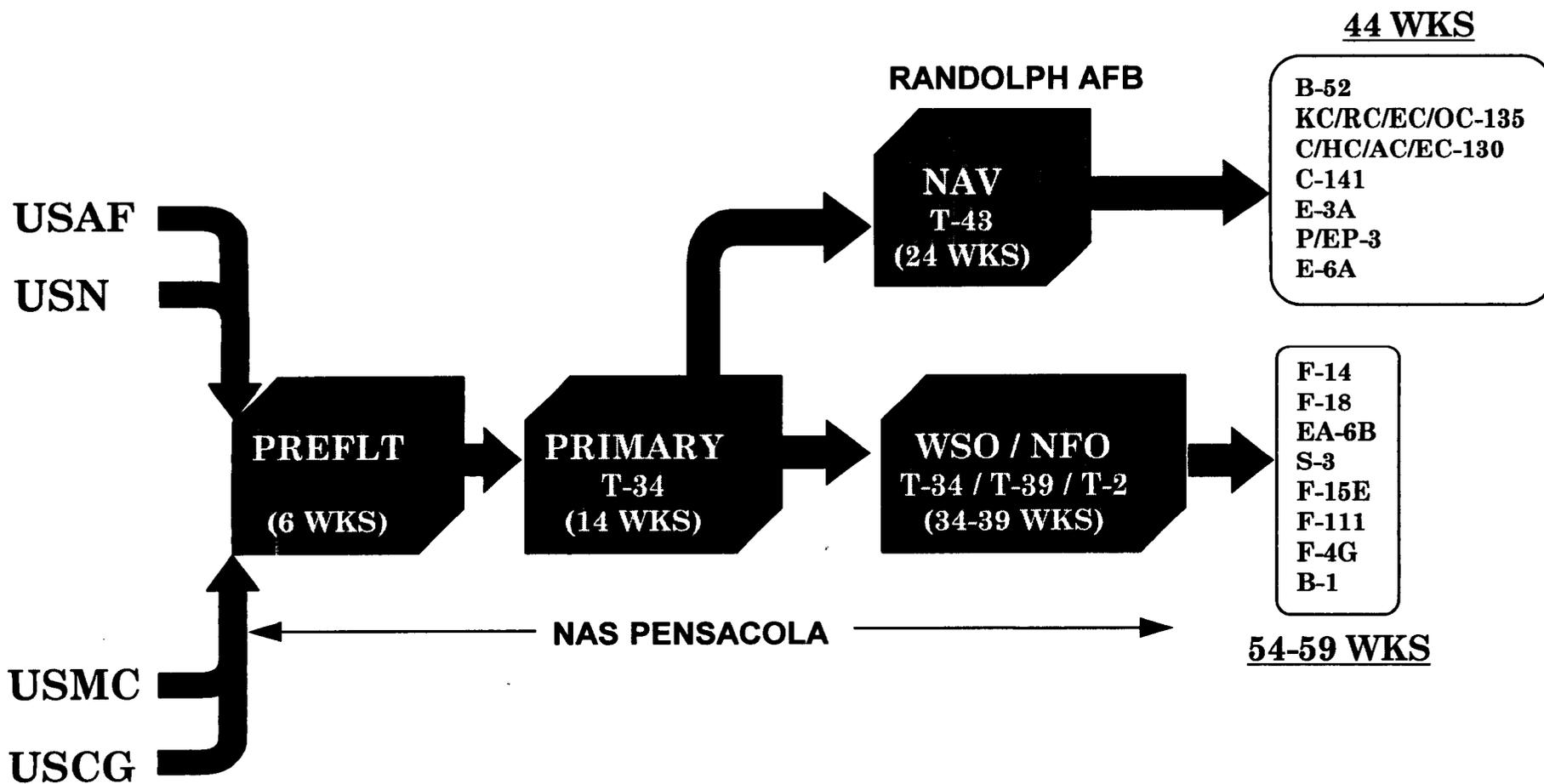
# JOINT UPT--END GAME



# ***JOINT UPT--CURRENT STATUS***

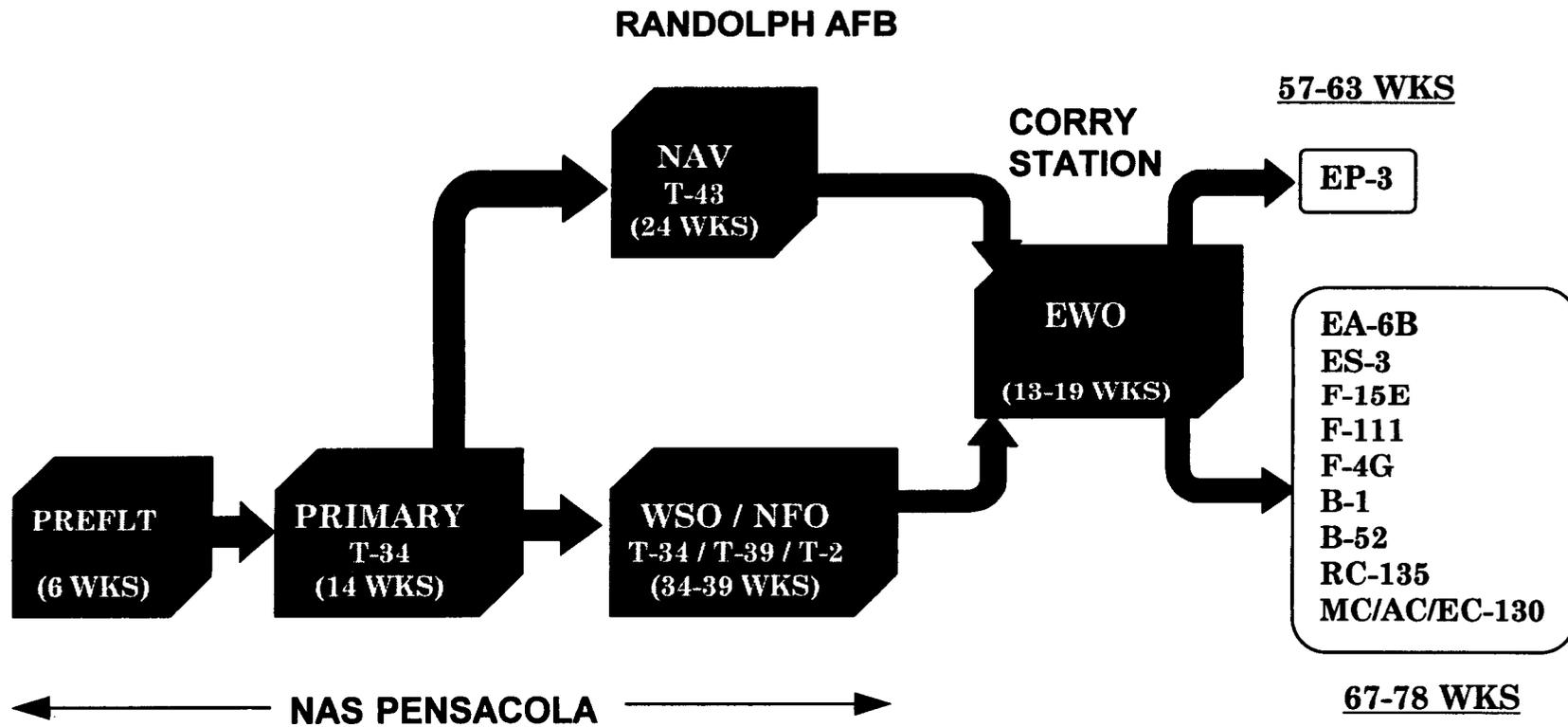


# ***JOINT NAVIGATOR/NFO TRAINING-- END GAME***



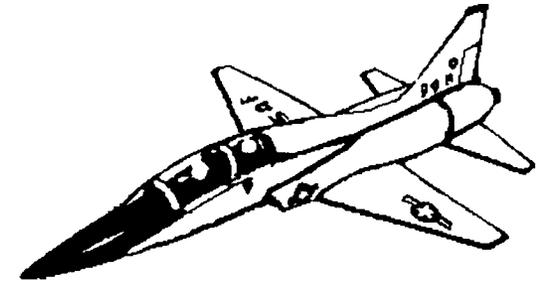
# ***JOINT ELECTRONIC WARFARE OFFICER (EWO) TRAINING--END GAME***

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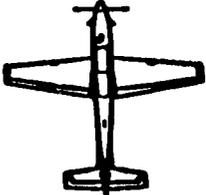
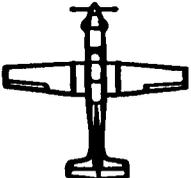
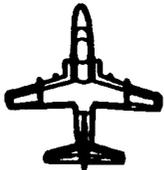
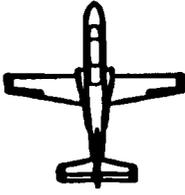
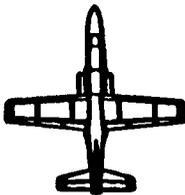
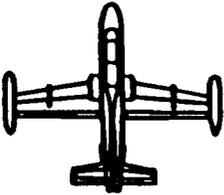
# ***OVERVIEW***

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- ***UFT LOCATIONS/TYPICAL BASE***
- ***FIXED-WING PILOT TRAINING AIRCRAFT***
- ***USAF PILOT TRAINING***
- ***JOINT PILOT AND NAVIGATOR/NFO TRAINING***
- ***JPATS UPDATE***

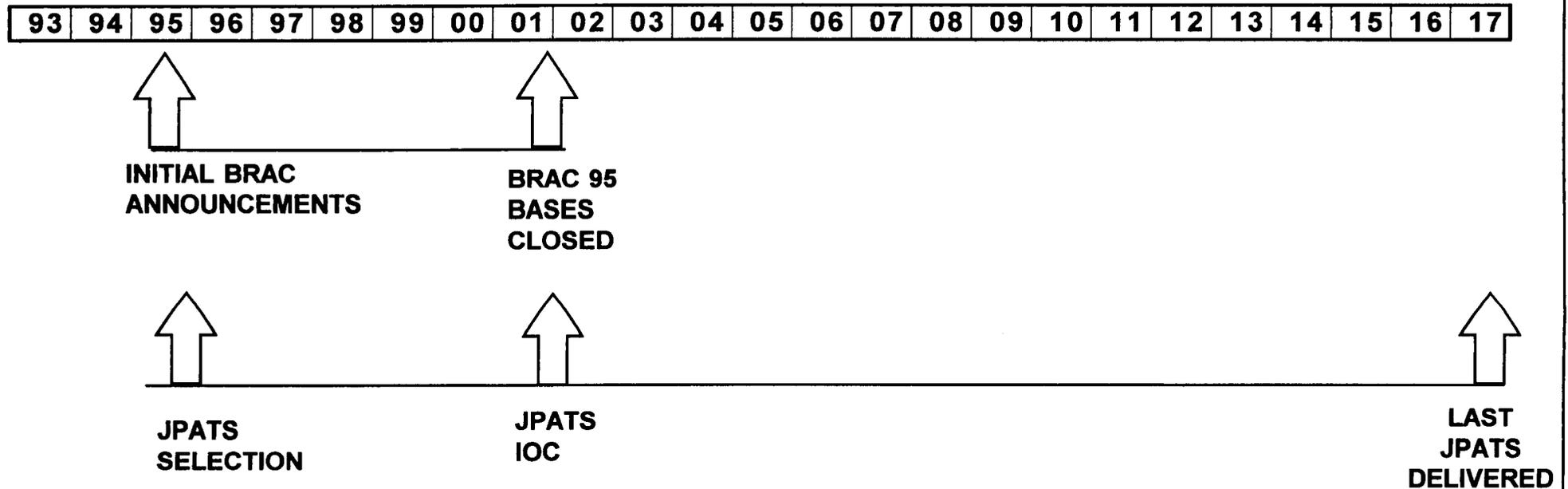
# JPATS CONTENDERS (T-37/T-34 REPLACEMENT)

	NORTHROP/ EMBRAER SUPER TUCANO BRAZIL	BEECH/ PILATUS PC-9 MK II SWITZERLAND	GRUMMAN/ AGUSTA S.211A ITALY	ROCKWELL/ MBB RANGER 2000 GERMANY	VOUGHT/ FMA PAMPA 2000 ARGENTINA	LOCKHEED/ AERMACCHI MB 339 ITALY	CESSNA CITATIONJET USA
PLANFORM							
AIRCRAFT DRAWN TO SCALE							
TAKEOFF WEIGHT (lb)	7,040	6,789	6,393	7,900	8,168	10,420	7,400
MAXIMUM SPEED	285	278	375	380	400	475	420
ENGINE(S)	P&W TURBOPROP	P&W TURBOPROP	P&W TURBOFAN	P&W TURBOFAN	GARRETT TURBOFAN	ROLLS-ROYCE TURBOJET	2 WILLIAMS TURBOFANS
MODEL IN PRODUCTION	EMB-312A/F	PC-9	S.211A (LIMITED)	(PROTO)	PAMPA (LOW RATE)	MB 339 (LIMITED)	(PROTO)
APPROX NO. BUILT	570	160	85	2	18	182	2

POTENTIAL GBTS CONTRACTORS: BRITISH AEROSPACE, CAE-LINK, HUGHES TRAINING SYSTEMS, LORAL DEFENSE SYSTEMS, McDONNELL DOUGLAS TRAINING SYSTEMS

# ***JPATS ACQUISITION SCHEDULE***

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## ***NOTES:***

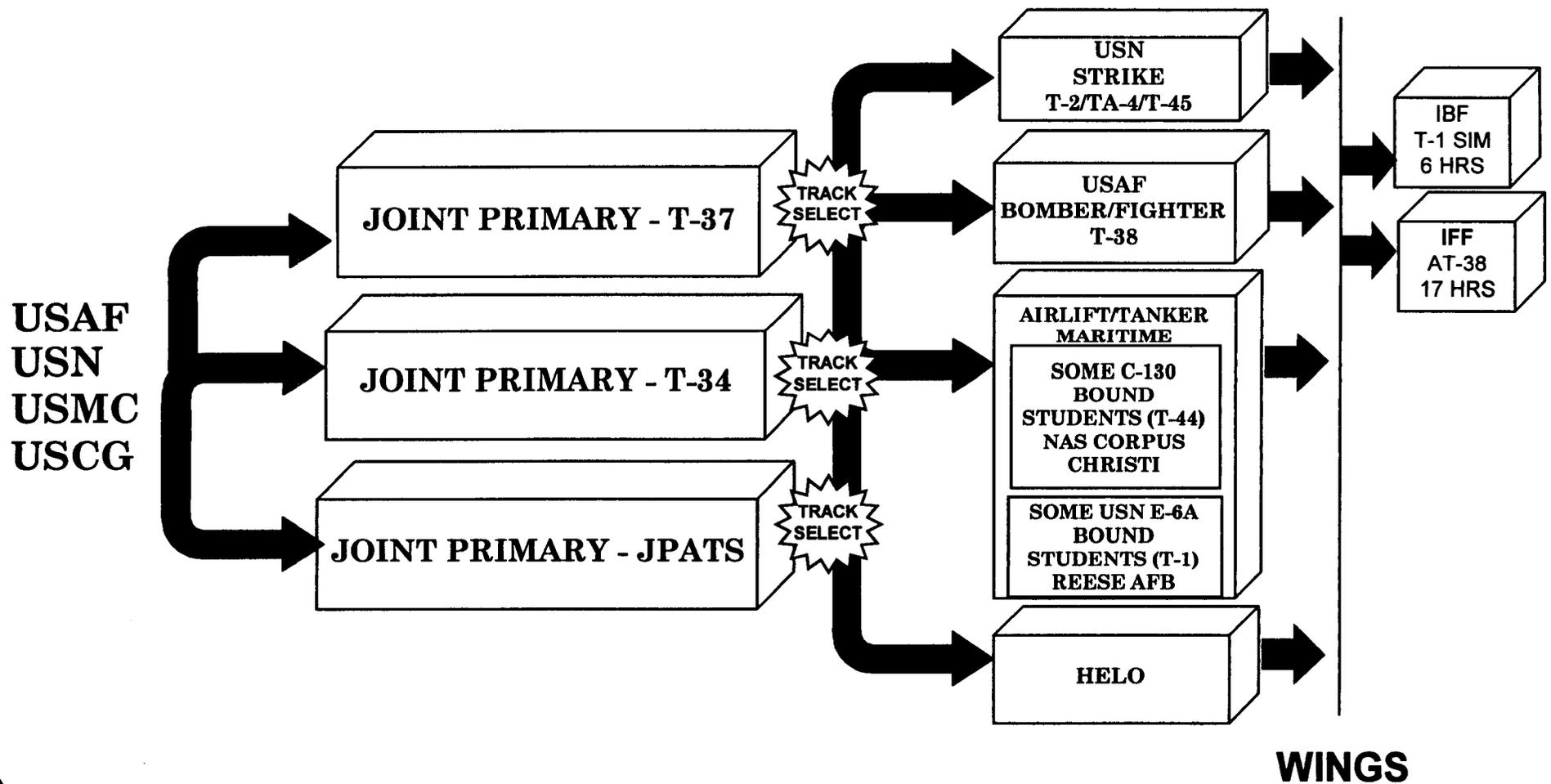
- 711 AIRCRAFT BUY: DOESN'T INCLUDE ALL OF ENJJPT AIRCRAFT***
- SERIES OF FIRM FIXED-PRICE CONTRACTS EXTENDING 4-5 YEARS EACH***
- FIRST ORDER WILL BE FOR APPROXIMATELY 140 AIRCRAFT***

# ***USAF UPT CHANGES SINCE 1973***

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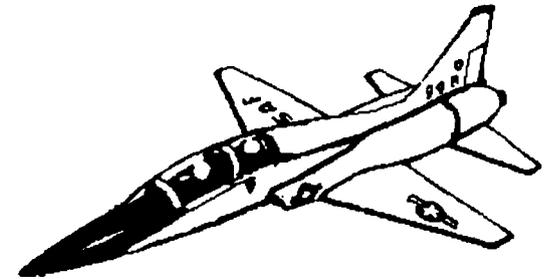
- ***CLOSED OR REALIGNED FIVE UPT BASES***
- ***STOPPED TRAINING IRANIANS***
- ***ENJJPT TRAINING BEGUN***
- ***TWO GENERATIONS OF FLIGHT SIMULATION CHANGES***
- ***IFF TRAINING ABSORBED INTO UPT BASES***
- ***T-46 TO REPLACE T-37 PURCHASED/CANCELLED***
- ***SUPT AND T-1 ACQUISITION***
- ***JOINT TRAINING***
- ***ROTARY-WING TRAINING CHANGED MULTIPLE TIMES***
- ***NAV TRAINING BASE CLOSED***
  - ***NAV TRAINING "REALIGNED" THREE TIMES***

# ***JOINT UPT--INTERMEDIATE STATUS WITH JPATS***



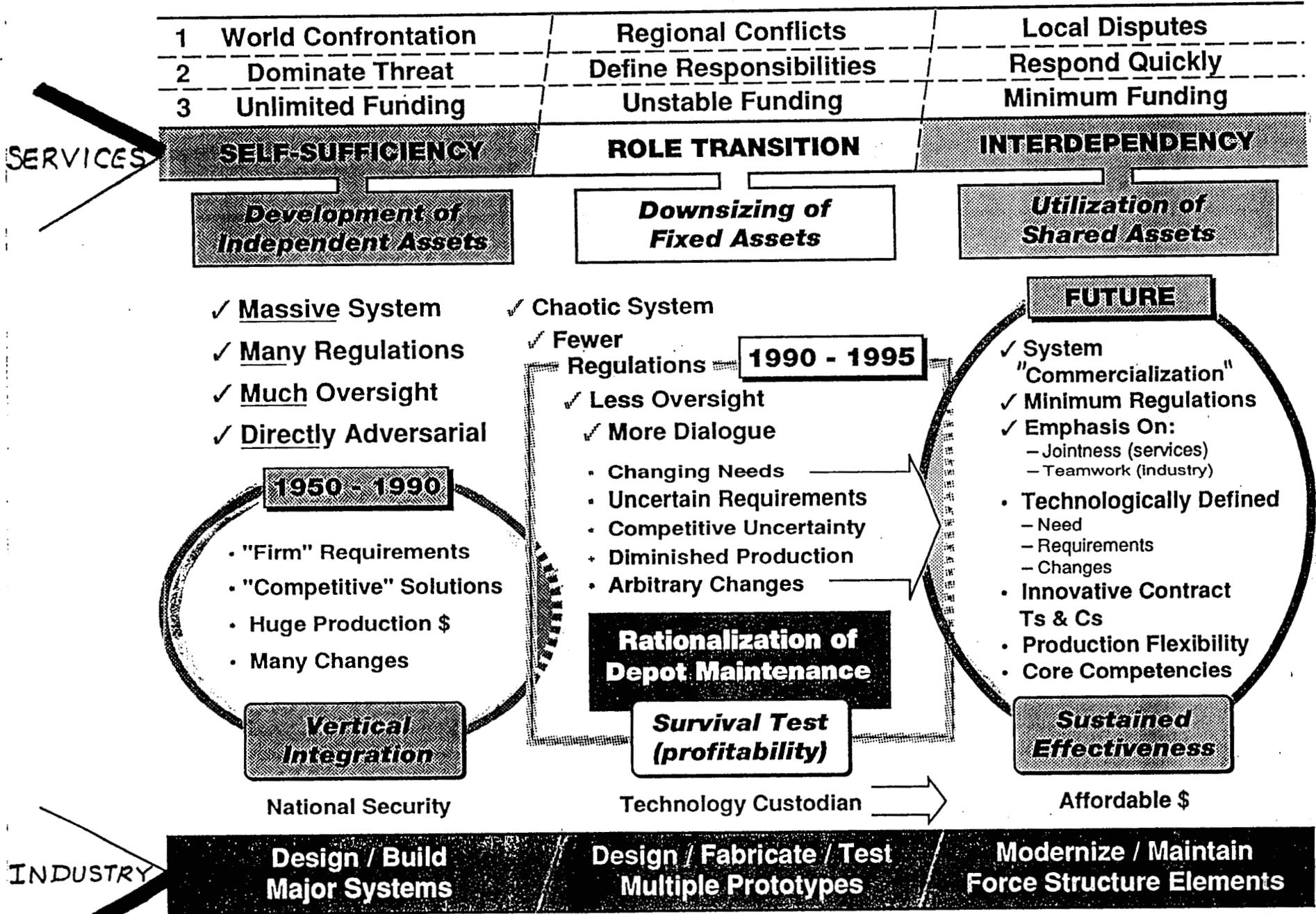
# ***SUMMARY***

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- ***JOINT TRAINING IS CENTERPIECE OF UFT***
- ***JPATS IS KEY TO CONSOLIDATED PRIMARY PILOT TRAINING***
- ***TRAINING “VISION” IS STILL GROWING AND DEVELOPING***

# Context for Public & Private Roles in Industrial Base Downsizing

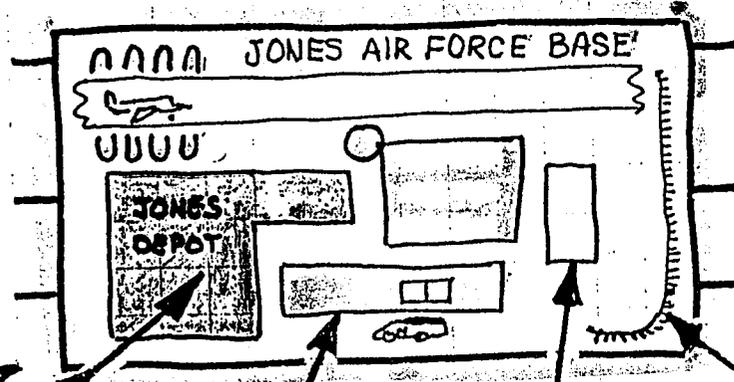


SERVICES

INDUSTRY

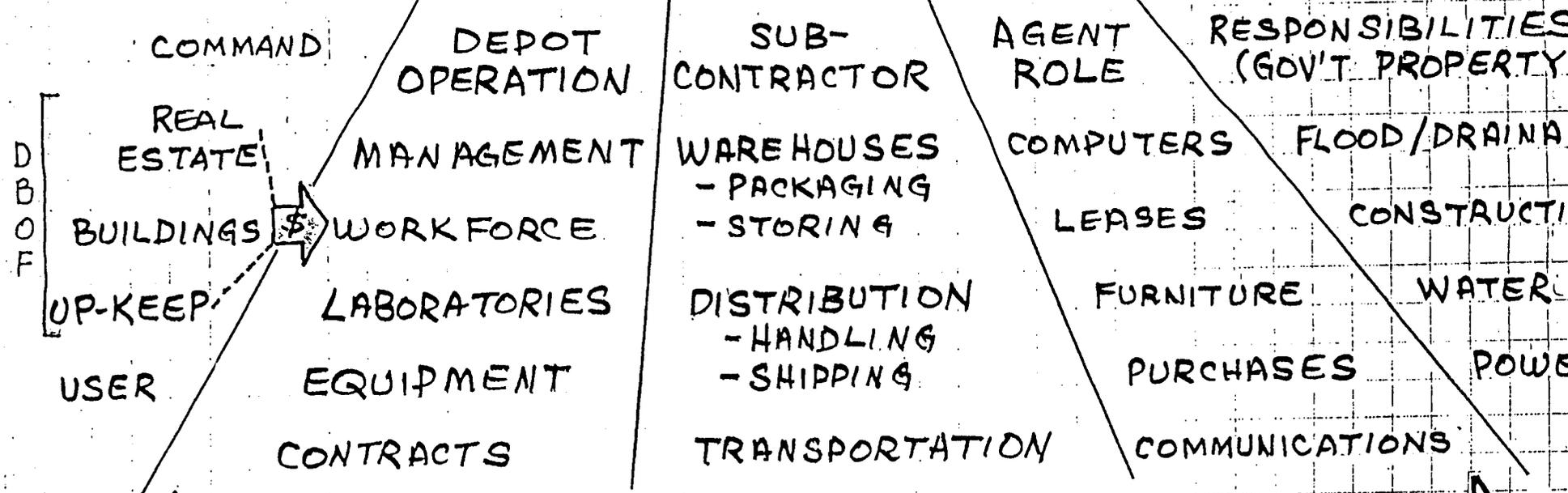
# WHAT IS A DEPOT?

- ? ORGANIZATIONAL (SERVICE/COMMAND)
- ? GEOGRAPHICAL
- ? BUDGET SOURCES



- FUNCTIONAL (MOD/REPAIR/M) ?
- EQUIPMENT TYPE ?
- TRADITIONAL ?

AIRFIELD (TACAIR)    AFMCG    DLA    GSA    CORPS OF ENGR'S (ARMY)



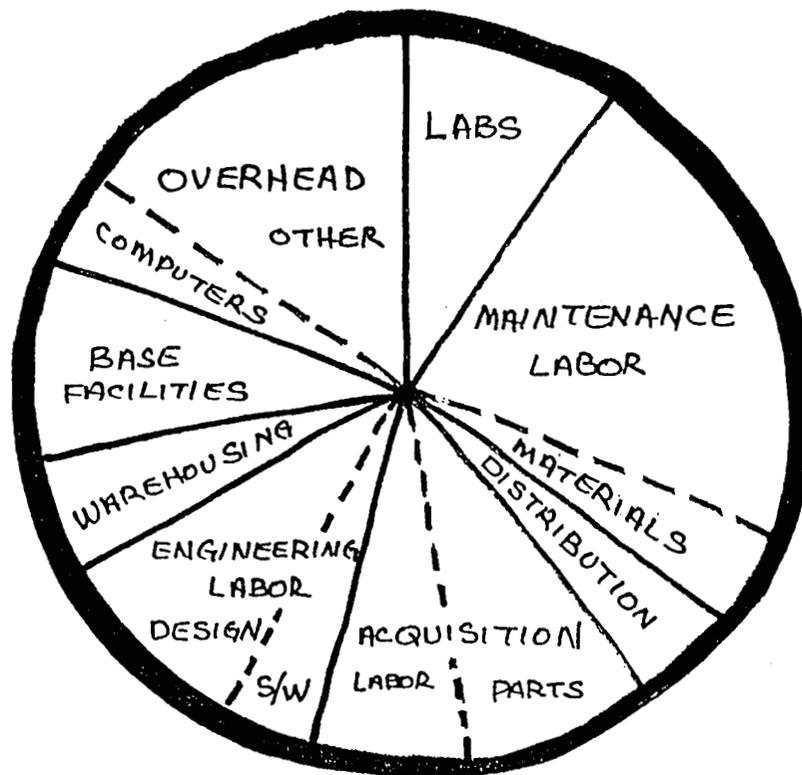
← HOW ARE EXPENSES ALLOCATED, ACCOUNTED FOR, AND AUDITED? →

FIVE AGENCIES WITH SEPARATE ACCOUNTABILITIES & FUNDING

# WHAT IS A DEPOT?

## WHAT ARE THE PROJECTS?

- ✓ CUSTOMER
- ✓ SCOPE
- ✓ URGENCY
- ✓ PRIORITY
- ✓ SECURITY



## WHAT ARE THE ESSENTIALS?

- SKILLS/SPECIALISTS
- PROCESSES/EQUIPMENT
- ORGANIZ'N/INTERFACE
- FACILITIES/LABS
- COST/BUDGETS

## WHAT SEGMENT OF DEPOT BUSINESS CAN INDUSTRY DO

- AIRCRAFT MODIFICATIONS
- DEPOT LEVEL MAINTENANCE

> BETTER, FASTER, CHEAPER?

## Aircraft Modifications:

- Aircraft modifications encompasses research and engineering, kit fabrication and assembly, and installation (and testing?) of modifications to post-delivery aircraft which may be in or out of production.
- Modifications may be to structures, electronics, weapons, propulsion, and/or other systems.
- Modifications are intended to correct deficiencies and/or improve the operational capabilities and/or reliability and maintainability of existing aircraft. The modification changes, as a minimum, the fit or function of the item.
- Modifications occasionally overlap with new aircraft production when a modification is incorporated in both pre- and post-delivery aircraft.

## Depot Level Maintenance:

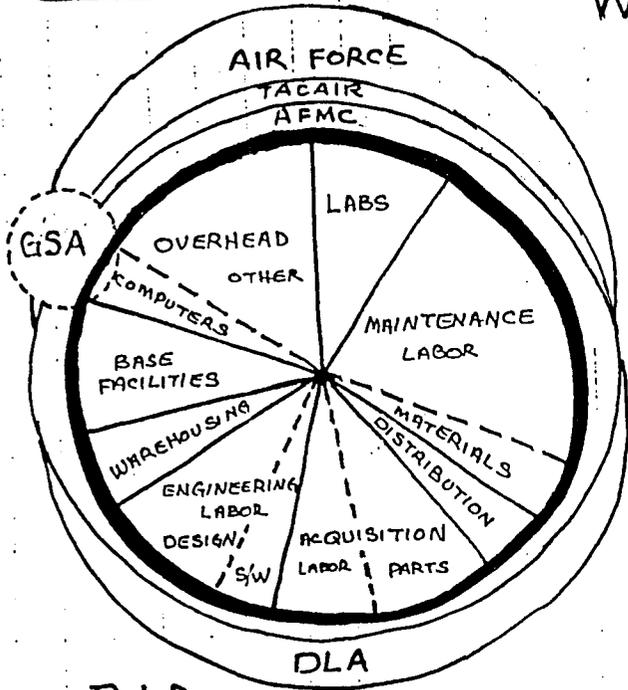
- Depot level maintenance encompasses the more complex maintenance and repair of aircraft at a depot-level maintenance facility or at an operating base by a field team.
- Complex maintenance and repair is the major overhaul or a complete rebuild of aircraft parts, assemblies or subassemblies and end items. It can include the emergency manufacture of nonavailable parts, modifications installations, testing, and reclamation.
- Depot level maintenance differs from modifications in that depot level maintenance maintains or restores an aircraft to its original configuration whereas modification results in a new aircraft configuration.
- Depot level maintenance may overlap with modifications in that when an aircraft is down for modification, depot level maintenance may be performed concurrently.

# DEPT BIDS

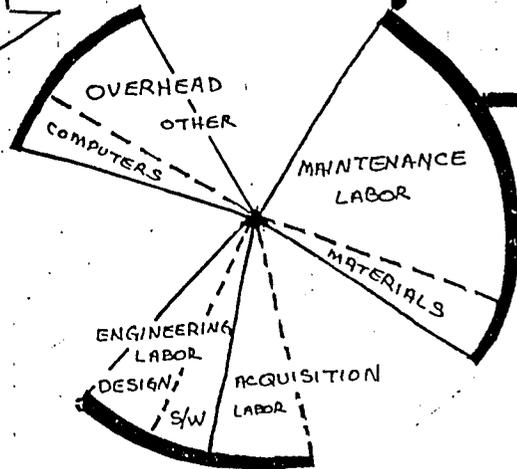
## WHAT COST ELEMENTS

PUBLIC

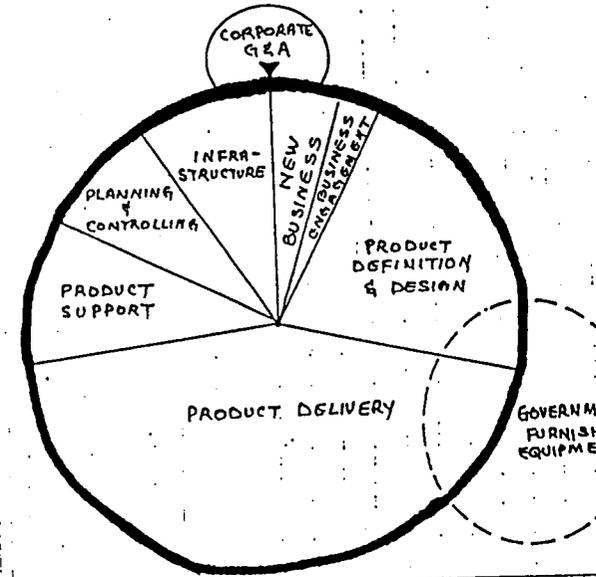
PRIVATE



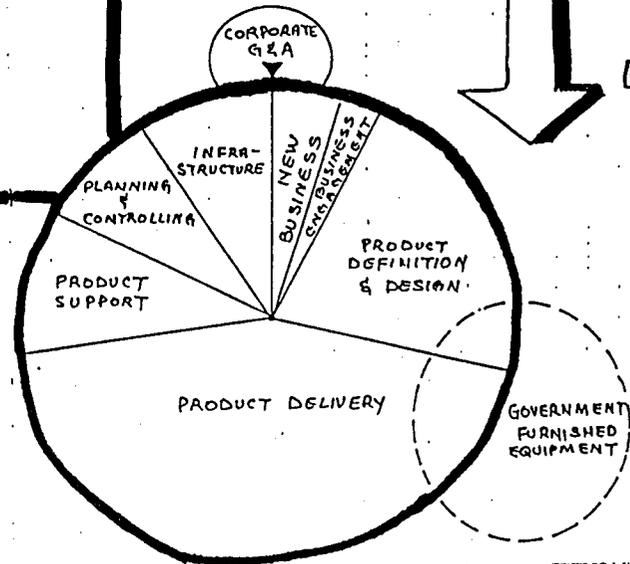
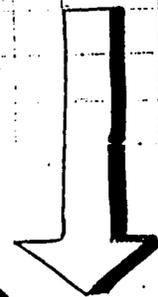
BID  
COST  
ELEMENTS



FALCON UP



BID  
COST  
ELEMENTS



# *Depot Facilities*

## Huge/Diverse Commitment of National Resources

<u>Owner</u>	<u>"Depot" Facilities</u>	<u>Depot Equivalents</u>
Army	6	+ Commercial Industrial Base
Navy Shipyards/Other	9	- Primes
Navy Aviation	6	- Major Subs
Air Force ALCs	5	- Vendors
Air Force Specialized	2	+ Space Industrial Complexes
Marine Corps Logistics	2	(Cape Canaveral AFS, Vandenberg)
		+ NASA Industrial Complexes Providing
SUBTOTAL	30	Depot Type Services to <u>Military</u> Space/ Missiles/Satellites
+ Naval Ordnance Depots	9	+ Distribution/Warehousing (DLA/GSA)
+ Army Weapons/Munitions	16	+ Foreign Government Depots/Firms
Maintenance Depots	<hr style="width: 50%; margin: 0 auto;"/> <b>55*</b>	Servicing DoD Equipment
		+ Services Intermediate Level Shops
		Performing Depot Level Repairs
		+ Non-Depot Governmental Labs



\* In addition, Depots have geographically separated detachments and operating locations.

## ***Distribution of Depots' Budgets by Service***

<u>% of Depot Budget</u>	<u>Service</u>
47%	Navy
34%	USAF
17%	Army
<u>2%</u>	Marines
100%	

## *Weapon Systems Budgets Serviced in Depots (By Types)*

<u>Weapon System</u>	<u>% of Depot Budgets</u>
450 Ships	33%
20,200 Aircraft	45%
36,000 Combat Vehicles	5%
660,000 Vehicles	13%
Missiles	<u>4%</u>
	100%

# 1 HOW HAS THE TERM "DEPOT OVERCAPACITY" BEEN DEFINED?

50% Potential Overcapacity Cited in January 93 JCS Report

● Since Depot "Requirements" are based on ability of each Depot as well as the Depot system to support a sustained wartime or emergency surge of up to 160% of the Peacetime Work Load, then exactly what is the BASE on which the 50% overcapacity is based?

--50% over the Peacetime Workload (If this is true, then USAF Depots would not meet the 160% Wartime Surge Objective)

--50% over the "160% of Peacetime Work Load" (If this is true, then the true minimum overcapacity is 240% -- based on 160% plus 50% over the 160%)

● The assumptions on which the wartime requirements are based still reflect DOD OPLANS -- many of which still have cold war assumptions. (If this is true, then the overcapacity is even higher)

● Overcapacity calculations only recognize the capacity of each Depot to maintain the specific product mix currently assigned to each individual Depot -- regardless of whether that Depot has the capacity to repair other systems.

2

HOW HAS THE TERM "DEPOT OVERCAPACITY" BEEN DEFINED?

50% Potential Overcapacity Cited in January 93 JCS Report

● No actual definition of Core Logistics Capability has yet been developed in response to DOD Directive 4151.18 (or any of the predecessor laws dating back to 1974).

"OPERATIONAL DEFINITION"—

— Does not reflect the additional overcapacity that would result from economies of scale resulting from consolidation of Depots capabilities within each Service Depot System.

— Does not reflect the additional overcapacity that would result from economies of scale resulting from inter-service consolidation of Depots capabilities.

— Excludes additional overcapacity that essentially results from the performance of Depot maintenance defined activities by non-Depot military units (eg. Intermediate Level Maintenance Shops)

3

HOW HAS THE TERM "DEPOT OVERCAPACITY" BEEN DEFINED?

50% Potential Overcapacity Cited in January 93 JCS Report

- In determining the Core Logistics skill & resource base that is solely justified as being essential to meet contingency requirements, the Army and Air Force computations exclude contributions provided by Commercial Defense Contractors.
- Overcapacity statistics are not in any way a measure of physical Depot plant capacity at each Depot--but rather are actually computed as a measure of current employment, organizational structure, product mix, and skill mix (Administrative, Maintenance, Management, etc.)
- The impact of recent structural changes (e.g. transferring Distributions functions from the "Depot" to DLA, etc.) may not be reflected in depot overcapacity estimates.
- Depot overcapacity estimates do not include reliability and maintainability (R&M) improved performance of currently acquired Weapon Systems versus the historical R&M performance of 1970-1980 era Weapon Systems (on which Depot Manpower Requirements are based in Manpower Standards).

# Context for Public & Private Roles in Industrial Base Downsizing

1	World Confrontation	Regional Conflicts	Local Disputes
2	Dominate Threat	Define Responsibilities	Respond Quickly
3	Unlimited Funding	Unstable Funding	Minimum Funding

SERVICES

<b>SELF-SUFFICIENCY</b>	<b>ROLE TRANSITION</b>	<b>INTERDEPENDENCY</b>
-------------------------	------------------------	------------------------

*Development of Independent Assets*

*Downsizing of Fixed Assets*

*Utilization of Shared Assets*

- ✓ Massive System
- ✓ Many Regulations
- ✓ Much Oversight
- ✓ Directly Adversarial

✓ Chaotic System

- ✓ Fewer Regulations
- ✓ Less Oversight
- ✓ More Dialogue

1950 - 1990

- "Firm" Requirements
- "Competitive" Solutions
- Huge Production \$
- Many Changes

*Vertical Integration*

National Security

1990 - 1995

**Rationalization of Depot Maintenance**

*Survival Test (profitability)*

Technology Custodian

FUTURE

- ✓ System "Commercialization"
- ✓ Minimum Regulations
- ✓ Emphasis On:
  - Jointness (services)
  - Teamwork (industry)
- Technologically Defined
  - Need
  - Requirements
  - Changes
- Innovative Contract Ts & Cs
- Production Flexibility
- Core Competencies

*Sustained Effectiveness*

Affordable \$

INDUSTRY

<b>Design / Build Major Systems</b>	<b>Design / Fabricate / Test Multiple Prototypes</b>	<b>Modernize / Maintain Force Structure Elements</b>
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P.02

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## *Distribution of Depots' Budgets by Service*

<u>% of Depot Budget</u>	<u>Service</u>
47%	Navy
34%	USAF
17%	Army
<u>2%</u>	Marines
100%	

## *Weapon Systems Budgets Serviced in Depots (By Types)*

<u>Weapon System</u>	<u>% of Depot Budgets</u>
450 Ships	33%
20,200 Aircraft	45%
36,000 Combat Vehicles	5%
660,000 Vehicles	13%
Missiles	<u>4%</u>
	100%

# Depot Facilities

## Huge/Diverse Commitment of National Resources

<u>Owner</u>	<u>"Depot" Facilities</u>	<u>Depot Equivalents</u>
Army	6	+ Commercial Industrial Base
Navy Shipyards/Other	9	- Primes
Navy Aviation	6	- Major Subs
Air Force ALCs	5	- Vendors
Air Force Specialized	2	+ Space Industrial Complexes
Marine Corps Logistics	2	(Cape Canaveral AFS, Vandenberg)
		+ NASA Industrial Complexes Providing
		Depot Type Services to <u>Military</u> Space/
		Missiles/Satellites
SUBTOTAL	30	+ Distribution/Warehousing (DLA/GSA)
+ Naval Ordnance Depots	9	+ Foreign Government Depots/Firms
+ Army Weapons/Munitions	16	Servicing DoD Equipment
Maintenance Depots	<u>55</u> <sup>⊛</sup>	+ Services Intermediate Level Shops
		Performing Depot Level Repairs
		+ Non-Depot Governmental Labs



⊛ In addition, Depots have geographically separated detachments and operating locations.

1

HOW HAS THE TERM "DEPOT OVERCAPACITY" BEEN DEFINED?

50% Potential Overcapacity Cited in January 93 JCS Report

● Since Depot "Requirements" are based on ability of each Depot as well as the Depot system to support a sustained wartime or emergency surge of up to 160% of the Peacetime Work Load, then exactly what is the BASE on which the 50% overcapacity is based?

--50% over the Peacetime Workload (If this is true, then USAF Depots would not meet the 160% Wartime Surge Objective)

--50% over the "160% of Peacetime Work Load" (If this is true, then the true minimum overcapacity is 240% -- based on 160% plus 50% over the 160%)

● The assumptions on which the wartime requirements are based still reflect DOD OPLANS -- many of which still have cold war assumptions. (If this is true, then the overcapacity is even higher)

● Overcapacity calculations only recognize the capacity of each Depot to maintain the specific product mix currently assigned to each individual Depot -- regardless of whether that Depot has the capacity to repair other systems.

2

HOW HAS THE TERM "DEPOT OVERCAPACITY" BEEN DEFINED?

50% Potential Overcapacity Cited in January 93 JCS Report

● No actual definition of Core Logistics Capability has yet been developed in response to DOD Directive 4151.18 (or any of the predecessor laws dating back to 1974).

"OPERATIONAL DEFINITION"—

— Does not reflect the additional overcapacity that would result from economies of scale resulting from consolidation of Depots capabilities within each Service Depot System.

— Does not reflect the additional overcapacity that would result from economies of scale resulting from inter-service consolidation of Depots capabilities.

— Excludes additional overcapacity that essentially results from the performance of Depot maintenance defined activities by non-Depot military units (eg. Intermediate Level Maintenance Shops)

3

HOW HAS THE TERM "DEPOT OVERCAPACITY" BEEN DEFINED?

P. 08

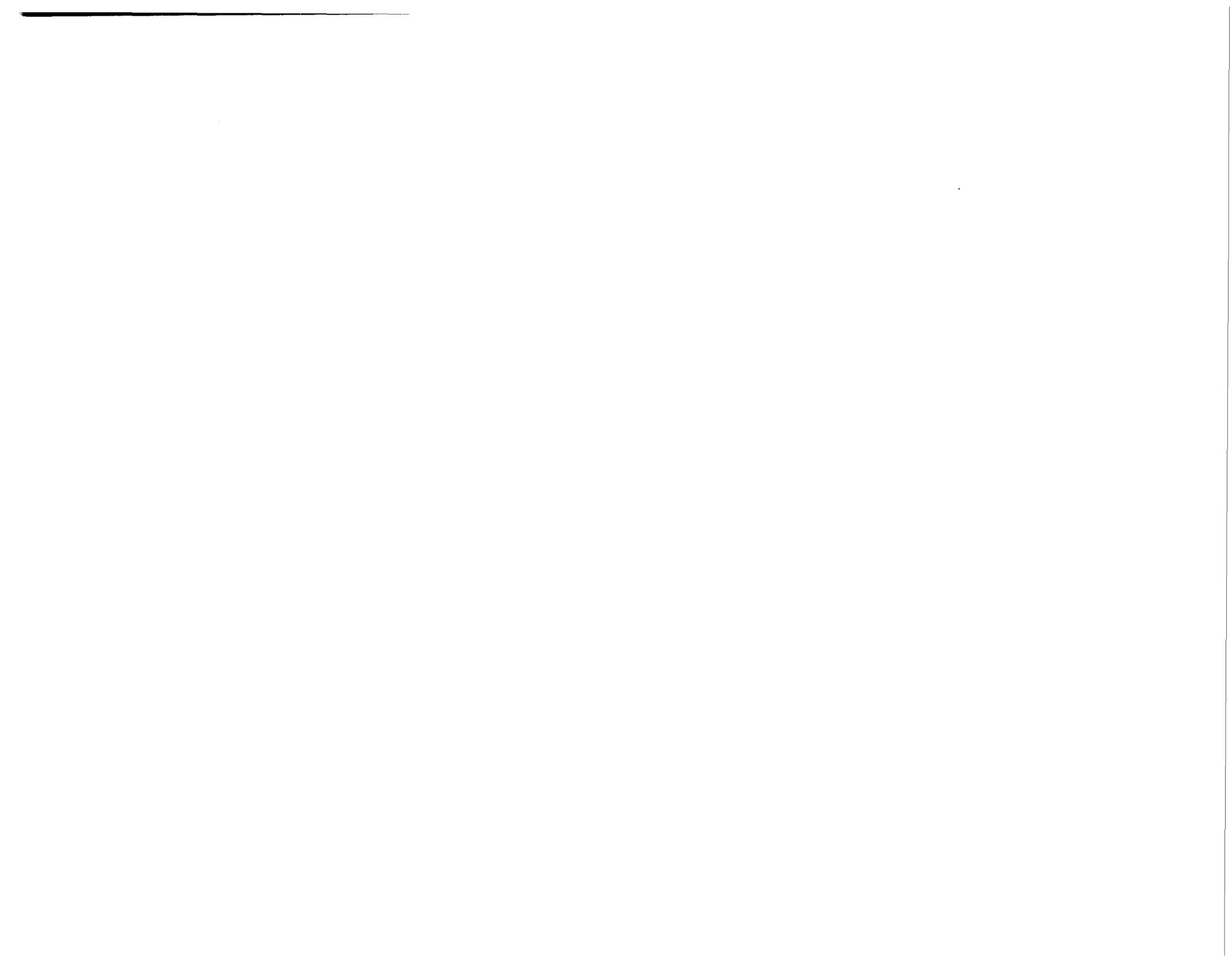
50% Potential Overcapacity Cited in January 93 JCS Report

- In determining the Core Logistics skill & resource base that is solely justified as being essential to meet contingency requirements, the Army and Air Force computations exclude contributions provided by Commercial Defense Contractors.
- Overcapacity statistics are not in any way a measure of physical Depot plant capacity at each Depot--but rather are actually computed as a measure of current employment, organizational structure, product mix, and skill mix (Administrative, Maintenance, Management, etc.)
- The impact of recent structural changes (e.g. transferring Distributions functions from the "Depot" to DLA, etc.) may not be reflected in depot overcapacity estimates.
- Depot overcapacity estimates do not include reliability and maintainability (R&M) improved performance of currently acquired Weapon Systems versus the historical R&M performance of 1970-1980 era Weapon Systems (on which Depot Manpower Requirements are based in Manpower Standards).

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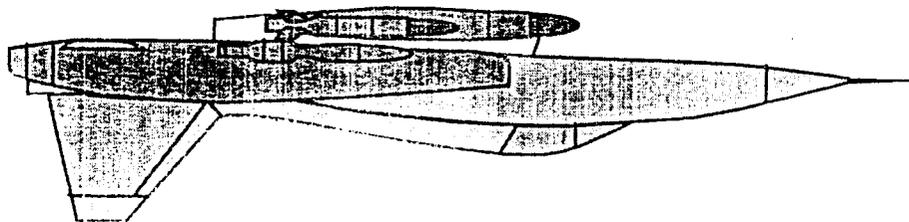
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# AIR FORCE TEAM



**DRAFT**

THANK YOU MR. CHAIRMAN, COMMISSIONERS, THIS FIRST SLIDE REPRESENTS THE 14 CATEGORIES, THE DEPARTMENT OF THE AIR FORCE USED IN THEIR ANALYSIS. THE SHADED CATEGORIES HAVE INSTALLATIONS TO BE CONSIDERED, AS ADDITIONS, TO THE SECRETARY OF DEFENSE'S RECOMMENDATIONS. I WILL BRIEF THE MISSILE, AND LARGE AIRCRAFT CATEGORIES TOGETHER, DUE TO THEIR RELATIONSHIP, AND THEN I WILL COVER THE UNDERGRADUATE PILOT TRAINING CATEGORY. THE DEPOT ~~AND LABORATORY~~ CATEGORIES HAVE ALREADY BEEN BRIEFED BY MR. JIM OWSLEY AND THE CROSS SERVICE TEAM. FINALLY, I WILL COVER THOSE INSTALLATIONS BEING CONSIDERED TODAY IN THE AIR FORCE RESERVE CATEGORY.

## AIR FORCE CATEGORIES

CATEGORY	NUMBER
MISSILES	4
LARGE AIRCRAFT	22
SMALL AIRCRAFT	15
UNDERGRADUATE PILOT TRAINING	5
DEPOTS	5
LABS & PRODUCT CENTERS	6
TEST & EVALUATION	4
SPACE SUPPORT	3
SATELLITE CONTROL	2
AIR FORCE RESERVE	14
AIR NATIONAL GUARD	13
ADMINISTRATIVE	4
TECHNICAL TRAINING	4

HIGHLIGHTED CATEGORIES HAVE CANDIDATES FOR FURTHER CONSIDERATION.

*Copy*  
**DRAFT**

CHART 2 AND THE MAP ON YOUR RIGHT REPRESENT THE MISSILE AND LARGE AIRCRAFT CATEGORIES. THE FOUR BASES INDICATED WITH AN "M" ARE THE MISSILE BASES. ALSO NOTE ON THIS SLIDE, THAT FOUR BASES WERE EXCLUDED BY THE AIR FORCE FOR MISSION OR GEOGRAPHICAL REASONS. ONE OF THE BASES EXCLUDED BY THE AIR FORCE, FRANCIS E. WARREN AFB IN CHEYENNE, WILL BE DISCUSSED FOR YOUR CONSIDERATION TODAY.

THE TIERS SHOWN AT THE LEFT FOR THE NON EXCLUDED BASES REFLECT THE AIR FORCE METHODOLOGY FOR RANKING THE RESPECTIVE INSTALLATIONS, WITHIN EACH CATEGORY. THE BASE CLOSURE EXECUTIVE GROUP REVIEWED ALL EIGHT SELECTION CRITERIA FOR ALL BASES AS GRADED BY THEIR OWN STAFF AND VOTED AND GROUPED THE BASES IN THREE TIERS, ACCORDING TO THE NECESSITY TO RETAIN. THOSE BASES IN TIER I, ARE CONSIDERED THE BASES MOST NECESSARY TO RETAIN, AND THOSE IN TIER THREE ARE CONSIDERED BY THE AIR FORCE AS THE LEAST NECESSARY TO RETAIN, DEPENDING ON CATEGORY CAPACITY.

FOR INFORMATION, THE SECRETARY OF THE AIR FORCE USED THE TIERS TO DEVELOP HER CLOSURE AND REALIGNMENT RECOMMENDATIONS

**AIR FORCE**  
**CATEGORY: MISSILE/LARGE AIRCRAFT**

TIER	INSTALLATION	TIER	INSTALLATION
I	Altus AFB, OK	Excl	Hickam AFB, HI
Excl	Andersen AFB, GU	I	Little Rock AFB, AR
Excl	Andrews AFB, MD	II	<i>Malmstrom AFB, MT</i> (M)(R) (*)
I	Barksdale AFB, LA	Excl	McChord AFB, WA
II	Beale AFB, CA	I	McConnell AFB, KS
I	Charleston AFB, SC	II	McGuire AFB, NJ
I	Dover AFB, DE	II	<i>Minot AFB, ND</i> (M) (*)
I	Dyess AFB, TX	II	Offutt AFB, NE
III	Ellsworth AFB, SD	III	Scott AFB, IL
Excl	<i>F E Warren AFB, WY</i> (M) (*)	I	Travis AFB, CA
I	Fairchild AFB, WA	I	Whiteman AFB, MO
III	<i>Grand Forks AFB, ND</i> (M) (R) (*)		

- (C) = DoD recommendation for closure  
 (R) = DoD recommendation for realignment  
 (\*) = Candidate for further consideration  
 (M) = Missile Base

AF Force Structure # 201

**DRAFT**

LOOKING AT CHART 4, THE AIR FORCE DETERMINED ~~THAT~~ THERE WAS AN EXCESS OF ONE MISSILE BASE AND 2 TO 3 LARGE AIRCRAFT BASES. PART OF THEIR ANALYSIS, AS WELL AS THE STAFF'S, WAS THE FACT THAT THREE OF THE FOUR MISSILE BASES ~~AS WELL AS~~ <sup>AND</sup> OTHER CATEGORIES, SUCH AS DEPOTS HAVE LARGE AIRCRAFT MISSIONS AND CAPACITY. THE AIR FORCE HAS RECOMMENDED THE ~~CLOSURE~~ <sup>ELIMINATION</sup> OF THE AIRFIELD AT MALMSTROM AFB, MONTANA. THIS ~~AIRFIELD CLOSURE~~ IS OFFSET BY THE RECOMMENDATION FOR MACDILL AFB. THE STAFF GENERALLY AGREES WITH THE AIR FORCE CAPACITY ANALYSIS.

2.9 including START  
Treaty Basing implications

## **MISSILE/LARGE AIRCRAFT CAPACITY ANALYSIS**

### **AIR FORCE**

- **Determined an excess of 1 missile base**
- **Determined an excess of approximately 2-3 large aircraft bases**
  - **1-2 Bomber bases**
  - **1 Airlift base**
  - **Included Depot airfield capacity**
- **Recommending relocation of Malmstrom AFB KC-135 operations and closure of airfield except for helicopter support activity**

**DRAFT**

ON CHART 5 ARE THE FOUR NORTHERN TIER MISSILE/LARGE AIRCRAFT BASES. TODAY, THE COMMISSION WILL BE CONSIDERING ADDING F.E. WARREN AND EXPANDING THE OPTIONS FOR GRAND FORKS, MALMSTROM AND MINOT.

## AIR FORCE MISSILE BASES

TIER	INSTALLATION	
Excluded	<i>F.E. WARREN AFB, WY</i>	(*)
III	<i>GRAND FORKS AFB, ND</i>	(R)(*)
II	<i>MALMSTROM AFB, MT</i>	(R)(*)
II	<i>MINOT AFB, ND</i>	(**)(*)

(C) = DoD recommendation for closure

(R) = DoD recommendation for realignment

(\*) = *Candidate for further consideration*

(\*\*) = March 7, 1995 Commission Add for realignment (Missile Field)

## DRAFT

CHART 6 SHOWS THE DOD RECOMMENDED REALIGNMENTS FOR THE FOUR MISSILE/LARGE AIRCRAFT BASES UNDER REVIEW. WE HAVE, BOLD FACED THE OPTIONS RECOMMENDED BY THE DEPARTMENT, AND HAVE SHOWN THEIR RATIONALE FOR NOT RECOMMENDING COMPLETE CLOSURE.

DOD RECOMMENDED TWO REALIGNMENTS FOR THE FOUR NORTHERN TIER BASES. ON THE MISSILE SIDE, THEY RECOMMENDED, INACTIVATION OF THE MISSILE FIELD AT GRAND FORKS . THEY ALSO SUGGESTED THAT MINOT'S MISSILES COULD BE SUBSTITUTED IF THE SECRETARY DETERMINED THAT ABM CONSIDERATIONS PRECLUDED THE GRAND FORKS RECOMMENDATION. AS SUCH, THE COMMISSION VOTED ON MARCH 7TH TO ADD THE MINOT MISSILE FIELD FOR CONSIDERATION. WE RECENTLY, RECEIVED A LETTER FROM SECRETARY DEUTCH, INDICATING THAT AN, INTERAGENCY REVIEW HAS NOW BEEN COMPLETED AND THAT (QUOTE) "THERE, WILL BE NO DETERMINATION BY THE SECRETARY THAT WOULD REQUIRE RETENTION OF THE MISSILE GROUP AT GRAND FORKS." (UNQUOTE)

DOD SELECTED THE GRAND FORKS MISSILE FIELD BECAUSE IT RANKED LOWER THAN THE OTHERS IN MILITARY EFFECTIVENESS, AND MAINTAINABILITY. FE WARREN AFB WAS EXCLUDED FROM THE AIR FORCE ANALYSIS, DUE TO THE START TREATY IMPLICATIONS OF EARLY DRAWDOWN OF PEACEKEEPER MISSILES.

ON THE AIRCRAFT SIDE, DOD RECOMMENDED THE REALIGNMENT OF MALMSTROM AFB BY SHUTTING DOWN THE AIRFIELD AND RELOCATING THE TANKER AIRCRAFT TO MACDILL AFB, FLORIDA. THE MALMSTROM

# NORTHERN TANKER MISSILE BASES

## DOD RECOMMENDATIONS VERSUS COMPLETE CLOSURES

	GRAND FORKS, ND	MINOT, ND	MALMSTROM, MT	FE WARREN, WY
<b>MISSILES</b>				
MINUTEMAN III MISSILES	<b>150 DOD RECOMMENDED FOR REALIGNMENT</b>  • Low ranked mil effectiveness and maintenance	150 Not Recommended but added by Commission  • Middle ranked mil effectiveness and maintenance	200 Not Recommended  • High ranked mil effectiveness and maintenance	150 Excluded  • Peacekeeper drawdown and START
PEACEKEEPER MISSILES	0	0	0	50
<b>AIRCRAFT</b>				
KC-135	48 Not Recommended	0	12 <b>DOD</b>	0

### DRAFT

AIRFIELD WAS SELECTED , BECAUSE OF OPERATING LIMITATIONS, AND BECAUSE OF THE TANKER CONCENTRATION IN THE NORTHWEST. DOD DID NOT RECOMMEND REALIGNING THE TANKERS AT GRAND FORKS BECAUSE THIS IS ONE OF THREE CORE TANKER BASES, AND MINOT'S B-52S WERE NOT RECOMMENDED FOR REALIGNMENT BECAUSE THE AIR FORCE WAS SATISFIED WITH CURRENT B-52 LOCATIONS.

*Tanker Saturation  
# 227*

ON CHART DRAFT

CHART 7 IS ARRANGED SO THAT THE INSTALLATION IS LISTED ON THE TOP, REFLECTING THE VARIOUS RECOMMENDATIONS AND OPTIONS DESCRIBED. WE HAVE LISTED SPECIFIC CRITERIA AREAS ALONG THE LEFT SIDE, ARRANGED IN GENERAL ORDER OF THE EIGHT SELECTION CRITERIA, STARTING WITH THOSE ELEMENTS REFLECTING MILITARY VALUE.

GOING ON WITH A DESCRIPTION OF THE CHART, WE SHOW THE RESPECTIVE AIR FORCE TIERING LEVELS, AS DESCRIBED EARLIER. THE TIERING WAS DETERMINED AFTER BALLOTING BY THE AIR FORCE BASE CLOSURE EXECUTIVE GROUP, OR BCEG. THE SECOND ROW SHOWS THE ACTUAL BCEG RANKING OF MALMSTROM AIR FORCE BASE, ~~IN THIS CASE~~. THE RELATIVE RANKING OF BASES RESULTED FROM BALLOTING ON THE EIGHTEEN NON EXCLUDED LARGE AIRCRAFT BASES ANALYZED BY THE AIR FORCE.] { ~~MINOT 21, SCOTT 13, GRAND FORKS & ELLSWORTH 12~~ }

YOU WILL SEE MANY CHARTS SUCH AS THESE AS WE PROCEED.

I WILL BE GLAD TO DISCUSS THE OTHER INFORMATION, SUCH AS ONE TIME COSTS TO CLOSE OR ANNUAL SAVINGS, BUT WHAT THIS SLIDE SPECIFICALLY DISPLAYS IS THE KC-135 REALIGNMENT OPTION FOR MALMSTROM AFB THAT WAS RECOMMENDED BY DOD, AND HOW IT STACKS UP AGAINST THESE CRITERIA.

## BASE ANALYSIS

### CATEGORY: MISSILE/LARGE AIRCRAFT

**DOD RECOMMENDATION:** Realign Malmstrom AFB by relocating the 43rd Air Refueling Group to MacDill AFB.

CRITERIA	MALMSTROM, MT (R)(*) (Realign KC-135 Acft)
AIR FORCE TIERING	II 29/36
BCEG RANK	11/18
FORCE STRUCTURE	80 MINUTEMAN III 120 MINUTEMAN X 12 KC-135 Aircraft
ONE-TIME COSTS (\$ M)	17.4
ANNUAL SAVINGS (\$ M)	5.1
RETURN ON INVESTMENT	4 Years
BASE OPERATING BUDGET (\$ M)	21.8
PERSONNEL ELIMINATED (MIL/CIV)	0/0
PERSONNEL REALIGNED (MIL/CIV)	719/19
ECONOMIC IMPACT (BRAC95/CUM)	3.0%/3.0%
ENVIRONMENTAL	Asbestos/Siting

- (C) = DoD recommendation for closure
- (R) = DoD recommendation for realignment
- (\*) = *Candidate for further consideration*
- (\*\*) = March 7, 1995 Commission Add for realignment (Missile Field)

**DRAFT**

CHART 8 SHOWS THE GRAND FORKS MISSILE FIELD REALIGNMENT RECOMMENDED BY DOD AND THE MINOT MISSILE FIELD REALIGNMENT ADDED FOR CONSIDERATION BY THE COMMISSION ON MARCH 7TH. AGAIN, WE SHOW THE AIR FORCE TIERING AND THE RANKING ACHIEVED THROUGH THE BCEG BALLOTING. THE BASES ARE VERY SIMILAR IN SIZE, AND THE REALIGNMENT COSTS REFLECT THAT SIMILARITY.

~~MINOT 21, SCOTT-13, GRAND FORKS & ELLSWORTH-12}~~

## BASE ANALYSIS

### CATEGORY: MISSILE/LARGE AIRCRAFT

**DOD RECOMMENDATION:** Realign Grand Forks AFB by inactivating the 321st Missile Group.

CRITERIA	GRAND FORKS, ND (R)(*) (Realign MM III)	MINOT, ND (**)(*) (Realign MM III)
AIR FORCE TIERING	III $\phi$	II
BCEG RANK	17/18 12/36	15/18 21/36
FORCE STRUCTURE	150 MINUTEMAN III 48 KC-135 Aircraft	150 MINUTEMAN III 12 B-52 Aircraft
ONE-TIME COSTS (\$ M)	11.9	12.0
ANNUAL SAVINGS (\$ M)	35.2	36.0
RETURN ON INVESTMENT	Immediate	Immediate
BASE OPERATING BUDGET (\$ M)	26.7	26.7
PERSONNEL ELIMINATED (MIL/CIV)	802/35	809/46
PERSONNEL REALIGNED (MIL/CIV)	0/0	0/0
ECONOMIC IMPACT (BRAC95/CUM)	2.4%/2.4%	3.1%/3.1%
ENVIRONMENTAL	Asbestos/Siting	Siting

- (C) = DoD recommendation for closure
- (R) = DoD recommendation for realignment
- (\*) = *Candidate for further consideration*
- (\*\*) = March 7, 1995 Commission Add for realignment (Missile Field)

## DRAFT

CHART 9 REPEATS THE GRAND FORKS AND MINOT REALIGNMENT OPTIONS IN THE SHADED AREA, AND ADDS REALIGNMENT OF THE MINUTEMAN III MISSILES AT FE WARREN AFB AND THE CLOSURE OF MALMSTROM AFB. THE REALIGNMENT OF MINUTEMAN III MISSILES AT FE WARREN WOULD PERMIT THE PEACEKEEPER DRAWDOWN TO CONTINUE TO 2003 AS SCHEDULED, THEREBY NOT JEOPARDIZING START II. IT WOULD THEN LEAD TO CLOSURE OF FE WARREN AND WOULD PRODUCE SUBSTANTIALLY MORE SAVINGS THAN SHOWN HERE FOR THE REALIGNMENT.

*IN THIS CASE*

MALMSTROM AFB IS SHOWN AS A CLOSURE <sup>^</sup> BECAUSE THE REALIGNMENT OF THE 200 MINUTEMAN III MISSILES AT MALMSTROM, WOULD BE ADDED TO THE KC-135 REALIGNMENT RECOMMENDED BY DOD. AS YOU CAN SEE, THIS COMPLETE CLOSURE WOULD ADDRESS BOTH THE NEED TO RELOCATE TANKERS FROM THE NORTHWEST TO THE SOUTHEAST AND THE NEED TO CLOSE ONE MINUTEMAN III MISSILE FIELD AS REQUIRED BY THE NUCLEAR POSTURE REVIEW. IT IS ALSO IMPORTANT TO NOTE HERE THAT THE COMPLETE CLOSURE OF MALMSTROM ALSO PRODUCES FAR GREATER SAVINGS THAN THE REALIGNMENTS RECOMMENDED BY DOD.

## BASE ANALYSIS

### CATEGORY: MISSILE/LARGE AIRCRAFT

CRITERIA	GRAND FORKS, ND (R)(*) (Realign MM III)	MINOT, ND (**)(*) (Realign MM III)	F.E. WARREN, WY (*) (Realign MM III)	MALMSTROM, MT (R)(*) (Closure)
AIR FORCE TIERING	III	II	Excluded	II
BCEG RANK	17/18 <sup>12/36</sup>	15/18 <sup>21/36</sup>	Excluded	11/18 <sup>29/36</sup>
FORCE STRUCTURE	150 MINUTEMAN III 48 KC-135 Aircraft	150 MINUTEMAN III 12 B-52 Aircraft	150 MINUTEMAN III 50 PEACEKEEPER	80 MINUTEMAN III 120 MINUTEMAN X 12 KC-135 Aircraft
ONE-TIME COSTS (\$ M)	11.9	12.0	84.3	96.4
ANNUAL SAVINGS (\$ M)	35.2	36.0	16.1	113.9
RETURN ON INVESTMENT	Immediate	Immediate	3 Years	1 Year
BASE OPERATING BUDGET (\$ M)	26.7	26.7	16.9	21.8
PERSONNEL ELIMINATED (MIL/CIV)	802/35	809/46	376/27	2,132/277
PERSONNEL REALIGNED (MIL/CIV)	0/0	0/0	103/5	1135/182
ECONOMIC IMPACT (BRAC95/CUM)	2.4%/2.4%	3.1%/3.1%	1.4%/1.4%	9.3%/9.3%
ENVIRONMENTAL	Asbestos/Siting	Siting	Siting	Asbestos/Siting

- (C) = DoD recommendation for closure  
(R) = DoD recommendation for realignment  
(\*) = *Candidate for further consideration*  
(\*\*) = March 7, 1995 Commission Add for realignment (Missile Field)

**DRAFT**

CHART 10 SHOWS THE MALMSTROM CLOSURE, ONCE AGAIN IN THE SHADED AREA, AND IT SHOWS THE CLOSURE OF GRAND FORKS AND MINOT AIR FORCE BASES. <sup>ALSO</sup> LIKE MALMSTROM, A CLOSURE OF GRAND FORKS WOULD ADDRESS BOTH THE TANKER DISTRIBUTION ISSUE AND THE NEED TO ELIMINATE ONE MINUTEMAN III MISSILE FIELD THE GRAND FORKS AND MINOT CLOSURE OPTIONS PRODUCE FAR MORE SAVINGS THAN THE DOD RECOMMENDED REALIGNMENTS.

**BASE ANALYSIS**  
**CATEGORY: MISSILE/LARGE AIRCRAFT**

CRITERIA	MALMSTROM, MT (R)(*) (Closure)	GRAND FORKS, ND (R)(*) (Closure)	MINOT, ND (**)(*) (Closure)
AIR FORCE TIERING	II	III	II
BCEG RANK	11/18	17/18	15/18
FORCE STRUCTURE	80 MINUTEMAN III 120 MINUTEMAN X 12 KC-135 Aircraft	150 MINUTEMAN III 48 KC-135 Aircraft	150 MINUTEMAN III 12 B-52 Aircraft
ONE-TIME COSTS (\$ M)	96.4	81.4	230.4
ANNUAL SAVINGS (\$ M)	113.9	87.6	98.2
RETURN ON INVESTMENT	1 Year	1 Year	2 Years
BASE OPERATING BUDGET (\$M)	21.8	26.7	26.7
PERSONNEL ELIMINATED (MIL/CIV)	2,132/277	1,597/116	1,846/230
PERSONNEL REALIGNED (MIL/CIV)	1135/182	2,354/309	1,947/261
ECONOMIC IMPACT (BRAC95/CUM)	9.3%/9.3%	12.7%/12.7%	15.8%/15.8%
ENVIRONMENTAL	Asbestos/Siting	Asbestos/Siting	Siting

(C) = DoD recommendation for closure

(R) = DoD recommendation for realignment

(\*) = *Candidate for further consideration*

(\*\*) = March 7, 1995 Commission Add for realignment (Missile Field)

**DRAFT**

CHART 11 SHOWS THE THREE CLOSURE OPTIONS WE JUST DISCUSSED, PLUS THE FE WARREN MINUTEMAN III REALIGNMENT WHICH WOULD LEAD TO EVENTUAL CLOSURE AFTER 2003.

I CALL YOUR ATTENTION TO THE FORCE STRUCTURE, COST AND IMPACT FACTORS

.....**KEEP THIS CHART UP.**

## BASE ANALYSIS

### CATEGORY: MISSILE/LARGE AIRCRAFT

**FOR CONSIDERATION:** Study Grand Forks , Minot, and Malmstrom AFBs for **REALIGNMENT** or **CLOSURE** and F.E. Warren AFB for **REALIGNMENT**.

CRITERIA	GRAND FORKS, ND (R)(*) (Closure)	MINOT, ND (**)(*) (Closure)	MALMSTROM, MT (R)(*) (Closure)	F.E. WARREN, WY (*) (Realign MM III)
AIR FORCE TIERING	III	II	II	Excluded
BCEG RANK	17/18	15/18	11/18	Excluded
FORCE STRUCTURE	150 MINUTEMAN III 48 KC-135 Aircraft	150 MINUTEMAN III 12 B-52 Aircraft	80 MINUTEMAN III 120 MINUTEMAN X 12 KC-135 Aircraft	150 MINUTEMAN III 50 PEACEKEEPER
ONE-TIME COSTS (\$ M)	81.4	230.4	96.4	84.3
ANNUAL SAVINGS (\$ M)	87.6	98.2	113.9	16.1
RETURN ON INVESTMENT	1 Year	2 Years	1 Year	3 Years
BASE OPERATING BUDGET (\$M)	26.7	26.7	21.8	16.9
PERSONNEL ELIMINATED (MIL/CIV)	1,597/116	1,846/230	2,132/277	376/27
PERSONNEL REALIGNED (MIL/CIV)	2,354/309	1,947/261	1135/182	103/5
ECONOMIC IMPACT (BRAC95/CUM)	12.7%/12.7%	15.8%/15.8%	9.3%/9.3%	1.4%/1.4%
ENVIRONMENTAL	Asbestos/Siting	Siting	Asbestos/Siting	Siting

- (C) = DoD recommendation for closure
- (R) = DoD recommendation for realignment
- (\*) = Candidate for further consideration
- (\*\*) = March 7, 1995 Commission Add for realignment (Missile Field)

CRIT = # 216  
Tiers = # 217

OPTIONS \$  
# AF-20A

Right

DRAFT Left

LEAVING CHART 11 UP ON YOUR ~~LEFT~~ CHART 12 ON YOUR ~~RIGHT~~ SUMMARIZES THE MAJOR ISSUES GATHERED FROM STAFF ANALYSIS AND COMMUNITY INPUT. NOTE THAT THE NUCLEAR POSTURE REVIEW REQUIREMENT OF 500 OR 450 MINUTEMAN III MISSILES CAN BE SATISFIED NO MATTER WHICH ICBM FIELD IS CLOSED, BUT CLOSING MALMSTROM WOULD LEAD TO A FORCE OF 450 MINUTEMAN <sup>3</sup> III MISSILES WHICH DOES NOT SATISFY CINC/STRATCOM'S PREFERENCE FOR 500 MINUTEMAN <sup>3</sup> IIIS.

ALL MISSILE SITES ARE RELATIVELY EQUAL IN ALERT RATE AND MAINTENANCE COSTS. THE HIGHER DEPOT SUPPORT COSTS AT MALMSTROM AND F E WARREN CAN BE PARTIALLY EXPLAINED BY THE FACT THAT EACH OF THOSE BASES HAS 200 SILOS WHILE THE OTHER TWO HAVE 150.

THE LAST TWO ROWS ARE AIRFIELD RELATED. THE TANKER SATURATION COMMENT REFLECTS THE FACT THAT THERE ARE AN OVER ABUNDANCE OF TANKER AIRCRAFT IN THE NORTH WEST. THE DOD RECOMMENDATION RELOCATES THE 12 TANKERS AT MALMSTROM TO MACDILL AFB, FLORIDA TO PARTIALLY RELIEVE A TANKER SHORTFALL IN THE SOUTH EAST.

THE AIR FIELD ELEVATION RELATES TO THE PRESSURE ALTITUDE DIFFICULTIES AT MALMSTROM AFB WHICH WAS A FACTOR IN THE AIR FORCE RECOMMENDATION TO SHUT DOWN THAT AIRFIELD.

MR. CHAIRMAN, WE ARE PREPARED TO ANSWER ANY QUESTIONS YOU MIGHT HAVE IN THIS CATEGORY.

## MISSILE/LARGE AIRCRAFT BASES MAJOR ISSUES

MAJOR ISSUES	GRAND FORKS, ND	MINOT, ND	MALMSTROM, MT	FE WARREN, WY
Anti Ballistic missile Site	Yes	No	No	No
Force Structure	Consistent with Nuclear Posture Review 500 MM III 3500 Total TRIAD	Consistent with Nuclear Posture Review 500 MM III 3500 Total TRIAD	Consistent with Nuclear Posture Review 450 MM III 3500 Total TRIAD	Consistent with Nuclear Posture Review 500 MM III 3500 Total TRIAD
Survivability	Hardened Silos Compact Field	Hardened Silos Compact Field	Hardened Silos Expansive Field	Hardened Silos Compact Field
Maintainability	Single System Compact Field 99% Alert Rate	Single System Compact Field 99% Alert Rate	Two Systems Expansive Field 99% Alert Rate	Single System Compact Field 99% Alert Rate
Total on site depot support costs 1993-1995 (Water intrusion, wind anomalies, etc.) (\$ M)	8.1	7.0	11.4	10.4
Annual on site depot support costs per launch facility	\$18,101 per launch facility	\$15,670 per launch facility	\$19,162 per launch facility	\$23,028 per launch facility
Tanker saturation in Northwest	Yes	N/A	Yes	N/A
Airfield Elevation	911 Ft	1,660 Ft	3,526 Ft	N/A

#227 TANK SATURAS

**DRAFT**

CHART 13 AND THE MAP ON YOUR <sup>LEFT</sup> ~~RIGHT~~ REFLECT THE BASES IN THE AIR FORCE UNDERGRADUATE PILOT TRAINING CATEGORY. AS SHOWN, THE AIR FORCE RECOMMENDED REESE AFB FOR CLOSURE. ~~THE~~ OPTIONS GENERATED BY THE DOD UPT JOINT CROSS SERVICE WORKING GROUP INCLUDED REESE AND VANCE AIR FORCE BASE. ~~THE~~ THE AIR FORCE DETERMINED THERE WAS AN EXCESS OF ONE AIR FORCE BASE IN THIS CATEGORY, AND THE STAFF CONCURS.

WE WILL BE DISCUSSING THE THREE SHADED BASES. RANDOLPH AIR FORCE BASE IS THE LOCATION OF A MAJOR COMMAND HEADQUARTERS AND IS THE AIR FORCE MANAGED SITE OF THE RECENTLY ESTABLISHED JOINT SERVICE NAVIGATOR TRAINING PROGRAM. SHEPPARD AIR FORCE BASE, SITE OF THE NATO PILOT TRAINING SITE AND A MAJOR AIR FORCE TECHNICAL TRAINING CENTER, WAS EXCLUDED BY THE AIR FORCE AS A CRITICAL TECHNICAL TRAINING BASE.

CARNETT #AF 101

**AIR FORCE**  
**CATEGORY: UNDERGRADUATE PILOT TRAINING (UPT) BASES**

TIER	INSTALLATION	
<i>I</i>	<i>Columbus AFB, MS.</i>	<i>(*)</i>
<i>I</i>	<i>Laughlin AFB, TX</i>	<i>(*)</i>
I	Randolph AFB, TX	
III	Reese AFB, TX	(X) (C)
Excl	Sheppard AFB, TX	
<i>I</i>	<i>Vance AFB, OK</i>	<i>(X) (*)</i>

(C) = DoD recommendation for closure  
(X) = Joint Cross-Service Group option for closure  
(\*) = *Candidate for further consideration*

**DRAFT**

CHART 15 SHOWS THE CRITERIA RELATED ELEMENTS FOR REESE AFB AS WELL AS THE THREE BASES UP FOR DISCUSSION TODAY.

I CALL YOUR ATTENTION TO DATA ROW THREE, WHERE WE HAVE SHOWN THE AVERAGE FUNCTIONAL VALUES AS DETERMINED BY THE SECRETARY OF DEFENSE UPT JOINT CROSS SERVICE WORKING GROUP. THESE VALUES WERE AVERAGED FROM THE TEN FUNCTIONAL AREAS ASSESSED BY THE GROUP. THE IMPORTANCE OF THESE NUMBERS IS THAT THE AIR FORCE AVERAGED THE SCORES AS SHOWN IN ROW THREE, AND STATISTICALLY USED THESE AVERAGES IN DETERMINING THE COLOR CODED RATING OF CRITERIA ONE - THE FIRST MILITARY VALUE CRITERIA. THE AIR FORCE ANALYSIS INCLUDED USING COLOR INDICATORS WHERE GREEN LEADS TO RETAINING THE BASE AND RED SIDES TOWARD CLOSURE. ASSESSMENT OF ALL CRITERIA WAS THE BASIS OF THE AIR FORCE BASE CLOSURE EXECUTIVE GROUP ~~RANKING~~ <sup>TIERING</sup> AND ~~TIERING~~ <sup>RANKING</sup>, AS SHOWN IN THE FIRST TWO DATA ROWS.

*CAANK*

THE REESE COMMUNITY HAS POINTED OUT FLAWS IN UPT JOINT CROSS-SERVICE GROUP ANALYSIS AND HAVE QUESTIONED THE APPLICATION OF FLAWED DATA BY BOTH THE JOINT CROSS SERVICE WORKING GROUP AND THE AIR FORCE.

AS A RESULT OF THESE CONCERNS, AS WELL AS BEING AN INTEGRAL PART OF STAFF ANALYSIS, WE HAVE RUN SOME OTHER EXCURSIONS AS SHOWN IN THE TWO STAFF ANALYSIS ROWS

.....**KEEP THIS CHART UP**

5/9/95 10:03 PM

*community # 103*

## BASE ANALYSIS

### CATEGORY: UNDERGRADUATE PILOT TRAINING (UPT)

**DOD RECOMMENDATION:** Close Reese, Inactivate 64th Flying Training Wing, Relocate/Retire other assigned aircraft.

**FOR CONSIDERATION:** Study Columbus, Laughlin and Vance **FOR CLOSURE.**

CRITERIA	REESE, TX (X) (C) \$245K Closure	COLUMBUS, MS (* ) \$238K Closure	LAUGHLIN, TX (* ) \$245K Closure	VANCE, OK (X) (*) \$232K Closure
AIR FORCE TIERING	III 14/39	I 36/39	I 32/39	I 32/39
BCEG RANK	5/5	2/5	3/5	3/5
FUNC VALUE: Air Force/JCSG	6.22 (Red)	6.74 (Green)	6.50 (Yellow +)	6.67 (Green)
FUNC VALUE: Staff Analysis I	6.4	7.2	7.8	6.7
FUNC VALUE: Staff Analysis II	6.3	6.4	7.4	6.3
FORCE STRUCTURE	21 T-1A 48 T-37B 51 T-38	45 T-37B 57 T-38/21 AT-38	21 T-1A 48 T-37B 51 T-38	46 T-37B 69 T-38
ONE-TIME COSTS (\$ M)	15.8	18.2	25.9	14.7
ANNUAL SAVINGS (\$ M)	19.7	25.3	21.6	19.5
RETURN ON INVESTMENT	1 Year	1 Year	2 Years	1 Year
BASE OPERATING BUDGET (\$ M)	21.0	26.3	23.7	26.3
PERSONNEL ELIMINATED(MIL/CIV)	209/0	315/0	282/101	202/0
PERSONNEL REALIGNED(MIL/CIV)	691/245	750/252	749/644	645/208
ECONOMIC IMPACT (BRAC95/CUM)	1.2%/1.2%	6.3%/6.3%	18.8%/18.8%	11.0%/11.0%
ENVIRONMENTAL	Siting	Asbestos	Asbestos	Asbestos

(C) = DoD recommendation for closure

(R) = DoD recommendation for realignment

(X) = Joint Cross-Service Group option for closure

(\*) = Candidate for further consideration

Criteria - #20  
Tiers - #221

- Analysis # 1 = 209  
- Analysis # 2 = 210

DRAFT <sup>Left</sup>

KEEPING CHART 15 UP ON YOUR ~~LEFT~~ <sup>Right</sup>, CHART 16 ON YOUR ~~RIGHT~~ <sup>16</sup> SHOWS THE METHODOLOGY OF OUR STAFF ANALYSIS. AS SHOWN ON ~~THE~~ <sup>1</sup> CHART, THE FIRST OBJECTIVE WAS TO DETERMINE THE VALIDITY OF THE AIR FORCE ANALYSIS. OUR RESULTS DIFFERED FROM THE AIR FORCE. THE STAFF ANALYSIS CONSIDERS ONLY THOSE FUNCTIONAL AREAS AND MEASURES OF MERIT SPECIFIC TO AIR FORCE UPT REQUIREMENTS.

IN THE SECOND ANALYSIS, THE OBJECTIVE WAS TO ASSESS THE EFFECT OF FLAWED DATA AS IDENTIFIED BY THE COMMUNITY. <sup>ON CHART 15,</sup> YOU WILL NOTE THE RESULTS OF THIS SECOND ANALYSIS, DEMONSTRATE HOW CLOSE THE BASES ARE IN MILITARY VALUE. IN ALL THREE CASES, THE POTENTIAL RANGE WAS BETWEEN ZERO AND TEN. THE HIGHER NUMBER REPRESENTS THE BEST FUNCTIONAL VALUE FOR THAT ANALYSIS.

MR. CHAIRMAN, COMMISSIONERS, WE WILL TRY TO ANSWER ANY QUESTIONS YOU MIGHT HAVE IN THIS CATEGORY.

**STAFF METHODOLOGY**  
**CATEGORY: UNDERGRADUATE PILOT TRAINING (UPT)**

**STAFF ANALYSIS - I**

OBJECTIVE: Test the validity of Air Force Analysis

METHODOLOGY:

- Utilize UPT Joint Cross-Service Group computer model and corrected data
- Consider UPT Measures of Merit relevant to Air Force UPT
- Delete those Measures of Merit considered in CRITERIA II through VIII
- Modify Weighting Factors in accordance with Staff judgment of Air Force priorities
- Determine a Functional Value score for each Air Force UPT Base
  - Apply result to CRITERIA I, "MISSION REQUIREMENTS: FLYING TRAINING"

UPT JCSG Terms  
# 104

**STAFF ANALYSIS - II**

OBJECTIVE: Assess impact of making data corrections

METHODOLOGY:

- Use Analysis I as starting point
- Change data to reflect corrections to UPT-JCSG and Air Force data calls

**DRAFT**

CHART 17 AND THE MAP ON YOUR <sup>left</sup>~~RIGHT~~ COVER THE AIR FORCE RESERVE CATEGORY, WHERE THE AIR FORCE HAS RECOMMENDED CLOSURE OF ONE FIGHTER AIR RESERVE BASE, BERGSTROM, AND ONE TACTICAL AIRLIFT AIR RESERVE BASE, LOCATED AT THE GREATER PITTSBURGH INTERNATIONAL AIRPORT.

THE AIR FORCE DETERMINED THERE WAS AN EXCESS OF TWO FIGHTER AND TWO TACTICAL AIRLIFT AIR RESERVE BASES. THE STAFF CONCURS. THE AIR FORCE DID NOT ESTABLISH TIERS FOR THE AIR RESERVE CATEGORY BUT RATHER MADE THEIR RECOMMENDATIONS PRIMARILY BASED ON COST AND GEOGRAPHICAL CONSIDERATIONS.

THE SHADED BASES HAVE BEEN PROPOSED FOR DISCUSSION TODAY..

I WILL COVER THE RESERVE FIGHTER AND AIRLIFT BASES SEPARATELY.

**AIR FORCE**  
**CATEGORY: AIR FORCE RESERVE BASES**

<b>Bergstrom ARB, TX</b>	<b>(C)</b>	March ARB, CA	
<i>Carswell ARB, TX</i>	<i>(*)</i>	<i>Minneapolis-St. Paul IAP ARS, MN</i>	<i>(*)</i>
Dobbins ARB, GA		NAS Willow Grove ARS, PA	
<i>Gen Mitchell IAP ARS, WI</i>	<i>(*)</i>	<i>Niagara Falls IAP ARS, NY</i>	<i>(*)</i>
<b>Greater Pittsburgh IAP ARS, PA</b>	<b>(C)</b>	<i>O'Hare IAP ARS, IL</i>	<i>(*)</i>
Grissom ARB, IN		Westover ARB, MA	
<i>Homestead ARS, FL</i>	<i>(R)(*)</i>	<i>Youngstown-Warren MPT ARS, OH</i>	<i>(*)</i>

- (R) = DoD recommendation for realignment  
(C) = DoD recommendation for closure  
(\*) = *Candidate for further consideration*

**DRAFT**

REFERRING TO CHART 19, I WILL DISCUSS THE AIR RESERVE, F-16, FIGHTER BASES FIRST. AS YOU RECALL,  
THE AIR FORCE RECOMMENDED CLOSURE OF BERGSTROM AIR RESERVE BASE.

## AIR FORCE RESERVE: F-16 BASES

TIER	INSTALLATION	
N/A	<b>Bergstrom ARB, TX</b>	(C)
N/A	<i>Carswell ARB, TX</i>	(*)
N/A	<i>Homestead ARB, FL</i>	(R)(*)

(C) = DoD recommendation for closure

(R) = DoD recommendation for realignment

(\*) = *Candidate for further consideration*

**Bergstrom ARS**, Tex. 78719-2557; 7 mi. SE of Austin. Phone (512) 389-0444; DSN 685-1110. AFRES base. 924th Fighter Wing, F-16 operations; Hq. 10th Air Force (AFRES); Ground Combat Readiness Center (AFRES). Area 450 acres. Runway 12,250 ft. Altitude 541 ft. Reservists 1,200, civilians 350. Activated as a base Sept. 22, 1942. Named for Capt. John A. E. Bergstrom, first Austin serviceman killed in WW II, who died Dec. 8, 1941, at Clark Field, the Philippines. Deactivated as an active-duty base Sept. 30, 1993. City of Austin converting base to new airport, due to open in 1998. Housing: 6 Chief suites, 6 DV suites, 94 rooms. No BX or commissary facilities.

**Carswell Field**, Tex. 76127-6200; 7 mi. WNW of downtown Fort Worth. Phone (817) 782-5000; DSN 739-1110. AFRES base. 301st Fighter Wing (AFRES), F-16 operations. Base activated Aug. 1942; named Jan. 30, 1948, for Maj. Horace S. Carswell, Jr., native of Fort Worth, WW II B-24 pilot and posthumous Medal of Honor recipient. Area approximately 322 acres. Runway 12,000 ft. Altitude 650 ft. Military 8, civilians 575, Reservists 1,400. Payroll \$24.7 million. Carswell will pass to Navy control in late FY 1995 and become NAS/JRB Fort Worth.

**Homestead ARB**, Fla. 33039; 5 mi. NNE of Homestead. Phone (305) 224-7303; DSN 791-7303. AFRES base. 482d Fighter Wing (AFRES); 301st Rescue Sqdn. (AFRES); Det. 1, 125th Fighter Gp. (Fla. ANG, NORAD). Limited billeting. No medical facilities. Area approximately 1,000 acres. Runway 11,200 ft. Altitude 11 ft. Base was devastated by Hurricane Andrew in August 1992 and is operational but still under reconstruction.

**DRAFT**

CHART 20 IS THE FIGHTER AIR RESERVE BASE ANALYSIS CHART. AS I STATED EARLIER, THE AIR FORCE CLOSURE RECOMMENDATIONS IN THE RESERVE CATEGORY DID NOT CONSIDER RELATIVE TIERING. INSTEAD, THE AIR FORCE KEYED ON FACTORS SUCH AS RECRUITING DEMOGRAPHICS AND COST EFFECTIVENESS.

*point*

ONE ~~POINT~~ I NEED TO MAKE HERE ~~IS~~ IS THE BERGSTROM COMMUNITY CONCERN THAT THE AIR FORCE DECISION WAS BASED ON AN INFLATED ANNUAL BASE OPERATING BUDGET AS COMPARED TO THE FORECAST OPERATING BUDGET SHOWN. WE ARE STILL REVIEWING THAT CONCERN. IN ADDITION, THE BERGSTROM COMMUNITY STATES THAT THE AIR FORCE ~~IS~~ HAS A COMMITMENT TO RETAIN RESERVE OPERATIONS AT THE BASE, NOW DESIGNATED AS THE SITE OF THE NEW AUSTIN TEXAS AIRPORT DUE TO COMMENTS IN THE TWO PREVIOUS

MR. CHAIRMAN, DO YOU HAVE ANY QUESTIONS?.

Report Quotes #AF105  
Community Concern #AF106  
Issues #AF107

## BASE ANALYSIS

### CATEGORY: AIR FORCE RESERVE (F-16)

**DOD RECOMMENDATION:** Close Bergstrom, relocate 10th Air Force to Carswell ARB (NAS Fort Worth)  
**FOR CONSIDERATION:** Study Homestead and Carswell **FOR CLOSURE.**

CRITERIA	BERGSTROM, TX (C)	HOMESTEAD, FL (R) (*)	CARSWELL, TX (*)
AIR FORCE TIERING	N/A	N/A	N/A
BCEG RANK	N/A	N/A	N/A
FORCE STRUCTURE	15 F-16C/D	15 F-16A/B	18 F-16C/D
ONE-TIME COSTS (\$ M)	13.0	12.6	7.9 (18.5)
ANNUAL SAVINGS (\$ M)	18.4	17.3	13.2 (19.2)
RETURN ON INVESTMENT	Immediate	1 Year	1 Year (2)
BASE OPERATING BUDGET (\$ M)	9.2	9.1	5.4
PERSONNEL ELIMINATED (MIL/CIV)	0/263	0/247	0/219 <del>27</del>
PERSONNEL REALIGNED (MIL/CIV)	0/94	0/127	0/0
ECONOMIC IMPACT (BRAC95/CUM)	0.1%/0.3%	0.1%/0.1%	0.1%/0.1%
ENVIRONMENTAL	None	Asbestos/Flood Plain	None

(C) = DoD recommendation for closure

(R) = DoD recommendation for realignment

(\*) = Candidate for further consideration

*Focused moves = #212*  
*vs Clos*

**DRAFT**

ON CHART 21, IN THE C-130 TACTICAL AIRLIFT BASES, GREATER PITTSBURGH AIR RESERVE STATION AT THE INTERNATIONAL AIRPORT WAS RECOMMENDED FOR CLOSURE, WHILE THE SHADED BASES ARE TO BE DISCUSSED TODAY. AGAIN, IN THIS AREA THE AIR FORCE DID NOT USE TIERING BUT MADE THEIR RECOMMENDATIONS BASED ON COST EFFECTIVE RELOCATIONS.

**General Mitchell International Airport/ARS,** Wis. 53207-6299; 3 mi. S of Milwaukee. AFRES base. Runway 9,690 ft. Altitude 723 ft. ANG and AFRES have separate telephone lines and facilities. ANG (414) 747-4410; DSN 580-8410. 128th Air Refueling Gp. (ANG). ANG area 111 acres. ANG military 668, full-time personnel 276. Payroll \$17.4 million. AFRES phone (414) 482-5000; DSN 950-5000. 440th Airlift Wing (AFRES). AFRES area 103 acres. AFRES full-time personnel and civilians 350. Reservists 1,183. Payroll \$18.9 million.

**Minneapolis-St. Paul International Airport/ARS,** Minn. 55450-2000; in Minneapolis, near confluence of the Mississippi and Minnesota rivers. AFRES station. Runway length NA. Altitude 840 ft. ANG and AFRES have separate phones and facilities. ANG phone (612) 725-5631; DSN 825-5631. 133d Airlift Wing (ANG) flies C-130s. ANG area 128 acres. Military 1,089, full-time personnel 273. Payroll \$19.9 million. AFRES phone (612) 725-5011; DSN 825-5110. 934th Airlift Wing (AFRES) flies C-130s. AFRES area 300 acres. Full-time personnel 141, civilians 199, Reservists 1,100. Payroll \$24.3 million. Units include 210th Engineering Installation Sqdn. (ANG); 237th Air Traffic Control Flt. (ANG); Naval Reserve Readiness Command, Region 16; USAF Civil Air Patrol, NCLR and MNLO; Rothe Development Inc. (AFRES). Lodging and BX available.

## AIR FORCE RESERVE: C-130 BASES

TIER	INSTALLATION
N/A	Dobbins ARB, GA
	<i>Gen. Mitchell IAP ARS, WI</i> (*)
	<b>Greater Pittsburgh IAP ARS, PA</b> (C)
	<i>Minneapolis-St. Paul, MN</i> (*)
	NAS Willow Grove ARS, PA
	<i>Niagara Falls IAP ARS, NY</i> (*)
	<i>O'Hare IAP ARS, IL</i> (*)
	<i>Youngstown-Warren MPT, OH</i> (*)

**Pittsburgh International Airport/ARS,** 15108-4403; 15 mi. NW of Pittsburgh. AFRES

Runway length NA. Altitude 1,203 ft. ANG and AFRES have separate phones and facilities. 171st Air Refueling Wing (ANG); phone (412) 269-8359; DSN 277-8359. ANG area 179 acres. ANG military 1,122, full-time personnel 457. Payroll \$29.3 million. AFRES phone (412) 474-8000; DSN 277-8000. 911th Airlift Wing (host unit). AFRES area 176 acres. AFRES military 26, full-time personnel 142, civilians 222, Reservists 1,166. Payroll \$23.3 million. Base activated 1943. Housing: 24 VOQ, 230 enlisted qtrs. No on-base housing. Limited BX.

- (C) = DoD recommendation for closure  
 (R) = DoD recommendation for realignment  
 (\*) = *Commissioner candidate for further consideration*

**O'Hare International Airport/ARS,** Ill. 60666-5023; 22 mi. NW of Chicago's Loop. Phone (312) 694-6917; DSN 930-6917. AFRES base. 928th Airlift Wing (AFRES); 126th Air Refueling Wing (ANG); Defense Contract Management Area Operations, Fort Dearborn (US Army Reserve). Base activated in Apr. 1946. Named for Lt. Cmdr. Edward H. "Butch" O'Hare. USMC Medal of Honor recipient, killed Nov. 26, 1943 during battle for Gilbert Islands. Area 349 acres (ANG 36 acres). Runway length NA. Altitude 643 ft. Reservists 1,550, full-time personnel and civilians (all units) 419, Illinois ANG full-time personnel 325. Total payroll for AFRES \$74.5 million. (ANG payroll \$20.6 million.)

**Niagara Falls International Airport/ARS,** N. Y. 14304-5000; 6 mi. E of Niagara Falls. Phone (716) 236-2000; DSN 236-2000. AFRES base. 914th Airlift Wing (AFRES); 107th Fighter Gp. (ANG). Base activated in Jan. 1952. Area 979 acres (ANG 104 acres). Runway length NA. Altitude 590 ft. AFRES: Reservists 1,200, civilians 367. ANG: military 572, full-time personnel 339. Total payroll \$57 million. (ANG payroll \$19.7 million.)

**Youngstown/Warren Regional Airport/ARS,** Ohio 44473-0910; 16 mi. N of Youngstown. Phone (216) 392-1000; DSN 346-1000. AFRES base. 910th Airlift Wing (AFRES). Host to 757th Airlift Sqdn.; 773d Airlift Sqdn.; 76th Aerial Port Sqdn.; Navy Reserve; Marine Corps Reserve; Army Corps of Engineers; FAA. Base activated in 1953. Area 403 acres. Three runways, primary length 7,492 ft. Altitude 1,196 ft. Total reserve 1,566, active-duty 27, civilian 400. Payroll \$24.6 million.

DRAFT

(2 CHARTS)

THE BASE ANALYSIS CHARTS FOR THE C-130 RESERVE BASES, NUMBERS 22 AND 23, ARE UP ON YOUR ~~LEFT~~ AND ~~RIGHT~~. I POINT OUT THAT THE AIR FORCE USED ERRONEOUS BASE OPERATING COSTS FOR THREE BASES. THIS ERROR AFFECTED THE AIR FORCE BASE CLOSURE EXECUTIVE GROUP'S PERSPECTIVE OF ANNUAL BASE OPERATING BUDGET AS WELL AS THE NET PRESENT VALUE TO BE ACHIEVED THROUGH CLOSURE.

REFERRING TO THE BASE OPERATING BUDGET AND NET PRESENT VALUE ROWS, AS SHADED FOR THE EFFECTED BASES, THE NUMBERS IN PARENTHESES REPRESENT THE FLAWED INFORMATION USED BY THE AIR FORCE BCEG, WHILE THE OTHER NUMBERS REFLECT THE REVISED DATA JUST RECEIVED FROM THE AIR FORCE, BASED ON COMMUNITY CONCERNS AND STAFF REQUESTS

THIS ERRONEOUS DATA, WAS ESPECIALLY SIGNIFICANT AS THE AIR FORCE CLOSURE RECOMMENDATION WAS BASED ON COST EFFECTIVENESS. IN THE ORIGINAL AIR FORCE COBRA FIGURE, CHICAGO STOOD OUT TO THE BCEG AS THE BEST CLOSURE VALUE, WHILE PITTSBURGH WOULD HAVE BEEN NEXT. INDICATIONS ARE THAT PITTSBURGH WAS SELECTED DUE TO THE FACT THAT THE 1993 COMMISSION RECOMMENDED CHICAGO AS A COMMUNITY FUNDED CLOSURE.

IN THE AIR FORCE REVISED COBRA, PITTSBURGH IS THE LEAST COST EFFECTIVE OPTION FOR THE RESERVE TACTICAL AIRLIFT BASES. NOTE THAT PITTSBURGH HAS THE LOWEST ANNUAL SAVINGS AND NET PRESENT VALUE.

MR. CHAIRMAN, COMMISSIONERS, THIS IS THE LAST AIR FORCE CHART. DO YOU HAVE ANY QUESTIONS?

## BASE ANALYSIS

### CATEGORY: AIR FORCE RESERVE (C-130)

**DOD RECOMMENDATION:** Close Greater Pittsburgh Air Reserve Station

**FOR CONSIDERATION:** Study Chicago O'Hare, Gen Mitchell, Minneapolis-St Paul, Niagara Falls, and Youngstown-Warren **FOR CLOSURE.**

CRITERIA	PITTSBURGH, PA (C)	GEN MITCHELL, WI (* )	MINNEAPOLIS-ST. PAUL, MN (* )
AIR FORCE TIERING	N/A	N/A	N/A
BCEG RANK	N/A	N/A	N/A
FORCE STRUCTURE	8 C-130	8 C-130	8 C-130
ONE-TIME COSTS (\$ M)	12.7	13.0	13.9
ANNUAL SAVINGS (\$ M)	7.5	9.8	9.6
RETURN ON INVESTMENT	2 Years	1 Year	2 Years
BASE OPERATING BUDGET (\$ M)	2.4 (5.7)	3.2	5.7
NET PRESENT VALUE (\$M)	-92.0 (-138.0)	-125.0	-119.0
PERSONNEL ELIMINATED (MIL/CIV)	0/110	0/143	0/84
PERSONNEL REALIGNED (MIL/CIV)	0/237	0/237	0/237
ECONOMIC IMPACT (BRAC95/CUM)	0.0%/0.0%	0.1%/0.1%	0.0%/0.0%
ENVIRONMENTAL	Non-attainment - Ozone	Non-attainment - Ozone	Non-attainment - CO

(C) = DoD recommendation for closure

(R) = DoD recommendation for realignment

(\* ) = Commissioner candidate for further consideration

ISSUES  
# AF 108, 109

**BASE ANALYSIS**  
**CATEGORY: AIR FORCE RESERVE (C-130)**

**DOD RECOMMENDATION:** Close Greater Pittsburgh Air Reserve Station

**FOR CONSIDERATION:** Study Chicago O'Hare, Gen Mitchell, Minneapolis-St Paul, Niagara Falls, and Youngstown-Warren **FOR CLOSURE.**

CRITERIA	NIAGARA FALLS, NY (* )	O'HARE, IL (* )	YOUNGSTOWN-WARREN, OH (* )
AIR FORCE TIERING	N/A	N/A	N/A
BCEG RANK	N/A	N/A	N/A
FORCE STRUCTURE	8 C-130	8 C-130	8 C-130
ONE-TIME COSTS (\$ M)	14.0	13.9	13.0
ANNUAL SAVINGS (\$ M)	10.4	10.2	8.6
RETURN ON INVESTMENT	1 Year	1 Year	2 Years
BASE OPERATING BUDGET (\$ M)	7.2 (5.7)	4.0 (5.7)	1.9
NET PRESENT VALUE (\$ M)	-135 (-115.0)	-128.7(-152.0)	-107.0
PERSONNEL ELIMINATED (MIL/CIV)	0/81	0/142	0/143
PERSONNEL REALIGNED (MIL/CIV)	0/237	0/237	0/237
ECONOMIC IMPACT (BRAC95/CUM)	0.6%/0.6%	0.0%/0.0%	0.5%/0.5%
ENVIRONMENTAL	Non-attainment - Ozone	Non-attainment - Ozone	Non-attainment - Ozone

(C) = DoD recommendation for closure

(R) = DoD recommendation for realignment

(\* ) = Candidate for further consideration

## Large Aircraft Capacity Analysis

- **Air Force calculated it had an excess of 4 active duty large aircraft bases, but after taking into consideration force structure requirements it could close 2-3 large aircraft bases.**
- **Air Force recommended closing the flying operations at Malmstrom AFB, but relocated the aircraft to MacDill AFB thus not reducing any excess capacity.**
  - **Air Force did not consider MacDill AFB for capacity analysis purposes.**
  - **Air Force capacity analysis for large aircraft included the airfields associated with air logistic centers/depots.**
- **Commission staff calculated the Air Force has excess capacity (ramp space) for 8 large aircraft bases.**
  - **Commission staff included MacDill AFB for capacity analysis purposes.**
- **Minot AFB, Ellsworth AFB, Malmstrom AFB, and McClellan AFB are operating at less than 50% capacity (flying operations only).**
- **When taking force structure requirements and START Treaty implications into consideration, Commission staff calculated Air Force has an excess of 2.9 large aircraft bases.**

## Capacity Analysis

### Small Aircraft

- **Air Force** calculated it had an excess of 4 active duty small aircraft bases, but after taking into consideration force structure requirements it concluded it could close 1-2 small aircraft bases.
- **Air Force** did not recommend any small aircraft bases for closure.
  - [IAW Nov 29, 1995 Base Closure Executive Group minutes, “SECAF determined that operational considerations (aircraft type, block and engine integrity; base loading; AF units sizing imperatives) would not allow the beddowns from the closure of any small aircraft bases.”]
- **Commission staff** calculated the Air Force could bring back all of its overseas force structure to the United States and still close a small aircraft base.
- When taking force structure requirements into consideration, **Commission staff** calculated Air Force has an excess of 2.3 small aircraft bases.

## Capacity Analysis

### Large Aircraft

- **Air Force calculated 4 active duty large aircraft bases**
- **After considering force structure requirements, concluded excess of 2-3 large aircraft bases.**
- **Air Force recommended closing the flying operations at Malmstrom AFB**
- **Reopened MacDill AFB -- no reduction in excess capacity.**
- **Air Force did not consider MacDill AFB for capacity analysis purposes.**
- **Air Force capacity analysis for large aircraft included the airfields associated with air logistic centers/depots.**
  
- **Commission staff calculated the Air Force has excess capacity (ramp space) for 8 large aircraft bases.**
  - **Commission staff included MacDill AFB**
- **Minot AFB, Ellsworth AFB, Malmstrom AFB, and McClellan AFB operating at less than 50% capacity (flying operations only).**
- **When taking force structure requirements and START Treaty implications into consideration, Commission staff calculated excess of 2.9 large aircraft bases.**

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## **AIR FORCE COBRA SUMMARIES**

- Air Force revised COBRA run summary
  - Original **one-time-to-close costs** of \$1,046.8 million have **increased by \$197.5 million** to \$1,244.3 million.
  - Original **annual savings** of \$363.6 million have **decreased by \$26.5 million** to \$337.1 million.
  - Original **total savings (Net Present Value)** of \$3,660.1 million have **decreased by \$798.6 million** to \$2,861.5 million.

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## DRAFT BRAC 95 Air Force COBRA Scorecard

Installation	State	DoD Comp	Action	Original 1-Time Cost (\$M)	Original Annual Savings (\$M)	Original ROI (# Yrs)	Original Total Savings (NPV)	Revised 1-Time Cost (\$M)	Revised Annual Savings (\$M)	Revised ROI (# Yrs)	Revised Total Savings (NPV)	Last Date Revised*	Reason for Revision
AF ALCOs (Hill, Kelly, McClellan, Robins, Tinker)	OK	AF	Realign	183.1	89.3	2	995.2	127.0	90.6	2	1,055.3	17-Apr	AF scrubbed w/d transfer
Bergstrom Air Reserve Base	TX	AF	Close	13.3	20.9	0	291.4	13.3	20.9	0	291.4		
Brooks Air Force Base	TX	AF	Close	185.5	27.4	7	142.1	185.5	27.4	7	142.1		
Edwin Air Force Base	FL	AF	Realign	2.2	2.6	1	31.4	2.2	2.7	1	32.8	22-Apr	Pers. to Nellis vice Edwards
AFEWS, Fort Worth	TX	AF	Disestab.	5.8	0.8	7	5.8	5.8	0.8	7	5.8		
Grand Forks Air Force Base	ND	AF	Realign	11.9	35.2	0	447.0	11.9	35.2	0	447.0		
Greater Pittsburgh IAP Air Reserve Station	PA	AF	Close	22.3	13.1	2	161.1	13.3	12.3	0	179.2	5/2/95	Inaccurate input data
Griffiss Air Force Base, (485th EIG)	NY	AF	Redirect	0.5	2.9	0	53.6	0.5	2.9	0	53.6		
Griffiss AFB, (Airfield Support for 10th ID)	NY	AF	Redirect	51.3	12.7	5	110.8	51.3	12.7	5	110.8		
Hill AFB (Utah Test and Training Range)	UT	AF	Realign	3.2	12.4	0	179.9	3.2	12.4	0	179.9		
Homestead Air Force Base, (301st Rescue)	FL	AF	Redirect	4.6	1.5	4	15.4	4.6	1.5	4	15.4		
Homestead Air Force Base, (726 Air Cntr Sqdns)	FL	AF	Redirect	7.4	0.2	0	4.6	7.4	0.2	0	4.6		
Kirtland Air Force Base	NM	AF	Realign	277.5	62.0	3	464.5	536.1	32.9	19	-81.0	3-May	Site survey. Costs for SOW.
Lowry Air Force Base	CO	AF	Redirect	1.7	3.0	1	39.0	1.7	3.0	1	39.0		
MacDill Air Force Base	FL	AF	Redirect	0.0	0.0	0	0.0	0.0	0.0	0	0.0		
Malmstrom Air Force Base	MT	AF	Realign	17.4	5.1	4	54.3	17.4	5.1	4	54.3		
Moffett Federal Airfield Air Guard Station	CA	AF	Close	15.2	4.8	4	50.1	15.1	4.5	4	46.9	22-Apr	Chgd pers. elim. vs. realign
North Highlands Air Guard Station	CA	AF	Close	1.3	0.2	8	1.5	1.3	0.2	8	1.5		
Onizuka Air Station	CA	AF	Realign	124.2	30.3	8	181.6	124.2	30.3	8	181.6		
Ontario IAP Air Guard Station	CA	AF	Close	0.8	0.1	8	0.9	0.8	0.1	8	0.9		
REDCAP, Buffalo	NY	AF	Disestab.	1.7	0.9	1	11.0	1.7	0.9	1	11.0		
Reese Air Force Base	TX	AF	Close	37.3	21.5	2	256.8	39.4	23.8	2	285.7	6-Apr	Chngd Civ. & Mil. realigned
Rome Laboratory, Rome	NY	AF	Close	52.8	11.5	4	98.4	52.8	11.5	4	98.4		
Roslyn Air Guard Station	NY	AF	Close	2.4	0.7	4	7.6	2.4	0.7	4	7.6		
Springfield-Beckley MAP, Air Guard Station	OH	AF	Close	23.4	4.2	6	35.1	23.4	4.2	6	35.1		
Williams Air Force Base (redirect)	AZ	AF	RD-Recei	0.0	0.3	0	21.0	0.0	0.3	0	21.0		
<b>TOTAL</b>				<b>1,046.8</b>	<b>363.6</b>		<b>3,660.1</b>	<b>1,244.3</b>	<b>337.1</b>		<b>2,861.5</b>		
<b>Changed Installations</b>				<b>Original 1-Time Cost (\$M)</b>	<b>Revised 1-Time Cost (\$M)</b>	<b>Delta (\$M)</b>	<b>Original Annual Savings (\$M)</b>	<b>Revised Annual Savings (\$M)</b>	<b>Delta (\$M)</b>	<b>Original Total Savings (NPV)</b>	<b>Revised Total Savings (NPV)</b>	<b>Delta (\$M)</b>	
AF ALCOs (Hill, Kelly, McClellan, Robins, Tinker)	OK	AF	Realign	183.1	127.0	-56.1	89.3	90.6	1.3	995.2	1,055.3	60.1	AF scrubbed w/d transfer
Edwin Air Force Base	FL	AF	Realign	2.2	2.2	0.0	2.6	2.7	0.1	31.4	32.8	1.4	Pers. to Nellis vice Edwards
Greater Pittsburgh IAP Air Reserve Station	PA	AF	Close	22.3	13.3	-9.0	13.1	12.3	-0.8	161.1	179.2	340.3	Inaccurate input data
Kirtland Air Force Base	NM	AF	Realign	277.5	536.1	258.6	62.0	32.9	-29.1	464.5	-81.0	-545.5	Site survey. Costs for SOW.
Moffett Federal Airfield Air Guard Station	CA	AF	Close	15.2	15.1	-0.1	4.8	4.5	-0.3	50.1	46.9	-3.2	Chgd pers. elim. vs. realign
Reese Air Force Base	TX	AF	Close	37.3	39.4	2.1	21.5	23.8	2.3	256.8	285.7	28.9	Chngd Civ. & Mil. realigned
<b>TOTAL</b>						<b>197.5</b>			<b>-26.5</b>			<b>-798.6</b>	

## DRAFT BRAC 95 Air Force COBRA Scorecard

Installation	Cmnity 1-Time Cost (\$M)	Cmnity Annual Savings (\$M)	Cmnity ROI (# Yrs)	Cmnity Total Savings (NPV)	Last Date Revised*	Reason for Revision
AFALC Hill, Kelly, McClellan, Robins, Tinker	183.1	89.3	2	995.2		
Bergstrom Air Reserve Base	13.3	20.9	0	291.4		
Brooks Air Force Base	11.1	21.7	0	301.5	8 Mar	Roberson COBRA, shutdown family housing
Edin Air Force Base	2.2	2.6	1	31.4		
AFEWS, Fort Worth	5.8	0.8	7	5.8		
Grand Forks Air Force Base	11.9	35.2	0	447.0		
Greater Pittsburgh IAP Air Reserve Station	22.3	13.1	2	161.1		
Griffiss Air Force Base, (485th EIG)	0.5	2.9	0	53.6		
Griffiss AFB, (Airfield Support for 10th ID)	51.3	12.7	5	110.8		
Hill AFB (Utah Test and Training Range)	3.2	12.4	0	179.9		
Homestead Air Force Base, (301st Rescue)	4.6	1.5	4	15.4		
Homestead Air Force Base, (726 Air Cntr Sqdns)	7.4	0.2	0	4.6		
Kirtland Air Force Base	277.5	62.0	3	464.5		
Lowry Air Force Base	1.7	3.0	1	39.0		
MacDill Air Force Base	0.0	0.0	0	0.0		
Malmstrom Air Force Base	17.4	5.1	4	54.3		
Moffett Federal Airfield Air Guard Station	15.2	4.8	4	50.1		
North Highlands Air Guard Station	1.3	0.2	8	1.5		
Onizuka Air Station	124.2	30.3	8	181.6		
Ontario IAP Air Guard Station	0.8	0.1	8	0.9		
REDCAP, Buffalo	1.7	0.9	1	11.0		
Reese Air Force Base	37.3	21.5	2	256.8		
Rome Laboratory, Rome	52.8	11.5	4	98.4		
Roslyn Air Guard Station	2.4	0.7	4	7.6		
Springfield-Beckley MAP, Air Guard Station	23.4	4.2	6	35.1		
Williams Air Force Base (redirect)	0.0	0.3	0	21.0		
<b>TOTAL</b>	<b>872.4</b>	<b>357.9</b>		<b>3,819.5</b>		
<b>Changed Installations</b>						
AFALC Hill, Kelly, McClellan, Robins, Tinker						
Edin Air Force Base						
Greater Pittsburgh IAP Air Reserve Station						
Kirtland Air Force Base						
Moffett Federal Airfield Air Guard Station						
Reese Air Force Base						
<b>TOTAL</b>						

## DRAFT BRAC 95 Air Force COBRA Scorecard

Installation	R&A 1-Time Cost (\$M)	R&A Annual Savings (\$M)	R&A ROI (# Yrs)	R&A Total Savings (NPV)	Last Date Revised*	Reason for Revision
AF ALCs (Hill, Kelly, McClellan, Robins, Tinker)	183.1	89.3	2	995.2		
Bergstrom Air Reserve Base	13.3	20.9	0	291.4		
Brooks Air Force Base	185.5	27.4	7	142.1		
Edin Air Force Base	2.2	2.6	1	31.4		
AFEWS, Fort Worth	5.8	0.8	7	5.8		
Grand Forks Air Force Base	11.9	35.2	0	447.0		
Greater Pittsburgh IAP Air Reserve Station	22.3	13.1	2	161.1		
Griffiss Air Force Base, (485th EIG)	0.5	2.9	0	53.6		
Griffiss AFB, (Airfield Support for 10th ID)	51.3	12.7	5	110.8		
Hill AFB (Utah Test and Training Range)	3.2	12.4	0	179.9		
Homestead Air Force Base, (301st Rescue)	4.6	1.5	4	15.4		
Homestead Air Force Base, (726 Air Cntr Sqdns)	7.4	0.2	0	4.6		
Kirtland Air Force Base	277.5	62.0	3	464.5		
Lowry Air Force Base	1.7	3.0	1	39.0		
MacDill Air Force Base	0.0	0.0	0	0.0		
Malmstrom Air Force Base	17.4	5.1	4	54.3		
Moffett Federal Airfield Air Guard Station	15.2	4.8	4	50.1		
North Highlands Air Guard Station	1.3	0.2	8	1.5		
Onizuka Air Station	124.2	30.3	8	181.6		
Ontario IAP Air Guard Station	0.8	0.1	8	0.9		
REDCAP, Buffalo	1.7	0.9	1	11.0		
Reese Air Force Base	37.3	21.5	2	256.8		
Rome Laboratory, Rome	50.9	18.3	1	217.3	3-May	Took 20% FR reduction upfront
Roslyn Air Guard Station	2.4	0.7	4	7.6		
Springfield-Beckley MAP, Air Guard Station	23.4	4.2	6	35.1		
Williams Air Force Base (redirect)	0.0	0.3	0	21.0		
<b>TOTAL</b>	<b>1,044.9</b>	<b>371.4</b>		<b>3,779.0</b>		
<b>Changed Installations</b>						
AF ALCs (Hill, Kelly, McClellan, Robins, Tinker)						
Edin Air Force Base						
Greater Pittsburgh IAP Air Reserve Station						
Kirtland Air Force Base						
Moffett Federal Airfield Air Guard Station						
Reese Air Force Base						
<b>TOTAL</b>						

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**BRAC 95 Air Force COBRA Scorecard**

Installation	Final 1-Time Cost (\$M)	Final Annual Savings (\$M)	Final ROI (# Yrs)	Final Total Savings (NPV)	Recommendation Selected
AFALC (Hill, Kelly, McClellan, Robins, Tinker)	183.1	89.3	2	995.2	
Bergstrom Air Reserve Base	13.3	20.9	0	291.4	
Brooks Air Force Base	185.5	27.4	7	142.1	
Eglin Air Force Base	2.2	2.6	1	31.4	
AFEWS, Fort Worth	5.8	0.8	7	5.8	
Grand Forks Air Force Base	11.9	35.2	0	447.0	
Greater Pittsburgh IAP Air Reserve Station	22.3	13.1	2	161.1	
Griffiss Air Force Base, (485th EIG)	0.5	2.9	0	53.6	
Griffiss AFB, (Airfield Support for 10th ID)	51.3	12.7	5	110.8	
Hill AFB (Utah Test and Training Range)	3.2	12.4	0	179.9	
Homestead Air Force Base, (301st Rescue)	4.6	1.5	4	15.4	
Homestead Air Force Base, (726 Air Cntr Sqdns)	7.4	0.2	0	4.6	
Kirtland Air Force Base	277.5	62.0	3	464.5	
Lowry Air Force Base	1.7	3.0	1	39.0	
MacDill Air Force Base	0.0	0.0	0	0.0	
Malmstrom Air Force Base	17.4	5.1	4	54.3	
Moffett Federal Airfield Air Guard Station	15.2	4.8	4	50.1	
North Highlands Air Guard Station	1.3	0.2	8	1.5	
Onizuka Air Station	124.2	30.3	8	181.6	
Ontario IAP Air Guard Station	0.8	0.1	8	0.9	
REDCAP, Buffalo	1.7	0.9	1	11.0	
Reese Air Force Base	37.3	21.5	2	256.8	
Rome Laboratory, Rome	52.8	11.5	4	98.4	
Roslyn Air Guard Station	2.4	0.7	4	7.6	
Springfield-Beckley MAP, Air Guard Station	23.4	4.2	6	35.1	
Williams Air Force Base (redirect)	0.0	0.3	0	21.0	
<b>TOTAL</b>	<b>1,046.8</b>	<b>363.6</b>		<b>3,660.1</b>	
<b>Changed Installations</b>					
AFALC (Hill, Kelly, McClellan, Robins, Tinker)					
Eglin Air Force Base					
Greater Pittsburgh IAP Air Reserve Station					
Kirtland Air Force Base					
Moffett Federal Airfield Air Guard Station					
Reese Air Force Base					
<b>TOTAL</b>					

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## Capacity Analysis

### Large Aircraft

- Air Force calculated it had an excess of 4 active duty large aircraft bases, but after taking into consideration force structure requirements it could close 2-3 large aircraft bases.
- Air Force recommended closing the flying operations at Malmstrom AFB, but relocated the aircraft to MacDill AFB thus not reducing any excess capacity.
  - Air Force did not consider MacDill AFB for capacity analysis purposes.
- Commission staff calculated the Air Force has excess capacity (ramp space) for 8 large aircraft bases.
  - Commission staff included MacDill AFB for capacity analysis purposes.
- Minot AFB, Ellsworth AFB, Malmstrom AFB, and McClellan AFB are operating at less than 50% capacity (flying operations only).
- When taking force structure requirements and START Treaty implications into consideration, Commission staff calculated Air Force has an excess of 2.9 large aircraft bases.

### Small Aircraft

- Air Force calculated it had an excess of 4 active duty small aircraft bases, but after taking into consideration force structure requirements it concluded it could close 1-2 small aircraft bases.
- Air Force did not recommend any small aircraft bases for closure.
- Commission staff calculated the Air Force could bring back all of its overseas force structure to the United States and still close a small aircraft base.
- When taking force structure requirements into consideration, Commission staff calculated Air Force has an excess of 2.3 small aircraft bases.

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## **Capacity Analysis**

### **Large Aircraft**

- **Air Force calculated excess of 4 large aircraft bases.**
- **After considering force structure requirements, it could close 2-3 large aircraft bases.**
- **Air Force recommended closing the flying operations at Malmstrom AFB, but re-opened MacDill AFB.**
  
- **Commission staff calculated Air Force has excess capacity (ramp space) for 8 large aircraft bases.**
- **After considering force structure and START Treaty, Commission staff calculated excess of 2.9 large aircraft bases.**

### **Small Aircraft**

- **Air Force calculated excess of 4 small aircraft bases.**
- **After considering force structure, concluded it could close 1-2 small aircraft bases.**
- **Air Force did not recommend any small aircraft bases for closure.**
  
- **Commission staff calculated Air Force could bring back all of its overseas force structure to the US and still close a small aircraft base.**
- **After considering force structure, Commission staff calculated excess of 2.3 small aircraft bases.**

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### BRAC 95 Air Force COBRA Scorecard

#### Background

The Air Force initially conducted 26 COBRA runs in support of its base closures, realignments, and redirects. Since then, the Air Force conducted six revised COBRA runs: one combined COBRA run for the five Air Logistics Centers (Hill ALC, Kelly ALC, McClellan ALC, Robins ALC, and Tinker ALC), Eglin AFB, Greater Pittsburgh IAP ARS, Kirtland AFB, Moffett Federal Airfield AGS, and Reese AFB. Communities have submitted only one revised Air Force COBRA run (Brooks AFB). Commission R&A staff have conducted one revised Air Force COBRA run (Rome Laboratory).

#### COBRA Summaries

- Air Force revised COBRA run summary
  - Original **one-time-to-close costs** of \$1,046.8 million have **increased by \$197.5 million** to \$1,244.3 million.
  - Original **annual savings** of \$363.6 million have **decreased by \$26.5 million** to \$337.1 million.
  - Original **total savings (Net Present Value)** of \$3,660.1 million have **decreased by \$798.6 million** to \$2,861.5 million.
- Community COBRA run summary
  - Original **one-time-to-close costs** of \$1,046.8 million have **decreased by \$174.4 million** to \$872.4 million.
  - Original **annual savings** of \$363.6 million have **decreased by \$5.7 million** to \$357.9 million.
  - Original **total savings (Net Present Value)** of \$3,660.1 million have **increased by \$159.4 million** to \$3,819.5 million.
- Commission R&A staff COBRA run summary
  - Original **one-time-to-close costs** of \$1,046.8 million have **decreased by \$1.9 million** to \$1,044.9 million.
  - Original **annual savings** of \$363.6 million have **increased by \$7.8 million** to \$371.4 million.
  - Original **total savings (Net Present Value)** of \$3,660.1 million have **increased by \$118.9 million** to \$3,779.0 million.

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## DRAFT BRAC 95 Air Force COBRA Scorecard

Installation	State	DoD Comp	Action	Original 1-Time Cost (\$M)	Original Annual Savings (\$M)	Original ROI (# Yrs)	Original Total Savings (NPV)	Revised 1-Time Cost (\$M)	Revised Annual Savings (\$M)	Revised ROI (# Yrs)	Revised Total Savings (NPV)	Last Date Revised*	Reason for Revision
Bergstrom Air Reserve Base	TX	AF	Close	13.3	20.9	0	291.4	13.3	20.9	0	291.4		
Brooks Air Force Base	TX	AF	Close	185.5	27.4	7	142.1	185.5	27.4	7	142.1		
AFEWS, Fort Worth	TX	AF	Disestab.	5.8	0.8	7	5.8	5.8	0.8	7	5.8		
Grand Forks Air Force Base	ND	AF	Realign	11.9	35.2	0	447.0	11.9	35.2	0	447.0		
Griffiss Air Force Base, (485th EIG)	NY	AF	Redirect	0.5	2.9	0	53.6	0.5	2.9	0	53.6		
Griffiss AFB, (Airfield Support for 10th ID)	NY	AF	Redirect	51.3	12.7	5	110.8	51.3	12.7	5	110.8		
Hill AFB (Utah Test and Training Range)	UT	AF	Realign	3.2	12.4	0	179.9	3.2	12.4	0	179.9		
Homestead Air Force Base, (301st Rescue)	FL	AF	Redirect	4.6	1.5	4	15.4	4.6	1.5	4	15.4		
Homestead Air Force Base, (726 Air Cntr Sqdns)	FL	AF	Redirect	7.4	0.2	0	4.6	7.4	0.2	0	4.6		
Lowry Air Force Base	CO	AF	Redirect	1.7	3.0	1	39.0	1.7	3.0	1	39.0		
MacDill Air Force Base	FL	AF	Redirect	0.0	0.0	0	0.0	0.0	0.0	0	0.0		
Malmstrom Air Force Base	MT	AF	Realign	17.4	5.1	4	54.3	17.4	5.1	4	54.3		
North Highlands Air Guard Station	CA	AF	Close	1.3	0.2	8	1.5	1.3	0.2	8	1.5		
Onizuka Air Station	CA	AF	Realign	124.2	30.3	8	181.6	124.2	30.3	8	181.6		
Ontario IAP Air Guard Station	CA	AF	Close	0.8	0.1	8	0.9	0.8	0.1	8	0.9		
REDCAP, Buffalo	NY	AF	Disestab.	1.7	0.9	1	11.0	1.7	0.9	1	11.0		
Rome Laboratory, Rome	NY	AF	Close	52.8	11.5	4	98.4	52.8	11.5	4	98.4		
Roslyn Air Guard Station	NY	AF	Close	2.4	0.7	4	7.6	2.4	0.7	4	7.6		
Springfield-Beckley MAP, Air Guard Station	OH	AF	Close	23.4	4.2	6	35.1	23.4	4.2	6	35.1		
Williams Air Force Base (redirect)	AZ	AF	RD-Recei	0.0	0.3	0	21.0	0.0	0.3	0	21.0		
<b>TOTAL</b>				<b>1,046.8</b>	<b>363.6</b>		<b>3,660.1</b>	<b>1,244.3</b>	<b>337.1</b>		<b>2,861.5</b>		
<b>Changed Installations</b>				<b>Original 1-Time Cost (\$M)</b>	<b>Revised 1-Time Cost (\$M)</b>	<b>Delta (\$M)</b>	<b>Original Annual Savings (\$M)</b>	<b>Revised Annual Savings (\$M)</b>	<b>Delta (\$M)</b>	<b>Original Total Savings (NPV)</b>	<b>Revised Total Savings (NPV)</b>	<b>Delta (\$M)</b>	
AFRC, Hill AFB, McClellan, Robins	GA	AF	Realign	183.3	277.3	2	58.3	127.0	68.7	2	105.3	17-Apr	AF Scrubbed - WKO transfer
Griffiss Air Force Base	NY	AF	Close	22.3	3.3	2	161.1	13.3	12.3	0	149.2	22-Apr	Pers to Nellis w/ Edwards
Monett Federal Airfield Air Guard Station	MO	AF	Close	15.2	4.8	4	50.3	15.1	4.5	4	46.9	22-Apr	Chgd pers. elim. vs. realign
Roosevelt Air Force Base	OK	AF	Close	37.3	39.4	2	21.5	23.8	2.3	2	256.5	28-Apr	Chngd Clv. & Mnt. assigned
<b>TOTAL</b>						<b>197.5</b>			<b>-26.5</b>				<b>-798.6</b>

## DRAFT BRAC 95 Air Force COBRA Scorecard

Installation	Cmnity 1-Time Cost (\$M)	Cmnity Annual Savings (\$M)	Cmnity ROI (# Yrs)	Cmnity Total Savings (NPV)	Last Date Revised*	Reason for Revision
McClellan Air Force Base (Inker)	183.1	89.3	2	995.2		
Bergstrom Air Reserve Base	13.3	20.9	0	291.4		
Brooks Air Force Base					9-Mar	Robertson COBRA shutdown family housing
Force Base	2.2	2.6	1	31.4		
AFEWS, Fort Worth	5.8	0.8	7	5.8		
Grand Forks Air Force Base	11.9	35.2	0	447.0		
Griffiss Air Force Base (485th EIG)	22.3	13.1	2	161.1		
Griffiss Air Force Base, (485th EIG)	0.5	2.9	0	53.6		
Griffiss AFB, (Airfield Support for 10th ID)	51.3	12.7	5	110.8		
Hill AFB (Utah Test and Training Range)	3.2	12.4	0	179.9		
Homestead Air Force Base, (301st Rescue)	4.6	1.5	4	15.4		
Homestead Air Force Base, (726 Air Cntr Sqdns)	7.4	0.2	0	4.6		
Lowry Air Force Base	277.5	62.0	3	464.5		
Lowry Air Force Base	1.7	3.0	1	39.0		
MacDill Air Force Base	0.0	0.0	0	0.0		
Malmstrom Air Force Base	17.4	5.1	4	54.3		
Wurtsmith Air Force Base, Air Guard Station	15.2	4.8	4	50.1		
North Highlands Air Guard Station	1.3	0.2	8	1.5		
Onizuka Air Station	124.2	30.3	8	181.6		
Ontario IAP Air Guard Station	0.8	0.1	8	0.9		
REDCAP, Buffalo	1.7	0.9	1	11.0		
Rome Air Force Base	37.3	21.5	2	256.8		
Rome Laboratory, Rome	52.8	11.5	4	98.4		
Roslyn Air Guard Station	2.4	0.7	4	7.6		
Springfield-Beckley MAP, Air Guard Station	23.4	4.2	6	35.1		
Williams Air Force Base (redirect)	0.0	0.3	0	21.0		
<b>TOTAL</b>	<b>872.4</b>	<b>357.9</b>		<b>3,819.5</b>		
<b>Changed Installations</b>						
Alton Air Force Base						
Edwards Air Force Base						
Griffiss Air Force Base						
Ontario Air Force Base						
Wurtsmith Federal Airfield Air Guard Station						
Reese Air Force Base						
<b>TOTAL</b>						

**DRAFT**  
**BRAC 95 Air Force COBRA Scorecard**

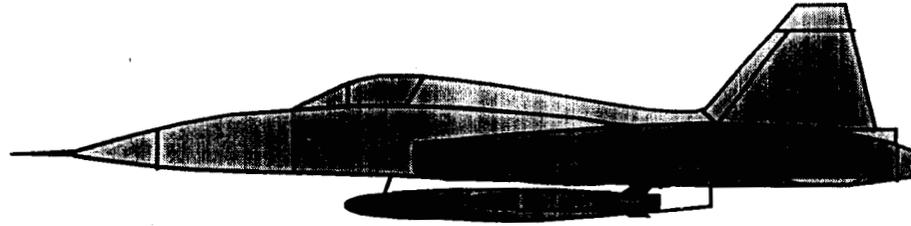
Installation	R&A 1-Time Cost (\$M)	R&A Annual Savings (\$M)	R&A ROI (# Yrs)	R&A Total Savings (NPV)	Last Date Revised*	Reason for Revision
Chickamauga Regional Airport, (Inlet)	183.1	89.3	2	995.2		
Bergstrom Air Reserve Base	13.3	20.9	0	291.4		
Brooks Air Force Base	185.5	27.4	7	142.1		
Brooks AFB	2.2	2.6	1	31.4		
AFEWS, Fort Worth	5.8	0.8	7	5.8		
Grand Forks Air Force Base	11.9	35.2	0	447.0		
Grand Forks Air Reserve Station	22.3	13.1	2	161.1		
Griffiss Air Force Base, (485th EIG)	0.5	2.9	0	53.6		
Griffiss AFB, (Airfield Support for 10th ID)	51.3	12.7	5	110.8		
Hill AFB (Utah Test and Training Range)	3.2	12.4	0	179.9		
Homestead Air Force Base, (301st Rescue)	4.6	1.5	4	15.4		
Homestead Air Force Base, (726 Air Cntr Sqdns)	7.4	0.2	0	4.6		
Homestead AFB	277.5	62.0	3	464.5		
Lowry Air Force Base	1.7	3.0	1	39.0		
MacDill Air Force Base	0.0	0.0	0	0.0		
Malmstrom Air Force Base	17.4	5.1	4	54.3		
Marshall Field Airfield Air Guard Station	15.2	4.8	4	50.1		
North Highlands Air Guard Station	1.3	0.2	8	1.5		
Onizuka Air Station	124.2	30.3	8	181.6		
Ontario IAP Air Guard Station	0.8	0.1	8	0.9		
REDCAP, Buffalo	1.7	0.9	1	11.0		
Reese AFB	37.3	21.5	2	256.8		
Rome Laboratory, Rome	50.0	10.0	2	222.5	May 1995	20% BR reduction option
Roslyn Air Guard Station	2.4	0.7	4	7.6		
Springfield-Beckley MAP, Air Guard Station	23.4	4.2	6	35.1		
Williams Air Force Base (redirect)	0.0	0.3	0	21.0		
<b>TOTAL</b>	<b>1,044.9</b>	<b>371.4</b>		<b>3,779.0</b>		
<b>Changed Installations</b>						
Alaska State Troop Training Center, (Inlet)						
Alaska State Troop Training Center, (Inlet)						
Ontario International Air Reserve Station						
King Air Force Base						
Marshall Field Airfield Air Guard Station						
Reese Air Force Base						
<b>TOTAL</b>						

## DRAFT BRAC 95 Air Force COBRA Scorecard

Installation	Final 1-Time Cost (\$M)	Final Annual Savings (\$M)	Final ROI (# Yrs)	Final Total Savings (NPV)	Recommendation Selected
	183.1	89.3	2	995.2	
Bergstrom Air Reserve Base	13.3	20.9	0	291.4	
Brooks Air Force Base	185.5	27.4	7	142.1	
	2.2	2.6	1	31.4	
AFEWS, Fort Worth	5.8	0.8	7	5.8	
Grand Forks Air Force Base	11.9	35.2	0	447.0	
	22.3	13.1	2	161.1	
Griffiss Air Force Base, (485th EIG)	0.5	2.9	0	53.6	
Griffiss AFB, (Airfield Support for 10th ID)	51.3	12.7	5	110.8	
Hill AFB (Utah Test and Training Range)	3.2	12.4	0	179.9	
Homestead Air Force Base, (301st Rescue)	4.6	1.5	4	15.4	
Homestead Air Force Base, (726 Air Cntr Sqdns)	7.4	0.2	0	4.6	
	277.5	62.0	3	464.5	
Lowry Air Force Base	1.7	3.0	1	39.0	
MacDill Air Force Base	0.0	0.0	0	0.0	
Malmstrom Air Force Base	17.4	5.1	4	54.3	
	15.2	4.8	4	50.1	
North Highlands Air Guard Station	1.3	0.2	8	1.5	
Onizuka Air Station	124.2	30.3	8	181.6	
Ontario IAP Air Guard Station	0.8	0.1	8	0.9	
REDCAP, Buffalo	1.7	0.9	1	11.0	
	37.3	21.5	2	256.8	
Rome Laboratory, Rome	52.8	11.5	4	98.4	
Roslyn Air Guard Station	2.4	0.7	4	7.6	
Springfield-Beckley MAP, Air Guard Station	23.4	4.2	6	35.1	
Williams Air Force Base (redirect)	0.0	0.3	0	21.0	
<b>TOTAL</b>	<b>1,046.8</b>	<b>363.6</b>		<b>3,660.1</b>	
<b>Changed Installations</b>					
<b>TOTAL</b>					

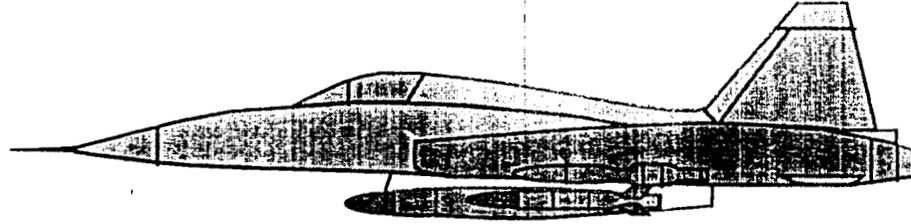
# MEASURES OF MERIT FOR FUNCTIONAL AREAS

MEASURES OF MERIT	Flight Screening	Primary Pilot	Bomber/Fighter	Strike/Adv E-2/C-2	Airlift/Tanker	Maritime/Int E-2/C-2	CORRESPONDING QUESTIONS
Managed Training Areas	5	5	6	6	6	6	pg 7/#1, 2
Weather	15	14	10	7	9	9	pg 10/#1-3
Airspace and Flight Training Areas	27	22	27	27	24	24	pgs 11-17/#1-23
Airfields	23	24	17	17	22	22	pgs 18-21/#1-4
Ground Training Facilities	10	10	10	10	10	10	pg 22/#1, 2
Aircraft Maintenance Facilities	5	5	5	5	5	5	pg 23/#1 pg 21/#3
Special Military Facilities	0	0	4	4	0	0	pgs 24-25/#1-7
Proximity to Training Areas	0	0	0	3	0	0	pg 27/#1, 2, 3, 4
Proximity to Other Support Facilities	0	2	2	2	5	5	pg 28/#1, 2, 3
Unique Features	0	0	0	0	0	0	pg 29/#1, 2
Air Quality	5	5	5	5	5	5	pg 30/#1-5
Encroachment	5	5	6	6	6	6	pgs 31-38/#1-11
Services	5	8	8	8	8	8	pgs 39-47/#1-6
<b>Total Points</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	



# AIR FORCE TEAM

CIRILLO / ADDS DRAFT



# AIR FORCE TEAM

SMAALL  
AC

518-PM

5/7  
6.18 PM

**DRAFT**

THANK YOU MR. CHAIRMAN. , COMMISSIONERS, THIS FIRST SLIDE REPRESENTS THE 14 CATEGORIES THE DEPARTMENT OF THE AIR FORCE USED IN THEIR ANALYSIS. THE SHADED CATEGORIES HAVE INSTALLATIONS TO BE CONSIDERED AS ADDITIONS TO THE SECRETARY OF DEFENSE'S RECOMMENDATIONS. I WILL BRIEF THE MISSILE AND LARGE AIRCRAFT CATEGORIES TOGETHER, DUE TO THEIR RELATIONSHIP, AND THAN I WILL COVER THE SMALL AIRCRAFT AND UNDERGRADUATE PILOT TRAINING CATEGORIES. THE DEPOT AND LABORATORY CATEGORIES HAVE ALREADY BEEN BRIEFED BY MR. JIM OWSLEY AND THE CROSS SERVICE TEAM. FINALLY, I WILL COVER THOSE INSTALLATIONS BEING CONSIDERED TODAY IN THE AIR FORCE RESERVE CATEGORY AND MR. DAVID LEWIS WILL DISCUSS AN CONSIDERATION INVOLVING AIR FORCE MEDICAL FACILITIES.

## BASE ANALYSIS

### CATEGORY: MISSILE/LARGE AIRCRAFT

**DOD RECOMMENDATION:** Realign Grand Forks AFB by inactivating the 321st Missile Group and realign Malmstrom AFB by relocating the 43rd Air Refueling Group to MacDill AFB.

**FOR CONSIDERATION:** Study Grand Forks , Minot, and Malmstrom AFBs for **REALIGNMENT** or **CLOSURE** and F.E. Warren AFB for **REALIGNMENT**.

CRITERIA	GRAND FORKS, ND (R)(*) (Realign MM III)	MINOT, ND (**)(*) (Realign MM III)	MALMSTROM, MT (R)(*) (Realign KC-135 Acft)
AIR FORCE TIERING	III 12/36	II 21/36	II 29/36
BCEG RANK	17/18	15/18	11/18
FORCE STRUCTURE	150 MINUTEMAN III 48 KC-135 Aircraft	150 MINUTEMAN III 12 B-52 Aircraft	80 MINUTEMAN III 120 MINUTEMAN X 12 KC-135 Aircraft
ONE-TIME COSTS (\$ M)	11.9	12.0	17.4
ANNUAL SAVINGS (\$ M)	35.2	36.0	5.1
RETURN ON INVESTMENT (\$ M)	Immediate	Immediate	4 Years
BASE OPERATING BUDGET (\$ M)	26.7	26.7	21.8
PERSONNEL ELIMINATED (MIL/CIV)	802/35	809/46	719/19
PERSONNEL REALIGNED (MIL/CIV)			
ECONOMIC IMPACT (BRAC95/CUM)	2.4%/2.4%	3.1%/3.1%	3.0%/3.0%
ENVIRONMENTAL	Asbestos/Siting	Siting	Asbestos/Siting

La

- (C) = DoD recommendation for closure
- (R) = DoD recommendation for realignment
- (\*) = Candidate for further consideration
- (\*\*) = March 7, 1995 Commission Add for realignment (Missile Field)

Keep up with next!

Keep up early

**DRAFT**

THIS CHART ADDS FRANCIS E WARREN DATA AND SHOWS THE FULL RANGE OF OPTIONS AVAILABLE FOR EACH OF THE FOUR BASES UP FOR DISCUSSION. AS A REMINDER, F E WARREN WAS EXCLUDED BY THE AIR FORCE AND WAS NOT TIERED OR VOTED ON BY THE AIR FORCE CLOSURE GROUP.

EVEN THOUGH THE GRAND FORKS AFB MISSILE FIELD WAS RECOMMENDED FOR ELIMINATION BY THE AIR FORCE THEY DID NOTE THAT THEY WERE WORKING WITH THE SECRETARY OF DEFENSE TO OBTAIN AN INTERAGENCY POSITION REFLECTING THE STATUS AND IMPACT OF THE INTERCONTINENTAL BALLISTIC MISSILE FIELD ON THE ANTI-BALLISTIC MISSILE TREATY. GRAND FORKS MISSILE FIELD CONTAINS THE MOTH BALLED ANTI-BALLISTIC MISSILE SITE. WE HAVE NOT YET RECEIVED THE INTERAGENCY POSITION ON THIS ISSUE

ALSO NOTE THAT THE ALTERNATIVE SHOWS A REALIGNMENT VS A CLOSURE OF F E WARREN AFB DUE TO THE EXISTENCE OF THE PEACE KEEPER MISSILES WHICH ARE NOT SCHEDULED TO GO OUT OF THE INVENTORY UNTIL 2003[ *AS REQUIRED BY START II, THE STRATEGIC ARMS REDUCTION TREATY.*]

I CALL YOUR ATTENTION TO THE FORCE STRUCTURE, COST AND IMPACT FACTORS

.....**KEEP THIS CHART UP.**

**BASE ANALYSIS**  
**CATEGORY: MISSILE/LARGE AIRCRAFT**

CRITERIA	GRAND FORKS, ND (R)(*) (Closure)	MINOT, ND (**)(*) (Closure)	MALMSTROM, MT (R)(*) (Closure)	F.E. WARREN, WY (*) (Realign MM III)
AIR FORCE TIERING	III	II	II	Excluded
BCEG RANK	17/18	15/18	11/18	Excluded
FORCE STRUCTURE	150 MINUTEMAN III 48 KC-135 Aircraft	150 MINUTEMAN III 12 B-52 Aircraft	80 MINUTEMAN III 120 MINUTEMAN X 12 KC-135 Aircraft	150 MINUTEMAN III 50 PEACEKEEPER
ONE-TIME COSTS (\$ M)	81.4	230.4	96.4	84.3
ANNUAL SAVINGS (\$ M)	87.6	98.2	113.9	16.1
RETURN ON INVESTMENT	1 Year	2 Years	1 Year	3 Years
BASE OPERATING BUDGET (\$M)	26.7	26.7	21.8	16.9
PERSONNEL ELIMINATED (MIL/CIV)	1,597/116	1,846/230	2,132/277	376/27
PERSONNEL REALIGNED (MIL/CIV)	2,354/309	1,947/261	1135/182	108
ECONOMIC IMPACT (BRAC95/CUM)	12.7%/12.7%	15.8%/15.8%	9.3%/9.3%	1.4%/1.4%
ENVIRONMENTAL	Asbestos/Siting	Siting	Asbestos/Siting	Siting

(C) = DoD recommendation for closure

(R) = DoD recommendation for realignment

(\*) = *Candidate for further consideration*

(\*\*) = March 7, 1995 Commission Add for realignment (Missile Field)

**DRAFT**

LEAVING THE CHART UP ON YOUR LEFT, THE CHART ON YOUR RIGHT SUMMARIZES THE MAJOR ISSUES GATHERED FROM STAFF ANALYSIS AND COMMUNITY INPUT. NOTE THAT ALL MISSILE SITES ARE RELATIVELY EQUAL IN ALERT RATE AND MAINTENANCE COSTS. THE HIGHER DEPOT SUPPORT COSTS AT MALMSTROM AND F E WARREN CAN BE PARTIALLY EXPLAINED BY THE FACT THAT EACH OF THOSE BASES HAVE 200 SILOS WHERE THE OTHER TWO HAVE 150.

THE LAST TWO ROWS ARE AIRFIELD RELATED. THE TANKER SATURATION COMMENT REFLECTS THE FACT THAT THERE ARE AN OVER ABUNDANCE OF TANKER AIRCRAFT IN THE NORTH WEST. THE DOD RECOMMENDATION RELOCATES THE 12 TANKERS AT MALMSTROM TO MACDILL AFB, FLORIDA TO PARTIALLY RELIEVE A TANKER SHORTFALL IN THE SOUTH EAST.

THE AIR FIELD ELEVATION RELATES TO THE PRESSURE ALTITUDE DIFFICULTIES AT MALMSTROM AFB WHICH WAS A FACTOR IN THE AIR FORCE RECOMMENDATION TO SHUT DOWN THAT AIRFIELD.

MR. CHAIRMAN, WE ARE PREPARED TO ANSWER ANY QUESTIONS YOU MIGHT HAVE IN THIS CATEGORY.

## MISSILE/LARGE AIRCRAFT BASES MAJOR ISSUES

MAJOR ISSUES	GRAND FORKS, ND	MINOT, ND	MALMSTROM, MT	FE WARREN, WY
Anti Ballistic Missile Site	Yes	No	No	No
Force Structure	Consistent with Nuclear Posture Review			
Warheads	500 MM III 3500 Total TRIAD	500 MM III 3500 Total TRIAD	450 MM III 3500 Total TRIAD	500 MM III 3500 Total TRIAD
Survivability	Hardened Silos Compact Field	Hardened Silos Compact Field	Hardened Silos Expansive Field	Hardened Silos Compact Field
Maintainability	Single System Compact Field 99% Alert Rate	Single System Compact Field 99% Alert Rate	Two Systems Expansive Field 99% Alert Rate	Single System Compact Field 99% Alert Rate
Total on site depot support costs 1993-1995 (Water intrusion, wind anomalies, etc.) (\$ M)	8.1	7.0	11.4	10.4
Annual on site depot support costs per launch facility	\$18,101 per launch facility	\$15,670 per launch facility	\$19,162 per launch facility	\$23,028 per launch facility
Tanker saturation in Northwest	Yes	N/A	Yes	N/A
Airfield Elevation	911 Ft	1,660 Ft	3,526 Ft	N/A

Two separate motions → Missile  
→ Avion

## DRAFT

THIS CHART AND THE MAP ON YOUR RIGHT REPRESENT THE NEXT CATEGORY TO BE DISCUSSED TODAY, THE SMALL, OR FIGHTER, AIRCRAFT CATEGORY. YOU WILL NOTE THAT THERE ARE NO BASES RECOMMENDED FOR CLOSURE OR REALIGNMENT IN THIS CATEGORY, BUT WE HAVE BEEN REQUESTED TO DISCUSS THE BASES SO INDICATED DUE TO EXCESS CAPACITY ISSUES. AGAIN, NOTE IF YOU WILL, WE HAVE INDICATED THE TIERING LEVEL ASSIGNED BY THE AIR FORCE CLOSURE GROUP EXCEPT IN THOSE FOUR INSTANCES SHOWN WHERE BASES WERE EXCLUDED FOR MISSION OR GEOGRAPHICAL REASONS BY THE AIR FORCE.

**AIR FORCE**  
**CATEGORY: SMALL AIRCRAFT BASES**

TIER	INSTALLATION	TIER	INSTALLATION
III	<i>Cannon AFB, NM</i> (*)	III	<i>Moody AFB, GA</i> (*)
I	Davis-Monthan AFB, AZ	II	Mountain Home AFB, ID
Excl	Eielson AFB, AK	Excl	Nellis AFB, NV
Excl	Elmendorf AFB, AK	Excl	Pope AFB, NC
III	<i>Holloman AFB, NM</i> (*)	II	Seymour-Johnson AFB, NC
II	Hurlbert Field, FL	II	Shaw AFB, SC
I	Langley AFB, VA	II	<i>Tyndall AFB, FL</i> (*)
II	Luke AFB, AZ		

(C) = DoD recommendation for closure

(R) = DoD recommendation for realignment

(\*) = *Candidate for further consideration*

**DRAFT**

THE AIR FORCE CALCULATED AN EXCESS OF UP TO FOUR SMALL AIRCRAFT BASES USING AVAILABLE PARKING AREAS AND COST LIMITATIONS AS LIMITING FACTORS. THAT NUMBER WAS LATER REFINED TO 1-2 BASES. THE STAFF GENERALLY CONCURS WITH THE AIR FORCE CALCULATIONS.

THE SECRETARY OF THE AIR FORCE DETERMINED THAT RESULTING OPERATIONAL TEMPO , MAINTENANCE AND SPAN OF CONTROL CONCERNS PRECLUDED CLOSURE OF ANY BASES IN THIS CATEGORY

## SMALL AIRCRAFT CAPACITY ANALYSIS

### AIR FORCE

- **Excess: 4**
- **After consideration of force structure requirements: 1-2**
- **Air Force recommendation: None**

**“SECAF determined that operational considerations (aircraft type, block and engine integrity; base loading; AF units sizing imperatives) would not allow the beddowns from the closure of any small aircraft bases.”**

**DRAFT**

ON THIS BASE ANALYSIS CHART WE HAVE DISPLAYED THE BASES SUGGESTED FOR PRESENTATION

AGAIN, THIS CHART REFLECTS THE KEY ELEMENTS OF ANALYSIS FOR EACH OF THE EIGHT SELECTION CRITERIA. MAJOR DIFFERENTIATING FACTORS HERE ARE RELATED TO THE ONE TIME COST TO CLOSE AND RETURN ON INVESTMENT. I ALSO CALL YOUR ATTENTION TO THE ECONOMIC IMPACT DATA. I WILL DISCUSS SOME OTHER ISSUES IN THE NEXT CHART.

.....LEAVE THIS CHART UP

## BASE ANALYSIS

### CATEGORY: SMALL AIRCRAFT

**DOD RECOMMENDATION:** None

**FOR CONSIDERATION:** Study Cannon AFB, NM and Tyndall AFB, FL FOR CLOSURE.

CRITERIA	CANNON, NM (* (Closure)	HOLLOMAN, NM (* (Closure)	MOODY, GA (* (Closure)	TYNDALL, FL (* (Closure)
AIR FORCE TIERING	III <sup>11/33</sup>	III <sup>19/33</sup>	III <sup>14/33</sup>	II <sup>27/33</sup>
BCEG RANK	11/11	9/11	10/11	3/11
FORCE STRUCTURE	54 F-16 (18 B50 / 36 B30) 24 EF-111	46 F-117, 18 F-4E 12 T-38	36 F-16 (B40L) 24 A/OA-10 8 C-130E/J	77 F-15A/B
ONE-TIME COSTS (\$ M)	73.7	258.0	98.2	(315.6) 180.5
ANNUAL SAVINGS (\$ M)	37.6	61.6	35.7	(53.9) 36.3
RETURN ON INVESTMENT	2 Years	5 Years	2 Years	(5) 5 Years
BASE OPERATING BUDGET (\$ M)	17.5M	24.9	12.0	(19.4) 19.4
PERSONNEL ELIMINATED (MIL/CIV)	854/107	1,061/331	670/169	(868/300) 725/227
PERSONNEL REALIGNED (MIL/CIV)	3,565/245	3,050/455	2,932/187	(9457/768) 3,595/567
ECONOMIC IMPACT (BRAC95/CUM)	22.4%/22.4%	37.2%/37.2%	12.5%/12.5%	10.3%/10.1%
ENVIRONMENTAL	Asbestos/Cultural/ Siting	Asbestos/Biological/ Cultural/Siting	Asbestos	Biological

(C) = DoD recommendation for closure

(R) = DoD recommendation for realignment

(\*) = Candidate for further consideration

▲

- DRONES  
- ROCC / SOCC (NAND)  
- CPN TO NEW

**DRAFT**

LEAVING THE CHART UP ON YOUR LEFT, THE CHART ON YOUR RIGHT IS THE LAST CHART IN THIS CATEGORY, WE SHOWN SOME OF THE OPERATIONAL AND COST CONSIDERATIONS AS RELATED TO A CLOSURE SCENARIO. WE ALSO LIST POTENTIAL RECEIVER BASES. AS A REMINDER THE AIR FORCE DID NOT RECOMMEND ANY OF THESE BASES FOR CLOSURE OR REALIGNMENT DUE TO THE SECRETARY'S CONCERNS ON SUCH FACTORS AS INCREASED OPERATIONAL TEMPO AT RECEIVER BASES.

MR. CHAIRMAN, WE WILL BE GLAD TO ANSWER ANY QUESTIONS IN THIS CATEGORY.

**BASE ANALYSIS**  
**CATEGORY: SMALL AIRCRAFT**

MAJOR ISSUES	CANNON, NM (*) (Closure)	HOLLOMAN, NM (*) (Closure)	MOODY, GA (*) (Closure)	TYNDALL, FL (*) (Closure)
OPERATIONAL ISSUES	Supersonic airspace	Test assets Supersonic airspace	Composite wing	Full-Scale Target Drone Operations F-15 Training Range Supersonic airspace NORAD Ops
COST TO CLOSE	Moderate	High	Moderate	High
POTENTIAL RECEIVER BASES	Hill Shaw Moody Nellis	Nellis Shaw Cannon	Hill Cannon Shaw McChord Little Rock	Eglin Langley Nellis

(\*) = Candidate for further consideration

## **DRAFT**

THIS CHART AND MAP REFLECT THE BASES IN THE AIR FORCE UNDERGRADUATE PILOT TRAINING CATEGORY. AS SHOWN, THE AIR FORCE RECOMMENDED REESE AFB FOR CLOSURE. [OPTIONS GENERATED BY THE DOD UPT JOINT CROSS SERVICE WORKING GROUP INCLUDED REESE AND VANCE AIR FORCE BASE..] THE AIR FORCE DETERMINED THERE WAS AN EXCESS OF ONE AIR FORCE BASE IN THIS CATEGORY AND THE STAFF CONCURS.

WE WILL BE DISCUSSING THE THREE SHADED BASES. RANDOLPH AIR FORCE BASE IS THE LOCATION OF A MAJOR COMMAND HEADQUARTERS AND IS THE AIR FORCE MANAGED SITE OF THE RECENTLY ESTABLISHED JOINT SERVICE NAVIGATOR TRAINING PROGRAM. SHEPPARD AIR FORCE BASE, SITE OF THE NATO PILOT TRAINING SITE AND A MAJOR AIR FORCE TECHNICAL TRAINING CENTER, WAS EXCLUDED BY THE AIR FORCE AS A CRITICAL TECHNICAL TRAINING BASE.

**INFORMATION PACK  
ADDS DELIBERATIONS  
WASHINGTON, DC  
MAY 10, 1995**



**Overview**

**Hearing Agenda**

**Fact Sheet**

**Staff Assignment Sheet**

**Commissioner Itineraries**

**ADDS DELIBERATIONS  
WASHINGTON, DC  
MAY 10, 1995**

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**COMMISSIONERS ATTENDING:**

Chairman Alan Dixon  
Commissioner Al Cornella  
Commissioner Rebecca Cox  
Commissioner James Davis  
Commissioner Lee Kling  
Commissioner Benjamin Montoya  
Commissioner Joe Robles  
Commissioner Wendi Steele

**HEARING LOCATION:**

Room 216  
Hart Senate Office Building  
Washington, DC 20510

**CONTACT:**

Senate Appropriations Committee  
Mazie Mattson  
(202) 224-2739

**HEARING AGENDA  
ADDS DELIBERATIONS  
WASHINGTON, DC  
MAY 10, 1995**

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**CROSS SERVICE ISSUES**

**Witnesses:** Mr. J. L. Owsley, Cross Service Team Leader  
Ms. Ann Reese, Cross Service Senior Analyst  
Mr. Glenn Knoepfle, Cross Service Senior Analyst  
Mr. Dick Helmer, Cross Service Senior Analyst  
Mr. Les Farrington, Cross Service Senior Analyst

**AIR FORCE ISSUES**

**Witnesses:** Mr. Frank Cirillo, Air Force Team Leader  
Mr. Frank Cantwell, Air Force Senior Analyst  
Mr. David Olson, Air Force Senior Analyst  
Mr. Rick DiCamillo, Air Force Senior Analyst  
LtCol Merrill Beyer, Air Force Senior Analyst

**NAVY ISSUES**

**Witnesses:** Mr. Alex Yellin, Navy Team Leader  
Mr. Larry Jackson, Navy Senior Analyst  
Mr. Jeff Mulliner, Navy Senior Analyst  
Mr. Doyle Reedy, Navy Senior Analyst  
LCDR Eric Lindenbaum, Navy Senior Analyst  
LtCol James Brubaker, Navy Senior Analyst  
Mr. David Epstein, Navy Senior Analyst

**ARMY ISSUES**

**Witnesses:** Mr. Ed Brown, Army Team Leader  
Mr. Rick Brown, Army Senior Analyst  
Mr. Mike Kennedy, Army Senior Analyst

**DEFENSE LOGISTICS AGENCY ISSUES**

**Witnesses:** Mr. Bob Cook, Interagency Issues Team Leader  
Ms. Marilyn Wasleski, Interagency Issues Senior Analyst

**FACT SHEET**  
**ADDS DELIBERATIONS**  
**WASHINGTON, DC**  
**MAY 10, 1995**

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**LOCATION:**

Room 216  
Hart Senate Office Building  
Washington, DC 20510

**DIRECTIONS:**

- \* Enter Dirksen Building (corner of Constitution & 1st St.)
- \* Take the elevator to the second floor
- \* Turn right out of the elevator and enter SD212-214  
(This is the back entrance to Hart 216 and the  
Commission holding room.)

**CAPACITY:**

300

**LUNCH ROOM:**

Dirksen Senate Office Building  
Room 212

**CONTACTS:**

Senate Appropriations Committee  
Kim Range  
(202) 224-2739

Capitol Hill Police  
Paula Harington  
(202) 224-4841

Office of the Superintendent  
Special Functions  
Tim Maxey  
(202) 224-3146

**STENOGRAPHER:**

Diversified  
Ellen Alcott  
(202) 296-229

**STAFF ASSIGNMENT SHEET  
ADDS DELIBERATIONS  
WASHINGTON, DC  
MAY 10, 1995**

Signage.....Melissa  
Reserved seating (VIP, witness, press, commission staff)

Advance on site check.....Paul

Lunch Arrangements/Logistics.....Shelley

Designated on-site supervisor during lunch.....Shelley/Paul

Testimony collection.....Paul

Copies.....Melissa

VIP Greeter.....CeCe

General Runners(s).....Melissa

Nameplates, gavel, etc.....Melissa

Computer Equipment.....James

Capitol Hill Police Officer.....Paul

Final site sweep.....Paul

**AIRPORT ARRIVALS/DEPARTURES  
ADDS DELIBERATIONS  
WASHINGTON, DC  
MAY 10, 1995**

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**ALAN DIXON**

Arrival:	Tuesday, May 9	10:59 pm	Hyatt Rosslyn
Departure:	Wednesday, May 10	6:22 pm	703/525-1234

**AL CORNELLA**

In town

**REBECCA COX**

In town

**J.B. DAVIS**

Arrival:	Monday, May 8	9:38 pm	The Bellevue Hotel
Departure:	Wednesday, May 10	5:40 pm	202-638-0900

**S. LEE KLING**

Arrival:	Monday, May 8	8:01 pm	Hyatt Rosslyn
Departure:	Wednesday, May 10	6:22 pm	703/525-1234

**BEN MONTOYA**

Arrival:	Monday, May 8	2:24 pm	Hyatt Rosslyn
Departure:	Wednesday, May 10	6:59 pm	703/525-1234

**JOE ROBLES**

Arrival:	Tuesday, May 9	11:54 am	Hyatt Rosslyn
Departure:	Wednesday, May 10	6:59 pm	703/525-1234

**WENDI STEELE**

Arrival:	Tuesday, May 9	11:38 am	Hyatt Rosslyn
Departure:	Thursday, May 11	2:08 pm	703/525-1234

# BACKUP SLIDES II

## SLIDE

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2. Base Analysis: Large Aircraft Category (1) *ELSWort Scott*
3. Base Analysis: Large Aircraft Category (2) *ELSWort Scott, McGinn*
4. Northern Tier Missile Base Realignment/Closure Options
5. Aircraft Transfer Options: Small Aircraft Category
6. Lubbock Community Concerns
7. Base Analysis: Undergraduate Pilot Training Bases
8. Staff Analysis I: : Undergraduate Pilot Training Bases
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11. Plattsburgh Air Force Base
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*Wesley Bonho*

## LARGE AIRCRAFT BASES FORCE STRUCTURE (PAA)

INSTALLATION	AIRCRAFT TYPE	TOTAL
ALTUS AFB, OK	24 KC-135; 6 C-141; 6 C-5; 6 C-17	42
ANDERSEN AFB, GU	-----	-----
ANDREWS AFB, MD	Various (10) Types	80
BARKSDALE AFB, LA	44 B-52; 18 A/OA-10	62
BEALE AFB, CA	34 U-2, 8 KC-135	
CHARLESTON AFB, SC	16 C-141; 24 C-17	40
DOVER AFB, DE	32 C-5	32
DYESS AFB, TX	24 C-130; 24 B-1	48
ELLSWORTH AFB, SD	12 B-1	12
FAIRCHILD AFB, WA	69 KC-135	69
GRAND FORKS AFB, ND	48 KC-135	48
HICKAM AFB, HI	8 KC-135, 4 C-130, 15 F-15, 2 C-135	29
LITTLE ROCK AFB, AR	76 C-130	76
MALMSTROM AFB, MT	12 KC-135	12
McCHORD AFB, WA	48 C-141, 12 A-10	60
McCONNELL AFB, KS	10 B-1; 48 KC-135	58
McGUIRE AFB, NJ	19 KC-135; 24 KC-10; 27 C-141	70
MINOT AFB, ND	12 B-52	12
OFFUTT AFB, NE	32 C-135; 6 C-21	38
SCOTT AFB, IL	11 C-9; 8 C-21	19
TRAVIS AFB, CA	24 KC-10; 16 C-141; 32 C-5	72
WHITEMAN AFB, MO	10 B-2; 18 A-10	28

## BASE ANALYSIS

### CATEGORY: LARGE AIRCRAFT

**DOD RECOMMENDATION:** Realign Malmstrom AFB tanker resources to MacDill AFB, FL and close airfield operations except for required helicopter support.

**FOR CONSIDERATION:** Study Ellsworth and Scott AFBs FOR CLOSURE.

CRITERIA	ELLSWORTH, SD (*) (Closure)	SCOTT, IL (*) (Closure)
AIR FORCE TIERING	III	III
BCEG RANK	17/18	16/18
FORCE STRUCTURE	12 B-1 Aircraft	12 C-9 & 8 C-21 Aircraft
ONE-TIME COSTS (\$ M)	41.3	241.2
ANNUAL SAVINGS (\$ M)	60.9	51.3
RETURN ON INVESTMENT (\$ M)	1 Year	5 Years
BASE OPERATING BUDGET (\$ M)	25.8	30.9
PERSONNEL ELIMINATED (MIL/CIV)	1,055/202	750/352
PERSONNEL REALIGNMENT (MIL/CIV)	2,073/178	5,322/2,366
ECONOMIC IMPACT (BRAC95/CUM)	8.8%	1.1%
ENVIRONMENTAL	Attainment	Non-Attainment Ozone Moderate

(C) = DoD recommendation for closure

(R) = DoD recommendation for realignment

(\*) = *Candidate for further consideration*

\*\* Lower costs if active force structure realigns to Plattsburgh AFB vice Dover and Charleston AFBs as depicted by the level playing field COBRA

## BASE ANALYSIS

### CATEGORY: LARGE AIRCRAFT

**DOD RECOMMENDATION:** Realign Malmstrom AFB tanker resources to MacDill AFB, FL and close airfield operations except for required helicopter support.

**FOR CONSIDERATION:** Study Ellsworth and Scott AFBs FOR CLOSURE. Further, study McGuire AFB FOR REALIGNMENT.

CRITERIA	ELLSWORTH, SD (*) (Closure)	SCOTT, IL (*) (Closure)	MCGUIRE, NJ (*) (REALIGN)
AIR FORCE TIERING	III	III	II
BCEG RANK	17/18	16/18	11/18
FORCE STRUCTURE	12 B-1 Aircraft	12 C-9 & 8 C-21 Aircraft	27 C-141, 24 KC-10, 19 KC-135 (ANG)
ONE-TIME COSTS (\$ M)	41.3	241.2	626.0**
ANNUAL SAVINGS (\$ M)	60.9	51.3	64.0
RETURN ON INVESTMENT	1 Year	5 Years	11 Years
BASE OPERATING BUDGET (\$ M)	25.8	30.9	33.9
PERSONNEL ELIMINATED (MIL/CIV)	1,055/202	750/352	799/278
PERSONNEL REALIGNMENT (MIL/CIV)	2,073/178	5,322/2,366	4,425/1,218
ECONOMIC IMPACT (BRAC95/CUM)	8.8%	1.1%	0.4%
ENVIRONMENTAL	Attainment	Non-Attainment Ozone Moderate	Non-Attainment Ozone Severe

(C) = DoD recommendation for closure

(R) = DoD recommendation for realignment

(\*) = Candidate for further consideration

\*\* Lower costs if active force structure realigns to Plattsburgh AFB vice Dover and Charleston AFBs as depicted by the level playing field COBRA

**NORTHERN TIER MISSILE BASE  
REALIGNMENT/CLOSURE OPTIONS**

OPTIONS	ONE-TIME COST	ANNUAL RECURRING SAVINGS	NET PRESENT VALUE	ECONOMIC IMPACT
REALIGN GRAND FORKS MSLS AND MALMSTROM ACFT	\$29.3M	\$40.3M	\$501.3M	4.7% - Grand Forks 2.3% - Great Falls
REALIGN MINOT MSLS AND MALMSTROM ACFT	\$29.4M	\$41.2M	\$512.9	6.1% - Minot 2.3% - Great Falls
REALIGN FE WARREN MSLS AND MALMSTROM ACFT	\$101.7M	\$21.2M	\$181.1M	1.4% - Cheyenne 2.3% - Great Falls
CLOSE GRAND FORKS	\$81.4M	\$87.6M	\$1,088M	15.4% - Grand Forks
CLOSE MALMSTROM	\$96.4M	\$113.9M	\$1,378M	15.2% - Great Falls
CLOSE MINOT AND REALIGN MALMSTROM ACFT	TBD	TBD	TBD	TBD 2.3% - Great Falls

**AIRCRAFT TRANSFER OPTIONS**  
**CATEGORY: SMALL AIRCRAFT BASES**

CLOSURE BASE	RECEIVER BASES			
<b>CANNON</b> - 18 F-16 (B 50) - 36 F-16 (B 30) - 6 EF-111 - 25 F-111	<b>SHAW</b> 54 F-16 (B 50) 24 A/OA-10	<b>MOODY</b> 36 F-16 (B 40L) 24 A/OA-10 8 C-130	<b>HILL</b> 54 F-16 (B 40L) 15 F-16 (B30/AFR)	<b>NELLIS</b> FTR Weapons CTR Red Flag
	+ 18 F-16 (B 50)	+ 36 F-16 (B 30) - 36 F-16 (B 40L)	+ 36 F-16 (B 40L)	+ 6 EF-111 + 25 F-111
<b>MOODY</b> - 36 F-16 (B 40L) - 24 A/OA-10 - 8 C-130	<b>HILL</b> 54 F-16 (B 40L) 15 F-16 (B30/AFR)	<b>CANNON</b> 18 F-16 (B 50) 36 F-16 (B 30) 6 EF-111 25 F-111	<b>SHAW</b> 54 F-16 (B 50) 24 A/OA-10	<b>McCHORD</b> 48 C-141 <b>LITTLE ROCK</b> 76 C-130
	+ 18 F-16 (B 40L)	+ 18 F-16 (B 40L) - 18 F-16 (B 50)	+ 18 F-16 (B 50)	+ 24 A/OA-10 (MC) + 8 C-130 (LR)
<b>TYNDALL</b> - 72 F-15 (TF) - WEG - NORAD OPS CTR DRONE OPS	<b>EGLIN</b> 54 F-15 (CC)	<b>LANGLEY</b> 54 F-15 (CC)	<b>NELLIS</b> FTR Weapons CTR Red Flag	
	+ 72 F-15 (TF) + WEG - 54 F-15 (CC)	+ 18 F-15 (CC) + NORAD OPS CTR	+ 36 F-15 (CC)	

## **LUBBOCK COMMUNITY CONCERNS**

- **REASONS TO REJECT AIR FORCE DECISION AND CONSIDER OTHER BASES FOR CLOSURE:**
  - **AIR FORCE ACKNOWLEDGED DATA/CALCULATION ERRORS:**
    - SHORT CHANGED REESE AIRSPACE BY 10,000 CUBIC NAUTICAL MILES
    - REPORTED 55% FEWER MILITARY TRAINING ROUTES (MTRs) FOR REESE THAN NAUTICAL
    - PERCENT ADEQUATE PAVEMENT 10% GREATER THAN REPORTED
  - **MODELING ERRORS:**
    - ERRORS IN MODEL FORMULAS
    - REESE'S ALERT AREA NOT CONSIDERED
    - OUTLYING INSTRUMENT AIRFIELD (LUBBOCK INTERNATIONAL AIRPORT) NOT CONSIDERED
    - REESE'S OTHER PRIMARY OUTLYING FIELDS NOT CONSIDERED
  - **AIR FORCE AND NAVY TOOK ENTIRELY DIFFERENT APPROACHES TO EVALUATING MILITARY VALUE OF UPT BASES -- THIS ISSUE ALONE CONSTITUTES A SIGNIFICANT DEVIATION:**
- **REASONS TO TAKE REESE OFF THE LIST:**
  - MILITARY VALUE SUPERIOR TO OTHER BASES
  - BETTER QUALITY OF LIFE THAN OTHER BASES
  - COST EFFECTIVE, LOWEST COST PER FLYING HOUR, SECOND LOWEST COST PER STUDENT
  - LUBBOCK COMMUNITY IN CONCERT WITH REESE:
    - SAVES THE AIR FORCE OVER \$1M ANNUALLY IN MEDICAL COSTS

**CAN SAVE THE AIR FORCE OVER \$6M IN ONE TIME COSTS AND MILLIONS OF DOLLARS ANNUALLY WITH THEIR OTHER COST SAVING PROPOSALS**

**BASE ANALYSIS**  
**CATEGORY: UNDERGRADUATE PILOT TRAINING (UPT)**

CRITERIA	REESE, TX (C) (Closure)	RANDOLPH, TX	SHEPPARD, TX
AIR FORCE TIERING	III	I	I
BCEG RANK	5/5	1/5	Excluded
FUNC VALUES (JCSG)	6.22	6.53	Excluded
FUNC VALUES (Prelim 1)	6.64	7.12	Excluded
FUNC VALUES (Prelim 2)	6.5	5.2	Excluded
FORCE STRUCTURE	21 T-1A 48 T-37B 51 T-38	15 T-1A 57 T-37B 57 T-38 / 8 AT-38 10 T-43A	36 T-37B 31 T-38 / 8 AT-38
ONE-TIME COSTS (\$ M)	15.8	205.2	TBD
ANNUAL SAVINGS (\$ M)	19.7	18.0	TBD
RETURN ON INVEST	1 Year	15 Years	TBD
BASE OPERATING BUDGET (\$ M)	21.0	21.1	33.7
PERSONNEL ELIMINATED (MIL/CIV)	900 / 245	4,323 / 3,137	TBD
PERSONNEL REALIGNMENT(MIL / CIV)			
ECONOMIC IMPACT (BRAC95/CUM)	8,446 (3.1%)	12,579 (2.0%)	TBD
ENVIRONMENTAL	Siting	Asbestos, Siting, Water	TBD

(C) = DoD recommendation for closure

(R) = DoD recommendation for realignment

(\*) = Candidate for further consideration

**CATEGORY: UNDERGRADUATE PILOT TRAINING (UPT)  
STAFF ANALYSIS-I**

**REVISE WEIGHTINGS OF MEASURES OF MERIT**

<b>UPT-JCSG MEASURES OF MERIT</b>	<b>STAFF WEIGHT</b>	<b>REESE (C) (Closure)</b>	<b>COLUMBUS (*) (Closure)</b>	<b>LAUGHLIN (*) (Closure)</b>	<b>VANCE (*) (Closure)</b>
WEATHER	30	4.7	5.4	7.4	5.3
AIRSPACE	20	4.8	6.9	7.1	6.4
ENCROACHMENT	20	8.6	8.9	10.0	6.9
AIRFIELDS	15	8.2	8.9	7.7	9.2
MAINTENANCE FACILITIES	10	7.0	7.1	6.4	6.6
GROUND TRNG FACILITIES	5	7.9	7.4	7.3	7.8
<b>TOTAL:</b>	100	6.4	7.2	7.8	6.7
<b>RANK:</b>		4	2	1	3

<b>UNWEIGHTED</b>	SCORE	6.87	7.43	7.65	7.03
<b>AVERAGE</b>	RANK	4	2	1	3

(C) = DoD **recommendation** for closure  
 (R) = DoD **recommendation** for realignment  
 (\*) = *Candidate for further consideration*

**CATEGORY: UNDERGRADUATE PILOT TRAINING (UPT)**  
**STAFF ANALYSIS -II**  
CORRECT DATA

UPT-JCSG MEASURES OF MERIT	STAFF WEIGHT	REESE (C) (Closure)	COLUMBUS (*) (Closure)	LAUGHLIN (*) (Closure)	VANCE (*) (Closure)
WEATHER	30	4.7	4.7	7.0	4.3
AIRSPACE	20	4.1	4.0	5.7	6.0
ENCROACHMENT	20	8.6	8.9	10.0	6.9
AIRFIELDS	15	8.2	8.9	7.7	9.2
MAINTENANCE FACILITIES	10	7.0	7.1	6.4	6.6
GROUND TRNG FACILITIES	5	7.9	7.4	7.3	7.8
<b>TOTAL:</b>	100	6.3	6.4	7.4	6.3
<b>RANK:</b>		3	2	1	3

<b>UNWEIGHTED</b>	SCORE	6.75	6.83	7.35	6.80
<b>AVERAGE</b>	RANK	4	2	1	3

(C) = DoD **recommendation** for closure  
(R) = DoD **recommendation** for realignment  
(\*) = *Candidate for further consideration*

**CATEGORY: UNDERGRADUATE PILOT TRAINING (UPT)  
WHICH UPT BASE TO ADD**

**COLUMBUS**

- BEST UPT BASE FOR BOMBER/FIGHTER TRAINING
  - LOW PRESSURE ALTITUDE
  - LONG RUNWAY
  - READY ACCESS TO AIR-TO-GROUND GUNNERY RANGE
  - ADVANCED STUDENTS HAVE INSTRUMENT RATING
- FORMER SAC BASE--MISSION FLEXIBILITY

**LAUGHLIN**

- BEST UPT BASE FOR PRIMARY TRAINING
  - BEST FLYING WEATHER
  - UNENCROACHED AIRFIELDS
  - UNLIMITED AIRSPACE POTENTIAL
- FORMER SAC BASE--MISSION FLEXIBILITY

**VANCE**

- SIMILAR LAYOUT TO REESE
- WELL-SUITED FOR PRIMARY AND AIRLIFT/TANKER TRAINING
  - BEST AIRSPACE AND LOW ALTITUDE TRAINING ROUTE STRUCTURE
  - CROSSWIND RUNWAY CONFIGURATION
- LOW AND MEDIUM ALTITUDE OPERATIONS MINIMIZE ICING IMPACTS

## PLATTSBURGH AIR FORCE BASE

- 1993 Base Closure Commission found substantial deviation by the Secretary of Defense and closed Plattsburgh AFB, NY which had been selected by the Secretary of the Air Force as the East Coast Mobility Base. Instead, the Commission retained McGuire AFB, NJ and recommended the East Coast Mobility Base be established at McGuire.
  - One Time Cost to Close: \$131.2M
  - Annual Savings: \$ 56.6M
- The Plattsburgh community filed a lawsuit in December, 1993 and subsequent restraining order the following April, challenging the Commission recommendation. The suit was dropped following the unanimous Supreme Court decision on Philadelphia Naval Shipyard challenge.
- Commission has received numerous community requests to reconsider Plattsburgh as a Redirect/Reopening. These requests have come to the Commission ever since the July 1, 1993 report but have increased in the last few months.
- DoD has not forwarded any recommendation to the Commission concerning Plattsburgh AFB. General Ronald Fogleman, Air Force Chief of Staff, testified that the Air Force took the necessary action to place the mobility wing force structure into McGuire AFB, that the mobility wing in fact stood up in support of 1994 contingencies and that the Air Force was satisfied with the progress.
  - Plattsburgh AFB is scheduled to close on September 30, 1995
  - There is no force structure assigned to Plattsburgh

## MARCH AIR FORCE BASE, CA

- 1993 Defense Base Closure and Realignment Commission realigned March
  - Active force structure relocated to Travis AFB, CA
  - Base realigned as a Reserve Component installation
- Community has proposed realignment of Marine Corps helicopter units from El Toro and Tustin Marine Corps Air Stations as more cost effective than 1993 decision
  - 1993 Commission closed El Toro and Tustin and realigned force structure to NAS Miramar and Camp Pendleton at a cost of \$936.6M
  - Community suggests a savings of approximately \$326.0M by moving to March
- Air Force position is Marines would have to assume ownership and fiscal and management responsibilities for the base and become host to Reserve units
  - Navy adamantly opposed to opening a base in the face of other base closures/infrastructure reductions
- Navy has submitted a redirect of their 93 recommendation realigning their force structure at Miramar thus reducing the original MILCON cost estimates for Marine Corps move from El Toro  
New data not considered by the community

## NEWARK AIR FORCE BASE

- 1993 Base Closure Commission validated the DoD recommendation to close Newark AFB.
  - One Time Cost to Close: \$31.3M
  - Annual Savings: \$ 3.8M
  
- December 1994 - GAO Report on Newark recommended review of the decision to close Newark
  - Air Force base closure group validated closure costs increased to \$62.2M
  - The \$3.8M annual savings will not be realized
  
- 
- March 1995 - AF evaluated numerous options that would (1) relocate Newark AFB functions to other depots or (2) privatize the work
  - (1) AF estimated cost of \$309.2M to relocate the Newark workload to other depots resulting in:
    - One Time Cost to Close: \$371.4M
    - Annual Savings: \$ 9.6M
  - (2) AF estimated cost of \$723.5M from FY96 - FY00 to privatize the workload resulting in:
    - One Time Cost to Close: \$62.2M
    - Annual Costs: \$63.2M
  
- April 1995 - Coopers & Lybrand evaluated both AF estimates:
  - (1) C&L estimated a range of \$147.6M to \$430.1M to relocate the workload
  - (2) C&L estimated a range of \$588.8M to \$828.4M to privatize the workload
  
- May 1995 - AF published a request for proposals to perform the Newark workload due back to the Air Force on June 17, 1995. If the contractor proposals to perform the work at Newark are still significantly higher than previously calculated, the AF may ask the 1995 Commission to consider reopening Newark.

## OPERATIONS - LARGE AIRCRAFT and MISSILES Subcategories

### ANALYSIS RESULTS at TIERING (3 Nov)

The following grades and data reflect the information on which the BCEG members based their tiering determination. Information in this chart was updated as the result of a number of factors between initial tiering and final recommendations.

Base Name	<i>Mission (Flying) Requirements</i>	<i>Mission (Missile) Requirements</i>	<i>Facilities and Infrastructure</i>	<i>Contingency and Mobility</i>	<i>Costs and Manpower Implications</i>	<i>Return on Investment</i>	<i>Economic Impact</i>	<i>Community</i>	<i>Environmental Impact</i>
	I.1	I.2	II	III	IV	V	VI	VII	VIII
Altus AFB	Green	No Grade	Green -	Green -	433/ 18	20	4,392 (43.9%)	Yellow	Green -
Barksdale AFB	Green -	No Grade	Green -	Green -	221/-378	5	9,963 (7.0%)	Green -	Yellow
Beale AFB	Green	No Grade	Yellow +	Green -	199/-567	3	4,795 (10.0%)	Yellow	Yellow +
Charleston AFB	Green -	No Grade	Yellow +	Green -	423/-100	14	34,210 (14.9%)*	Yellow +	Yellow +
Dover AFB	Green	No Grade	Yellow	Green -	322/-314	8	8,215 (13.1%)	Green -	Red +
Dyess AFB	Green -	No Grade	Green -	Green -	132/-443	3	6,983 (12.7%)	Green -	Green -
Ellsworth AFB	Yellow +	No Grade	Green	Green -	41/-849	1	6,427 (12.6%)	Green -	Yellow
Fairchild AFB	Green -	No Grade	Green -	Green -	300/-306	8	7,850 (4.5%)	Yellow +	Yellow +
Grand Forks AFB	Yellow +	Red	Green -	Yellow +	129/-731	2	7,054 (16.7%)	Yellow +	Yellow +
Little Rock AFB	Green -	No Grade	Green -	Green -	328/-347	8	7,798 (2.9%)	Yellow +	Yellow +
Malmstrom AFB	Green -	Green	Green -	Yellow	32/-797	1	6,722 (19.4%)	Yellow +	Green -
McConnell AFB	Green -	No Grade	Green -	Green -	224/-347	6	5,760 (2.3%)	Green -	Yellow +
McGuire AFB	Green	No Grade	Yellow +	Green -	624/-386	10	32,627 (1.4%)*	Yellow +	Yellow
Minot AFB	Green -	Yellow	Green -	Yellow +	59/-801	1	7,320 (29.7%)	Green -	Green -
Offutt AFB	Yellow +	No Grade	Green	Yellow +	515/-151	13	16,085 (4.8%)	Green -	Yellow +
Scott AFB	Yellow	No Grade	Yellow +	Yellow	240/-528	5	16,245 (1.4%)	Yellow +	Yellow +
Travis AFB	Green	No Grade	Yellow	Green -	846/-207	14	31,570 (14.8%)*	Yellow +	Yellow
Whiteman AFB	Green -	No Grade	Green -	Yellow +	326/-383	7	4,551 (12.3%)	Yellow +	Green -

**OPERATIONS - LARGE AIRCRAFT and MISSILES Subcategories****TIERING OF BASES**

As an intermediate step in the Air Force Process, the BCEG members established the following tiering of bases based on the relative merit of bases within the subcategory as measured using the eight selection criteria. Tier I represents the highest relative merit,

**TIER I**

---

Altus AFB  
Barksdale AFB  
Charleston AFB  
Dover AFB  
Dyess AFB  
Fairchild AFB  
Little Rock AFB  
McConnell AFB  
Travis AFB  
Whiteman AFB

**TIER II**

---

Beale AFB  
Malmstrom AFB  
McGuire AFB  
Minot AFB  
Offutt AFB

**TIER III**

---

Ellsworth AFB  
Grand Forks AFB  
Scott AFB

## OPERATIONS - SMALL AIRCRAFT Subcategory

### ANALYSIS RESULTS at TIERING (25 Oct)

The following grades and data reflect the information on which the BCEG members based their tiering determination. Information in this chart was updated as the result of a number of factors between initial tiering and final recommendations.

*Mission (Flying) Requirements*     
 *Facilities and Infrastructure*     
 *Contingency and Mobility*     
 *Costs and Manpower Implications*     
 *Return on Investment*     
 *Economic Impact*     
 *Community*     
 *Environmental Impact*

Base Name	I.1	II	III	IV	V	VI	VII	VIII
Cannon AFB	Yellow	Green -	Yellow +	73/-502	2	7,479 (31.5%)	Yellow -	Yellow +
Davis-Monthan AFB	Green -	Green -	Green -	360/-16	17	9,746 (3.1%)	Yellow +	Yellow +
Holloman AFB	Yellow +	Green -	Green -	257/-633	4	8,625 (47.5%)	Yellow	Yellow -
Hurlburt Fld	Green -	Green -	Yellow +	129/-400	4	9,381 (14.4%)	Green -	Yellow
Langley AFB	Green -	Green -	Yellow +	294/-517	5	16,372 (2.5%)*	Green -	Yellow
Luke AFB	Green -	Yellow	Yellow	180/-343	5	11,002 (1.0%)	Yellow +	Yellow +
Moody AFB	Green -	Green -	Yellow +	98/-438	2	5,477 (16.1%)	Yellow +	Yellow +
Mt Home AFB	Yellow +	Green -	Green -	245/-414	5	5,269 (69.7%)	Yellow	Yellow
Seymour Johnson AFB	Green -	Green -	Green -	179/-462	4	7,452 (17.5%)	Yellow	Yellow +
Shaw AFB	Green -	Green -	Yellow +	194/-513	4	7,852 (19.5%)	Yellow +	Yellow +
Tyndall AFB	Green -	Green -	Yellow +	179/-373	5	7,503 (13.0%)	Yellow	Yellow +

UNCLASSIFIED

## OPERATIONS - SMALL AIRCRAFT Subcategory

### TIERING OF BASES

As an intermediate step in the Air Force Process, the BCEG members established the following tiering of bases based on the relative merit of bases within the subcategory as measured using the eight selection criteria. Tier I represents the highest relative merit,

#### TIER I

---

Davis-Monthan AFB

Langley AFB

#### TIER II

---

Hurlburt Fld

Luke AFB

Mt Home AFB

Seymour Johnson AFB

Shaw AFB

Tyndall AFB

#### TIER III

---

Cannon AFB

Holloman AFB

Moody AFB

UNCLASSIFIED

## UNDERGRADUATE FLYING TRAINING

### ANALYSIS RESULTS at TIERING (18 Oct)

The following grades and data reflect the information on which the BCEG members based their tiering determination. Information in this chart was updated as the result of a number of factors between initial tiering and final recommendations.

Base Name	<i>Mission (Flying) Requirements</i> I.1	<i>Facilities and Infrastructure</i> II	<i>Contingency and Mobility</i> III	<i>Costs and Manpower Implications</i> IV	<i>Return on Investment</i> V	<i>Economic Impact</i> VI	<i>Community</i> VII	<i>Environmental Impact</i> VIII
<b>Columbus AFB</b>	Green	Green	Yellow	17/-333	1	3,423 (8.4%)	Yellow +	Yellow
<b>Laughlin AFB</b>	Yellow +	Green -	Yellow -	25/-275	2	4,115 (27.1%)	Yellow	Yellow +
<b>Randolph AFB</b>	Green -	Green -	Yellow	204/-59	13	12,579 (2.0%)	Green -	Yellow -
<b>Reese AFB</b>	Red	Green -	Yellow -	15/-259	1	3,446 (3.1%)	Green -	Yellow
<b>Vance AFB</b>	Green	Green -	Yellow -	14/-254	1	3,040 (11.6%)	Green -	Yellow +

## UNDERGRADUATE FLYING TRAINING

### TIERING OF BASES

As an intermediate step in the Air Force Process, the BCEG members established the following tiering of bases based on the relative merit of bases within the subcategory as measured using the eight selection criteria. Tier I represents the highest relative merit,

#### TIER I

---

Columbus AFB

Laughlin AFB

Randolph AFB

Vance AFB

#### TIER III

---

Reese AFB

## INDUSTRIAL/TECHNICAL SUPPORT - DEPOT Subcategory

### ANALYSIS RESULTS at TIERING (13 Sep)

The following grades and data reflect the information on which the BCEG members based their tiering determination. Information in this chart was updated as the result of a number of factors between initial tiering and final recommendations.

*Satellite Control Operations*     
 *Facilities and Infrastructure*     
 *Contingency and Mobility*     
 *Costs and Manpower Implications*     
 *Return on Investment*     
 *Economic Impact*     
 *Community*     
 *Environmental Impact*

Base Name	I.3	II	III	IV	V	VI	VII	VIII
Hill AFB	Green -	Yellow +	Green -	1,409/ 514	30	38,748 (6.8%)	Green -	Yellow +
Kelly AFB	Yellow	Green -	Yellow +	653/-179	10	41,125 (6.4%)	Green -	Red +
McClellan AFB	Yellow +	Yellow +	Yellow +	514/-607	5	32,438 (5.2%)*	Yellow	Yellow +
Robins AFB	Green -	Green -	Green	1,011/ 133	18	32,004 (24.3%)	Green -	Yellow +
Tinker AFB	Yellow +	Green -	Green	1,312/ 633	42	47,590 (10.1%)	Green -	Yellow +

**INDUSTRIAL/TECHNICAL SUPPORT - DEPOT Subcategory****TIERING OF BASES**

As an intermediate step in the Air Force Process, the BCEG members established the following tiering of bases based on the relative merit of bases within the subcategory as measured using the eight selection criteria. Tier I represents the highest relative merit,

**TIER I**

---

Hill AFB  
Tinker AFB

**TIER II**

---

Robins AFB

**TIER III**

---

Kelly AFB  
McClellan AFB

## INDUSTRIAL/TECHNICAL SUPPORT - PRODUCT CENTERS and LABORATORIES Subcategory

### ANALYSIS RESULTS at TIERING (20 Oct)

The following grades and data reflect the information on which the BCEG members based their tiering determination. Information in this chart was updated as the result of a number of factors between initial tiering and final recommendations.

Base Name	<i>Flying Operations</i>	<i>Product Center/ Lab Evaluation</i>	<i>Facilities and Infrastructure</i>	<i>Contingency and Mobility</i>	<i>Costs and Manpower Implications</i>	<i>Return on Investment</i>	<i>Economic Impact</i>	<i>Community</i>	<i>Environmental Impact</i>
Base Name	I.1	I.5	II	III	IV	V	VI	VII	VIII
<b>Brooks AFB</b>	Red	Yellow	Green -	Red +	246/-78	10	7,723 (1.2%)	Green -	Red +
<b>Hanscom AFB</b>	Red	Green -	Yellow +	Red +	421/-158	9	18,769 (1.0%)*	Green -	Yellow +
<b>Kirtland AFB</b>	Yellow +	Green -	Yellow +	Yellow	448/-469	6	20,364 (8.0%)	Green -	Green -
<b>Los Angeles AFB</b>	Red	Yellow +	Yellow	Red +	450/-142	10	22,935 (0.6%)*	Yellow	Green -
<b>Rome Lab</b>	Red	Yellow +	Green -	Red +	134/112	100+	10,931 (8.2%)*	Yellow +	Yellow +
<b>Wright-Patterson AFB</b>	Yellow +	Green -	Yellow +	Green -	1,567/ 834	49	52,399 (11.9%)	Green -	Yellow -

# INDUSTRIAL/TECHNICAL SUPPORT - PRODUCT CENTERS and LABORATORIES Subcategory

## TIERING OF BASES

As an intermediate step in the Air Force Process, the BCEG members established the following tiering of bases based on the relative merit of bases within the subcategory as measured using the eight selection criteria. Tier I represents the highest relative merit,

### TIER I

---

Hanscom AFB  
Rome Lab  
Wright-Patterson AFB

### TIER II

---

Kirtland AFB  
Los Angeles AFB

### TIER III

---

Brooks AFB

## AIR RESERVE COMPONENT - AIR FORCE RESERVE Subcategory

### OVERALL

*Mission (Flying)  
Requirements*

*Facilities and  
Infrastructure*

*Contingency  
and Mobility*

*Costs and  
Manpower  
Implications*

*Return on  
Investment*

*Economic  
Impact*

*Community*

*Environmental  
Impact*

Base Name	I.1	II	III	IV	V	VI	VII	VIII
Bergstrom ARB	Yellow -	Yellow	Yellow +	34/-84	2	1,513 (0.3%)*	Green -	Green
Carswell AFB	Yellow	Yellow +	Yellow	26/ 55	Never	975 (0.1%)	Green -	Green
Dobbins ARB	Yellow +	Green -	Yellow	20/-110	3	10,774 (0.6%)	Green -	Green -
Gen Mitchell IAP ARS	Yellow +	Yellow	Yellow	13/-124	1	629 (0.1%)	Green -	Green -
Greater Pittsburgh IAP ARS	Green -	Yellow +	Yellow	14/-138	1	701 (0.1%)	Green -	Green -
Grissom AFB	Yellow +	Yellow +	Yellow	81/-161	5	3,757 (4.3%)*	Green -	Yellow +
Homestead ARB	Yellow +	Yellow +	Yellow	8/-194	0	693 (0.1%)*	Green -	Yellow
March ARB	Yellow +	Yellow	Green -	184/-212	7	18,772 (1.8%)*	Green -	Yellow -
Minneapolis-St Paul IAP ARS	Yellow +	Green -	Yellow -	14/-119	2	1,111 (0.1%)*	Green -	Yellow +
NAS Willow Grove ARS	Yellow +	Yellow	Yellow	12/-60	3	26,933 (1.0%)*	Green -	Green -
Niagara Falls IAP ARS	Yellow +	Yellow +	Yellow	14/ 115	1	1,039 (1.1%)*	Green -	Yellow +
O'Hare IAP, ARS	Green -	Yellow +	Yellow	14/-152	1	4,584 (0.1%)*	Green -	Green -
Westover ARB	Green -	Yellow	Green -	149/ 190	7	2,268 (0.8%)*	Green -	Yellow +
Youngstown-Warren MPT ARS	Yellow +	Yellow +	Yellow -	13/-107	2	1,193 (0.5%)	Green -	Green -

# BACKUP SLIDES II

#2

SLIDE	CONTENTS
AF-201.	Large Aircraft Bases: Force Structure (PAA)
AF-202.	Base Analysis: Large Aircraft Category (Ellsworth, Scott AFBs)
AF-203.	Base Analysis: Large Aircraft Category (Ellsworth, Scott, McGuire AFBs)
AF-204.	Northern Tier Missile Base Realignment/Closure Options
AF-205.	Aircraft Transfer Options: Small Aircraft Category
AF-206.	Lubbock Community Concerns
AF-207.	Base Analysis: Undergraduate Pilot Training Bases
AF-208.	Base Analysis: Undergraduate Pilot Training Bases (Reese, Randolph, Sheppard)
AF-209.	Staff Analysis I: Undergraduate Pilot Training Bases
AF-210.	Staff Analysis II: Undergraduate Pilot Training Bases
AF-211.	Installation Characteristics: Undergraduate Pilot Training Bases
AF-212.	Base Analysis: Air Force Reserve (F-16), Closure and Relocation
AF-213.	Plattsburgh Air Force Base
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AF-216.	Vol. V Chart - Large Aircraft/Missiles - Tiering (Nov 3)
AF-217.	Vol. V Chart - Large Aircraft/Missiles - Tiering
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AF-220.	Vol. V Chart - Undergraduate Flying Training - Tiering (Oct 18)
AF-221.	Vol. V Chart - Undergraduate Flying Training - Tiering
AF-222.	Vol. V Chart - Depot - Tiering (Sep 13)
AF-223.	Vol. V Chart - Depot - Tiering
AF-224.	Vol. V Chart - Product Centers/Laboratories - Tiering (Oct 20)
AF-225.	Vol. V Chart - Product Centers/Laboratories - Tiering
AF-226.	Vol. V Chart - Air Force Reserve - Overall
AF-227.	Receiver Demand v. Total Tanker Basing Map

← Focused on  
#212  
MAC  
HOW  
RNR  
BOM

# Document Separator

## AIR FORCE CATEGORIES

CATEGORY	NUMBER
MISSILES	4
LARGE AIRCRAFT	22
SMALL AIRCRAFT	15
UNDERGRADUATE PILOT TRAINING	5
DEPOTS	5
LABS & PRODUCT CENTERS	6
TEST & EVALUATION	4
SPACE SUPPORT	3
SATELLITE CONTROL	2
AIR FORCE RESERVE	14
AIR NATIONAL GUARD	13
ADMINISTRATIVE	4
TECHNICAL TRAINING	4

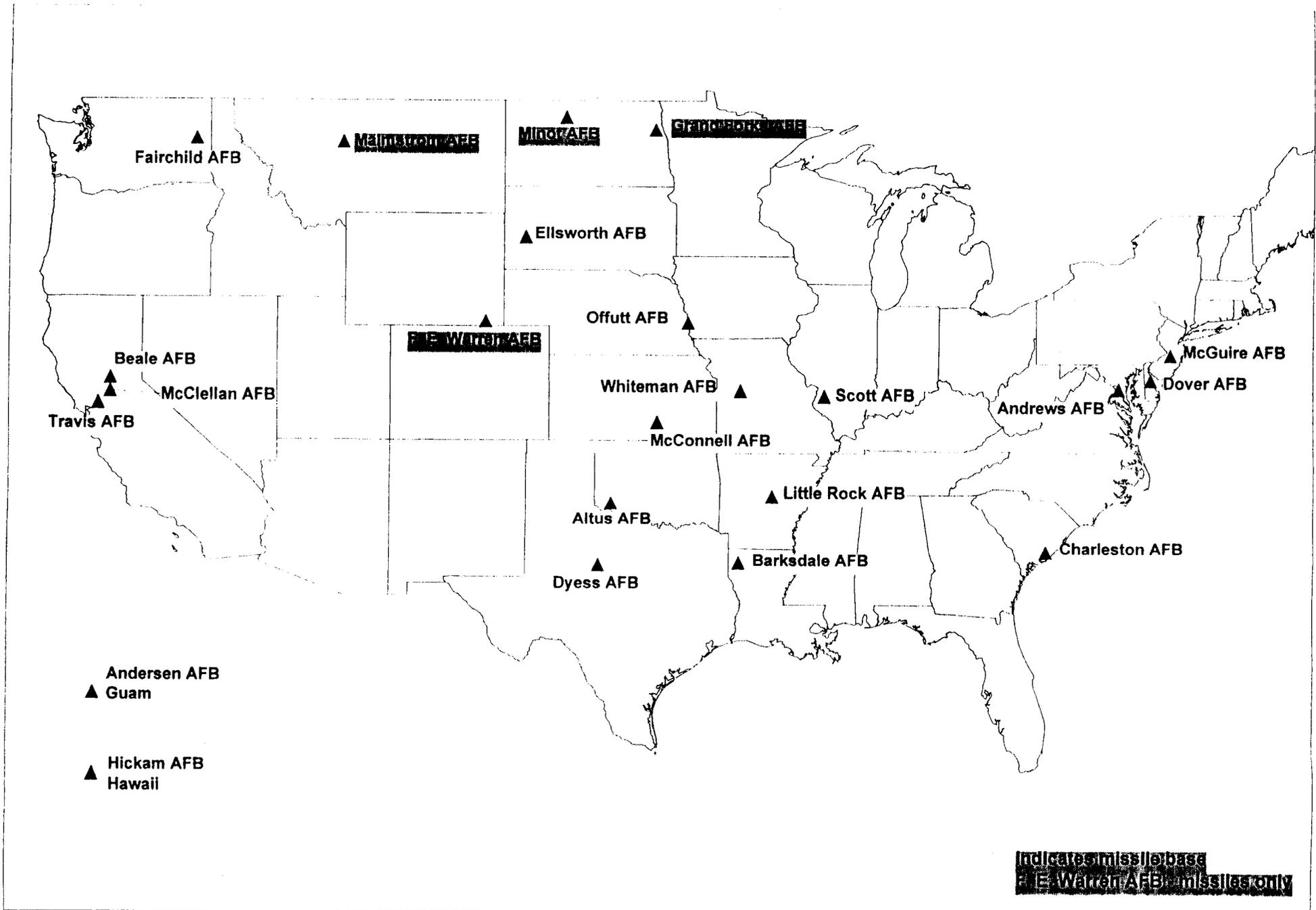
HIGHLIGHTED CATEGORIES HAVE CANDIDATES FOR FURTHER CONSIDERATION.

**AIR FORCE**  
**CATEGORY: MISSILE/LARGE AIRCRAFT**

TIER	INSTALLATION	TIER	INSTALLATION
I	Altus AFB, OK	Excl	Hickam AFB, HI
Excl	Andersen AFB, GU	I	Little Rock AFB, AR
Excl	Andrews AFB, MD	II	<i>Malmstrom AFB, MT</i> (M)(R) (*)
I	Barksdale AFB, LA	Excl	McChord AFB, WA
II	Beale AFB, CA	I	McConnell AFB, KS
I	Charleston AFB, SC	II	McGuire AFB, NJ
I	Dover AFB, DE	II	<i>Minot AFB, ND</i> (M) (*)
I	Dyess AFB, TX	II	Offutt AFB, NE
III	Ellsworth AFB, SD	III	Scott AFB, IL
Excl	<i>F.E. Warren AFB, WY</i> (M) (*)	I	Travis AFB, CA
I	Fairchild AFB, WA	I	Whiteman AFB, MO
III	<i>Grand Forks AFB, ND</i> (M) (R) (*)		

- (C) = DoD recommendation for closure  
 (R) = DoD recommendation for realignment  
 (\*) = Candidate for further consideration  
 (M) = Missile Base

# Missile/Large Aircraft Bases



2

## **MISSILE/LARGE AIRCRAFT CAPACITY ANALYSIS**

### **AIR FORCE**

- **Determined an excess of 1 missile base**
- **Determined an excess of approximately 2-3 large aircraft bases**
  - **1-2 Bomber bases**
  - **1 Airlift base**
  - **Included Depot airfield capacity**
- **Recommended relocation of Malmstrom AFB KC-135 operations and closure of airfield except for helicopter support activity**

## AIR FORCE MISSILE BASES

TIER	INSTALLATION
Excluded	<i>F.E. WARREN AFB, WY</i> (*)
III	<i>GRAND FORKS AFB, ND</i> (R)(*)
II	<i>MALMSTROM AFB, MT</i> (R)(*)
II	<i>MINOT AFB, ND</i> (**)(*)

(C) = DoD recommendation for closure

(R) = DoD recommendation for realignment

(\*) = *Candidate for further consideration*

(\*\*) = March 7, 1995 Commission Add for realignment (Missile Field)

## NORTHERN TIER MISSILE BASES DOD RECOMMENDATIONS VERSUS COMPLETE CLOSURES

	GRAND FORKS, ND	MINOT, ND	MALMSTROM, MT	FE WARREN, WY
<b>MISSILES</b>				
MINUTEMAN III MISSILES	<b>150 DOD RECOMMENDED FOR REALIGNMENT</b>  • Low ranked mil effectiveness and maintenance	150 Not Recommended but added by Commission  • Middle ranked mil effectiveness and maintenance	200 Not Recommended  • High ranked mil effectiveness and maintenance	150 Excluded  • Peacekeeper drawdown and START
PEACEKEEPER MISSILES	0	0	0	50
<b>AIRCRAFT</b>				
KC-135 AIRCRAFT	48 Not Recommended  • Core Tanker Base	0	<b>12 DOD RECOMMENDED FOR REALIGNMENT</b>  • Operating limitations	0
B-52 AIRCRAFT	0	12 Not Recommended  • USAF not seeking to relocate bombers	0	0

**Note: 80 launchers at Malmstrom AFB currently have Minuteman III missiles in place; 120 are awaiting conversion to Minuteman III when missiles become available.**

## BASE ANALYSIS

### CATEGORY: MISSILE/LARGE AIRCRAFT

**DOD RECOMMENDATION:** Realign Malmstrom AFB by relocating the 43rd Air Refueling Group to MacDill AFB.

CRITERIA	MALMSTROM, MT (R)(*) (Realign KC-135 Acft)
AIR FORCE TIERING	II
BCEG RANK	11/18
FORCE STRUCTURE	80 MINUTEMAN III 120 MINUTEMAN X 12 KC-135 Aircraft
ONE-TIME COSTS (\$ M)	17.4
ANNUAL SAVINGS (\$ M)	5.1
RETURN ON INVESTMENT	4 Years
BASE OPERATING BUDGET (\$ M)	21.8
PERSONNEL ELIMINATED (MIL/CIV)	0/0
PERSONNEL REALIGNED (MIL/CIV)	719/19
ECONOMIC IMPACT (BRAC95/CUM)	3.0%/3.0%
ENVIRONMENTAL	Asbestos/Siting

(C) = DoD recommendation for closure

(R) = DoD recommendation for realignment

(\*) = *Candidate for further consideration*

(\*\*) = March 7, 1995 Commission Add for realignment (Missile Field)

## BASE ANALYSIS

### CATEGORY: MISSILE/LARGE AIRCRAFT

**DOD RECOMMENDATION:** Realign Grand Forks AFB by inactivating the 321st Missile Group.

CRITERIA	GRAND FORKS, ND (R)(*) (Realign MM III)	MINOT, ND (**)(*) (Realign MM III)
AIR FORCE TIERING	III	II
BCEG RANK	17/18	15/18
FORCE STRUCTURE	150 MINUTEMAN III 48 KC-135 Aircraft	150 MINUTEMAN III 12 B-52 Aircraft
ONE-TIME COSTS (\$ M)	11.9	12.0
ANNUAL SAVINGS (\$ M)	35.2	36.0
RETURN ON INVESTMENT	Immediate	Immediate
BASE OPERATING BUDGET (\$ M)	26.7	26.7
PERSONNEL ELIMINATED (MIL/CIV)	802/35	809/46
PERSONNEL REALIGNED (MIL/CIV)	0/0	0/0
ECONOMIC IMPACT (BRAC95/CUM)	2.4%/2.4%	3.1%/3.1%
ENVIRONMENTAL	Asbestos/Siting	Siting

(C) = DoD recommendation for closure

(R) = DoD recommendation for realignment

(\*) = *Candidate for further consideration*

(\*\*) = March 7, 1995 Commission Add for realignment (Missile Field)



**BASE ANALYSIS**  
**CATEGORY: MISSILE/LARGE AIRCRAFT**

CRITERIA	GRAND FORKS, ND (R)(*) (Realign MM III)	MINOT, ND (**)(*) (Realign MM III)	F.E. WARREN, WY (*) (Realign MM III)	MALMSTROM, MT (R)(*) (Closure)
AIR FORCE TIERING	III	II	Excluded	II
BCEG RANK	17/18	15/18	Excluded	11/18
FORCE STRUCTURE	150 MINUTEMAN III 48 KC-135 Aircraft	150 MINUTEMAN III 12 B-52 Aircraft	150 MINUTEMAN III 50 PEACEKEEPER	80 MINUTEMAN III 120 MINUTEMAN X 12 KC-135 Aircraft
ONE-TIME COSTS (\$ M)	11.9	12.0	84.3	96.4
ANNUAL SAVINGS (\$ M)	35.2	36.0	16.1	113.9
RETURN ON INVESTMENT	Immediate	Immediate	3 Years	1 Year
BASE OPERATING BUDGET (\$ M)	26.7	26.7	16.9	21.8
PERSONNEL ELIMINATED (MIL/CIV)	802/35	809/46	376/27	2,132/277
PERSONNEL REALIGNED (MIL/CIV)	0/0	0/0	103/5	1,135/182
ECONOMIC IMPACT (BRAC95/CUM)	2.4%/2.4%	3.1%/3.1%	1.4%/1.4%	9.3%/9.3%
ENVIRONMENTAL	Asbestos/Siting	Siting	Siting	Asbestos/Siting

(C) = DoD recommendation for closure

(R) = DoD recommendation for realignment

(\*) = *Candidate for further consideration*

(\*\*) = March 7, 1995 Commission Add for realignment (Missile Field)

**BASE ANALYSIS**  
**CATEGORY: MISSILE/LARGE AIRCRAFT**

CRITERIA	MALMSTROM, MT (R)(*) (Closure)	GRAND FORKS, ND (R)(*) (Closure)	MINOT, ND (**)(*) (Closure)
AIR FORCE TIERING	II	III	II
BCEG RANK	11/18	17/18	15/18
FORCE STRUCTURE	80 MINUTEMAN III 120 MINUTEMAN X 12 KC-135 Aircraft	150 MINUTEMAN III 48 KC-135 Aircraft	150 MINUTEMAN III 12 B-52 Aircraft
ONE-TIME COSTS (\$ M)	96.4	81.4	230.4
ANNUAL SAVINGS (\$ M)	113.9	87.6	98.2
RETURN ON INVESTMENT	1 Year	1 Year	2 Years
BASE OPERATING BUDGET (\$M)	21.8	26.7	26.7
PERSONNEL ELIMINATED (MIL/CIV)	2,132/277	1,597/116	1,846/230
PERSONNEL REALIGNED (MIL/CIV)	1,135/182	2,354/309	1,947/261
ECONOMIC IMPACT (BRAC95/CUM)	9.3%/9.3%	12.7%/12.7%	15.8%/15.8%
ENVIRONMENTAL	Asbestos/Siting	Asbestos/Siting	Siting

(C) = DoD recommendation for closure

(R) = DoD recommendation for realignment

(\*) = *Candidate for further consideration*

(\*\*) = March 7, 1995 Commission Add for realignment (Missile Field)

## BASE ANALYSIS

### CATEGORY: MISSILE/LARGE AIRCRAFT

**FOR CONSIDERATION:** Study Grand Forks , Minot, and Malmstrom AFBs for **REALIGNMENT** or **CLOSURE** and F.E. Warren AFB for **REALIGNMENT**.

CRITERIA	GRAND FORKS, ND (R)(*) (Closure)	MINOT, ND (**)(*) (Closure)	MALMSTROM, MT (R)(*) (Closure)	F.E. WARREN, WY (*) (Realign MM III)
AIR FORCE TIERING	III	II	II	Excluded
BCEG RANK	17/18	15/18	11/18	Excluded
FORCE STRUCTURE	150 MINUTEMAN III 48 KC-135 Aircraft	150 MINUTEMAN III 12 B-52 Aircraft	80 MINUTEMAN III 120 MINUTEMAN X 12 KC-135 Aircraft	150 MINUTEMAN III 50 PEACEKEEPER
ONE-TIME COSTS (\$ M)	81.4	230.4	96.4	84.3
ANNUAL SAVINGS (\$ M)	87.6	98.2	113.9	16.1
RETURN ON INVESTMENT	1 Year	2 Years	1 Year	3 Years
BASE OPERATING BUDGET (\$M)	26.7	26.7	21.8	16.9
PERSONNEL ELIMINATED (MIL/CIV)	1,597/116	1,846/230	2,132/277	376/27
PERSONNEL REALIGNED (MIL/CIV)	2,354/309	1,947/261	1,135/182	103/5
ECONOMIC IMPACT (BRAC95/CUM)	12.7%/12.7%	15.8%/15.8%	9.3%/9.3%	1.4%/1.4%
ENVIRONMENTAL	Asbestos/Siting	Siting	Asbestos/Siting	Siting

- (C) = DoD recommendation for closure  
 (R) = DoD recommendation for realignment  
 (\*) = *Candidate for further consideration*  
 (\*\*) = March 7, 1995 Commission Add for realignment (Missile Field)

## MISSILE/LARGE AIRCRAFT BASES MAJOR ISSUES

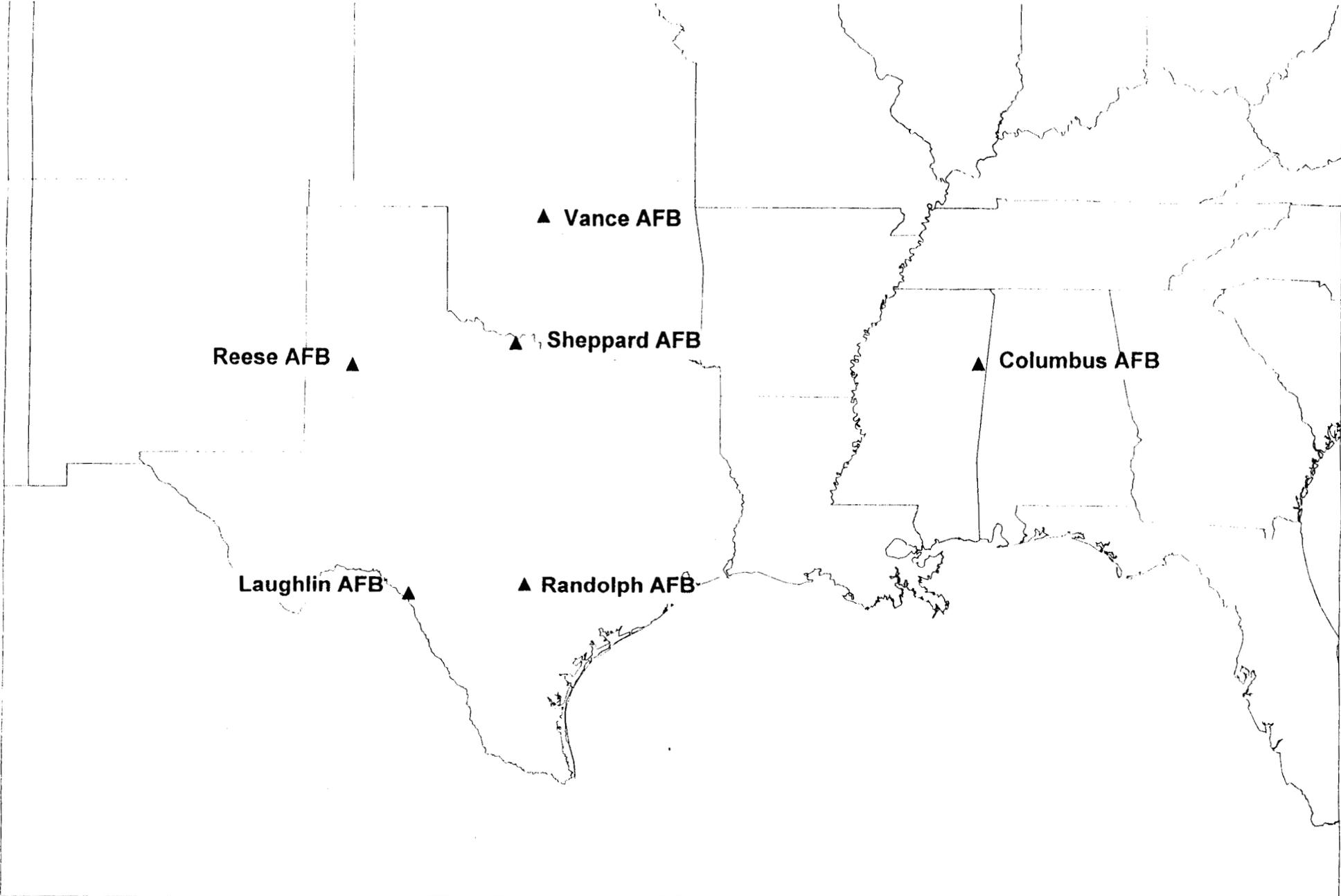
MAJOR ISSUES	GRAND FORKS, ND	MINOT, ND	MALMSTROM, MT	F.E. WARREN, WY
Anti Ballistic Missile Site	Yes	No	No	No
Force Structure	Consistent with Nuclear Posture Review 500 MM III 3,500 Total TRIAD	Consistent with Nuclear Posture Review 500 MM III 3,500 Total TRIAD	Consistent with Nuclear Posture Review 450 MM III 3,500 Total TRIAD	Consistent with Nuclear Posture Review 500 MM III 3,500 Total TRIAD
Survivability	Hardened Silos Compact Field	Hardened Silos Compact Field	Hardened Silos Expansive Field	Hardened Silos Compact Field
Maintainability	Single System Compact Field 99% Alert Rate	Single System Compact Field 99% Alert Rate	Two Systems Expansive Field 99% Alert Rate	Single System Compact Field 99% Alert Rate
Total on site depot support costs 1993-1995 (Water intrusion, wind anomalies, etc.) (\$ M)	8.1	7.0	11.4	10.4
Annual on site depot support costs per launch facility	\$18,101 per launch facility	\$15,670 per launch facility	\$19,162 per launch facility	\$23,028 per launch facility
Tanker saturation in Northwest	Yes	N/A	Yes	N/A
Airfield Elevation	911 Ft.	1,660 Ft.	3,526 Ft.	N/A

**AIR FORCE**  
**CATEGORY: UNDERGRADUATE PILOT TRAINING (UPT) BASES**

TIER	INSTALLATION
<i>I</i>	<i>Columbus AFB, MS</i> (*)
<i>I</i>	<i>Laughlin AFB, TX</i> (*)
I	Randolph AFB, TX
III	Reese AFB, TX (X) (C)
Excl	Sheppard AFB, TX
<i>I</i>	<i>Vance AFB, OK</i> (X) (*)

- (C) = DoD recommendation for closure  
(X) = Joint Cross-Service Group option for closure  
(\*) = *Candidate for further consideration*

# Undergraduate Pilot Training Bases



## BASE ANALYSIS

### CATEGORY: UNDERGRADUATE PILOT TRAINING (UPT)

**DOD RECOMMENDATION:** Close Reese, Inactivate 64th Flying Training Wing, Relocate/Retire other assigned aircraft.  
**FOR CONSIDERATION:** Study Columbus, Laughlin, and Vance AFBs **FOR CLOSURE**.

CRITERIA	REESE, TX (X) (C) Closure	COLUMBUS, MS (* ) Closure	LAUGHLIN, TX (* ) Closure	VANCE, OK (X) (* ) Closure
AIR FORCE TIERING	III	I	I	I
BCEG RANK	5/5	2/5	3/5	3/5
FUNC VALUE: Air Force/JCSG	6.22 (Red)	6.74 (Green)	6.50 (Yellow +)	6.67 (Green)
FUNC VALUE: Staff Analysis I	6.4	7.2	7.8	6.7
FUNC VALUE: Staff Analysis II	6.3	6.4	7.4	6.3
FORCE STRUCTURE	21 T-1A 48 T-37B 51 T-38	45 T-37B 57 T-38/21 AT-38	21 T-1A 48 T-37B 51 T-38	46 T-37B 69 T-38
ONE-TIME COSTS (\$ M)	15.8	18.2	25.9	14.7
ANNUAL SAVINGS (\$ M)	19.7	25.3	21.6	19.5
RETURN ON INVESTMENT	1 Year	1 Year	2 Years	1 Year
BASE OPERATING BUDGET (\$ M)	21.0	26.3	23.7	26.3
PERSONNEL ELIMINATED(MIL/CIV)	209/0	315/0	282/101	202/0
PERSONNEL REALIGNED(MIL/CIV)	691/245	750/252	749/644	645/208
ECONOMIC IMPACT (BRAC95/CUM)	1.2%/1.2%	6.3%/6.3%	18.8%/18.8%	11.0%/11.0%
ENVIRONMENTAL	Siting	Asbestos	Asbestos	Asbestos

- (C) = DoD recommendation for closure  
(R) = DoD recommendation for realignment  
(X) = Joint Cross-Service Group option for closure  
(\*) = Candidate for further consideration

# **STAFF METHODOLOGY**

## **CATEGORY: UNDERGRADUATE PILOT TRAINING (UPT)**

### **STAFF ANALYSIS - I**

OBJECTIVE: Test the validity of Air Force Analysis

METHODOLOGY:

- Utilize UPT Joint Cross-Service Group computer model and corrected data
- Consider UPT Measures of Merit relevant to Air Force UPT
- Delete those Measures of Merit considered in CRITERIA II through VIII
- Modify Weighting Factors in accordance with Staff judgment of Air Force priorities
- Determine a Functional Value score for each Air Force UPT Base
  - Apply result to CRITERIA I, "MISSION REQUIREMENTS: FLYING TRAINING"

### **STAFF ANALYSIS - II**

OBJECTIVE: Assess impact of making data corrections

METHODOLOGY:

- Use Analysis I as starting point
- Change data to reflect corrections to UPT-JCSG and Air Force data calls

**AIR FORCE**  
**CATEGORY: AIR FORCE RESERVE BASES**

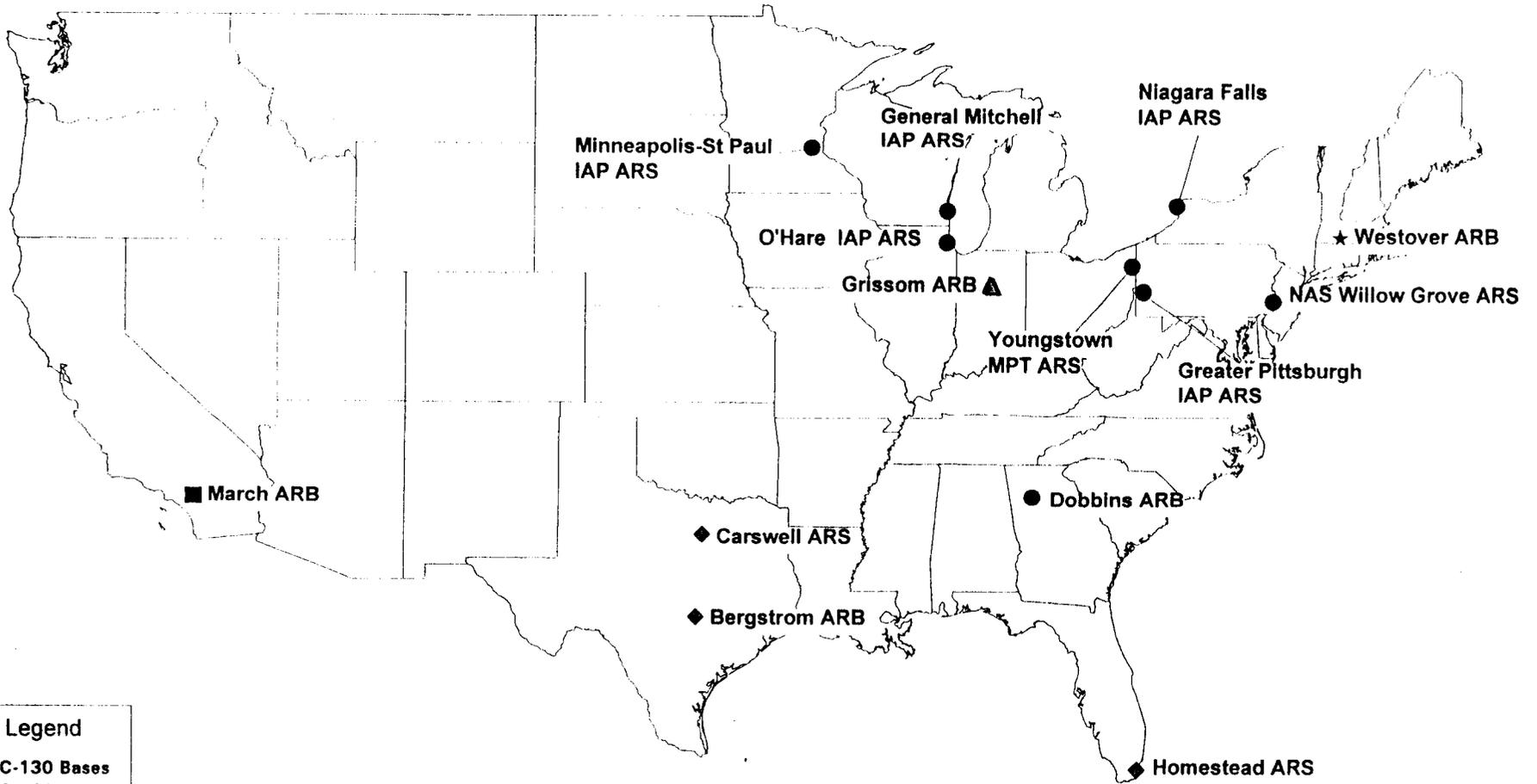
Bergstrom ARB, TX	(C)	March ARB, CA	
<i>Carswell ARB, TX</i>	<i>(*)</i>	<i>Minneapolis-St. Paul IAP ARS, MN</i>	<i>(*)</i>
Dobbins ARB, GA		NAS Willow Grove ARS, PA	
<i>Gen Mitchell IAP ARS, WI</i>	<i>(*)</i>	<i>Niagara Falls IAP ARS, NY</i>	<i>(*)</i>
Greater Pittsburgh IAP ARS, PA	(C)	<i>O'Hare IAP ARS, IL</i>	<i>(*)</i>
Grissom ARB, IN		Westover ARB, MA	
<i>Homestead ARS, FL</i>	<i>(R)(*)</i>	<i>Youngstown-Warren MPT ARS, OH</i>	<i>(*)</i>

(R) = DoD recommendation for realignment

(C) = DoD recommendation for closure

*(\*) = Candidate for further consideration*

# Air Force Reserve Bases



## AIR FORCE RESERVE: F-16 BASES

TIER	INSTALLATION
N/A	Bergstrom ARB, TX (C)
N/A	<i>Carswell ARB, TX</i> (*)
N/A	<i>Homestead ARB, FL</i> (R)(*)

(C) = DoD recommendation for closure

(R) = DoD recommendation for realignment

(\*) = *Candidate for further consideration*

## BASE ANALYSIS

### CATEGORY: AIR FORCE RESERVE (F-16)

**DOD RECOMMENDATION:** Close Bergstrom, relocate 10th Air Force to Carswell ARB (NAS Fort Worth)

**FOR CONSIDERATION:** Study Homestead and Carswell ARBs **FOR CLOSURE.**

CRITERIA	BERGSTROM, TX (C)	HOMESTEAD, FL (R) (*)	CARSWELL, TX (*)
AIR FORCE TIERING	N/A	N/A	N/A
BCEG RANK	N/A	N/A	N/A
FORCE STRUCTURE	15 F-16C/D	15 F-16A/B	18 F-16C/D
ONE-TIME COSTS (\$ M)	13.0	12.6	7.9
ANNUAL SAVINGS (\$ M)	18.4	17.3	13.2
RETURN ON INVESTMENT	Immediate	1 Year	1 Year
BASE OPERATING BUDGET (\$ M)	9.2	9.1	5.4
PERSONNEL ELIMINATED (MIL/CIV)	0/263	0/247	0/219
PERSONNEL REALIGNED (MIL/CIV)	0/94	0/127	0/0
ECONOMIC IMPACT (BRAC95/CUM)	0.1%/0.3%	0.1%/0.1%	0.1%/0.1%
ENVIRONMENTAL	None	Asbestos/Flood Plain	None

(C) = DoD recommendation for closure

(R) = DoD recommendation for realignment

(\*) = Candidate for further consideration

## AIR FORCE RESERVE: C-130 BASES

TIER	INSTALLATION
N/A	Dobbins ARB, GA
N/A	<i>Gen. Mitchell IAP ARS, WI</i> (*)
N/A	Greater Pittsburgh IAP ARS, PA (C)
N/A	<i>Minneapolis-St. Paul, MN</i> (*)
N/A	NAS Willow Grove ARS, PA
N/A	<i>Niagara Falls IAP ARS, NY</i> (*)
N/A	<i>O'Hare IAP ARS, IL</i> (*)
N/A	<i>Youngstown-Warren MPT, OH</i> (*)

(C) = DoD recommendation for closure

(R) = DoD recommendation for realignment

(\*) = *Commissioner candidate for further consideration*

## BASE ANALYSIS

### CATEGORY: AIR FORCE RESERVE (C-130)

**DOD RECOMMENDATION:** Close Greater Pittsburgh Air Reserve Station

**FOR CONSIDERATION:** Study Chicago O'Hare, Gen Mitchell, Minneapolis-St. Paul, Niagara Falls, and Youngstown-Warren **FOR CLOSURE.**

CRITERIA	PITTSBURGH, PA (C)	GEN MITCHELL, WI (* )	MINNEAPOLIS-ST. PAUL, MN (* )
AIR FORCE TIERING	N/A	N/A	N/A
BCEG RANK	N/A	N/A	N/A
FORCE STRUCTURE	8 C-130	8 C-130	8 C-130
ONE-TIME COSTS (\$ M)	12.7	13.0	13.9
ANNUAL SAVINGS (\$ M)	7.5	9.8	9.6
RETURN ON INVESTMENT	2 Years	1 Year	2 Years
BASE OPERATING BUDGET (\$ M)	2.4 (5.7)	3.2	5.7
NET PRESENT VALUE (\$M)	92.0 (138.0)	125.0	119.0
PERSONNEL ELIMINATED (MIL/CIV)	0/110	0/143	0/84
PERSONNEL REALIGNED (MIL/CIV)	0/237	0/237	0/237
ECONOMIC IMPACT (BRAC95/CUM)	0.0%/0.0%	0.1%/0.1%	0.0%/0.0%
ENVIRONMENTAL	Non-attainment - Ozone	Non-attainment - Ozone	Non-attainment - CO

(C) = DoD recommendation for closure

(R) = DoD recommendation for realignment

(\* ) = Commissioner candidate for further consideration

## BASE ANALYSIS

### CATEGORY: AIR FORCE RESERVE (C-130)

**DOD RECOMMENDATION:** Close Greater Pittsburgh Air Reserve Station

**FOR CONSIDERATION:** Study Chicago O'Hare, Gen Mitchell, Minneapolis-St. Paul, Niagara Falls, and Youngstown-Warren **FOR CLOSURE.**

CRITERIA	NIAGARA FALLS, NY (*)	O'HARE, IL (*)	YOUNGSTOWN-WARREN, OH (*)
AIR FORCE TIERING	N/A	N/A	N/A
BCEG RANK	N/A	N/A	N/A
FORCE STRUCTURE	8 C-130	8 C-130	8 C-130
ONE-TIME COSTS (\$ M)	14.0	13.9	13.0
ANNUAL SAVINGS (\$ M)	10.4	10.2	8.6
RETURN ON INVESTMENT	1 Year	1 Year	2 Years
BASE OPERATING BUDGET (\$ M)	7.2 (5.7)	4.0 (5.7)	1.9
NET PRESENT VALUE (\$ M)	135.0 (115.0)	128.7(152.0)	107.0
PERSONNEL ELIMINATED (MIL/CIV)	0/81	0/142	0/143
PERSONNEL REALIGNED (MIL/CIV)	0/237	0/237	0/237
ECONOMIC IMPACT (BRAC95/CUM)	0.6%/0.6%	0.0%/0.0%	0.5%/0.5%
ENVIRONMENTAL	Non-attainment - Ozone	Non-attainment - Ozone	Non-attainment - Ozone

(C) = DoD recommendation for closure

(R) = DoD recommendation for realignment

(\*) = Candidate for further consideration

# BACKUP SLIDES I

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<b>AF-102.</b>	Capacity Analysis: Sheppard Air Force Base
<b>AF-103.</b>	Reese Air Force Base Community Issues
<b>AF-104.</b>	UPT Joint Cross-Service Group Terms of Reference
<b>AF-105.</b>	Bergstrom Air Reserve Base Decisions
<b>AF-106.</b>	Bergstrom Air Reserve Base Community Issues
<b>AF-107.</b>	Base Analysis: Air Force Reserve (F-16) Bases (Major Issues)
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# CAPACITY ANALYSIS

## CATEGORY: UNDERGRADUATE PILOT TRAINING (UPT) BASES

### AIR FORCE UPT CAPACITY

- BASED CAPACITY ANALYSIS ON MEETING AIR FORCE PILOT TRAINING REQUIREMENTS (PTR) ONLY
- ASSUMES 5-DAY WORK WEEK TO ALLOW RECOVERY CAPACITY FOR UNFORESEEN IMPACTS
- CAPACITY EXPRESSED IN "UPT GRADUATE EQUIVALENTS."

CAPACITY	
COLUMBUS	408
LAUGHLIN	424
REESE	392
VANCE	396
SUBTOTAL	1,620
CLOSE LOWEST	- 392
TOTAL	1,228

REQUIREMENT	
BOMBER/FIGHTER	394
AIRLIFT/TANKER	592
FIXED-WING UPGRADE	4
FMS	31
SUBTOTAL	1,021
INTRO, FIGHTER FUND	57
TOTAL	1,078

CAPACITY	1,228	
PTR	<u>- 1,078</u>	
	150	(12% EXCESS)

### NEED FOR EXCESS

- JPATS TRANSITION 100
- INSTRUCTOR CROSSFLOW (T-37 TO T-38): 39
- OPERATIONS BEYOND 95% CAPACITY WILL BE COMPROMISED

**AF 101**

**SHEPPARD AFB CAPACITY ANALYSIS**  
**CATEGORY: UNDERGRADUATE PILOT TRAINING (UPT) BASES**

**EURO-NATO JOINT JET PILOT TRAINING PROGRAM (ENJJPT)**

- COMBINES USAF AND NATO UPT IN A MODIFIED PROGRAM
- INTERNATIONAL AGREEMENT CONSTRAINS AIR FORCE OPTIONS
- CAPACITY EXPRESSED IN "ENJJPT EQUIVALENTS."

REQUIREMENT	
ACTIVE AIR FORCE	98
AIR NATIONAL GUARD	11
NATO	123
SUBTOTAL	232
INTRO, FTR FUND	25
TOTAL	257

CAPACITY	320	
PTR	<u>-257</u>	
	63	(20% EXCESS)

**NEED FOR EXCESS**

- JPATS TRANSITION
- AIR FORCE OVERFLOW FOR PRIMARY AND FIGHTER/BOMBER UPT TRACKS
- NATO REQUIREMENTS

*AE-107*

**REESE AFB COMMUNITY ISSUES**  
**CATEGORY: UNDERGRADUATE PILOT TRAINING (UPT)**

**DATA ERRORS:**

- AIRSPACE UNDER-REPORTED BY 10,000 CU NM
- MILITARY TRAINING ROUTES (MTRs) UNDER-REPORTED BY 55%
- PERCENT ADEQUATE PAVEMENT 10% GREATER THAN REPORTED

**MODELING ERRORS:**

- INCLUDED AREAS INAPPROPRIATE FOR UPT MISSION EVALUATION
- WEIGHTING FACTORS INAPPROPRIATE FOR AIR FORCE UPT COMPARISONS
- DISCRIMINATORS TOO BROAD (WEATHER, AUXILIARY FIELDS)
- CALCULATION ERRORS
- STANDARD OF TRAINING NOT ADOPTED TO PROPERLY COMPARE AIR FORCE/NAVY CAPACITY

**RESULT: ERROR IN CRITERIA I FLOWED INTO OVERALL TIERING AND CLOSURE RECOMMENDATION**

**COMMISSION EVALUATION**

- COST EFFECTIVENESS:
  - LOWEST COST PER FLYING HOUR
  - 2ND LOWEST COST PER GRADUATE
- GAO COMMENT: QUESTIONED AIR FORCE UPT ANALYSIS

**AE-103**

**UPT JCSG TERMS OF REFERENCE**  
**CATEGORY: UNDERGRADUATE PILOT TRAINING (UPT) BASES**

**FUNCTIONAL AREAS (10)**

- \* FLIGHT SCREENING
- \* PRIMARY PILOT
- \* AIRLIFT/TANKER
- \* ADVANCED BOMBER/FIGHTER
- STRIKE/ADVANCED E-2/C-2
- ADVANCED MARITIME/INTERMEDIATE E-2/C-2
- HELICOPTER
- PRIMARY & INTERMED. NAVAL FLIGHT OFFICER
- ADVANCED NAVAL FLIGHT OFFICER STRIKE
- ADVANCED NAVAL FLIGHT OFFICER PANEL

\* Air Force Only

**MEASURES OF MERIT (13)**

- MANAGED TRAINING AREAS
- \* WEATHER
- \* AIRSPACE AND FLIGHT TRAINING AREAS
- \* AIRFIELDS
- \* GROUND TRAINING FACILITIES
- \* AIRCRAFT MAINTENANCE FACILITIES
- SPECIAL MILITARY FACILITIES
- PROXIMITY TO TRAINING AREAS
- PROXIMITY TO OTHER SUPPORT FACILITIES
- UNIQUE FEATURES
- AIR QUALITY
- \* ENCROACHMENT
- SERVICES

\* Utilized in Staff Analysis

**AF-1011**

**BERGSTROM ARB DECISIONS**  
**CATEGORY: AIR FORCE RESERVE (F-16) BASES**

**1991 COMMISSION REPORT:**

**“Therefore, the Commission recommends that Bergstrom Air Force Base close and that the assigned RF-4 aircraft retire...The Air Force Reserve units shall remain in a cantonment area if the base is converted to a civilian airport. If no decision on a civilian airport is reached by June 1993, the Reserve units will be redistributed.”**

**1993 COMMISSION REPORT:**

**“Therefore, the Commission recommends the following: Bergstrom cantonment area will remain open and the 704th Fighter Squadron (AFRES) with its F-16 aircraft and the 924th Fighter Group (AFRES) support units remain at the Bergstrom cantonment area until at least the end of 1996.”**

***AF-105***

# **BERGSTROM ARB COMMUNITY ISSUES**

## **CATEGORY: AIR FORCE RESERVE (F-16)**

### **COMMITMENTS**

- US GOVERNMENT
- '91 AND '93 COMMISSIONS
- CITY OF AUSTIN

### **ANNUAL SAVINGS INFLATED**

- AIR FORCE COBRA: \$19.0 M
  - ASSUMES FY 94 COSTS ARE STEADY STATE
  - REMEDIATION DELAYS
- STAFF ANALYSIS: \$14.1 M
  - AUSTIN ASSUMES RESPONSIBILITY FOR AIRPORT (SEP 96)
  - ARB MOVES INTO CANTONMENT AREA (90% LAND AREA REDUCTION)
  - BOS/PERSONNEL REDUCTIONS

### **MILITARY VALUE**

- CONSTRUCTED AS SAC BASE
  - RAMP AND HANGAR SPACE ADEQUATE FOR ONE KC-135 AND TWO F-16 SQUADRONS
  - 12,000 X 300 FT RUNWAY (2ND RUNWAY PLANNED)
- JOINT TRAINING ENHANCED: PROXIMITY TO FORT HOOD
- UNENCROACHED AIRFIELD

*AF-106*

**BASE ANALYSIS**  
**CATEGORY: AIR FORCE RESERVE (F-16)**

MAJOR ISSUES	BERGSTROM, TX (C)	HOMESTEAD, FL (R) (*)	CARSWELL, TX (*)
COMMITMENTS	1993 Retention of Reserve	1993 Retention of Reserve	N/A
INFLATED SAVINGS	Yes	N/A	N/A
20-YEAR NPV (\$ M)	256.9	228.6	177.9
MANNING	99.6%	90.3%	95.1%
GROUND ENCROACHMENT INCOMPATIBILITY	0%	29%	33% - 50%

(C) = DoD recommendation for closure  
(R) = DoD recommendation for realignment  
(\*) = *Candidate for further consideration*

**AF-107**

**BASE ANALYSIS**  
**CATEGORY: AIR FORCE RESERVE (C-130)**

MAJOR ISSUES	PITTSBURGH, PA	GEN MITCHELL, WI	MINNEAPOLIS- ST. PAUL, MN
	(C)	(*)	(*)
LEVEL PLAY COBRA INACCURATE	No	Yes	Yes
Base Operating Budget (\$M)	5.7	3.2	5.7
20-YEAR NPV - LEVEL PLAY			
Air Force Initial Report (\$M)	137.0	125.0	119.0
Air Force Revised (\$ M)	92.0	N/A	N/A
EXPANSION CAPABILITY	Yes	Yes	Yes

(C) = DoD recommendation for closure

(\*) = Candidate for further consideration

*AE-100*

**BASE ANALYSIS**  
**CATEGORY: AIR FORCE RESERVE (C-130)**

MAJOR ISSUES	NIAGARA FALLS, NY	O'HARE, IL	YOUNGSTOWN- WARREN, OH
	(*)	(*)	(*)
LEVEL PLAY COBRA INACCURATE	No	No	Yes
Operating Budget (\$M)	5.7	5.7	1.9
20-YEAR NPV - LEVEL PLAY			
Air Force Initial Report (\$M)	123.0	153.0	107.0
Air Force Revised (\$M)	135.0	129.0	N/A
EXPANSION CAPABILITY	Yes	Yes	No

(\*) = Candidate for further consideration

*AF-100*

## BACKUP SLIDES II

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## LARGE AIRCRAFT BASES FORCE STRUCTURE (PAA)

INSTALLATION	AIRCRAFT TYPE	TOTAL
ALTUS AFB, OK	24 KC-135; 6 C-141; 6 C-5; 6 C-17	42
ANDERSEN AFB, GU	None	0
ANDREWS AFB, MD	Various (10) Types	80
BARKSDALE AFB, LA	44 B-52; 18 A/OA-10	62
BEALE AFB, CA	34 U-2; 8 KC-135	CLASSIFIED
CHARLESTON AFB, SC	16 C-141; 24 C-17	40
DOVER AFB, DE	32 C-5	32
DYESS AFB, TX	24 C-130; 24 B-1	48
ELLSWORTH AFB, SD	12 B-1	12
FAIRCHILD AFB, WA	69 KC-135	69
GRAND FORKS AFB, ND	48 KC-135	48
HICKAM AFB, HI	8 KC-135; 4 C-130; 15 F-15; 2 C-135	29
LITTLE ROCK AFB, AR	76 C-130	76
MALMSTROM AFB, MT	12 KC-135	12
McCHORD AFB, WA	48 C-141; 12 A-10	60
McCONNELL AFB, KS	10 B-1; 48 KC-135	58
McGUIRE AFB, NJ	19 KC-135; 24 KC-10; 27 C-141	70
MINOT AFB, ND	12 B-52	12
OFFUTT AFB, NE	32 C-135; 6 C-21	38
SCOTT AFB, IL	11 C-9; 8 C-21	19
TRAVIS AFB, CA	24 KC-10; 16 C-141; 32 C-5	72
WHITEMAN AFB, MO	10 B-2; 18 A-10	28

AF-201

## BASE ANALYSIS

### CATEGORY: LARGE AIRCRAFT

**DOD RECOMMENDATION:** Realign Malmstrom AFB tanker resources to MacDill AFB, FL and close airfield operations except for required helicopter support.

**FOR CONSIDERATION:** Study Ellsworth and Scott AFBs **FOR CLOSURE.**

CRITERIA	ELLSWORTH, SD (*) (Closure)	SCOTT, IL (*) (Closure)
AIR FORCE TIERING	III	III
BCEG RANK	17/18	16/18
FORCE STRUCTURE	12 B-1 Aircraft	12 C-9 & 8 C-21 Aircraft
ONE-TIME COSTS (\$ M)	41.3	241.2
ANNUAL SAVINGS (\$ M)	60.9	51.3
RETURN ON INVESTMENT (\$ M)	1 Year	5 Years
BASE OPERATING BUDGET (\$ M)	25.8	30.9
PERSONNEL ELIMINATED (MIL/CIV)	1,055/202	750/352
PERSONNEL REALIGNMENT (MIL/CIV)	2,073/178	5,322/2,366
ECONOMIC IMPACT (BRAC95/CUM)	8.8%	1.1%
ENVIRONMENTAL	Attainment	Non-Attainment Ozone Moderate

(C) = DoD recommendation for closure

(R) = DoD recommendation for realignment

(\*) = *Candidate for further consideration*

\*\* Lower costs if active force structure realigns to Plattsburgh AFB vice Dover and Charleston AFBs as depicted by the level playing field COBRA

AF-202

## BASE ANALYSIS

### CATEGORY: LARGE AIRCRAFT

**DOD RECOMMENDATION:** Realign Malmstrom AFB tanker resources to MacDill AFB, FL and close airfield operations except for required helicopter support.

**FOR CONSIDERATION:** Study Ellsworth and Scott AFBs **FOR CLOSURE**. Further, study McGuire AFB **FOR REALIGNMENT**.

CRITERIA	ELLSWORTH, SD (*) (Closure)	SCOTT, IL (*) (Closure)	MCGUIRE, NJ (*) (Realign)
AIR FORCE TIERING	III	III	II
BCEG RANK	17/18	16/18	11/18
FORCE STRUCTURE	12 B-1 Aircraft	12 C-9 & 8 C-21 Aircraft	27 C-141, 24 KC-10, 19 KC-135 (ANG)
ONE-TIME COSTS (\$ M)	41.3	241.2	626.0**
ANNUAL SAVINGS (\$ M)	60.9	51.3	64.0
RETURN ON INVESTMENT	1 Year	5 Years	11 Years
BASE OPERATING BUDGET (\$ M)	25.8	30.9	33.9
PERSONNEL ELIMINATED (MIL/CIV)	1,055/202	750/352	799/278
PERSONNEL REALIGNMENT (MIL/CIV)	2,073/178	5,322/2,366	4,425/1,218
ECONOMIC IMPACT (BRAC95/CUM)	8.8%	1.1%	0.4%
ENVIRONMENTAL	Attainment	Non-Attainment Ozone Moderate	Non-Attainment Ozone Severe

(C) = DoD recommendation for closure

(R) = DoD recommendation for realignment

(\*) = Candidate for further consideration

\*\* Lower costs if active force structure realigns to Plattsburgh AFB vice Dover and Charleston AFBs as depicted by the level playing field COBRA

AF-703

**NORTHERN TIER MISSILE BASE  
REALIGNMENT/CLOSURE OPTIONS**

<b>OPTIONS</b>	<b>ONE-TIME COST</b>	<b>ANNUAL RECURRING SAVINGS</b>	<b>NET PRESENT VALUE</b>	<b>ECONOMIC IMPACT</b>
REALIGN GRAND FORKS MSLS AND MALMSTROM ACFT	\$29.3M	\$40.3M	\$501.3M	2.4% - Grand Forks 3.0% - Great Falls
REALIGN MINOT MSLS AND MALMSTROM ACFT	\$29.4M	\$41.1M	\$512.9	3.1% - Minot 3.0% - Great Falls
REALIGN FE WARREN MSLS AND MALMSTROM ACFT	\$101.7M	\$21.2M	\$181.1M	1.4% - Cheyenne 3.0% - Great Falls
CLOSE GRAND FORKS	\$81.4M	\$87.6M	\$1,088M	12.7% - Grand Forks
CLOSE MALMSTROM	\$96.4M	\$113.9M	\$1,378M	9.3% - Great Falls
CLOSE MINOT AND REALIGN MALMSTROM ACFT	\$247.8M	\$103.3M	\$1,120.4M	15.8% - Minot 3.0% - Great Falls

RF-204

**CATEGORY: SMALL AIRCRAFT  
AIRCRAFT TRANSFER OPTIONS**

CLOSURE BASE	RECEIVER BASES			
CANNON	SHAW 54 F-16 (B 50) 24 A/OA-10	MOODY 36 F-16 (B 40L) 24 A/OA-10 8 C-130	HILL 54 F-16 (B 40L) 15 F-16 (B 30/AFR)	NELLIS Fighter Weapons CTR Red Flag
- 18 F-16 (B 50) - 36 F-16 (B 30) - 24 EF-111	+ 18 F-16 (B 50)	+ 36 F-16 (B 30) - 36 F-16 (B 40L)	+ 36 F-16 (B 40L)	+ 24 EF-111
MOODY	HILL 54 F-16 (B 40L) 15 F-16 (B 30/AFR)	CANNON 18 F-16 (B 50) 36 F-16 (B 30) 6 EF-111 25 F-111	SHAW 54 F-16 (B 50) 24 A/OA-10	McCHORD 48 C-141 LITTLE ROCK 76 C-130
- 36 F-16 (B 40L) - 24 A/OA-10 - 8 C-130	+ 18 F-16 (B 40L)	+ 18 F-16 (B 40L) - 18 F-16 (B 50)	+ 18 F-16 (B 50)	+ 24 A/OA-10 (MC) + 8 C-130 (LR)
TYNDALL NORAD OPS CTR DRONE OPS	EGLIN 54 F-15C	LANGLEY 54 F-15C	NELLIS Fighter Weapons CTR Red Flag	
- 72 F-15 (Training) - Weapons Eval Group	+ 72 F-15 (Training) + Weapons Eval Gp - 54 F-15C	+ 18 F-15C	+ 36 F-15C	

AF-205

## LUBBOCK COMMUNITY CONCERNS

- **REASONS TO REJECT AIR FORCE DECISION AND CONSIDER OTHER BASES FOR CLOSURE:**
  - AIR FORCE ACKNOWLEDGED DATA/CALCULATION ERRORS:
    - SHORT CHANGED REESE AIRSPACE BY 10,000 CUBIC NAUTICAL MILES
    - REPORTED 55% FEWER MILITARY TRAINING ROUTES (MTRs) FOR REESE THAN NAUTICAL
    - PERCENT ADEQUATE PAVEMENT 10% GREATER THAN REPORTED
  - MODELING ERRORS:
    - ERRORS IN MODEL FORMULAS
    - REESE'S ALERT AREA NOT CONSIDERED
    - OUTLYING INSTRUMENT AIRFIELD (LUBBOCK INTERNATIONAL AIRPORT) NOT CONSIDERED
    - REESE'S OTHER PRIMARY OUTLYING FIELDS NOT CONSIDERED
  - AIR FORCE AND NAVY TOOK ENTIRELY DIFFERENT APPROACHES TO EVALUATING MILITARY VALUE OF UPT BASES -- THIS ISSUE ALONE CONSTITUTES A SIGNIFICANT DEVIATION:
- **REASONS TO TAKE REESE OFF THE LIST:**
  - MILITARY VALUE SUPERIOR TO OTHER BASES
  - BETTER QUALITY OF LIFE THAN OTHER BASES
  - COST EFFECTIVE, LOWEST COST PER FLYING HOUR, SECOND LOWEST COST PER STUDENT
  - LUBBOCK COMMUNITY IN CONCERT WITH REESE:
    - SAVES THE AIR FORCE OVER \$1M ANNUALLY IN MEDICAL COSTS

**CAN SAVE THE AIR FORCE OVER \$6M IN ONE TIME COSTS AND MILLIONS OF DOLLARS ANNUALLY WITH THEIR OTHER COST SAVING PROPOSALS**

05-206

## BASE ANALYSIS

### CATEGORY: UNDERGRADUATE PILOT TRAINING (UPT)

**DOD RECOMMENDATION:** Close Reese, Inactivate 64th Flying Training Wing, Relocate/Retire other assigned aircraft.

**FOR CONSIDERATION:** Study Columbus, Laughlin and Vance **FOR CLOSURE** and Randolph **FOR REALIGNMENT**.

ISSUES	REESE, TX (C) (X)	COLUMBUS, MS (*)	LAUGHLIN, TX (*)	RANDOLPH, TX (*)	VANCE, OK (*) (X)
AIR FORCE TIERING	III	I	I	I	I
BCEG RANK	5/5	2/5	3/5	1/5	3/5
FUNCTIONAL VALUE: AF/JCSG	6.22 (Red)	6.74 (Green)	6.50 (Yellow+)	6.53 (Green-)	6.67 (Green)
FUNCTIONAL VALUE: Staff I	6.4	7.2	7.8	5.3	6.7
FUNCTIONAL VALUE: Staff II	6.3	6.4	7.4	4.4	6.3
FORCE STRUCTURE	21 T-1A 48 T-37B 51 T-38	45 T-37B 57 T-38/21 AT-38	21 T-1A 48 T-37B 51 T-38	15 T-1A 57 T-37B 57 T-38/8 AT-38 10 T-43 6 C-21A	46 T-37B 69 T-38
ONE-TIME COSTS (\$ M)	15.8	18.2	25.9	205.2	14.7
ANNUAL SAVINGS (\$ M)	19.7	25.3	21.6	18.0	19.5
RETURN ON INVEST	1 Year	1 Year	2 Years	15 Years	1 Year
BASE OPERATING BUDGET (\$ M)	21.0	26.3	23.7	21.1	26.3
PERSONNEL ELIM (Mil/Civ)	209/ 0	315/ 0	282/101	447/397	202/ 0
PERSONNEL RLNG (Mil/Civ)	691/245	750/252	749/644	3,876/2,740	645/208
ECONOMIC IMPACT (BRAC95/CUM)	1.2% / 1.2%	.6.3% / 6.3%	18.8% / 18.8%	0.2% / 8.3%	11.0% / 11.0%
ENVIRONMENTAL	Siting	Asbestos	Asbestos	Asbestos , Siting, Water	Asbestos

(C) = DoD recommendation for closure

(X) = Joint Cross-Service Group option for closure

(\*) = Candidate for further consideration

RF-207

**BASE ANALYSIS**  
**CATEGORY: UNDERGRADUATE PILOT TRAINING (UPT)**

CRITERIA	REESE, TX (C) (Closure)	RANDOLPH, TX (*) (Realign)	SHEPPARD, TX
AIR FORCE TIERING	III	I	I
BCEG RANK	5/5	1/5	Excluded
FUNCTIONAL VALUES (AF/JCSG)	6.22	6.53	Excluded
FUNCTIONAL VALUES (Staff I)	6.64	7.12	Excluded
FUNCTIONAL VALUES (Staff II)	6.5	5.2	Excluded
FORCE STRUCTURE	21 T-1A 48 T-37B 51 T-38	15 T-1A 57 T-37B 57 T-38 / 8 AT-38 10 T-43A	36 T-37B 31 T-38 / 8 AT-38
ONE-TIME COSTS (\$ M)	15.8	205.2	TBD
ANNUAL SAVINGS (\$ M)	19.7	18.0	TBD
RETURN ON INVEST	1 Year	15 Years	TBD
BASE OPERATING BUDGET (\$ M)	21.0	21.1	33.7
PERSONNEL ELIMINATED (MIL/CIV)	209/0	447/397	TBD
PERSONNEL REALIGNMENT(MIL / CIV)	691/245	3,876/2,740	
ECONOMIC IMPACT (BRAC95/CUM)	1.2%/1.2%	0.2%/0.2%	TBD
ENVIRONMENTAL	Siting	Asbestos, Siting, Water	TBD

(C) = DoD recommendation for closure

(R) = DoD recommendation for realignment

(\*) = Candidate for further consideration

AF-208

# CATEGORY: UNDERGRADUATE PILOT TRAINING (UPT)

## STAFF ANALYSIS-I

### REVISE WEIGHTINGS OF MEASURES OF MERIT

UPT-JCSG MEASURES OF MERIT	STAFF WEIGHT	REESE (C) (X) Closure	COLUMBUS (*) Closure	LAUGHLIN (*) Closure	RANDOLPH (*) Realignment	VANCE (*) (X) Closure
WEATHER	30	4.7	5.4	7.4	6.0	5.3
AIRSPACE	20	4.8	6.9	7.1	7.0	6.4
ENCROACHMENT	20	8.6	8.9	10.0	0.0	6.9
AIRFIELDS	15	8.2	8.9	7.7	6.0	9.2
MAINTENANCE FACILITIES	10	7.0	7.1	6.4	7.4	6.6
GROUND TRNG FACILITIES	5	7.9	7.4	7.3	8.6	7.8
<b>TOTAL:</b>	100	6.4	7.2	7.8	5.3	6.7
<b>RANK:</b>		4	2	1	5	3

<b>UNWEIGHTED</b>	SCORE	6.87	7.43	7.65	6.72	7.03
<b>AVERAGE</b>	RANK	4	2	1	5	3

(C) = DoD recommendation for closure

(X) = Joint Cross-Service Group option for closure

(\*) = Candidate for further consideration

DE-200

**CATEGORY: UNDERGRADUATE PILOT TRAINING (UPT)**  
**STAFF ANALYSIS -II**  
 CORRECT DATA

UPT-JCSG MEASURES OF MERIT	STAFF WEIGHT	REESE (C) (X) Closure	COLUMBUS (*) Closure	LAUGHLIN (*) Closure	RANDOLPH (*) Realignment	VANCE (*) (X) Closure
WEATHER	30	4.7	4.7	7.0	5.8	4.3
AIRSPACE	20	4.1	4.0	5.7	2.8	6.0
ENCROACHMENT	20	8.6	8.9	10.0	0.0	6.9
AIRFIELDS	15	8.2	8.9	7.7	6.0	9.2
MAINTENANCE FACILITIES	10	7.0	7.1	6.4	7.4	6.6
GROUND TRNG FACILITIES	5	7.9	7.4	7.3	8.6	7.8
<b>TOTAL:</b>	100	6.3	6.4	7.4	4.4	6.3
<b>RANK:</b>		3	2	1	5	3

<b>UNWEIGHTED</b>	SCORE	6.75	6.83	7.35	5.10	6.80
<b>AVERAGE</b>	RANK	4	2	1	5	3

(C) = DoD recommendation for closure

(X) = Joint Cross-Service Group option for closure

(\*) = Candidate for further consideration

**RF-210**

## **CATEGORY: UNDERGRADUATE PILOT TRAINING (UPT) INSTALLATION CHARACTERISTICS**

### **COLUMBUS**

- BEST UPT BASE FOR BOMBER/FIGHTER TRAINING
  - LOW PRESSURE ALTITUDE
  - LONG RUNWAY
  - READY ACCESS TO AIR-TO-GROUND GUNNERY RANGE
  - ADVANCED STUDENTS HAVE INSTRUMENT RATING
- FORMER SAC BASE--MISSION FLEXIBILITY

### **LAUGHLIN**

- BEST UPT BASE FOR PRIMARY TRAINING
  - BEST FLYING WEATHER
  - UNENCROACHED AIRFIELDS
  - UNLIMITED AIRSPACE POTENTIAL
- FORMER SAC BASE--MISSION FLEXIBILITY

### **VANCE**

- SIMILAR LAYOUT TO REESE
- WELL-SUITED FOR PRIMARY AND AIRLIFT/TANKER TRAINING
  - BEST AIRSPACE AND LOW ALTITUDE TRAINING ROUTE STRUCTURE
  - CROSSWIND RUNWAY CONFIGURATION
- LOW AND MEDIUM ALTITUDE OPERATIONS MINIMIZE ICING IMPACTS

**AF-211**

**BASE ANALYSIS**  
**CATEGORY: AIR FORCE RESERVE (F-16)**

**DOD RECOMMENDATION:** Close Bergstrom, relocate 10th Air Force to Carswell ARB (NAS Fort Worth).  
**FOR CONSIDERATION:** Study Homestead and Carswell **FOR CLOSURE** and **RELOCATION** of AFRES units.

CRITERIA	BERGSTROM, TX (C) Closure	HOMESTEAD, FL (R) (*) Closure and Relocation (MacDill)	CARSWELL, TX (*) Closure and Relocation (Bergstrom)
AIR FORCE TIERING	N/A	N/A	N/A
BCEG RANK	N/A	N/A	N/A
FORCE STRUCTURE	15 F-16C/D	15 F-16A/B	18 F-16C/D
ONE-TIME COSTS (\$ M)	13.0	24.2	18.5
ANNUAL SAVINGS (\$ M)	18.4	8.0	10.1
RETURN ON INVESTMENT	Immediate	4 Years	2 Years
BASE OPERATING BUDGET (\$ M)	9.2	9.1	5.4
PERSONNEL ELIMINATED (MIL/CIV)	0/263	0/0	0/169
PERSONNEL REALIGNMENT (MIL/CIV)	0/94	0/584	0/260
ECONOMIC IMPACT (BRAC95/CUM)	0.1%/0.3%	0.1%/0.1%	0.1%/0.1%
ENVIRONMENTAL	None	Asbestos/Flood Plain	None

(C) = DoD recommendation for closure

(R) = DoD recommendation for realignment

(\*) = Candidate for further consideration

RF-212

## PLATTSBURGH AIR FORCE BASE

- 1993 Base Closure Commission found substantial deviation by the Secretary of Defense and closed Plattsburgh AFB, NY which had been selected by the Secretary of the Air Force as the East Coast Mobility Base. Instead, the Commission retained McGuire AFB, NJ and recommended the East Coast Mobility Base be established at McGuire.
  - One Time Cost to Close: \$131.2M
  - Annual Savings: \$ 56.6M
- The Plattsburgh community filed a lawsuit in December, 1993 and subsequent restraining order the following April, challenging the Commission recommendation. The suit was dropped following the unanimous Supreme Court decision on Philadelphia Naval Shipyard challenge.
- Commission has received numerous community requests to reconsider Plattsburgh as a Redirect/Reopening. These requests have come to the Commission ever since the July 1, 1993 report but have increased in the last few months.
- DoD has not forwarded any recommendation to the Commission concerning Plattsburgh AFB. General Ronald Fogleman, Air Force Chief of Staff, testified that the Air Force took the necessary action to place the mobility wing force structure into McGuire AFB, that the mobility wing in fact stood up in support of 1994 contingencies and that the Air Force was satisfied with the progress.
  - Plattsburgh AFB is scheduled to close on September 30, 1995
  - There is no force structure assigned to Plattsburgh

AF-213

## MARCH AIR FORCE BASE, CA

- 1993 Defense Base Closure and Realignment Commission realigned March
  - Active force structure relocated to Travis AFB, CA
  - Base realigned as a Reserve Component installation
- Community has proposed realignment of Marine Corps helicopter units from El Toro and Tustin Marine Corps Air Stations as more cost effective than 1993 decision
  - 1993 Commission closed El Toro and Tustin and realigned force structure to NAS Miramar and Camp Pendleton at a cost of \$936.6M
  - Community suggests a savings of approximately \$326.0M by moving to March
- Air Force position is Marines would have to assume ownership and fiscal and management responsibilities for the base and become host to Reserve units
  - Navy adamantly opposed to opening a base in the face of other base closures/infrastructure reductions
- Navy has submitted a redirect of their 93 recommendation realigning their force structure at Miramar thus reducing the original MILCON cost estimates for Marine Corps move from El Toro  
New data not considered by the community

RF-214

## NEWARK AIR FORCE BASE

- 1993 Base Closure Commission validated the DoD recommendation to close Newark AFB.
  - One Time Cost to Close: \$31.3M
  - Annual Savings: \$ 3.8M
- December 1994 - GAO Report on Newark recommended review of the decision to close Newark
  - Air Force base closure group validated closure costs increased to \$62.2M
  - The \$3.8M annual savings will not be realized
- March 1995 - AF evaluated numerous options that would (1) relocate Newark AFB functions to other depots or (2) privatize the work
  - (1) AF estimated cost of \$309.2M to relocate the Newark workload to other depots resulting in:
    - One Time Cost to Close: \$371.4M
    - Annual Savings: \$ 9.6M
  - (2) AF estimated cost of \$723.5M from FY96 - FY00 to privatize the workload resulting in:
    - One Time Cost to Close: \$62.2M
    - Annual Costs: \$63.2M
- April 1995 - Coopers & Lybrand evaluated both AF estimates:
  - (1) Coopers & Lybrand estimated a range of \$147.6M to \$430.1M to relocate the workload
  - (2) Coopers & Lybrand estimated a range of \$588.8M to \$828.4M to privatize the workload
- May 1995 - AF published a request for proposals to perform the Newark workload due back to the Air Force on June 17, 1995. If the contractor proposals to perform the work at Newark are still significantly higher than previously calculated, the AF may ask the 1995 Commission to consider reopening Newark.

AF-215

## OPERATIONS - LARGE AIRCRAFT and MISSILES Subcategories

### ANALYSIS RESULTS at TIERING (3 Nov)

The following grades and data reflect the information on which the BCEG members based their tiering determination. Information in this chart was updated as the result of a number of factors between initial tiering and final recommendations.

Base Name	<i>Mission (Flying) Requirements</i>	<i>Mission (Missile) Requirements</i>	<i>Facilities and Infrastructure</i>	<i>Contingency and Mobility</i>	<i>Costs and Manpower Implications</i>	<i>Return on Investment</i>	<i>Economic Impact</i>	<i>Community</i>	<i>Environmental Impact</i>
	I.1	I.2	II	III	IV	V	VI	VII	VIII
Altus AFB	Green	No Grade	Green -	Green -	433/ 18	20	4,392 (43.9%)	Yellow	Green -
Barksdale AFB	Green -	No Grade	Green -	Green -	221/-378	5	9,963 (7.0%)	Green -	Yellow
Beale AFB	Green	No Grade	Yellow +	Green -	199/-567	3	4,795 (10.0%)	Yellow	Yellow +
Charleston AFB	Green -	No Grade	Yellow +	Green -	423/-100	14	34,210 (14.9%)*	Yellow +	Yellow +
Dover AFB	Green	No Grade	Yellow	Green -	322/-314	8	8,215 (13.1%)	Green -	Red +
Dyess AFB	Green -	No Grade	Green -	Green -	132/-443	3	6,983 (12.7%)	Green -	Green -
Ellsworth AFB	Yellow +	No Grade	Green	Green -	41/-849	1	6,427 (12.6%)	Green -	Yellow
Fairchild AFB	Green -	No Grade	Green -	Green -	300/-306	8	7,850 (4.5%)	Yellow +	Yellow +
Grand Forks AFB	Yellow +	Red	Green -	Yellow +	129/-731	2	7,054 (16.7%)	Yellow +	Yellow +
Little Rock AFB	Green -	No Grade	Green -	Green -	328/-347	8	7,798 (2.9%)	Yellow +	Yellow +
Malmstrom AFB	Green -	Green	Green -	Yellow	32/-797	1	6,722 (19.4%)	Yellow +	Green -
McConnell AFB	Green -	No Grade	Green -	Green -	224/-347	6	5,760 (2.3%)	Green -	Yellow +
McGuire AFB	Green	No Grade	Yellow +	Green -	624/-386	10	32,627 (1.4%)*	Yellow +	Yellow
Minot AFB	Green -	Yellow	Green -	Yellow +	59/-801	1	7,320 (29.7%)	Green -	Green -
Offutt AFB	Yellow +	No Grade	Green	Yellow +	515/-151	13	16,085 (4.8%)	Green -	Yellow +
Scott AFB	Yellow	No Grade	Yellow +	Yellow	240/-528	5	16,245 (1.4%)	Yellow +	Yellow +
Travis AFB	Green	No Grade	Yellow	Green -	846/-207	14	31,570 (14.8%)*	Yellow +	Yellow
Whiteman AFB	Green -	No Grade	Green -	Yellow +	326/-383	7	4,551 (12.3%)	Yellow +	Green -

UNCLASSIFIED

## OPERATIONS - LARGE AIRCRAFT and MISSILES Subcategories

### TIERING OF BASES

As an intermediate step in the Air Force Process, the BCEG members established the following tiering of bases based on the relative merit of bases within the subcategory as measured using the eight selection criteria. Tier I represents the highest relative merit,

#### TIER I

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Altus AFB  
Barksdale AFB  
Charleston AFB  
Dover AFB  
Dyess AFB  
Fairchild AFB  
Little Rock AFB  
McConnell AFB  
Travis AFB  
Whiteman AFB

#### TIER II

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Beale AFB  
Malmstrom AFB  
McGuire AFB  
Minot AFB  
Offutt AFB

#### TIER III

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Ellsworth AFB  
Grand Forks AFB  
Scott AFB

UNCLASSIFIED

## OPERATIONS - SMALL AIRCRAFT Subcategory

### ANALYSIS RESULTS at TIERING (25 Oct)

The following grades and data reflect the information on which the BCEG members based their tiering determination. Information in this chart was updated as the result of a number of factors between initial tiering and final recommendations.

*Mission (Flying)  
Requirements*

*Facilities and  
Infrastructure*

*Contingency  
and Mobility*

*Costs and  
Manpower  
Implications*

*Return on  
Investment*

*Economic  
Impact*

*Community*

*Environmental  
Impact*

Base Name	I.1	II	III	IV	V	VI	VII	VIII
Cannon AFB	Yellow	Green -	Yellow +	73/-502	2	7,479 (31.5%)	Yellow -	Yellow +
Davis-Monthan AFB	Green -	Green -	Green -	360/-16	17	9,746 (3.1%)	Yellow +	Yellow +
Holloman AFB	Yellow +	Green -	Green -	257/-633	4	8,625 (47.5%)	Yellow	Yellow -
Hurlburt Fld	Green -	Green -	Yellow +	129/-400	4	9,381 (14.4%)	Green -	Yellow
Langley AFB	Green -	Green -	Yellow +	294/-517	5	16,372 (2.5%)*	Green -	Yellow
Luke AFB	Green -	Yellow	Yellow	180/-343	5	11,002 (1.0%)	Yellow +	Yellow +
Moody AFB	Green -	Green -	Yellow +	98/-438	2	5,477 (16.1%)	Yellow +	Yellow +
Mt Home AFB	Yellow +	Green -	Green -	245/-414	5	5,269 (69.7%)	Yellow	Yellow
Seymour Johnson AFB	Green -	Green -	Green -	179/-462	4	7,452 (17.5%)	Yellow	Yellow +
Shaw AFB	Green -	Green -	Yellow +	194/-513	4	7,852 (19.5%)	Yellow +	Yellow +
Tyndall AFB	Green -	Green -	Yellow +	179/-373	5	7,503 (13.0%)	Yellow	Yellow +

## OPERATIONS - SMALL AIRCRAFT Subcategory

### TIERING OF BASES

As an intermediate step in the Air Force Process, the BCEG members established the following tiering of bases based on the relative merit of bases within the subcategory as measured using the eight selection criteria. Tier I represents the highest relative merit,

#### TIER I

---

Davis-Monthan AFB

Langley AFB

#### TIER II

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Hurlburt Fld

Luke AFB

Mt Home AFB

Seymour Johnson AFB

Shaw AFB

Tyndall AFB

#### TIER III

---

Cannon AFB

Holloman AFB

Moody AFB

## UNDERGRADUATE FLYING TRAINING ANALYSIS RESULTS at TIERING (18 Oct)

The following grades and data reflect the information on which the BCEG members based their tiering determination. Information in this chart was updated as the result of a number of factors between initial tiering and final recommendations.

Base Name	<i>Mission (Flying) Requirements</i>	<i>Facilities and Infrastructure</i>	<i>Contingency and Mobility</i>	<i>Costs and Manpower Implications</i>	<i>Return on Investment</i>	<i>Economic Impact</i>	<i>Community</i>	<i>Environmental Impact</i>
Base Name	I.I	II	III	IV	V	VI	VII	VIII
<b>Columbus AFB</b>	Green	Green	Yellow	17/-333	1	3,423 (8.4%)	Yellow +	Yellow
<b>Laughlin AFB</b>	Yellow +	Green -	Yellow -	25/-275	2	4,115 (27.1%)	Yellow	Yellow +
<b>Randolph AFB</b>	Green -	Green -	Yellow	204/-59	13	12,579 (2.0%)	Green -	Yellow -
<b>Reese AFB</b>	Red	Green -	Yellow -	15/-259	1	3,446 (3.1%)	Green -	Yellow
<b>Vance AFB</b>	Green	Green -	Yellow -	14/-254	1	3,040 (11.6%)	Green -	Yellow +

UNCLASSIFIED

## UNDERGRADUATE FLYING TRAINING TIERING OF BASES

As an intermediate step in the Air Force Process, the BCEG members established the following tiering of bases based on the relative merit of bases within the subcategory as measured using the eight selection criteria. Tier I represents the highest relative merit,

### TIER I

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Columbus AFB

Laughlin AFB

Randolph AFB

Vance AFB

### TIER III

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Reese AFB

UNCLASSIFIED

## INDUSTRIAL/TECHNICAL SUPPORT - DEPOT Subcategory

### ANALYSIS RESULTS at TIERING (13 Sep)

The following grades and data reflect the information on which the BCEG members based their tiering determination. Information in this chart was updated as the result of a number of factors between initial tiering and final recommendations.

Base Name	<i>Satellite Control Operations</i>	<i>Facilities and Infrastructure</i>	<i>Contingency and Mobility</i>	<i>Costs and Manpower Implications</i>	<i>Return on Investment</i>	<i>Economic Impact</i>	<i>Community</i>	<i>Environmental Impact</i>
	I,3	II	III	IV	V	VI	VII	VIII
<b>III AFB</b>	Green -	Yellow +	Green -	1,409/ 514	30	38,748 (6.8%)	Green -	Yellow +
<b>Kelly AFB</b>	Yellow	Green -	Yellow +	653/-179	10	41,125 (6.4%)	Green -	Red +
<b>McClellan AFB</b>	Yellow +	Yellow +	Yellow +	514/-607	5	32,438 (5.2%)*	Yellow	Yellow +
<b>Robins AFB</b>	Green -	Green -	Green	1,011/ 133	18	32,004 (24.3%)	Green -	Yellow +
<b>Tinker AFB</b>	Yellow +	Green -	Green	1,312/ 633	42	47,590 (10.1%)	Green -	Yellow +

UNCLASSIFIED

## INDUSTRIAL/TECHNICAL SUPPORT - DEPOT Subcategory

### TIERING OF BASES

As an intermediate step in the Air Force Process, the BCEG members established the following tiering of bases based on the relative merit of bases within the subcategory as measured using the eight selection criteria. Tier I represents the highest relative merit,

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#### TIER I

Hill AFB

Tinker AFB

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#### TIER II

Robins AFB

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#### TIER III

Kelly AFB

McClellan AFB

6 Feb 95

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Appendix 8 75

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UNCLASSIFIED

## INDUSTRIAL/TECHNICAL SUPPORT - PRODUCT CENTERS and LABORATORIES Subcategory

### ANALYSIS RESULTS at TIERING (20 Oct)

The following grades and data reflect the information on which the BCEG members based their tiering determination. Information in this chart was updated as the result of a number of factors between initial tiering and final recommendations.

Base Name	<i>Flying Operations</i>	<i>Product Center/ Lab Evaluation</i>	<i>Facilities and Infrastructure</i>	<i>Contingency and Mobility</i>	<i>Costs and Manpower Implications</i>	<i>Return on Investment</i>	<i>Economic Impact</i>	<i>Community</i>	<i>Environmental Impact</i>
	I.1	I.5	II	III	IV	V	VI	VII	VIII
<b>Brooks AFB</b>	Red	Yellow	Green -	Red +	246/-78	10	7,723 (1.2%)	Green -	Red +
<b>Hanscom AFB</b>	Red	Green -	Yellow +	Red +	421/-158	9	18,769 (1.0%)*	Green -	Yellow +
<b>Kirtland AFB</b>	Yellow +	Green -	Yellow +	Yellow	448/-469	6	20,364 (8.0%)	Green -	Green -
<b>Los Angeles AFB</b>	Red	Yellow +	Yellow	Red +	450/-142	10	22,935 (0.6%)*	Yellow	Green -
<b>Rome Lab</b>	Red	Yellow +	Green -	Red +	134/ 112	100+	10,931 (8.2%)*	Yellow +	Yellow +
<b>Wright-Patterson AFB</b>	Yellow +	Green -	Yellow +	Green -	1,567/ 834	49	52,399 (11.9%)	Green -	Yellow -

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**AF-224**

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## INDUSTRIAL/TECHNICAL SUPPORT - PRODUCT CENTERS and LABORATORIES Subcategory

### TIERING OF BASES

As an intermediate step in the Air Force Process, the BCEG members established the following tiering of bases based on the relative merit of bases within the subcategory as measured using the eight selection criteria. Tier I represents the highest relative merit,

#### TIER I

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Hanscom AFB  
Rome Lab  
Wright-Patterson AFB

#### TIER II

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Kirtland AFB  
Los Angeles AFB

#### TIER III

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Brooks AFB

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## AIR RESERVE COMPONENT - AIR FORCE RESERVE Subcategory

### OVERALL

*Mission (Flying) Requirements*      *Facilities and Infrastructure*      *Contingency and Mobility*      *Costs and Manpower Implications*      *Return on Investment*      *Economic Impact*      *Community*      *Environmental Impact*

Base Name	I.1	II	III	IV	V	VI	VII	VIII
Bergstrom ARB	Yellow -	Yellow	Yellow +	34/-84	2	1,513 (0.3%)*	Green -	Green
Carswell AFB	Yellow	Yellow +	Yellow	26/ 55	Never	975 (0.1%)	Green -	Green
Dobbins ARB	Yellow +	Green -	Yellow	20/-110	3	10,774 (0.6%)	Green -	Green -
Gen Mitchell IAP ARS	Yellow +	Yellow	Yellow	13/-124	1	629 (0.1%)	Green -	Green -
Greater Pittsburgh IAP ARS	Green -	Yellow +	Yellow	14/-138	1	701 (0.1%)	Green -	Green -
Grissom AFB	Yellow +	Yellow +	Yellow	81/-161	5	3,757 (4.3%)*	Green -	Yellow +
Homestead ARB	Yellow +	Yellow +	Yellow	8/-194	0	693 (0.1%)*	Green -	Yellow
March ARB	Yellow +	Yellow	Green -	184/-212	7	18,772 (1.8%)*	Green -	Yellow -
Minneapolis-St Paul IAP ARS	Yellow +	Green -	Yellow -	14/-119	2	1,111 (0.1%)*	Green -	Yellow +
NAS Willow Grove ARS	Yellow +	Yellow	Yellow	12/-60	3	26,933 (1.0%)*	Green -	Green -
Niagara Falls IAP ARS	Yellow +	Yellow +	Yellow	14/ 115	1	1,039 (1.1%)*	Green -	Yellow +
O'Hare IAP, ARS	Green -	Yellow +	Yellow	14/-152	1	4,584 (0.1%)*	Green -	Green -
Westover ARB	Green -	Yellow	Green -	149/ 190	7	2,268 (0.8%)*	Green -	Yellow +
Youngstown-Warren MIT ARS	Yellow +	Yellow +	Yellow -	13/-107	2	1,193 (0.5%)	Green -	Green -

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# RECEIVER DEMAND VS TOTAL TANKER BASING

