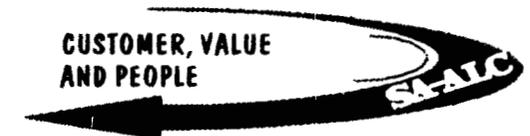


WORLD CLASS DEPOT



Kelly Capabilities Unmatched in the Department of Defense

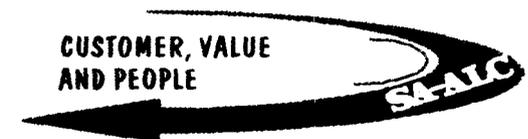
- **Productivity**
- **Product Quality**
- **Unique Capabilities**
- **Value for U.S. Taxpayer**
- **Environmental Excellence**



PRODUCTIVITY



- **Improvements to Direct Labor Efficiency**
 - 14.3% Improvement from FY93 to FY95
 - Reduces Cost of Doing Business
- **Productivity Benefits from New and Improved Facilities**
 - New Corrosion Control Facility (B379) - \$4.8M Savings Annually
 - New GTE Repair Facility (B331) - \$.7M Savings Annually
 - Improved Aircraft Paint Facility (B365) - \$1.4M Savings Annually
- **Productivity Improvement Program (PIP)**
 - \$4.4M Enhancement in Potential Revenue
 - Projected 10% Reduction in Standards
 - » 7.8% Productivity Improvement from Oct 94 - Mar 95
- **#1 ALC Participant in Suggestion Program**
 - Five Year Suggestion Savings of \$76.2M

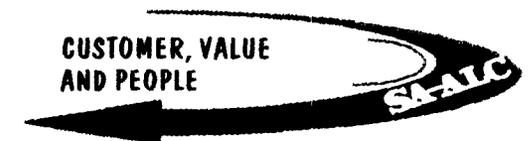


PRODUCT QUALITY

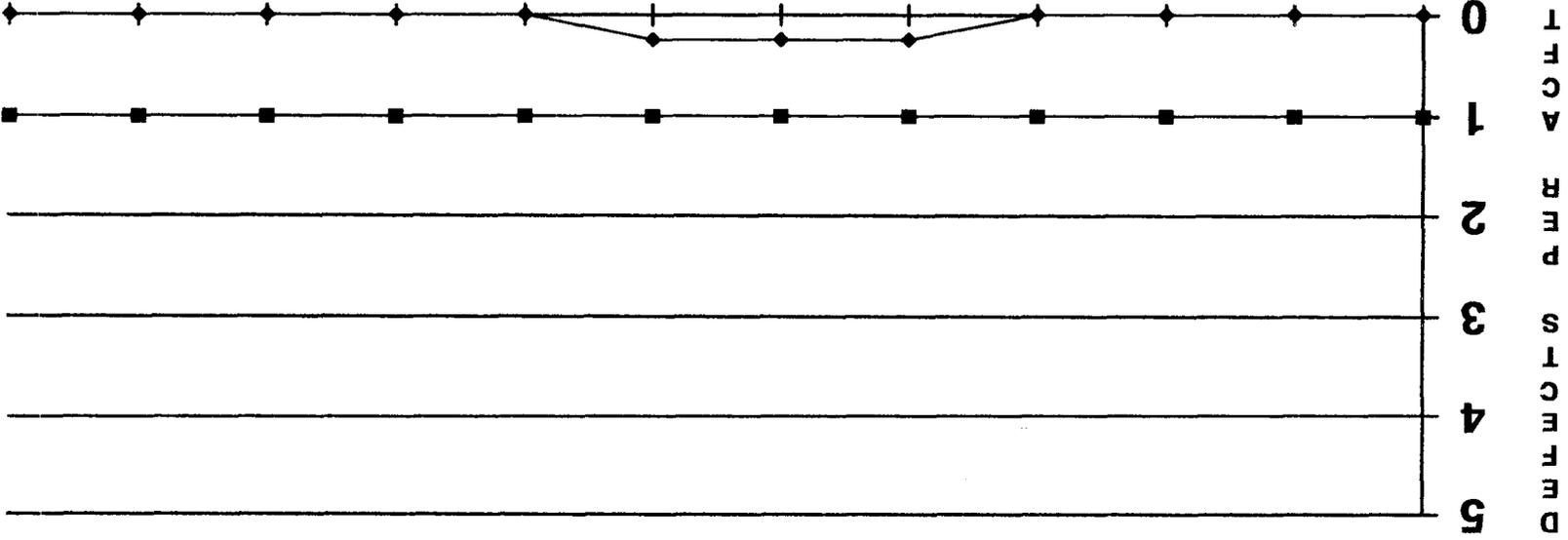


FY94 Data

- **Organic Production - 105,302 Units**
- **Quality Deficiency Reports (QDRs) - 670 (0.63%)**
- **Workmanship Defects - 38 (0.04%)**
- **Engine Product Quality is 99.5% Defect Free**
- **Aircraft Defect Rate 0.003% for 695K Hours**
- **Zero Percent Failure on Space COMSEC**
- **First Product Warranty in DoD**



Goal	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AVG	0	0	0	0	0.25	0.25	0.25	0	0	0	0	0
	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Jan-95	FEB	MAR



**C-5
CRITICAL OR MAJOR DEFECTS**



**SA-ALC
CUSTOMER SUPPORT**

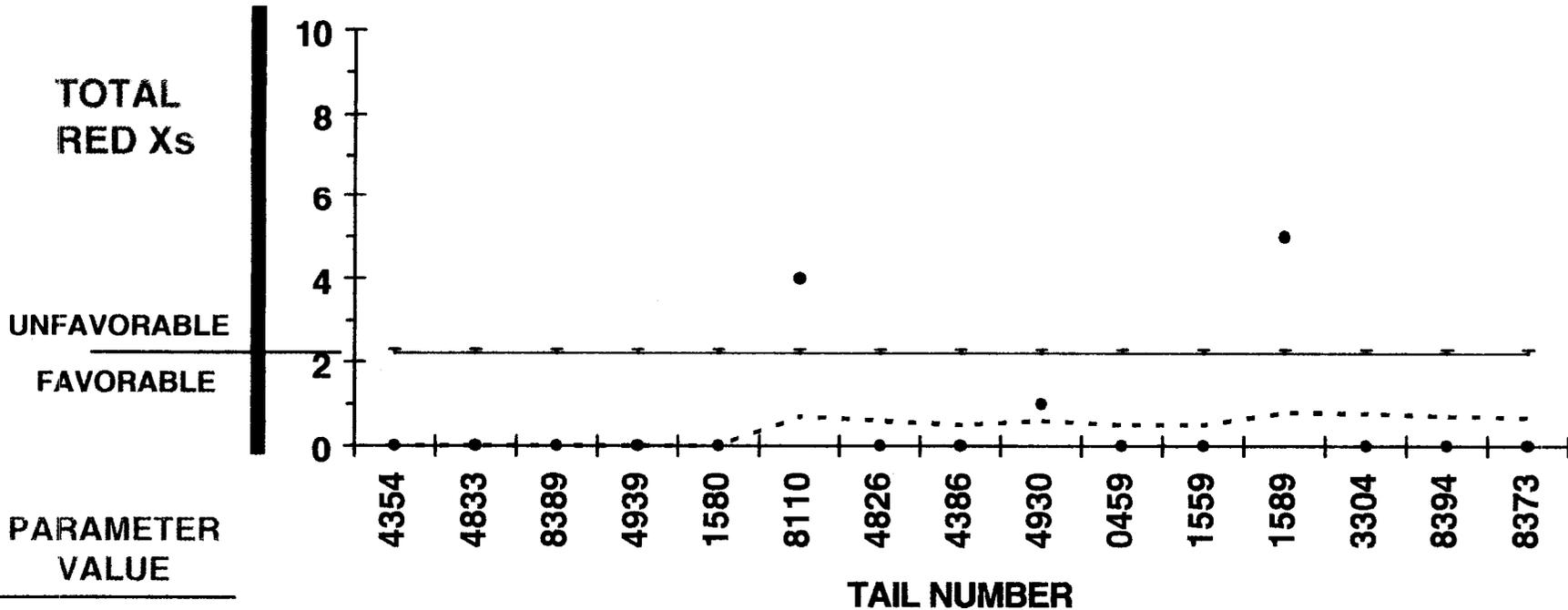




SA-ALC CUSTOMER SUPPORT



T-38 AIRCRAFT RED Xs AT HOME BASE FY95



RED Xs FOUND BY CUSTOMER

FY94 PROCESS AVG = 2.7

FY95 E.O.Y. GOAL = 2.2 DEFECTS OR 20% REDUCTION

THRESHOLD = 2.3 DEFECTS OR 15% REDUCTION

— FY95 EOY GOAL • ACTUAL - - - CUM AVG DEF

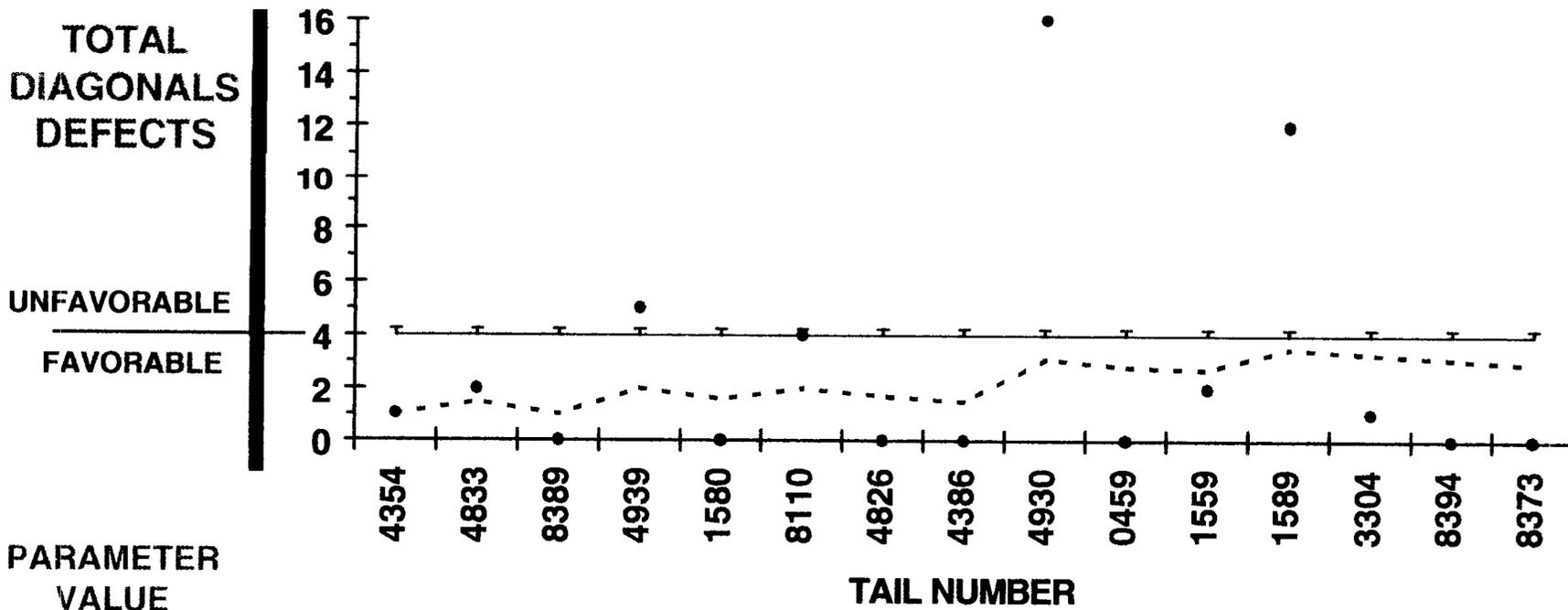
FY95 CUM AVG = 0.67 DEFECTS PER AIRCRAFT



SA-ALC CUSTOMER SUPPORT



T-38 AIRCRAFT DIAGs AT HOME BASE FY95



DIAGs DEFECTS FOUND BY CUSTOMER
 FY94 PROCESS AVG = 5.0 DIAGs PER ACFT
 FY95 E.O.Y. GOAL = 4.0 DEFECTS OR 20% REDUCTION
 THRESHOLD = 4.25 DEFECTS OR 15% REDUCTION

— FY95 EOY GOAL ● ACTUAL - - - CUM AVG DEFs

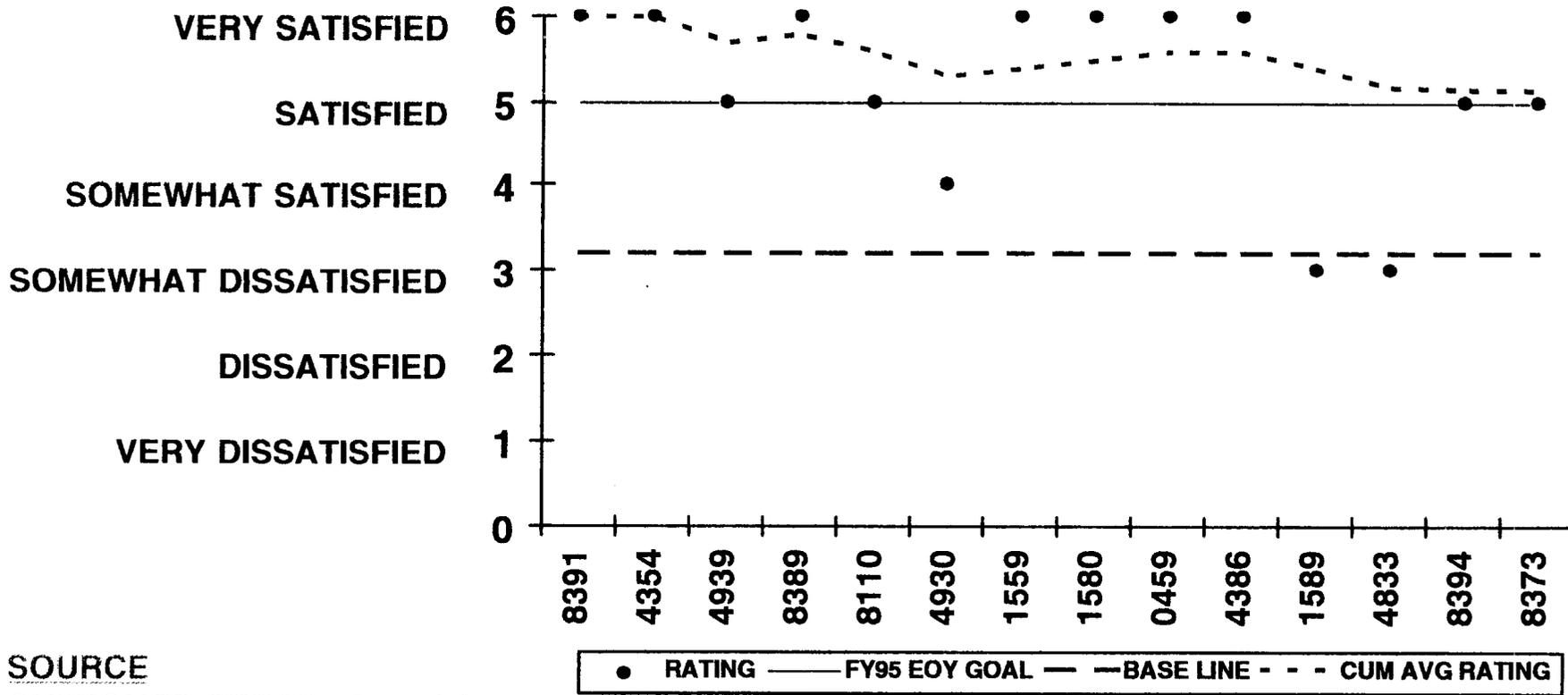
FY95 CUM AVG = 2.9 DEFECTS PER AIRCRAFT



SA-ALC CUSTOMER SUPPORT



T-38 AIRCRAFT CUSTOMER MEASURES PRODUCT QUALITY



SOURCE
CUSTOMER FEEDBACK BOOKLET
SENT OUT WITH EACH T-38 AIRCRAFT
DELIVERED

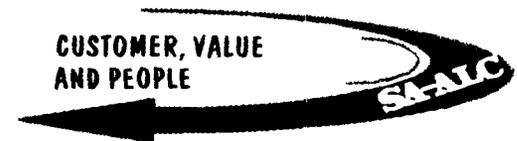
PRODUCT QUALITY

(Cont)



First Organic Warranty in DoD

- **Implemented in October 1992**
- **Covers Workmanship and Material Defects for Reparable Items**
- **Extends for Six Months From Installation**
- **Applies to Air Force, Reserve, and Guard Units**
- **Expanded to Include T-38 Warranty with Depot Field Team Support**

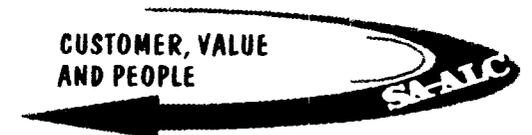


WORLD CLASS DEPOT



Kelly Capabilities Unmatched in the Department of Defense

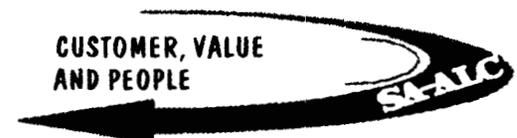
- **Productivity**
- **Product Quality**
- **Unique Capabilities**
- **Value for U.S. Taxpayer**
- **Environmental Excellence**

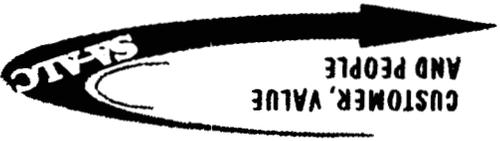


UNIQUE CAPABILITIES



- **Largest Free Standing Hangar**
 - Capable of Housing 6 C-5s
 - Capable of Housing 8 C-17s
- **Largest Paint and Corrosion Control Facilities**
- **Most Modern Jet Engine Overhaul Facilities/Capabilities**
 - Only Facility in DoD Specifically Designed for Repair of Jet Engines
 - Automated Jet Engine Test Cell Facility
 - F100 Unified Fuel Control Facility
 - Advanced Fuel Accessories Test Systems (AFATS) Facility
 - Cryogenic Spin Test Facility
 - Two Levels of Maintenance
- **Only Air Force Cryptologic Repair Center**
- **Manage 100% of Space COMSEC**





- Only Gas Turbine Engine Facility with Capacity to Handle Total DoD Workload
- Nuclear Weapons Component Repair Facility
- Integrated Reverse Engineering and Remanufacturing Capability
- Computerized Industrial Tomographic Analyzer (CITA)
- Stereolithography
- Depot Machine Shop
- Foundry
- Rubber Shop
- Largest Electropolishing Capability in Air Force
- Only Life Sciences Equipment Laboratory



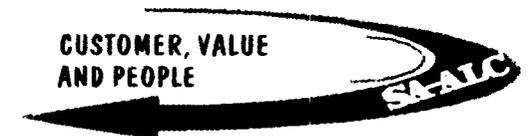
UNIQUE CAPABILITIES
(cont)

WORLD CLASS DEPOT



Kelly Capabilities Unmatched in the Department of Defense

- **Productivity**
- **Product Quality**
- **Unique Capabilities**
- **Value for U.S. Taxpayer**
- **Environmental Excellence**



DEPOT-TO-DEPOT COMPARISON



Direct Labor and Overhead in Dollars

	1987	1988	1989	1990	1991	1992	1993
	38.07 SA	41.64 SA	43.44 SA	43.41 SA	46.01 SA	50.10 SA	52.32 SA
	38.91 OC	42.13 NOR	45.09 WR	46.82 WR	50.13 WR	52.61 SM	55.20 OO
	41.12 SM	42.82 OC	46.02 OC	47.42 SM	50.50 OO	53.14 WR	55.59 WR
	41.55 OO	45.37 SM	46.90 OO	48.75 NOR	50.64 OC	53.37 OC	57.47 SM
	42.27 WR	45.85 WR	47.75 SM	49.58 OO	52.04 SM	54.70 OO	57.50 CHE
	44.66 NOR	46.84 OO	50.54 NIS	50.36 OC	53.02 NOR	55.88 JAX	57.99 NOR
	48.57 PEN	50.14 NIS	54.09 NOR	51.95 PEN	58.08 JAX	56.98 CHE	58.51 OC
	48.97 NIS	52.50 PEN	55.98 PEN	56.25 JAX	59.95 CHE	58.13 NOR	61.99 PEN
	50.45 CHE	52.68 CHE	57.28 CHE	57.17 NIS	60.84 PEN	63.39 PEN	66.62 JAX
	52.82 ALA	52.80 ALA	60.48 ALA	62.47 CHE	61.26 NIS	63.48 ALA	69.82 NIS
	53.02 JAX	54.10 JAX	74.60 JAX	68.51 ALA	64.19 ALA	69.30 NIS	
AF	40.22	44.24	45.67	47.39	49.66	52.66	55.82
NA	49.14	49.67	58.26	57.49	59.75	61.18	62.78
△	8.92	5.43	12.59	10.09	10.11	8.52	6.96

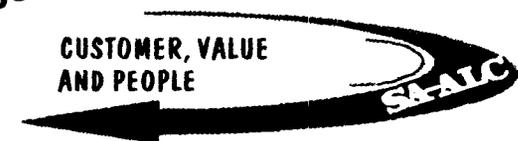
SA - San Antonio OC - Oklahoma City OO - Ogden WR - Warner Robins

SM - Sacramento AF - Air Force Average

NOR - Norfolk NIS - North Island CHE - Cherry Point PEN - Pensacola

ALA - Alameda JAX - Jacksonville NA - Navy Average

Source: DOD 7220.9-M and 7220.29-H Data
FY93 Data for Alameda Not Available

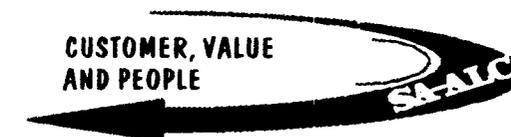


SA-ALC CROSS-SERVICE REQUIREMENTS BASE



**SA-ALC REQUIREMENTS EQUATE TO 37% OF COMMAND'S
CROSS-SERVICE WORKLOAD**

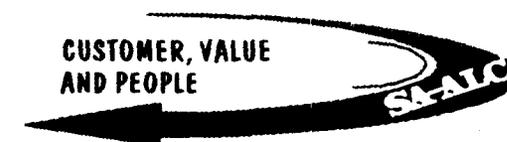
	COAST		<u>CUSTOMER</u>			TOTAL WKLD
	<u>GUARD</u>	<u>NASA</u>	<u>MARINE</u>	<u>ARMY</u>	<u>NAVY</u>	
SA-ALC	18,400	833	0	47,867	536,271	603,371
OO-ALC	1,042	0	0	44,069	468,496	513,607
OC-ALC	0	23,417	0	1,013	374,415	398,845
SM-ALC	80	8,341	16,565	63,256	21,339	109,581
WR-ALC	0	0	0	640	2,073	2,713
AFMC TOT	19,522	32,591	16,565	156,845	1,402,594	1,628,117

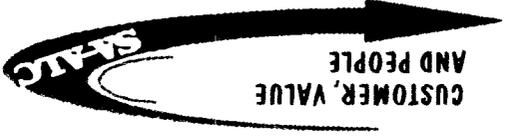


SA-ALC CROSS-SERVICE SUPPORT



	FROM OTHER SERVICES TO SA-ALC		FROM SA-ALC TO OTHER SERVICES	
	<u>HOURS</u>	<u>DOLLARS</u>	<u>HOURS</u>	<u>DOLLARS</u>
NAVY	302.0K	\$60.0M	138.0K	\$42.0M
ARMY	19.5K	\$11.0M	18.0K	\$2.4M
COAST GUARD	.6K	\$84.0K	0.0	0.0
DLA	<u>7.6K</u>	<u>\$503.0K</u>	<u>0.0</u>	<u>0.0</u>
TOTAL	330.0K	\$71.5M	156.0K	\$44.0M





• Environmental Excellence

• Value for U.S. Taxpayer

• Unique Capabilities

• Product Quality

• Productivity

***Kelly Capabilities Unmatched in the
Department of Defense***

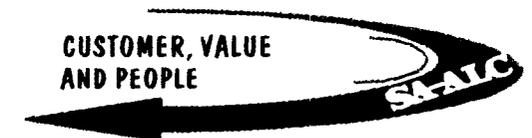


WORLD CLASS DEPOT

ENVIRONMENTAL EXCELLENCE



- **DoD Pollution Prevention Award, 1994**
- **AF Pollution Prevention Award, 1994**
- **AFMC Pollution Prevention Award, 1994**
- **Recognized for Environmental Excellence by Texas Natural Resources Conservation Commission**
 - **Member of Clean Texas 2000 Honor Roll**
 - **Only Federal Agency Nominated for Texas 2000 Award**
- **Ranked First Among ALCs by AFMC/IG on Establishing Pharmacy Concept**
- **Lowest Projected Environmental Clean-Up Cost of All ALCs**
- **Only ALC Not on the National Priority List**

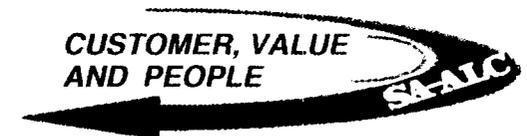


ENVIRONMENTAL EXCELLENCE

(Cont)



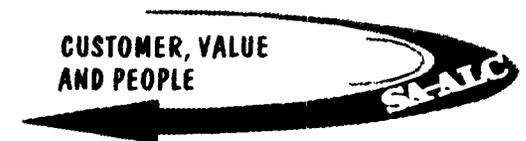
- **Pollution Prevention CY1994 (1992 Baseline)**
 - 88% Reduction in ODC, Pounds Purchased
 - 59% Reduction in EPA17 Pounds Purchased
 - 24% Reduction in Hazardous Waste Disposal
 - 47% Reduction in Solid Waste Disposal
 - 32% Reduction in VOC HAPs (1993 Baseline)
- **Water Reduction**
 - 36% Reduction in 1994 Edwards Aquifer Water Use Equivalent to 3.5 Billion Gallons (1984 Baseline)
- **Future Outlook**
 - Reuse of Waste Water for On-Base Industrial Processes and Cooling Demand Would Reduce Current Levels Another 40%

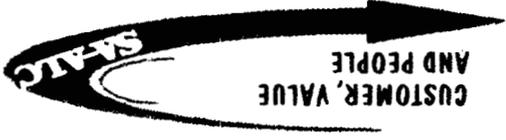


THE KELLY TEAM



- **More Than a Maintenance Depot**
- **World Class Maintenance Depot**
- **Our People - The Kelly Advantage**
- **Posturing Kelly for the Future**





- Unique Workforce
- Base/Community Team
- People Initiatives
- Union Partnership



OUR PEOPLE
THE KELLY ADVANTAGE

UNIQUE WORK FORCE

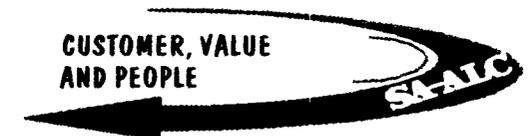


Diversity and Education



- **Ethnic Diversity - Largest Minority Population in DoD**
 - 7,600 Minorities Employed - 68% of all Employees at SA-ALC
 - 45% of all Hispanics in Air Force Work at Kelly AFB
 - 13% of all Hispanics in DoD Work at Kelly AFB

- **Best Educated ALC Work Force**
 - Highest Number of Employees with 1+ Years of College
 - Second Highest Number of Employees with Degrees

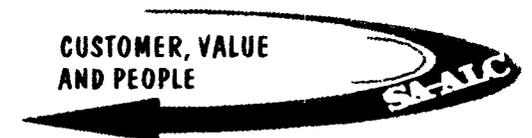


UNIQUE WORK FORCE (Cont)



Diversity and Education

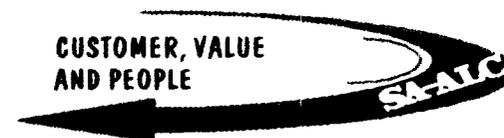
- **Highly Skilled**
 - **70+ Specialized Industrial Skills**
 - **28% of Work Force in Critical Skills**
 - » **608 Engineers**
 - » **2,194 Craftsmen in Critical Skills**



OUR PEOPLE THE KELLY ADVANTAGE



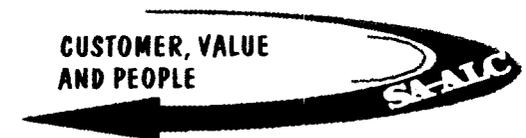
- **Unique Workforce**
- **Base/Community Team**
- **People Initiatives**
- **Union Partnership**



BASE / COMMUNITY TEAMWORK



- **Commitment to Community**
 - **Mentoring - Over 800 Mentors**
 - **Highest Air Force Contributor to United Way - Combined Federal Campaign \$2.2M in 1994**
 - **Scholarships - 135 Total - \$57K**
 - **Multi-District School for Expelled Students**
 - **Annually Host Over 8,000 Students to Encourage Entry to Scientific, Engineering and Technical Career Fields**

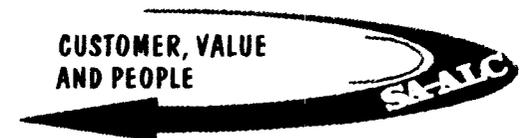


GLOBAL POWER



The Support

- **Automatic Test Equipment to Support Fighters**
 - 1,036 F-15 and F-16 Testers
- **COMSEC and Identification Friend or Foe (IFF)**
- **Support Equipment**
 - 14,465 Units Supporting Fighting Forces
- **Life Support**
 - Helmets/Oxygen Masks/Parachutes/Survival Kits
 - Chemical Defense
 - Escape Systems

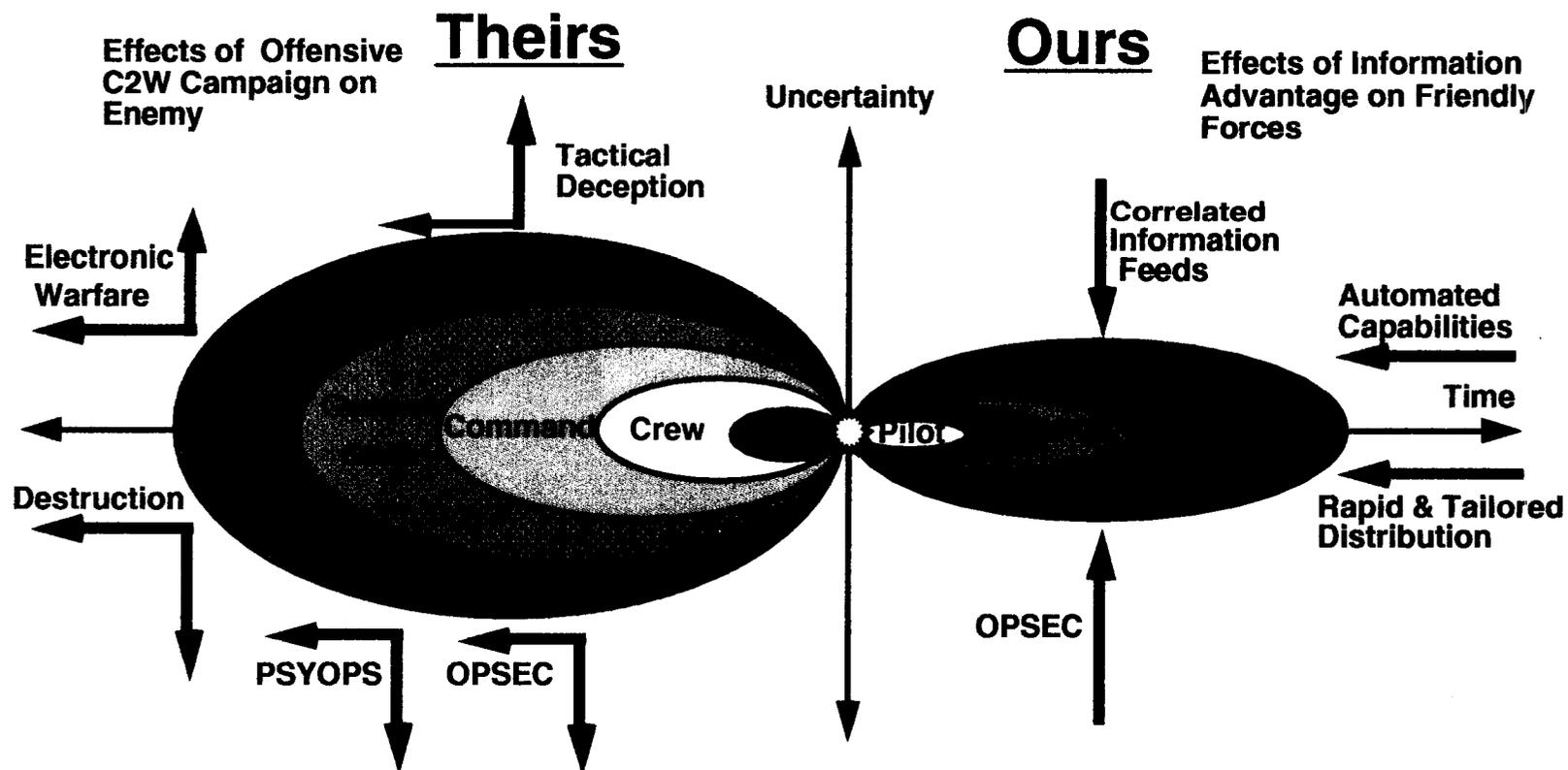


INFORMATION WARFARE



DECISION CYCLE

COMPETING COMMAND LOOPS



EXPAND THEIRS; CONTRACT OURS

CUSTOMER, VALUE
AND PEOPLE

SA-AIC

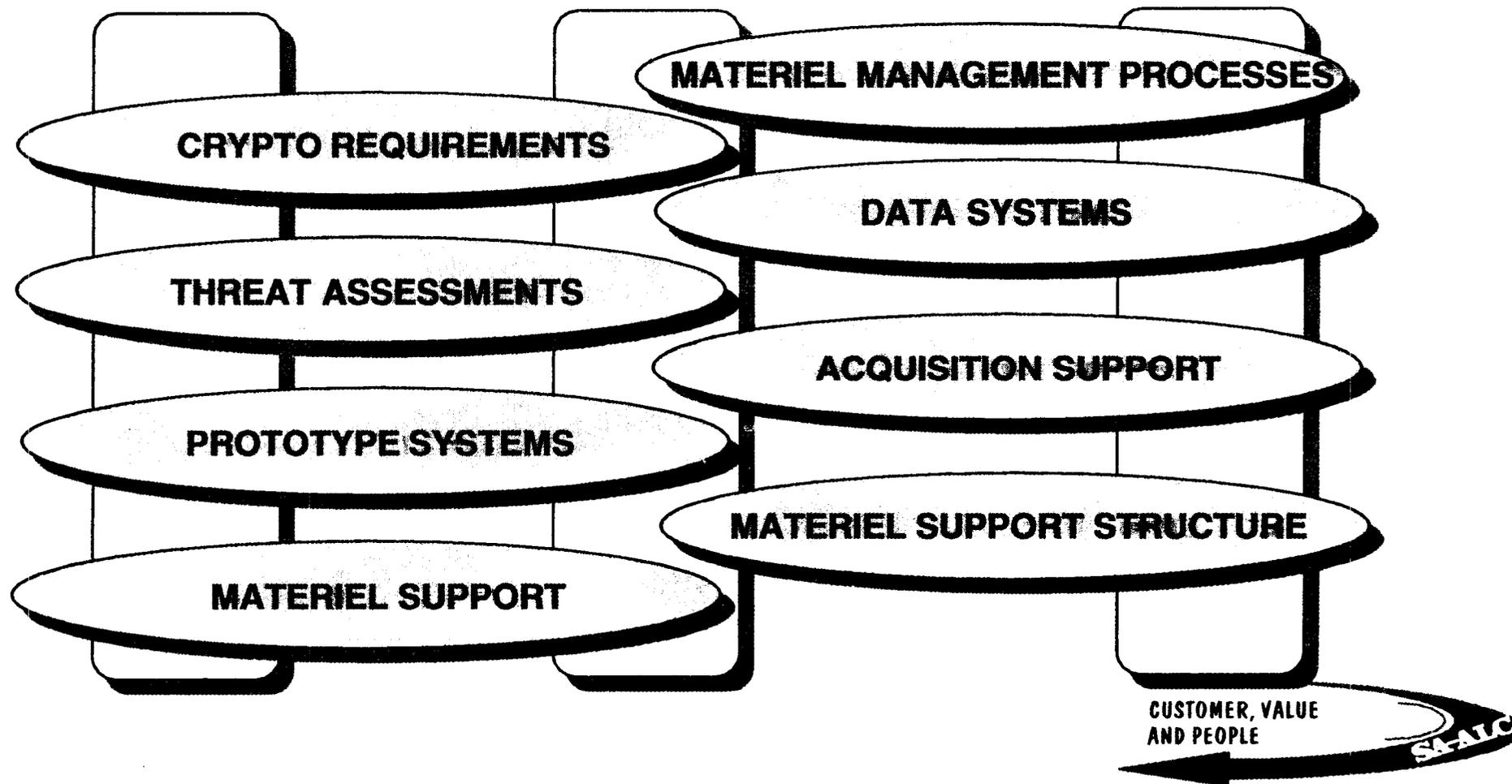
INTEGRATED INFORMATION WARFARE TEAM



**AIA / AFIWC
CUSTOMER**

CRYPTOLOGIC PGM

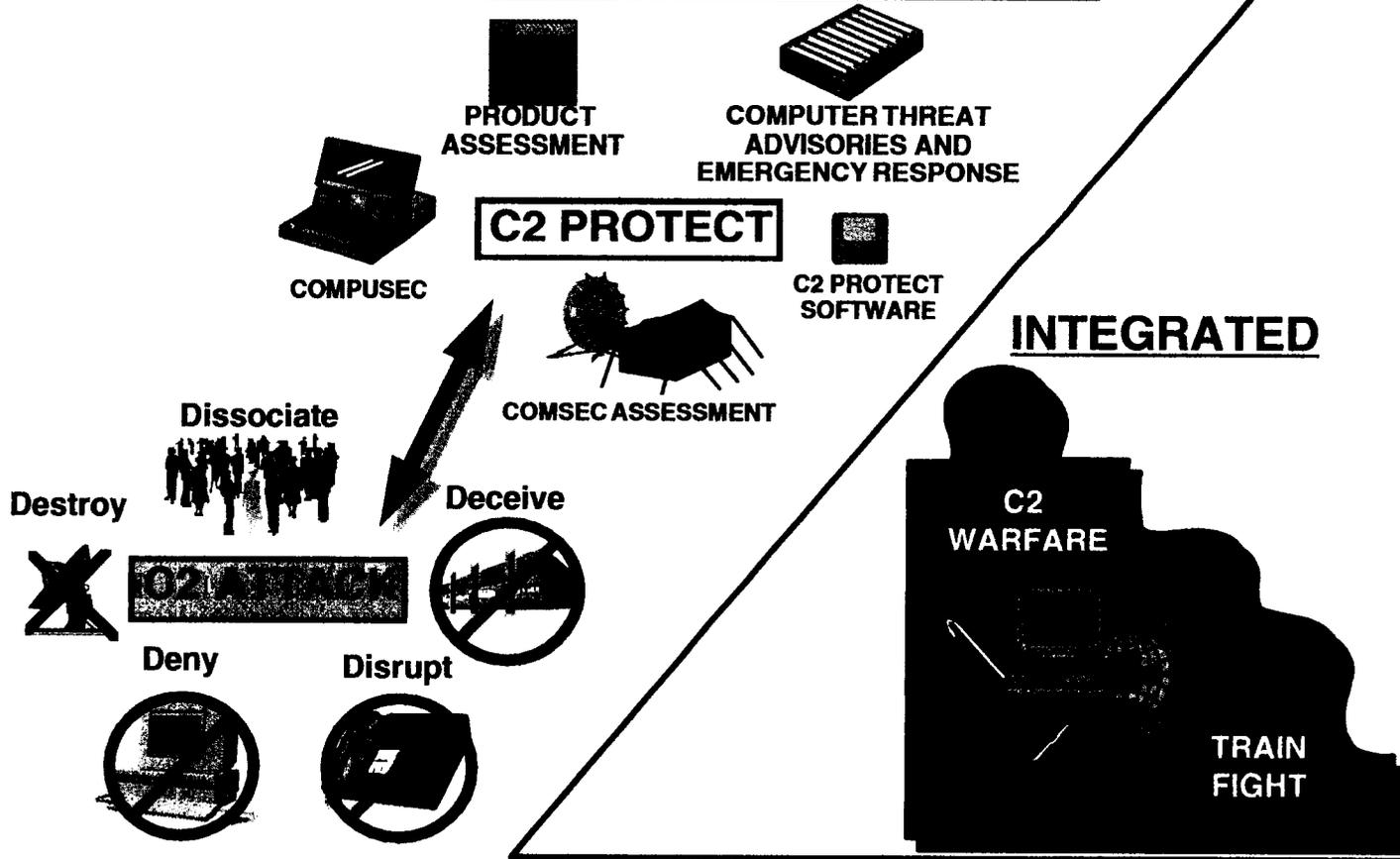
**SA-ALC
INFRASTRUCTURE**



INFORMATION WARFARE



COMMAND AND CONTROL WARFARE



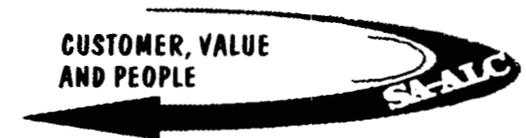
CUSTOMER, VALUE AND PEOPLE

SAALC

THE KELLY TEAM



- **More Than a Maintenance Depot**
- **World Class Maintenance Depot**
- **Our People - The Kelly Advantage**
- **Posturing Kelly for the Future**

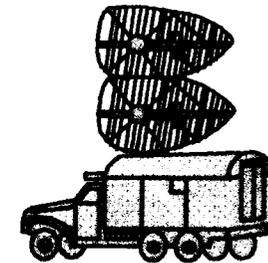


MORE THAN A MAINTENANCE DEPOT



Integrated Mission

- **Integrated Weapon System Management (IWSM)**
- **Heart of Nation's Airlift**
- **Backbone of Our Fighter Force**
- **Information Warfare**



**CUSTOMER, VALUE
AND PEOPLE**

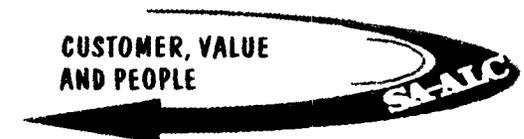
SAALC

WORLD CLASS DEPOT



Kelly Capabilities Unmatched in the Department of Defense

- **Productivity**
- **Product Quality**
- **Unique Capabilities**
- **Value for U.S. Taxpayer**
- **Environmental Excellence**

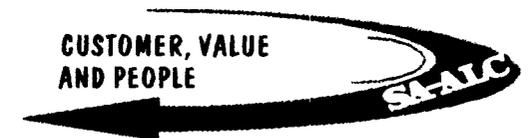


AEROSPACE FUELS MGM



- **Manages:** **Jet Fuels**
 Special Fuels
 Gases
- **Units**
 - 100 Line Items
 - Annual Sales \$2.7B
- **SA-ALC Organic Repairs**
 - None

Ground Fuels
Missile Propellants
Chemicals

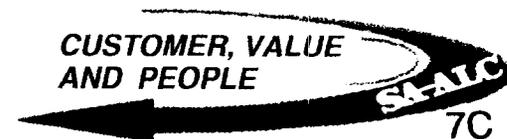


SECONDARY POWER SYSTEMS

MGM



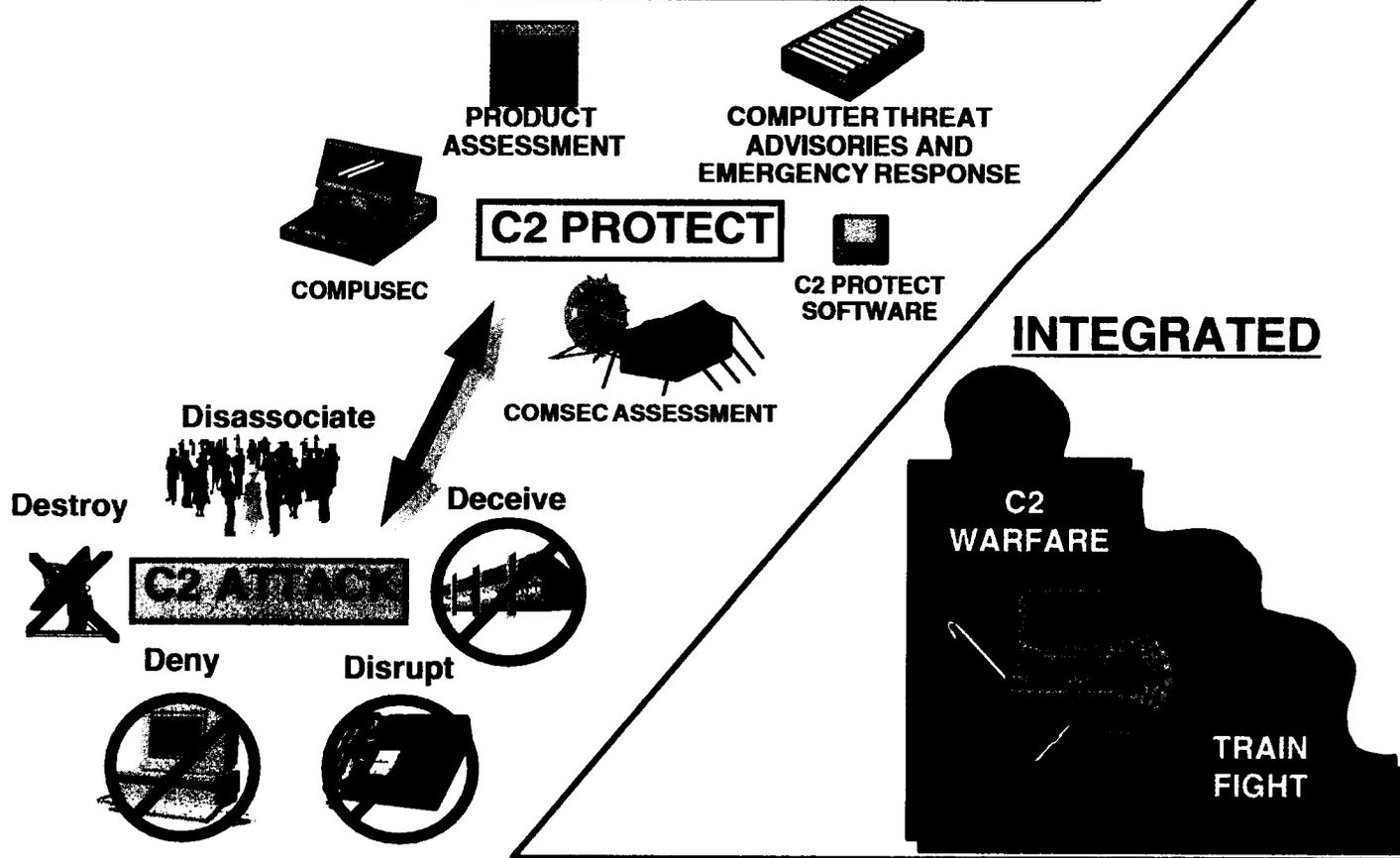
- **Manages: Secondary Power Systems Fuel System Accessories**
Gas Turbine Engines (GTEs) Auxiliary Power Units (APUs)
- **Items Managed**
 - 1,287 Line Items
 - \$606.2M Inventory
 - Includes Army and Navy Interservice
- **SA-ALC Organic Repair**
 - 374 Line items
 - 649,342 Hours (DPSHs)
 - \$91M
 - Only Air Force Depot Working this Class of Equipment



INFORMATION WARFARE



COMMAND AND CONTROL WARFARE



CUSTOMER, VALUE AND PEOPLE

SAATC

IWSM SUPPORT TEAM



Base Support



Def Info Sys Agency



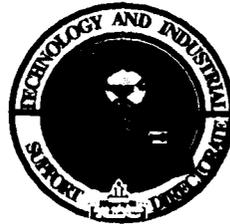
DLA Depot



Judge Advocate

CONTRACTING
DIRECTORATE
SA ALC

Contracting



Technology and
Industrial Support



Financial Management

CUSTOMER, VALUE
AND PEOPLE

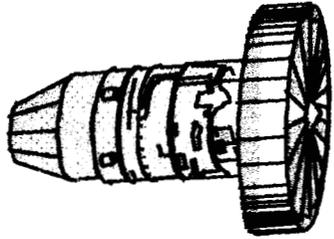
SAIC

7M



MORE THAN A MAINTENANCE DEPOT

Integrated Mission

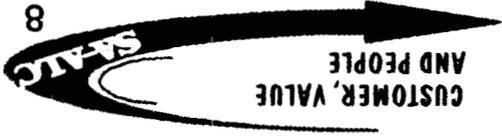
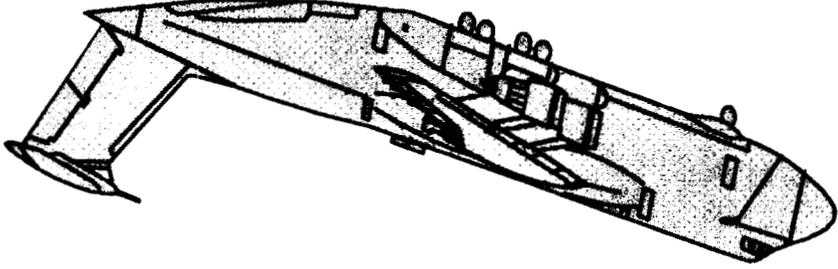


- Integrated Weapon System Management (IWSM)

• Heart of Nation's Airlift

- Backbone of Our Fighter Force

- Information Warfare

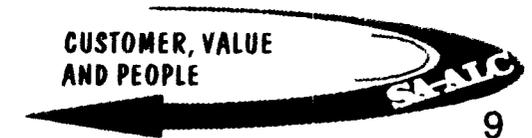
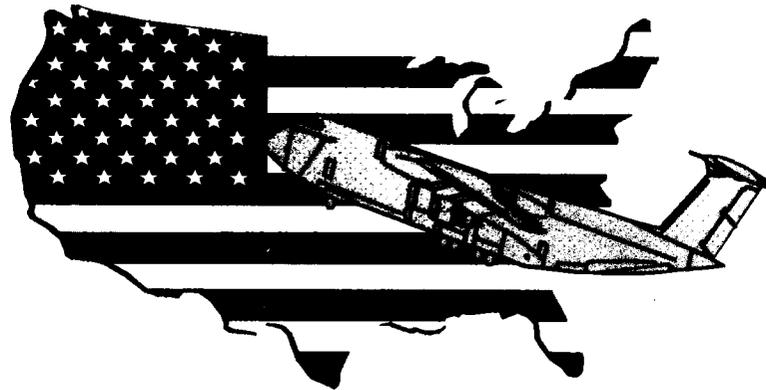


HEART OF NATION'S STRATEGIC AIRLIFT CAPABILITY



Global Reach

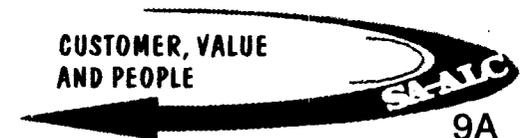
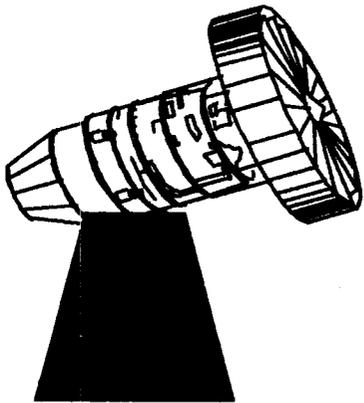
- **Airlift System Management and Repair**
- **Conventional Air Mobility Munitions Storage and Shipping Point**
- **Airlift Operations and Mobility**



AIRLIFT SYSTEM MANAGEMENT AND REPAIR



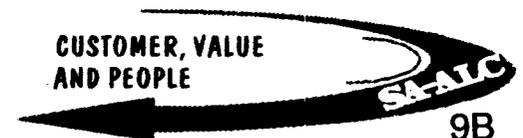
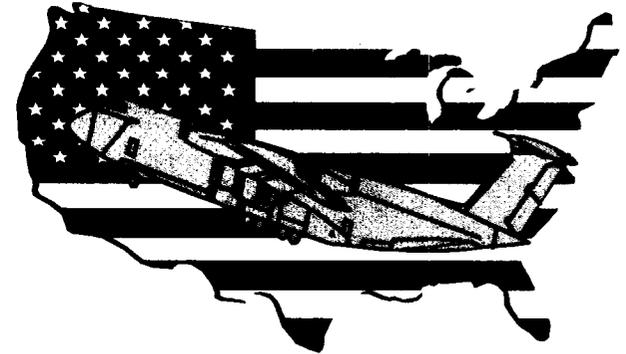
- **100% Outsize Cargo Capacity**
 - C-5 Aircraft / TF39 Engine
 - C-17 Aircraft / F117 Engine
 - 80% of Strategic Airlifters (C-5/C-17, C-141) by 2000
- **C-130 Aircraft Commodities / T56 Engine**
- **Two Levels of Maintenance**
 - TF39
 - T56



CONVENTIONAL AIR MOBILITY MUNITIONS STORAGE AND SHIPPING POINT



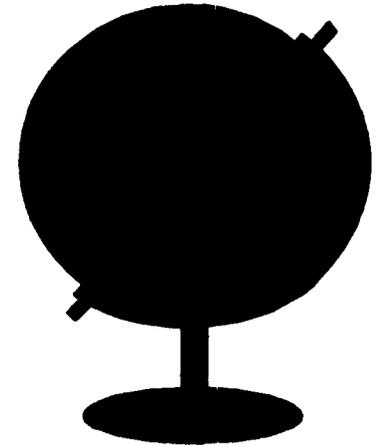
- **Largest CONUS Location (One of Two Sites in Continental U.S.)**
- **DESERT SHIELD/STORM**
 - 17 Million Lbs Shipped
 - 59 C-5 Aircraft (309 C-141 Aircraft)
- **Worldwide Rapid Response**
- **Year Round Accessibility**



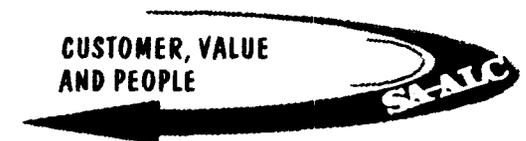
HEART OF NATION'S AIRLIFT



- **Operations - 433rd Airlift Wing**
 - Largest C-5 Equipped Reserve Wing
 - First to Deploy in DESERT SHIELD/STORM
 - JUST CAUSE to Panama
 - RESTORE HOPE to Somalia



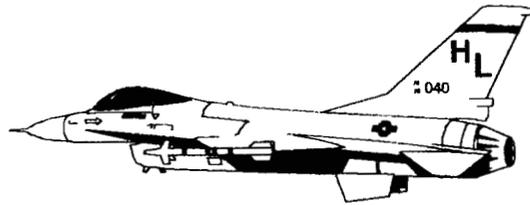
- **MEDEVAC Center**
 - 433rd Aeromedical Evacuation Squadron (AFRES)
 - 604th Contingency Hospital (AFRES)
 - Wilford Hall Medical Center
 - Brooke Army Medical Center



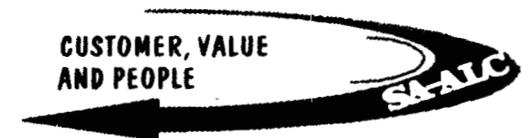
MORE THAN A MAINTENANCE DEPOT



Integrated Mission



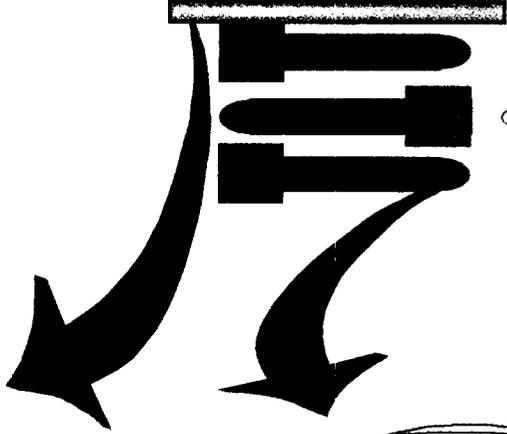
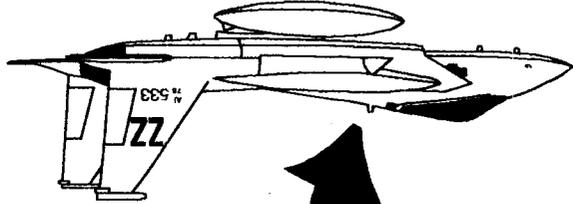
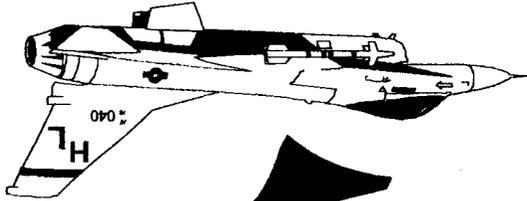
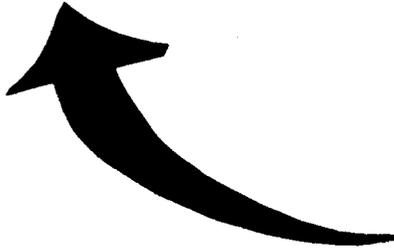
- **Integrated Weapon System Management (IWSM)**
- **Heart of Nation's Airlift**
- **Backbone of Our Fighter Force**
- **Information Warfare**



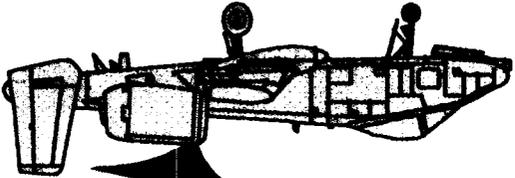
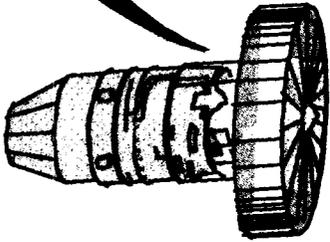
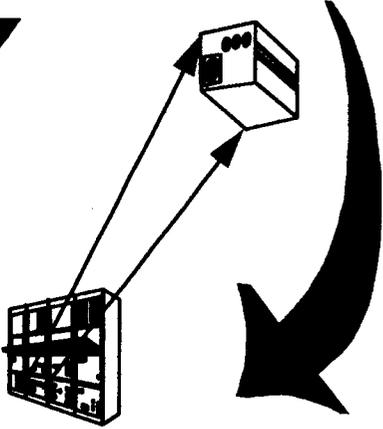
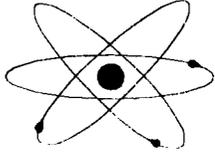


BACKBONE OF FIGHTER FORCE GLOBAL POWER

The Power

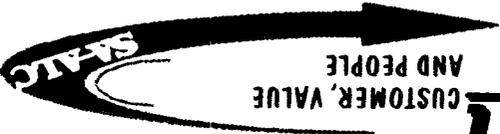


The Punch



The Support

CUSTOMER, VALUE
AND PEOPLE

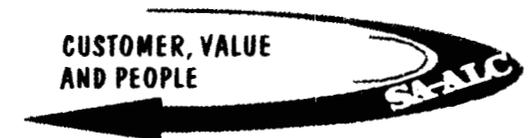


GLOBAL POWER



The Power

- **F100 Engines Power**
 - 100% of F-15s (783 Aircraft)
 - 51% of F-16s (811 Aircraft)
- **Engine 2LM**
 - JEIM for F100/220 (FY95 - 123; FY96 - 269)
- **TF34 Engines Power Close Air Support (A-10)**
- **Manage All Fighter Engines**
- **Manage and Repair Secondary Power Systems**
 - 100% for F-15
 - 100% for F-16



GLOBAL POWER



The Punch

- **Store, Maintain and Deploy 100% of Air Mobile Air-to-Ground Munitions**
 - **Shipped 17M Lbs of Munitions from Kelly AFB by Air for DESERT SHIELD/STORM**
- **Manage 100% of Air Mobile Munitions (Air-to-Air and Air-to-Ground)**
- **Manage 100% of Tactical Nuclear Weapons**

**CUSTOMER, VALUE
AND PEOPLE**

SEATC

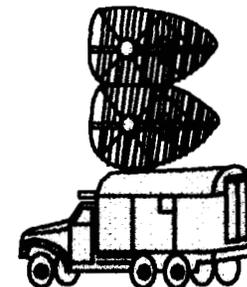
MORE THAN A MAINTENANCE DEPOT



Integrated Mission



- **Integrated Weapon System Management (IWSM)**
- **Heart of Nation's Airlift**
- **Backbone of Our Fighter Force**
- **Information Warfare**



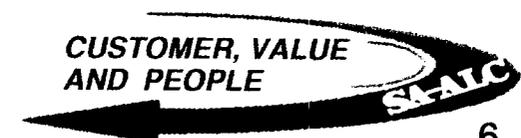
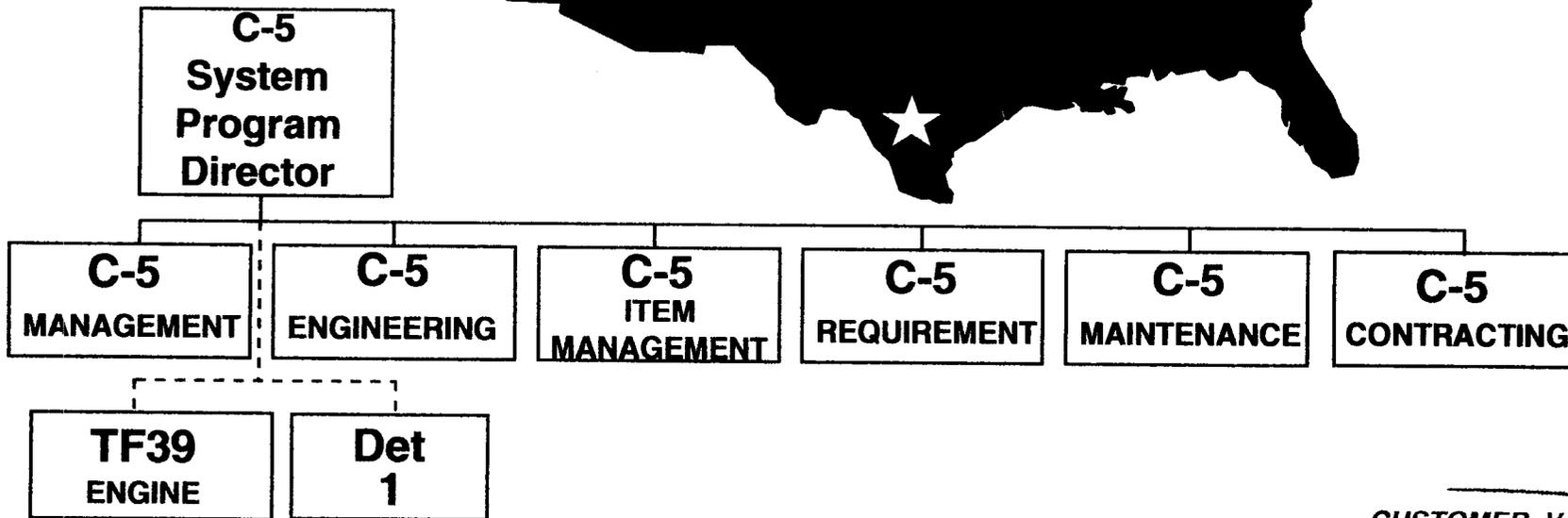
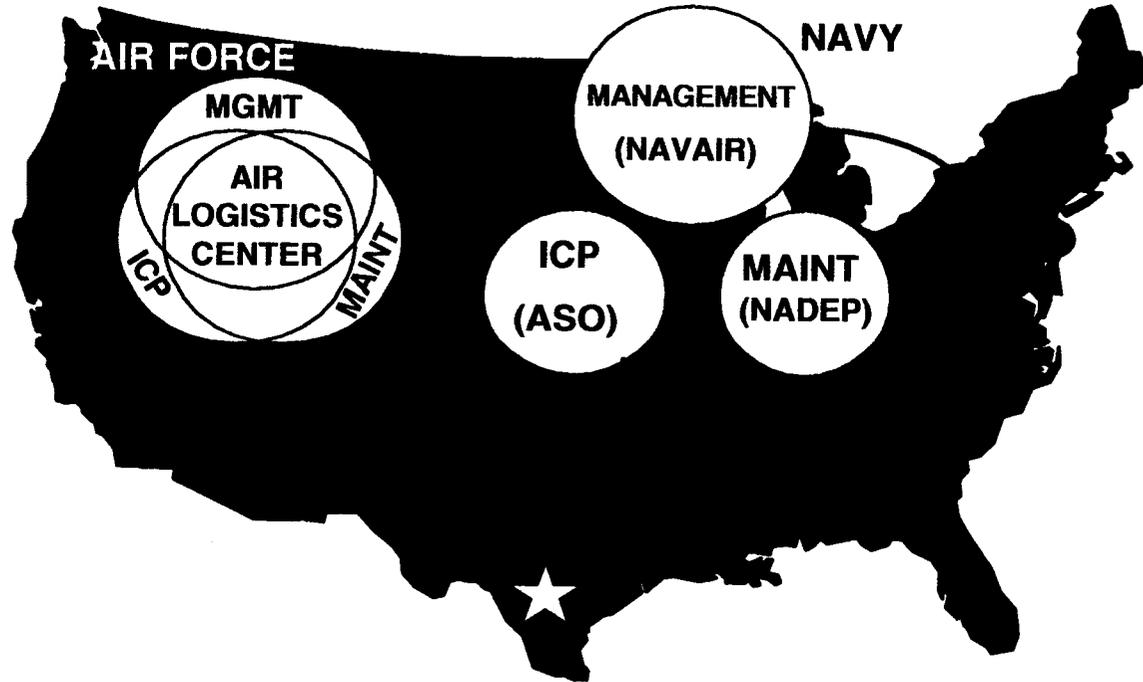
**CUSTOMER, VALUE
AND PEOPLE**

SAALC

INTEGRATED WEAPON SYSTEM MANAGEMENT



“More Than a Maintenance Depot”



IWSM TEAM



SA-ALC/CC

Propulsion Designated Acq Commander

External Customers
ACC
AMC
USAFE
PACAF

External Suppliers
Pratt & Whitney
General Electric
Allison

Air Breathing Propulsion



PGM

The Engine Team

Internal Customers
F-16 SPD
F-15 SPD
B-1 SPD
C-5 SPD

Internal Suppliers
Propulsion Lab
Material Lab
Maintenance (Backshops)
Support

SA-ALC

Propulsion Directorate
F100 Series (F-15/F-16) J69 (T-37)
TF39 (C-5) J85 (T-38)
T56 (C-130)

Depot Maintenance
F100 Series
TF39
T56 (USAF & USN)

ASC

Propulsion Directorate
F100-229
F110-129
F117 (for C-17 SPO)

OC-ALC

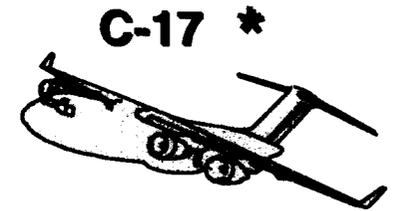
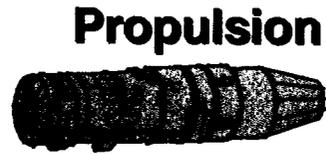
Propulsion Directorate
F101 (B-1B) TF33 (B-52H, C-141, C-135, E-3)
F108 (C-135R)
F110 (F-16C) J57 (B-52G, C-135)

Depot Maintenance
F101 TF30
TF33 F110 (USAF & USN)
J57 F108

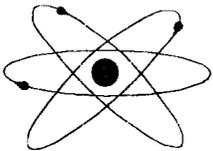
**CUSTOMER, VALUE
AND PEOPLE**



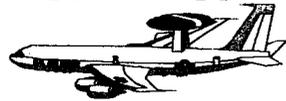
IWSM



Nuclear Weapons



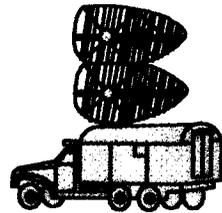
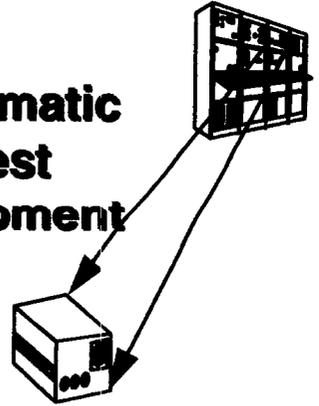
Cryptology



Trainers & FMS



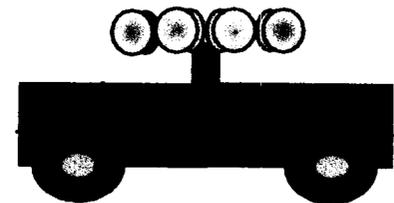
Automatic Test Equipment



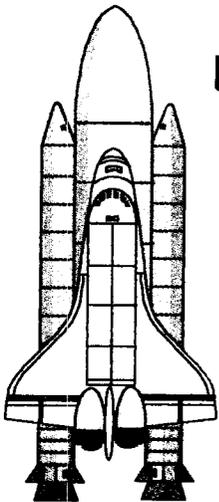
Aircraft Accessory



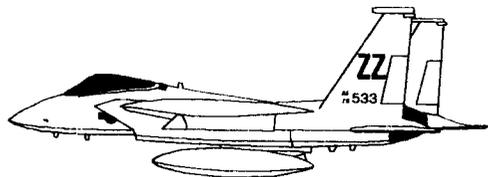
Support Equipment



Fuels



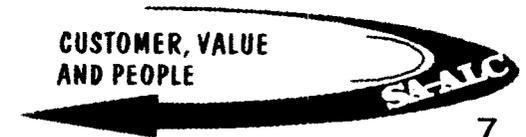
Secondary Power Systems



Life Support *



CUSTOMER, VALUE AND PEOPLE



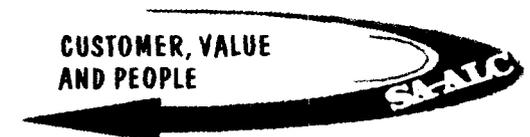
C-5 SPD



- **Manages: C-5 Aircraft Structure and Components**

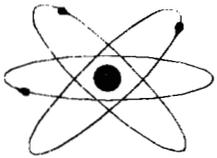
- **Customers**
 - **Air Mobility Command, Air Education and Training Command, Air Force Reserves, Air National Guard**

- **SA-ALC Organic Repair**
 - **C-5 Programmed Depot Maintenance**
 - » **21 Aircraft Per Year (FY95-2000)**
 - » **7 Speedline Aircraft Per Year (FY95-99)**
 - » **855,227 Hours (DPSHs)**
 - » **\$10.9M Budget**

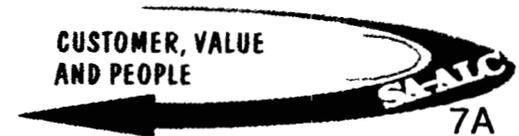


MUNITIONS - NUCLEAR

PGM



- **Manages:** Trailers
Practice Bombs
Reentry Vehicles
Components
- **Items Managed**
 - 397 Line Items
 - 95,536 Hours (DPSHs)
 - \$5.8M Inventory
- **Organic Repair**
 - Aircraft Nuclear Weapons Controllers
 - Aircraft Nuclear Station Logic Units
 - Nuclear ICBM Reentry Vehicle



CRYPTOLOGIC PGM



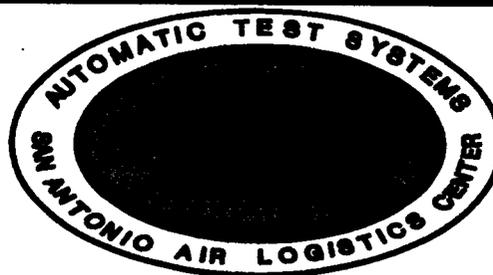
- **Manages:** AF Information Security
Signal Intelligence
- **DoD Space ComSec**
Information Warfare
- **Items Managed**
 - 42,890 Line Items
 - 2.45M Density
 - \$1.65 Billion Inventory
- **SA-ALC Organic Repair**
 - AF Cryptologic Equipment (HW & SW) - 15,841 per year
 - DoD Space Cryptologic Equipment - 1000 per year
 - AF Signal Intelligence Equipment - 4000 per year
 - AF Information Warfare - Start FY96



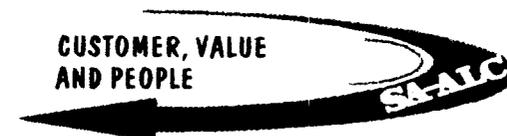
CUSTOMER, VALUE
AND PEOPLE

SA-ALC

AUTOMATIC TEST SYSTEMS PGM



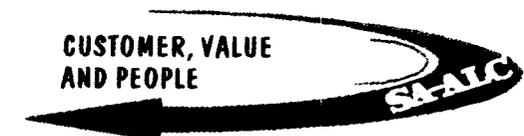
- **Manages: Automatic Test Equipment**
- **Items Managed**
 - 62,000 Line Items
 - \$5.4B Inventory
- **SA-ALC Organic Repair**
 - 150,000 Hours (DPSHs)
 - \$27.5M



GROUND SUPPORT EQUIPMENT MGM



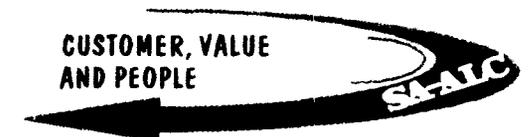
- **Manages: Ground Support Equipment**
- **Items Managed**
 - **33,476 Line Items**
 - **\$3.6B Inventory**
- **SA-ALC Organic Repair**
 - **81 Line Items**
 - **\$1.2M**



AIRCRAFT ACCESSORIES MGM



- **Manages: Aircraft Accessories**
- **Items Managed**
 - 4,055 Line Items
 - \$439.6M Inventory
- **SA-ALC Organic Repair**
 - 63 Line Items
 - \$5.8M



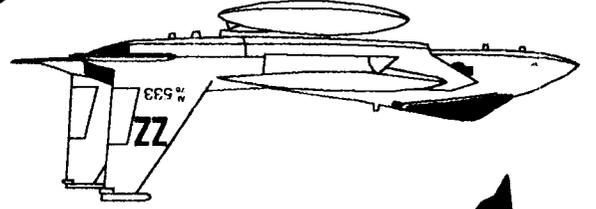
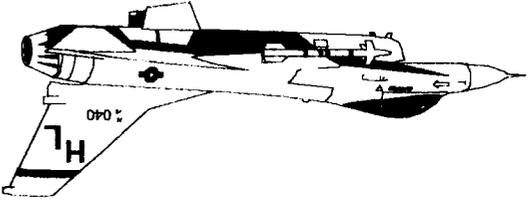
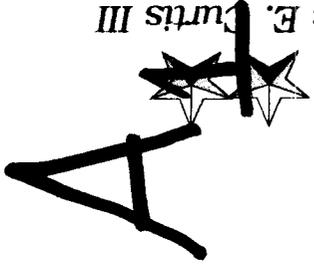
TRAINERS AND FMS SPD



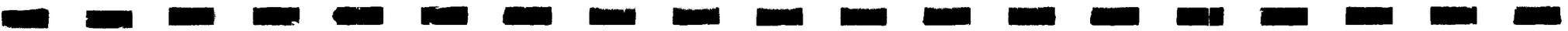
- **Manages: T-37, T-38A, AT-38B, QF-106, F-5, et.al.**
- **Mature and Proven Aircraft**
- **Organic Repair**
 - **T-38 Depot Modification Program**
 - » **38 Aircraft for FY95**
 - » **184,509 DPSH**
 - » **\$10.9M Budget**



Breifer:
Maj Gen Lewis E. Curtis III
April 1995



GLOBAL REACH
GLOBAL POWER

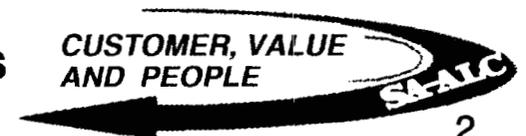


KELLY FIELD

“Air Force’s Oldest Base”



- **Military Aviation Came to San Antonio in 1910 at Fort Sam Houston**
- **Lt Kelly Killed in 1911 Crash of Curtiss “Pusher”**
- **November 1916, Kelly Area Chosen as Site for a New Aviation Center**
- **World War I - Most American Pilots Trained in U.S. Learned to Fly at Kelly Field**
- **March 1921 - Depot Repair Combined with Depot Supply for Predecessor of Today’s ALC**
- **World War II**
 - **Advanced Flight Training Until 1943**
 - **March 1943, Kelly Field Became Maintenance and Supply Depot (B-17, B-25, B-29, P-51, C-47 and 31,000 People)**
- **Post World War II**
 - **B-36, B-58, B-52, F-102, F-106 and Engines**



THE KELLY AFB TEAM



- **More Than a Maintenance Depot**
- **World Class Maintenance Depot**
- **Our People - The Kelly Advantage**
- **Posturing Kelly for the Future**

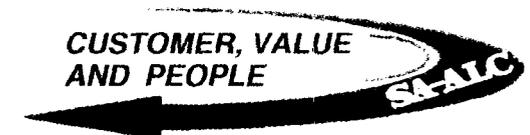
**CUSTOMER, VALUE
AND PEOPLE**

SAALC

NOT GOING TO DISCUSS



- **Strategic Planning Process**
- **Corporate Management Structure**
- **Integrated Product Teams**
- **Products and Process Metrics**
- **Quality Program and QAF Assessment**
- **Unit and Individual Awards**

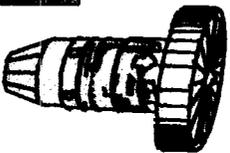


INTEGRATED MISSION



Weapon System/Commodity Mgt

C-17



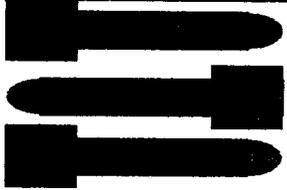
Combat Capability

Global Reach - Global Power

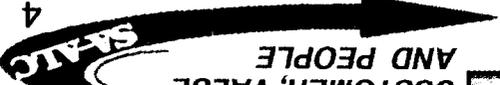


Support Missions

Air Mobile
Munitions



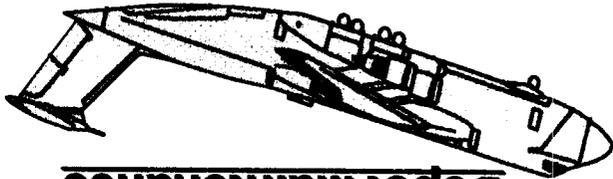
CUSTOMER, VALUE
AND PEOPLE



Operational Missions



Depot Maintenance



AIR INTELLIGENCE AGENCY



- **Mission:**

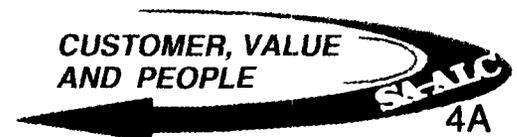
- Pursue Information Dominance by Protecting the U.S. and Subverting Adversary Information Systems
- To Provide the Best “Battle Space” Information to the Right Customer
- Joint Information Warfare Center
 - » Develop, Maintain and Deploy Information Warfare / Command and Control Warfare Capabilities
 - » Air Force Focal Point for Tactical Deception and Operations Security Training

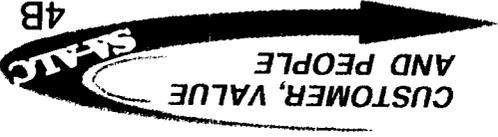
- **Facility Square Feet:**

- 611,526 SF

- **Manpower:**

- 3,022 Personnel



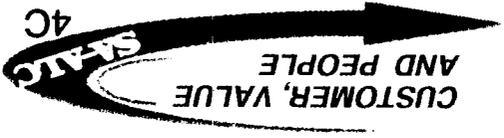


- **Manpower:**
 - 2,939 Personnel
 - » 608 Military Full Time
 - » 48 Civilian Full Time

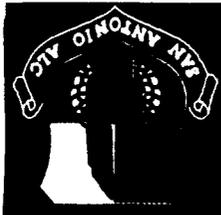
- **Facility Square Feet:**
 - 565,975 SF

- **Mission:**
 - 14 C-5As with 12% of Total C-5 Capability
 - Largest C-5 Equipped Air Force Reserve Wing
 - First Wing to Deploy During DESERT SHIELD/STORM





- **Mission:**
 - 18 F-16A Aircraft
 - 10 Supporting Units Assigned and Mobility Tasked
- **Facility Square Feet:**
 - 236,435 SF
- **Manpower:**
 - 1,024 Personnel
 - » 270 Full Time



149th FIGHTER GROUP

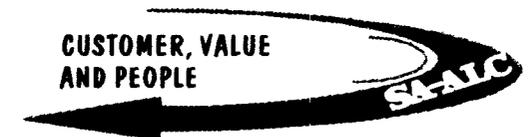
Document Separator

BASE / COMMUNITY TEAMWORK (Cont)



- **Commitment to Kelly**
 - **City Ordinance Protects Airfield Encroachment**
 - **Base Comprehensive Land Use Plan in Place**
 - **City Zoning Ordinance Controls Development Near Base**
 - **Reduced Utility Rates (Annual Savings \$1.8M)**
 - **City and State Protecting Kelly Water Supply**

- **Military City USA**





- Union Partnership
- People Initiatives
- Base/Community Team
- Unique Workforce



OUR PEOPLE
THE KELLY ADVANTAGE

PEOPLE INITIATIVES



- **Leadership Training**

	<u>SESSIONS</u>	<u>#ATTENDED</u>	<u>% COMPL</u>
– Civilian	45	581	86
– Progressive	12	168	72
– Workleader Seminar	10	132	58

- **Employee Feedback to Supervisors**

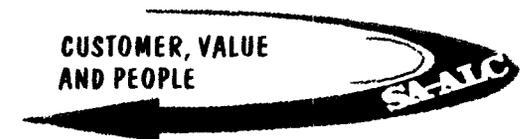
- Currently in Third Cycle
- Mandatory Feedback to Each Supervisor

- **Team Performance Based Awards**

- Awards Allocation to Directorates
- Each Directorate has a “Flow Down”

- **Multi-Skilling Multi-Crafting**

- 447 Multi-Skilled Technicians in 20 Job Series

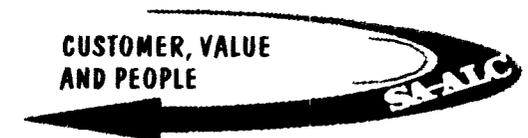


PEOPLE INITIATIVES (Cont)



Productivity Based Awards

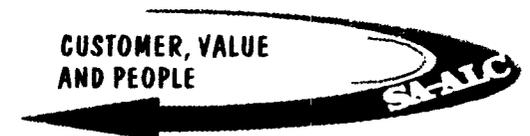
<u>Metric</u>	Metric Pt. <u>Value</u>
• Cost of Production	50
• Safety	60
• Customer Satisfaction	70
• Productivity Improvement	50
• Environmental Compliance	<u>20</u>
• TOTAL	250



OUR PEOPLE THE KELLY ADVANTAGE



- **Unique Workforce**
- **Base/Community Team**
- **People Initiatives**
- **Union Partnership**

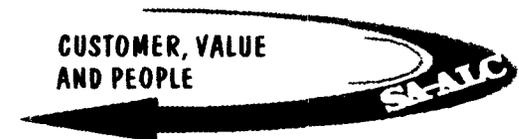


UNION PARTNERSHIP



- **Instituted at Kelly AFB Three Years Ago**
 - **Open Door Policy (Mar 92)**
 - **Safety Shoes (Sep 92)**
 - **Quality Initiatives (Oct 93)**
 - **RIF Task Force Cooperation (93-94)**

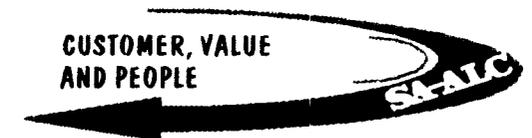
- **Presidential Directive (Oct 93)**
 - **Intensified Joint Union-Management Cooperation**
 - **FLRA Training to Develop Joint Goals (Jun 94)**



SIGNED A FORMAL PARTNERSHIP AGREEMENT



- **Improve Labor-Management Relations**
 - Training
 - Union on Management Committees
- **Improve Employees' Confidence in Personnel Processes**
 - Union Present at Promotion Panels
- **Establish an Effective Alternate Dispute Resolution Process**
 - To Reduce ULPs, Grievances, Disciplinary Issues
- **Reduce Production Costs**
 - Reduce from \$62; Goal - \$54
- **Improve Customer Support**
 - Customer feedback and Metrics



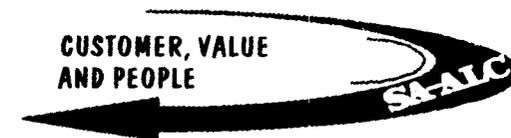
PARTNERSHIP

The Bottom Line



FOR SA-ALC:	1992	1993	1994	1995-Thru 30 Mar
ULPs	193	122	71	1 36% DROP-1993 41% DROP-1994
ARBITRATIONS	142	158	68	8 57% DROP-1994
UNION GRIEVANCES	47	25	12	2 46% DROP-1993 52% DROP-1994
EMPLOYEE GRIEVANCES				
2ND STEP	409	170	61	4 58% DROP-1993 64% DROP-1994
3RD STEP	150	156	121	5 4% INC-1993 19% DROP-1994

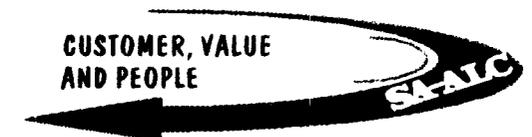
AFMC ULP:	HQ&WPAFB	SM-ALC	OC-ALC	WR-ALC	OO-ALC	SA-ALC	TOTAL
CY1994	44	24	11	34	24	71	208
CY1995 (TO DATE)	2	2	10	18	7	1	40

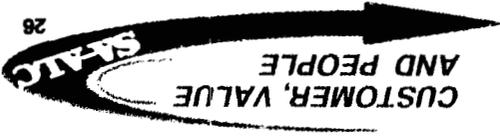


THE KELLY TEAM



- **More Than a Maintenance Depot**
- **World Class Maintenance Depot**
- **Our People - The Kelly Advantage**
- **Posturing Kelly for the Future**





- Results
- Realignment Strategy
- Facts of Life

**POSTURING KELLY
FOR THE FUTURE**

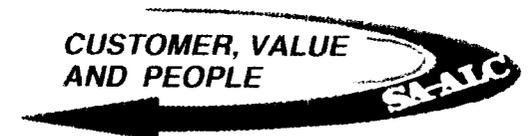


FACTS OF LIFE



- **Moving Workload is Tough**
 - Major Cost Risk
 - Major Readiness Risk

- **Case Studies**
 - B-52
 - AGMC



CASE STUDY

B-52H AIRCRAFT (Cont)

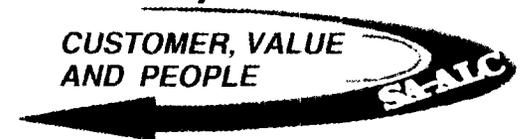


- **Cost Impacts**

- **13% Increase in Cost for C-5**
 - » **Direct Labor Cost Increase of \$8 per Hr**
 - » **\$4.7M C-5 DMBA Loss**
- **T-38 Production**
 - » **\$7.7M Loss**
- **Unprogrammed Pipeline Build-up Cost Over \$1.1M**

- **Readiness Impacts**

- **C-5 PDM Schedule Overruns**
 - » **1993 Average Days Beyond Schedule Output**
 - **138 Days X 15 Aircraft = 2,070 Days**
 - » **1994 Average Days Beyond Schedule Output**
 - **70 Days X 21 Aircraft = 1,470 Days**
 - » **1995 Average Days Beyond Schedule Output**
 - **19 Days X 21 Aircraft = 399 Days**
 - » **Average 3.6 Fewer C-5s in Operational Fleet (126 Aircraft) in FY93/94**

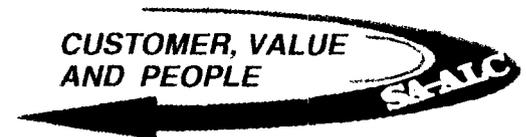


CASE STUDY

NAVY T56 ENGINE



- **Navy T56 Workload Transfer From Alameda (1995)**
 - SA-ALC Became Sole DoD Source for T56
- **Readiness Impacts**
 - War Reserve Engines Will Be Below Target in May 95
 - Degraded AF C-130 and Navy P-3, C-130, and Destroyers
- **Cost Impacts**
 - Unprogrammed Equipment Repair Costs
 - Increased Overtime to Maximize Production
- **Personnel Impacts**
 - Extensive Knowledge Since Navy Personnel Did Not Transfer
 - Extensive Navy Certification Required
 - Workload Increased (141K) Without Increasing People
- **Equipment Impacts**
 - Not Properly Shipped/Marked and Inadequate T.O.s
 - Delayed Production

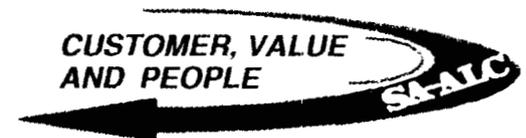


CASE STUDY

TF34 ENGINE



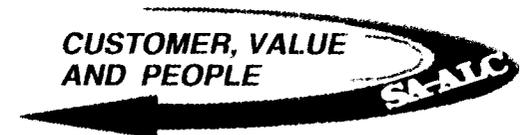
- **TF34 Transfer From Alameda to Jacksonville (1995)**
 - 100,400 Hrs (FY95) and 130,200 Hrs (FY96)
 - Significant Production Delays Due to Transfer
- **Readiness Impacts**
 - Delayed Production Drove War Readiness Engines Below Target
- **Cost Impacts**
 - Increased Overtime
 - Unprogrammed Equipment Repair Costs
- **Personnel**
 - Extensive Certification Requirements Not Completed
 - » Only 20 of 72 Processes Completed
- **Equipment**
 - Received in Unserviceable Condition
 - Required Extensive Repair



CASE STUDY - AGMC COST RISK



- **BRAC COBRA Estimate: \$32.4M**
- **Strategy**
 - Transfer 9% of Workload to ALCs
 - Privatize Remainder in Place
- **Current Total Cost to Close: \$75.4M**
(133% Increase)
- **AGMC Was Easy Compared to an ALC**

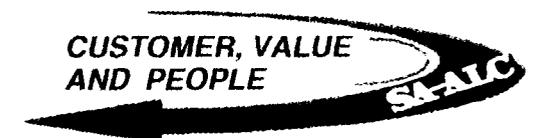


CASE STUDY

B-52H AIRCRAFT



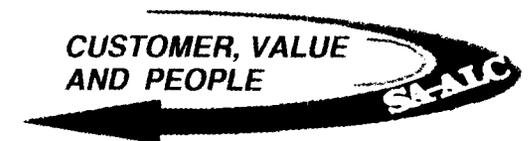
- **B-52H PDM/MISTR/Unprogrammed Workload**
 - Transfer to OC-ALC (1992-1993)
- **B-52H Workload 900K Hrs (FY92)**
 - Loss of Workload Resulted in Major Realignment of Personnel
- **Personnel Impacts**
 - 659 B-52 People in FY91
 - Transfer People to C-5 and T-38 Workloads
 - » 346 Man Years of Retrain Need for Recertification
 - » 39% Decrease in Production in C-5 PDM



ALC CLOSURE COST RISK



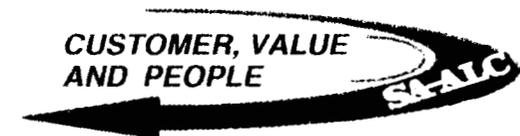
- **BCEG '95 COBRA Estimate** **\$653M**
- **AGMC Experience Factor** **\$1,521M**
(133% Increase)
- **Decrement to AF Modernization** **\$993M**
- **4+ C-17s at Current Flyaway Cost of \$221M per Aircraft**

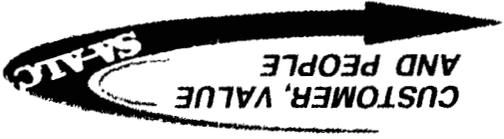


HISTORY - WE'VE TRIED TO CLOSE AN ALC



- **BRAC 91**
 - **AFLC Tried to Close an ALC**
 - **Couldn't Justify Cost**
 - **Downsize in Place**
- **BRAC 93**
 - **AFMC - Downsize in Place & Interservice**
 - **AF/DoD - Tried to Close an ALC**
 - **BRAC - Tried to Close an ALC**
 - **Didn't Make Sense**
 - **Continue to Downsize in Place**
- **BRAC 95**
 - **AF/DoD - Realign ALCs**





- Results

- Realignment Strategy

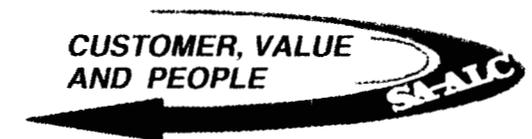
- Facts of Life

**POSTURING KELLY
FOR THE FUTURE**

REALIGNMENT STRATEGY



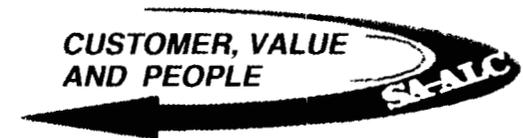
- **Downsize**
 - Started in 1990
 - ALC Size Still Large Enough for Substantial Realignment
- **Realignment Process**
 - Industrial Base Assessment
 - Technology Repair Center (Process) Analysis
 - Compression



DOWNSIZING CRITERIA AND STRATEGIES



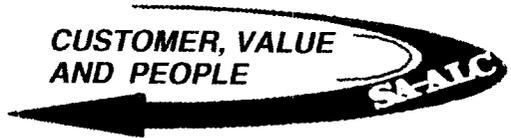
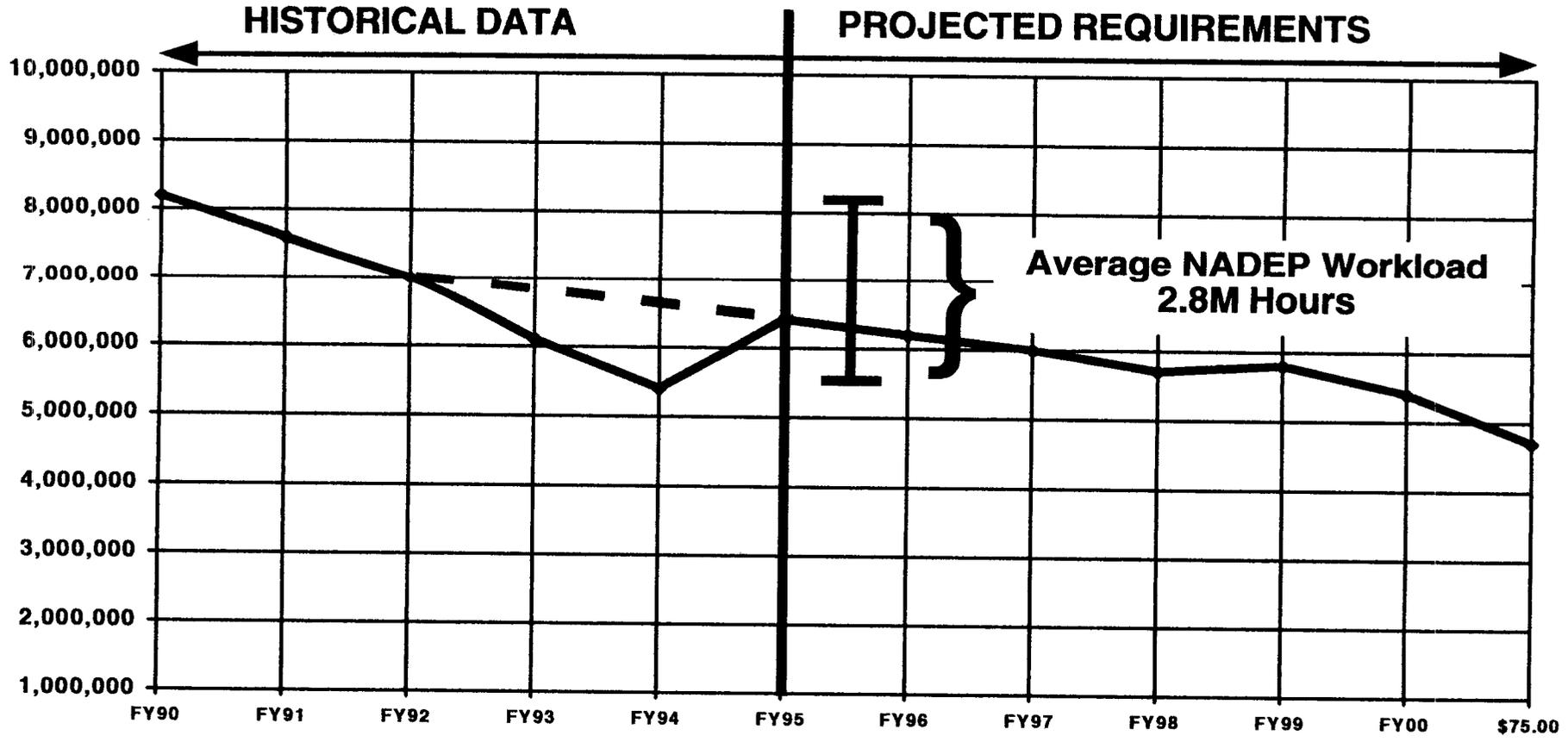
- **Protect Combat Capability and Customer Dollar Strategies:**
 - Take Manpower Cuts in Depot Maintenance
 - Establish/Maintain Contract Second Sources
- **Reduce Prices/Increase Productivity Strategies:**
 - Stabilize Workforce
 - Reengineer Critical Processes
 - New Workloads
 - Exploit Efficiency Opportunities (BRAC Realignment)



WORKLOAD ERODING



SA-ALC WORKLOAD



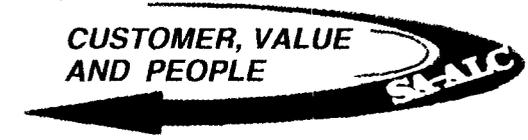
DEPOT MAINTENANCE WORKLOAD

DPAHs (000's)



	FY83	FY84	FY85	FY86	FY87	FY88	FY89	FY90	FY91	FY92
AIRCRAFT	2,102	2,124	2,038	1,841	1,981	1,807	1,980	2,138	1,839	1,932
ENGINES	2,476	2,651	2,734	2,689	2,367	2,064	2,282	2,163	1,951	1,889
OMEI	0	0	0	0	0	0	0	0	0	0
EXCH	4,024	3,967	3,965	4,262	4,232	3,852	4,041	4,018	3,753	3,376
AREA BASE	88	81	76	79	74	67	74	54	47	53
MANUF	245	285	365	448	757	610	549	465	344	270
SOFTWARE	105	116	103	167	152	142	181	162	146	143
TOTAL	9,040	9,224	9,281	9,486	9,563	8,542	9,107	9,000	8,080	7,663

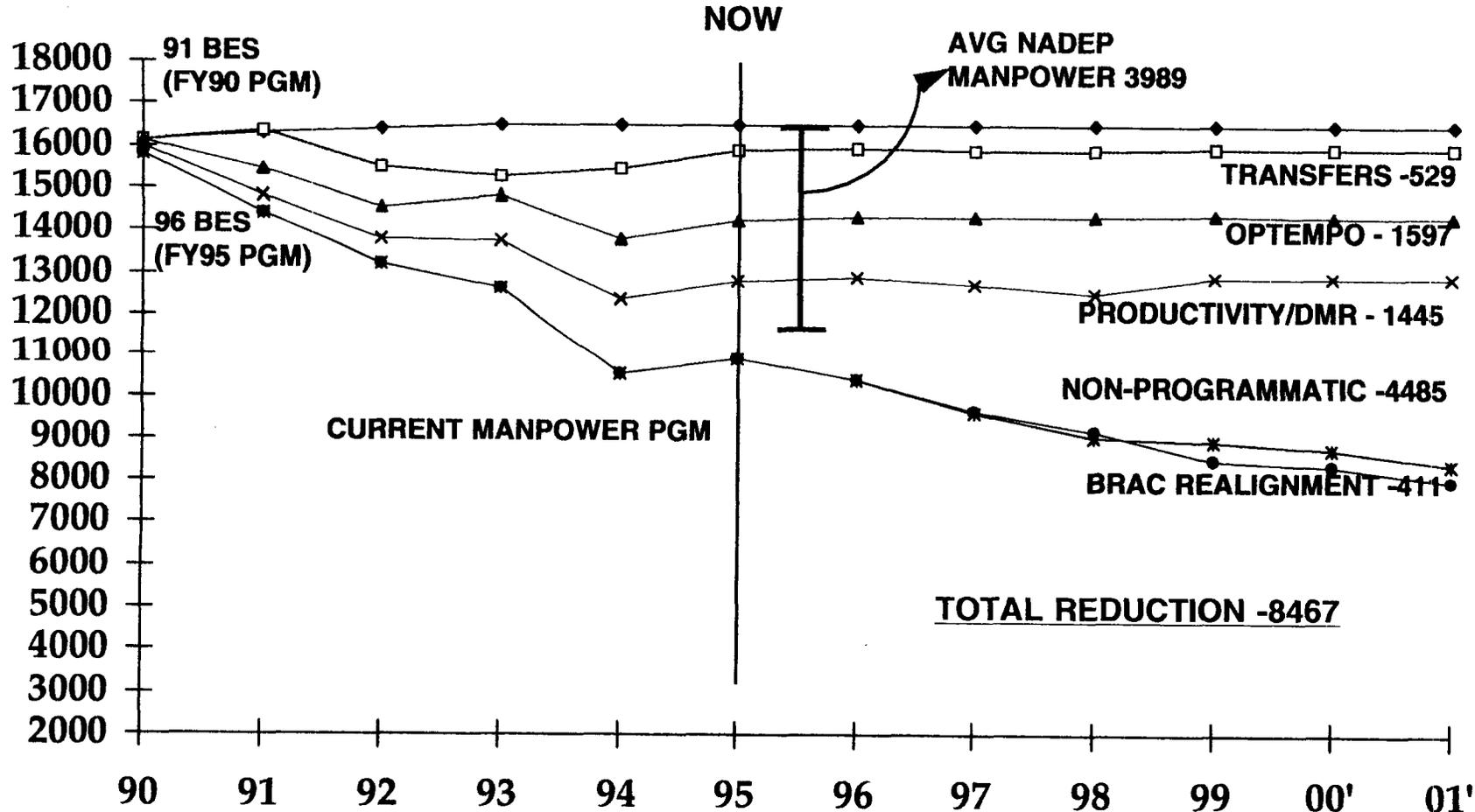
	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01
AIRCRAFT	1,676	1,482	1,026	1,044	1,079	917	804	670	690
ENGINES	1,857	1,112	1,168	1,347	1,234	1,129	1,117	1,120	890
OMEI	0	0	13	17	13	13	13	13	13
EXCH	3,442	3,505	3,914	3,570	3,462	3,380	3,383	3,118	3,101
AREA BASE	80	58	88	86	85	82	80	80	80
MANUF	194	118	157	156	156	155	150	150	150
SOFTWARE	142	175	253	236	233	219	210	209	209
TOTAL	7,391	6,450	6,619	6,456	6,262	5,895	5,757	5,360	5,133



SA-ALC MANPOWER AUTHORIZATIONS - CIVILIAN



As Of: 17 Apr 95

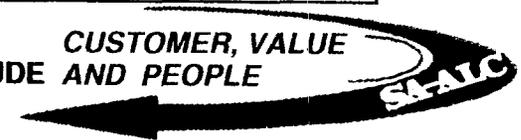


◆ 91BES □ TRANSFERS ▲ OPTEMPO × PRODUCTIVITY * NON-PROGRAMMATIC ● BRAC REALIGNMENT

SOURCES: FY95-FY01: CURRENT MANPOWER PROGRAM AS OF 17 APR 95.

BRAC REALIGNMENT INCLUDES +1 CIV (68TH INTEL SQ) AND -412 CIV (TRC). DOES NOT INCLUDE

CUSTOMER, VALUE AND PEOPLE



KELLY AFB POPULATION



**Civilian and Military Assigned
As of: 27 Mar 95**

Depot Maintenance	Aircraft	1,474
	Non-Aircraft	4,354
	Total	5,828
Weapon System/Commodity Mgt -----		3,117
(Does Not Include 50 Special Fuels Off-Site)		
Base Support -----		3,752
ALC Total -----		12,697

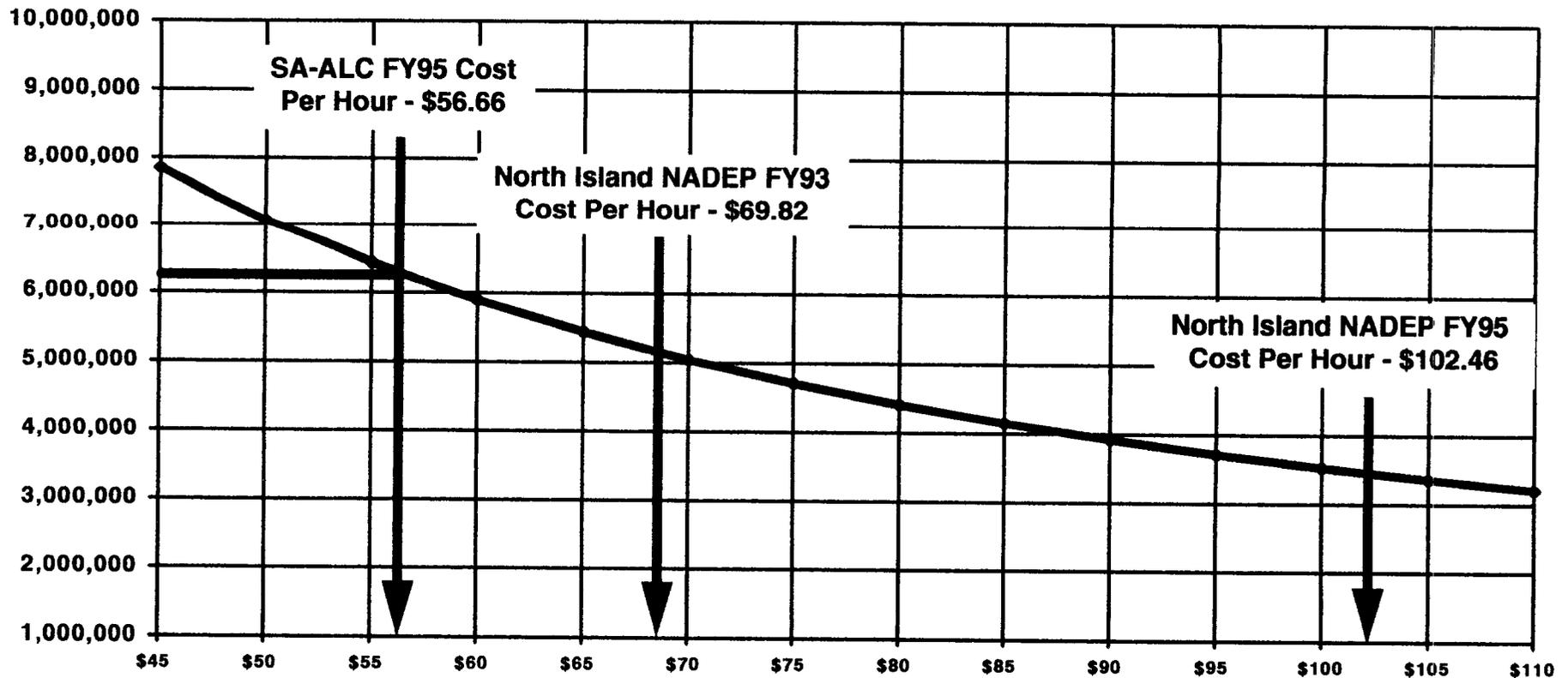
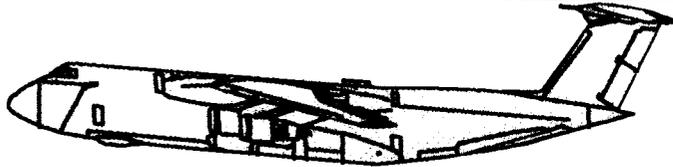
←-----→

Air Intelligence Agency (AIA) -----	3,022
433rd Airlift Wing (AFRES) -----	2,939
149th Fighter Group (ANG) -----	1,024
Def Distribution Depot (DLA) -----	944
Other Tenants / Organizations -----	2,271
Kelly Total -----	22,897

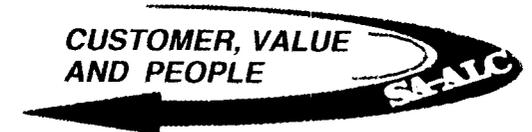
CUSTOMER, VALUE
AND PEOPLE

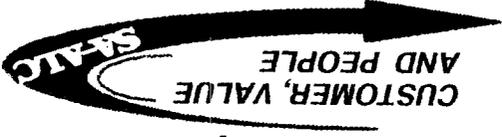


PRODUCTIVITY/COST RELATIONSHIP

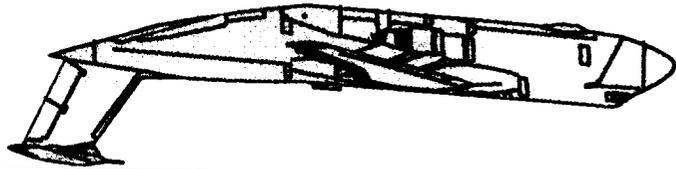
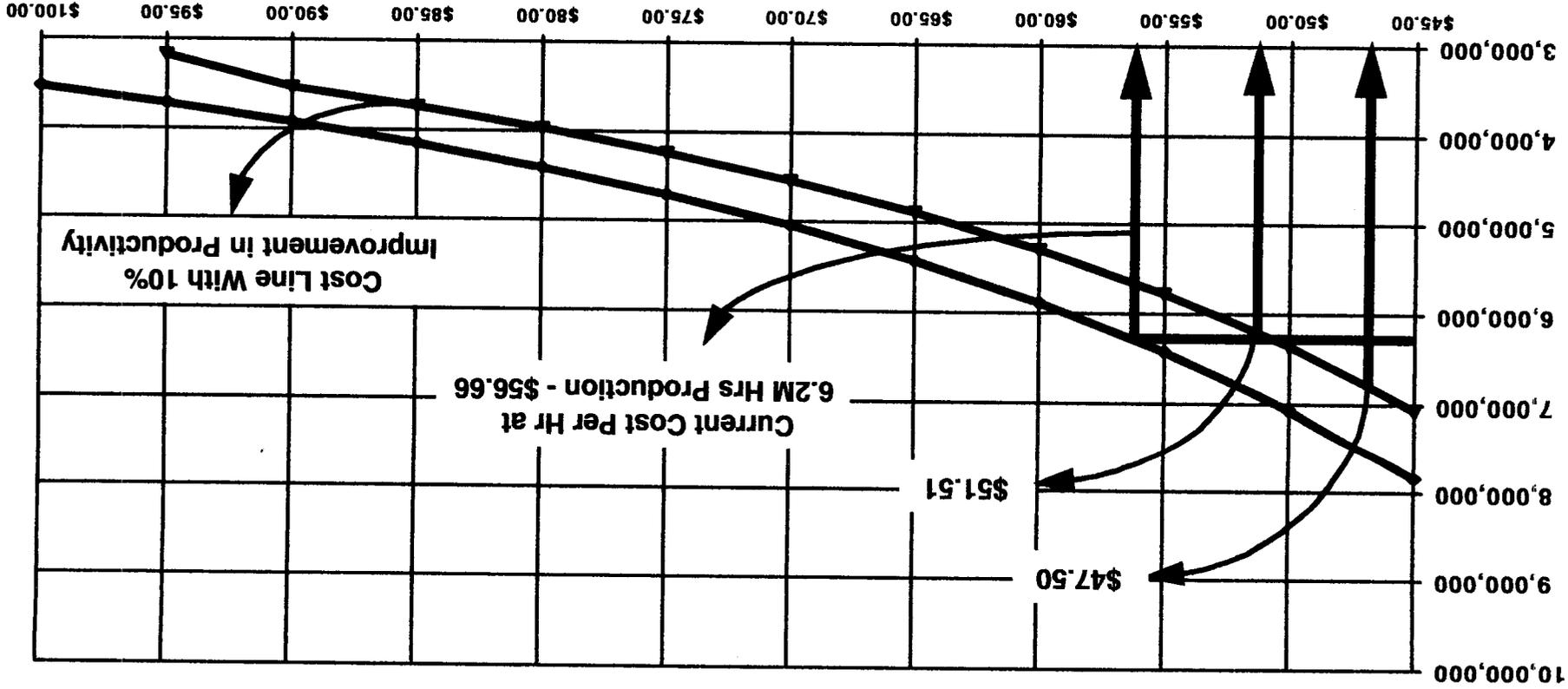


COST PER HOUR FOR LABOR AND OTHER (NO MATERIAL)





COST PER HOUR FOR LABOR AND OTHER (NO MATERIAL)

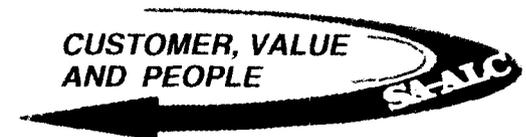


PRODUCTIVITY/COST RELATIONSHIP

INDUSTRIAL BASE ASSESSMENT



- **Identify Existing Industrial Capabilities at SA-ALC**
- **Provide Assessment of Realignment and Consolidation Opportunities**
- **Reduce Operating Costs**
- **Reduce Facility Footprint**
- **Minimize Capital Investments**
- **Optimize Process Capability**

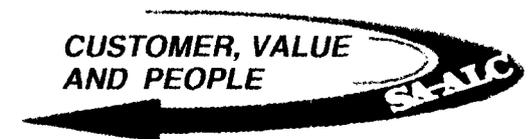


TRC/PROCESS CONSOLIDATION



- **Assess Command TRC Workloads and Industrial Processes**
 - Identify Duplication
 - Determine Consolidation Potential

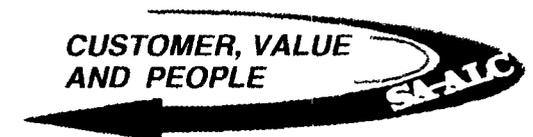
- **Achieve Benefits of Consolidation**
 - Reduce Manpower
 - Vacate Facilities
 - Reduce Capacity

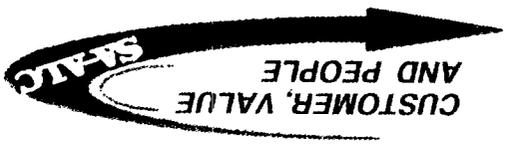


FACILITY AND PROCESS COMPRESSION



- **Optimum Implementation Plan for Process and Workload Realignments**
- **Re-Layout of Facilities to Fully Utilize Isolated Areas Vacated by Workload Transfers**
- **Move Out of Older Facilities into Newer Facilities**
- **Vacate Whole Facilities**
- **Collocate Processes Supporting Affected Commodities**
- **Create More Self-Sustaining Work Environments**
- **Minimize Routing**



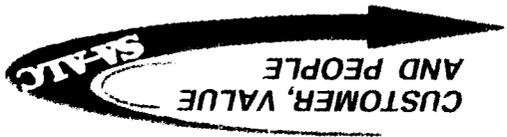


• Results

• Realignment Strategy

• View of Future





Sheet Metal

Cleaning

Physical Science Lab

Machining

Engine Related



WORKLOAD TRANSFERS FROM SA-ALC



TRC / PROCESS AREA

LOCATION OF VACATED SPACE

Machine Manufacture

B303 / 375

Composites

B375

Harness Manufacture

B375

Hydraulic / Pneudraulic

B333

Tubing Manufacture

B375

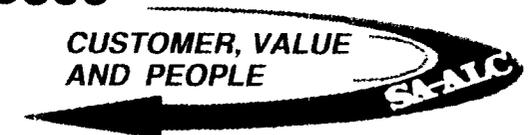
Software ATE / OFP

B178

Engine Related

Blades / Vanes

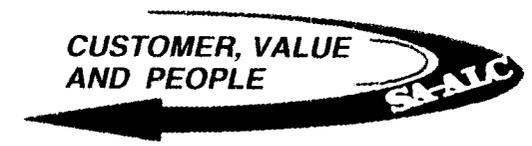
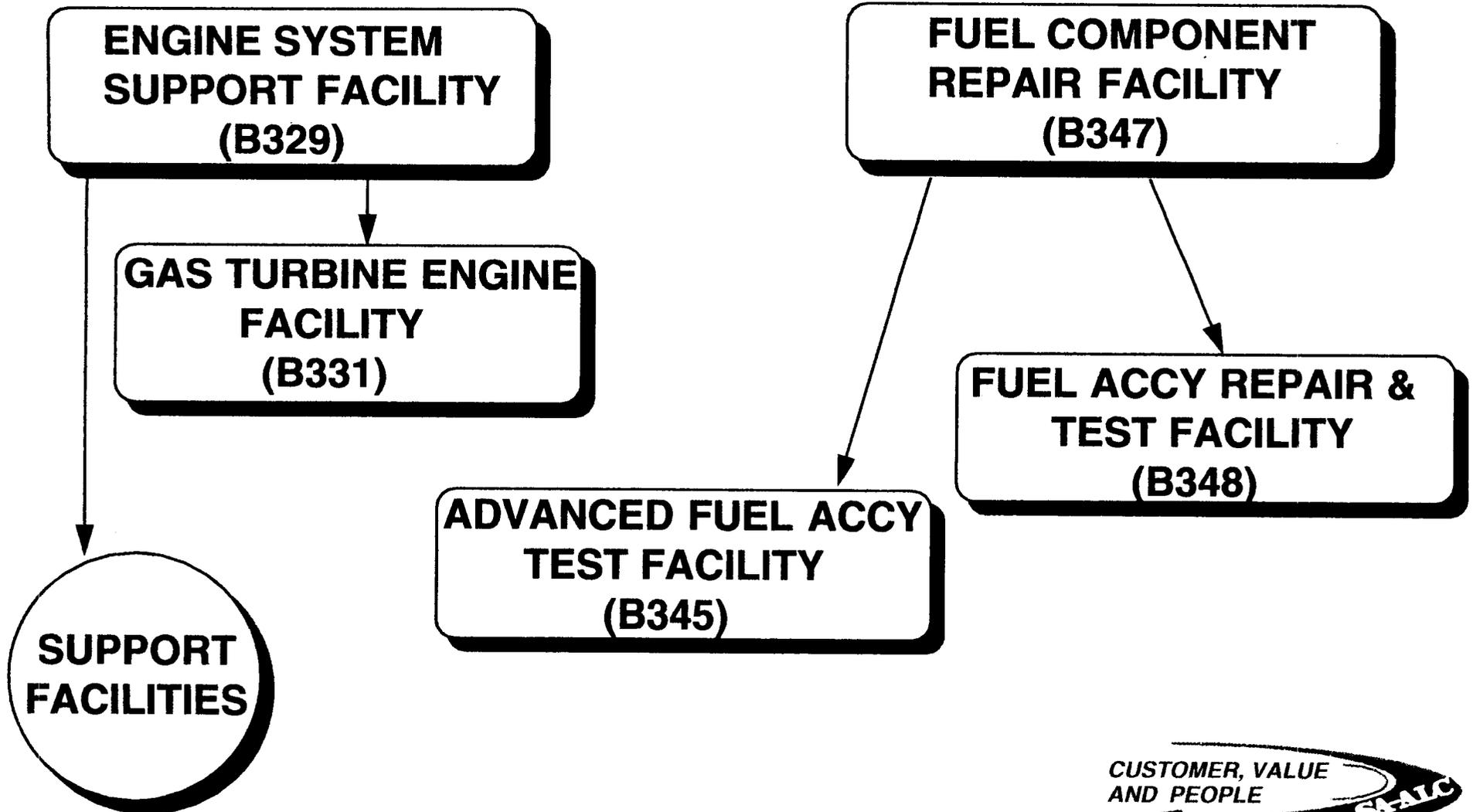
B360



SA-ALC BRAC REALIGNMENT



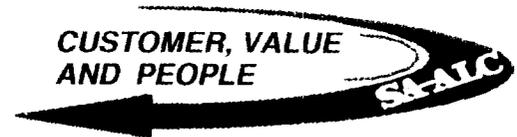
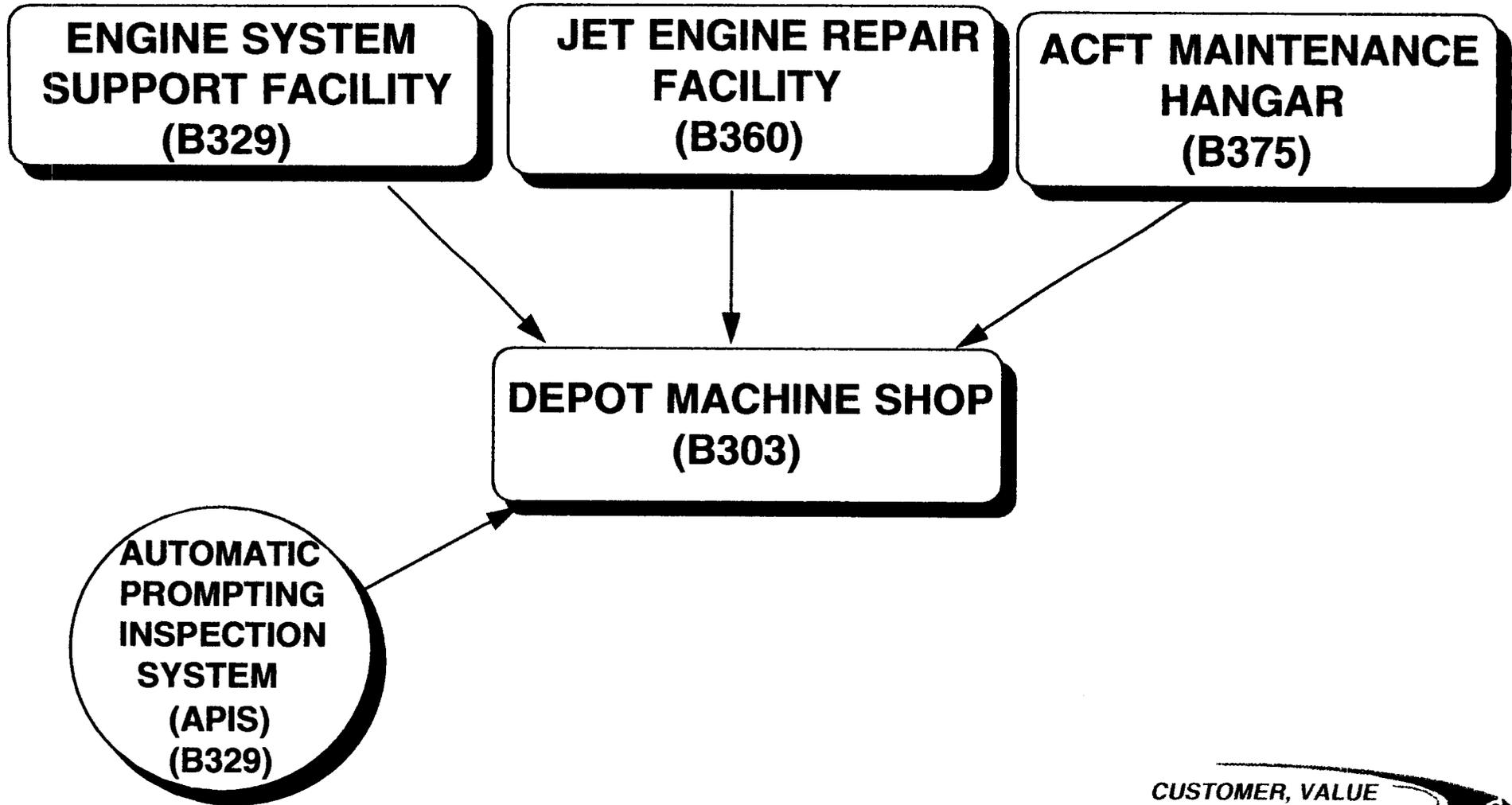
Engine Related

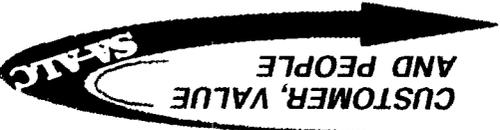


SA-ALC BRAC REALIGNMENT



Machining





**ENGINE SUPPORT FACILITY
(B324)**

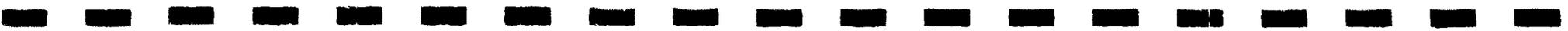
**PHYSICAL SCIENCE LAB
(B320)**

**METALLURGICAL LAB
(B321)**

**HAZARDOUS MAT'L'S
STORAGE
(B184)**

**LIFE SCIENCE EQPT
LABORATORY
(B183)**

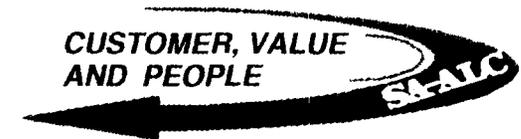
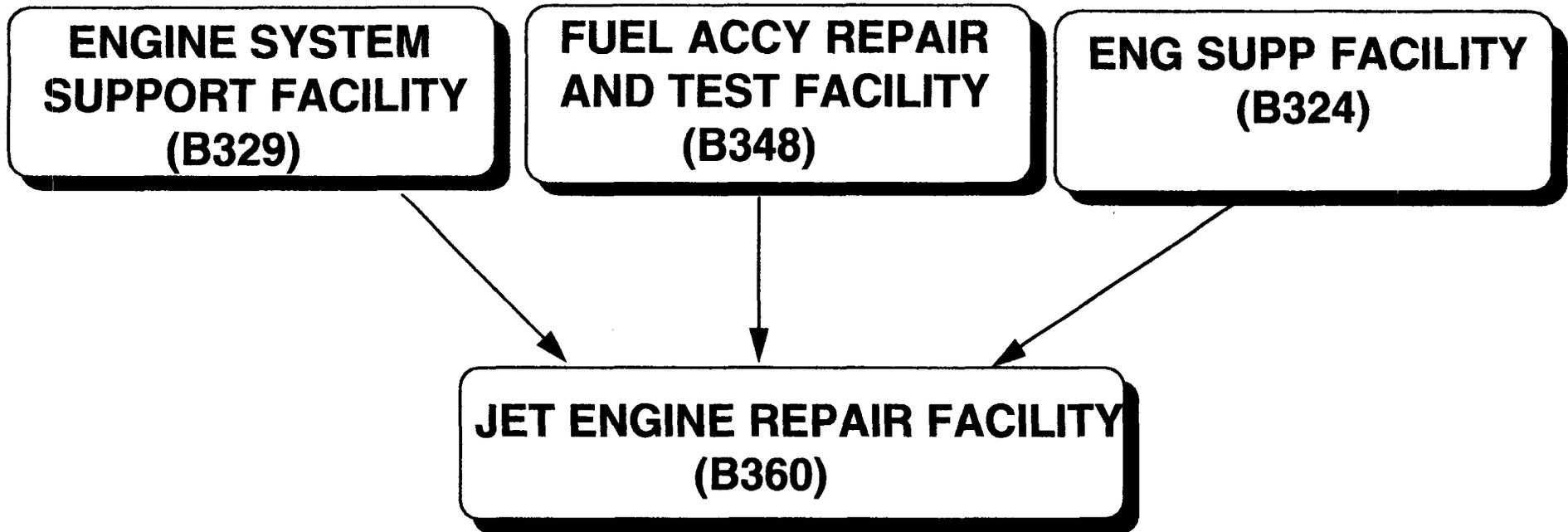
Physical Science Lab



SA-ALC BRAC REALIGNMENT



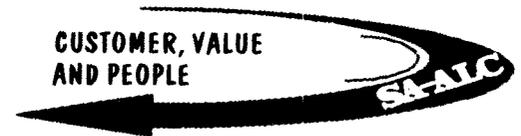
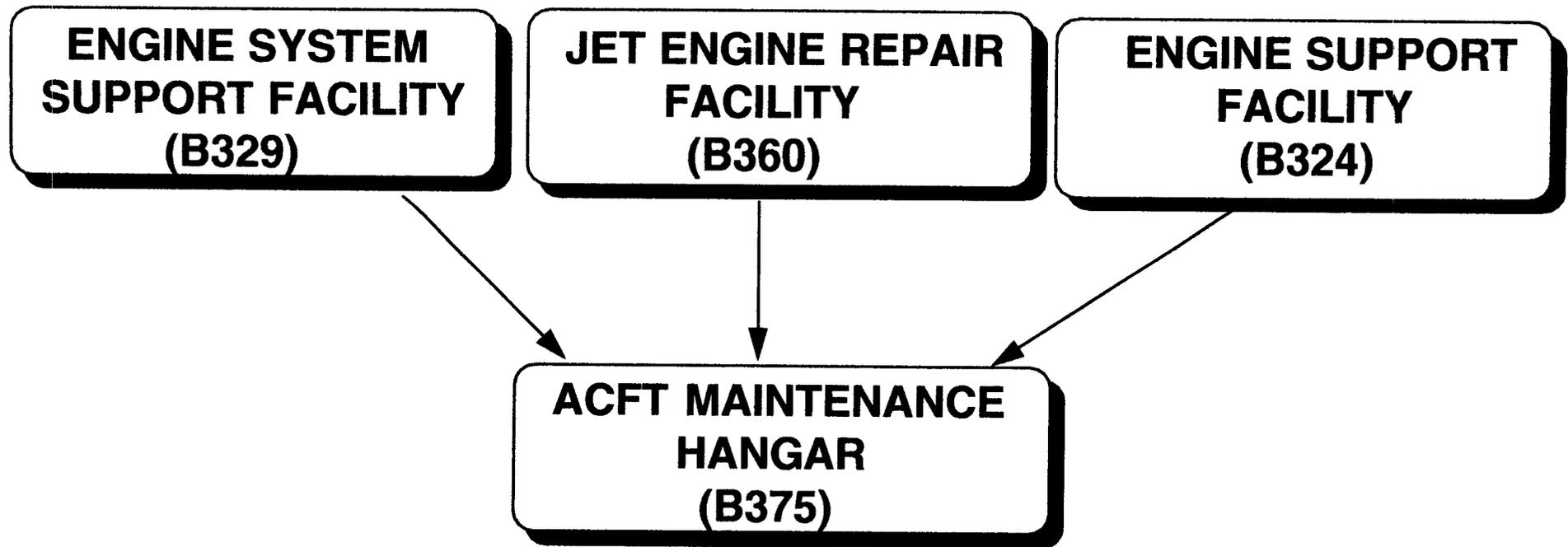
Cleaning



SA-ALC BRAC REALIGNMENT



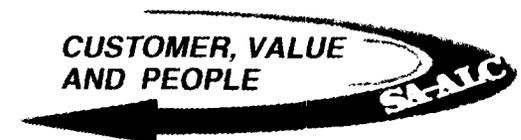
Sheet Metal

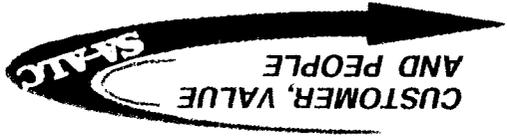


SA-ALC IMPACT SUMMARY

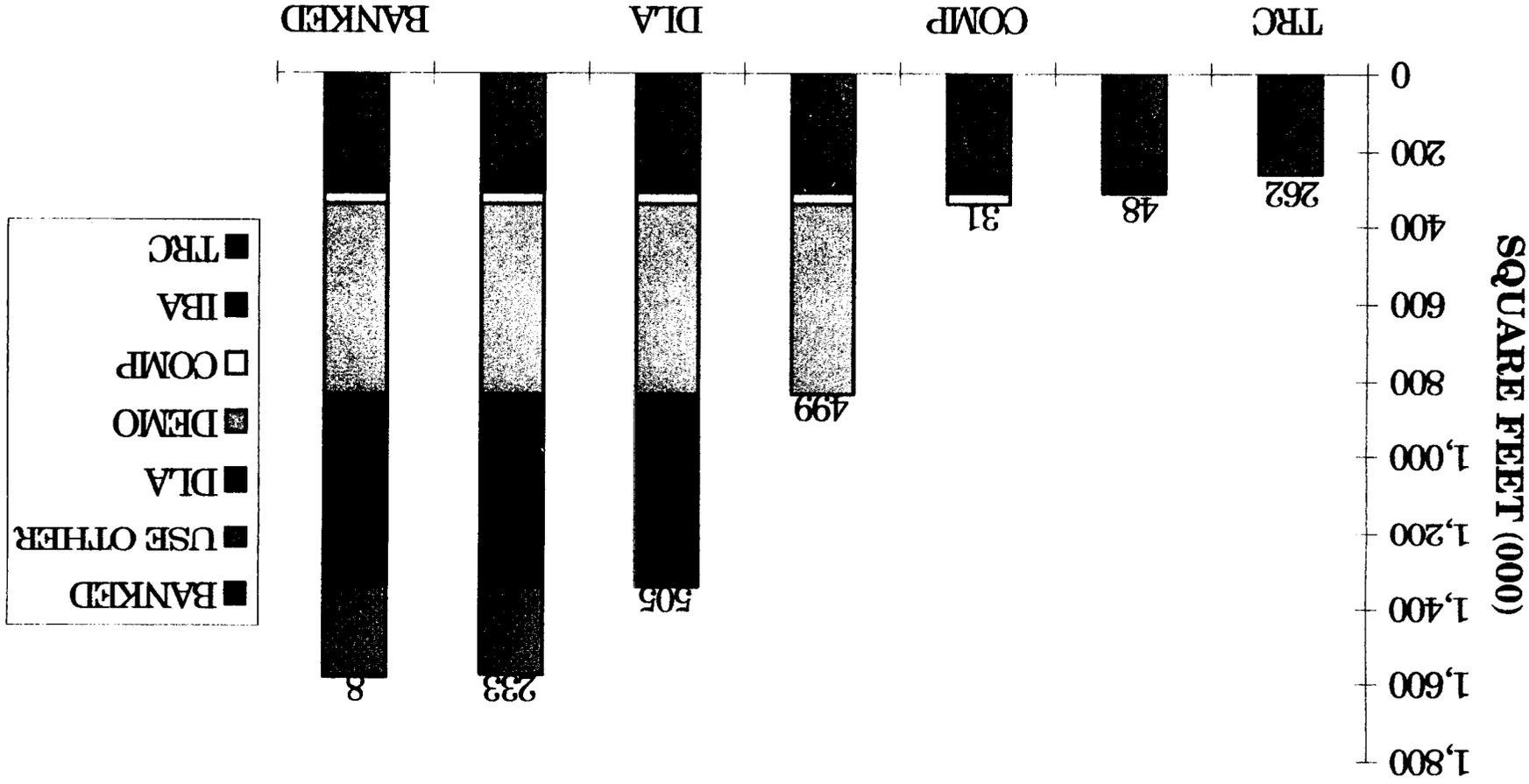


- **Facility Savings** **1.7M Sq Ft**
(Avg NADEP - 1.9M Sq Ft)
- **Capacity Reduction** **2.9M DPAH**
(Avg NADEP - 2.8M DPAH)
- **Manpower** **412**

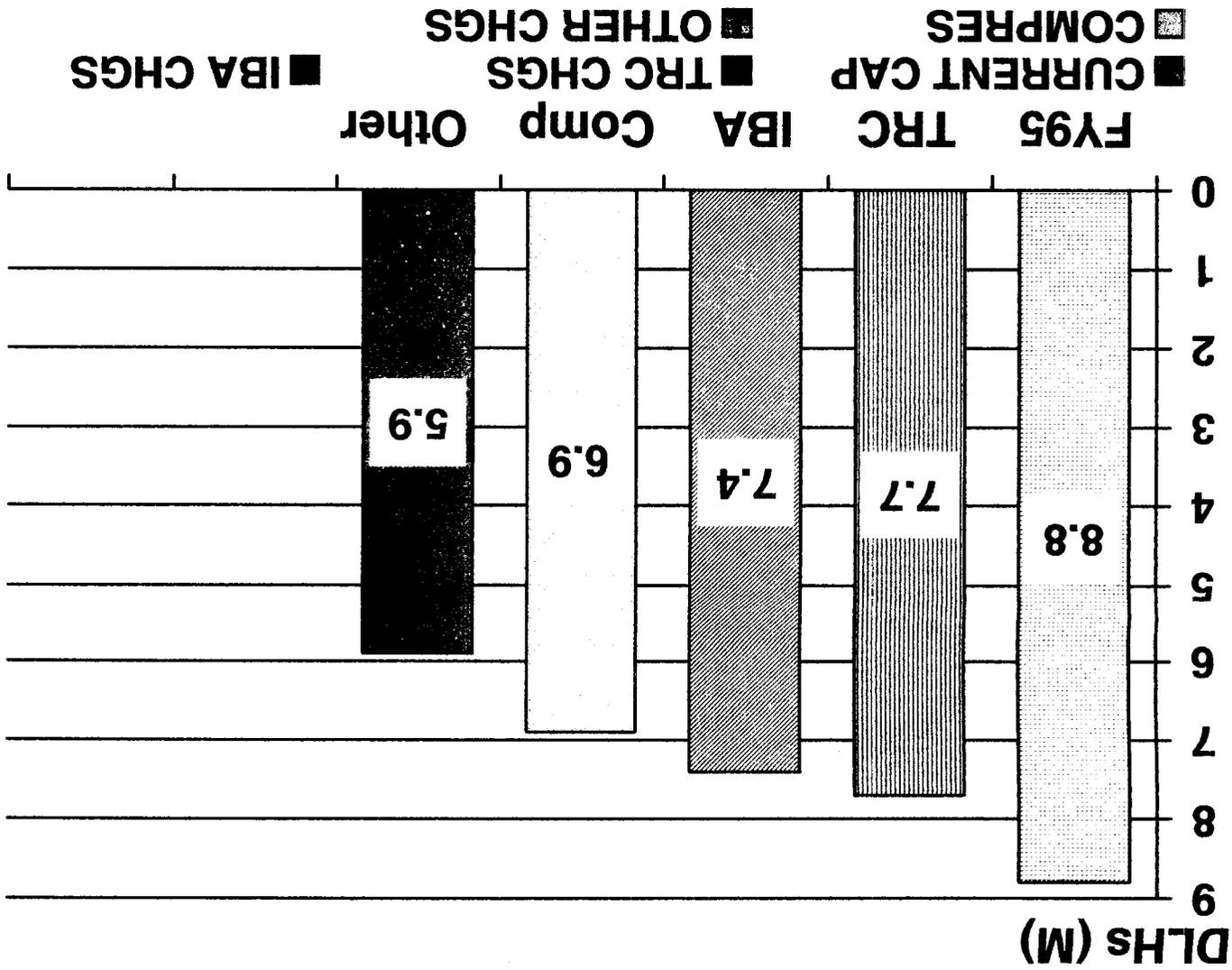
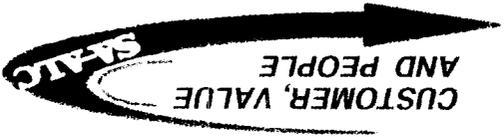




CUMULATIVE CATEGORIES

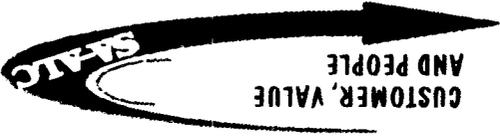


CUMULATIVE SPACE REDUCTIONS

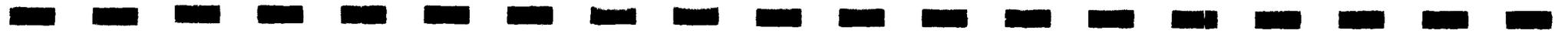
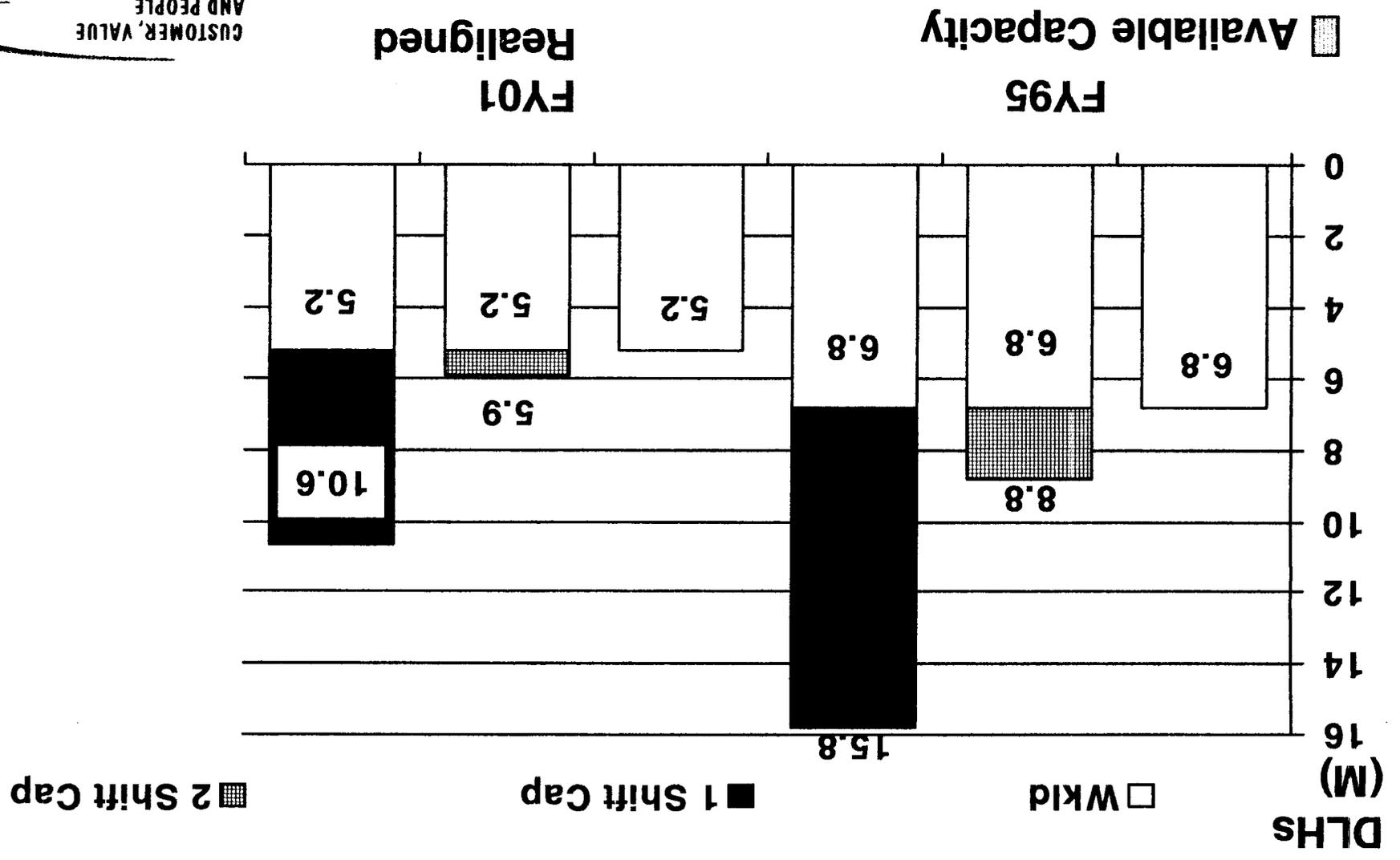


CAPACITY DOWNSIZING





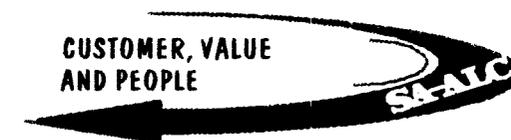
WORKLOAD VS. CAPACITY



WORKLOAD REALIGNMENT MANPOWER IMPACT



Workload Transfers	- 232
Internal Process Consolidation	- 177
Process Improvement	- 16
Workload Gains	+ <u>13</u>
Net Manpower Reduction	- 412



WORKLOAD REALIGNMENT MANPOWER IMPACT



Workload Transfers

	Reductions
Software	50
Engine Related	112
Hyd/Pneu	4
Harness Mfg	2
Composites	12
Machine Mfg	31
Tubing Mfg	1
Plating	<u>20</u>
	-232

Internal Process

Consolidation

	Reductions
Cleaning	10
Machine Repair	80
Inspection	50
Physical Science	20
Sheetmetal Repair	11
Sheetmetal Mfg	<u>6</u>
	-177

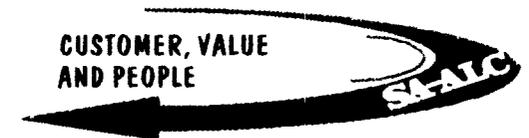
Process Improvement

	Reductions
Paint/Depaint	-16

Net Manpower Reduction 412

Workload Gain's

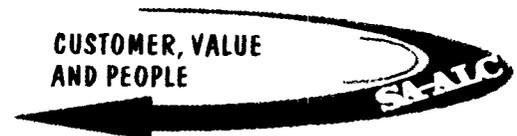
Software IPE	6
Foundry	<u>7</u>
	+13



BOTTOM LINE



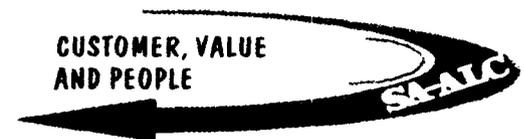
- **Provides Room to Grow**
 - Vacates Three Entire Buildings: B329, B347, B321
- **Optimizes Center Utilization**
 - Increased Efficiencies
 - Utilize Multi-Skilled Personnel
 - Co-utilization of Skills
 - Increased Utilization of Equipment
 - Allowed Disposal of Excess Equipment
- **Downsized Equivalent of a NADEP**

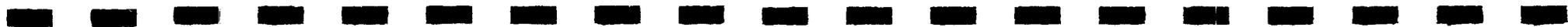


THE KELLY TEAM



- **More Than a Maintenance Depot**
 - Integrated Team Delivering Global Reach & Global Power
- **World Class Maintenance Depot**
 - Top Quality & Best Value
- **Our People - The Kelly Advantage**
 - A Team Working for the Taxpayer
- **Posturing Kelly for the Future**
 - Rightsizing & Realigning





LM2500 ENGINE WORKLOAD



- **SA-ALC DEPOT PROTOTYPING PNEUMATIC AIR STARTER AND REGULATING VALVE**
- **ENGINE ACCESSORIES BEING NEGOTIATED WITH NAVSEA FOR 7K HRs OF WORKLOAD**
- **ENGINE CONSISTS OF THE FOLLOWING TF39 COMMON MODULES**
 - **HPT ROTOR**
 - **LPT ROTOR**
 - **COMPRESSOR ROTOR**
 - **TURBINE MID-FRAME**
 - **LPT STATOR**
 - **TRANSFER GEARBOX**
- **ENGINE WORKLOAD REQUIREMENTS - 93K HRs**
- **SA-ALC LABOR RATE VERSUS NORTH ISLAND NADEP**
 - **\$58 P/HR VS \$102 P/HR**
- **ENGINE WORKLOAD COST**
 - **\$5.7M FOR SA-ALC**
 - **\$10.8M FOR NORTH ISLAND NADEP**
- **ENGINE PROGRAM COST SAVINGS**
 - **\$5.1M**
- **CUSTOMER: "SA-ALC ENGINE DEPOT OF CHOICE"**

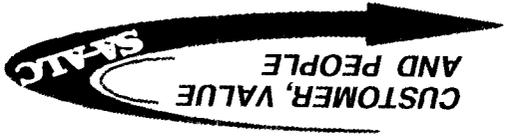
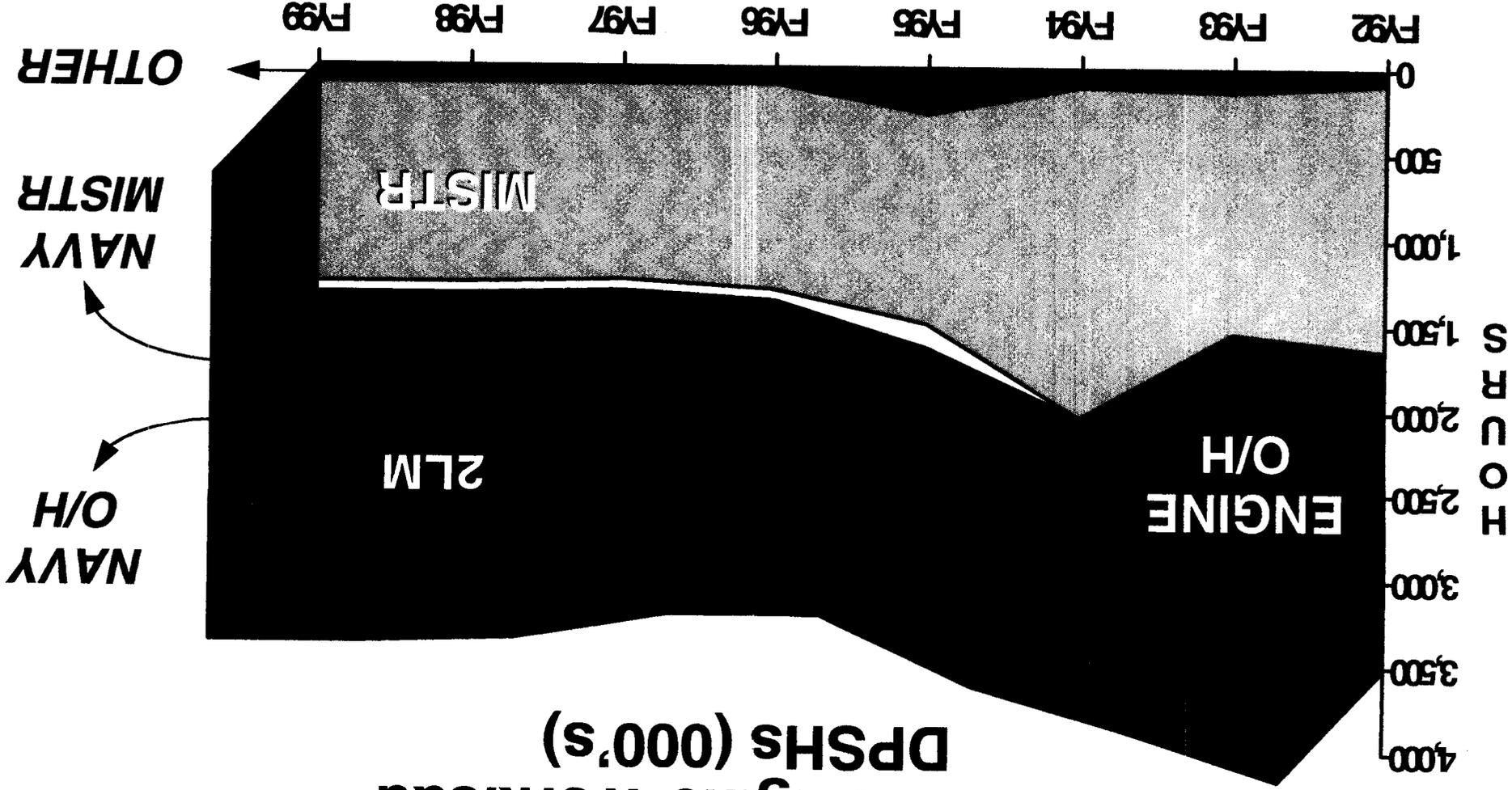
**CUSTOMER, VALUE
AND PEOPLE**

SA-ALC

INTENSE WORKLOAD TURBULENCE



SA-ALC Engine Workload
DPSHS (000's)



STRATEGY FOR REALIGNING AFMC



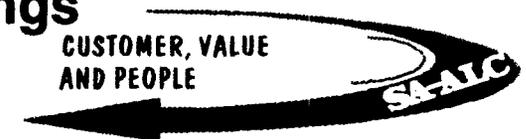
- **Prioritize Workload (Bandera/Kerrville) - C-5 and Engines #1 Priority**
- **Prioritize Weapon System Management Workload - Example C-5 SPD**

Top Sustainment Issues

**Logistics Departure Reliability
A/C Availability PDM Flowdays
Engine Availability/2LM
Integrated System Master Plan
Spares Supportability
Inspection Program
Modification Dev/Exec
Lean Logistics
Mission Capable Rates
R&M Initiatives
Funding Execution**

Lower Priority Issues

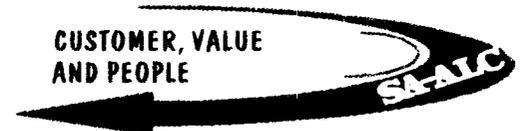
**ODC Reduction
EPA-17 Reduction
Disposal of Excess Stocks
Prod Tooling Disposition
AFTO 22 Processing
AFTO 135 Processing
Weapon Sys Cost Reduction
Suggestion Processing
Warranty Program
Fast Fix Program
PIWG Meetings**



BRAC REALIGNMENT



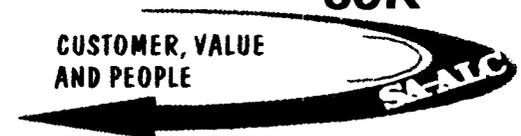
<u>FUNCTION</u>		<u>WORKLOAD (MANHOURS)</u>	<u>PERSONNEL</u>	<u>SQ FT</u>
Inspection	Keep	197K	294	104K
	Loss	35K	50	26K
Engine Related Comp	Keep	793K	664	182K
	Loss	58K	112	135K
Hydraulic/ Pneudraulic	Keep	0K	0	0
	Loss	5K	4	3K
Electro/Mechanical	Keep	0K	0	0K
	Loss	13K	0	5K



BRAC REALIGNMENT



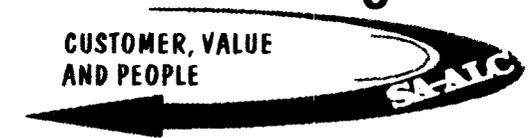
<u>FUNCTION</u>	<u>WORKLOAD (MANHOURS)</u>		<u>PERSONNEL</u>	<u>SQ FT</u>
Tubing Mfg	Keep	0K	3	.9K
	Loss	2K	1	1K
Plating	Keep	227K	120	77K
	Loss	5K	20	19K
Paint/Depaint	Keep		16	
	Loss			
Cleaning	Keep	74K	53	36K
	Loss	13K	10	9K
Machine Repair	Keep	471K	469	139K
	Loss	83K	80	35K



BRAC REALIGNMENT



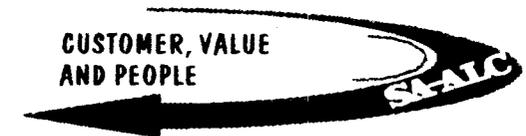
<u>FUNCTION</u>	<u>WORKLOAD (MANHOURS)</u>		<u>PERSONNEL</u>	<u>SQ FT</u>
Composites	Keep	65K	28	13K
	Loss	28K	12	3K
Machine Mfg	Keep	7K	9	5K
	Loss	26K	31	6K
Software OFP	Keep	119K	116	1.8K
	Loss	21K	4	.3K
ATE	Keep	105K	3	19K
	Loss	27K	46	6K
IPE	Keep	200K	174	20K
	Loss	0K	+6	0



BRAC REALIGNMENT



<u>FUNCTION</u>	<u>WORKLOAD (MANHOURS)</u>		<u>PERSONNEL</u>	<u>SQ FT</u>
Foundry	Keep	21K	21	26K
	Loss	+10K	+7	0
Physical Science Lab	Keep	131K	111	28K
	Loss	23K	20	7K
Harness Cable Mfg	Keep	0K	2	3K
	Loss	2K	2	.8K
Sheet Metal Mfg	Keep	24K	27	17K
	Loss	4K	6	3K



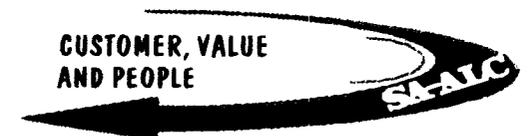
BRAC BEDDOWN ACTIONS

(Cont)



- **Drug Testing Lab/AF Medical Service Agency/AF Medical Operating Agency**
 - 77+ Personnel
 - Add/Alter B1500

- **485th Electronic Installation Group**
 - 61 Personnel
 - Renovate B3820



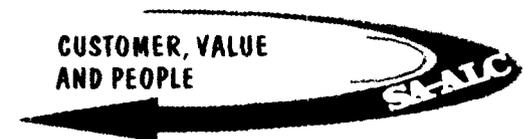
BRAC BEDDOWN ACTIONS

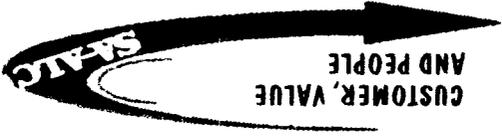


- **Defense Nuclear Agency**
 - 350 Personnel
 - Add/Alter Nuclear Weapons (B1420)

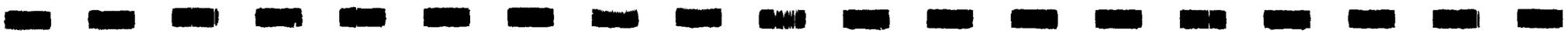
- **AF Inspection Agency/AF Safety Agency**
 - 298 Personnel
 - Renovate B169

- **68th Intel Squadron**
 - 125 Personnel
 - Medina AFB





- Technology Repair Center Analysis
- BRAC Beddown Actions



DEPOT-TO-DEPOT COMPARISON



Direct Labor and Overhead in Dollars

	1987	1988	1989	1990	1991	1992	1993
	38.07 SA	41.64 SA	43.44 SA	43.41 SA	46.01 SA	50.10 SA	52.32 SA
	38.91 OC	42.13 NOR	45.09 WR	46.82 WR	50.13 WR	52.61 SM	55.20 OO
	41.12 SM	42.82 OC	46.02 OC	47.42 SM	50.50 OO	53.14 WR	55.59 WR
	41.55 OO	45.37 SM	46.90 OO	48.75 NOR	50.64 OC	53.37 OC	57.47 SM
	42.27 WR	45.85 WR	47.75 SM	49.58 OO	52.04 SM	54.70 OO	57.50 CHE
	44.66 NOR	46.84 OO	50.54 NIS	50.36 OC	53.02 NOR	55.88 JAX	57.99 NOR
	48.57 PEN	50.14 NIS	54.09 NOR	51.95 PEN	58.08 JAX	56.98 CHE	58.51 OC
	48.97 NIS	52.50 PEN	55.98 PEN	56.25 JAX	59.95 CHE	58.13 NOR	61.99 PEN
	50.45 CHE	52.68 CHE	57.28 CHE	57.17 NIS	60.84 PEN	63.39 PEN	66.62 JAX
	52.82 ALA	52.80 ALA	60.48 ALA	62.47 CHE	61.26 NIS	63.48 ALA	69.82 NIS
	53.02 JAX	54.10 JAX	74.60 JAX	68.51 ALA	64.19 ALA	69.30 NIS	
AF	40.22	44.24	45.67	47.39	49.66	52.66	55.82
NA	49.14	49.67	58.26	57.49	59.75	61.18	62.78
△	8.92	5.43	12.59	10.09	10.11	8.52	6.96

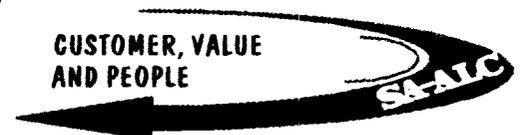
SA - San Antonio OC - Oklahoma City OO - Ogden WR - Warner Robins

SM - Sacramento AF - Air Force Average

NOR - Norfolk NIS - North Island CHE - Cherry Point PEN - Pensacola

ALA - Alameda JAX - Jacksonville NA - Navy Average

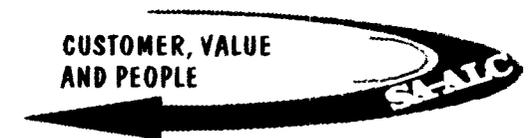
Source: DOD 7220.9-M and 7220.29-H Data
FY93 Data for Alameda Not Available



DMRD SAVINGS



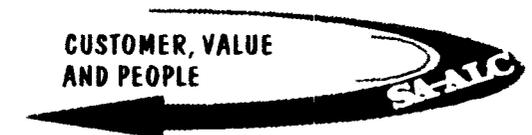
- **DMRD 908 - Management Initiatives**
 - 6,000 Manpower Reduction - \$274.3M
 - Manpower Savings Through Depot Maintenance Competition
 - » T56 Gearbox Reduction of 10 PEs
 - » C-5 Speedline No Reduction due to Speedline Being New Workload
 - » Signal Sources Generators Reduction of 6 PEs
- **DMRD 926 - Consumable Item Transfer**
 - Current Personnel Status 57 PEs
 - 90,000 Items Transferred
- **DMRD 931 - Streamling Acquisition Process**
 - Savings Achieved Through Not Combining AFLC/AFSC
 - » Reduce Overhead
 - 1,501 SA-ALC Manpower Savings

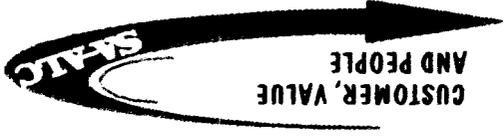


SECOND / DUAL SOURCE OF REPAIR WORKLOADS

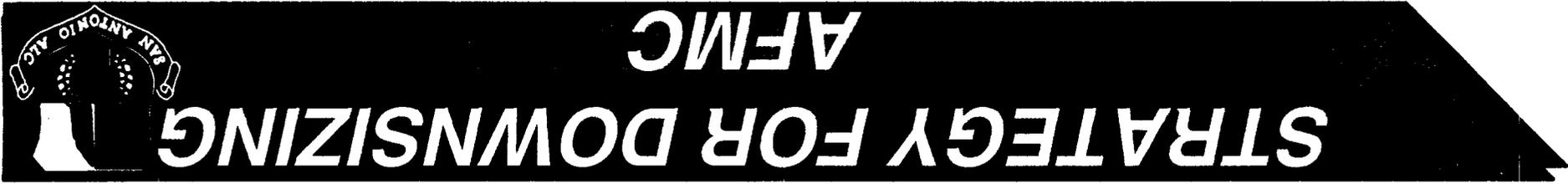


<u>WORKLOAD</u>	<u>SOURCE</u>	<u>HOURS</u>	<u>DOLLARS</u>
Improved Life Core	Tech Space Aero	130,365	\$22.4M
	Pratt & Whitney	52,146	\$12.4M
T56 Gearbox	Standard Aero	87,685	\$10.2M
F-15 Jet Fuel Starter	Allied Signal	6,055	\$2.9M
F-16 Accessory Drive Gearbox	Allen Airmotive	6,719	\$1.5M





- TRC Analysis Process Consolidation
- Competition Lessons Learned
- Prioritize Workload
- Square Foot Reduction

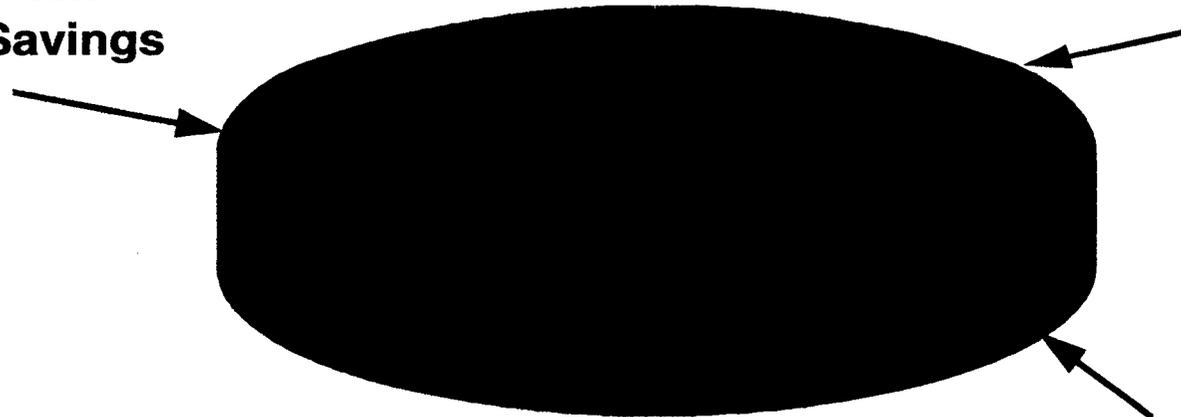


STRATEGY FOR DOWNSIZING AFMC



- **Competition Lessons Learned**
 - Significant Savings can be Realized
 - \$20.9M Saved in Three Awarded Competitions

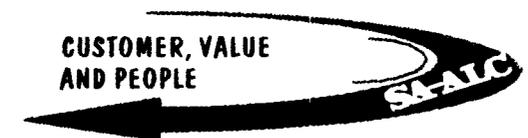
C-5 Speedline
\$15.1M Savings



T56 Gear Box
\$4.2M Savings

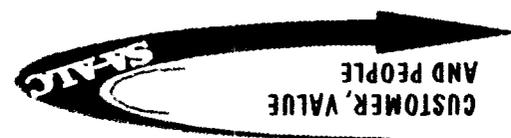
**Signal Source
Generators**
\$1.6M Savings

- **Savings Through Application of Lessons Learned to Non-Competed Workloads**
 - 10% Reduction in Labor Standards





DEPOT MAINTENANCE WORKLOADS DPAHS (000's)

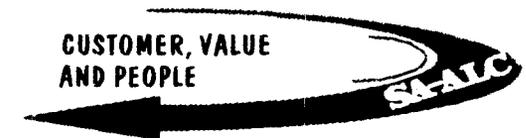
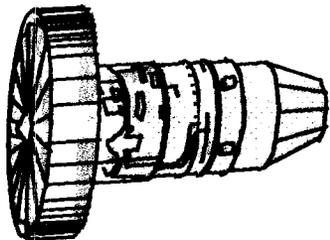


INTENSE WORKLOAD TURBULENCE



- **Engine Workload**

- **Implementation of Two Level Maintenance (2LM) Concept and Navy T56/501K Workloads**
 - » **Change from Overhaul to On Condition Maintenance**
 - » **Different skill requirements**
 - **Specialized Jet Engine Intermediate Maintenance Mechanics**
 - **Certification Requirements**
 - **Flow Process**
- **Transfer of Module Workload into Exchangeables**
 - » **FY95 Funded as RSD**
- **Engine Workload Increased Significantly**
 - » **Compared to HQ AFMC Funding Projections**



OTHER



- **Foundry:**
 - 10,449 Workload Gain
- **Plating:**
 - Consolidated 11 Processes to Single Source
 - Reduced 19,000 SF in Plating Support Facility (B301)
- **Paint / Depaint:**
 - Continually Upgrade of Equipment and Processes
 - Environmentally
 - Net Efficiency Gains
- **Software:**
 - Realigned OC-ALC PACER COMET to SA-ALC
 - Consolidate OFP with Systems Engineering
 - Realigned ATE Workload to Weapon System

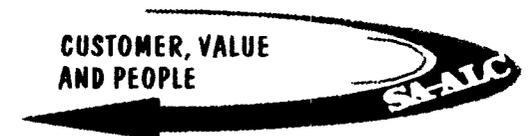
CUSTOMER, VALUE
AND PEOPLE

SA-ALC

SHEET METAL



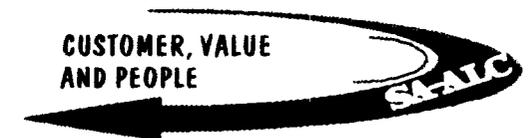
- **Workload Included**
 - Aircraft Maintenance
 - Tubing and Wiring Harness
- **235,000 Manhours / 84,000 Square Feet**
- **Consolidation of Multiple Shops**
 - Moved Workload to Engine Support (B324)
- **Tubing and Wire Harness Manufacturing**
 - Realigned Workload to Single Sites
 - Co-Utilization of PDM Skills for Aircraft Line Support



CLEANING



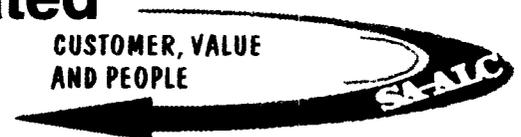
- **Workload Included**
 - Jet Engine Repair Facility (B360)
- **87,000 Manhours / 45,000 Square Feet**
- **Eliminates Proliferation of Environmentally Sensitive Process**
- **Workload Realignment Allowed Consolidation of Multiple Shops**



PHYSICAL SCIENCE LAB



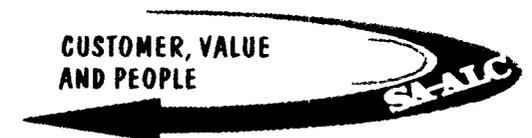
- **Workload Included**
 - Chemical Analysis Process
 - Quality Verification Center
 - Metallurgical Lab
 - Non-Destructive Inspection
- **154,000 Manhours / 35,000 Square Feet**
- **Vacates Entire Facility**
- **Utilize Multi-Skilled Personnel**
- **Workload and Equipment Consolidated**



MACHINING



- **Workload Included**
 - Machine Repair
 - Machine Manufacturing
- **819,000 Manhours**
- **315,000 Square Feet Currently Utilized**
- **Created Isolated Pockets of Space**
 - Depot machine Shop (B303)
 - Engine System Support Facility (B329)
 - Aircraft Maintenance Hangar (B375)
 - Jet Engine Repair Facility (B360)

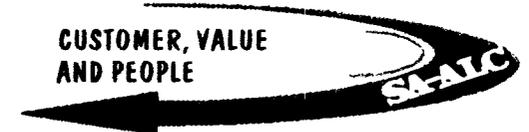


ENGINE RELATED



- **Workload Included**
 - **Fuel Accessories**
 - **Gearboxes**
 - **Blades and Vanes**
 - **Engine Electronics**
 - **Hydraulic/Pneumatics**
 - **Electro/Mechanical**
- **851,000 Manhours / 375,000 Square Feet**
- **Created Isolated Pockets of Space**
 - **Engine System Support Facility (B329)**
 - **Fuel Component Repair Facility (B347)**
 - **Electronics SE Repair Facility (B308)**
 - **Jet Engine Repair Facility (B360)**

**CUSTOMER, VALUE
AND PEOPLE**



MANPOWER TURBULENCE

LA



FY91 FY92 FY93 FY94 FY95/4

- **RIF ACTIONS**

– Separations	65			115
– Internal Moves	342			145
– Loss Formula	155			164
– New to LA	35			70

- **RETIREMENTS**

111	8	114	123	16
-----	---	-----	-----	----

- **ON CALL RELEASE**

82

- **RESERVIST CALL-UP**

34

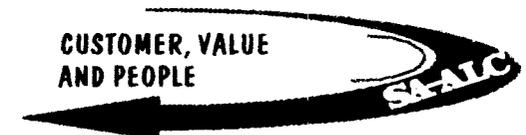
- **TOTAL**

824	8	114	619	16
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- **TOTAL AUTHORIZED**

1920	2041	2026	1481	1306
------	------	------	------	------

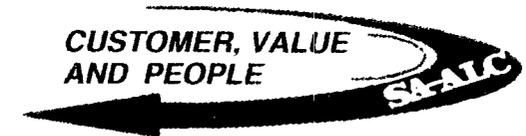
– As Of: 30 Sep 94	43%	6%	42%	1%
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NEW WORKLOADS



• Current (As of FY94)	<u>FY95 Hrs</u>	<u>FY96 Hrs</u>	<u>FY97 Hrs</u>
– 2LM	461,646	972,330	1,355,115
» F100	123,000	263,000	309,000
» TF39	160,210	368,050	465,475
» T56	52,545	79,100	233,300
» QECs	125,891	262,180	347,340
– F100-229	26,000	53,000	77,000
– Navy T56/501K	301,000	366,000	366,000
– DLA Manufacturing	20,331	20,331	20,331
– Navy Pensacola H-60	59,123	59,123	59,123
• Future (FY96 and Beyond)			
– C-17			
– F117			
– LM2500			
– Army GTEs			



STABILIZE WORKFORCE



- **Strategy**

- **Staff to Enduring Workloads**

- » **C-5 - 1,156,989 Hrs and 993 PEs**

- » **Engines - 3,738,312 and 2,704 PEs**

- **Enhance Workforce Productivity (Direct Labor Efficiency)**

- » **FY90 - 90.9%**

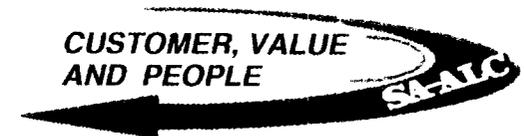
- » **FY91 - 93.5%**

- » **FY92 - 90.7%**

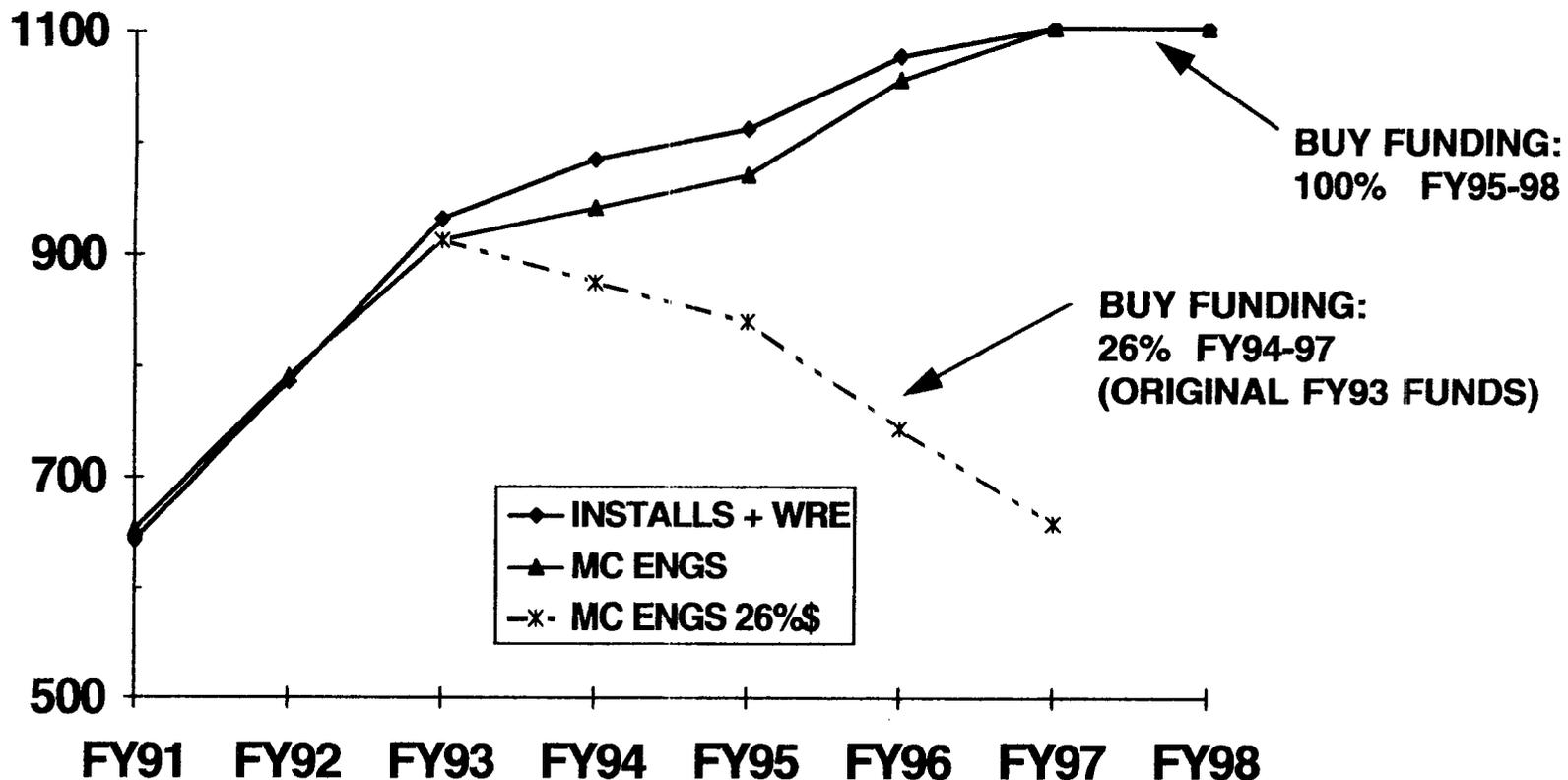
- » **FY93 - 81.7%**

- » **FY94 - 87.2%**

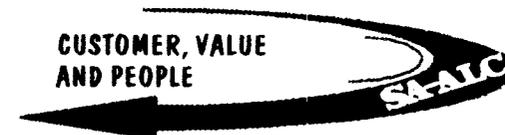
- » **FY95 - 96.0%**

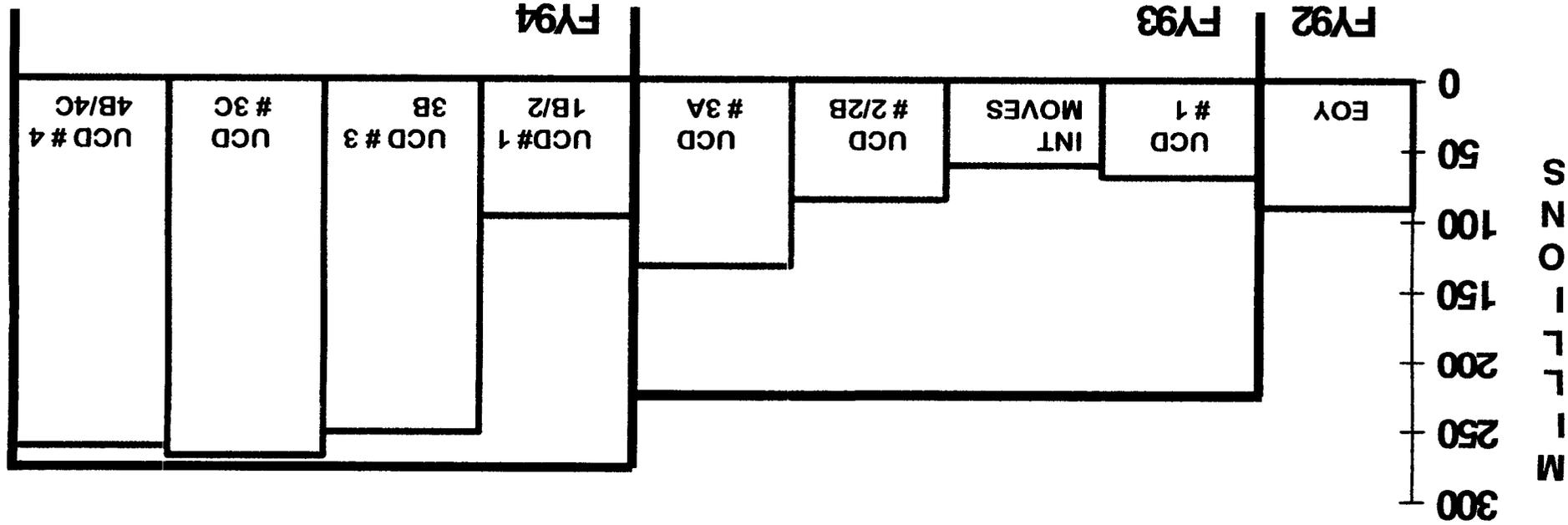
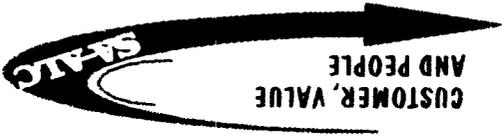


PROJECTED F100-220 MC ENGINES



	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98
INSTALLS + WRE	643	786	932	985	1012	1077	1103	1103
MC ENGS	653	791	913	942	971	1056	1103	1103
MC ENGS 26%\$			913	875	840	743	658	





FUNDS → RGMT

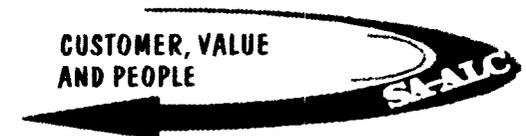


SA-ALC F100 FUNDING HISTORY RSD(B) and SSD

OPTIMUM COMPRESSION PLAN



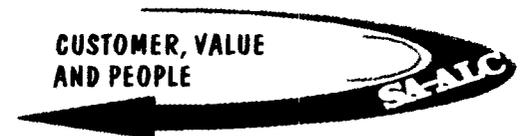
- **Realignment of Manufacturing to OC-ALC**
- **Turn in Excess Equipment**
 - **Allowed Depot Machine Shop Compression**
- **Allowed Consolidation of Inspection (APIS) with Machine Shop Capability**
- **Absorbed Machining Workload from Multiple Sites**
- **Increased Utilization in Depot Machine Shop**



OPTIMUM COMPRESSION PLAN



- **Vacate Entire Buildings**
- **Older Facilities**
 - **Engine System Support Facility (B329)**
 - **Fuel Component Repair Facility (B347)**
- **Utilize State-of-the-Art Facilities**
 - **Advanced Fuel Accy Test Facility (B345)**
 - **Fuel Accy Repair & Test Facility (B348)**
 - **Gas Turbine Engine Repair Facility (B331)**
- **Consolidate Similar Processes and Skills**
- **Cross Utilization of Skills and Equipment**
- **Minimize Routing**

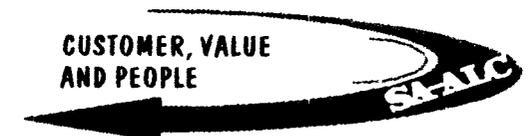


OPTIMUM COMPRESSION PLAN

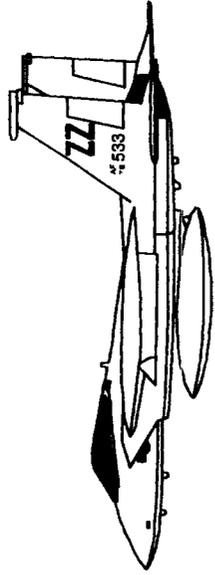
(Cont)



- **Expand Beyond BRAC and TRC**
- **Catalyst for Restructuring**
 - **Gas Turbine Engines**
 - **Secondary Power Systems**
 - **Engine Related Components**
- **Vacate Two Complete Facilities**
- **Centralize Functional Areas**



Document Separator



April 1995

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PREFACE

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PREFACE

INTRODUCTION. Kelly Air Force Base has a more than 75-year tradition of service to the nation. Kelly continues its legacy of excellence, with an unwavering focus on customer support, military value and value to the taxpayers, as well as on its quality work force. The major organization at Kelly, the San Antonio Air Logistics Center, has a vital role in supporting the Air Force mission of "Global Reach -- Global Power." There is not a single weapon system in the Air Force inventory that does not depend on the work of San Antonio ALC craftspeople. War fighters depend on work accomplished at Kelly AFB, ranging from airframes for trainers and engines for fighter aircraft to communications security and signal intelligence necessary for air superiority. Maintenance of C-5 aircraft and engines, and C-130 engines, make Kelly the logistics life-blood of the nation's strategic airlift capabilities. With the induction of interservice workload from the Army, Navy and Marine Corps and other government agencies, and management of foreign military sales aircraft, the center is, indeed, more than just a maintenance depot.

MORE THAN A MAINTENANCE DEPOT. Kelly is committed to the principles of Integrated Weapon System Management, ensuring aircraft, engines, nuclear weapons, cryptologic equipment, automated test equipment, aircraft and engine accessories, aircraft and missile fuels and air mobile munitions transportation packages successfully meet customer needs. The San Antonio ALC also enjoys a special relationship with several of its tenants which are also major customers. The Air Intelligence Agency relies on the center for cyptologic equipment support. The 433rd Airlift Wing, the largest Reserve C-5 unit, flies the San Antonio ALC-managed C-5 Galaxy. The 149th Fighter Group, Texas Air National Guard, flies the F-16 aircraft which uses one of the primary engines and secondary power systems maintained at the center. Tenants also support the center. The Defense Distribution Depot San Antonio provides some of the best storage facilities and distribution services within the Department of Defense. The Defense Megacenter San Antonio not only provides computer processing for Kelly organizations, but also for Air Force bases in eight states and Panama. DMC-SA also processes civilian personnel data for Army, Navy and seven non-defense federal agencies. Kelly is an important asset for neighboring military facilities. The base supports medical evacuation flights bound for two of the nation's top military medical centers. And Kelly is a processing center for deploying military members in support of regional conflicts or contingencies. Mission synergism, product quality, unique capabilities and an experienced work force make Kelly a world-class organization

WORLD CLASS ORGANIZATION. Kelly AFB is a leader in product quality and performance. In fact, the center backs its promise of quality with the first, most extensive product warranty program within DoD. Supporting the center's missions are several unique, costly to duplicate, capabilities. Such capabilities include the largest free-standing hangar within DoD which allows indoor work on several aircraft simultaneously; the largest paint and corrosion control facilities in the Air Force; DoD's most modern jet engine overhaul facilities specifically designed for jet engine test and repair; the largest conventional munitions storage and shipment operation within the continental United States; a gas turbine engine facility capable of handling the total

DoD GTE workload; integrated reverse engineering and remanufacturing; largest capability for electroplating in the Air Force; and DoD's only robotics prototyping capability.

Quality and capability are only part of the equation. The backbone of Kelly's world class organization is its people. Kelly workers are among the best educated and most highly skilled in the command. The ethnic diversity of the work force makes Kelly the largest employer of minorities in DoD. San Antonio ALC is the first air logistics center where Management and the Union have forged a partnership on communication and cooperation. The successful partnership has improved productivity and drastically reduced the number of unfair labor practice complaints. Kelly is at the forefront of offering productivity awards based on team effort and team goals. Other pioneering "people programs" include a supervisory feedback program and leadership training for civilian managers and supervisors. And Kelly people are being recognized for their efforts. Kelly workers have earned Air Force, Defense Department and presidential recognition through the suggestion program which saved the government tens of millions of dollars in first-year benefits. The spirit of partnership goes beyond Kelly's main gates. The base joins the community in "Team San Antonio."

TEAM SAN ANTONIO. Kelly and the military community have enjoyed a long-standing partnership with the city of San Antonio, also known as Military City, USA. City ordinances protect the Kelly airfield from encroachment and control development near the base, and the city has provided the base with reduced utility rates. For its part, Kelly and its employees support the community through mentoring and other education programs, contributing the largest amount of any Air Force base to the Combined Federal Campaign and providing more than 100 scholarships. Another example of commitment to the community is Kelly's environmental management program. The base earned DoD's Pollution Prevention Award for 1994, was recognized as an environmental leader by its induction into the Texas 2000 honor roll for clean industry, led the Air Force by fielding the model hazardous materials "pharmacy" for better control of those materials, and has the first fully functioning community Restoration Advisory Board within Air Force Materiel Command.

BRAC '95 DoD STRATEGY FOR AIR FORCE DEPOTS. The DoD strategy of consolidation is the best solution for the challenge of reducing excess depot capacity. It will allow San Antonio ALC to provide space for new tenants as well as aid in base modernization efforts. Reducing floor space will allow collocation of similar workloads and help the base cut the number of antiquated facilities and outdated equipment. These improvements will help Kelly maintain the best quality of life for Kelly workers. Gradually drawing down the work force through 2001 keeps the experience and skill of Kelly's craftspeople in place, since many would choose not to relocate. DoD's recommendations provide the best value for the nation.

SECTION II
BIOGRAPHIES

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Biography

United States Air Force

Secretary of the Air Force, Office of Public Affairs, Washington, D.C. 20330-1000

MAJOR GENERAL LEWIS E. CURTIS III

Major General Lewis E. Curtis III is commander, San Antonio Air Logistics Center, Air Force Materiel Command, Kelly Air Force Base, Texas. He commands and directs the activities of approximately 16,000 military and civilian personnel who are responsible for system support of 35 types of aircraft, including the C-5, T-38, OV-10 and other aircraft operated by U.S. allies; the Air Force inventory of jet engines for the C-5, F-15, and F-16; turboprop engines for the C-130; and nearly 94,000 non-aircraft engines. He is also responsible for the management of more than 100 other property classes, including special weapons and aerospace fuels, as well as automatic test, precision measuring and aircraft ground equipment.

General Curtis was born Jan. 20, 1941, in Biloxi, Miss. He earned a bachelor of science degree in mechanical engineering from the University of Wyoming in 1964, a master of science degree in mechanical engineering from the Air Force Institute of Technology in 1969, and a master's degree in business administration from Troy State University in 1985. The general completed Squadron Officer School in 1970, Royal Air Force Staff College in 1974 and Air War College in 1984.



Enlisted in the Air Force in 1960, he served as an F-105D radar maintenance technician. He completed the Airman Education and Commissioning Program, and received his commission through Officer Training School, Lackland Air Force Base, Texas, in December 1964.

After completing technical training at Chanute Air Force Base, Ill., General Curtis served with Strategic Air Command as a maintenance officer on the U-2, DC-130, CH-3C and other special reconnaissance systems at Davis-Monthan Air Force Base, Ariz., and Bien Hoa Air Base, South Vietnam. In April 1969 he returned to Southeast Asia and served as an F-4D, RF-4C, C-130 and AC-47 maintenance officer at Udorn Royal Thai Air Force Base, Thailand.

Assigned to Headquarters Military Airlift Command, Scott Air Force Base, Ill., in April 1970, he was chief of the Systems Analysis Branch, Office of the Deputy Chief of Staff for Logistics. After completing Royal Air Force Staff College in December 1974, he served an exchange tour with the Royal Air Force at Headquarters Strike Command, Royal Air Force Station High Wycombe, England, where he managed the F-4K and F-4M. He subsequently served as commander of the 834th Organizational Maintenance Squadron, 1st Special Operations Wing, Hurlburt Field, Fla., maintaining AC-130, MC-130, UH-1N and CH-3C aircraft from January 1977 until March 1978. He was director of logistics for the AIM-120 advanced medium range air-to-air missile (AMRAAM), Eglin Air Force Base, Fla., until January 1982 and deputy director of logistics for the B-1B at Headquarters Air Force Logistics Command (AFLC), Wright-Patterson Air Force Base, Ohio, until July 1983.

After completing Air War College in June 1984, General Curtis was assigned to the Office of the Deputy Chief of Staff for Materiel Management, AFLC headquarters, and served in both engineering and logistics positions.

In August 1988 he became deputy chief of staff for plans and programs. A year later he assumed command of the Acquisition Logistics Division, AFLC headquarters, where he remained until its deactivation in September 1991. The general next served as deputy chief of staff for engineering and technology management. He assumed his current command in March 1992.

The general's awards and decorations include the Distinguished Service Medal, Defense Meritorious Service Medal, Meritorious Service Medal with oak leaf cluster, and Air Force Commendation Medal.

He was promoted to major general Oct. 1, 1991, with same date of rank.

General Curtis is married to the former Kathleen Taylor, also of Biloxi. They are the parents of two sons, Gig (deceased), and Paul.



BIOGRAPHY

UNITED STATES AIR FORCE

San Antonio Air Logistics Center

Office of Public Affairs

807 Buckner Drive

Kelly Air Force Base, Texas 78241-5842



EDWARD RIOJAS JR.

Mr. Edward Riojas Jr., is executive director, San Antonio Air Logistics Center, Air Force Materiel Command, Kelly Air Force Base, Texas. He acts on behalf of the commander in the command and direction of more than 15,000 military and civilian personnel who are responsible for logistics support of 33 U.S. Air Force aircraft systems. These systems range in size from OV-10s to C-5s. He also assists in the management of more than 90,000 engines for such aircraft as the C-5, F-15, F-16 and C-130, as well as many non-aircraft engines. Additional responsibilities include management of more than 100 other Air Force systems, including special weapons, aerospace fuels, automatic test equipment, ground equipment and precision measuring equipment.



Mr. Riojas began his civil service career in 1958 as an aircraft electronic equipment apprentice at the San Antonio Air Materiel Area, predecessor to the current air logistics center. He entered management in 1974 when he became chief of the logistics support branch. Since then, he has held a number of management positions at air logistics centers such as director of financial management. Most recently he served as propulsion product group manager, a position which put him in charge of engine production for the entire Air Force. He was appointed to the Senior Executive Service in 1988.

Mr. Riojas is married to the former Aurora Arredondo of San Antonio. They have one son, Richard and two daughters, Sharon and Cristina.

EDUCATION:

- 1976 Associate degree in mid-management, San Antonio College
- 1978 Bachelor's degree in logistics management, Southwest Texas State University
- 1986 Air War College, Maxwell Air Force Base, Ala.

CAREER CHRONOLOGY:

1. 1974, Chief, Logistics Support Branch, Directorate of Aerospace Fuels
2. 1981, Chief, Logistics Management Branch, Directorate of Materiel Management
3. 1984, Chief, Requirements Branch, Directorate of Materiel Management
4. 1984, Deputy Chief, International Logistics Division, Directorate of Materiel Management
5. 1986, Deputy Chief, Resources Management Division, Directorate of Materiel Management

6. 1988, Deputy Director, Energy Management Directorate, Directorate of Materiel Management
7. 1988, Deputy Director, Directorate of Materiel Management, Sacramento ALC
8. 1990, Director, Technology and Industrial Support Directorate, Sacramento ALC
9. 1992, Director, Financial Management Directorate, Kelly AFB
10. 1993, Propulsion Product Group Manager, Kelly AFB
11. 1994, Executive Director, Kelly AFB

AWARDS AND HONORS:

Meritorious Civilian Service Award
Senior Executive Service Meritorious Presidential Rank Award

(Current as of February 1994)

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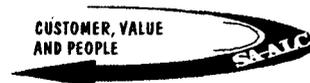
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THE KELLY AFB TEAM



- **More Than a Maintenance Depot**
- **World Class Maintenance Depot**
- **Our People - The Kelly Advantage**
- **Posturing Kelly for the Future**

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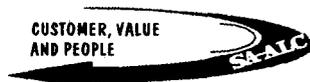


KELLY FIELD ***"Air Force's Oldest Base"***



- **Military Aviation Came to San Antonio in 1910 at Fort Sam Houston**
- **Lt. Kelly Killed in 1911 Crash of Curtiss "Pusher"**
- **November 1916, Kelly Area Chosen as Site for a New Aviation Center**
- **World War I - Most American Pilots Trained in U.S. Learned to Fly at Kelly Field**
- **March 1921 - Depot Repair Combined with Depot Supply for Predecessor of Today's ALC**
- **World War II**
 - **Advanced Flight Training Until 1943**
 - **March 1943, Kelly Field Became Maintenance and Supply Depot (B-17, B-25, B-29, P-51, C-47 and 31,000 people)**
- **Post World War II**
 - **B-36, B-58, B-52, F-102, F-106 and Engines**

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MORE THAN A MAINTENANCE DEPOT



"Integrated Mission"



- Integrated Weapon System Management (IWSM)
- Heart of Nation's Airlift
- Backbone of Our Fighter Force
- Information Warfare



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CUSTOMER, VALUE AND PEOPLE

SA-ALC

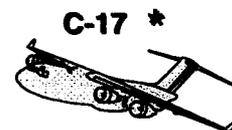
IWSM



C-5

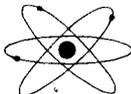


Propulsion



C-17 *

Nuclear Weapons



Cryptology



Trainers & FMS



Automatic Test Equip



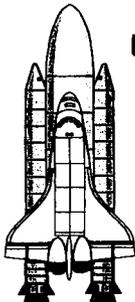
Aircraft Accessory



Support Equip



Fuels



Secondary Power Systems



Life Support *



CUSTOMER, VALUE AND PEOPLE

SA-ALC

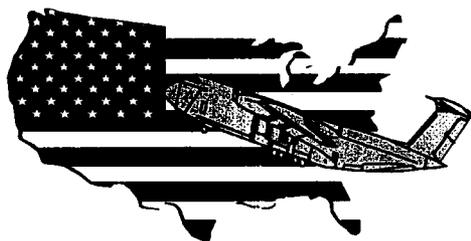
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"HEART OF NATION'S STRATEGIC AIRLIFT CAPABILITY"

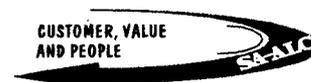


Global Reach

- **Airlift System Management and Repair**
- **Conventional Air Mobility Munitions Storage and Shipping Point**
- **Airlift Operations and Mobility**



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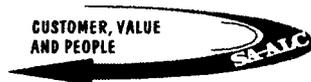
GLOBAL POWER



The Power

- **F100's Power**
 - 100% of F-15s (783 acft)
 - 51% of F-16s (811 acft)
- **Engine 2LM**
 - JEIM for F100/220 (FY95 - 123; FY96 - 269)
 - Item Managers, Engine Program Manager, and Engineering Personnel Collocated at SA-ALC
- **TF34 Powers Close Air Support (A-10)**
- **Manage All Fighter Engines**
- **Manage and Repair Secondary Power Systems**
 - 100% for F-15
 - 100% for F-16

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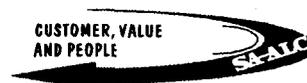
GLOBAL POWER



The Punch

- Kelly Stores, Maintains and Deploys 100% of Air Mobile Air-to-Ground Munitions
 - Shipped 17M Lbs of Munitions from Kelly AFB by Air for DESERT SHIELD/STORM
- Manages 100% of Air Mobile Munitions (Air-to-Air and Air-to-Ground)
- Manages 100% of Tactical Nuclear Weapons

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GLOBAL POWER

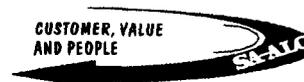


The Support

- Automatic Test Equip to Support Fighters
 - 1036 F-15 & F-16 Testers
- COMSEC & IFF
- Support Equipment
 - 14465 Units Supporting Fighting Forces
 - Ground Power Units
- Life Support
 - Helmets/Oxygen Masks/Parachutes/Survival Kits
 - Chemical Defense
 - Escape Systems



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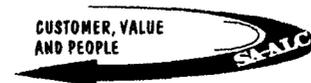


WORLD CLASS DEPOT



"Kelly Capabilities Unmatched in the Department of Defense"

- Productivity
- Product Quality
- Unique Capabilities
- Value for U.S. Taxpayer
- Environmental Excellence

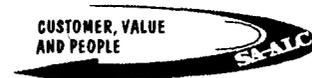


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ENVIRONMENTAL EXCELLENCE



- DoD Pollution Prevention Award, 1994
- AF Pollution Prevention Award, 1994
- AFMC Pollution Prevention Award, 1994
- Recognized for Environmental Excellence by Texas Natural Resources Conservation Commission
 - Member of Clean Texas 2000 Honor Roll
 - Only Federal Agency Nominated for Texas 2000 Award
- Ranked First Among ALCs by AFMC/IG on Establishing Pharmacy Concept
- Lowest Projected Environmental Clean-Up Cost of All ALCs
- Only ALC Not on the National Priority List



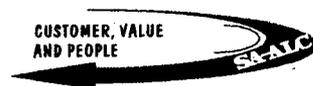
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POSTURING KELLY FOR THE FUTURE



- **Facts of Life**
- **Realignment Strategy**
- **Results**

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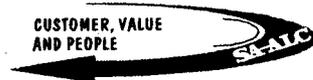


STRATEGY FOR DOWNSIZING AFMC



- **Square Foot Reduction**
- **Prioritize Workload**
- **Competition Lessons Learned**
- **“TRC Analysis” Process Consolidation**

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SECTION IV
BUILDINGS TO BE
REALIGNED

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SECTION IV. PART 1
Pictures and Captions

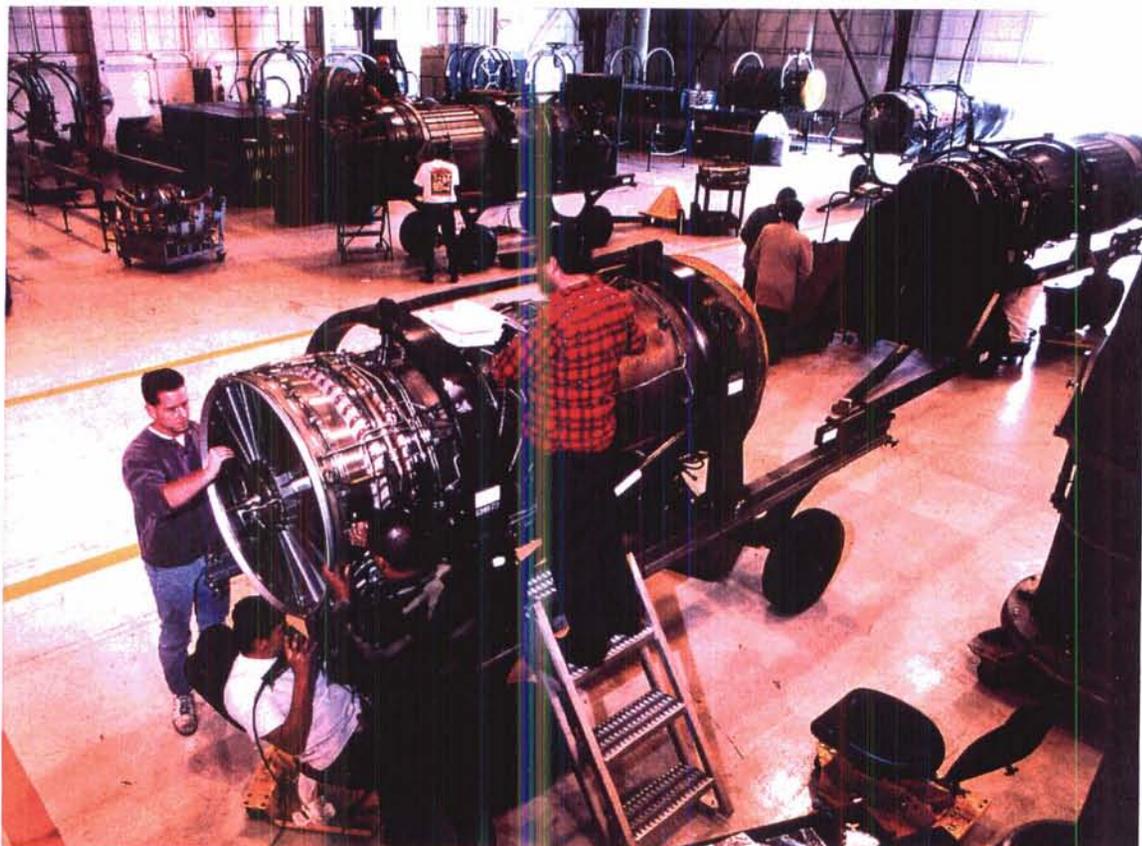


Building 360: Jet Engine Repair Facility, 575,019 sq ft, is the centerpiece of a 1.2M sq ft complex designed to provide reliable propulsion systems, products and services through the use of many high tech processes such as the cryogenic spin test for the F100 engine fan disks.





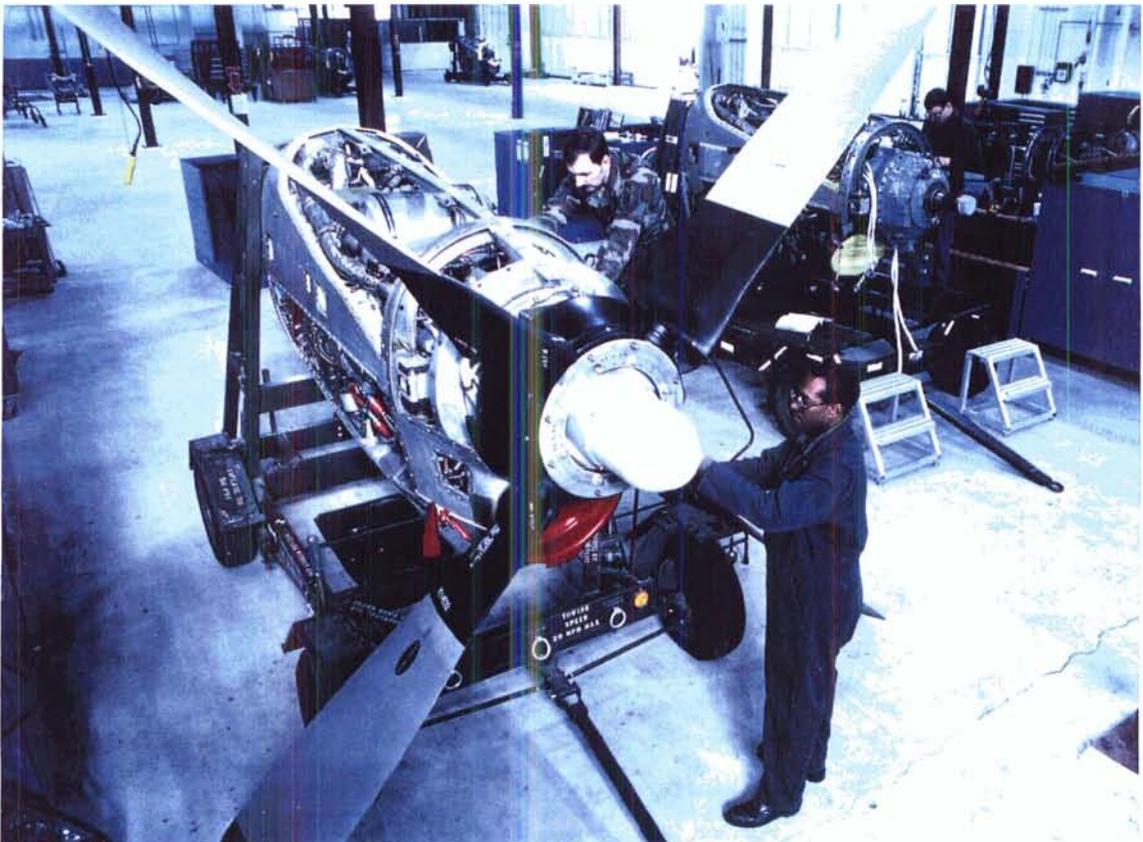
Building 655: Jet Test Cell Facility, 65,094 sq ft, consists of eleven active cells supporting both depot and 2LM workloads for the F100, T56 and TF39 engines as well as the T56 gearbox.

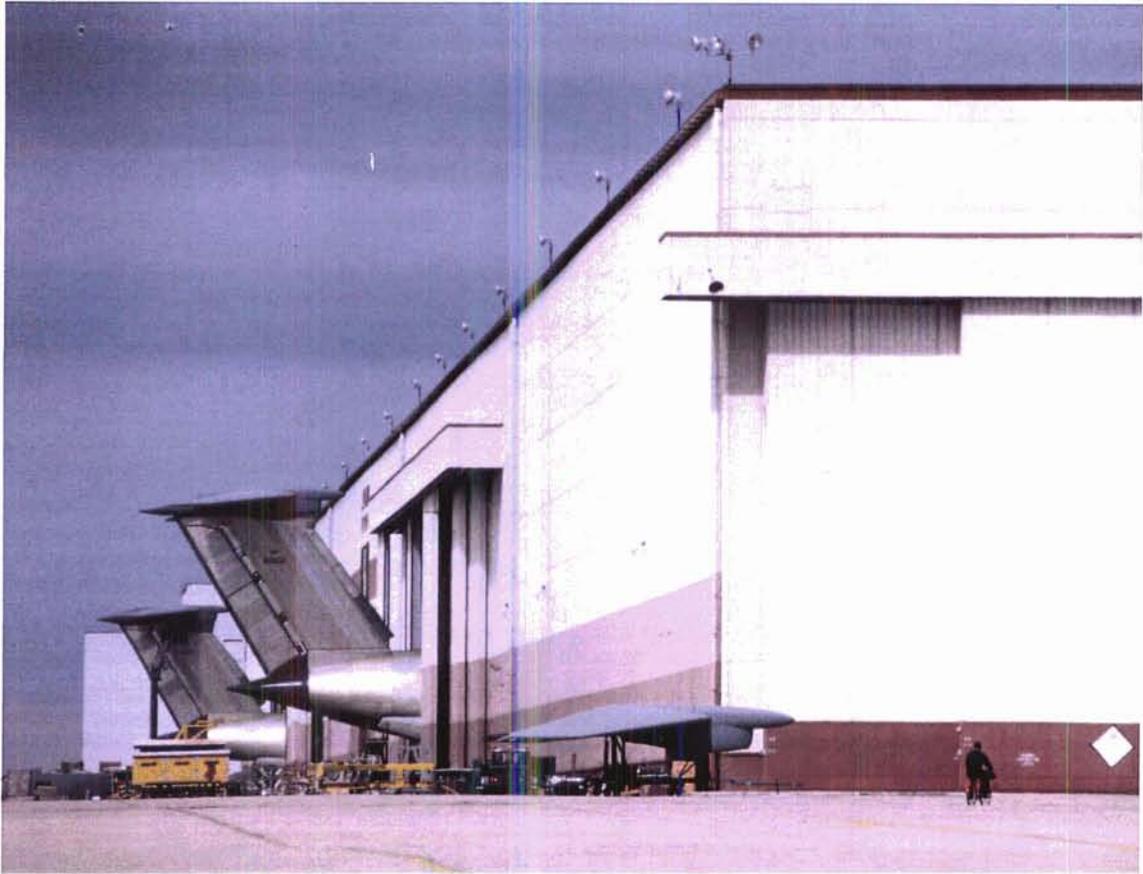


Building 310: F100 Two Level Maintenance Facility, 70,238 sq ft, was recently renovated to house workload transitioned from the operational units.



Building 324: Engine Support Facility, 367,235 sq ft, houses specialized repair technologies including heat treat, plasma spray, welding and sheet metal, as well as T56 Engine Two Level Maintenance.



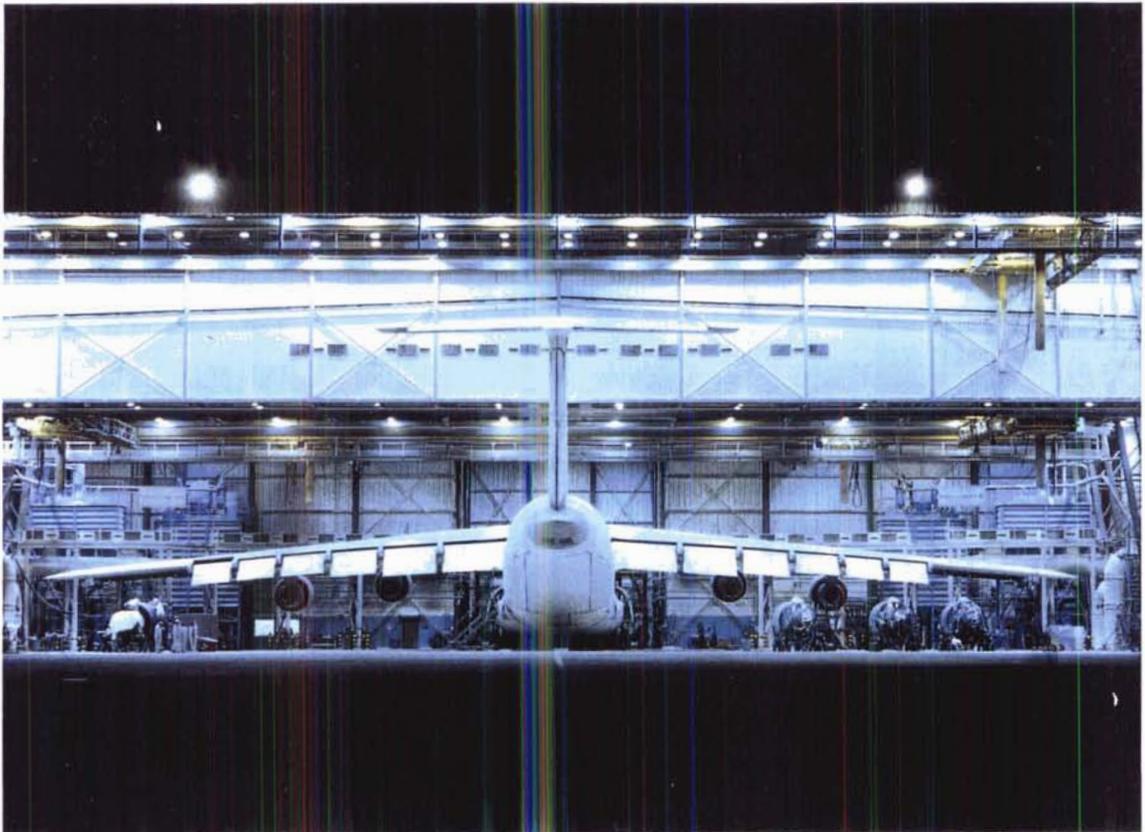


Building 375: Aircraft Maintenance Hangar, 1,107,091 sq ft, the largest freestanding hangar in the world, is designed for repair of large-body airframes and can house six C-5 aircraft simultaneously.





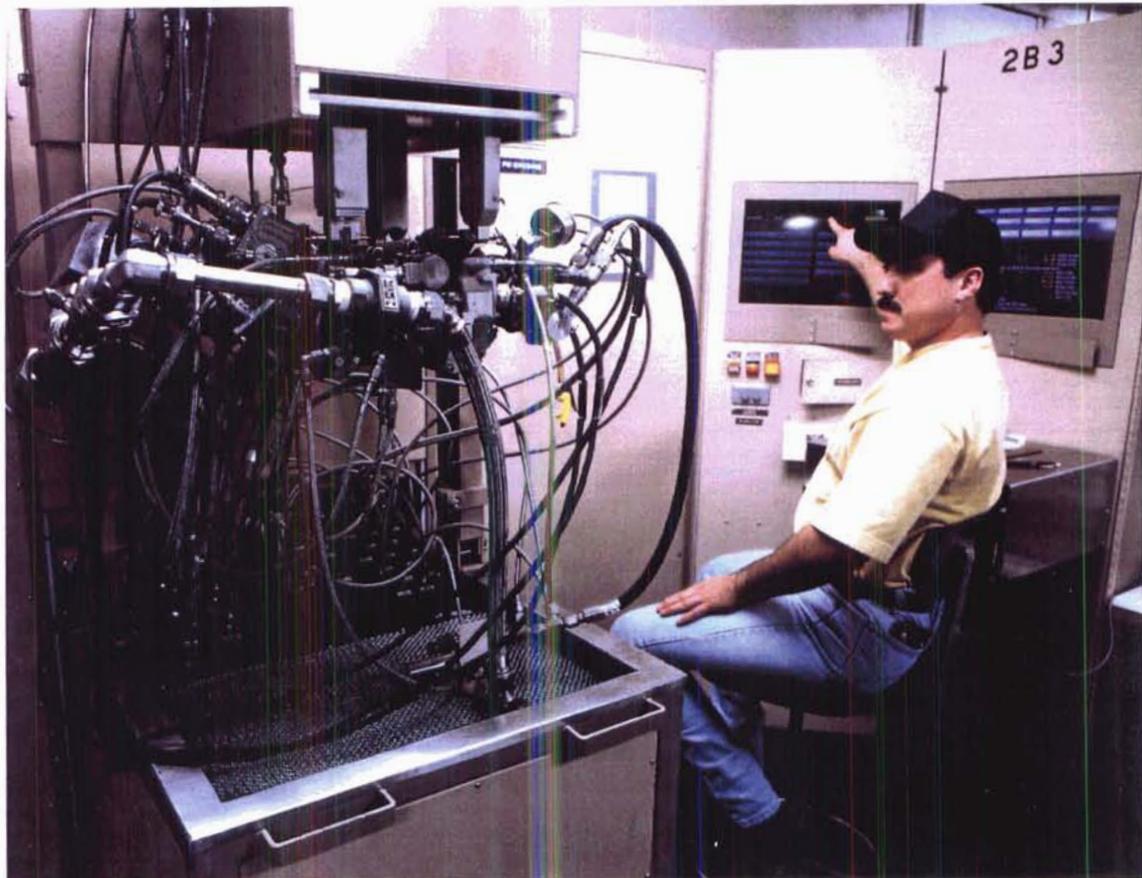
Building 375: Aircraft Maintenance Hanger, 1,107,0911 sq ft, has approximately 600,000 sq ft of high bay floor space to accommodate large aircraft and approximately 400,000 sq ft of shops to service aircraft components.



Building 379: Aircraft Corrosion Control Facility, 103,840 sq ft, was designed and built to utilize Plastic Media Blasting technology to strip paint from the outer surface of aircraft and can accommodate any aircraft within the Air Force inventory.

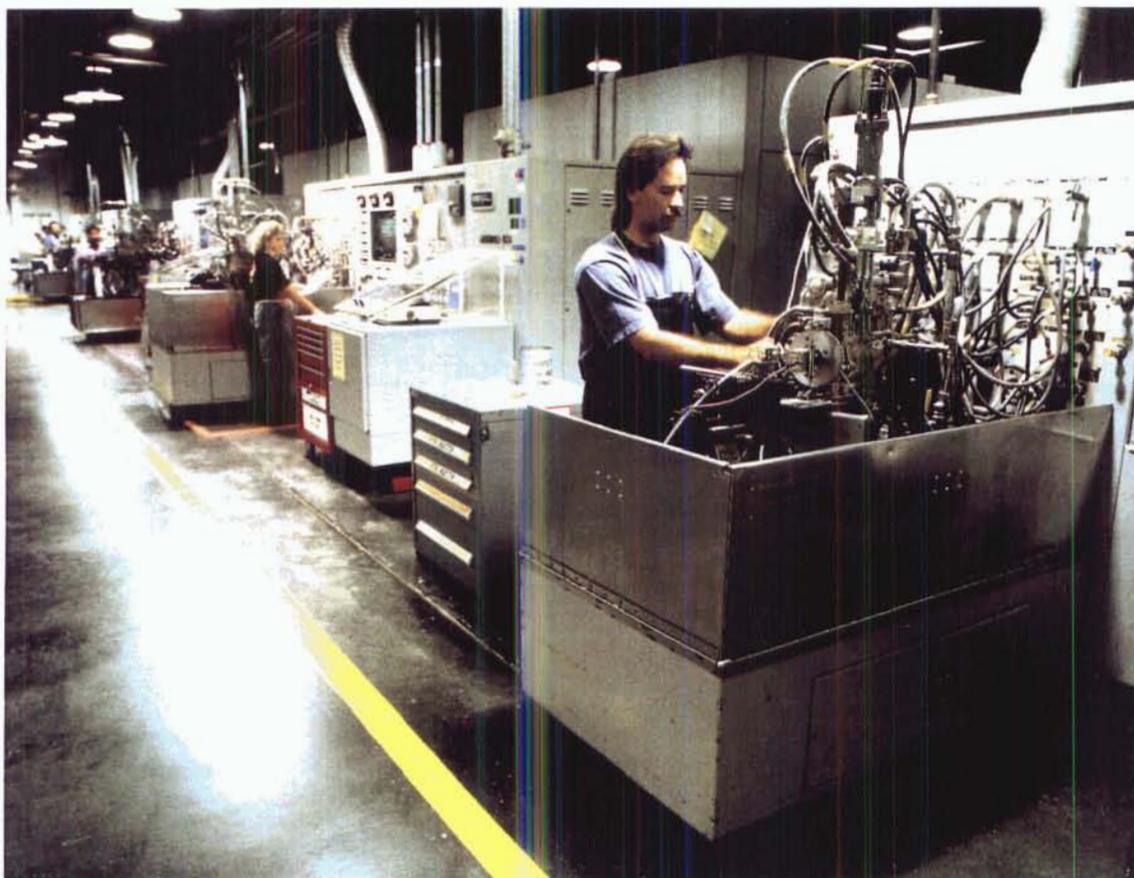


Building 345: Advanced Fuel Accessories Test System Facility, 48,959 sq ft, is an explosion-proof facility specifically designed to test and calibrate jet engine fuel accessories for the T56, TF39 and F100 engines and airframe fuel accessories for virtually every aircraft in the inventory.



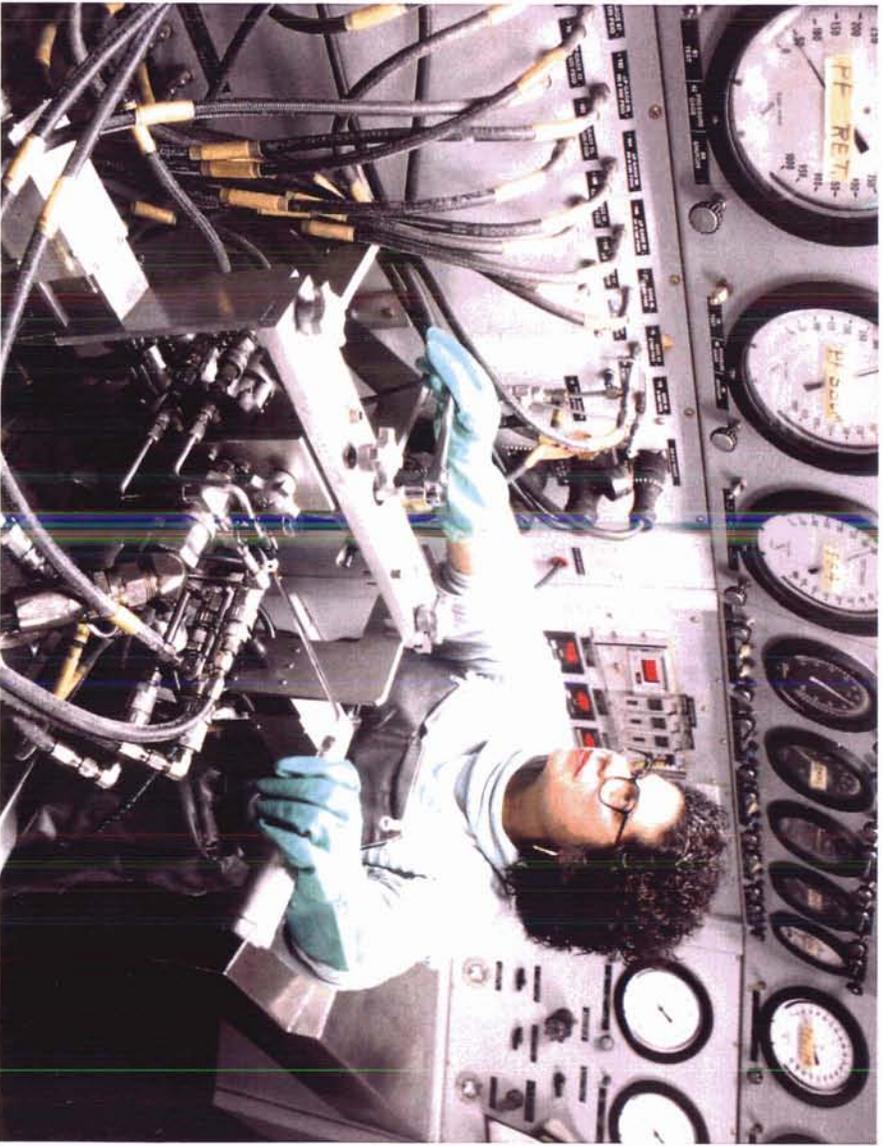


Building 348: Fuel Accessories Repair and Test Facility, 94,520 sq ft, unique to the Department of Defense, provides explosion-proof capability for inspection, repair and test of fuel controls and nozzles for engine systems.





Building 333: Hydraulic/Pneumatic Overhaul Test Facility, 29,941 sq ft, provides overhaul and test for valves and oil pumps in support of Air Force and Navy engines.



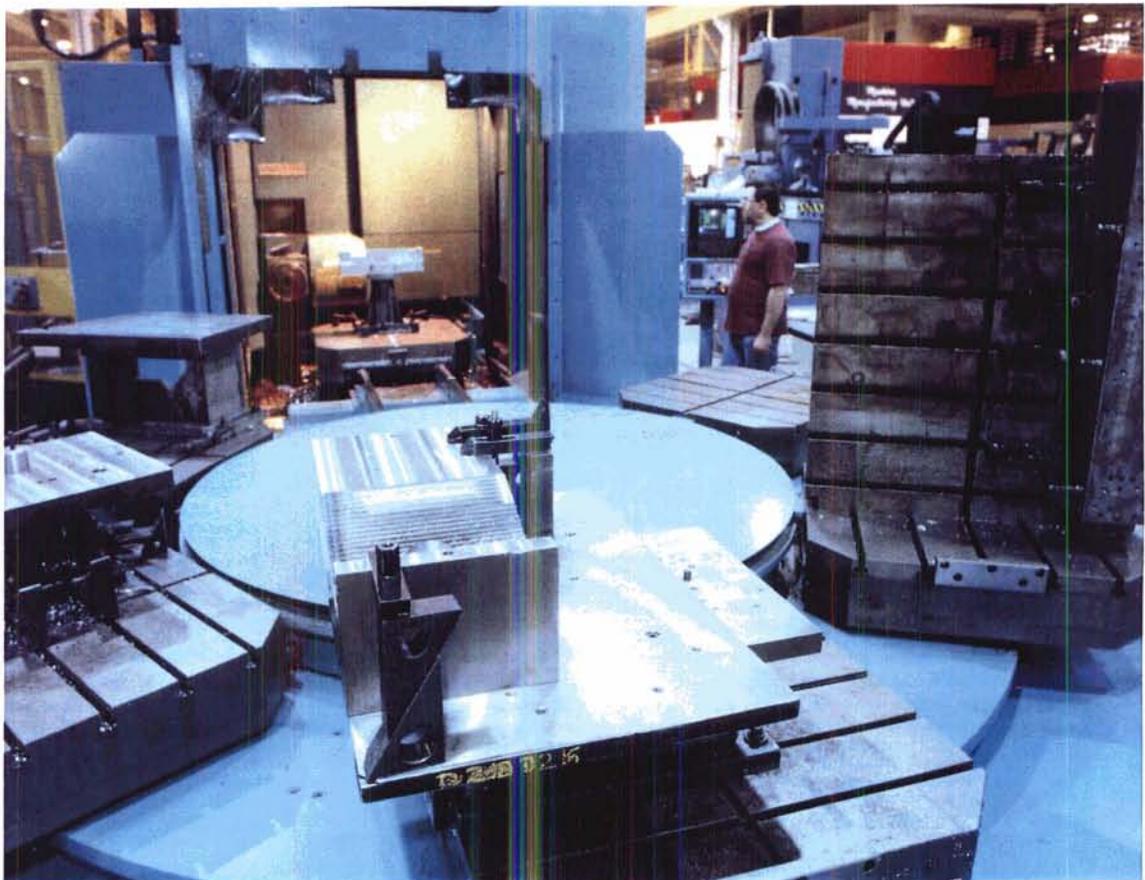


Building 331: Gas Turbine Engine Repair Facility, 136,532 sq ft, provides assembly and test capability for gas turbine engines, secondary power systems and air turbine starters as well as electrical , pneumatic and fuel accessories, such as the F-16 Jet Fuel Starter.



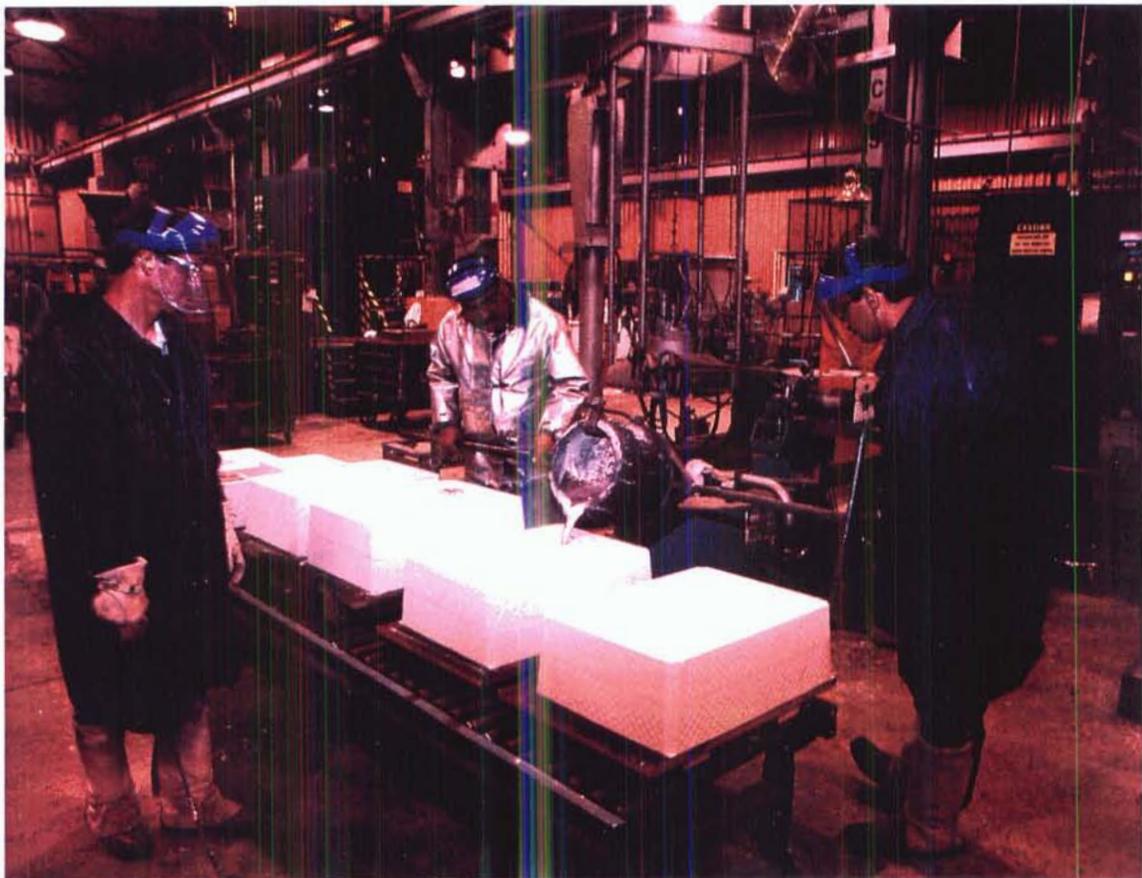


Building 303: Depot Machine Shop, 166,500 sq ft, provides machining support for repair of engine and aircraft components as well as the manufacture of new parts in direct support of critical depot maintenance workloads.





Building 338: Foundry, 19,532 sq ft, specializes in the production of high grade, x-ray quality aluminum sand castings and the manufacture of precision plastic drop hammer dies used in the forming of aircraft sheet metal components.





Building 320: Physical Sciences Laboratory, 22,796 sq ft, ensures the customer receives the most reliable product and process testing in chemical, environmental, mechanical, electrical, non-destructive dimensional and metallurgical areas.





Building 301: Weapon Systems Component Plating Shop, 93,155 sq ft, of plating lines and process support provides metal surface treatment and finishing for engine and aircraft.



Building 178: Integration Support Facility, 79,419 sq ft, houses the state-of-the-art Mission Critical Computer Resources as well as controlling Industrial Process Equipment, Operational Flight Preparation, and Automatic Test System software.

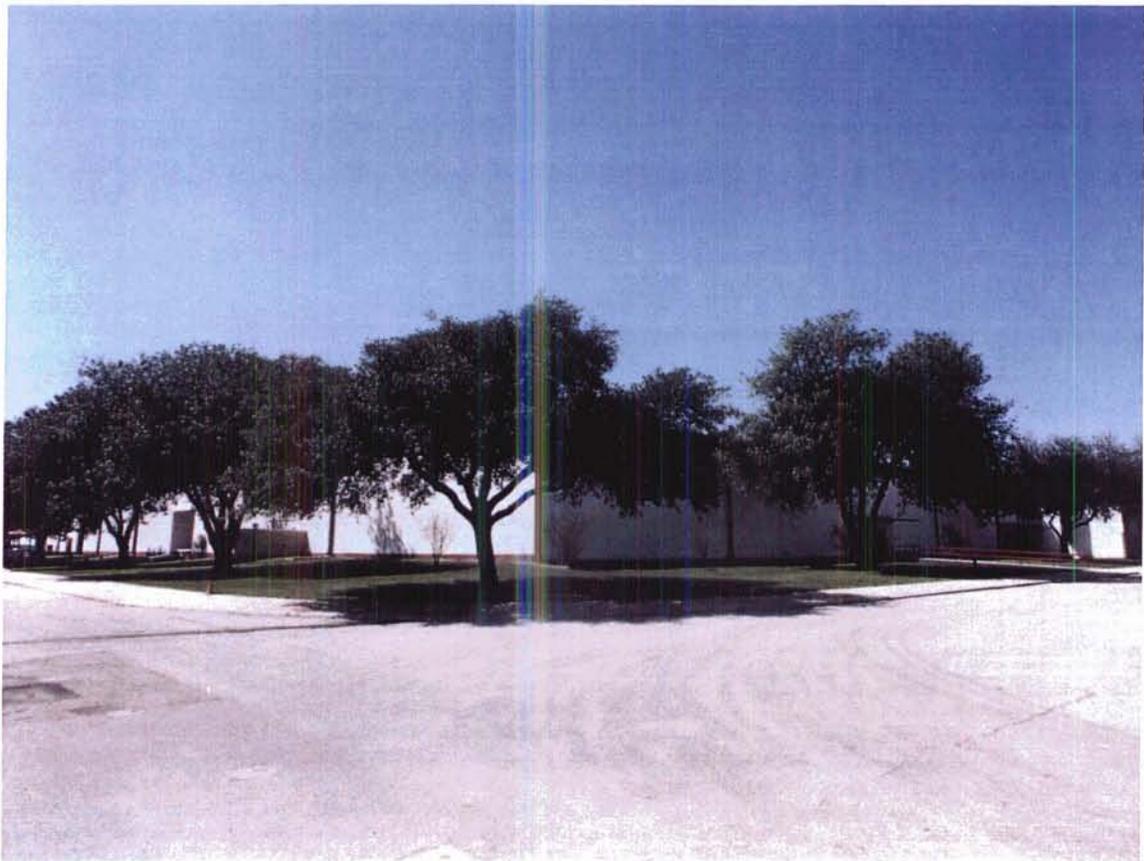


Building 308: Electronic Support Equipment Repair Facility, 191,559 sq ft, provides a full range of repair for electronic and automated test systems supporting both aircraft and engines.





Building 305: General Purpose Electronics Repair Facility, 30,819 sq ft. Scheduled for demolition.



Building 1420: Nuclear Weapons Facility, 165,462 sq ft, provides repair, storage and management of nuclear components. Potential facility addition to site the Defense Nuclear Agency Field Command.



Building 329: Engine Systems Support Facility, 214,647 sq ft, houses a range of processes which support repair of gas turbine engines, secondary power systems, starters, and aircraft and engine accessories.



Building 347: Fuel Component Repair, 76,522 sq ft, used for inspection and overhaul of engine fuel accessories (valves, pumps, etc.) for T56, TF39 and F100 engines and test of these fuel accessories plus aircraft fuel accessories. This facility will be phased out of operation by October 1996.



Building 522: Plastics and Fiberglass Component Manufacturing and Repair Shop, 37,413 sq ft. Workload being realigned to Building 375 in preparation for demolition.



Building 169: Warehouse, 81,101 sq ft. Potential renovation for siting of the Air Force Inspection Agency and Air Force Safety Agency.



Building 170: Warehouse, 60,801 sq ft. Scheduled for demolition.



Building 172: Warehouse, 91,122 sq ft. Scheduled for demolition.



Building 180: Warehouse, 13,275 sq ft. Scheduled for demolition.



Building 183: Life Sciences Equipment Laboratory, 17,624 sq ft. Scheduled for demolition.



Building 184: Hazardous Materials Storage, 5,695 sq ft. Scheduled for demolition.



Building 207: Administrative, 10,807 sq ft. Scheduled for demolition.



Building 208: Administrative, 9,239 sq ft. Scheduled for demolition.



Building 259A: Equipment Storage, 4,000 sq ft. Scheduled for demolition.



Building 306: Administrative, 16,484 sq ft. Scheduled for demolition.

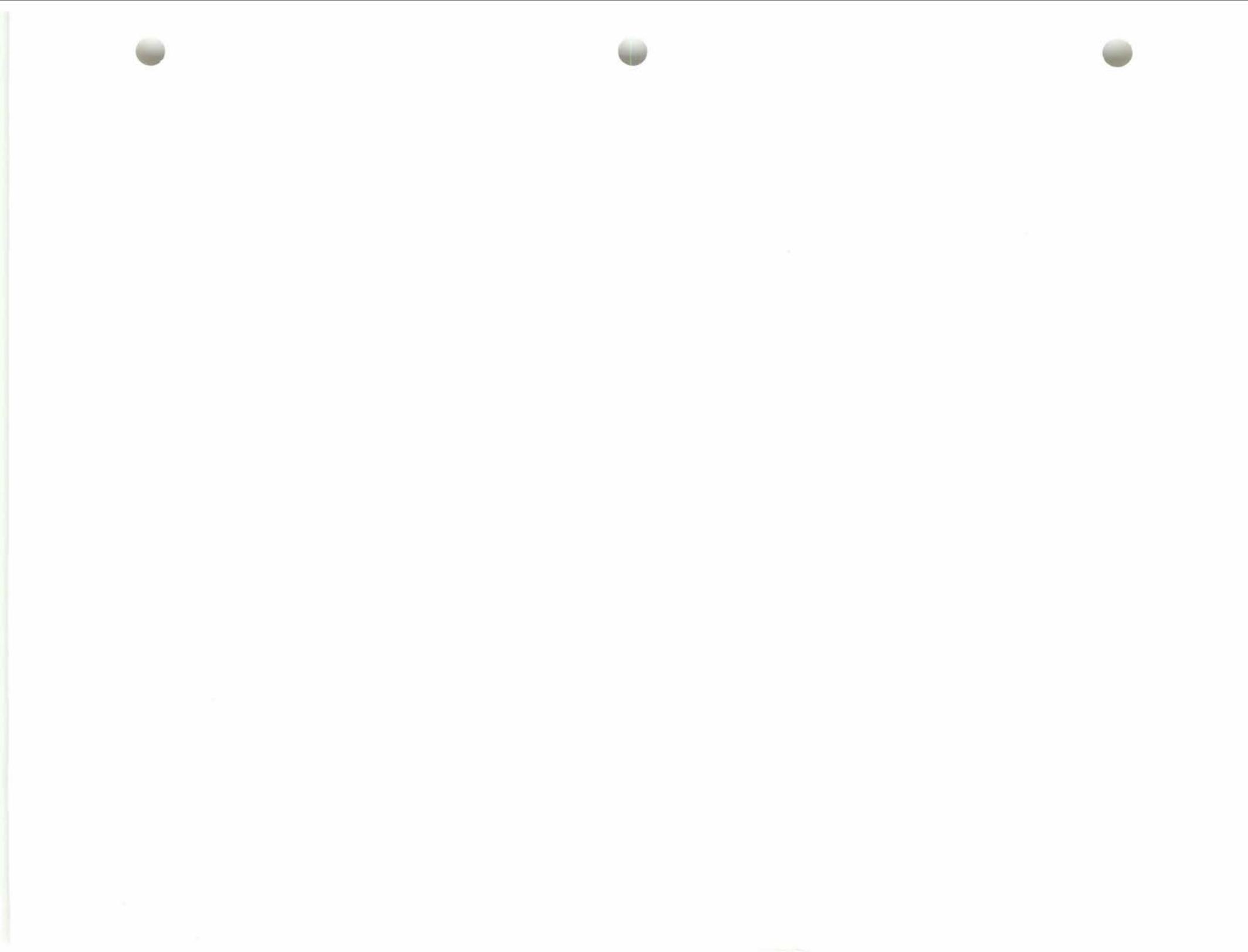


Building 340: Gas Turbine Engine Test Facility, 42,658 sq ft. Scheduled for demolition.

SECTION IV. PART 2
Layouts

Welcome to Onizuka Air Station and Moffett Federal Airfield







Agenda for the Day

- ◆ **Onizuka Air Station Mission Brief**
- ◆ **Press Availability**
- ◆ **Onizuka Air Station Facility Tour**
- ◆ **Classified Briefing / Lockheed Space Exhibit**
- ◆ **Lunch with Local CEO's**
- ◆ **Moffett Federal Airfield Briefing**
- ◆ **Helicopter or Bus Tour Onizuka Annex / Moffett**
- ◆ **129th Rescue Group Briefing & Tour**
- ◆ **Community Briefing**





Our Goal for the Day

- ◆ **To Provide an Orientation and Information on Onizuka - Moffett Units Recommended for Realignment / Transfer**
 - ◇ Onizuka Air Station / 750th Space Group
 - ◇ 129th Rescue Group (CA ANG)
- ◆ **To Understand Their Military Roles and Values**
- ◆ **To Describe Synergies and Dependencies in the Onizuka - Moffett Complex**
 - ◇ Military Operations
 - ◇ NASA
 - ◇ Industry / Academia / Community





Onizuka Air Station

Mission Briefing



Major Units at Onizuka

AIR FORCE SPACE COMMAND

750th Space Group - AF Satellite Control Network
(AFSCN) Operations and Base
Support

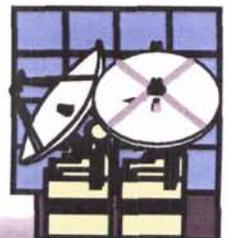
5th Space Operations Squadron - Satellite Operations

SPACE & MISSILE SYSTEM CENTER

Detachment 2 - Research, Development, Test,
and Evaluation

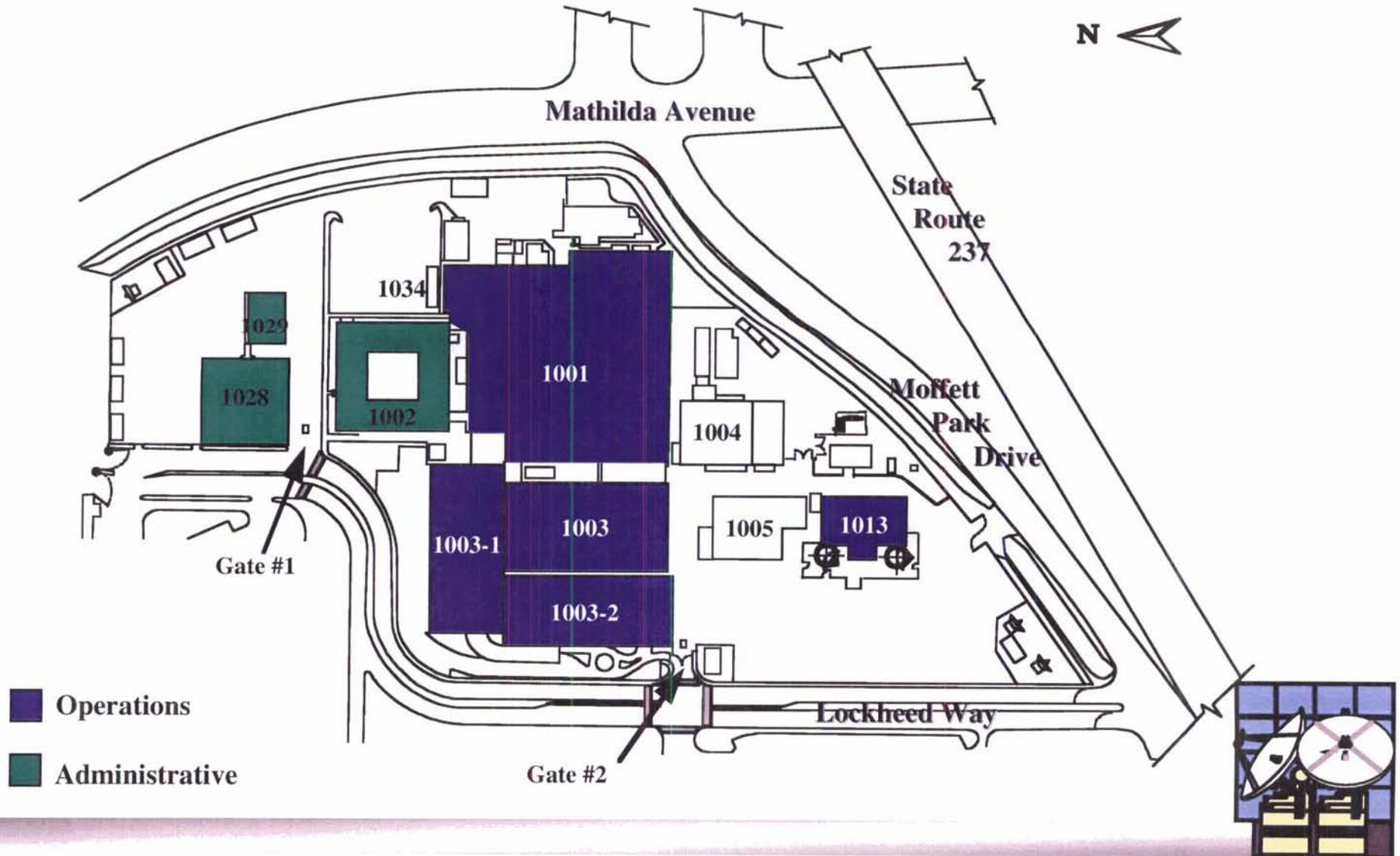
CWO - AFSCN Sustaining Engineering

Operating Division-4 - Operations





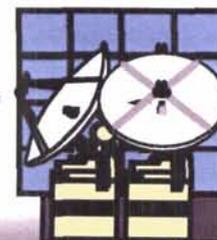
Onizuka Air Station





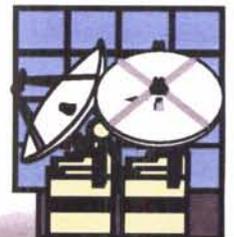
History of Onizuka

- 1956** Established in Palo Alto by Lockheed
- 1959** 1st Satellite Supported - "Discoverer 1"
- 1960** Moved to Current Sunnyvale Location
 - ◇ Satellite Test Center (STC)
- 1964** SecDef Designates a "National" Network
 - ◇ Air Force Satellite Control Facility (AFSCF)
- 1969** Built "Blue Cube" for Manned Orbiting Lab (MOL)
- 1971** Became Sunnyvale Air Force Station
- 1981** Supported 1st Space Shuttle Flight
- 1986** Renamed "Onizuka Air Station"
- 1987** Space Command Began Base/Network Management
 - ◇ Air Force Satellite Control Network (AFSCN)
- 1992** Remaining AFSC Assets to Space Cmd
- Apr 93** NAS Moffett Field Assets Begin Transfer to AF
- Jul 94** 750 SG Assumes Military Support for Onizuka -
Moffett Community





Air Force Space Command Missions





Air Force Space Command Organizational Chart

**Space
Operations**

**Missile
Operations**

**Air Force Space
Command HQ
Peterson AFB, CO**

**14th AIR FORCE
Vandenberg AFB, CA**

**20th AIR FORCE
F.E. Warren AFB, WY**

**21st Space Wing
Peterson AFB, CO**

**30th Space Wing
Vandenberg AFB, CA**

**341st Missile Wing
Malmstrom AFB, MT**

**90th Missile Wing
F.E. Warren AFB, WY**

**45th Space Wing
Patrick AFB, FL**

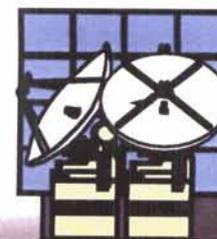
**50th Space Wing
Falcon AFB, CO**

**91st Missile Group
Minot AFB, ND**

**321st Missile
Group
Grand Forks AFB, ND**

**750th Space
Group
Onizuka AS, CA**

**351st Missile Wing
Whiteman AFB, MO**





50th Space Wing

Commander

50th Operations Group

50th Logistics Group

50th Support Group

750th Space Group

◆ On-orbit USAF Satellite Operations

◆ Comm, Computer, Contracting & Supply at Falcon AFB

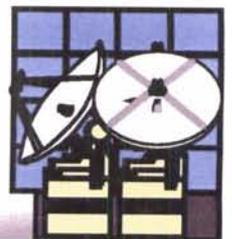
◆ General Base Support at Falcon AFB & Remote Locations

◆ Air Force Satellite Control Network





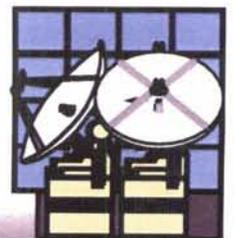
750th Space Group





Space Group Mission

- ◆ **Air Force Satellite Control
Common User Network
Operations and Support**
- ◆ **Host Base Support for
Onizuka Air Station**





750th Space Group

Commander

Group Staff

Command Post
Comptroller
Chaplain
Legal
Public Affairs
Plans & Pgms
Safety
Quality AF

**750th Logistics
Support
Squadron**

**750th Operations
Support
Squadron**

**750th Mission
Support
Squadron**

**750th Medical
Squadron**

**21st Space
Operations
Squadron**

**22nd Space
Operations
Squadron**

**23rd Space
Operations
Squadron**

**750th
Communication
Squadron**

(Falcon AFB, CO)
PIKE

(New Boston AS, NH)
BOSS

**Det 1
COOK**

**Det 2
REEF**

**Det 3
POGO**

**Det 4
INDI**

**Det 5
GUAM**

**Det 6
HULA**

**OL-AE
LION**

(Vandenberg AFB, CA)

(Diego Garcia, BIOT)

(Thule AFB, Greenland)

(Mahe, Seychelles)

(Andersen AFB, Guam)

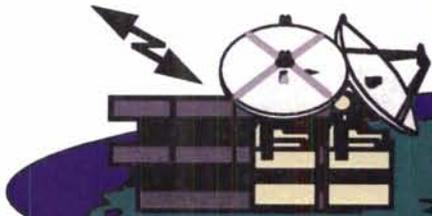
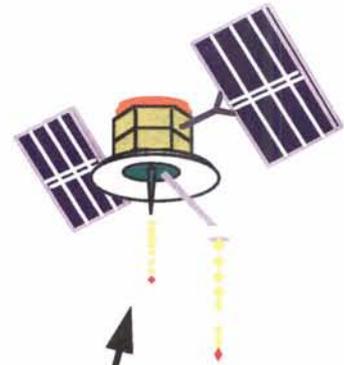
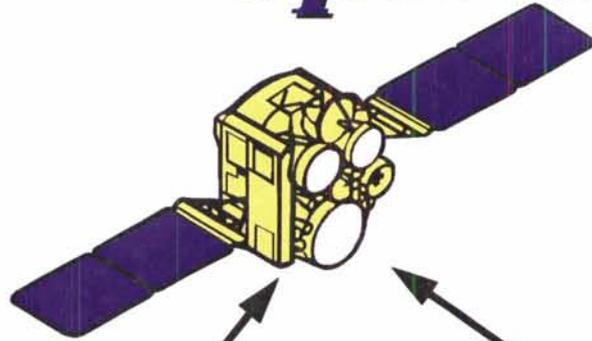
(Kaena Point, HI)

(Oakhanger, UK)

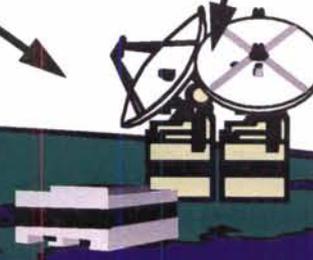


Satellite Operations

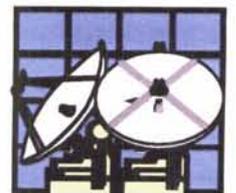
SATELLITE
OPERATIONS
CENTER



NETWORK
CONTROL
CENTER



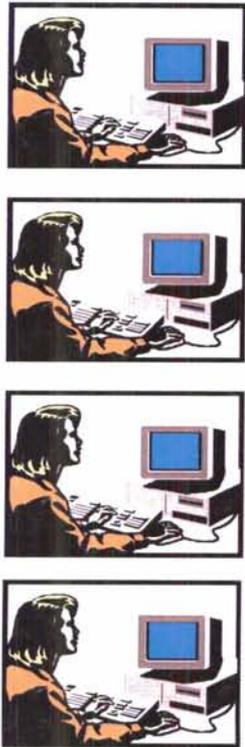
REMOTE
TRACKING
STATION





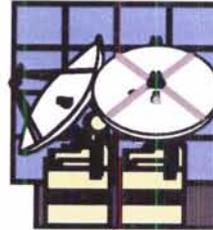
Network Operations

Satellite Operations Centers

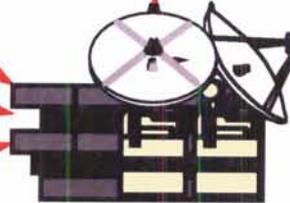


Network Control

Onizuka AS

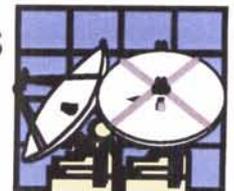


Falcon AFB



Remote Tracking Stations

-  IOS
-  TCS
-  VTS
-  TTS
-  CTS
-  DGS
-  NHS
-  HTS
-  GTS





Worldwide Common User Network

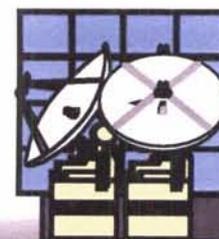




AF Space Missions at Onizuka

- ◆ **Communications** **DSCS II, DSCS III***
- ◆ **Allied Comm** **NATO, SKYNET**
- ◆ **NASA/USAF Booster** **IUS / Space Shuttle***
- ◆ **Navigation** **GPS***
- ◆ **Missile Warning** **DSP***
- ◆ **R&D** **STEP, APEX, Clementine**
- ◆ **CLASSIFIED**

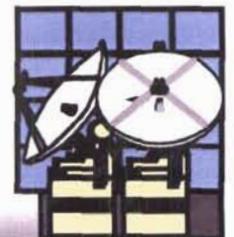
*** - BACK-UP CONTROL**





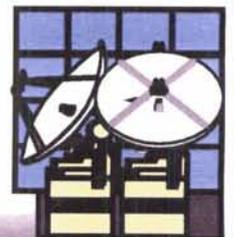
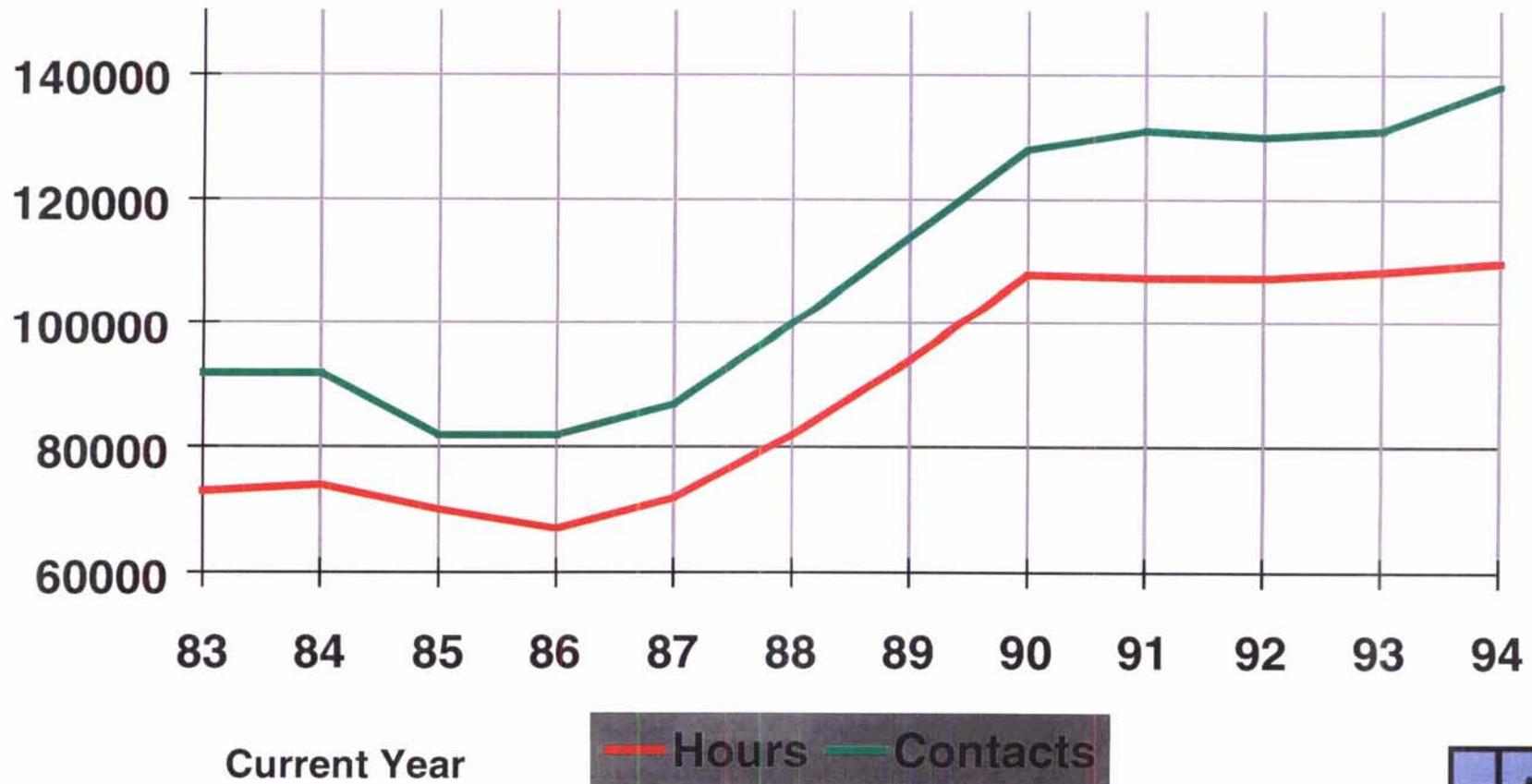
5 SOPS Mission

- ◆ **Plan and Conduct Launch and On-Orbit Operations for DOD, Allied and Commercial Space Systems**
 - ◇ Prime Satellite Control (DSCS II, NATO, SKYNET)
 - ◇ Back-up Satellite Control (DSCS III, DSP, GPS)
 - ◇ Support To NASA/Launch (SHUTTLE, GOES, IUS)





AFSCN Supports



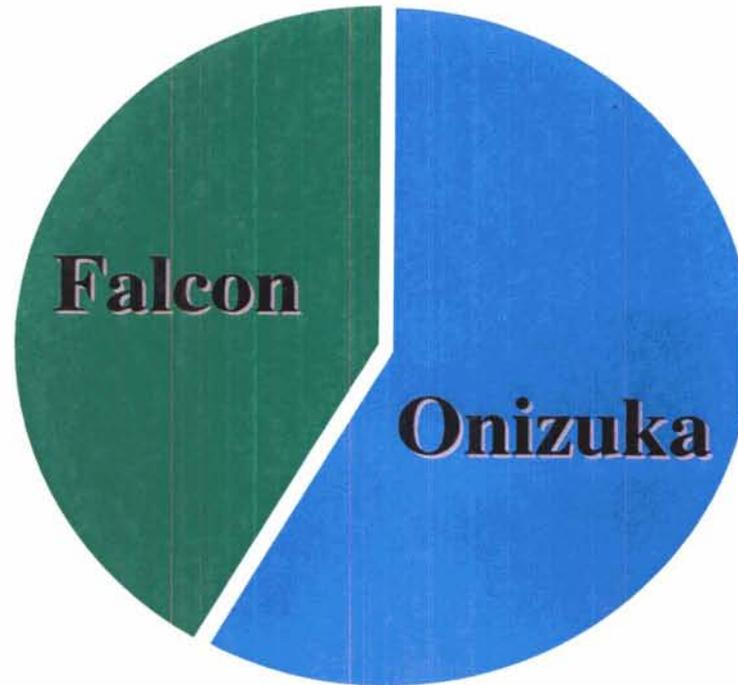


Common User Network Usage

(Based on Number of Contacts)

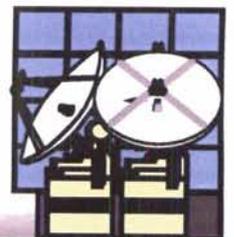
Falcon Missions

GPS
DSCS III
DSP
DMSP
FLTSATCOM
UHF Follow On
MILSTAR



Onizuka Missions

DSCS II
DSCS III LEO
Shuttle
IUS
Boosters
Skynet/NATO III/IV
RDT&E
Classified





750 SG Resources

- ◆ **Operations Support - \$71.0M**
 - ◇ Network Ops Contract (NSP) - 50.9M
 - ◇ Satellite Ops Support (SOSC) - 20.1M

- ◆ **Operations and Maintenance - \$47.1M**
 - ◇ Civil Engineering - 15.5M
 - ◇ Civilian Pay - 13.0M
 - ◇ Supplies - 6.3M
 - ◇ Leases - 5.9M
 - ◇ Communication - 1.6M
 - ◇ Other - 4.8M

- ◆ **Military Family Housing - \$ 5.3M**

- ◆ **Medical Support - \$ 3.5M**

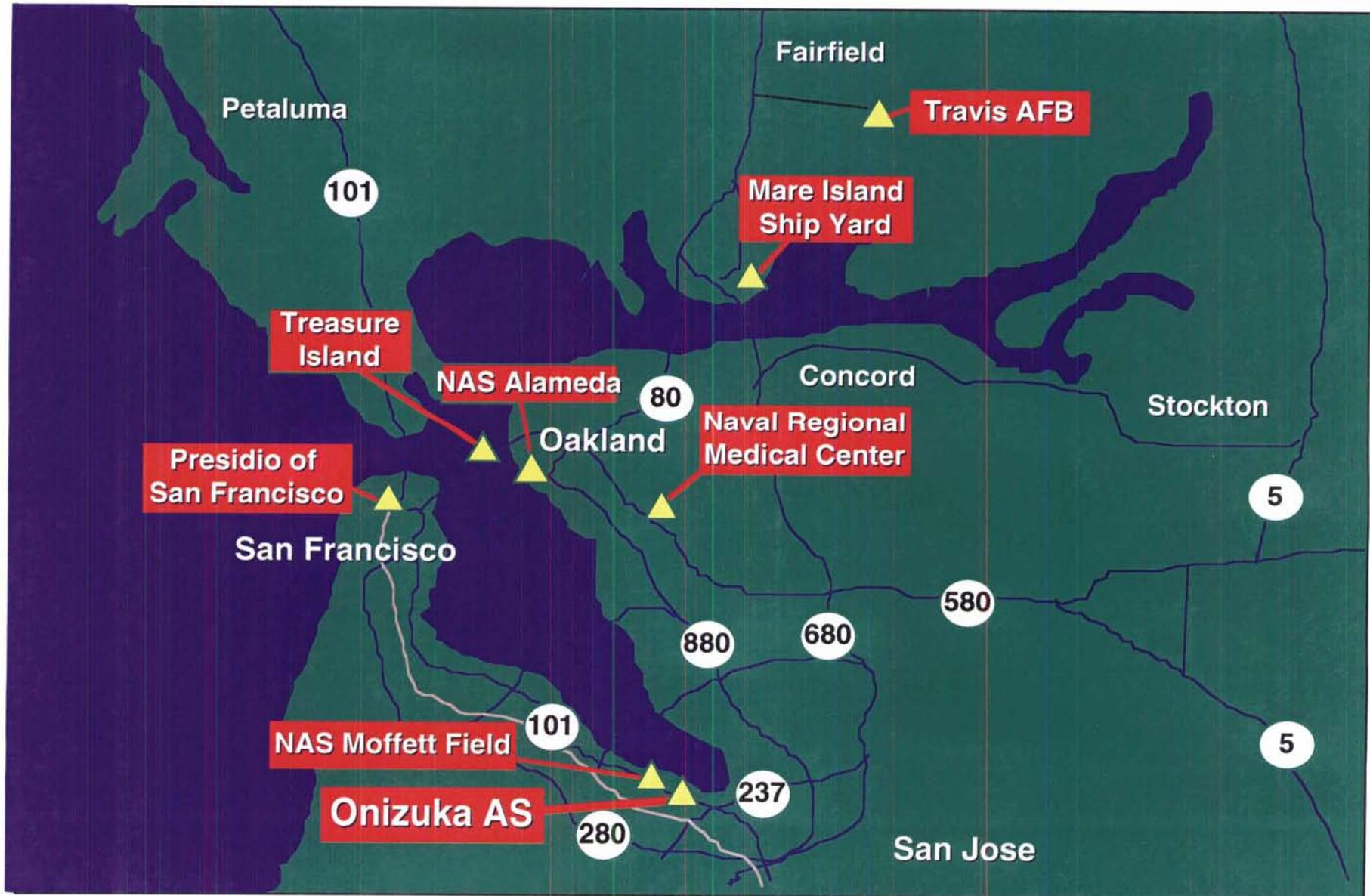




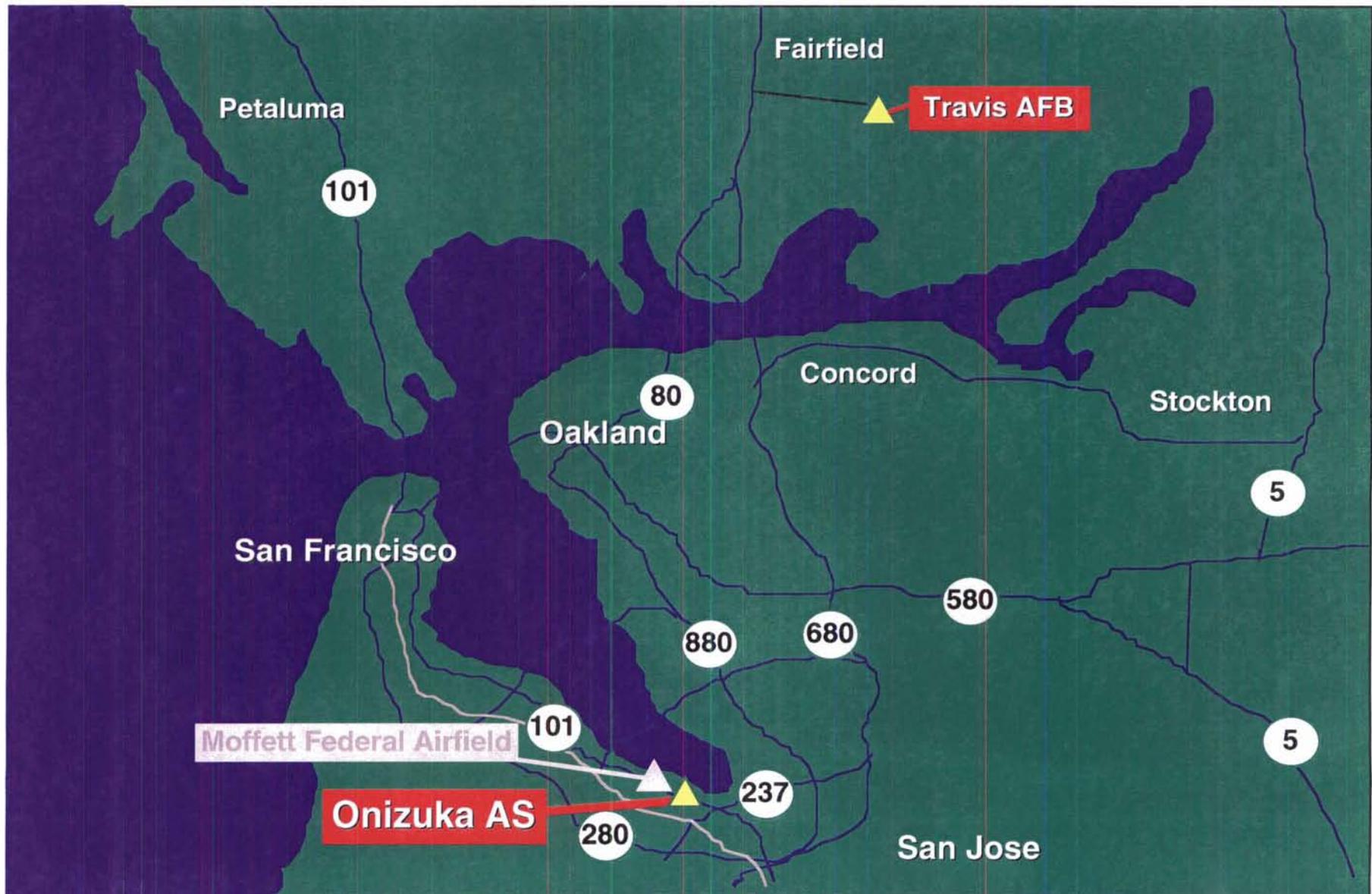
Military Community Support



Military Community Support Facilities 1991



Military Community Support Facilities 1996





Onizuka AS Demographics

◆ Military	700
◆ Government Civilians	300
◆ Contractors	2,200
◆ Dependents	1,000+
◆ Retirees	79,000
◆ Annual Direct Economic Impact	\$200M





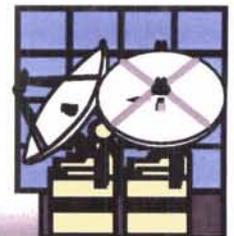
Onizuka - Moffett Complex

Units Supported /Active Duty Strength

◆ Dept of Air Force	865	◆ Dept of Navy*	761
✧ AFSPC	484	✧ NAVAL AIR RES	619
✧ AFMC	119	✧ MARINE AIR GP	120
✧ OD-4	167	✧ OTHER	22
✧ ANG	95	◆ US Coast Guard*	87
◆ Dept of Army*	45	◆ Defense Contract Mgt*	29
		◆ Recruiters, ROTC*	120

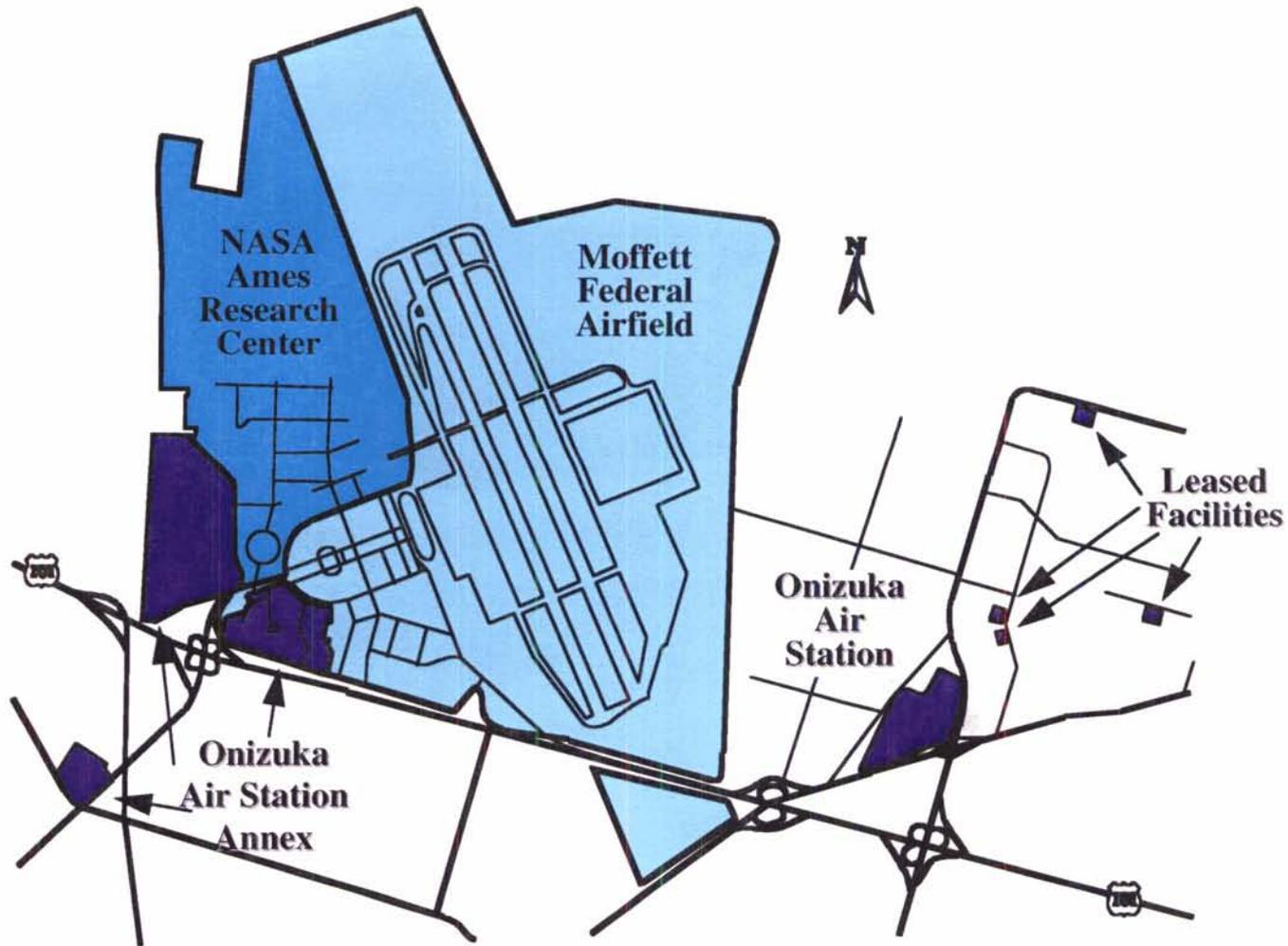
Total Active Duty- 1,862
Total Reserve - More Than 2,000

* - Not Considered by Re-alignment





Onizuka/Moffett - 1994





Military Community Support - 1991

Naval Air Station Moffett Field

Military Family Housing

Unaccompanied Housing

Chapel & Religious Education

Recreation Facilities

Officers/Enlisted Open Messes

Large Exchange

Medical Clinic

Commissary

Temporary Living Facilities

Child Care

Onizuka Air Station

126 Leased Housing + 100 at Moffett

36 Dorm Rooms at Moffett

Chaplain

Fitness Center

Consolidated Open Mess

Small Exchange

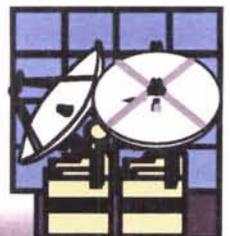




Military Community Support - 1995

◆ 750th Space Group - Onizuka/Moffett Complex

- ◇ Military Family Housing (806 Units)
- ◇ Enlisted Dormitory (168 Rooms)
- ◇ Chapel, Community/Education Center
- ◇ Fitness Center, Swimming Pool, Golf Course
- ◇ Military Exchange
- ◇ Medical/Dental Clinic
- ◇ Child Development Center / Youth Center
- ◇ Family Support Center





Air Force Materiel Command Missions



UNCLASSIFIED



Space & Missile Systems Center (SMC)

- *SMC - Test & Evaluation*
 - Mission
 - Resources
 - Move to Kirtland AFB

- *SMC - Network Support*
 - Mission
 - Resources
 - Support Activities

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Test & Evaluation (T & E) Mission



Policy and Direction

- **USAF MISSION (SUMMER 93):**
 - “TO DEFEND THE USA THROUGH THE CONTROL & EXPLOITATION OF AIR **AND SPACE**”

- **DOD TEST RESOURCES MASTER PLAN (DEC 90):**
 - “THE **SPACE SYSTEM TEST** FUNCTIONAL AREA IS JUDGED THE MOST SERIOUS LONG TERM (DOD TESTING) DEFICIENCY”

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Test & Evaluation (T & E) Mission

Policy and Direction (Cont'd)

- **AIR FORCE PROGRAM DIRECTION:**
 - **PLANNING, DEVELOPMENT, ACQUISITION, AND ACTIVATION OF RESOURCES TO PERFORM SPACE T&E MISSION**
 - **ACTIVITIES TO CONDUCT TEST PLANNING, SPACE SAFETY, OPERATIONS OF SPACE TEST RESOURCES, TEST EXECUTION AND TEST EVALUATION AND REPORTING FOR PRE-OPERATIONAL SPACECRAFT, R&D SPACECRAFT AND OTHERS**

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UNCLASSIFIED



Test & Evaluation (T & E) Mission

History

- **TRACES ITS LINEAGE TO 1958 ESTABLISHMENT OF THE AIR FORCE SATELLITE TEST CENTER AT SUNNYVALE AFS CA**
- **PROVIDED COMMAND, CONTROL AND TESTING OF ALMOST ALL DOD SATELLITES FROM 1958 TO 1987**
 - 250K SPACECRAFT CONTACTS PER YEAR IN 1987
- **WITH TRANSFER OF OPERATIONAL PROGRAMS TO AFSPACECOM IN 1987, BECAME CSTC (RETURNING TO ORIGINAL R&D TEST ROOTS)**
- **SUPPORTED EVERY MANNED SPACEFLIGHT**

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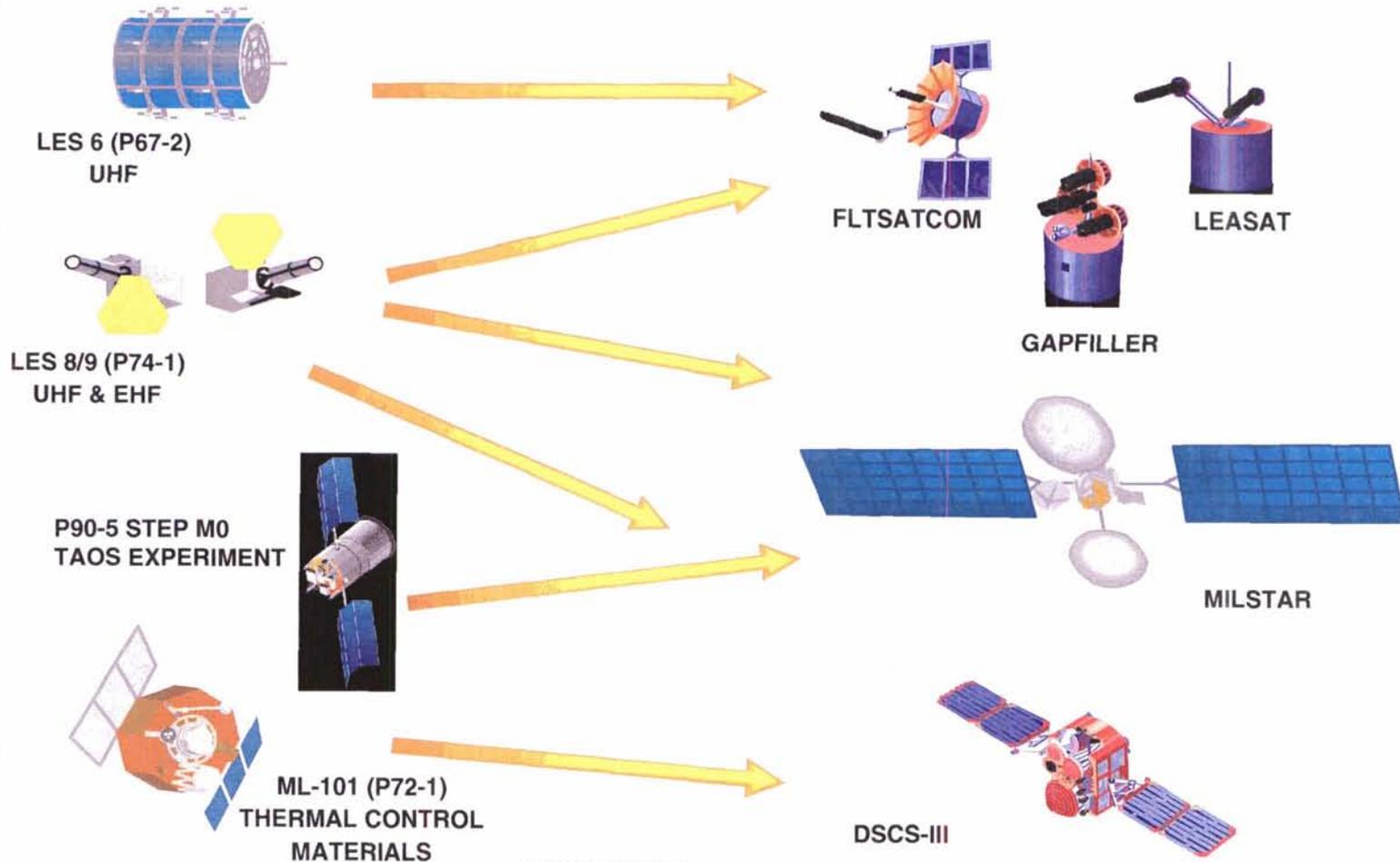
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Test & Evaluation (T & E) Mission



“Why We Exist!”

COMMUNICATIONS SATELLITES



UNCLASSIFIED



Test & Evaluation (T & E) Mission

- **WHAT WE DID IN FY94!**
 - THE PLANNING, READINESS, ACTIVATION, PRE-LAUNCH TESTING, AND ON-ORBIT OPERATION OF THE MILSTAR SATELLITE
 - AFSCN REMOTE GROUND FACILITY TRACKING AND COMMANDING OF THE CLEMENTINE SPACE VEHICLE
 - THE PLANNING, READINESS, PRE-LAUNCH TESTING, AND ON-ORBIT OPERATION OF THE MINIATURE SEEKER TECHNOLOGY DEMONSTRATION (MSTI) FAMILY OF SPACECRAFT



Test & Evaluation (T & E) Mission

- **WHAT WE DID IN FY94! (Cont'd)**
 - **THE PLANNING, READINESS, PRE-LAUNCH TESTING, AND ON-ORBIT OPERATION OF THE SPACE TEST PROGRAM (STEP) FAMILY OF SPACECRAFT**
 - **CURRENTLY PERFORMING 140 SATELLITE CONTACTS (SORTIES) PER WEEK**
 - **THE PLANNING, READINESS, PRE-LAUNCH TESTING, AND ON-ORBIT OPERATION OF THE RADAR CALIBRATION (RADCAL) SATELLITE**
 - **PERFORMING CRITICAL RADAR SITE CALIBRATIONS FOR AIR FORCE SPACE COMMAND AND OTHER USERS**



Test & Evaluation (T & E) Mission

- **WHAT WE DID IN FY94! (Cont'd)**
 - **TRANSPORTABLE S-BAND TERMINALS WERE DEPLOYED CONTINUOUSLY THROUGHOUT THE WORLD IN SUPPORT OF CRITICAL LAUNCH AND ON-ORBIT EVENT**
 - **WE ARE THE EXECUTING AGENT FOR THE CENTER FOR RESEARCH SUPPORT (CERES) AT THE NATIONAL TEST FACILITY (NTF)**



Test & Evaluation (T & E) Mission

- **CURRENT/FUTURE ACTIVITIES**
 - **THE PLANNING, READINESS, PRE-LAUNCH TESTING, AND PREPARATION FOR ON-ORBIT OPERATION OF THE FOLLOWING SERIES OF SATELLITES AND LAUNCHES:**
 - **THIRD IN A SERIES OF MSTI SPACECRAFT**
 - **FOURTH IN A SERIES OF STEP SPACECRAFT**
 - **MIDCOURSE SPACE EXPERIMENT (MSX) SPACECRAFT**
 - **BOWSHOCK (“SKIPPER”) SPACECRAFT**
 - **SPACE TARGETING SYSTEM (STARS)**



Test & Evaluation (T & E) Mission

Manpower at Onizuka

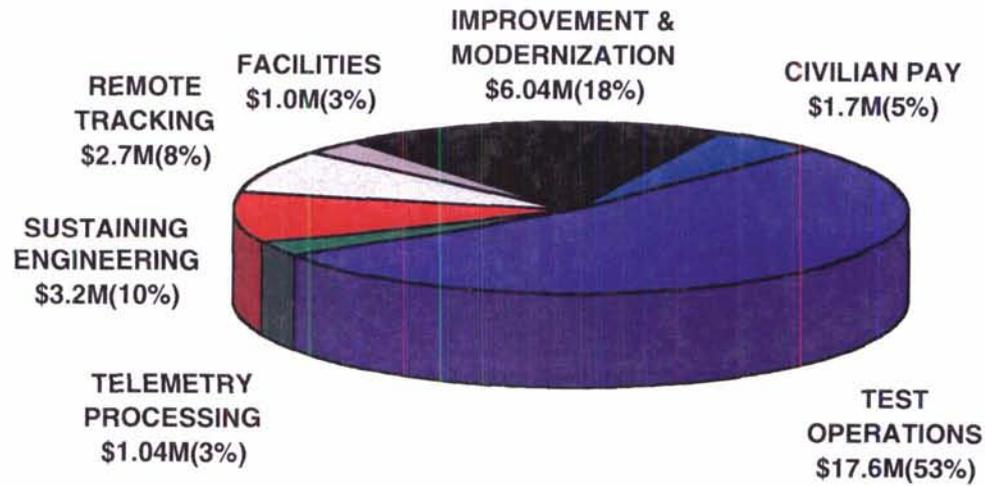
	<u>AUTH</u>
OFFICER TOTAL:	53
ENLISTED TOTAL:	37
CIVILIAN TOTAL:	<u>41</u>
TOTAL GOVT PERSONNEL:	131
TOTAL CONTRACTORS:	<u>344</u>
TOTAL:	475

UNCLASSIFIED



Test & Evaluation (T & E) Mission

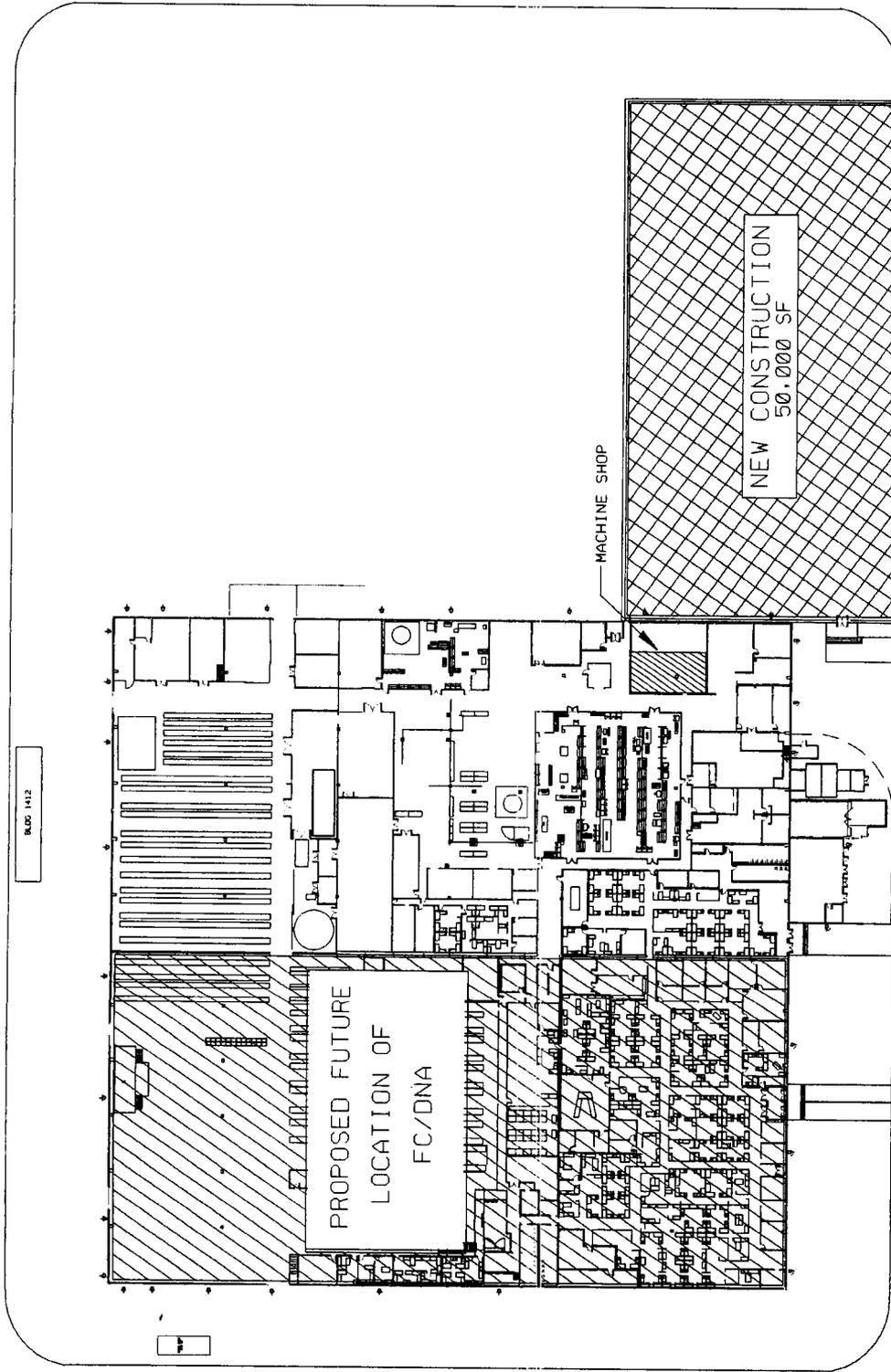
Budget Allocations



TOTAL: \$33.33M

UNCLASSIFIED

BUILDING 1420



BLDG 1420
ADD/ALTER
FOR
FC/DNA

TOTAL COST: \$ 12.6 M

SECTION IV. PART 3
Placards



BUILDING 301

Total SF: 93,155

Current Capacity: 179,507 Hours

<u>Area</u>	<u>SF</u>
Plating	-19,000
Machine Shop	- 1,500

Total SF Reduction: 20,500

KELLY AIR FORCE BASE



Plating BUILDING 301

<u>SF</u>	<u>Capacity</u>	<u>PEs</u>
-19,000	-46,360	-20

Consolidate 11 specialized processes to single sources.

KELLY AIR FORCE BASE



Machine Shop BUILDING 301

<u>SF</u>	<u>Capacity</u>	<u>PEs</u>
-1,500	N/A	N/A

Workload will be consolidated into B303 machine shop.

KELLY AIR FORCE BASE



BUILDING 303

Total SF : 89,508
Current Capacity: 512,439 Hours

<u>Area</u>	<u>SF</u>
Manufacturing Machining	4,442
Repair Machining	11,877

Total SF Reduction: 16,319

KELLY AIR FORCE BASE



Manufacturing Machining

BUILDING 303

<u>SF</u>	<u>Capacity</u>	<u>PEs</u>
4,442	- 36,424	- 30

Workload transfer and consolidation to OC-ALC.

KELLY AIR FORCE BASE



Repair Machining

BUILDING 303

<u>SF</u>	<u>Capacity</u>	<u>PEs</u>
-11,877	- 97,391	- 31

Internal consolidation of multiple machine shops will co-utilize equipment and personnel. Machine shops from B178, B348, B1420, B301, and B320 will be consolidated to B303.

KELLY AIR FORCE BASE



BUILDING 320/321/324

Total SF: 35,000

Current Capacity: 154,562

<u>Area</u>	<u>SF</u>	<u>Location</u>
Physical Science Lab (Metallurgy)	-4,800	Bldg 321
Physical Science Lab (Process Control)	- 2,200	Bldg 324
Totals	-7,000	

Total SF Reduction: -7,000

KELLY AIR FORCE BASE



Physical Science Lab

BUILDING 321

<u>SF</u>	<u>Capacity</u>	<u>PE</u>
- 4,800	- 4,800	-14

Current workload/equipment will consolidate to Bldgs 318 and 320 and utilize multi-skilled personnel.

KELLY AIR FORCE BASE



Physical Science Lab

BUILDING 324

<u>SF</u>	<u>Capacity</u>	<u>PE</u>
- 2,200	- 2,200	- 6

Current workload/equipment will be consolidated into Bldg 320 and maximize manpower efficiency and flexibility.

KELLY AIR FORCE BASE



KELLY SCIENCE AND ENGINEERING LAB

CURRENT HIGH TECHNOLOGIES

- Computerized Industrial Tomographic Analyzer (CITA) Facility
- Robotic-Controlled Industrial Radiography Facility
- Surface Analysis System
- Single Stage Scanning Electron Microscope
- Dual Stage Scanning Electron Microscope
- Real Time Radiography System
- Coordinate Measurement Machine
- Gas Chromatograph Mass Spetrometer
- X-ray Fluorescent Spectrometer
- Optical Emission Spectrometer
- Fourier Transform Infrared Spectrometer
- Ion Chromatograph
- Computerized Ultrasonic Immersion System

KELLY AIR FORCE BASE



KELLY SCIENCE AND ENGINEERING LAB

ROBOTIC-CONTROLLED INDUSTRIAL RADIOGRAPHIC FACILITY

- Provides for nondestructive inspection utilizing conventional film radiography with a robot-controlled radiation system
- State-of-the-art multi-axis robot with a 200 kg capacity manipulates the 450 KEV radiation source for repeatable and higher quality inspection processes
- Only robotic-controlled radiography system in USAF for aerospace engine components
- Workloads include F100, T56 and TF39 engine components, C-5A/B, T-38, F-15, F-16 and B-1B airframe components
- Specialized applications include accident/mishap investigations, First Article/CVP operations and process development

KELLY AIR FORCE BASE



KELLY SCIENCE AND ENGINEERING LAB

COMPUTERIZED INDUSTRIAL TOMOGRAPHIC ANALYZER FACILITY

- Provides for nondestructive inspection utilizing computed tomography, digital radiography and digital laminography
- Only intermediate-type computed tomography inspection system within DOD using a 420 KEV radiation source
- Ability to accommodate a part envelope of 5' diameter, 6' high and up to 5000 lbs weight
- Dimensioning accuracy is 0.001", density resolution is 5% and spatial resolution is 0.08"-0.01"
- Applications include F100, T56 and TF39 engine components, C-5A/B, T-38, F-15, F-16 and B-1B airframe components
- Specialized applications include accident/mishap investigations, First Article/CVP operations and reverse engineering

KELLY AIR FORCE BASE



BUILDING 324

Total SF: 367,235
Current Capacity: 659,727 Hours

<u>Area</u>	<u>SF</u>	<u>Area</u>	<u>SF</u>
Machine Shop (conventional)	-7,000	Machine Shop (non-conventional)	-7,000
		Multiple Areas	-21,520

Total SF Reduction: 35,520

KELLY AIR FORCE BASE



Machine Shop BUILDING 324

<u>SF</u>	<u>Capacity</u>	<u>PEs</u>
-7,000	N/A	N/A

Non-conventional machining workload will be consolidated into B360 and B303 machine shops increasing equipment utilization and manpower efficiencies.

KELLY AIR FORCE BASE



Machine Shop BUILDING 324

<u>SF</u>	<u>Capacity</u>	<u>PEs</u>
-7,000	-57,400	0

Conventional machining workload will be consolidated into B360 and B303 machine shops.

KELLY AIR FORCE BASE



Multiple Areas BUILDING 324

<u>SF</u>	<u>Capacity</u>	<u>PEs</u>
-21,520	N/A	N/A

These areas will be compressed into other parts of B324, B360, and B303. The space freed will be used to absorb workloads from LD and TI in B329.

KELLY AIR FORCE BASE



UNIQUE CAPABILITY SA-ALC T56 2LM

- Opened Oct 94, Full Ramp FY97
- 175 Engines per year and 56 skilled mechanics
- 32 Field JEIMs to be consolidated by FY 97
- 40 Engine Stations, (20 bays @ 2 engines per bay)
- Collocation with Depot = JEIM Plus
 - All technical support personnel located on base
 - Job Routing and Minor Repair = cost avoidance
 - Extensive QEC rework previously not available at the field level

KELLY AIR FORCE BASE



UNIQUE CAPABILITY SA-ALC F100-220 2LM

- 294 Engines per year and 152 skilled mechanics by FY96
- 10 Field JEIMs approx. 140,000 SF consolidated into a single 70,000 SF shop
- Co-location = JEIM Plus
 - All technical support personnel located on base
 - More sophisticated NDI and Test Cell Analysis
 - Job Routing > \$10,000,000 cost avoidance
 - JEIM minor repair > \$12,000,000 cost avoidance
- 10 additional bays (13,000 SF) Dec 96 additional capacity for future/surge work load

KELLY AIR FORCE BASE



BUILDING 329

Total SF: 214,647

Current Capacity: 615,234

<u>Area</u>	<u>SF</u>	<u>Area</u>	<u>SF</u>
Disassembly	8,375	Parts Pool	10,625
Cleaning	8,125	DMSC & AWP	17,500
FPI & MPE	5,625	Admin	14,125
APIS	16,250	TIP	26,250
Paint	8,750	Actuator	6,125
Sheet Metal	4,500	Tank & Radiator	8,750
Misc	80,000		

Total Building Divestiture

214,647 SF

KELLY AIR FORCE BASE



Cleaning BUILDING 329

<u>SF</u>	<u>Capacity</u>	<u>PEs</u>
-8,125	N/A	N/A

Cleaning line will be consolidated to B360 and absorbed with current capacity and personnel.

KELLY AIR FORCE BASE



Inspection

BUILDING 329

<u>SF</u>	<u>Capacity</u>	<u>PEs</u>
-21,875	N/A	N/A

FPI and MPI as well as the APIS system will be consolidated to B303 and absorbed with current capacity and personnel.

KELLY AIR FORCE BASE



Sheet Metal Repair

BUILDING 329

<u>SF</u>	<u>Capacity</u>	<u>PEs</u>
-4,500	N/A	N/A

Sheet Metal Repair workload will be consolidated with B324, B375, and B360 shops.

KELLY AIR FORCE BASE



BUILDING 345

Total SF: 48,959
Current Capacity: 44,493 Hours

Relocating Test Stands and Safety Wire
from B347.

KELLY AIR FORCE BASE



UNIQUE CAPABILITY

Building 345

- Over 16,000 sq ft of Class I, GPD Hazardous Test
- Facility supplied technical utilities
 - 400 Hz electrical power
 - 0-40 VDC electrical power
 - 0-850 psi air
- Chilled Water for cooling fuel
- Environmental exhaust vapor removal EPA compliant
- AFATS "Smart Automation"
 - Improved test reliability
 - Improved test capability
 - Improved throughput
 - Reduced energy consumption
 - Reduced operating costs

KELLY AIR FORCE BASE



BUILDING 347

Total SF: 76,552
Current Capacity: 159,562 Hours

<u>Area</u>	<u>SF</u>	<u>Area</u>	<u>SF</u>
Overhaul	7,500	Admin	2,750
Test Stands	32,000	DMSC & AWP	1,875
Safety Wire	1,250	Vacant	31,177

Total Building Divestiture
76,552 SF

KELLY AIR FORCE BASE



BUILDING 348

Total SF: 94,520

Current Capacity: 349,809

Relocate functional areas from
B347:

Overhaul
Test Stands
Administrative
DMSC

KELLY AIR FORCE BASE



UNIQUE CAPABILITY

Building 348

- Unified Fuel Control (UFC) Repair and Test is unique throughout DoD
- Test capability using Automated Test Equipment (ATE) for Fuel Nozzles for all F100/200/229 Series Engines in DoD
- Overhaul of TF39 Engine Main Fuel Control is unique throughout DoD
- Interservicing of Air Force and Navy T56 Fuel Controls

KELLY AIR FORCE BASE



BUILDING 360

Total SF: 575,000

Current Capacity: 1,597,045 Hours

<u>Area</u>	<u>SF</u>
Blade & Vane Rework	16,500
Blade & Vane Cleaning	1,500
Machine Shops	5,000
Chemical Cleaning	2,500

Total SF Reduction: 25,500

KELLY AIR FORCE BASE



Blade & Vane Rework BUILDING 360

<u>SF</u>	<u>Capacity</u>	<u>PEs</u>
-16,500	-49,665	-22

Current workload/equipment will move to OC-ALC. This space will be used to absorb OC-ALC Gearbox workloads and other SA-ALC workloads.

KELLY AIR FORCE BASE



Blade & Vane Cleaning BUILDING 360

<u>SF</u>	<u>Capacity</u>	<u>PEs</u>
-1,500	-4,515	-4

Current workload will move to OC-ALC. This space will be used to absorb other SA-ALC cleaning workloads.

KELLY AIR FORCE BASE



Machine Shop BUILDING 360

<u>SF</u>	<u>Capacity</u>	<u>PEs</u>
-5,000	-41,000	-41

Area will be reconfigured to production cell format. A combination of equipment moves and process realignment and equipment co-utilization will free 5,000 SF to accommodate absorption of B324 workloads.

KELLY AIR FORCE BASE



Chemical Cleaning BUILDING 360

<u>SF</u>	<u>Capacity</u>	<u>PEs</u>
-9,000	-27,090	-10

Internal consolidation of current equipment and processes will allow facility to absorb workloads from B329, B333, B348, and B324 without additional manpower.

KELLY AIR FORCE BASE



UNIQUE CAPABILITIES Engine Sprayed Abradable Compressor Tip Shrouds (ESACTS)

- Project provides organic turn key capability to strip, reapply and inspect PWA279 proprietary abradable coating
- Applicable to F100-PW-220/-220E/-229 4th through 12th stage compressor stators
- Process employs water jet stripping, automated plasma spray and laser holography systems already in place
- SA-ALC is only qualified DoD source for process
- Increases reliability and durability of components due to improved compressor efficiency and resistance to foreign object damage

KELLY AIR FORCE BASE



UNIQUE CAPABILITIES Cryogenic Spin Test Facility

- Unique form of potentially destructive testing for 1st, 2nd and 3rd stage Fan Disks for F100 engine
- Process description
 - Disks fitted with dummy blades to simulate operation and balanced
 - Cooled to -320° F with liquid Nitrogen
 - Assembly spun up to 15,000 RPM in specially designed pit
- Provides earliest detection of Fan Disk flaws
 - Disks with flaws fail catastrophically
 - Disks which pass gain extended life due to microstructural stress relief
- Process has yielded over \$100 Million in savings
- Only source in DoD and one of only two in the world

KELLY AIR FORCE BASE



UNIQUE CAPABILITIES Enhanced Fluorescent Penetrant Inspection System

- State-of-the-art system will consist of three modules:
 - Large Parts Processor (LPP) - parts up to 5'x5'x5'
 - Small Parts Processor (SPP) - parts up to 3'x3'x3'
 - Drum Rotor Processor (DRP) - designed for -229 Drum Rotor
- Increases capability to detect small flaws
 - Whole field inspection to .040" (dash on word processor)
- Increases capability to access hard to reach areas on part with complicated configurations such as Drum rotor
- Applicable to all current and future engine workloads (F119)
- Only one other system in world (P&W original)

KELLY AIR FORCE BASE



UNIQUE CAPABILITY

Transition to Production Cells

- Group machines and processes to perform operations on components having similar repair requirements
- Plan calls for 16 Production cells and 11 Functional shops
- Cells will consolidate processes in B324 and B360
 - Reduce distance of in-process routes and queue time
 - Increase quality and throughput
- Theory of new cell flow
 - Receive, clean & inspect, repair buffer, production cell, functional shop (as required), assembly buffer
- Cell metrics
 - Labor efficiency, flow days, quality, schedule
- Prototype status - PC10 (Inlet Fan Case)

KELLY AIR FORCE BASE



BUILDING 375

Total SF: 1.1M
Current Capacity: 1,910,141 Hours

<u>Area</u>	<u>SF</u>		<u>Area</u>	<u>SF</u>
	BRAC	ALT		
Sht Mtl Mfg	-16,000	-3,000	Mach Shop	- 2,456
Sht Mtl Rpr	- 8,000	-3,750	Component Paint	- 8,404
Tube/Wire	- 4,000	- 735		
Composites	- 3,000	- 3,000		
Cordage	- 800	- 800		
Totals	- 31,800	-11,285		- 10,860

KELLY AIR FORCE BASE



Sheet Metal Repair BUILDING 375

<u>Option</u>	<u>SF</u>	<u>Capacity</u>	<u>PEs</u>
BRAC	- 8,000	-19,404	-34
ALT	- 3,750	- 8,925	-13

Consolidation of non-PDM sheetmetal workloads
with B324, B360, and B329 shops.

KELLY AIR FORCE BASE



Sheet Metal Manufacturing

BUILDING 375

<u>Option</u>	<u>SF</u>	<u>Capacity</u>	<u>PEs</u>
BRAC	- 16,000	-131,200	-10
ALT	- 3,000	-24,600	- 6

Consolidation of non-PDM sheetmetal workloads with B324, B360, and B329 shops.

KELLY AIR FORCE BASE



Harness/Cable Manufacture

BUILDING 375

<u>Option</u>	<u>SF</u>	<u>Capacity</u>	<u>PEs</u>
BRAC	-800	-1904	-2

Efficiencies will be achieved through co-utilization of PDM skills personnel for aircraft backshop support.

KELLY AIR FORCE BASE



Tubing Manufacture

BUILDING 375

<u>Option</u>	<u>SF</u>	<u>Capacity</u>	<u>PEs</u>
BRAC	- 4,000	-32,800	-1
ALT	- 735	-6,027	-1

Efficiencies will be achieved through co-utilization of PDM skills personnel for aircraft backshop support.

KELLY AIR FORCE BASE



Machine Shop

BUILDING 375

<u>Area</u>	<u>SF</u>	<u>Capacity</u>	<u>PEs</u>
Machine Repair	- 2,456	-18,523	- 6
Machine Mfg	- 197	- 1,615	- 1

Consolidation of non-PDM line support machining workload to B303 Depot Machine Shop. Excess equipment will be turned in for disposal.

KELLY AIR FORCE BASE



Composites BUILDING 375

<u>Option</u>	<u>SF</u>	<u>Capacity</u>	<u>PEs</u>
BRAC	-3,000	-24,600	-12

Current MISTR workload will transfer to SM-ALC.

KELLY AIR FORCE BASE



Component Paint BUILDING 375

<u>Option</u>	<u>SF</u>	<u>Capacity</u>	<u>PEs</u>
SA-ALC	-8,404	Will absorb workload into current capacity and PEs.	

Paint booths from B329, B308, B655 will consolidate to B375
for a reduction of 8,404 SF.

KELLY AIR FORCE BASE



UNIQUE CAPABILITY SA-ALC TF39 2LM

- Opened Oct 94, reach full ramp late FY97
- 210 Engines per year and 330 skilled mechanics by FY97
- Consolidation of Travis, Dover and 433rd JEIM shops
- Co-location with Depot = JEIM Plus
 - All technical support personnel located on base
 - More sophisticated Test Cell Analysis
 - First time “Over Haul” of QEC kit
- 34 engine bays, 103,000 SF, largest JEIM shop in the world

KELLY AIR FORCE BASE



BUILDINGS 650 & 651

Total SF: 26,500
Current Capacity: N/A

<u>Area</u>	<u>SF</u>
Bldg 650 Storage	-6,631
Bldg 651 Storage	-6,614

Total SF Reduction: 13,245

KELLY AIR FORCE BASE



Machine Shop

BUILDING 1420

<u>SF</u>	<u>Capacity</u>	<u>PE</u>
-1100	- 9,020	N/A

Machine manufacturing workload will move to Bldg 303. Excess equipment will be turned in for disposal.

KELLY AIR FORCE BASE



UNIQUE CAPABILITIES

Nuclear Weapons

- **Universal Cable Tester**
- **Thermotron Temperature Chamber**
- **Cable Braiding Machine**
- **Altitude Temperature Test Chamber**
- **Multi-Use Centrifuge (MUC)**
- **Anechoic Antenna Test Facility**
- **Rotary Centrifuge Accelerator**
- **Shock Machine Test System**

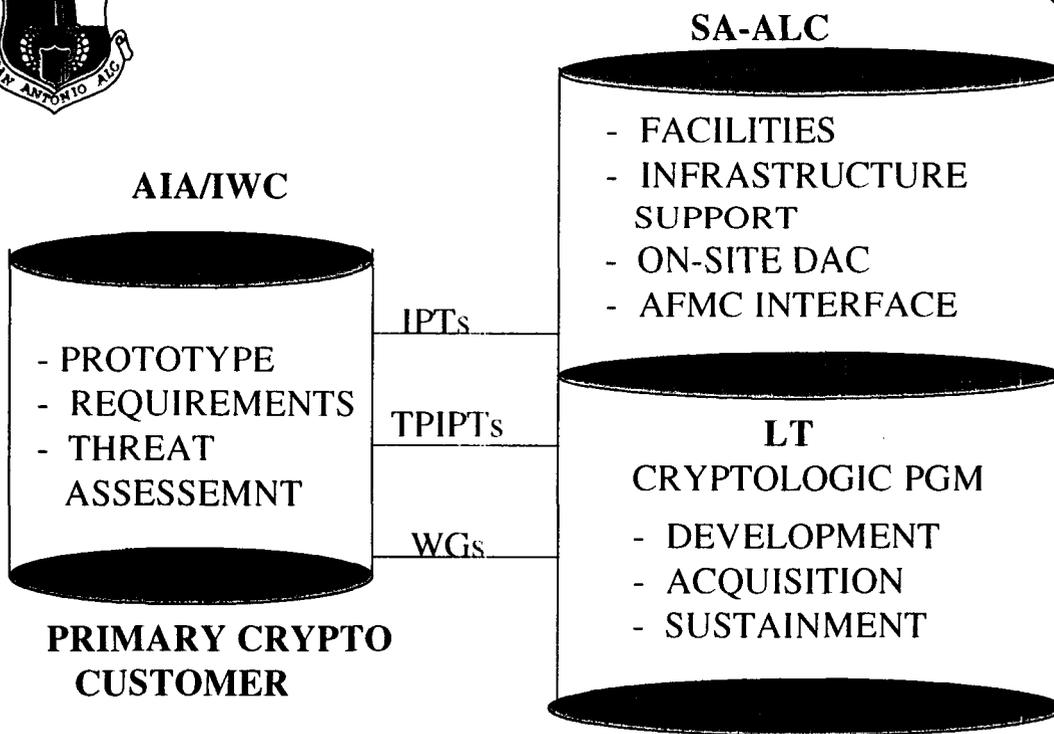
KELLY AIR FORCE BASE



UNIQUE CAPABILITY Cryptologic Programs

- Only DoD Trusted Software A-1 Certified Depot
- Only AF Acquisition, Repair, and Recertification Capability for COMSEC -- SCIF Facility
- Only DoD Repair and Maintenance Facility for Space COMSEC Systems
- Only AF Facility for Maintenance of Signal Intelligence Systems

KELLY AIR FORCE BASE



KELLY AIR FORCE BASE

Document Separator

SECTION V
TALKING PAPERS

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TALKING PAPER ON DEPOT MACHINE SHOP

Purpose/Main Thrust:

To highlight BEST unique features of the SA-ALC Depot Machine Shop.

Discussion:

- State-of-the art machine shop in DoD.
 - Only DoD totally environmentally controlled machine shop to reduce variability caused by temperature changes.
 - Only DoD dual cutting fluid (coolant) recycling system to minimize the generation of industrial waste.
- Provides manufacturing and repair support for virtually all aircraft structural component's, engine parts, and other needed items used to maintain the AF inventory.
- Has 142,500 SF of floor space.
- Houses 390 machine tools of which 51 are computer numerically controlled.
- Specialize in rapid repeatable manufacture of critical items in small or large lots.

Impact:

- Estimated cost of facility is \$10 million with equipment valued over \$55 million.
- Cost to relocate facility - over \$12.0 million.
- High cost of relocating, retraining, or contracting skilled machinists and machine operators.

TALKING PAPER ON SUGGESTION PROGRAM

Purpose/Main Thrust:

To highlight the AF Suggestion Program at Kelly AFB.

Discussion:

- The Suggestion Program gives employees an opportunity to contribute their ideas to improve government operations and save taxpayer dollars.
 - Over the past two years, the Kelly AFB program has met and exceeded all command measures of excellence.
 - Since 1991, the program received 7852 suggestions, approved 2621 of them, awarded \$1,006,902 to suggestors, and saved the government \$76 million.
 - One employee alone has saved \$8.7 million and earned \$20,503.
 - Another employee received both AF and Presidential awards totaling \$35,000 for suggestions that saved \$8.5 million.
 - A third individual became the only AF employee to receive two Air Force Chief of Staff Awards for High Value Suggestions in a single year.

- 28% of work force in critical industrial skills.
- Lowest cost Aviation Depot.
 - Lowest direct labor/overhead cost of all ALCs - \$58.44.
 - Based on FY95 earned hours, as of 28 February 1995.
 - SA-ALC \$5 - \$10 lower than Navy depots in FY93.
 - Low average wage grade salary - \$28,867.
 - Environmental Excellence.
 - Only AF depot not on EPA Super Fund List.
 - Leader in applying new Bio and Microwave remediation technologies.
 - Only federal facility on "Texas Industry 2000" Industrial Honor Roll.
 - 1992 AFMC Environmental Restoration Award Winner.
 - 1994 DoD Pollution Prevention Award winner.

-- Unique Capabilities.

- Largest free standing hangar - capable of simultaneously housing six C-5 and eight C-17 aircraft.
- New Gas Turbine Engine Repair Facility (1994).
- Largest Aircraft Paint and Corrosion Control facilities within the AF.
- Nuclear Weapons component repair facility.
- Only AF Cryptologic Repair Center.
- Integrated reverse engineering and remanufacturing capability.
 - Computerized Industrial Tomographic Analyzer, Stereolithography, Depot Machine Shop, Foundry, and Rubber Shop.
- Largest electroplating facility in DoD.

-- Unique Work Force.

- Highest ethnic diversity.
 - 68% of work force are minorities.
 - 45% of all Hispanics employed by AF.
- One of the best educated depot work forces in DoD.
 - 50% of civilian work force has attended one-plus years of college.
 - 645 Associates, 1,791 Bachelors, 530 Masters, and 12 PhD degrees.
- Intense community involvement.
 - 800 mentors working with local school children.
 - 135 scholarships granted to local students.
 - \$2.2 million contributed to Combined Federal Campaign, highest in the AF.
- Highly skilled work force.

TALKING PAPER ON STEREOLITHOGRAPHY

Purpose/Main Thrust:

To highlight the unique features of our stereolithography capability.

Discussion:

- Stereolithography (SLA) is a revolutionary new system which uses laser technology to build precision three-dimensional models in a matter of hours, regardless of their complexity.
- Dramatically cuts production time of prototype parts for aircraft and other weapon systems.
- First of its kind in the AF inventory.
- Stereolithography is an automated, free-form rapid prototyping technique for producing solid three-dimensional plastic models, masters, and casting patterns directly from Computer-Aided Design (CAD) files without machining, tooling or cutting.
- With SLA, extremely low quantities of foundry produced castings become economically feasible. This rapid manufacturing of low quantities of parts promises to improve operational readiness rates while reducing parts stockage requirements.
- The SLA equipment and computer software was purchased several years ago to enhance our ability to rapidly respond to urgent manufacturing requests affecting readiness of USAF aircraft and engines.
- This technology is applicable to production of castings, prototyping new designs, and in production of parts in the depot machine shop and rubber manufacturing shop.
- This revolutionary new technology when coupled with Artificial Intelligence Computer Software, simplifies designs and greatly reduces the time to accomplish prototypes, reverse engineering, and production of patterns and molds, for castings.

Impact:

- The SLA machine, software and other supporting equipment cost approximately \$906,000.
 - Relocation would necessitate six months and \$35,000 to transfer equipment.

Prepared by: SA-ALC/TIME/5 April 95/mg/filename: B95TP_3.DOC

TALKING PAPER ON WORLD CLASS DEPOT

Purpose/Main Thrust:

To highlight key Kelly AFB capabilities and attributes which are unmatched anywhere within the DoD.

Discussion:

- Kelly AFB is a truly "World Class Depot" based on cross-servicing, productivity, product quality, unique capabilities, unique workforce, low cost, and environmental excellence. These key capabilities and attributes enable Kelly AFB to provide unmatched, superior support to AF and DoD forces worldwide.
 - Cross-Servicing.
 - SA-ALC requirements equate to 30.5% of command cross-service workload.
 - Productivity.
 - Suggestion Program savings of \$101 million since FY90.
 - Productivity Improvement Programs.
 - Productivity Based Awards.
 - Gas Turbine Engine 10% decrease in inventory expenses.
 - Product Quality.
 - Exceeds 99% overall product quality.
 - First organic warranty in DoD.
 - Only ALC with an established AF Organic Warranty Program covering all items overhauled, repaired, or manufactured.
 - Any defect found within 6 months after installation will be corrected at no cost to the customer.

Prepared by: SA-ALC/FMPF/5 April 95/kjl/filename:B95TP_72.DOC

-- Over \$13.2 Million invested in developmental technologies all due into depot by October 1996.

--- Closed Loop Manufacturing System.

--- Engine Sprayed Abradable Compressor Tip Shroud repair process.

--- Combustion Chamber Cell System.

--- High Pressure Aqueous Stripping System.

--- Vapor Incineration System.

--- Chemical Rejuvenation System.

--- Compressor and Turbine Balancing System.

--- Plasma Robot Upgrade.

--- Density Inspection Gauge and Tooling.

Impact:

- Readiness of the AF F-15, F-16, C-5A/B and C-130 fleets severely impacted
- Readiness of the Navy E-2C, C-2, P-3, and C-130 fleets severely impacted as well as readiness of Spruance and Kidd Class Destroyers and Ticonderoga and Aegis guided missile cruisers.
- Estimated cost to reconstruct similar complex \$560.0 million.
- Additional costs to train and certify work force are unknown but must be considered.

**TALKING PAPER
ON
JET ENGINE OVERHAUL COMPLEX**

Purpose/Main Thrust:

To highlight the Unique Capabilities of the Jet Engine Overhaul Complex.

Discussion:

- Complete overhaul and test complex for the following engines:
 - F100 Turbofan Engines (5 models), TF39 High Bypass Turbofan Engine (largest DoD Engine), T56 Turboshaft Engines (2 AF models and 3 Navy models).
 - 1.4 million SF environmentally controlled facilities.
- Supports AF exchangeable, FMS, Navy and 2LM workloads.
- More than 350 engines, 5,000 modules, and 72,000 components produced annually.
- Unique state-of-the-art capabilities including:
 - Only DoD Unified Fuel Control (UFC) Repair and Test Facility.
 - 89 unique test stands dedicated to UFC.
 - Only DoD Cryogenic Spin Test.
 - Only AF Non Contact Dimensional Inspection System.
 - Only AF Dynamometer test cells, gearbox test stand, and blade pinning/depinning system for T56 engine.
 - Only DoD Robotic Shot Peening System.
- A leader in innovation and technology enhancement.

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- Technology Repair Center for:
 - C-5 Airlifter.
 - T-38 Trainer.
 - F100 Engine.
 - TF39 Engine.
 - T56 Engine.
 - Components and Accessories.
 - 2 Level Maintenance: Engines and Avionics.
 - Cryptologic Equipment.
 - Automated Test Equipment.
- Tenant Units - 57 total.
- Major Tenants:
 - 433rd Airlift Wing - C-5 and TF39 Engine.
 - 149th fighter Group - F-16 Aircraft and F100 Engine.
 - AF Intelligence Agency - Intelligence Acquisition.
 - Defense Logistics Agency - Supply and Distribution Center.
 - Defense Information Systems Agency - Regional Mega Center.
 - Inter-American Air Forces Academy - provides training for maintenance of various aircraft to Air Forces of Central/South American countries.

- Nuclear Weapons is the only organization providing worldwide logistics support to the AF Nuclear Weapons Program. Provide logistics support including, but not limited to:
 - Nuclear bombs.
 - Nuclear warheads.
 - Air-launched missiles.
 - Air crew practice bombs.
 - Transport trailers.
 - Re-entry systems and test sets.
- Cryptologic Management is the main provider of Communications Security (COMSEC) and Signal Intelligence (SIGINT) equipment in the AF.
 - Manage, purchase, design, build, store, and repair.
- Commodities Management - 296,446 items managed:
 - Gas Turbine Engines (including the US Army Patriot missile system) - only depot working this class of equipment.
 - ATS manage procure, repair and manufacture support and test equipment used by virtually every AF Weapon System.
 - Ground Support Equipment - the integrated production process includes overhaul, repair, rework, and refurbishment of ground support equipment such as, but not limited, to jacks, engine trailers, aircraft de-icers, and air conditioners.
 - Aircraft Accessories - manage, maintain, repair, and overhaul various aircraft accessories such as, but not limited to, secondary power systems, jet fuel starters, actuators, starters and aircraft fuel accessories.
 - Aircraft and missile fuels - single manager for liquid missile propellants, special fuels, chemicals and gases used by the AF, NASA, the Department of Energy and other agencies.
 - Cryptologic Equipment (COMSEC/SIGINT) - only AF depot providing total sustainability, maintainability, and development of state-of-the-art systems/equipment.

TALKING PAPER ON INTEGRATED MISSION

Purpose/Main Thrust:

To highlight information on the integrated mission of SA-ALC.

Discussion:

- The Integrated Weapon System Management (IWSM) approach to mission accomplishment brings synergy not enjoyed by other service logistics activities. IWSM brings together all aspects of the logistics function; management, engineering, requirements planning, item management, and maintenance under a single manager. The following functions are performed at Kelly.AFB:
- System Program Management and engineering support for:
 - C-5 Airlifter.
 - T-37 and T-38 Trainers.
 - Allied Aircraft (Foreign Military Sales).
 - Automated Test Systems (ATS).
- Single AF Engine Executive has management and programming responsibility for:
 - F100 Engine (F-15/F-16 Aircraft) - 3,983 (without modules)
 - TF39 Engine (C-5 Aircraft) - 665.
 - TF34 Engine (A-10 Aircraft) - 1,418.
 - T56 Engine (C-130 Aircraft) - 3,582
 - J85 Engine (T-38 Aircraft) - 1,723.
 - J69 Engine (T-37 Aircraft) - 1,200.

Prepared by: SA-ALC/FMPF/5 April 95/kjl/filename:B95TP_68.DOC

- First wing to deploy during Desert Shield.
- SA-ALC and 433rd AW share a TF39 engine test cell.
- Kelly AFB is a major medivac center.
 - Point of debarkation for patients bound for two of the largest medical facilities in DoD: Wilford Hall Medical Center and Brooke Army Medical Center.
 - 433rd Aeromedical Evacuation squadron deploys from Kelly AFB.
- Centrally located, Kelly AFB is an ideal support base for Central and South American exercises and operations.
 - During Exercise Puertes Caminos, 5,000 personnel and 35 tons of cargo shipped out from Kelly AFB

TALKING PAPER ON AIRLIFT FOCUS

Purpose/Main Thrust:

To highlight airlift capability available at Kelly AFB.

Discussion:

- With the demise of the Soviet nuclear threat and the rise of regional conflicts, US military strategy has shifted to strategic mobility. Airlift is the vital ingredient in the nation's ability to carry out this new strategy. Kelly AFB, the home of SA-ALC and the 433rd AW, is the cornerstone of America's strategic airlift capability.
 - Strategic airlift is vitally needed for the rapid deployment of US combat forces.
 - United Nations humanitarian relief efforts in places like Bosnia and Somalia rely heavily on American airlift aircraft.
- Airlift support represents the heart of the SA-ALC mission.
 - Management and repair of C-5 and C-17 aircraft.
 - T56 engine and C-130 commodities are managed and repaired at SA-ALC.
 - Two Level Maintenance repair of airlift engines and avionics.
- One of only two conventional munitions storage and shipping point in the continental United States.
 - Capable of rapid, worldwide response with 93 munitions igloos adjacent to airfield.
 - 17 million pounds of munitions shipped by airlift during Desert Storm, the equivalent of 59 C-5 missions.
- Home of the 433rd AW
 - Largest C-5 equipped AF Reserve wing.

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**TALKING PAPER
ON
HALON RECOVERY, RECYCLING, AND RECHARGING (HRRR)**

Purpose/Main Thrust:

To describe the unique capabilities of the HRRR System at San Antonio Air Logistics Center.

Discussion:

- Only such system in Air Force, first in DoD.
- Capability to recycle halon is mission essential now that the purchase of new halon is prohibited.
 - Secretary of the Air Force Memorandum, dated 1 January 1993, banned the purchase of newly produced halon as of 1 June 1993.
- Recycles at 99% efficiency the 270,000 pounds of Halon 1301 used in the 35,000 aircraft fire suppression system bottles managed and maintained by SA-ALC.
 - Capacity to process the 1,000,000 pounds of Halon 1301 in the AF inventory.

IMPACTS:

- Without this halon recycling capability, the AF would be unable to service aircraft fire suppression system bottles.
 - Serious mission degradation would result.
- Cost to duplicate this capability is \$400,000.

- Welding and heat treating shop with drop bottom furnace, accutherm furnaces, refurbished older models with added state-of-the-art electronic temperature controllers for better reliability and uniformity, and resistance welders.
- Sheet metal manufacturing and assembly shop with numerically controlled router, power brake machine, shearing machine, hydroform, and extrusion stretch press.
- Computer Aided Design/Computer-Aided Manufacturing (CAD/CAM) capability with Computervision system and waterjet cutter.
- Machine shop capability for immediate aircraft maintenance line support.
- Tubing and wiring back shops supporting aircraft hydraulics and electrical systems.

Impact:

- Major disruption in C-5 airlift if facility is relocated.
- Estimated replacement cost in excess of \$88.0 million plus the cost of equipment relocation.
- Five years lead time to construct a similar facility in another location.

TALKING PAPER ON LARGE AIRCRAFT REPAIR FACILITY

Purpose/Main Thrust:

To describe the special characteristics of the largest freestanding hangar in DoD.

Discussion:

- Largest freestanding aircraft hangar in DoD.
 - Unique large-body aircraft maintenance capability.
 - Covers 1.1 million SF area and is five stories tall.
 - Giant hangar doors weigh 672 tons each.
 - Built in 1956 at cost of \$14 million and took 2 1/2 years to construct.
- Complete repair, overhaul, and modification of C-5 aircraft.
- Can accommodate multiple mixes of aircraft that can include up to six C-5 or eight C-17 aircraft simultaneously.
- Over 20 back shops support the nonprogrammed depot maintenance and exchangeables repair.
 - Utilizes Bicarbonate of Soda Blast process to clean parts such as degreasing fairings and carbon removal from engine components.
 - Component Walk-in booth 14' by 34' by 14'.
 - Ability to clean jet engine parts and components with sensitive substrates.
 - Bonding and plastic shop with three autoclaves, portable bonders, and anodize line.
 - 50 ft autoclave capability for large body airframe components.

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- Bond testing units, three each.
- Eddy current units.
 - ED 520, six each.
 - EC 5000, ten each.
 - Hocking, one each.
 - MIZ10A, five each.
 - NORTEC 19EII, four each.
- Magnetic particle units.
 - Stationary, two each.
 - Portables, five each.
 - Fluorescent penetrant line, one each (portable, eight each).

**TALKING PAPER
ON
NONDESTRUCTIVE INSPECTION (NDI), BLDG 361**

Purpose/Main Thrust:

To describe the capabilities of the Nondestructive Inspection Facility at SA-ALC.

Discussion:

- Full capability in the five main disciplines of NDI.
 - X-ray.
 - Ultrasonic.
 - Eddy current.
 - Magnetic particle.
 - Fluorescent penetrant inspection.
- Workload includes all structural areas of aircraft, including fuselage, wings, landing gear, and tail section for components and full size airframes such as C-5s.
- Twenty plus American Society of Nondestructive Testing (ASNT) Level 2 certified employees with equipment and facilities able to perform inspections on or off aircraft, indoors or outdoors.
 - X-ray equipment.
 - Radiography units (160 KV 10 ea) (300 KV one ea).
 - Real time imaging x-ray facilities.
 - X-ray processing units (two each).
 - Ultrasonic units.
 - Mark IV, four each.
 - Mark I, four each.

**TALKING PAPER
ON
SA-ALC CORROSION CONTROL CAPABILITIES**

Purpose/Main Thrust:

To describe the unique capabilities of the SA-ALC aircraft corrosion control facilities.

Discussion:

- Corrosion Control Facilities (Bldgs 379 and 365) provide the only capability within DoD to accommodate large-body aircraft in conjunction with depot maintenance.
 - New 76,500 SF aircraft depainting facility in Bldg 379, completed in 1992 at a cost of \$16.5 million.
- Utilizes Plastic Media Blasting, an environmentally "clean" process, to remove airframe coatings from the C-5A/B aircraft and smaller aircraft.
 - Eliminates carcinogenic chemical paint strippers.
 - Reduces hazardous chemical waste by 72,000 gallons per year.
- Contributes to annual cost savings of 40 percent by reducing manpower requirements, improving flow times, and reducing material acquisition and disposal costs.
 - Forty C-5s have been depainted in this facility with savings of 80,000 man-hours.
 - "Stacker" crane platforms transverse laterally and longitudinally on truss work rails and platform can rotate around the bottom of a telescoping mast.
- Paint Facility (Bldg 365) recently renovated to upgrade lighting, temperature and humidity control, breathing air system, and overhead platforms. Bldg 365 is a world class paint facility capable of handling any aircraft in the AF inventory.

Impact:

- Relocating Corrosion Control Facilities will degrade support readiness of the C-5 fleet and severely impact airlift mission of Air Mobility Command, Air National Guard, and Air Force Reserves.
- Cost to reconstruct both facilities is \$60 million and reconstruction lead time is five years.

--- The City Council refused to strike the ordinance and passed a resolution to keep the ordinance regardless of the outcome of the appeal which City Mayor Wolfe personally hand delivered to the Center.

--- The City ordinance was upheld; City's appeal still pending.

- Coordination between government attorneys have prevented testimony in one case from prejudicing the other case.

Impact:

- None.

**TALKING PAPER
ON
PERSYN ET AL VS USAF AND VAN DE WALLE ET AL VS
CITY OF SAN ANTONIO**

Purpose/Main Thrust:

Update litigation of Air Installation Compatible Use Zone (AICUZ).

Discussion:

- The Persyn case alleges that the AICUZ program has taken value from 44 property owners to the south of Kelly AFB by overflights and excessive noise.
 - The Persyn case is in the United States Court of Federal Claims.
 - A Partial Summary Judgment was granted in favor of the AF 19 January 1995 substantially narrowing the case we must defend against.
 - The case is being defended by SA-ALC/JA, AFLSA/JACE and the Department of Justice.
 - The case has tentatively been set for trial 12 June 1995.
 - At risk is an estimated \$20 million in damages, interest and attorneys' fees.
- The Van De Walle case alleged that the City's ordinance which was based on the AICUZ program should be struck down and/or some unspecified amount of money be awarded to the corporate land owners to the north of Kelly AFB.
 - Although the USAF was not a party to the suit, Gen Viccellio, AETC/CC, testified for the City as the former SA-ALC Vice Commander.
 - At risk was the loss of the City ordinance which contains much of the Kelly AFB AICUZ program.
 - A state jury trial awarded the Van De Walles alternate compensations as either \$12.7 or \$7.9 million plus interest with the higher figure depending on whether the ordinance was upheld.

TALKING PAPER ON ENGINEERING INDUSTRIAL LABORATORY

Purpose/Main Thrust:

To identify unique capabilities of the Science and Engineering Industrial Laboratory.

Discussion:

- The Science and Engineering Industrial Laboratory provides technical and scientific support for C-5 and C-17, tactical fighter mission support and other agencies such as DLA, Navy, and Department of Energy. In addition, the Science and Engineering Laboratory is:
 - The largest industrial testing lab in AFMC.
 - A facility with ten million dollars of sophisticated state-of-the-art laboratory test equipment.
 - The only AFMC industrial lab that provides textile testing support to Life Support Equipment.
 - Involved in industrial research project with Rice University concerning surface technology. A unique one-of-a-kind surface analyzer LH-12 is used in this project.
 - Computed tomography capability for engine and aircraft production, strategic aircraft and tactical fighter support.

Impact:

- Production of aircraft and engines cannot function without laboratory support.
- Cost of relocation would exceed \$10 million of facilities and relocation of equipment.

TALKING PAPER ON CONVENTIONAL MUNITIONS STORAGE AND SHIPMENT

Purpose/Main Thrust:

To highlight unique features of the Standard Air Munitions Package (STAMP) and Standard Tanks, Racks, Adapters and Pylon Package (STRAPP).

Discussion:

- Management of receipt, storage, maintenance and deployment of assigned munitions, adapters, tanks, racks and pylons in support of tactical forces worldwide.
- Largest Air Force conventional munitions stockpile in US (\$426 million - STAMP and \$11 million - STRAPP).
 - 17 million pounds shipped during Desert Shield/Storm.
- Contingency Program.
 - Worldwide rapid response within hours - requires significant air freight support.
 - 100% movement by airlift (not standard supply).
- Unique facilities.
 - 91 munitions igloos, 7 miles from Kelly AFB flightline (\$45 million).
 - Dedicated munitions maintenance facilities.

Impact:

- STAMP/STRAPP is a critical mission and growing.
- STAMP/STRAPP cannot be cost effectively relocated.
- SA-ALC plays an integral role in STAMP/STRAPP.

Prepared by: 76th MUNS/LGWM/7 April 95/ldn/filename: B95TP_55.DOC

TALKING PAPER ON CRYPTOLOGIC SUPPORT CENTER

Purpose/Main Thrust:

Highlight information on the Cryptologic support provided by Kelly AFB.

Discussion:

- Single manager for providing worldwide support for a wide range of cryptologic materials.
- Provide life cycle support for over 17,000 line items of materials.
- Serves more than 3,000 customers worldwide.

Impact:

- One of-a-kind support provided to worldwide customers would be severely interrupted if relocated.
- Relocating functions in three buildings totaling 251,000 SF will cost more than \$502 million.
- Subordinating as an operating location to another ALC will result in increased time, TDY cost, and retraining to work senior-level issues.
 - Direct support and participation of SA-ALC senior staff provides manpower, funding, organization and DoD interface support.
 - Collocation allows facilities, manpower and funding agreements, and ALC support to be timely.
 - Collocation allows timely, cost effective, periodic review of acquisition and sustainment programs for our primary customer (AIA).
 - Provides an on-site DAC for major customer procurements and developments for our primary customer.
 - Numerous opportunities to network at variety of senior staff official and social functions resulting in quicker response time to critical customer and AF issues.

**TALKING PAPER
ON
THE DOLLAR IMPACT OF KELLY AFB CONTRACTING**

Purpose/Main Thrust:

Provide information on the impact of contracting at Kelly AFB on the San Antonio Statistical area and State of Texas Business' for the years 1991, 1992, 1993 and 1994.

Discussion:

- The contracting function at Kelly AFB purchases supplies and services in support of base operations and centrally managed items.
- The following is a breakdown of the impact on the area and state economy for all business.
- Dollar Impact of Kelly AFB Contracting for the San Antonio Metropolitan Business Statistical Area.

1991	\$113,438,000
1992	\$103,150,000
1993	\$107,847,000
1994	\$100,817,000

- Dollar Impact of Kelly AFB Contracting for the all Texas business.

1991	\$179,238,000
1992	\$190,250,000
1993	\$179,334,000
1994	\$210,244,000

**TALKING PAPER
ON
DEFENSE DISTRIBUTION DEPOT
SAN ANTONIO**

Purpose/Main Thrust:

To provide background information on the Defense Distribution Depot, its mission and relationship to Kelly AFB.

Discussion:

- Receive, inspect, store, inventory, pack and issue material world wide.
- Thirty-six percent of issues are to SA-ALC.
- Over 1,800 customers in CONUS; over 300 overseas.
- 66 million cubic feet of covered storage space; largest of any depot in the western region of Defense Logistics Agency.
- Largest shipper of AF material to foreign military sales customers.

**TALKING PAPER
ON
PRECISION MEASUREMENT EQUIPMENT LABORATORY (PMEL)**

Purpose/Main Thrust:

To highlight SA-ALC's unique PMEL capabilities.

Discussion:

- The Precision Measurement Equipment Laboratory (B300) provides local and worldwide customers precision calibration, certification test measurement, and diagnostic capabilities.
- The 33,000 SF foot facility is a software environmentally controlled area.
- Permanent granite tables (weighing 2 to 3 tons).
- State-of-the-art cold room.
 - Maintained at a specialized 68 degrees Fahrenheit for accomplishing precise dimensional calibration and repair.
- Test Measurement and Diagnostic Equipment (TMDE).
- Radiation And Detection Instrumentation And Computation (RADIAC) Equipment.
- Measurement traceability through AGMC to the National Institute of Standards & Technology.
- Serves regional DoD and US government agencies.
 - Foreign customers : Mexico, Central America, South America, and the Caribbean.
 - Current customers: Marines, Navy, Army, Air Force, Reserves, Guard , FAA, and NASA.

Impact:

- The estimated replication cost to relocate PMEL Facility \$6.0 million.
- Cost of contracting out, based on past experience.
 - Higher than organic repair.
 - Less quality.

Prepared by: SA-ALC/LDS/6 April 95/dr/filename: B95TP_46.DOC

- A significant number of the 433rd AW maintenance work force are civilian employees. This provides a resource of highly-skilled and well-trained maintenance technicians. Loss of their civilian jobs degrades the skills and expertise due to the almost certain loss of these people.
- Loss of support by the Logistics Group Supply and DLA would increase mission incapability rates five to eight percent; turnaround time increased by 40 percent and airframe reduction of one to two per day.
- Impact of the 149th FG.
 - Loss of DLA support increases stock fund management workload, large truck shipments, refueling and transient alert manpower costs. Costly alternatives or new contract agreements are necessary to replace well organized and functioning sources for this support.
 - Increase in collocated material and services costs which are currently managed by the SA-ALC.
 - Increase in accounting, supply, and maintenance communication costs due to the loss of DISA support functions.
- Impact to the 838 EIS.
 - Loss of personnel resources and continuity with the major base support activities degrades mission effectiveness.
- Impact to the Joint Electronic Warfare Center.
 - Significant increase in support costs to replace previously negotiated support functions. Customer service, MWR, CE, Housing, Education, Mobility Support, Airlift Deployment, DRMO Support, and in/out processing.
- Impact to Major Host Units.
 - Loss of computer processing, warehousing, and other facility support activities would cause significant degradation to the major host units.
 - Changes to the base wide host/tenant agreements will result in considerable cost to replicate existing host support activities.

TALKING PAPER ON COLLOCATED UNIT IMPACT

Purpose/Main Thrust:

To show the potential impact on the operations/mission effectiveness of the SA-ALC collocated tenants and other units should the ALC, Defense Logistics Agency (DLA), and Defense Information Services Agency (DISA) be selected for closure.

Discussion:

- Fifty-seven tenant and hosted units are collocated with SA-ALC.
 - Major collocated units include the 433rd AW, 149th FG, Joint Electronic Warfare Center (JEWC) and the 838th Electronics Installation Squadron (EIS).
 - Major hosted units include the Air Intelligence Agency (AIA), Defense Commissary Agency (HQ DeCa Midwest Region) and the AF News Agency (AFNEWS).
- The SA-ALC, DLA, and DISA provide mission essential computer processing, facility and other base wide activity support for these units.
- Impact information provided by major collocated units should the SA-ALC, DLA, and DISA be selected for closure.
 - Impact to the 433rd AW.
 - Loss of test cell support would increase engine repair turnaround costs by approximately \$45,552 per engine. An average of 2.8 jet engines are repaired per month.
 - As an alternative to jet engine repair capability, elimination of jet engine turnaround capability would result in the loss of 69 personnel and engine production cost increase of approximately \$1.3 million per year.
 - Loss of Programmed Depot Maintenance (PDM) at the SA-ALC would require additional costs for flights to the new PDM location. Current procedure requires towing the C-5 Aircraft across the flightline.

Prepared by: SA-ALC/FMPF/5 April 95/kjl/filename: B95TP_45.doc

TALKING PAPER ON INTEGRATION SUPPORT FACILITY

Purpose/Main Thrust:

To highlight the features of the SA-ALC Integration Support Facility.

Discussion:

- Only DoD facility that provides mission critical computer resources software engineering support.
 - Automatic Test Equipment (ATE) software engineering. Supports all USAF aircraft
- 80,000 SF actual cost \$6.0 million.
- Heavy duty raised floor for Avionics Intermediate Station (AIS) equipment.
- FY93 MCP will provide 40,000 SF addition - completed April 1995 for a total of 120,000 SF, state-of-the-art facility. Cost of addition \$4.1 million.
- Considered the AF Model.
- Contains over \$60.0 million worth of equipment.

Impact:

- Cost to relocate facility - \$30.0 million.
- Environmental compliance constraint would have to be considered in relocation.

- Explosion vents in roof.

Impact:

- Primary fuel control system on two-thirds of combat ready F100 powered fighters
 - 1,316 F100-PW-100 engines
 - 526 F100-PW-200 engines
- Used on all C5A/B aircraft
- Used on all special operations: C-130 aircraft and C-130's used for all Tactical Airlift
- Used on All Navy AWACs (E-2/C-2), Tankers (T-130) and sub-hunters (P-3)
- Powers Navy Ships' electrical systems
 - Spruance and Kidd Class Destroyers
 - Ticonderoga and Aegis Guided Missile Cruisers

**TALKING PAPER
ON
F100 UNIFIED FUEL CONTROL (UFC) FACILITY**

Purpose/Main Thrust:

To describe the unique capabilities of the F100 Unified Fuel Control (UFC) Facility.

Discussion:

- Only DoD UFC Repair and Test facility.
- Used for inspection, repair and test of F100 UFC and fuel controls for the T56 and TF39 engines as well as fuel nozzles for all three engines.
- Utilizes 89 DoD unique test stands dedicated to UFC.
 - UFC Main Fuel Control (33 stands), gas generator section (10 stands), augmentor section (6 stands), augmentor computer (17 stands), UFC sub-assemblies (7 stands), Engine Electronic Control simulators (16 stands).
 - Estimated replacement cost of UFC test stands - \$243.0 million.
 - Facility test capability also includes five fuel nozzle test stands for the F100, two for the TF39, and two for the T56 as well as six TF39 Fuel Control test stands and eight T56 Fuel Control test stands.
- Testing collocated with On Condition Maintenance (OCM) inspection, assembly/disassembly and machine shop/repair capabilities to optimize process flow and end-item quality.
- Facility occupies over 50,000 SF.
- Over 13,500 UFCs repaired and tested since the facility opened.
- Facility rated as a Class I, Division II, Group D hazardous testing area.
 - Explosion proof electrical systems.

Prepared by: SA-ALC/LPPEB/5 April 95/en/filename: B95TP_43.DOC -

TALKING PAPER ON DEPOT MAINTENANCE CAPACITY

Purpose/Main Thrust:

To provide information on capacity data used for BRAC 95.

Discussion:

- The Joint Cross Service Group data call in Spring 1994 documented Capacity Index, Capacity Utilization Index, and Maximum Potential Capacity for fiscal years (FY)1995 through 1999. The data was computed based on sixteen commodity groups that were applicable to Depot Maintenance work performed at our center.
- The Capacity Index was computed using data extracted from funded workload files and capacity files IAW draft DoD 4151.15H "Depot Maintenance Production Shop Capacity Measurement Handbook". Work positions by Resource Control Center (RCC) from the capacity files were multiplied by the percent of hours each RCC funded per commodity. The sum of work positions were then converted to direct product actual hours by multiplying them by .95 (availability factor) and then 1615 hours (annual productive hours).
- The Capacity Utilization Index was computed by dividing the funded workload hours of each applicable commodity group by their Capacity Index.
- The Maximum Potential Capacity was computed by dividing the highest Capacity Index of each commodity by its corresponding Capacity Utilization Index. There was not a universal computing method or guidance for all the Centers to comply with for this computation.
- The methodology of computing capacity has changed since FY87.
- Projected workload reflects funded requirements to be placed into work in the depot facilities. This requirement does not consider work in process and new interservice workloads that developed since the funded workload review.

Recommendation:

Informational.

Prepared by: SA-ALC/FMPF/4 April 95/ga/filename: B95TP_41.DOC

**TALKING PAPER
ON
RETIREMENT FOR CAUSE (RFC)
INSPECTION SYSTEM**

Purpose/Main Thrust:

To provide information on the unique capabilities of the RFC Inspection System.

Discussion:

- Automated nondestructive testing system currently used to extend the life (allowed cycles) of life-limited F100 engine components previously considered unusable for the overhaul process.
- Uses Eddy Current Inspection (ECI) and Ultrasonic Inspection (UI) systems to evaluate F100 engine components.
 - Maximizes useful service of life limited parts.
 - Provides previously non-existent state-of-the-art inspection capability.
 - System allows for parts inspection at a faster rate with greater accuracy and reliability than previously possible.

Impact:

- Decreases useful service of life-limited engine parts.
- Lost cost avoidance of \$10.0 million over 15 years by not continuing to reuse engine components
- Initial cost of development contract was \$2.6 million.
- Relocation cost is \$3.0 million.

TALKING PAPER ON ROBOTIC SHOT PEENING SYSTEM

Purpose/Main Thrust:

To provide information on the Robotic Shot Peening System.

Discussion:

- Only fully-automated shot peening center in AF
 - Uses two independently controlled robots.
- Conditions surface of metal parts in preparation for repair.
 - Bombards parts surface with round steel shot or glass beads.
- Reduces production costs.
 - Direct labor costs reduced \$167,000 a year.
 - Inspection time reduced 50%.
- Environmental enhancements.
 - Media waste reduction.
 - Noise abatement.
- Production increased 300%.

- Movement also impacts Navy E-2C, C-2,P-3, and C-130 aircraft as well as Spruance and Kidd Class Destroyers and Ticonderoga and Aegis guided missile cruisers
- Cost to relocate - \$1.6 million
- Environmental clean-up costly
- Cost associated with packing/shipping routed components to another depot
- Increases flow days and pipeline required to support weapon systems

TALKING PAPER ON LARGEST ELECTROPLATING FACILITY IN DOD

Purpose/Main Thrust:

To provide unique information on the Electroplating Facility.

Discussion:

- Provides metal surface treatment and finishing support on engine and aircraft parts for SA-ALC and surrounding military bases.
 - Includes 270 plating tanks.
 - 50 different plating processes as well as multiple associated support processes including stripping, cleaning, and other chemical coating processes.
- Over 90,400 SF dedicated to plating and support processes and 124 authorized personnel.
- In-house waste water pre-treatment and de-ionized/de-mineralized water systems in place.
- A chrome line monitoring system provides information allowing for increased precision and quality in the chrome plating process.
- Modernization of chrome line and installation of a Plating Inventory Control System (PICS) currently under way
- Plates approximately 25,000 items a month.
- Approximate cost to rebuild: \$16.0 million.

IMPACT:

- Movement of capability impacts AF F-15/F-16, C-5A/B, and C-130 aircraft support

Prepared by: SA-ALC/LPPEB/5 April 95/en/filename: B95TP_36.DOC

**TALKING PAPER
ON
NON-CONTACT DIMENSIONAL (NCDI) SYSTEM**

Purpose/Main Thrust:

To provide information on the Non-Contact Dimensional (NCDI) System.

Discussion:

- Only system of its type in AF
- Provides SA-ALC with the ability to undertake accurate and repeatable geometric inspections of a wide variety of engine components without having to touch the part physically.
 - Automatically generates 3-dimensional surface measurement of a part without part contact by employing moiré interferometry technique.
 - Can measure any part that will fit in its 2'x2'x2' gauging envelope.
- System permits gauging resolution of two ten thousandths of an inch which is over 100 times better than other common techniques.
- System can be used to measure roundness, eccentricity, and a number of other geometrical measurements common to jet engine component inspection procedures.
- Decreased inspection time by 800 percent.
 - From 4-6 disks per day to 4-6 disks per hour.

Prepared by: SA-ALC/LPPEB/5 April 95/en/filename: B95TP_35.DOC

- Eight inactive cells identified for space reallocation/compression.
- Totally automated testing/data acquisition system (Pacer Comet III).
- Meets all federal, state, and local environmental standards.
- Provides accurate, quantifiable measures of engine effectiveness through analysis systems including:
 - Automatic Vibration Diagnostic (AVID) System.
 - Gas Path Analysis (GPA) System.

Impact:

- Movement of capability would degrade the readiness of the AF F-16, F-15, C-5, and C-130 aircraft and JEIM supportability.
- Movement degrades support to Navy E-2C, C-2, C-130, and P-3 aircraft, Spruance and Kidd Class destroyers, and Ticonderoga and Aegis Class guided missile cruisers
- Cost to reconstruct facility - \$102.0 million (FY93 dollars).

TALKING PAPER ON AUTOMATED JET ENGINE TEST CELL FACILITY

Purpose/Main Thrust:

To highlight the unique aspects of the SA-ALC Jet Engine Test Cell Facility.

Discussion:

- Only AFMC facility currently configured to test the TF39, F100 and T56 engines without the purchase of adapters and extensive modification.
- Only DoD installation that has the capability to test the T56 engine in either propeller or dynamometer turboshaft cells as well as the capability to test the T56 Reduction Gearbox.
- Performs field level engine testing for Jet Engine Intermediate Maintenance (JEIM) on the F100-PW-220, T56-7 & -15 Quick Engine Change (QEC), and the TF39 Engine Buildup Unit (EBU).
- Performs testing for Navy T56 interservice workloads.
- Test cells can be converted with the appropriate engine adapters to accommodate all turbojet, turbofan, and heavy turboshaft engines in the DoD's inventory.
- Performs Accelerated Mission Testing (AMT) and Accelerated Accelerated Mission Testing (A2MT).
- Consists of 19 test cells.
 - Eleven active.
 - Four TF39/F100 universal cells.
 - Two T56 turboshaft propeller cells.
 - Two T56 dynamometer cells.
 - Two T56 outdoor field cells.
 - One T56 gearbox cell.

Prepared by: SA-ALC/LPPEB/5 April 95/en/filename: B95TP_33.DOC

TALKING PAPER ON SA-ALC COMPARATIVE RATES

Purpose/Main Thrust:

To provide comparative analysis on the Cost per labor hour.

Discussion:

- In FY95, based on the MTC-FM(M)7118 Report, 28 February 1995, SA-ALC has the lowest ALC labor rate.

		FY95		
SA-ALC	OO-ALC	OC-ALC	SM-ALC	WR-ALC
\$58.44	\$69.98	\$62.10	\$67.11	\$62.64

- San Antonio also ranked best in 1993, but took a dip in 1994.

		FY94		
SA-ALC	OO-ALC	OC-ALC	SM-ALC	WR-ALC
\$60.45	\$63.84	\$55.97	\$60.07	\$52.64

- San Antonio had the second highest rates in FY94 due to several unexpected factors:
 - Fewer C-5s underwent Programmed Depot Maintenance (PDM) than anticipated because some of the fleet had to be kept aloft when wing cracks grounded C-141s.
 - C-5 customers chose to stretch out the PDM cycle.
 - An increase in the cost of reparable components affected the engine depots more than the others.
- Despite a temporary reversal in FY94, in FY95, San Antonio re-established its former position as the most cost effective ALC.

Impact:

- San Antonio Air Logistics Center is the most cost effective depot in DoD.

Prepared by: SA-ALC/FMPF/6 April 95/kjl/filename: B95TP_32.DOC

TALKING PAPER ON SA-ALC INTERSERVICING

Purpose/Main Thrust:

To highlight SA-ALC interservicing position within the DoD.

Discussion:

- The DoD must maintain organic aviation depots to provide the basic core capabilities to repair air and space weapons so that US military forces can quickly respond to contingencies anywhere in the world.
- To fulfill its organic industrial base requirement, the DoD maintains ten aviation depots. These are operated by the US Army (1), US Air Force (5) and US Navy (4). The current DoD structure consists of separate facilities for each service which results in some duplication of capabilities and services.
- The method that should be employed to eliminate this duplication is simple. We should determine the requirement for organic work, match it against available capacity, determine the depots that can best provide that capability at the lowest cost and close the rest (infrastructure, technology insertion, life cycle investments, operating costs, environmental compliance and pollution prevention initiatives, should be part of the decision process). Once the decision has been made as to which depots provide the best value to the taxpayer and the work should be transferred to them.
- San Antonio ALC has an outstanding record of successful interservice programs. Army Patriot gas turbine engine, Navy T56 engine and Navy 501-K17 marine gas turbine engine, are examples of SA-ALC interservice programs.

Recommendation:

- The best solution to DoD depot duplication and excess capacity lies in interservicing. This concept eliminates duplication, utilizes excess capacity, allows for closure of our least efficient operations and allows the most experienced and efficient depots to perform maintenance.

Prepared by: SA-ALC/FMPF/5 April 95/dg/filename: B95TP_28.DOC

-- \$.5 million cost to relocate equipment.

Impacts:

- SA-ALC provides a unique infrastructure to support the reverse engineering and remanufacturing mission.
- Relocation will impact both the AF mission and cost effectiveness.
 - Customer support will be adversely impacted.
 - Replication of these six capabilities elsewhere would cost approximately \$18 million.
 - Extensive and costly training required if capabilities are relocated.

- Extensive training required, five to ten years to become effective and efficient.
- Rubber Products Manufacturing Shop.
 - Provides capability to manufacture a wide variety of rubber seals and components used in engine and aircraft workloads.
 - Supports AF and DoD rubber components not readily available from commercial sources.
 - Capability not duplicated at any other Air Logistics Center.
 - Example of capability involves injection of rubber into F100 engine cases to form air seals and rub strips.
 - Without such capability F100 engines could not be overhauled.
 - Cost to relocate.
 - Cost to relocate capability \$.8 million.
 - Would require approximate one year to relocate.
 - Severely impact AF ability to maintain F100 engines in support of F-15 and F-16 aircraft.
- Science and Engineering Industrial Laboratory.
 - Largest industrial testing laboratory in AF.
 - Provides support to AF, DoD, DLA, and Forest Service.
 - \$8 million worth of sophisticated state-of-the-art laboratory test equipment.
 - Only AF industrial laboratory capable of providing textile testing support.
 - Involved in industrial research concerning surface technology.
 - Unique one-of-a-kind surface analyzer (LHS-12).
 - Only DoD CITA nondestructive evaluation tool for specialized radiographic inspection of engine and airframe components

- Allows for determination of internal and external dimensions and associated tolerances.
 - When remanufacturing data is not available, CITA allows for rapid reverse engineering capability.
 - Transfers data into Computer Aided Design/Computer Aided Manufacturing (CAD/CAM) files for stereolithography and machine shop applications.
- Cost to relocate.
 - Specialized manpower and training requirements require approximately two years minimum.
- Foundry.
 - Only foundry in the AF capable of producing X-ray quality aluminum sand castings for engine and aircraft components.
 - 20,000 SF with state-of-the-art induction furnaces and two sand casting systems.
 - \$2.0 million of equipment.
 - Capable of producing parts weighing a few ounces to 400 pounds.
 - Capable of producing drop hammer dies, using the latest in plastic technology, in forming aircraft skin panels.
 - Improves production efficiency while eliminating environmental impacts caused by fabricating dies from traditional materials.
 - Casting and dies produce remanufactured and reverse engineered parts used in aircraft and engine maintenance/overhaul workloads.
 - Cost to relocate.
 - Cost to replicate facility in excess of \$1.5 million.
 - Cost to transfer and reinstall equipment - \$1.9 million.
 - Foundry requires highly skilled patternmakers.
 - Patternmaking more of an art than a skill.

- Replicate facility - \$12 million.
- Equipment transfer and installation - \$1 million.
- Machine operators are qualified and certified on individual equipment.
- Relocating capability would require extensive operator training.
- Stereolithography (SLA) capability.
 - First of its kind in the Air Force and first in DoD to support manufacturing.
 - Initial software and equipment cost approximately \$1 million.
 - SLA is a revolutionary new computerized process that uses laser technology to produce prototypes, patterns and molds, for castings.
 - Produces three dimensional models in a matter of hours regardless of complexity.
 - SLA facilitates reverse engineering and remanufacture of small and large numbers of parts needed for aircraft, engine and commodity maintenance/overhaul workloads.
 - Dramatically reduces the time needed to prototype parts for depot workloads.
 - Cost to relocate.
 - Relocating SLA would result in a six month loss of capability.
 - Cost to transfer and reinstall equipment - \$35,000.
 - Training requires two to three years of extensive training to develop skilled operators.
- Computerized Industrial Tomographic Analyzer (CITA).
 - Only DoD CITA nondestructive evaluation tool for specialized radiographic inspection of engine and airframe components.
 - Inspection table envelope approximately six feet in height and five feet in diameter.

**TALKING PAPER
ON
INTEGRATED REVERSE ENGINEERING AND
REMANUFACTURING CAPABILITIES**

Purpose/Main Thrust:

SA-ALC has a unique and integrated infrastructure to accomplish reverse engineering and remanufacturing using in place facilities, equipment, skilled craftsmen, and highly educated professionals.

Discussion:

SA-ALC's Depot Maintenance Machine Shop, Stereolithography, Computerized Industrial Tomographic Analyzer, Foundry, Rubber Products Manufacturing Shop and Science and Engineering Industrial Laboratory are the basis for a one-of-a-kind, integrated infrastructure that enables rapid response to AF and DoD requirements which can only be met through reverse engineering and remanufacturing. This infrastructure is postured to accomplish this critical industrial mission both effectively and with cost efficiency.

- Depot Maintenance Machine Shop.
 - State-of-the-art facility opened in January 1989.
 - Facility Cost - \$10M; Equipment Cost - \$55M.
 - Only DoD facility that is totally environmentally controlled.
 - Controlled environment maintains critical tolerance control and repeatability.
 - 142,500 SF of floor space.
 - 390 individual machining equipment/tools.
 - 51 Computer Numerically Controlled (CNC) machines.
 - Provides economical and efficient repeatable remanufacturing.
 - Cost to relocate

TALKING PAPER ON CANTILEVER RACK INSTALLATION

Purpose/Main Thrust:

To provide background information on a unique cantilever rack installation for the Defense Distribution Depot.

Discussion:

- World's largest installation of its kind.
- 28 ft of high storage of large bulk material.
- Serviced by six man-aboard wire guided forktrucks.
- Installed in 1992.
- \$4.4 million installation, \$10 million building.

- New workloads or work center locations are easily added to the system. The system was designed with maximum flexibility and ease of use as primary objectives.
- The coordination of planner, scheduling, inventory, and shop data in a centralized database has resulted in better communications, increased accuracy and effective WIP management.
- Long Term Benefits.
 - Statistics are being collected to identify problem parts.
 - We are improving our material forecasting capability.
 - We are closely monitoring condemned parts.
 - We are improving our scheduling capabilities.
- Process improvement initiatives are implemented and become part of our culture through the integration of these processes into the tracking system.

TALKING PAPER ON MATERIAL TRACKING /SCHEDULING/INVENTORY CONTROL SYSTEM

Purpose/Main Thrust:

The mission of this system is to assist in the control of the repair process by providing improved management visibility of the work in progress as well as an integrated view of scheduled requirements, inventory levels, and short and long term production requirements. The system currently supports the repair process for small Gas Turbine Engines (GTEs), Secondary Power Systems (SPSs), Air Turbine Starters (ATs) and their electrical, pneumatic and fuel accessories.

Discussion:

- The system contains the current status and history of repaired items, induction management, scheduling, inventory management, backshop requirements forecasting, quality management, and production statistics capabilities which together enable the successful management of work in progress.
- The system was fully implemented in the Secondary Power Systems/Gas Turbine Engine Branch (LDTA) in January 1993. Since that time, additional workloads from other branches have been added to the system. Recently efforts were initiated to add the workload from the Fuel Systems Branch (LDTF) and the routed portions of the workload from the Aircraft/Engine Accessories Branch (LDTB). These workload are expected to be fully operational in the system in May, 1995.
- Unique Features.
 - Open system architecture utilizes the UNIX operating system and the ORACLE relational database management system which allow the system to run on many types of hardware.
 - Requires very little effort from mechanics to support the system's data collection requirements. Simple scanning of a barcode is all that is required.
 - The system has the capability to provide queue time, work time, and move time statistics.

Prepared by: SA-ALC/LDTI/6 April 95/rq/52233/filename: B95TP_24.DOC

- Civilian leadership program.
- Deployment of safety initiatives in the Center.
- 13 AFMC team members:
 - Sought answers to specific issues identified in SA-ALC self assessment.
 - Attended briefings conducted by product directorates.
 - Surveyed several hundred employees to determine the impact of quality initiatives.
- The team found marked improvements:
 - First two items addressed through QAFA analysis, validating SA-ALC's results.
 - Leadership program considered noteworthy and best practice for AFMC.
 - 72 survey respondents agreed safe work environment existed.
 - 86 percent agreed safety was important to the directorates.

Impact:

Informational.

TALKING PAPER ON TOTAL QUALITY

Purpose/Main Thrust:

To give a brief discussion of Unit Self Assessment (USA) activity at SA-ALC

Discussion:

- During 1992, the AFMC Commander directed each of the ALCs to conduct a self-assessment based on the Malcolm Baldrige Award criteria to use as a tool for continuous improvement. In our quest toward Total Quality Management, the ALC had never undertaken such a demanding and time intensive self-examination.
 - 1993 USA focused on seven categories with 92 sub-categories, and resulted in 79 areas for improvement.
 - Identifying problems only part of the procedure. It also involved:
 - Providing long term solutions.
 - Building processes and metrics.
 - Incorporated the areas for improvement into the SA-ALC Strategic Plan. Resulting initiatives:
 - Supervisor feedback survey.
 - On-going effort to devise productivity based team awards.
- During 7-15 March 1994, HQ AFMC inspectors visited Kelly AFB as part of the Quality Air Force Assessment (QAFA) process validation, only the second such visit in the command.
 - SA-ALC/CC asked the QAFA team to look at four specific items:
 - Deployment of quality initiatives throughout the Center.
 - Differences in quality deployment between directorates.

Prepared by: SA-ALC/QI/7 April 95/ry/filename: B95TP_23.DOC

- Services worldwide Air Force master personnel files.
- Services the personnel systems design and development activity.
- Logistics Systems batch and on-line processing.
 - Services the SA-ALC, AIA, AFNEWS, and DLA.
 - Provides worldwide aerospace fuels, aircraft maintenance, procurement and contractor support.
 - Supports 1.2 million items for world wide support with a combined value of \$13.2 billion.
- Facilities and Equipment.
 - New facility completed in 1993.
 - Near the top in the nation for computer and communications capacity and for contingency processing.
 - Site of DoD network nodes.
 - Significant cost to relocate or duplicate facility, communications, and equipment.
 - Computer equipment valued at over \$65 million with budget of \$26 million.
- Work Force.
 - Highly skilled work force.
 - 219 civilians; 69 military; 107 contractor personnel.
 - Payroll of \$11.0 million.
 - 70% of the civilian work force is minority or female.
 - Excellent rating last Operational Readiness Inspection.

**TALKING PAPER
ON
DEFENSE INFORMATION SYSTEMS AGENCY (DISA)
DEFENSE MEGACENTER (DMC) SAN ANTONIO**

Purpose/Main Thrust:

To provide information on the Defense Megacenter San Antonio at Kelly AFB.

Discussion:

- Selected as 1 of 16 computer megacenters under Defense Management Review Decision (DMRD) 918.
 - Ranked number five in the nation by the megacenter team based on facilities, security, operational capability and cost.
- Provides multi-service computer support worldwide.
 - Selected as one of five AF Regional Processing Centers in the nation.
 - Selected by the AF to provide base level computer support under DMRD 924 which consolidated AF base level computer support, with a total savings of over 500 manpower positions and reduction of computer systems by over 280.
 - Services the base level computing requirements for 17 AF bases for ACC, AMC, AFMC, and AETC, including their associated Air Force Reserve and Air National Guard components.
 - Provides all standard base level processing, including the Standard Base Supply System, Core Automated Maintenance System, Military and Civilian Personnel Systems, and Finance and General Ledger Systems.
 - Processes over \$4 billion in military and civilian payrolls.
 - Services all Army and Navy civilian personnel data systems worldwide.
 - Services the Client Server Medical Analysis Support System for CHAMPUS medical system.

Prepared by: DISA/WEA/6 April 95/cjw/filename: B95TP_21.DOC

**TALKING PAPER
ON
651ST COMBAT LOGISTICS SUPPORT SQUADRON (CLSS)**

Purpose/Main Thrust:

To discuss the functions of the 651 CLSS and their role in support of the AFMC, SA-ALC and AF missions

Discussion:

- The 651st CLSS, one of five squadrons in AFMC located at each of the ALCs. The CLSS provides highly trained personnel as an elite corps of maintenance and logistics technicians in worldwide deployable teams. All teams possess unique capabilities to enhance peacetime and combat capabilities of AF operational units.
- Composed ONLY of military personnel that are hand-picked in selected maintenance, supply and transportation AF specialties for this special duty.
- Provides airframe and system maintenance, damage repair and crash recovery support for both C-5 and C-17 aircraft. Also, performs C-5 aircraft depot maintenance.
- Accomplishes limited field level depot repairs and modifications and augment supply and freight packaging management operations.
- Responsible for Standard Base Supply System and Rapid Area Distribution Support (RADS) operations for all DoD agencies.
- Performs warehousing, rerehousing, mechanizes material handling systems and weapon system conversions.
- Capable of reconstituting assets due to wartime contingency operations or national/natural disaster, unique packaging tasks and special logistics projects; as directed.
- Responsible for F-15 and F-16 aircraft worldwide support of F100 engines in conjunction with SA-ALC two level maintenance operations.
- The 651 CLSS wartime employment includes the following: two 14-man C-5 aircraft teams, one 14-man C-17 aircraft team, 19 two-man F100 engine teams (five for F-15 aircraft and 14 for F-16 aircraft), and a total of seven supply/transportation teams.

**TALKING PAPER
ON
AUTOMATED GROUND ENGINE TEST SET (AGETS)
HARDWARE AND SOFTWARE DEPOT MAINTENANCE**

Purpose/ Main Thrust:

- Organic hardware and software maintenance of the Automated Ground Engine Test Set (AGETS) which provides automated engine trim and diagnostics for the F100-100/200 engines on the F-15 and F-16.
- Provides rapid response in order for ACC, ANG, AFRES, PACAF, USAFE, and NATO to maintain their mission capabilities for F-15 and F-16 fighter aircraft.

Discussion:

- Kelly AFB is the only site within DoD for this organic depot capability for hardware and software maintenance.
- Supports 44 units located worldwide.
- Tasks performed:
 - Maintain Executive software (approximately 161,000 lines of code).
 - Maintain UUT software (approximately 165,000 lines of code).
 - Test and release yearly software revisions to the field (approximately 50 changes per release).
 - Field support on-site at AGETS bases for hardware and software.
 - Provide hotline support for problems that arise in the field.
 - Research and development of new components and capabilities.
 - Organic repair of 23 AGETS unique circuit cards.

Impact:

- Loss of DoD operational readiness.
 - Loss of direct field support if relocation would occur.
 - Loss of direct mission capabilities for fighter squadrons.
 - 50 man-years of hands-on experience.

**TALKING PAPER
ON
INTER-AMERICAN AIR FORCES ACADEMY (IAAFA)**

Purpose/Main Thrust:

Provide background information on the IAAFA located on Kelly AFB.

Discussion:

- The IAAFA provides technical training to Central and South American air forces. In 1992, Hurricane Andrew destroyed all IAAFA facilities at Homestead AFB, Florida and the unit relocated at Lackland AFB, Texas. Upon relocation to Lackland AFB, the need of an active flightline for IAAFA's aircraft required an annex located at Kelly AFB.
- Currently the IAAFA facilities at Kelly AFB include:
 - Bldg 1416, Corrosion Control Training facility.
 - Bldg 1426, Maintenance Support facility.
 - Bldg 1427 and 1428, Aircraft Maintenance Training hangar.
 - Bldg 1435, Aircraft Maintenance Personnel section (temporary).
 - Bldg 1439, International Training Administration section (temporary).
 - Bldg 1440, Technical Training Center, BRAC project, houses classrooms, laboratories for Aircraft Maintenance courses.
- IAAFA future BRAC projects include:
 - Construction of a new hangar adjacent to Bldg 1426. It will replace Bldg 1435 and provide additional classrooms.
 - Refurbishing Bldgs 1427 and 1428 to include additional classrooms, re-skinning, new insulation of structure.
 - Construction of a new International Training Administration facility to replace Bldg 1439.

Prepared by: IAAFA/se/6 April 95/ag/filename:B95TP_16.DOC

**TALKING PAPER
ON
C-17 OPERATIONAL FLIGHT PROGRAM
SOFTWARE MAINTENANCE**

Purpose/Main Thrust:

Organic maintenance of Operational Flight Program (OFP) software for nine C-17 Line Replaceable Units (LRUs).

Ensures software corrections, upgrades, and enhancements are performed in a timely and cost effective manner.

Discussion:

- New acquisition with organic capability coming to SA-ALC.
- New facility being built to house equipment.
- Approximately 517,000 lines of code.
- High software change rate expected.

Impact:

- Loss of system knowledge gained through involvement in system acquisition.
- \$4.5 million facility to be completed May 1995.

**TALKING PAPER
ON
C-5 MADARS II OPERATIONAL FLIGHT PROGRAM
SOFTWARE MAINTENANCE**

Purpose/Main Thrust:

Organic maintenance of the C-5 Malfunction Analysis Detection and Recording System (MADARS) II Operational Flight Program (OFP).

Ensures software corrections, upgrades, and enhancements are performed in a timely and cost effective manner.

Discussion:

- Originally done by contractor.
- Organic capability developed in house.
- Approximately 100,000 lines of code.
- 10,000 digitized technical order pages.
- 750 aircraft data points monitored.
- Currently working third organic release.
- Software done at half the contractor proposed cost.

Impact:

- Loss of unique capabilities:
 - Immediate access to operational C-5s and personnel at the 433rd AW.
 - Collocation of depot hardware maintenance.
 - In-house development of maintenance environment and simulator.

- At full ramp up (FY97), SA-ALC 2LM will employ 538 skilled engine mechanics: F100-220 (158 PEs), TF39 (330 Pes), and T56 (56 PEs).
- At full ramp up (FY97), SA-ALC will provide support for 660 engines per year: F100-220 (294 engines), TF39 (191 engines), and T56 (175 engines).
- Known as JEIM Plus, collocating JEIM with advanced depot technology and capabilities has resulted in a cost avoidance of over \$10 Million in the first 18 months of operation.
 - Item Managers, Engine Program Managers, and all cognizant engineering personnel also collocated at SA-ALC.
- Overall JEIM engine quality has improved due to the sophisticated inspection and test cell capabilities previously not accessible to field units.
 - Quality/Process improvement metrics based on customer feedback.
- SA-ALC 2LM currently operating at 75% of full operating capacity.
- C-5 and A-10 Avionics.
- In FY94, SA-ALC produced 267 LRUs (8130.5 hours) with an average repair time of 2.4 days, exceeding the command goal by .6 days.
- In FY95, SA-ALC has already superseded FY94 production. As of 31 March 1995, 344 LRUs have been produced with an average repair time of 2.16 days. The depot is on target for another very successful year in support of 2LM. If the current trend remains constant, SA-ALC will have an opportunity to produce over 1000 LRUs for FY95. Workload projections for FY95 are 23,224 hours.
- SA-ALC has not sustained any significant impact regarding facilities/equipment.
- No additional manpower requirements noted for avionics 2LM.

TALKING PAPER ON TWO LEVELS OF MAINTENANCE (2LM)

Purpose/Main Thrust:

Provide the BRAC information about the impact of Two Levels of Maintenance (2LM) on SA-ALC.

Discussion:

- Defense Management Review Decision 983.
 - Manpower reductions by FY99 - 5,888 personnel.
 - FY94-99 Mandated Savings - \$384M.
 - Two Levels of Maintenance (2LM) is being planned for avionics (80 percent manpower reduction) and engines (60 percent manpower reduction).
- SA-ALC Impact.
 - Engines
 - SA-ALC 2LM provides Jet Engine Intermediate Maintenance (JEIM) for over sixty F100-PW-220, TF39, and T56 field JEIM units.
 - Over 245,000 SF of industrial floor space dedicated to 2LM.
 - F100-220 - 70,000 SF, 20 engine bays with an additional 10 bays scheduled for completion in December 1995.
 - TF39 - 100,000 SF, 34 engine bays collocated with Quick Engine Change (QEC) Kit repair area.
 - T56 - 73,000 SF, 20 engine bays capable of supporting 40 engines simultaneously.
 - All 2LM industrial floor space supported by overhead crane and rail systems and collocated with DMSC forward supply points.

Prepared by: SA-ALC/LDS/6 April 95/wb/filename: B95TP_12.DOC

- Thirteen different models of GTEs for the KC-135, C-130, C-141, C-5, E-3A, C-2A, and A-10 aircraft, ground carts, Patriot Missile System and the MD3B Hough tractor.
- B-1B, F-15 Secondary Power System and F-16, F-15 Engine Start System components.
- Seventeen models of aircraft Air Turbine Starters for bomber, cargo and tanker aircraft.
- GTE and SPS accessories such as pneudraulic, electrical and fuel components.
- These workloads are critical to the aircraft availability rates of front line fighters, tankers and bombers. Skilled, experienced, high technology support is provided by this facility.
- Currently the only Air Force Depot for small GTEs, SPSs and ATs.
- Repairs 52% of DoD small GTE workload with capability to assume it all.
- Currently supporting some Army and Navy GTE work under interservice agreements.
- This facility has the capacity, flexibility and skilled personnel to support additional compatible requirements.

**TALKING PAPER
ON
GAS TURBINE ENGINE ASSEMBLY AND
TEST FACILITY AT SA-ALC**

Purpose/Main Thrust:

The mission of this facility is the assembly and test of small Gas Turbine Engines (GTEs), Secondary Power Systems (SPSs), Air Turbine Starters (ATs) and their electrical, pneumatic and fuel accessories.

Discussion:

- The facility consists of 132,949 SF of test cells, assembly shops and supporting functions and was completed in September 1993 at a cost of \$16.5 million dollars.
- The facility reached full occupancy in January 1995 and represents a total investment of over \$33 million dollars.
- Unique features.
 - Over 40,000 SF of clean room assembly space featuring flexible work areas and utilities, and bridge cranes in assembly bays.
 - Incorporates the latest in safety and environmental requirements.
 - Twenty-eight modern product test areas, supported by a 10,000 gallon. JP5 fuel system, closed loop water brake system, 28 volt DC distribution system, 300 psi air system and 300 psi air heater for simulated bleed air testing, and engine bleed exhaust systems for GTE test.
 - Production engineering, planning , and scheduling functions located on site.
 - Integration of assembly, test and supporting functions in one facility results in reduced flow time, better communications and a high quality product.
- This facility overhauls, modifies and tests the following high technology workloads.

TALKING PAPER ON X-RAY EQUIPMENT REPAIR FACILITY

Purpose/Main Thrust:

To provide unique information on the X-Ray Equipment Repair Facility.

Discussion:

- Supports all X-ray equipment currently in the Air Force inventory.
- The 2500 SF facility is dedicated to overhaul and calibration of X-ray systems.
- Approved by Armstrong Laboratory Brooks AFB, Texas.
- Overhauls and calibrates Magnaflux and Sperry/Stavelly X-ray systems as well as individual components on an as needed basis.
- X-ray tube sources contained in facility are tested inside an approved protective lead vault exposure room.
- Exposure room contains an interlock and alarm system to disable the X-ray tube upon personnel entry.
- Radiation levels are monitored using radiation dosimeters and by radiac survey meters that measure levels on outside surface of exposure room.
- All test equipment used is traceable to the National Institute of Standards & Technology (NIST).
- Radiation output of systems is certified using systems calibrated to National Institute of Standards & Technology (NIST).
- All systems are repaired and calibrated to meet maintenance Technical Order specifications.
- X-ray system repairs are covered by the SA-ALC Organic Warranty Program.

Impact:

- Only facility in DoD capable of repairing X-ray equipment. High costs involved with contracting workload or moving equipment and training personnel. Environmental costs involved with radiation cleaning.

Prepared by: SA-ALC/LD/6 April 95/dr/filename: B95TP_10.DOC

**TALKING PAPER
ON
LHS - 12 SURFACE ANALYSIS SYSTEM**

Purpose/Main Thrust:

To provide information on the LHS-12 Surface Analysis System.

Discussion:

- Provides the unique capability to perform failure analysis related to aircraft crashes and engine mishaps including those involving loss of life.
- Unique capability to look at the molecular surface where the most informative and important chemical information can be present.
- The equipment consists of five energy analysis systems including X-ray Photoelectron Spectroscopy (XPS), Monochromated X-ray Photoelectron Spectroscopy (MXPS), Auger Electron Spectroscopy (AES), Secondary Ion Mass Spectroscopy (SIMS) and Ultraviolet Photoelectron Spectroscopy (UPS).
- Cost is over \$500,000.

Impact:

- The development of training skills for this capability has been three years in the making.
- Unlikely that receiving installation could redevelop capability if uniquely skilled personnel do not relocate.

TALKING PAPER ON RUBBER PRODUCTS MANUFACTURING

Purpose/Main Thrust:

To highlight best strategy for closure and realignment policies.

Discussion:

- The DoD must maintain organic aviation depots to provide the basic core capabilities to repair air and space weapons so that US military forces can quickly respond to contingencies anywhere in the world.
- To fulfill its organic mission, the aviation depot must retain capabilities to manufacture and repair rubber products. The Rubber Products Manufacturing Shop consists of approximately 40 different pieces of unique equipment valued at about \$5.0 million.
- Capability involves injecting rubber into F100 engine cases to form the air seals. Without this function, engines could not be overhauled in our jet engine overhaul facility.
- Supports AF and DoD with rubber components not readily available through commercial sources.
- Formulates all types of rubber for short or high volume runs, in batch sizes of 3 to 45 pounds.
- Meets stringent requirements of all applicable technical orders and military specifications.
- F100 engine parts support is one of the most vital functions currently being performed by this shop.

Impact:

- Relocation of this shop to another site is estimated to cost about \$.8 million and would take about one year. Most devastating impact of relocating is providing interim equivalent support to produce F100 engines for the F-15 and F-16 aircraft.

Prepared by: SA-ALC/TIME/5 April 95/mg/filename: B95TP_7.DOC

TALKING PAPER ON NUCLEAR WEAPONS REPAIR FACILITY

Purpose/Main Thrust:

To describe the unique Nuclear Weapons facility, and repair capabilities for nuclear components

Discussion:

- Provides worldwide logistics management on all nuclear ordnance commodities and delivery systems to support all USAF organizations.
- Single point of contact between the AF and Field Command Defense Nuclear Agency (FCDNA), Department of Energy (DOE)
- Only AF facility capable of test and analysis of all Intercontinental Ballistic Missile (ICBM) Reentry Vehicle (RV) components.
- Only AF facility with complete Nuclear Ordnance Environmental Stress Screening (ESS) capability.
- 10,183 SF of Electrostatic Discharge (ESD) floor space with ESD workstations conforming to Technical Order VII requirements.
- Capability to braid cable to meet nuclear hardness standards
- Shielded Microwave Anechoic Antenna Test Chamber (36' X 15' X 12' high) to verify antenna pattern integrity and conformance to design specifications.

Impact:

- The estimated cost of relocating all related equipment and services is \$10.0 million.
- High costs related to interruption of worldwide logistics support and breaches of security will occur.
- High costs related to relocation, retraining, and security certification for 284 personnel would be detrimental to mission effectiveness.

Prepared by: SA-ALC/NW/4 April 95/ks/filename: B95TP_6.DOC

TALKING PAPER ON FOUNDRY

Purpose/Main Thrust:

To highlight the unique features of the SA-ALC Foundry.

Discussion:

- Most complete sand casting foundry in the AF.
- Provide the AF and DoD organic capability to produce x-ray quality aluminum sand castings.
- State-of-the-art capability to produce plastic drop hammer dies used in forming aircraft skin panels.
- The foundry upgraded in the 1980's to satisfy the need for x-ray quality aluminum sand castings that met the AF's most stringent quality requirements for safety of flight items.
- Processes produce drop hammer dies using advanced plastic technology, improving efficiency while eliminating environmental concerns caused when fabricating dies from traditional materials.
- Work area is 20,000 SF with modern induction furnaces and two sand systems with the capability to produce parts weighing from a few ounces to 400 pounds.

Impact:

- Estimated cost to relocate this capability is \$1.9 million and would require approximately two years.
- Foundrymen have special knowledge and skills not readily available. Patternmakers are the most highly skilled and require five to ten years before becoming masters of the art. Many of these skilled craftsmen would choose not to relocate to another geographical area.

Prepared by: SA-ALC/TIME/4 April 95/mg/filename:B95TP_5.DOC

TALKING PAPER ON THE COMPUTERIZED INDUSTRIAL TOMOGRAPHIC ANALYZER (CITA)

Purpose/Main Thrust:

To describe the unique features of the Computerized Industrial Tomographic Analyzer (CITA).

Discussion:

- Unique internal dimensioning capability. Spatial resolution is 0.08"-0.01", density resolution is 5% and dimensioning accuracy is 0.001".
- Extensive Reverse Engineering/Rapid Prototyping and Neural Network defect characterization system applications.
- Current mission requirements include critical F100 and TF39 engine components, C-5A/B aircraft components, DoD/AF/DLA specialized inspections, OSI and laboratory support, and accident/mishap investigations.

Impact:

- Manpower is very specialized and requires extensive training for approximately two years.
- Only intermediate size Computer Tomography system within DoD.
- Transfer of CITA facility not feasible; cost to replicate it and associated systems \$1.9 million.
- Critical to production/laboratory workloads and application development for state-of-the-art processes (i.e., Reverse Engineering).

Document Separator

SECTION VI
ARTICLES AND AWARDS

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SECTION VI. PART 1
BRAC Facts Articles



FACT SHEET

UNITED STATES AIR FORCE

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Team Kelly Update

KELLY AFB BOASTS MODERN MAINTENANCE FACILITIES

Historic Kelly Air Force Base has existed for more than three-quarters of a century. But facilities and equipment are continuously built or upgraded through aggressive programs which make the San Antonio Air Logistics Center one of the most modern aviation depots within the Defense Department.

San Antonio ALC boasts state-of-the-art technologies in both aircraft maintenance and engine overhaul facilities. Through renovation and new construction, the center continues to keep ahead of projected workloads.

More than half of the buildings at Kelly AFB have been built or renovated since 1980 and another 20 percent were constructed after 1970.

Older buildings which cannot be renovated are scheduled for demolition.

Military Construction Program investments in Kelly's facilities and infrastructure since 1991 total more than \$81 million.

The newest addition to the center is the Gas Turbine Engine Repair Facility, Bldg. 331, completed in September 1993. The building provides a specialized area for GTE assembly and testing.

San Antonio Air Logistics Center vigorously pursues programs to maintain and upgrade equipment and technologies.

"Capital investment budget reductions have resulted in changes to our industrial equipment investment strategy," said Richard Barbosa, chief of the Industrial Equipment Section in the Financial Management directorate.

"Working closely with the center's Production Council, we make very selective prioritized funding decisions that allow us to maintain our industrial base to support our current workloads," he said. "At the same time, we focus on technological advances to make us more productive and which allow us to operate in the most cost-effective manner. Our budget is now in the range of \$8 million versus prior budgets of \$26 million. Even at reduced funding we have maintained our equipment in a condition very competitive with the best in private industry."

Investments in industrial equipment for use in new facilities and to upgrade capabilities in existing facilities comprises more than 2,563 pieces of equipment with a replacement value of \$670 million.



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KELLY AFB: HOME OF A WORLD-CLASS WORK FORCE

Kelly Air Force Base is the heart of strategic airlift and propulsion, a world-class facility with a mission of worldwide support. Meeting the mission rests on the shoulders of an educated, capable and caring work force which exceeds customer expectations and is sensitive to the needs of the community.

Doris Stacy, chief of the Education and Training Flight, noted Kelly workers are among the best educated in the command. "We have the greatest number of employees who have attended one or more years of college and more than 3,000 Kelly employees have earned degrees ranging from associate to doctorate," Stacy said.

Providing support to education within the community is important to "Team Kelly," which helps create a source of highly qualified candidates for future jobs at the base. More than 900 employees mentor students in local schools--a partnership with education which has earned national recognition.

Kelly is a partner with three school districts in providing a program to give expelled students a "last chance" at a high school education. The base hosts an annual science and engineering career expo for 8,000 students to promote high-tech careers.

In addition, employees and organizations sponsor \$57,000 in scholarships annually.



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INTERSERVICING BOOSTS CENTER WORKLOAD

San Antonio Air Logistics Center at Kelly Air Force Base has been repairing the Air Force models of the T56 engine for over 37 years.

Now, as a result of a 1993 Defense Base Realignment and Closure Commission decision to close Alameda Naval Aviation Depot in California, San Antonio ALC is entering into a new phase of T56 repair, which includes Navy versions of this versatile turboprop engine.

The Navy uses the T56 to power its E-2 electronic surveillance and P-3 anti-submarine aircraft. This engine also powers the multi-use C-130 for both the Navy and Air Force. Also, the Navy's 501K version of the T56 has shipboard applications to provide auxiliary power.

San Antonio's preparation for assumption of the Navy workload began in the third quarter of fiscal 1994. Full depot responsibility was assumed in early fiscal 1995. According to current projections, the Depot Maintenance Interservice Agreement with the Navy will add 300,000 manhours of workload here over the duration of the first full year of the contract.

"We anticipate the workload hours to increase as we accomplish the prototype of the Navy's new models, the T56-427 and the 501K-34 engines," said Dan Sassin, transition team project manager for the Engine Production Division. "Both of these are Series IV engines and will introduce a new scope of work to San Antonio, but once we are confident we can accomplish."



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KELLY AFB: PLATFORM FOR 'GLOBAL REACH -- GLOBAL POWER'

Airlift is the key ingredient in "Global Reach -- Global Power" and Kelly Air Force Base is a primary platform for that mission.

Through a unique combination of specialized organizations, Kelly AFB makes the nation's military airlift possible.

"The C-5 aircraft is the largest in the Air Force inventory," according to Mike Kirchoff, Air Mobility Command representative at Kelly. "With a fleet of 126 aircraft, it provides 47 percent of the nation's total military airlift capability and 100 percent of AMC's ability to fly out-sized cargo."

The 433rd Airlift Wing at Kelly, with 16 Galaxies authorized, represents 12 percent of the total C-5 capability. This Air Force Reserve unit has supported all recent conflicts, including those in the Persian Gulf, Haiti and Panama in addition to humanitarian missions to Bosnia, Croatia and Somalia.

Hurricanes, earthquakes and floods here in the United States have also kept Kelly C-5s busy flying relief supplies, personnel and equipment.

San Antonio Air Logistics Center's combination of C-5 management and repair has created a synergy of forces where the sum is greater than its parts. This collocation provides everything for weapon system support from "cradle to grave."

Looking at Kelly's industrial complex, one sees a tremendous physical infrastructure sustaining a wide diversity of airlift support including airframe maintenance, engine overhaul and component repair.

"San Antonio ALC has been the only depot to maintain the C-5 airframe and its TF39 engine in the 25-year life of the weapon system," said Richard Laemmler, C-5 directorate plans chief. "As such, we have DoD's only complete infrastructure in place to do the jobs."

The combination of C-5 and TF39 management, maintenance performed by the depot, coupled with the operational capability of the 433rd AW, brings together a powerful triad of airlift support found no where else in the world.



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SAN ANTONIO ALC -- GTE CENTER OF EXCELLENCE

As the Defense Department's Center of Excellence for gas turbine engines, San Antonio Air Logistics Center provides mission support to the C-141, C-130, KC-135, E-3A and other critical aircraft, as well as support for flight line ground carts and missile launchers.

The center overhauls 13 different models of these auxiliary power units, which provide compressed air or electrical current, or both to airborne and ground-based systems. That represents half of the Defense Department's organically repaired GTEs.

"Kelly's GTE repair and test facility in Bldg. 331, the largest such facility in DoD, turns out approximately 500 of these small engines per year," said Kevin Schnitzer, chief of the GTE Engineering and Planning Section, Aerospace Equipment directorate. "This facility represents an investment of over \$50 million and has maximum flexibility to accommodate new workloads."

GTE support cuts across traditional service lines to include Navy, Army and Foreign Military Sales customers, as well as the Air Force.

The Army's Patriot missile system, which proved its value against Iraqi "Scud" missiles during the Gulf War, is a prime user of GTEs repaired at Kelly.

Citing Kelly's effort to gear-up and begin overhaul of Patriot missile GTEs, John E. McClure, chief of the Depot Production Division, Headquarters U.S. Army Aviation and Troop Command, wrote in 1993: "As a result of your many technical abilities and the professionalism of your staff, the initial prototype effort and actual production was started ahead of schedule."

Success with the Patriot system has since earned the center three new Army workloads.

With pride in facility and the highly skilled craftsmen who make it run, Schnitzer added, "We have adopted a continuous improvement philosophy that stresses teamwork and innovation in every facet of the GTE repair process to ensure the ongoing production of the finest GTEs anywhere in the world."



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LAB PART OF LIFE SUPPORT SYSTEMS WEB

The Air Force Life Sciences Equipment Laboratory at Kelly Air Force Base is inextricably bound to the web of interdependent facilities which make San Antonio home to life support systems for the Defense Department.

That web includes Life Support Research and Development at Brooks AFB, Life Support Officer's School at Randolph AFB and the depot labs at Kelly AFB.

The laboratory at Kelly is the only facility of its kind in the world. Its staff conducts global mishap investigations, trains life support officers and tracks down artifacts which may belong to about 2,200 Americans missing in action in Southeast Asia.

The lab also supports Air Force mishap boards worldwide on every operating aircraft system. Lab founder and chief Mike Grost said that since 1983 the lab has performed more than 250 mishap investigations. It has at its disposal an inventory of 10,000 artifacts ranging from parachutes and flight apparel to ejection seats dating back to 1941 to aid in research.

Managed by Human Systems Center at nearby Brooks AFB since 1992, the lab has immediate access to all San Antonio ALC state-of-the art technology, including metallurgical, chemical, fabric, textile and non-destructive inspection laboratories.

Such resources at the center allow X-ray of whole ejection seats to find cracks or tensile-load a lap belt until it snaps like a rubber band.

"Our aim," said Grost, "is to prevent more mishaps from occurring in the future."

Kelly's lab is also a site for mishap investigation training for Life Support Officer's School students from Randolph AFB. About 3,000 aircrew, life support, egress, parachute and medical personnel from the U.S. and foreign military services are trained here.

The Joint Chiefs of Staff activated the lab's Life Sciences Artifacts Section in April 1994. This section analyzes artifacts returned from Southeast Asia for all U.S. military forces as part of the nation's efforts to account for those still listed as missing in action.

"Ironically," Grost notes, "The same strong and resilient equipment that previously had been designed and built to protect their users and permit them to survive some extreme ordeal, now becomes a silent testimony of their host's passing."



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KELLY AFB: LEADER IN HAZARDOUS MATERIALS MANAGEMENT

Kelly leads the Air Force and the Department of Defense in the way it manages hazardous materials. The Pharmacy Concept, literally a cradle-to-grave tracking system, manages hazardous materials from the time they enter the base to when they leave the base as wastes or recyclable products. The tracking system was developed here and is now being introduced throughout the rest of the Air Force.

Kelly won the 1994 Air Force Materiel Command Pollution Prevention Award and then went on to win the Air Force-level award. The award recognizes Kelly's efforts in meeting or exceeding all state and federal environmental goals. Kelly's Pollution Prevention Program is currently competing at the Department of Defense level.

Of the five air logistics centers, Kelly is the only one not on the Environmental Protection Agency's Superfund list. While Kelly has used many of the same types of chemicals and fuels as the other centers, geology and the south Texas climate have kept Kelly from being on the list.

More than 1,000 feet of dense clay and rock keep any chemical or fuel spill at Kelly from entering the Edwards Aquifer, the primary source of drinking water for the region. Such spills at some other centers have contaminated municipal drinking water supplies.

Because Kelly has not contaminated the Edwards Aquifer, our estimated cleanup bill is \$350 million. Most of the other centers' cleanup bills are currently estimated to cost twice as much as Kelly's.

In recognition of Kelly's environmental record, the base was the first federal facility in the state to be inducted into the Texas Clean 2000 Industrial Honor Roll. Under this state program, industries are asked to reduce pollution discharge by 50 percent by the year 2000. Kelly has already met that goal and is working to reduce its waste stream and emissions even more.



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KELLY AFB SMALL BUSINESS PROGRAM LEADS AIR FORCE

The Kelly Air Force Base Small Business Program leads Air Force Materiel Command in absolute dollars and percent of total obligations to small businesses and has won the Secretary of the Air Force Small Business Award for 17 of the past 23 years.

Last fiscal year, the base awarded a total of \$1.3 billion to the private sector. Of this amount, \$295 million, or 22 percent, went to small business. Specifically, \$45.4 million went to minority-owned and \$19.4 million to woman-owned enterprises.

In addition to setting aside contracts, the Small Business Office reaches out to the community through workshops, seminars and conferences on how to do business with the government. These efforts showcase business opportunities at Kelly and teaches small business leaders on how to take advantage of those opportunities.

The Small Business Offices maintains memberships in the Small Business Coordinating Council, San Antonio Opportunities Council and Business Opportunities for Texas.

Small Business Office staff member Rey Nieto said the goal of the program is to stimulate the growth of small enterprises, including those run by women and minorities "so they can become large and successful businesses."

"A lot of small businesses here are doing very well. We have several success stories," said Nieto. In fact, the impact of Kelly's Small Business Program on the local community alone actually exceeds \$100 million each year.



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SAN ANTONIO ALC SETS SIGHTS ON INTERSERVICING

By the end of 1995, the San Antonio Air Logistics Center will be responsible for more than \$69 million of interservicing work. In fact, Navy and Air Force people will be working side by side on workloads ranging from engines to cryptologic equipment.

What makes the value of work even more important is that in fiscal 1993 the dollar value of interservice work at all five Air Force depots was \$74 million.

"In one year, we went from dead last to the top in interservicing," said Dan Gotwald, maintenance interservice support officer in the Financial Management directorate.

Before fiscal 1993, San Antonio ALC did very little work for the other services. After the Naval Aviation Depot in Alameda, Calif., closed as a result of the 1993 base closure and realignment process, Navy T56 engines became part of the center's workload. The new Navy workload is expected to reach 254,000 hours at a dollar value of almost \$54 million this fiscal year. In addition, Navy T56 requirements are expected to increase to 353,000 hours in fiscal 1996.

In addition to the T56, the center is maintaining gas turbine engines for other services. This includes all GTEs for the Army's Patriot missile launcher. The center's new cryptologic Management directorate has also brought Army and Navy workload on Cryptologic equipment to the center..

The San Antonio ALC also has 40 non-programmed manufacturing jobs from other organizations including Defense Logistics Agency, Navy, other ALCs and the Human Systems Center.

Larry Cheever, plans and programs chief in the Financial Management directorate, said, "The more interservice work San Antonio does, the more we'll be helping an economy-minded Defense Department achieve its global mission.

"At the same time, Kelly becomes not just an Air Force depot, but a tri-service depot."



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DEFENSE MEGACENTER SERVES VARIETY OF CUSTOMERS

The Defense MegaCenter - San Antonio at Kelly Air Force Base is one of 16 within the Department of Defense and the only center of its kind in Texas.

DMC-SA provides computer processing to the San Antonio Air Logistics Center, Headquarters Air Intelligence Agency, Defense Logistics Agency, Air Force Military Personnel Center at nearby Randolph AFB and 17 Air Force Bases located in eight states and Panama.

DMC-SA employs 395 people, has an annual budget of \$26 million and serves more than 100,000 customers.

The center's \$60 million computer inventory includes such high-tech devices as the tape silo. The silo saves time and labor by automating data retrieval and loading. Like something out of "Star Trek," a small robot inside the silo finds a cassette tape with needed data, retrieves it and loads it into the computer.

DMC-SA also specializes in processing civilian personnel data for the Army and Navy along with seven non-defense federal agencies such as the Office of Personnel Management, U.S. Information Agency, General Accounting Office and the Internal Revenue Service with an impact on a total of 711,000 federal employees.

In the future, the Kelly center plans to expand its civilian personnel business and also become a focal point for storing and processing medical records throughout the United States.



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KELLY AFB UNIT RESPONSIBLE FOR NUCLEAR MUNITIONS

The San Antonio Air Logistics Center Nuclear Weapons directorate is the only consolidated nuclear munitions logistics center in the Defense Department.

Located at Kelly Air Force Base, the directorate oversees a division at Kirtland AFB, N.M., and an operating location at Ramstein Air Base, Germany. The directorate is the product group manager for Air Force integrated nuclear munitions.

The Kirtland division provides nuclear systems engineering support for Air Force weapons developed by the Department of Energy. Ramstein provides the same type of support for U.S. Air Forces in Europe.

The Nuclear Weapons directorate manages reentry vehicles for Peacekeeper and Minuteman intercontinental ballistic missiles, nuclear warheads for the Air Launched Cruise missile and Advanced Cruise missile, among other munitions. The directorate is also responsible for Nuclear Ordnance Commodity Management items and electro-mechanical weapons interface on nuclear-capable aircraft.

The directorate supervises the majority of the Defense Department's worldwide nuclear stockpile. In addition to managing DoE nuclear munitions, directorate personnel work with that agency in joint testing of ICBMs and other ordnance.

One of Nuclear Weapons' more exotic pieces of testing equipment is the underground multiuse centrifuge. With a diameter of 26 feet, the centrifuge is capable of obtaining a top acceleration of 200 Gs and can carry a maximum one-half ton payload.

The directorate also maintains, catalogs, and warehouses nuclear items. The directorate is, in fact, a self-contained mini-air logistics center.



FACT SHEET

UNITED STATES AIR FORCE

San Antonio Air Logistics Center
Office of Public Affairs
807 Buckner Drive
Kelly Air Force Base, Texas 78241-5842

BRAC FACTS '95

Team Kelly Update

SUGGESTION PROGRAM RANKS HIGH IN VALUE

For the past two years, the Air Force Suggestion Program at Kelly Air Force Base has met and exceeded all Air Force Materiel Command measurements of excellence including submission, pending and adoption rates. Kelly's program ranks second in the command for tangible benefits to the Air Force in fiscal 1994.

Chris Brauchle, suggestion program manager, said, "This program has always given employees the opportunity to contribute their ideas to improve government operations, save money, and play an active role in the management of the Air Force."

In addition to recognition for Kelly, the program results in both recognition and cash rewards for suggestors.

Pete Galaviz, Aeospace Equipment directorate, saved the Air Force more than \$8.5 million by designing a piece of test equipment. He has received a suggestion award of \$25,000 and another \$10,000 Presidential award.

Air Force Suggestor of the Year for 1994, Charles Capelli of the Propulsion directorate, has earned \$20,503 through the program. Through the years, his ideas have saved the government more than \$8.7 million.

Gabriel Terrazas, also of the Aerospace Equipment directorate, set a milestone in 1994. He became the only Air Force employee to receive two Air Force Chief of Staff Awards for High Value Suggestions in a single year.

Throughout the past fiscal year, 19 Kelly workers have received the Air Force's high-value suggestion award. These suggestors saved the government more than \$30 million in first-year benefits.

This fiscal year is promising even more successes. As of the end of February, employee suggestions have resulted in first-year benefits of more than \$9 million. Employees have received \$97,604 for their efforts.

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FACT SHEET

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WATER ABUNDANT AT KELLY AIR FORCE BASE

The low marks which the Pentagon gave Kelly Air Force Base for water, according to an Air Force official quoted in the March 3 *San Antonio Express-News*, "Could be traced to concerns about the Edwards aquifer and various lawsuits filed to restrict pumping."

At first glance, as far as water is concerned, Kelly would seem to be the Garden of Eden. We are adjacent to an abundant source of some of the cleanest water in the nation. Seven Kelly wells which tap into the Edwards Aquifer have the capacity to supply up to 12.7 million gallons of water a day. We only use 3 million a day. Roughly 35% of that amount goes to drinking and personal hygiene; 45% for industrial processes; and 20% for land irrigation and cooling. Protected from contamination from more than 1,000 feet of dense clay and rock, all of this water comes to us potable and pure.

Through the efforts of the geologists, engineers, and physical scientists at Kelly's Environmental Management directorate, we have reduced water consumption by 35% from 1984 levels. This was accomplished, in part, by state-of-the-art technologies. For example, according to Water Program Manager William Ryan, "Conversion from chemical paint stripping to Plastic Media Blasting conserves 100,000 gallons per aircraft."

Moreover, plans are already underway to reduce water consumption by another 50%. The City of San Antonio has pledged to set aside 1000 acre feet of water for Kelly's exclusive use. This would be "non potable," that is, non-drinking, treated effluent. In addition, Kelly's Environmental Process Control Facility also produces another 1.2 million gallons of treated industrial waste water each day. Combined, what we get from the city and from EPCF could satisfy most of our non-drinking water demands.

The key to the 50% reduction plan is to build a secondary distribution system. Such a system would channel treated water for reuse in irrigation projects, cooling tower operations, and industrial uses. A package is currently being submitted to Congress to fund the secondary distribution system, estimated to cost \$6.7 million.

"Kelly would be looked at as the leader in water conservation for the whole region," said Ryan. We will have reduced water consumption first by 35%, and then by 50% more. And we were only using about one quarter of our well capacity to begin with, before any of these conservation measures took place.

Given these facts concerning water quality, availability, and conservation, why has the Pentagon ranked Kelly so low?

The answer takes the form of a little known, tiny aquatic creature called the fountain darter. This is one of several endangered and threatened species that ply the waters of the Comal and San Marcos Springs. Their habitat depends on a certain level of "spring flow," which, in turn, derives from the Edwards Aquifer. In times of severe drought, the aquifer may plunge, and the spring flows may drop below levels required for species support.

The Sierra Club, under the Endangered Species Act, has brought a lawsuit against the U.S. Interior Department, on behalf of the fountain darter, and the other plant and animal inhabitants of Comal and San Marcos Springs. The federal court has found a direct correlation between spring flow to support an endangered species and the amount of water pumped from the aquifer. The effect of this ruling is that the entire Edwards Aquifer region is on notice that the taking of an endangered species is possible.

How does this impact Kelly? It threatens future growth. For example, the Pentagon plans to realign new missions to our base. But these new missions entail an added demand for water. Will that added demand be enough to wipe out an entire aquatic species?

Not likely, according to the Environmental Management directorate's February 1995 "Hydrologic Study of Kelly AFB." We are an extremely small user of Edwards Aquifer, the report states, accounting for less than one percent of total pumpage from the aquifer. In fact, if every gallon of water normally used at Kelly on a daily basis ended up as spring flow, the resulting increase in spring flow would be almost impossible to detect.

The resolution, in this increasingly complex tale, may ultimately lie with Federal District Judge Lucius Bunton, who's hearing the Sierra Club lawsuit. As things stand now, only a portion of the water can be used without affecting the Comal and San Marcos spring flow. But the judge wants the Texas Legislature to enact a law that will define water conservation requirements. Such a law would help eliminate the uncertainty, which led the Pentagon to rank Kelly so low. If, on the other hand, the legislature refuses to act, then Bunton has threatened to declare the aquifer an "underground river," which would subject it to stringent state regulation.

Either way, said Ryan, we will be able to adjust. "Kelly AFB has saved over 3.5 billion gallons of water since 1984. Clearly, present infrastructure and pumping capacity are more than adequate to meet the need of any future mission," he said. "Furthermore," Ryan continued, "Kelly's proactive and innovative water conservation and reuse programs will ensure ample water to supply all future demand."



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A BRIEF HISTORY OF KELLY AIR FORCE BASE

Kelly Air Force Base is the oldest continuously-operating flying field in the Air Force. It is named in honor of Lt. George E. M. Kelly, a pioneer in military aviation. Lt. Kelly was one of the first Army pilots. On May 10, 1911, he took to the skies above San Antonio in a Curtiss "pusher," when the plane lost its steering. He was able to maneuver his out-of-control aircraft away from an Army encampment, but lost his life in the resulting crash.

Kelly Field originated in November 1916, when the "Father of Military Aviation," Benjamin Foulois, selected its site for the expanding activities of the Aviation Flying Section of the U.S. Army Signal Corps. The first troops arrived in March 1917 to begin construction of the field and its facilities, and flying activities began on April 5 - one day prior to the United States' entry into World War I. Shortly after its founding, the field was unofficially divided into two adjoining fields. Maintenance and supply functions were concentrated on "Kelly Number One," the area that today is southeast of Duncan Drive. "Kelly Number Two," northwest of Duncan Drive, handled most of the flying activities and stretched in a mile-long array of buildings directly across the site of the modern runway.

During World War I the fields served as reception and testing centers for recruits, and as training centers for pilots, mechanics, cooks, and bakers, as well as engineering and supply officers. Most American trained World War I flyers trained or were processed at Kelly Field. After the war, Kelly underwent a number of changes. In 1925, "Kelly Number One" became "Duncan Field" and "Kelly Number Two" became, simply, Kelly Field. For 18 years, Kelly and Duncan operated separately. Kelly remained the center for Army Flight instruction, while Duncan specialized in supply and maintenance functions.

The Air Corps Advanced Flying School established operations at Kelly in 1922 and provided advanced training to numerous future leaders of the Air Force, including Curtis R. LeMay, Hoyt Vandenberg, and Claire Chennault. The most famous student, Charles A. Lindbergh, graduated in 1925. Other noteworthy individuals associated with Kelly and the AFS included Carl "Tooney" Spaatz, first Chief of the Air Force, and renowned civilian pilot Eddie Stinson, who served as a flight instructor.

(From the SA-ALC Office of History)

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V1-16

Both fields took part in numerous exciting events during the "Roaring Twenties," including Jimmy Doolittle's transcontinental "Dawn to Dusk" flight in 1922, the national Elimination Balloon Race of 1924, several "Air Circuses," and the "Pan American Goodwill Flight" of 1926. But no event matched the excitement generated in 1926, when Kelly helped make motion picture history by providing aircraft, pilots, and technicians for the film "Wings," which in 1928 received the first Academy Award for "Best Picture."

The business of flight training, maintenance, and supply expanded in the 1930s. Near the end of the decade, an assortment of hangars, residences, storehouses, offices, the present Officers' Club and Logistics Center Headquarters buildings, and the unique miniature bombing range (Building 1625) were constructed at Kelly. These facilities remain today, although nearly all traces of the original "Kelly Number Two" hangar line vanished in the 1950's, victim to expanding runway facilities for larger aircraft.

World War II brought about major changes. The Air Service Depot expanded while flight training activities moved to other locations. In 1943 Kelly and Duncan were reunited under the name Kelly Field, whose primary functions became those of maintenance and supply. By war's end, the annexation of the Normoyle Ordnance Depot, known today as East Kelly, further enlarged the base. During the war, Kelly developed into a huge industrial complex that stored and distributed materiel and modified or repaired aircraft, engines, and related equipment. The civilian work force increased tremendously; many of the new employees were "Kelly Katies," the Kelly counterparts to the "Rosie the Riveters" who contributed nationwide to the war effort. These adjustments marked a distinct shift in Kelly's mission, which over the next 40 years expanded into a world-wide logistics and support capability.

Kelly Field became Kelly Air Force Base in 1948 after the Air Force became a separate branch of the armed services. Throughout the years that followed, the San Antonio Air Materiel Area based at Kelly continued to expand its responsibilities. Kelly maintained such aircraft as the B-29, B-36, B-47, B-52 and B-58 bombers, numerous types of fighters including the F-102 and F-106, and various cargo planes. One of most famous of these was the XC-99, a one-of-a-kind aircraft that was based at Kelly. The XC-99 was for a time the world's largest aircraft, and it was the logistical predecessor to today's C-5 cargo aircraft.

The SAAMA evolved into today's San Antonio Air Logistics Center which handles about 60 percent of the total dollar value of the Air Force's propulsion assets, all Air Force nuclear ordnance, the aerospace fuels used by the Air Force and by NASA, and more than 296,000 stock items. It provides refueling facilities for the space shuttle's "piggyback" mother ship, and manages, supports or maintains such Air Force aircraft as the C-5 cargo jet and T-38 trainer. Kelly is host to 41 tenant organizations, which collectively make the base the largest single employer in San Antonio.

The days of small biplanes landing on dirt fields have long been a thing of the past, but the spirit with which early Kelly workers maintained, repaired, and flew their aircraft is still very much a part of the ongoing Kelly tradition.



FACT SHEET

UNITED STATES AIR FORCE

San Antonio Air Logistics Center
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Kelly Air Force Base, Texas 78241-5842

BRAC FACTS '95
Team Kelly Update

SAN ANTONIO AIR LOGISTICS CENTER MISSION

The Air Force provides a large portion of the superior military strength required to achieve and sustain world peace, and San Antonio Air Logistics Center is a critical link in the Air Force Materiel Command's mission of assuring affordable combat superiority, readiness and sustainability.

AFMC has 17 bases located throughout the United States. Five are depot repair activities, or air logistics centers. San Antonio ALC is one of the largest industrial complex in the Southwest and is located on historic Kelly Air Force Base. The base is named in honor of Lt. George E. M. Kelly, the first American military pilot to lose his life in the crash of a military aircraft.

Air logistics centers are big business, responsible for providing worldwide logistics support for the U.S. Air Force as well as the air forces of allied countries through the foreign military sales program. This logistics support encompasses a wide range of activities to ensure the long-term health of current and future Air Force aircraft, support equipment, and supplies.

Although all the centers have a common mission, each center is assigned specific aircraft, items, programs, weapons or engines to manage and repair. Each center has unique technological maintenance tasks to perform as well as different capabilities and responsibilities.

Much like private industries, air logistics centers are organized to focus on full support of the product. At San Antonio ALC, these product organizations include three aircraft directorates. Also included are the Propulsion, Aerospace Equipment Management, Technology and Industrial support, Aerospace Fuels, and Nuclear Weapons directorates.

AIRCRAFT MANAGEMENT

The center's aircraft workload includes everything from support of new and modified aircraft, to repair and support of more established systems encompassing an inventory of more than 5,000 aircraft worldwide. The largest aircraft directorate manages the C-5, the

(Current as of February 1995)

Air Force's prime cargo airlifter which proved itself during Desert Storm and continues to provide relief and supply missions throughout the world.

The Mature Aircraft directorate is responsible for the Air Force's fighters and trainers that include the T-37 and T-38 as well as older aircraft such as the OV-10 and F-5. The directorate also manages many other mature aircraft still being flown by other U.S. government agencies and allied nations.

The C-17 Aircraft System Support Management directorate is responsible for activating and supporting the new C-17 Globemaster III. The C-17 directorate provides depot, technical, engineering, and supply support to customers and ensures the C-17 airlifter will serve the needs of the Air Force well into the 21st century.

PROPULSION MANAGEMENT

The San Antonio ALC is host to the Air Force's single manager for propulsion, also known as the propulsion product group manager. The propulsion product group manager oversees development and production support for engines assigned to the Air Force's two engine depots.

San Antonio ALC is the largest Air Force engine depot and manages, procures, and maintains more than 14,000 aircraft engines. In fact the center is responsible for about 60 percent of the total dollar value of the Air Force's propulsion assets. Organic depot workload performed at the ALC includes: the T56 engine which powers the C-130 Hercules; the TF39 engine which propels the C-5 Galaxy; and the F100 family of engines which powers over two-thirds of the Air Force's fighter aircraft as the propulsion plant for both the F-16 Fighting Falcon and the F-15 Eagle.

One of the unique capabilities of the engine repair shop is the cryogenic spin facility that tests jet engine fan discs at super low temperatures to find flaws that could cause loss of engine or possibly an aircraft; and at the same time, increases the life of the disc. This is the only such facility in the United States.

SUPPORT AND TEST EQUIPMENT MANAGEMENT

In addition to supporting aircraft and engines, the center manages, procures, repairs, and manufactures support and test equipment and provides engineering and technical support for equipment used by virtually every Air Force weapon system. This responsibility includes automated test systems, flightline support equipment, ground and aircraft accessories, ground intelligence and security systems, engine test cells, automated systems for jet engine test cells, fuel control test stands, and various other computer-driven systems.

CRYPTOLOGIC MANAGEMENT

The Cryptologic Management directorate provides command and control communications/computer intelligence, information security and signal intelligence products and support for the war fighter. They also provide program management, technical services, transportation, materiel processing, and communications security accounting support. In addition they perform depot level hardware maintenance on communications security and signal intelligence systems as well as software sustainment for communications security systems.

OTHER MANAGEMENT RESPONSIBILITIES AND CAPABILITIES

Without fuel the Air Force wouldn't get off the ground. The Aerospace Fuels Management directorate provides the vital link between supply and consumption of all fuels required by the Air Force. In addition to managing the conventional fuels used by the Air Force, the directorate is single manager for liquid missile propellants, special fuels, chemicals, and gases used by the Air Force, NASA, and other agencies.

Another unique workload at the center is worldwide logistics management of the Air Force nuclear ordnance program. This responsibility encompasses supply support and repair for nuclear ordnance at Kelly AFB and engineering support at both Kelly and Kirtland Air Force bases.

To help keep the San Antonio ALC on top with the latest in technological developments, the San Antonio ALC maintains a responsive manufacturing capability; a plant services function; and a scientific and engineering laboratory to support customer needs at competitive prices. The center also has the only full foundry in the Air Force which is comparable to the best commercial facilities.

With increasing concern about protection of the environment and public health, the center's environmental management organization ensures the center complies with local, state, and federal environmental laws and requirements. An example of this commitment is our \$12 million environmental process control facility which treats all industrial wastewater to levels which exceed federal and state standards and recycles this water to areas on base. Installing a new wastewater collection system using "smart pipe" technology with its pipe-in-pipe system will ensure protection of the environment by preventing leaks and providing real-time data to treatment plant operators.

Also, the center's new corrosion control facility provides state-of-the-art paint stripping for any sized aircraft using a plastic media blasting process which is more friendly to the environment and safer for employees.

QUALITY WORK FORCE

In order to make these organizations function, one very valuable asset is required -- people. At San Antonio ALC, thousands of civilian and military personnel work together to provide worldwide mission support for the Air Force. More than 300 Air Force Reserve individual mobilization augmentees serve at Kelly alongside their active duty counterparts in virtually every unit.

The number one priority stressed to each center employee is quality. Special emphasis is placed on assuring that our people are trained to do the best possible job through Quality Air Force initiatives. This means teamwork as well as individual empowerment to continuously strive for improvement in the products and services provided, with the ultimate goal of exceeding customers' expectations.

To accommodate a wide range of workloads requiring use of the latest in technological advances, our Center has a staff of approximately 750 professional engineers engaged in continuous development and modification to improve aircraft and aeronautical equipment. Our technical and engineering functions provide technical direction in identifying, planning, and integrating the latest scientific and engineering developments for the center.

With an eye to the future, the center has implemented several educational undertakings geared towards attracting bright, promising young professionals to enter the Kelly AFB work force in years to come. Base employees are actively involved in mentoring and tutoring programs throughout the city of San Antonio to encourage youngsters to excel and stay in school. Also, various Kelly employee organizations award over 80 scholarships each year to help deserving Kelly employees and their children achieve higher education.

Keeping military forces ready is what logistics is all about. Complex, constant, and global, what "Team Kelly" accomplishes is fundamental to national security. At the San Antonio ALC, readiness demands our best! Logistics is our mission; readiness is our purpose; and sustainability is our challenge.

SECTION VI. PART 2
Awards

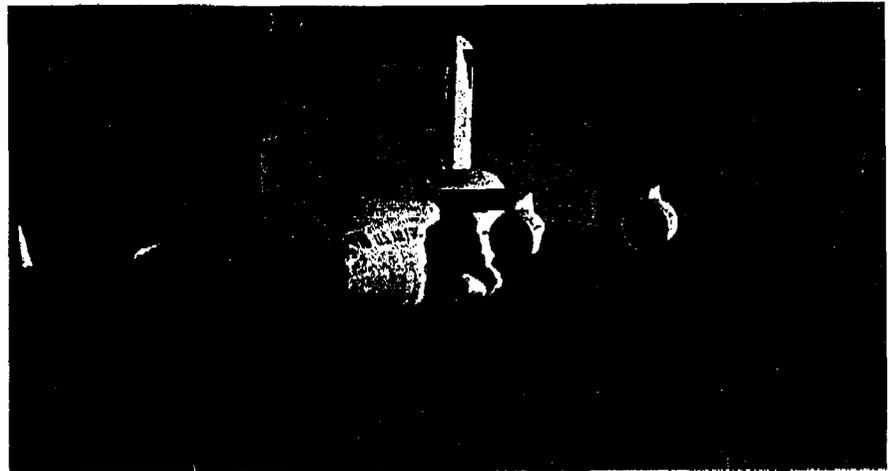
C-17 captures prestigious Collier Trophy

The C-17 Globemaster III has won the prestigious Collier Trophy, symbolizing the top aeronautical achievement of 1994, it was announced on Feb. 15.

The trophy, established in 1911, is awarded each year by the National Aeronautic Association (NAA) for "the greatest achievement in aeronautics or astronautics in America, the value of which has been demonstrated by actual use in the previous year."

The NAA said the award was bestowed "for designing, developing, testing, producing and placing into service the C-17 Globemaster III whose performance and efficiency make it the most versatile airlift aircraft in aviation history."

Named as recipients of the 1994 Collier Trophy were the U.S. Air Force, McDonnell Douglas Corporation and the C-17 industrial team of subcontractors and suppliers. The Air Force Association (AFA) placed the C-17 in nomination for the award.



"We are highly honored that the C-17 has been selected by the NAA for this most famous of all aviation awards," said Harry Stonecipher, McDonnell Douglas president and chief executive. "This honor recognizes the dedication and commitment of our company and its employees—along with our supplier teammates—in designing, producing and delivering to the Air Force the

best military transport plane ever built."

In its nomination, the AFA cited the C-17 as "the linchpin of airlift modernization" and said that it "demonstrated in 1994 that it had the versatility to create a new era in military airlift."

The Collier Trophy will be presented at the annual banquet set for May 12 in Washington, D.C. ■

Air Force declares C-17 operationally ready

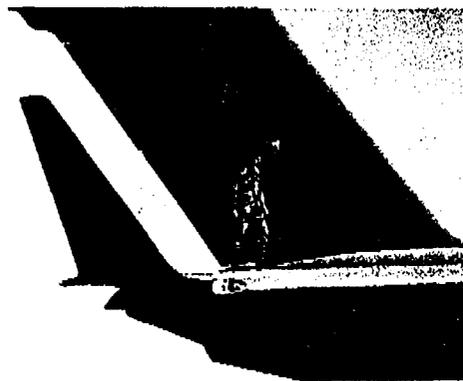
The Air Mobility Command declared the first squadron of 12 McDonnell Douglas C-17 Globemaster III transports, based at Charleston AFB, S.C., operationally ready for worldwide service on Jan. 17.

Gen. Robert L. Rutherford, AMC commander, announced Initial Operational Capability (IOC) for the 17th Squadron of the 437th Airlift Wing. In addition, the Air Force Reserve's 317th Airlift Squadron, with aircrews also flying the C-17s at Charleston, is operational.

This declaration of IOC means that the Globemaster III is now part of the Air Force's operational inventory and that the aircraft are ready for worldwide military and humanitarian missions.

Charleston-based crews have already demonstrated the C-17's rapid ability to airlift personnel and equipment with missions to Japan, Southwest Asia, Central America and the Caribbean basin.

IOC is the first of the three big events coming up this year that are crucial to extending the C-17 program beyond 40 airplanes.



With IOC declared, the focus has now shifted to passing the RM&A (reliability, maintainability and availability) evaluation in July and then the Milestone IIIB decision in November on whether to buy more C-17s.

To clear the IOC hurdle, MDC was required to have 12 operationally ready C-17s delivered to the Charleston wing by midnight New Year's Eve. The team in Long Beach worked hard to meet this commitment, delivering the last five C-17s in 1994 ahead of schedule, and the modification teams in Tulsa and Charleston kept at it round-the-clock through the year-end holiday to ensure the last aircraft needing modifications was back on the Charleston flight line by the deadline. ■

AFCSC Takes Prestigious Award

by Capt. Lawrence Johnson III
AFCSC/CCE
Kelly AFB, Texas
Photo by Rich Harrell

The Air Force Cryptologic Support Center, Kelly AFB, Texas, received the 1992 Frank B. Rowlett National Information Systems Security Award from Vice Admiral J. M. McConnell, director of the National Security Agency and chief of Central Security Service, Nov. 3.

The Information Systems Security National Awards Program, established in 1989, was named after Frank Byron Rowlett who pioneered and wrote cryptologic history during World War II. This national-level award commemorates his outstanding contributions to our national security and honors today's pioneers for their significant and history-making accomplishments in INFOSEC.

Maj. Gen. Kenneth Minihan and Col. James Jackson II, AFCSC commander, accepted the award during the annual ceremony held at Fort George Meade, Md. The center competed against two other finalists — Air Mobility Command's C2 Multilevel Security Program at Scott AFB, Ill., and the Center for Computer High Assurance Systems, Naval Research Laboratory, Washington, D.C.

Two major efforts, the Command, Control, Communications, and Computer (C4) Systems Security Assessment Program and the automated security incident measurement project, brought a hands-on, operational approach to COMPUSEC. Units can now detect and respond to COMPUSEC incidents. These efforts led to the cen-



TSgt. Joseph Rivers assembles a piece of equipment built by AFCSC's engineering lab for use in the field. The lab was one of many entities that helped AFCSC win the Frank B. Rowlett Award.

ter's key role in the design of a national-level INFOSEC reporting and response program. The center managed the Air Force Computer Response Team as the single point of contact for reporting and handling INFOSEC security incidents and vulnerabilities.

AFCSC took the lead in certification and accreditation for the computer systems in the Global Decision and Support System. The GDSS serves Air Force units around the world.

INFOSEC training and awareness programs are a key element in educating the work force. AFCSC provides a

full range of guidance publications on COMSEC, COMPUSEC, and TEMPEST protection.

Supporting the Air Force transition to electronic keying, the center provided early fielding of an INFOSEC device to Alaskan remote sites. This saved \$2 million in resources.

AFCSC trained COMSEC monitoring personnel to assess the INFOSEC posture of Air Force organizations. More than 20 multidisciplinary assessments were conducted around the world.

Additionally, AFCSC developed new approaches to solving INFOSEC problems. The Center has been a key element in the Air Force's implementation of the new information warfare mission. The momentum built by AFCSC promises continuing INFOSEC innovation and product development.

Much of the credit for this award goes to Larry Merritt, the former director of Securities at AFCSC, and all the men and women who were assigned to the Securities Directorate, as well as those assigned in certain areas of the Logistics Directorate during that time.

"It is truly an honor to have AFCSC nationally recognized for its contributions to the field of Information Systems Security," said Merritt. "I am convinced that the same energy and talents that resulted in AFCSC receiving this award will push the Air Force into the lead in implementing the new information warfare mission."



DEPARTMENT OF THE AIR FORCE

This is to certify that
THE AIR FORCE ORGANIZATIONAL
EXCELLENCE AWARD

has been awarded to the

AIR FORCE CRYPTOLOGIC SUPPORT CENTER

For exceptionally meritorious service

1 January 1992 To 30 September 1993

Given under my hand this

First Day Of September 1993

MAJOR GENERAL, USAF
COMMANDER, AIR FORCE INTELLIGENCE COMMAND





DEPARTMENT OF THE AIR FORCE

This is to certify that
THE AIR FORCE OUTSTANDING UNIT
AWARD

has been awarded to the

2873rd Test Squadron

For exceptionally meritorious service
15 January 1990 to 31 December 1991

Given under my hand this
27th Day of April 1992


CHARLES C. McDONALD, General, USAF
Commander, Air Force Logistics Command





DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR FORCE LOGISTICS COMMAND
WRIGHT-PATTERSON AIR FORCE BASE, OHIO 45433

Special Order
GB-88

15 May 1992

1. The 1923rd Communications-Computer Systems Group (KH0FFFK6) is awarded the *AIR FORCE OUTSTANDING UNIT AWARD* for exceptionally meritorious service during the period 1 January 1989 to 31 December 1991.

2. The 2701st Explosive Ordnance Squadron (HP0FFB26) is awarded the *AIR FORCE OUTSTANDING UNIT AWARD* for exceptionally meritorious service during the period 1 January 1991 to 31 December 1991.

3. The 2750th Air Base Wing (WE0FFB2L) is awarded the *AIR FORCE OUTSTANDING UNIT AWARD* for exceptionally meritorious service during the period 1 January 1990 to 31 December 1991. The following subordinate units will share in the award for the same period:

2750th Comptroller Squadron (WE0FFG5X)
2750th Engineering and Services Group (WE0FFG4W)
2750th Logistics and Operations Group (WE0FFW9G)
2750th Mission Support Squadron (WE0FFG4Y)
2750th Security Police Squadron (WE0FF2XB)

4. The 2849th Civil Engineering Squadron (HP0FF1W9) is awarded the *AIR FORCE OUTSTANDING UNIT AWARD* for exceptionally meritorious service during the period 1 January 1990 to 31 December 1991.

5. The 2853rd Air Base Group (RX0FFB2G) is awarded the *AIR FORCE OUTSTANDING UNIT AWARD* for exceptionally meritorious service during the period 1 January 1991 to 31 December 1991. The following subordinate units will share in the award for the same period:

2853rd Civil Engineering Squadron (RX0FF161)
2853rd Security Police Squadron (RX0FF2W9)
2853rd Air Base Group Headquarters Squadron Section (RX0FFB2G)
2853rd Services Squadron (RX0FF9FW)

6. The 2873rd Test Squadron (KH0FF9KK) is awarded the *AIR FORCE OUTSTANDING UNIT AWARD* for exceptionally meritorious service during the period 15 January 1990 to 31 December 1991.

7. The 2951st Combat Logistics Support Squadron (MU0FFRDN) is awarded the *AIR FORCE OUTSTANDING UNIT AWARD* for exceptionally meritorious service during the period 1 January 1990 to 31 December 1991.

GB-88





**313TH TEST SQUADRON
SAN ANTONIO AIR LOGISTICS CENTER**

FOR OUTSTANDING ACHIEVEMENT IN AIRCRAFT MISHAP PREVENTION
1 OCTOBER 1992 TO 30 SEPTEMBER 1993

**RONALD W. YATES
GENERAL, USAF
COMMANDER**



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS SAN ANTONIO AIR LOGISTICS CENTER (AFMC)
KELLY AIR FORCE BASE, TEXAS

10 SEP 1993

Mr Larry S. Harvey
SA-ALC/LAV
303 Wilson Blvd Ste 1
Kelly AFB TX 78241-5443

Dear Mr Harvey

Larry

It is with great pleasure that I forward a copy of the AFSAC/CC letter congratulating you for being selected Case/Country Manager of 1992. The International Logistics Awards recognize outstanding professional contributions and you have been selected at AFMC level.

You have consistently shown extraordinary commitment to quality customer support and the Aircraft Directorate is proud to have you in our organization. Thank you for a job well done!

E Garcia

EDWARD V. GARCIA
Deputy Director of Aircraft

1 Atch
AFSAC/CC Ltr, 4 Aug 93



DEPARTMENT OF THE AIR FORCE

HEADQUARTERS AIR FORCE MATERIEL COMMAND
WRIGHT-PATTERSON AIR FORCE BASE OHIO

16 February 1993

FROM: AFMC/CC
4375 Chidlaw Road, Suite 1
Wright-Patterson AFB OH 45433-5001

SUBJ: 1992 AFMC Productivity Enhancement Awards for Professional Excellence

TO: SA-ALC/CC *LEW*

1. I am extremely pleased to inform you that Colonel William T. Daniel, Jr., was selected by the Productivity Panel as AFMC's 1992 Outstanding Productivity Contributing Officer of the Year. You can be proud that San Antonio Air Logistics Center received one of the six AFMC Productivity Enhancement Awards for Professional Excellence.

2. Colonel Daniel will represent AFMC at the Air Staff as the Outstanding Officer. Colonel Daniel's ranking in the Air Force competition will be provided to you as soon as it is known.

3. Quality and productivity accomplishments for 1992 have yielded tremendous success stories and continue to be vital to the defense and economic well-being of our Nation. Contributions made by people like Colonel Daniel support my conviction that every military member and civilian employee can play a major role in improved and timely government service. Please present the attached plaque, along with my personal letter of thanks and congratulations, to Colonel Daniel for a job well done.

A handwritten signature in black ink, appearing to read "Ronald W. Yates", is written over a large, stylized oval scribble.

RONALD W. YATES
General, USAF
Commander

1 Atch
CC Ltr. 12 Feb 93. w/Atch



DEPARTMENT OF THE AIR FORCE

This is to certify that
THE AIR FORCE ORGANIZATIONAL
EXCELLENCE AWARD
has been awarded to the

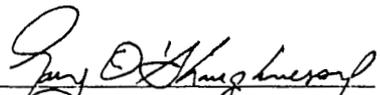
Air Force Cryptologic Support Center

For exceptionally meritorious service

1 January 1989 to 31 December 1990

Given under my hand this

17th Day of October 1991


MAJOR GENERAL, USAF
Commander, Air Force Intelligence Command





DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR FORCE MATERIEL COMMAND
WRIGHT-PATTERSON AIR FORCE BASE, OHIO

28 NOV 1994

MEMORANDUM FOR 76 SVS/CC

FROM: HQ AFMC/SVF
4375 Chidlaw Road, Suite 6
Wright-Patterson AFB OH 45433-5006

SUBJECT: FY94 Innkeeper Award Command Winner

Congratulations on Kelly AFB being selected the command winner of the 1994 Innkeeper Award. As the winner in the small category competition, you will receive \$25K from the Command Lodging Fund. The \$25K will be transferred from the Command Lodging Fund to your Base Lodging Fund through the electronic banking system. The transfer of funds can be accomplished by two methods; the first would be for you to use your local Base Lodging Funds and then request reimbursement from our office; or request a funds transfer on the date payment for expenditures will be made. Accounting instructions for the receipt of the funds are as follows: debit GLAC 101, Cash, and credit GLAC 83301, Special Grants-Operating Innkeeper (in the benefiting cost center). The purpose of these funds is to prepare for the AF Innkeeper competition and cannot be used for any type of celebration or to entertain the AF Evaluation Team. It is imperative that these funds be expended prior to the arrival of the AF evaluation Team. If you have any questions or require additional information, our POCs are Mr. Jim Fox and Ms. Gail Long, HQ AFMC/SVFM, DSN 787-7733.

FOR THE COMMANDER

A handwritten signature in cursive script, appearing to read "Kirk K. Links".

KIRK K. LINKS, Lt Col, USAF
Chief, Resource Management
Services

cc: 76 SVS/SVF



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR FORCE MATERIEL COMMAND
WRIGHT-PATTERSON AIR FORCE BASE OHIO

31 JAN 1995

MEMORANDUM FOR SEE DISTRIBUTION

FROM: HQ AFMC/DP
4375 Chidlaw Road, Suite 6
Wright-Patterson AFB OH 45433-5006

SUBJECT: AFMC Nomination for the FY94 Nathan Altschuler Award for Excellence in Educational Programs

1. Congratulations are due to Kelly AFB's Education Services Center for having been selected as AFMC's best Category III Award for Excellence in Educational Programs. Continued base support for this important people program, as well as the efforts of this dedicated education staff, has set an example for others to follow.
2. A plaque will be prepared and presented to Kelly AFB in the near future. In May/June 95, Air Staff will announce the winners of the overall Air Force competition. We will notify you of the results as soon as we are informed.
3. Once again, our congratulations to Mrs. Vanderwall and her dedicated staff for their continued super work in the education arena. If you have any questions, our POCs are Mr. Peter Niles and Ms. Rita Nowakowski, HQ AFMC/DPEE, DSN 787-2110.

FOR THE COMMANDER

A handwritten signature in black ink, appearing to be "D. P. ROGERS", written over a horizontal line.

DAVID P. ROGERS
Colonel, USAF
Director, Personnel



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR FORCE LOGISTICS COMMAND
WRIGHT-PATTERSON AIR FORCE BASE, OHIO 45433-5001

28 FEB 1992

REPLY TO
ATTN OF:

XPM

SUBJECT:

AFLC Manpower Management Awards for Professional Excellence - 1991

TO:

Det. 4, 3025 MES (Lieutenant Colonel John S. Lazar II)

1. Please accept my congratulations on the selection of your detachment as the AFLC Large Management Engineering Team of the Year.
2. The people at Detachment 4 exhibited superb performance which produced outstanding results in 1991. The efforts of all your personnel contributed greatly to advancing the management engineering program throughout AFLC and the USAF.
3. Please convey my congratulations and thanks to all members of your team. Good luck in the Air Force competition.

LYNTON C. DUDLEY, Colonel, USAF
Director, Manpower and Organization
DCS/Plans and Programs

United States Air Force



Certificate of Appreciation

to

LAS - TACTICAL/TRAINER SYSTEM PROGRAM MANAGEMENT DIVISION
WORK CENTER TEAMS

FOR DEVELOPMENT AND IMPLEMENTATION OF VASTLY IMPROVED WORK PROCESSES
THAT ENHANCED THE EFFICIENCY OF THE TACTICAL/TRAINER SYSTEM MANAGEMENT
DIVISION AND CONTRIBUTED TO SUPERIOR PERFORMANCE IN CUSTOMER SATISFACTION.

10 April 1992

Date

A handwritten signature in dark ink, appearing to read "LEWIS E. CURTIS III".

LEWIS E. CURTIS III
Major General, USAF
Commander

"HEROES OF REINVENTION"

1994 Hammer Award Nominee



Corrosion Control Work Center Team

SA-ALC/LAPM

In recognition of your effort to build a government that works better and costs less—
by putting customers first, by cutting red tape, by empowering employees to get results,
and by cutting back to basics.



Al Gore
National Performance Review



AIR FORCE ASSOCIATION

Citation

— ◆ AWARDED TO ◆ —

CAPTAIN BRIAN HOLMGREN

ALAMO CHAPTER KELLOGG BLUE SUIT AWARD
OUTSTANDING COMPANY GRADE OFFICER

IN RECOGNITION OF OUTSTANDING PERFORMANCE
CONTRIBUTING TO THE ACCOMPLISHMENT OF THE
MISSION OF THE UNITED STATES AIR FORCE

EDWARD W. GARLAND
President

23 March 1995



1993

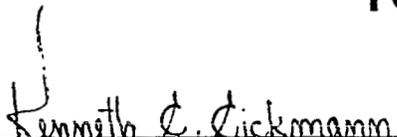


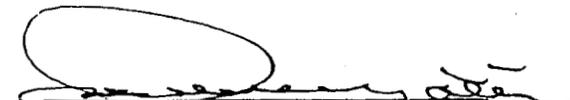
TRANSPORTATION
SENIOR CIVILIAN EMPLOYEE
OF THE YEAR

IS PRESENTED TO

Ms. Cecilia E. Ridgeway
Chief, Procurement Traffic Section
651st Air Base Group
Kelly AFB TX

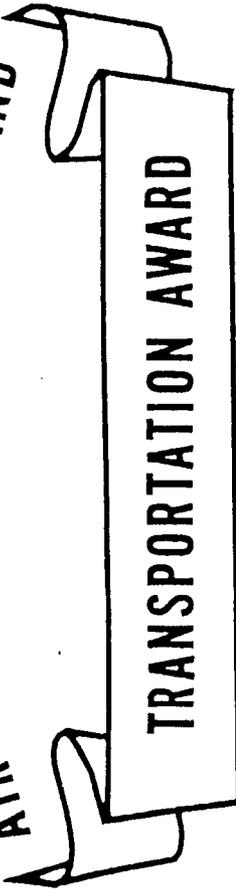
IN RECOGNITION OF OUTSTANDING CONTRIBUTIONS
TO AIR FORCE TRANSPORTATION


DIRECTOR OF LOGISTICS


COMMANDER AFMC



AIR FORCE LOGISTICS COMMAND



TRANSPORTATION AWARD

1991 AFLC PACKAGING IMPROVEMENT AWARD
FOR INDIVIDUAL EXCELLENCE

Is Presented To

MS LINDA T. JACOBS

KELLY AFB TX

In Recognition of Outstanding Contributions
To Air Force Transportation

Fabrice A. Skeneberry
DCS/LOGISTICS

Charles L. McDonald
COMMANDER AFLC



1993

Transportation

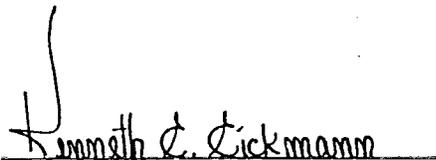


**Military Traffic Management Command (MTMC)
Award for Excellence in Traffic Management**

IS PRESENTED TO

**Ms. Elva Aragon
Acquisition Support Flight
651st Air Base Group (SA-ALC)
Kelly Air Force Base, Texas**

**IN RECOGNITION OF OUTSTANDING CONTRIBUTIONS
TO AIR FORCE TRANSPORTATION**



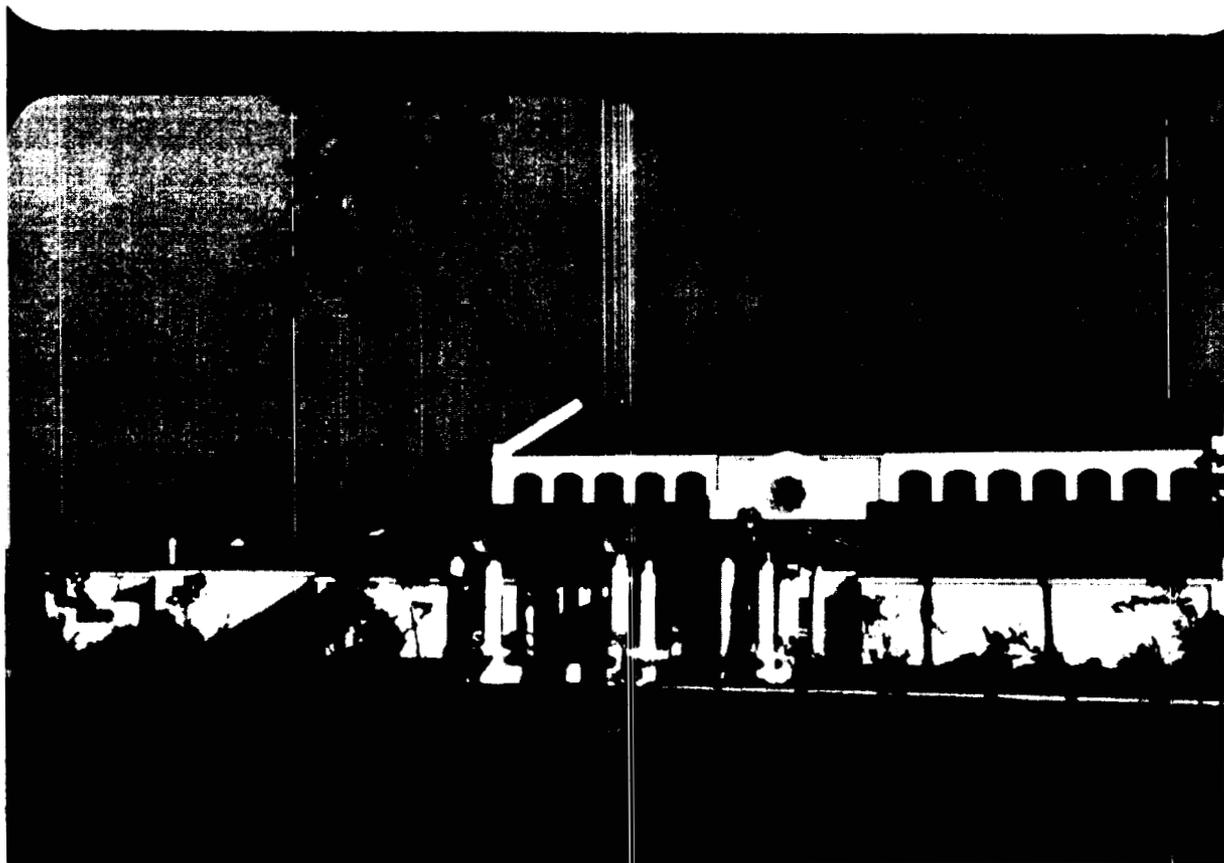
DIRECTOR OF LOGISTICS



COMMANDER AFMC

1993
AFMC DESIGN AWARDS
FIRST HONOR AWARD

NCO CLUB
KELLY AFB



1993
AFMC DESIGN AWARDS
DESIGN CITATION

WEAPONS SYSTEMS SUPPORT CENTER
KELLY AFB



1993
AFMC DESIGN AWARDS
SECOND HONOR AWARD

UPGRADE WHERRY HOUSING, PHASE III
"BILLY MITCHELL VILLAGE"
KELLY AFB



1992
AFMC DESIGN AWARDS
SECOND HONOR

HOUSING COMMUNITY PLAN
KELLY AFB



SECTION VII
CROSS REFERENCE
MATRIX

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TOPIC CROSS REFERENCE MATRIX

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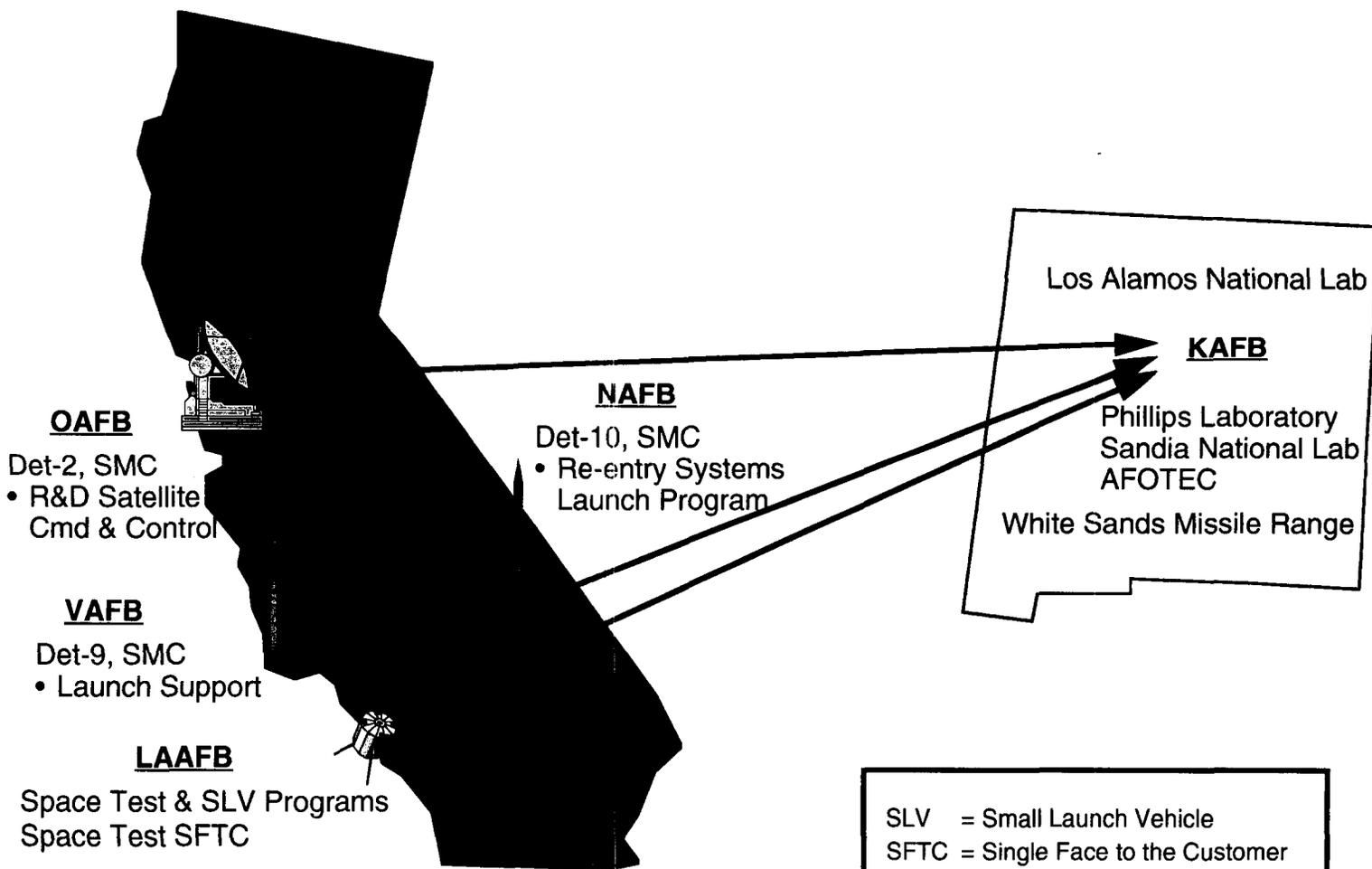
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UNCLASSIFIED



TEO MOVE TO KAFB

Collocation of Space & Missile RDT&E Functions at Kirtland AFB



UNCLASSIFIED

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Network Support

Mission



- **On-site Network Program Office**
- **Sustaining engineering and integration of satellite control operations**
- **Ensures system availability for**
 - **Telemetry, Tracking, and Commanding (TT&C)**
 - **Mission data dissemination**
 - **Data processing support**
- **Assists planning for launch and early on-orbit satellite support**
- **Ensures integrity of developmental and operational capabilities at Onizuka to support and control space missions**

UNCLASSIFIED

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Network Support (Cont'd)

- **MINOR MOD PROGRAM**
 - **A quick, inexpensive means to satisfy small-scale temporary and permanent AFSCN requirements**
 - **Larger modifications handled by Network Program Office**

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Network Support (Cont'd)



Resources

	<u>AUTH</u>
OFFICER:	18
ENLISTED:	2
CIVILIAN:	<u>9</u>
TOTAL GOVT PERSONNEL:	29
TOTAL CONTRACTORS:	<u>200</u>
TOTALS:	229

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UNCLASSIFIED



Network Support Accomplishments

- **NIS Rehost onto SMART**
- **TOMS-EP (NASA) Launch & Early Orbit Communications Link**
- **OTSS/DDE Cutover**
- **FTS-2000 Installation with Goddard SFC (NASA)**
- **ES-9000 Installation for Four MCCs**
- **MSX Link to VAFB**
- **Primary Launch & Early Orbit Support for MILSTAR**
- **Automatic Main Beam Acquisition (AMBA) Test & Checkout**
- **GOES (NOAA) Launch**

UNCLASSIFIED

UNCLASSIFIED



Current Network Support Activities

- **Manage Software Development and Test Laboratory**
 - **Operational Database Checkout**
 - **Software Development and Test for CCS Models**
- **Operate Integrated System Support Facility**
 - **Software/Hardware Assembly/Test Area for Mods**
- **Operate Secure Test Facility**
 - **Integration and Testing of Mods Involving COMSEC**
- **Provide OAS Facility Integration Support**

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Onizuka Air Station Summary



Unique Onizuka Missions and Roles

◆ Network Operations

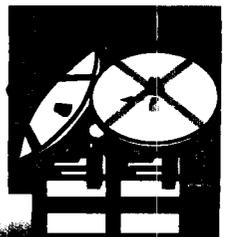
- ◇ **Technical Capacity/Connectivity to Support Users**
- ◇ **Support to Non - DOD Users - NASA, Allies**
- ◇ **Specialized Comm and Test Assets DLT, IRO, Camp Parks**

◆ Satellite Operations

- ◇ **Prime for Launch, early orbit and Allied Satellites**
- ◇ **Back-up for numerous DOD and NASA Satellites**
- ◇ **R&D, Test and Evaluation of new systems and technology**

◆ Classified Program Support

- ◇ **Mission Control and Comm Node for multiple programs**





Unique Onizuka Missions and Roles

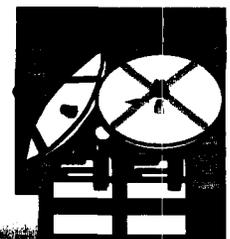
(Cont.)

◆ Defense Satellite Communications

- ◇ 1 of 2 West Coast Nodes for Pacific Area Comm

◆ Primary Military Community Support for Onizuka-Moffett Complex and South Bay Area

- ◇ Active Duty, Reserve, Dependents and Retirees





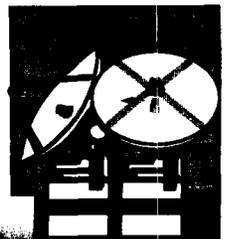
Contributions to Our Nation's Defense

◆ **For Three Decades Onizuka was at the Front Lines Fighting the Cold War**

◆ **Space Operations were key to Nuclear Deterrence**

◆ **Onizuka has been at the Forefront of Providing Direct Support to Post Cold War Military Operations**

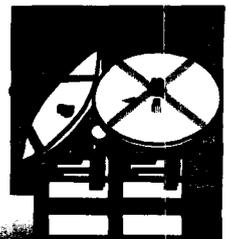
◆ **Providing Global Presence and Information in era of
Reduced Defense Forces and Increased World Instability**





Factors in Our Success

- ◆ **Vital Important Missions, Good People and Strong Support**
- ◆ **Physical Proximity of World - Leading Space Technology, Development, Manufacturing, Operations Expertise and Facilities**
 - ◇ **Stimulate, Assimilate, Facilitate Innovation**
- ◆ **Close Government - Industry Team Work**
 - ◇ **Many agencies and companies working together**





Our Future Direction

◆ Continued DOD Satellite Program Consolidation

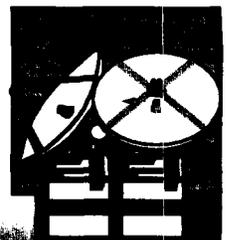
- ◇ Declining Budgets, Fewer systems/programs
- ◇ More DOD/Civil Space Integration
- ◇ Increasing Commercial Space Programs, Products & Services

◆ Satellite Control Network Modernization

- ◇ Move towards commercial telecommunications technology, systems, operations

◆ Increased Government - Industry Space Cooperation / Partnership

- ◇ Commercial Space use of AF Satellite Control Network





Onizuka Air Station Facility Tour

Stop 1: Network Scheduling

- Scheduling is a 24 hour a day operation scheduling 800 global resources for 370 - 400 satellite contacts per day for a growing number of customers
- 30% of the schedule will be changed after it is published because of dynamic customer requirements
- The biggest users of the network, OD-4, have 2 Satellite Operations Centers that identify mission requirements only 48 hours prior to publishing of the schedule
 - Everyone else has a 7 day requirement
- Scheduling has "out grown" paper chart
 - No longer a viable back up - there are too many satellites and too many resources.
- ASTRO Scheduling System - not "automated" scheduling, but "computer assisted." Still requires experienced scheduler to optimize and deconflict

Stop 2: Test Support Complex - 1 (TCS-1)

- Here we do development testing and evaluation for SPACE programs similar to what Air Force Flight Test Center does for aircraft programs
- Det 2 provides:
 - Capability to rapidly modify and install test support equipment and software to accommodate test missions
 - Special data processing and analysis services to customers to assist in meeting experiment objectives
 - Distribution of collected information to scientist, program offices, and other users as required
- We are able:
 - Control tracking station equipment at remote sites
 - Send commands to maneuver, configure and control orbit and attitude of orbiting spacecraft

- Receive telemetry (configuration, health/status, and scientific data) from the orbiting spacecraft
- Currently the on-orbit missions are testing new technologies to enhance capability of space resources
 - 1. STEP Mission 1 demonstrates the application of a low-cost, standardized spacecraft architecture that any experimenter can use to fly his satellite without having to design a spacecraft for it to ride on
 - 2. APEX tests new technologies for solar energy collection and application in space
 - 3. STEP M2/SIDEX tests new technologies for communications in dense signal environments
 - 4. STEP M0/TAOS tests new technologies for satellite autonomous operation and survivability to better protect satellites during times of hostility
 - 5. POAM measures the atmospheric make-up at the polar regions and its affect on light propagation for application of spaceborne optical systems-- also tests affect of man-made chemicals on the ozone layer
 - 6. PEGASUS, TAURUS and LLV test new booster technologies for making access to space significantly cheaper then traditional means

Stop 3: Satellite Operations Center - 38 (SOC 38)

- 24 hour continuous operations center; primarily supports communications satellite
- Primary responsibility for Defense Satellite Communication System (DSCS II) on orbit and DSCS III launch and early orbit operations
- Very active back-up facility for NATO IV and SKYNET communication satellites flown by the British
- Also back-up for Navy FLTSAT and DSCS III Communication Satellite Constellations flown at Falcon
- Additional very basic back-up capability for Global Positioning System (GPS) Navigation Satellite Constellation

Stop 4: Satellite Operations Center - 39 (SOC 39)

- Primarily supports launches, hence not in a continuous operations except during launch campaigns

- Solely responsible for Inertial Upper Stage (IUS) booster carried on the Space Shuttle and the expendable booster.

 - IUS is used to kick satellites up to high altitude orbits

- Supports various NASA launches such as National Oceanic and Atmospheric Administration (NOAA) weather satellites and the Geostationary Operational Environmental Satellite (GOES) weather satellites which provide high altitude cloud cover photos common on TV

- Provide back-up support for Defense Support Program (DSP) early warning system

Stop 5: Network Tech Control

- Mission Focus: Provide real-time configuration of Network Communication assets (Falcon AFB, SOC's, NASA, externals, etc.)

- 24 hour operation manned by military, civilian and contractor personnel

- Dual (Prime/Alt) communication connectivity to all RTS's

- Provide additional communication path for Falcon AFB to Tracking Stations via backhaul (dual node reliability)

- Onizuka AS 1994 Personnel Reliability: 118,424 Supports with Personnel Errors (PE's) = .025 PE's per 1000 Supports

Stop 6: Satellite Ground Terminals

- Defense Satellite Communications System (DSCS-pronounced disk-cus) is a worldwide Department of Defense satellite communications system with 81 earth terminals and 11 satellites

 - Onizuka's two earth terminals (SUN-EAST and SUN-WEST) each point toward geosynchronous satellites located over the Eastern Pacific (EASTPAC: a DSCS-III satellite) and the Western Pacific (WESTPAC: a DSCS-III satellite)

- Defense Information Systems Agency manages the DSCS network

 - Earth terminal sites operated by all three services (29 USAF, 35 USA, 16 USN, 1 other)

 - 86 Air Force enlisted personnel operate and maintain SUN-EAST and SUN-WEST

- Onizuka's DSCS terminals serve as one of two major DOD communication gateways to Pacific region
 - Over 200 digital and analog circuits and trunks are routed through the terminals
 - Carry a wide variety of traffic including telephone calls, message traffic, strategic warning data, national emergency command post information, White House communications, the Air Force Satellite Control Network, and other national agencies
 - Only 5-10 percent of circuits through terminals are for AFSCN data

Stop 7: Onizuka Power Plant

- The Onizuka Air Station's total energy power plant provides prime power for critical equipment at Onizuka's satellite mission control centers.
- The plant capacity is 9 megawatts (sufficient to provide electricity to 1,700 average sized residential homes).
- The capacity for 2000 tons of refrigeration would air condition approximately 4,500 residences.
- Twelve 1,005hp industrial gas turbines drive twelve 750 kilowatt alternators.
- Waste heat from engine exhaust is recycled to produce steam and chilled water via absorption chillers.
- In over 25 years of around the clock operation, the plant has only been down for a total of 11 hours and 36 minutes due to equipment problems.





Mr. Federal Arnold

Presentation to the BRAC Commission

NASA Ames Research Center

April 26, 1995

① OAC ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱ ⑲ ⑳ ㉑ ㉒ ㉓ ㉔ ㉕ ㉖ ㉗ ㉘ ㉙ ㉚ ㉛ ㉜ ㉝ ㉞ ㉟ ㊱ ㊲ ㊳ ㊴ ㊵ ㊶ ㊷ ㊸ ㊹ ㊺ ㊻ ㊼ ㊽ ㊾ ㊿

Proposed realignment of
OAC ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱ ⑲ ⑳ ㉑ ㉒ ㉓ ㉔ ㉕ ㉖ ㉗ ㉘ ㉙ ㉚ ㉛ ㉜ ㉝ ㉞ ㉟ ㊱ ㊲ ㊳ ㊴ ㊵ ㊶ ㊷ ㊸ ㊹ ㊺ ㊻ ㊼ ㊽ ㊾ ㊿
NG would have significant
impacts on MFA

- Loss of necessary services
- Loss of significant airfield user
- Increased costs to remaining Resident Agencies
- Diminished attractiveness to federal agencies

*Proposal increases concern about
NASA's ability to host the Federal Airfield*

Timeline of NAS Alameda Technology

1947 - 1948 - Commenced as Sunnyvale Naval Air Station

1950 - 1951 - NAS Alameda Research Center adjacent to NAS

1952 - Lockheed Martin facility adjacent to NAS

1953 - USAF satellite control facility - now Onizuka AS

1962 - BRAC recommends closure of NAS Moffett Field

1963 - Navy and NASA sign MOU for transfer

1964 - BRAC directs NAS Alameda reserve units to MFA

1965 - NAS Moffett Field disestablished and Moffett Federal Airfield established



129th RQG

Operations/Deployments

**Operations, Medical, Maintenance
and Support personnel**

129th Civil Engineering Squadron

561st Air Force Band

129th Civil Engineering Squadron

**Operations, Maintenance and
Support personnel**

129th Rescue Squadron





129th RQG

State Contingency

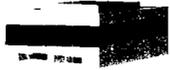
Support





Civil Search and Rescue Elements

**Calif. Office of
Emergency Services**



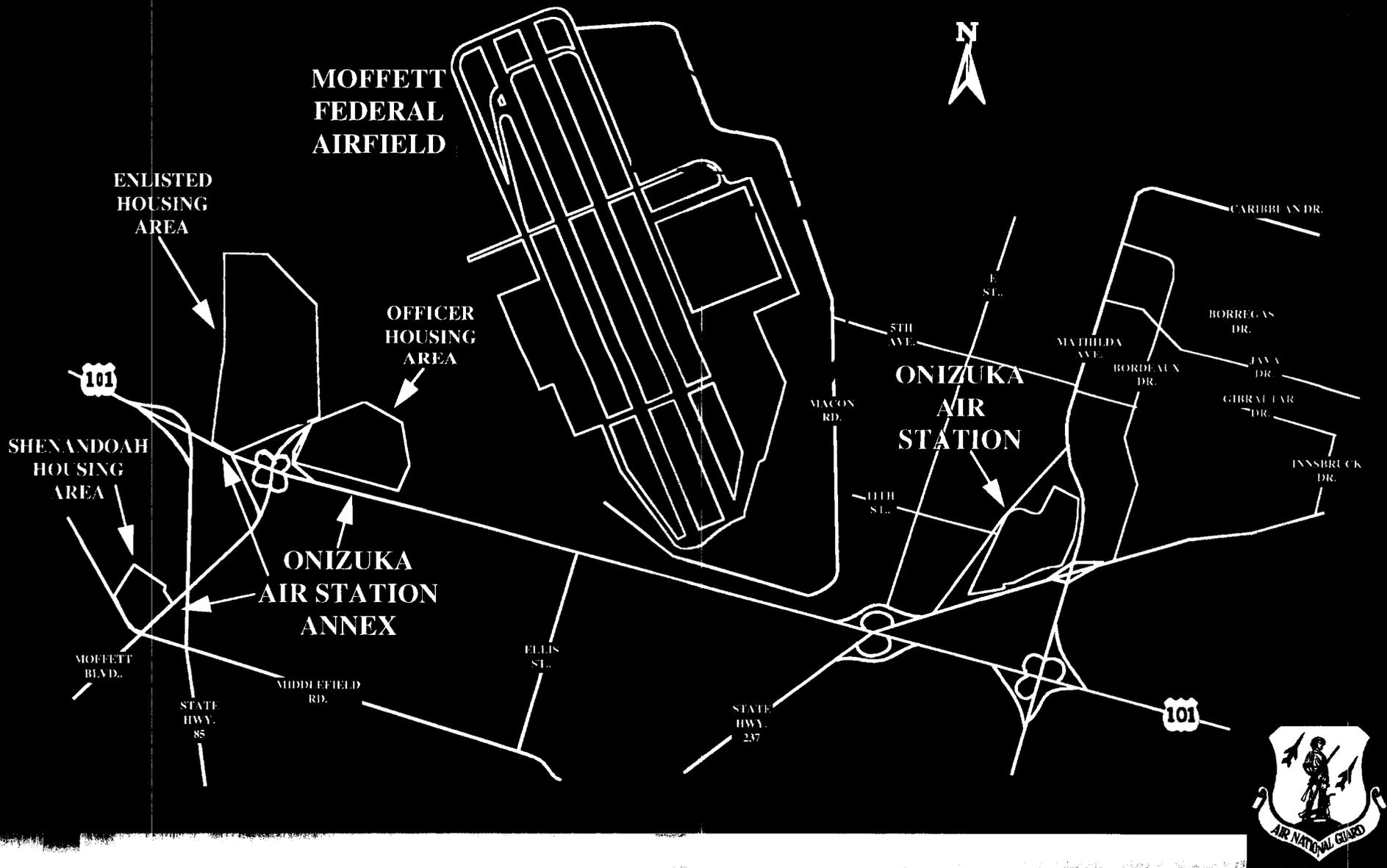
129th Rescue Group

**Rescue Coordination Center
Langley AFB VA**





Moffett Facilities





129th RQG Information

◆ Acres of Land	14.7
◆ Number of Buildings	13
✧ Square footage	183,512
◆ Equipment Values	\$73.9M
✧ HC-130 aircraft	4
✧ HH-60 helicopters	5
◆ Missions Flown	(FY 94)
✧ HH-60 Sorties	829
✧ HH-60 Hours	1,231
✧ HC-130 Sorties	525
✧ HC-130 Hours Flown	1,342





129th Rescue Group Demographics

Auth/Assign

◆ Active Duty Members	90/90
◆ Air Technicians	158/148
◆ Temporary Air Technicians	/10
◆ Traditional Guardsmen	539/468
◆ Others	64/62
◆ Annual Direct Economic Impact	\$27M





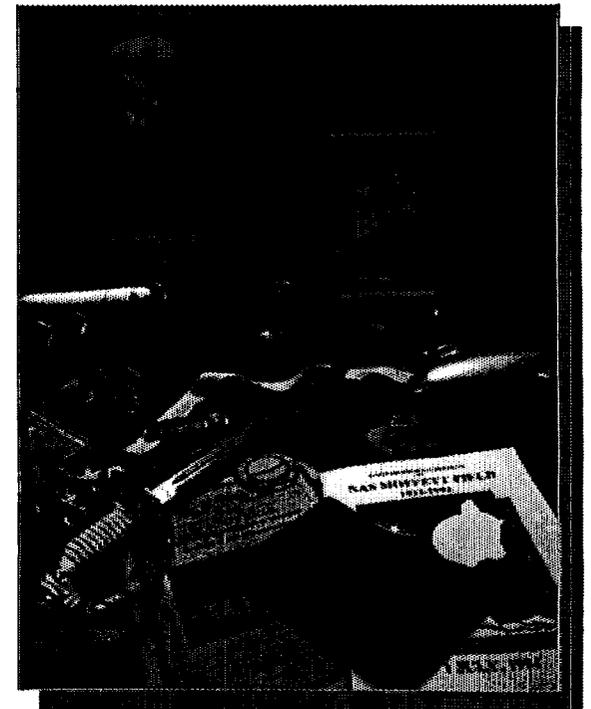
129th RQG Budget

✧ Air Technicians	8.700M
✧ Active Duty (AGR)	3.200M
✧ State Civil Service	.300M
✧ Other Full-time Personnel	1.900M
✧ Traditional ANG Pay & Allowance	6.300M
✧ Supplies and Equipment	1.600M
✧ NASA Share Cost	.600M
✧ Other Support Services	.400M
✧ Aircraft Fuel	1.060M
✧ Training Support	.590M
✧ Facilities O&M	.400M
✧ Depot Level Repairables	1.600M





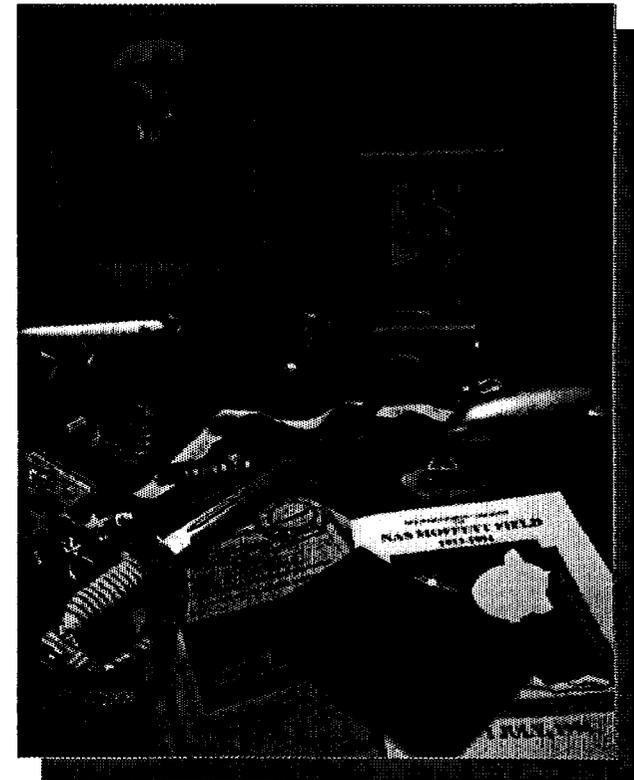
***Moffett Field Complex
Community Presentation to
Commissioners Cox & Cornella
and BRAC 95 Staff***



Briefing Outline

◆ Introduction

- ◆ **Moffett Field Complex**
- ◆ **Air Force Recommendations**
- ◆ **Onizuka Air Station**
 - National Security
 - Military Value
 - COBRA Analysis
 - Alternative Proposal
- ◆ **129th Rescue Group (RQG)**
 - Military Value
 - COBRA Analysis
 - National Security
- ◆ **Summary and Conclusions**



Briefing Panelists

<i>Panelist</i>	<i>Title</i>
Honorable Dianne McKenna	Member, Board of Supervisors, Santa Clara County
Honorable Anna Eshoo	Member of Congress (D-14-CA)
Honorable Barbara Waldman	Mayor of Sunnyvale
Honorable Patricia Figueroa	Mayor of Mountain View
Mr. John McMahon	Former Deputy Director, CIA
Mr. Tapan Munroe	Chief Economist, Pacific, Gas & Electric
Mr. Lee Grissom	Director of Planning & Research, Officer of the Governor

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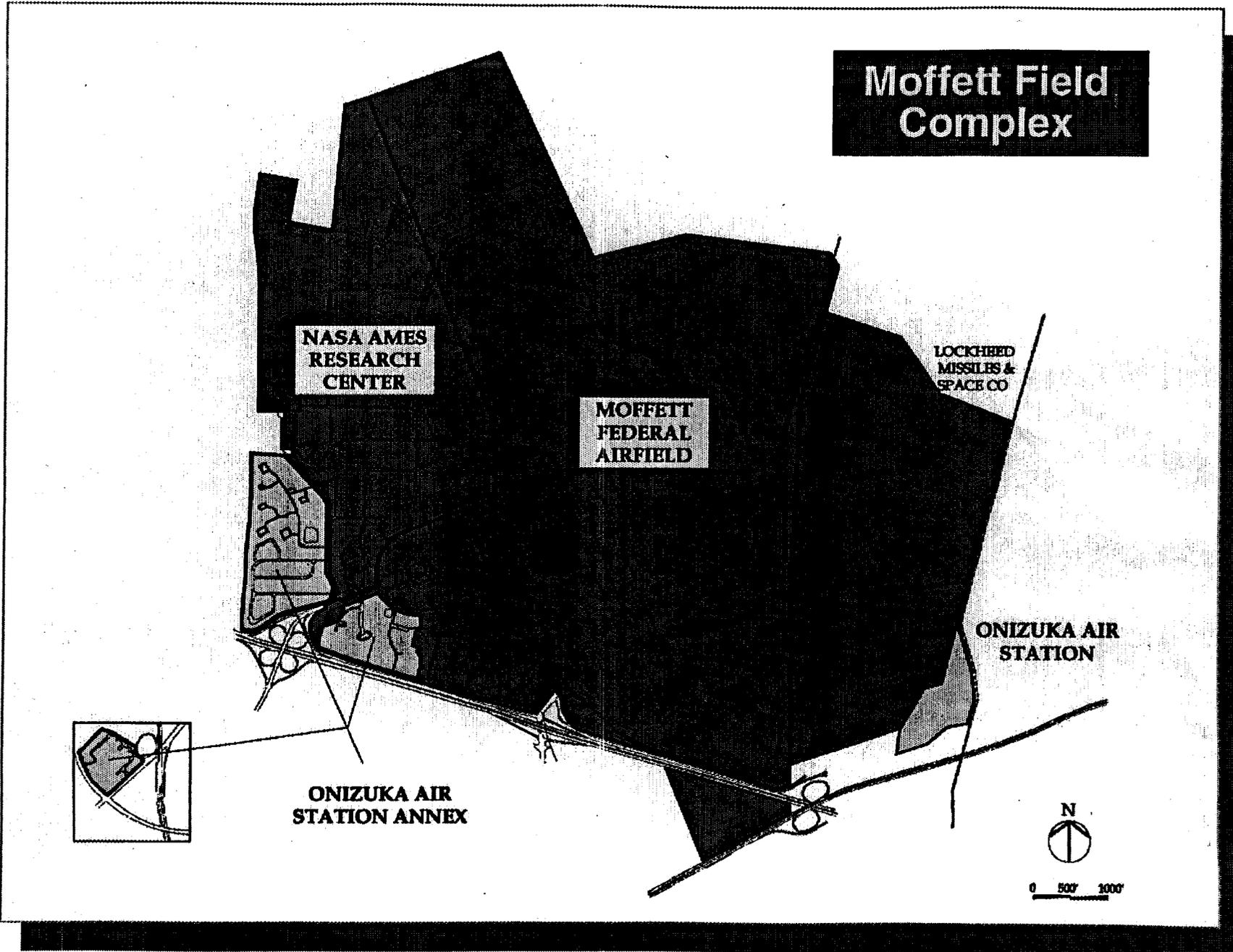


Moffett Field Complex
Center of America's
Aerospace Industrial Base





Moffett Field Complex



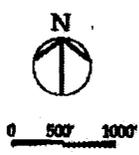
NASA AMES
RESEARCH
CENTER

MOFFETT
FEDERAL
AIRFIELD

LOCKHEED
MISSILES &
SPACE CO

ONIZUKA AIR
STATION

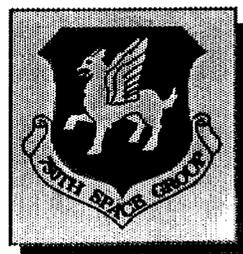
ONIZUKA AIR
STATION ANNEX



Moffett Field Complex



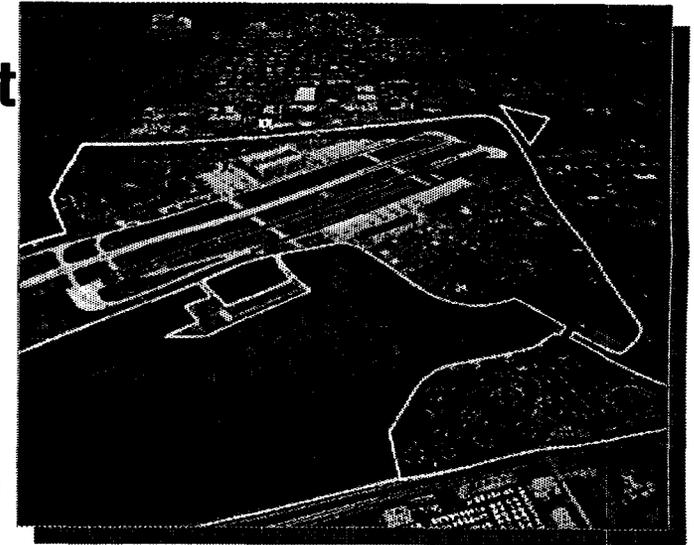
- ◆ Moffett Federal Airfield
- ◆ Onizuka Air Station
- ◆ NASA Ames Research Center
- ◆ Aerospace and High Technology Industries
- ◆ Bay Area Universities



Moffett Field Complex

Moffett Federal Airfield

- ◆ **Approximately 1,500 acres**
- ◆ **3.5 million square feet of facilities**
- ◆ **Two runways of 9,200 and 8,100 feet capable of accommodating the largest military transport aircraft**
- ◆ **All-weather capability / controlled airfield**
- ◆ **129th Rescue Group (RQG) – CANG**
 - **Key aviation tenant at the airfield**
 - **Air Guard Search & Rescue Mission**
 - **Provides manpower for the Moffett Federal Airfield's Crash, Fire and Rescue; and Air Traffic Control operations**

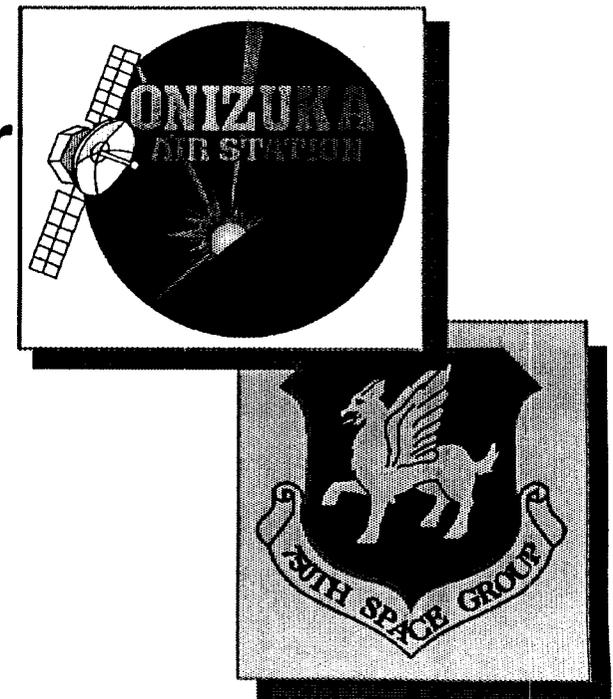


Moffett Field Complex

Onizuka Air Station



- ◆ **Air Force Space Command (750th Space Group): Satellite Command and Control Network**
- ◆ **Space & Missile Systems Center (Detachment 2): Research, Development, Test & Evaluation of Pre-Operational Spacecraft**
- ◆ **Classified Tenants**



Moffett Field Complex

NASA Ames Research Center



- ◆ **Center for National Rotorcraft and Powered – Lift Flight Research**
- ◆ **Research Center for Aeronautics, Space, Life and Earth Sciences**
- ◆ **Custodian of Moffett Federal Airfield**

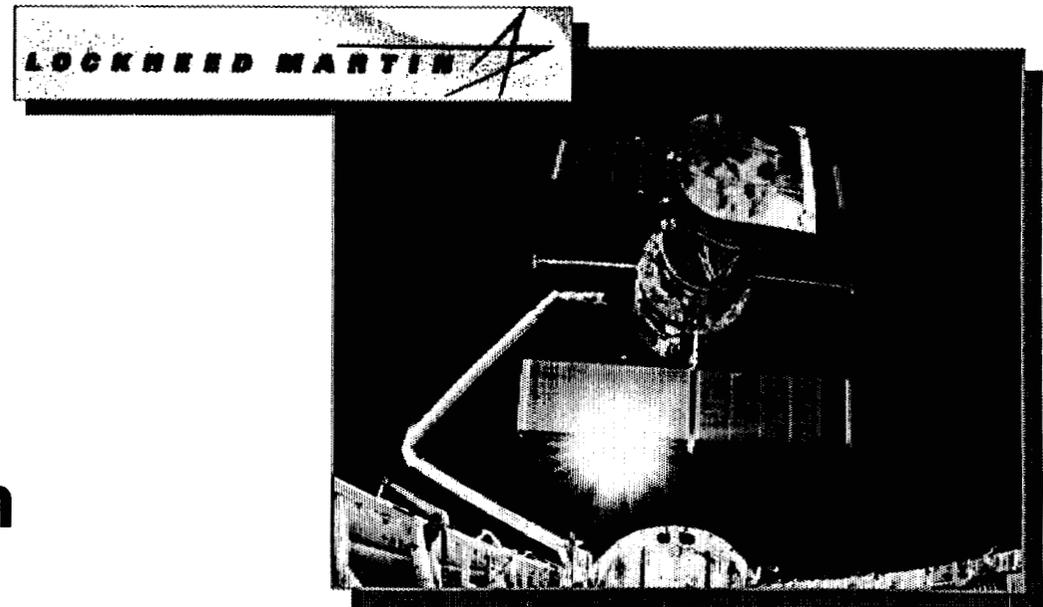


Moffett Field Complex



Aerospace and High Technology Industries

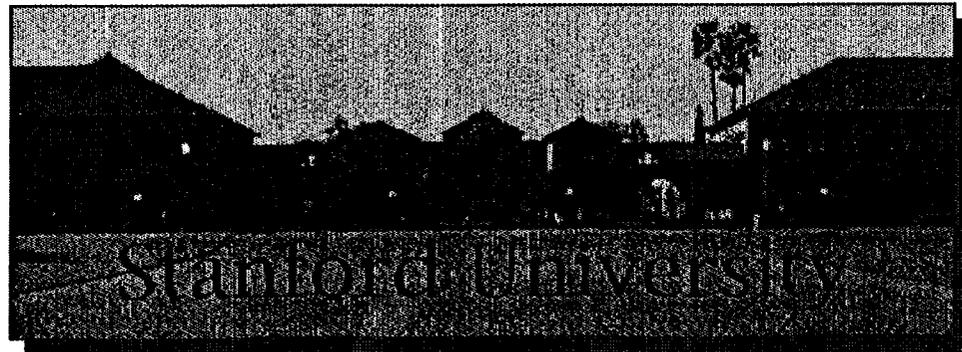
- ◆ Lockheed Missiles & Space Company
- ◆ TRW
- ◆ Loral
- ◆ Silicon Graphics
- ◆ Trimble Navigation



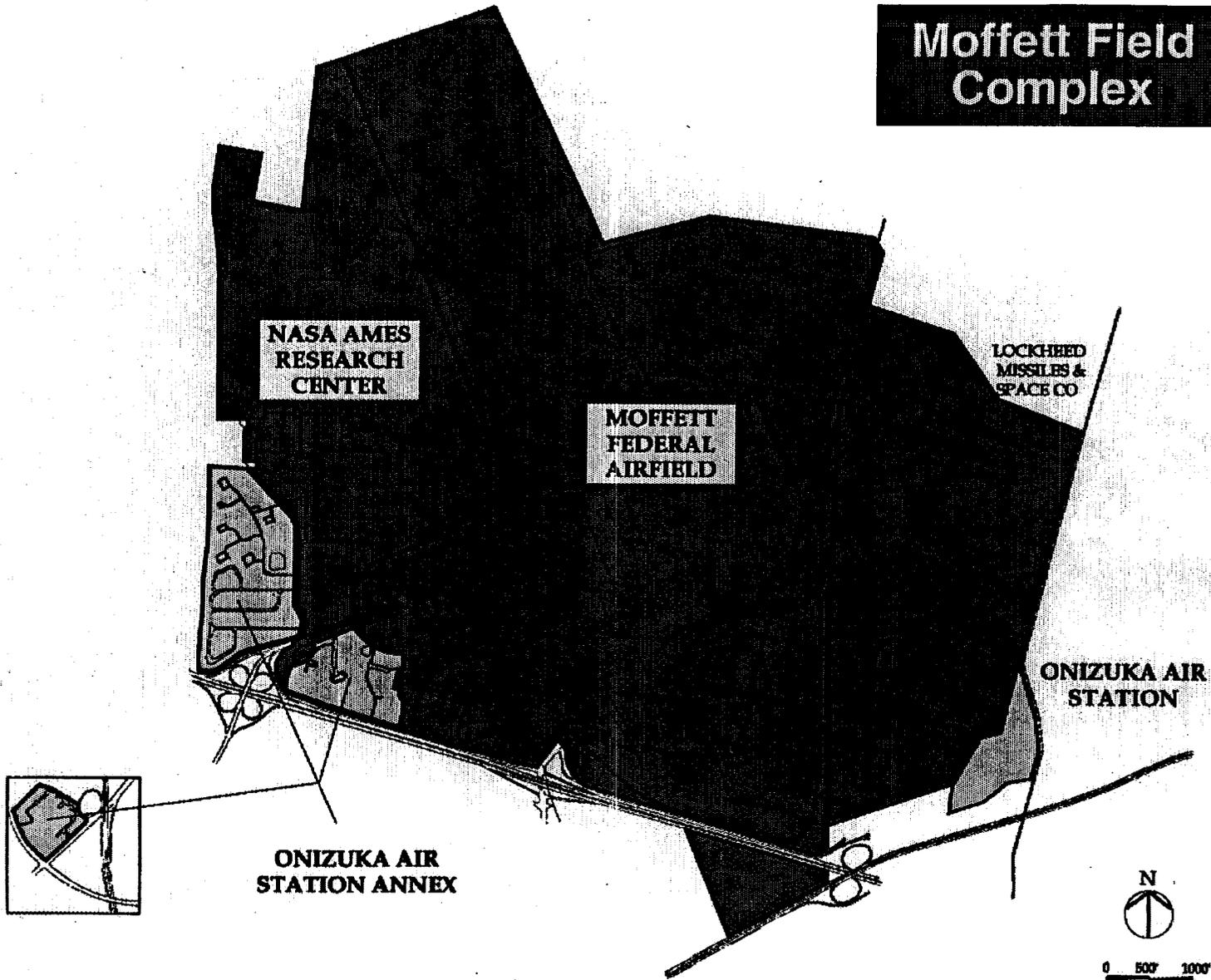
Moffett Field Complex

Bay Area Universities

- ◆ **Close proximity**
- ◆ **Direct contribution to educational and professional development of engineers / scientists; and conduct of research initiatives, etc.**
- ◆ **Stanford, U.C. Berkeley, San Jose State, Santa Clara, etc.**



Moffett Field Complex



NASA AMES
RESEARCH
CENTER

MOFFETT
FEDERAL
AIRFIELD

LOCKHEED
MISSILES &
SPACE CO

ONIZUKA AIR
STATION

ONIZUKA AIR
STATION ANNEX



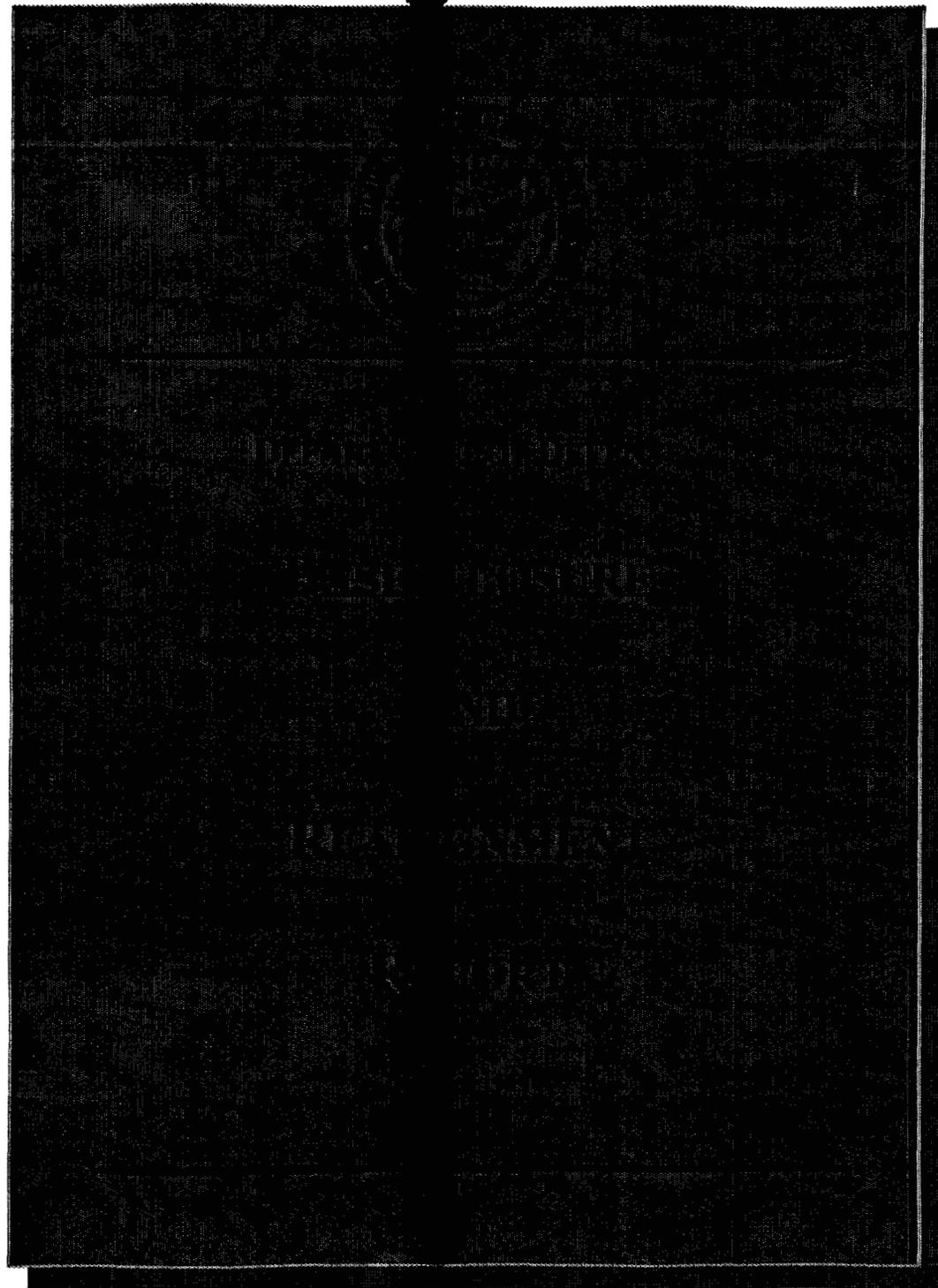
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Briefing Outline

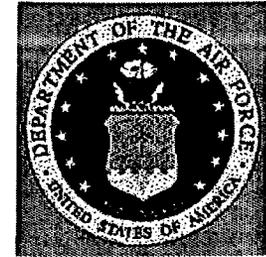


- ◆ Introduction
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Air Force Recommendations



Onizuka Air Station (OAS)

◆ Recommendations

- Realign OAS
- Inactivate the 750th Space Group
- Relocate 750th functions to Falcon AFB
- All activities and facilities associated with the 750th will close (family housing/clinic)
- Detachment 2, Space and Missiles Systems Center will relocate to Falcon AFB

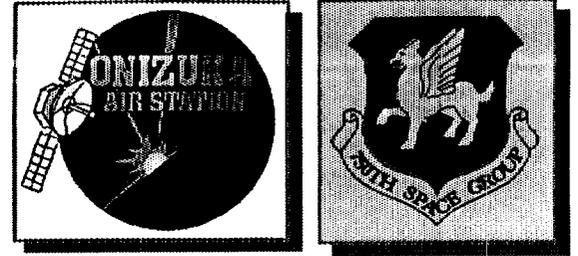
◆ Justification

- Single Node versus Dual Node
- OAS ranked lower in Military Value than Falcon AFB
- Significantly higher closure costs at Falcon AFB

◆ Return On Investment

- Estimated one – time cost to implement: \$124.2 million
- ROI: Expected in eight (8) years

Onizuka Air Station



- ◆ **National Security Implications**
- ◆ **Military Value Analysis**
- ◆ **Flawed Air Force Analysis**
- ◆ **Alternative Realignment Proposal**

Air Force Recommendations



Moffett Federal Airfield Air Guard Station

- ◆ **Recommendation**
 - **Close Moffett Federal Airfield Air Guard Station**
 - **Relocate 129th RQG and associated aircraft to McClellan AFB**

- ◆ **Justification**
 - **Costs to the Air National Guard for Moffett Federal Airfield operations have risen significantly**
 - **Costs can be avoided if unit moved to an active duty airfield**

- ◆ **Return on Investment**
 - **Estimated one – time cost to implement: \$15.2 million**
 - **ROI: Expected in four (4) years**

129th Rescue Group (RQG)



- ◆ **Military Value Analysis**
- ◆ **COBRA Analysis**
- ◆ **Recommended Course of Action**

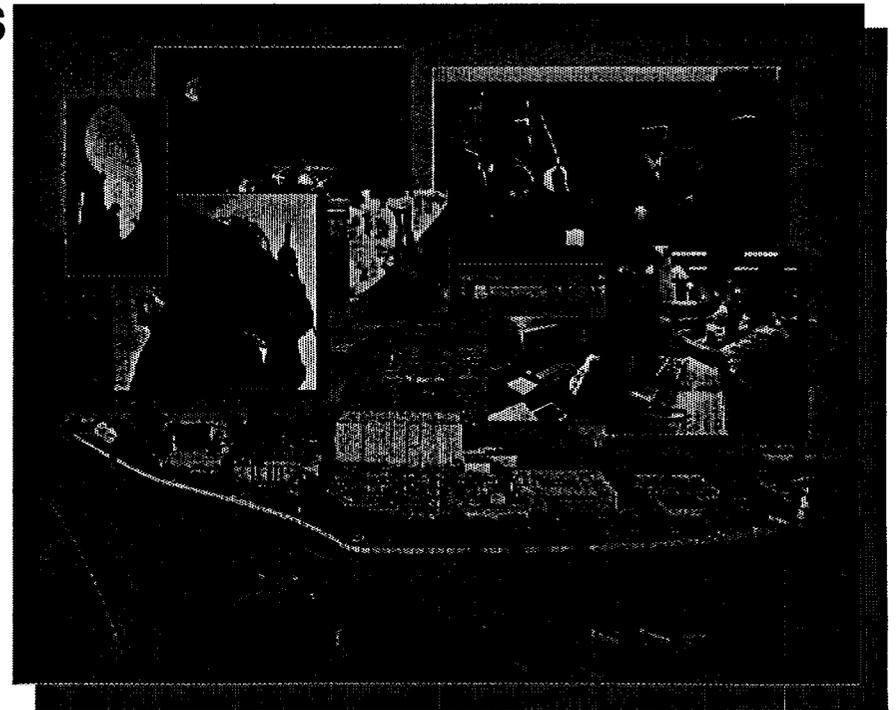
Briefing Outline



- ◆ Introduction
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- ◆ Air Force Recommendations



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Onizuka Air Station



◆ National Security Implications

◆ Military Value Analysis

◆ Flawed Air Force Analysis

◆ Alternative Realignment Proposal

Onizuka Air Station



National Security Implications / Operational Requirements

- ◆ **Redundancy (Dual Node vs. Single Node)**
 - Mission Objective
 - Mission Requirements
 - Security Requirements
 - External / Environmental Threats
 - Need for Back-up
 - Air Force Policy Directive

- ◆ **Excess Capacity**
 - Space Command Analysis
 - OAS Satellite Control Capacity
 - Expansion Capability

Onizuka Air Station

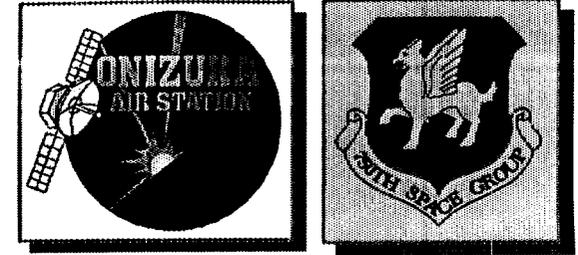


◆ Redundancy (Dual Node vs. Single Node)

– Mission:

Mission objective is to provide vital support from space during peace and throughout all levels of conflict with a robust, flexible, responsible and enduring satellite control capability.

Onizuka Air Station



- ◆ **Redundancy (Dual Node vs. Single Node)**
 - **Mission Requirements:**
 - **Standardized space / ground segment datalinks**
 - **Data processing elements**
 - **Interfaces**
 - **Support infrastructure**
 - **Secure communications**
 - **Data dissemination connectivity**
 - **Back-up resources to eliminate single failure points**

Onizuka Air Station



- ◆ **Redundancy (Dual Node vs. Single Node)**
 - **Security Requirements**
 - **Highest degree**
 - **Multi – Level**
 - **Redundancy**
 - **External / Environmental Threats**
 - **Protestors**
 - **Terrorists**
 - **Natural disasters**

Onizuka Air Station



- ◆ **Redundancy (Dual Node vs. Single Node)**
 - **Back – Up Required**
 - **Critical national assets**
 - **Continuous / Uninterrupted control capability**
 - **Air Force Policy Directive**
 - **January 30, 1995**
 - **Back – up satellite control capability**
 - **Geographical separation required**

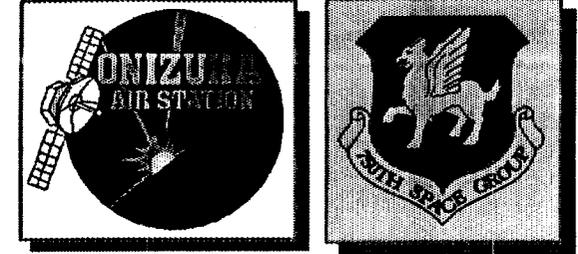
Onizuka Air Station



National Security Implications / Operational Requirements

- ◆ **Redundancy (Dual Node vs. Single Node)**
- ◆ **Excess Capacity**
 - **Space Command Analysis**
 - **OAS Satellite Control Capacity**
 - **Expansion Capablility**

Onizuka Air Station



◆ **Excess Capacity**

- **Space Command Analysis**
 - **No runway**
 - **Limited mission area**

- **Satellite Control Capacity**
 - **Core operations**
 - **Mission volume**

- **Expansion Capability**
 - **Relationship with Moffett Federal Airfield**
 - **Controlled / Secure Airfield**
 - **Suitable area for low cost expansion**

Onizuka Air Station



◆ National Security Implications

◆ Military Value Analysis

◆ Flawed Air Force Analysis

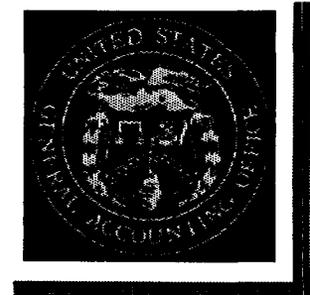
◆ Alternative Realignment Proposal

Onizuka Air Station

Military Value Analysis



- ◆ **Unauditable Due To Secret Ballot By BCEG**
- ◆ **Air Force Relied On "Military Judgment"**
- ◆ **Undocumented Approach Put Falcon In Tier I and Onizuka in Tier III**
- ◆ **GAO Faulted This Approach**
- ◆ **Makes Commission's Independent Assessment Difficult**
- ◆ **Commission's Independent and Thorough Review Is Crucial**



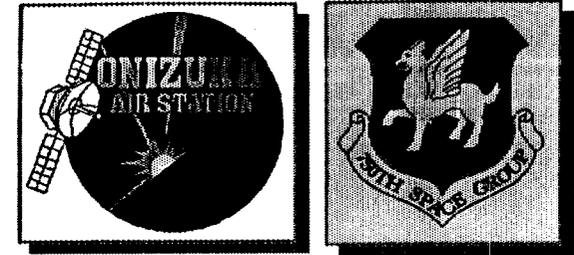
Onizuka Air Station

Military Value Analysis – Satellite Control Operations



- ◆ **Mission Capacity (Future Mission Projection)**
 - **Unidentified 75% Reduction In Future Missions**
 - **No Reason To Assume Reduction Based On Current Total Capacity**
 - **Were Tenant Activities The Source Of This Reduction?**

Onizuka Air Station



Military Value Analysis – Satellite Control Operations

- ◆ **Mission Capacity (Core Mission Capable)**
 - Onizuka has 23 CPUs of data processing power, Falcon has 13 CPUs
 - Onizuka has 36 satellite control points, Falcon has 21 control points
 - Onizuka has 100% of bandwidth capability benchmark, Falcon has 30%
- ◆ **Onizuka clearly superior on relevant mission capacity scoring subelements**
- ◆ **Realigning to Falcon AFB which does not have Core Capacity**

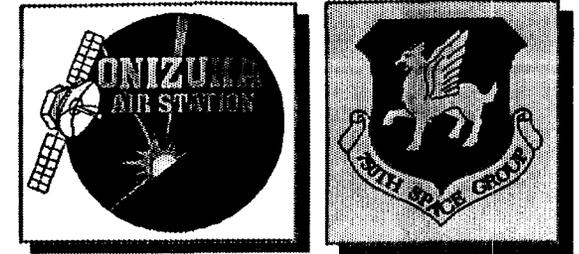
Onizuka Air Station



Military Value Analysis – Facilities and Infrastructure

- ◆ **Mission Capacity (Unique Facilities)**
 - **Air Force Questionnaire Lists None**
 - **Onizuka Has Several Unique Facilities Including:**
 - **Data Link Terminal**
 - **Camp Parks Calibration Facility**
 - **Communication Connectivity**
 - **DSCS Heavy Terminal**
 - **Classified Programs**
 - **Space Ops Center 37 (Test Support)**

Onizuka Air Station



Military Value Analysis - Facilities and Infrastructure

- ◆ **On-Base Housing**
 - **Onizuka Annex has Moffett Housing Area**
 - **Falcon Has No On - Base Housing**
 - **Falcon Received (Green -) and Onizuka Received (Yellow +)**
 - **Scoring Is Flawed**

Onizuka Air Station



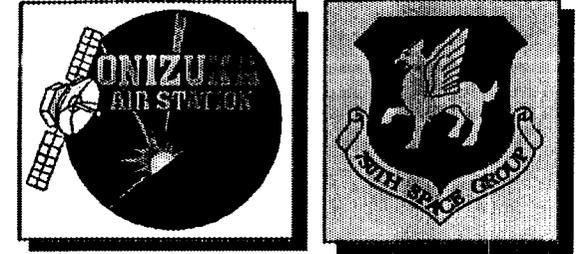
Military Value Analysis – Facilities and Infrastructure

◆ Air Quality

- **Weighted 40% (Highest In Subcategory)**
 - **Not Relevant – No Flight Operations**
 - **No Impact On Satellite Control**
- **Onizuka Scored Red on "Restrictions Element", Although No Operational Impact**

Onizuka Air Station

Military Value Analysis



◆ Summary

- Onizuka Now Handles Majority of Contacts
- 750th Synergy With Tenants
- Current Location Permits Critical Contractor Support
 - Expertise In Communications, Computing Systems Space Vehicles (Satellites and Boosters)

Onizuka Air Station



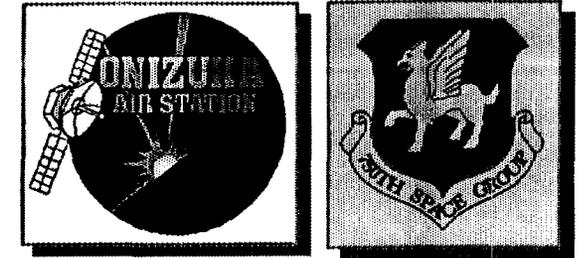
◆ National Security Implications

◆ Military Value Analysis

◆ Flawed Air Force Analysis

◆ Alternative Realignment Proposal

Onizuka Air Station



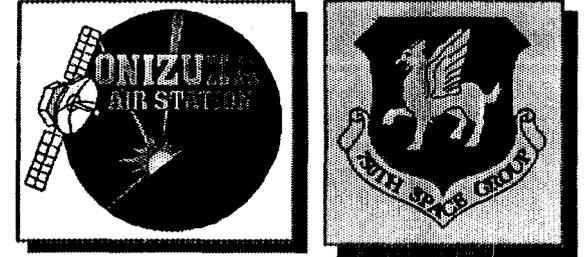
Flawed Air Force Analysis

- ◆ **Air Force Violated DoD BRAC Guidance From Start of Process**
 - Air Force Report
 - Hearing Transcript
- ◆ **Subjective Nature of Decision Process**
- ◆ **Documentation Too Limited for GAO to Substantiate**
- ◆ **Evidence from GAO Supports Conclusion That Rating Was Arbitrary**

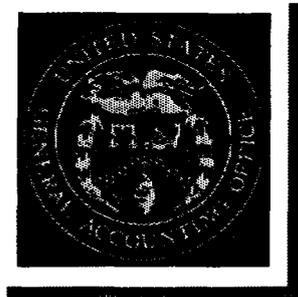


Onizuka Air Station

Flawed Air Force Analysis

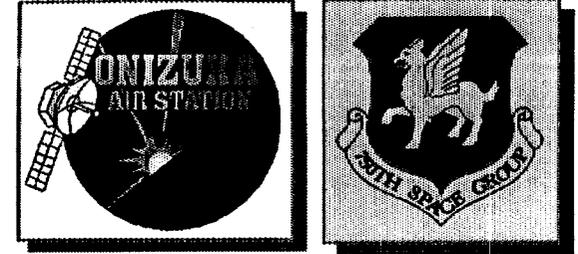


- ◆ **Air Force Savings Shifted As Costs To Other Federal Agencies**
- ◆ **GAO Recommendation to Commission**
 - **Have DoD Identify Closure and Realignment Costs / Savings That Affect Other Federal Agencies**



Onizuka Air Station

Flawed Air Force Analysis

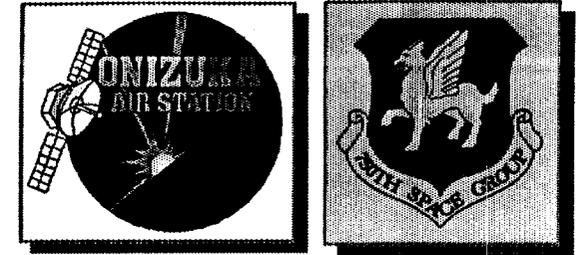


◆ Air Force COBRA Analysis

- Exaggerated prediction of \$10 million RPMA / BOS savings out of \$14 million current level, even though base stays open
- RPMA savings estimate is 100% of costs
- Inclusion of unrelated National Test Facility included in cost of closing Falcon – approximately 35% of cost
- Early consideration of these costs biased closure analysis against Onizuka

Onizuka Air Station

Flawed Air Force Analysis

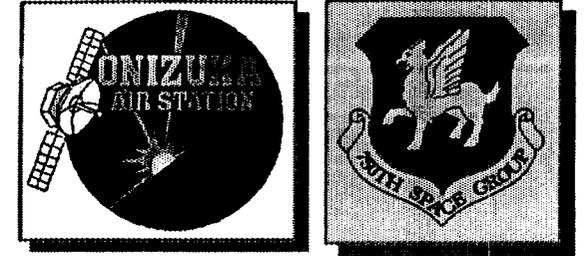


◆ Air Force COBRA Analysis

- COBRA figures revised at least 5 times
 - Each new estimate increasingly justified realignment
- Cost of realignment dropped from \$290.6 million to \$124 million in three months

Onizuka Air Station

Flawed Air Force Analysis

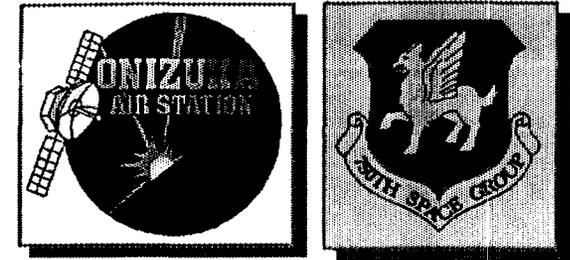


◆ **Air Force COBRA Analysis / Military Construction**

- **Cost of moving tenants is mission although 750th realignment will cause movement of tenants**
- **Full cost of closure is at least \$250 million**
- **Payback would be close to 20 years**

Onizuka Air Station

Flawed Air Force Analysis



- ◆ **Air Force COBRA Analysis / Infrastructure**
 - **Falcon does not have capability to handle all core operations**
 - **No Consideration Of “Switch” and related equipment costs required at Falcon**
 - **Cost = approximately \$100 million**

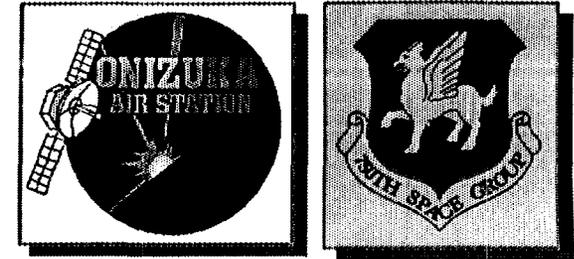
Onizuka Air Station



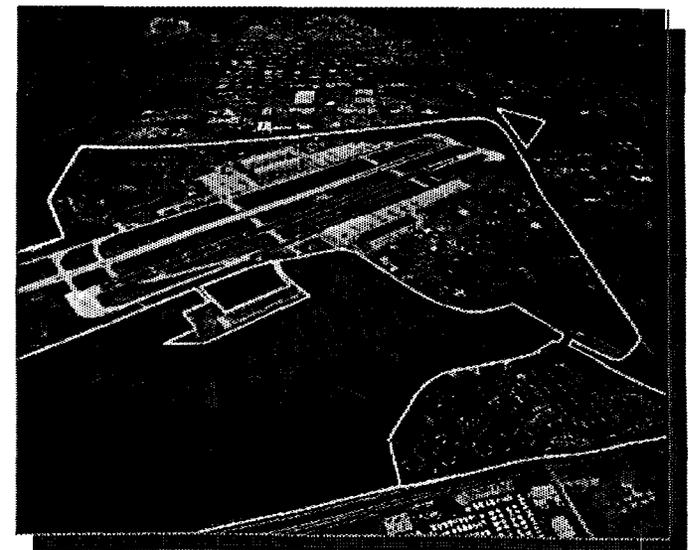
- ◆ **National Security Implications**
- ◆ **Military Value Analysis**
- ◆ **Flawed Air Force Analysis**
- ◆ **Alternative Reassignment Proposal**

Onizuka Air Station

Alternative Realignment Proposal



- ◆ **Realign to Moffett Federal Airfield Not Falcon AFB**
- ◆ **Commercial Utilization of Available Capacity**
- ◆ **Integrity of Moffett Complex**



Onizuka Air Station

Alternative Realignment Proposal



- ◆ **Realign To Moffett Federal Airfield**
 - Available Space/Mission Expansion
 - Significant Cost Savings (MILCON, Moving, Leases, Training, etc.)
 - Preserves Redundancy

- ◆ **Commercial Utilization of Available Capacity**
 - “Network of Choice”
 - Commercial Joint Ventures

- ◆ **Integrity of Moffett Field Complex**
 - Irreplaceable Resource
 - Significant National Asset
 - Cornerstone of America’s Space Industrial Base

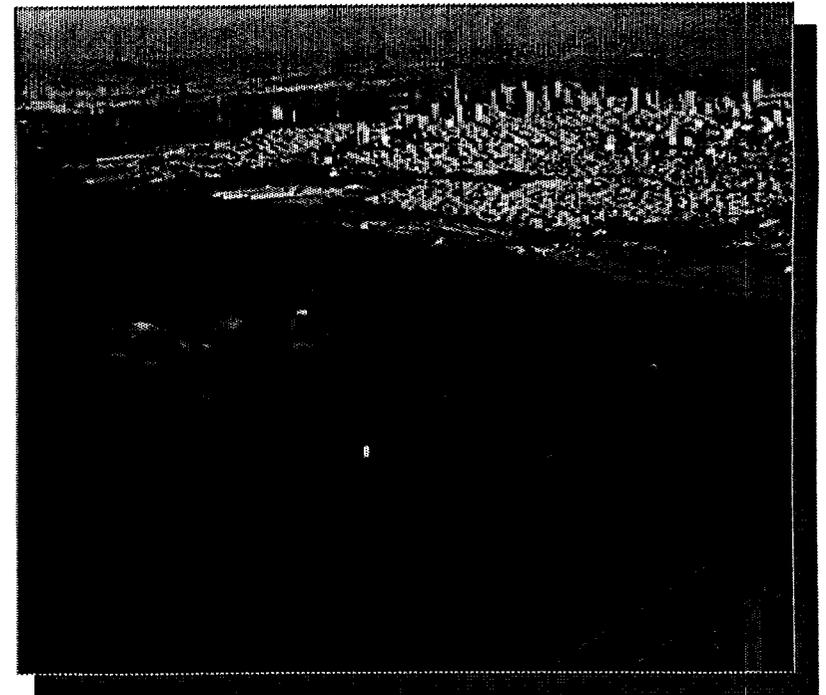
Briefing Outline



- ◆ Introduction
- ◆ Moffett Field Complex
- ◆ Air Force Recommendations
- ◆ Onizuka Air Station
 - National Security
 - Military Value
 - COBRA Analysis
 - Alternative Proposal

- ◆ 129th Rescue Group (HRC)
 - Military Value
 - COBRA Analysis
 - National Security

- ◆ Summary and Conclusions



129th Rescue Group (RQG)



◆ Military Value Analysis

◆ **COBRA Analysis**

◆ **Recommended Course of Action**

129th Rescue Group (RQG)



Air Force Military Value Analysis

- ◆ **No Evidence of Completed Military Value Analysis Prior To Air Force Recommendation**
- ◆ **No Improvement In Military Value Claimed**
- ◆ **Military Value Improvement Should Be Test Of Closure / Realignment per OSD Guidance**
- ◆ **Move to McClellan Reduces Space By 220,000 Square Feet**
- ◆ **Current Moffett Facilities Are 1980's Vintage, McClellan Facilities 1950's Vintage**

129th Rescue Group (RQG)



Air Force Military Value Analysis

- ◆ **Fails Military Value Test**
- ◆ **McClellan Operates Airfield 2 Hours Less Per Day Than Moffett**
- ◆ **Typically More Ground Fog (Thule Fog) At McClellan**
- ◆ **Both Reduce Military Value Of McClellan To 129th**

129th Rescue Group (RQG)



◆ Military Value Analysis

◆ COBRA ANALYSIS

◆ Recommended Course of Action

129th Rescue Group (RQG)



Air Force COBRA Analysis / MILCON

- ◆ **Original Site Survey Estimated \$20M MILCON at McClellan**
- ◆ **Base Closure Executive Group Arbitrarily Eliminated Several Facilities:**
 - **Flying Squadron Operations: –\$6.4M**
 - **Unit Supply Facility: –\$2.8M**
 - **Trade for Buildings 877/878: –\$1.4M**
- ◆ **Post – BRAC Survey Recently Completed (Not Released)**

129th Rescue Group (RQG)



Air Force COBRA Analysis / Reimbursement

- ◆ **Savings Of \$4.75M Annually Claimed For Move; However,**
- ◆ **Moffett Fully Reimburses Cost Of 129th RQG (i.e. Security, Fire, Crash Rescue, Air Traffic Control, Maintenance Services, etc.)**
- ◆ **Cost Differential Needs To Exceed \$8 Million To Generated Claimed Savings**

129th Rescue Group (RQG)



Air Force COBRA Analysis / Labor Costs

- ◆ **Basis For Savings – Elimination of 19 Jobs;
However,**
- ◆ **CANG Reimbursed For 59 Jobs By Moffett
Tenants**
- ◆ **40 Equivalent Positions At McClellan Will Not
Be Reimbursed – Labor Costs For 129th
Increase By \$2.2 Million**

129th Rescue Group (RQG)



Air Force COBRA Analysis / McClellan Move Summary

Estimated MILCON	\$20.0 Million
Lost Reimbursed Personnel	\$2.2 Million/year
Other Lost Reimbursements	\$5.25 Million/year

129th Rescue Group (RQG)



◆ **Military Value Analysis**

◆ **COBRA Analysis**

◆ **Recommended Course of Action**

129th Rescue Group (RQG)

Recommended Course Of Action



- ◆ **Retain In Place**
- ◆ **National Guard Bureau Commitment**
- ◆ **Cost Impact**
- ◆ **Security Considerations / Contractor Needs**
- ◆ **Domino Effect**
- ◆ **Mission Expansion**
- ◆ **Commander– In –Chief’s Preference**

129th Rescue Group (RQG)

Recommended Course Of Action



◆ **Retain In Place**

- **Save Operations / MILCON Costs**
- **Improve Military Value**
- **1993 Guard Bureau Long – Term Commitment To Moffett Complex**
- **1993 BRAC Commission Ordered Additional Reserve Aviation Assets to Moffett**

◆ **National Guard Bureau Commitment**

- **Guard Was Key Member of Concept Team**
- **Agreed To Become Anchor Tenant / MOU Commitment in 1993**
- **Shares In Costs**
- **Long – Term Tenancy**

129th Rescue Group (RQG)



Recommended Course Of Action

◆ **Cost Impact**

- **Accept GAO Recommendation To Include Cost Impact On Federal Agencies**
- **129th Movement Will Not Reduce Cost of Moffett Federal Airfield Operations to Federal Government**

◆ **Security Considerations / Contractor Needs**

- **Original Justification For 129th's Position As Anchor Was Need To Have Controlled Airfield To Support NASA Ames; Reserves (Army, Navy, Air Force); Lockheed; TRW; and Other National Security Contractors**
- **Secured / Controlled Airfield Is Still A Key Requirement**

129th Rescue Group (RQG)



Recommended Course Of Action

◆ **Domino Effect**

- **Loss of Controlled Airfield Will Impair Functioning of NASA Ames and Contractors**
- **Will Result In The Loss of High Tech Industrial Base Capacity**
- **Causes Unraveling of a National Asset**

◆ **Mission Expansion**

- **600 Acres Available For Expansion**
- **Area Available For 129th and Onizuka Air Station for Future Expanded Missions**
- **Economical Option For Both Units**

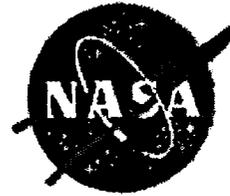
129th Rescue Group (RQG)

Recommended Course Of Action

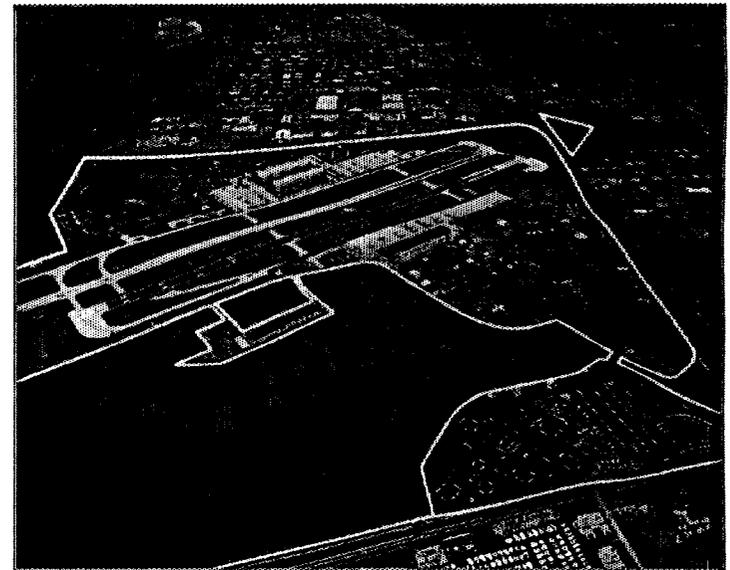


- ◆ **Commander– in –Chief’s Preference**
 - **As Commander– in –Chief of the CANG, Governor Supports Retention of 129th at Moffett**
 - **Supports Military Value Argument to Stay at Moffett**

Briefing Outline



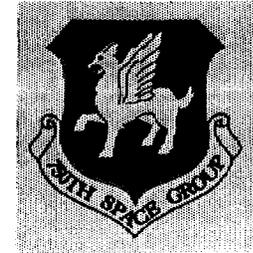
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◆ Summary and Conclusions

Summary

Onizuka Air Station (OAS)



- ◆ **National Security Considerations**
 - **Redundancy (Requirement for Dual Nodes)**
 - **Unique Capabilities**
 - **Available Capacity (Commercial Utilization)**

Summary



Onizuka Air Station (OAS)

- ◆ **Flawed Air Force BRAC Analysis**
 - **Single Node Is Not Strategically Prudent**
 - **Satellite Control Operations / Mission Capacity**
 - **Facilities Availability and Condition**
 - **Contingency, Mobility, and Deployment Requirements**
 - **Cost and Manpower Implications / Return on Investment**
 - **Community Consideration**
 - **Classified Mission Evaluation**
 - **Scored All Eight Criteria Equally**
 - **Secret Ballot Approach**
 - **Air Force Can't Have It Both Ways**

Summary

Onizuka Air Station (OAS)



- ◆ **Alternative Realignment Proposal**
 - **Realign to Moffett Not Falcon AFB**
 - **Maintains Dual Node Redundancy**
 - **Continued Contractor Support**
 - **Leased Space Savings**
 - **MILCON Savings**
 - **Savings On Movings Costs**

Summary



129th Rescue Group

- ◆ **Not a BRAC Issue**
 - BRAC Law
 - ANG Action
- ◆ **Flawed BRAC Analysis**
 - No Military Value Audit Trail
 - Unknown Relocation Costs – Being Studied
- ◆ **Other Considerations**
 - Retain in Place: Overall Cost Savings
 - No Mission Degradation

Recommendation



Adopt Onizuka Air Station Realignment Alternative

- ◆ **Realization of Cost Savings**
 - **\$125 Million For One – Time Cost For Moving To Falcon**
 - **Unknown Additional Costs (perhaps \$125 million) For Movement of Tenants**
- ◆ **Redundancy Requirements**
- ◆ **Mission Expandability**
- ◆ **Maintain Integrity of Moffett Complex**

Recommendation



Retain 129th RQG at Moffett Federal Airfield

- ◆ **Realization of Cost Savings**
 - **\$20 Million In Construction Cost At McClellan**
 - **\$2.2 Million A Year In Personnel Reimbursements**
 - **\$5.5 Million In Other Reimbursements**
- ◆ **Mission Expandability**
- ◆ **Maintain Integrity of Moffett Complex**

Moffett Field Complex
Center of America's
Aerospace Industrial Base





Document Separator

The Way

FORWARD . . . from GUAM

C

TEAM GUAM REPORT
on
DOD CLOSURE & REALIGNMENT RECOMMENDATIONS
for
BRAC '95

DRAFT FINAL REPORT
APRIL 28, 1995

Location



- Legend
-  Conservation
 -  Historic Preservation
 -  Recreation
 -  Medium Density Development
 -  Commercial
 -  Public Use
 -  Low Density Development
 -  Light Industrial
 -  Heavy Industrial
 -  Retained by the Navy

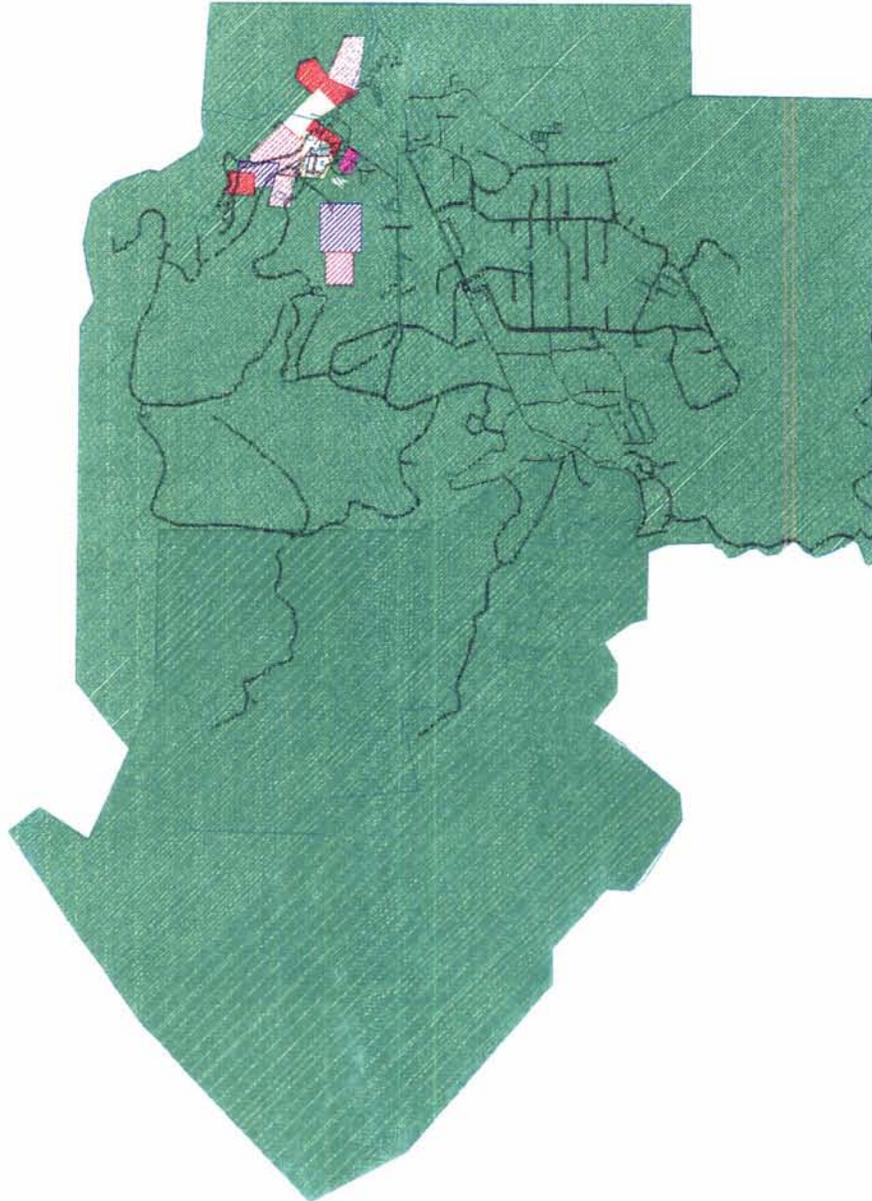
Existing Use - Apra Harbor Complex



GRAPHIC SCALE



Location



Legend

- Conservation
- Historic Preservation
- Recreation
- Medium Density Development
- Commercial
- Public Use
- Low Density Development
- Light Industrial
- Heavy Industrial
- Retained by the Navy

Existing Use

Naval Magazine

Location

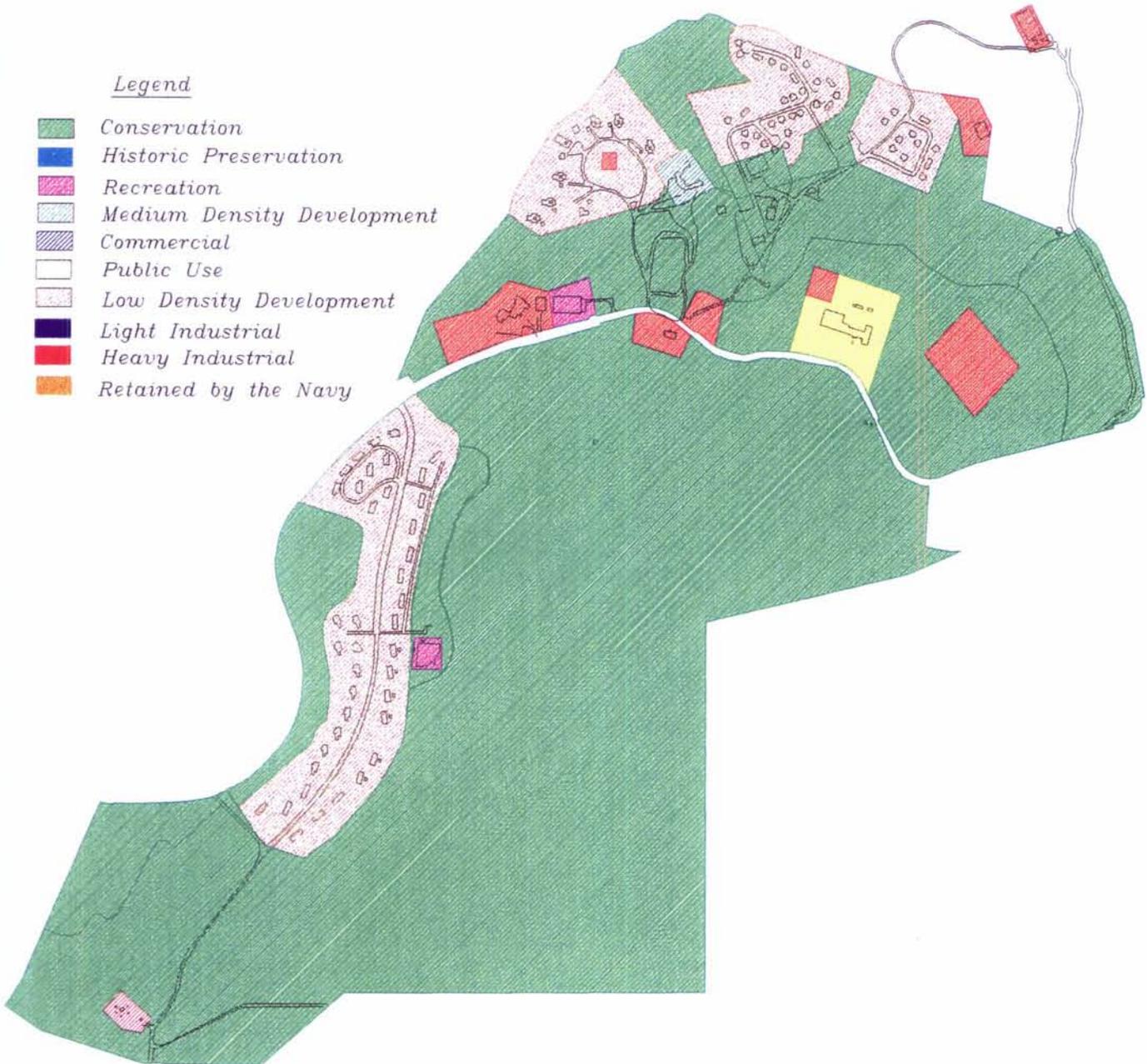


GRAPHIC SCALE



Legend

-  Conservation
-  Historic Preservation
-  Recreation
-  Medium Density Development
-  Commercial
-  Public Use
-  Low Density Development
-  Light Industrial
-  Heavy Industrial
-  Retained by the Navy



Existing Use
Nimitz Hill

ii. Land

Apra Harbor Complex

The following table depicts the amounts of land (inclusive of POL facilities and housing in the Apra Heights area) in the Apra Harbor Naval Complex under the control of the four commands.

Lands Under Separate Command at Apra Harbor Naval Complex	
Naval Station (NavActs), Guam	4,659.66
Public Works Center, Guam	2,135.69
Fleet Industrial Support Center, Guam	1,454.41
Ship Repair Facility, Guam	231.0
TOTAL	8,480.76

Source: Apra Harbor Master Plan (1986) p. B-34

Naval Magazine and Fena Watershed

In addition to the land in the Apra Harbor Complex, the area of the magazine and a watershed area for surface water (Fena Lake) is also under the Command of NavActs. The "naval magazine" component of Naval Activities is located in Santa Rita, Guam. The magazine area is inclusive of 5,026 acres of property covering the naval magazine proper, 3,670 acres of which is located in the Fena watershed area. 181 acres of property (in two parcels) have been identified as "releasable" since 1977 and are designated for return to Guam under U.S. Public Law 103-339.

Nimitz Hill

The Nimitz Hill Annex comprises an area of approximately of 758.69 acres, of which 217 acres have been identified by the Navy as "releasable" since 1977. The Nimitz Hill Annex host several functions: Headquarters for the Commander U.S. Naval Forces Marianas (COMNAVMAR), a oceanographic/typhoon warning center as well as housing and other navy ancillary activities.

iii. Assets

The primary facilities under NavActs include Orote Point, Barracks and Administration, Apra Harbor Waterfront, NEX Commissary Complex, Polaris Point, Nimitz Hill, and Camp Covington. Assets also include the former Naval Magazine since Oct., 1994.

Waterfront

The following table defines the command structure and size of the wharf areas in the Apra Harbor Complex assigned to Naval Activities and other commands.

Command	Wharf	Berthing (ft)
NAVAL STATION		
NavSta/U.S.C.G	Alpha	520
	Bravo	500
	Uniform	1,219
	Victor - 1,2,4,5,6	2,665
	Victor - 3	400
	Victor - 3,5	400
Total NavSta		5,704
FLEET INDUSTRIAL AND SUPPLY CENTER		
	Delta	800
	Echo	800
	Sierra - 1,2,3,4	1,982
	Tango - 1,2,3	1,495
	X-Ray - 1,2,3	1,476
Total FISC		6,553
SHIP REPAIR FACILITY		
* Excludes Drydocks	Lima - 1,2	1,110
	Mike	270
	November	540
	Oscar	570
	Papa	510
	Quebec	251
	Romeo - 1,2	1,035
Total SRF		4,286
NAVAL MAGAZINE		
	Kilo	400
TOTAL NAVY WHARF SPACE IN APRA HARBOR		16,943

The waterfront area contains operational areas along the wharves (Uniform and Victor) with community and personnel support services located further inland. NAVSTA's berthing areas are primarily used for visiting vessels, Coast Guard berthing and the small vessel operations of the NSWU-1 ("SEALS").

Orote Area

Orote Point is considered a low density development area as a result of the ESQD zone generated by the Ammunition Dock at Kilo wharf. Facilities on Orote include a pistol and rifle range, the Marines' jungle warfare training school, GabGab Beach, and the BOQ (Bachelor Officers Quarters).

Polaris Point

Polaris Point, located at the eastern side of the entrance of Apra Harbor is operated entirely by Submarine Group 7 Guam (tenant) and the submarine tender USS Holland. A warehouse-like facility for repairs and supplies provides support for activities at Polaris Point.

Nimitz Hill

The Nimitz Hill Annex, an area of 217 acres, is primarily used as an island wide command center and for residential purposes. The area possesses no strategic value.

The principal non-residential use of the Nimitz Hill Annex is the headquarters of COMNAVMAR. The commander's responsibilities include serving as the regional coordinator for the U.S. PACFLT and monitoring the activities of the various naval operational commands in Guam. Like the role of the NAVSTA commander in Apra Harbor, the COMNAVMAR is designated to facilitate the activities of eight separate commands with no direct jurisdiction over specific actions.

In addition to administrative offices for COMNAVMAR staff the headquarters building also provides office space for the analysis of regional oceanographic and weather conditions. The Naval Pacific Meteorology and Oceanography Center/ Joint Typhoon Warning Center (NPMOCW/JTWC), which operates in the COMNAVMAR Headquarters, provides weather analysis (together with NOAA) for the region and even the Indian Ocean area.

The residential quarters in the Nimitz Hill Annex consist of 147 lodging facilities for officers and enlisted men (including "historic" Flag Circle),¹⁹ bachelor quarters. Morale and Welfare facilities on this small and outlying residential/operational area with spectacular vistas include a club (TOP'O MAR), two tennis courts, and a fire station.

Through the southeast corner of Nimitz Hill Annex are major GPA power lines and military operated POL lines. Fuel is conveyed from Apra Harbor to tank farms in the Sasa Valley and Tenjo Vista, and transferred to NAS Agana, and eventually AAFB.

Barracks, Administration and other Operational Assets

The command maintains extensive quarters for Bachelors (both BOQ and BEQ), as well as messing areas. Moral and welfare facilities to support housed personnel (including those in PWC administered houses) are situated throughout the command area. The reputedly largest NEX in the Navy and a new commissary (under construction), together with numerous self-help stores provide on-base consumers with a self-contained access to all measure of commodities.

Administrative, medical and training facilities are also dispersed throughout the port area. They are primarily located near the entrance of the "Naval Station" although others are dispersed throughout the NavActs area.

Operational assets include maintenance and production facilities, storage areas and utilities assets (power and wastewater). A network of roads connect the various assets in the NavaActs area.

The Magazine

The magazine also hosts numerous activities including administrative, housing and community, operations and training, as well as maintenance and utilities facilities. The Fena reservoir treatment plant and four smaller reservoirs (ranging from 0.5 to 5.0 million gallons) as well as the Boña Springs (and pump station) are also in the Naval Magazine.

At present the magazine has the following capacity:

- 7.6 million pounds (lbs) of Net Explosive Weight (NEW) High Explosive (HE) Magazine capacity or 241,244 SF capacity;
- 5.7 million lbs NEW capacity for Smokeless Powder and Projectile (SP&P) ordnance or 42,043 SF capacity;
- 3.6 million lbs NEW Open Ammunition Storage Pad capacity or 10,209 SY of space (to stow bomb type ammunition in event of an emergency.);

as well as 64,000 lbs NEW (8,367 SF) and 10,398 SF capacity in Mine Assembly Facilities and Ammunition (Bomb and Projectile) Renovation Facilities respectively.²⁰ Under construction are two (2) 9,000 (SF) magazines for approximately 150 Tomahawk cruise missiles relocated to Guam from Subic's magazine facilities in the Philippines.²¹ Additionally, an inert storehouse of 17,000 SF is to be constructed to accommodate increased usage of Naval Magazine as a result of ordinance removal from the Philippines.

The Fena reservoir, originally constructed in 1951, was in 1990, estimated to have a capacity of 2,339,555,000 gallons.²² The production capability of the Fena Reservoir varies between a rainy season high of 10.5 million gallons per day (MGD) to a low during the dry season of approximately 9.5 MGD.²³ The Almagaso Spring, (together with the Boña Spring on Naval Magazine) produce an additional 3.5 MGD during the rainy season and 1.5 MGD during the dry season. The production of the Fena Valley reservoir and wells located within the Naval magazine and watershed is approximately 33.6% of the island's total water production; inclusive of water produced by the U.S. Air Force and private well operators.²⁴

The use of the Fena Valley reservoir was clearly intended to serve the Fena reservoir, Naval Station as well as Navy Housing in the Apra and Nimitz Hill areas.²⁵ However, in 1993, the Public Utility Agency of Guam (PUAG) purchased around half of the water produced by the reservoir and springs in the area covered by the Naval Magazine. PUAG buys water from the Navy at \$1.50 per thousand gallons, with the stipulation that a 15.533% surcharge is added if PUAG resells the water to customers.

Unlike in stateside jurisdictions where the military procures water from civilian authorities, in Guam the military sells water to the civilian community²⁶ The Navy's control of over 30% of the island's water production from the Fena area alone nearly mirrors the amount of real property held by the military in Guam. And like the military's control of land, it is clear that the control of water resources is beyond the Navy's demonstrable requirements. Moreover, the situation with respect to water resources held by the Navy provides an allegory with respect to the economic impact of the military's occupation of land in Guam: i.e. the people of Guam pay for impact of federal property holdings.

These, amongst other reasons has led to the Navy's control over the water resources of the Fena Valley area being a source of contention. In 1982, a court action was brought against the U.S. government with respect to the ability of the President to reserve the Fena watershed area (and other utilities) as military reservation areas under Executive Order 10178 as provided for in Section 28(a) of the Organic Act of Guam. Initially filing a suit based on Legislative authorization²⁷ the legal action was dismissed by the District Court of Guam based on separation of power²⁸ the Plaintiff appealed to the Ninth Circuit Court. Subsequently, the Plaintiff was deputized as an Attorney General of Guam, and the appeal was withdrawn. A new (and identical case) was filed but the case was dismissed because the Quiet Title statute of limitations had expired by 9 days.²⁹ In 1986, the 18TH Guam Legislature adopted Resolution No. 106, calling for the return of the Fena Valley Reservoir.

iv. Personnel and Associated Activities and Tenant Commands

"Big Navy", as the "Naval Station" has been known since the end of WWII, hosts numerous tenants and has long been the largest military installation in Guam. Following is an overview of the personnel of "Naval Activities" and the associated tenants as well as the personnel assigned to those activities.

Naval Activities (including NavSta and NavMag)

Naval Activities has a billeted military population of 393 military personnel. Just over 100 of these billets are assigned to the magazine with the remainder based in the former naval station. There are 448 appropriated civilian personnel currently employed at NavActs with an additional 179 non-appropriated personnel employed at the activity.

Homeported Ships

Following are the vessels which are homeported or forward deployed in Guam.

USS Holland

A submarine tender, which is expected to be replaced by another tender in FY95. It is manned by 1,445 military personnel. A tender in Guam is apparently viewed as a continuing requirement, at least until such time as the arrangements are made for nuclear repairs to be done in foreign nations.

AFS Forward Deployed

Following are the Military Sealift Command (MSC) combat logistic force (CLF) ships which are homeported in Oakland, CA but which are forward deployed to Guam:

- USNS Mars (refrigerator stores ship)
- USNS San Jose (refrigerator stores ship)
- USNS Spica (refrigerator stores ship)
- USNS Niagara Falls (refrigerator stores ship)
- USNS Kilauea (ammunition ship)
- USNS Flint (ammunition ship)

USNS Catawba (fleet tug boat)
USNS Narrangansett (fleet tug boat)

The MSC vessels are largely manned by civilian crews (approximately 120 civilians per vessel), with a contingent of military personnel (around 50). The fleet tugs are also manned by a mix of military (four positions) and civilian mariners (16).

In the early 1980's, three AFS's (stores ship) and one AE (ammunition ship) were transferred from Oakland, California, to Guam for two reasons. First, the Combat Logistics Force (CLF) ships were being over-extended on their operations tempo because of their scarcity in numbers and their great distance from Oakland to their operational areas in the Western Pacific and Indian Oceans. The Navy determined that deployments greater than six (6) months from homeports was the cutting point for retention.

Second, the wharf facilities at Naval Station, Guam had been upgraded in anticipation of a destroyer squadron being assigned to Guam and work was mandated for SRF by Congressional action (\$21 million per year). Therefore, there was a base waiting for ships and there were ships needing a base closer to their operating areas. Accordingly, the store ships and the ammunition ship were homeported at Guam.

In the late 1980's the decision was made to convert the active service AFS's and AE's to civilian-manned MSC ships in order to save funds and to be able to deploy the ships greater than six months at a time. The last AFS in the U.S. Navy, the U.S.S. White Plains was decommissioned in Guam on April 17, 1995.

Currently, there are four T-AFS's "forward deployed" to Guam: USNS MARS (T-AFS), USNS SAN JOSE (T-AFS), USNS SPICA (T-AFS) and the NIAGARA FALLS (under conversion). As for ammunition ships, there are currently two "forward deployed" to Guam: USNS KILAUEA (T-AE) and the USS FLINT (AE) which is being turned over to MSC in August, 1995. The MSC ships are technically homeported at a CONUS port while "forward deployed" to Guam. This designation has an impact for the dependents of the military detachments on these ships. The dependents of the military detachments on the T-AFS have two year tours on Guam while the dependents of the military personnel embarked on the other MSC ships do not get transferred to Guam.

There are three more ammunition ships based at Oakland (HOOD, SHASTA, and KISKA), plus the CAMDEN and SACRAMENTO (AOE) (combination oil and ammunition), plus few oilers (AO) in the Combat Logistics Force for the Pacific and Indian Oceans.

The Secretary of Defense establishes military requirements for presence throughout the world, upon the recommendations of the Unified Commanders and the Chairman of the Joint Chiefs of Staff. These requirements are called "strings" by the military planners and operators. Currently, the strings for the Aircraft Carrier Battle Groups is one present in the U.S. Commander-in-Chief, Central Command's (USCINCCENT) Area of Operations. This area is the

Persian Gulf and Northern Arabian Sea as defined by a line drawn from the tip of India due west to the coast of Africa.

Another Battle Group must be present in the waters of the Indian Ocean and Western Pacific, under the operational command of the U.S. Command-in-Chief, Pacific (USCINCPAC). This part of USCINCPAC's area of responsibility (AOR) comes under a subordinate operational commander, the Commander of the Seventh Fleet. This requirement for a battle group in the Seventh Fleet is normally satisfied by the INDEPENDENCE Battle Group based in Yokosuka, Japan.

The operational commanders have mandated that deployed with each battle group are either: (1) an AOE and AFS, or (2) an AO, AE, and an AFS.

Therefore, to support these battle groups, the operational commanders require that an AFS be present in the USCINCENT area and that another one be present in the Indian Ocean/Western Pacific (Seventh Fleet's Area of Operation) at all times. (The division between the "Western Pacific" and the Third Fleet's area is roughly the International Date Line." This is called a "1.0" presence requirement - "1.0" for USCINCENT and "1.0" presence for Seventh Fleet. Additionally, the operational commander likes to keep on ammunition ship in the local waters near Guam to support the INDEPENDENCE Battle Group.

With four AFS/T-AFS operating from Guam, these presence requirements can be met without the operating tempo rates becoming too extensive. Even with civilian-manned MSC ships, there comes a point where excessive deployments produce too much wear and tear on the ships. It is known by information obtained from military officials, that if the AFS ships are reverted back to the Pearl Harbor area, that the "1.0" presence can not be maintained. It is also understood that this analysis has been made known to the BRAC commissioners and staff by the military.

COMPSRON THREE

This is a contingent of Maritime Prepositioning Ships which are owned and operating by the AMSEA Corporation and time -chartered to the Military Sealift Command. Their assigned Forward Operating Areas is Saipan/Guam.

MV Lummus
MV Button
MV Williams
MV Lopez

AWR-3

Army Heavy Brigade Afloat Ships forward deployed to the Saipan/Guam area. The ships are U.S. Maritime Administration assets on charter to the U.S. Army.

MV Cape Washington
MV Cape Wrath
MV Gibson

MV Titus
SS Gopher State
SS American Osprey

Diego Garcia Resupply -- The SS Cleveland provides eight (8) resupply shuttles to support U.S. military personnel and activities in Diego Garcia. The vessel is operated under charter by Sealift Inc.

Navy Public Works Center Guam (PWC)

PWC is the largest employer of civilian personnel of any military activity in Guam, with almost 1,450 civilian billets. Fourteen (14) military personnel are assigned to the PWC. Civilian salaries for GS and WG personnel totals more than \$46 million per year, with military salaries amounting to over \$650,000 per annum.

PWC provides maintenance for the shops and offices buildings for all naval activities in Guam. Additionally PWC is responsible for electrical power distribution and generation, water treatment and distribution, sewage collection and treatment and road maintenance on Navy facilities as well as contracting support for road-side maintenance along some public roads leading to naval bases in Guam. The Public Works Center also provides support for several fleets of Navy vehicles.

PWC Guam also manages and maintains the following navy housing areas:

NAS Agana
Lockwood (NS)
Lockwood Ter. (NS)
North Tupalao
Naval Hospital
Nimitz Hill
NavCams WestPac
Andersen Annex Housing
NavCams Barrigada
Naval Magazine
New Apra Heights
Old Apra Heights
South Finegayan
South Tupalao
Sumay

Tenant commands of PWC include the Defense Printing Service Detachment Branch Office, Guam (DPSDBO). This office produces or procures all the DOD printing requirements on Guam. The main production facility is located at the PWC complex and reprographic facilities at SRF and FISC. Also included as a tenant command under PWC are the NAVMAR federal Credit Union, Ship Repair Calibration, Defense Finance & Accounting Service, and OICC, Marianas.

Commander, Naval Forces Marianas (COMNAVMAR) Headquarters

With the responsibility for regional area coordination, COMNAVMAR assures support for the 7th Fleet and shore activities of naval personnel on Guam. COMNAVMAR also holds the title of Commander in Chief, U.S. Pacific Fleet Pacific Representative (CINCPACFLT) for Guam, Commonwealth of the Northern Mariana Islands, Federated States of Micronesia, the Republic of Belau.

Currently 52 military personnel are assigned to COMNAVMAR. Ten (10) civilian personnel are also assigned to the activity. Total military and civilian salaries amount to approximately \$1.3 million per year.

CINCPACFLT Band

Assigned to COMNAVMAR, is a 21 member (enlisted personnel) Navy Band. Annual salaries for the band amount to over \$544,000 per year.

NTCC Nimitz Hill

Navy Telecommunications Command Center. This unit is under the authority of NCTAMS but is located at COMNAVMAR headquarters in Nimitz Hill.

Commander, Logistics Group Western Pacific Representative (COMLOG WESTPAC REP)

The mission of COMLOGWESTPACREP is to provide representation for the AFS ships homeported in Guam and support to the 7th Fleet ships visiting the island. One (1) military and one (1) civilian personnel are billeted for the activity. Annual salary for the activity is around \$100,000.

Explosive Ordinance Maintenance Unit 5

Located at Naval Station, the unit is divided into two shore detachments which provide explosive ordinance disposal of all explosive ordinance including chemical and nuclear weapons located on U.S. Naval activities and ships in the Western Pacific. Ninety-six (96) military personnel are assigned to this activity. The annual salary for the activity is over \$3.5 million.

Naval Criminal Investigative Service (NCISRA GU) and NavActs Security Detachment

The law enforcement detachment for Naval Activities in Guam include approximately ten (10) civilians assigned to NCISRA and over 100 military personnel are billeted to the NavActs Security Detachment.

Navy Family Services Center

The purpose of the center is to provide active duty personnel and their families with information and assistance on a broad range of matters. The center is located at three sites: Naval Hospital, Naval Station, and the U.S. Naval Computer and Telecommunications Area Master Station, Western Pacific (NCTAMS). Four (4) military personnel are assigned to the Family Service Center and an additional 25 civilian billets. Salaries for the activity amount to over \$785,000 per year.

Navy Resale Activity (NEX)

Navy Exchange Guam is one of the largest in the world. For authorized patrons, it provides a broad range of merchandise services. NEX outlets are located at Naval Station (including Camp Covington), NCTAMS, Naval Hospital, and Naval Magazine. One (1) military billets and almost 1,000 civilian (non-appropriated) billets are assigned to NEX activities. The total annual salaries earned at the NEX amount to over \$10.3 million.

Defense Commissary Agencies (DECA)

Guam has two Commissaries or DECA stores, one located at Andersen Air Force Base, and other at Naval Station. The staffing for DECA at naval installations in Guam is two (2) military personnel and fifty-eight (58) civilian personnel. Total salaries per annum amount to approximately \$1.4 million.

Naval Educational & Training Support Center

Float training center for ships homeported or operating in Guam waters. Five (5) civilian personnel are assigned to this activity with annual salaries amounting to about \$125,000.

Naval Reserve Unit 120

This unit is located at Naval Station with 41 personnel presently assigned.

USPACOM SA

One military personnel is assigned for the U.S. Pacific Command special assistant billet to the staff of CINCPACREP Guam.

U.S. Army Veterinary Detachment

The detachment has 30 military personnel. Its mission includes food hygiene, quality assurance, sanitary inspections, and medical care for military working dogs assigned to Naval Station and Andersen Air Force Base.

Military Sealift Command Western Pacific, Guam (MSC WESTPAC)

MSC WESTPAC has 297 military and 11 civilian personnel assigned in Guam. Annual salaries for the activity amount to over \$8.9 million per year. The mission of the MSC in Guam is to provide logistical and operational support for MSC controlled vessels.

Officer in Charge of Construction, Marianas(OICC Marianas)

OICC Marianas has 14 military and 76 civilian personnel for a total staff of 90. Annual salary for the activity amounts to almost \$3.4 million. OICC is responsible for the administration of construction contracts. It is a tenant command of PWC, and the OICC Marianas position is dual hatted with that of the Commanding Officer, PWC.

Personnel Support Activities Detachment Guam (PERSUPPDET GUAM)

PERSUPPDET Guam has 93 military and 10 civilian personnel for a total staff of 103. Annual salary for the activity is around \$3 million. PSD is located at Naval Station with additional customer service desks at NCTAMS and Naval Hospital and provides personnel and pay-related customer service to personnel island-wide.

Naval Dental Center

The Naval Dental Center has a staff of 52 military and seven (7) civilian personnel. Total annual payroll for the Dental Center activities is over \$2.0 million. The Navy Dental Center clinics are located at Naval Station and NCTAMS.

Naval Legal Service Office, Guam (NLSO)

NLSO has 17 military and 2 civilian personnel for a total staff of 19. Annual salaries at the activity is around \$730,000. The NLSO is located in the CQ building in the Apra Heights annex of Naval Station and provides all legal services and lawyer counsel to Navy and Marine Corps commands and activities located on Guam.

Officer in Charge, Third Naval Construction Brigade Detachment Civic Action Teams (COMTHIRDNCB DET CAT Guam)

The Civic Action detachment has 13 military and 2 civilian personnel for a total staff of 15. Annual salaries amount to approximately \$450,000. The CB's CAT DET provides logistic and administrative support to and exercise operational control of DoD sponsored civic action teams in Micronesia.

Naval Mobile Construction Battalion (NMCB-40)

NMCB-40, Otherwise know as the "Seabees", a total staff of 464 military personnel with an annual salary of over \$6.6 million. The NMCB-40, like other CB's groups, performs military construction of buildings, roads and other general construction projects.

Naval Pacific Meteorology and Oceanography Center/Joint Typhoon Warning Center (NPMOCW/JTWC)

The Meteorology Center contains 114 military and 8 civilian personnel for a total staff of 122. Total salaries for the activity is around \$4.0 million per year. The warning center activity occupies the annex to and a portion of the COMNAVMAR headquarters building in Nimitz Hill and provides operational oceanographic services to military units and weather warnings to the civilian community in Micronesia.

Submarine Group Seven (SUBGROUP 7 REP)

SUBGROUP 7 has a small military staff of seven personnel and is the representative of the operational commander with oversight authority of the submarine tender (presently USS Holland) homeported on Guam.

Naval Special Warfare Unit One (SEALTEAM ONE)

SEALTEAM ONE transferred to Guam after the closure of Subic Bay. The Seals unit is manned by 33 military personnel. Annual salary for the activity is over \$1.1 million.

U.S. Coast Guard, Marianas Section

There are four separate Coast Guard active duty commands on Guam: Guam, Marianas Section (MARSEC); Marine Safety Office (MSO) and Two Cutters: CGC Galveston Island & Basswood

3. Disestablishment: Fleet and Industrial Supply Center (FISC), Guam

a. Definition

i. Command Structure & Associated Units

FISC is commanded by a Navy Captain in the Supply Corps. Its administrative commander is the Commander, Naval Supply Systems Command, in Washington, D.C. For area coordination it reports to the Commander, U.S. Naval Forces Marianas. It is a land (Class 1) holder with its main compound in Apra Harbor, collocated with U.S. Naval Activities, Guam.

The mission of FISC is broad. Its Guam-oriented mission is to provide supply and support services to fleet and shore activities on Guam. It provides supply support to homeported and transient ships and specified support to every military activity on Guam. FISC provides supplies, fuel, and freight terminal services for major customers such as Navy Public Works Center, Naval Ship Repair Facility, Naval Computer and Telecommunications Center, and Naval Activities. FISC also stocks food items for issue for ships, clubs, enlisted dining facilities, exchanges and the commissaries. FISC also provides limited support to various federal government agencies in Guam and in the Commonwealth of the Northern Marianas, Federated States of Micronesia and the Republic of Palau.

FISC also has tenant activities. The Defense Commissary Agency (DECA) is a tenant along with the Defense Accounting Office (DAO), Military Traffic Management (MTMC) the Information Processing Center (IPC), Defense Reutilization & Marketing Officer (DRMO), the Fitting Out & Supply Support Assistance (FOSSAC), and the Army Vet Detachment from the Tripler Army Medical Center. There are presently a total of 116 tenant personnel residing on FISC land.

The mission of FISC, however, is broader than that associated with Guam and the local regional customers. The FISC booklet commemorating its fiftieth anniversary, stated: "The closure of Subic Bay in 1992 increased the importance of FISC Guam dramatically. As the last navy supply facility in the South Pacific, NSD Guam took over many of the functions that had previously belonged to NSD Subic Bay. These included support of deployed AFS's, support of Diego Garcia, and management responsibility for Ready Supply Stores (RSS) located thousands of miles away in Diego Garcia, Singapore, and the Middle East."

This expanded mission came when the MSC ocean tugboat USNS SIOUX, the MSC stores ship USNS SPICA, and the MSC ammunition ship USNS KILAUEA were transferred to Guam from Subic as a result of the closure of Subic Bay.

ii. Land

FISC land is grouped into four compounds as indicated on the attached maps. The first compound is the Sierra/Tango Wharf Compound that includes the Administrative area. The second

compound is the X-Ray Wharf Compound where the dehumid/cold storage warehouses are located, the third is the Fuel Department compound containing the Sasa Valley and Tenjo Vista Tank Farms, and the last compound is the Fuel Wharves area. Each of these compounds has a map, attached, indicating the details of structures located within them.

iii. Assets

A building inventory of FISC assets is attached to this report. Sixty-three structures exist in the inventory, ranging from a 135,793 square foot transit shed to a flag pole. Among these assets are dehumid/cold storage warehouses, a new warehouse being constructed for handling containers (integrated storage), and another new facility being constructed for a consolidated island-wide storage and handling facility for toxic materials.

The total value of inventory is \$165 million. This inventory does not include the fuel tanks or the fuel piping systems nor does it include the wharves under FISC control. The fuel department handles an annual fuel throughput of over three million barrels (over 120 million gallons). The FISC fuel facility has tank storage capacity of over 1.4 million barrels. The products include JP5, JP8, Diesel, and Low Sulfur fuels. There are a total of 39 tanks. Anderson Air Force Base is supplied through a twenty mile pipeline system. It is one, ten inch underground line that stretches from FISC to the former Naval Air Station. The Air Force then takes custody of the fuel at that location and transports it through its one, eight-inch above ground line. The former Naval Air Station receives JP5 fuel from FISC through a separate, underground, ten inch line.

FISC owns two fuel piers, Delta and Echo with 42 ft depths for each. These are the deepest draft wharves/piers in Apra Harbor. The last U.S. Navy aircraft carriers to berth at the fuel piers were the USS MIDWAY and the USS CORAL SEA in the 1960's. In 1990 the battleship USS NEW JERSEY berthed at the fuel piers. FISC also owns a de-ballasting facility when enables tanker loading. It also operates a petroleum testing laboratory. It has the required equipment to meet Environmental Protection Agency (EPA) requirements for the testing of oily water/waste oil. The FISC Fuel Department also operates a complete Used Oil Reclamation Facility that produces a product called Low Sulfur Fuel (FSL). FISC has the ability to accomplish the full spectrum of tests on waste oil from various activities to ensure acceptability.

An inventory of FISC's assets attached to this report.

iv. Personnel

The annual salaries of the civilian FISC personnel equate to \$12,566,433.00. The annual military payroll is \$2,356,294, slightly different from the amount in the DoD report to BRAC '95.

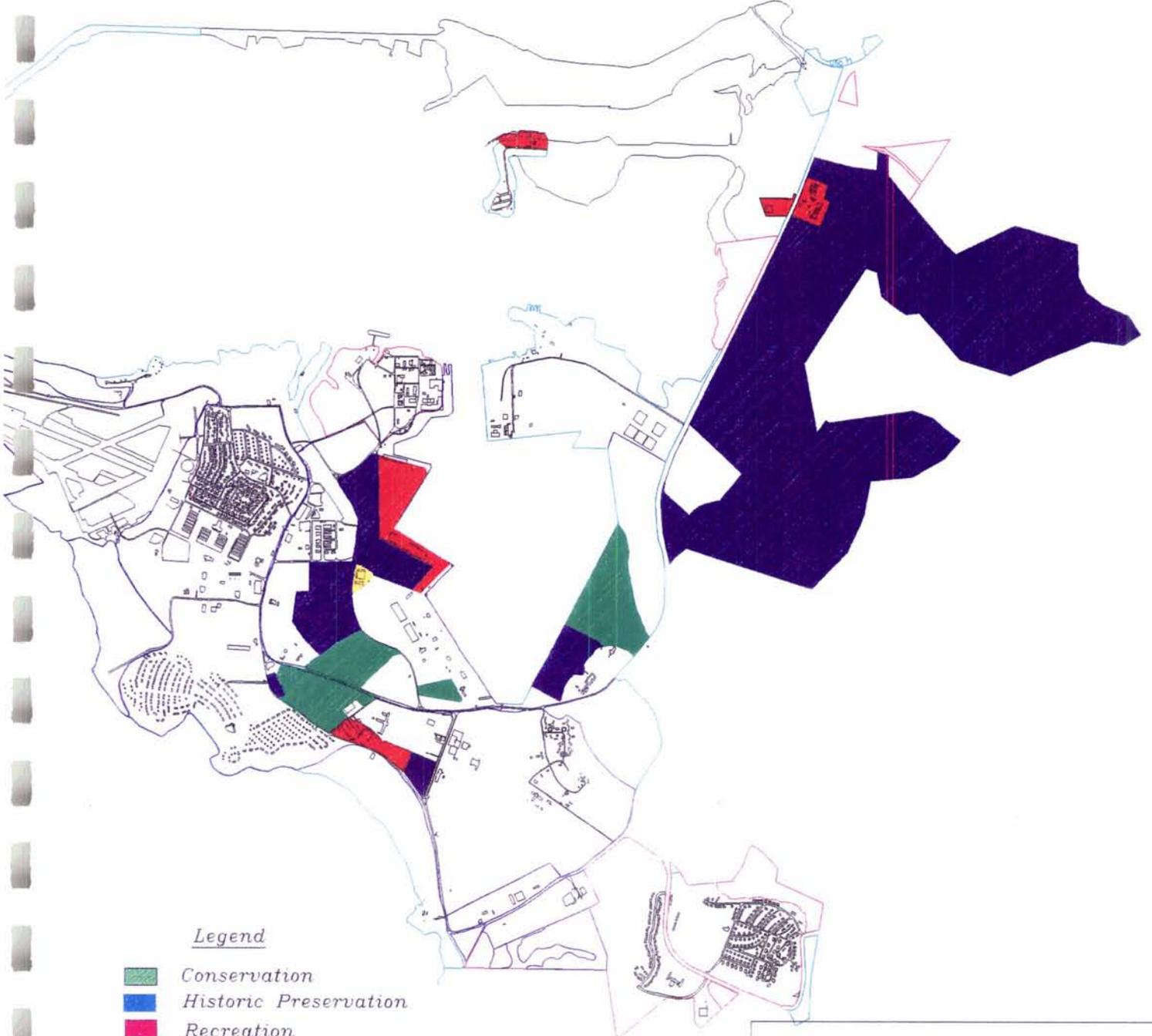
The Cobra Data for BRAC indicates that the mean civilian salary for FISC is \$54,694 per annum, RPMA Payroll is \$1,860,000, BOS Non-Payroll is \$5,146,000 per annum, BOS payroll is \$2,311,000 per annum, and Family Housing is \$742,000 per annum.



GRAPHIC SCALE



Location



Legend

-  Conservation
-  Historic Preservation
-  Recreation
-  Medium Density Development
-  Commercial
-  Public Use
-  Low Density Development
-  Light Industrial
-  Heavy Industrial
-  Retained by the Navy

*Existing Use
FISC*

There are currently 62 military personnel (17 officers and 45 enlisted) and 414 civilian personnel assigned to FISC. This is a total of 476 personnel. The Data Call varies slightly by stating that there are 19 officers, 75 enlisted and 518 civilians attached to FISC for a total of 612. Elsewhere in the data call papers there is a FY94 listing showing 18 officers, 45 enlisted, and 441 civilians for a total of 504 assigned. It also indicates that 73 military positions were authorized, although only 63 were filled.

The variance between the 612 total in the data call and the 8476 (actually on board in April 1995) or (504 in another part of the data call) totals for FISC, evidently arises from the addition of FISC tenant activities in the Data Call figures. DECA is listed as a tenant with 6 officers and 17 civilians (out of a total of 60 currently assigned), Defense Accounting Office (DAO) is listed with 28 civilians, Military Traffic Management (MTMC) is listed with 2 civilians, Information Processing Center (IPC) is listed as a tenant with one officer, 5 enlisted and 23 civilian positions, Defense Reutilization & Marketing Officer (DRMO) with 5 enlisted and 23 civilians, Fitting Out & Supply Support Assistance (FOSSAC) with 5 enlisted, and one Army Vet from the Tripler Army Medical Center. This is a total of 116 tenant personnel, bringing the figures closer together (620 compared to 612).

For contract workyear data, the DoD recommendation has FISC holding 29 total contract workyears and MSC Guam holding 2 contract workyears. The recommendation has 26 of the FISC contract workyears being eliminated with 4 workyears being transferred along with the 2 MSC workyears being transferred.

It further states that NAVACTS GUAM will receive from FISC 2 enlisted and 16 civilians, from DECA 6 enlisted and 17 civilians, from DAO 28 civilians, from MTMC 2 civilians, and from DRMO 5 enlisted and 23 civilians for a total of 13 enlisted and 86 civilians. These figures are based on the assumption that the X-Ray subsistence compound is turned over to NAVACTS for DECA and Navy Exchange use. All of these personnel realignments will occur in FY97 according to the data analysis.

Therefore, a total of one officer, 16 enlisted, and 128 civilian positions will move under the scenario. The data call scenario has the transfer to NAVBASE Pearl (FISC Pearl Harbor) of one officer, 3 enlisted, and 42 civilians in FY1997.

The elimination of 18 officers (4 in FY96 and 14 in FY97), 59 enlisted (10 in FY96 and 49 in FY97), and 267 civilian positions (60 in FY96 and 207 in FY97) will occur under this scenario. The total personnel figures are therefore 145 billets/positions being moved with 344 being eliminated for the total figure of 489 personnel as contained in the scenario.

The difference of 123 billets/positions between the 612 listed in the summary sheets and the 489 billets/positions either moved or eliminated is a cryptic notation of a reduction of 123 civilian positions due to "force structure changes." It must be assumed that these positions are also "eliminated." Therefore, the true total of eliminated civilian positions should be the 267 plus the 123 for a true total of 390 jobs. It is also significant that all of these jobs are programmed to be lost by the end of FY97 under this scenario, just over two years from now.

All of the FY96 eliminated billets/positions are from FISC. The FY97 eliminations are from FISC plus cuts from its tenants: IPC, FOSSAC, and the Army Vet. Interesting, the data call states that there is one officer and seven enlisted assigned to the Vet tenant for purposes of billet eliminations while elsewhere, the data call states earlier that one officer and no enlisted are assigned to the Vet tenant. Currently, there are 30 military personnel assigned to the Army Vet Detachment Guam.

The Cobra Data for BRAC also indicates that it is anticipated that of the civilian positions, that 31 will take early retirement (6 in FY96 and 25 in FY97), 15 will take regular retirement (3 in FY96 and 12 in FY97), 46 will be cut by civilian turnover (9 in FY96 and 37 in FY97). These figures, presumably, are to be subtracted from the 390 civilian jobs eliminated, for a bottom-line "unemployed" figure of 298.

v. Associated Activities and Tenant Commands

As stated above, FISC has several tenant commands. They are: a portion of DECA, an office of the DAO-Cleveland, Guam DRMO, Guam IPC, Guam MTMC, Fitting Out & Supply Support Assistance, a portion of NEX Guam, and the Tripler Army Medical Center, Army Vet Detachment.

The current status of personnel for some of these tenant activities differs somewhat from the data call as indicated below:

DECA (island-wide):	5 officers, 58 appropriated civilian personnel with an annual military payroll of \$146,238 and a civilian payroll of \$1,268,582.
IPC:	5 military personnel and 24 appropriated civilian personnel with an annual payroll of \$205,440 and \$729,676 respectively.
DRMO:	25 appropriated civilian personnel with an annual payroll of \$726,099.
Army VET:	30 military personnel.

An important associated activity for FISC is the resupply of Diego Garcia by the SS CLEVELAND. That ship makes eight trips per year to Diego Garcia, carrying provisions, consumables, and parts from FISC Guam. FISC Guam also provides commercial resupply for U.S. Navy requirements at Jebel Ali in the Persian Gulf area by weekly sailing from Guam Commercial Port with approximately 25 days sailing time. For this resupply commercial 20ft and 40ft vans (dry/refrigerated/freeze) are utilized.

The DoD Scenario Development Data Call for FISC Guam states that an additional supply ship for Diego Garcia will be required in order to maintain the cycle of eight trips per year. This means that \$9.1 million additional funding will be required in order to provide for the added supply ship.

b. A Brief History of FISC

FISC evolved from a supply support group that came to Guam with the initial landing force in July of 1944. The supply group was called D-1, a component of Lion Six. A "Lion" was the code name adopted for identifying a complete advanced area Naval Operating Base.

The first shipment of supplies arrived on August 7, three days before the island was formally declared secured. On November 11, 1944, the Navy Supply Depot (NSD) Guam was officially commissioned. The expansion in the first year was tremendous.

NSD Guam grew from two small supply outlets known as "Alligators" on Agat Beach into 1,804,000 square feet of covered space, 302,000 square feet of transit shed space, more than 200 fuel storage tanks with a total capacity in excess of 1,000,000 barrels, and a total area of over 6,384 acres, occupying Orote Point.

As the principal Pacific logistics base for the planned invasion of Japan, the initial nucleus of 1,500 NSD personnel grew to 13,165 personnel by 1946. It was manned entirely by military personnel until 1945. They worked around the clock to supply the Pacific Fleet with the tools of war and earned the nickname "The Pacific supermarket."

At the height of its operations, the depot unloaded as many as 120 liberty ships and 20 tankers in a single month, the Fuel Branch serviced an average of 75 ships a day. Total issues exceeded a billion dollars in the first ten months of operation.

When the war ended, the mission changed and the Navy demobilized what had been the largest supply effort in history. Tons and tons of equipment had to be redistributed. An exodus of thousands of troops had to be orchestrated. With that accomplished, NSD business was far less robust and was reduced to basic support of island commands and a few ships.

Though a few part time office workers came on board in late 1945, the first full time civil service employees began in August 1946, and approximately 500 foreign workers arrived about the same time.

Approximately 2,000 Japanese POWs were drafted into service in 1946, but the language barrier prevented extensive utilization. The POWs were repatriated later in 1946. By April 1948, the level of foreign workers had been increased to about 1,500. There were, at that time, 984 stateside civil service workers and 133 Chamorros. Military enlisted men, by April 1948, had been reduced to 1,075 with 53 officers.

Through the Cold War, NSD Guam was mainly concerned with local area and homeported ship support. In 1991, the Philippines Senate rejected extension of the base treaties with the U.S. and the Navy decided to close its bases there within 12 months. By February 1992, NSD Guam received the first of what would become a mountain of material shipped from Subic over a 10 month period.

In addition to all the material, NSD Guam picked up new tasks as well:

- Pacific and Middle East theaters.
- Support of Diego Garcia and its 3,500 residents.
- Support of ready supply stores in Diego Garcia, Singapore, and the Middle East.

Almost as soon as the work force caught up to the massive influx of tasks, the playing surface was again skewed. In the spring of 1992, FISC's was asked to reshape in response to then Defense Secretary Cheney's Defense Management Review. In CONUS, the Defense Logistics Agency took over physical distribution functions. NSD Guam, along with the other overseas stock points, retained that function, but its accounting and data processing functions were placed under the Department of Defense activities.

The data processing function transferred to the Information Processing Center(IPC) Guam under the Defense Information Systems Office (DISO) and accounting functions passed to Defense Finance and Accounting Service (DFAS).

Finally, on March 1, 1993, Naval Supply Depot, Guam became U.S. Fleet and Industrial Supply Center (FISC),Guam." This change meant all U.S. Naval Supply Centers and Naval Supply Depots carried the same official title for the first time in history.

c. Recent Activity at the Installation.

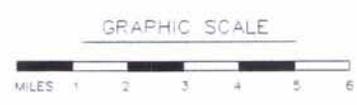
During the past year, FISC has entered into partnerships with other naval commands on Guam and implemented other cost cutting initiatives such as "interweaving" or regionalizing some functions to cut costs and remain competitive.

The current statistics regarding FISC's activities are: Annually, FISC has \$62 million in annual sale of goods, \$41 million in fuel sold, 187,000 requisitions processed, and 95,000 inventory line items stored.

4. Redirect: Guam Navy Aviation Assets at Andersen AFB, Guam

BRAC 93 and the Navy's Actions

NAS Agana is situated on 1,823 acres at the heart of the island. It is bordered by the villages of Tamuning, Dededo, Mongmong-Toto-Maite and Barrigada, which contain 47.4% of Guam's total population and the bulk of Guam's commercial and tourist activities. The economic potential for civilian reuse of NAS Agana and the significant underutilization of similar facilities 8 miles away at Andersen Air Force Base (AAFB) prompted local leaders to initiate the closure of NAS Agana in the 1991 hearings of the Base Realignment and Closure Commission. At that time, however, uncertainties concerning the renewal of the basing agreement with the Republic of the Philippines negated the possibility for closure of NAS Agana.



Legend

- Conservation
- Historic Preservation
- Recreation
- Medium Density Development
- Commercial
- Public Use
- Low Density Development
- Light Industrial
- Heavy Industrial
- Retained by the Navy



Existing Use
NAS

In 1993, the U.S. government agreed with the Base Realignment and Closure Commission's recommendation to close NAS in response to Guam's call for reuse of the facilities. The 1993 Commission found excess land and operations, maintenance, and administrative capacity existed at Andersen AFB to allow consolidation of the mission, personnel, aircraft and support equipment of NAS Agana at Andersen AFB. The Commission found the consolidation was economically feasible and due to the elimination of duplicate base operating and administrative costs, the closure would be paid back in 11 years. Consequently, the BRACC decided to:

close Naval Air Station Agana. Move aircraft, personnel and associated equipment to Andersen AFB, Guam. Retain housing at NAS Agana necessary to support Navy personnel who have relocated to Andersen AFB. The Commission finds this recommendation is consistent with the force structure plan and criteria.

The decision to transfer aviation operations to AAFB provided the best of both worlds since the military would remain in Guam to contribute to the growing Guam economy, while freeing up land for more productive, non-military economic and community use. In 1994, however, the U.S. Navy announced its plans to transfer aviation squadrons directly from NAS to bases on the West Coast.³⁰ In that memorandum, Fleet Air Reconnaissance Squadron ONE (VQ1) would "temporarily" relocate to NAS Whidbey Island, Washington effective December 31, 1994 while Fleet Air Reconnaissance Squadron FIVE (VQ5) would "temporarily" relocate to NAS North Island, San Diego effective October 1, 1994. To avoid the appearance that relocation to the West Coast was in contravention of the BRACC '93 decision, the military emphasized that such a move would be temporary and the squadrons would return upon construction of facilities at AAFB. Helicopter Combat Support Squadron FIVE (HC-5) would be relocated to AAFB, Guam effective October 1, 1994. HC-5 would utilize facilities vacated by the disestablished VRC-50 Squadron (which relocated from the Philippines to AAFB), including a newly constructed hangar, administrative offices, ramps and aprons and storage buildings³¹ Since no funding has even been requested by the Department of Defense (although funding was requested by the Navy) to begin construction, it is clear to the local population that the squadrons will never return. The recent DoD report on the recommended NAS redirect to BRACC 1995 simply confirmed local suspicions that the Navy never really planned to "temporarily" transfer aviation squadrons but rather that the move was permanent.

Since the approval of the BRAC 93 decision by Congress in September 1993, Naval authorities have opted to deviate from the BRAC orders and the NAS base closure process as well. By preempting the request for a BRAC 95 redirect, the timetable for NAS Agana to close operationally was accelerated forward to March 1995 rather than October 1997 as initially projected. While on one-hand claiming that the "temporary relocation" of the squadrons was just temporary, the Navy also espoused the view that their actions would permit the to excessing of NAS nearly four years ahead of schedule to meet "local needs."³²

The acceleration of the base closure date coupled with the Navy's decision to move the operational flying units to CONUS bases rather than relocating them 8 miles away to Andersen

AFB as directed by BRACC '93 provides evidence that *in Guam* the Navy cannot be counted on to follow BRAC decisions or the BRACC process. The Governor of Guam, the Speaker of the Guam Legislature and Guam's Congressional delegate, in a joint letter pointed out that the Navy's actions in ignoring the BRAC language was in conflict with other positions taken by the Department of the Navy in treating the BRAC decisions as having the force of law, including those recommendations which related to "relocations of operating forces."³³

Following Congressional approval of the 1993 BRACC decision to relocate NAS squadrons to AAFB, the Navy decided to process the airfield and attendant facilities for closure and to retain housing areas in the north side of the base and "quality of life" facilities and areas on the south side of the base, as so-called "retention requirements" for Navy's AAFB operations. Subsequently, a representative of the Chief of Naval Operations offered GovGuam to close base enlisted housing and quality of life areas if GovGuam supported a permanent move of NAS tenant squadrons to CONUS. This offer constituted another signal that the squadrons would never return. GovGuam's support was not given since it has always been Guam's position that Navy did not need these areas anyway. Formal notification of the closure of the enlisted housing and quality of life areas was received on May 17, 1994 in the form of a letter from Steven S. Honigman, the General Counsel of the Navy. Subsequent closure of these areas and inclusion of the DoD recommendation to redirect BRAC 1993 decision provides validity to the position taken by Team Guam.

The transfer of VQ-1 and VQ-5 affected not only the squadrons shown in the table below, but also 132 appropriated-fund employees and over 260 NAFI employees.

Once the decision to move to VQ- and VQ-5 to CONUS, officer and enlisted personnel were transferred with the relocating squadrons while the civil service employees either retired or sought jobs elsewhere. In addition, 185 NAFIMWR civilians and 80 NEX employees lost their jobs as a direct result of the relocation of VQ-1 and VQ-5 to CONUS.

Even with the transfer of squadrons in 1994 to CONUS and the subsequent release of over 350 units of enlisted family housing on the north side of the base and quality of life facilities on the south side, Navy continues to retain the 148 units of Officer Family Housing on 88 acres of land on the cliffline overlooking the Philippine Sea. Recent Navy correspondence indicates that the need for this housing will be reassessed after the BRACC '95 process is completed, while local Navy commanders privately agree that such housing is excess to Navy needs. Retention of this small housing area in the heart of the island contradicts military land use policy stated in GLUP II of consolidating military activities in two central locations, AAFB in northern Guam and Naval Station (NAVACTS) in southern Guam. Moreover, retention of the Officers Family Housing Area at the former NAS Agaña, is in contradiction to the Navy's stated claim for sending VQ-1 and VQ-5 to CONUS; to meet local needs for reuse. A housing needs analysis is contained in a separate section of this report.

5. Cumulative Impacts

a. Personnel

A following attachment indicates the disposition of personnel directly affected by the Pentagon's recommendations. Among the civilian personnel whose jobs in Guam would be either eliminated or move to other jurisdictions (3,497 civilian positions) are:

- 773 civilian mariners who are not homeported in Guam, do not pay taxes in Guam and who spend little time in Guam; and,
- 1,019 non-appropriated fund personnel employed by the Navy Exchange, an activity which if it continues will not result in the reported number of civilians losing their jobs.

Although the full impact of these "direct job losses" on the job multiplier for "indirect jobs" lost may be smaller than identified in the report, these numbers have been included in calculations throughout this report. Other job losses not identified in the Pentagon's recommendation are likely to off-set the above mentioned overstated "direct jobs" affected. These jobs are: continuing military-funded construction and maintenance projects which employ U.S. citizens; MWR (NAFI) civilian positions which are likely to decline in relation to a reduction in military activity; and, a decline in NEX and Commissary civilian positions even if the NEX operation continues. While non-appropriated civilian positions are not usually included in the job impact of BRAC activities, these loss of these positions are, in fact, job losses affecting the local community.

An overview of the impact of the Pentagon's recommendation to BRAC on civilian and military personnel is shown in Attachment __.

b. Housing Assets and Requirements

The Pentagon's recommendations to the BRAC do not address the disposition of the Navy housing requirements in Guam that would be affected by the impact of personnel reductions. Following is an overview of the existing state of the Navy's housing assets in Guam.

Data sources on the total number of military in Guam are obtained from the COMNAVMAR Shareholder's FY94 Report submitted by the Navy 5,487 personnel were assigned to Guam's bases. These figures include personnel who are attached to ships homeported in Guam but remain at sea the majority of the time.

Approximately 535 houses are presently in the process of being returned (or identified for return) to Guam. Excluding these housing areas identified for return, the Navy has a continuing inventory of 4,575 living spaces. Of these living spaces, 712 (or 16%) are officers spaces. An additional 3,863 spaces are available for enlisted personnel. Following are tables which reflect the number of quarters in Guam which are perspectively available for use by military personnel.

Navy Officer Quarters in Guam			
Officers Housing		Officers Bachelors Quarters	
NAS	136	Naval Station	72
Lockwood Terrace	62	Camp Covington	34
Naval Hospital	27	Naval Hospital	25
Nimitz Hill	67	Temp Lodging Fac.	18
Old Apra Heights	72	NCTAMS	31
South Finegayan	137		180
Sumay	28		
Nav Cams WestPac	2		
Naval Mag	1		
	532		

Navy Enlisted Quarters in Guam			
Enlisted Housing/excluding GLUP II,		Enlisted Barracks (Current)	
South Finegayan	434	NavSta/CampCov	763
North Tupalao	450	NCTAMS (F)	294
NCTAMS (Fin.)	302	Naval Hospital	112
NAVSTA (new)	300	NavMag	100
South Tupalao	230	NCTAMS (B)	60
Apra Hts.	308	NavMag	100
Lockwood Ter. (NS)	240		1429
Sumay	104		
Naval Hospital	44		
NCTAMS (B)	22		
	2434		

In addition to Navy personnel, over 230 non-Navy families reside in Navy housing at installations throughout Guam. The non-Navy families residing in Navy housing units throughout the island represents about eight percent (8%) of the continuing inventory of Navy houses.

Endnotes (Part 2-B)

¹ In this regard, we are appreciative of the last minute work which activity commands in Guam labored over to provide baseline data. The latest push by COMNAVMAR to respond to baseline data requests forwarded by Guam (since 3.08.95) began during the week of April 17, 1995. Coordination of the information submitted by commands was conducted by COMNAVMAR staff CPTN T. Thorsen and LT. G. Robinson.

² U.S. Naval Ship Repair Facility, Guam, Capabilities Handbook (October, 1994) p. 2A

³ U.S. Naval Ship Repair Facility, Guam, Mission Briefing Book (March, 1995) p. 7A

⁴ Farrell, D.A., The Americanization: 1898-1918 (Micronesian Publications, Guam: 1986) p. 38

⁵ Hammer, Harry, Lion Six (U.S. Naval Institute, Annapolis, MD; 1947

⁶ U.S. Naval Ship Repair Facility, Guam, Capabilities Handbook, op. cit. p. 2A

⁷ Ibid.

⁸ Sanchez, Pedro, Guam: The History of our Island (Sanchez Publishing, Guam: 1988) p. 252

⁹ Pomeroy, Earl, Pacific Outpost in Guam and Micronesia (Stanford University Press: 1951) pp. 176, 177

¹⁰ U.S. Naval Ship Repair Facility, Guam, Capabilities Handbook, op. cit. p. 2A

¹¹ Ibid. p. 2B and U.S. Naval Ship Repair Facility, Guam, Apprentice Graduation Ceremony, March 30, 1995

¹² U.S. Naval Ship Repair Facility, Guam, Mission Briefing Book, op. cit. p. 13

¹³ Ibid. p. 4B

¹⁴ U.S. Naval Ship Repair Facility, Guam, Capabilities Handbook, op. cit. p. 2C

¹⁵ Data Call 1: General Installation Information, UIC: 62586, p. 4.

¹⁶ Ibid. p. 5.

¹⁷ Ibid. p. 8-10.

¹⁸ U.S. Naval Ship Repair Facility, Guam, Mission Briefing Book, March 7, 1995 Visit of Governor Gutierrez & GovGuam Staff, p. 8B

¹⁹ The house occupied by the COMNAVMAR was first built by Admiral Nimitz. The tradition was long established but was interrupted by Typhoon Omar (1992) The House of Nimitz was reconstructed by the Navy at the cost of \$1 million (a celebration of the reopening was held by RADM Kristensen on 01/09/94). Although the "Nimitz House" may be of some historic significance, renovation plans were not subjected to State or national historic preservation screenings and approval.

²⁰ U.S. Navy, Master Plan, U.S. Naval Magazine, Guam, Mariana Islands (1984) Table D-7, p. D-35. Seven HE Magazines (Bldgs. 816-822) and the ordnance disposal site are located within the Fena watershed.

²¹ 4. Belt Collins, Ibid., p. 15. The military construction project for these facilities (MILCON Project P-289) was awarded to Hanil Resort Corporation 9/22/93

²² U.S. Geological Survey, Storage Capacity of Fena valley Reservoir, Guam, Mariana Islands, (Water-Resources Investigation Report 92-4114) The U.S.G.S. review indicated that as a result of sediment depositions, the reservoir capacity has been reduced by 13.5% since its construction.

²³ Actual production varies depending on the length of the dry season and other factors (e.g. Guam's August 1993 earthquake). The figure provided here as well as all other figures with respect to water production are available from the U.S. Navy Public Works Center (Guam), Engineering Branch.

²⁴ Public Utilities Agency of Guam, Water Facilities Master Plan Update, (Prepared by Barrett Consulting Group, February 1992). See Table 5-1 at p. 5-4.

²⁵ 10. Naval Magazine Master Plan, op.cit. Figure D-14.

²⁶ 11. In the Washington D.C. area for instance, Bolling AFB, McNair Army Base and Navy Yard all procure water from the D.C. Water Service Administration. According to Mr. Edward Scott, Director of the WSA, military water purchases are made under contract at the "local rate." If military usage is less than the contractual amount, the military pays the contract amount. Meters are placed outside the gates of the military installation for civilian monitoring purposes. (Telephone conversation with Director of the Washington Office of the Governor of Guam, 20 December, 1993.)

²⁷ 12. Guam Public Law 16-53, Section 10.

²⁸ Government of Guam vs. United States of America, Civil Case No 82-0001, District Court of Guam, August 1982.

²⁹ 14. See Government of Guam vs. United States Case No. 83-2237, United States Court of Appeals, Ninth Circuit Court (Decided Oct. 4, 1984)

³⁰ July 13, 1994 Memorandum for Interested Members of Congress from Navy Captain Jay M. Cohen, Deputy Chief of Legislative Affairs. This likelihood was earlier noted in *The Next Liberation* (January, 1994)

³¹ July 15, 1994 letter from Melvin Kaku, Environmental Planning Division, NAVFAC, Pearl Harbor to the Bureau of Planning requesting a federal consistency determination with the Guam Coastal Management Program.

³² News Release dated June 2, 1994 issued by the Public Affairs Office of the Commander, U.S. Naval Forces Marianas. Just a year and a half earlier the Navy had vehemently opposed the relocation of NAS to AAFB.

³³ Team Guam letter to The Honorable Robert Perry, June 23, 1994. The letter referenced the position taken by former Navy Secretary William Ball and the 12 August 1993 opinion of the NAVSEA General Counsel on the BRAC 93 recommendation for the Naval Undersea Warfare center, Newport, Norfolk, VA.

C. Effect of the Proposed Recommendations

In preparing an overview of potential affect of the proposed Pentagon actions yet another significant obstacle was encountered: this is the absence of a clear understanding of how the recommendations would be implemented. While uniform personnel in the region have sometimes publicly (but mostly privately), told us that the decisions simply do not make sense strategically, logistically or otherwise. This mind-set has contributed to uniformed personnel not preparing for the real scenario which would unfold if the recommendations were implemented. Today in Guam some Navy personnel are trying to justify, and are planning for the continued control of assets which will be without staff support, an incoming ship, and without moneys to maintain them.

Added to this difference of view of those in the field and what the recommendations appear to entail, most uniform personnel are clearly unaware of the intent of the planners in Washington who have laid out the recommendations and who will drive the implementation of the same. More disturbingly, it seems that there are obvious — and significant — structural problems in communications between Pentagon officials and planners and the uniformed officers in the field. This results in uniformed personnel in the field being unaware of what the Pentagon's planners envision. Moreover, given the differences of echelon, there is no way for direct communication to occur between those who would be tasked with actually implementing the Pentagon's recommendations and those who will make the decisions which drive the recommendations.

Another significant obstacle in assessing the potential impact of the recommendations is obvious. In the rush (48 hour turn-around) to complete data calls and get data into COBRA scenarios to evaluate, some information was submitted which is inconsistent with BRAC guidelines and which were not detected by the BSAT and COBRA. This has led to some of the data behind the recommendations (and the cost savings) possibly not reflecting what would actually occur. For example, 1,019 non-appropriated civilian employees at the NEX being identified as "eliminated billets," when in fact it is more likely that NEX activities will continue after the BRAC decision. Additionally, although the Data Calls, COBRA and recommendations indicate that all of the FISC fuel tanks would be emptied and closed down, the Navy apparently overlooked the fact that these tanks provide support for the Department of Defense war reserve fuel supplies. These are but two of the "confusing" recommendations which all parties have difficulty in sorting through now that the recommendations have been submitted to BRAC.

With these caveats noted, following is a review of the possible affect of the DoD recommendations on Navy activities and installations in Guam.

1. Ship Repair Facility

The Pentagon's recommendation to the BRAC 95 would close the Naval Ship Repair Facility, Guam. 625 current civilian employees and 21 military billets would be eliminated under the proposal. The industrial facility would be closed down for Navy purposes.

However, given the military's existing limitations on performing nuclear repairs in foreign nations, the recommendations would maintain the capability of the floating drydocks and cranes. Personnel to support emergent maintenance requirements would presumably be met by Navy "Tiger Teams" (rapid response units).

To maintain the drydocks and cranes for emergent operations, a handful of civilian (30) and military (4) personnel will transfer to Naval Activities. The labor and materials costs for the maintenance and overhaul of the drydock are programmed at \$5.2 million a year. The maintenance of the floating cranes is programmed at \$1.0 million. Two other military personnel now billeted at SRF will transfer to other activities in Guam (1 to NavFac, Guam and another to CINCPACFLT (Rep) Guam).

The disposition of the other industrial assets at SRF, valued at over \$20 million, is less clear. While these plant assets are not state-of-the-art, they are of the same standards that is found in most other shipyards in the Navy; thus they have significant future value. The Pentagon's recommendation makes no provision for these assets to be mothballed nor for a caretaker status for the SRF despite the fact that the Pentagon's overall recommendations appear to place some value on the "contingency" use of Guam and these assets.

While it is unclear what the Navy intends to do with these assets, we have assumed that they would either be turned over in a reuse process. However, the manner in which the Navy proposes reuse options will affect the viability of this possibility. A lease of the SRF area and assets would clearly render the success of reuse activities less effective than the outright transfer of the SRF area and "personal property" situated there. If arrangements could not be worked out for effective civilian reuse, the disposition of the plant equipment at SRF is less clear. Alternatives include moving the equipment into warehouses for storage and periodic maintenance by PWC personnel; movement of the equipment off-island to other DoD depot maintenance centers; or, allowing them to deteriorate at their present site. The latter two options would render Guam's immediate readiness impotent in the event of a significant contingency because equipment would not be available. The first alternative, while maintaining readiness (albeit at costs higher than is identified in the data Calls and the COBRA), would displace economic revitalization opportunities available to the local community.

2. Naval Activities

The Impact of the Recommendations

The Pentagon's recommendations to the BRAC 95 would significantly alter the current level of activities in Apra Harbor and the command structure of Naval Activities. The significant changes involve the absence of utilization of Apra Harbor by vessels supporting the 3rd and 7th Fleets, a reduction in the follower activities of NavActs tenants (such as PWC) and a major cutback in other tenant activities.

i. Maritime Activity

Vessel activity in Apra Harbor would be dramatically reduced by the Pentagon's recommendation to BRAC 95. This probable reduction in activity is directly related to the

proposed relocation of all combat logistics force ships, ammunition vessels and associated personnel and support to naval bases in Hawaii by 1998.

The transfers are slated to be implemented in accordance with the following timetable:

1996

USNS Catawba (fleet tug boat)	transferred to Pearl Harbor
USNS Spica (refrigerator stores ship)	transferred to Pearl Harbor
USNS Kilauea (ammunition ship)	transferred to Lualelualei
USNS Flint (ammunition ship)	transferred to Lualelualei

1997

USNS Narrangansett (fleet tug boat)	transferred to Pearl Harbor
USNS San Jose (refrigerator stores ship)	transferred to Pearl Harbor

1998

USNS Mars (refrigerator stores ship)	transferred to Pearl Harbor
USNS Niagara Falls (refrigerator stores ship)	transferred to Pearl Harbor

Concurrent with this move is the relocation of the supporting Military Sealift Command personnel (MSC WESTPAC) to Pearl Harbor over the 1997-98 period. COMPSRON THREE and the AWR ships will remain in Guam waters.

The movement of the T-AFS and T-AE (MSC) vessels to Hawaii will require additional support to maintain their mission. Given the fact that seven to ten additional sailing days (each way from the new support base in Pearl Harbor to their operational waters) for the combat logistics support ships is required, one of two things can happen. Either the "strings" will be relaxed for the battle groups - for example, moving the "CHOP" (Change of Operational Command) lines from the tip of India to the South China Sea, in order to "cheat" a bit on fulfilling the presence requirement for USCINCCENT (with the possibility that a battle group will be too far from a breaking crisis in the Persian Gulf) or; an additional supply ship will have to be provided in the inventory. The former option is not likely given the volatility of the Persian Gulf region.

The cost of adding an additional T-AFS to the inventory has not been mentioned in the DoD Report to BRAC as an associated cost. According to the Military Sealift Command, the cost of operation of an MSC vessel in the Pacific is \$59,000 per day. At a minimum the addition 120 sailing days to Hawaii, will result in approximately \$7.1 million in costs for steaming to the new location in Hawaii. An additional T-AFS vessel being added to the mix of four existing vessels (to meet the 1.0 ratio of AFS's to Carrier Battle Groups) would be an additional cost of \$21.5 million per year. Again, these costs are not reflected in the DoD's Scenario Development Data Calls, nor the COBRA analysis.

Furthermore, the fleet tugboats cannot be ignored. For the same reasons of operational tempo and close support assets for the warships, there are two fleet ocean going tugboats

operating out of Guam at this time. With these ocean tug-boats relocated further back east, their support for the battle groups is compromised. There are possible negative strategic implications involved in homeporting AFS vessels at bases further away from strategic interests in Asia and the Indian Ocean, and important questions related to moving the fleet tug boats from Guam. Should DoD retain use of the shore assets for some prospect of servicing future arrival of vessels, it would seem obvious to retain on Guam the necessary infrastructure to support such a move. However, the removal of the fleet tug boats raises questions as to how effectively that can be done under the scenario outlined by DOD.

Additionally, the Diego Garcia resupply activity, presently conducted by the SS Cleveland out of Guam and Singapore would be relocated to Hawaii. This movement to Hawaii, and the additional steaming time involved, may necessitate the addition of another resupply vessel after FY97. The Development Scenario Data Call and the COBRA analysis indicate that the annual recurring cost for an additional vessel is \$9.125 million.

The only remaining military-related maritime activity in Apra harbor would be that of a tender (presently the HOLLAND, a vessel which will likely be replaced), the U.S. Coast Guard and the small boat activity of the SEALs. Presently these activities are conducted from Victor Pier (USCG and the SEALs) and from Alpha and Bravo Piers at Polaris Point (Tender). The Pentagon's recommendation does describe the possible consolidation of these existing activities.

ii. Public Works Center Guam (PWC)

The level of activity of PWC is directly related to the overall level of U.S. military activities in Guam. As decreases in activity occur, so does the mission of PWC, particularly as it relates housing and facility maintenance.

As outlined in the BRAC 95 Scenario Development Data Call, PWC would be realigned with personnel transferred to Naval Magazine by 1998. The scenario also call for the elimination of 5 military billets and 553 civilian positions over the next three years.

iii. Nimitz Hill

The principal tenant command at Nimitz Hill aside from COMNAVAMAR HQ is NPMOCW/JTWC. The Pentagon has recommended to the BRAC that this command essentially be disestablished except for the Joint Typhoon Warning Center which is being relocated to Pearl Harbor..

To accommodate the continued requirement for weather forecasting in the western Pacific and the Indian Ocean, the move to Hawaii requires that "near real-time" satellite imagery from the regions under surveillance be down-linked in Hawaii. The cost of this requirement is estimated at \$550,000 per annum. Statements made by NPMOCW senior leadership cast serious doubt as to whether this unit's mission can be fully carried out at its new site.

The oversight role of COMNAVAMAR does not require Navy's occupation of a specific administrative area. The headquarters of COMNAVAMAR could be situated at any administrative

area in the island. As the U.S. Navy (and military) continues "down-sizing" in Guam some thought must be given to consolidation of the disparate Navy commands. It is likely that the CINPAC's Representative in Guam would be moved from COMNAVMAR headquarters to "Naval Station" where the majority of Navy activities will operate. Although not specifically mentioned in the Pentagon's recommendations, the reductions of COMNAVMAR staff and similar reductions/removal of the other tenant commands at Nimitz Hill would support the logic of such consolidation at Naval Station. The future use of the Nimitz Hill Annex must be understood within the context of the Navy's "requirement" for a building that supports a non-operational naval function.

iv. **The Magazine**

According to the supporting data behind the Pentagon's recommendations to the BRAC 95, Naval Activities, Guam appears to be merged into a new command entitled "Naval Magazine, Guam", although a continuation of a consolidated "Naval Activities" is anticipated.

The primary mission of the facility to provide conventional and (nuclear ordnance as necessary) support to units of the Pacific Fleet operating in the western Pacific appears to be a continuing one. The maintenance of Kilo Wharf -- the primary munitions wharf -- under the DoD's recommendations clearly demonstrates the continued role of the magazine in the near future.

From the Navy's perspective, munitions storage in Guam will continue to be necessary for tactical deployment. A wide range of weapons systems (ranging from ASW weapons, projectiles, and bombs) are likely to continue to be stored in Guam for ready use and disbursement. The increase in the number of Tomahawk sea-launched cruise missiles (SLCM) in Guam also speaks of the importance of ready reserves of these advanced weapons systems to support the U.S. Pacific military mission.¹ Of the nearly 4,000 Tomahawk SLCMs to be fully deployed by the mid-1990's, 2,739 of the total will be for surface ships and 1,255 for submarines.² The U.S. Navy's *Final EIS*, notes that wharves at "Polaris Point will also be experiencing greater use for loading and unloading of Tomahawk missiles" (at p.2-6), indicating a significant submarine based mission for Guam-stored Tomahawk SLCMs.

Although the Navy may desire a separate facility for ammunition storage, the primary munitions storage concern in Guam is to support the aviation mission. Given the size (and opportunities for expansion) of the facilities at AAFB, the future use of Guam real estate at the Naval Magazine may not be a necessity if joint use (or use under a joint operational command) were established.

Moreover, the necessity of large forward-based munitions storage areas will continue to decline vis-à-vis sea and airlift capabilities. The Middle East altercation of 1973 amply demonstrated the capability of sealift and airlift munitions and equipment over long distances. This was reiterated by the Gulf War. Present munitions storage requirements are based on the projected need to engage in a high-intensity conflict over an extended period of time without replenishment. Given the fact that Guam's future military role will primarily be as a "dispersal" and "recoverable" forward location -- with the firepower delivery systems having to be brought

in -- the "supply train" would effectively arrive in Guam with the first wave of weapons delivery systems. In mobilizing for the Gulf War, CONUS munitions storage areas were tapped before those in Guam, even though Guam was closer to the theater of engagement and attached to the PACFLT with direct jurisdiction over the Indian Ocean and the Persian Gulf.

Clearly the future need of two separate munitions facilities in Guam requires further review. Given the large amounts of land use required for such operations (including prohibitions on development resulting from ESQD's), the consolidation of munitions storage should be seriously examined.

v. Fena Watershed

The Fena Water shed area is not addressed by the Pentagon's recommendations. However, given the decline of the military population, the civilian population's reliance on the potable water from the reservoir and needed maintenance at the site, consideration to that areas use requires an examination. Dredging of the reservoir is an increasingly necessary development vis-à-vis its current use and would increase the capacity of the reservoir by over 315 million gallons.

The presence of ESQD's (originating in the munitions storage area at Naval Magazine) overshadowing the Fena Valley watershed area pose no significant problems for water source production, nor have they resulted in the extinguishment of habitat to date. Moreover, the necessity of maintaining an ordnance storage facility at Naval Magazine is not likely to be a defensible requirement in the near future. The continued use of the explosive ordnance demolition area, however, would continue with the return of lands below the cliffline at AAFB.

vi. Other Affected Areas/Activities

Among other areas/activities within Naval Activities affected by the DoD recommendations are the Naval Exchange (NEX), the staffing of Naval Activities, security personnel at the command (Security Det and NCISRA), the Naval Legal Service Office (NLSO), the Navy Dental Center and DECA.

Activities which appear to be eliminated under the Pentagon's recommendations are the Naval Exchange (1,019 billets eliminated), and the NLSO (18 billets eliminated). Naval Activities personnel support under the recommendations would be reduced by over 20%.

vii. Personnel Transferring Out

	1997		1998		1999		Total			
	Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ		
NAVY COMMAND										
Naval Activities	0	0	0	0	0	0	0	0		
Pers Supt Det	0	0	0	0	0	0	0	0		
NSW U1(SEALS)	0	0	0	0	0	0	0	0		
NSW U1(SEALS)	0	0	0	0	0	0	0	0		
DET CAT	0	0	0	0	0	0	0	0		
Navy Band CINPACFLT	0	0	0	0	0	0	0	0		
NMCMC-133	0	0	0	0	0	0	0	0		
COMTHIRDNCB DET CAT	0	0	0	0	0	0	0	0		
COMTHIRDNCB DET	0	0	0	0	0	0	0	0		
COMNAVMAV	0	0	0	0	0	0	0	0		
Def Comm Agency	0	0	0	0	0	0	0	0		
PWC	0	0	0	0	0	0	0	0		
OICC	0	0	0	0	0	0	0	0		
Nav Base Sec	0	0	0	0	0	0	0	0		
NCISRA	0	0	0	0	0	0	0	0		
USPACOM SA	0	0	0	0	0	0	0	0		
NAV E&T PMGMT	0	0	0	0	0	0	0	0		
SUBGRUSEVEN	0	0	0	0	0	0	0	0		
Nav Leg Serv Off	0	0	0	0	0	0	0	0		
Nav Fam Serv Ctr	0	0	0	0	0	0	0	0		
COMLOG WESTPAC REP	0	0	0	0	0	0	0	0		
NTCC Nimitz Hill	0	0	0	0	0	0	0	0		
Navy Dental Ctr a/	0	0	0	0	7	0	7	0		
NPMOC W SCIF a/	0	0	0	0	10	0	10	0		
NAV Pac Met Ocea/JTWC a/	0	0	0	0	37	2	37	2		
ATG WestPac a/	0	0	0	0	0	0	2	0		
FLT IMAGING a/	0	0	0	0	0	0	3	0		
MIL SEA COMM a/	0	0	15	10	3	3	18	13		
USNS CATAWBA a/	4	0	0	0	0	0	4	0		
USNS NARRAGANSET a/	0	0	4	16	0	0	4	16		
USNS SAN JOSE a/	0	0	49	124	0	0	49	124		
USNS SPICA DET a/	49	108	0	0	0	0	49	108		
USNS MARS a/	0	0	0	0	49	124	49	124		
USNS NIAGARA FALLS a/	0	0	0	0	49	124	49	124		
USNS FLINT b/	40	0	0	0	0	0	40	0		
USNS KILAUEA DET b/	40	0	0	0	0	0	40	0		
Nav Res Act (NEX) 1/ c/	0	0	0	0	0	10	0	10		
Army Vet Det	0	0	0	0	0	0	0	0		
DPSDBO	0	0	0	0	0	0	0	0		
Info Proc	0	0	0	0	0	0	0	0		
FOSSAC	0	0	0	0	0	0	0	0		
DRMO	0	0	0	0	0	0	0	0		
DFAS	0	0	0	0	0	0	0	0		
DFAS(PWC)	0	0	0	0	0	0	0	0		
MTMC	0	0	0	0	0	0	0	0		
MPSRON 3	0	0	0	0	0	0	0	0		
NavFac Caretaker	0	0	0	0	0	0	0	0		
TOTAL	133	108	68	150	155	263	5	0	361	521

viii. Personnel Eliminated

NAVY COMMAND	1996		1997		1998		1999		Total	
	Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
Naval Activities	0	0	36	0	38	0	40	48	114	48
Pers Supt Det	0	0	0	0	0	0	0	0	0	0
NSW U1(SEALS)	0	0	0	0	0	0	0	0	0	0
NSW U1(SEALS)	0	0	0	0	0	0	0	0	0	0
DET CAT	0	0	0	0	0	0	0	0	0	0
Navy Band CINPACFLT	18	0	0	0	0	0	0	0	18	0
NMCB-133	0	0	0	0	0	0	0	0	0	0
COMTHIRDNCB DET CAT	0	0	0	0	0	0	0	0	0	0
COMTHIRDNCB DET	0	0	0	0	0	0	0	0	0	0
COMNAVMAR	0	0	0	0	0	4	35	4	35	8
Def Comm Agency	0	0	0	0	0	0	0	19	0	19
PWC	1	86	1	166	3	304	0	0	5	556
OICC	2	0	4	20	6	32	0	0	12	52
Nav Base Sec	20	0	4	0	0	0	0	0	24	0
NCISRA	0	0	0	0	0	8	0	0	0	8
USPACOM SA	0	0	0	0	0	0	0	0	0	0
NAV E&T PMGMT	0	0	0	0	0	0	0	0	0	0
SUBGRUSEVEN	0	0	0	0	0	0	0	0	0	0
Nav Leg Serv Off	0	0	0	0	0	0	18	0	18	0
Nav Fam Serv Ctr	0	0	0	0	0	0	4	0	4	0
COMLOG WESTPAC REP	0	0	0	0	0	0	1	0	1	0
NTCC Nimitz Hill	0	0	0	0	0	0	7	0	7	0
Navy Dental Ctr	0	0	0	0	0	0	16	0	16	0
NPMOC W SCIF	0	0	0	0	0	0	0	0	0	0
NAV Pac Met Ocea/JTWC	0	0	0	0	60	5	0	0	60	5
ATG WestPac	0	0	0	0	0	0	0	0	0	0
FLT IMAGING	0	0	0	0	0	0	4	0	4	0
MIL SEA COMM	0	0	0	0	0	0	0	0	0	0
USNS CATAWBA	0	0	0	0	0	0	0	0	0	0
USNS NARRAGANSET	0	0	0	0	0	0	0	0	0	0
USNS SAN JOSE	0	0	0	0	0	0	0	0	0	0
USNS SPICA DET	0	0	0	0	0	0	0	0	0	0
USNS MARS	0	0	0	0	0	0	0	0	0	0
USNS NIAGARA FALLS	0	0	0	0	0	0	0	0	0	0
USNS FLINT	0	0	0	0	0	0	0	0	0	0
USNS KILAUEA DET	0	0	0	0	0	0	0	0	0	0
Nav Res Act (NEX) 1/	0	94	0	337	8	588	1	0	9	1,019
Army Vet Det	0	0	8	0	0	0	0	0	8	0
DPSSBO	0	0	0	0	0	0	0	0	0	0
Info Proc	0	0	6	23	0	0	0	0	6	23
FOSSAC	0	0	5	0	0	0	0	0	5	0
DRMO	0	0	0	0	0	0	0	0	0	0
DFAS	0	0	0	0	0	0	0	0	0	0
DFAS(PWC)	0	0	0	0	0	0	0	0	0	0
MTMC	0	0	0	0	0	0	0	0	0	0
MPSRON 3	0	0	0	0	0	0	0	0	0	0
NavFac Caretaker	0	0	0	0	0	0	0	0	0	0
TOTAL	41	180	64	546	115	941	126	71	346	1738

ix. Personnel "Transferring In"/Remaining

NAVY COMMAND	1996		1997		1998		1999		Total	
	Mil	Civ	Mil	Civ	Mil	Civ	Total	Civ	Mil	Civ
Naval Activities	0	0	2	16	0	0	213	271	215	287
Pers Supt Det	0	0	0	0	0	0	49	0	49	0
NSW U1(SEALS)	0	0	0	0	0	0	0	1	0	1
NSW U1(SEALS)	0	0	0	0	0	0	49	0	49	0
DET CAT	0	0	0	0	0	0	0	0	0	0
Navy Band CINPACFLT	0	0	0	0	0	0	0	0	0	0
NMCB-133	0	0	0	0	0	0	0	0	0	0
COMTHIRDNCB DET CAT	0	0	3	0	0	0	13	3	16	3
COMTHIRDNCB DET	0	0	0	0	0	0	3	0	3	0
COMNAVMAR	0	0	0	0	2	2	0	0	2	2
Def Comm Agency	0	36	6	17	0	0	0	0	6	53
PWC	0	0	0	0	11	665	0	0	11	665
OICC	0	0	0	0	1	15	0	0	1	15
Nav Base Sec	0	0	0	0	0	0	83	0	83	0
NCISRA	0	0	0	0	0	5	0	0	0	5
USPACOM SA	0	0	0	0	0	0	0	2	0	2
NAV E&T PMGMT	0	0	0	0	0	0	2	0	2	0
SUBGRUSEVEN	0	0	6	0	0	0	0	0	6	0
Nav Leg Serv Off	0	0	0	0	0	0	0	0	0	0
Nav Fam Serv Ctr	0	0	0	0	0	0	0	0	0	0
COMLOG WESTPAC REP	0	0	0	0	0	0	0	0	0	0
NTCC Nimitz Hill	0	0	0	0	0	0	0	0	0	0
Navy Dental Ctr	0	0	0	0	0	0	25	0	25	0
NPMOC W SCIF	0	0	0	0	0	0	0	0	0	0
NAV Pac Met Ocea/JTWC	0	0	0	0	0	0	0	0	0	0
ATG WestPac	0	0	0	0	0	0	0	0	0	0
FLT IMAGING	0	0	0	0	0	0	0	0	0	0
MIL SEA COMM	0	0	0	0	0	0	0	0	0	0
USNS CATAWBA	0	0	0	0	0	0	0	0	0	0
USNS NARRAGANSET	0	0	0	0	0	0	0	0	0	0
USNS SAN JOSE	0	0	0	0	0	0	0	0	0	0
USNS SPICA DET	0	0	0	0	0	0	0	0	0	0
USNS MARS	0	0	0	0	0	0	0	0	0	0
USNS NIAGARA FALLS	0	0	0	0	0	0	0	0	0	0
USNS FLINT	0	0	0	0	0	0	0	0	0	0
USNS KILAUEA DET	0	0	0	0	0	0	0	0	0	0
Nav Res Act (NEX) 1/	0	0	0	0	0	0	0	0	0	0
Army Vet Det	0	0	0	0	0	0	0	0	0	0
DPSDBO	0	0	0	0	0	0	0	0	0	0
Info Proc	0	0	0	0	0	0	0	0	0	0
FOSSAC	0	0	0	0	0	0	0	0	0	0
DRMO	0	0	5	23	0	0	0	0	5	23
DFAS	0	0	0	28	0	0	0	0	0	28
DFAS(PWC)	0	0	0	0	0	0	0	0	0	0
MTMC	0	0	0	2	0	0	0	0	0	2
MPSRON 3	0	0	0	0	0	0	0	0	0	0
NavFac Caretaker	0	0	0	0	0	0	1	12	1	12
TOTAL	0	36	22	86	14	687	438	289	474	1098

3. Fleet and Industrial Supply Center

The DoD recommendation proposes to disestablish FISC, whose existence the DoD report notes depends upon active fleet units in their homeport area. A residual role for FISC-like activities (and

that of some FISC tenants) will be absorbed into Naval activities in FY96 and FY97, with an even smaller number of "FISC" personnel realigning into to Naval Magazine in FY99.

Given the system-wide excess capacity in FISC's and the excess of personnel to activity in Pearl Harbor, Hawaii, the mission of FISC Guam is recommended to be absorbed with any significant transfer of personnel. However, the disestablishment scenario provides for 150 pieces of MHE (the equipment and vehicles, such as fork lifts, used to move containers and handle pallets of material), amounting to 750 Metric tons of equipment, will be relocated to Pearl Harbor.

The data analysis for workload and missions shows that FISC Pearl Harbor would gain the AFS Loadout/Resupply and Diego Garcia Support RSS Management. Although FISC Pearl Harbor can continue the mission of FISC, Guam, its more distant location from the area of afloat operations will involve increased steaming time for the MSC vessels transporting supplies and this impact on ship-board endurance levels is "undetermined."

In a presentation to BRAC, the Commanding Officer of FISC Guam, Captain Skirm, indicated that the movement to Pearl Harbor would reduce the number of cycles for resupplying the Diego Garcia. The number of cycles would drop from eight to six per year and, whereas right now material has to be ordered eight months in advance, they will have to order in excess of a year in advance.

The DoD recommendation is that "the remaining workload can efficiently be handled by other activities on Guam or by other FISCs." FISC fuel activities also appear to be completely closed down.³

The Data Call and COBRA analysis feeding into the DoD Recommendation has the DECA, DAO, DRMO, and MTMC personnel and functions realigning to the newly structured NAVACTS and later NAVMAG. Other existing FISC tenants -- the Army Vet, FOSSAC, and the IPC -- would be disestablished.

The scenario also indicates that the dehumid/cold storage facility will be transferred to NAVACTS for holding DECA items. However, given the movement of MHE equipment it is difficult to determine how NAVACTS will be able to use the retained warehouses. It also indicates that the consolidated handling warehouse and the hazardous material storage facility, now being built, will be completed. Other projects, such as the gas bottle storage facility and a new cold storage warehouse will not be constructed.⁴

Information from the scenarios also show that NAVACTS Guam would receive the functions of Household Goods/POV Shipments, Hazardous Material Minimization, Freight Delivery from Air Terminal, and Warehousing of Commissary and Navy Exchange Stores. It would, as mentioned above, also receive the DECA, DAO, DRMO, MTMC tenants as well as a Navy Exchange (NEX) tenant function, although the data shows no personnel assigned to the latter tenant activity.

The Scenario Development Data Call for FISC assumes that the "X-ray subsistence compound is turned over to NAVACTS for DECA and Navy Exchange use." The functions of the X-ray subsistence would enable DECA and the Navy Exchange to have an additional cold storage facility. This compound is being retained even though the new commissary opening up later this year at the Naval Station has its own self-contained cold storage facility. While some area could be retained by the Navy in order to accommodate the storage needs of the exchange, it is unnecessary to retain the entire X-ray subsistence compound.

Despite the essential shutdown of FISC activities in Guam to support regional mobilization, the Pentagon's recommendations provide no process for the transfer of property and assets which would largely be vacated. In fact, it appears that DoD will continue to use some of the fuel tanks at FISC in order to continue to fill pipeline to Anderson AFB. According to their figures, 36% of the oil from FISC is routed for Anderson AFB. No reference is made in the recommendation for how the fuel needs currently being serviced by FISC would be accommodated after its disestablishment.

Additionally, the recommendation and data calls do not address the disposition of the hazardous material storage currently being built at FISC. There is no reference to what facilities on Guam or elsewhere would take these functions over. Since construction of the storage facility is still continuing in spite of the DoD recommendation, it is unclear whether or not the Navy would retain this storage facility in order to meet requirements.

As a result of the fact that the DoD recommendations are vague, Team Guam is concerned that DoD will continue to retain assets such as the X-ray subsistence, certain fuel tanks for the transport of fuel to AAFB, and the hazardous material storage facility. While the Navy has stated that they are willing to cooperate with Guam on reuse of these facilities and Guam is willing to accommodate their mission requirements, retaining the assets would preclude economic revitalization.

4. Guam Navy Aviation Assets and Andersen AFB

DoD's Base Closure and Realignment Report to BRACC '95 recommends:

Change the receiving site specified by the 1993 Commission (1993 Commission Report at page 1-21) for "the aircraft, personnel, and associated equipment" from the closing Naval Air Station, Agana, Guam from "Andersen AFB, Guam" to "other naval or DoD air stations in the Continental United States and Hawaii." (at page 5-98)

DoD provides three reasons for requesting the redirect:

- To co-locate the helicopter squadron with the vessels they support, which are recommended for transfer to Hawaii;
- To co-locate VQ-1 and VQ-5 with similar assets on the West Coast for operational synergies (a "completed" process which the redirect is called for to sanction); and,
- To avoid additional construction costs at AAFB to house the squadrons.

While it is clear that HC-5 should be co-located with the vessels they support, questions concerning the military value of relocating these vessels to Hawaii are addressed in other sections of the report. Should the BRAC decide against the DoD and allow vessels to remain on Guam, HC-5 should also remain for the same reason provided by the DoD in recommending its relocation. It should be pointed out that HC-5 is the only helicopter equipped squadron that performs search and rescue (SAR) operations in Micronesia. It averages over 30 SAR cases and saves over forty lives per year. Should HC-5 be transferred, additional costs would be incurred by the Air Force in carrying out aviation exercises at AAFB. Additional costs would also be incurred by the U.S. Coast Guard on Guam which does not have but is required to have SAR capabilities. These additional costs are not factored into the COBRA analysis.

Co-location of VQ-1 and VQ-5 with similar assets stateside is understandable given today's need to cut costs. In any event, the squadrons were relocated in 1994, with never any hope locally for their return. However, avoiding additional construction cost at AAFB is flawed reasoning given the excess capacity that currently exists at AAFB, as pointed out to the Navy and DoD by Team Guam in the 1993 BRAC process. Use of the "cost avoidance rationale" for HC-5 is also unsupported since HC-5 utilizes a newly constructed \$17 Million hangar as well as other aviation facilities vacated by VRC-50 on the north side of AAFB and shares Air Force housing, maintenance and operational facilities on the south side of the base.

The DoD report estimates:

"the one-time cost to implement this recommendation is \$43.8 million. The net of all costs and savings during the implementation period is a savings of \$213.8 million. Annual recurring savings after implementation are \$21.7 million with an immediate return on investment expected. The net present value of the costs and savings over 20 years is a savings of \$418 million." (page 5-98)

Cost Savings Overstated

As identified in the COBRA report, the net of all costs and savings estimated by DoD to be \$213.8 million is incurred primarily by avoiding the construction of facilities at AAFB to house VQ-1, VQ-5 and HC-5, estimated at \$180 million. While the data call and the COBRA report identifies the \$33 million in construction that is needed to house squadrons at the receiving bases, DoD does not address how the \$180 million for construction at AAFB is derived.

The data call does not specify a need for new facilities to house HC-5 because HC-5 is currently located in a \$17 million facility on which construction was begun in 1994. Since no new facilities would be needed at AAFB, cost avoidance should only equate to \$4.45 million, for the only MILCON currently funded. Moreover, MILCON for hangers and aviation-support infrastructure at AAFB is unnecessary since the existing Air Force infrastructure is well in excess of Navy's requirements and supports no Air Force planes based at AAFB.

The Pentagon has now recommended that all remaining Naval air squadrons at AAFB be relocated. However, new Navy facilities exist at AAFB (air support and administration buildings) and these facilities are not recommended for closure. Since the Scenario Development

Data Call explicitly notes that none of the Navy's assets at AAFB are to be "shutdown."⁵ If this is the case, then the Pentagon's recommendations should include the costs of mothballing Navy-owned assets at AAFB or alternatively, include the Air Force cost of operating these facilities since they are not being recommended for transfer to the local government.

The data call and COBRA analysis also includes costs for personnel, overhead and moving for the squadrons that have already left. These costs should include only those costs related to the moving of the only existing squadron at AAFB, namely HC-5.

5. Cumulative Impacts

i. Personnel

The contingent of Navy personnel in Guam would be significantly impacted by the Pentagon's recommendation. The present level of billets (approximately 5,200) would be reduced by approximately 1,200 if the recommendations went into effect; a reduction of 23%. In addition to the Pentagon's recommendations to BRAC 95, force reductions are also planned for NCTAMS, Guam which may reduce the number of military personnel by as many as 250. The possibility of personnel reductions at Naval Hospital is also likely given the general decline of the military population in Guam.

If the recommendations are approved, the population of military personnel in Guam would be no higher than 4,200 and possibly as low as 3,500. Of this amount, over 1,400 would be afloat personnel assigned to the tender operating out of Polaris Point.

ii. Housing

Military requirements in Guam are driven by personnel loading. The Pentagon's recommendation to the BRAC 95 does not specifically address this issue. Rather the DoD prefers to leave the decision on how to implement quarters requirements until after a decision by BRAC is made. This leaves the military with a level of discretionary authority which -- in the case of the closure of NAS -- has been demonstrated to be adverse to revitalization activities.

In an attempt to assist the BRAC is defining the areas which will actually be required by the Navy for quartering personnel, the following adjustments to the existing housing and barracks inventory are recommended. These recommendations offered are consistent with the Navy's "Guam Consolidation" plans (Phase III) which would bring all housing in the Apra Harbor area onto Orote Peninsula. The housing areas which are recommended for closure under the BRAC 95 process should the Pentagon's recommendations be accepted are indicated by **bold type** in the following tables.

Navy Officer Quarters in Guam			
Officers Housing		Officers Bachelors Quarters	
NAS	-136	Naval Station	72
Lockwood Terrace	62	Camp Covington	34
Naval Hospital	27	Naval Hospital	25
Nimitz Hill	-67	Temp Lodging Fac.	18
Old Apra Heights	72	NCTAMS	31
South Finegayan	137		180
Sumay	28		
Nav Cams WestPac	2		
Naval Mag	-1		
	124		

Navy Enlisted Quarters in Guam			
Enlisted Housing		Enlisted Barracks	
South Finegayan	434	NavSta/CampCov	763
North Tipalao	450	NCTAMS (F)	294
NCTAMS (Fin.)	302	Naval Hospital	112
NAVSTA (new)	300	NavMag	-100
South Tipalao	230	NCTAMS (B)	60
Apra Hts.	-308		
Lockwood Ter. (NS)	240		1129
Sumay	104		
Naval Hospital	44		
NCTAMS (B)	22		
	1818		

The following table projects the remaining number of quarters for officers and enlisted personnel in relation to force levels.

Projected Navy Quarters Levels--Without NAS, Nimitz & Apra				
	Officer	Enlisted	Total	Percentage
TOTAL Living Spaces	304	3,563	3,867	
Personnel (high)			4,200	92.07%
Personnel (medium)			3,800	101.76%
Personnel (low)			3,500	110.49%

Endnotes

¹As the Gulf War demonstrated, the use of sea-launched cruise missiles (SLCMs) are an important element of U.S. offensive strategy. In addition to the Tomahawk's ability to "significantly increase the Pacific Fleet's theater nuclear arsenal and provide the capability to strike land targets from survivable sea-based platforms (Navy before SASC, FY1983 DoD Budget, prt.5 p.3083) they would also be a part of the U.S. post-global nuclear war reserve (Admiral Kelso, SASC, Strategic Force Modernization Programs, FY 1982, 97th Congress, First Session, p.203; both references in Arkin and Fieldhouse, *op.cit.* pp 125-6.)

² Arkin and Fieldhouse, *op.cit.*, p. 125.

³ The Pentagon's recommendations note (in the section on FISC, Guam, Environmental Impact) that the fuel tanks would be "empty." Additionally, monies are programmed for "tank cleaning/gas free inspection" (FISC, Guam (FISC Pearl Harbor Scenario) BRAC-95 Scenario Development Data Call, p.2-10)

⁴ FISC, Guam Data Call 64 and the COBRA Milcon One-Time Savings

⁵ Guam Aviation Assets, Scenario Development Data Call, p. 2-20, 21.

PART 3. BRAC 95 LANDS

As our analysis demonstrates thus far, DOD's recommendation first neglects to consider the historical role Guam has played in maintaining U.S. forward presence in the Pacific and the sacrifices that the people of Guam have borne in this regard. The DoD recommendation identifies Guam for large reductions in forces levels on the island despite the historical role Guam has played without adequate planning for the return of closed and realigned assets for the citizens of Guam to provide for their own economic revitalization. The citizens of Guam have been "at the tip of the spear" for decades, so they more than any other U.S. citizen understand the impact of force reductions. They have also been subject to so many restrictions in their lives, tracing all the way back to the initial U.S. occupation after the Spanish-American War, that they have only been able to develop an infant private sector over the past 25 years. The citizens of Guam understand that when the military cuts back its forces and its forward presence, they are the ones to pay the price. They are willing to accept this burden, but they want assistance in this transition to a new period of private economic enterprise.

Secondly, from an operational point of view, it is militarily essential to keep reliable access to American soil in the Western Pacific to respond to contingencies and readiness demands. Moving the Navy's critical supply ships back to Hawaii seven to ten days sailing away from the Western Pacific and closing or realigning all related activities in Guam will complicate operations greatly and affect CINCPAC's ability to respond to a contingency. Without maintaining the readiness of the facilities in Guam and a skilled work force, DoD will not be able to respond to two nearly simultaneous regional conflicts as is required under the Bottom Up Review (BUR) without costly expenditures of time and materials, which in this era of rapid military responses may be woefully late. The citizens and Government of Guam believe that in this transition and the new era, Guam still provides an effective base for the United States in the Pacific. They believe that in partnership with the military in the Pacific they can provide less expensive, cost-effective basing alternatives for the continued presence of military resupply and contingency forces.

Additionally, the economic impact of the DoD recommendations are greater than projected for any other American community. The recommendations will affect about 25 percent of our economy and approximately 10 percent of the work force. To put these reductions in perspective, if this magnitude of cuts was undertaken in California, then about 1.5 million people would lose their jobs.

The Preferred Option

Given these conclusions, Team Guam's position addresses positively the concerns of military commanders in the Pacific regarding the strategic military value of Guam, DOD's need to save money, and Guam's effort to adjust to the economic impact. Team Guam's recommendations accomplish this by responding to the final selection criteria. Our preferred option is:

- To keep the MSC ships forward deployed in Guam indefinitely with language clarifying that they will continue to receive repairs from SRF-Guam and provide a core level of work for SRF.

- SRF will continue to repair Navy ships, but a collaborative arrangement would be worked out with the Navy to allow SRF to conduct private-sector work;
- FISC will remain open in order to continue to supply the MSC ships requirements but private sector co-utilization could occur.
- HC-5 would be maintained in Guam in order to operate the MSC ships.

This position allows the military commanders in the Pacific to respond to the current and future mission requirements and improve on operational readiness, the first criteria. By maintaining the MSC ships forward deployed in Guam, military commanders would retain the flexibility to respond to a contingency. Instead of keeping the MSC ships on constant cruises and be forced to coordinate those cruises to meet up with a battle fleet in case of a contingency, as would be necessary under the DoD recommendation, the Team Guam position gives the commanders in the field the flexibility that they need. Admiral Zlapoter, the Commander of the Navy's Pacific Fleet, has stated on public record that the Team Guam option is more desirable from an operational standpoint than the DoD recommendation.

The Team Guam proposal would also give military commanders more flexibility since they would not be forced to rely on foreign bases in the future. The examples cited earlier of how our allies in Asia rejected DOD's request to deploy maritime prepositioned ships and Okinawa's efforts to remove the U.S. military bases from their island is evidence of need for the flexibility that bases in Guam provide.

The Team Guam proposal also responds to the second criteria, the availability and condition of land and facilities at both the existing and receiving locations. The Team Guam proposal averts the problem that the DoD recommendation is facing with the transfer of the HC-5 squadron to Hawaii. With an over-capacity at facilities in Hawaii, DoD has now been left without a receiving site for HC-5 and has yet to make a decision about where this realignment will be placed.

Team Guam's recommendation is more responsive to the third criteria, regarding the availability to accommodate contingency, mobilization and future total force requirements at both the existing and potential receiving locations, than DOD's recommendations to retain the assets. It will enhance the ability of military commanders to respond to a contingency more quickly and efficiently. MSC ships will already be placed in Guam, seven days ahead of the battle fleet and ready to respond.

The Bottom-Up Review (BUR) strategy proposed by the Secretary of Defense requires that DoD have the ability to respond to two nearly simultaneous regional contingencies about the size of Desert Storm. Guam proved its strategic military value during Desert Storm, and FISC-Guam played a critical role in providing the logistics needed for a massive operation of this size. If a conflict erupted in the Persian Gulf and Korea, at nearly the same time, a mobilization greater in size than the one undertaken during Desert Storm would be necessary.

Team Guam's proposal will save DoD money with a downsized presence in Guam and a collaborative effort at SRF, the fourth selection criteria. DoD will have reduced operating and overhead costs as a result of the collaborative arrangement at SRF. Moreover, DoD will not be forced to spend money on maintaining the MSC ships on permanent cruises and the added cost of an additional MSC vessel, which is about \$21 million annually and \$400 million over twenty years. This additional cost is roughly the amount that DoD projects it will save in their return on investment over twenty years as a result of the closure of FISC.

From the perspective of our local community in Guam, Team Guam's recommendation would ease the economic impact on the island's economy. A certain core employment base would be maintained since 70% of SRF's work comes from the supply ships. SRF would be able to expand its operations to accommodate private sector work. Additionally, the employment base at FISC would be maintained to service the MSC vessels, since its customer base is anchored in the 42% of sales that are attributed to the MSC supply ships.

The Minimum Option

Team Guam recognizes the military changes that are imperative in the post-Cold War environment and the need to downsize. If BRAC decides against these two options, then it is the position of Team Guam that at a minimum, Guam should be allowed a reasonable transition and unfettered access to the assets -- primarily through land transfers --to allow Guam to better revitalize its economy

Therefore, if a thorough collaborative effort is not achievable, Team Guam recommends that BRAC 95 direct that DOD's recommendations be accepted with the following difference: the Commission should direct that no actions to close, realign, disestablish or redirect military forces or facilities in Guam until four (4) years after the passage of the BRAC 95 enabling legislation so as to complete those actions by the end of the required six (6) year period.

The BRAC 95 Commission should encourage the Departments of Defense and Navy to work closely with the Government of Guam to affect a meaningful dual-use of the facilities in Guam and an effective transition to the final closure actions. In this manner, the interests of the citizens of Guam and the military in the Pacific are protected and the transition to economic revitalization is assured. It is then up to the Government of Guam and its representatives to work with the military in putting a real transition into place. If the military does not cooperate with the Government of Guam, at a minimum the people of Guam have four years in which to prepare for the final reductions.

During this period, some of the actions that could take place are as follows:

- The transition of the MSC ships out of Guam over a four year period. This period would enable CINCPAC and CINCPACFLT to adjust to the new scenario and give Guam a chance to transition SRF to more commercial and private-sector work

- A collaborative arrangement would be worked out with the Navy to allow SRF to transition to private-sector work;
- Guam would work with the military to privatize FISC operations;
- HC-5 would be maintained to accompany and support the MSC ships;
- The assets currently controlled by the Navy in relation to their operations at SRF, FISC and Naval Station would be transferred to Guam under lease or preferably outright transfers, and the Navy would still retain access to the assets in time of a contingency.

As noted earlier, DOD's original recommendation with regard to the disposition of the assets was unclear. Recently, however, in a letter from Assistant Secretary Robert Pirie, the Department of the Navy clarified its intentions stating that it intends "to convey, through long-term leases, outright transfers, or any other mutually agreeable arrangement, as much of the land area and facilities as possible." Mr. Pirie further stated that it is not the Navy's intention to hinder in any way the economic revitalization of Guam, and that it stands ready to work with Guam to ensure the vitality of the local economy.

DOD's recommendations needs clarification in the BRAC report. Although the Navy has expressed their willingness to work with Guam on its economic revitalization, clarifying language is needed because in order to follow through on DOD's stated intentions on assisting Guam revitalize the local economy.

The absence of a clearly defined process by which economic revitalization could occur at the activities affected by the Pentagon's recommendations favors military discretion over Guam's economic needs. The history of the military's discretionary authority in Guam as it relates to Guam's economic needs lends little confidence to a successful revitalization effort.

The Pentagon's recommendation to retain waterfront assets after closure of SRF and the realignment of most maritime activities to Hawaii vests the U.S. Department of the Navy with discretionary authority over future use. This discretionary authority is unwarranted because the Navy will not require the assets for any planned or frequently level activity during non-hostile periods. Moreover, there are a sufficient number of case-studies where similar actions (close-but-retain) have demonstrated that the Navy is unable to satisfactorily use its discretionary authority to accommodate reuse.

In Guam's case, the Navy has proposed civilian utilization of its existing under-utilized assets in Inner Apra Harbor has for some time. The Navy's response to this -- under its existing discretionary authority (for which there are no recommended changes) -- has been less than enthusiastic and ultimately not accommodating. Examples of the Navy's absence of a willingness to accommodate Guam's growing economic development requirements for waterfront property are even indicated in the Data Calls for BRAC 95. Following is an example:

...there is a proposal by (the) Government of Guam to use parts of Inner Apra Harbor for civilian shipping (specifically Victor Wharf). This proposal would impact vessel traffic patterns in the Inner Harbor, vehicle traffic on the Naval Station, security of Naval Station and the environment.

The Navy's desire to maintain discretionary authority is clear in its responses -- through the BRAC -- to questions asked of the Secretary of Defense. In response to a question about the facilities being "turned over to the Government of Guam for economic development with the proviso that they be used for military contingency operations at the request of the Federal Government," the DoD response was:

...Since our recommendation is clear that we need to maintain access to this strategic location, a careful balance will be struck between community reuse and the retention of the necessary facilities for potential operational contingencies. Decisions regarding the retention of specific property in Guam will not be finalized until the BRAC recommendations are approved. (Answer to Question 1.)

The Pentagon's unwillingness to identify and commit facilities for civilian reuse and economic revitalization in the areas to be affected by a closure or operational slow down, would continue the military's discretionary control over areas of vital economic importance to the people of Guam. From Guam's experience, this control has historically meant complete economic control over economically vital assets such as waterfront property. The Pentagon's proposal to govern the continued use of these underutilized assets even further leaves little confidence in the possibility of constructive joint-use (peacetime) scenario.

A transition period is not spelled out in the DoD recommendation that would allow for an economic revitalization. The timeframe of the Pentagon's recommendation for closures is not defined. It does not provide for a transition period during which time Guam can adjust to the new economic circumstances. It assumes that the facilities would be closed without providing the local community with the opportunity to adjust to the change.

This transition period would direct that the base closures would not move forward for a set number of years after the BRAC decision. This period would give Guam the time it would need to make a transition toward a private sector operation of these facilities. In order to make this a workable transition, BRAC would have to direct the Navy to work within certain set parameters and a set number of years to be determined.

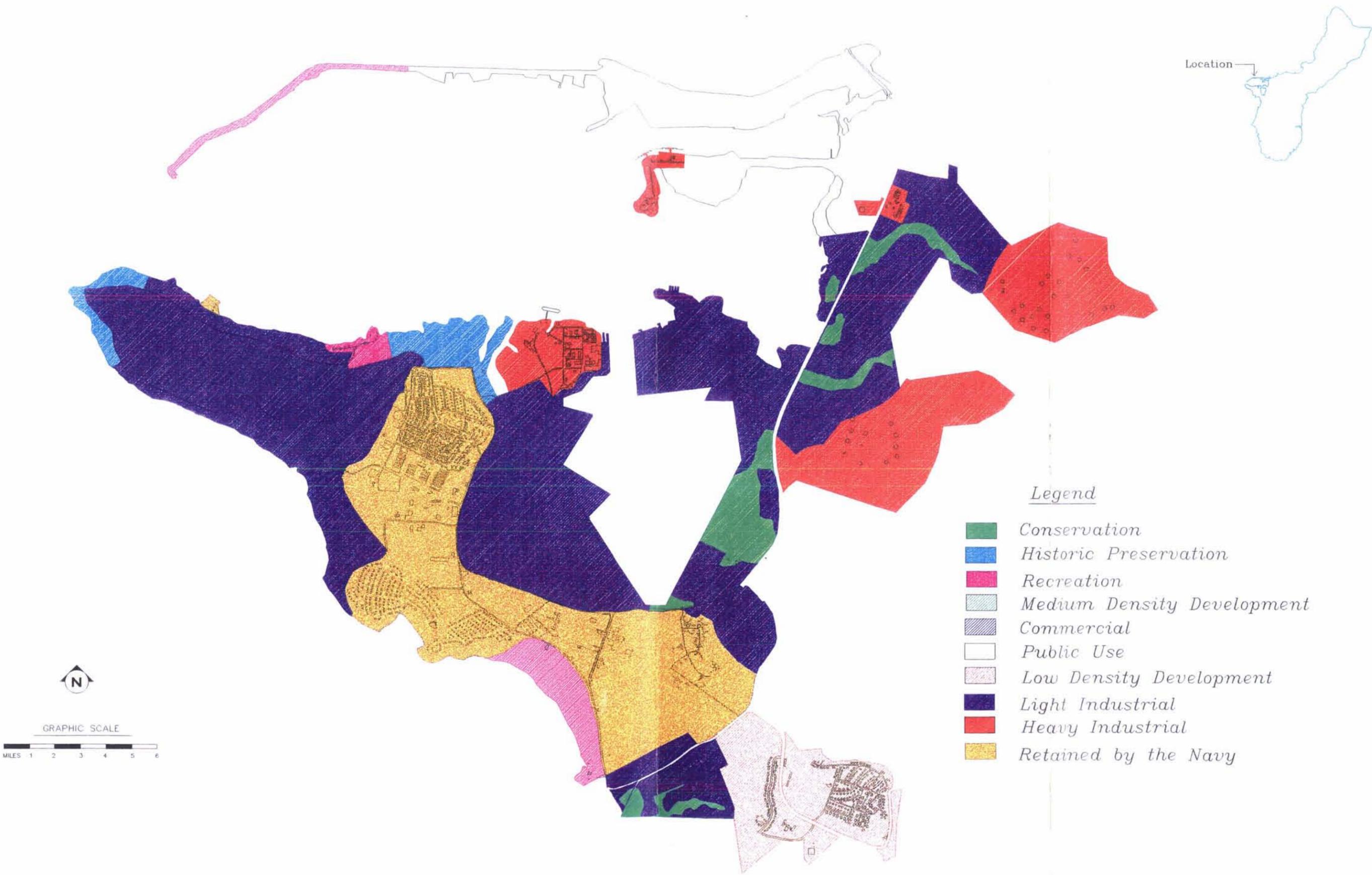
A Proposal to Delay the Closure of Bases in Guam

Should the Commission decide to adopt any or all of the DoD recommendations concerning Guam, we request that the execution of the action(s) be delayed. This would allow both a reasonable transition period and a partial mitigation of the potentially catastrophic impacts on the civilian economy of the island. While delaying the action(s) would reduce the present value of the overall cost savings of closure and/or realignment activities, we believe that the offsetting benefits to the citizenry of Guam deserves at the very least this relatively small consideration.

We propose, as an alternative to the DoD proposals, that whatever actions are taken be pushed back by a mere two years, so that the bulk of the closure and/or realignment activity takes place in 1998 and 1999, rather than in 1996 and 1997. All closure and/or realignment activities would still fall within the required six-year time frame. The impacts on the net present value of the prospective cost savings are as outlined below:

Transition Cost Savings Under the Proposal and the Proposed Delay					
(\$K)	Discounting Rate	Six-Year NPV		Twenty-Year NPV	
		2.20%	2.75%	2.20%	2.75%
DoD Proposal					
SRF		168,181	164,798	594,067	562,829
FISC *		127,075	124,605	443,965	420,768
NAVACTS		55,976	53,616	506,090	474,290
NAVAIR		205,264	203,254	435,054	418,014
Total		556,495	546,274	1,979,177	1,875,901
Guam's Alternative Proposal					
SRF		85,205	83,058	517,840	487,605
FISC *		70,946	69,177	387,164	364,691
NAVACTS		(26,825)	(26,656)	430,712	401,154
NAVAIR		159,258	156,629	389,048	371,388
Total		288,583	282,208	1,724,764	1,624,838
Difference (\$K)					
SRF		(82,975)	(81,740)	(76,228)	(75,224)
FISC *		(56,129)	(55,427)	(56,801)	(56,077)
NAVACTS		(82,801)	(80,272)	(75,378)	(73,136)
NAVAIR		(46,007)	(46,626)	(46,007)	(46,626)
Total		(267,912)	(264,065)	(254,413)	(251,062)
Difference (%)					
SRF		49.34%	49.60%	12.83%	13.37%
FISC *		44.17%	44.48%	12.79%	13.33%
NAVACTS		147.92%	149.72%	14.89%	15.42%
NAVAIR		22.41%	22.94%	10.57%	11.15%
Total		48.14%	48.34%	12.85%	13.38%

* Note: FISC figures reflect a correction to the COBRA model to account for the time-phasing of MILCON and shutdown.



Legend

- Conservation*
- Historic Preservation*
- Recreation*
- Medium Density Development*
- Commercial*
- Public Use*
- Low Density Development*
- Light Industrial*
- Heavy Industrial*
- Retained by the Navy*

Proposed Use — Apra Harbor Complex

REUSE CONCEPTS

Guam's position in the Western Pacific is a crucial link between the east and the west. As part of the burgeoning "New Pacific," Guam's leadership is presently developing "Vision 2001," a strategic plan aimed at developing Guam into a center for business and commerce. A crucial element of this strategic plan is the potential for Guam to become a transshipment hub for the central Pacific basin. Guam today is a leader in the Micronesia area for transportation, communications, tourism and financial services. Its attractiveness stems from its location and the fact that Guam is the westernmost American soil, which provides a sense of stability both politically and financially.

Planning strategically, Guam is aggressively generating new investment opportunities, including the creation of new industries designed to create jobs, generate profits for new businesses, and increase overall government revenues to replace the potential loss of federal and defense funding and jobs as a result of the DoD recommendations.

To do so, Guam must think competitively, utilizing all possible tools at its disposal to maximize the value of its strategic location as an established link for businesses between Asia and the United States. Its political stability and English-speaking workforce makes it a natural setting. However, to do so will require that Guam be given the opportunity for its burgeoning private sector to mature into a main player in the Western Pacific.

The Apra Harbor area is the only developed and certified deep water port facility within a 1,500 mile radius of Guam. This makes Guam a vital link to the surrounding Micronesian islands, and creates the potential for the island to become a major base of operations for short-haul commercial shipping and fishing industries for the entire Pacific Rim. The reuse of the Naval Facilities in and around Apra Harbor by the local government and private sector would provide for a wealth of opportunities, placing Guam in the forefront for transshipment and transportation. Moreover, it would still allow for the U.S. military to operate successfully through the joint use of existing facilities.

Ship Repair Facility (SRF)

Under our reuse plan, the existing Ship Repair Facility can easily accommodate both military and civilian markets. Our proposal is to preserve the military's ability to support its fleet operations while expanding our commercial opportunities for private ship repair and industrial support of our public and private operations through a joint use agreement. Some of the reuse opportunities we envision for SRF include:

Military Ship Overhauls and Repairs:

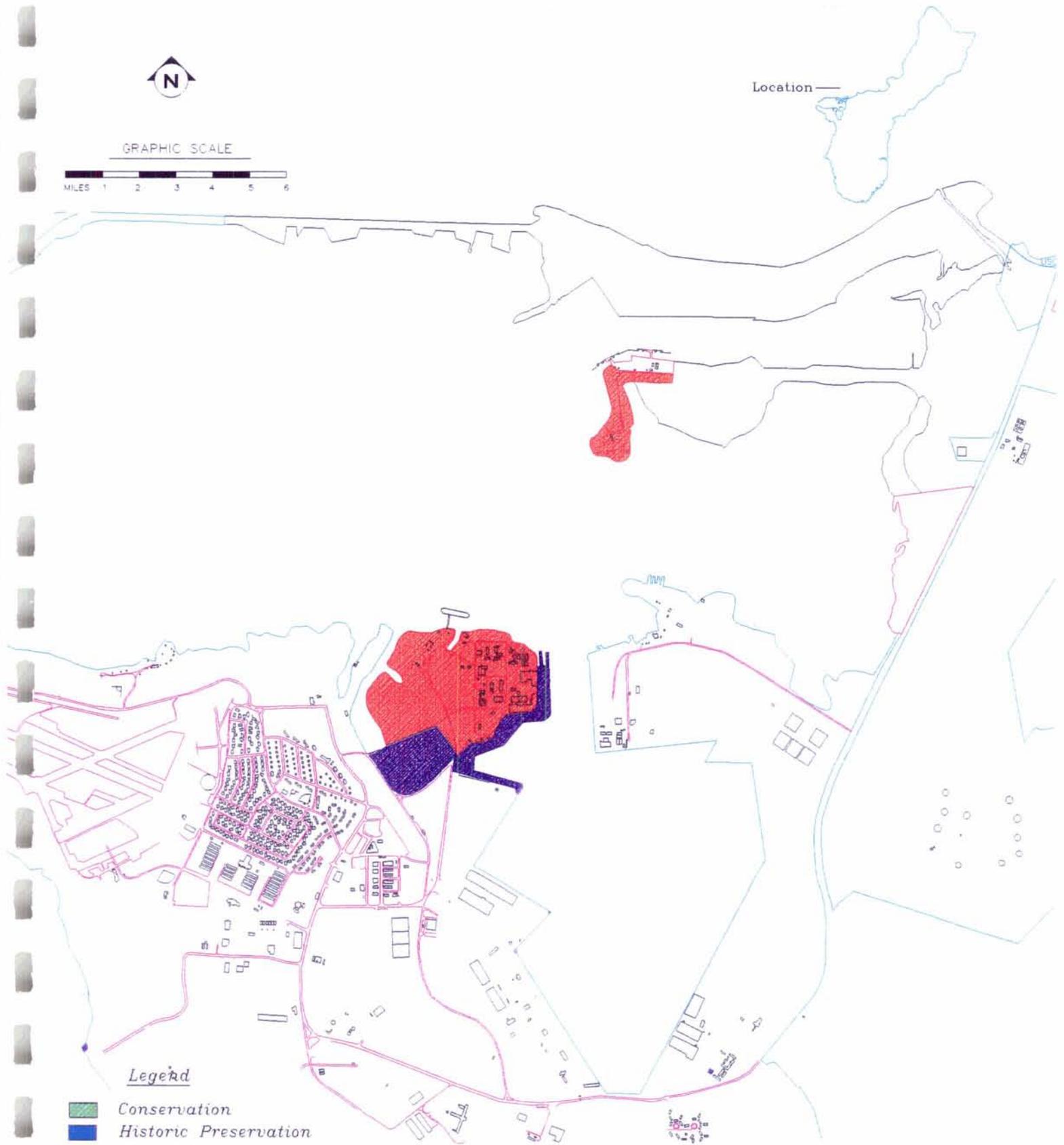
The Military Sealift Command operates numerous vessels in the Western Pacific region, including several prepositioning ships which are situated around Guam. While the T-AFS and T-AE forward deployed afloat vessels are recommended for movement to Hawaii under the



GRAPHIC SCALE



Location —



Legend

-  Conservation
-  Historic Preservation
-  Recreation
-  Medium Density Development
-  Commercial
-  Public Use
-  Low Density Development
-  Light Industrial
-  Heavy Industrial
-  Retained by the Navy

Proposed Use
Ship Repair Facility

recommendations to BRAC 95, the Military Prepositioning vessels located in the Marianas will be a continued source for replenishment activities. Expansion of these services into maintenance activities is a possibility, and could range from voyage repairs to bi-annual overhauls. Presently, these vessels travel to CONUS every second year for overhaul.

The MSC vessels which are recommended for movement to Hawaii could also be a source of intermittent voyage repairs (a relatively minor operation). These activities could encompass overhauls when work schedules at the proposed depot-level maintenance facilities in Japan and Hawaii are occupied with other, time-sensitive repairs.

Emergent repairs could be a continuing source of intermittent work. This is particularly the case with U.S. nuclear vessels operating in the Western Pacific, since such vessels cannot presently undergo repairs in foreign countries.

Arrangements providing for U.S. military vessels to receive preferential treatment at a civilian run industrial/ship repair facility in Guam would be welcomed by the Government of Guam in economic revitalization proposals

Commercial Ship Overhaul and Repair:

Aside from providing for the military's ability to support fleet operations, we envision the reuse of SRF to include opportunities to market Guam as a main port-of-call for the repair and overhaul of commercial and private ships. This includes container ships, fuel ships, passenger liners, and most importantly, fishing fleets. Presently, there are 8 fishing fleets that utilize Guam's port facilities as a transshipment, minor repair and provisioning station. This industry represents some \$37 million in its infancy stage. To date, we have received numerous inquiries from fishing fleets operating in and around the Micronesian Islands as to the potential for expanding our existing facilities. With our proposal to keep the MSC ships forward deployed in Guam as a core level of work, in addition to our vision of commercial use of the facilities, there is no doubt that the SRF will become a central focus in Guam's economic revitalization.

General Industrial Production

The facilities at the SRF represent great opportunities for the support of commercial and public businesses, operations and maintenance activities. These include utilization of the existing facilities for repair of equipment, calibration, die casting for parts, metal works, metal fabrication, and a whole host of other uses, including services to the dive industry through use of the existing decompression chambers. Presently, the government of Guam and the private sector are forced to send much of their repair work and fabrication of parts to Asia and the United States. This includes everything from baseline power generators to construction cranes and aircraft parts. With the expansion of the Guam International Airport and Continental Micronesia's routes, as well as the addition of new air carriers, the need for precision repair and fabrication facilities is growing rapidly. Moreover, Guam's economy is poised for expansion in

tourism, having reached its room inventory saturation point of 1.4 million visitors by the end of this year. This will require another push for the construction of some 2500 additional hotel rooms, which will underscore the need for the repair and maintenance of construction equipment and fabrication of parts for the construction industry.

Small Commercial Ship and Private Vessel Construction

One aspect of use that could be of great importance to Guam would be the actual construction of small commercial ships and private vessels. With the increased interest in Guam as a major port-of-call in the Pacific, interest in the construction of small commercial ships and private vessels is growing, as well. Guam's proximity to major ports and marinas provides a unique opportunity in this industry. This is underscored by the increased interest and inquiries from ship builders in the Asian markets.

Naval Activities/Apra Harbor

Cruise Ship Passenger Terminal

As Guam continues its tourism expansion, the need for options in travel and leisure activities will continue to grow. One area of great interest is in the passenger cruise industry. In recent years, Guam has enjoyed very limited opportunities in this area due to the lack of facilities to accommodate these "floating hotels." To date, Guam has hosted Club Med cruise ships, Windjammer Cruises, Major Japanese cruise ships and the Queen Elizabeth II. With Guam's location being an average of 3.5 hours from Japan, Korea, Taiwan and Hong Kong, the possibility of fly/cruise travel packaging is very real for Guam. The area known as Victor Wharf is well-suited to serve as docking space for passenger liners stationed in or visiting Guam. With the addition of a first class passenger terminal and the support facilities available in FISC, there is no doubt that this will be a major source of revenue enhancement for the Territory.

Commercial Fishing Fleet Support:

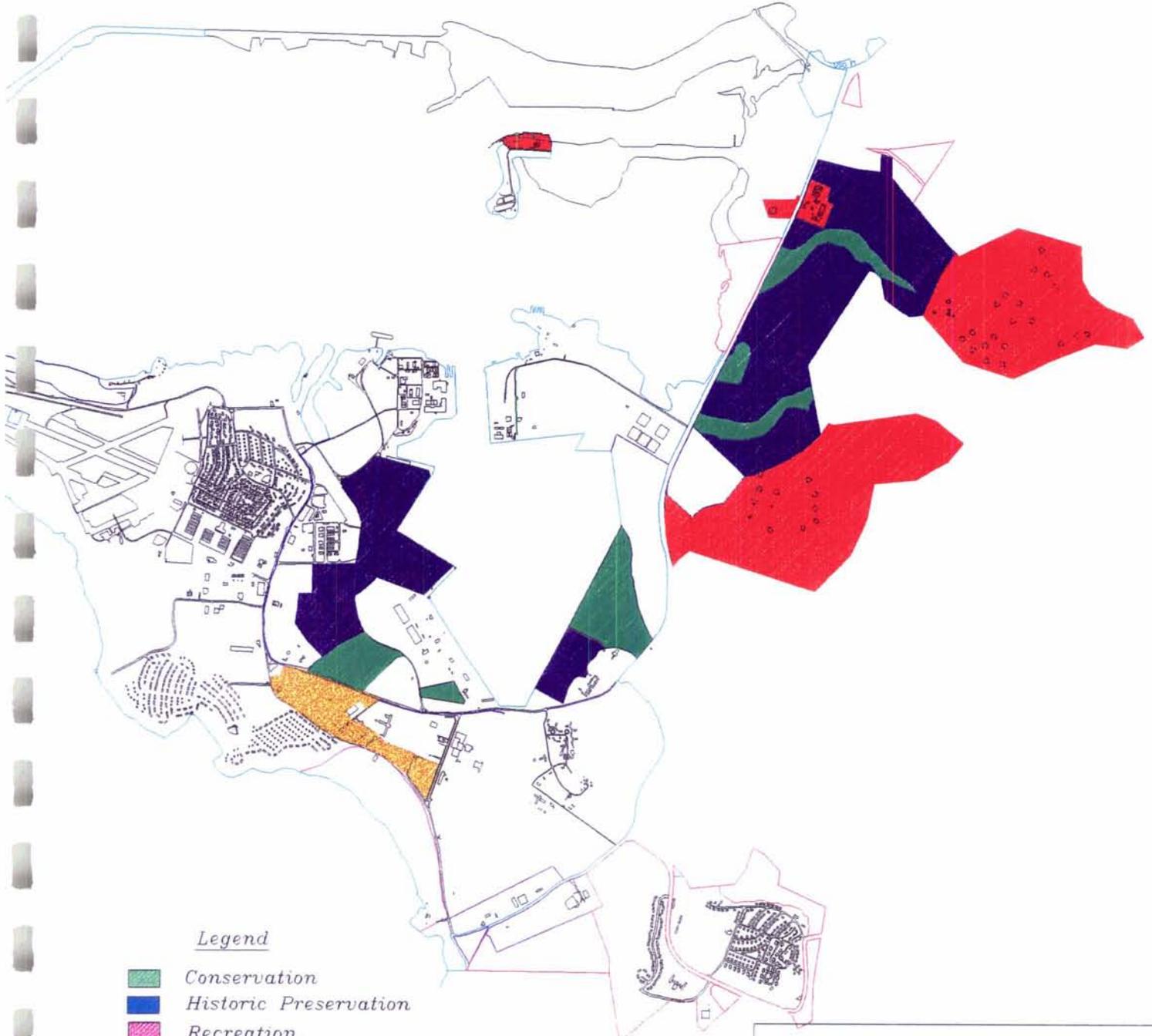
Presently, as stated before, Guam is host to 8 major fishing fleets, which use Guam as a port-of-call for transshipment of tuna into the Asian markets. Guam now moves 9 million metric tons of tuna per year through its very limited and restrictive facilities at the existing commercial port. We have been repeatedly approached by Taiwanese and Chinese fishing fleets to homeport in Guam, which translates into a potential for up to 250 vessels. Moreover, Guam's proximity to the Asian fish markets makes it an ideal location for auctioning of fresh fish for those markets prior to shipment, bringing the cost to the buyers far below the costs they are presently paying. This translates into major revenue potentials for Guam.



GRAPHIC SCALE



Location



Legend

-  Conservation
-  Historic Preservation
-  Recreation
-  Medium Density Development
-  Commercial
-  Public Use
-  Low Density Development
-  Light Industrial
-  Heavy Industrial
-  Retained by the Navy

Proposed Use
FISC

Fleet and Industrial Supply Center

Military Sealift Cargo and Fuel Support

U.S. military vessels operating in the Western Pacific will continue to find Guam a convenient and welcome port-of-call. Presently, the MSC receives reprovisioning at various points in their area of operations. Since Guam's cargo-handling capacity will expand with the availability of additional dock space and warehousing assets, reprovisioning in Guam can continue to be of benefit to the military. Additionally, the fuel capacity which Guam currently maintains, (together with additional storage facilities that may be available with the closure of FISC Guam), will allow Apra Harbor to be a convenient site for refueling. Just as Apra Harbor currently serves the military as a one-stop port for replenishment, a civilian run operation will be of interest to military vessels seeking a strategic site for meeting maritime needs.

Commercial Warehousing

The existing Fleet and Industrial Supply Center provides an excellent opportunity for Guam's economic future. The existing warehouses can provide the anchor for a "Free Trade or Special Processing Zone" for the transshipment business. This could include bonded warehouses for products destined for the United States and Asia, light assembly industries and manufacturing of capital goods and supplies, and a major redistribution center for markets throughout Asia. Moreover, the area in and around the FISC offers excellent opportunities for fish processing, cold storage and warehousing for industrial park development.

Sasa Valley and Tenjo Fuel Farms

The present capacity of 1.4 million barrels of oil storage capacity in these areas is without a doubt a major opportunity for Guam's economic future. The possibilities for refineries, holding tanks for private oil storage, fueling for commercial ships and a whole host of related industries are within Team Guam's visions of the future.

In conclusion, there is no doubt as to the importance of these assets and properties to Guam's future. With our reuse proposal, we fully intend to maximize our economic activities to their fullest potential. These brief sketches represent only a narrow glimpse of our vision for a future that includes the return of these assets. The true potential for Guam's economic future relative to these areas cannot be overstated by any stretch of the imagination. Team Guam is focused on developing a strategic plan that includes the reuse of these areas. It is a vision that sees Guam's true potential as a center for finance, telecommunications, transshipment and tourism. It is a vision of the Way Forward for Guam's people.

Officer Family Housing at NAS Agaña

As a result of the recommendations of the 1993 Base Closure and Realignment Commission, the Department of the Navy was directed to move their air operations at NAS

Agaña to the little-utilized Andersen Air Force Base 10 miles to the north. NAS Agaña also included 136 units of Officer Family Housing, 352 units of Enlisted Family Housing, a Bachelor Officer Quarters with room for 96 personnel, and a Bachelor Enlisted Quarters with room for 841 personnel. At the time, Team Guam requested that the entire operation, including the housing occupants, move to Andersen. Team Guam wrote a report that postulated that the Navy had excess housing in Guam and did not need the NAS housing units. The GAO reviewed Guam's data and the Navy data. They did not agree totally with the Navy position, but neither could they confirm Team Guam's position.

During the debate by the Commissioners during the hearing at which they made their unanimous decision, it was clear that the Commission staff and the Members understood the proximity of the two fields, the fact that many of the housing units held Navy personnel not stationed at the airfield, and that many of the airfield personnel lived outside of the air station. Since the Commission could not justify the cost of rebuilding the housing at Andersen, despite the lack of evidence that it was unnecessary, they chose instead to impose a compromise that ordered the Navy to move the air operations only. However, the Commission left the housing areas intact. In the debate during the Commission hearing, the Commissioners felt the officers and sailors could easily commute to their jobs at Andersen, especially since roughly half did not live within the air station and were already commuting.

After the Navy began to actually execute the decision, they altered the direction of the BRAC decision in two fundamental ways. First, they disestablished VRC-50 (already stationed at Andersen, having moved from the Philippines to Guam), transferred the two electronic fixed wing squadrons (VQ-1 flying EP-3 aircraft and VQ-3 flying ES-3 aircraft) "temporarily" to bases on the west coast of the Continental U.S., and moved HC-5 and their CH-47 support helicopters up to Air Force spaces at Andersen to await the construction of a new hangar and support spaces. They obviously felt that their moves of the two VQ squadrons had to be temporary because otherwise it would violate the direction of BRAC 93.

The General Counsel of the Navy called Guam's Delegate in Washington to discuss this issue. The Navy would not admit that they intended to ask for a "redirect" to bring them into compliance with the law, but it was obvious to most observers in Guam that they would have to obtain a redirect none-the-less. Consequently, the current DOD recommendation requests just such a move. In fact, given the proposed reduction of forces at Naval Activities, it goes one step further and recommends moving the helicopter squadron to Hawaii.

The second fundamental change to the NAS Agaña move was the Navy's realization that they indeed had no need for most of the housing at the air station. Within a year, the Navy's position began to change, and over the last two years they have voluntarily relinquished their control over all the enlisted bachelor and family housing, all the Moral, Welfare and Recreation (MWR) facilities and land, and the officer bachelor housing. They have, however, continued to insist (with one known exception) upon the need to retain the officer housing. The one exception which reflects that the chain of command was at times split as to the real need was a statement by a senior civil engineer on Guam that the housing would be returned. He later was forced to recant his position.

Location

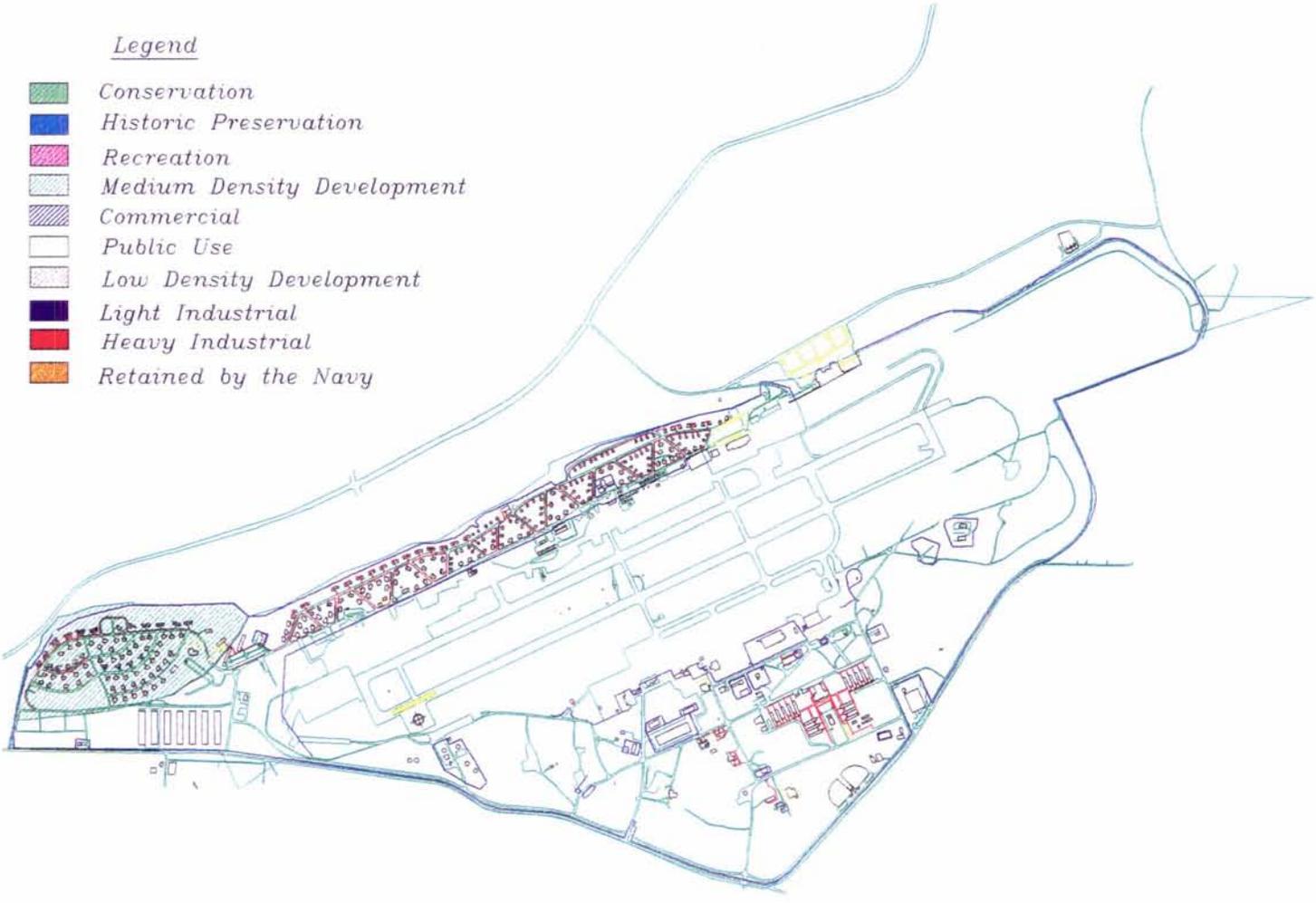


GRAPHIC SCALE



Legend

- Conservation
- Historic Preservation
- Recreation
- Medium Density Development
- Commercial
- Public Use
- Low Density Development
- Light Industrial
- Heavy Industrial
- Retained by the Navy



Proposed Use
NAS

To add fuel to the fire, at one point the senior leadership of Guam was being told that the housing would be retained for use by the Navy doctors. This was especially egregious because the doctors had no operational reason to be close to the air station and had been housed quite comfortably in their own block of housing adjacent to the hospital for years, even when the size of the hospital staff was larger. The citizens of Guam could not help but conclude that the superior views available from the NAS officer housing units had convinced the doctors and others that this piece of property was "essential" to the viability of the Navy's mission on Guam.

The plot of land at the now former NAS Agaña that contains the 136 units of officer family housing not only has some of the best views of the waters of the Philippine Sea and the areas around the community of Agaña, but it is also extremely convenient to the new civil air terminal now under construction and, more importantly, completely clear of the airports AICUZ zones. As a consequence, it is one of the most desirable and developable plots of land at the airport for the benefit of the citizens of Guam in their drive towards true economic revitalization. In all scenarios of reuse, this piece of property is a key element, as it is superbly located for use as an airport hotel area, a convention site, a business center area, or some combination of those and other uses, all of which would enhance the desirability and profitability of travel to and business in Guam.

As a result, Team Guam is requesting that the Officer Housing Area at the former NAS Agaña be closed by the 1995 BRAC Commission and returned to the Government of Guam for reuse.

Return of Excess Lands identified in the Guam Land Use Plan of 1994

The Department of the Navy, through the Department of Defense, has declared over 6,000 acres of DOD land to be excess to their needs, excluding the lands encompassed by the Naval Air Station. This land is proposed for the Government excessing process in a document called the Guam Land Use Plan of 1994. Given the experience of the Government of Guam with the eccentricities of the federal Government's excessing program, GovGuam would prefer to have the GLUP 94 lands included in the BRAC 95 process.

Guam is only now about to receive over 3,000 acres of excess DOD land that will help immeasurably in their process of satisfying the long-standing land claims of the citizens of Guam and in the development of business opportunities in Guam. Unfortunately, this land was first declared to be excess in a document referred to as THE GUAM LAND USE PLAN OF 1977. Indeed, these 3,000 acres were first proposed for excess in 1977. The land was about to be transferred in 1985 when the then Commander-in-Chief of the Pacific Fleet weighed in, over the objections of his Fleet Civil Engineer, and said the land was critical to the Pacific Fleet.

The issue was then referred to the Secretary of Defense and on to the Office of the Secretary of the Navy. Many interviews, hours of research and visits to Guam later, the Secretary issued a report, The Army Report of 1985, stating that indeed the land was still excess to DOD's needs. This, however, did not end the issue.

The basic principle of the GSA process is that excess land should be returned at "fair market" value. Given how little the Federal Government had paid for the land when it was first "condemned," and the height of the property values during the peak of the expansion of the Japanese travel industry, the fair market price was unaffordable to most citizens of Guam and far exceeded the price the Government had paid for it, even including the cost of actual inflation -- a "fair market" price recommended in the Army Report.

In 1994 the Congress passed special legislation allowing the land to be transferred to GovGuam, through GSA, at no cost for "public" use.

By putting the GLUP 94 lands into BRAC 95, the excessing process can be streamlined and made more efficient. One of the basic tenets of the BRAC process as expanded upon by President Clinton is the acceleration and additional streamlining of the return of excess land to allow each community to better provide for its own economic revitalization. The land must still be transferred using the GSA excessing process, but that process is put under the management control of the Department of the Navy (in the case of Guam lands).

There is no theoretical reason why the GSA process when managed by the Navy, should be any faster or more efficient than the same process managed by GSA themselves. Actual experience, however, proves the contrary. The excess property process as managed by the Navy, and probably the other military services, has proved to be far more rapid, and the land has been transferred more quickly into the hands of the local governments where it can be more expeditiously returned to productive use. There are at least two possible explanations: one is that the President's Five-Point Policy has definitely provided methods and motivation to accelerate the process and make it more "community-friendly;" the second possible explanation is that the Navy is not normally in the land excessing business, and they want to get the land off their records as soon as possible.

Whatever the reason, the evidence of the past two BRAC cycles has proven that the return of excess DOD property to the local communities is better handled by the BRAC process than it is by GSA themselves, even though the basic procedures used in both are similar. Thus, given this opportunity, the Government and citizens of Guam would far prefer to include the recommended GLUP 95 land transfers in this round of base closures. The closure process is underway, the DOD has recommended that over 6,000 acres of land in Guam be declared excess, and the last two BRACs have proven that transfers handled by the Services even using GSA procedures are far quicker than when handled exclusively by GSA. Consequently, GovGuam will recommend that the lands in GLUP 94 be included in the recommended closures in BRAC 95.

Nimitz Hill

Nimitz Hill is a 217 acre parcel on a hill overlooking the Philippine Sea and the Apra Harbor complex. It is named after Fleet Admiral Chester Nimitz who commanded the Navy's

Location

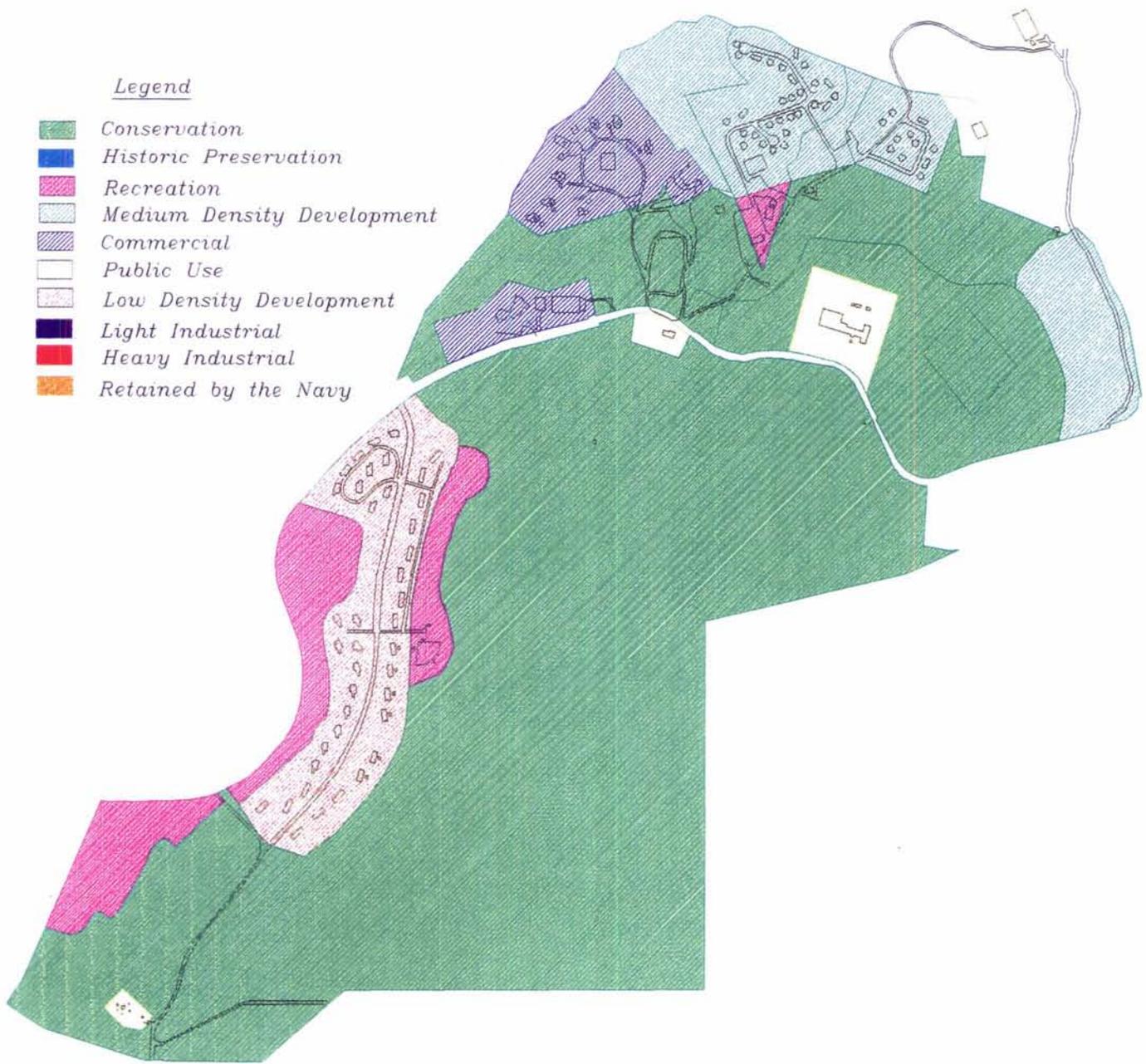


GRAPHIC SCALE



Legend

-  Conservation
-  Historic Preservation
-  Recreation
-  Medium Density Development
-  Commercial
-  Public Use
-  Low Density Development
-  Light Industrial
-  Heavy Industrial
-  Retained by the Navy



*Proposed Use
Nimitz Hill*

Pacific Fleet in World War II and lived in housing on the hill after the war. It contains the area know as "Flag Circle," which contains the housing for the island's most senior naval officers, an officer and enlisted family housing area, the command complex for the Commander, Naval Forces Marianas (COMNAVMAR) -- a junior one-star flag billet -- and several recreation facilities.

The Government of Guam requests that Nimitz Hill be recommended for closure by the BRAC 95 commission. The enlisted family area is already included in GLUP 94. With all the other closures and realignments in Guam, there appears to be no real reason that the officer family housing can not be included with it.

Secondly, with the number of closures and realignments in Guam, there would seem to be a serious question about the viability of the position and staff of COMNAVMAR. Thus, it would seem that the headquarters should be closed. Even if the flag billet and the appropriate staff remain viable, they will be smaller in size and should be consolidated into facilities on the new and smaller Naval Activities. Finally, with the departure of the families and the flag officer and his staff, and with the decreased size of the Navy contingent in Guam, there is no reason to continue operating the MWR facilities at Nimitz Hill, and they should also be recommended for closure.

Other Housing Areas: Apra Heights and Nimitz Hill

The officer and enlisted family housing area at Nimitz Hill was mentioned in the paragraphs above. The other area GovGuam would like the BRAC 95 to consider for closure is the Apra Heights housing area, which contains 72 officer and 308 enlisted family housing units. GovGuam estimates that these housing units are excess to the Navy's needs, and these estimates are supported within the Navy civil engineering community.

Fena Watershed

The Fena watershed is a 3,670 acre area that sits in the southern and mountainous area of the island surrounding the Fena reservoir. It was constructed in 1951 and is the only remaining viable reservoir in the lower tropical latitudes. Thanks to a pristine watershed surrounding the reservoir and periodic violent typhoons, the reservoir remains a viable and long-term source for water. All other viable reservoirs are located in the higher latitudes where the freezing and thawing and other violent weather control the growth of organism in the water that, when unchecked, can clog and "kill" a reservoir. The reservoir was built in 1951 and has an estimated storage capacity of over 2.3 billion gallons. The reservoir and its associated springs can produce between 9.5 and 10.5 million gallons per day, depending on the season.

The reservoir is also used for recreation for the exclusive use of the personnel stationed at the Naval Magazine. This policy has changed periodically, depending on the whims of the commanding officer of the Magazine, a circumstance that Guam has seen for almost 100 years of Navy governance and management of facilities in Guam. Stories abound from the history of the Navy in Guam that are almost identical. For some time in the recent past, citizens of Guam were

allowed to visit and use the reservoir in limited numbers, but after a change of command that policy changed.

The reservoir sits under the “explosive arcs” of the Naval Magazine, and thus some argue the land cannot be returned to GovGuam. GovGuam, on the other hand, intends to use the land for the same purpose as it is used by the Navy: i.e., as a watershed and for low-impact recreation, but it will also be used for all the citizens of Guam, not just for the benefit of a special elite.

GovGuam will requests that BRAC 95 to return the reservoir to the Government of Guam. GovGuam will prohibit any major development within the watershed and will establish controlled low-impact recreation programs for fishing, camping, hunting and other conservation-based programs.

Naval Magazine

The Naval Magazine in Guam encompasses over 1,300 acres located in the village of Santa Rita and just north of and adjacent to the Fena Reservoir. The magazine has a capacity to store over 17 million pounds of explosives of three basic types for the Navy, as well as other materials used by the Navy’s explosive program.

There is more than adequate acreage at Andersen Air Force Base to include all of the Navy’s requirements. There may, however, be some military construction required to store all of the Navy ordnance. It is the sense of the leadership in Guam that the consolidation of munitions storage be effectuated by the military.



GRAPHIC SCALE



Location



Legend

-  Conservation
-  Historic Preservation
-  Recreation
-  Medium Density Development
-  Commercial
-  Public Use
-  Low Density Development
-  Light Industrial
-  Heavy Industrial
-  Retained by the Navy

Proposed Use

Naval Magazine



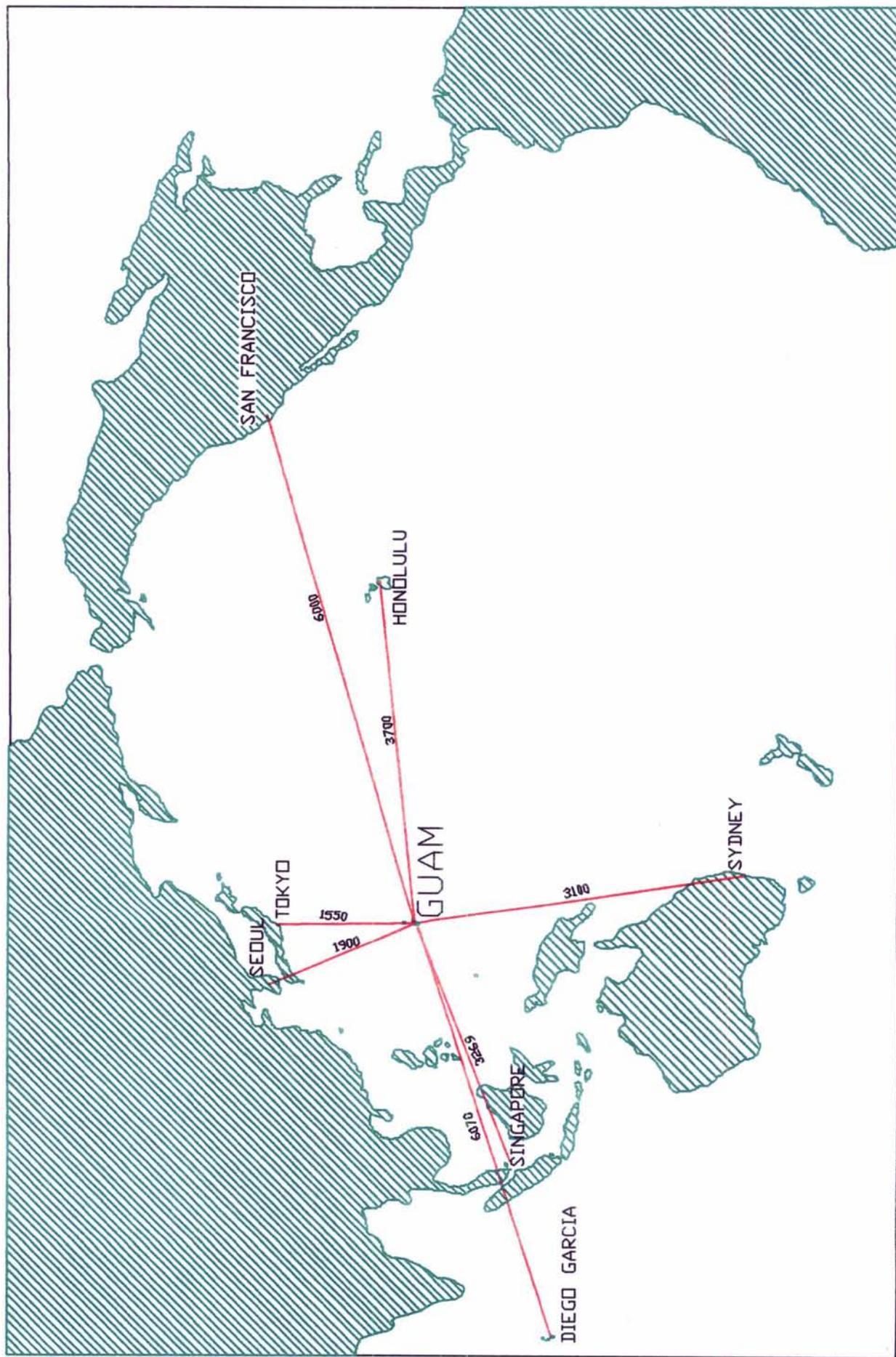
THE WAY FORWARD ... FROM GUAM:
Team Guam Report On DOD Closure & Realignment Recommendations For Brac 95

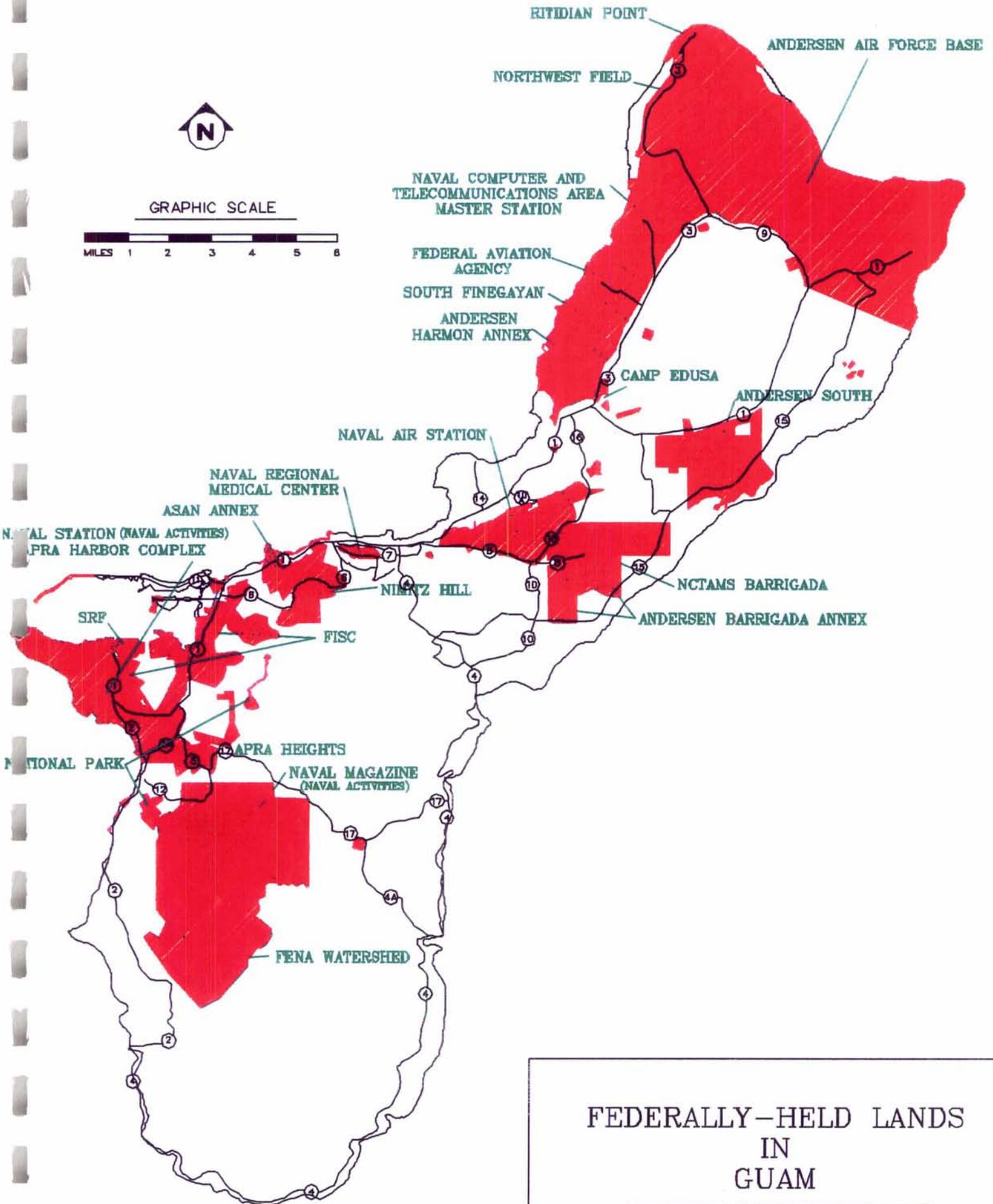
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FEDERALLY-HELD LANDS
IN
GUAM

Prepared By: Bureau of Planning, Government of Guam
APRIL 1995

Note: Not all the parcels within the War In The Pacific Park boundary have been acquired by the Federal Government.

PART 1 THE U.S. NAVY IN GUAM

I. Overview and History of U.S. Military Activities in Guam

In this section, current U.S. property holdings, the U.S. military mission in Guam, an historical overview of U.S. property taking in Guam, and an economic view of the impact of U.S.-held property will be undertaken.

A. Lands Held by the U.S. Government in Guam

The disposition of real estate in Guam, at present is divided between private property owners (51.3%), the U.S. Government (33.0%) and the Government of Guam (15.7%).

Private property holdings are estimated at 19,700 acres in over 40,000 separate land parcels. Southern Guam now contains most of the large land parcels. However, their location in volcanic uplands adversely affects developability of these parcels. Smaller lots, usually 5,000 to 10,000 square feet for residential use, characterize the north/central portion of Guam where three-fourths of Guam's population resides.

The U.S. government presently occupies 44,468.86 acres of property in Guam or approximately 33.7% of all real estate in Guam.¹ This real property provides operational area for 19 separate military installations and support areas as well as 6 separate parcels of land which make up the War in the Pacific National Historical Park. Federally-held property holdings are estimated broken down as follows: Navy, 23,583.91 acres; Air Force, 19,434.86 acres; Department of Interior, 1,412.99 acres and Federal Aviation Administration (FAA) 37 acres. Federally-held properties are characterized by large concentrations of continuous property in contrast to private and GovGuam properties which are scattered pockets of smaller parcels.

The following table provides a listing of all federally-held property in Guam by installation or parcel.

Table 1-1 Federally-Held Property in Guam

Bases, Installations and Support Facilities			
Installation	Acres	Installation	Acres
Andersen Air Force Base (AAFB)	10,775.61	Naval Regional Medical Center	111.79
Andersen South (various parcels)	2,356.22	Old Apra Housing	228.62
Andersen Barrigada Annex	451.62	Northwest Field	4,007.80
COMNAVMAR/Nimitz Hill Area	758.69	South Finegayan Housing	728.15
NCTAMS/Old FAA Housing Area	3,806.89	Sasa Valley/Tenjo Vista	1,217.77
Naval Magazine/Fena Watershed	8,877.00	Harmon Annex	1,680.97
Naval Air Station (NAS), Agana	1,886.74	Camp Edusa	102.00
NCTAMS Barrigada	1,848.00	Asan Annex	17.00
Naval Station/Apra Heights	4,201.00		
		Total	43,055.87
Other U.S. Held Property			
National Historic Memorial Park	722.53	Outside Park	273.93
Ritidian (U.S. Fish & Wildlife)	370.60	Lot 7133	45.93
		Total	1,412.99
TOTAL Federally-held Land			44,468.86

Among the lands held are two (2) munitions storage areas, the islands largest ground-water reservoir, 81% of the available fastland within a 2 mile radius of the islands' only deep-water port, two (2) large POL sites with an 85 mile pipeline network, three (3) separate antenna/communication infrastructure facilities and fifteen (15) separate housing areas. This sporadic development, although in part historically marked by strategic requirements (e.g. the need for deep water port access as well a large airfields immediately after WWII) is also noteworthy for the abundance of unused federally-held real estate on and between installations as well as redundant stand-alone service operations.²

In general, it is clear that the military land use requirements have not, since WWII, come close to matching operational demands for property. As will be further discussed in this report, in addition to the possession of property not utilized, significant underutilization of installation facilities is evident.

Non-military real estate holdings can be accounted for by the tract of FAA property along Cross Island Road as well as parcels identified for the War in the Pacific National Historical Park. Of the 958.22 acres in six separate parcels set aside for the National Historical Park, 653.38 acres were transferred by the Department of Interior - after receipt of these properties from the Government of Guam - and the Navy to the National Park Service (NPS) and 69.15 acres were purchased by NPS from private owners. Only 64.78 acres that may be owned by GovGuam remain to be transferred while 170.91 acres of privately owned property, needs to be acquired in order for NPS to control all fastlands within the Congressionally-designated boundary.

A prospective federal designation of Guam real estate for non-military use is for the establishment of an area for "critical habitat." The designation of a "critical habitat area" would overlay 29,347 acres of existing federally-held property, 5,338 acres of Government of Guam property, and 1,007 acres of privately-held property. The critical habitat designation proposal was withdrawn and the proposal for a "Wildlife Refuge" an alternative to critical habitat designation, was consummated through a Memorandum of Understanding between the U.S. Fish and Wildlife Refuge (USFWS), the Navy, and the Air Force without participation by GovGuam. The Wildlife Refuge overlays 22,477 acres of federally-held lands which will be managed through cooperative agreements among the Navy, Air Force, and the USFWS. An additional 371 acres is held in fee title by the USFWS.

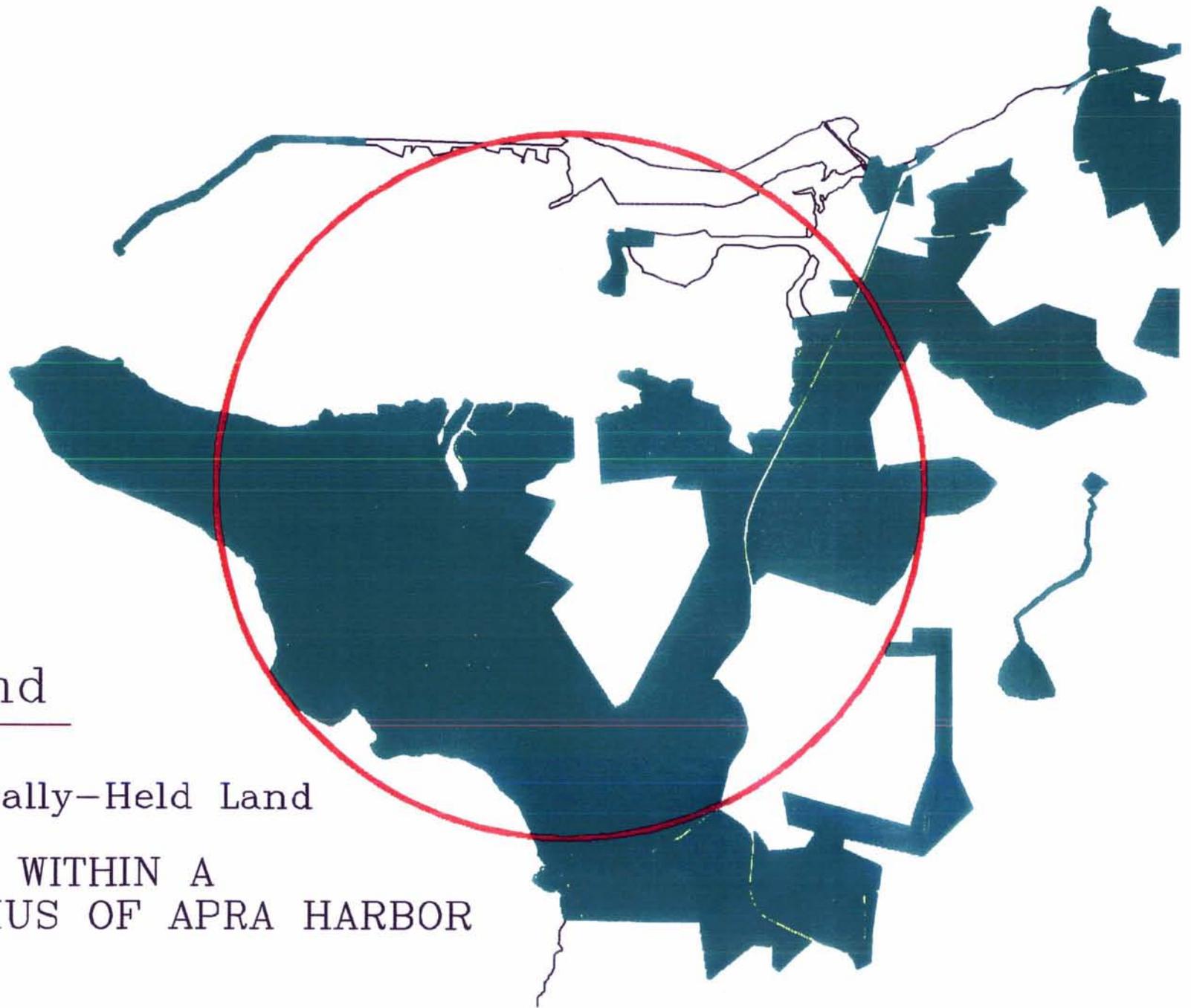
Over 63% or 28,141 acres of federally-held properties are located in northern Guam, of which 21,486 acres are concentrated in a continuous block from the Andersen Harmon Annex to Andersen Air Force Base. Two smaller concentrations in the north include Andersen South and the Marbo area (2,356 acres) and the Naval Air Station, Agaña, NCTAMS Barrigada and the Andersen Barrigada Annex (4,122 acres). These three concentrations account for 99% of the federally-held property in northern Guam.

Approximately 37% of federally-held land is located in southern Guam, in four contiguous parcels. The Naval Magazine/Fena Watershed (8,877 acres), Naval Station/Sasa Valley/Apra Heights Housing Areas (5,647 acres), Interior lands in or around the National Park (996 acres) and Nimitz (759 acres) total 15,483 acres. These four areas account for almost 95% of federally-held properties in southern Guam.

In the area of Apra Harbor, the largest deepwater port in the Marianas, the U.S. government holds 81% of the fast lands within a two (2) mile radius of inner Apra Harbor or 60.5% within a three (3) mile radius. Within these radii, the U.S. government holds most of the developable property. What is not held by the U.S. government (with the exception of the 584 acres of fast land at the Port Authority of Guam), is either landlocked by military holdings or undevelopable. The existence of developable federally-held properties in proximity of the harbor, in itself restricts expansion of industries around the port. This impediment has been recognized by the U.S. government through the return of lands in the port area (P.L. 96-418). Under this law, however, only 927 acres were transferred, including 500 acres of submerged lands. Moreover, the strategic location of federal lands around the port prevents access to over 5% (204 acres) of public and GovGuam lands within a 3 mile radius, east of Sasa Valley. The existence of protected wetlands just south of the federal landholding at Sasa Valley prevents their development. Additionally, military controlled easements to the private and GovGuam property between the Sasa and Tenjo Vista Tank Farms prohibit their development. (See following maps with radii).

Legend

 Federally-Held Land



PROPERTIES WITHIN A
2 MILE RADIUS OF APIA HARBOR

Government of Guam property includes 26,868 acres of surveyed land and an estimated 5,695 acres of unsurveyed property for an estimated total of 32,563 acres. Over 40% of the properties owned by GovGuam are found in the southern villages of Inarajan, Umatac, Merizo, Talofofu, and Yona. Most of these properties are located in the mountains characteristic of the south. These lands are generally undeveloped as a result of the topographic and geologic conditions prevalent in the area.

Approximately 35% of GovGuam landholdings occur in the northern villages of Dededo and Yigo. These properties are highly suited for development given their relatively flat topography.

However, most of these lands have been designated as the "principal source aquifer" placing importance on the need to protect Guam's primary source of potable water. Over 70% of Guam's population is served by the water that is pumped from over 70 water wells that dot the north.

Management of land uses over this aquifer by the Government of Guam requires improvement. However, pressures for development of this area are constantly experienced as a result of the comparatively low cost of site preparation for development, the area's proximity to population centers, and the general lack of land similarly situated. The principal source aquifer is bordered on three sides by federally-held property.

Guam Land Use Plan (GLUP) 1977

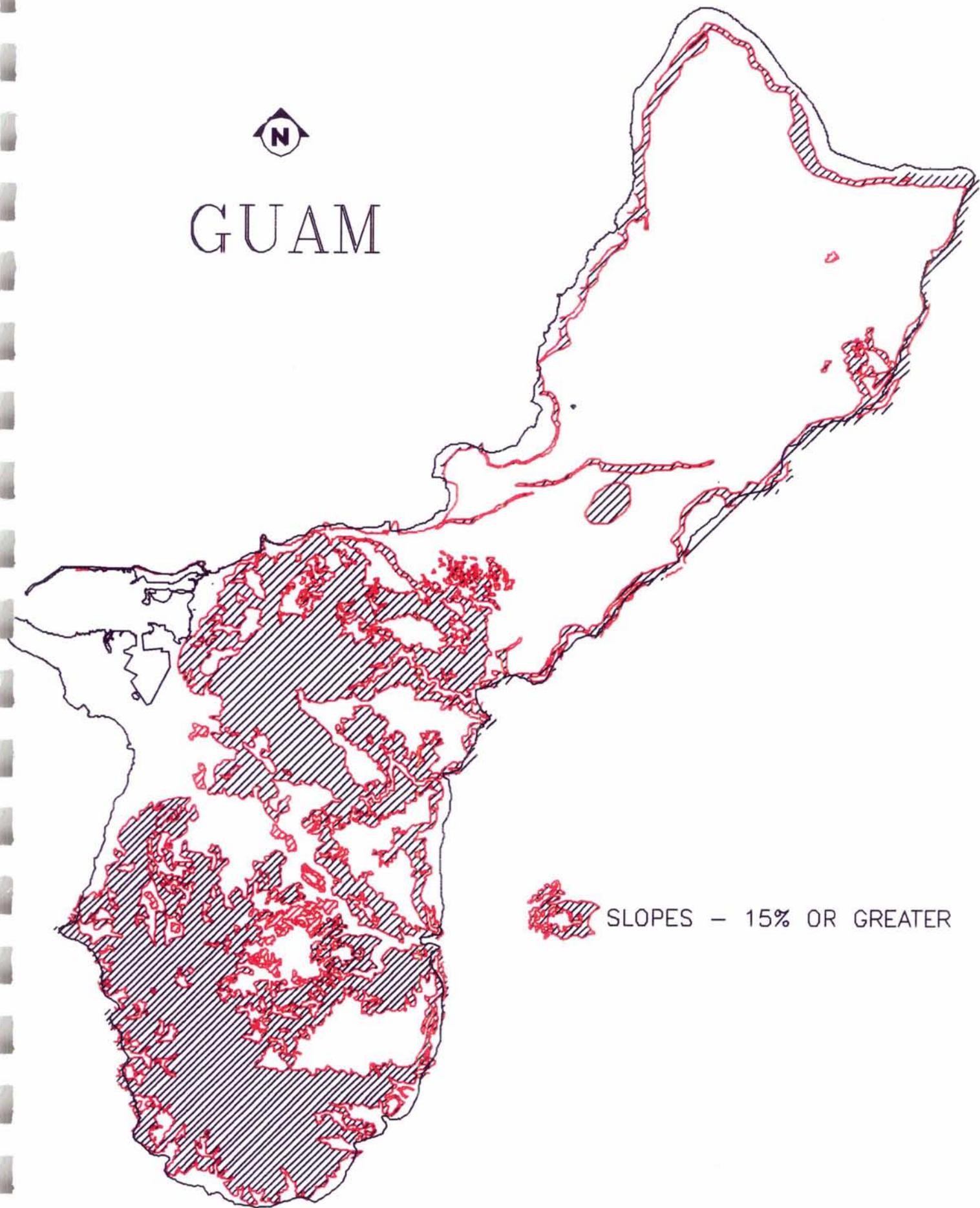
The Guam Land Use Plan was prepared in response to a December 1974 Assistant Secretary of Defense request that the Navy and Air Force jointly study the Department of Defense's (DOD) landholdings on Guam. The objectives of the study were:

- to determine the landholdings required to support the mid-range (8 years) DOD presence on Guam;
- to examine joint use of land and facility consolidations to promote effective and efficient use of real property resources and to eliminate the patchwork pattern of military landownership on Guam; and
- to determine which landholdings could be released by DOD pursuant to Executive Order 11954 (this order establishes the policy of executive agencies reviewing their real property holdings to assure maximum use) and which landholdings could also be used to meet the development needs of the Government of Guam.

The GLUP, completed in September 1977 and issued in February 1978, represented DOD's desired mid-range land use goals and was viewed as a general guideline for all DOD components in future facility planning on Guam. The Plan included recommendations on facility consolidations, acquisition of land, and the release of land not required by DOD agencies.



GUAM



 SLOPES - 15% OR GREATER

The GLUP recommended that 5,180 acres of land on Guam be released which included 2,517 acres of Navy-held land and 2,663 acres of Air Force-held land. Of the total 5,180 acres, 2,625 acres were identified as available for outright release and exchange purposes, while the remaining 2,555 acres will be available contingent upon construction of replacement facilities.

Subsequently, these lands were withdrawn from releasable status as DOD decided it needed to reassess its land requirements on Guam. While several acres have been transferred to the Government of Guam, the majority of these lands remained under DOD control. On October 1994, 17 years after completion of GLUP, congressional legislation (HR 2144) was passed into law (USPL 103-339) which provided for the return of approximately 3,200 acres of federal-held lands (DOD and Federal Aviation Administration) to the Government of Guam. Most of the parcels identified in PL 103-339 were initially on the GLUP 1977 report.

Guam Land Use Plan (GLUP) 1994

In mid-1993, USCINCPAC requested the Air Force and the Navy to review their landholdings on Guam and to develop a master plan for Department of Defense (DOD) land use on the island. USCINCPAC designated the Navy, through the Pacific Division, Naval Facilities Engineering Command (PACNAVFACENGCOM), as executive agent for the land use plan.

Pursuant to USCINCPAC's request, the Navy submitted its draft GLUP 94 report for review and conducted a briefing to the Government of Guam in April 1994. The briefing indicated GLUP 94's intent which included the following:

- to develop a rationale for military landholdings based on foreseeable mission taskings and force levels;
- to develop a comprehensive plan for all DOD land requirements on Guam which considers combined service use of real property where feasible;
- to identify opportunities for functional consolidations and joint use arrangements, and address environmental considerations that affect land use; and
- to address specific functional requirements identified by the services.

Over 7,600 acres of land were identified to be releasable, and another 450 acres as potentially releasable, for a total of over 8,100 acres. Additionally, the Navy recommended obtaining development controls on approximately 130 acres of non-federal lands. The recommendations in the draft GLUP 94 report represent an 18 percent reduction in the DOD footprint on Guam, and a one-fourth overall reduction if previous GLUP parcels (USPL 103-339) are included. DOD land ownership would be reduced from a current one-third of all land on Guam, to approximately one-fourth.

Although the GLUP 94 proposes to reduce DoD's control of federally-held property in Guam, over one-third of the lands identified are within the U.S. Fish and Wildlife Service's, "Guam

Wildlife Refuge." Thus DoD's proposal to "excess" unneeded property provides no assurance that such lands will be put to economic use.

B. The U.S. Military Mission

The U.S. military mission in Guam has changed throughout the U.S.-Guam colonial relationship. From a site selected for its value as a "coaling station" at the turn of the century, an abandoned outpost prior to WWII, to a WWII Naval Operating Base (NOB) in preparation for the invasion of Imperial Japan and a frequently utilized logistic base in regional conflicts from the 1950's through the early 1990's. The Pentagon's recommendations to BRAC 95, if implemented, would return Guam to a status the military first envisioned in the late 1800's.

1. History of the Military Mission

Prior to WWII, although some military planners saw "Guam: The Key of the Western Pacific",³ Guam was left unfortified pursuant to the Five-Powers-Treaty of 1921. As one authoritative observer noted:

"(I)n the view of American statesmen the risk of precipitating a disastrous naval race with Japan if the United States did not accept Article XIX (of the Five-Powers-Treaty) seemed especially unwarranted, considering the opinion of virtually all observers, including the big-navy advocates, that Congress would never consent to spend the vast sums required to build or fortify bases in Guam and the Philippines."⁴

Up until WWII, Guam played a minimalist role for U.S. military activities in the Pacific given the agreements to limit naval capacity and Pacific island fortifications pursuant to the 1921 Five-Powers-Treaty.

Prior to Guam's reoccupation by the United States in 1944, plans were in progress to enhance Guam's strategic military status. As the war ended, Guam was one giant military base and with the emergence of a Soviet security threat, the bases in Guam were seen to be of assistance in the event of operations in the Far East or even the Soviet Union.⁵ After 1949, China was seen as the main communist threat in Asia. In the vein of the prevailing military view that Guam was "a base of immeasurable strategic importance,"⁶ and with the complicity of U.S. civilian administrators, Guam remained under a veil of security control until 1962.

The overall mission was to deter aggression by being able to strike strategic targets in China and the Soviet Union with nuclear armed bombers and missiles, and to counter with conventional forces, the communist inspired insurgencies within friendly countries. United States nuclear capabilities in the Pacific were tied into the United States Strategic Integrated Operational Plan (SIOP); a program to deal with worldwide nuclear war based on a triad of deterrent weapons systems: bombers, intercontinental ballistic missiles, and submarine launched ballistic missiles.

The strategic role Guam played for the U.S. military focused on long-range Air Force bombers with concomitant weapons and petroleum, oil and lubricant (POL) support. The Island's port also served as a forward logistical service and communications location and submarine base, while aircraft carrier-based and regional sea surveillance was carried out from a Naval aviation field. Technological limitations on the range of nuclear-capable bombers and submarines from the 1950's through the 1970's involved the use of Guam in two components of SIOP: bombers and submarines (and support facilities). Additionally, the sound surveillance system (SOSUS) processing center at Ritidian provided a critical intelligence component for anti-submarine warfare (ASW): a pivotal U.S. element for directing military activities under the SIOP. A complex early warning electronic and communication system supported the U.S. strategic posture in Guam.

The island's most active military role after WWII, however, came at the end of the Vietnam conflict. During this period the island effectively served in a dual capacity as a support facility and long-range bombing base for conventional forces and weapons and as an operational base for strategic deterrence. By the late 1970's, however, both U.S. policy and military technology had changed. A slow U.S. rollback from the forward deployment on the Asian rim had first been announced in Guam in 1969 by President Nixon as the "Guam Doctrine/Nixon Doctrine." The return of Okinawa to the Japanese, the reduction of military commitments to Taiwan, the renegotiation of base rights with the Philippines and the U.S. military withdrawal from Vietnam and Thailand -- all in the 1970's -- served to lessen the forward deployment of U.S. conventional forces in the Asia and the western Pacific.

Technology, as well, began to have an impact on the strategic importance of Guam. In addition to the development of longer-range bombers capable of striking Soviet targets from the United States and advances in the technological capabilities of the intercontinental ballistic missile, Guam's role as a bomber base in the U.S. SIOP was seen to be on the decline by the late 1970's. On the Navy side, the launching of the Trident-class submarine (with its longer range weapons systems) led to the removal of Polaris submarine Squadron 15 from Guam in April of 1980.

With the revival of U.S. military projection in the 1980's and the growing Soviet military presence in Vietnam, Guam's strategic role briefly increased. Along with the projected increase of the Navy to 600 ships, nuclear strategies were enhanced. In 1981, the Defense Nuclear Agency (DNA) announced plans for "improving the nuclear force effectiveness of those assets under Commander-in-Chief, Pacific Command (CINCPAC)...(and)...enhancing Pacific nuclear targeting capability and assisting PACOM staffs to determine specific TNF weapons systems requirements."⁷ In Congressional testimony before the Senate Armed Services Committee in 1984, PACOM commander, Admiral William Crowe stated:

"In my view, all of our military efforts in the PACOM area must rest on the foundation of a viable and credible nuclear deterrent. I cannot hypothesize a situation where it is in our interest to be dealing nuclear inferiority. Upgrading our

theater nuclear posture combined with supporting survivable and enduring C³ (Command, Control and Communications) system is also important.⁸

A 1985 publication, Nuclear Battlefields, noted Guam as "the center of U.S. nuclear planning and storage in the western Pacific"⁹ with the island storing 428 nuclear weapons, giving it the distinction of having the world's largest stockpile of nuclear weapons per square mile.¹⁰ Large stockpiles of conventional weapons at Andersen Air Force Base (AAFB) and Naval Magazine, extensive POL facilities at both AAFB and the Apra Harbor area, as well as early warning ballistic missile satellite system, DoD communications systems, and the SOSUS processing facility at Ritidian, and sea-surveillance/attack ASW capabilities (operating out of both AAFB and Naval Air Station (NAS) Agaña), continued to play important roles in the U.S. strategic framework for the western Pacific.

The future of military activities in Guam through the end of the 1980's and the early 1990's witnessed a period of speculation vis-a-vis the U.S. military role in the Republic of the Philippines as well as a period of reality with respect to U.S. budget-tightening measures. The possibility of Guam acting as a fallback site for a larger U.S. Pacific military presence, (depending on the outcome of the renegotiation of U.S. base rights in the Philippines), was considered simultaneous to other rollback activities proposed for the region. For example, the East Asian Strategy Initiative (EASI, also referred to as the Nunn-Warner initiative) required an orderly, phased reduction of authorized U.S. military personnel in Japan and Korea.

By the late 1980's the impact of tightening U.S. budgets and technology began to usher in a new era of rollback from Guam. In 1990, the once nuclear-capable B-52G's at AAFB were removed from Guam as a result of budget cutting measures in the U.S. Congress.¹¹ In 1991, the U.S. government began a process of base closures through an independent Base Realignment and Closure Commission (BRAC). Also, in the early 1990's, as a result of meeting budgetary reduction measures, the "600 ship Navy" projected during the 1980's was slated to be a 340 ship Navy before the end of the century.

While the U.S. government's budget tightening process in 1989 resulted in the removal of the nuclear capable B-52G's from Guam and other general budget cutting measures seemed sure to impact U.S. military activities in Guam, the situation in the Republic of the Philippines with respect to future U.S. base rights promoted speculation about a significantly larger military role for Guam in the event of a "fallback."¹² However, when the U.S. and Republic of the Philippines governments failed to reach terms on a renewed bases rights agreement in 1991, the U.S. Navy proposed that only 1,380 Navy billets or personnel (as well as an estimated 1,450 dependents) were slated for transfer to Guam by 1992.¹³ Even this number, however, was an overstatement of the permanent relocation of U.S. personnel from the Philippines that would result from the closure of Philippine bases.¹⁴

As noted in Navy documents, among the factors affecting the relatively small size of the U.S. Navy's rollback from the Republic of the Philippines to Guam was the "end of the Cold War and severe reductions in the military budget, affecting the military's ability to operate and maintain overseas bases."¹⁵ It is significant to note that even prior to the failure of the renegotiation of base rights in the Philippines, the U.S. Administration had in August of 1990 proposed a new national security strategy which marked the end of the U.S. government's Cold War "global containment strategy." A November 1990 action by the U.S. Secretary of Defense approved a CINCPAC plan to adjust U.S. troop levels in East Asia (including those afloat) downward by over 11% by 1992.¹⁶ Clearly, the demise of the Soviet Union (and its fallback from Cam Ranh Bay, Vietnam) reduced U.S. strategic concerns for deployment in the Pacific. This decline of a symmetric threat in the Pacific region, the costs of relocating *in toto* U.S. military operations in the Philippines to another/other Pacific site(s), together with ever tightening military budgets, resulted in only limited plans to use Guam as a "fallback" location.

Beginning in the 1990's the U.S. military mission in the Pacific changed from the "offensive" posture supported by the "600 ship Navy" and emphasis on nuclear deterrence, to a strategy of "flexibility." "(F)lexibility derives from its focus on regional, not global conflict; selective engagement in critical regions of the world; and international cooperation with...friends and allies."¹⁷ With the decline of a symmetric conventional and nuclear threat to the United States and the pressure on the U.S. budgetary process, the U.S. military "presence" in the Pacific will continue, but significant adjustments will be made which require less expenditure of U.S. funds. The fundamental security missions in the Pacific (which are acknowledged to now be secondary to other "U.S. regional roles"¹⁸ are defined as:

- * defending Alaska, Hawaii and the connecting lines of communication (LOCs) to the continental United States;
- * protecting U.S. Territories and Freely Associated States for which the U.S. has defense responsibilities;
- * assisting our allies in defense;
- * maintaining the security of the LOCs throughout the Pacific as well as the Persian Gulf, Indian Ocean and the East and South China Seas."¹⁹

Guam's role in the current U.S. flexibility posture was evident by the early 1990's in the operations of both the Air Force and the Navy.

The once heavily utilized Andersen Air Force Base (AAFB) has had no Air Force planes assigned since 1990. However, as a "hardened" operational center in the event of contingencies, AAFB now serves as a "ready dispersal" and "recovery" base for bombers, as was successfully demonstrated during the Gulf War. While not an active base in 1994 -- rather a base waiting for a

mission to develop in the event of conflict -- AAFB retains extensive munitions, POL and communications infrastructure which are ready-to-use in the event of hostilities.

Decreases in the active role of the U.S. Navy were also evident in the proposal by the Commander, Naval Forces Marianas in early 1994 to remove from Guam the ASW nuclear capable P-3 Orion aircraft and the carrier-based electronic reconnaissance ES-3A Viking aircraft and well as the 17 aircraft assigned to the Fleet Logistics Support Squadron (VRC-50) which transferred from Cubi Point, Republic of the Philippines in 1992.²⁰ Additionally, homeported Navy vessels in Guam (all combat stores ships) are projected to decline from five in 1991 to just one -- the USS Holland, a submarine tender -- by 1993. In 1994, the decommissioning of the Holland was acknowledged and while a replacement was "planned" the certainty of replacement was far from certain.²¹ Three decommissioned supply ships (the USS Niagara Falls, the USS White Plains and the USS San Jose) were to be converted to the Military Sealift Command (MSC) and homeported out of Oakland, California and forward deployed to Guam.

It is not insignificant that the majority of the activities associated with the Navy's proposed rollback from Guam in the early to mid-1990's were activities that arrived in Guam in the 1980's²² as a part of the "offensively oriented and increasingly aggressive surveillance, exercise and training schedule" that made the Pacific a priority for U.S. war planners.²³ In effect, most of the cut backs in military activities between 1989 and 1994 brought Guam back to a level of activity that would otherwise have been in place if the military build-up of the 1980's had not occurred. In retrospect, the Navy activities introduced to Guam in the early 1980's were a short-term occurrence in relation to the aggressive military activity of the period which budgetarily extended the role of the military beyond sustainable levels.

In January of 1994, a report prepared by the Governor of Guam, the Speaker of the Guam Legislature, Guam's Congressional Delegate and Chairman of the Guam Legislature's Federal and Foreign Affairs Committee noted:

Guam's intermittent use (if at all) as a forward operating location in regional conflict ranges from the complete use of all civilian and military facilities to a limited role for existing military facilities. However, most contingency operations (such as the use of AAFB airfield, its munitions and POL facilities and munitions storage at Naval Magazine during the Gulf War) involve the transfer of most support operations and personnel. This places only a minimal burden on existing infrastructure since: 1.) Guam acts as a reserve for munitions storage with munitions coming from more distant areas first (e.g. Concord Naval Weapons Station) and 2.) operational facilities for aircraft (e.g. production and technical equipment support) are secondary to equipment that arrives with incoming squadrons and their War Readiness Supply Kit (WRSK) resources.

The primary mission of Guam now appears to be among a network of "dispersal" facilities that are "recoverable" in the event of conflict. Large munitions and POL facilities, supported by available airfields and berthing facilities pose a "contingency" role for Guam; facilities that are available in the event of hostilities. Additionally, space and electronic warfare capabilities are expected to continue for the near future but many are clearly going to be impacted by technological advances.²⁴ Except during regional training exercises or during a period of conflict, the active U.S. military presence in Guam is likely to decline through the end of the 1990's. (Team Guam, *The Next Liberation*, January 1994 p.17)

In October 1994, the process leading up to the Department of Defense's recommendations to the Base Realignment and Closure Commission of 1995 was evident in the consolidation of the Naval Station, Guam and Naval Magazine, Guam into a consolidated operation called Naval Activities, Guam.

The recommendations of the Department of Defense to the Base Realignment and Closure Commission of 1995 to close operations at the Naval Ship Repair Facility, and the Fleet Industrial and Supply Center, and to essentially mothball the recently created Naval Activities command illustrate the continuing decline of Guam's importance for the forward deployment of an active U.S. military presence. From another view, the recommendations of the Department of Defense to BRAC 1995 reflects changes in the U.S. military presence in Guam which might have occurred earlier had it not been for the brief period of nuclear build up in the Pacific under the U.S. offensive posture of the early to mid-1980's.

Given the absence of a symmetric military opponent on a global scale, the U.S. government's flexible approach to its military strategy will endure. In this strategic environment, together with continued military "right-sizing" and U.S. national belt-tightening, the recommendations of the Department of Defense to the BRAC 1995 represent the near end-yun of Guam's decline as a forward U.S. military outpost.

As is clear in the Department of Defense's recommendations to the BRAC Guam's near-term value to the U.S. military will be that of a recoverable asset and dispersable center to support very limited mobilization and/or contingency operations to meet emergent military needs.

2. Long-term U.S. contingencies and contingency planning in Guam.

A complete review of the U.S. long-term contingency plans for the region is obviously impossible without reference to classified U.S. contingency plans. However, several themes run throughout U.S. long-term policy for the region. Foremost is a long-term policy of "strategic

denial" which has its roots in the U.S. post-WWII/Cold War posture of assuring military access on a contingency basis and at a minimum limiting the utilization of areas/islands by other nations. Access and development of a forwardly deployed basing activity, however, are two different things.

In Micronesia, the U.S. government's acquisition of basing ability in the the case of the Federated States of Micronesia, the Republic of the Marshall Islands, the Republic of Palau and the Commonwealth of the Northern Marianas, occurred during the process of the island nations' evolution from a U.S. administered Trust Territory to a decolonized status.²⁵ In the case of Guam, the permanent basing ability (and active utilization of property for such purposes) was acquired through accession.

The purpose of holding basing rights, in part, is answered by the international geopolitical conditions during which the U.S. began administering the Trust Territories after WWII, and the Cold War that followed. It is not insignificant that the United Nations Security Council's approval of the termination of the Trust Territory of the Pacific Islands (in which the former Soviet Union has veto powers) occurred only after the demise of communist control of the former Soviet Union.²⁶ While the end of the Cold War with the Soviet Union does not mean that long-term U.S. contingency planning for the region has ended, (nor are the plans any less ambitious over an extended period of time) it is clear that the drive which underscores such contingencies has been dramatically affected by advancements in technology and realistic budgetary limitation.

The United States has historically relied on its military to project itself as a "Pacific nation", indeed the commercial interest of the United States propelled the "imperialist movement" of even Navy strategists such as Captain Alfred Mahan²⁷ and the U.S. "Open Door Policy" at the turn of the century.²⁸ Although the U.S. projection of military power into the Pacific region has not resulted in the economic expectations "imperialists" might have imagined, it is clear that the diplomatic power of a military presence is a mainstay of U.S. policy in the Pacific. The adoption of the "flexibility" posture is but a more sophisticated and regionalized projection of policy interest than the offensive nuclear policy of the 1980's, but requires less capital and recurring budgetary expenditure. Again, however, it is important to note that the level of U.S. military activity has decreased coincident with budget constraints, technological advances and the rise of more interactive/confidence-building policies such as flexibility.

It is a fair assumption that the United States has an enduring interest in retaining a forward access as a Pacific military presence in its projection as a Pacific nation. From the present vantage, the U.S. military basing structure is in the "forward" Pacific centers around Japan and Korea with an increasing array of Asian Rim nations providing logistical support.²⁹ Nations providing forward basing support and those hosting intermittent access are distinguished by the commitment of land resources for continuing military activities. The intermittent access is meant to engender goodwill through a friendly show of force, by activities such as joint military exercises, port calls and procurement of goods and services, but does not involve the costs nor the political aspects (in host

countries) of forward basing. However, such confidence building activities, while promoting bilateral goodwill and advancing U.S. political and military objectives, does not assure the projection of military power from such host nations in times of conflict.

Although the nature of the missions of existing military basing activities in foreign countries is considerably different than the role -- and strategic potential -- of Guam, military strategists undoubtedly foresee the termination of existing basing rights in foreign countries. Under such "foreseeable" conditions, Guam is seen by military strategists (particularly real estate and war planners) as an insurance policy. Since the U.S. government at present holds real estate in Guam, for which no future premiums are "due," Guam represents the best kind of insurance policy for military strategists.

Even as an insurance policy (in the minds of real estate planners) for future U.S. rollbacks from Japan and Korea, the range of military activities which can be conducted from Guam are not limitless. The harbor is constrained in accommodating aircraft carriers and thus full scale SRF activities; tactical aircraft are too far from potential operating areas to be based out of Guam; and the basing of deployable troops in Guam offers no significant advantage over Hawaii or even CONUS. The role of Guam, however, as the pivot of the Marianas-Belau defense arch,³⁰ could possibly give rise to increased military activity. The costs, however, of producing the infrastructure to support such a diversification of deliverable military force was prohibitive for the Philippine rollback, and given technological advances is not likely to be necessary over the long-term.

The role of real estate planners and uniform officers in overstating the true military requirements for contingencies is obvious from Guam's experience since WWII. Given the absence of a future cost factor for retaining property in Guam, from the perspective of military real estate planners and active commands, any worst-case scenario is reason enough to justify retention of real property. No one in such a position is willing to guarantee that the U.S. will not require real estate for some future military use. As history has shown, however, military planners are always ahead of the will of the U.S. government to commit resources to plans. As was the case well before WWII, Navy planners viewed Guam as a location which should be heavily fortified to inhibit Japanese imperialism.³¹ Just as some U.S. Navy planners imagined Guam as being a heavily fortified location prior to WWII, U.S. policy did not create such an environment. The future should be regarded with a skepticism that accounts for overstatements of contingencies and plans of the past.

Proposals to homeport a carrier task force in Guam in 1980 -- the beginning a peacetime military resurgence -- were declined based on prohibitive costs and security concerns. The costs of dredging Apra harbor to accommodate the reasonable mobility of a carrier and task force vessels, amounted to over \$300 million. Additionally, the narrow harbor entrance presented logistical as well as security problems, while the high incidence of typhoons presented additional homeporting concerns.³² Military planners, even given the feasibility of the costly operations to make the Apra harbor minimally capable to accommodate aircraft carriers, did not believe the political will existed

to expend the resources (and to give up the economic and political impact of a homeported carrier task force) to improve the area (Ibid).

The numerous U.S. contingencies for the use of Guam in a Philippine base rollback certainly did not occur. Moreover, several of the military construction projects included in the limited movement of operations from the Philippines (as defined in the *Final EIS*) are no longer being pursued or have not met with Congressional approval. As has historically been the case, the priority of U.S. expenditures, even in the midst of intense activity, does not necessarily result in the commitment of resources for permanent facilities outside of the United States mainland.³³ In the face of military budget cuts that reduce the size of activities in CONUS (which has resulted in base closures nationwide notwithstanding the concerns of representatives of the people of the U.S.), Guam's possible future development as a more expansive military facility would be at least secondary to a reinvigoration of military operations in the United States.

Technology also weights heavily into the equation with respect to the future U.S. military requirements for Guam. When "Lion Six" was planned for Guam in 1944, a carrier task force was made up of "100 ships, four hundred attack aircraft, and heavy anti-aircraft artillery typical of a 1940s carrier task force."³⁴ By the 1980's a carrier task force was made up of nine ships, less than 50 aircraft and missile systems. (Ibid). Planners for "Lion Six" could not account for such technological changes.

Guam's experience is ample demonstration of the impact of technology on military deployments. Guam's incipient role as a coaling station was strategically surpassed by petroleum driven vessels whose capacity has been passed by nuclear-powered vessels. Submarine launched inter-continental ballistic missiles once required a forward basing operation to be effective against targets in the U.S.S.R. By 1980, in the wake of the new Trident submarine, the Polaris Submarine Squadron 15 was disestablished from Polaris Point, Apra Harbor. Similarly, the permanent basing of a nuclear-capable bomber wing in Guam was not considered necessary given technological advances in other weapons delivery systems. Command, Control, Communications, Intelligence (C³I) operations in Guam are now clearly under "threat" from technology. As noted by Vice Admiral Jerry O. Tuttle (Director, Space and Electronic Warfare, CNO) in *SeaPower* (August, 1993, pp. 9-13).

"Seapower: What do you mean by a 'lights out' operation?"

Tuttle: First of all I mean these big NCTAMS -- Navy Computer Telecommunications Area Master Station. They are run by an inordinate number of people. They have all these rooms and compartments. They have a naval forest of antennas...I want to close down these NCTAMS" (Ibid. p.13).

The military mission in Guam will continue to be affected as much by technology than by budgetary cycles; i.e. advances in technology will likely affect the U.S. military mission in Guam

more significantly than periods of budgetary escalation or decline. While U.S. policy planners may consider the forward basing of a military presence a necessary well into the next decade, even the establishment of an suitable infrastructure to sustain a Marianas-Belau defense arc would not require the amount of land in Guam that is presently held by real estate planners within the U.S. Department of Defense.

C. Pre-takings use of Guam real estate.

In taking Guam properties after WWII, the U.S government assumed control over the most developable properties: those where properties "bearing capacity" was "excellent" in northern Guam as opposed to southern Guam where "poor" or "poor to fair" conditions exist. (Military Geology of Guam pp.225-253). Given the relative quality of lands taken by the military it is not surprising that these same lands were a vital part of the web of civilian "society" in pre-World War II Guam, through the war and before condemnation by the U.S. government.

Aside from the roads, utility easements and petroleum, oil and lubricant (POL) lines, the U.S. condemned lands in large tracts for military complexes. Condemnations were of two general types, leaseholds where the government needed temporary bases and fee condemnations where the bases were deemed permanent. Temporary and permanent were determined by perceived national security needs of the time. The term "complexes" is used because they included a series of interdependent support facilities that collectively formed a self-supporting community segregated socially and physically from the native Chamorro population.

Because the government condemned these lands in large tracts and because property had not been subdivided into smaller lots (except in Agana and Sumay) it is fairly easy to determine use of the area utilizing appraisal reports of that time.³⁵ Only property presently possessed by the U.S. government is addressed in this section.

There were four large areas condemned by the Federal for military complexes.

1. Naval Ammunition Depot (presently Naval Magazine, Fena Valley, Reservoir and Watershed Area).

Although this "complex" does not have many buildings, its physical plant primarily consists of a water reservoir and treatment area, munitions storage area (including nuclear weapons) and extensive security zones. This area of taking consists of approximately 28.6 million square meters later amended to 21.1 million square meters.

Prior to WWII this area was a vital agricultural area, supporting the surrounding villages of Agat, Piti, Sumay, and to lesser extent the village of Umatac and later the villages of Talofofu and Santa Rita. It is also the source of the most significant surface water in Guam at the time. Fena Dam was created by the U.S. government utilizing fresh water springs on condemned Lot 357, Agat

4. Andersen Air Force Base, Naval Communications Station (presently NCTAMS), Northwest Field, Marbo Base Command, Marbo Base Command Sewage Disposal, Ritidian Communications Area, Harmon Air Field and Harmon Aviation Gas Fuel Farm.

This area of taking is approximately 39.2 million square meters. Pre-war use of this area was sporadic agricultural use but primarily family subsistence farms. However in the northwest quadrant of this taking-area there were spot areas where there were extensive commercial activity by different enterprises that annually contributed significantly to the economy of pre-war Guam. These activities included commercial farming for profit, a sawmill, copra plantations and a copra loading area for ships.

A significant but overlooked use of this area is its wildlife aspect: as a community hunting ground. Although this area was private property before the war, it sustained large tracts of forest and undergrowth. The nature of such areas made it quite difficult to restrict trespassing and maintain exclusive use of property by owners. As such it was classified or zoned by the native Chamorro population as "halom tano" (inside the land or the deep forest) and was quite readily used as community hunting grounds and an area to gather edible flora. The wildlife aspect and the halom tano aspect made it valuable as a source of fresh meat and a source of consumable plants. Although landowners probably did not particularly like encroachments by non-owners, no extensive measures were taken to prevent them from utilizing the property.

Primary use: Agricultural, sporadic extensive commercial ventures, large tracts of "halom tano" serving as dietary supplement.

D. Overview of takings and "rationale" for holding.

Several overarching issues involved in the process of the takings. These issues involve the psychological, social and economic condition of the population of Guam after WWII; the U.S. military's projection of power in the region which was seen, in part to be sustained by interest in Guam land; as well as the military's ability to directly influence unilateral U.S. decision over the affairs of Guam.

The effects of Guam's occupation by Japanese forces and devastating recapture by American troops on the Chamorro psyche vis-a-vis U.S. requests for "real property assistance" after WWII are too complex to be dealt with fully in this paper. However, the consequences of emancipation by American troops, together with an appreciation for the phenomenal power and "needs" of the U.S. military for property, are woven throughout the post-war history of the Chamorro people and U.S. land takings.³⁶ Moreover, the land takings themselves resulted in the complete displacement of Guam's agrarian economy which had been stymied by Japanese occupation and shattered by the bombardment during the U.S. reoccupation. The impact of the changes in Guam brought on by military land taking, land use and support activities were radical,

not only with respect to displacement from property, but also economically, socially and culturally.³⁷

The process of the land-takings by the U.S. military which stretched from 1944 to 1965,³⁸ is itself testimony to the uncertainty of the U.S. Government with respect to its real land needs in Guam. Moreover, it symbolizes the arbitrary manner in which such important matters to the Chamorro people were handled almost casually by the U.S. Government.³⁹ Not unlike regular criticism of U.S. military strategy in the Pacific -- which from a posture of power assumes the cooperation of its allies⁴⁰ -- an arrogance of power marked the process of land takings after WWII. A preponderance of U.S. documents -- both military and civilian -- point to U.S. military interests as the first order of business in Guam in the immediate post-war period and indeed very overtly until the lifting of the security clearance in 1962.⁴¹ Clearly, these interests -- together with the attitudinal framework of the U.S. government's unilateral decision-making authority over Guam's affairs -- resulted in the real estate takings without serious deference to the needs of the civilian community.

Perhaps the most compelling evidence of the fact that the military's land-taking program treated civilian land needs with indifference is seen not only in the taking of lands that were utilized by the Chamorro people, but also the self-established claim that the best lands in Guam were taken.

Federal records indicate repeated references by military officials that the island's best agricultural properties were taken.⁴² During a House Naval Affairs Committee hearing on H.R. 6547 (79th Congress, Second Session) on May 23, 1946, Commander Albert O'Bannon (the Naval officer in charge of the Real Estate and Land Acquisition Division of the Lands and Claims Commission) responded to questioning from Congressman Drewery:

Mr. Drewery: We are proposing to buy...some of the most valuable land on the island of Guam; is that so?

Commander O'Bannon: That is the fact.

Mr. Drewery: That land we are buying is among the most valuable on the island then?

Commander O'Bannon: I would say so. I would say it is valuable to this extent, because it is tillable land, and can be used for cultivation, and of course, you have the water front area that is used there in the harbor, and down from the water."⁴³

Military strategy continues to drive primary U.S. interests in Guam. Obviously, real estate to accommodate these interest and from which these interests can be projected is necessary. Unfortunately, significant strains of the military's post-WWII attitudinal framework remain in place in Guam today: military planners have by and large refused to acknowledge the value of real estate to the community of Guam despite historically declining military usage. "Possible future mission" requirements and "contingencies" have become the mainstay of the military's rationale for retaining unused and underutilized federally-held property. As succinctly put by the Planning Assistance Team study for Andersen Air Force Base (AAFB):

"ISSUE: Development of Andersen AFB South (Andy South)

DISCUSSION: Andy South is relatively undeveloped and there is some pressure on the Air Force to dispose of some of this underutilized land. A logical extension of land use at Andy South would be for additional family housing and land uses which are compatible. Andy South currently has land resources which can support a major build-up of U.S. forces on Guam.

RECOMMENDATION: All existing land at Andy South be retained by the Air Force for possible future missions."

(1987: at p. 50).

Military holdings of Guam property that accommodate existing activities often tend to be underutilized. This matter will be examined in greater detail in this report. However, it is significant to note that in general, excess operational capacity is either "justified" by providing tenant commands with exclusive jurisdiction over operational facilities (e.g. berthing space at Apra Harbor Naval Complex: See Chapter 6., A.1.) or designation for contingency purposes.⁴⁴

The reliance on "contingency" as a rationale to prevent the return of unused lands or forego consolidation of operational activities is prospectively, and has been in practice, incongruous. First it must be understood that "contingencies" include a wide range of options, including worst-case scenarios. Such situation reviews (in their classified form) include such scenarios as military conflict with allies and non-hostile nations.⁴⁵

Beyond the grandiose aspects of "worst-case-scenario" contingency planning, the mundane aspect of land utilization during periods of intensive military use have shown that the full extent of U.S. land-holdings since WWII have never been required. This was evident from the beginnings of the taking of Guam property in 1946 by the U.S. military when far more land was taken than was needed. The advent of the Korean Conflict and the Vietnam Conflict -- despite massive operations from Guam during the latter -- have further failed to demonstrate that full-scale operations from Guam require the amount of property occupied by the U.S. military.

Given the current U.S. posture of "flexibility", budget constraints (which will take the U.S. well into the next century), and "right-sizing," the active role for Guam is further minimized. Contingencies under the "flexibility" approach rely on available facilities not only in Guam, but also amongst Pacific allies. As was demonstrated during the Gulf War, while usage of U.S. military facilities in Guam increased, the deployment of operational groups with WRSKs minimized the reliance on many operational facilities to engage in technical support.

While the U.S. military's retention of the present amount of Guam property can not be fully justified in relation to operational requirements, there is little doubt that land in Guam is desirable to U.S. military officials because it is retained/available and because there are no recurrent costs

associated with holding such property. This myopic view places little or no consideration on the value of land in Guam for civilian use. Correction of this perspective has long been encouraged by Guam as well as other observers. As former Secretary of Navy James H. Webb wrote in his 1974 publication, Micronesia and U.S. Pacific Strategy: A Blueprint for the 1980's:

"Although military planners have assumed for planning purposes that the 1970 military population will have doubled on Guam by the year 2000, they have not referred to specific plans or reasons why this is so. A stricter accounting for land usage will require a concrete plan for justification of retention of these present land areas....First we should recognize that this is not 1945....Second, we are depriving a land-poor island of one-third of its land, while its population and tourist economy are rapidly expanding. Finally, many sensitive Guamanians feel strongly about the loss of native culture attendant to such an expansive military presence"⁴⁶

A long-standing central point of dissention between the U.S. military and the people of Guam has been the military's land use plans and long-term contingencies vis-a-vis Guam's civilian community's requirement for land. This contentious issue has been well manifest in the DoD's recommendation to the BRAC 95: a recommendation which proposes even less use of existing U.S.-held property in Guam, but which does not propose the transfer of significant property already being sought by Guam for its rapidly expanding population and tourist economy.

The BRAC 1995 should be aware of this situation as its gravity is serious. If bases are closed, but assets and land retained for "necessary access", "operational and forward basing considerations" and "emergent requirements" the BRAC 95 process will likely become the flashpoint of long-standing tensions between the Navy's view of Guam as an "insurance policy" and Guam's need to develop its economy.

II. The Economic Value of Land in Guam

A. Summary

The occupation of significant areas of land in Guam by the federal government, predominantly by the Department of Defense, has caused and continues to cause substantial impairment of the performance of the civilian economy. From the pre-War days, when sanctioned economic activities were narrowly limited and even land transfers among residents were strictly controlled, until today, when simple ownership "rights" and proximity-related conditional usage severely constrain further civilian economic development, the federal use of land in Guam and issues related to such usage have had a negative impact on the economic well-being of the people of Guam. Much of the land held by the federal government today could generate a great deal more economic value to the people of Guam if it were converted to civilian use; ironically, much of the land that meets this description is held as idle land, albeit still in the federal estate. As a resource that is extremely scarce (particularly in the context of an isolated 212 sq. mi. island), land holds enormous economic value to the people of Guam, a value far greater than that of the relatively

inconsequential spin-offs of income from the expenditures of the federal government in Guam incidental to its use of the island's land.

Beginning with the strict limitations on how privately-owned land could be used in Guam under U.S. governance prior to World War II, the people of Guam have faced numerous restrictions on the use of their land that would normally be considered to be unduly onerous and generally unacceptable in a capitalistic democracy. Before the War, almost any use of land other than for agricultural pursuits or housing was discouraged; similarly, the market price for land was arbitrarily distorted because of the requirement that private land transactions first be approved by the Naval Governor, who regularly denied transactions in which he perceived the price to be "too high." During the War and immediately after the reoccupation of Guam by U.S. forces, private property rights were simply disregarded whether or not they conflicted with purely military interests in the use of land for the war effort. After the War, the "best" land, especially the most productive agricultural land, was taken for military use because of its topographical properties; other land that would be considered "prime" by today's standards (i.e., cliff line and smaller plots of more fertile property) was also taken without regard to the value (either real or potential) to the civilian population. Much of the remaining agricultural land was used for the relocation of civilians who had been displaced by land takings in other areas of the island. Development of civilian land was further constrained, partly by severe limitations on the availability of the capital necessary for development projects and partly by regulatory restrictions accompanying the particular military uses of adjacent federal lands.

Today, these "proximity" restrictions continue; for example, civilian commercial development in and around Apra Harbor is limited due to the "blast arc" around munitions handling facilities at Naval Station, and land development around Naval Air Station and Andersen Air Force Base is constrained in the attendant Air Installation Compatibility Use Zones. Access to private lands is blocked in several places, and in at least one case this is accomplished (in part) on the grounds that private vehicular traffic could interfere with sensitive electronic instruments used by the military, so that civilian development of private land is prohibited by military considerations. As Guam's civilian economy has developed despite these constraints, its growth (particularly that of the tourism industry) has been constricted by federal holdings of unused land. This is land which is not made available for civilian use, either because it is held as a "security buffer" to ongoing military operations, it is being retained for undefined "contingency purposes," or simply because the technical aspects of a method for returning the land to civilian control have taken on a low priority for the federal government.

The economic well-being of the people of Guam has been and continues to be negatively affected by the pattern of federal land use in Guam. The level of standards of living has been adversely affected; the distributions of income and wealth have been haphazardly distorted; the structure of relative prices has been contorted to the point that many development opportunities are hampered, and even the socio-political interests of the United States itself have suffered.

B. The Impact of Federal Land Use in Guam Prior to World War II

Although the premise may be contestable, it is held here that the very presence of the federal government in Guam and Guam's governance under the authority of a Naval Governor had an important influence on the economic use of land in the pre-War period, as well as on the overall economic development of the island. The economy of Guam was closely controlled by the military government, and only those activities that were in the interests of the military mission (or at least not even remotely in conflict with said mission) were sanctioned. Guam was occupied by the U.S. exclusively because of its strategic geographic location and its deep-water harbor. However, because Guam was already populated by indigenous civilians, it was necessary for the military government to encourage certain types of economic activity and development so as to minimize the costs of colonial administration and to protect the welfare of U.S. troops stationed here.

In the early years of the Navy's colonial administration of Guam, several public health projects were undertaken, such as the establishment of reliable supplies of potable water, the eradication of some of the more dangerous diseases (such as diphtheria and tuberculosis), and the disposal of environmental wastes. Roads and bridges were built in order to facilitate the transportation of military supplies and personnel, as well as to make law enforcement easier. Rudimentary schools were formed to generate an employable labor pool to meet periodic military needs and to educate the civilian population in agricultural and animal husbandry skills to foster greater economic self-sufficiency. Trading companies were licensed to provide a market for agricultural surplus so that the local people could earn the wherewithal to purchase those necessary items that they could not produce themselves. Overall, the economic development that was sanctioned (and, in some cases, encouraged) by the military government was a success (however imperfect) in the eyes of the colonial establishment; the U.S. extracted a great deal of value from Guam in terms of both military defense and the diplomatic advantage of a projected threat of force, while the costs of obtaining these benefits from the colony were maintained at a bare minimum.

Because of the nature of the colonial administration of Guam and the granting of certain low-level employment positions to some civilian residents during the pre-War period, it was common in the central part of the island for people to live on their "ranches" (farms) during the week and to migrate to more or less organized villages over the weekend. This had also been true during the Spanish era in Guam, when the localized provision of public services and the proximity to the government's administrative offices and private commercial establishments engendered this practice.

Thus, in the pre-War period, the economic impact of federal ownership of land in Guam (along with the socio-economic impact of the federal presence at its very basis) was to concentrate the population in easily controlled sub-municipal villages, to improve health and educational standards (principally to protect the interests of the military establishment and its personnel, as well as to gain the good will of Guam' residents with regard to the military presence), and to limit the types of civilian economic activity that were economically viable.

Particularly in the late pre-War period, the military control of land prices in Guam had an important effect on economic organization and performance. The premise under which land transactions required prior approval by the Naval Governor was that it protected the residents of Guam (who were considered to be relatively unsophisticated by the military leaders) from exploitation by those from outside of Guam who might otherwise take advantage of them. This was despite the fact that land ownership by individuals from outside of Guam was strictly prohibited. Whether this control of land prices showed foresight in preparation for the post-War condemnations of land at extremely low prices is not the immediate issue here, although there are some who view it in retrospect as a concerted plot to enable the militarization of Guam for purposes of regional hegemony at a minimum cost. What is at issue is that the distortion of the price structure in Guam resulting from artificially low prices for land had (and continues to have) adverse effects on the efficient allocation of land resources in the process of economic development. Any economic good, including the land resource, that is administratively undervalued will be overutilized and, in many cases, wasted. This is particularly problematic in a place such as Guam, where land resources are so limited that any waste whatsoever brings with it serious reductions in the wealth and standards of living of the community. These informal land price controls in Guam before the War had a negative impact on the civilian economy, but led to far greater economic difficulties beginning with the reoccupation of Guam in 1944 and extending up to the present day.

C. The Post-Reoccupation Impact of Federal Land Use in Guam (Late WWII)

Prior to the landing of U.S. Marines in Guam on July 21, 1944, there had been a battle raging in the air and in the waters surrounding Guam off and on for several weeks. For ten days immediately before the landing of the Marines south of Apra Harbor and south of Agaña, air battles had shredded the landscape with .50 caliber rounds and aerial bombardment, while the Navy engaged in the shelling of the island's major population centers from vessels off-shore; the forests had burned and the rivers had run red with the color of Guam clay. Some 26,000 artillery rounds had been fired from Navy ships, day and night, leaving the leeward coast of Guam in tatters. Even so, the invading Marines faced bloody resistance from the Japanese forces, as the Imperial Army desperately tried to defend its honor as much as the island it had taken, almost without resistance from the U.S., just 32 months earlier.

The Navy's justification for having so viciously devastated the land and, more particularly, the major villages of Guam was that they did not want to fight another bloody urban guerrilla war like the one they had just finished in Saipan, to the north of Guam. No one seems to be certain of how the decision to raze Agaña, Asan, Piti and Sumay was made, but it has been widely reported that Marines were surprised to find survivors in the concentration camps in Guam. The seemingly endless bombardment did, though, utterly ruin what had been the lush, beautiful paradise that was the western coast of Guam. The coming years of military construction projects to fortify Guam would take again as much land, and denude as much once more.

With the U.S. invasion of Guam in July 1944, and the routing of Japanese Imperial Army forces from the island by mid-August of that year, federal use of Guam land expanded dramatically, almost overnight. While there may have been other factors involved, the exigencies of full-scale war were used as justification for the outright disregard for private property rights by the occupying U.S. military forces. At one point during the final year of the war, the U.S. military occupied as much as 82% of the island's land, with the larger part of this acreage being private land for which no rent or lease had been paid, much less agreed upon. Some accounts relate that a landowner could be shot on sight by military personnel simply for entering his own property to harvest his produce or recover personal items. The gist is that representatives of the federal government in the persons of U.S. military forces occupying Guam showed no regard whatsoever for the private property rights of the civilian residents of Guam; those property rights which America holds to be so true and dear, those rights upon which the very foundation of the capitalistic system of economic organization is anchored, were clearly unimportant to the United States government in the face of the retreating, nearly defeated Japanese.

This is an extremely important point in these discussions: property rights, whether private or public, are the primary basis for the existence of governments. Governments are formed initially for the mutual protection of one group from the unwanted advances of another. These advances are most often acquisitory in nature, so it is property (and the rights thereto, as defined by the group to be governed) that forms the fundamental basis for the existence of government. As a protector of property rights, the government ultimately also defines those rights. This is another central role, indeed, a central purpose, of government, both with regard to external aggressors and in internal relationships. In this, governments deter anarchy. Defense requires arms and armies, the tools of defense and warfare require payment, this payment requires taxes, and everything needs order, and thus, regulation; so grow governments. In the process, though, at least in a democratic society, it is the prime responsibility of the government to maintain and enhance the interests and welfare of its subjects, both collectively and individually. It is not only the responsibility of the government to protect the physical well-being and safety of its subjects, but to uphold their economic security and access to opportunities, as well. This is true in part because of the inordinate power of government relative to that of the common man, but even more so (at least in a democratic society) because the government obtains all of its just powers through the consent of the governed. Without such consent, governments fail.

In the months immediately after the U.S. invasion of Guam in 1944, the property rights of the resident civilians were almost totally disregarded. They were grateful for their "liberation" from the horror and atrocities of Japanese occupation, although their living conditions improved only moderately at first. They were loyal subjects of the U.S. government, even though they were U.S. nationals rather than citizens and their status as subjects was without their formal consent. However, not only were their respective property rights not defended by their government (or by the government's primary enforcement arm), those rights were usurped and abused by the occupying power. Land was taken indiscriminately by the U.S. military, stripped of its pre-War economic value as agricultural land, and damaged beyond reasonable recovery by the activities of a

wartime army. Incredibly (or nearly so, even when one accounts for the attitudes held by Guam's people toward the Japanese at that time), the people of Guam were willing to waive their property rights in support of the war effort. This would be an enormous sacrifice for any people, but even more so for a people who were already economically disadvantaged after 42 years of American colonial occupation and nearly three years as hostages under Japanese bondage. The people did not, though, realize that their property rights were lost forever. They expected that the government would return to them what was rightfully theirs, once the hostilities had ended. The government never completely fulfilled its responsibility to the people of Guam as its subjects, but as unenfranchised nationals (and later, unenfranchised "citizens"), the people of Guam have had no reasonable avenue to assert their rights in these matters.

To put the scope of federal use of Guam land during this period into perspective, some population figures might be illustrative: In 1940, the U.S. Census enumerated 22,290 people in Guam, excluding military personnel; "natives" comprised 93.2% of the total population of 23,067, while "others" comprised the remainder. By the end of World War II in 1945, there were more than 200,000 U.S. military personnel stationed at Guam's many bases; adding these to the surviving civilian population, Guam had approximately one and one-half times the population that it has today. There were airfields, supply depots, fuel storage complexes, ports and docks, field hospitals, barracks and all other manner of land uses on a magnitude sufficient to accommodate the overwhelming influx of personnel in support of the war effort. Vast areas of the island that had escaped the ravages of the pre-invasion bombardment were now reduced to a level of economic value that was similar. There was no consideration of aesthetics, there were no environmental impact assessments or studies. Bulldozers simply stripped the land to make room for the troops and their logistical support.

At the end of the War, virtual mountains of munitions, material, structures, fuel, vehicles, and all manner of waste were left behind as the "boys" went home. To this day, the Navy maintains an explosive ordinance disposal team in Guam to handle the several discoveries of hazardous remnants of WWII each year (at this writing, 12/31/93 two such incidents were reported in this evening's news and there was a small underground explosion at San Vicente elementary school last year). Each year another few chlorine tanks burst underground at the undocumented sites of temporary water treatment facilities. There are many other toxic waste sites that have not been identified, but even many of those that are known are not cleaned up because the cost to the military would be "too high." The economic view of federally-held property in Guam is greatly complicated by the fact that there are so many unknown impacts today that are the direct result of federal land use here in the last days of the second World War.

D. The Post-War Impact of Federal Land Use in Guam (Latter 1940s)

By the time World War II had ended, it was evident that the United States was the preeminent world power, and that the nation had become the *de facto* "defender of the free world." To carry this role, though, the nation would have to be prepared to project military force anywhere

in the world on short notice; there was also the matter of policing the unstable powers that were left in the wake of Japan's adventurism, a crusade that had affected Asia and the Pacific for many years through its influence on China, Korea and the Soviet Union. Guam proved to have the right combination of characteristics to win its preference as a forward strategic base for U.S. military, commercial, and diplomatic interests. The vestiges of the military interest may be the most visible on the island, but the military interest takes on its value because of the commercial and diplomatic leverage that it provides. On the trail of its victories in Europe and the Pacific, the United States chose Guam for the privilege of being a place where the nation could fight its wars away from its own shores.

The War had left Guam with far greater capacity for warfare than could be economically sustained during times of peace. The U.S. had to decide what its ongoing mission in Guam would be, and what resources were necessary to support that mission. At the same time, though, there were marvelous military facilities that had been constructed during the War, and these facilities might be needed if war broke out once more. It was in the interests of the U.S. to retain these facilities as a "contingency" in the event that they were needed some time in the indefinite future. Consequently, much of the land that had been developed for full-scale warfare in Guam was retained by the military in the post-War years for potential use in the nation's new global strategy.

As stated earlier, much of the land that had been taken during the last year of the war was the best land that Guam had to offer: It was the flat land, also best for housing and for cultivation; it was the land surrounding the harbor, Guam's economic lifeline to the outside world; it was the cliff line, with the most spectacular views of the island's beauty and that of the surrounding waters; it was the interior river basin, which would have been the most significant source of surface water for a developing economy; it was the narrow coastal plain that had held most of Guam's population before the War. In short, it was the most valuable land on the island.

Rather than return Guam's land to its rightful owners after the end of the War, the Navy "condemned" it, using its eminent domain powers; the total amount of money appropriated for this purpose was a mere \$1.6 million, so land prices had to be set in order to fall within this budget. The artificially-set pre-War prices of record were used as a basis for compensation in the proceedings. Much of the land taken in this manner was not in use by the military at the time, but was acquired for contingency purposes; the greater proportion of this land has still not been used, but is still in the federal estate; other portions are now used as "buffer" or "security" zones around land that is devoted to one or another military mission.

The military takings of land in Guam in the post-War period were not uniform; some people (and families, given Guam's land tenure traditions) were treated worse than others. Many lost the bulk of their estates, while others were left unscathed; some were offered land exchanges (albeit for inferior plots), while others were only paid paltry sums of money, which had little practical value in Guam's controlled economy at that time. Consequently, the distribution of wealth that had prevailed in the pre-War period was overthrown, disrupting the social and economic structure to

which the people had become accustomed in peacetime; the distribution of income was similarly disturbed, which compounded the result.

Guam had never had a well-developed economy, but what progress it had made had been undone by the Japanese occupation, the pre-invasion bombardment, the post-invasion fortification and the post-War radical transformation of traditional land tenure and use patterns. Again, the power and privilege of government was abused to the detriment of people who stood powerless in their own defense (there were not even any civilian attorneys in Guam at the time to defend the property interests of the civilians living here). The cumulative result was a radical, violent and complete upheaval of the economic system of the island.

What had been very nearly an agricultural subsistence economy just one decade earlier, based upon barter in casual exchange transactions, was suddenly transformed into a wage-based service economy with mismatched labor opportunities and the monetary trappings of a modern exchange system. Huge areas of traditional farmlands had been taken for semi-permanent military purposes, while much of the remaining farmland had been converted into villages where the people were relocated from their pre-War homes. Many jobs were available in the construction trades for military projects (as well as some for private housing and small commercial establishments), and for minor roles in the military government's administration of the civilian population; virtually no employment was available for the agricultural skills most civilian residents held, and foreign workers were often imported to meet the military's labor needs, further depriving Guam's people of economic opportunity.

In all of this, the government disregarded its responsibilities to its subjects. Not only were the people of Guam abandoned at the outset of a massive multinational war, they were also subjected to massive bombardment during the reoccupation; not only were their lands taken for the war effort and ruined beyond recognition, they were then kept by the current occupying power and held idle while denying their use for traditional purposes; not only was the economy overturned several times in succession, there was ultimately no direct assistance forthcoming from the national government to aid in the economic recovery of the people of Guam from the catastrophe they had experienced. When the interests of a government conflict with the interests of its people, it is the well-being of the people that should prevail; in Guam, the well-being of the people was not only disregarded, it was denied. The government, the United States government, did not meet its obligations to the people of Guam, and actually used its powers of eminent domain to deprive the people of Guam of many of the economic opportunities available to them. That this was done for the convenience of the U.S. military in executing its part in national foreign policy does not justify the economic deprivation that the people of Guam have individually and collectively suffered because of the loss of the use of their land.

E. The Impact of Federal Land Use in Guam Under the Organic Act and Naval Security Requirements

The Organic Act of Guam (1950) gave Guam a degree of civilian government for the first time in nearly 300 years, but the Navy maintained most of its powerful influence on civilian affairs. Although the Guam Legislature was a popularly elected body, the Governor of Guam was appointed by the President and had veto power over legislation that could not be overturned by civilian authorities in Guam (only the President of the U.S. could override a veto exercised by the Governor of Guam). This allowed the Navy to continue its influence on civil affairs in Guam, but another tool proved to be even more effective: all persons entering or leaving Guam first had to receive security clearance from the Navy.

In light of the massive military buildup that was taking place in Guam at the time, it is understandable that the Navy would want to take the convenient security measure of closing Guam to all but strictly controlled entrance and egress; otherwise, maintaining security would have been far more difficult and costly. However, this restriction on travel also closed most avenues available for civilian economic development. It has been claimed that the security clearance requirements protected the people of Guam from exploitation by outsiders, but this is a questionable view, since many select outsiders (U.S. citizens and foreigners alike) were allowed into Guam during the period, and collectively dominated civilian commerce in many markets. It was during this period that large landholdings in Guam were privately accumulated by American expatriates, so the "protection" accorded by Navy security clearance requirements was not as effective as it might have been if that were truly a part of its intent.

The main problem that faced the resident civilian population during this period, aside from adapting to the new economic order that had been arbitrarily imposed in the wake of WWII, was an inability to maintain reliable relationships with suppliers and other business associates outside of Guam. Another key problem was the shortage of accumulated capital necessary to spur internally-funded economic development projects. In combination, these factors kept the value of Guam land low, and the Navy was still able to secure additional pieces of property as it saw fit at relatively depressed market prices. Those businesses that did develop during the period were predominantly small-scale groceries, saloons, restaurants, service stations, clothiers and amusement halls, along with a few small department stores (which were mostly owned by outsiders).

During this period, from 1950 through late 1962, Guam's economy was almost entirely dependent on military spending. The closure of Guam virtually ensured that outside civilian investment was kept to a minimum, but also that internal wealth could not accumulate. Without the creation of wealth in the local civilian economy, even that land which had been retained by the civilian community through the war years and the subsequent rounds of eminent domain condemnations could not be substantially improved. Even had the wealth existed, the closure of Guam made any form of large-scale development economically impractical. Whether intentionally

or otherwise, regulations accompanying federal land-use patterns in Guam denied the civilian community both the means and the incentive to develop its land.

F. The Impact of Federal Land Use in Guam After the Lifting of Naval Security Requirements

During the late 1950s and early 1960s, base construction in Guam was coming to a close. Federal spending in Guam was declining correspondingly, and Naval security clearance became increasingly unnecessary. In August, 1962, the security clearance requirement was ended. This presented Guam with a dilemma: federal funds flowing into Guam were diminishing rapidly, but the civilian economy was not sufficiently developed to compensate for the decline in income. Efforts to attract business capital investment from the States were largely unsuccessful, in part because of the image of Guam as an armed camp covered with military installations and Quonset huts, but mostly because Guam could not provide the amenities (transportation, communications, education, entertainment and retail outlets) that would be demanded by U.S. firms' expatriate employees.

The Organic Act had placed Guam squarely under the control of federal regulation, and the decade of the 1960s saw these regulations grow rapidly in both range and depth. Attempts to develop manufacturing in Guam for export to the United States failed repeatedly as regulations (and their interpretation and application by federal officials) changed. Environmental and land-use regulations designed for the States were inappropriately applied to Guam, to an economy that had been intentionally stunted by centuries of colonial repression; these restrictions hampered much of the potential for economic development that would otherwise have been available to the civilian community.

Guam finally hit upon tourism as a viable industry in the late 1960s, and the economy began to grow in spite of federal interference. The early 1970s brought the first true economic boom to Guam, with rapid development of hotels and other facilities to accommodate the growing tourism trade. Even though federal land use in Guam during the Viet Nam conflict caused social disruption and endangered the well-being of civilians (nightly bombing runs by B-52s and the transportation of heavy munitions through civilian population centers created a present danger to public safety, and disturbed civilian work and sleep patterns that had been established), the growth of the civilian economy continued almost unimpeded.

The end of the Viet Nam conflict and the depression of the tourism industry due to oil price escalation led to a severe recession in Guam in the latter half of the 1970s; while these cannot be blamed on federal land-use patterns *per se*, the mis-application of federal regulations attendant to federal land use did undermine any hopes of economic recovery in 1978, when the infamous "Adverse Effect Wage Rate" went into effect. The rising affluence of the civilian population in Guam in direct response to tourism development, coupled with the destruction caused by Supertyphoon Pamela in 1976, had created a surge in housing demand; in order to meet the labor

needs of the construction industry, contractors had started bringing in foreign workers on temporary visas. Under the premise that these foreign workers were displacing U.S. citizens from jobs in Guam's construction industry, thus creating an "adverse effect," the U.S. Department of Labor imposed the requirement that the foreign workers be paid according to wage scales derived from compensation standards in the industry in some 33 U.S. mainland cities. Being far higher than any comparable wage rates that had ever been paid in Guam (at one time, the Naval government imposed a three-tiered wage structure in Guam, with American expatriates being paid the most and foreign workers being paid more than resident civilians), these wage rates most certainly had an adverse effect: the construction industry in Guam collapsed, as did the aspirations of Guam's people for adequate modern housing. By the time federal courts overturned the Department of Labor's ill-conceived wage structure, it was too late: irresponsible federal monetary policies had driven Dollar-based interest rates so high that construction financing was well beyond the reach of most civilian residents in Guam. Even the land that was available for housing construction in Guam could not be developed because of the impact of federal policies here; this impact was indirectly due to federal land interests on the island.

Three factors combined to stimulate a return to economic prosperity in Guam during the mid-1980s: Dollar-based interest rates declined, Japanese affluence resumed its rapid long-term growth pattern, and protectionist pressures from the U.S. Congress induced Japan to encourage investment of its trade surplus back into U.S. jurisdictions (including Guam). The forced devaluation of the Dollar relative to the Deutschmark and the Yen at mid-decade merely accelerated the rapid development of new hotels and other tourism facilities in Guam, and attempts by the U.S. Immigration and Naturalization Service to once more undermine the economy by cutting off Guam's supply of temporary foreign construction workers were unsuccessful. From 1984 through 1991, Guam experienced unprecedented economic growth, with real income more than doubling on a *per capita* basis.

As the decade of the 1980s progressed, though, land became more and more of a constraint to further economic development. Guam's tourism industry is centered in Tumon, north of Agaña on the leeward coast of the island. In 1984, land could be purchased in Tumon for approximately \$200 per square meter. Tumon, though, was hemmed in by housing and medical developments to the southwest and by unused federally-held land to the northeast. As a result, land prices in Tumon increased to as much as \$2,200 per square meter by 1990. Hotel and other tourism-related projects that would have been feasible at reasonable land prices were abandoned. While nothing could be done to increase the availability of land to accommodate tourism expansion to the southwest, expansion to the northeast through the release of unused federal land (or allowing access to civilian-owned land) was denied under the auspices of "national security" and "contingency plans." Combined with the world-wide recession of the early 1990s, federal land-use (or, in this case, non-use) patterns in Guam once more brought the economic development of the island to a screeching halt.

While tourism may not be the only economically viable industry for Guam, it is certainly the one that has garnered the most attention over the past quarter-century. The development potential of the industry, though, is severely limited by the fact that the federal government retains (or restricts access to) most of those areas that are best suited to the visitor industry: cliff line property, leeward beach-front property and undisturbed forest vistas. The historical pattern of federal land use has been one based upon a view of land as being virtually costless (land taking values stood at an average of a fraction of a cent per square meter), so land resources were generally wasted. For instance, if a radio transmitter needed a radiation buffer zone surrounded by a security perimeter, forty acres of land could be devoted to this use; if another transmitter needed similar conditions, it would be accorded its own forty acres, rather than sharing all or part of the land devoted to the first transmitter. In this hypothetical illustration, twice as much land is used as is necessary to accomplish a particular set of purposes; in reality, though, this "nuclear" pattern of land use by the military in Guam absorbs many times as much land as would be reasonably necessary to accomplish the same national security objectives. Indeed, it is likely that the U.S. military could accomplish its mission in Guam with considerably less land than it actually occupies and very little of that land would have to be the best that the island has to offer.

Thus, federal land-use (and particularly land-use patterns) in Guam constrains civilian economic development; as the economy continues to grow, these constraints are becoming more binding and far more costly in terms of the opportunities for economic development that are denied to the civilian community. Even if the lands held by the federal government in Guam were of the same quality as civilian-held land, the impact of withholding roughly one-third of the island's land from civilian development would be enormous. The impact of federal land holdings on the price of land alone forces the cost of civilian development to be much higher than it would otherwise be. This discourages much of the potential economic development in Guam, reducing the range and number of job opportunities, thus holding wage rates down; it reduces the opportunity to earn profits from the use of the land. By reducing the amount of income generated within the civilian economy, it holds the standards of living of the people of Guam at a level below what they would otherwise enjoy. At the same time, it forces the cost of meeting basic human needs, such as food and housing, to be higher than it should be. It also reduces the potential revenues of the civilian government of Guam, adversely affecting the availability and provision of public services.

These adverse effects only consider one side of the equation, though; they are, of course, partially offset by the beneficial impacts of the federal presence, such as the incomes of civilian employees of the military and the flow of funds in the civilian community generated by the expenditures of the government on procurement and the spending of military personnel within the civilian community. Each year, the various branches of the military in Guam release economic impact statements specific to Guam, detailing the expenditures they have made in the community under various expenditure categories. Using gross levels of expenditures on military operations in Guam and applying adjustment factors (such as an income "multiplier," which is intended to reflect the cumulative impact of multiple rounds of expenditures made in successive transactions wherein the seller in one transaction becomes the buyer in the next), a total economic impact is computed.

However, there are several flaws in the analyses. For instance, only a portion of the gross budgetary expenditures are actually made in Guam at all; much of the money is spent on procurement of supplies and material in the States, and the physical goods are shipped to Guam. Of those funds that are actually spent in Guam, only a fraction is spent on civilian payroll, and many of those civilians are either military dependents or hired "stateside," and have base exchange privileges, and consequently spend only a small portion of their income in civilian establishments; similarly, military personnel spend only a very small fraction of their income outside the gates of the base, and then generally in a specialized segment of the business community that caters to their particular tastes. As David MacKinnon of the Office of Economic Adjustment, Office of the Secretary of Defense, wrote in the Summer 1991 edition of *Federal Planner's Network*,

Military bases are unique micro environments. Understanding how each one works is important to assess the impact of closure. Each will be different. However, generally speaking, *military families tend to be taxed elsewhere, spend a major portion of their salaries on the military base at the exchange, commissary, and recreational facilities. This spending does not enter the local or regional economy* (Emphasis added).

Similarly, a joint research project between the Departments of Defense and Commerce came to the conclusion that:

The [economic] impact caused by a military base, in large part, depends on the extent to which the local economy supplies the input requirements of the base, the amount that military personnel consume in the local economy, and the number of local civilians the base employs.⁴⁷

Further, because military employees can make purchases at the base facilities, all of their consumption expenditures do not take place in the local economy. Therefore it is necessary to reduce military consumption expenditures by the level of base sales to give an estimate of consumption expenditures in the local economy.⁴⁸

Nevertheless, the economic impact statements tend to imply that the full effect of the military expenditures benefits the people of Guam. To add to the overstatements in the analyses, the "multipliers" that are used in the respective reports are based upon the structure of the United States economy, and not on the economy of Guam. Because Guam must import virtually all of the consumer and capital goods used here, expenditures circulate (on average) far fewer times than in the States before the funds leave the island to pay for imported products; consequently, the multiplier in Guam is much smaller than that in, say, Omaha, Nebraska. Rather than cumulative income being on the order of three times as high as the initial expenditure (as the multiplier used by the Air Force under the direction of Strategic Air Command headquarters just south of Omaha several years ago), the multiplier in Guam ranges from roughly 1.2 to 1.8, depending on the

characteristics of the initial multiplier; the multiplier for the types of expenditures made from funds that actually are spent outside the gates of the various bases here would fall at the lower end of that range.

It is important to note that there is a distinction made here between "the economy of Guam" and the activities that take place within the military bases. For all intents and purposes, there is a separation of base activity from the civilian community, a separation which is only highlighted by the gates and the fences, but actually derives from the difference between residents of Guam and the transients stationed at the military facilities here. The only workable perspective on the economy holds that the well-being of military personnel living on the bases is separate and distinct from the civilian economy; the well-being of military personnel and their dependents is administered by the federal government, and does not depend upon the performance of the economy here in any way. In a sense, there is no economy on the bases at all, since the allocation of resources and the distribution of goods and services is exogenous to the system altogether. One bomber, one missile, one ship more or less has no direct impact upon the economic well-being of the civilian community, other than through the expenditures that are made in the civilian community based upon different force levels; consequently, these must be considered to be outside the economy. Only those activities of the military in Guam that affect the civilian community can rightfully be said to impact upon the "economy of Guam," and this effect (although strictly unmeasurable) is most probably around 10% of the total impact claimed in the military's economic impact studies, or (generously) about \$100 million per year.⁴⁹

One hundred million dollars in economic impact by the military, as compared to an overall economy that is estimated at well over \$2 billion annually; less than 5% of what could be considered to be the gross domestic product of Guam. In exchange for this, the federal government holds approximately the same amount of land as that which generates the remaining 95% under private civilian usage. There is a gross imbalance in this, a gross misallocation of resources; the well-being of the people of Guam is harmed by the scope as well as the pattern of federal land use on the island. As time goes on and the population grows, as available land becomes more scarce and, consequently, more expensive to civilians, as Guam's image as a tourist destination (as well as for other types of lucrative civilian economic activity) improves, the losses in income experienced by the civilian community escalate, and the opportunity cost of the federal presence borne by the civilian community rises accordingly. This constitutes a negligent failure on the part of government to meet its responsibility even to protect the economic interests of its subjects, let alone to enhance those interests. While the exercise of government authority is necessary for the stability of the economy, the faith of the civilian residents of Guam in that authority continues to deteriorate in the face of harmful federal land-use practices in Guam, risking a return to virtual anarchy.

G. The Impact of Changing Federal Land Use Patterns in Guam

Prior to World War II, Guam was predominantly an agricultural economy with a relatively low population. The federal government held only a moderate amount of land on the island, and

the land resource did not represent a significant constraint to civilian economic well-being. After the War, though, the federal government absorbed vast acreage of land in Guam for military purposes, and even intended to take Tumon, the core of Guam's economic development in modern times, as a recreation area exclusively for military personnel. Without the intervention of community leader Simon A. Sanchez and others, the economy of Guam would never have advanced to its present level of development.

As time, technology, and the world political condition have changed, though, so has the pattern of federal land use in Guam. Most of that change has resulted in declining federal land requirements, but not in declining land holdings. As a consequence, the federal government is left with unnecessarily high administrative and other costs in Guam; as peculiar as it may seem, it has been left to the local government of Guam to explain how those costs can be reduced by altering federal land use patterns. As an example of this, the Navy determined that it was economically unfeasible to relocate military aviation activities from Naval Air Station - Agaña in the center of Guam to Andersen Air Force Base at the northern end of the island, consolidating Navy and Air Force operations there. The government of Guam was able to prove that the move would pay for itself through cost savings within a reasonable period of time; otherwise, the cost to the federal government of its land use in Guam would have been higher than necessary.

A disturbing aspect of the decision-making process in moving NAS operations to Andersen AFB is that federal costs were the only effective consideration; the costs (either direct or "opportunity costs") to the local government and the private sector were unimportant. This belies an attitude on the part of the federal government relative to its activities in Guam that has surfaced time and again over the past 95 years: the interests of the government are all-important, and those of the civilian community are unimportant. This attitude directly contrasts with the most basic precepts of government, particularly in a democratic society. Rather than the government existing for the benefit of the people, the people (and their land) is viewed as existing for the benefit of the government; there is something very wrong with this view of the world, and any economic system which is based upon it is doomed to fail (witness the recent collapse of the Soviet Union as a secular example).

In the future, the situation will become even more unbalanced. As time goes on, the constraint of limitations on available land area will affect the civilian economy of Guam more and more; consequently, the costs of the land constraint to the civilian community will rise, while the cost to the federal government of the land that it holds in Guam will remain relatively constant (since there is no mechanism for compensating the people of Guam for the use of their land on an ongoing basis). More land will be needed for housing as the population grows; more land will be needed for schools, government services, retail establishments, hotels and recreation areas, for warehousing, manufacturing, transportation facilities, and all of the other things that are needed by and define a community. More land will be needed for all of the ways in which the workers within an economy earn their income, and more land will be needed for all of the ways in which households spend their income.

The demand for land will increase, pushing civilian land prices upward, while a substantial portion of Guam land is artificially withheld from the market by an administered governmental costing system that (as of today) disregards the market mechanism entirely in its resource-allocating decisions. There will be no more land in Guam; the island will not grow (at least not appreciably). The expansion of demand in the context of a fixed supply adds exclusively to price; it does not draw forth any additional quantity of anything that exists only in a finite amount. Thus, as the economy of Guam grows, increasing the demand for land, the cost to the civilian community of federal land holdings rises rapidly to unbearable levels. This is not to say that there are no other constraints to Guam's economic growth and development; other resources, though, are variable over time, while the available quantity of land is immutable. This is a fundamental reality facing a growing economy that has no practical frontier: when the land resource is limited, eventually only changes in technology allow economic progress. With a wider availability of land in Guam, though, both present levels of income and the rate of economic growth would be dramatically improved, and the upper limit on Guam's economic potential in the future would be both expanded and postponed.

As time goes on, there will be numerous opportunities for the federal government to reduce its land use in Guam. As technology advances, the need for redundant communications facilities will diminish, new weapons systems will supplant the need for remote logistics support and munitions storage, proximate air fields and surface craft facilities will become obsolete, and extravagant federal land holdings for "contingency" purposes will place an increasingly unnecessary burden on the public purse. Technological advancement, though, is not a discrete process; it is a continuum, and much of the technology necessary to reduce federal land holdings in Guam is already available and has been implemented. For example, the Navy no longer needs sensitive underwater microphones to "listen" for the engines of enemy submarines, since it can now "watch" their thermal signatures from orbiting satellites; the B-52 bombers that were long a staple of strategic preparedness are now obsolete, replaced by faster, longer-range bombers that do not require remote air fields; the Polaris submarines have been replaced by the Tridents, which can stay submerged for months on end; even fighter jets are losing their value in the military arsenal to Tomahawk missiles that can deliver destruction with greater accuracy at a lower cost.

The effect of these changes in technology is clearly reflected in the pull-back from U.S. bases in the Philippines. Of the tens of thousands of U.S. military personnel that were stationed at Clark Air Force Base and the Naval Station at Subic Bay (along with several other, smaller bases), only a small fraction are being relocated to Guam and other points in the Asian-Pacific theater; the rest are being re-deployed in Hawaii or the States, along with some being reassigned to posts that are not associated with this part of the world at all. A lesson that was learned in Guam from this pull-back is that the "contingency plans" that were used for decades to justify inordinate land holdings in Guam never actually existed: once it became clear that the Philippines would not renew the base agreements, the U.S. military had to scramble its planners to create the plans for re-deployment. The people of Guam, as well as those of countless other places, had been deceived for

decades into believing that the military actually had a firm idea of what their land would be used for in the event of unanticipated changes in the world power structure; these people are now left to question what other convenient terms have been used to withhold property and other economic opportunities in the name of "national security."

The world is also changing in terms of international tensions and the posture of "world powers." With the collapse of the Soviet Union, the justification for the U.S. to maintain a large standing army has all but disappeared. The popular term today is "downsizing" (although the Pentagon seems to prefer "right-sizing," apparently for budgetary reasons), but whatever moniker is used, the huge military force of the U.S. is being reduced, partly in recognition of its unnecessary costs, partly because its threatening stature risks a resurgence in countervailing power, and partly because there is simply no major enemy left to fight. Coupled with the burgeoning budget deficit, the United States can no longer afford the extravagance of a 2 million-plus standing army, and is forced to make the difficult decisions that it has been able to avoid for so long.

Not only is the holding of unused federal land for dubious "contingency" purposes costly to the federal government in budgetary terms; such land holdings are costly in terms of credibility, once the absence of actual contingency plans is discovered, but they are also costly in terms of faith in the United States' political ideology. Further, it is a poor exhibition of the capitalist spirit to withhold economic opportunity unnecessarily from the people who make up the nation. The actions of the federal government in Guam not only affect how the civilian population here perceives the value of the American political and economic system; they affect how the U.S. is viewed by many developing and newly-developed countries in the region. Their view of the U.S. is diminished when they witness a government that harms its own people economically, and as a result they are far more skeptical of the motives of the U.S. in their dealings with the nation. The narrow budgetary view of federal land use patterns grossly understates the total costs of that use, yet this is the view that has dominated land use decisions in recent years.

The question has recently turned, though, from, "what do we have, and how do we use it so that we can keep it?" to, "what do we need, and how do we obtain it at the lowest possible cost?" While this latter question will be answered in different ways in different places, the concern here is with land use in Guam. While it is certainly time for the federal government to carefully reconsider its land use patterns in Guam, it is also time to consider the impact of that use on the performance of the civilian economy here. Land in Guam is divided among the federal government, the local, civilian government, and private holdings, with roughly one-third share going to each. The land held by the local government generates very little economic income, but serves to directly support the income generated by the private sector; federal land generates even less income in Guam, although it can also be said to support privately-generated income, albeit to a lesser degree. Work performed on private land in Guam generates some \$2.1 billion in income annually, but (despite the annual economic impact statements of the Navy and the Air Force) work performed on military land provides something less than five percent as much to the civilian community.

Thus, the value of privately-held land in Guam in terms of civilian standards of living is roughly 20 times that of federally-held land, disregarding the fact that the higher-quality land held by the military should be producing more per square meter than the relatively inferior land held by private citizens. By keeping the generation of income and the formation of wealth in Guam below its potential, federal land-use patterns diminish the income and wealth of United States citizens in a U.S. jurisdiction under U.S. control; they diminish the wealth of the nation. By all appearances, this is simply because no one will decide how to use the land more efficiently.

The process of change in land use need not be sudden or disruptive to either the military or the civilian communities. In the short-term, those areas of land that are idle and not held for any specific planned and budgeted project should be released to civilian use without any long-term conditions being placed upon their use. Over the intermediate term, a plan for the eventual consolidation and minimization of federal land usage in Guam should be developed (jointly with the people of Guam), and those facilities that can be moved or are scheduled for replacement should be relocated to their respective positions within the area(s) to be retained as federal land (although placing military equipment and/or facilities on leased private land should also be considered). Over the long-term, all federal facilities in Guam should be relocated so as to minimize the federal government's need to own land in Guam. Throughout the process, land that becomes unused by the federal government should be returned to civilian control under the same conditions that apply to land that is already unused. This will allow the federal government to minimize its land-related costs in Guam, and will allow the civilian economy to perform to its greatest potential. It must be noted that this in no way necessarily precludes federal access to and use of Guam land and its attached facilities during times of war or other emergencies; on the contrary, not only do war powers generally override simple civilian economic considerations, but the improvements to the land provided by private development would undoubtedly surpass the utility to the military during these periods of land held exclusively by and for the military.

There are other considerations to be made in the return of land from the federal government to Guam. Among these are the changes that have affected the land since it was first taken nearly 50 years ago. In some ways, some of the land has been dramatically improved; the land being transferred with the closure of Naval Air Station - Agaña will serve a very valuable purpose for the people of Guam as a civilian airport, and it will serve in ways that it never could while still under the control of the Navy. At the same time, much of the value of other land has been destroyed by stripping its topsoil, using it for waste (even hazardous waste) disposal, or flattening it into an unbroken plane. It will be necessary to find some way of restoring land in this condition to a more reasonable economic value when it is returned to the people of Guam.

When options present themselves in the process of planning for the relocation of federal facilities to a consolidated profile, the plan should be biased in favor of prioritizing those actions which will result in the greatest economic return to the people of Guam. That land best suited to the overall development of the civilian economy should be released first, or at least have its facilities moved if those facilities adversely affect the development of adjacent civilian land. For

example, as land is released on the Naval Station side of Apra Harbor, it will be quite useful for the munitions wharf to be moved first; this would allow the civilian development of the harbor to the greatest degree possible. (Perhaps no munitions wharf is necessary at all, given today's airlift capacities and the consolidation of Air Force and Naval aviation activities at Andersen AFB.) As land in the interior is released, the Fena watershed should be released to civilian control, as should the ocean waters surrounding other released federal lands. As with the land itself, both fresh and salt water are extremely valuable resources of the people of Guam, and their access should not be unnecessarily denied; as with the land, their value is far greater to the nation as a whole when held within the civilian economy.

There are many civilian concerns and there will be several opinions expressed relating to the prospective loss of jobs in Guam as the result of declining military land use here. However, what is suggested here is not the employment of fewer people (or, more accurately, no fewer than would otherwise be the case in a regime of diminishing military activity in Guam), but merely the federal control of less land; existing activities can and should be consolidated in a much smaller acreage. It should be obvious that the release of land will create more jobs in Guam, on net, and that many of these jobs will be more appealing to the worker than any federal position could be. There may be a temporary decline in job opportunities as some federal activities are discontinued, but those activities are not dependent on land availability, they derive from the national budget and other factors in world politics. If federal land in Guam is released now, and particularly if more land is released as federal land use patterns are consolidated, there can be a massive expansion in civilian employment opportunities without any decline in the availability of existing employment (other than that which would have occurred anyway).

As federal land in Guam is returned to civilian ownership, that land will be put to economic use. This means that the existing facilities will be activated for profitable ventures that will generate income and wealth. As this wealth accumulates, further improvements will be made to the property, improvements that are not necessarily incompatible with contingent federal uses. For example, a floating dry dock can be used to service any vessel that will fit inside, whether it is a civilian or a military craft; a pier is a pier, but if the adjacent waters have to be dredged to a greater depth to meet the needs of civilian vessels or the gantry operators have true professional skills, this should not reduce its value for military purposes during a time of emergency (or even if changing world political conditions in the future require the legitimate exercise of eminent domain).

H. Conclusion

The magnitude of federal land holdings in Guam far surpasses the need of the federal government, and works as an economic detriment to federal and local governments alike, along with the civilian private sector. In addition to the fact that the federal budget can no longer sustain wasteful expenditures, the nation can no longer afford to waste its economic resources in this era of heightened international competition. It is time for a wholesale reassessment of federal land use in Guam, with an eye toward the overall economic value of property, not just the narrow budgetary

interests of a single agency within the federal government. There is the potential that the overall well-being of all parties involved will be enhanced through this exercise, and there is the strong possibility that the methods and constructs learned in Guam can be applied more generally throughout the federal land tenure system.

Endnotes (Part 1)

1. Over 1,000 acres of this property, encompassing the non-housing areas of the Naval Air Station, Agaña (Brewer Field) are slated for return to as a result of the recommendations of BRAC '93.
2. For example, until the BRAC 1993 decision, military planners appeared to have supported the indefinite maintenance of separate Air Force and Navy aviation installations although both were significantly underutilized. Likewise, both the Navy and the Air Force maintain separate munitions storage facilities (cumulatively occupying approximately 10,000 acres of property or over 20% of Guam's real estate) despite the fact that the Navy has traditionally serviced Air Force munitions requirements.
3. Bywater, Hector, Seapower in the Pacific: A Study of the American-Japanese Naval Problem (Houghton Muffin Co., N.Y.: 1921) This quote comes from Map No. 2 in the 1921 prospectus for war or peace in the Pacific between the United States and Japan. Shortly after this book was printed, the Five Power Naval Treaty of Washington Conference resulted in Guam's purported potential to limit Japanese imperial developments in the Pacific being curtailed by American agreement not to fortify the island.
4. Osgood, Robert, Ideals and Self-Interest in America's Foreign Affairs (University of Chicago Press, Chicago: 1953) p. 339.
5. President H.S. Truman to Admiral Forrestal and Forrestal to Truman, May 7, 1946. NR, Official Correspondences, May 1946, MARC.
6. U.S. Department of the Navy, "Guam:1958" (ComNavMar, 1958).
7. Defense Nuclear Agency Budget Justification, in Office of the Secretary of Defense, "Justification of Estimates for Fiscal Year 1982." (Jan. 1981).
8. *Statement on the Pacific Area before the Senate Armed Services Committee*, Feb. 23, 1984 p.14
9. Arkin, W.M. and Fieldhouse, R.W., Nuclear Battlefields, (Ballinger Pub.Co., Cambridge, MA: 1985) p. 123.
10. Ibid. p. 147. At p. 224, Guam was identified as having 150 nuclear bombs at AAFB, with 60 SRAM (short range attack missiles -- nuclear) proposed to be delivered in 1986. Naval Magazine's nuclear arsenal was identified as being a compliment of 45 artillery projectiles, 75 bombs and 98 nuclear depth bombs.
11. Since October 1988, the B-52's at AAFB were conventionally configured. In November 1989 a House-Senate Appropriations Bill Conference slashed \$47 million from the B-52 program resulting in a move to close one of three B-52 bases. The choices were between the squadrons in Guam, or those in Barksdale AFB (Louisiana) or Loring AFB (Maine). Senators J.B. Johnston (D-LA) and W. Cohen (R-ME) intervened to protect the squadrons in their states. "B-52's Out of Guam" in *Pacific Research* (Vol 3. No. 1, February 1990).

12. See various studies: Henry D., Crane, K. and Webb., *The Philippine Bases: Background for Negotiations* (RAND Corporation, for the Under Secretary of Defense for Policy and the Department of State: August 1989); Bowen, A., *Philippine Bases: U.S. Redeployment Options* (Congressional Research Service 86-44F, February, 1986); Gannon, W., *Alternative Sites for U.S. Philippine Bases*, (CRS, 1977)

13 . U.S. Navy, *Final Environmental Impact Statement for Proposed Facilities Development and Relocation of Navy Activities to the Territory of Guam from the Republic of the Philippines* (Naval Facilities Engineering Command, Pacific Division: July 1993) p. ES-1.

14 . See Chapter 6, A.1.a.

15 . U.S. Navy, *Final EIS*, op.cit. p. ES-1

16 . See U.S. Department of Defense, *A Strategic Framework for the Asian Pacific Rim: Report to Congress* (1992)

17 . Ibid.

18 . Ibid p.4

19 . Ibid, p.13

20 . The nature of these projected cuts is acknowledged by the U.S. Navy, (Conversation of Mr. Mike Cruz, Acting Director Guam Bureau of Planning with Commander Jim Poole, USN, NAS Agaña Base Transition Coordinator; January 10, 1994), although documentation outlining these issues were not available at that time. The ES3-A and P-3 Squadrons were originally to be consolidated at AAFB under the decision of BRAC 93, but in early 1994 the Navy decided to move the squadrons off-island. The Department of Defense formalized the 1994 actions with a recommendation to BRAC 95 that the squadrons be assigned to "other naval or DoD air squadrons in the Continental United States and Hawaii." (Department of Defense Base Closure and Realignment Report, March 1995 p.5-98). See Chapter __ for a detailed discussion of the situation surrounding the movement of the squadrons.

21 . The Holland's decommissioning was acknowledged during a briefing at COMNAVMAR in March of 1994 (for Guam's Governor, Lt. Governor, Legislative Speaker and Congressional delegate) on the Navy's Guam Land Use Plan 1994. (GLUP 94) The Holland's decommissioning was not a proffered by COMNAVMAR but was acknowledged by RADM Kristensen in response to a direct question. The "planned" replacement is the USS McKee presently homeported in San Deigo, CA.

22 . The USS San Jose, Niagara Falls, and White Plains were homeported in Guam between 1981-1984. The USS Haleakala was homeported in Guam in 1986.

23 . Arkin and Fieldhouse, *op.cit.*, p. 118.

24 . See "Seaside Sonata: Interview with Vice Admiral Jerry O. Tuttle" in *SeaPower Magazine*, (August 1993) pp. 9-13.

25 . Numerous books and articles have been written on this subject. For a U.S. perspective see, Armstrong, J., "Strategic Underpinnings of the Legal Regime of Free Association: The Negotiations for the Future Political Status of Micronesia", *The Brooklyn Journal of International Law*, 7(2). 19981, pp.179-223. For a perspective less sympathetic to the U.S. view see, Smith, G., Micronesia: Decolonization and US Military Interests in the Trust Territories of the Pacific Islands, (Australian National University, Canberra: 1991)

26. Kiste, R.C., "New Political Statuses in American Micronesia", Contemporary Pacific Societies (Prentice Hall, Englewood Cliffs: 1992), p.78
27. Mahan wrote in the preface of The Influence of Seapower Upon History: 1660-1783
"There is not, however, within the knowledge of the author any work that professes the particular object here sought; namely, an estimate of seapower upon the course of history and the prosperity of nations."
28. Crapol E.P. and Schonberger H, "The Shift to Global Expansion: 1865-1900", From Colony to Empire, (Wiley, New York: 1972), pp.135-202 and Vinacke, H.M., History of the Far East in Modern Times, (Crofts, New York: 1928) p.155
29. See Stament of Admiral Richard C. Macke, U.S. Navy, Commander in Chied United States Pacific Command, Before the House National security Committee, Posture Hearing, February 28, 1995. Mackes entire testimony focuses on "Cooperative Engagement."
30. Webb, op.cit., pp. 66-76 and pp. 88-93.
31. See Baywater, H., Seapower in the Pacific : A Study of the American-Japanese Naval Problem (Houghton Mifflin Co, Boston: 1921) Chapter IX, "Strategy in the Pacific."
32. Personal interview with former Captain (USN) Richard Wettenbach, Homeporting Officer, CINCPACFLT Staff, 1979 -1982. The review of Guam (along with several other Pacific ports -- Perth, Australia, Singapore, and Subic) determined these deficiencies.
33. Courter Tour of Andersen AFB. An Air Force officer noted to Mr. Courter that AAFB, even when a SAC base, was not funded for base administrative and personnel support operations like similar bases were in CONUS.
34. Hayes, et. al., op.cit., p.163
35. Appraisal Reports required by U.S. Public Law 79-224 are available in the U.S. Navy Archives. Copies on file with the Administrative Director, Chamorro Land Trust (Mr. Joe Borja).
36. For a sense of the impact of these factors from a first-person perspective see, Statement of B.J. Bordallo on H.R. 5540, 92nd Congress, 2nd Session, to the House Subcommittee on Territorial and Insular Affairs (September 14, 1972). Part of Bordallo's testimony provides an insight into the situation Chamorros found themselves in at the time of the land-takings.

"Some of you are perhaps wondering why these things were not raised at the time of the takings? Why didn't the people of Guam shout and scream bloody murder? A combination of factors led to many people accepting the terms of the taking.

We were in the hands of the enemy for over 30 months. From December 1941 to July 1944. permit me to relate my own experience during the japanese occupation...One night, in 1942, in the middle of the night, the Japanese took me from my home and marched me to jail. Unknown to me at the time, they also took my wife and my 13 children, the youngest being about 7 days old and marched them to jail. My family was released the next day. My second oldest son then about 12 years old received several blows from a pipe to his shins. They tried to have him admit that I was hiding George Tweed.

I was detained for six days and beaten within an inch of my life. Upon being released, I was given 20 days to find Tweed of forfeit my life. Needless to say, I did not find Tweed and they changed their minds

about my life....I had other less painful but just as harrowing experiences throughout the occupation. Other have suffered a worse fate in the hands of the enemy.

Words cannot therefore describe our joy, happiness and gratitude upon the return of the United States. This deep sense of gratitude still pervaded us during the land takings.

Another factor which influenced us as well as the military is the complete absence of those institutions that protect the rights of individuals. The island was strictly and absolutely under the control of the Navy. Our judges were appointed by the Navy and served at the pleasure of the Navy. We did not have a jury system. We did not have sufficient attorneys.

My family's property was condemned. I was offered what they said the land was worth. They never informed me that I could accept the money and still protest the value fixed by them. I was told that if I accepted the value placed, then my war claims, which was an entirely different matter and overly delayed, would be paid promptly."

37. As put by Admiral W.H. Smith, Chief Planning Officer, U.S.N. in Senate Hearings on S. 1362 (Authorizing the Navy to transfer lands for resettlement purposes) Oct. 18, 1945:

"I would say practically the entire population is or was self-supporting before the war. Their economies have been completely deranged by our occupation and by the Japanese occupation."

Also see Chapters 4 and 5.

38. The period 1944-46 is characterized as "trespassory occupancy," condemnations began in 1946 and the period of fee takings was concentrated between 1950 and 1953. After 1953, most of the takings were for easements (Joseph Borja).

39. See Statement of B.J. Bordallo, op.cit., (September 14, 1972). Bordallo summarized the Chamorro experience, and pointed directly to the excessive manner of military land-takings.

"The lands condemned showed that the military totally disregarded the interest, feelings and welfare of the people and grossly exaggerated the defense needs at the time...The passage of time has shown that the military in its condemnation policy completely disregarded the future needs of the civilian community and grossly exaggerated its own needs."

40. See Babbage, Ross, "The future of U.S. maritime security and the Pacific military balance" in Superpower Maritime Strategies in the Pacific (Routledge, Chapman and Hall, N.Y.: 1990)

41. See Chapter 5.

42. See p. 22, 23 and 27 of "Repressive Socio-Economic Conditions in Guam Created by the Naval Government (1898-1950)" Submitted in the Guam Land Claims Cases, Master File No, 77-00072 MF, on January 26, 1986, District Court of Guam.

43. The military plans to utilize certain types of properties began even before Guam was reoccupied by U.S. troops in mid-1944. As noted by the Deputy Chief for Naval Operations (Vice Admiral Forrest Sherman) in testimony on S. 1139, 79th Congress, 2nd Session (October 18, 1945):

"In late 1943 and early 1944 we made our plans for the recapture and development of Guam, and these plans made the maximum use of the natural facilities of the island, of the harbor, of existing roads, and of the land which was best suited to most readily be adapted for construction projects which we had to press at maximum speed after the capture of the islands of the group. In many cases the best sites for airfields were located on land which because it was well drained, reasonably level, and accessible had been sites for agriculture and for the life of the natives before we took the island."

In 1945 during a Senate Naval Affairs Committee on S.1139 (June 26, 1945) Senator Tydings noted:

"I do not know of any finer wards that we have got in the world than in Guam. They are absolutely loyal. They have suffered like they have suffered everywhere. Their men, women and children have been killed in the course of the fighting. We have taken over their best lands in many cases for Army or Navy installations, primarily naval installations. (p. 32)

44 . Such was the case made by the Air Force for the excess operational capacity at AAFB during discussions about the movement of aviation operations from NAS Agaña to AAFB. While NAS Agaña and AAFB maintained equivalent military populations, and NAS's GAO determined operational, maintenance, supply, medical, administrative and (non-housing) community facilities were only eight percent (8%) of AAFB's assets, the Air Force maintained that full integration of NAS operations was not possible given "contingency requirements." (Personal conversation of AF officials to Mr. James Courter (BRAC Chairman) during a visit to the base 10/20/93: witnessed by Mr. Vince Leon Guerrero and Mr. Leland Bettis). See *Na'na'lo I Lugat Tiyan (The Return of Tiyan): A Call for the Consolidation of Naval Air Station Agana with Andersen Air Force Base*(March 1993) pp.32-3

45 . The various "Rainbow Plans" prior to WWI (and subsequently developed up to WWII) contemplated war with continental neighbors of the U.S. such as Canada (and the possible involvement of Great Britain in such a conflict).

46 . Webb, James H., Micronesia and U.S. Pacific Strategy, (Praeger Publishers, N.Y.; 1973) p. 71 and 75-6. Webb writes extensively about the need for the U.S. military to be realistic about its land requirements in Guam and the necessity of entering into a "true partnership" with the people of Guam which clearly defines U.S. interests.

47 . Cartwright and Beemiller, "The Regional Impact of Military Base Spending," November 1980, p. 1.

48 . Cartwright and Beemiller, p. 12.

49 . Barakat & Chamberlin, "Analysis of the Impact of the U.S. Military Presence on Guam," (Draft; 1992), PP. 22-28.

PART 2. RECOMMENDATIONS & THE INSTALLATIONS

A. DoD Recommended Closures and Realignments

1. Overview of DOD Recommendations as Presented

The Department of Defense concurred in all the recommendations for the closure and/or realignment of facilities in Guam forwarded to them by the Department of the Navy. Under "Major Base Closures," the recommendations listed the Ship Repair Facility, Guam. Naval Activities, Guam, appeared as a "Major Base Realignment," and Fleet and Industrial Supply Center, Guam, appeared as a "Smaller Base or Activity Closures, Realignments, Disestablishments or Relocations." Finally, the Department recommended a "Redirect" of the Naval Aviation assets of the former NAS Agana to bases inside the Continental U.S. under "Changes to Previously Approved BRAC Recommendations." The specific recommendations and justifications were as follows:

Ship Repair Facility, Guam

The Navy/DOD recommendation for this facility was to "Close the Naval Ship Repair Facility (SRF), Guam, except transfer appropriate assets, including the piers, the floating drydock, its typhoon basin anchorage, the recompression chamber, and the floating crane, to Naval Activities, Guam."

The report justified this closure on the basis that, despite "substantial reduction in depot maintenance capability" in prior BRAC rounds, additional excess capacity remained. The key part of the recommendation said that "While operational and forward basing considerations require access to Guam, a fully functional ship repair facility is not required." The DON desired the retention of the waterfront facilities to allow them the "ability to meet voyage repair and emergent requirements that may arise in the Western Pacific." The recommendation did not describe the specific circumstances that underlay these requirements.

The return on investment estimated a one-time cost to implement of **\$8.4 million**, a net of all costs and savings over the period as a savings of **\$171.9 million**, an annual recurring savings after implementation of **\$37.8 million**, an **immediate return on investment**, and a net present value over 20 years of **\$529 million of savings**.

The economic impact reported by DOD, assuming no economic recovery, is 1,321 jobs (663 direct and 658 indirect) over the 1996-to-2001 period, or 2.0% of the economic area employment for SRF alone. The report also includes a comment that the closure of SRF "will have a generally positive impact on the environment because a significant industrial operation will be closed, including the removal of stationary emission sources associated with this operation. This, of course, ignores any potential industrial use by the Government and citizens of Guam.

Naval Activities, Guam

The DOD recommendation for the harbor area in Guam was "Realign Naval Activities, Guam. Relocate all ammunition vessels and associated personnel and support to Naval Magazine, Lualualei, Hawaii, Relocate all other combat logistics force ships and associated personnel and support to Naval Station, Pearl Harbor, Hawaii. Relocate Military Sealift Command personnel and Diego Garcia support functions to Naval Station, Pearl Harbor, Hawaii. Disestablish the Naval Pacific Meteorology and Oceanographic Center-WESTPAC, except for the Joint Typhoon Warning Center, which relocates to the Naval Pacific Meteorology and Oceanographic Center, Pearl Harbor, Hawaii. Disestablish the Afloat Training Group-WESTPAC. All other Department of Defense activities that are presently on Guam may remain either as a tenant of Naval Activities, Guam or other appropriate naval activity. Retain waterfront assets for support, mobilization, and contingencies and to support the afloat tender.

This recommendation justifies this realignment by stating that the Navy force structure will sustain another 10% reduction by the year 2001 and they must eliminate additional excess capacity. The Navy wanted to retain only that infrastructure to support the future force "without impeding operational flexibility for deployment of that force." They state that "shifting deployment patterns in the Pacific" and thus reduce the need for a "fully functional naval base" in Guam. "Operational and forward basing considerations," however, "require access to Guam." They go on to say that since there are no combatant ships homeported in Guam, there is essentially no day-to-day need for the base, as long as they retain "access."

The return on investment estimated there would be a one-time cost to implement of **\$93.1 million**, a net of all costs and savings over the period as a savings of **\$66.3 million**, an annual recurring savings after implementation of **\$42.5 million**, an **return on investment expected in one year**, and a net present value over 20 years of **\$474.3 million of savings**.

Fleet and Industrial Supply Center, Guam

The DOD report for BRAC 95 recommends "Disestablishment of the Fleet and Industrial Supply Center, Guam (FISC Guam). It states that FISC Guam is a "follower" activity, and in view of the other closures and realignments on Guam, the FISC can be disestablished and its activities assumed by other FISCs outside of Guam or by activities that remain in Guam.

The estimated return on investment estimated there would be a one-time cost to implement of **\$18.4 million**, a net of all costs and savings over the period as a savings of **\$143 million**, an annual recurring savings after implementation of **\$31.1 million**, an **immediate return on investment**, and a net present value over 20 years of **\$437.3 million of savings**.

The economic impact reported by DOD, assuming no economic recovery, is 580 jobs (413 direct and 167 indirect) over the 1996-to-2001 period, or 0.9% of the economic area employment for FISC alone. The report also includes a comment that a significant factor in the closure of FISC "further contributing to an overall positive impact on the environment in Guam is the shutdown of fueling facilities at Guam, especially Sasa Valley and Tenjo." This, of course,

ignores any potential reuse by the Government and citizens of Guam and the need to use the facility by the Federal Government or some other entity to continue a ready supply of fuel to Andersen AFB, a facility for which there is no closure recommendation by Air Force.

Naval Air Station, Agana, Guam (A Redirect)

During BRAC 93 the Government of Guam argued successfully that the Navy should be made to consolidate their air operations from the Naval Air Station up to underused Andersen Air Force Base. As a consequence, the aircraft from VQ-1 (EP-3 aircraft), VQ-3 (ES-3 aircraft), and HC-5 (CH-47 helicopters) were to move from the NAS to the AFB, along with their officers and enlisted, and the housing was to be continued in operation to support Navy married and bachelor officers and enlisted men island-wide.

Rather than consolidate with the Air Force, an operation which both opposed and neither pursued with any conviction, the Navy violated the spirit and the letter of the BRAC 93 recommendation and transferred "temporarily" VQ-1 to NAS Whidbey Island, WA, and VQ-3 to NAS North Island, CA. To escape further embarrassment, the Navy is asking to codify this "fact of life" by seeking a redirect for the two VQ squadrons.

The only portion of this recommendation that tracks with the other recommendations for SRF, FISC, and Naval Activities is the request to move HC-5 to Hawaii. Without the MSC ships homeported in Guam, there is no apparent need to homebase the helicopters in Guam.

The specific recommendation asks to "Change the receiving site specified by the 1993 Commission Report for 'the aircraft, personnel, and associated equipment' from the closing Naval Air Station, Agana, Guam from 'Andersen AFB, Guam' to 'other naval or DoD air stations in the Continental United States and Hawaii.'"

The justification for the change was listed as the movement of the MSC ships and other "operational synergies" desired by the Fleet Commander-in-Chief "for his surveillance aircraft, which results in movement away from Guam." The recommendation goes on to discuss the need to collocate similar aircraft and avoid constructing new facilities at Andersen.

The estimated return on investment for the redirect estimated there would be a one-time cost to implement of **\$43.8 million**, a net of all costs and savings over the period as a savings of **\$213.8 million**, an annual recurring savings after implementation of **\$21.7 million**, an **immediate return on investment**, and a net present value over 20 years of **\$418 million of savings**.

The economic impact reported by DOD, assuming no economic recovery, is 1,641 jobs (1,272 direct and 369 indirect) over the 1996-to-2001 period, or 2.5% of the economic area employment. The report also includes a comment that the redirect will have a negative environmental effect at NAS North Island.

Summary of Recommendations

The total impact of the DOD recommendations to close, realign or redirect the SRF, the FISC, Naval Activities, and aviation assets in Guam were as follows (all costs in millions):

•One-time Cost to Implement:	\$163.7
•Net of all Costs and Savings (Savings):	\$595.0
•Annual Recurring Savings:	\$133.1
•Net Present Value of the Savings over 20 years:	\$1,858.6
•Maximum potential reductions in jobs:	\$6,901.0
•Maximum potential reductions in direct jobs:	\$4,769.0
•Maximum potential reductions in indirect jobs:	\$2,132.0
•Percent Reduction of the Economic Area Employment:	10.4%

2. Shortcomings of DoD's Recommendations

The DoD recommendations appear short-sighted with respect to military readiness and future military use for contingencies. The recommendations do not seem to recognize the strategic value of Guam; are inconsistent with other DoD recommendations; complicate the operation of supply ships and do not take political considerations into account. Because of these shortcomings, military commanders in the Pacific have expressed their concern about the results of a BRAC decision which validated the DoD recommendations.

a. Strategic Value of Guam

Guam's geographic position in the Western Pacific on the other side of the international dateline is evidence of its strategic value. Guam is only a three hour flight from Japan, four hours from North Korea, and three hours from the South China Sea. By sea, Guam is ten days from Hawaii and four days from the Korean Peninsula. This close proximity to Asia and distance from the nearest U.S. soil is the reason why Guam has played a vital role in conflicts involving the United States from World War II to Operation Desert Storm.

Military commanders in the Pacific recognize the strategic value of Guam. This is apparent in the Data Call statements of the COMSUBPAC N46 and other notes which indicate that the value of Guam is something less than that described by force operators. The Commander of submarines in the Pacific noted that Guam is:

...the only forward deployed U.S. Naval activity on U.S. soil. It is of utmost strategic value to have a forward deployed base on U.S. territory where we are not subject to the dramatic effects of changes in a foreign government's political climate...Additionally,...Guam is of a tremendous benefit because of our capability and flexibility to do both nuclear and non-nuclear complex maintenance there.¹

DoD's decision to maintain the tender on Guam is a perfect example of the value of Guam. The Scenario Development Data Calls note that a tender would need to remain in Guam between FY96 and FY2002. The Navy is relying on the tender on Guam because there is no such facility available in the Western Pacific or Asia. For political reasons, Japan and other nations in Asia do not accommodate American nuclear-powered submarines. In this case, DoD recognizes that they cannot rely on foreign installations to accommodate their needs, but fail to realize that these same political uncertainties is the reason why Guam is so strategically important.

Moreover, military commanders at Pacific Command and Pacific Fleet have expressed their concern about the effect of the recommendations on their ability to forward deploy in the Western Pacific and Asia. Admiral Zlatopor, Commander in Chief PACFLT, has stated on the record that the removal of the MSC ships from Guam will complicate his ability to deploy his forces in the Pacific. If the MSC ships are moved to Hawaii, then they would have to be placed on permanent cruises. In the event of a crisis, the location of the MSC ships would have to be coordinated to meet up with the battle ships.

As reported by "Inside the Pentagon" on March 2, 1995, Admiral Macke, Commander in Chief Pacific Command, has also objected to the recommendations on two counts. First, he did not want to give U.S. allies in the Pacific the impression that the United States is pulling back, despite repeated U.S. statements that the nation will retain its forward presence in the region. Second, and more seriously, Macke has raised objections on a warfighting basis.

Admiral Macke's objections to the recommendation are based primarily on how the DoD recommendations will affect his ability to respond to the DoD policy outlined in the Bottom Up Review (BUR), which requires that DoD have the ability to respond to two nearly simultaneous regional conflicts about the size of Operation Desert Storm. During Desert Storm, Guam served as the major staging ground for materials transported to the Persian Gulf. Under the BUR scenario, if a conflict erupted in the Persian Gulf and North Korea, at nearly the same time, DoD would need the capability to flexibly respond. This response would mean that DoD would be required to transport thousands of tons of materials across the Pacific.

The DoD BRAC recommendation does not address how DoD would be able to respond to two major nearly simultaneous regional conflicts without the same capability that Guam provided during the last major conflict. The strategy outlined in the BUR demonstrates why Guam would be an essential strategic staging ground to respond to these two nearly simultaneous conflicts and why Admirals Macke and Zlatopor's have expressed their concerns about the DoD's recommendations.

b. The proposal to move the Military Sealift Command (MSC) vessels to Hawaii will create an additional strain on the supply "pipeline" and create new inefficiencies in requisitioning needed supplies for the deployed and afloat 7th Fleet.

The movement of the MSC vessels and FISC, Guam activities to Hawaii would put a new and "undetermined" physical and fiscal strain on the 7th Fleet's replenishment activities. The fundamental issue is that the movement of vessels to Hawaii will add an additional twenty (20) days (round-trip) transit time to each deployment cycle in the Western Pacific and Indian Ocean of the T-AFS and T-AE vessels that currently operate out of Guam. While it is not impossible to conduct such activities out of Hawaii (at a greater operational costs for the MSC vessels), we have identified the military value analysis (and matrix) as biasing Guam's strategic value.

While excess capacity may exist system-wide in relation to existing and the future force structure,² the exercise of full-scale contingency operations in Guam requires a certain "Guam capacity" to take advantage of the island's unique location. From discussions with uniformed personnel, from Admirals to Seamen, the strategic advantages Guam's unique location are undercut by the Pentagon's recommendation.

The Pentagon's analysis matrix does not identify this unique capacity and in fact uses evaluation standards which negatively bias the island's advantages. The "Guam" capacity/requirement, then, is not given sufficient weight in the military value weighing matrix. For example, all FISC activities recorded that they provided a "strategic or geographical advantage" and thus all were weighted the same. For mariners afloat who are serviced by this activity the "strategic and geographic advantages" offered by San Diego, Oakland, Puget, Pearl Harbor and Guam are different -- particularly Guam because of its more forward location. Additionally, over 10% of the evaluation of FISC's Operational Infrastructure was rated on whether or not the FISC was located with a "fleet concentration." While the "evaluators" felt that a FISC being located with a fleet concentration was worth over 10% of the Operational Infrastructure military value, they created a bias against Guam's unique logistical support capacity to be AHEAD OF THE FLEET. A CONUS-based bias in the military value matrix serves to diminish Guam's relative usefulness in other ways; for example, matrix questions such as "Is the FISC serviced by railroad" and whether the "FISC (is) within 25 miles of all transportation mode" clearly are impossible (and unexpected) in an island.

Simply put, the military value analysis and matrix can in no way compare a largely CONUS-based bias with the unique environment of secure forward positioning. It is not surprising then that Guam activities, such as FISC, ranked poorly in terms of military value. The domino effect began once the "matrix" determined that FISC Guam was not highly rated, and that cost-savings could occur by cutting military and civilian personnel in Guam while absorbing the mission at other places with "excess capacity" (e.g. Pearl Harbor and Yokusaka). If money could be saved at FISC, Guam, then the vessels which FISC Guam supports would also move. Even though the movement of the MSC vessels would accrue new recurring costs for operations -- for both the vessels and their helicopter re-supply support -- if the ships moved, more "cost-savings" could accrue by closing the "excess capacity" on a depot maintenance facility.

Notwithstanding our view that the military value matrix maintains a CONUS-bias which underestimates Guam's value, it must be also be noted that while there may be greater stress on the supply line and vessel rotation, the combat logistics mission in the PACFLT Area of Responsibility (AoR) could be carried out from Hawaii, Japan or even the U.S. West Coast. Moreover, given the "flexibility doctrine" which drives the U.S. post-Cold War military posture, the forward location of a FISC may be less important as U.S. AFS's operating in the PACFLT AoR frequently load supplies (for underway replenishment to the battle groups) at Jebel Ali and Singapore -- areas much closer to the Indian Ocean and Gulf operations than is Guam.

In carrying out this mission from a deployment base further from afloat activities, however, either the area command "strings" will have to be relaxed for battle groups or additional stores vessels will be required in the mix of CLF support ships. We have no information which indicates that changes in the operational commands of CINCPAC and CINCCENT are planned to accommodate the movement of MSC vessels to Hawaii. We anticipate that additional stores support capability (i.e. more vessel support) would be required to resolve the tempo and retention difficulties created by the movement of the MSC vessels to Hawaii.

c. DoD Recommendations Are Inconsistent With Other DoD Decisions

While the Pentagon's recommendations are perplexing with respect to the future military value of Guam, they are also perplexing in that they are inconsistent with other DoD recommendations. While we are not privy to all information with respect to U.S. plans which are increasingly focused on "interoperability"³ we do note inconsistency of the recommendations with other proposals proffered by the Department of Defense.

An inconsistency which has emerged since the DoD recommendations to the BRAC is clear in the recent decision to establish a regional depot level maintenance facility in Japan. Under this decision, Japan and Hawaii serve as the two regional maintenance centers of the Pacific.

While both Japan and Pearl Harbor have higher levels of depot maintenance capacity than Guam, the decision to "set-up" in Japan is inconsistent with the Pentagon's decision not to move FISC, Guam to Yokusaka (Alternative 1), and instead to Hawaii (Alternative 2). In the two scenarios for moving FISC, Guam into areas with excess capacity, the move to Yokusaka would have resulted in 40% more 20-year (NPV) cost-savings than the move to Hawaii.⁴ Despite the higher cost the move to Pearl Harbor (compared to Yokusaka) and Yokusaka's more forward location, the BSEC decided against Yokusaka.

In reviewing Alt1 the BSEC discussed the possibility of a future rollback from Japan, and questioned the wisdom of moving additional assets there. BSEC deliberations 11.23.94 RP-0455-F8)

Because rollback from Japan is a major strategic concern the BSEC saw little point in putting more assets in Japan. (BSEC deliberations, 12.19.94 RP-0514-F10)

It is perplexing to examine the issue of military value vis-à-vis these disparate decisions. The Pentagon, on one hand, decided not to base its warehousing and operational structure in Japan because of the instability in future basing considerations. Yet, in this political environment, the Pentagon, on the other hand, decided to place its Pacific area forward depot maintenance capability in Japan; an activity which will likely include nuclear maintenance in the near future.

- d. Political considerations are not incorporated in DoD's recommendations. DoD would be forced to rely on foreign bases which are less reliable.**

The political aspects of the Pentagon's recommendation are ignored. These "values" and "costs" could not have been evaluated by the computer driven model as they involve complex interpersonal and dynamic group responses to the recommendation. These sensitive values have been ignored in the recommendations, which, if implemented, would be further disquieted.

Recent events prove that bases in Asia are less reliable than those on Guam. In the fall of 1994, when CINCPAC proposed to station propositioned ships in Southeast Asia, our "allies" rejected his request because of political considerations. Thailand, Indonesia and Malaysia all formally refused to go along with the DoD plan for American military supply ships to be based in South-East Asia. They rejected the proposal after expressing concerns that it would result in a possible religious and political backlash, that the pre-positioning plan might raise suspicions in China and complicate relations with nearly nations such as Vietnam, Cambodia and Burma. Consequently, CINCPAC was forced to fall back on more reliable bases.

Similarly, recent statements by Okinawan Governor Masahide Ota raise concerns about the U.S. reliance on military installations on foreign soil. The mission of U.S. forces in Okinawa is to provide a forward presence in the Western Pacific, with the air base at Kadena being the largest American air base in the Far East. Kadena's purpose in a contingency situation would be to give the United States air superiority in the Western Pacific. Gov. Ota has argued that the role of U.S. forces in Okinawa could be fulfilled as well on Guam as on Okinawa and that the forces should be withdrawn. Japan is coming under increased pressure from the Governor of Okinawa to force U.S. forces out of the island, and these pressures are likely to increase as a new post Cold War political, economic and military environment emerges.

As DoD approaches the next century, these political considerations demonstrate why the U.S. cannot fully rely on bases in Asia, even those on the soil of our allies. From an operational point of view, military commanders cannot pursue long-term planning if they are uncertain of their ability to rely on bases in Asia. Questions that now abound about the U.S. military's long-term presence in Asia are not considerations on Guam. Guam has already shown its loyalty and reliability over the past fifty years and it is the only piece of American soil in the Western Pacific that the U.S. would fall back on if it loses access to bases in Asia. However, Guam's reliability cannot be calculated in a computer model, but still needs to be considered by the commission.

3. The Economic Impact of the Recommendations on Guam

The Pentagon's proposal would result in major cuts in employment, the island's salary base, and government revenues in Guam. Additionally, in calling for the BRAC to allow the military to retain control of affected land and assets, the prospects for economic revitalization are not guaranteed. Lease arrangements by the military to local communities have proven to be poor vehicles for economic revitalization given the onerous conditions on reuse under such arrangements and the military's inability to appreciate private sector dynamics.

Guam is an insular rural economy over 3,800 miles from the nearest U.S. metropolitan area. Any federal decision that directly affects a significant portion of the island's U.S. citizen work-force will have a similarly significant effect on indirect employment, Guam's overall salary base, personal income and government revenues to support the general population.

The impact of the elimination of 4,796 work-force positions under the DoD proposal (3,487 civilian jobs and 1,309 combined officer and enlisted military positions) would occur rapidly. Of the direct jobs lost, 63% of the civilian positions and 69% of the military positions would be lost within two (2) years, with the remaining loss of direct jobs occurring within the following two (2) years. This near-immediate loss of employment positions, without a workable period of transition, merely compounds the economic damage that Guam will suffer and further complicates our prospects for recovery.

In addition to the direct employment effects, there will be indirect job losses associated with the net loss of income flowing into Guam and expenditures in the civilian community derive from DoD payrolls. Based upon employment multipliers provided by the U.S. Department of Commerce (and received via the U.S. Navy) and an estimated employment multiplier applied to Non-Appropriated Fund positions that will be lost to Guam, approximately 2,011 additional, indirect jobs are expected to be lost as a result of the DoD proposal.

In 1994, the government of Guam commissioned the development of an economic forecasting model by KPMG's Washington-based Policy Economics Group. A computer simulation of the impacts of the DoD proposal under this model indicates that the level of "Gross Island Product" (Guam's Gross Domestic Product) will exhibit a cumulative reduction of \$942 million through 1999 (with a present value estimated at \$789 million); extension beyond the capacity of the five-year model indicates a reduction in Guam's GIP at a net present value of \$4.2 to \$4.5 billion (depending upon which discount factor is used) during the remainder of the twenty-year evaluation period used in the COBRA model. Thus, the total present value of the reduction in Guam's GIP over the next twenty years under the DoD proposal is estimated to be approximately \$5.1 billion, if it is assumed that there is no replacement of the jobs or income lost through the realignment and closure process.

Historically, the government of Guam has collected revenues at a rate of approximately one-sixth of GIP, so the losses to the government under the DoD proposal would be substantial at a time when revenues have already been reduced due to a series of natural disasters in 1992 and 1993, along with a recession in the island's tourism industry due to Japan's slow recovery from the recent world-wide downturn. These losses should approximate \$9 million in 1996, \$34 million in 1997, \$54 million in 1998 and \$61 million in 1999, severely limiting the government's capacity to

provide the level of public services and infrastructure improvements necessary during this stage of Guam's economic development; with the prospective increased level of unemployment and the associated increased public costs, the government's available finances would be even further strained.

An "Assessment of Economic Impact to Guam of Recommendations contained in a Report by the Department of Defense (DOD) to the Base Realignment and Closure Commission in March, 1995" is submitted as an attachment to this report. This document is an overview of the effect of the Pentagon's proposal on direct employment, indirect employment, Guam's salary base and Guam's GIP prepared by the Special Economic Service of the Guam Finance Commission. These impacts are projected through the year 1999 utilizing the economic forecasting model developed for Guam in 1994 by KPMG's Washington-based Policy Economics Group.

The Department of Defense's recommendation for Guam is exceptionally vague in respect to the issue of how assets from the closed facilities will be disposed of. It states that DoD will retain "appropriate assets" at Naval Activities. The actual wording of the recommendation seems to demonstrate that the local community would not be afforded access to those assets in order to regain the lost employment and economic stimulus. Local military officers at COMNAVMAR have generally agreed with this reading of the recommendation.

The proposal to retain assets, where employment activity is being eliminated, negates economic revitalization. As has been noted by states and local reuse authorities, even where properties are being returned to communities under the BRAC process, the "plethora of legal restrictions has created a number of critical problems."⁵ Given Guam's finite land resources and the economic value of the harbor complex lands which are to be retained under the Pentagon's recommendations, the prospects for recovery from the loss of employment and economic activity is grim.

4. Critique of the COBRA Model.

During Guam's review of the COBRA model that is used by the Navy in preparing its analysis of the impacts of its recommendations to the BRAC Commission, several potential problems were discovered with the model itself. Perhaps the most troublesome of these is the use of a secular real interest rate rather than a long-term real interest rate to discount future cost and saving flows in the computation of a prospective action's net present value. The rate used, according to BRAC staff, is based upon the difference between current long-bond (30-year U.S. Treasury Bond) rates and the current rate of inflation, as per Office of Management and Budget Circular A-94; however, the nature of the bond market and the current rate of inflation will lead to almost continual changes in the real interest rate derived using this method.

While it is gratifying to learn that the BRAC (and the COBRA model, the GAO and OMB) has adopted the method recommended by the contingent from Guam during the 1993 BRAC process, it is disappointing that the government only partially implemented the appropriate procedure. As recommended in 1993, the appropriate real interest rate to use would be based upon long-term *historical* data, taking the difference between average long-bond prices

and average rates of inflation, both averages taken over a period of at least twenty years to remove the differential variability caused by the fluctuations in inflation and interest rates over the course of the business cycle. The reason that this is the appropriate approach is that it gives a more accurate estimation of the prospective difference between the two rates over the period of investigation related to the cost savings that the BRAC is working to discover. This rate should be somewhere in the vicinity of the long-term real growth rate of the U.S. economy (plus a few other, minor factors), or about 2.2% per annum. Guam's presentation this year uses this rate in comparison with the 2.75% rate used in the COBRA model; it is important to note that the lower discounting rate yields a higher net present value of net cost savings in the case of each of action proposed for bases in Guam (and would do the same in all other recommendations under the BRAC Commission's consideration).

Another of the comments that Guam has to make concerning the COBRA model in relation to the computation of any particular action's net present value is the apparently arbitrary selection of a twenty-year period in the computation of cost savings. While we have no particular objection to this, given that it treats all proposals equally and a sufficient period of time is allowed to test the comparisons among the different BRAC alternatives, we are left to wonder why the model does not use the relatively simple algorithm required to compute the net present value of any particular action's effect in perpetuity. While this may extend beyond the period in which the BRAC Commission is immediately interested, it would certainly provide a better estimation of the relative merits of various alternative actions.

Critique of the COBRA Scenarios Relative to Proposed Actions in Guam

In our review and analysis of the scenarios input into the COBRA model regarding the four actions proposed for Guam, one of the most disturbing factors involved the military and civilian salaries that were used. The figures for officer, enlisted and civilian compensation appear to be gross overstatements of the salaries actually paid; this perception was verified by data provided for each of the Navy commands in Guam by COMNAVMAR. While we understand that the figures used in the COBRA scenarios possibly reflect the fully-loaded costs of employing these personnel (i.e., including insurance premiums, retirement contributions and so forth), we still feel that they are far too high for the purposes to which they are put.

The scenario applied to SRF in Guam supposes compensation of \$76,781.00 annually for officers, \$33,178.00 for enlisted personnel and \$54,694.00 for civilians; that applied to the other proposed actions assumes supposes the same \$76,781.00 annually for officers and \$33,178.00 for enlisted personnel, but \$50,827.00 for civilians; the factors in the "standard" scenario, in contrast, use figures of \$64,440.50 for officers, \$27,028.50 for enlisted personnel and \$35,000.00 for civilians. Although COMNAVMAR does not distinguish between officers and enlisted personnel in the data that was provided, the average salary given for active-duty personnel is \$29,847.94, while the average salary for civilians is \$25,113.93. There are obvious discrepancies among these figures. Regardless, it would seem more appropriate to use actual compensation levels rather than the figures plugged at O-5 for officers, E-6 or 7 used for enlisted personnel or GS-9 through 11 for civilians in the standard scenario (as reported by BRAC staff); the actual compensation levels would be far more reliable in the BRAC Commission's decision-making

and average rates of inflation, both averages taken over a period of at least twenty years to remove the differential variability caused by the fluctuations in inflation and interest rates over the course of the business cycle. The reason that this is the appropriate approach is that it gives a more accurate estimation of the prospective difference between the two rates over the period of investigation related to the cost savings that the BRAC is working to discover. This rate should be somewhere in the vicinity of the long-term real growth rate of the U.S. economy (plus a few other, minor factors), or about 2.2% per annum. Guam's presentation this year uses this rate in comparison with the 2.75% rate used in the COBRA model; it is important to note that the lower discounting rate yields a higher net present value of net cost savings in the case of each of action proposed for bases in Guam (and would do the same in all other recommendations under the BRAC Commission's consideration).

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process than the much higher levels used in COBRA scenarios N95OM.SFF (for SRF) and N95DBOF.SFF (FISC, NAVACTS and NAVAIR), or even in STDFCTRS.SFF, which is presumably the standard used as a basis for all of the COBRA scenarios.

Also in the Guam scenarios, there are costs and savings associated with the Military Sealift Command vessels being re-deployed from Guam to Hawaii that appear to be out of line. First, there are costs associated with the movement of some 773 civilian mariners, when those seamen are actually homeported in Oakland; these costs, therefore, are illusory. In addition, many familiar with MSC operations note that there may be a requirement for one additional MSC vessel to meet mission needs, since Hawaii is some ten days further from the region served, yet there is no allowance for the cost of operating this vessel; the scenario, then, may understate the cost of the move by approximately \$59,900 per day, or \$21.9 million annually, the vessel operating cost.

With the proposed realignment of Navy aviation assets from "Base X" (Andersen AFB) to other points (one of which has not even been identified), there are claimed cost savings of \$180 million in avoided MILCON, yet it is Guam's understanding that this construction (required by a BRAC '93 action) has never been funded; BRAC staff informs us that this is a violation of the "rules" of COBRA assessment, in that no savings can be realized by foregoing unfunded construction. There is, however, ongoing construction at Andersen AFB to accommodate the movement of Navy aviation assets from the former Naval Air Station - Agaña under the 1993 BRAC decision; it appears that this construction is to be completed and then abandoned, since there is no allowance for cost savings by terminating the construction activity, nor is there any funding in the model scenario for mothballing or caretaker maintenance.

The deviations from actual costs and potential savings that are reflected in the COBRA model are bothersome, both because it complicates Guam's efforts to assess the prospective impacts of whatever action the BRAC Commission deems to be appropriate for bases in Guam and because of our concern that the BRAC Commission may make its decisions based upon faulty information, and that these decisions may consequently lead to sub-optimal results. We believe that the BRAC Commission should interpret the results of the COBRA model with extreme caution, not only as those results apply to bases in Guam, but for all bases under consideration in the BRAC '95 process.

1. Military Value Analysis, Data Call Work Sheet, Naval Station Guam, p. 16

2. BSAT Memo to the BESC 2.21.95 Enclosure 13 (FISC).

3. "...the ability to operate in concert with friendly and allied forces -- so that in the future we can easily participate fully as part of a formal multinational response to "ad hoc" coalitions forged to react to short-notice crisis situation." *Forward...From The Sea*, U.S. Department of the Navy, 1994.

4. BSEC deliberations of 12.05.94 (RP-0490-F9) The 20 year net savings for move to Yokusaka were \$831.9 million while the move to Pearl Harbor was only \$495.7 million

5.. Report of the California Military Base Reuse Task Force to the Governor of California. p. XI.

B. INSTALLATION ANALYSIS

Introduction

The following provides an overview of the installations in Guam which would be directly affected by the Pentagon's recommendation to the BRAC 1995. In preparing this review, "Team Guam" recognizes that our knowledge of current military activities in Guam is incomplete. Moreover, we have no special knowledge on future military developments and requirements, except for that which might be gleaned from commonly available sources and publications, as well as the exercise of common sense and a modicum of reason.

Unfortunately, much of the information which was received from various quarters—the Data Calls, COBRA analysis and information requested of local commands through the Commander, U.S. Naval Force Marianas—is often inconsistent and unreconcilable. Throughout this presentation we have attempted to note data sources. In most instances we have relied on DoD presented data (Data Calls and COBRA), except where such information resulted from the application of a standard or common factor which did not reflect actual conditions in Guam. For example, in the following review of the installations, we have relied on information provided by COMNAVMAR.¹

The following overview examines the existing and the DoD recommended utilization of the following installations and tenants:

1. Closure: Ship Repair Facility (SRF), Guam

a. Definition

i. Command Structure and Associated Units

SRF is a self-contained unit with its own command structure. This structure allows SRF to promote its own interests and activities with respect to its facilities and property. SRF is under the immediate command of the Commander in Chief, U.S. Pacific Fleet and under the area coordination of the Commander, U.S. Naval Forces Marianas. The organizational structure consists of the Business, Administrative, Strategic, and Planning; Planning and Engineering; Production; Staff Civil Engineer; Supply/Comptroller; Occupational Safety and Health; and Command Evaluation Offices. The following is the Command Organization and its associated units:

Commanding Officer - (Highest ranking Officer at SRF)

- Production Officer
- Planning Officer
- Staff Civil Engineer
- Supply Officer / Comptroller
- Business Manager

OIC AFDM
Occupational Safety / Health Manager
Command Evaluation

Production Officer - (Also serves as the Executive Officer)

Repair Officer
Senior Ship Superintendents
Structural Group
Machinery Group
Production Support
Hull, Mech. and Elec. Test Branch
Electrical and Electronics Group
Meteorology Division

Planning Officer

Chief Design Engineer
Design Superintendent
ADP Officer

Business Manager

Total Quality leadership Office
Business Office / Scheduling
Administration

ii. Land

The Ship Repair Facility was established in 1945 as the Industrial Department of the Naval Operating Base. In 1951, it was redesigned as SRF. Its mission was and is to provide drydocking, alteration, conversion, voyage and emergency repairs, and other services for U.S. Naval ships, service crafts, and other U.S. Government ships. SRF is located in the inner Apra Harbor Naval Complex adjacent to Sumay Cove. The SRF land area occupies approximately 231 acres out of more than 4,000 acres of property in the Apra Harbor complex and includes about 4,200 feet of berthing extending from Lima (main industrial wharf) to Romeo.

Physical plant facilities include three floating drydocks, the island's only foundry and largest motor rewind facility, as well as pipefitting, sandblasting, painting and electronic module shops. Other facilities include a tool shop, a sheet metal shop, boilermaking shop, shipfitting shop, an acoustic range lab and the Reserve Craft berthing area on Drydock Island which is now under license to the Port Authority of Guam.



GRAPHIC SCALE



Location



Legend

-  Conservation
-  Historic Preservation
-  Recreation
-  Medium Density Development
-  Commercial
-  Public Use
-  Low Density Development
-  Light Industrial
-  Heavy Industrial
-  Retained by the Navy

Existing Use
SRF

Wharf	Berthing footage
Lima	1,110 ft
Mike	270 ft
November	540 ft
Oscar	570 ft
Papa	510 ft
Quebec	251 ft
Romeo	1,035 ft

Waterfront facilities (Lima, Mike, November, Oscar, Papa, Quebec and Romeo wharves) are capable of providing complete ship-to-shore services. With the exception of two buildings, all SRF facilities are in the main industrial complex where ship repair operations are conducted. According to the 1986 Apra Harbor Master Plan, a land use pattern has been established for operational requirements consisting of operations, maintenance and storage uses organized into specialized work zones.

SRF is the only U.S. owned, land-based repair facility on American Territory within 4,000 miles.

iii. Assets

- SRF has 78 building facilities with over 444,041 square feet, including an industrial laboratory, foundry, motor rewind, sandblasting and painting, corrosion control facility, compressed air plant, shop facilities for tool, sheetmetal boilermaking, shipfitting etc.
- Wharf footage of 4,932 feet with full utilities, including three floating cranes with lifting capacity of 125 and 100 tons.
- Two floating drydocks that are 622 feet long, including 35 ft outriggers at 124 feet wide overall.
- Docking capacity of 16,000 long tons at 18 inch freeboard.

(Source: SRF Mission Briefing Handbook, 3/7/95)

iv. Personnel

There are approximately 676 civilian workers at SRF. Specifically, there are 666 permanent and 10 temporary employees. In addition, there are 15 stateside-hire workers who have return rights and 39 military personnel of which 32 are enlisted and seven are officers.

The occupation breakdown is as follows:

Executive, Administrative and Management	47
Engineers	17
Architects and Surveyors	3
Computer and Operations Research	8
Physical Science Tech/Chemistry	3
Administrative Support & Clerical	45
Mechanics, Installers and Repairers	607

By Fiscal Year 1997, thirty one positions will move to NAVACTS to maintain drydock activities, and by 1999, these positions will move to NavMag. Of the 676 civilian workers, 377 have priority placement, 94 have retirement rights, 94 turnover, 64 RIF's and 26 are moving or relocating. The average civilian salary is \$33,107.72

SRF has a four year apprentice program that was started in 1957. It covers all major trades. There were 631 graduates under this program as of February 1995, and there are 33 personnel currently under the program. There are 386 apprentice graduates are currently working for SRF.

v. Tenant Commands and Associated Activities

There are no tenant commands at SRF. The Ship Repair Facility is itself a tenant command under Naval Activities.

Associated activities and description include:

1. Business, Administration, Strategic Planning Department
 - Availability Planning Division
 - Administrative Division
 - Total Quality Leadership Division
 - Surveys
2. Planning / Engineering Department
 - Capabilities Division
 - Information Processing Division
3. Operations Group
 - Shipfitter Shop
 - Sheetmetal Shop
 - Welding Shop
 - Corrosion Control
 - Boilermaker Shop
 - Pipefitter Shop
 - Process Control & Inspection
 - Technical Support

- Industrial Laboratory Services
 - Machine Shop
 - Foundry / Patternmaker Shop
 - Marine Machinery Shop
 - Electrical Shop
4. Support Group
 - Paint Shop
 - Rigging Shop
 - Fabric Shop
 - Shipwright Shop
 - Engine/Pump Operation / Labor Shop
 - Temporary Services
 5. Production Support
 - Preventive maintenance
 - Repair Shop
 - Toolroom Shop
 - Crane Shop
 - AFDM-8 Docking capability
 6. Special Capabilities
 - Welding School
 - Phosphating Facility
 - Corrosion Control
 - Silver Brazing School
 - Piping Alignment
 7. Dive Locker Services
 - Recompression Treatments & Support
 - Underwater Ships Husbandry
 8. Training / Employee Development Office

b. A Brief History of the U.S. Naval Ship Repair Facility (SRF) Guam

The U.S. Naval Ship Repair Facility (SRF), Guam, occupies a unique position in the Department of Defense battery of bases: it is the only facility of its kind on U.S. soil in the western Pacific. A second, similar facility is located on foreign soil in Yokosuka, Japan. SRF's mission is to provide drydocking, overhaul, voyage repairs, emergency repairs, shore industrial support, and other services for U.S. Navy ships, service craft and other U.S. government vessels.²

SRF currently occupies 231 acres on a point at the entrance of inner Apra Harbor. There are 4,300 linear feet of berthing space at SRF, from Lima 1 and 2, the main industrial wharf, to Romeo 1 and 2 (Chart 1). Facilities at the waterfront provide complete ship-to-shore services. Current staffing levels are 676 civilian and 39 military personnel.³

SRF Guam is under the immediate command of the Commander in Chief, U.S. Pacific Fleet (CINCPACFLT) and under the area coordination of the Commander, U.S. Naval Forces, Marianas (COMNAVMAR).

Just before the turn of the century, Captain Alfred Mahan recommended a coaling station be established in the Ladrones Islands, "probably Guam."⁴ The Navy recognized the importance of the deep water port of Apra Harbor, and its advantages have attracted U.S. political and military interests since that time. (Apra's leeward location and deep, easily navigable waters are perfectly suited for port activities and other maritime support, including ship repair.)

Prior to World War II, Apra was used primarily for the movement of military cargo, and the port facilities were known as the Navy Yard. The land surrounding the harbor was, in most part, privately held, and the village of Sumay was the center of commerce for the island.

Apra Harbor was designated "Lion Six" immediately after Guam's recapture from the Japanese in 1944.⁵ It was later changed to the Naval Operations Base (NOB) Guam, and the U.S. Naval Ship Repair Facility (SRF) was established in January, 1945, as the Industrial Department of the NOB. The activity was initially designed to meet wartime needs and was manned entirely by military personnel under the direction of an Industrial Manager.⁶

Near the end of World War II, the NOB was at peak staffing, with over 4,000 personnel, utilizing 11 floating drydocks and performing repairs on as many as 166 vessels at one time. These repairs ranged from minor operational maintenance to the complete rehabilitation of aircraft carriers, battleships and cruisers.⁷ In 1945, more military cargo was moved in and out of Apra than any other harbor in the western Pacific.⁸

Long range military plans called for the development of the protected waters of inner and outer Apra Harbor as a base to rival Pearl Harbor, but the end of World War II reduced the need for such a major facility. The proposal to build a "Little Pearl" never became reality.⁹

In August, 1951, the Industrial Department became a Ship Repair Facility, under the command of an Engineering Duty Officer.¹⁰ Navy personnel were gradually replaced by civilian employees, primarily Filipino contract workers and "stateside hires," civil service employees recruited from the mainland United States and granted special benefits not available to locally recruited civilians.

In 1957 a four-year Apprenticeship Program was established to train and develop skilled local personnel as future key employees and supervisors. The program has been extremely successful, allowing SRF to gradually replace hundreds of stateside hires with local employees. In 1995, SRF's complement of civilian employees includes only 15 stateside hires. Including the March, 1995, graduating class of 25, nearly 631 apprentices have successfully completed the program, with 386 currently employed at SRF.¹¹

Guam was devastated by two strong storms in the early 1960's, Super Typhoon Karen in November, 1962, and Typhoon Olive in April 1963. The storms caused major damage to SRF buildings, facilities and equipment.

The number of personnel assigned to SRF slowly declined until the onset of the Vietnam War brought an increased need for its services. By 1969, manning had peaked at nearly 2,400 civilians, including about 1,200 contract hires from the Philippines, and over 200 military personnel

The withdrawal of the United States from Vietnam several years later, and the subsequent reduction of workload, caused manning to decline again. In 1971, 450 contract and civil service workers were released. In 1975, Destroyer Escort Squadron 15 and other activities were moved from SRF Guam to Yokosuka, and the Navy announced the facility would be closed. A reduction in force reduced SRF personnel even further until manning reached an all-time low of 500 civilians and 113 military in 1976.¹² An uproar from the community and a well-organized campaign to save SRF helped to convince the DOD to rescind their decision.

Guam was once again struck by a major storm, Super Typhoon Pamela, in May of 1976. SRF suffered major damage. The decision to rebuild indicated a commitment to keep the facility functioning.

The number of civilian personnel grew to 700 in 1977 and it stabilized at that figure until 1982. Temporary civil service employees were brought on board to supplement permanent staff on an as-needed basis.

The first AFS vessel to be home ported on Guam, the USS San Jose, arrived in 1981, followed by the USS Niagara Falls (1983) and the USS White Plains (1984). Civilian employment at SRF once again began to grow, peaking at over 1,000 in 1987.

Two typhoons, Russ in December, 1990, and Yuri in November, 1991, affected several SRF buildings. Russ caused extensive damage to the Supply Storage area, and Yuri damaged the Richland's mooring facilities.¹³

Between Russ and Yuri, DOD implemented a hiring freeze and SRF's complement of personnel, both civilian and military, began a slow decline to present levels.

SRF has facilities and capabilities unique to Guam and the western Pacific. It is the only U.S. Department of Transportation certified facility in this part of the world for recertification requirements for breathing air and high pressure air cylinders. SRF has the only foundry, environmentally controlled sandblasting and painting facility and micro-miniature circuit board and corrosion control facilities on Guam. Its floating cranes, with a lifting capacity of 100 and 125 tons respectively, are the only ones of their type on Guam. SRF also has the only shore-based recompression chamber in the region, manned and operated by SRF divers, who have performed over 300 humanitarian missions.¹⁴

c. Recent Activities at the Installation

Activities

SRF Guam provides shore industrial support, repair, maintenance, overhaul and drydocking services to U.S. Seventh Fleet ships, USS WHITE PLAINS (AFS 4), USS HOLLAND (AS 32); homeported Military Sealift Command (MSC) ships, USNS SPICA (TAFS 9), USNS KILAUEA (TAE 26), USNS CATAWBA (TATF 168), USNS NARRAGANSETT (TATF 167), USNS MARS (TAFS 1); to the U.S. Coast Guard ships BASSWOOD (WPB 388) and GALVESTON ISLAND (WPB 1349); and, NOGALES (YTB 777), KETCHIKAN (YTB 795) and WEEHAWKEN (YTB 776).¹⁵

Current Missions

- Emergent and scheduled docking support for USN submarines, surface ships, MSC ships, service craft, and vessels of other governmental agencies. SRF Guam has the only floating dry dock in the Mariana Islands and is the only nuclear capable docking facility in the area.
- Diving and salvage services/maintenance and operation of the island's only hyperbaric chamber.
- Overhaul, repair, and alteration of USN ships, MSC ships, service craft and vessels of other governmental agencies.
- Emergent infrastructure maintenance and repair as requested by other federal agencies.¹⁶

Current Unique Missions

- Recompression Chamber
- Industrial Lab (chemical and metallurgical)
- Drydocking
- Diving and Salvaging
- Farthest Western Pacific U.S. Territory capable of ship repair in consonance with Title 10 USC.¹⁷

Customer Funding

Over the last eight years, funding for SRF was generated from four sources, the Naval Sea Systems Command (NAVSEA), the Naval Surface Pacific (SURFPAC), the Military Sealift Command (MSC) and OTHER categories (Other Naval Activities, Army, Air Force, Federal

Agencies, Coast Guard, Government of Guam, Commercial Agencies and foreign military governments).

SRF's funding level over the last eight years has dropped by 46% from \$52m in FY 1988 to the current fiscal year level of \$28 m. The highest funding level was \$61 m in 1991 and the most significant drops occurred in FY 1991 by 46.5% and FY 1994 by 33.3% and is attributable to the downsizing program.

Analysis of the funding sources for SRF indicates that from FY 1988 to FY 1993, SURFPAC accounted for the majority (over 50%) of the workload in the shipyard, and the highest level was in FY 1989 at 79.2%. With the downsizing in FY 1994, a shift occurred in 1995 so that funding from NAVSEA and SURFPAC are now insignificant, and the shipyard is now dependent on MSC and the OTHER category.

Manning Profile

During the last eight years, the total workforce has declined by 35% from 1,096 in FY 1988 to the current level of 712. The decrease in manpower was most significant in the last two (2) years, 19.8% in FY 1994 and 15.1% in FY 1995. SRF civilian workers have been encouraged to take early retirement and voluntary resignation. In 1994 alone, 39 personnel took early retirement (VERA) and 18 personnel took early resignation incentives.

Civil servants make up the majority of SRF's personnel. In FY 1986, they were 81.0% of the workforce compared with the current level of 93.7%. The impact of the Navy's downsizing was significant in FY 1995 with the 64.2% decline in the number of military personnel.

Regional Support

Since SRF Guam is the only industrial repair facility in Guam, it provides valuable service to other branches of the military as follows.

Activity Name	Location	Support Function
USAF (OTHER MILITARY DEPARTMENT)	ANDERSEN AIR FORCE BASE GUAM	REPAIR/CALIBRATION OF TEST EQUIPMENT & MISC. EQUIPMENT, CORROSION CONTROL - ISSA
U.S. ARMY RESERVE (OTHER MILITARY DEPARTMENT)	SUMAY, GUAM	REPAIR/CALIBRATION OF TEST EQUIPMENT & MISC EQUIPMENT - ISSA
GUAM NATIONAL GUARD	TAMUNING, GUAM	REPAIR/CALIBRATION OF TEST EQUIPMENT & MISC EQUIPMENT - ISSA

U.S. COAST GUARD (OTHER FEDERAL AGENCY)	NAVSTA VESSELS GUAM	REPAIR COAST GUARD
U.S. ARMY (OTHER MILITARY DEPARTMENT)	SCHOEFIELD BARRACKS HI	REPAIR ARMY VESSELS
NCTAMS WESTPAC (U.S. NAVY COMMUNICATION STATION)	FINEGAYAN GUAM	REPAIR & CALIBRATION OF MISC EQUIPMENT
NAPRA (NAVAL AIR PACIFIC REPAIR ACTIVITY)	BARRIGADA GUAM	REPAIR & MFG OF VARIOUS EQUIPMENT COMPONENTS
AIMD (U.S. NAVY)	BARRIGADA, GUAM	REPAIR & MFG OF VARIOUS EQUIPMENT COMPONENTS
EOD MU-5 (U.S. NAVY)	NAVAL MAGAZINE, GUAM	REPAIR/TEST MISC EQUIPMENT
HC-5 (U.S. NAVY)	ANDERSEN AIR FORCE BASE, GUAM	MFG & TEST MISC COMPONENTS (I.E. SLINGS, EQUIPMENT PARTS, ETC.)
MOMAG UNITS (U.S. NAVY)	NAVAL MAGAZINE, GUAM	REPAIR/TEST MISC EQUIPMENT
NCCOSC ISE WEST FACILITY (U.S. NAVY)	FINEGAYAN GUAM	PROVIDE TECHNICAL LABOR INSTLN OF ELEC/ELEX EQUIPMENT
NCCOSC ISE WEST FACILITY (U.S. NAVY)	PEARL HARBOR, HI	TEST/CALIBRATE ELEX TEST EQUIPMENT AND RADIAC EQUIPMENT
COMNAVSPECWARGRU (U.S. NAVY)	NAVSTA, GUAM (SUMAY)	REPAIR/TEST PATROL BOATS ONE /CRAFT AND MISC EQUIPMENT

PWC (U.S. NAVY)	NAVSTA, GUAM (SUMAY)	FLOATING CRANE ASSIST AND REPAIR/TEST EQUIPMENT
FISC (U.S. NAVY)	NAVSTA,	FLOATING CRANE ASSIST GUAM (SUMAY) CRAFTS, BOATS & MISC EQUIPMENT
NAVACTS	NAVSTA, GUAM (SUMAY)	OVERHAUL/TESTER VICE CRAFTS, BARGES & MISC EQUIPMENT
COMSCWESTPAC (MILITARY SEA LIFT COMMAND, WESTPAC)	NAVSTA, GUAM (SUMAY)	OVERHAUL/TEST MSC SHIPS
COMLOGWESTPAC (U.S. NAVY)	NAVSTA, GUAM (SUMAY)	OVERHAUL/TEST SHIPS AND CRAFT UNDER COMNAVSURFPAC COG ASSIGNED TO GUAM AVAILS
COMSUBGRU SEVEN (U.S. NAVY)	PITI, GUAM	PROVIDE REPAIR ASSIST AND REP MFG. OF VARIOUS EQUIPMENT PARTS FOR SUBMARINE & SUBMARINE TENDER

SRF also provides repair of various equipment, the manufacturing of parts and floating crane services to the Government of Guam through the Guam Power Authority, Port Authority of Guam and the Public Utility Agency of Guam. Without SRF, these Government of Guam agencies would have to seek off-island services in the U.S. mainland or Asia.¹⁸

2. Realignment: Naval Activities (NavActs), Guam

a. Definition

Naval Activities, Guam is a command established on 24 October, 1994 encompassing the former Naval Station (Guam) and Naval Magazine (Guam). Naval Activities supervises a broad range of facilities and subordinate commands with the mission of supporting U.S. Navy operations on Guam. The mission of Naval Activities is:

1. to operate and maintain base facilities for the logistical support of homeported units and visiting operating forces in the Pacific Fleet and designated tenants and shore activities;
2. to receive, renovate, maintain, store and issue ammunition, explosives, expendable ordinance items, weapons and technical ordinance material;
3. to perform other duties as may be directed by higher authority.

In this review of Naval Activities, a distinction between "Naval Station" and "Naval Magazine" operations is made for two reasons. First, most of the data collected in the BRAC data calls makes the distinction since it was collected prior to the consolidation of the separate commands under "Naval Activities, Guam" in October 1994. Secondly, although presently under one command, the magazine occupies an area that is separated from the Naval Station and the majority of its tenant activities.

Despite this distinction, and the BRAC Scenario Development Data Call which proposes to consolidate "Naval Activities Guam" into a command called "Naval Magazine, Guam" in 1999, it is assumed that "Naval Activities" will continue as the command. It is assumed that the Scenario Development Data Call's proposal to consolidate NavActs into Naval Magazine, Guam in 1999, was driven by the absence of an understanding of the command consolidation that occurred in October of 1994.

Discussing the history of Naval Activities on Guam is synonymous to discussing the entire period of American history in Guam since 1898, when U.S. Navy warships seized the island from Spain. Prior to Guam's capture, Captain Alfred Mahan had recommended a coaling station be established in the Marianas Islands, "probably Guam."³ This posture was reflected in the original protocols of the Treaty of Peace between the U.S. and the Empire of Spain which provided that the U.S. would take one of the islands of the Marianas. When the Treaty of Peace was finalized, Guam was the island in the Marianas selected by the U.S. Government.

The Navy recognized the importance of the deep water port of Apra Harbor, and its advantages have attracted U.S. political and military interests since that time. Apra's leeward location and deep, easily navigable waters are perfectly suited for port activities and other maritime support, including ship repair. The role of the Navy has, either directly or indirectly, been responsible for determining the course of the island's development. This Navy interest has largely been driven by port requirements and access.

i. Command Structure & Associated Units

The Commanding Officer, Naval Activities, Guam is under the immediate supervision of the Commander, Naval Surface Force, U.S. Pacific Fleet. Area Coordination and the Major Claimant are under the Commander in Chief, Pacific Fleet (CINCPACFLT).

As earlier noted, NavActs encompasses both port (and related) activities as well as munitions storage and handling. Within the port area of the Apra Harbor Complex, additional commands operate, including a Naval Ship Repair Facility, a Fleet Industrial Supply Center and a Public Works Center.

Numerous units are located with NavActs; from area command coordination (COMNAVMAR), homeported ship operations, large follower activities (such as the Public Works Center and the Naval Exchange) to small units such as the Navy Legal Services Office.