



**MCCLELLAN**

**So Much**

**MORE**

**Than Just**

**Another**

**Air Force Base**

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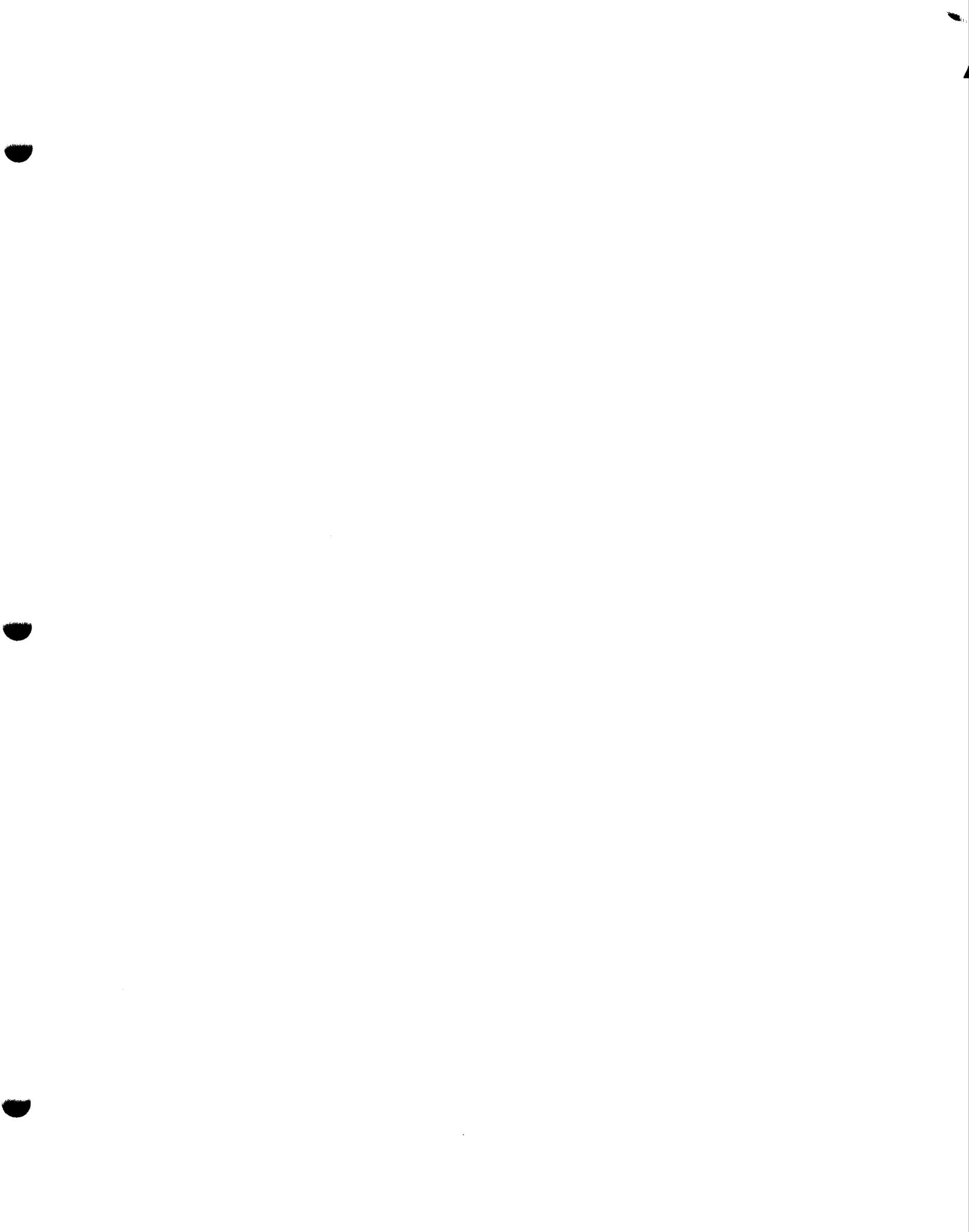
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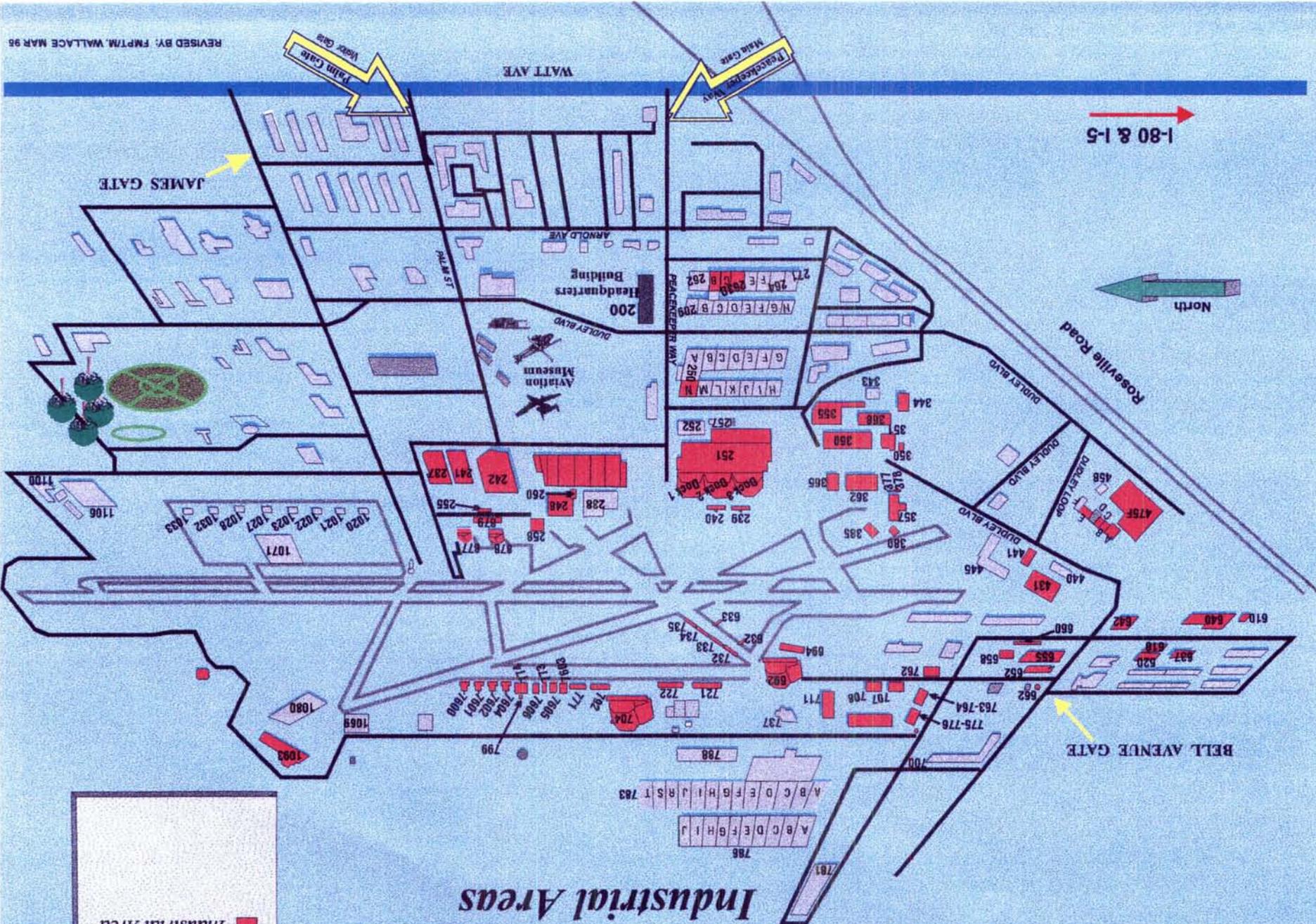




# McClellan Air Force Base Industrial Areas

**LEGEND**

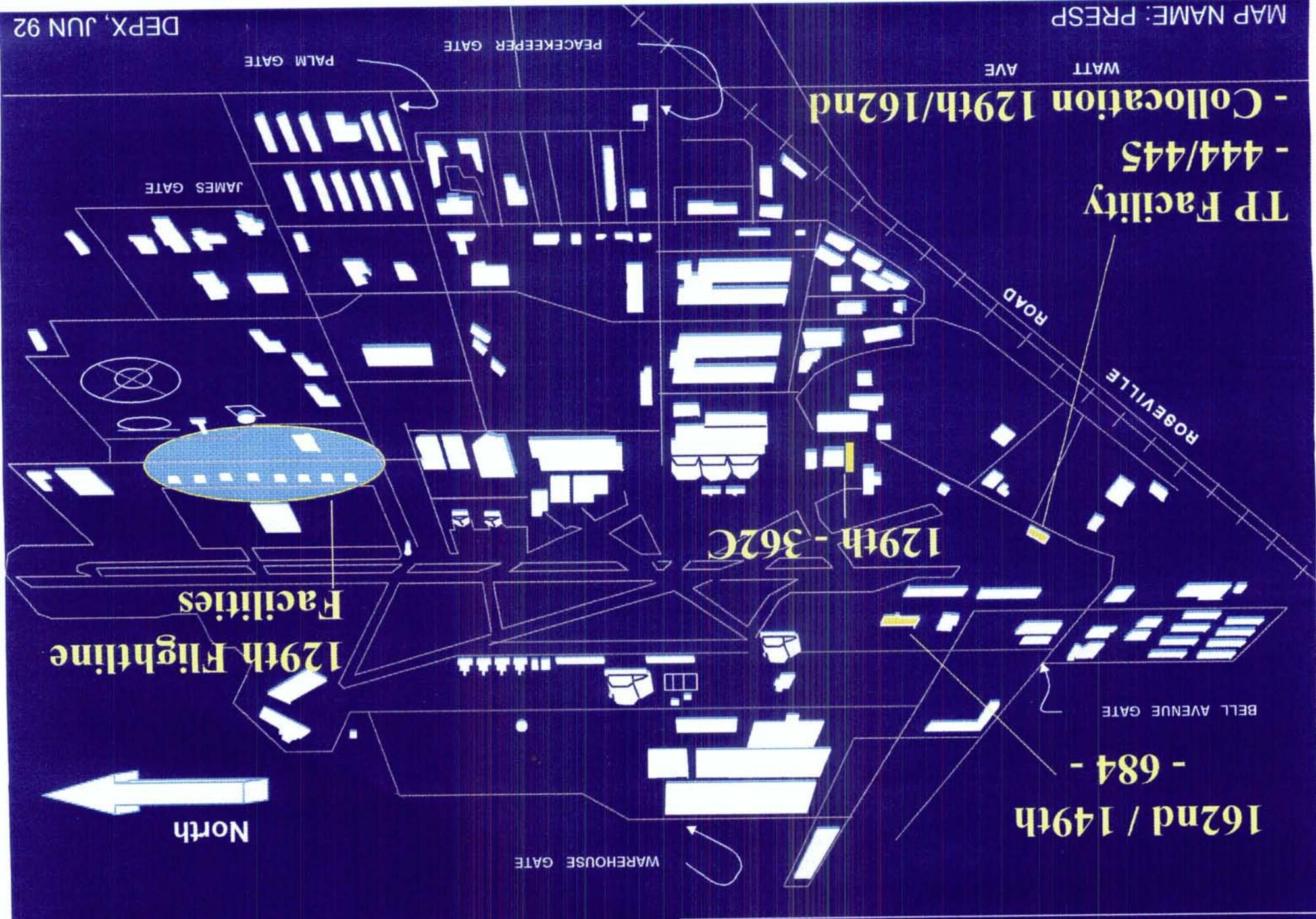
Industrial Area



REVISED BY: FMPT/M WALLACE MAR 96



# McClellan Air Force Base



162nd / 149th

- 684 -

BELL AVENUE GATE

129th - 362C

129th Flightline  
Facilities

TP Facility

- 444/445

- Collocation 129th/162nd

MAP NAME: PRSP

WATT AVE

PEACEKEEPER GATE

PALM GATE

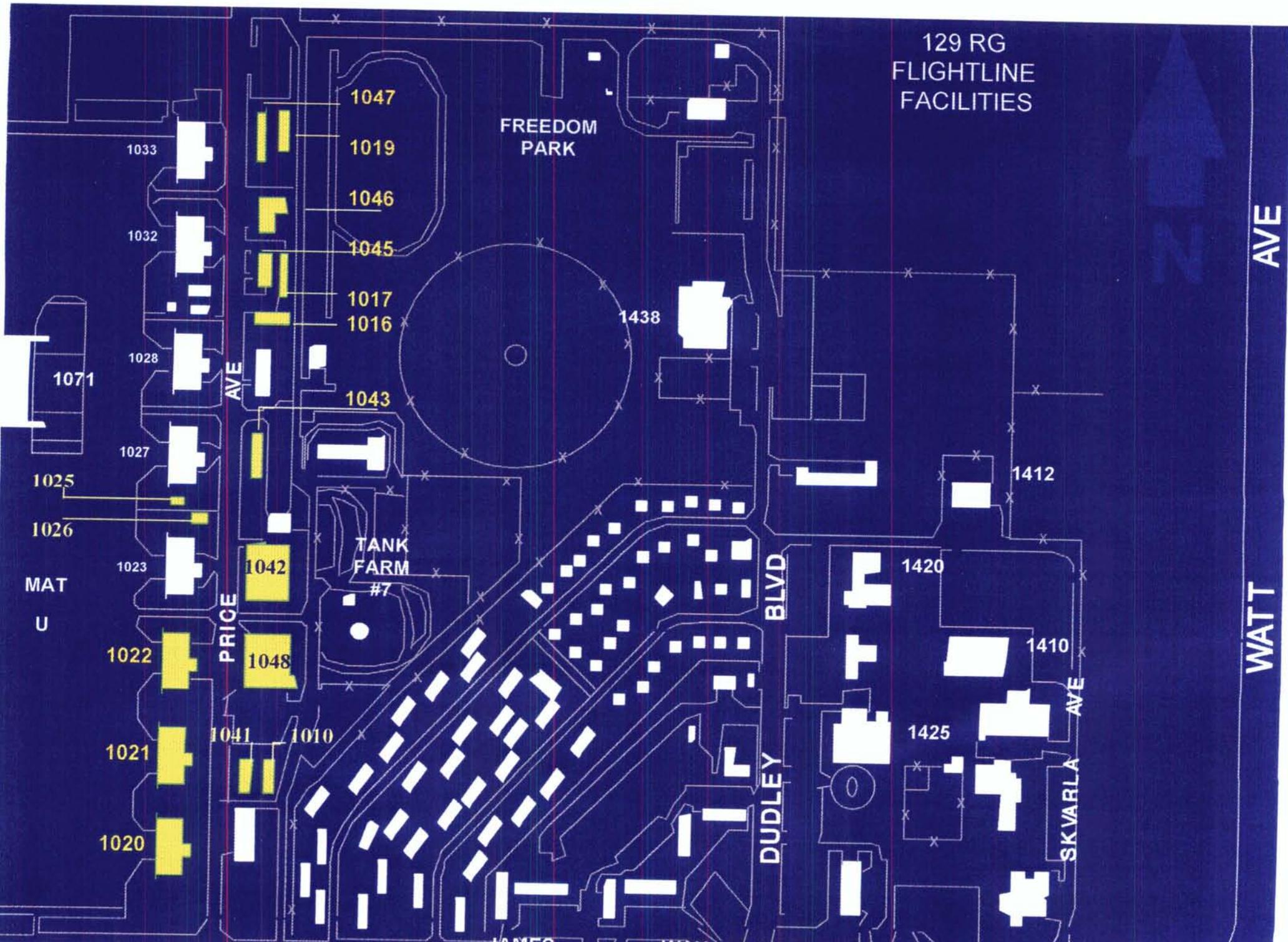
JAMES GATE

ROSEVILLE  
ROAD

WAREHOUSE GATE

North

DEPX, JUN 92



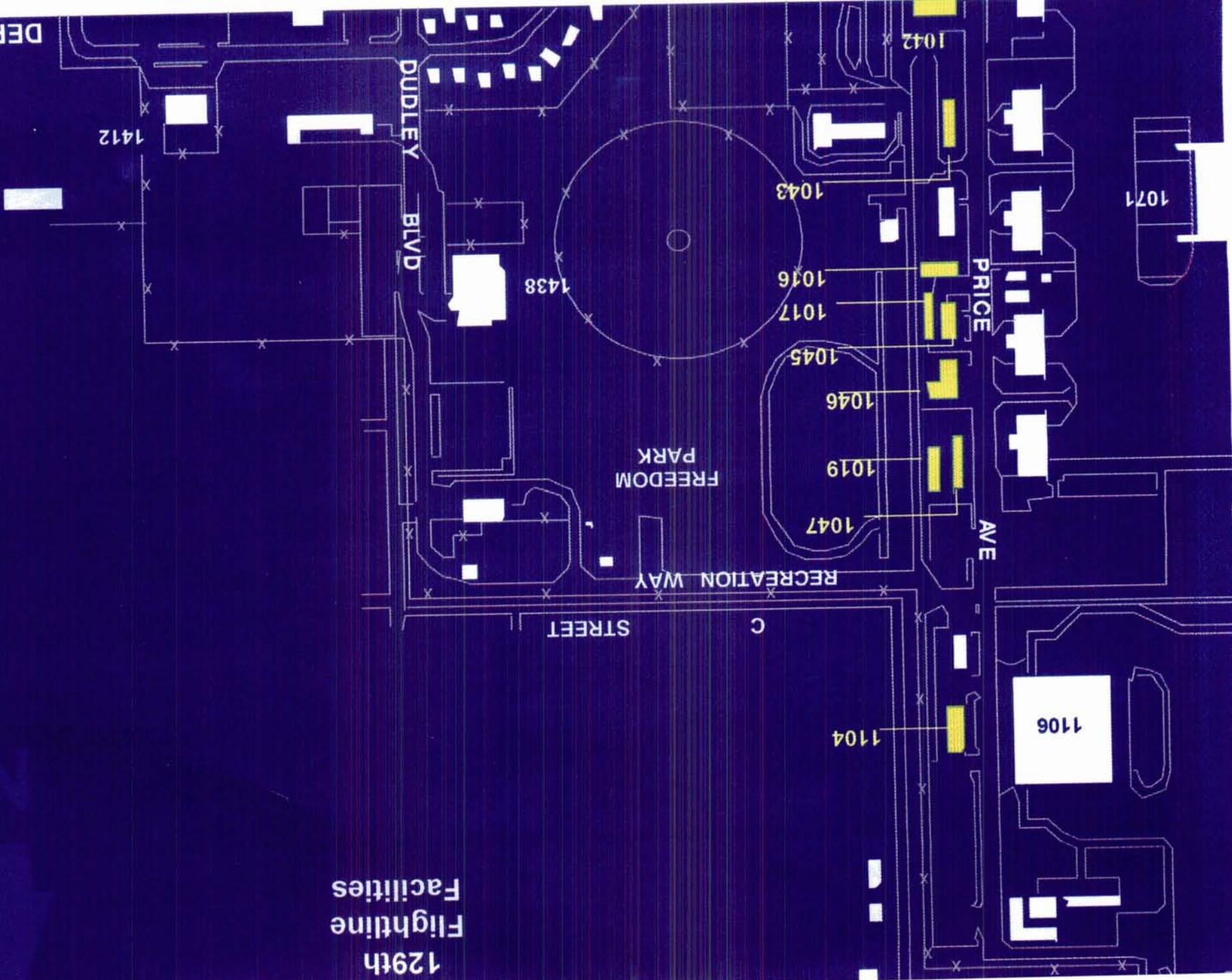
WATT AVE

WATT

129th  
Flightline  
Facilities

DEPX, JUN 92

WATT  
AVE

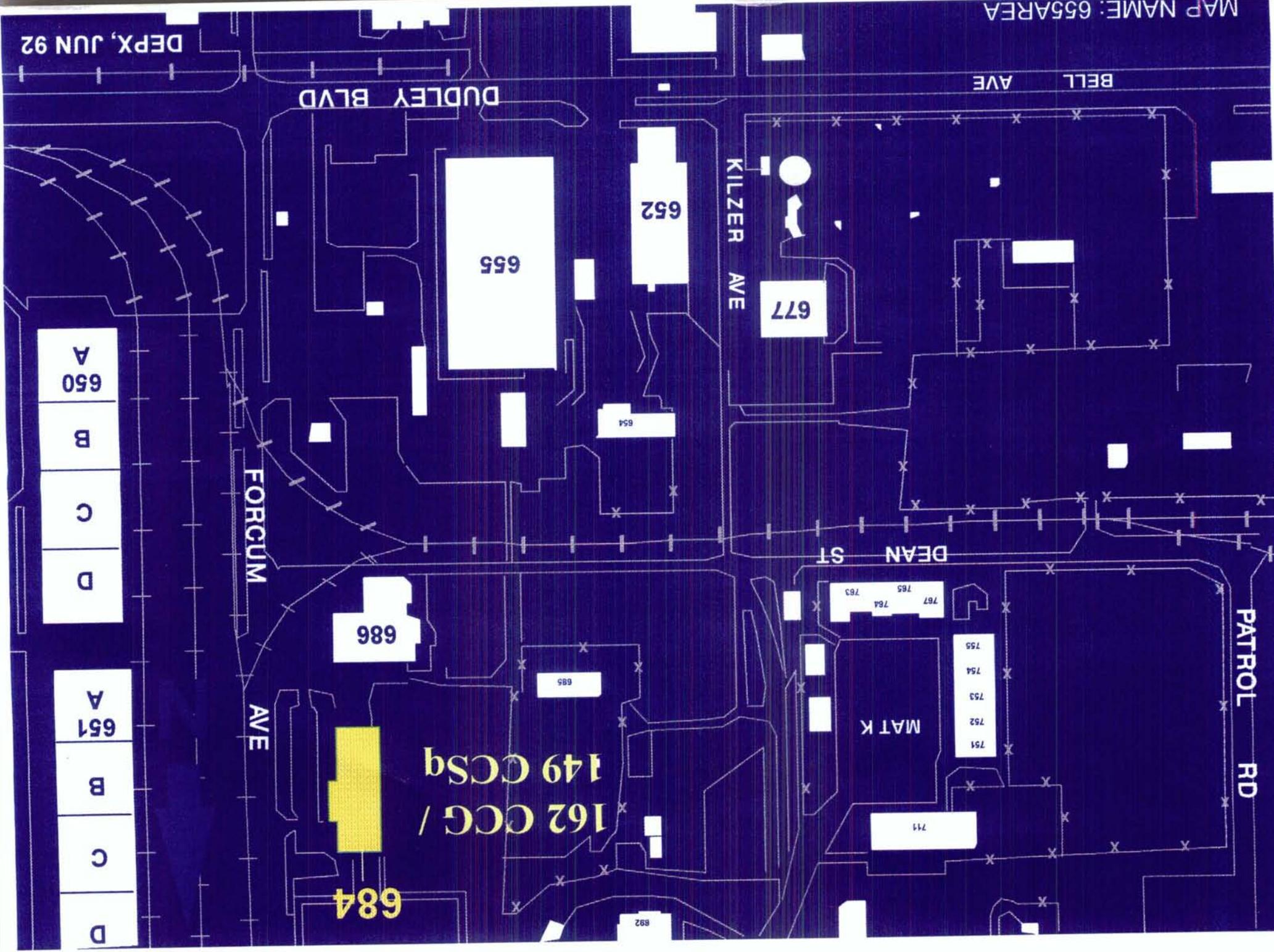




**129th  
- 362C -**

MAP NAME: 250AREA

DEPX. JUN 92



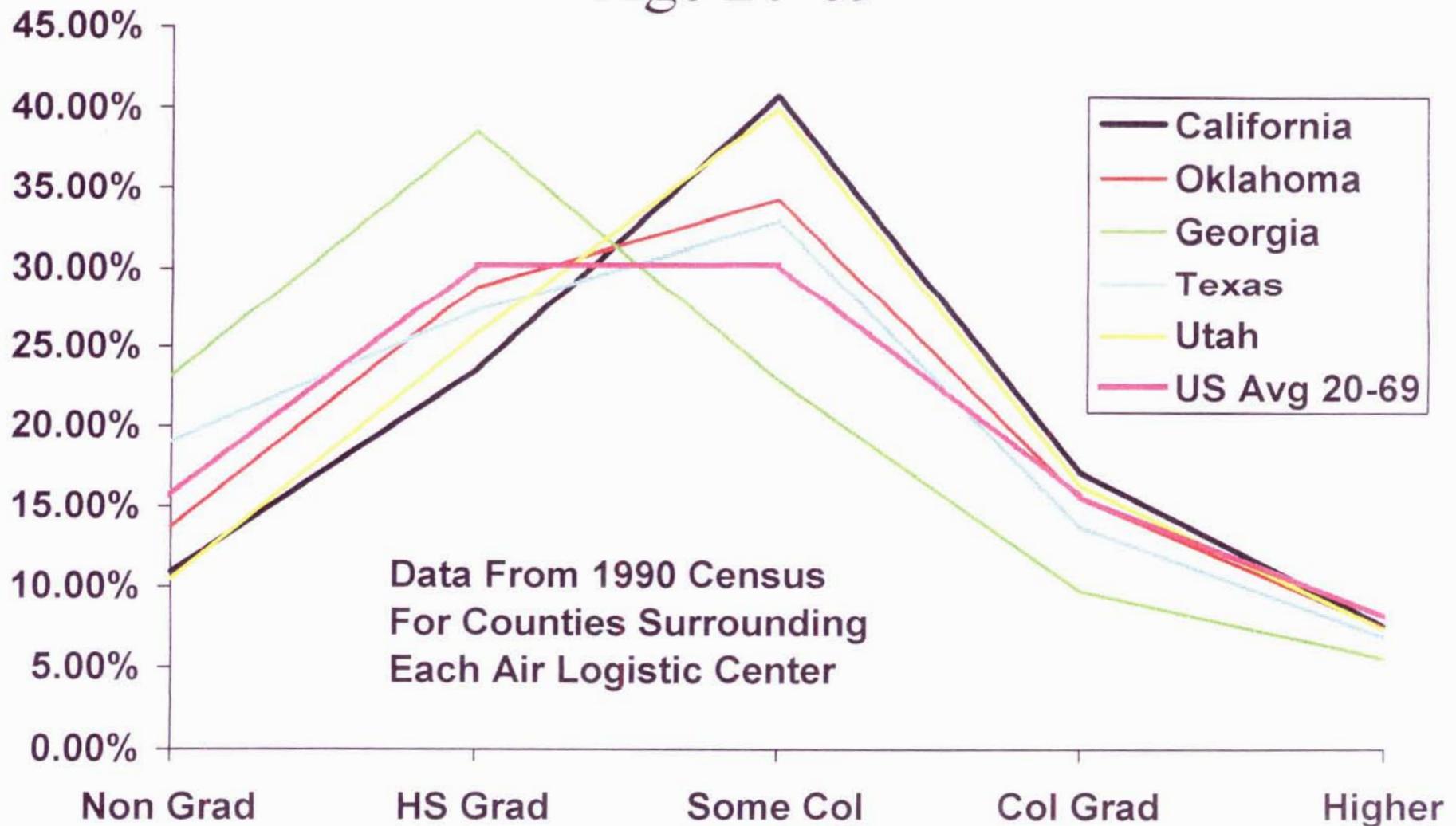
A	650
B	
C	
D	

A	651
B	
C	
D	

684  
 162 CCG /  
 149 CCSq

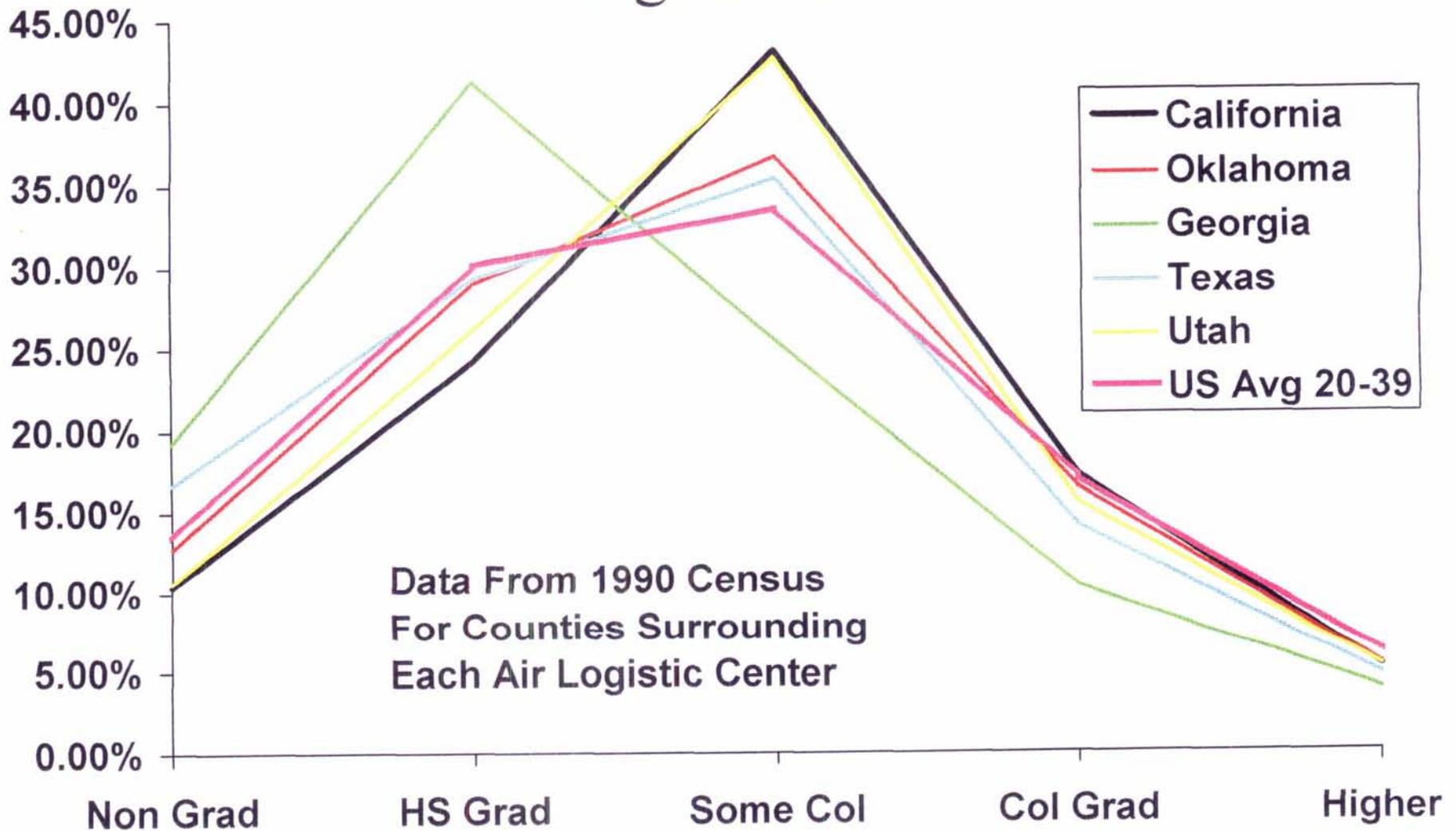
# Education Level

## Age 20-69



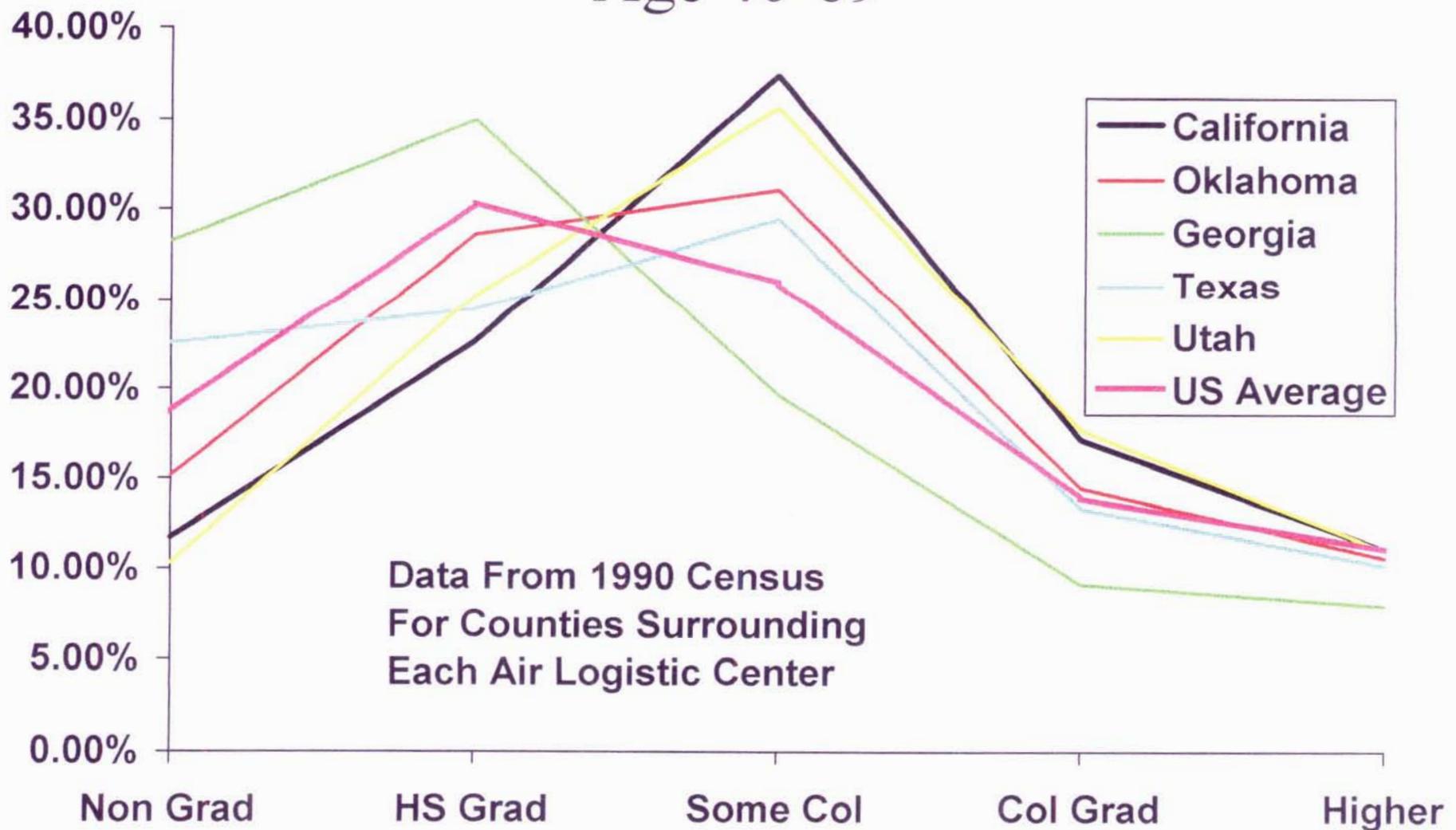
# Education Level

## Age 20-39



# Education Level

Age 40-69



The background of the page is a stylized American flag. The stars in the upper left corner are white on a blue field. The stripes are wavy and alternate between a light purple and a white color. The text is centered over this background.

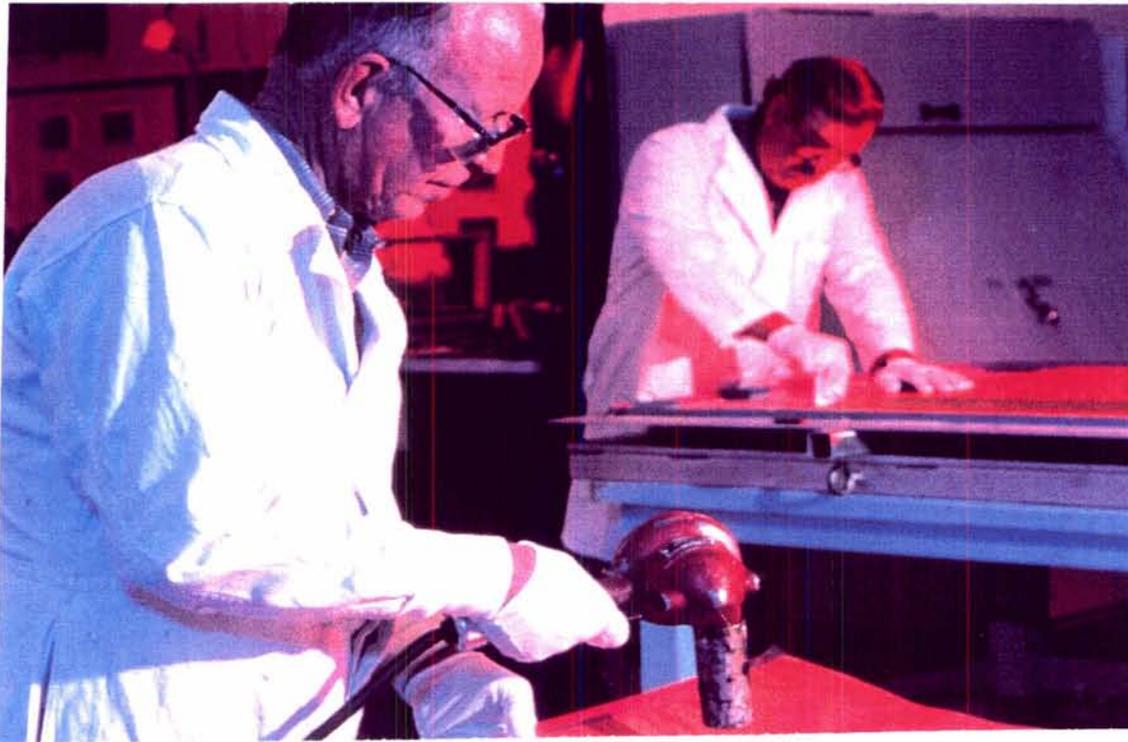
**Technology  
Repair Centers/  
Centers  
of  
Excellence**

## Instruments/Displays



The instrument technology encompasses the full range of pressure, temperature, humidity, and time-measuring instruments; chemical analysis and engine instruments; flight control and navigation instrument systems. Specific examples are sextants, compasses, airspeed indicators, attitude and horizon gyro indicators, autopilot mechanisms, fuel and air pressure gages, heads-up displays and multipurpose displays.

## Advanced Composites, Plastics and Metal Bonding



Composite structures consist of skins bonded to substructure. The skin is fabricated by building up layers of uncured material to a desired thickness and orientation, then cured with heat and pressure in an autoclave. A bondform with the desired contour is used to provide the desired shape to the cured structure. The skin is attached to a substructure (usually honeycomb core) by co-curing, secondary bonding or mechanically fastened.

Metal-bonded structures consist of metallic skins adhesively bonded to a supporting substructure. Skins are aluminum or, less commonly, titanium. The substructure is usually aluminum honeycomb core, although steel and titanium core is also available.

Plastics shops work on three basic types of applications: Aircraft transparencies (canopies), wet lay-up fiberglass structures (typically radomes), and manufacturing from acrylic sheets

**SM-ALC Technology Repair Center (TRC)/Center Of Technical Excellence(CTX)**

Subject: **Instruments/Displays**

McClellan Capability: McClellan is home to the largest, most modern, most comprehensive Instrument and Electronic Component Test and Repair capability in DoD. This facility provides test and repair of a full range of pressure, temperature, humidity and time measurement instruments; flight control and navigational instruments; and flight data cockpit recorders. Skills and capabilities include reverse engineering, unsupportable electronic equipment repair, large wire harness test automation, specialized test equipment manufacture, test system overhaul process development, supportability review, normal repair procedures development, and mil standard technical manual development.

Current Number Of People Authorized: 170  
Current Number Of People Assigned: 170

Capacity in Man-hours | \_\_\_\_\_  
1 Shift | 260,780

\* There is also considerable capacity in related technologies (Avionics, Electrical Components, etc.) that could be made available for instruments workload.

<b><u>Instruments/Displays</u></b>	<b><u>Tinker</u></b>	<b><u>Hill</u></b>	<b><u>Kelly</u></b>	<b><u>McClellan</u></b>	<b><u>Robins</u></b>	<b><u>Total/ Change</u></b>
AFMC TRC/Process Study	141	82		190	149	339
AFMC Study with 30% Overhead	184	107		247	194	732
OSD Decision	-169	-82		272	-149	-128
Air Force Recommendation	-184	-101		242	-43	-86
AFMC Alternative Recommendation	64	-101		-221	129	-129

- a. Capacity: 40%
- b. Core Workload & Capabilities: 30%
- c. Unique & Peculiar Core Workloads: 10%
- d. Unique & Peculiar Core Test Facilities: 10%
- e. Other Workloads: 10%

Individual commodity scores are not available but the overall results of the first run of this modified model (Sep 94) were as follows:

	Tinker	Hill	Kelly McClellan	Robins
Total Score	808	1036	731	896

In this computation, McClellan dropped from highest rated to second highest rated.

4. The Air Force was still not satisfied with the model, so they made some minor modifications to the weighting factors, and they consolidated all the Communications-Electronics (C-E) technologies into a single computation. In the JCSG-DM data, C-E was broken out into seven sub-categories, just as the other technology groupings were. The results of this revision in November 1994 was as follows:

	Tinker	Hill	Kelly McClellan	Robins
Total Score	828	1081	738	905

In this computation, McClellan dropped from the second highest rated to the third highest rated. McClellan AFB was the only depot that dropped, while the other four each increased their value slightly.

### Summary

5. The JCSG-DM functional value analysis was done in an effort to establish the best sites for cross servicing of all DoD depot maintenance workloads. They removed items (like capacity) that would give an undue advantage to the largest depots and were using a set of factors and weights that were agreed to by all of the services. Their own calculations, actually finalized after either of the Air Force calculations, show that McClellan AFB is hands-down the highest rated depot. The Air Force calculations, while less favorable to McClellan, never drop this depot below the third place among the Air Logistics Centers.

**GAO Update of Depot Performance Indicators**  
As Of 31 Dec 94

**Direct Labor Efficiency**

	<b>1988</b>	<b>1989</b>	<b>1990</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>
Hill	93.9%	92.8%	91.1%	90.3%	90.4%	90.4%	86.2%	83.4%
Tinker	95.2%	95.7%	92.2%	95.7%	91.9%	94.3%	90.3%	87.3%
McClellan	93.1%	97.4%	90.6%	94.3%	94.3%	93.7%	92.8%	90.4%
Kelly	95.7%	94.8%	90.9%	93.5%	92.3%	81.7%	87.2%	98.3%
Robins	93.7%	90.8%	90.0%	92.6%	95.1%	91.6%	89.8%	82.7%

**Output Per Paid Man-Day**

	<b>1988</b>	<b>1989</b>	<b>1990</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>
Hill	3.86	3.79	3.71	3.80	3.89	3.77	3.39	3.13
Tinker	3.84	3.78	3.72	3.95	3.88	3.74	3.69	3.47
McClellan	3.84	3.97	3.61	3.98	3.99	3.89	3.73	3.52
Kelly	3.87	3.96	3.67	3.81	3.79	3.23	3.11	3.44
Robins	3.90	3.94	3.80	4.04	4.15	4.03	3.83	3.36

**Profit/Loss (\$ MIL)**

	<b>1988</b>	<b>1989</b>	<b>1990</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>
Hill	\$ 27.8	\$ (18.6)	\$ (40.3)	\$ (17.2)	\$ 22.4	\$ 39.2	\$ (33.3)	\$ (11.3)
Tinker	\$ (23.2)	\$ (37.5)	\$ (76.0)	\$ (12.6)	\$ 54.5	\$ 12.0	\$ (29.5)	\$ 11.7
McClellan	\$ (12.2)	\$ (9.8)	\$ 1.7	\$ 3.9	\$ 66.6*	\$ 7.0	\$ (43.8)	\$ (22.0)
Kelly	\$ (33.9)	\$ (50.7)	\$ (18.4)	\$ 41.2	\$ 5.6	\$ (44.0)	\$ (45.5)	\$ 15.3
Robins	\$ (10.3)	\$ (18.7)	\$ (32.7)	\$ 1.1	\$ 36.6	\$ 52.2	\$ 0.5	\$ (4.7)

\* Includes **Command Total** for Desert Storm. Adjusted number would be \$28.1 M

**SM-ALC Technology Repair Center (TRC)/Center Of Technical Excellence(CTX)**

Subject: **Physical Science Labs**

SM-ALC Capability: Provides engineering and material control for the ALC's industrial shops. We are certified with the state of California for hazardous waste analysis.

Current Number Of People Authorized: 77

Current Number Of People Assigned: 77

Capacity in Manhours |  
1 Shift | 118,118

<u>Physical Science Labs</u>	<u>Tinker</u>	<u>Hill</u>	<u>Kelly</u>	<u>McClellan</u>	<u>Robins</u>	<u>Total/ Change</u>
AFMC TRC/Process Study	52	44	96	77	57	326
AFMC Study with 30% Overhead	68	58	125	101	75	427
OSD Decision	-8	-7	-14	-12	-9	-50
Air Force Recommendation	-11	-10	-20	-16	-12	-69
AFMC Alternative Recommendation	-11	-10	-20	-16	-12	-69



## Physical Science Labs



Provides expertise in chemistry, chemical and materials engineering, non-destructive inspection, metallurgy, dimensional verifications, and materials and transparency testing.

**SM-ALC Technology Repair Center (TRC)/Center Of Technical Excellence(CTX)**

Subject: **Operation Flight Program (OFP) Software**

McClellan Capability: McClellan AFB personnel are capable of modifying operational software to correct deficiencies in existing programs developed by others; to modify software to change the operation or behavior of existing software; to develop new software to increase or modify the functions of the weapon system; and to develop complete operational software packages for new equipment.

Current Number Of People Authorized:	170	F-111:	79
Current Number Of People Assigned:	170	F-111:	79

Capacity in Man-hours		_____
1 Shift		

<u>Software - OFP</u>	<u>Tinker</u>	<u>Hill</u>	<u>Kelly</u>	<u>McClellan</u>	<u>Robins</u>	<u>Total/Change</u>
AFMC TRC/Process Study	202	261	35	209	339	1046
AFMC Study with 30% Overhead	263	340	46	272	441	1362
OSD Decision						
Air Force Recommendation	-39	-65	-19	-80	-56	-259
AFMC Alternative Recommendation	-39	-65	-19	-80	-56	-259

## Operation Flight Program (OFP) Software



Operational software is that used in weapon systems (airborne or ground) that causes the equipment to perform the functions designed and implemented for the weapon system. A typical operational software implementation involves the use of one or more computers and controllers, sensors, indicators, etc., that permits the computer to collect data related to the weapon system environment and drive the weapon system to respond to that environment

**SM-ALC Technology Repair Center (TRC)/Center Of Technical Excellence(CTX)**

Subject: **Inspection**

McClellan Capability: McClellan AFB is equipped to perform all standard Non-Destructive Inspection (NDI) processes at McClellan or on site at locations around the world. Additionally, some of our unique capabilities are outlined below:

1. McClellan has two of the largest programmable robots in the world that are capable of inspecting complete fighter-sized aircraft. Inspection can be done in real-time or stored on film.

2. McClellan has the only TRIGA reactor in DoD and the only one in the world that is dedicated to neutron inspection. This neutron inspection system is attached to a robot for inspecting aircraft in real-time. Neutron radiography, unique in DoD at McClellan AFB, is capable of detecting very small amounts of moisture and corrosion inside parts, assemblies and aircraft. This reactor is also used for leading edge research projects such as the Silicon Doping project for NASA and boron capture therapy for brain tumor treatment. Because of the unique design of this system, and our ability to safely expose materials to the reactor core, we are capable of a multitude of experiments that can be performed for DoD and non-DoD customers.

3. A Laser Ultrasonic Inspection System (LUIS) is being installed to supplement our water based ultrasonic inspection system. This system uses a laser beam to transmit a sound wave through a part. The echo is then captured and computer images are generated that can be analyzed for signs of internal corrosion, delamination, or other defects. This robotically controlled system was developed in partnership with the Canadian Government and Wright Labs.

Current Number Of People Authorized: 56

Current Number Of People Assigned: 51

Capacity in Man-hours	
1 Shift	102,778

<u>Inspection</u>	<u>Tinker</u>	<u>Hill</u>	<u>Kelly</u>	<u>McClellan</u>	<u>Robins</u>	<u>Total/Change</u>
AFMC TRC/Process Study	140	46	252	67	96	601
AFMC Study with 30% Overhead	182	60	328	88	125	783
OSD Decision						
Air Force Recommendation	-28	-10	-50	-15	-20	-123
AFMC Revised Recommendation	-28	-10	-50	-15	-20	-123

## Inspection



We perform Non-destructive testing and inspection of intact aircraft and components. Processes include Magnetic Penetrant, Magnetic Rubber, Ultrasonic, Eddy Current, X-Ray and N-Ray.

**SM-ALC Technology Repair Center (TRC)/Center Of Technical Excellence(CTX)**

Subject: **Machine Repair**

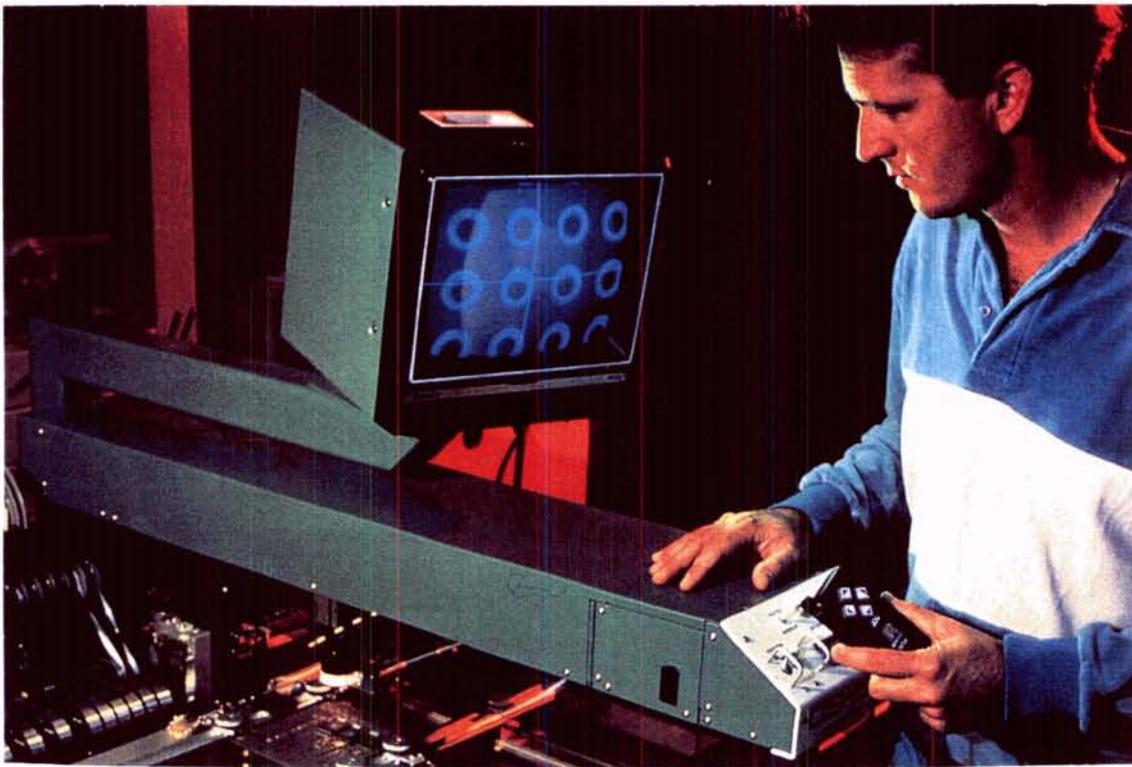
McClellan Capability    McClellan has the capability to repair virtually any machined part.

Current Number of People Authorized:            66  
 Current Number of People Assigned:            66

Manhours:	
Capacity (1 Shift)	101,244

<u>Machine Repair</u>	<u>Tinker</u>	<u>Hill</u>	<u>Kelly</u>	<u>McClellan</u>	<u>Robins</u>	<u>Total/Change</u>
AFMC TRC/Process Study	297	141	702	66	33	1239
AFMC Study with 30% Overhead	387	184	913	86	43	1613
OSD Decision						
Air Force Recommendation	-46	-26	-80	-12	-7	-171
AFMC Alternative Recommendation	-46	-26	-80	-12	-7	-171

## Machine Repair



All machining workloads associated with the overhaul and repair of aircraft, engine and accessory components fit into this category. This consists of accomplishing repair using a variety of machining equipment and other processes including heat treat, plating, cleaning, blasting, shot peening, plasma spray, welding, painting, tool and die, quality verification lab support and non-destructive inspection. Typically, items repaired have no source of supply and would require procurement action to obtain a replacement item. Items may be as small as a mounting bracket or as large as a major aircraft structural element.

**SM-ALC Technology Repair Center (TRC)/Center Of Technical Excellence(CTX)**

Subject: **Hydraulics/Pneudraulics**

McClellan Capability: Our hydraulic repair capability is the most advanced capability of its kind in the world. It is the largest aircraft-related hydraulic and pneudraulic overhaul and repair capability in DoD. The 186,000 sq ft new and modern facility has five separate hydraulic manifold systems with 4000 psi working pressure and 6000 proof psi and expansion capability to 8000 proof psi. There are 70 hydraulic test stands built by manufacturers such as Dayton T. Brown, Vickers, ACL Technologies, R.R. Textron, MOOG, Parker Hanifin, Greer, Weston, and Sprauge. Pump and motor test stands are 3000 psi with flow to 70 gallons per minute and regulated temperatures up to 240 degrees F. The facility has a controlled temperature and humidity, 300,000 class air particle environment as well as a 100,000 class metrology lab and 100,000 class laminar flow stations. There is also a computer operated mechanized material handling system, precision lapping equipment, and precision measuring equipment. It has highly skilled artisans with 21 different skills capable of providing complete "ground-up" rebuild and re-manufacture of components, and complete plating and machining support. Support can be provided for any pneudraulic component, whether ground equipment or aircraft.

Current Number Of People Authorized: 255  
 Current Number Of People Assigned: 255

Capacity in Manhours |  
 1 Shift | 391,170

<u>Hydraulics/Pneudraulics</u>	<u>Tinker</u>	<u>Hill</u>	<u>Kelly</u>	<u>McClellan</u>	<u>Robins</u>	<u>Total/Change</u>
AFMC TRC/Process Study				255		255
AFMC Study with 30% Overhead				332		332
OSD Decision	-2	-7	-3	-38	-2	-52
Air Force Recommendation	-3	-10	-4	-59	-3	-79
AFMC Alternative Recommendation	-3	-10	-4	-59	-3	-79

## Hydraulics/Pneudraulics



This technology includes mechanical repair of items that are operated by the basic hydraulic principles of applying force to fluids to achieve an increased efficiency of the applied force. Repair includes disassembly, refurbishment/replacement of parts, precision fitting, reassembly, and test.

**SM-ALC Technology Repair Center (TRC)/Center Of Technical Excellence(CTX)**

Subject: **Metal Manufacturing - Machine Manufacturing**

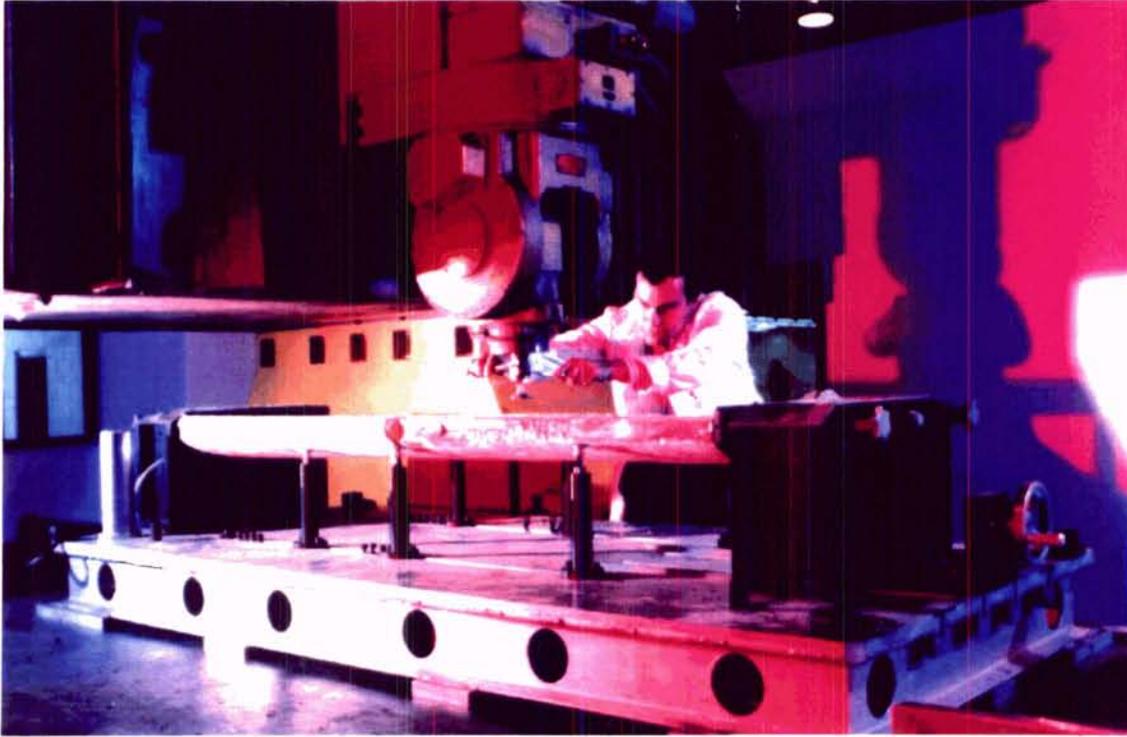
McClellan Capability: McClellan has the capability to manufacture virtually any machined part. We can produce the drawings and programs necessary to replicate the part, and do the machining necessary to produce the part.

Current Number Of People Authorized: 48  
 Current Number Of People Assigned: 48

Capacity in Manhours		
1 Shift		73,632

<u>Metal Machine Manufacturing</u>	<u>Tinker</u>	<u>Hill</u>	<u>Kelly</u>	<u>McClellan</u>	<u>Robins</u>	<u>Total/Change</u>
AFMC TRC/Process Study	70	61	30	48	127	336
AFMC Study with 30% Overhead	91	80	39	63	166	439
OSD Decision	16	-61	-30	-48	77	-46
Air Force Recommendation	16	-63	-31	-50	77	-51
AFMC Alternative Recommendation	16	-63	-31	-50	77	-51

## Metal Manufacturing - Machine Manufacturing



This type of manufacturing is the machining of aircraft, engine, and accessory components from raw material to finished parts. It consists of procuring raw material, certifying material, and manufacturing using a variety of machining equipment and other processes such as heat treat, plating, cleaning, blasting, shot peening, welding, painting, tool and die, quality verification lab support, and non-destructive inspection

**SM-ALC Technology Repair Center (TRC)/Center Of Technical Excellence(CTX)**

Subject: **Sheet Metal Repair/Sheet Metal Manufacturing**

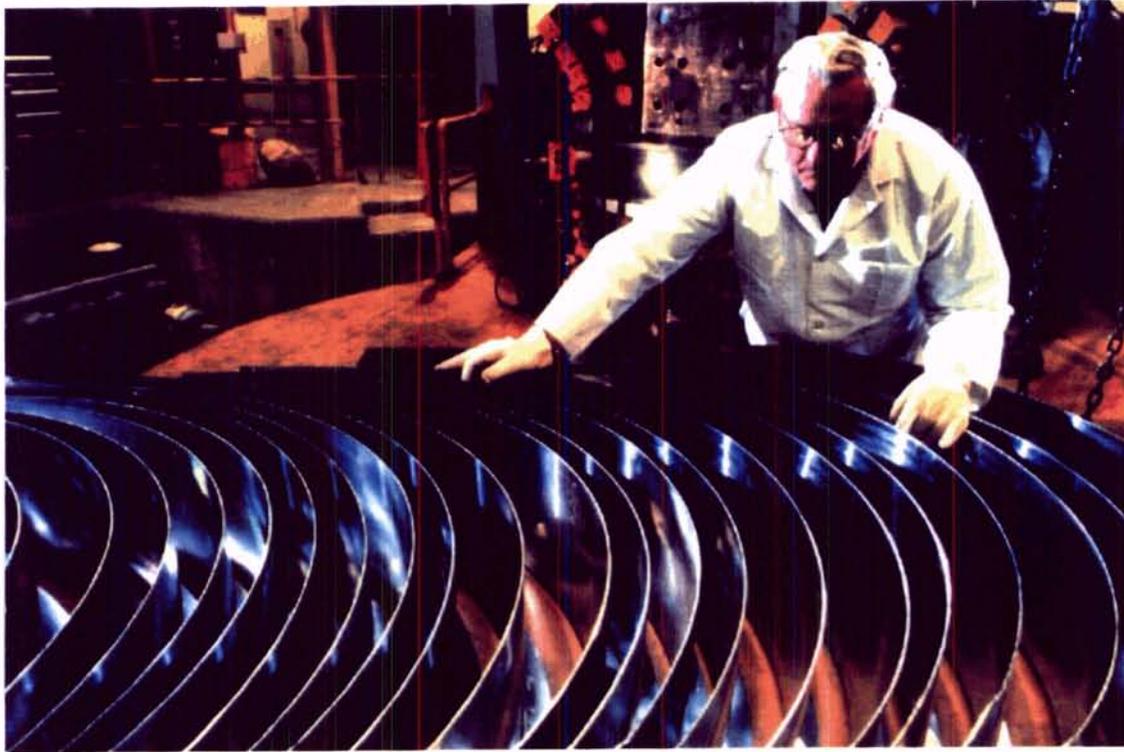
McClellan Capability: McClellan AFB has the capability to perform sheetmetal repair and manufacturing of virtually any applicable aircraft component. We have the necessary general purpose equipment for most applications and the specialized jigs and fixtures for assigned weapon systems.

Current Number Of People Authorized: 79  
Current Number Of People Assigned: 79

Capacity in Manhours  
1 Shift | 121,186

<b>Sheet Metal Manufacturing/Repair</b>	<b>Tinker</b>	<b>Hill</b>	<b>Kelly</b>	<b>McClellan</b>	<b>Robins</b>	<b>Total/ Change</b>
AFMC TRC/Process Study	234	53	76	79	478	920
AFMC Study with 30% Overhead	305	69	99	103	622	1198
OSD Decision	-549	436	-138	-43	-174	-468
Air Force Recommendation	-170	353	-38	-40	-192	-87
AFMC Alternative Recommendation	-43	-10	-16	-17	-71	-157

## Sheet Metal Repair and Sheet Metal Manufacturing



Sheet metal repair is the repair and refurbishment of basic airframe structural components, flight controls and other integral airframe components. It includes inspection, repair or replacement of defective parts, and reassemble. Sheet Metal Manufacturing consists of fabrication of aircraft, engine and accessory components. It consists of procuring and certifying material, then manufacturing the required component using a variety of machinery and equipment to layout, cut, form, fit, test, and assemble parts. It uses processes such as heat treat, foundry, plating, cleaning, welding, painting, machining, tool and die, and quality verification lab support, and non-destructive inspection.

**SM-ALC Technology Repair Center (TRC)/Center Of Technical Excellence(CTX)**

Subject: **Paint/Depaint**

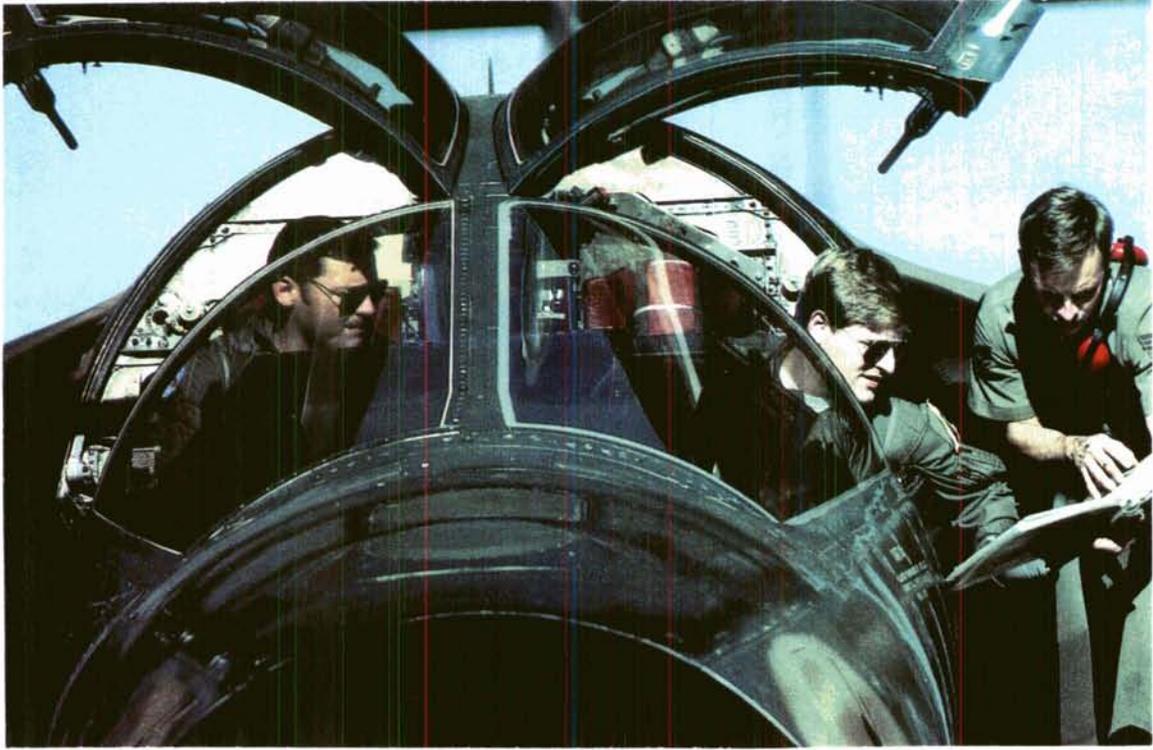
SM-ALC Capability: McClellan AFB has the equipment, facilities and skills to depaint and paint all aircraft for which we perform depot level maintenance.

Current Number Of People Authorized: 83  
Current Number Of People Assigned: 83

Capacity in Man-hours |  
1 Shift | 127,322

<b><u>Paint/Depaint</u></b>	<b><u>Tinker</u></b>	<b><u>Hill</u></b>	<b><u>Kelly</u></b>	<b><u>McClellan</u></b>	<b><u>Robins</u></b>	<b><u>Total/Change</u></b>
AFMC TRC/Process Study	192	56	125	103	127	603
AFMC Study with 30% Overhead	250	73	163	134	166	786
OSD Decision	-29	-8	-19	-16	-20	-92
Air Force Recommendation	-38	-12	-25	-21	-26	-122
AFMC Alternative Recommendation	-38	-12	-25	-21	-26	-122

## Paint/Depaint



Remove paint from aircraft using chemical means or using plastic media blasting. Paint aircraft using requisite paints and apply applicable decals and insignia.

**SM-ALC Technology Repair Center (TRC)/Center Of Technical Excellence(CTX)**

Subject: **Automatic Test Equipment (ATE) Software**

McClellan Capability: McClellan AFB has capability and extensive experience in all three of the major categories of ATE software:

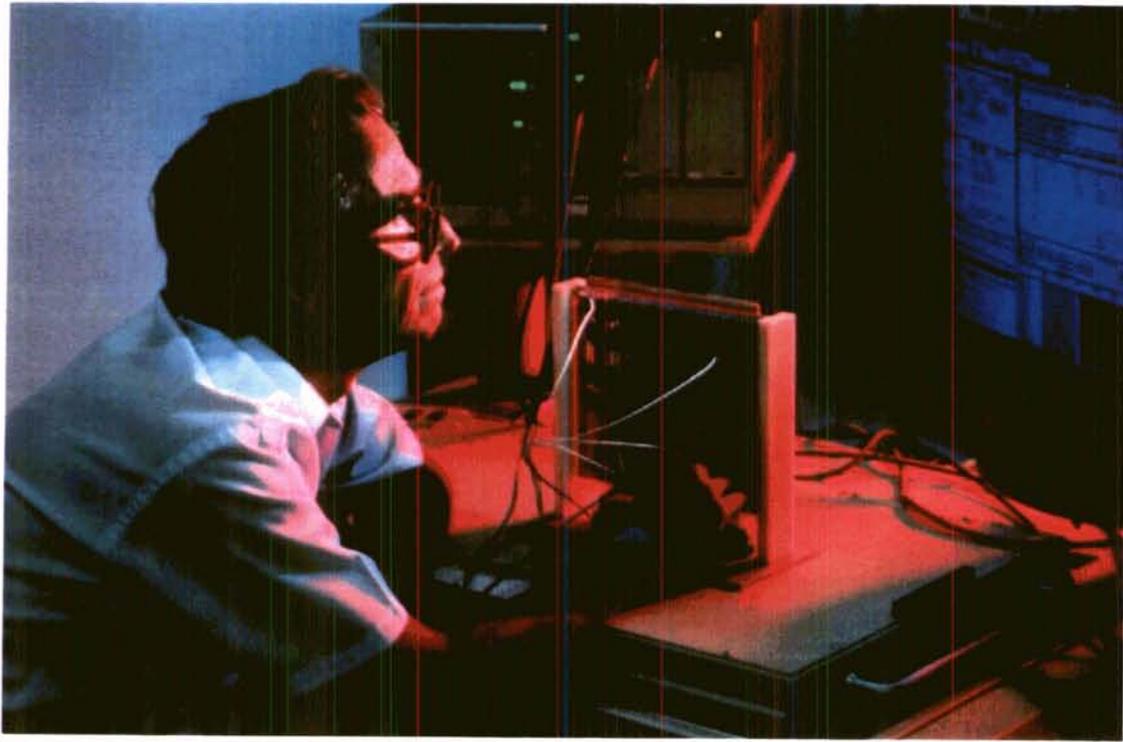
1. Sustainment. This involves the correction or improvement of software already in use.
2. Support. Support software is associated with the test equipment that is used to identify faulty components. It is intended to correct deficiencies in tester function.
3. Development. This involves the creation of a new test capability either for the depot or intermediate level for new or modified weapon systems. It may use new or existing test equipment. McClellan personnel can develop the software specific to the tester and assembly being diagnosed; design and build the Interface Test Adapter that connects the assembly to the test equipment; and prepare all necessary documentation to assure a smooth transition from the software developer to the maintainer.

Current Number Of People Authorized:	133	Avionics:	21
Current Number Of People Assigned:	133	Avionics:	21

Capacity in Man-hours		_____
1 Shift		

<u>Software - ATE</u>	<u>Tinker</u>	<u>Hill</u>	<u>Kelly</u>	<u>McClellan</u>	<u>Robins</u>	<u>Total/Change</u>
AFMC TRC/Process Study	108	244	69	172	304	897
AFMC Study with 30% Overhead	141	318	90	224	396	1169
OSD Decision	-108	81	-75	-172	81	-193
Air Force Recommendation	-88	-26	-46	-21	73	-108
AFMC Alternative Recommendation	-88	-26	-46	-21	73	-108

## Automatic Test Equipment (ATE) Software



ATE Software is test software that is used to determine the serviceability of an item. It includes the software associated with the item being tested as well as the software for the test equipment being used. It is used to identify faulty components in electronic assemblies or sub-assemblies

**SM-ALC Technology Repair Center (TRC)/Center Of Technical Excellence(CTX)**

Subject: **Foundry Operations**

SM-ALC Capability: The SM-ALC foundry is one of the largest and best equipped facilities in the Command. The foundry meets the higher California environmental requirements and is working with the EPA to develop the standards for Title 3 Maximum Achievable Control Technology.

Current Number Of People Authorized: 5

Current Number Of People Assigned: 5

Capacity in Man-hours |  
1 Shift | 7,670

<u>Foundry</u>	<u>Tinker</u>	<u>Hill</u>	<u>Kelly</u>	<u>McClellan</u>	<u>Robins</u>	<u>Total/Change</u>
AFMC TRC/Process Study		5	10	5	1	21
AFMC Study with 30% Overhead		7	13	7	2	29
OSD Decision			3	-5	-1	-3
Air Force Recommendation		-2	7	-7	-2	-4
AFMC Alternative Recommendation		-2	7	-7	-2	-4

## Foundry Operations



Casting of aircraft, engine, or other system components.

**SM-ALC Technology Repair Center (TRC)/Center Of Technical Excellence(CTX)**

Subject: **Plating**

McClellan Capability: McClellan AFB is capable of performing virtually all industrial plating processes including stylus plating, chemical milling, metal plating (copper, chrome, silver, gold, tin, cadmium, silver rhenium and decorative), electroless-bright-sulfamate nickel plating, and alodine-anodize-phosphoric acid anodize. We provide engineering services for special process development, process and chemical prototyping/verification/testing, and development of technical data. We have skills and equipment for over 28 electroplating processes, electro-deposition, and 14 material cleaning processes.

Current Number Of People Authorized: 21  
 Current Number Of People Assigned: 21

Capacity in Man-hours  
 1 Shift | 32,214

<u>Plating</u>	<u>Tinker</u>	<u>Hill</u>	<u>Kelly</u>	<u>McClellan</u>	<u>Robins</u>	<u>Total/Change</u>
AFMC TRC/Process Study	30	48	102	27	27	234
AFMC Study with 30% Overhead	39	63	133	36	36	307
OSD Decision				-27		-27
Air Force Recommendation	-7	15	-21	-28	-6	-47
AFMC Recommendation	-5	-10	-20	-5	-6	-46

## Plating



Plating is a metal finishing process that restores dimensions and improves properties, such as corrosion resistance, hardness, and surface lubricity, so parts can perform within their design parameters. At SM-ALC plating is used as a vital repair process to rebuild worn expensive parts, and to protect newly manufactured parts from wear and corrosion. Plating is an integral back shop process that crosses almost all the TRCs supported at McClellan AFB.

**SM-ALC Technology Repair Center (TRC)/Center Of Technical Excellence(CTX)**

Subject: **Injection Molding**

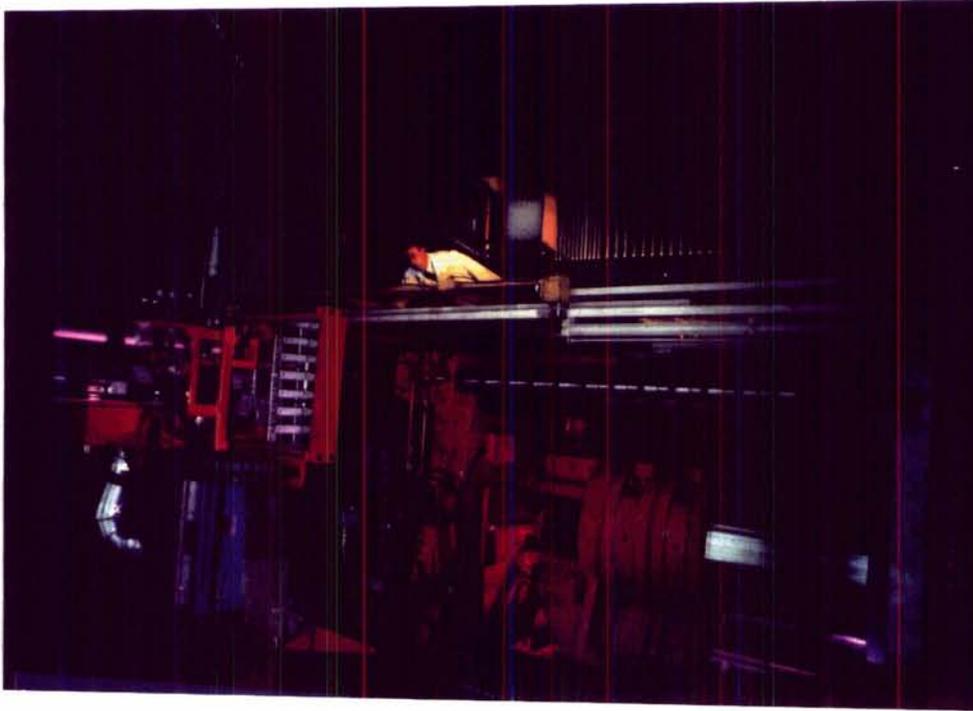
SM-ALC Capability: McClellan's capability is unique in that it is the largest facility of its kind in the DoD. This facility provides a test and development arena for the resolution of DoD problems relating to composites and plastics. Our injection molding capability was instrumental in the competition, award and subsequent production of the A-10 Link Tube second source contract. This milestone was important because it represents the first time a DoD agency was able to compete for and win a workload that previously had been awarded to the private sector. It proved we could provide both capability and value.

Current Number Of People Authorized: 7  
Current Number Of People Assigned: 7

Capacity in Man-hours |  
1 Shift | 10,738

<u>Injection Molding</u>	<u>Tinker</u>	<u>Hill</u>	<u>Kelly</u>	<u>McClellan</u>	<u>Robins</u>	<u>Total/ Change</u>
AFMC TRC/Process Study		2		2		4
AFMC Study with 30% Overhead		3		3		6
OSD Decision		-2		-2		-4
Air Force Recommendation		-3		2		-1
AFMC Alternative Recommendation		-3		2		-1

## Injection Molding



This technology includes all types of injection such as liquid crystal, polymers, engineering plastics, polyurethane impregnated fiberglass and acrylic plastics.

**SM-ALC Technology Repair Center (TRC)/Center Of Technical Excellence(CTX)**

Subject: **Electronic Manufacturing (Printed Wire Boards)**

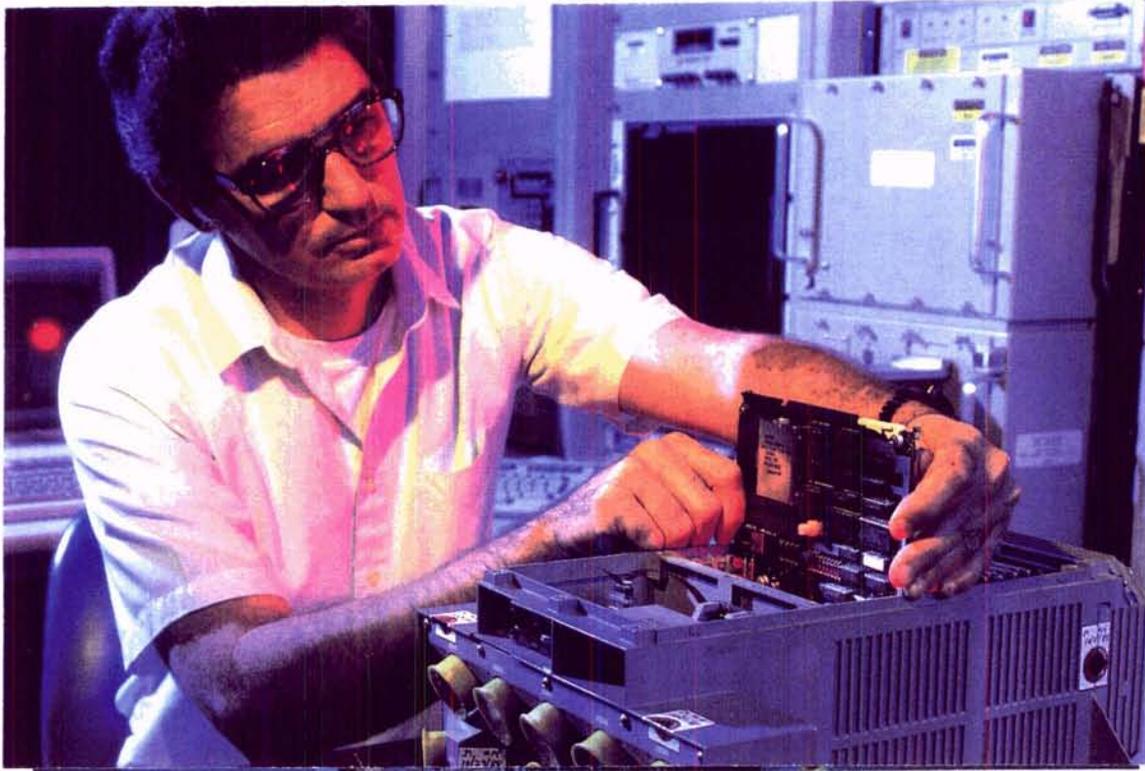
McClellan Capability: We have the capability to manufacture, test, and repair every type of circuit board found in industry including surface mounted assemblies, flexible circuit boards and multi-layer boards.

Current Number Of People Authorized: 7  
 Current Number Of People Assigned: 7

Capacity in Manhours |  
 1 Shift | 10,738

<u>PWB Manufacturing</u>	<u>Tinker</u>	<u>Hill</u>	<u>Kelly</u>	<u>McClellan</u>	<u>Robins</u>	<u>Total/Change</u>
AFMC TRC/Process Study		22		17	40	57
AFMC Study with 30% Overhead		28		23	52	103
OSD Decision		-22		-17	23	-16
Air Force Recommendation		-29		-23	38	-14
AFMC Alternative Recommendation		29		-9	-41	-21

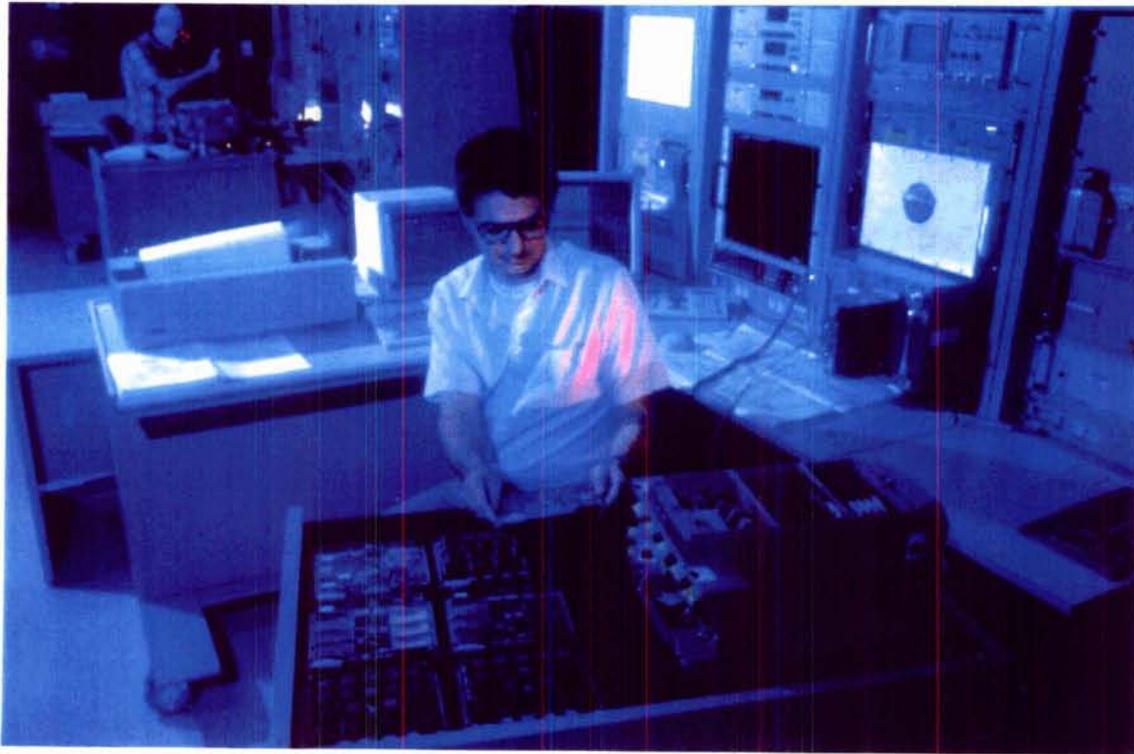
## Electro/Mechanical Support Equipment



This technology includes repair of items used in repair and test operations for all types of military equipment by all levels of maintenance. Included is equipment for measuring electrical and electronic properties such as ammeters, voltmeters, ohmmeters, and multi-meters. It also includes automatic test equipment that is programmed to perform tests on various aircraft systems automatically and operate on a fault isolation technique or a go/no-go basis.



## Airborne Electronics



Airborne Electronics encompasses the full range of aircraft-mounted electronics equipment including all communications, fire control, communication-navigational, electronic warfare, and general electronic control equipment. Within these categories is the full spectrum of components and sub-components such as UHF, VHF, HF, VLF, communications sets, intercoms, TV and audio equipment, antennas, radar sights, computers, weapons preparation and release, and ancillary equipment associated with comm/nav and fire control systems for bombs, guns and air-launched missiles.

**SM-ALC Technology Repair Center (TRC)/Center Of Technical Excellence(CTX)**

Subject: **Electro/Mechanical Support Equipment**

McClellan Capability: McClellan offers complete reverse engineering for applicable equipment components, prototyping and process development, ground-up technical data development, complete component redesign, technical order verification, and acquisition program hardware and, software functional data review and consultation.

Current Number Of People Authorized: 76  
Current Number Of People Assigned: 70

Capacity in Man-hours |  
1 Shift | 116,584

<b><u>Electro/Mechanical Support Equip</u></b>	<b><u>Tinker</u></b>	<b><u>Hill</u></b>	<b><u>Kelly</u></b>	<b><u>McClellan</u></b>	<b><u>Robins</u></b>	<b><u>Total/ Change</u></b>
AFMC TRC/Process Study				76	2	78
AFMC Study with 30% Overhead				99	3	102
OSD Decision				-6	-2	-8
Air Force Recommendation				-11	-3	-14
AFMC Alternative Recommendation				-11	-3	-14

## Electronic Manufacturing (Harnesses)



Manufacture wiring and cable assemblies to include standard, braided, braid sleeve, nuclear hardened, ribbon, rigid, and coaxial types to support other depot repair or manufacturing operations.

**SM-ALC Technology Repair Center (TRC)/Center Of Technical Excellence(CTX)**

Subject: **Airborne Electronics**

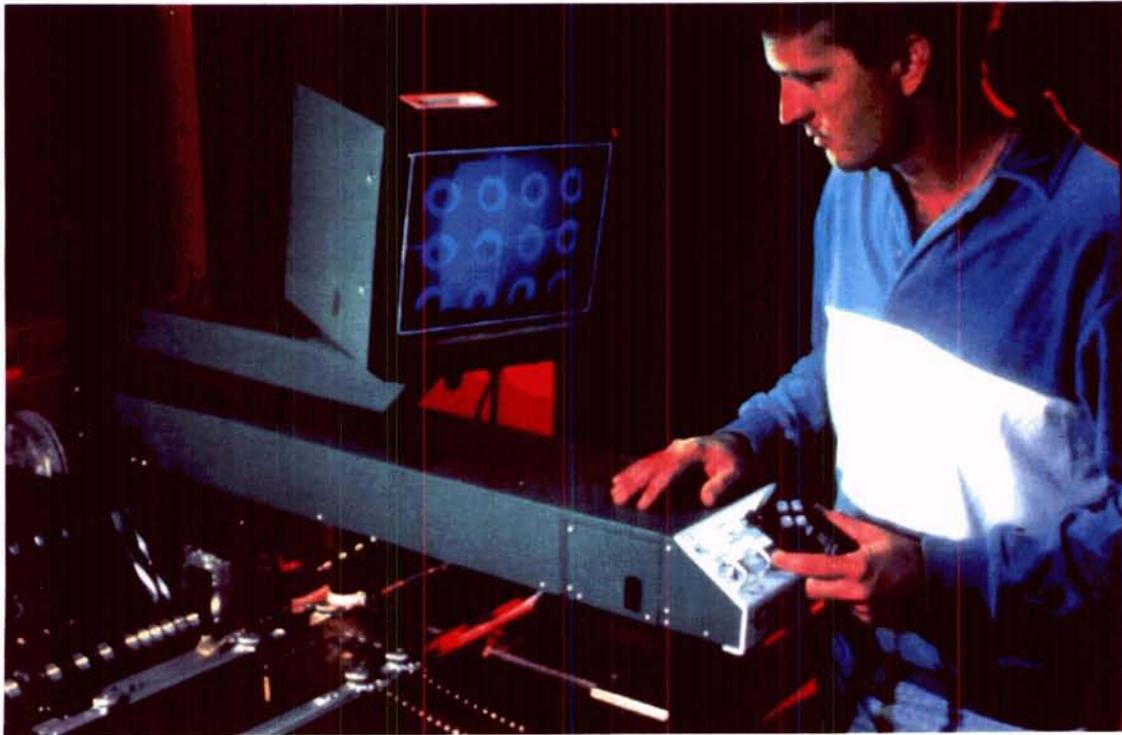
McClellan Capability: McClellan AFB's Airborne Electronics workload is limited to specific systems on the F-111 aircraft. However, we also are the designated center for ground communications-electronics, and the technologies required are very similar to those in airborne systems.

Current Number Of People Authorized: 83  
 Current Number Of People Assigned: 83

Capacity in Man-hours  
 1 Shift | 127,322

<u>Airborne Electronics</u>	<u>Tinker</u>	<u>Hill</u>	<u>Kelly</u>	<u>McClellan</u>	<u>Robins</u>	<u>Total/Change</u>
AFMC TRC/Process Study	26	209		83	713	796
AFMC Study with 30% Overhead	34	272		108	927	1035
OSD Decision	-4	-37		-92	-119	-252
Air Force Recommendation	-39	-42		-108	-15	-204
AFMC Alternative Recommendation	-39	-42		-108	-15	-204

## Electronic Manufacturing (Printed Wire Board)



This is the manufacture of printed wire boards from schematics, customer provided artwork or through reverse engineering. It includes cutting blanks, mounting required components, and imprinting lines and spaces.

**SM-ALC Technology Repair Center (TRC)/Center Of Technical Excellence(CTX)**

Subject: **Electronic Manufacturing (Harnesses)**

SM-ALC Capability: McClellan AFB has the capability to manufacture all harnesses required for supported aircraft, ground-communications equipment, support equipment, ground power generators and shelters for which the depot is responsible.

Current Number Of People Authorized: 2  
Current Number Of People Assigned: 2

Capacity in Man-hours |  
1 Shift | 3,068

<b><u>Harness Manufacturing</u></b>	<b><u>Tinker</u></b>	<b><u>Hill</u></b>	<b><u>Kelly</u></b>	<b><u>McClellan</u></b>	<b><u>Robins</u></b>	<b><u>Total/ Change</u></b>
AFMC TRC/Process Study	62	9	2	13	59	145
AFMC Study with 30% Overhead	81	12	3	17	77	190
OSD Decision	-9	-1		-2	-9	-21
Air Force Recommendation	-13	-3	-2	-3	9	-12
AFMC Alternative Recommendation	-13	-3	-2	-3	9	-12

## Highlights

*Functional Value: "the merit of performing a cross service function at a given site"*

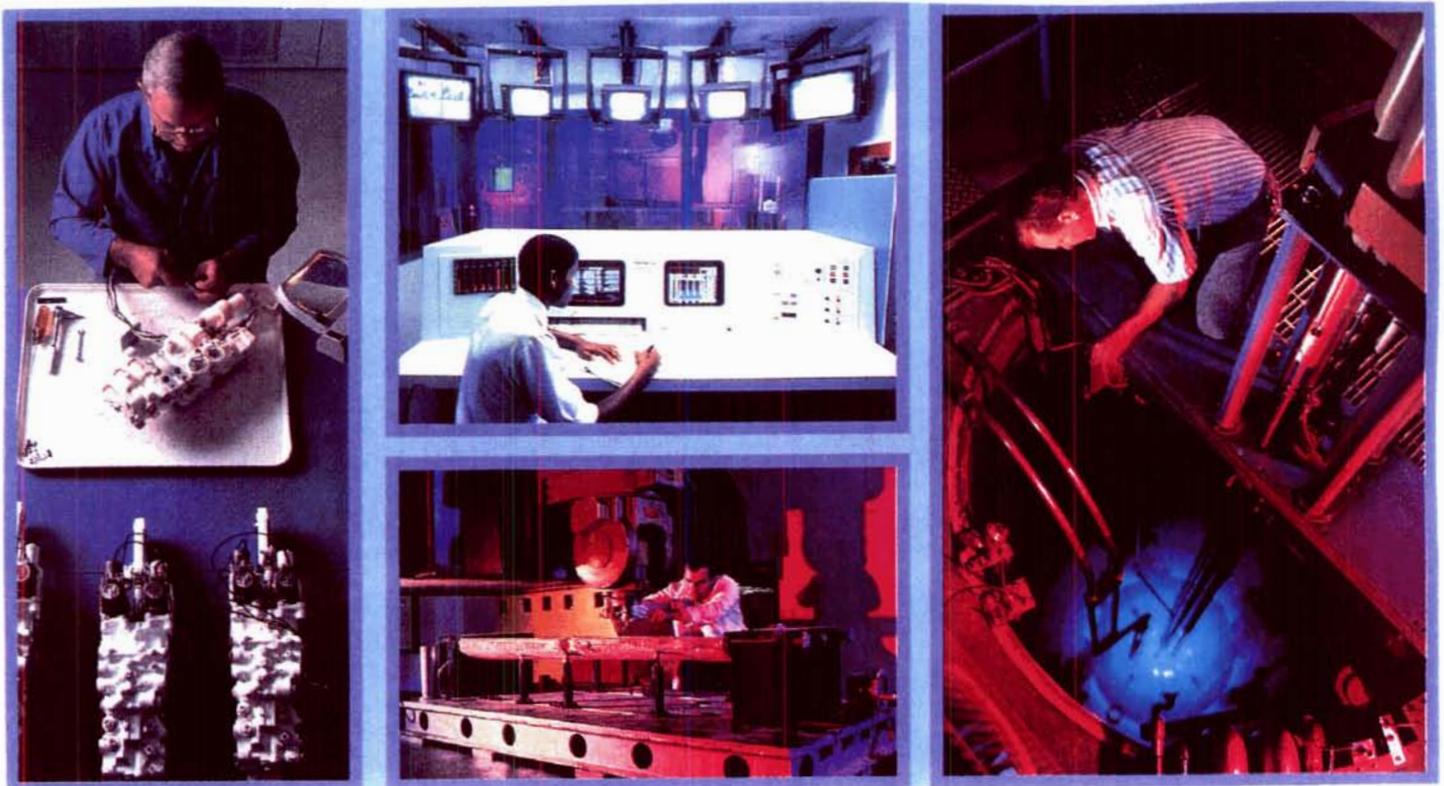
*November 1994:* Rated #1 depot for functional value by the Joint Cross Service Group for Depot Maintenance.

*September 1994:* Rated #2 depot for functional value by the Air Force.

### *Air Logistics Center Performance Data Comparison*

*1991-1995:* In labor efficiency and output per manday, we have consistently ranked in the top two. Historically, we have the best profit/loss in the command.

*Education:* McClellan AFB enjoys the benefits of a highly educated labor pool.



## Functional Value

1. The Joint Cross Service Group for Depot Maintenance (JCSG-DM) was charged with finding the best allocation of the future cross-service functional requirements to DoD sites and activities performing depot maintenance. They determined that the best allocation was consolidation of cross-service functions into a small set of high value sites, provided that those sites have the capacities required to perform the work. To this end, they defined Functional Value as "the merit of performing a cross-service function at a given site or activity."

2. In an attempt to determine functional value of all DoD depots for specific commodities, the JCSG-DM developed a model to compute a numerical value that could be used to discriminate among depots. They used a five part analysis:

- a. Core Workload/Core Capabilities (30 Points Max)
- b. Unique/Peculiar Core Workloads, Capabilities, Capacities (15 Points Max)
- c. Unique/Peculiar Core Workload Test Facilities (15 Points Max)
- d. Other Workloads (30 Points Max)
- e. Environmental Issues/Questions (10 Points Max)

The JCSG-DM applied this model on 28 Nov 94 with the following results:

Commodity	Tinker	Hill	Kelly	McClellan	Robins
Aircraft Air Frame	135	90.5	55	<b>81.5</b>	96.5
Aircraft Components	213	281.5	262	<b>162.5</b>	192
Engines	108.5	20	53	<b>0</b>	0
Missiles	0	120	47	<b>0</b>	19
Ground Combat Vehicles	0	0	0	<b>7.5</b>	0
Grnd & Ship Com & Elec	0	0	0	<b>323.5</b>	50
Ground Group	0	36.5	20	<b>80</b>	0
Software	85.5	97.5	91.5	<b>93.5</b>	104.5
Special Interest Items	65	21	42	<b>0</b>	0
Other	0	0	0	<b>17.5</b>	0
Manufacturing/Fabrication	19	20	21	<b>21.5</b>	23
Total	626	687	591.5	<b>787.5</b>	485

3. Prior to the sharing of data among the services, the Air Force was interested in developing their own Functional Value for the ALCs. They used the same general methodology as the JCSG-DM, but with some modification. They incorporated a *capacity* element, which the JCSG-DM resisted, since it gives an advantage to the larger depots. They also modified the weighting system as follows:

**SM-ALC Technology Repair Center (TRC)/Center Of Technical Excellence(CTX)**

**Subject: Instruments/Displays**

**McClellan Capability:** McClellan is home to the largest, most modern, most comprehensive Instrument and Electronic Component Test and Repair capability in DoD. This facility provides test and repair of a full range of pressure, temperature, humidity and time measurement instruments; flight control and navigational instruments; and flight data cockpit recorders. Skills and capabilities include reverse engineering, unsupportable electronic equipment repair, large wire harness test automation, specialized test equipment manufacture, test system overhaul process development, supportability review, normal repair procedures development, and mil standard technical manual development.

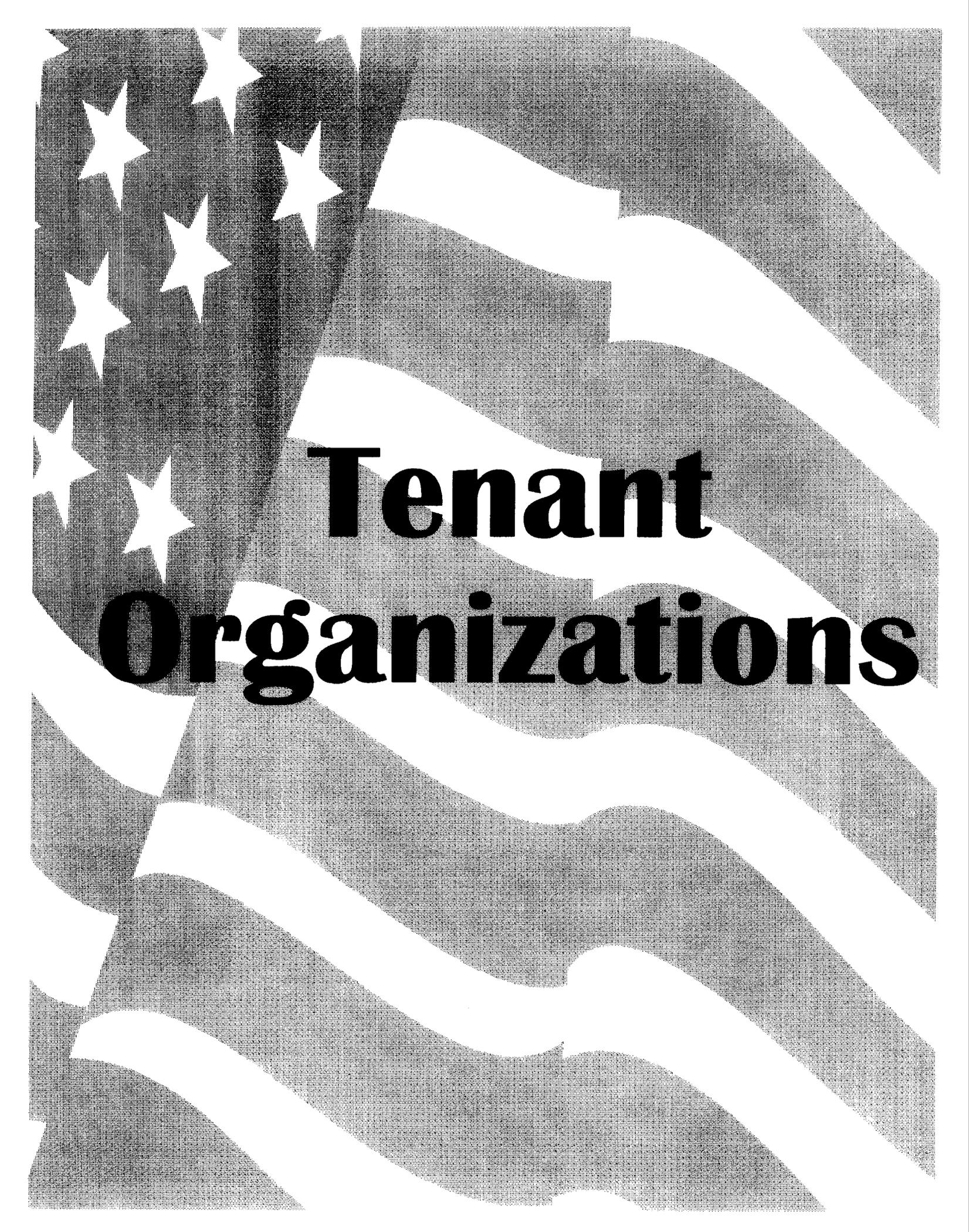
Current Number Of People Authorized: 170  
 Current Number Of People Assigned: 170

Capacity in Man-hours |  
 1 Shift | 260,780

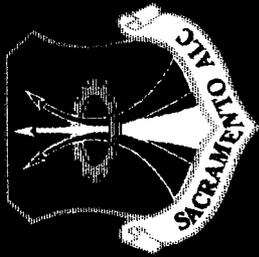
\* There is also considerable capacity in related technologies (Avionics, Electrical Components, etc.) that could be made available for instruments workload.

<u>Instruments/Displays</u>	<u>Tinker</u>	<u>Hill</u>	<u>Kelly</u>	<u>McClellan</u>	<u>Robins</u>	<u>Total/Change</u>
AFMC TRC/Process Study	141	82		190	149	339
AFMC Study with 30% Overhead	184	107		247	194	732
OSD Decision	-169	-82		272	-149	-128
Air Force Recommendation	-184	-101		242	-43	-86
AFMC Alternative Recommendation	64	-101		-221	129	-129

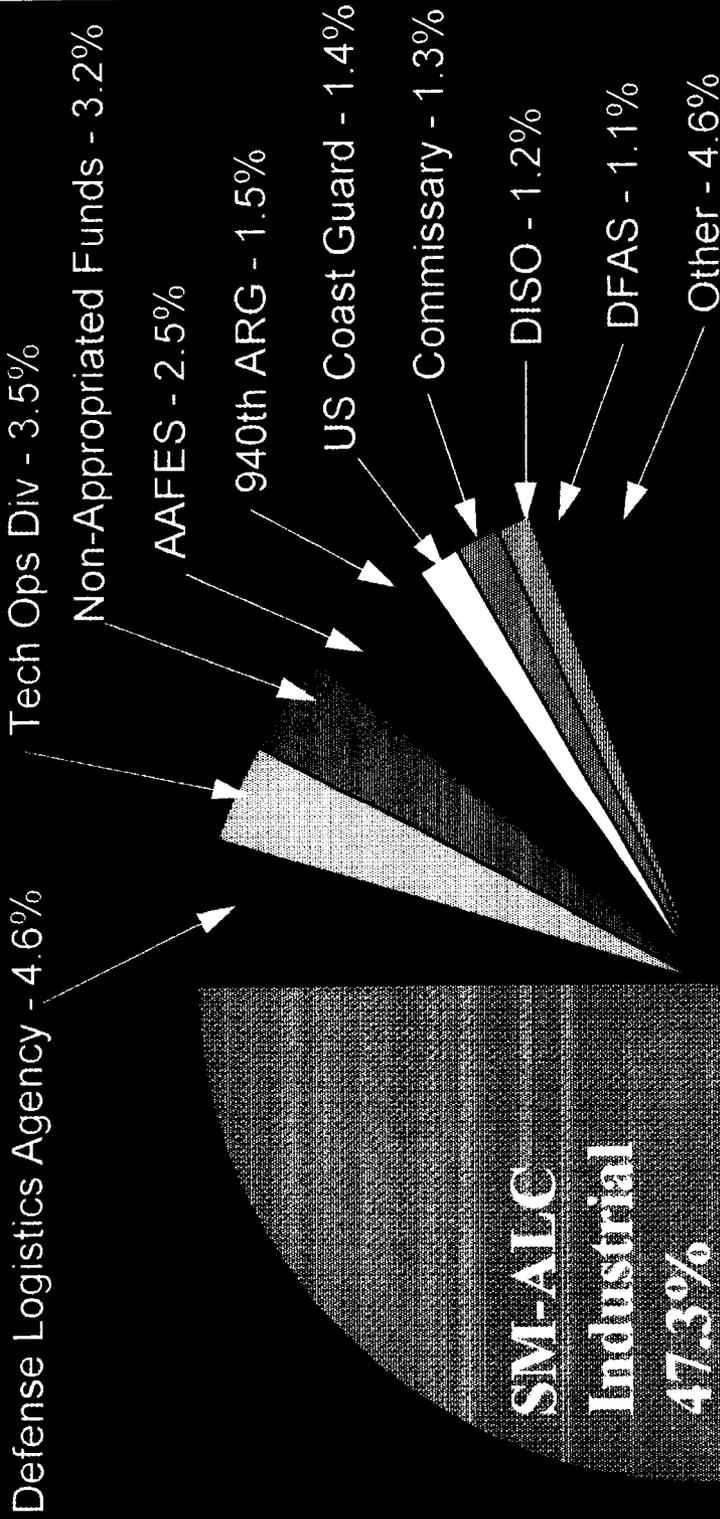




# **Tenant Organizations**

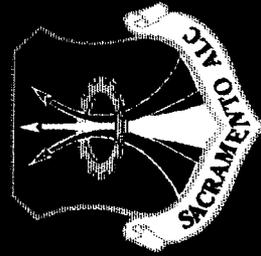


# McClellan AFB Organizations



Civilian - 10,500

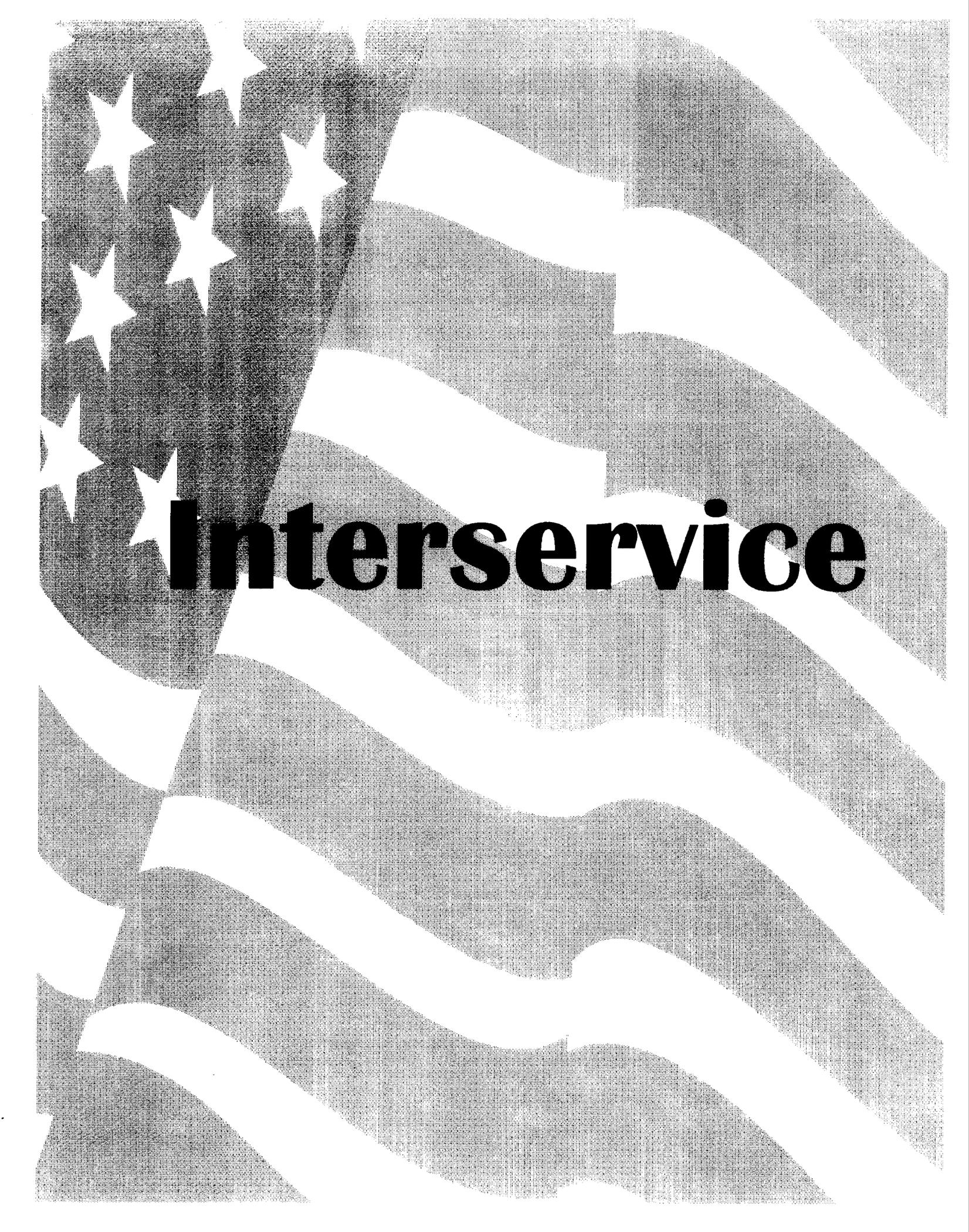
Military - 3,000



## *Base Supported Organizations*

- Defense Distribution - McClellan (DLA)
- Defense Investigative Services
- Technical Operations Division
- United States Coast Guard
- Defense Information Service Agency (DISA)
- 940 Air Refueling Wing
- Naval Media Center
- Defense Printing Service
- Television Audio Services Agency
- Defense Reutilization & Marketing Organization
- DoD Dependent Schools
- Defense Finance & Accounting



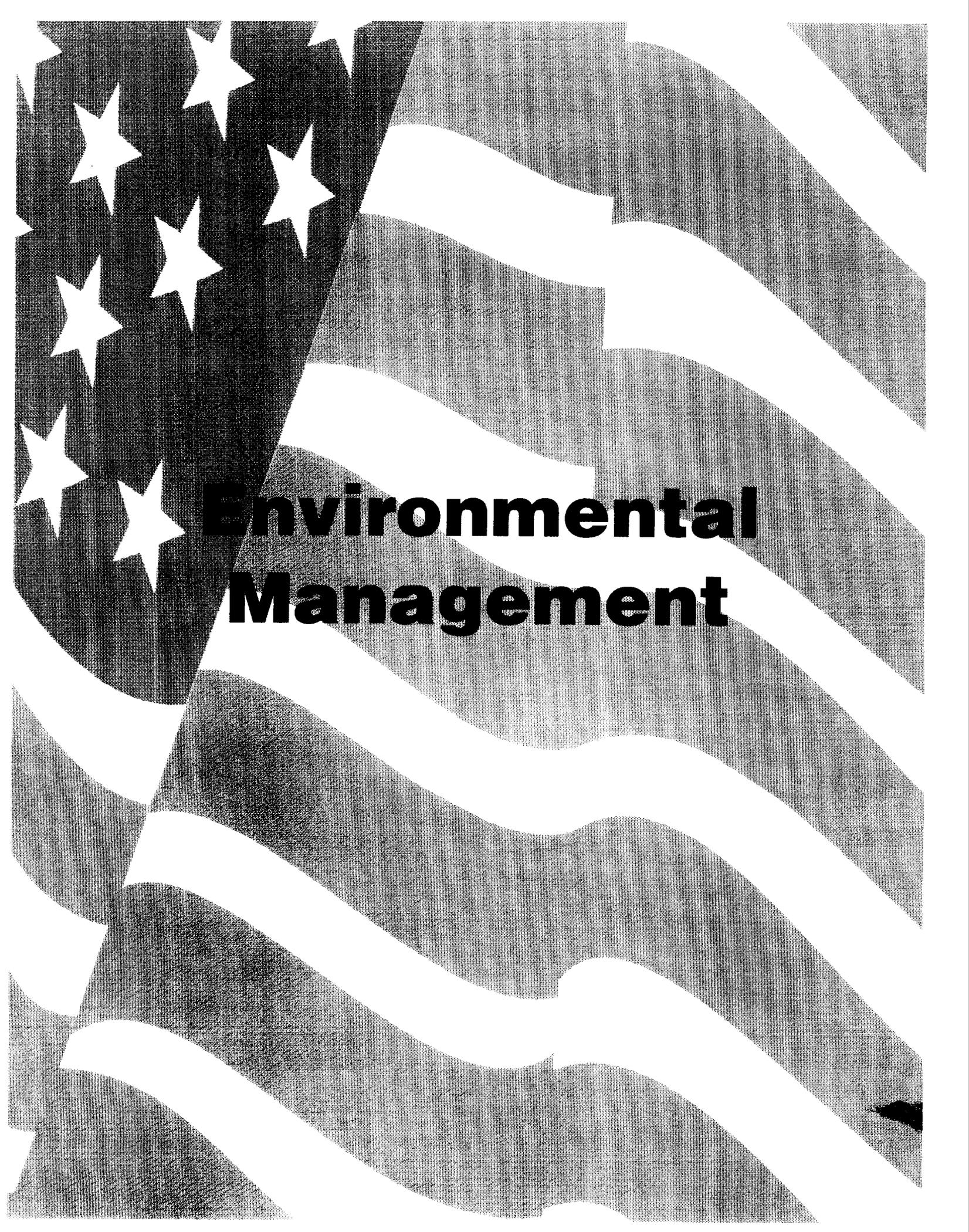


# **Interservice**



# INTERSERVICE SUPPORT

## Sacramento Air Logistics Center McClellan AFB CA

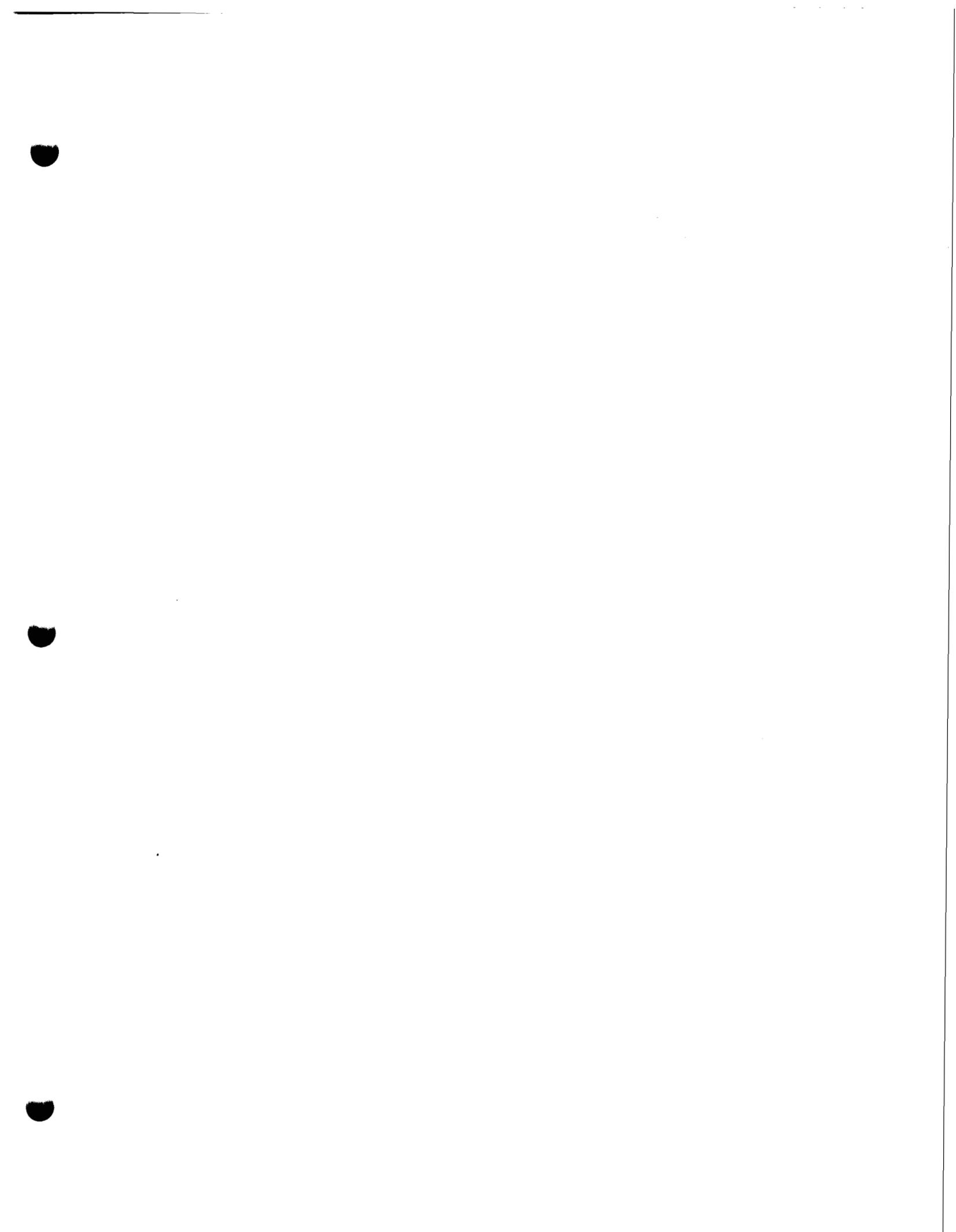


# **Environmental Management**

## Environmental Management



McClellan has a genuine concern for the environment. We demonstrate this concern every day by using fewer chemicals, generating less waste and recycling whenever possible. We also show our concern by stepping out on our own initiative to form partnerships with others. These alliances are improving our environment and opening doors to trust and credibility. They are also serving as models and have been praised by President Clinton, Congressman Vic Fazio, and Deputy Under Secretary of Defense for Environmental Security, Ms. Sherri W. Goodman. Our environmental program is built on cooperation and consensus with the public and the regulatory agencies. In 1991, we formed the Environmental Process Improvement Center (EPIC), a voluntary alliance with California EPA and US EPA Region 9. Its goals include developing innovative technologies, improving pollution prevention, and sharing lessons learned.



## **SM-ALC Technology Repair Center (TRC)/Center Of Technical Excellence(CTX)**

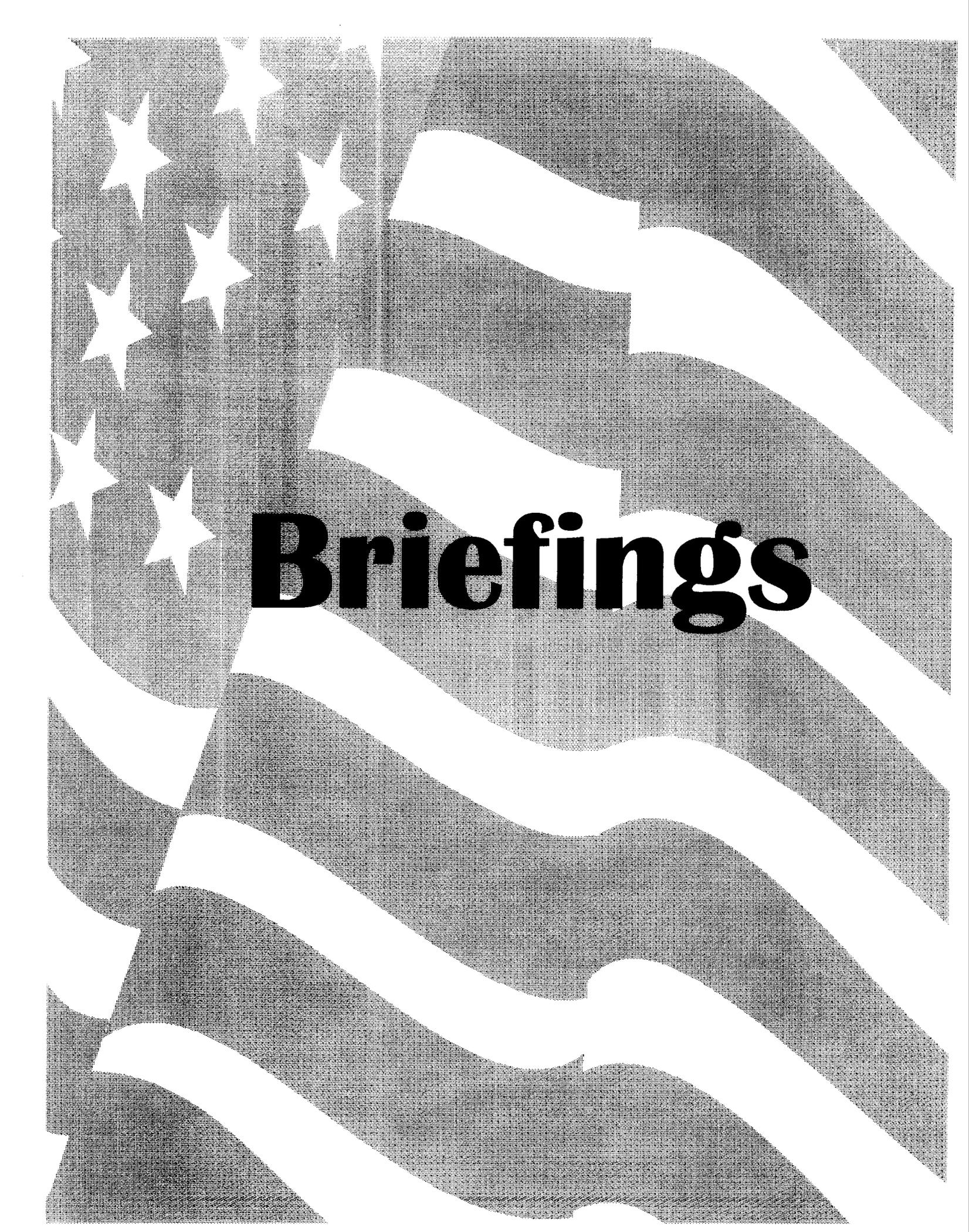
**Subject: Environmental Management**

### **SM-ALC Capability:**

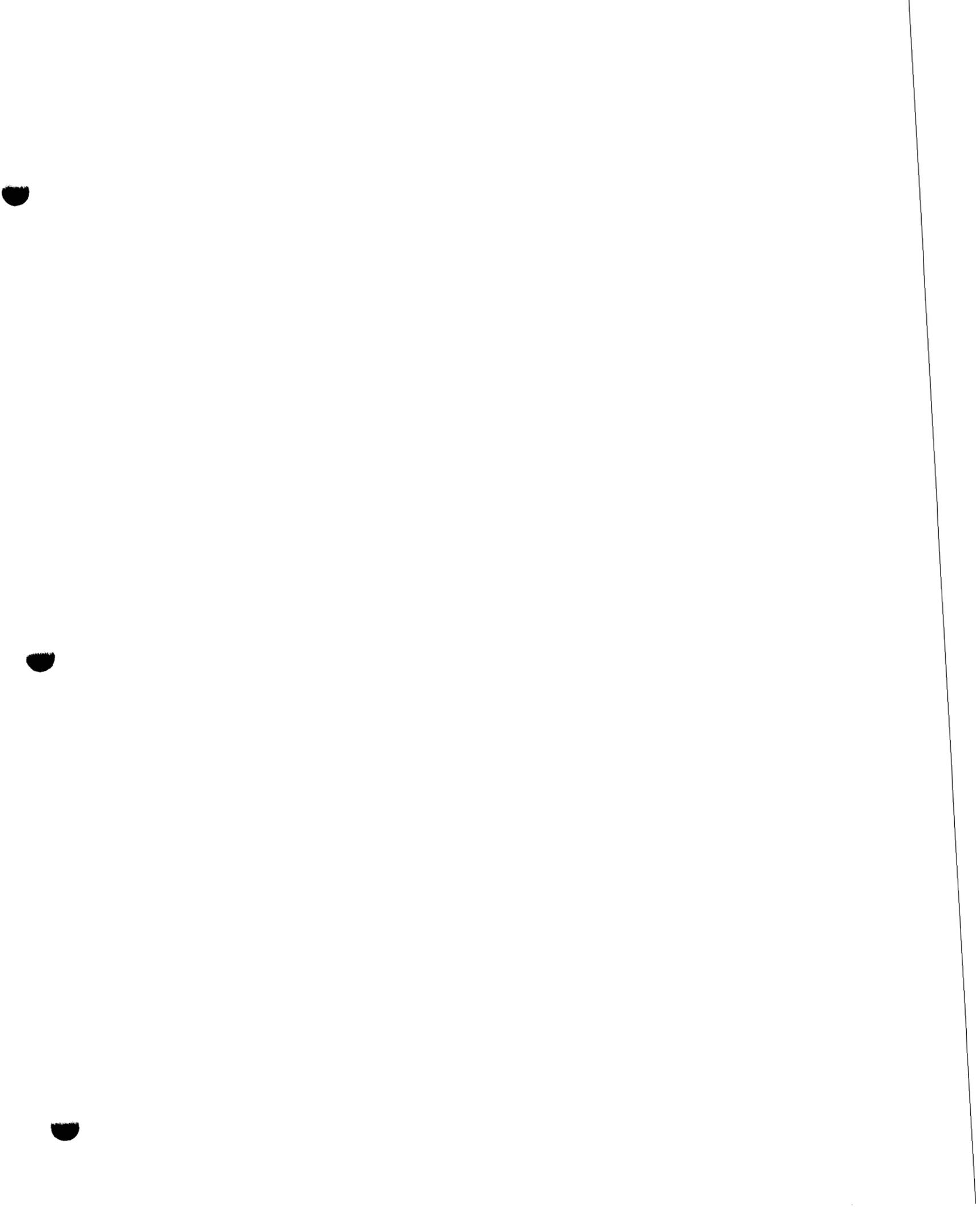
EPIC forms the hub for McClellan's other environmental partnerships. Some partners include the Department of Energy, universities and colleges of California, the Western Governors' Association, regulatory agencies, and private industry. Our joint efforts enable us to channel valuable resources to eliminate duplication of effort. Partners bring some combination of money, people, and facilities to the table and they enhance our knowledge and expertise. In the end, it is a win for the environment and a win for industry and ultimately the economy.

One example is evident in McClellan's role as a sponsored National Test Site for environmental technologies. In this role, we serve as a proving ground for developing, demonstrating, and commercializing environmental technologies. Results obtained here are being shared with the tri-services. The end goal is rapid transfer of technology from laboratory to field application.

We continually show concern for our environment is by fully integrating our environmental program into our industrial mission. As the largest industrial employer in northern California, our mission includes operations such as painting, plating, and degreasing. These provide prime opportunities for improving our industrial processes while improving our environment. On a large scale, we are achieving pollution prevention results. Our environmental metrics show major reductions in EPA 17 and ozone depleting chemicals, air emissions, and solid and hazardous waste disposal. In order to achieve these reductions, accurate and up to date tracking of hazardous material and waste is essential. We developed an advanced computerized system to help control the ordering, licensing, issue and disposal of hazardous materials. This information helps us establish baselines, identify opportunities and update our strategy. In spite of all dedicated effort to prevent pollution, air credits are necessary for a logistics depot to do business in a non attainment area. In a show of true community spirit, Sacramento county banked the air credits freed-up by the closure of Sacramento's other two military installations and will use them to ensure McClellan can continue to accept new workloads.

The image features a stylized, grayscale, halftone American flag. The stars are arranged in a grid in the upper left corner, and the stripes are wavy and flow across the page. The word "Briefings" is printed in a large, bold, black, serif font, centered horizontally and slightly below the vertical center of the page. The background has a fine, dotted texture characteristic of halftone printing.

# Briefings

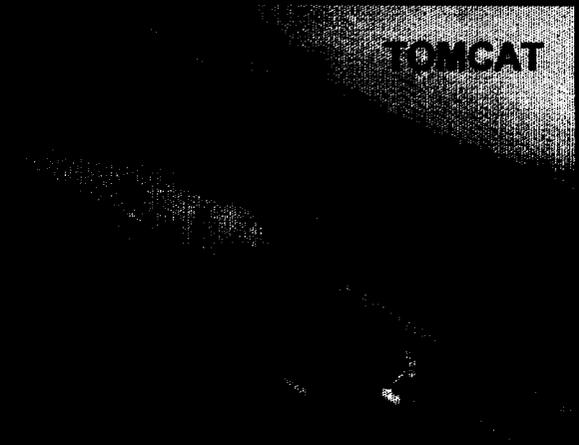


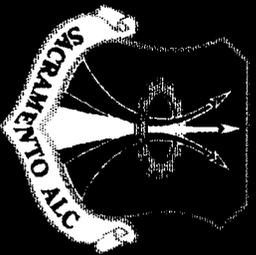


# Interservice Support

## Highlights: NAVY

- Repair F-14 Central Air Data Computer
- Repair Gyros/Indicators
- Manufacture Printed Wire Boards
- NDI (X/N-Ray) entire F-14 Aircraft
- Repair Electro Optics/Night Vision Equipment
- Negotiating NDI of Missile Brackets
- Repair Shipboard/Shore Radars, Electronic Beacons, Antennas, Navigational Aids, Communications Systems
- Remanufacture/Rewind S-3 Aircraft Electric Stators/Rotors
- Developing Repair Capability for F-14 Aircraft Data Link Converter
- Repair Flight Instruments & Airborne Power Inverters/Converters
- Developing Tech Manuals for Penguin Missile Launcher Test Set
- Microelectronics Reverse Engineering





# Interservice Support

## Highlights: ARMY

- Repair Firefinder Radar \*
- NDI of Apache AH-64A Airframe
- Manufacture of Printed Wire Boards
- Repair TMDE/RADIAC Equipment \*
- Repair Gyros/Indicators \*
- Negotiating Manufacture and On-Site NDI of AH-64A Struts
- Inspect/Repair Deployable Medical Systems Dolly Sets & ECUs
- Repair Electro Optics/Night Vision Equipment \*
- World-Wide Maintenance/Engineering Support of AN/TRC-170 Troposcatter Communications Systems
- Repair Radios, Telephones, Teletypes, Countermeasures
- In-Depot/On-Site Repair of Tactical Radar Threat Generator
- Repair Bradley Fighting Vehicle Electronics \*
- Thermoplastic Injection Molding of Ammunition Link Tubes
- Microelectronics Reverse Engineering \* Competition Item





# Interservice Support

## Highlights: MARINES

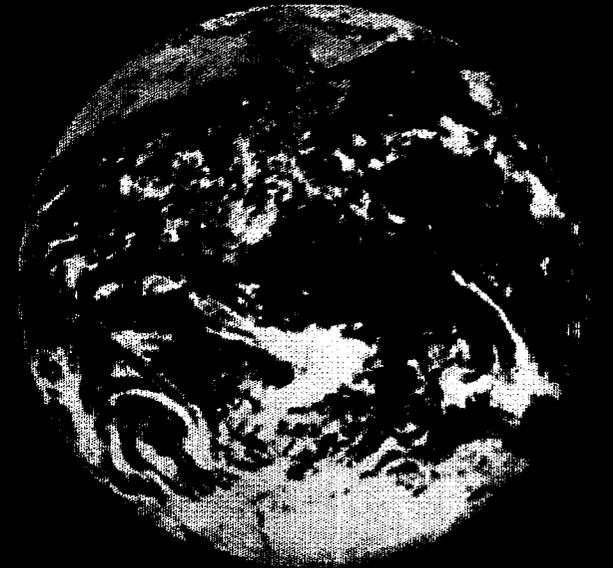
- Repair Firefinder Radar
- Repair Ground Power Generators
- World-Wide Radar Radome Repair
- Casting Vehicle Transmission Cases
- Microelectronics Reverse Engineering
- Build/Repair Mobile Photographic Laboratories
- Repair Electro Optics/Night Vision Equipment
- World-Wide Maintenance/Engineering Support of AN/TRC-170 Troposcatter Communications Systems



# Interagency Support

## Highlights: OTHERS

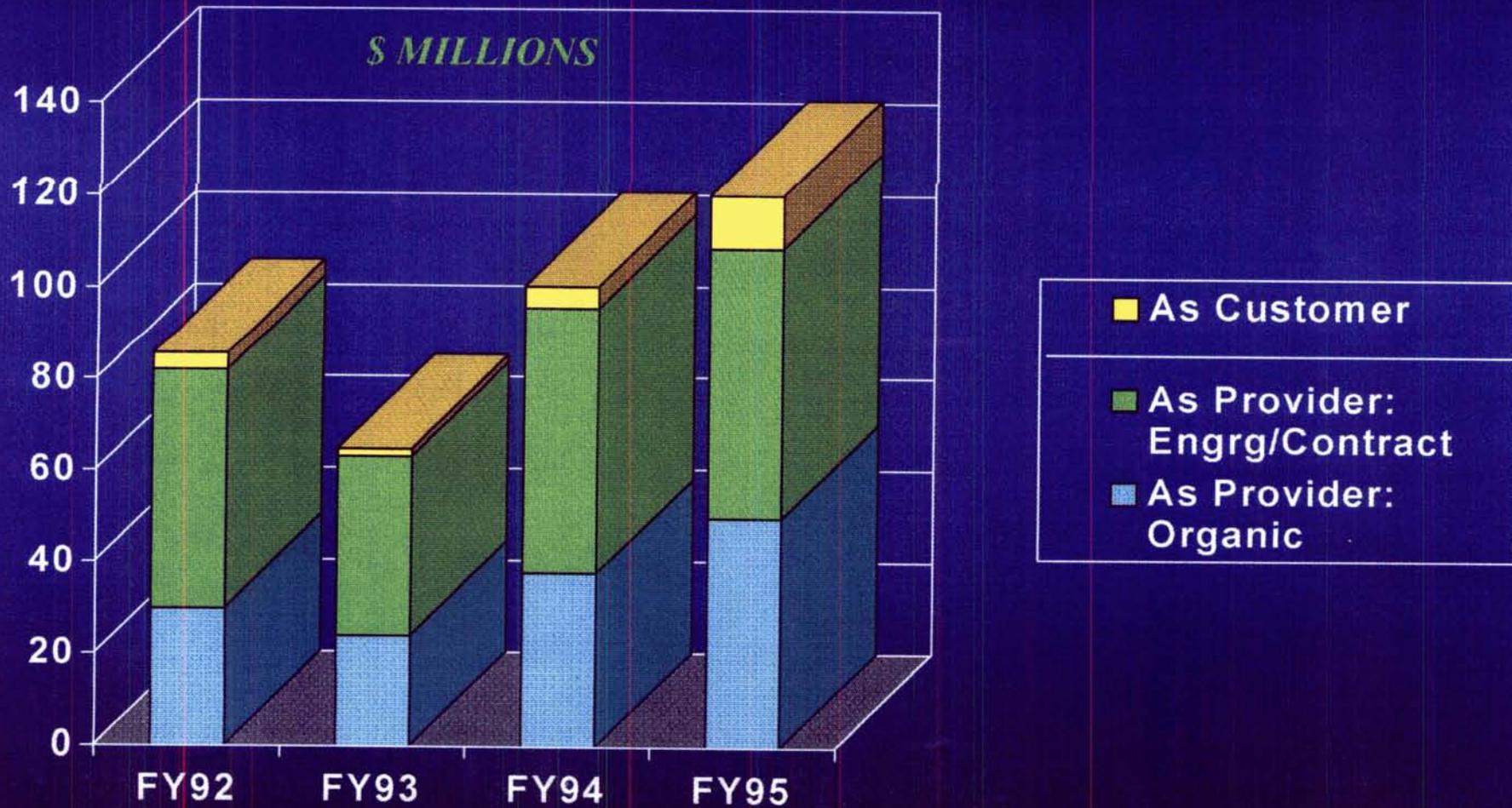
WORLD-WIDE



- Repair NASA T-38 Aircraft Radomes
- Laboratory Sample Testing for DLA
- Negotiating NDI of Canadian Air Force F-18
- Manufacturing Tooling for U.S. Mint
- Negotiating Software Development for USDA
- Microelectronics Reverse Engineering for FAA / DLA / DOT
- Negotiating Modification/Manufacture of USDA Medfly Equipment
- Repair of FAA Air Traffic Control/Landing Equipment
- Repair Printed Wire Boards for Defense Mapping Agency
- Repair Electro Optics/Night Vision Equip for US Border Patrol
- Repair FMS Electro Optics/Night Vision Equip:  
Thailand, Tiawan, El Salvador, Israel, Bah Rain, Jordan,  
Columbia (Army/Air Force & National Police), Phillipines



# INTERSERVICE SUPPORT *SM-ALC's Total Involvement*



**SLIDE I/S-5:**

***Interagency Support Highlights***

McClellan supports a multitude of **Defense/Non-Defense Agencies**, including such efforts as:

a. Repair of **NASA's** T-38 aircraft radomes, various Air Traffic Control and Landing equipment for **FAA**, and specialized printed wire boards for the **Defense Mapping Agency**.

b. Repair of electro-optics/night vision equipment for the **US Border Patrol**, as well as for **eight other countries around the world**.

c. Laboratory sample testing (destructive/nondestructive) for **DLA**, manufacture tooling for the **US Mints** (San Francisco, Philadelphia and Denver), and reverse engineering support of an assortment of microelectronics devices for the **FAA, DLA** and the **Department of Transportation**.

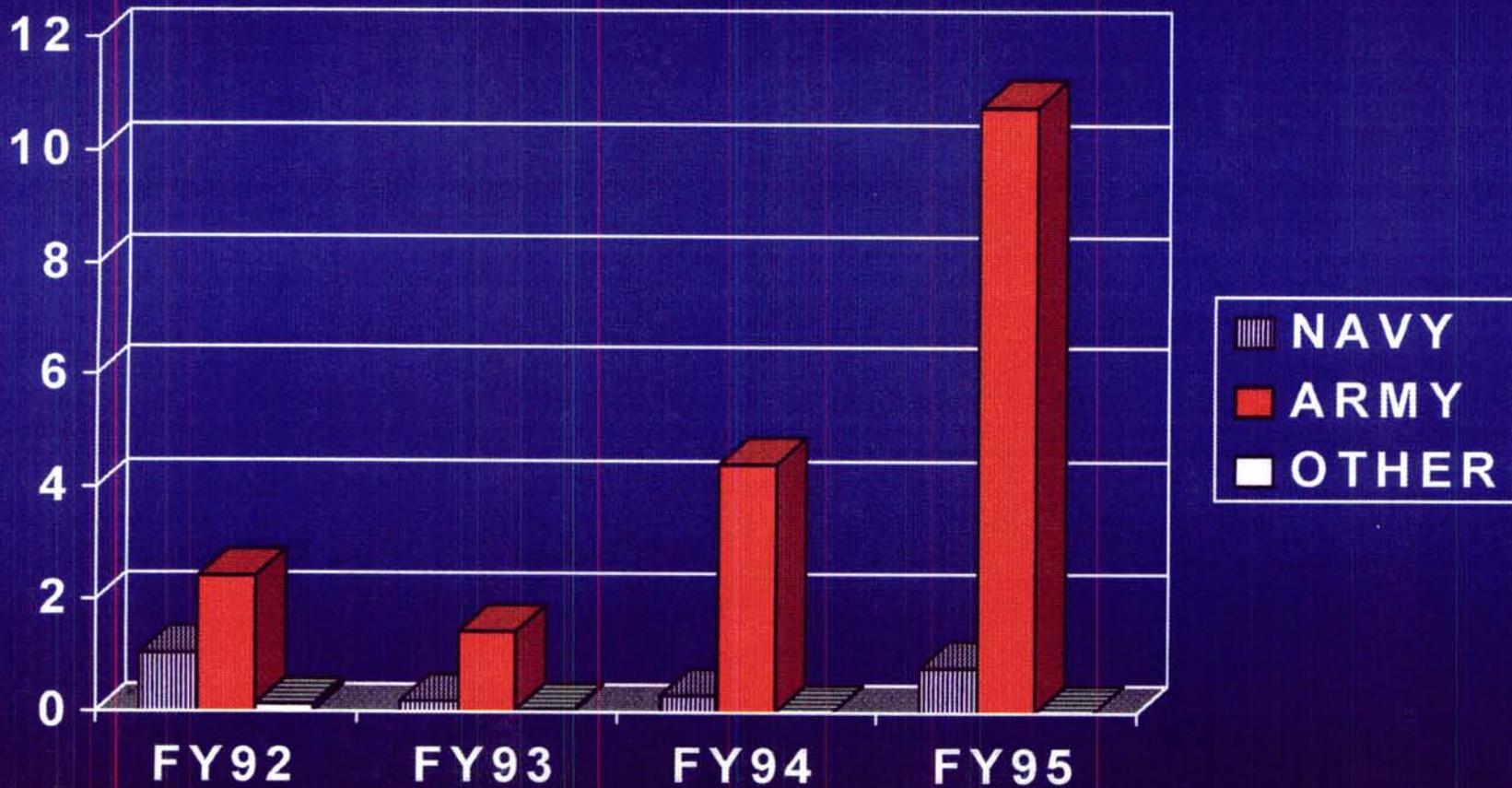
d. New areas include negotiating with the **Canadian Air Force** for the complete NDI of their F-18 aircraft, and negotiating software development for Medfly data collection as well as the modification/manufacture of Medfly rearing facility equipment with the **US Department of Agriculture**.



# INTERSERVICE SUPPORT

## SM-ALC AS CUSTOMER WORKLOAD VALUE - BY SERVICE

\$ MILLIONS



**SLIDE I/S-6:**

***SM-ALC's Total Interservice Support Involvement***

Having experienced an **increase in interservice support** over the last few years, our total interservice support involvement is valued at just **over \$120M for FY95**. The three primary types of interservice support are:

a. **As Customer** - Various communications-electronics equipment/systems that we manage are supported by the Navy, Army and Marines. The value of “out-going” interservice work is projected to be **\$11.6M in FY95**.

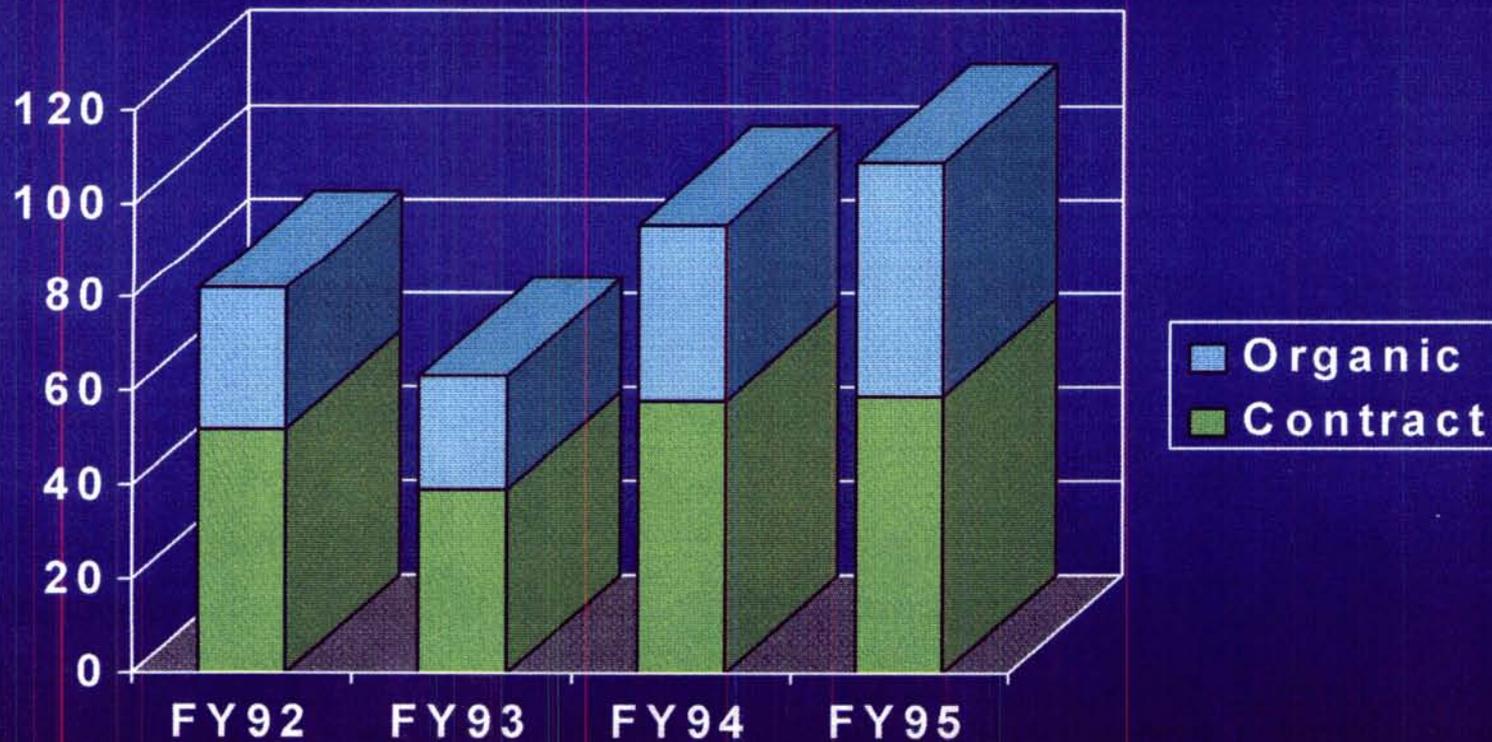
b. **As Provider: Engineering/Contract** - Several customers use our existing contract vehicles and engineering expertise in order to minimize the cost of their contract services. Our primary effort is the reverse engineering of obsolete microelectronics devices, with the Navy being one of our larger customers. The value of these “contract” services is expected to be **\$59M in FY95**.

c. **As Provider: Organic Support** - As seen in previous slides, McClellan AFB has a very wide range of “in-coming” work that we accomplish in-house. While our main customers reside in DoD, we also support several non-DoD agencies as well as other countries. The organic workload value for **FY95** is projected to be **\$50M**.



# INTERSERVICE SUPPORT - SM-ALC AS PROVIDER - *Total Value*

*\$ MILLIONS*



**SLIDE I/S-9:            *SM-ALC as Customer, Workload Value by Service***

The Army is currently our largest provider of interservice support. The significant **increase in FY95 workload value** can be attributed to the aging of fielded Air Force **communications-electronics** systems and equipment. The **FY95 workload values** by Service are:

**Navy:** \$0.8M

**Army:** \$10.8M

**Other:** \$0.0M (FAA previously supported older Air Traffic Control equipment)

**Total:** \$11.6M



# INTERSERVICE SUPPORT

*All Types Provided by SM-ALC*  
*Total Value*

	<u>FY92</u>	<u>FY93</u>	<u>FY94</u>	<u>FY95</u>
<b>Repair &amp; Return</b> - Organic	\$12.5M	\$8.8M	\$22.8M	\$35.0M <sub>(E)</sub>
<b>Wholesale</b> - Organic	\$17.4M	\$15.2M	\$15.0M <sub>(E)</sub>	\$15.0M <sub>(E)</sub>
<b>Wholesale</b> - Contract	\$2.0M	\$1.0M	\$1.0M <sub>(E)</sub>	\$1.0M <sub>(E)</sub>
<b>Engineering</b> - Contract	\$50.0M	\$38.2M	\$57.0M	\$58.0M <sub>(E)</sub>
<b>TOTALS</b>	\$81.9M	\$63.2M	\$95.8M	\$109.0M

**SLIDE I/S-10: *SM-ALC as Provider, Total Value***

McClellan AFB provides two types of interservice support to our various customers: **Organic** (in-house), and **Contract** (including engineering services). We have a general trend of **increasing workloads** for both organic and contract. The breakdown for our total workload value as provider for **FY95** is:

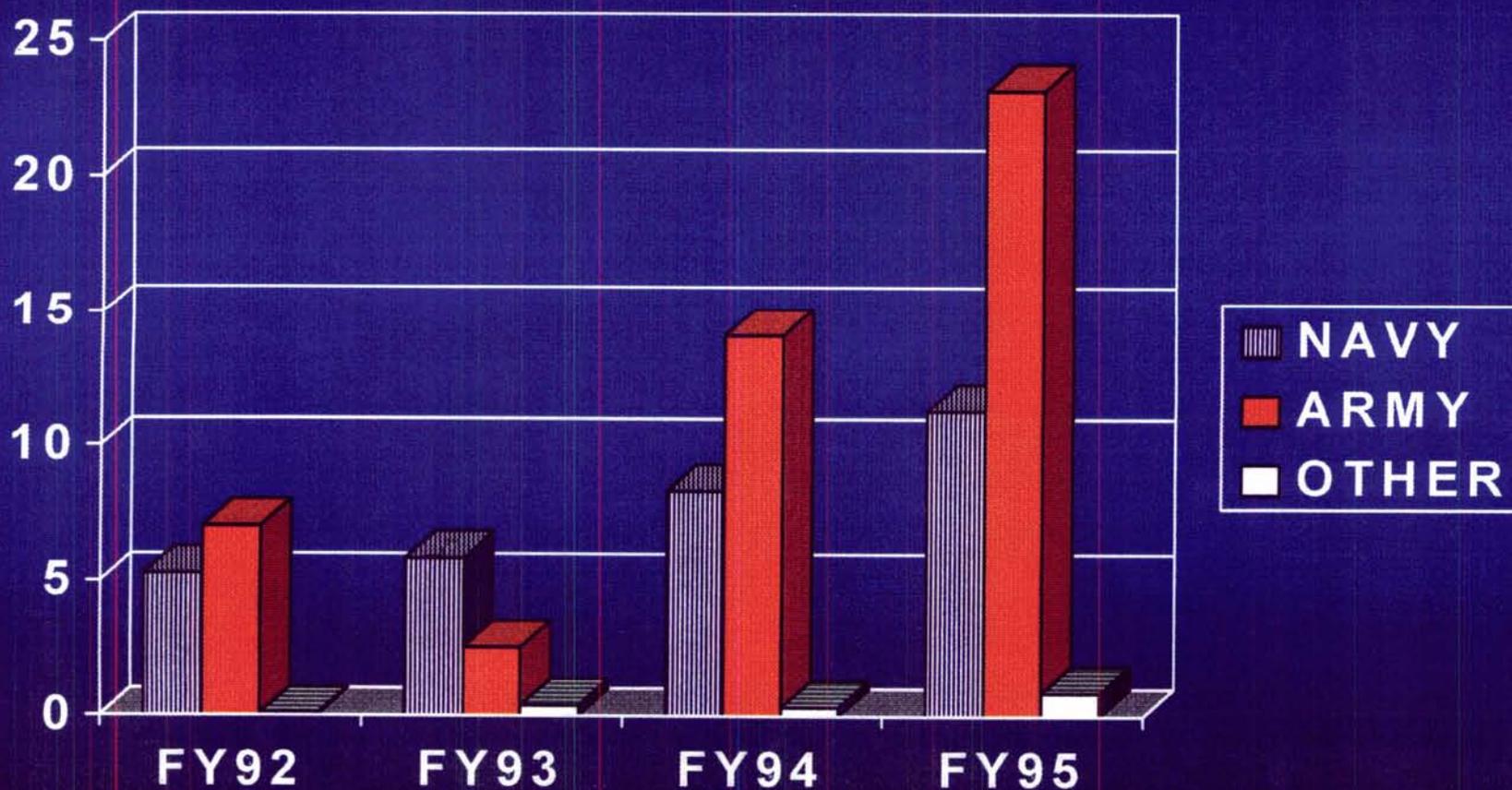
<b>Organic:</b>	\$50M
<b><u>Contract:</u></b>	<b><u>\$59M</u></b>
<b>Total:</b>	\$109M



# INTERSERVICE SUPPORT

## REPAIR & RETURN - ORGANIC WORKLOAD VALUE BY CUSTOMER

\$ MILLIONS



## **SLIDE I/S-11: *All Types Provided by SM-ALC, Total Value***

Each of the two types of interservice support (**Organic** and **Contract**) that McClellan AFB provides can be further divided into two categories each, as follow:

For **Organic**, there are:

**“Repair & Return”:** The customer’s specific asset is repaired and returned.

**“Wholesale”:** The customer requisitions an “Air Force” replacement asset from our repair-supported supply which we maintain for all DoD users, and receives a credit upon turn-in of their broken asset.

Note: Due to the nature of the Wholesale business, it is virtually impossible to discern a specific amount of support associated with individual customers based on the data provided by existing DoD data systems, and for that purpose no additional “By Service” breakdown is attempted.

For **Contract**, there are:

**“Wholesale”:** As described above, but the asset is commercially repaired as opposed to in-house, and the above note applies.

**“Engineering Services”:** We provide some in-house engineering support services, and the customer also obtains contractor-provided engineering services through our existing contract vehicles thereby greatly reducing the expense and time required to procure such services.

The following is a breakdown of the above categories for **FY95 workload values:**

<b>Repair &amp; Return - Organic:</b>	\$35M	(All Services, with Army being largest customer)
<b>Wholesale - Organic:</b>	\$15M	(All Services)
<b>Wholesale - Contract:</b>	\$1M	(All Services)
<b><u>Engineering - Contract:</u></b>	<b><u>\$58M</u></b>	(Primary effort is reverse engineering microelectronics devices, the Navy being our largest customer)
<b>Total:</b>	<b>\$109M</b>	



# McClellan AFB = Interservice

## ARMY

- Repair Firefinder Radar
- NDI Apache AH-64A Airframe
- Repair Electro Optics/Night Vision

## NAVY

- NDI (X-Ray) Entire F-14 Aircraft
- Microelectronics/Reverse Engineering
- Repair Electro-Optics/Night Vision

## MARINES

- Repair Firefinder Radar
- Build/Repair Mobile Photo Labs
- Repair Electro Optics/Night Vision

**SLIDE I/S-13: *Workload Value (Repair & Return - Organic) by Customer***

While we are experiencing increased Repair & Return Organic (in-house) workloads from all Services, the **substantial increase** in support that McClellan AFB provides to the **Army** is primarily in the **electro-optics/night vision** equipment repair area. We expect this type of workload to continue to increase as newly developed systems/equipment are deployed in the near future. The following is a breakdown of the **FY95 workload value** by customer:

**Navy:** \$11.3M

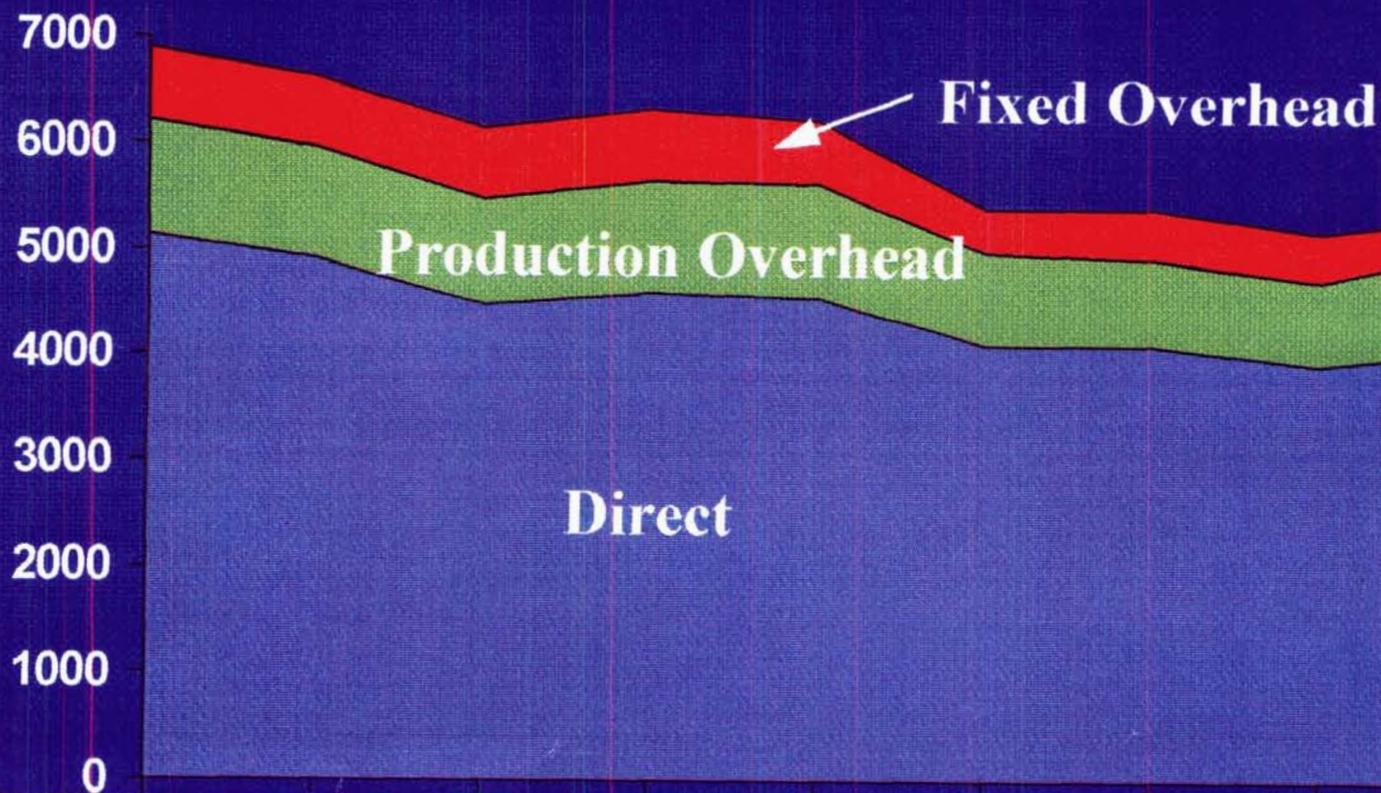
**Army:** \$23.2M

**Other:** \$0.9M

**Total:** \$35.4M



# McClellan AFB Manpower Assigned Depot Personnel



	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Direct	5138	4918	4491	4607	4566	4092	4095	3908	4087	3847
Prod O'Head	1068	1044	990	1047	1065	897	840	831	1009	928
Fixed O'Head	695	668	663	674	592	422	473	450	286	241
<b>Total Depot</b>	<b>6901</b>	<b>6630</b>	<b>6144</b>	<b>6328</b>	<b>6223</b>	<b>5411</b>	<b>5408</b>	<b>5189</b>	<b>5382</b>	<b>5016</b>

**McClellan Air Force Base  
Capacity and Depot Workload By Commodity**

COMMODITY	CURRENT									
	FY95	FY94	FY93	FY92	FY91	FY90	FY89	FY88	FY87	FY86
Machine Repair	101,244	71,000	64,790	70,126	73,874	73,944	79,786	76,252	92,129	89,179
Inspection	102,778	70,000	63,877	66,409	72,834	72,902	78,662	75,178	90,831	87,923
Software										
OFF	320,606	224,924	205,250	222,156	234,029	234,250	252,757	241,561	291,859	282,513
ATE	32,214	22,600	20,623	21,441	23,515	23,537	25,397	24,272	29,326	28,386
Abn Electronics	127,322	127,800	116,621	121,244	132,973	133,099	143,614	137,253	165,832	160,522
Sheet Metal Rpr/Mfg	121,186	136,000	124,104	129,023	141,505	141,639	152,829	146,059	176,472	170,821
Metal Mfg										
Tubing	4,602	6,000	5,475	5,926	6,243	6,249	6,742	6,444	7,786	7,536
Machine	73,632	68,000	62,052	64,512	70,753	70,820	76,415	73,030	88,236	85,411
Instrument/Display	260,780	301,000	274,671	285,559	313,185	313,481	338,247	323,264	390,575	378,067
Composites/Plastics	131,924	194,000	177,031	184,048	191,612	201,853	202,044	208,350	251,733	243,671
Plating	32,214	30,000	27,376	28,461	31,214	31,244	33,712	32,219	38,928	37,681
Electronic Mfg (PWB)	10,738	10,300	9,399	9,772	10,173	10,727	11,575	11,062	13,365	12,937
Hyd/Pneu	391,170	378,000	344,936	358,609	373,348	393,302	424,775	405,959	490,489	474,782
Electro/Mech SE	116,584	109,000	99,466	103,408	107,658	113,412	122,488	117,062	141,437	136,908
Injection Molding	10,738	700	639	664	691	728	787	752	908	879
Foundry Operations	10,738	7,000	6,388	6,641	6,914	7,283	7,866	7,518	9,083	8,792
Paint/Depaint	127,322	575,000	524,705	545,503	567,923	598,276	646,152	617,531	746,115	722,221
PS Labs	118,118	112,000	102,203	106,254	110,622	116,534	125,859	120,284	145,330	140,676
Elect Mfg (Harness)	3,068	16,000	14,600	15,179	15,803	16,648	17,980	17,183	20,761	20,097
TOTAL	2,093,910	2,459,324	2,244,207	2,333,161	2,429,055	2,558,878	2,763,648	2,641,232	3,191,196	3,089,003

← WORKLOAD →

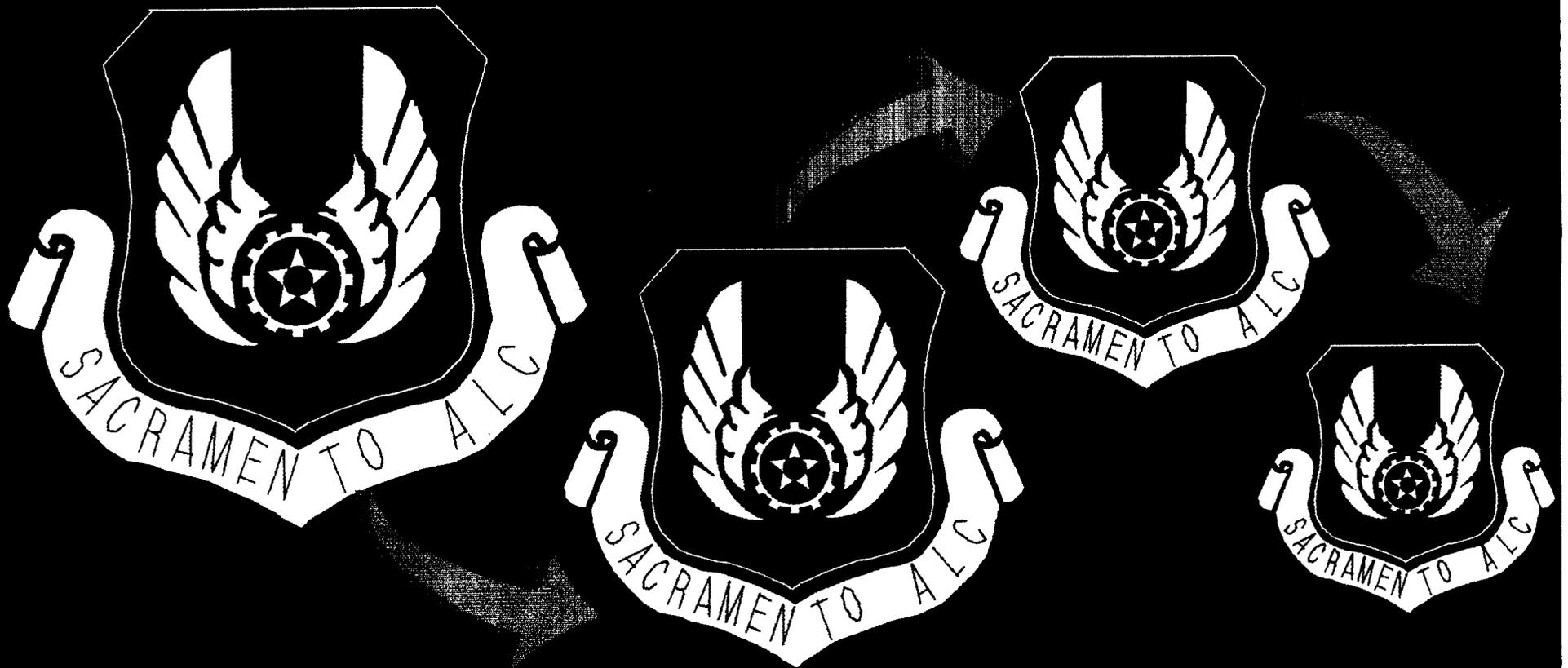
**SLIDE I/S-14: McClellan AFB = Interservice**

While McClellan AFB has a primary mission of supporting the Air Force, we also support the Navy, Army and Marine Corps as equals. As such, McClellan AFB has become a true DoD asset, not just an Air Force Base.

This may best be evidenced in a recent letter to our SM-ALC Commander Maj. Gen. John F. Phillips from Maj. Gen. Otto J. Guenther, commanding general for CECOM and Fort Monmouth, in which he recognized our interservice support of the Army's critical AN/TPQ-36/37 Radars as remarkable, stating:

**“Your dedicated and hard working staff again demonstrated the highest degree of skill, professionalism and responsiveness in support of the Firefinder program.”**

# SM-ALC's Role in BRAC Downsizing



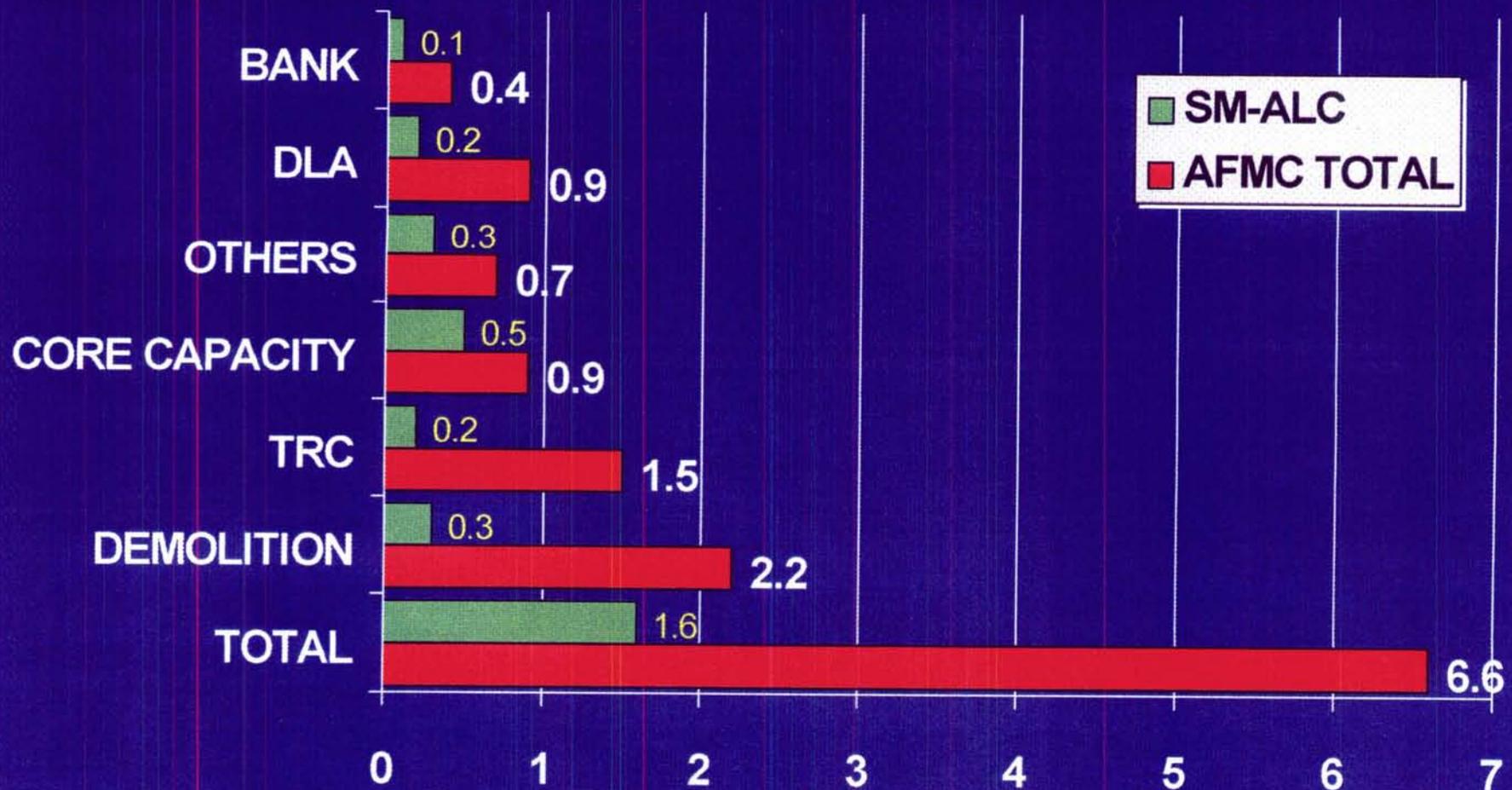
## Objectives of Downsizing in Place

- Meet the Levels of Reduction Prescribed by the OSD BRAC Recommendations

- Reduce Depot Infrastructure by 6.8M sq ft
- Reduce Capacity by 8.9M DPAH
- Eliminate 1706 DMA Manpower Authorizations

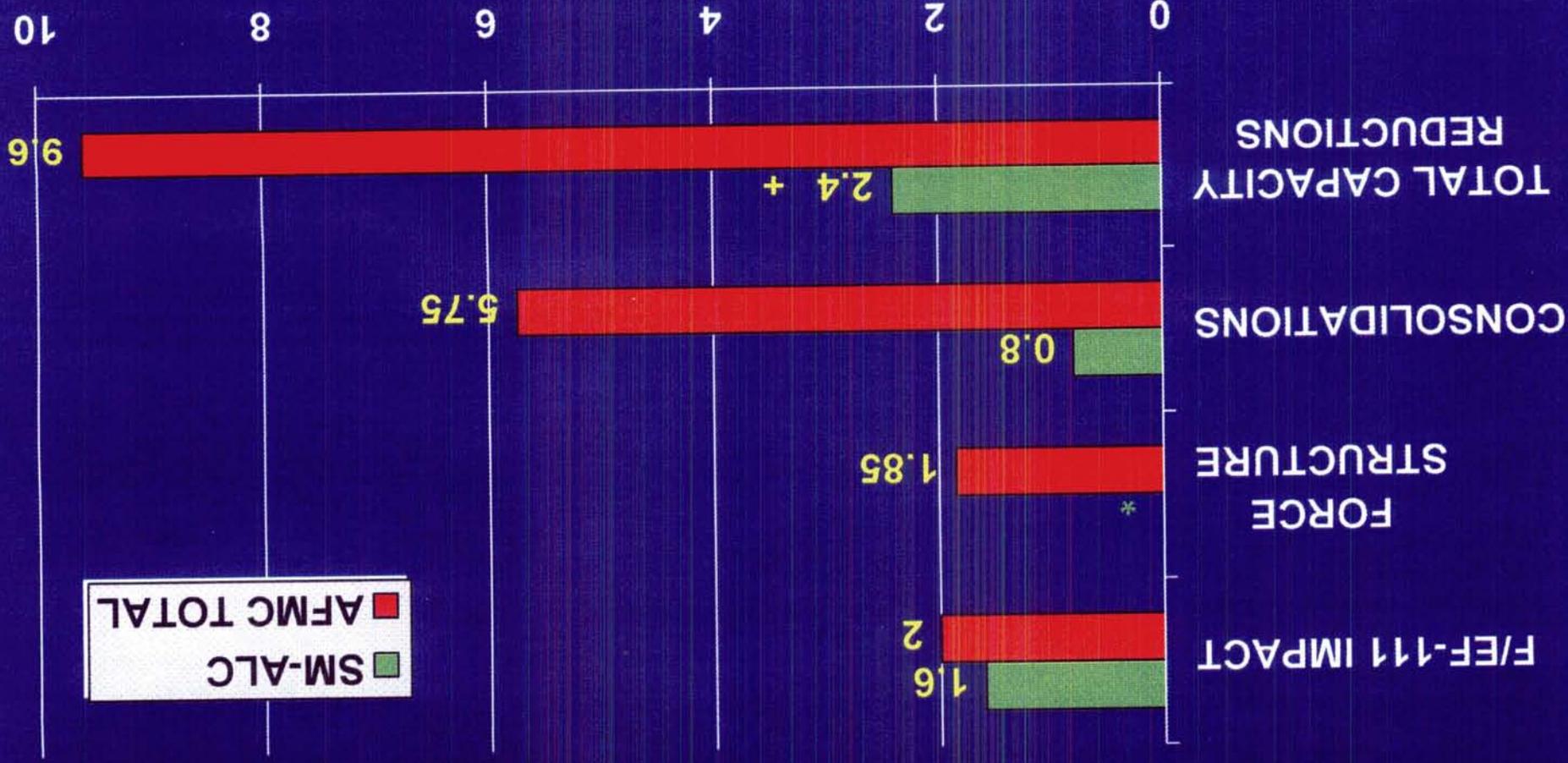
# SM-ALC's Share of Infrastructure Reductions

(Square Footage in Millions)



# SM-ALC's Share of Capacity Reductions

(Millions of Direct Labor Hours)



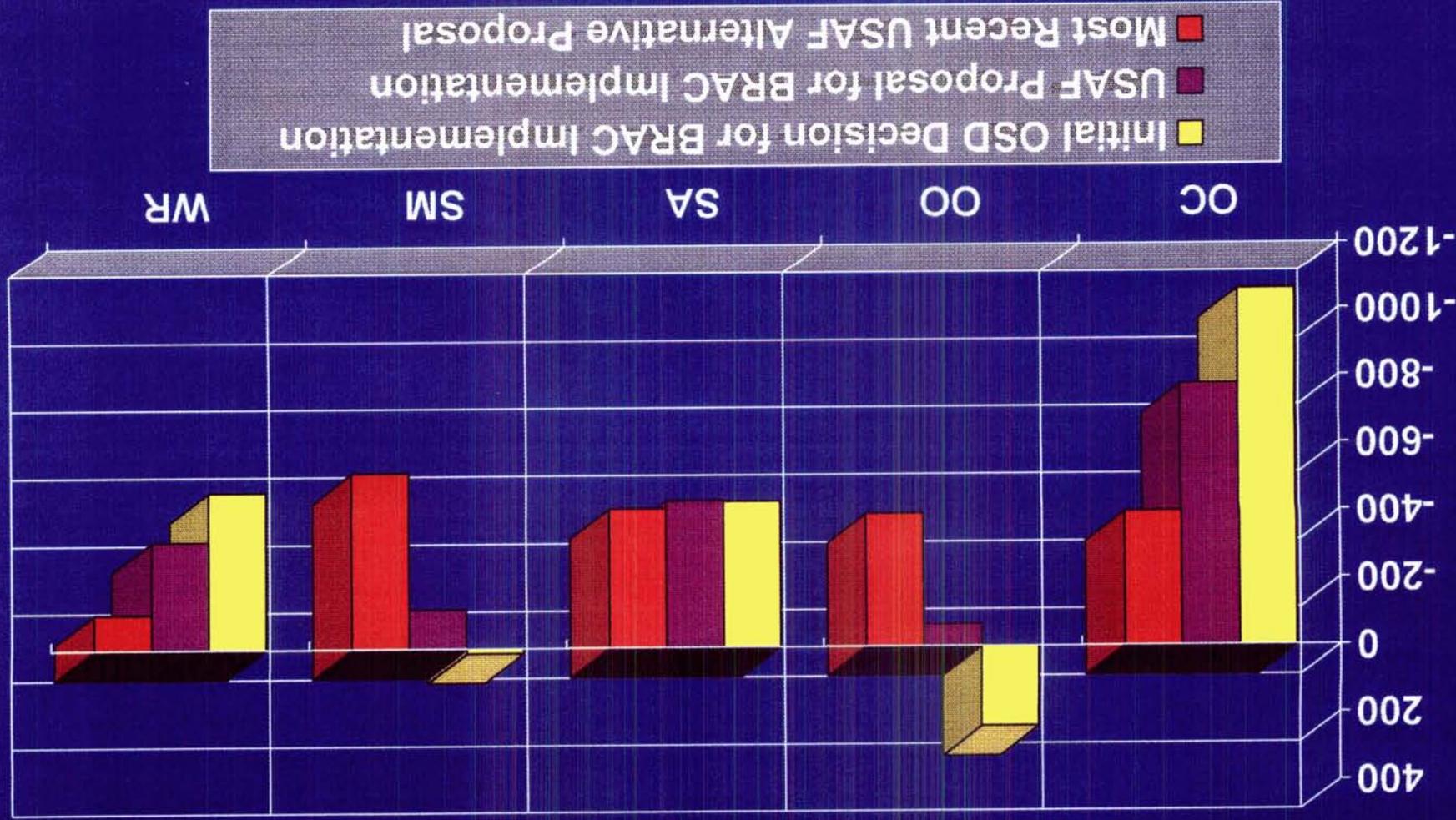
\*Data For SM-ALC Not Available

# Air Staff TRC Realignment

(Most Recent USAF Alternative Proposal)

- Printed Wire Boards (OO-ALC vs. WR-ALC)
- Sheet Metal Repair/Manufacturing (Leave with A/C vs.. OO-ALC)
- Instruments (OC-ALC and WR-ALC vs. SM-ALC)
- Plating (Consolidate 11 at a single site/Downsize 15 in place vs. SM-ALC to OO-ALC)

# Personnel Changes



# SUMMARY

SM-ALC Plays a Significant Role  
in AFMC's BRAC Downsizing  
Proposals

*Sacramento  
Air Logistics Center*

Jim Hall

Plans & Programs  
Office

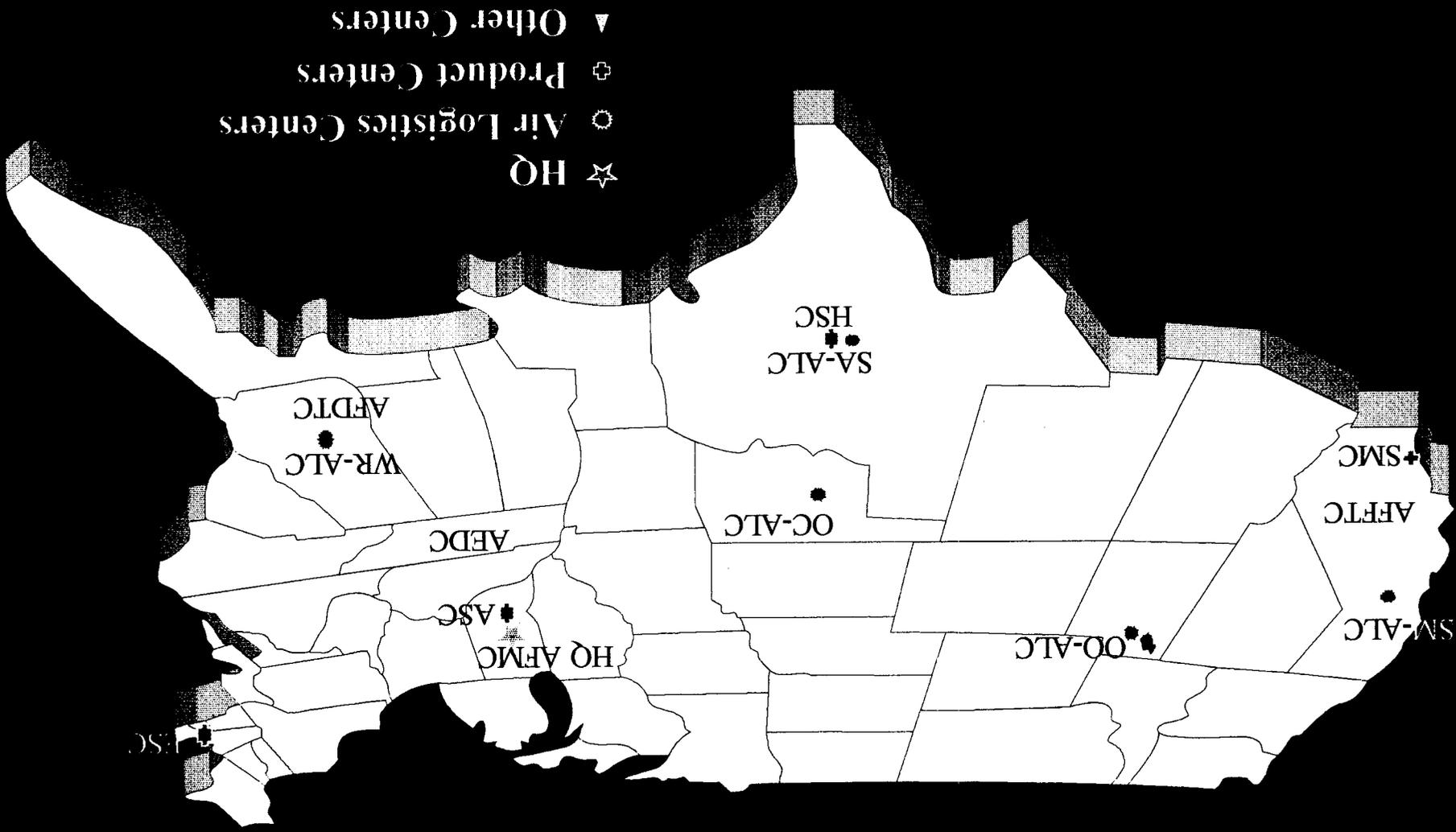




# *Outline*

- **McClellan AFB**
- **SM-ALC**
- **Customers**
- **Summary**

# Air Force Materiel Command



- ☆ HQ
- Air Logistics Centers
- ⊕ Product Centers
- ▼ Other Centers



## *McClellan Air Force Base More than a Depot*

**Land**

**3,763 Acres**

**Building Area**

**12.7 Million Sq Ft**

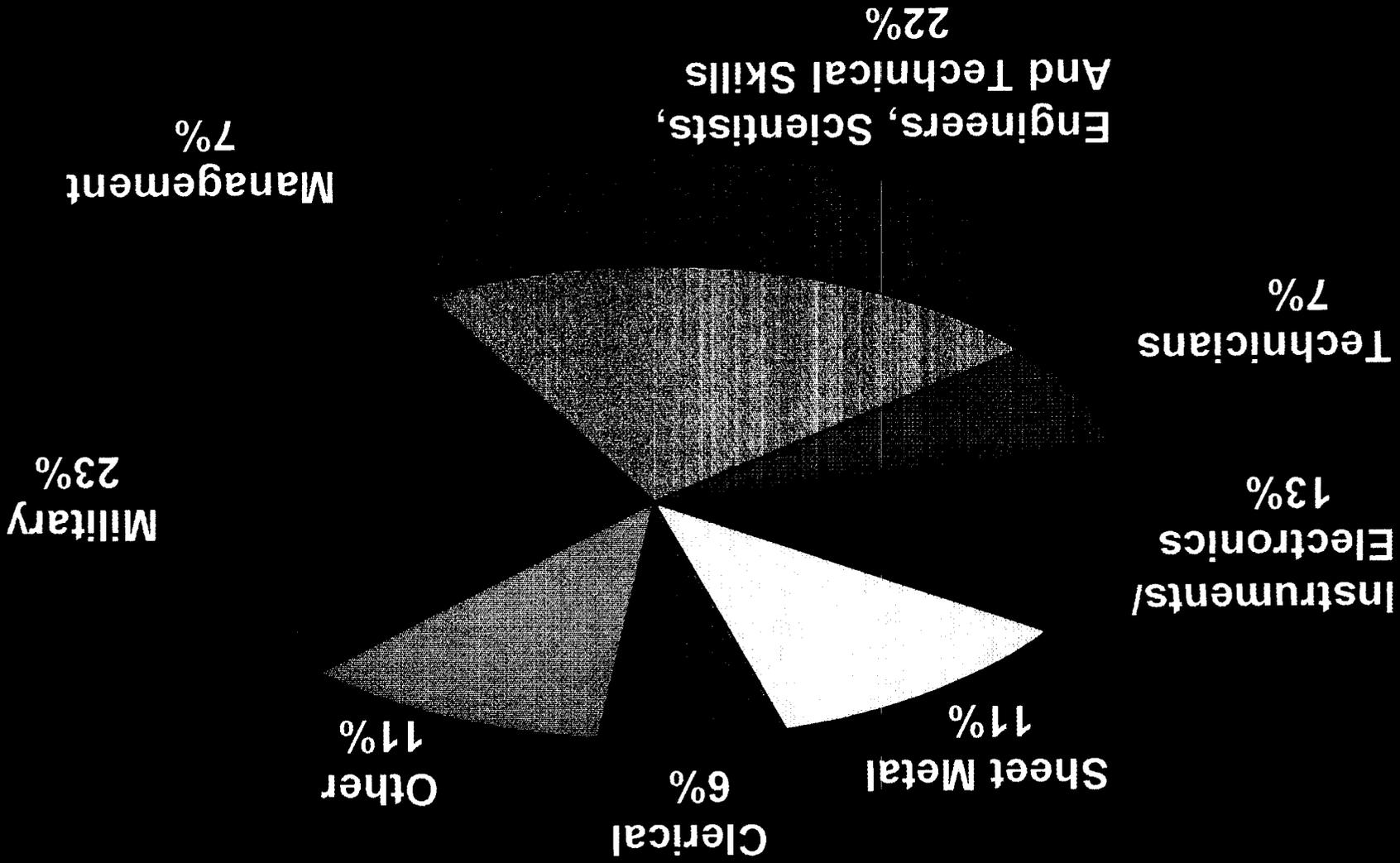
**Real Property Value**

**\$2.9 Billion**

**People**

**13,500**

*People... Our Greatest Asset*



# ACQUISITION

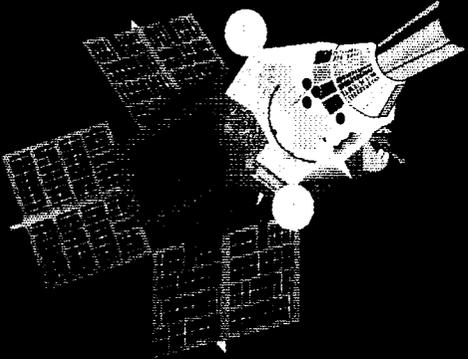
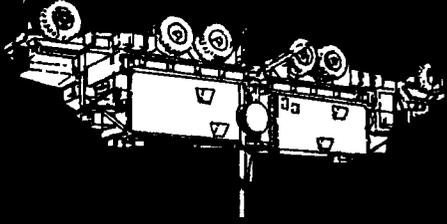


- Single Manager - 13 Programs
  - SM-ALC/CC is Designated Acquisition Commander
  - Supported by other Product and Logistics Centers

- System Support Manager - 16 Programs
  - Supports Multiple Product Centers
  - Reports to Multiple DACs / PEOs

- Over 1800 Personnel Supporting Single Managers

- Programs Value - Over \$6B





# More than a Depot

Defense Logistics Agency - 4.6%

Tech Ops Div - 3.5%

Non-Appropriated Funds - 3.2%

AAFES - 2.5%

940th ARG - 1.5%

US Coast Guard - 1.4%

Commissary - 1.3%

DISO - 1.2%

DFAS - 1.1%

Other - 4.6%

**SM-ALC  
Industrial  
47.3%**

**SM-ALC  
Non-Industrial  
27.8%**

**Civilian - 10,500**

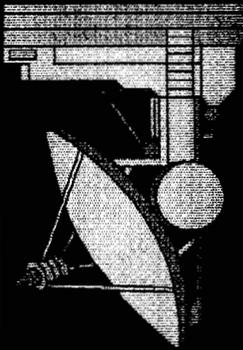
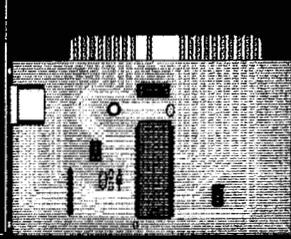
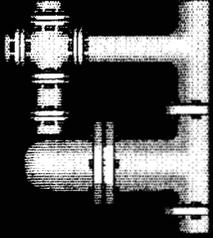
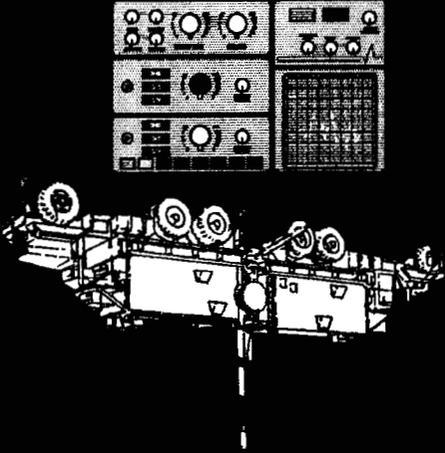
**Military - 3,000**





# *Centers of Excellence*

- Hydraulics - Fluid Driven Accessories
- Instruments - Flight Controls
- Rigid Wall Shelters
- Electrical/Mechanical Support Equipment
- Electrical Components
- Ground Communication/Electronics



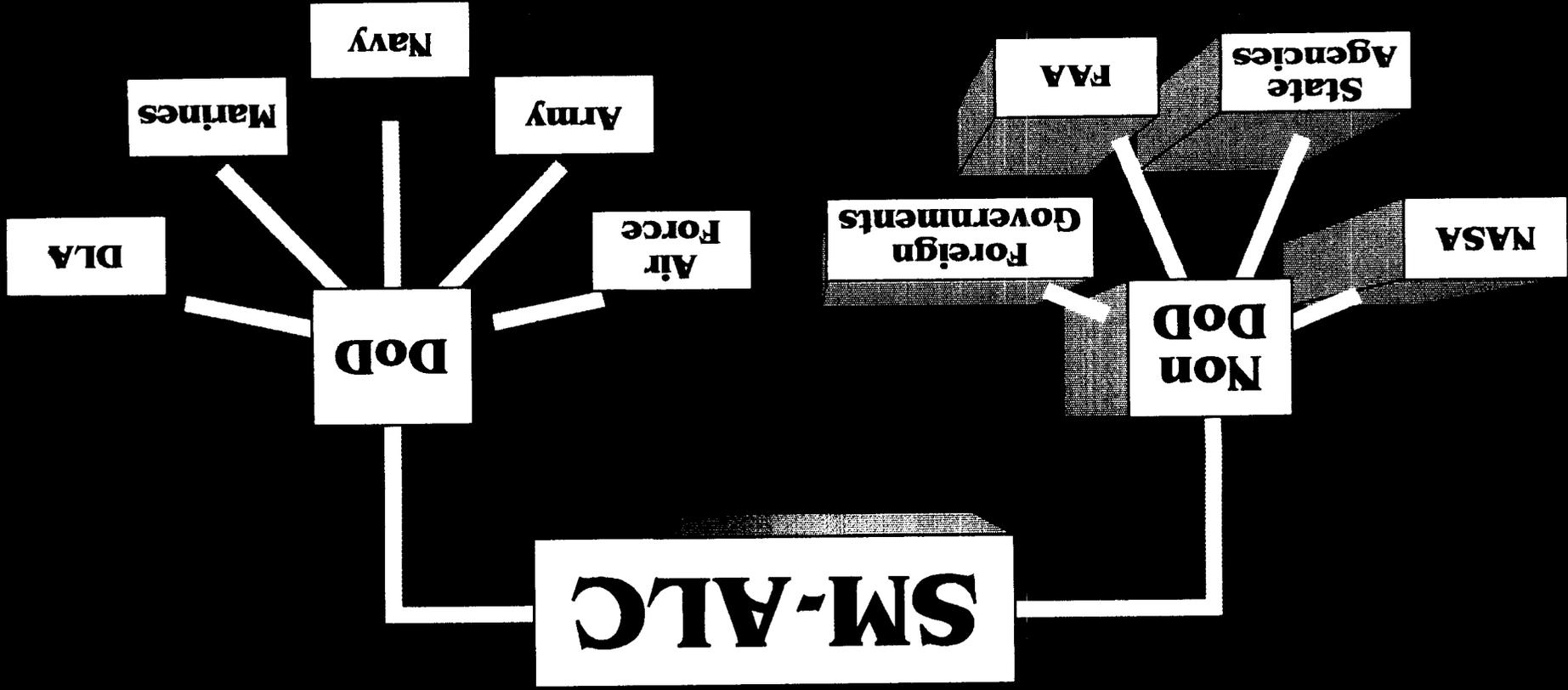


# *World Class Capabilities*

- **Nondestructive Inspection Facility**
- **Micro-Electronics**
- **Composites**
- **Cold Proof**
- **Anechoic Test Chamber**
- **SEI Maturity Level 3 Software Division**



*Serving a Diverse Customer Base*





## *McClellan - More than a Depot*

- **Cradle to Grave Support**
- **World Class Capabilities / Facilities**
- **Well Educated, Highly Skilled Work Force**
  - Flexible, Responsive, Committed and Capable
- **Diverse Customer Base**
  - Interservice
  - Non-DoD

---

# Document Separator



**McClellan**  
**Today** 1994  
Edition

CAPABILITIES

MISSION

ECONOMIC  
IMPACT



Official Air Force Photo

## commander's comments

When I accepted command of the Sacramento Air Logistics Center, I spoke of a new vision--a vision to expand this base into a model dual-use industrial facility. Leveraging our investment in facilities, equipment, and technologies is the genesis of this dual-use plan. My goals are to actively engage in, and win, intra-DOD competitions; offer our capabilities, facilities, and technologies for interservicing; and support commercial applications that are in the interest of the taxpayer. Working together, our people perform extraordinary feats and I am overwhelmed at the progress "Team McClellan" has made toward building reality into this challenging plan.

With the decision to close the Sacramento Army Depot (SAAD), the 1991 Defense Base Closure and Realignment Commission mandated nine separate competitions between Sacramento Air Logistics Center and the Army for SAAD workload. As the only non-Army competitor, we prevailed over 4 out of the 5 Army depots in competition and, based on dollar value, won 75% of the workload competed. Our victories include the Firefinder radar system, the Bradley Fighting Vehicle guidance system, gyros, and Night Vision. Night Vision encompasses the entire DOD electrooptics repair and modification package and represents a minimum of \$50 million in workload.

Our nondestructive inspection, composite, and microelectronic workloads are expanding not only within the other DOD services, but within US agencies like NASA, and across the ocean to foreign governments. This year, we hosted the Navy's F-14 Tomcat in our full-aircraft nondestructive inspection facility and the Army's Apache helicopter in both our full-aircraft facility and in the McClellan Nuclear Radiation Center for blade inspection. After seeing our successes in composite design and manufacture, NASA asked us to redesign their T-38 radome. NASA approved our prototype and requested our services to produce the composite radomes for their entire T-38 fleet. We accomplished a reverse engineering and redesign project for the British Royal Air Force using VHSIC multichip module technology and VHDL design specifications. This state-of-the-art product definition will be used for competitive manufacturing by private sector firms in both the United States and the United Kingdom.

A commercial aspect of the dual-use plan with tremendous expansion potential is technology transfer. In a hallmark cooperative research agreement with the United States Council for Automotive Research (USCAR) Environmental Research Consortium, we will jointly develop an environmentally compliant casting facility for the domestic automobile industry and the DOD. USCAR represents the Chrysler Corporation, Ford Motor Company, and General Motors Corporation. The USCAR-McClellan team will originate and implement new procedures, processes, materials, and technologies with a goal of producing a cost effective foundry with near zero impact on the environment. On Veteran's Day, 1993, President Clinton signed the bill appropriating the first \$11.5 million of this 5 year, \$40 million project. Representing another thrust toward the transfer of military capacity into peaceful uses, we formed a partnership with a local utility company to develop and demonstrate advanced technologies for zero-pollution electric vehicles. Significantly, this agreement will create civilian jobs in the process and help establish an electric vehicle industry in Sacramento. McClellan will support this enterprise as we transition from traditional to electric base support vehicles in the unified effort toward cleaner California air.

We face tremendous challenges and opportunities as we do our part in "right-sizing" the DOD. McClellan Air Force Base is a unique national asset--a large, high-tech industrial facility dedicated first and foremost to the support of America's military. The capacity of a depot the size of McClellan is not required during peacetime, but must be maintained for any military action that might occur--at any time, at any place in the world. The dual-use concept prototypes appropriate customer base diversification while maintaining strong support to the military. It enhances the community, rewards the taxpayer, and allows us to promote our heritage as good neighbors and responsible citizens.

*John F. Phillips*

JOHN F. PHILLIPS  
Major General, USAF  
Commander, Sacramento Air Logistics Center



Photo by Bob Wick

# use...

# Dual...

# New Business Approach

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**Writer/Editor:** Diane Margetta, Sacramento ALC Marketing Office

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1994  
McClellan

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Headquarters, McClellan Air Force Base, California  
Headquarters, Sacramento Air Logistics Center (AFMCC)  
DEPARTMENT OF THE AIR FORCE

2M-ALC MCAFEBP 120-A, 1 January 1994

DEPARTMENT OF THE AIR FORCE  
Headquarters, Sacramento Air Logistics Center (AFMC)  
Headquarters, McClellan Air Force Base, California  
McClellan Air Force Base, CA 95652

SM-ALC MCAFBP 170-4, 1 January 1994

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## *mcclellan's history*



Official Air Force Photo

**a North American  
O-47 aircraft undergoes  
depot maintenance in  
1939 at the Sacramento  
Air Depot**

In the early 1830's, the Army at Rockwell Field, North Island in San Diego needed to relocate their aviation general supply and repair operation. Due to the enterprising efforts of Arthur S. Dudley, Secretary-Manager of the Sac-

ramento Chamber of Commerce, Rancho del Paso was selected for the new site. Captain Austin served as the first commander of the Sacramento Air Depot. By November 1938, the Depot was shipping supplies from its new facilities. The following year the base name was changed from Sacramento Air Depot to McClellan Field, honoring Major Hezekiah McClellan who died in an airplane crash.

With the outbreak of World War II, and the need for increased military posture, McClellan, the only depot on the west coast, surged up and bore the brunt of air logistics to the Pacific. Between this war and the Korean War, the United States Air Force was established; McClellan's activity increased as new units were activated. During the Berlin Airlift of 1948, McClellan overhauled bombers, and continued to provide logistics support for California bases.

By June 1950, when the Korean War broke out, McClellan's repair processing time improved considerably due to technological advances and teletype links between Far East Air Force and Sacramento Air Materiel Area. In 1952, decentralization of Air Materiel Command occurred and many additional duties were picked up. In addition to aircraft management (F-80, T-33, F-94, F-51, F-82, and F-86), we also managed aircraft auxiliary fuel tanks, electrical generator sets, and print and reproduction equipment.

As the Korean War drew to a close, the Air Force cancelled McClellan's B-29 projects and took on more fighters and interceptors. McClellan began managing the F-100 "Super Sabre" and the F-104 "Starfighter". Additional projects and ideas sparked after the Sputnik launch in 1957--the depot expanded its expertise from exclusive aircraft support to include management of satellite systems. During the Vietnam Era, Sacramento supported A-1E, F-104, and F-100 aircraft, the F-105 "Thunderchief", and the F/FB-111 aircraft which entered the force in 1967.

Since the beginning of McClellan's history, technology has been in the forefront of maintaining and repairing high tech systems. Through the depot modernization efforts of the 1960's and early 1970's into the space age of the 1980's, McClellan took on greater technological management missions such as the F-22, advanced composites, fiber optics, and very high speed integrated circuits. In the 1990's, McClellan played an integral part in the Gulf War, making history with remarkable accomplishments.

McClellan sees challenges as opportunities to improve supportability and performance. McClellan, today, provides capabilities not found anywhere else, making it one of the Department of Defense's premier installations.



Photo by Bob Wickley

## economic impact

On base services supporting our military and civilian work force include the Commissary, Base Air Force Services. These support services generated local sales, primarily food items, of \$34.7 million, \$4.7 million, and \$2.7 million respectively. Representative of the magnitude of these transactions, last year we purchased over 1.1 million loaves of bread. A vast majority of McClellan's food purchases are made in agriculturally-rich north central California. For example, our commissary alone spent \$1.5 million on produce, and 44.8 million on meat. Other significant purchases benefiting our local area include 7.4 million cans of soft drinks, 124 thousand gallons of ice cream, and 945 thousand gallons of milk.

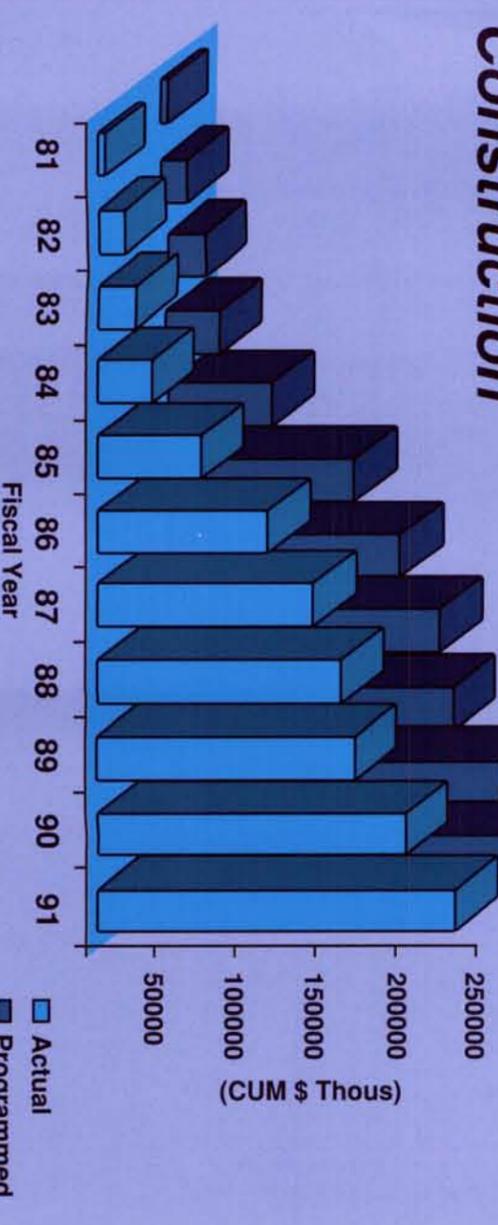


<b>Groceries:</b>	<b>\$ 27,919,500</b>
<b>Meat:</b>	<b>\$ 4,826,500</b>
<b>Produce:</b>	<b>\$ 1,593,750</b>
<b>Deli:</b>	<b>\$ 422,000</b>

The impacts of McClellan Air Force Base spending are both direct and indirect. Expenditures such as those exemplified above; payroll, services, construction, and consumables, produce an indirect effect that ripples through the community. For example, when McClellan employees receive their paychecks they spend most of their money in the community; like paying for dinner at a local restaurant. The restaurant then buys produce from a local grocery store. The grocery store replenishes its inventory by purchasing produce from a local farmer who uses some of the profits to make a mortgage payment to a local bank, etc. The total value of these exchanges is greater than the initial money spent. Thus, the money flowing into our community from McClellan AFB expenditures creates an increase in local economic activity. This past fiscal year,

our expenditures generated a significant \$2.2 billion impact in the ten county area surrounding McClellan. This impact is substantially greater than the prior year's \$1.5 billion due to incentive and lump sum leave payments in the payroll and a significant increase in construction expenditures. Our investment in high technology facilities and equipment has been an on-going effort over the past ten years, making us one of the most modern, well-equipped depots in the DOD. Additionally, due to the closure of the other two Sacramento military installations, we are picking up some of the responsibilities they had in support of a significant number of retirees and dependents--84 thousand estimated. For example, the CHAMPUS costs, that we absorbed from Mather Air Force Base were in excess of \$23 million.

## **Military Construction**



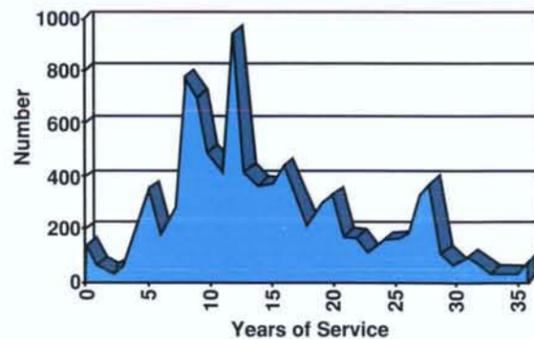
## demographics

McClellan AFB generated a positive influence on the state's economy by awarding \$353 million in contracts to California businesses--a 75 percent increase over fiscal year 1992. Closer to home, we awarded \$95 million in contracts to local businesses with the majority going to Sacramento and Placer counties. Beneficiaries of our contract awards include small businesses (\$143 million), minority-owned businesses (\$33 million), and woman-owned businesses (\$8 million). Total contract actions for fiscal year 1993 approached \$1 billion.

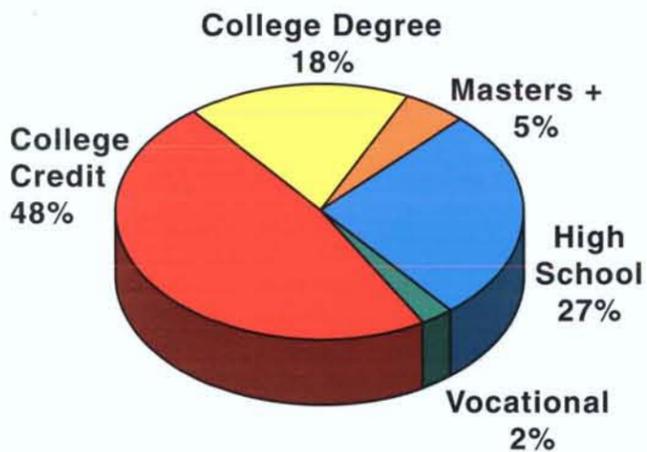
McClellan AFB is the only surviving military installation in northern California providing civilian employment of any magnitude. Even though our present civilian work force was downsized to 11,100 during the past year, McClellan AFB remains the largest industrial employer in northern California, as well as the largest aeronautical and electronics repair facility in California. Total payroll dollars for this streamlined civilian work force plus military pay for 3,000 members equaled \$583 million.



The average salary of our work force is generally much higher than the average salary of surrounding communities such as North Highlands, the community immediately adjacent to McClellan. For example, the McClellan employee's annual average salary of \$37,000, excluding benefits, is over three times greater than the \$21,000 salary of the average North



Highlands employed resident. Our highly skilled workforce averages 45 years of age and has about 15 years service.



Over 70 percent of McClellan employees have college degrees or college credit—18 percent have bachelors degrees, and 5 percent have masters degrees. With a blue collar work force of over 40 percent, we provide industrial diversification to a predominantly service-based region. Our primary skills in this area are instrument repair, and electronics repair, sheet metal work, and technical specialist skills.

**CIVILIAN POPULATION** 11,100  
**AVG SALARY:** \$37,000  
**AVG AGE:** 45.5  
**AVG YEARS SERVICE:** 14.6

## communications-electronics

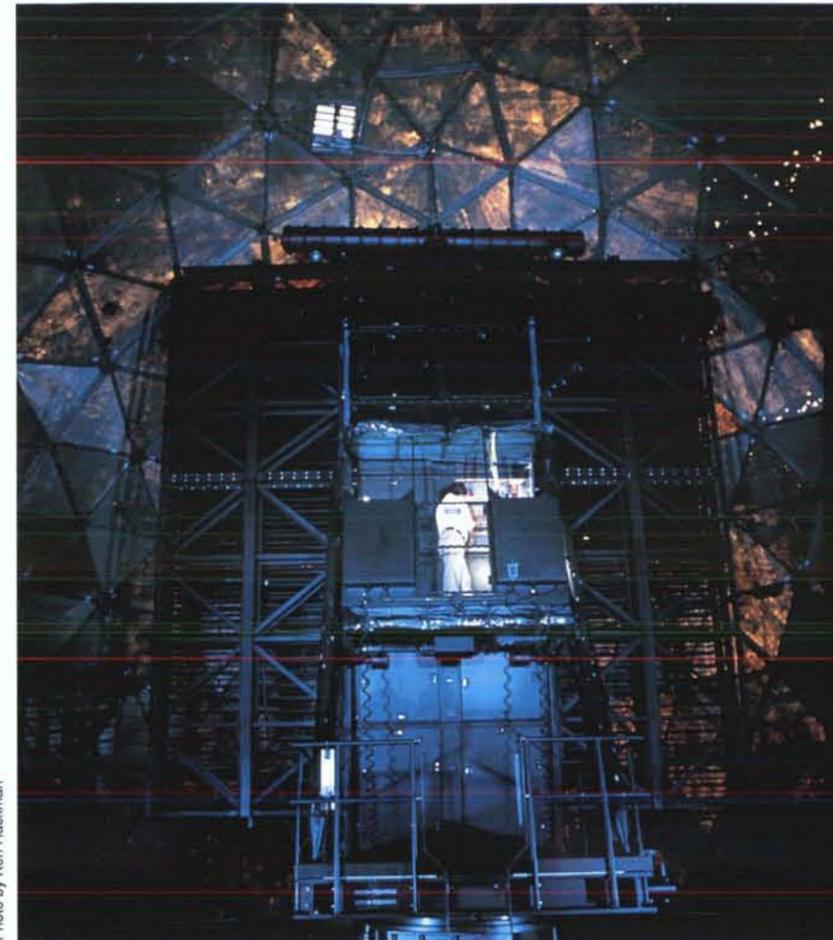


Photo by Ken Hackman



Photo by Steve McGill



Official Air Force Photo

Imagine the communications requirements of a multiservice contingent involved in a hostile engagement halfway across the world. As the Air Force Technology Repair Center for Communications-Electronics, we manage, maintain, and modify the systems that facilitate this level of communication.

We perform depot level maintenance for all types of large radar systems, air traffic control radar and landing systems, meteorological equipment, and cryptographic equipment. We support radios, navigation aids, flight controls and electronic warfare systems.

Our phased array support is unchallenged. We manage and maintain the FPS-117 radar system which is the military equivalent of the General Electric 592-class commercial version. There are five versions of the FPS-117: Berlin, Saudi, Iceland, Seek Igloo, and North Warning. At Sacramento, we have the only facility in the

Department of Defense that can be configured to support all five versions. Proven to be very instrumental in research, software development, modification verification, and training. This facility is a resource that made us a leader in phased array technology.

Through successful competitions, we are increasing our interservice business base in communications-electronics. We have most recently prevailed in competitions for the Fire-finder radar, Bradley Fighting Vehicle guidance system, Night Vision, and gyros. As we continue expanding our support, we will extend the lives of our assigned systems through the insertion of new technologies. Our goal is to provide our customers fast reactions and low cost solutions.

*with capabilities that span from repairing radars to radios, no job is ever too big--no job is ever too small*



Photo by Steve McGill

is enhanced by mobile depot repair vans capable of worldwide deployment for on-site repairs. We provide worldwide support and depot repair for the Air Traffic Control Radar and Landing Systems. This unique capability includes simulated moving targets, a complete checkout of computer data loops, and performance operational tests at system and component levels--we have mock-up for every radar used by the Federal Aviation Administration.

As the Air Force Telecommunications Technology Repair Center, our telecommunications equipment support capability has an experience span in excess of 50 years. This includes repair of mechanical and electronic telephone switching systems, AUTOVON support, and command, control, and communications systems.

Our communications antennas and rotary couplers repair processes include complete mechanical repair and electrical tests. In our chamber test facility, we conduct static checks of TACAN antennas. To better meet customer needs, our antenna repair capability is expanding to include evaluation, repair, test, and calibration of phased array.

**W**e provide repair, overhaul, modification, and test support to an extensive product line. We trouble-shoot and perform functional tests on over 200 categories of power supplies including flight control power systems,

weapons navigational computers, and specifically, the Airborne Warning and Control System. With a repair capability for meteorological equipment, we support storm tracking ground based radar, and temperature, humidity, and wind monitoring equipment. Our cryptic depot repair service encompasses secure telephones, modems, and multiplexers. This capability includes micro miniature components and test equipment with embedded cryptologic.

Our depot level maintenance and test operations support all types of large radars including height finders and search radars. This service



Photo by Steve McGill



Photo by Scott Stewart

**M**cClellan employees are active members of the Sacramento community participating in community activities, assisting charities, and reaching out to individuals that are less fortunate than themselves. During 1993, more than \$1 million in financial aid was donated to the Combined Federal Campaign (CFC). We were the number one contributor to the CFC exceeding the number two business by an impressive 350 percent. Over 500 McClellan employees volunteered their time to support Operation Santa Claus. We collected \$23,000 and provided 74,000 cans of food for 1,900 food baskets. A very special gift from the McClellan workforce is our "Gift of Life." As the largest regional contributor, in 1993 McClellan employees donated over 5,000 pints of blood to the Sacramento Blood Bank. Due to a strong McClellan endorsement of the academic community, our employees actively participate in the Adopt-A-School program with over 100 employees assisting 24 local schools.

A rich educational resource is the McClellan Aviation Museum, listed by our local Chambers of Commerce as a site to see in Sacramento.

**GOOD NEIGHBOR  
1993 STATISTICS**

- \$1,050,000 Combined Federal Campaign
- \$23,000 Operation Santa Claus
- 5,000+ Pints of Blood
- Special Children's Christmas
- Educational Programs

Since 1986, we have hosted over 500 school tours, instilling an early appreciation for the history of aviation. Viewed as one of the finest base-level museums, we have 26 aircraft ranging from an A-10 Desert Storm war veteran to a C-53 "Sky Trooper" which air lifted paratroopers on D-Day.



Photo by John McDowell



Photo by Steve McGill

*since 1986, we have hosted over 500 school tours in our museum, instilling an early appreciation for aviation*

## community involvement



Photo by Tony Lambert

**the technologies we develop and support have application potential beyond McClellan Air Force Base**

**M**cClellan AFB is teaming with local businesses academic institutions, and community leaders with a goal of maturing into Northern California's Business Center of Excellence. Together, we are creat-

ing opportunities to achieve economic prosperity by augmenting our service industry through industrial growth. Sacramento Air Logistics Center is known throughout DOD as a high technology industrial center with advanced capabilities in composites, microelectronics,



Photo by Ken Hackman

electrooptics, software, hydraulics/pneumatics, nondestructive testing, flexible manufacturing, system engineering, and environmental technologies. We have agreements with local businesses to use McClellan's unique equipment such our thermal plastic injection molding machine, and unique facilities like our microelectronics and electrooptics laboratories. We are working with these small businesses to develop first articles for new products--they, in turn, are establishing local manufacturing sites for these new products. Contributing to the advancement of the sciences, we have several academic technology transfer agreements. Specifically, we have an agreement with the University of California, Davis Medical Center to study neutron boron capture therapy. This effort will result in a regional treatment center for previously inoperable brain tumors. To facilitate technology transfer we are forming Cooperative Research Development Agreements (CRDAs) and memorandums of understanding with state and local government and the private sector. Following are just a few examples of agreements in process and under negotiation.

□ In a partnership agreement with Phillips Laboratory, we are testing and diagnostically supporting a VHSIC space borne computer.

□ We are working with CALTRANS to develop the transportation system of the future. This involves the development of microelectronics and software, as well as other technologies, for the control and tracking of future transportation.

□ In a CRDA with a small business, we are developing processes to generate photo tooling for rapid remanufacture of printed wire boards for which tech data is not available. Included are single sided and double sided flexible circuit boards.

□ In a private enterprise CRDA, we are providing reactor access for neutron radiography of space components. In return, we will receive consultation and expert data on the use of neutron radiography for space component structures and their composition.

## small computer repair

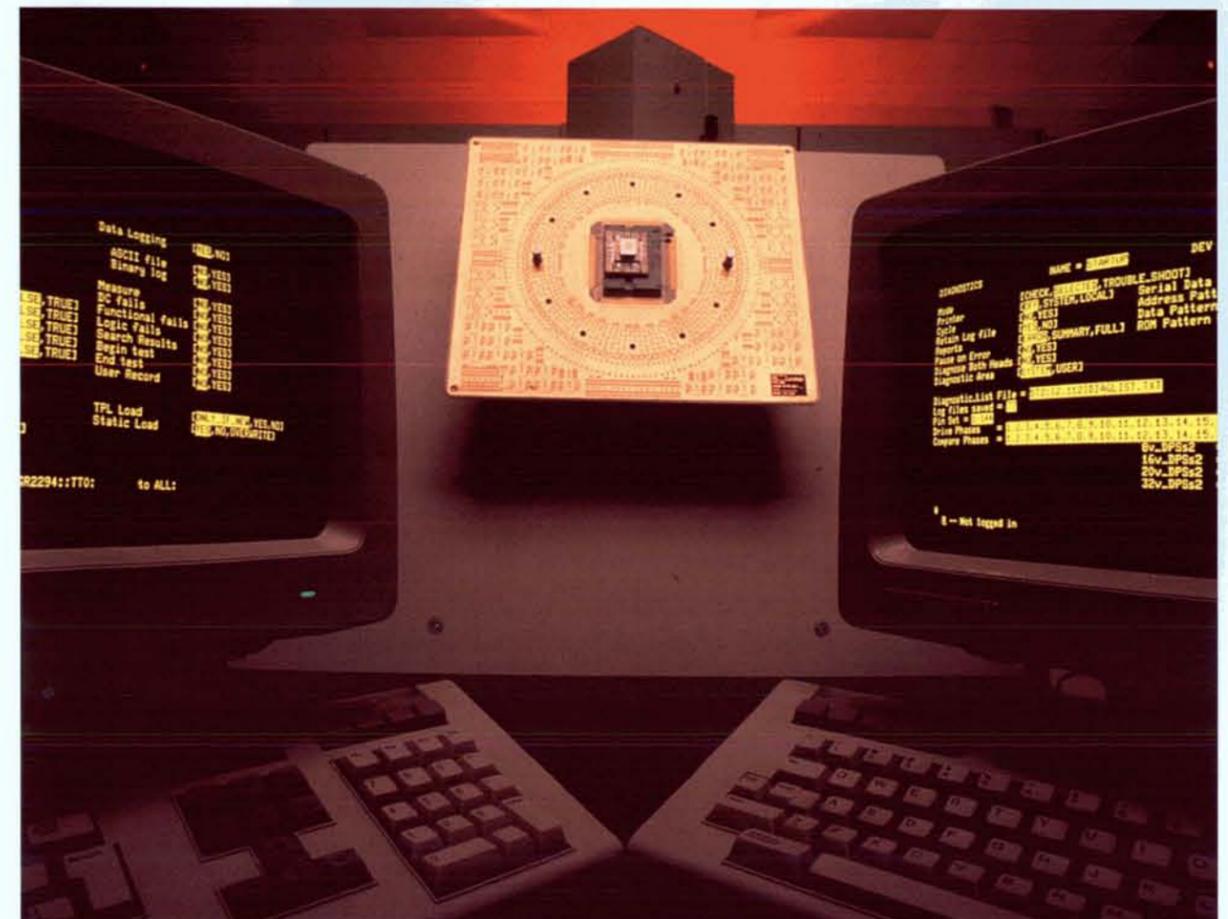
**O**ur small computer repair center provides maintenance support to all DOD and Federal Government activities. In addition to small computers, we service and upgrade audio visual devices, projectors, televisions, video cassette recorders, facsimile machines, telephone answering machines, and peripheral equipment. To improve our competitiveness, we employ "best commercial practices," and maintain the latest state-of-the-art commercial equipment, technical data, and technical manuals.

From a bench stock of generic programmable read-only memory (PROM) microcircuits and erasable PROM microcircuits, we logically replicate failed items. Site specific programs are satisfied with "Just-In-Time" programming of blank "vanilla" circuit card assemblies. These circuit cards are drawn from a common inventory and can be programmed for immediate delivery. Beyond maintenance support, we perform

complete system installations. Expertise is in place to engineer, furnish, and install new automated data processing equipment, local area networking, and video television conference systems. As well, we upgrade older systems to today's technology level.

If we don't satisfy our customer, somebody else will--the customer is our reason for being here. Therefore, our computer repair center is structured as a "total quality" activity. We provide telephone technical support and information service for trouble-shooting. Although all work performed by our technicians is warranted for 90 days, our goal remains to deliver "first-time" quality products and services.

**when our customers' computer support needs are immediate and critical, our technicians provide field support**



Official Air Force Photo

## electronic warfare

A pilot's survival tactics demand evasive maneuvers when being tracked by enemy radar. To improve their proficiency, pilots fly against systems that emulate enemy radar and electronic warfare signals. We manage and maintain these systems through our Red Force Range Center.

range at Delemere to include electronic warfare capabilities. Our support of this 2-year lease program involves requirements definition, site preparation installation of equipment, and initiating the integration contract.

For the duration of the program, we are functioning as contract managers and the operational link for trouble-shooting and technical consultation. Our Red Force Range Center provides system engineering, hardware and software engineering, technical support, maintenance, and formal modifications. Not only do we manage existing systems, but we insert advanced capabilities for aging systems no longer supportable through private industry.

Closing the Philippine's Crow Valley Bombing Range left a critical void in the Pacific Theater. At the request of the Royal Australian Air Force, we are modifying their existing bombing and strafing

**we provide program management support for all Air Force ground electronic warfare simulators**



Photo by Steve McGill

## dual use



Official Air Force Photo

The Sacramento Air Logistics Center dual use plan represents a new approach to acquisition and depot level logistics support in the post-cold war era. It reflects the Air Force vision of Air Force people building the world's most respected Air and Space Force--global power and reach for America.

Our plan is an evolving one and, therefore, it is flexible and designed to establish the architecture for the near term as well as the future of McClellan Air Force Base. Representing McClellan's approach to future utilization and growth, dual use consolidates such things as strategic planning, joint service initiatives, technology planning, foreign military sales programs, cooperative agreements, and discussion of legal and funding policies. Dual use considers McClellan as a whole and depends on maintaining a continued military depot mission. However, up to 25 percent of the base's capacity may ultimately support nonmilitary dual use applications. The plan centers around three basic ideas--preserve, diversify, and facilitate.

Preserve refers to maintaining the workload base we have today by fulfilling existing commitments and customer quality expectations, by maintaining our system management responsibilities, and by winning our depot maintenance competitions.

Diversity refers to expanding and diversifying our customer base internally, in the interservice area, with other federal agencies and in foreign military sales. Additionally, it refers to breaking down barriers to other potential customers.

Facilitate refers to helping the community and McClellan through facilitating others, creating environmental partnerships, utilizing cooperative research development agreements (CRDAs) and joint-use agreements, and pursuing community development activities.

As directed by the 1991 Defense Base Closure and Realignment Commission, McClellan competed in a series of nine separate competitions with the Army for the Sacramento Army Depot's (SAAD) workload as a result of SAAD's scheduled closure. Based on dollar value, we won 75% percent of the workload competed, including Electrooptics/Night Vision--a minimum \$50 million workload. Night Vision workload focuses on image optics systems used in low light applications, and lasers used to measure distances and provide target identification. The image optics systems that we repair use either light intensification or infrared technologies.

**night vision equipment includes observation systems used on the battlefield and on US Navy ships**

# *environmental management*

Allowing McClellan to function as a test bed demonstrating environmental technology and management innovations is the result of an alliance we have with the US Environmental Protection Agency and the State of California. This alliance is called "EPIC"--the Environmental Process Improvement Center.

One example pioneered through EPIC is a soil vapor extraction system which removed 46,000 pounds of contaminants from McClellan soil in 8 weeks. The traditional cleanup technology would have taken 6 years.

As northern California's largest industrial employer, we're called upon to be a leader in addressing California's clean air efforts. Our partnership

with a local utility company to develop and demonstrate the use of zero-pollution electric vehicles represents a stalwart effort toward cleaner California air. But our leadership role extends beyond California's boundaries. McClellan AFB has long been a recognized environmental leader in the military, paving the way for the Air Force, as well as the DOD, in areas such as pollution prevention, restoration, and environmental community relations. We were the first installation in the DOD to establish an Environmental Management Directorate and we were the first air force base in the country to switch to JP-8 jet fuel, a safer, less polluting fuel that reduces air emissions by 25 tons a year.

Altogether our efforts and future goals are ensuring that we continue to meet and exceed our environmental responsibilities and that we do our part in keeping Sacramento a desirable place for people to live and work. At McClellan AFB, we're committed to finding a better way.

*if the 1980's was the decade for containment, the 1990's is the decade for treatment*



Official Air Force Photo



Photo by Steve McGill



Photo by Steve McGill

# *space*

A satellite's orbit through space is tracked by ground radar equipment managed and maintained at McClellan AFB. Responsible for all space-based ground systems, we are the predominant space logistics support facility in the Department of Defense. We provide logistics management support to programs like MILSTAR, the Global Positioning System, and the Defense Support Program (DSP). DSP provides detection and tracking of missile launches.

A significant player during Operation Desert Storm, DSP provided satellite detection of SCUD missiles.

Through our space range program, we manage, maintain, and modify the ground equipment that collectively controls space vehicles from launch to early orbit. Our services actively support 6 US agencies and 4 foreign governments, operating over 140 radar systems on 27 space ranges with 63 operating site locations.

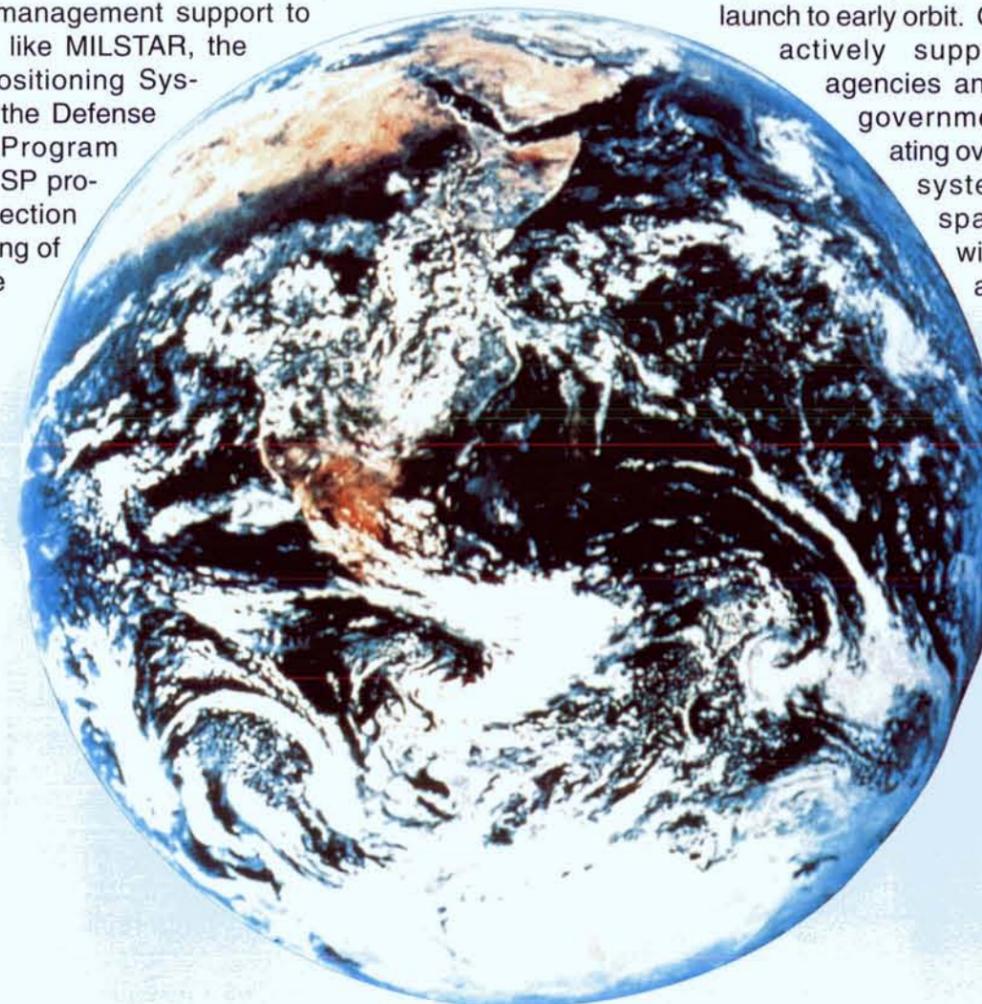


Photo Courtesy of NASA

*in addition to space systems, we manage all of the communications equipment that keeps the critical Cheyenne Mountain Complex alert and operational*

# manufacturing



Photo by Bob Wickley



Photo by Rose Reynolds

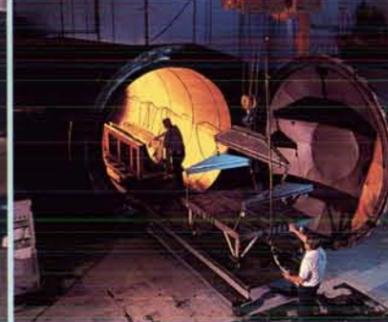


Photo by John McDowell

*when traditional methods have been exhausted our custom manufacturing techniques provide creative solutions*

**F**lexibility in the factory is a critical requirement in today's production environment. With over 400,000 square feet dedicated to manufacturing, our goal is to meet our customers' needs through a virtually unlimited product line--microcircuits, tubes, hoses, cables, avionic components, and mobile shelters are just a few examples of our diversity. We are a one-stop, full-service manufacturing facility complete with a foundry and plating shop.

Over the past 10 years, we have invested heavily in capital equipment. We have a complete numerical control capability, as well as heat treating, laser punching, and robotic

painting equipment. Supporting our composite capability, our bonding autoclaves attain 300 PSI and 800° F. Our parts replication system optically measures objects up to 1 x 2 x 3 meters and provides three-dimensional data used with our numerically-controlled machining equipment.

Adding to these capabilities are our flow grind and match fitting processes, which achieve tolerances of 5 millionths of an inch and maintain roundness and concentricity to 10 millionths of an inch. Applying the 25,000 pounds of pressure generated by our drop hammers, we stamp out skins up to 6 feet wide and 1/4 inch thick. Our hot press forms parts at temperatures up to 2000° F, while our Hufford stretch wrap machine stretches and forms up to 15 foot lengths of steel, aluminum, and titanium sheets.

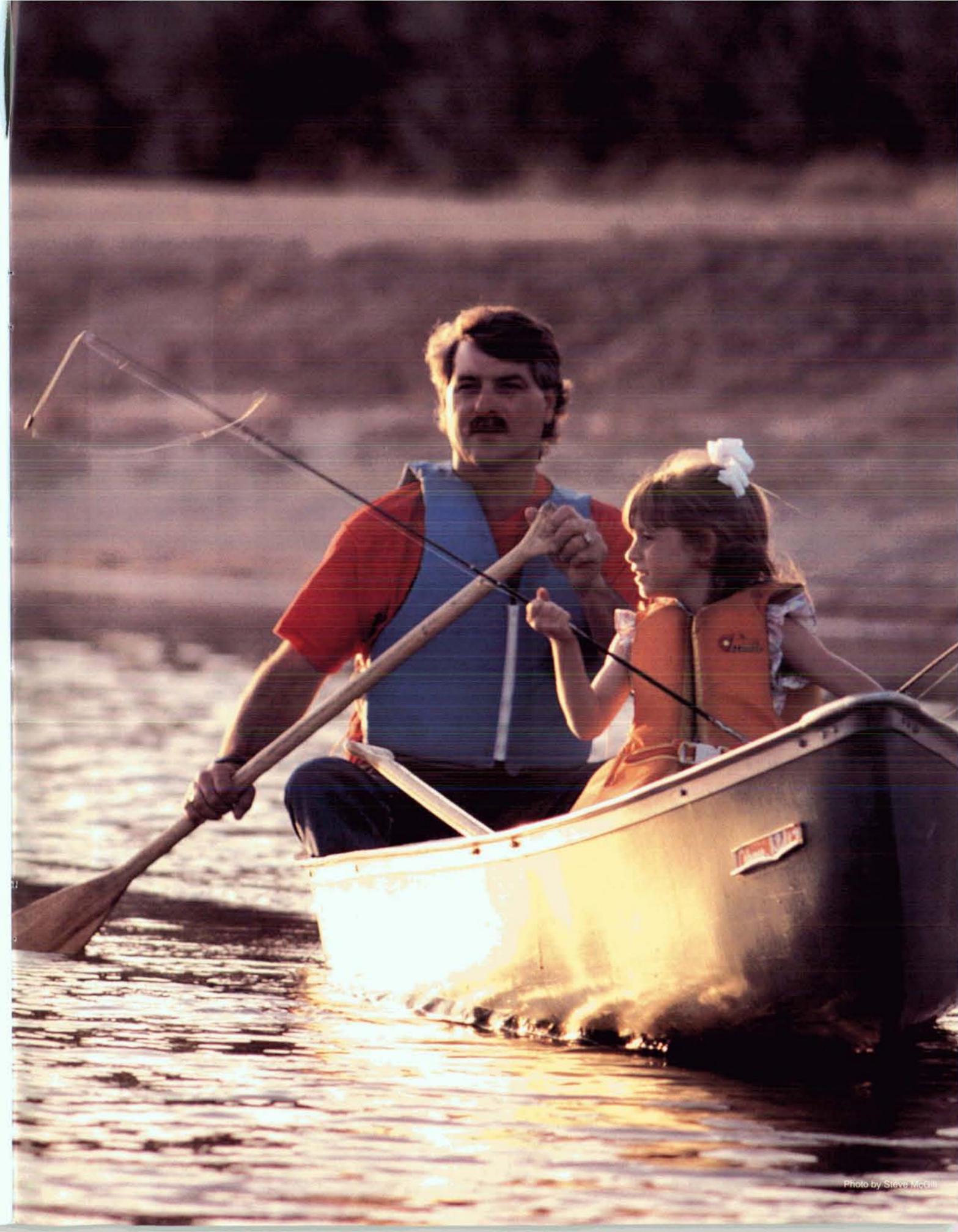


Photo by Steve McGill

## resource preservation

**M**cClellan AFB is doing business cleaner than ever before. We use fewer chemicals, generate less waste, and recycle whenever possible. We are asking people who live nearby what they think and respecting their needs and wishes. A team of environmental professionals works in Environmental Management to properly manage, restore and preserve our resources. McClellan AFB has 250 acres of land managed for fish, wildlife and wetland resources. The base's natural resources program includes two local creeks, several vernal pools, and large fish and wildlife areas.

On the west side of the base, beyond the jet fighters and runways, is a shining example of how McClellan has turned a problem into a resource. An old "borrow pit," an area where soil was excavated for construction projects, is restored into a wildlife pond. Treated ground water from throughout the base is piped into the area. Benefits to the environment are numerous. We are reclaiming the treated ground water, providing nonconsumptive recreational opportunities, and enhancing the existing protected wetland habitat and thriving wildlife population in this area.

The pond provides a flood control basin if needed during particularly heavy rainy seasons. The base encourages families, neighbors and school children to visit this area. Catching and releasing fish is a highlight during special events held at the base. The US Department of Fish and Game is a partner for this program.

McClellan's goal is to develop this part of the base into a "watchable wildlife area," matching DOD efforts to promote educational awareness of natural areas. A nature trail with interpretive displays will enhance our wildlife area. Some wildlife species in the area are California quail, ring-necked pheasants muskrat, jack rabbits, turtles and various species of fish.



*by encouraging  
wildlife  
preservation and  
restoring  
resources, we're  
finding better  
ways to do  
business*

Official Air Force Photos



Photo by Bob Wickley

## printed wire boards

The quality and reliability of McClellan's printed wire boards have made us the supplier of choice for critical Air Force, Army, and Navy projects. Fostered by a roundtable environment, we believe in including the customer in each step of the development process. This allows for on-the-spot modifications to more precisely align the product with customer needs.

We have the ability to manufacture, repair and test every type of circuit board found in industry

including surface mounted assemblies and combination boards which apply both traditional through-hole components with surface mount technology. Having dense packaging capability, we work with fine traces down to 5 mils;

and our multilayer experience includes boards up to 13-layers.

Certain applications, such as recording devices require pliable surfaces. We have the capability to manufacture flexible circuit boards. As the name implies, the elasticity of copper and thin layers of mylar allow the boards to literally "twist."

Reverse engineering is a frequent requirement in the manufacturing process. This process begins with engineering data development on our computer-aided design/computer-aided manufacturing (CAD/CAM) system. Each layer of a multilayer board can be designed and mapped on our CAD. Digitized data is processed through a laser photo tool and a numerically controlled drill and router. Integrating these systems enhances the retrofit process, as well as new product design, development, and modifications to existing boards.

*surface mount technology results in higher lead counts and increases in the density of board population*

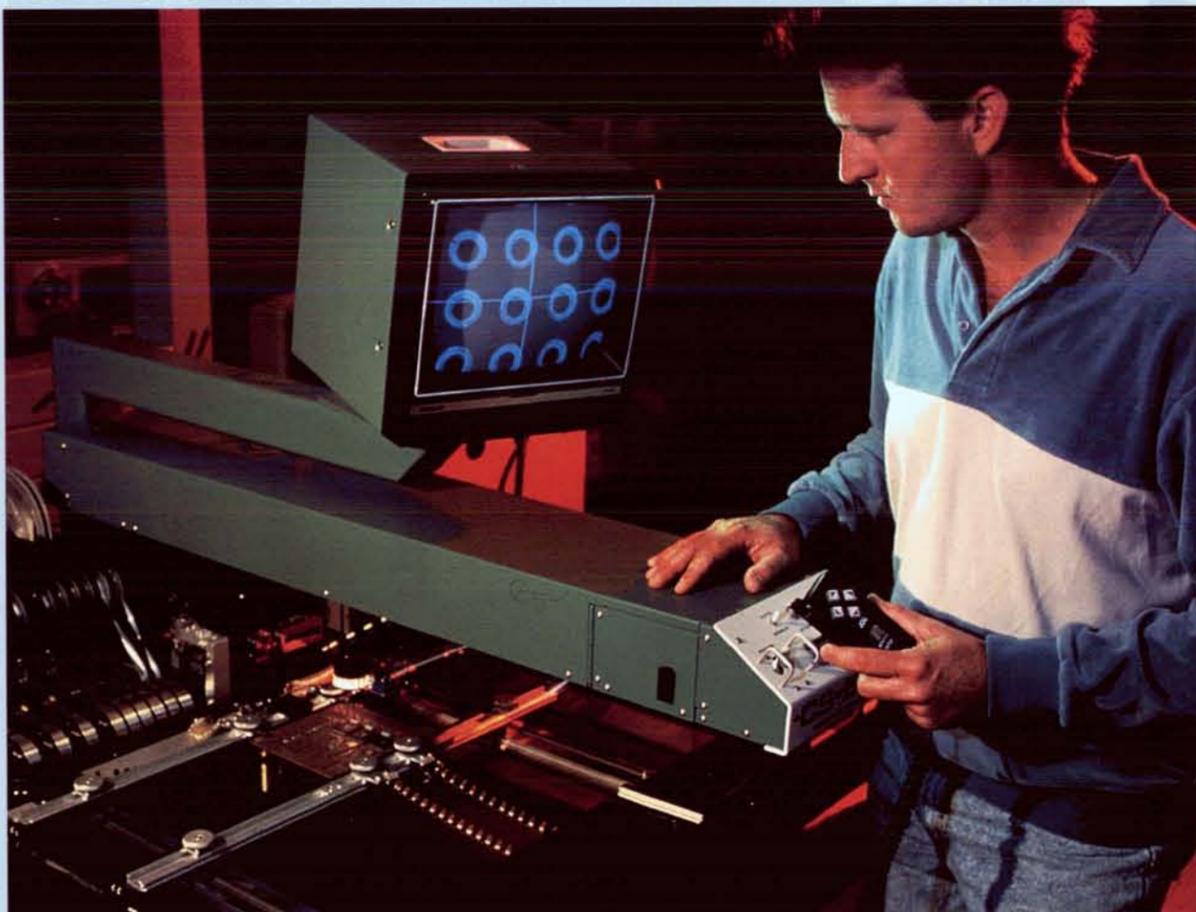


Photo by Steve McGill

## software

Our support encompasses system hardware and software technology insertion for computer systems, including embedded computers. We provide design, development, reengineering, integration, modification, and documentation support. We offer superior solutions to a wide range of engineering issues including analysis, design, testing, and formal modifications.

Following rigorous system engineering processes, we develop real-time Ada software for insertion projects. A precise development process is used to ensure software is well documented, supportable, reusable, and defect free. This process is supported by integrated diagnostic software for rapid internal fault.

Within our software reuse repository, procedures have been established to ensure

potential users know the quality and suitability of the reusable components to their applications. The repository contains real-time, multitasking, fault tolerant operations, and mathematical processing operations. We follow industry guidelines to ensure compatibility across the DOD.

We provide solutions for obsolescence issues involving electronic hardware systems which utilize embedded computers. These hardware and software replacements are significantly more cost effective than procuring new systems. Projects in this category include the Low Altitude Safety and Target Enhancement modification from Jovial to Ada.

*software workload will rise naturally as we increase workloads in other areas and as modern systems become more sophisticated*



## *electrooptics*



Photo by Ken Hackman

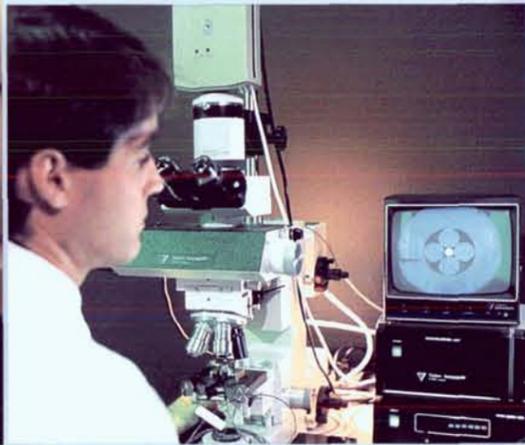


Photo by Ken Hackman

*through our electrooptic technology center, we provide high technology solutions based on prototype development*

**W**e apply electrooptics technology to solve weapon system performance problems and improve reliability and maintainability. This capability is supported by 5,000 square feet of laboratory space and

over \$5 million of electrooptic test equipment.

Electrooptic and fiber optic technologies are changing rapidly and continuously providing new solutions to inherent problems in afflicted weapon systems. With a focus on transceivers, lasers, optical electronics, smart structures, and electrooptic sensors, we provide organic engineering support, technology integration, and proof-of-concept prototyping for avionic and ground communications systems. On the basis

of prototype development, we provide high technology solutions to upgrade older weapon systems and improve current system survivability. Program elements of prototype development include field test evaluations, data collections for new systems and future modifications, and development of maintenance concepts and related hardware for fiber optic system support.

Our technology center has a fiber optic sensor evaluation test system. This system consists of five sensor test and evaluation substations dedicated to the parametric measurement areas of vibration, temperature, pressure, fluid flow and level, and combined temperature, altitude and humidity. This expanse of optical test, diagnostic, and inspection equipment provides a unique means to facilitate the insertion of rapidly advancing technology into tomorrow's Department of Defense.

## *composite manufacturing*



Photo by Ken Hackman

**W**e are the Air Force center for the design, repair, and production of advanced composite components. Our objective is to develop a capability within the Air Force to apply advanced composites' technology to solve aerospace and ground vehicle structural and service life problems.

Our total capability for the design and analysis of composite structures and components encompasses computer and software capabilities, including simulated testing of structures. We utilize our own load frame to perform structural testing. It is equipped with a heat lamp to simulate aerodynamic heating.

Our software packages support three-dimensional computer-aided design/computer-aided manufacturing (CAD/CAM), drafting, solids molding, finite element analysis, structural design, five-axis numerical control, and injection molding. Utilizing a 1,500 ton injection machine--the largest in the DOD--we design and manufacture injection molded

thermoplastic structures up to 500 square inches and 20 pounds. We provide multiservice support for composite technology insertion, aircraft transparencies, and composites engineering. We continually survey industry and academia to sufficiently understand new developments, trends, and opportunities associated with this advanced technology.

A recent success in the application of composites is the redesign of an F-117 trailing edge. The redesign took advantage of a new material, Air Force Resin 700B, which can withstand 700° Fahrenheit for more than 100 hours without degradation. We simplified the original design, maintained low observation requirements, cut manufacturing cost in half, and provided our customers with an improved part that meets their needs.

*composite materials take us into the future with heavy application in tomorrow's weapon systems*

# computer integrated manufacturing

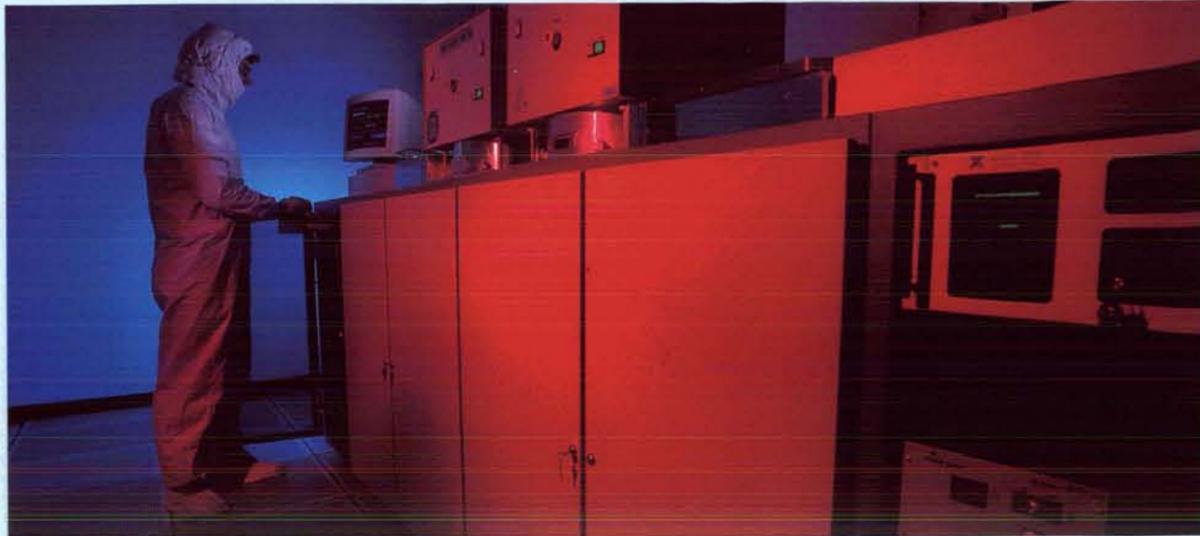


Photo by Steve McGill

*in the McClellan tradition,  
we are dedicated to  
ensuring cost-conscious  
production of quality  
manufactured goods*

The Flexible Computer Integrated Manufacturing (FCIM) initiative is a tri-service, interagency effort which focuses upon reengineering of manufactured processes across a spectrum of public and private industries. Through the integration of equipment, software, communications, human resources, and re-engineered business processes, FCIM enables rapid prototype, manufacture, repair, and delivery of products.

Sacramento ALC is proud to be the Air Force's product validation enterprise (PVE) site for electronics. Our goal is to provide a quality product within 30 days of our customers' request. We are developing this capability throughout our enterprise by treating every job as an exception, utilizing "proof of concept" prototypes, and by linking participant at every step of the manufacturing process to a base-wide data communications network.

The implementation of FCIM technologies in our printed wire assembly/printed wire board area has led to innovative business solutions for a dynamic market. As the lead Air Force PVE, we have modeled our "as is" business processes and have begun reengineering those

that present barriers to engaging in sound business practices. This initiative, coupled with insertion of modern manufacturing technology, will establish a firm foundation for electronic data interchange for enterprise integration, enabling us to rapidly respond to changing customer needs.

Supported by the FCIM processes, our microelectronic development projects are the only organic projects of their kind in the Air Force depot system. Reverse engineering is a frequent requirement for solving supportability problems. We address current and emerging obsolescence issues through a process developed and refined at this center--logistics retrofit engineering. This innovative technology is used by our engineers to analyze problems and formulate solutions using both engineering and logistics criteria. All solutions are as technically viable as they are logistically sound.

Responding to a wide variety of customer needs, under the FCIM umbrella, we are implementing the latest computer aided design/computer aided manufacturing CAD/CAM technology for designing, prototyping, and manufacturing patterns for cast parts, injection molding, sheetmetal forming dies, and composite layup. We are also developing platform-neutral machine control languages which will enable the exchange of machine instructions between diverse shop floor equipment, as well as geographically diverse manufacturing sites.

We are also developing platform-neutral machine control languages which will enable the exchange of machine instructions between diverse shop floor equipment, as well as geographically diverse manufacturing sites.

# instruments



Photo by Rose Reynolds

We have a proven capability gained in repairing, overhauling, and modifying entire categories of complex avionics components. Our instrument repair operations include overhaul of a full range of pressure, temperature, humidity, and time measurement instruments; flight control and navigational flight instruments; and flight data cockpit recorders. Our electrical accessories repair capability includes any ground-based or airborne electrical component that generates, distributes, controls, regulates, stores, or converts electrical energy.

We service thousands of items worldwide, and overhaul and test electrical equipment which incorporates state-of-the-art solid state generator control units used on multiple interservice aircraft. Our software-driven test stands, with custom adapter sets, provide the

means for automatic testing of oil- and air-cooled aircraft generators in less time and with far greater accuracy than conventional methods.

We reverse engineer and develop rewind data on electrical wire-wound components like airborne and ground rotors and stators, excitor rotor coils, and transformer windings. Our rewind experience includes flat or round wire units sized from 2 inches to 4 feet in diameter, with weights ranging from a few ounces to several hundred pounds. This technology facilitates our ability to remanufacture electrical actuators, heads, transformers, and rotors.

*we package a standard  
set of core computer  
modules to satisfy the  
requirements of any of  
our customers*

# hydraulics

Sacramento Air Logistics Center is the Air Force Center of Excellence for Hydraulics and Pneudraulics. We have the largest aircraft-related hydraulic and pneudraulic overhaul and repair capability in the DOD. Our professional staff stays abreast of the latest industry advances and participates in developing and implementing hydraulic and pneudraulic standards.

We support electro-servo actuators, servo valves, mechanical servos and valves, rotary actuators, linear actuators, pumps, motors, reservoirs, and related components. State-of-the-art test stations support this capability, such as the computer operated and controlled general purpose hydraulic test station which is designed to test virtually all flight control components.

With the addition of our new advanced hydraulic facility, we can accommodate multiple interservice flight control workloads such as the Navy's F-14 Tomcat.

Most important, this workload capability encompasses advanced hydraulic components using manifold systems with pressures up to 8,000 PSI. Our overall



Photo by Bob Wickley

capability is germane to a multitude of hydraulic and pneudraulic components present on mobile ground segments of space systems, fixed-site sensor stations, and reusable spacecraft.

*in our new advanced hydraulic facility, we accomplish multiple interservice flight control workloads*

# aircraft

We listen very carefully to the requirements of the aerospace industry and ensure that the aircraft maintenance, modifications, and back shop support we offer conform precisely to our customer's needs.

The combat-proven A-10 is a Sacramento repair workload. We perform programmed depot maintenance (PDM) for the F-111 and as a second source of repair, for the F-15 and the KC-135. Through our aircraft PDM line we support processes like structural and electrical modifications, corrosion control, intermediate engine maintenance, and pyrotechnics. We overhaul wing pivots, actuators, slats and flaps, and horizontal and vertical stabilizers. And as logistics support managers, we're responsible for the F-117 and the newest addition to the Air Force fleet--the F-22 Advanced Tactical Fighter. Aircraft support operations include radome recoating, desealing and resealing of fuel tanks, and structural inspection programs which include McClellan's Nuclear Radiation Center (MNRC). This center is the world's largest

neutron radiography facility dedicated to component inspection. The MNRC provides our structural engineers with data concerning moisture and corrosion intrusion never before available. The MNRC data collection systems are designed to provide on- and off-line tracking of critical components and data reduction for trend analysis. In addition, the MNRC provides inspection data for egress and hydraulic systems concerning explosive integrity and oil fill levels.

Full aircraft nondestructive inspection is accomplished in our world-unique fighter-size facility. This cost-cutting process uses N-rays and X-rays to examine an aircraft's internal structure while it is left fully intact. This past year, we did inspections to collect data for the Navy's F-14 aircraft and we inspected the Army's Apache helicopter.

*our depot overhaul services range from electrical modifications to structural integrity inspections*



Photo by Bob Wickley



Photo by Rose Reynolds

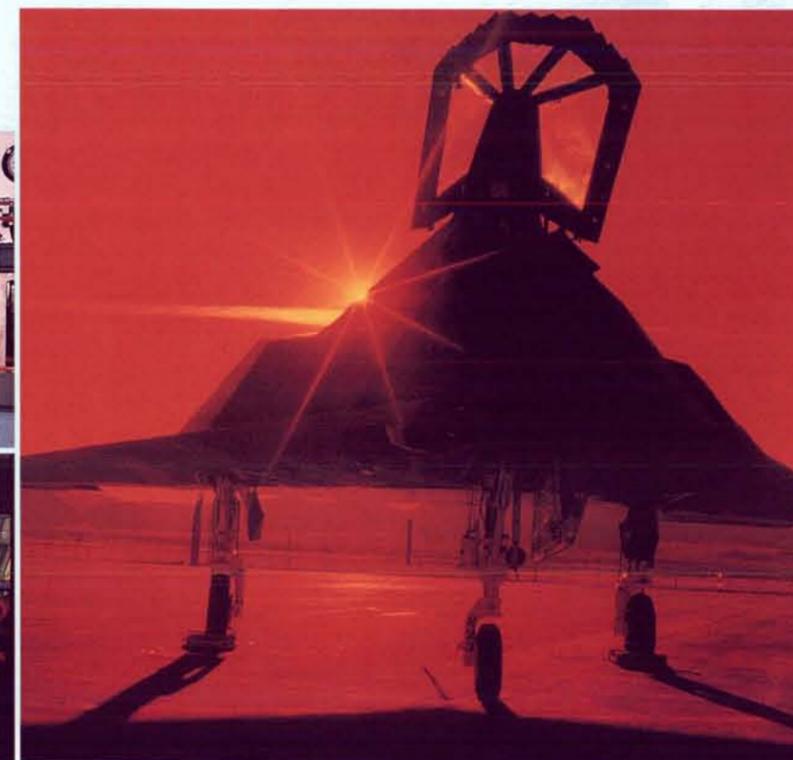


Photo by Greg Meland



# Document Separator

21  
100-19  
*McClellan AFB*

# *Environmental Restoration Program*

**“Costs to Complete - An Accelerated Cleanup Scenario”**

**McClellan AFB CA**

**2 May 95**

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*Environmental  
Restoration Division*

## *McClellan "Quick Benchmark"*

- Found contamination in 1979
- Contamination "Soup" (i.e., VOCs, PCBs, Metals, Radioactive)
- Entire base on National Priority List (NPL): Jul 87
- Extensive soil and groundwater contamination
- Interagency Agreement (IAG): May 1990
- ATSDR Public Health Hazard Determination: February 1993

## *Overview*

- **Key Issues**
- **Magnitude and Extent of Contamination:  
Risk & Cost Drivers**
- **Cost to Complete**
- **Summary**

## ***KEY ISSUES***

- **McClellan's Cleanup Costs Have & Will Continue to be Driven by:**
  - *The Present Risk of Contaminated Groundwater and,*
  - *The Present and Future Risk of Contaminated Soil/Soil Gas to the Groundwater*
  - *Magnitude of Contamination*
    - > 12 Billion Gallons Contaminated Groundwater
    - > 370 Acres Contaminated soil
- **Variety of Contaminants (e.g., Radioactive, PCBs, VOCs, Metals, etc.)**
- **Cost Estimates for an Accelerated Cleanup are approximately twice the current "Technology Advancement" cleanup approach**

*McClellan AFB*

# *Magnitude & Complexity of Contamination*

**“Multi-Media & Multi-Contaminant”**

*Environmental  
Restoration Division*

# Volume/Mass Contaminant Estimates\*

## McClellan AFB CA

Media	Area (Acres)	Volume (cu ft)	Mass (lbs)	Contaminants
Groundwater	664	2.2 x 10 <sup>9</sup> (>12 billion gallons)	19,404 lbs	VOCs, Metals, Semi-VOCs
Soil/Soil Gas	373	16.7 x 10 <sup>8***</sup>	771,660 lbs	VOCs, PCBs, Metals, Dioxin, Radioactive
Totals	N/A**	3.9 x 10 <sup>9</sup>	791,064 lbs	

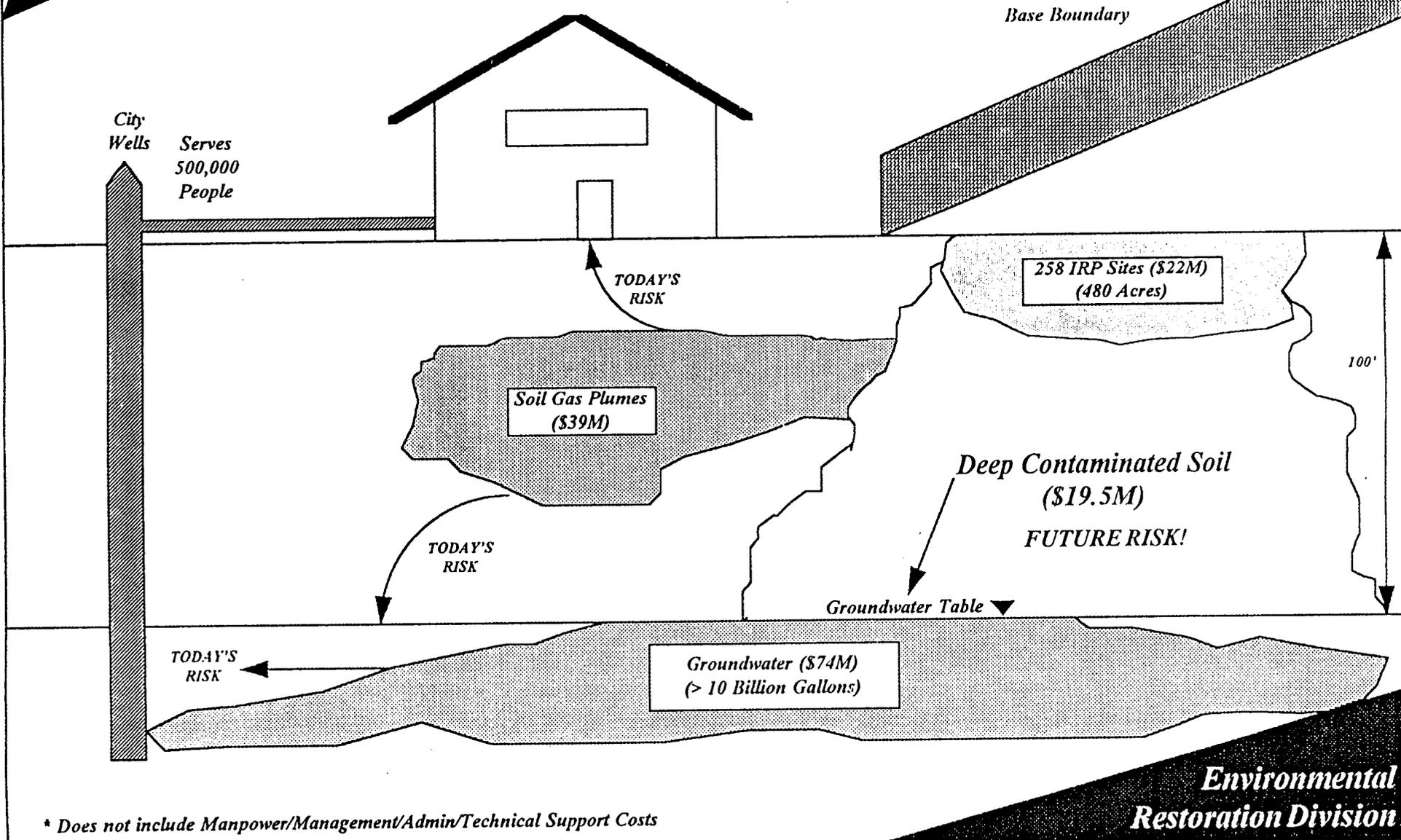
\*Source: MAP, 1994

\*\*N/A - Some Areas Overlap

\*\*\*Includes Volume Estimates for Soil Gas

**McClellan AFB**

**McClellan Environmental Restoration Snapshot**  
**Costs by Media**  
**FY81-94: \$154.5M\***



Base Boundary

City Wells  
Serves  
500,000  
People

TODAY'S  
RISK

258 IRP Sites (\$22M)  
(480 Acres)

Soil Gas Plumes  
(\$39M)

100'

Deep Contaminated Soil  
(\$19.5M)  
FUTURE RISK!

TODAY'S  
RISK

Groundwater Table

TODAY'S  
RISK

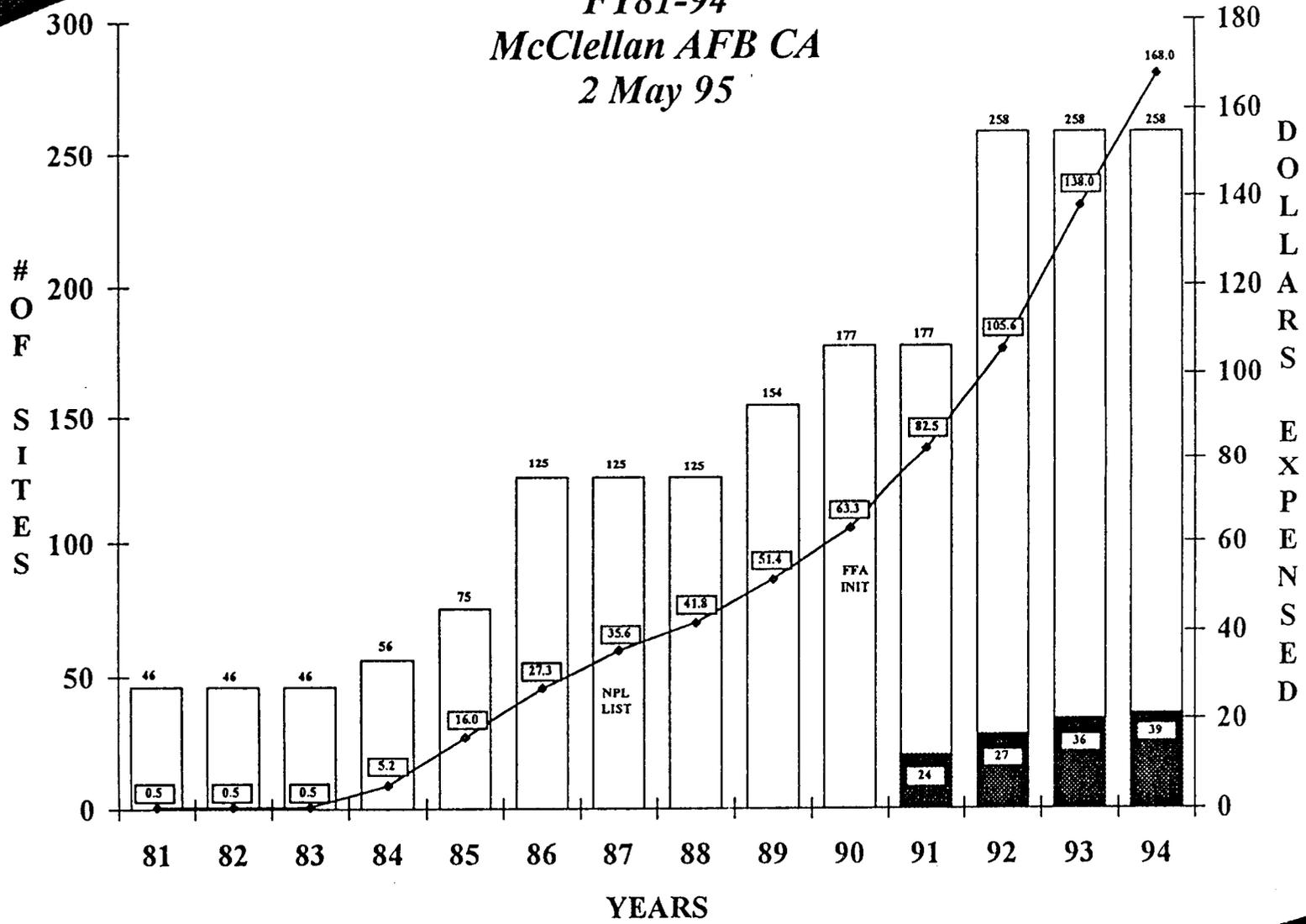
Groundwater (\$74M)  
(> 10 Billion Gallons)

\* Does not include Manpower/Management/Admin/Technical Support Costs

**Environmental  
Restoration Division**

**McClellan AFB**

**Environmental Restoration Cost Trends  
FY81-94  
McClellan AFB CA  
2 May 95**



■ Finished Sites    □ Total # Sites    ◆-----◆ \$s Expended (Total Dollars)

**Environmental  
Restoration Division**

**Environmental Restoration Program**  
**Costs to Complete - Assuming an Accelerated Cleanup Approach**  
**McClellan AFB CA**  
**27 Apr 95**

<b>Scenario:</b> Accelerated Approach	
<b>Strategy:</b>	
<ul style="list-style-type: none"> <li>- Priority: Time to Complete</li> <li>- Do everything as fast as possible approach</li> <li>- Accelerate all sites to cleanup as fast as possible</li> <li>- Utilize existing technologies only (high \$/lb removed)</li> </ul>	
<b>Costs (in millions):</b>	
Cost to Implement Cleanup Systems:	\$825-1210M
Cost to Complete Cleanup (i.e., LTM/LTO*):	<u>\$375-590M</u>
<b>Total Cost to Complete:</b>	<b>\$1,200-1,800M</b>
<b>Cleanup Timeframes:</b>	
Time to Implement all Cleanup Systems:	2008
Time to Complete Cleanup:	2018
<b>Assumptions:</b>	
<ul style="list-style-type: none"> <li>- Range of Cost Uncertainty (20-25%)</li> <li>- Costs do not include Manpower/Management &amp; Tech Support</li> <li>- Cost increase driven by acceleration of timeframes and utilization of existing technologies only (i.e., higher \$/lb removed)</li> <li>- Assumes radioactive contaminated sites require excavation &amp; disposal</li> <li>- Assumes an annual budget: \$40-60M/yr</li> </ul>	



BRAC QUESTIONNAIRE (21 APR 94)							
VIII.14.A COMPLIANCE							
PRJY	TITLE	FY94	FY95	FY96	FY97	FY98	REMARKS
<b>CLEAN AIR ACT</b>							
881512	Transportation Plan Implementation				300	100	
901550	Toxic Hot Spots	212			100		
921812	Rpr BACT Boilers Basewide				250		
921813	Alter BACT Boilers Basewide				100		
931506	Clean Fules Operation				90	90	
931516	Enhanced Commute Alternatives					100	
931519	Base Compliance with I&M Procedures				50	50	
931522	AB2588 EIR/RA Updates				300		
941506	Paint Spray Control					50	
941507	Solvent Spray Control				203	215	
941513	Maskant Dip Tank Vapor Control			50			
971508	PreparE Part B Permit Application					150	
	<b>TOTAL</b>	<b>212</b>	<b>0</b>	<b>50</b>	<b>1393</b>	<b>755</b>	
<b>HAZARDOUS WASTE DISPOSAL</b>							
5011	Hazardous Waste Disposal	878	2300	1900	1700	1800	
5035	Sludge	37	50	60	70	80	
5048	Lead & Asbestos Disposal	200	500	400	400	500	
5051	Friable Asbestos Disposal	6	7	8	9	10	
5056	Bulk Disposal		350	300	450	500	
5059	Lab Packing	200	600	400	600	750	
	<b>TOTALS</b>	<b>1321</b>	<b>3807</b>	<b>3068</b>	<b>3229</b>	<b>3640</b>	

BRAC QUESTIONNAIRE (21 APR 94)							
VIII.14.A COMPLIANCE							
PRJY	TITLE	FY94	FY95	FY96	FY97	FY98	REMARKS
<b>NATURAL RESOURCES</b>							
921522	Historical Preservation Plan/Survey	40					
931547	Update Grazing & Cropland Management / 4/91	72					
	<b>TOTAL</b>	<b>112</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
<b>PERMITS</b>							
5001	Air Permits (339 ea)	138.6	184	130	140	150	
5002	Asbestos Removal Permits (4 ea)	2.2	10	10	10	10	
5010	Lab Accreditation Fees (3 ea)	3	3	3	3	3	
5015	Misc Permits (3 ea)		60	65	50	75	
5028	UST Permits (5 ea)	4.4	37	12	12	12	
5038	Water Treatment Permits (7 ea)	9.8	5	6	7	8	
	<b>TOTALS</b>	<b>158</b>	<b>299</b>	<b>226</b>	<b>222</b>	<b>258</b>	
<b>SAFE DRINKING WATER</b>							
941804	Repair Water Backflow Cross Connections		200				
	<b>TOTAL</b>	<b>0</b>	<b>200</b>	<b>0</b>	<b>0</b>	<b>0</b>	



**Environmental Restoration Program  
 Cost Estimate Inputs - Assuming an Accelerated Cleanup Approach  
 McClellan AFB CA  
 2 May 95**

Cost Factors	Input	Contaminants Addressed	Technology	Source
1. Area of Soil to be Remediated (Acres)	373	-	-	MAP, 94
2. Area of Soil to be Capped (Acres)	23	PCBs/Dioxins	CAP	Vadose Zone FS, 95
2a. Capping Costs (\$/acre)	\$260K/acre - \$1M/acre			
3. Area of Soil to be Excavated/Disposed	25*	PCBs/Dioxins/ Radioactive	Excavation/Disposal	Vadose Zone FS, 95
3a. Volume of Soil to be Excavated/Disposed (cu yd)	1.2 x 10 <sup>6</sup> cu yd			
3b. Excavation/Disposal Costs (\$/cu yd)	\$275 - 400/cu yd			
4. Area of Soil to be Treated (Acres)	350*	VOCs	Soil Vapor Extraction	Actual Performance
4a. Volume of Soil/Soil Gas to be Treated (cu yd)	60.8 x 10 <sup>6</sup> cu yd			
4b. Soil/Soil Gas Treatment Costs (\$/cu yd)	\$9-13/cu yd			
5. Area Underline with Groundwater Contamination (Acres)	664 acres	VOCs, Metals	Pump & Treat	MAP, 94/ Actual Performance
5a. Volume of Contaminated Groundwater (gallons)	12 x 10 <sup>9</sup> gallons			
5b. Groundwater Treatment Costs (c/gallon)	2 - 3.3 c/gal			

\* Some areas will require excavation & treatment

***McClellan AFB***

***Environmental Restoration Program***  
**Cost Estimate Inputs - Assuming an Accelerated Cleanup Approach**  
**(Cost Element)**  
**McClellan AFB CA**  
**2 May 95**

<b>Cost Element</b>	<b>Costs (In Millions)</b>
1. Soil Capping Costs	\$6 - 23M
2. Soil Excavation/Disposal Costs	\$332 - 482M
3. Soil/Soil Gas Treatment Costs*	\$547 - 790M
4. Groundwater Treatment Costs*	\$240 - 395M
5. Long Term Monitoring Costs	\$75 - 110M
6. Total Restoration Costs	\$1,200-1,800M

*\* Includes O&M Costs*

***Environmental  
Restoration Division***

**Environmental Restoration Program**  
**Comparison of Cleanup Costs: Current vs. Accelerated Approach**  
**McClellan AFB CA**  
**27 Apr 95**

Scenario: Current Approach	Scenario: Accelerated Approach												
<p><u>Strategy:</u></p> <ul style="list-style-type: none"> <li>- Priority: "Cost Effective Cleanup"</li> <li>- Risk Based (Worst Sites First) Approach</li> <li>- Put lower risk sites on "hold" pending more cost effective technology or funding availability</li> <li>- Advance emerging technologies to reduce cost (lower \$/lb removed)</li> </ul>	<p><u>Strategy:</u></p> <ul style="list-style-type: none"> <li>- Priority: Time to Complete</li> <li>- Do everything as fast as possible approach</li> <li>- Accelerate all sites to cleanup as fast as possible</li> <li>- Utilize existing technologies only (high \$/lb removed)</li> </ul>												
<p><u>Costs (in millions):</u></p> <table border="0"> <tr> <td>Cost to Implement Cleanup Systems:</td> <td align="right">\$320-435M</td> </tr> <tr> <td>Cost to Complete Cleanup (i.e., LTM/LTO*):</td> <td align="right">\$385-455M</td> </tr> <tr> <td><b>Total Cost to Complete:</b></td> <td align="right"><b>\$705-925M</b></td> </tr> </table>	Cost to Implement Cleanup Systems:	\$320-435M	Cost to Complete Cleanup (i.e., LTM/LTO*):	\$385-455M	<b>Total Cost to Complete:</b>	<b>\$705-925M</b>	<p><u>Costs (in millions):</u></p> <table border="0"> <tr> <td>Cost to Implement Cleanup Systems:</td> <td align="right">\$825-1210M</td> </tr> <tr> <td>Cost to Complete Cleanup (i.e., LTM/LTO*):</td> <td align="right">\$375-590M</td> </tr> <tr> <td><b>Total Cost to Complete:</b></td> <td align="right"><b>\$1,200-1,800M</b></td> </tr> </table>	Cost to Implement Cleanup Systems:	\$825-1210M	Cost to Complete Cleanup (i.e., LTM/LTO*):	\$375-590M	<b>Total Cost to Complete:</b>	<b>\$1,200-1,800M</b>
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Time to Implement all Cleanup Systems:	2008												
Time to Complete Cleanup:	2018												
<p><u>Assumptions:</u></p> <ul style="list-style-type: none"> <li>- Range of Cost Uncertainty (10-15%)</li> <li>- Costs do not include Manpower/Management &amp; Tech Support</li> <li>- Costs assume radioactive contamination requires monitoring only</li> <li>- Cost range include RACER estimate and professional judgment/ experience of installation.</li> <li>- Longer cleanup timeframes encourage technology advancement to achieve a more "cost-effective" overall cleanup cost</li> <li>- Assumes an average annual budget: \$24-30 M/yr</li> </ul>	<p><u>Assumptions:</u></p> <ul style="list-style-type: none"> <li>- Range of Cost Uncertainty (20-25%)</li> <li>- Costs do not include Manpower/Management &amp; Tech Support</li> <li>- Cost increase driven by acceleration of timeframes and utilization of existing technologies only (i.e., higher \$/lb removed)</li> <li>- Assumes radioactive contaminated sites require excavation &amp; disposal</li> <li>- Assumes an annual budget: \$40-60M/yr</li> </ul>												

\*LTM = Long Term Monitoring

LTO = Long Term Operation

## *Summary*

- **Cost Estimates for an Accelerated Cleanup are approximately twice the cost of the current “Technology Advancement” approach**
- **Technology Advancement is Key to Achieving “Cost Effective” Restoration**

### *BottomLine:*

*The Patient is Stabilized While Awaiting Surgery!*

PERMITS PAID BY MCCLELLAN AFB CA ENVIRONMENTAL MANAGEMENT			
MEDIA	PURPOSE	NATIONAL STATUTE	LOCAL/STATE RULE/IMPLEMENTATION
<b>SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT (SMAQMD)</b>			
AIR	PERMIT TO OPERATE -(337 PERMITS)	CLEAN AIR ACT (CAA)	SMAQMD RULES 301 & 306
AIR	EMISSION REDUCTION CREDIT (2 PERMITS)	CLEAN AIR ACT (CAA)	SMAQMD RULE 301
ASBES	ASBESTOS REMOVAL (4 PERMITS)	TOXICS SUBSTANCE CONTROL ACT (TSCA)	SACRAMENTO COUNTY PLANS FEE, RULE 304
<b>CALIFORNIA STATE BOARD OF EQUALIZATION</b>			
HW	WASTE TREATMENT PERMIT (1 PERMIT)	RESOURCE RECOVERY/CONSERVATION ACT (RCRA)	CA HEALTH & SAFETY CODE SEC 25205.14
HW	HAZARDOUS WASTE FACILITY FEE (1 PERMIT)	RESOURCE RECOVERY/CONSERVATION ACT (RCRA)	CA HEALTH & SAFETY CODE SEC 25205.14
HW	PERMIT B (1 PERMIT)	RESOURCE RECOVERY/CONSERVATION ACT (RCRA)	CA HEALTH & SAFETY CODE SEC 25205.14
<b>CALIFORNIA DEPARTMENT OF FISH AND GAME</b>			
NAT RES	STREAM ALTERATION FEE (1 PERMIT)	NATIONAL ENVIRONMENTAL PROTECTION ACT (NEPA)	CA FISH & GAME CODE SEC 1601-1607
<b>CALIFORNIA DEPARTMENT OF HEALTH SERVICES</b>			
LAB	LAB ACCREDITATION FEES (3 LABS)		CA HEALTH & SAFETY CODE, SECTION 1017
WATER	SMALL WATER SYSTEM FEES (4 PERMITS)	CLEAN WATER ACT (CWA)	CA HEALTH & SAFETY CODE, SECTION 1017
WATER	DRINKING WATER CERTIFICATION (1 PERMIT)	SAFE DRINKING WATER ACT (SDWA)	CA HEALTH & SAFETY CODE, SECTION 1017
<b>PLACER COUNTY AIR POLLUTION CONTROL BOARD (PCAPCB)</b>			
ASBES	AUTHORITY TO CONSTRUCT & PERMIT TO OPERATE (1 EA)	TOXICS SUBSTANCE CONTROL ACT (TSCA)	PCAPCB REGULATION 6, RULE 601
<b>STATE WATER RESOURCES CONTROL BOARD</b>			
WATER	WATER DISCHARGE FEE (2 PERMITS)	NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES)	CALIFORNIA WATER CODE SECTION 13260
<b>SACRAMENTO COUNTY HAZARDOUS MATERIALS DIVISION</b>			
UST	CLOSURE CERTIFICATE (1 PERMIT)	40 CFR 280 (CODE OF FEDERAL REGULATIONS)	CALIFORNIA CODE OF REGULATIONS TITLE 23
UST	TANK PERMITS (4 PERMITS)	40 CFR 280 (CODE OF FEDERAL REGULATIONS)	CALIFORNIA CODE OF REGULATIONS TITLE 23

# Document Separator



**Base Realignment and Closure  
(BRAC) Visit  
25 April 1995**

**Volume I**

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**Sierra Army Depot  
Demographics**

**EMPLOYEES:**

**Total:** Approximately 1,245

**Civilian:** 554 permanent, 198 temporary (400 wage grade (WG)/blue collar and 352 general schedule (GS)/white collar, **plus** 49 non-appropriated fund and 52 contract workers). About 50% of the civilian employees live in the Herlong/Doyle area, 30% in the Susanville/Janesville area, 15% in the Reno/Sparks area and the reaming 5% in other areas.

**Military:** 391 active duty Army including 32 tenant personnel (and about 400 family members). Retired Military serviced: More than 2,000 (Commissary, Exchange, Medical, Personnel, etc.)

**Tenant Units:** 34th Explosive Ordnance Detachment (EOD), U.S. Army Health Clinic, U.S. Army Dental Clinic, Defense Finance and Accounting Office, Defense Reutilization and Marketing Office, Defense Commissary Agency, Post Exchange, and Scheduled Airline Traffic Office.

**KEY PERSONNEL:**

**Depot Commander,** Colonel Donald D. Whitfield II  
**Civilian Executive Assistant,** Mr. Charles S. Furca  
**Command Sergeant Major,** Command Sergeant Major Lynell Sullivan.

**BUDGET:**

**Payroll:** Approximately \$36 million (civilian about \$28 million, military about \$8 million)

**Local procurement:** Approximately \$5 million annually (\$1.3 million in Lassen County)

**Utilities:** Approximately \$1.5 million

**ASSETS:**

Approximately \$7 billion in government assets stored at the depot (Inland Petroleum Distribution System, Water Support System and Force Provider total more than \$500 million).

**INSTALLATION SERVICES:**

DOD Police Force, Fire Department, Medical Clinic, Ambulance Service, Post Office, Credit Union, Commissary, Post Exchange, Chapel, Child Development Center, Youth Activities Center, SATO Travel Office, Laundromat, Outdoor Recreation Office, Army Community Services, Barber & Beauty Shops, C-Mart/Gas Station, Community Club, Education Center, Public School: Primary K-6), Middle (7-8), High (9-12), Theater, Bowling Center, Gymnasium, Fitness Center, Craft Shop (Auto, Wood, Ceramic).

**SIZE:**

Total area: 96,430 acres (32,292 main land mass plus 4,030 demo ground and 60,108 Honey Lake)

**TOTAL NUMBER OF BUILDINGS:**

1,237 (5.6 million square feet) including:

Warehouses - 26 (2.3 million square feet)

Igloos - 799 plus 12 standard magazines

Housing - 165 (1,500 square foot average/140 enlisted, 25 officer)

**TRANSPORTATION:**

Roads: 301 miles (205 paved, 96 gravel/dirt)

Rail: 59 miles internal rail system (2 locomotives)

Air: 7,168 foot runway (largest aircraft in inventory, C-5, can land here)

**DEMIL EFFORTS:**

Demil Pits: 14 (up to 10,000 pound net explosive weight (NEW) each). Nearly 20,000 tons of ammunition and more than 200 rocket motors destroyed on an annual basis.

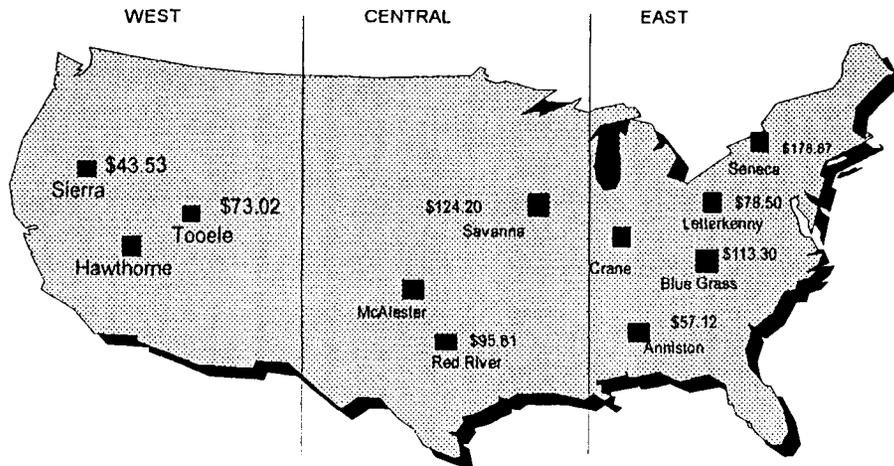
**AMMUNITION IN STORAGE**

Approximately 209,000 short tons equal to approximately 418 million pounds. Enough to fill 3,484 rail cars stretching over 36 miles.

## Sierra Army Depot Ammunition Mission Advantages

### Infrastructure and Area Information

- Located in northeastern California on a major all weather highway.
- On-site airfield (C-5 capable).
- Best proximity to west coast ports.
- Access to two major rail lines.
- 26 general purpose warehouses with 2.3 million square feet of covered storage space.
- 797 igloos and 12 standard magazines for ammunition storage.
- Serves as safe haven for munitions for Naval Weapons Station-Concord.
- 14 demolition pits capable of 10,000 pounds NEW each, plus an open burn pit capable of burning 100,000 pounds NEW and a deactivation furnace capable of 200,000 rounds of small arms daily.
- 36,000 acres available for open controlled storage.
- Center of Technical Excellence for the processing and maintenance of Operational Project Stock.
- Active Reserve Forces Training Program.
- Ideal moderate climate with low relative humidity.
- Lowest ammunition rates.



1995 Depot System Command  
Installation Ammunition  
Rates

Transportation

205 miles of paved roads, 96 miles of unimproved roads, 59 miles of rail, and a 7,168 foot runway capable of handling all types of aircraft.

Maintenance

**GENERAL**

Automotive shops for vehicles and heavy equipment.

Box and crate shop.

Ammunition maintenance facilities with deluge systems, dual propellant vacuum systems, dual power conveyors and intrusion detection systems.

MACHINING

Milling, vert/horiz  
Cutting  
Drilling  
Grinding  
Turning  
Thread milling  
Shapiong  
Boring

SURFACE COATING

Blasting  
Painting, include CARC  
Plating/Coating

WELDING

Oxyacetylene  
Conventional Arc  
MIG, TIG

FABRICATION

Notching  
Pressing  
Cutting  
Iron work,  
multiple operation

HEAT TREATING

Annealing  
Tempering

POINT PAPER

SUBJECT: Post-BRAC Manpower Requirements

1. PURPOSE: To provide information on the manpower enclave requirements, proposed costs, and proposed savings identified in the BRAC recommendation.
2. FACTS.
  - a. The BRAC recommendation to realign the depot stated the post-BRAC enclave would be comprised of 240 personnel.
  - b. The source documents used in determining the post-BRAC staffing level were the Army Stationing and Installation Plan and the depot's response to a data call from the Industrial Operations Command, BRAC Office in which the question was asked, "How many personnel are currently required to support Operational Project Stocks mission?"
  - c. Using these two documents to determine the depot's staffing level created a distorted picture of depot requirements. The Army Stationing and Installation Plan used is 145 personnel short of the actual on-board strength. The cause of this is the inability of the depot to report anything other than authorized personnel in the Plan. The depot's Plan is 630 personnel while the authorized workyears is 775.
  - d. The depot's response to the data call referenced above was 240 personnel. The depot did not interpret the data call to include base operations functions required to support the enclave. Also, specifically excluded was any workload other than Operational Project Stocks. We currently perform critical radiation survey functions required to divest department of Defense facilities identified by BRAC.

SDSSI-REB

SUBJECT: Post-BRAC Manpower Requirements

- e. In order to determine the correct staffing level for the enclave, we used two methods to approach the question. The first method was a bottom-up review of direct mission and base operations and general and administrative support requirements that would remain as a part of the enclave. The direct labor hours are based on funding levels, detailed cost estimates, and historical manhour standards. Some of the functions Sierra Army Depot performs include: Receiving; inspections; inventory; warehousing; prepare and pack for shipping by truck, ship, and air; repair and overhaul of major items; and set assembly. We work with the project managers to incorporate engineering changes and produce technical manuals for users. As the customer's representative, we support the change-outs at the prepositioned ships. This entails performing an inventory on all assets coming off and going on the ships, inspecting for any minor defaults which can be rectified at the port, as well as all related care of supplies in storage. The summary of the FY96 regular direct labor projection is 388,606 hours. This equates to 227 direct workyears. The indirect workyears are driven by a historical factor of 20 percent, which adds 57 workyears.
- f. The second method identified the conventional ammo and special weapons direct, indirect and base operations workyears then subtracted that amount from the total FY94 and the FY95 costed workyears. This process confirmed that the 512 civilian figure is reasonable.
- g. Based on the results of both methods, the depot concluded that the personnel requirements to the enclave is 512 civilian positions.
- h. Using the civilian requirement of 512 positions, the actual manpower savings is 238 jobs rather than the 363 jobs the BRAC recommendation claimed, grossly overstating the savings.
- i. The Cost of Base Realignment model estimated Sierra Army Depot's one time implementation cost for the recommended realignment to be \$14.0M. The depot's estimated minimum additional costs above the \$14.0M that were not considered in the model equal an

SDSSI-REB

SUBJECT: Post-BRAC Manpower Requirements

additional \$62.0M and the estimated probable additional costs above the \$14.0M would be \$101.0M. These amount consist of :

(1) <u>Minimum Additional Costs</u>	
Ammo short tons to move	\$ 40.0M
Ammo Demil to move	\$ 19.0M
Ammo Radiological Surveys	<u>\$ 3.0M</u>
Total	\$ 62.0M
(2) <u>Probable Additional Costs</u>	
Ammo short tons to move	\$ 75.0M
Ammo Demil to move	\$ 19.0M
Ammo Radiological Surveys	<u>\$ 7.0M</u>
Total	\$101.0M

- j. The BRAC costing model states that the depot will achieve a net savings of \$55M during the implementation period. The depot has identified an approximate additional \$100M in costs not considered by the model. Taking into consideration the additional costs, the recommended realignment will cost the depot at minimum \$45.0M to execute, totally negating any projected savings.

## POINT PAPER

SUBJECT: Ammunition Mission at Sierra Army Depot (SIAD)

1. PURPOSE: To provide the BRAC Commissioners with information on the ammunition shipping/receiving mission and supporting infrastructure at SIAD.

2. FACTS.

- a. Sierra Army Depot has major missions for the receipt, issue, and storage of ammunition. Workload for shipping and receiving has averaged 66,720 short tons per year, with a workload of 46,464 short tons scheduled for FY95, as reflected on the chart at enclosure 1. Current fiscal year actual receipts and issues through March are 30,320 short tons.
- b. Sierra Army Depot continues to have the best ammunition rates of any installation within the Industrial Operations Command (IOC) for FY95 at \$43.53 per direct labor hour. The cost per ton for shipping and receiving has averaged \$127.36 for FY92 through FY95, and is \$123.43 for FY95, which is the best in the IOC. In spite of this cost effective rate for the customers, SIAD continues to make a profit. Additional information on SIAD's rates is contained in enclosure 2.
- c. Sierra Army Depot has 799 igloos plus 12 standard magazines for ammunition storage and has a covered storage capability of approximately 2 million square feet. Additionally, SIAD has outside improved storage of 1.9 million square feet. The outside storage has a permitted capacity of 53.7 million pounds of net explosive weight (NEW).
- d. Sierra Army Depot's open burn/open detonation capability is the best in the Army. For more details on this mission, refer to the point paper "Ammunition Demilitarization Mission at Sierra Army Depot."
- e. Sierra Army Depot has an excellent transportation network from which to serve as a power projection platform and the best proximity to western ports of any IOC

SDSSI-MPO

SUBJECT: Ammunition Mission at Sierra Army Depot (SIAD)

installation. Sierra Army Depot has access to two major rail lines, the Union Pacific and the Southern Pacific, and is the only Western Depot Systems Command Ammunition installation with an on-site airfield (a 7,168-ft runway) capable of handling C-141, C-17, and C-5A cargo planes. The on-site airfield and access to two major rail lines provide for the rapid delivery of ammunition anywhere in the world.

- f. Since SIAD is on the major east/west rail line, shipments from all other ammunition depots destined for west coast ports pass by SIAD. This convenient location has allowed SIAD to serve as a rail holding facility for staging shipments enroute to port at Naval Weapons Station - Concord and as a safe haven for ammunition shipments enroute to/from port.
- g. Sierra Army Depot has maintained its internal rail network infrastructure. An extensive rebuilding effort, initiated approximately 12 year ago, costing over \$8.4 million, is now virtually complete. Only minor maintenance of the internal rail serving the ammunition area will be required during the next 20-25 years.
- h. Sierra Army Depot has been performing continuous maintenance on the road network and the rail docks to ensure their availability when needed. Since 1988, \$9.9 million has been spent to maintain depot roads. The current condition of all roads and docks in the ammunition area is from good to excellent.
- i. Sierra Army Depot is nearing completion of a new ammunition surveillance facility which is scheduled to be completed by the summer of 1995. This facility will replace an existing older ammunition surveillance facility (Building 401) and provides increased capability to perform ammunition surveillance inspections.

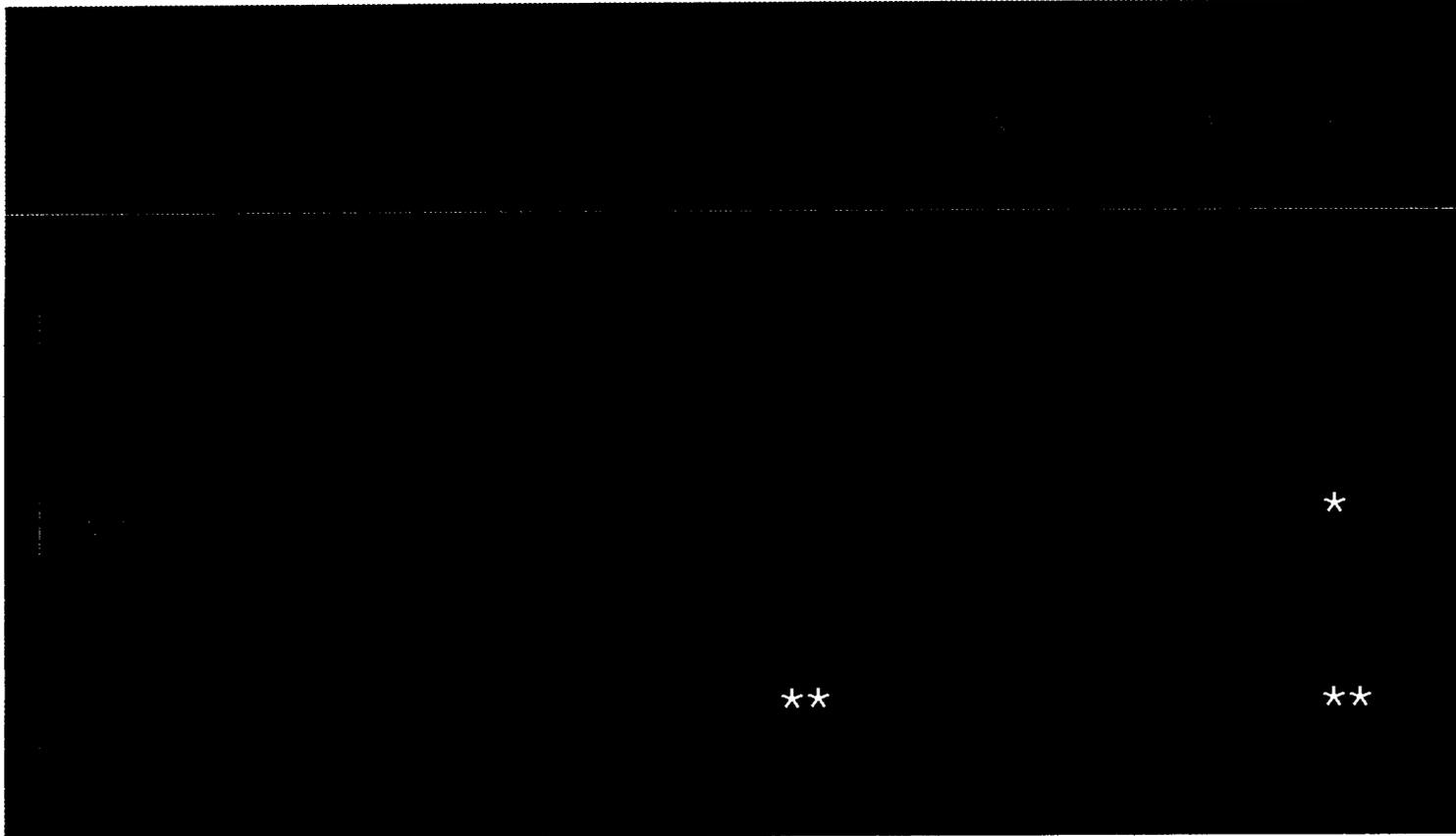
# SHIPPING AND RECEIVING

## SHORT TONS

---

FY90	49,265
FY91	80,493
FY92	95,945
FY93	67,899
FY94	40,000
FY95 SCHEDULED	46,464

# Shipping/Receiving/Storage Rates by Year



\* \* \*

- \* Cost per ton increased due to commodity mix
- \*\* Best Rates in Depot System for FY95

## POINT PAPER

SUBJECT: Ammunition Demilitarization Mission at Sierra Army Depot (SIAD)

1. PURPOSE: To provide the BRAC Commissioners with information on the Ammunition Demilitarization mission at SIAD.

2. FACTS.

- a. Sierra Army Depot has a major mission for the destruction of obsolete munitions, and has the best Open Burn/Open Detonation capability in the Army. This includes 14 demolition pits for open detonation with the ability to detonate between 6,275 pounds to 10,000 pounds net explosive weight (NEW) per pit. All operations are done above ground, without the requirement to bury the munitions before detonation, a process that is found at many installations, thereby increasing the amount that can be destroyed in a day. Additionally, the burning grounds at SIAD have a capacity to burn 100,000 pounds of NEW per day.
- b. Sierra Army Depot also has a Deactivation Furnace. This furnace is the only one in the Army currently with authority to process small arms munitions of .50 caliber and below.
- c. Sierra Army Depot has had average demil rates of \$54.59 for the past four years as is reflected on the chart at enclosure 1, and has the best demil rates in the Industrial Operations Command (IOC) for FY95 at \$43.54 per hour as portrayed on the chart at enclosure 2. The cost per ton for FY95 demil is \$372.90 based on the current schedule, and is the most cost effective in the IOC as reflected in the chart at enclosure 3.
- d. Although Resource Recovery and Recycling (R3) is replacing Open Burning/Open Detonation, due to environmental regulatory limitations, it still remains cost prohibitive. Additionally, burying munitions before detonation adds to the cost and reduces through put. These impacts can be seen by the chart at enclosure 3. Pure Open Burning process is still much more efficient and cost effective. When

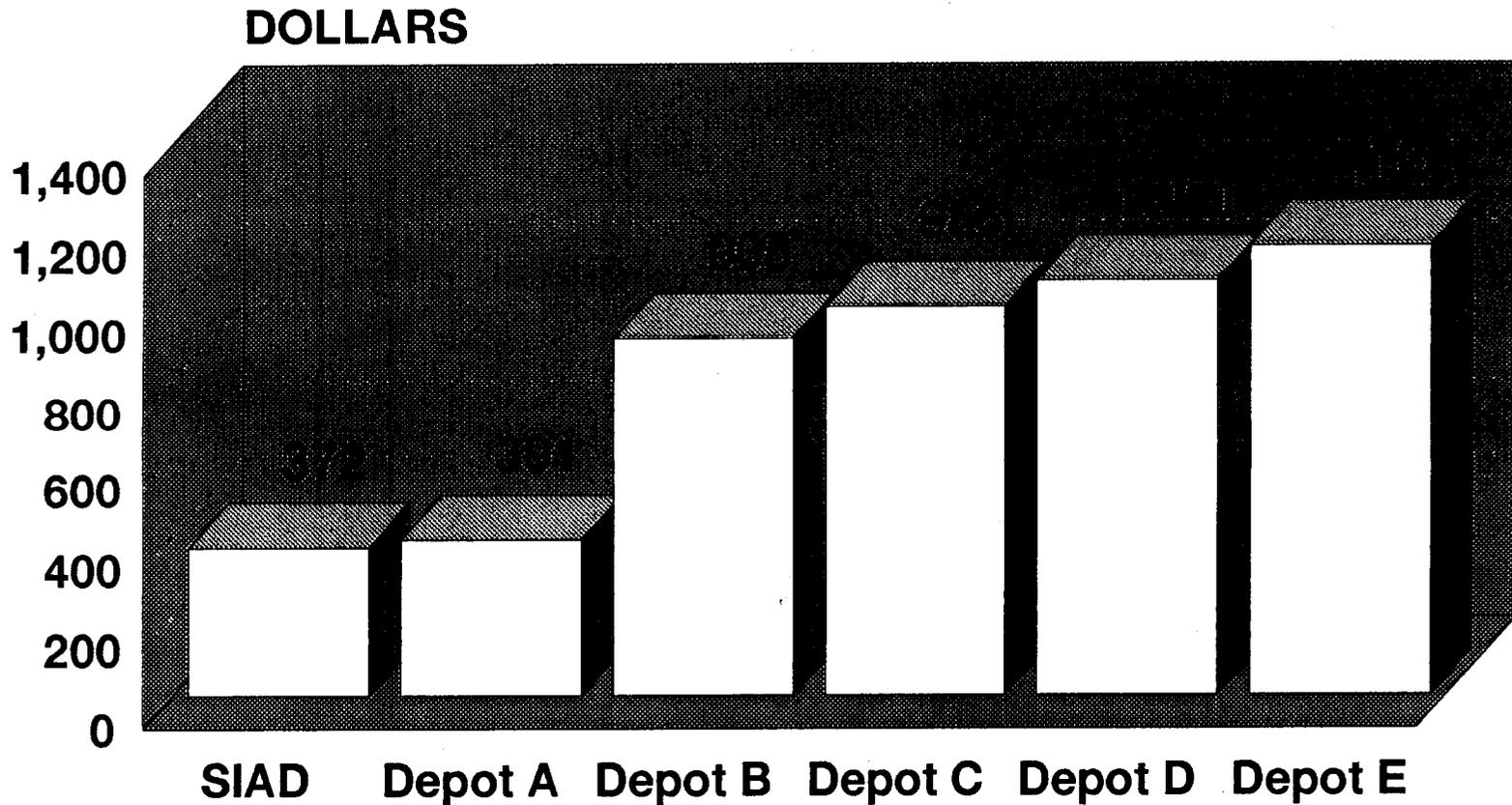
SDSSI-MPO

SUBJECT: Ammunition Demilitarization Mission at Sierra Army Depot (SIAD)

SIAD receives its Part B permit for the Open Burning processes this year, it will allow for a minimum of 10 more years of cost effective operations.

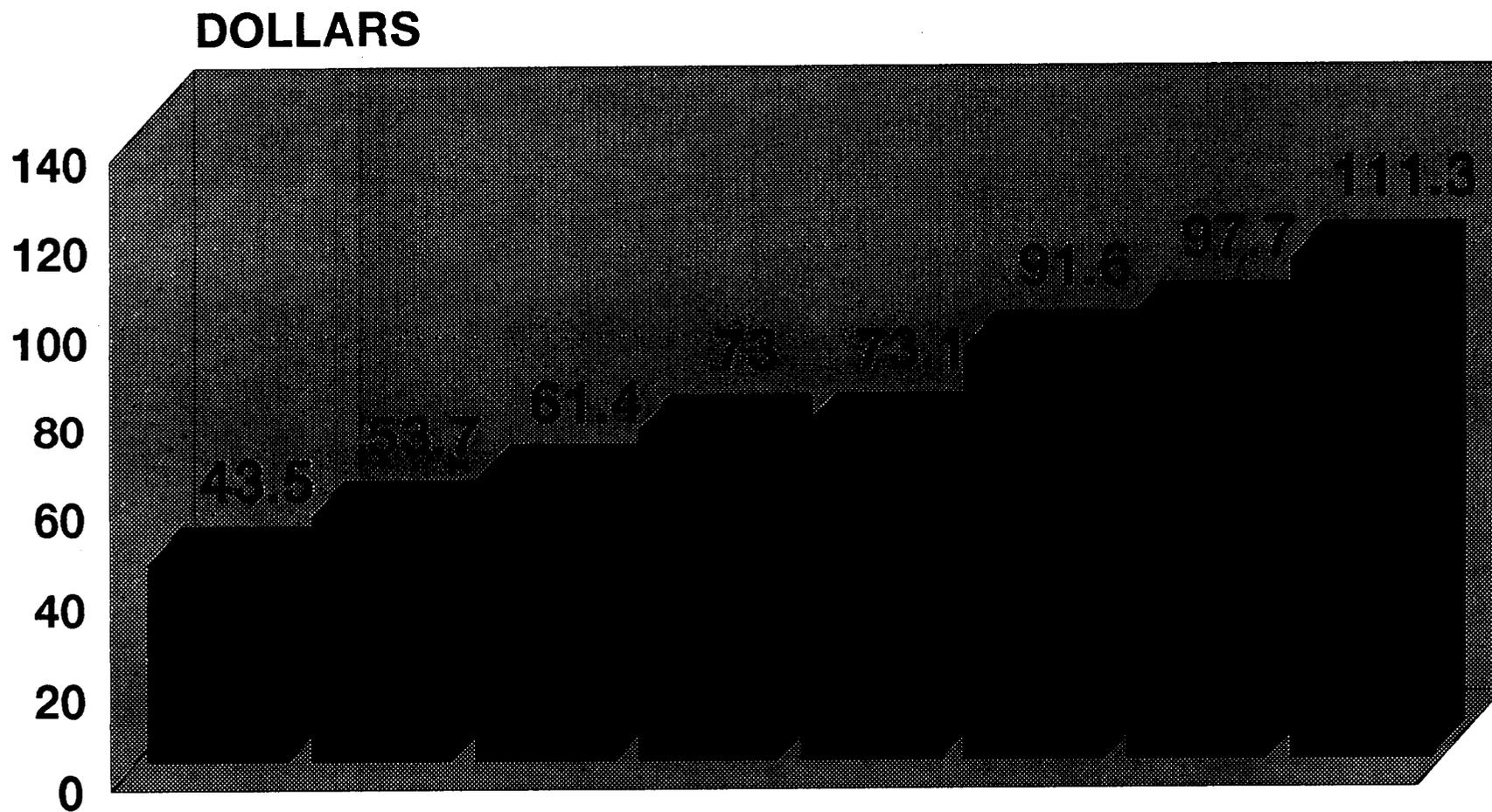
- e. Sierra Army Depot demil workload has averaged 14,591 short tons per year for the period FY90 - FY94, and the scheduled workload for FY95 is 28,245 short tons, which represents the largest single workload and over 30% of the Army's annual total plan.
- f. Sierra Army Depot has proven its capability to burn large rocket motors as demonstrated by burning large motors for the Navy to accomplish Strategic Arms Reduction Treaty (START) I requirements. Some of the rockets that have been destroyed include Poseidon, Polaris, Peacekeeper, and Minuteman. Because of the large Open Burn/Open Detonation capability here, the Navy depends on SIAD to help them achieve their schedules as set forth in the START II treaty requirements. There are no other installations with the capabilities of SIAD to perform demil of START II items.
- g. There is currently about 413,000 short tons of ammunition in demil accounts and with the draw down, this amount is projected to increase. Sierra Army Depot will be heavily depended on for demil operations by ammunition managers because of the large capability that exists here and because of SIAD's cost effectiveness.

# FY95 Demilitarization Cost per Ton



Source: AMCCOM FY95 Demilitarization Business Plan  
Forecasted by AMCCOM

# FY95 Demilitarization Fixed Rate



SIAD  
Source: DESCOM Rate File FY95

## POINT PAPER

SUBJECT: Smoke Plume From The Open Burning/Open Detonation Static Fire Grounds

1. PURPOSE. To provide information on the smoke plume from the Open Burn processing grounds.

2. FACTS:

- a. Sierra Army Depot is presently evaluating the effects of the smoke plume in a Health Risk Assessment and in an Ecological Risk Assessment. The risk assessments should be completed by September 1995. With the studies completed so far, Sierra Army Depot does not expect any problems from the smoke plume for humans, or animals/plants.
- b. The smoke plume from the Open Burn processing grounds includes products of combustion and products of incomplete combustion. During detonations, soil is also blown into the air.
- c. The primary air emissions are carbon monoxide, carbon dioxide, nitrogen and nitrogen oxides, water, sulfur dioxide, methane, and ammonia.
- d. The secondary air emissions include products of incomplete combustion such as unreacted explosive material, organics, and trace metals. Some metals may be emitted, primarily from the shell casing.
- e. Soil sampling is being completed by the State of California and Sierra Army Depot at the most likely places the trace metals (copper and lead) would be found to finalize the data needed for the risk assessments.

3. IMPACT.

- a. Emissions data has been taken from numerous Army and Air Force studies. The Bang Box Study at Dugway has shown that organic pollutants are destroyed during the burning or detonation. The air monitoring stations set around the Tooele Army Depot demo grounds indicated that no metallic pollutants were being transported off the grounds.

SDSSI-ENV

SUBJECT: Smoke Plume From The Open Burning/Open Detonation Static Fire Grounds

- b. The final permit written by Environmental Regulators for the Open Burning processing grounds will ensure that Sierra Army Depot does not create a hazard that is dangerous to human health or the environment.

POINT PAPER

SUBJECT: Permit Status Open Burning/Open Detonation/Static Fire (OB/OD/SF) Grounds

1. PURPOSE. To provide information on the Open Burning/Open Detonation/Static Fire status for Sierra Army Depot (SIAD).

2. FACTS.

- a. Sierra Army Depot is currently permitted to demilitarize larger quantities of ammunition than any other Army site.
- b. The depot is currently operating with interim status under a Part A permit for hazardous waste and has a current air permit with Lassen County.
- c. Health Risk Assessment for the Part B or final permit is about 90% completed.
- d. California Environmental Protection Agency, in August 1994, determined that SIAD would have to complete an Environmental Impact Report to permit the demolition grounds.
- e. The Environmental Impact Report is scheduled for completion, Fall 1995.
- f. California Environmental Protection Agency has requested SIAD take soil samples to test for two main concerns, lead and copper. Soil sample locations have been determined by the Environmental Impact Report maximum concentration locations. This is scheduled to be completed by the end of April 1995.
- g. Draft Part B permit for Open Burning/Open Detonation/Static Fire is scheduled at the end of May 1995.
- h. Final Part B permit for Open Burning/Open Detonation/Static Fire is scheduled for January/February 1996.

## POINT PAPER

SUBJECT: Operational Project Stocks Mission at Sierra Army Depot (SIAD)

1. PURPOSE: To provide the BRAC Commissioners with information on the Operational Project Stocks mission at SIAD.

2. FACTS.

- a. Sierra Army Depot is the home of the three largest Operational Project Stocks in the Army: The Inland Petroleum Distribution System, the Water Support System, and the Force Provider. In addition, SIAD has other Operational Project Stocks to include the landing mats and bridging material projects. As a result of these missions, SIAD was designated the Center of Technical Excellence for the processing and maintenance of Operational Project Stocks in February, 1993.
- b. As part of the Center of Technical Excellence and Operational Project Stocks missions, SIAD does shipping, receiving, storage and maintenance on assigned systems. In addition, SIAD performs direct support/general support level maintenance on the stocks. Some typical daily functions include receiving, configuration management, containerization, packaging, inspections, fabrication and refurbishment.
- c. The total value for the assigned stocks is \$1.2 Billion. The shipping/receiving rates for major end items at SIAD has averaged \$52.93 per hour for the period FY92 through FY95, with a FY95 rate of \$50.05 per hour.
- d. Sierra Army Depot has 26 general purpose warehouses with 2.3 million square feet of covered storage space. Sierra Army Depot currently has 17.6 acres of improved hard stand in support of the Operational Project Stocks mission, with an additional 5.4 acres being prepared this year. Also, SIAD has unlimited outside storage space to support future missions.

SDSSI-MPO

SUBJECT: Operational Project Stocks Mission at Sierra Army Depot (SIAD)

- e. Sierra Army Depot has spent \$8.5 million on rail upgrades in the last five years. In addition, over \$1 million has been spent on hard stands for the Operational Project Stocks mission.
- f. Sierra Army Depot has an excellent transportation network to support the mission, including access to two major rail lines, and an on-site airfield. Having an on-site airfield that is C-5 capable was a requirement for acquiring the Force Provider mission.
- g. Sierra Army Depot has supported military operations and humanitarian assistance efforts with Operational Stocks. Recent examples include Haiti, Somalia, Rwanda, Guam, and Hurricane Andrew in Florida as reflected on the enclosed charts.
- h. Because of the excellent location and moderate climate, SIAD is an ideal site for the storage of Operational Project Stocks or any other commodity.

# **Emergency Shipments by SIAD**

## **Somalia Shipments**

**Chemicals for 3K Gallons Per Minute (GPM) Reverse  
Osmosis Water Purification Units (ROWPUs)**

**Reverse Osmosis (RO) Elements for 3K GPM ROWPUs**

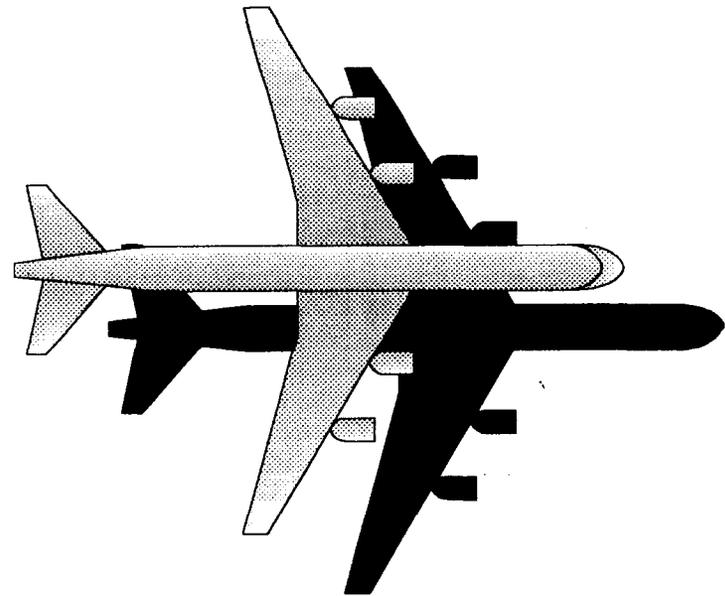
**5 Mile Set (IPDS)**

**500 Gallon Drums**

**125 GPM Pumps**

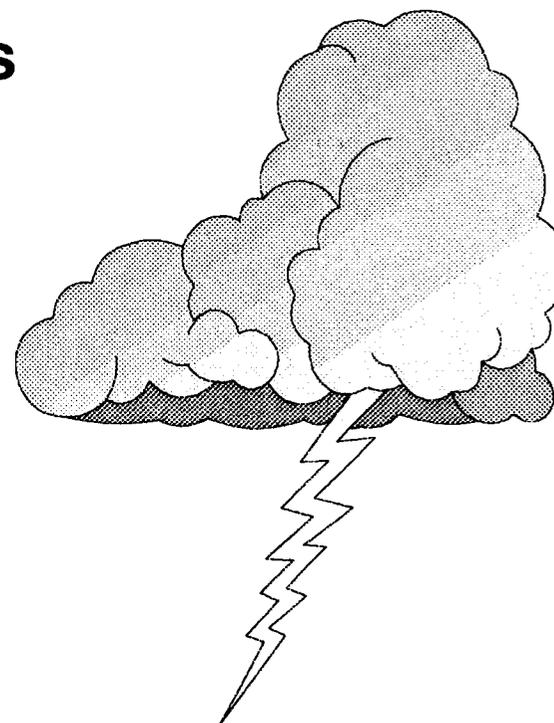
**350 GPM Pumps**

**600 ROWPUs**



# Emergency Shipments by SIAD Humanitarian Relief

Florida	600 GPM ROWPUs
Guam	3K GPM ROWPUs
Hawaii	3K GPM ROWPUs
Arizona	3K GPM ROWPUs
Haiti	FP Components
Rwanda	3K GPM ROWPUs



POINT PAPER

SUBJECT: Deactivation Furnace Status

1. PURPOSE. To provide information on the status of the deactivation furnace.
2. FACTS.
  - a. Sierra Army Depot is the only Army depot with an operation Deactivation Furnace.
  - b. Sierra Army Depot has concurrence of the State of California to operate for the demilitarization of small arms ammunition (.50 caliber and smaller). An air permit is all that is required.
  - c. The furnace is undergoing a Health Risk Assessment, an Ecological Risk Assessment, and an Environmental Impact Report, which should be completed in the Fall 1995.
  - d. Air emissions data from the Health Risk Assessment indicate acceptable emission levels.
  - e. A Completeness Determination for hazardous waste has been made for the Part B permit application.
  - f. Sierra Army Depot is expecting a Draft Part B permit in May 1995.
  - g. The final Part B permit for the deactivation furnace should be received in January/February 1996.

POINT PAPER

SUBJECT: Environmental Permits Status

1. PURPOSE. To provide information on the status of environmental permits for Sierra Army Depot (SIAD).

2. FACTS.

- a. Sierra Army Depot is in compliance with all required environmental permits.
- b. Permits for the landfill, water distribution system, and sewage treatment systems are current.
- c. Sierra Army Depot's current air permit covers the paint booths, Deactivation Furnace, Open Burning/Open Detonation/Static Fire grounds, paper incinerator, and boilers.
- d. The Open Burn processing facility is operating with interim status under a Part A permit for hazardous waste.
- e. The Deactivation Furnace operates for small arms ammunition (.50 caliber and less) under the air permit.
- f. Final permitting actions for Open Burn processing and the Deactivation Furnace are currently underway for hazardous waste. Draft permits for these facilities are expected in May 1995. Full permits are subject to a public comment period and the anticipated date of completion is January/February 1996.

POINT PAPER

SUBJECT: Status of the Installation Restoration Program

1. PURPOSE. To provide information on the status of the installation restoration program for Sierra Army Depot (SIAD).

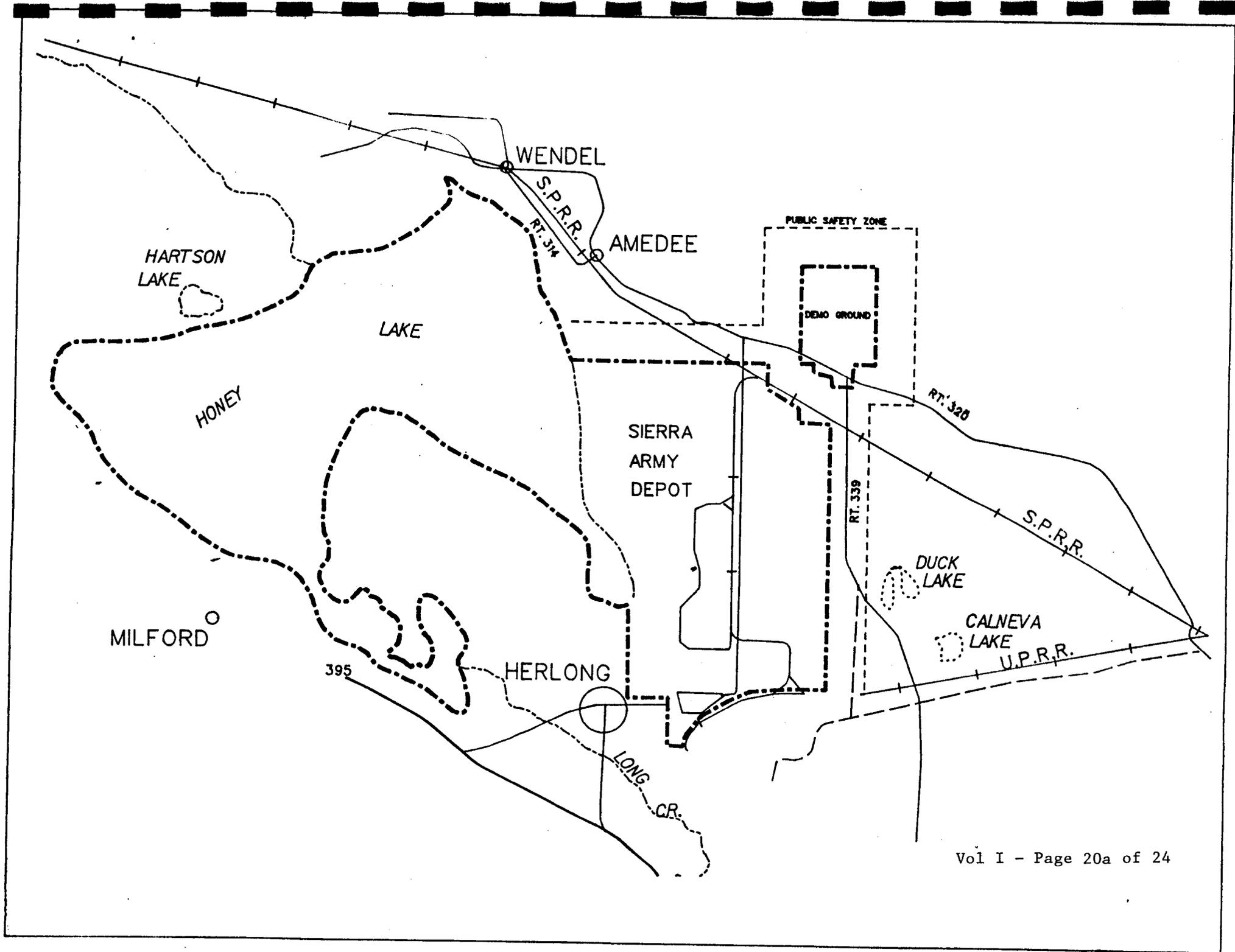
2. FACTS.

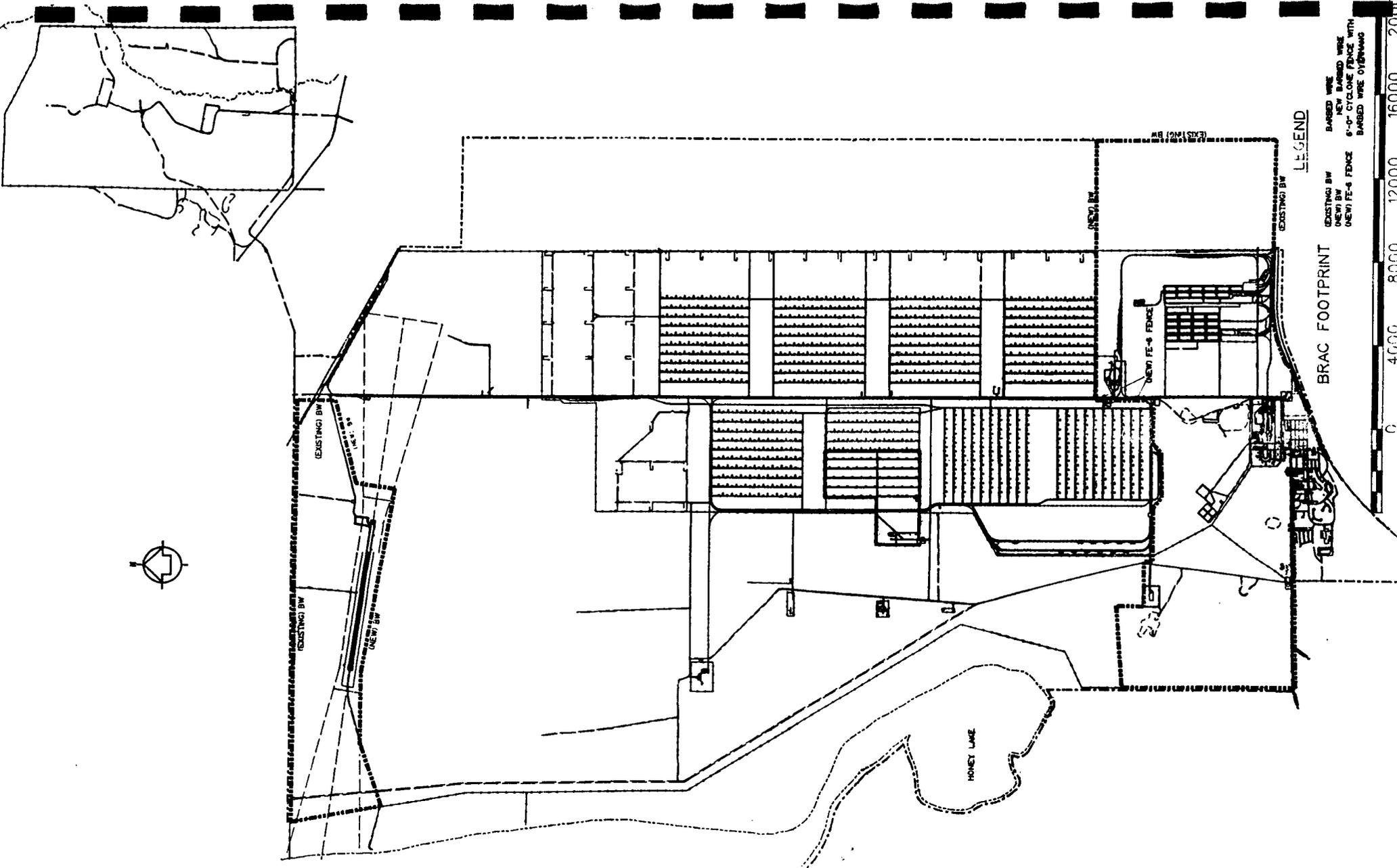
- a. Sierra Army Depot's Installation Restoration program has conducted a remedial investigation or Resource Conservation and Recovery Act investigation at 23 sites.
- b. The 9 sites outside the draft footprint (see enclosed map) are: Honey Lake, upper burning grounds, lower burning grounds, NIKE missile fuel disposal area A & B, Bldg 578, 1960's demolition grounds, old firefighting training area, and the unidentified pit.
- c. If SIAD excesses land on which these sites are located, the land will be unavailable for reuse for several years and in some cases, never available due to heavy unexploded ordnance levels.
- d. Unexploded ordnance is expected at Honey Lake, upper and lower burning grounds, and the 1960's demolition area.
- e. The contaminates of concern:
  - (1) Upper burning grounds found concentrations of explosives and Environmental Protection toxicity metals (arsenic, lead, barium).
  - (2) Lower burning grounds found concentrations of Environmental Protection toxicity metals (arsenic, barium, cadmium, chromium, lead, mercury).
  - (3) NIKE missile fuel disposal area A & B suspected unburned JP-4 and nitrates, fluorides from the evaporation of the Inhibited Red Fuming Nitrate Acid.

SDSSI-ENV

SUBJECT: Status of the Installation Restoration Program

- (4) Bldg 578 suspected cyanide and titanium tetrachloride contamination.
  - (5) The 1960's demolition grounds have metal fragments left over from past detonation and burning activities.
  - (6) Unidentified pit has concentrations of arsenic, thallium, chromium, exceeding background concentrations.
  - (7) Old firefighting training area contaminants of concern, Diesel JP-4.
- f. Records of Decision have been prepared for some sites, with other sites being scheduled for additional investigation.



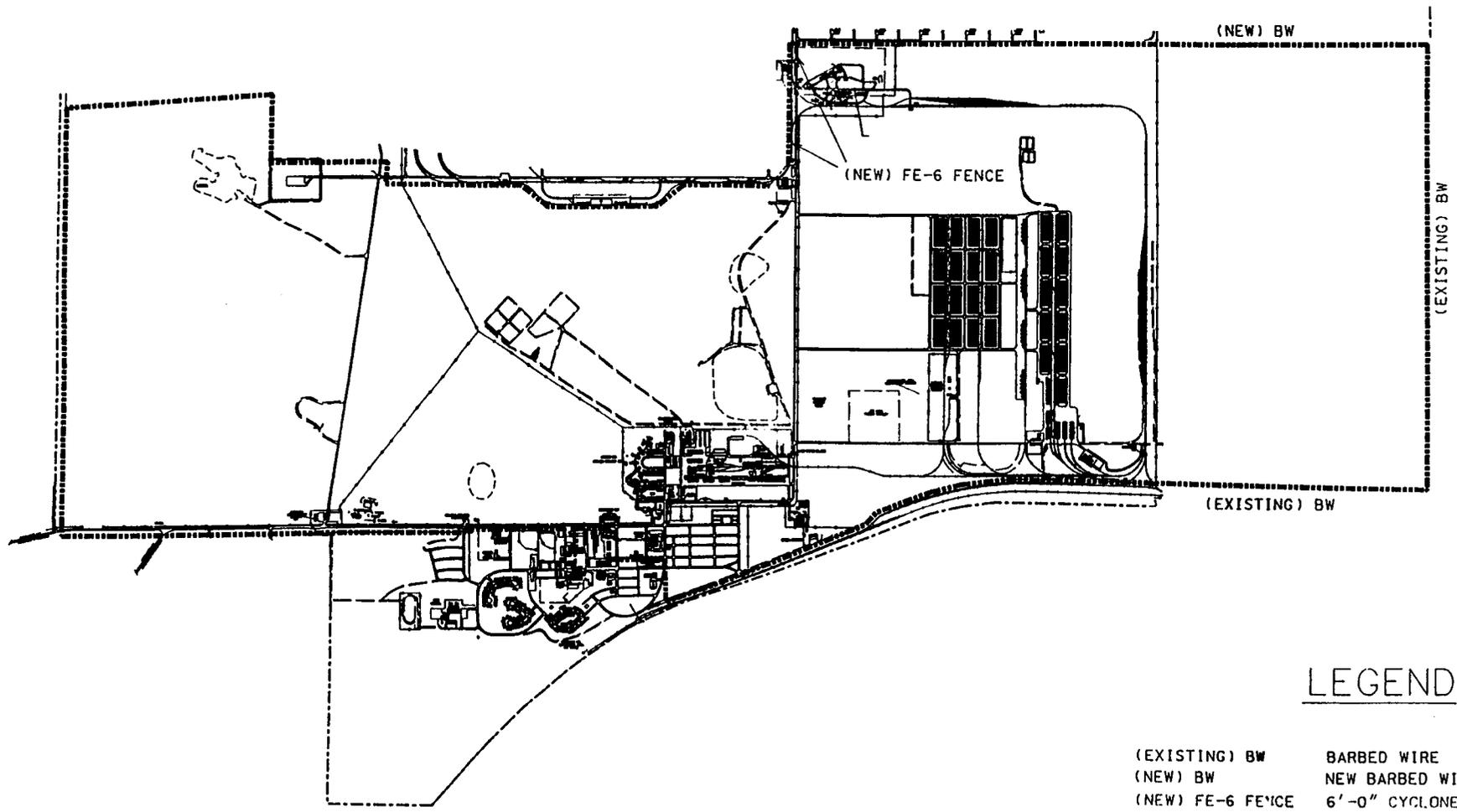


**LEGEND**

- BARBED WIRE
- EXISTING BW
- NEW BW
- NEW FE-4 FENCE
- 6'-0" CYCLOPE FENCE WITH BARBED WIRE TOPPING

**BRAC FOOTPRINT**

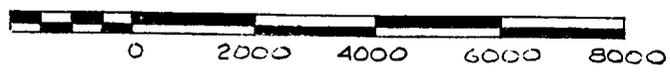


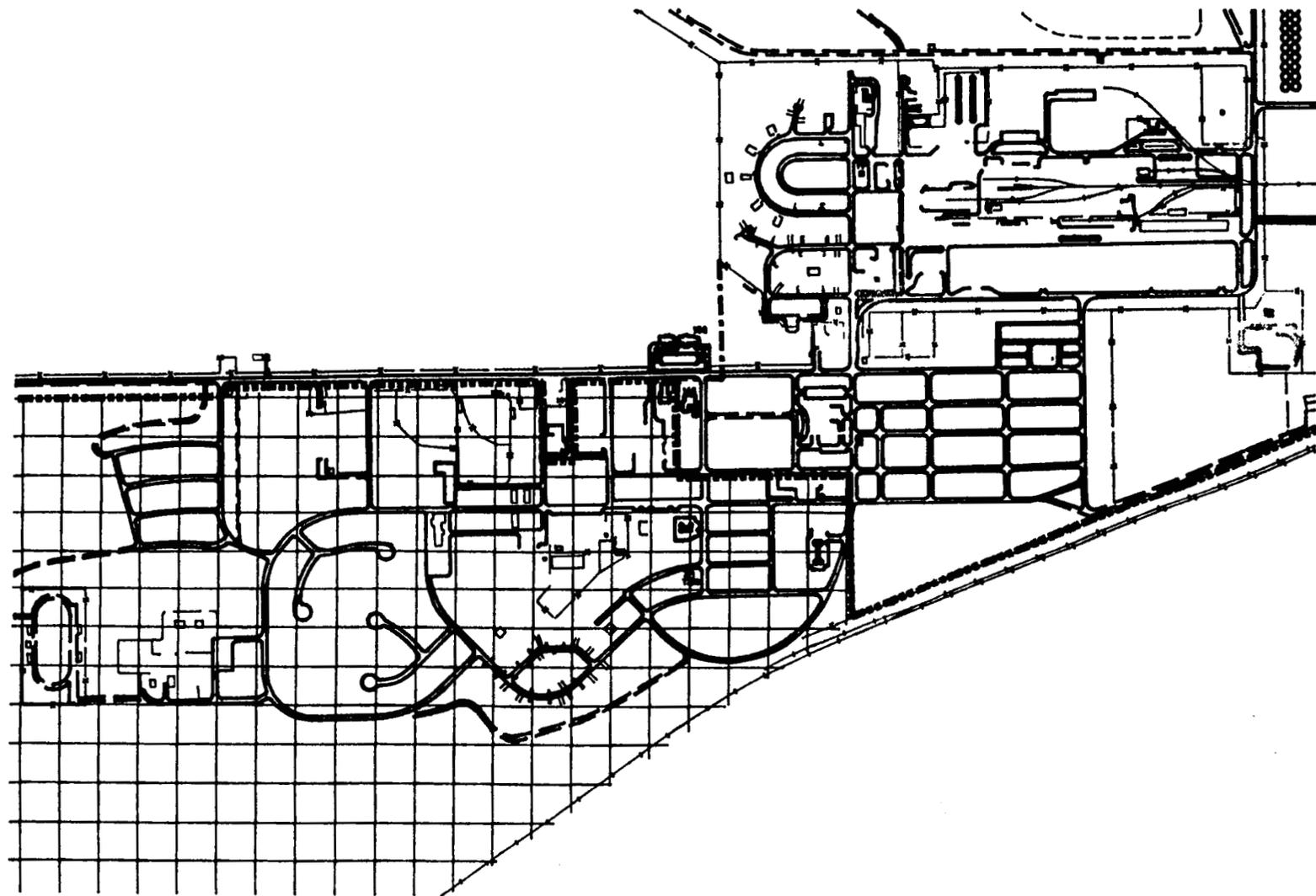


LEGEND

- |                  |   |
|------------------|---|
| (EXISTING) BW    | BARBED WIRE                                   |
| (NEW) BW         | NEW BARBED WIRE                               |
| (NEW) FE-6 FENCE | 6'-0" CYCLONE FENCE WITH BARBED WIRE OVERHANG |

SIERRA ARMY DEPOT





## POINT PAPER

SUBJECT: Sierra Army Depot (SIAD) Reserve and Active Component Training Program

1. PURPOSE. To provide information concerning the training programs offered to Reserve and Active Components of the Armed Services.

2. FACTS.

- a. Sierra Army Depot Reserve Component Training Program was established in 1970 with the purpose of providing meaningful sustainment training for the Reserve units in the ordnance, supply, and transportation fields.
- b. The depot dedicates 2,000 environmentally approved acres for maneuvers and bivouac. Sierra Army Depot is the only installation within the geographical area capable of supporting the tactical training requirements of the local Reserve Units.
- c. The Reserve Component Training is manned by one civilian and two military personnel. Currently, training opportunities are offered in 38 Military Occupational Specialities.
- d. Over the last 3 years Sierra Army Depot has established Partnership Programs with the Naval Mobile Construction Battalion, 152d Civil Engineering Squadron, Naval Reserve Naval Weapons Station, Concord Explosive Outload Team, Detachment 320, and 240th Quartermaster Battalion, with the purpose of sharing assets and expertise in those areas where mutual benefits can be attained. This valuable program provides essential training location for reserve units and Sierra Army Depot gains an integrated work force in the areas of construction, rewarehousing, and maintenance at minimal costs. Sierra Army Depot has provided a highly flexible Reserve Training Environment ranging from Military Occupational Skill (MOS) improvement to maneuver areas and storage for Combat Engineer Vehicles and Armored Personnel Carriers for National Guard Units.

SDSSI-CA

SUBJECT: Sierra Army Depot (SIAD) Reserve and Active Component Training Program

- e. The Depot and the dedicated reserve billet facilities has provided critical training for Active Duty Soldiers in Force Provider Operation, Reserves Soldiers in Combat Service Support skills, and essential National Guard training sites for both rifle ranges and combat as well as construction engineer exercises.
- f. Currently Sierra Army Depot will support 17 units with approximately 2,470 assigned personnel. Enclosed is a chart showing the units scheduled for training and the number of training mandays accomplished within the last five years.
- g. The future for Reserve and National Guard utilization for Sierra Army Depot is unlimited. This installation can provide everything from formal classroom training with dormitory style living to humanitarian training on Force Provider Modules to tactical training using Combat Service Support Concepts. Sierra Army Depot has the capability, with current assets, to provide a critically needed local training site for both California and Nevada National Guard and Reserve stationed units.
- h. Sierra Army Depot continues to offer year-round support facilities i.e., weapon qualification ranges, classroom space, nuclear, biological, chemical chamber, billeting, and dining facility support. Without this support it would be virtually impossible for the Reserve and State National Guard units to meet their training requirements.

POINT PAPER

SUBJECT: Local Area Network (LAN) at Sierra Army Depot (SIAD)

1. PURPOSE: To provide the Base Realignment and Closure Commission with information concerning Local Area Network capability at Sierra Army Depot.

2. FACTS.

- a. Sierra Army Depot is in the process of installing a higher capacity, state of the art fiber optic Local Area Network.
- b. Installation is 70 percent complete, with portions of the system totally operable. Full completion will occur not later than October 1995.
- c. The open architecture, fully integrated system currently supports 15 central computers, a worldwide Defense Data Network gateway, an Ethernet backbone and 300 microcomputer systems. It is also integrated into/with a General Telephone and Electronics (GTE) electronic telephone dial central office system.
- d. The system is both video and voice capable, and employs standards based on protocols for maximum networking flexibility and re-usability.

3. IMPACTS FOR BRAC.

- a. The main backbone was designed and installed with sufficient capacity to provide for years of major expansion with no additional cost to the depot.
- b. Yearly Local Area Network maintenance costs will be extremely low (limited to parts only) since maintenance will be accomplished with existing in house personnel. No additional personnel are required to operate and/or maintain the Local Area Network.

# Document Separator



**Base Realignment and Closure  
(BRAC) Visit  
25 April 1995**

**Volume II**

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# Sierra Army Depot

Base Realignment and Closure (BRAC)  
Ammunition Operations Briefing  
25 April 1995

Briefer: Fred Winters

Director of Missions, Plans and Operations  
(916) 827-4505

Chart 1/19 Sierra Army Depot Ammunition Operations Briefing

Presenter: Fred Winters  
Director of Missions, Plans and  
Operations

Sierra Army Depot  
Directorate of Missions, Plans and  
Operations  
SDSSI-MO  
Herlong, CA 96113

Comm (916) 827-4505  
FAX (916) 827-5824  
DSN 855-4505  
DSN FAX 855-5824

This is an Information Briefing on Ammunition Operations at  
Sierra Army Depot.

This briefing will provide you with some general facts, our  
mission, functions, facilities, historical data, rates, cost per  
ton, comparisons with other depots, some major items we  
demilitarize, cost to ship out our stocks, and some of the  
concerns which were identified in the Wholesale Ammunition  
Stockpile Program Study.

# Directorate of Ammunition Operations

## Facts

16,000 acres which includes 4,000 acres for the demolition grounds

Dollar value of munitions: \$1,634,491,732

Short tons of munitions: 226,583

Located in Northeastern California on a major all-weather highway

Rail service by Union Pacific and Southern Pacific railroads

Amedee Airfield on site with 7,168 foot runway

Closest depot to major sea and air ports (Concord, 250 miles; Oakland, 265 miles; and Travis Air Force Base, 225 miles)

Safe haven for Naval Weapons Station-Concord

Sierra 4/25/95

2/19

Chart 2/19 Directorate of Ammunition Operations - Facts

The Directorate of Ammunition Operations covers over 16,000 acres which includes 4,000 acres for the Demolition Grounds. We have over 225,000 short tons of munitions with a value of over \$1.6 billion.

Our capabilities to ship/receive munitions are tremendous. We have Highway 395 which intersects Interstate Highway 80 at Reno, Nevada (55 miles). We are serviced by the Union Pacific and Southern Pacific railroads on the north and south side of the depot respectively. The future of ammunition shipments is by container/milvan. We have one container loading dock where we can load/offload containers coming/departing Sierra, and are in the process of completing another to position us for the future. Amedee Airfield provides us with a capability to handle all aircraft including C17, C141, and C5. We are within 265 miles of our closest ports (Concord 250 miles, Oakland 265 miles, and Travis Air Force Base 225 miles). During Desert Shield (Desert Storm), our outload capabilities were tested, not taxed; however, we were easily able to meet our commitments by truck, rail, and air. Additionally, we provided safe haven for railcars loaded with over 300,000 short tons of ammunition destined for Concord from other depots and plants.

# Directorate of Ammunition Operations

## **Mission:**

**To plan, program, manage, and accomplish efficient and effective receipt, storage, issue, preservation/ packaging, renovation/maintenance, destruction and surveillance of ammunition, missiles, and components.**

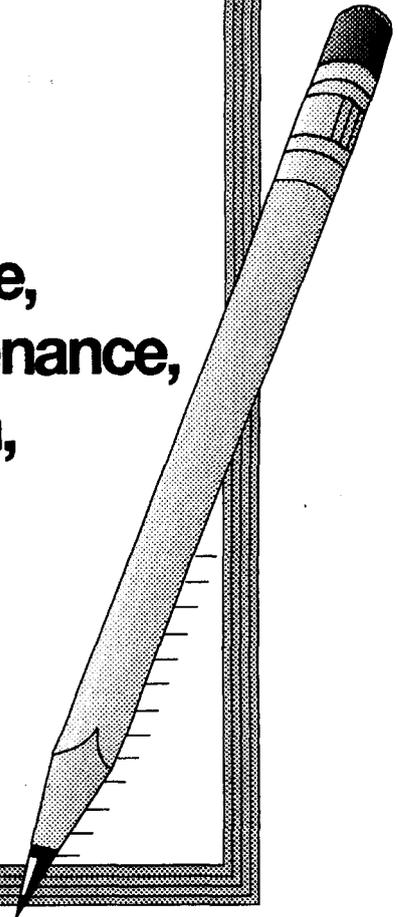


Chart 3/19 Directorate of Ammunition Operations - Mission

Our mission is primarily the receipt, issue, storage, maintenance, and demilitarization of ammunition shown on the chart. Subsequent charts have been segregated by functional areas within the Directorate as follows:

Shipping/Receiving/Storage  
Renovation/Maintenance  
Demilitarization  
Surveillance

These functional areas will be discussed individually in more detail.

# Function

## Shipping/Receiving/Storage

### Storage:

Covered (1.9 million gross square feet)

799 Igloos

12 Standard Magazines

Improved open (1.9 million gross square feet)

539 Y-Sites - Usable

32 Large Sites

### Cost:

Lowest depot rates for FY95:

\$ 43.53 Per Hour

\$123.43 Per Ton

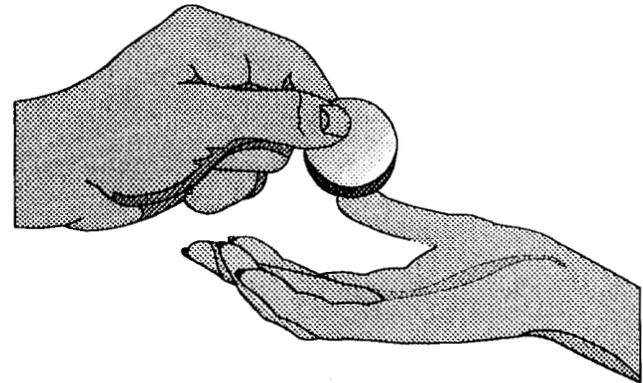


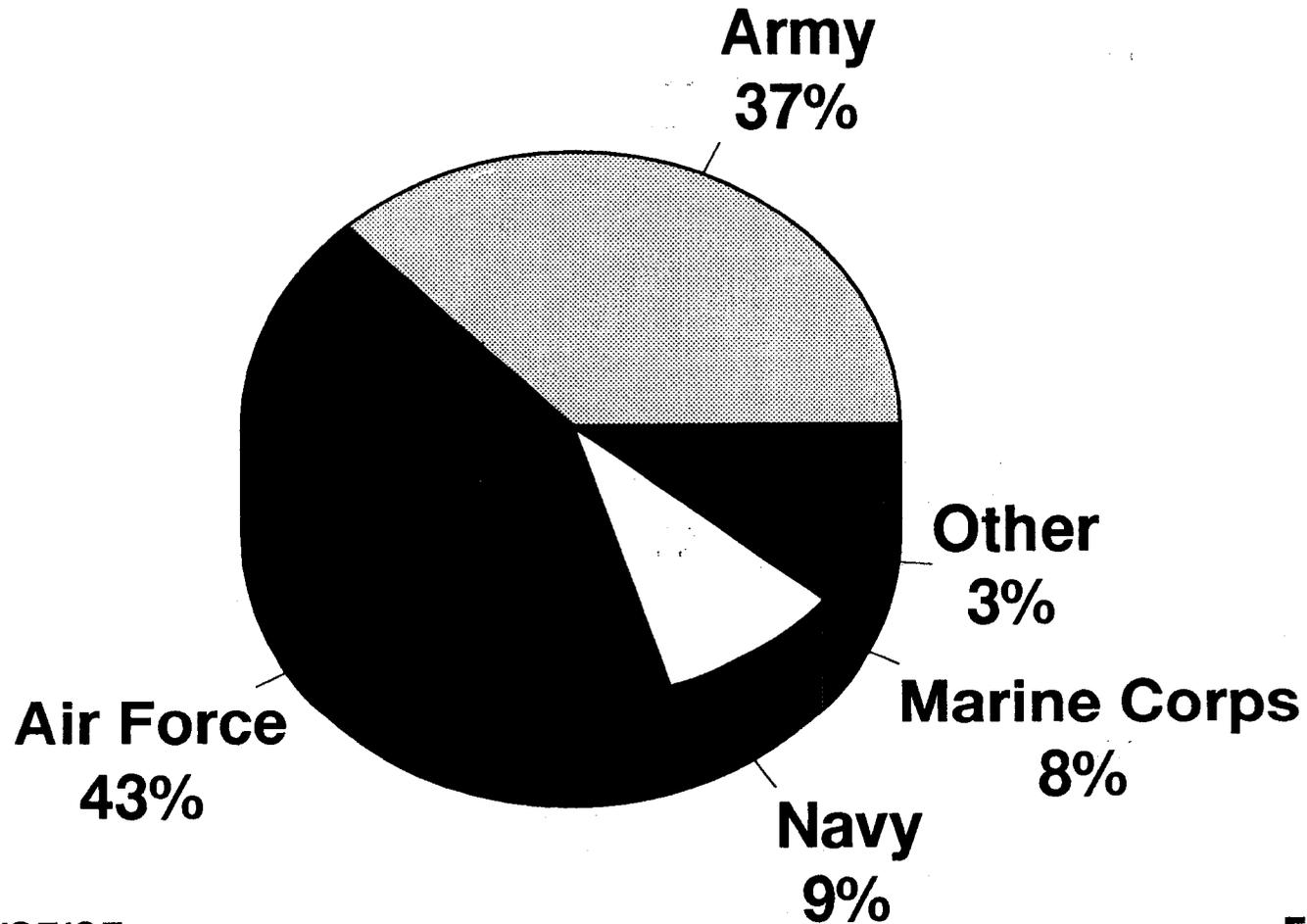
Chart 4/19 Function - Shipping/Receiving/Storage

The ammunition storage area covers over 12,000 acres. There are 811 covered storage facilities with 1.9 million gross square feet of available storage. This includes 799 igloos, 12 standard magazines, and 571 usable sites with improved open storage of an additional 1.9 million gross square feet. In some of the improved open storage locations, we can store 250,000 pounds net explosive weight of high explosives per site.

We have the lowest cost per hour and short ton in the depot system for fiscal year (FY) 95. The chart reflects our per hour and per ton cost. Cost factors will be covered in more detail in subsequent charts.

# Percent of Assets by Customer

## Short Tons



Sierra 4/25/95

5/19

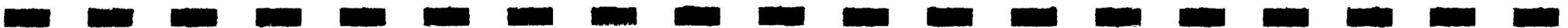


Chart 5/19 Percent of Assets by Customer

Here is a chart showing the percentage of assets by customers. The Army is the single manager for conventional ammunition. These percentages exclude demilitarization accounts because all ammunition becomes Army assets once it is placed in the demilitarization category. The Air Force is currently our largest customer. As previously discussed, these assets total over 226,000 Short tons of munitions. As depicted in the chart, we do a lot of interservice work.

# Shipping/Receiving/Storage Rates by Year

	Hourly	Cost Per Ton
FY93	\$64.66	\$121.36
FY94	\$59.39	\$182.55*
FY95	\$43.53**	\$123.43**

\* Cost per ton increased due to commodity mix  
 \*\* Best Rates in Depot System for FY95

Sierra 4/25/95

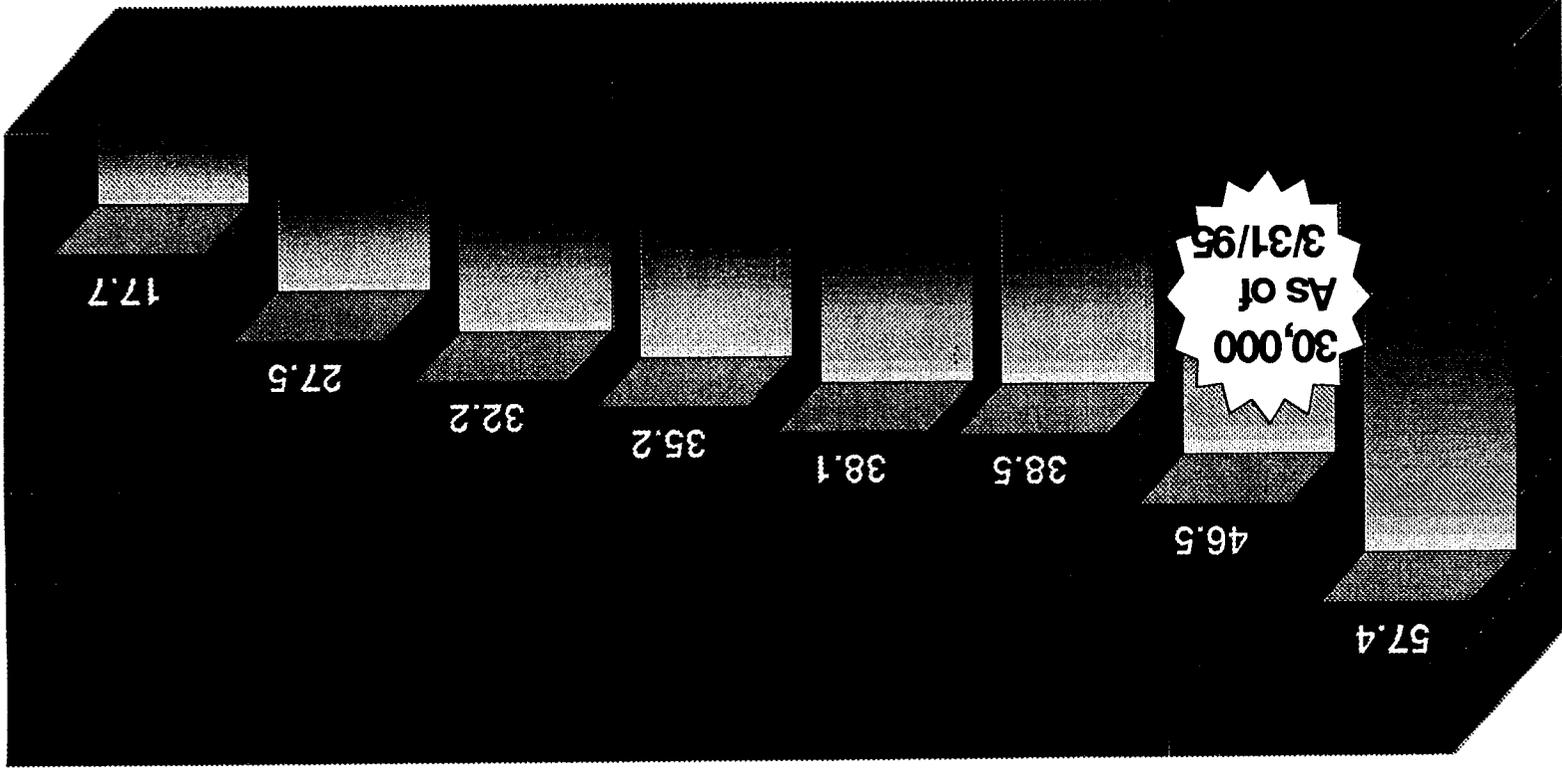
6/19

Chart 6/19 Shipping/Receiving/Storage - Rates by Year

This chart depicts the hourly cost and cost per ton for FY93-95. This installation has the best hourly rates and cost per short ton rates for FY95 within the depot system. Cost per short ton rates have averaged \$142.00 for the last three years. Even though price per hour went down in FY94, the price per ton went up due to commodity mix.

The reductions in rates for FY95 were affected by increased workload (more short tons), and implementation of Total Army Quality process improvements. Additionally, the commodity mix (i.e., heavy bombs vs small rounds) and applied cost savings, based on prior year profits, passed on to our customers have helped to improve our rates. We have returned over \$11 million to our customers in the past 3 years.

# FY95 Workload by Depot Shipping/Receiving (Short Tons)



Source: FY95 AMCCOM Workload Forecast

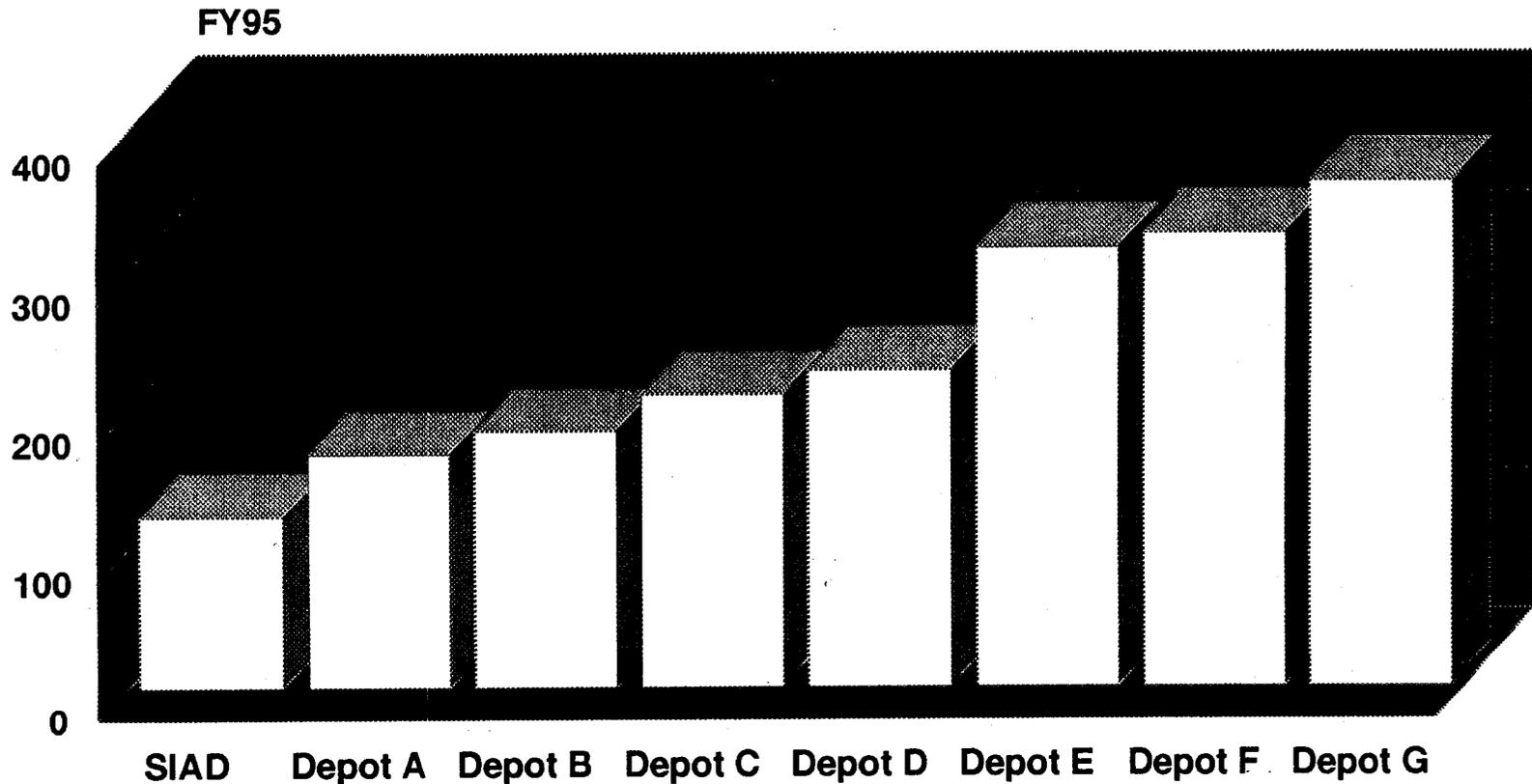
Sierra 4/25/95

7/19

Chart 7/19 FY95 Workload by Depot - Shipping/Receiving (Short Tons)

This chart depicts the FY95 shipping and receiving workload in short tons by installation. Sierra Army Depot currently has the second largest workload in this function, and our workload will increase by an additional 20,000 short tons over what has been projected in this fiscal year. The mark indicates that we have already accomplished 30,000 short tons in the first two quarters of the fiscal year, and have exceeded the entire year receiving forecast in the first six months. With the projected increase in workload this year, Sierra Army Depot may end up executing more work than any other depot in the shipping/receiving function.

# Shipping and Receiving Cost per Ton Comparison



Source: FY95 DESCOM Rate File

Chart 8/19 Shipping and Receiving - Cost per Ton Comparison

This chart shows our fiscal year cost per ton. Our FY95 cost per short ton is the lowest in the Industrial Operations Command. We are \$44.00 cheaper than our closest depot for shipping and receiving. This cost per ton has improved approximately \$60.00 from the previous year rates as was discussed in the prior charts. By maintaining these low rates, we can do approximately 30 percent more work than our closest competitor for the same price.

# Ammunition Shipping Costs 145,619 Tons of Ammunition at SIAD

	From SIAD	To Nearest Depot	To Farthest Depot
Transportation Cost:			
Rail		1,398,149	21,129,856
Truck		8,541,480	42,355,692
Cost to Receive		18,347,994	30,725,609
Total by Rail (2,792 Railcars)		37,657,280	69,766,602
Total by Truck (8,374 Trucks)		44,800,611	90,992,438
Loading Cost		17,911,137	17,911,137

Chart 9/19 Ammunition Shipping Costs

This chart is the ammunition shipping cost to move the 145,619 short tons of ammunition at Sierra Army Depot required for BRAC realignment to either the nearest or/and farthest destinations. The cost includes the loading cost based on our cost per short ton at Sierra Army Depot to ship, transportation charges, receiving at the destination and provides a total cost to the above by rail or truck. The cost equates to millions of dollars to make this shipment, with an average movement cost of \$60,803,750.00. This also does not consider the fact that there may not be enough covered space at any other installations to accommodate these munitions. This figure does not include any of the ammunition stock currently identified in the Army's Demilitarization Account stored at Sierra Army Depot which to date totals 79,381 short tons.

# **Function**

## **Renovation/Maintenance**

### **Facilities:**

**General Purpose Ammunition (Rapid Response Deluge)**

**Nuclear Regulatory Commission Licensed for Depleted Uranium**

**Reconditioned Building for Small Arms (Projected completion date third quarter FY95)**

**Cost : \$43.53 per hour**

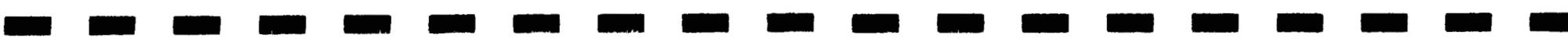


Chart 10/19 Function - Renovation/Maintenance

There are four facilities identified for renovation/maintenance of ammunition. The two general purpose facilities can also be used for demilitarization to download and pull-apart ammunition. The Nuclear Regulatory Commission has licensed our facility to perform maintenance on depleted uranium rounds. We are one of only two installations that can do this work. Another facility is being refurbished to handle small arms ammunition and should be operational by the third quarter FY95. Our facilities are equipped with intrusion detection systems and rapid response deluge systems for safety.

The maintenance cost is \$43.53 per hour.

# Function

## Demilitarization

### Facilities:

Deactivation Furnace

Incinerator to demilitarize and/or dispose of ammunition items

Only Depot approved by the state to incinerate up to .50 Cal.

General Purpose Ammunition (Rapid Response Deluge)

General Purpose Ammunition (Rapid Response Deluge)

### Area:

Open Burn/Open Detonation - 4,000 acres

### Largest Capacity in the United States:

14 Pits permitted for 10,000 pounds net explosive weight per pit

Burning grounds with 100,000 pounds net explosive weight per burn

Burn 140,000 pounds net explosive weight of large rocket motors  
per day

### Cost :

Lowest in Depot FY95

\$ 43.54 per hour

\$372.90 per ton

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11/19

Chart 11/19 Function - Demilitarization

There are three facilities identified for demilitarization of ammunition. The deactivation furnace is an incinerator that can demilitarize small arms ammunition, primers, fuzes, and boosters. The deactivation furnace consists of: control panel, automatic feed system, furnace, afterburner, gas coolers, baghouse, and exhaust stack. We are the only depot in the Industrial Operations Command currently approved to incinerate up to .50 caliber small arms ammunition. We are expecting approval from the State of California for our Part B Permit that will allow us to incinerate all of the above items in our deactivation furnace for an additional 10 years. The two general purpose maintenance facilities are used by maintenance personnel to download and pull-apart ammunition for demilitarization. We have the largest open burn/open detonation capacity in the United States. We are permitted to detonate in our pits 10,000 lbs net explosive weight per pit. We can also do 100,000 pounds net explosive weight per burn. When the Part B Permit is approved this year, our capability will increase to 160,000 net explosive weight per burn.

We have the lowest cost per hour in the depot system for FY95. The chart reflects our per hour and ton cost. Within the FY95 rate, there is a one time surcharge of \$17.47 to recoup costs from past BRAC action. Costs will be further discussed in subsequent charts.

# Demilitarization Rates by Year

	Hourly	Cost Per Ton
FY94	\$60.53	\$702.78
FY95	\$43.53	\$372.90

Sierra 4/25/95

12/19

Chart 12/19 Demilitarization - Rates by Year

This chart depicts our hourly and cost per short ton rates for FY94 and FY95. Our reduction in rates for FY95 is due to some of the factors that were discussed as part of the shipping and receiving rates. These cost reductions include increased workload in short tons, process improvements as part of Total Army Quality, the commodity mix of bombs and bullets, and cost savings passed on to our customers based on prior year profits of \$11 million.

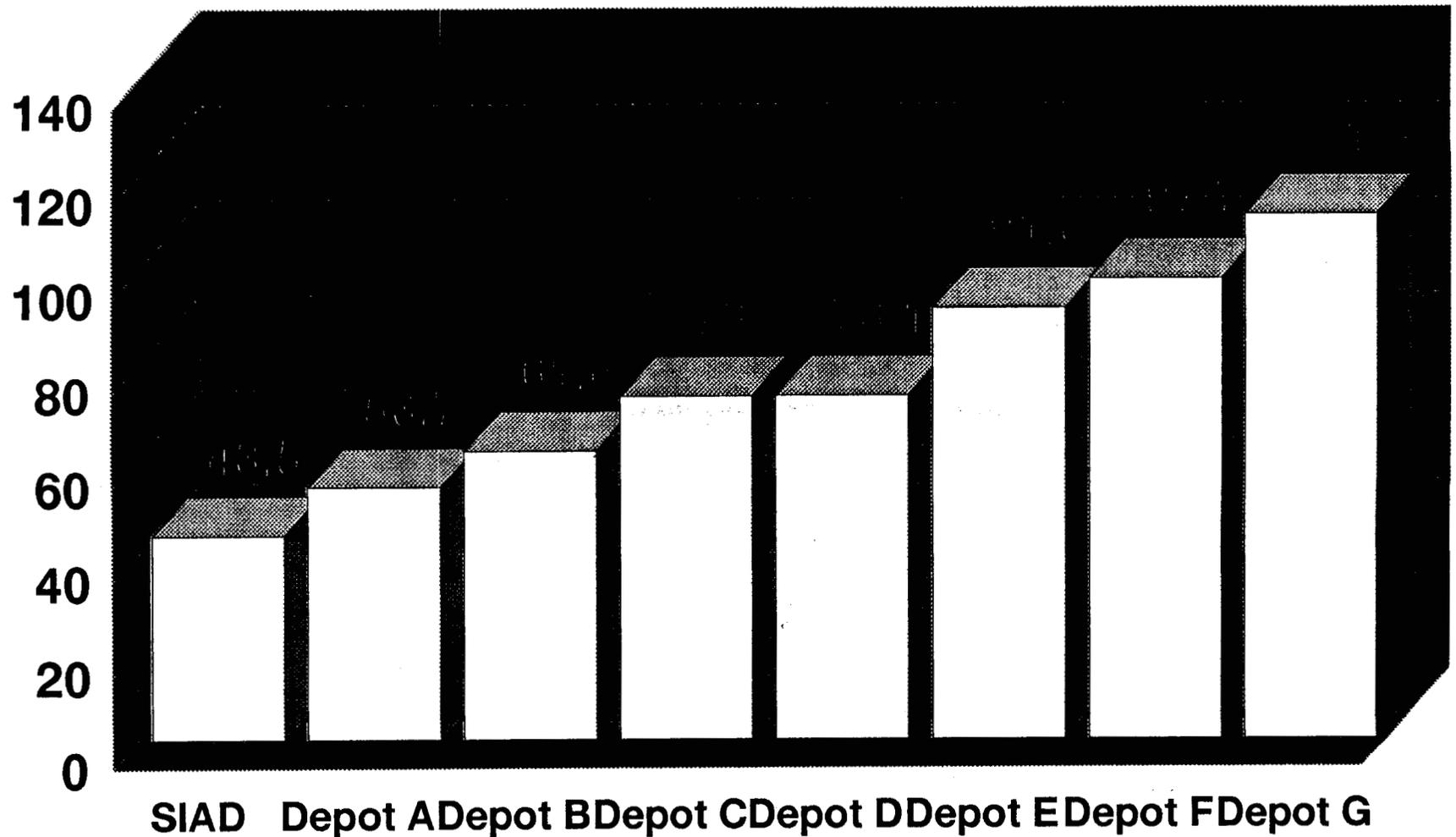
# Demilitarization Short Tons

FY90	20,018
FY91	10,008
FY92	19,649
FY93	14,528
FY94	8,753
FY95 Scheduled	28,245

Chart 13/19 Demilitarization - Short tons

This chart depicts Sierra Army Depot's actual demilitarization workload for FY90-94 and scheduled workload for FY95. We have demilitarized 5,833 short tons so far this year. The remainder excluding some carry-over will be accomplished in the summer months which is our prime demilitarization season. This total for FY95 is over 31 percent of the total Army demilitarization program. Sierra Army Depot is projected to receive over 30,000 short tons of demilitarization in FY96, which will be close to 40 percent of the Army total. The demilitarization capability at this installation cannot be duplicated anywhere else.

# FY95 Demilitarization Fixed Rate

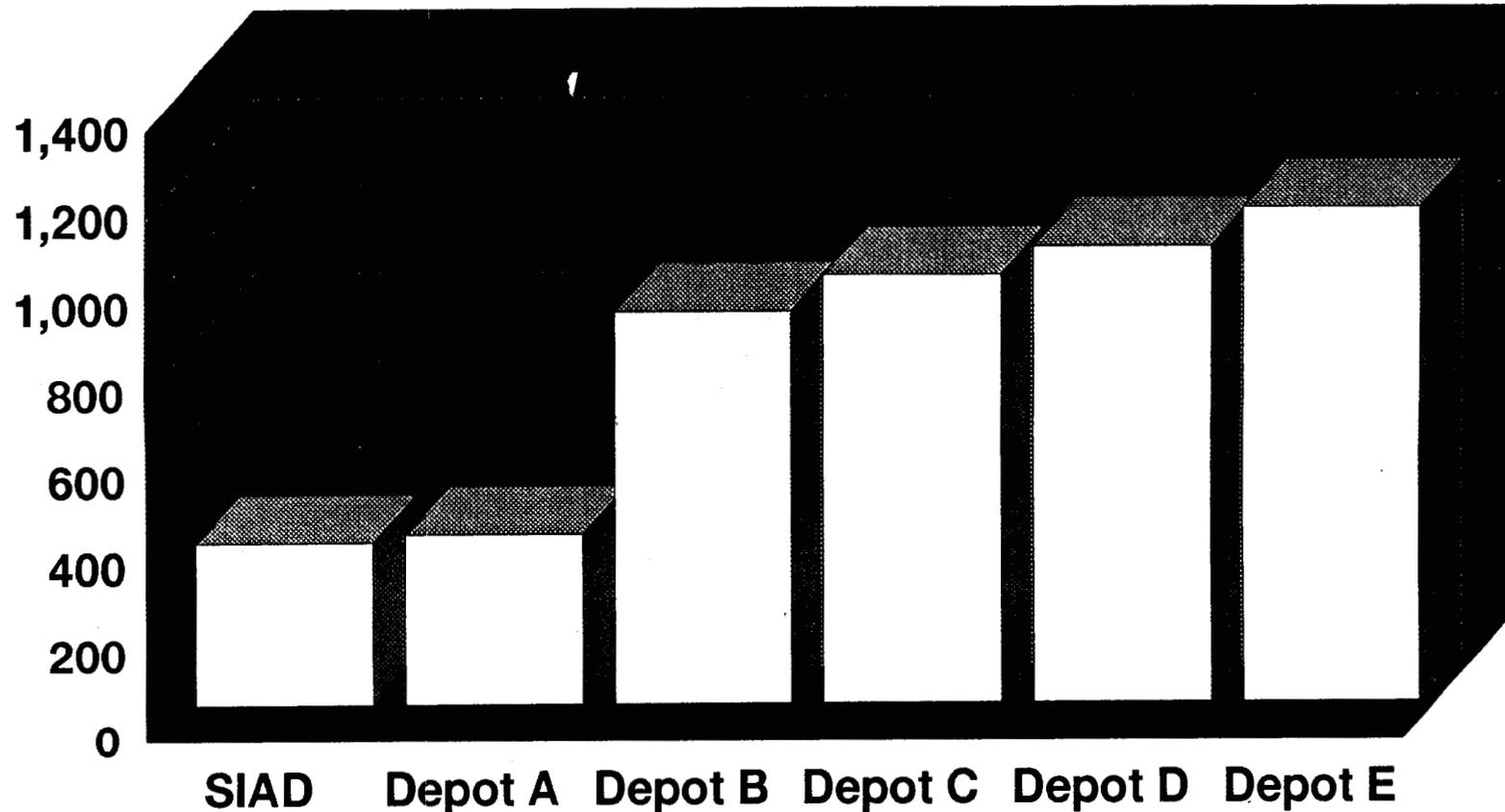


Source: DESCOM Rate File FY95

Chart 14/19 FY95 Demilitarization Fixed Rate

This chart shows an hourly rate cost comparison between the different depots in the depot system. Sierra Army Depot is over \$10 per hour cheaper than its closest competitor in the demilitarization business. As can be seen on the chart, demilitarization rates at some of the other installations are more than twice as expensive as here at Sierra Army Depot. Because our rates are cheaper, this results in a better value for our customers.

# FY95 Demilitarization Cost per Ton



Source: AMCCOM FY95 Demilitarization Business Plan  
Forecasted by AMCCOM

Chart 15/19 FY95 Demilitarization - Cost per Ton

Here is a cost per short ton comparison for the different depots. Sierra Army Depot is over \$19 per ton cheaper than our closest competitor. Also, the cost per short ton in the system is \$807.00 on the average. Sierra Army Depot's cost per ton is over \$435.00 cheaper than this average. Also, because of Sierra Army Depot's large capability, the cost effectiveness of this installation cannot be overstated.

# Conventional Ammunition Demilitarization Capabilities

Depot	Open Burning	Open Detonation Limits	
Depot A	5,000 lbs X 34 Sites	100 lbs (5,000 lbs*) X	19 SITES
Depot B	5,000 lbs X 1 Site	180 lbs X	15 SITES
Depot C	50 lbs X 15 Sites	15 lbs (1,000 lbs*) X	22 SITES
Depot D	4,000 lbs X 3 Sites	50 lbs (500 lbs*) X	14 SITES
Depot E	11,000 lbs X 1 Site	100 lbs (3,000 lbs) X	4 SITES
Depot F	By Permit Only	100 lbs * X	30 SITES

**\*Detonation limits under Earth Cover**

Chart 16/19 FY95 Demilitarization Program

This chart shows the conventional ammunition demilitarization capabilities at the various depots for open burn/open detonation. We have the largest demilitarization capability for open burn/open detonation in the depot system. We are permitted to open burn 100,000 pounds net explosive weight and 10,000 pounds net explosive weight per pit for our 14 pits. The net explosive weight permit will increase open burn to 160,000 pounds. The capabilities at Sierra Army Depot are the largest in the Army by several times over. Also, because most of the other installations are required to bury their munitions before detonation, this is more labor intensive, costly and reduces through put. Sierra Army Depot also is the only military facility in the country that can burn large rocket motors. Because of this capability, the Navy depends on Sierra Army Depot to help them meet their Strategic Arms Reduction Treaty requirements. Because of our expertise in the demilitarization arena, Sierra Army Depot has become the leader in developing and validating demilitarization procedures for other agencies.

# FY95 Demilitarization Program

Installation	Tons	Percent
SIAD	*28200	**31.6
HWAD	19200	21.5
BGAD	4700	5.3
TEAD	4200	4.7
LEAD	2200	2.5
RRAD	1100	1.2
ANAD	850	1
Others (20 installations)	28700	32.2
Total	89150	100

SOURCE: AMCCOM FY95 Demilitarization Business Plan

\* Expected to increase to 48200

\*\* Expected to increase to 44%

Chart 17/19 FY95 Demilitarization Program

This chart shows the Army's Organic Base total demilitarization program for FY95 in short tons's. The program includes open burn/open detonation, resource recycling and recovery, and deactivation furnaces. Sierra Army Depot has over 31 percent of this year's total program. The others are comprised of around 20 ammunition plants. Sierra Army Depot has the largest single site portion of the current program because of the tremendous capabilities that exist here. The projected demilitarization workload for FY96 here at Sierra Army Depot is around 30,000 short tons, which will be about 40 percent of the FY96 total program. Although, some other installations have more resource recycling and recovery capability, it is very expensive. Thus, open burn/open detonation is still more cost effective which contributes to Sierra Army Depot's competitive posture.

# **Function**

## **Surveillance**

### **Facility:**

**Surveillance workshop to be replaced by new workshop under construction**

### **Responsibilities:**

**Receipt inspection**  
**Pre-issue inspection**  
**Safety in storage inspection**  
**Magazine inspections**  
**Condition code changes**  
**Periodic inspection**  
**Damage in transit inspection**  
**Foreign military sales inspection**

Chart 18/19 Function - Surveillance

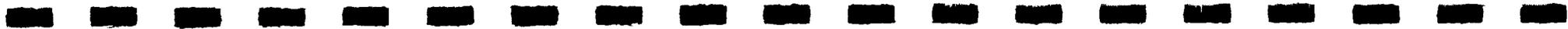
Surveillance has one workshop where they perform various inspections; i.e., periodic, pre-issue, safety in storage and foreign military sales. In addition to the workshop, surveillance personnel are assigned to inspect incoming/outgoing trucks/railcars; inspect ammunition operations at receiving, maintenance lines, and demolition grounds; inspect igloos/magazines; and maintain Ammunition Data Cards for each lot of ammunition. Our responsibilities are shown on the chart. A new state of the art net explosive weight surveillance workshop, which will be completed in the third quarter FY95, will allow for improved operations.

# **Wholesale Ammunition Stockpile Program (WASP) Study Demilitarization**

- **SIAD has the best demilitarization capability in the Army**
- **SIAD is the most cost effective demilitarization installation**
- **Currently 413 K short tons in the demilitarization account and growing**
- **Aggressive demilitarization program required to generate storage space**
- **SIAD will receive a 10 year demilitarization permit in FY95**
- **Without SIAD, demilitarization and storage problems become more critical**

Chart 19/19 Wholesale Ammunition Stockpile Program (WASP) -  
Study

As we have seen previously, Sierra Army Depot has the premier demilitarization capability and is currently executing over 31 percent of this year's demilitarization program. This will be over 28,000 short tons. Based on this and the projected FY96 workload of over 30,000 short tons, Sierra Army Depot will continue to maintain our low rates. With over 400,000 short tons to date, of demilitarization backlog identified and the demilitarization account increasing on an annual basis, an aggressive demilitarization program is essential. Sierra Army Depot will receive its final part B permit later this year which would enable us to operate for another 10 years at maximum capacity. With this permit and proper funding, Sierra Army Depot could increase current workload to beyond the 31 of the current organic tonnage. Without Sierra Army Depot's tremendous capability, the demilitarization problem and subsequent lack of storage problem will be further adversely impacted. The Wholesale Ammunition Stockpile Program Study identifies these problems and recommends an aggressive demilitarization program to help alleviate the current situation.





# **Sierra Army Depot**

**Base Realignment and Closure (BRAC)  
Operational Project Stocks Briefing  
25 April 1995**

**Briefer: LTC Danny Edwards  
Director of Operational Project Stocks  
(916) 827-4433**

Chart 1/7 Sierra Army Depot Operational Project Stocks

Presenter: LTC Edwards  
Director of Operational Project Stocks

Sierra Army Depot  
Directorate of Operational Stocks  
SDSSI-OS  
Herlong, CA 96113

Comm (916) 827-4433  
Fax (916) 827-4265  
DSN 855-4433  
DSN Fax 844-4265

As stated in the video, the primary mission of the Directorate is the receipt, issue, storage, repair, overhaul, and maintenance of Operational Project Stocks.

# Center Of Technical

## Excellence



Sierra 4/25/95

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Chart 2/7 Center of Technical Excellence

Sierra Army Depot was designated as the Center for Technical Excellence for the processing and maintenance of Operational Project Stocks by the United States Army Depot System Command (DESCOM) in 1993.

# Functions

- Receiving/Shipping
- Care of Supplies in Storage (COSIS)
- Prepositioned (PREPO) Ships - Maintenance Cycle
- Systems Integration
- Technical Assist Teams - Worldwide
- Preservation and Packaging
- Environmental Compliance
- Inspections
- Cost Estimates
- Maintenance
- Logistics Management
- Soldier Training
- Fielding

## Chart 3/7 Functions

The Directorate of Operational Project Stocks works closely with the Program Manager to integrate systems into the Army's inventory. Systems are received, fielded at Sierra, repaired, rebuilt, overhauled, processed, and packaged for worldwide shipment. Technical assistance teams are available to provide worldwide training and support when needed. Sierra stands ready to answer the call.

# **Operational Project Stocks at Sierra**

## **Value of Stock on Hand**

### **\$1.2 Billion**

**Water Support System (WSS)**

**Mobile Kitchen Trailers**

**Inland Petroleum Distribution  
System (IPDS)**

**Clam Shelters**

**Force Provider (FP)**

**Landing Mats**

**Army Field Feeding  
System-Future (AFFS-F)**

**Bridging**



Chart 4/7 Operational Project Stocks at Sierra Value of Stock  
on Hand - \$1.2 Billion

This Chart shows Operational Project Stocks presently  
maintained at Sierra Army Depot.

Water Support System: Transports, stores, and purifies water  
for all troop movements and  
humanitarian efforts.

Inland Petroleum Distribution System: A rapid deployment fuel  
storage and pipe line  
system which supplies  
fuel to deployed  
forces.

Force Provider: State-of-the-art system designed for combat troop  
support under austere field conditions. Designed  
primarily to provide rest and recuperation for  
soldiers in the field. Humanitarian assistance  
and disaster relief operations are also possible.

Army Field Feeding System-Future: Fixed modular designed feeding  
system to provide hot meal  
service for deployed troops.

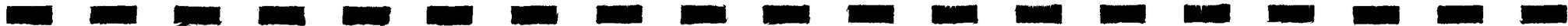


Chart 4/7 Operational Project Stocks at Sierra Value of Stock  
on Hand - \$1.2 Billion (Cont'd)

Mobile Kitchen Trailers: Trailer mounted kitchen for feeding troops  
in deployment or field operations.

Clam Shelters: Semi-mobile shelters provide protection from the  
weather during maintenance on aircraft and vehicles.

Landing Mats: Surface material for construction of airfields in  
support of all Army aircraft.

Bridging: Fixed type bridge erected to transport troops,  
materials, and equipment over rivers or ravines.

# Storage Space

**Total Covered Storage**  
**over 2 million sq ft**

**Total Improved Outside Storage**  
**over 17 Acres**  
**(More hard stand pads in process)**

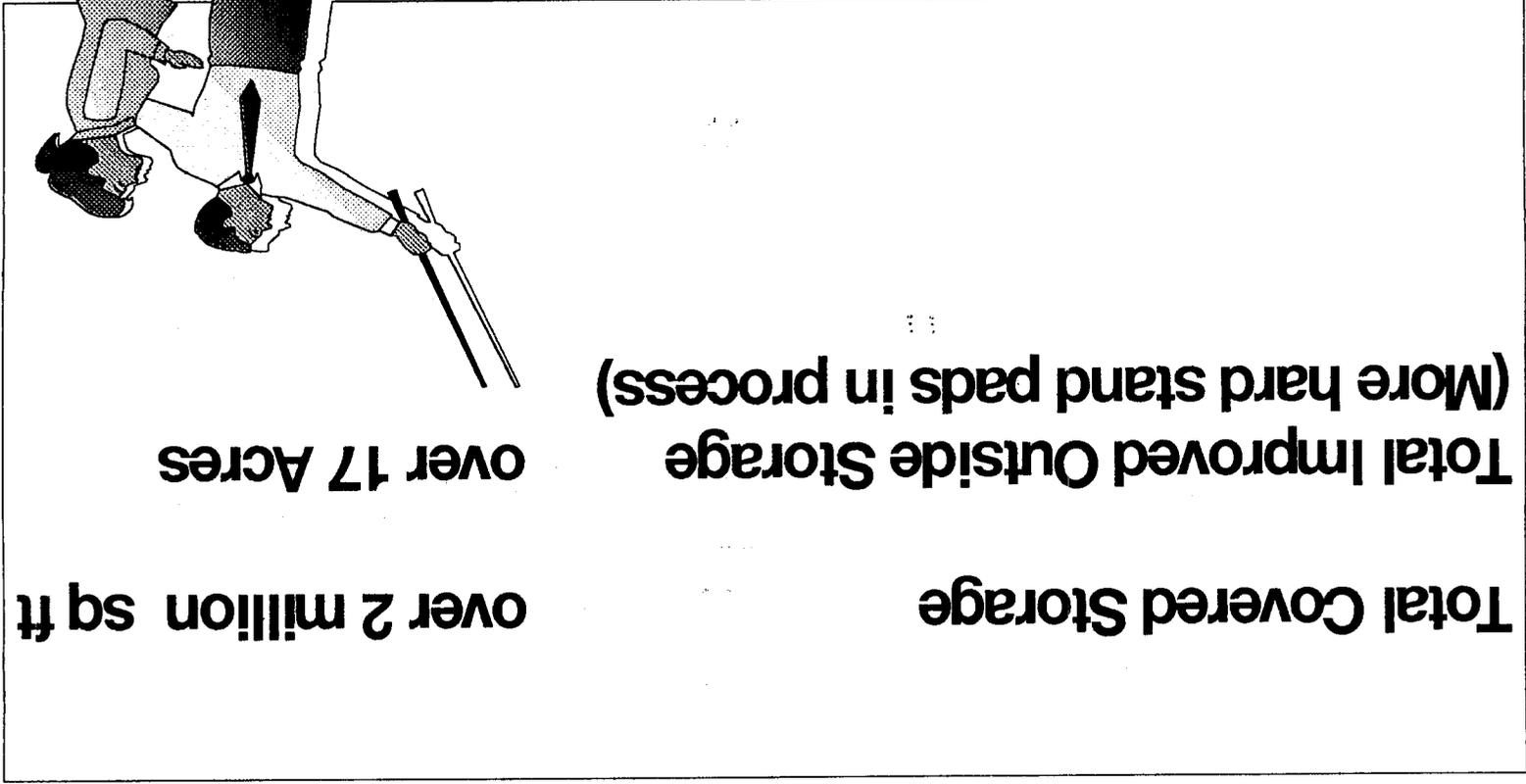
An illustration showing two stylized human figures standing on a large, empty rectangular area. The figure on the left is wearing a dark suit and holding a long, thin object, possibly a tool or a measuring device. The figure on the right is wearing a light-colored suit. The rectangular area represents the storage space mentioned in the text.

Chart 5/7 Storage Space

This chart shows present storage capability. All warehouses have modern fire suppression systems.

The acreage is available to increase storage capability.

All warehouses are accessible by rail.

Covered storage capacity equates to 13 NFL football fields.

In the process of building additional hardstands to accommodate the steadily increasing mission.

# **Emergency Shipments by SIAD**

## **Somalia Shipments**

**Chemicals for 3K Gallons Per Minute (GPM) Reverse Osmosis Water Purification Units (ROWPUs)**

**Reverse Osmosis (RO) Elements for 3K GPM ROWPUs**

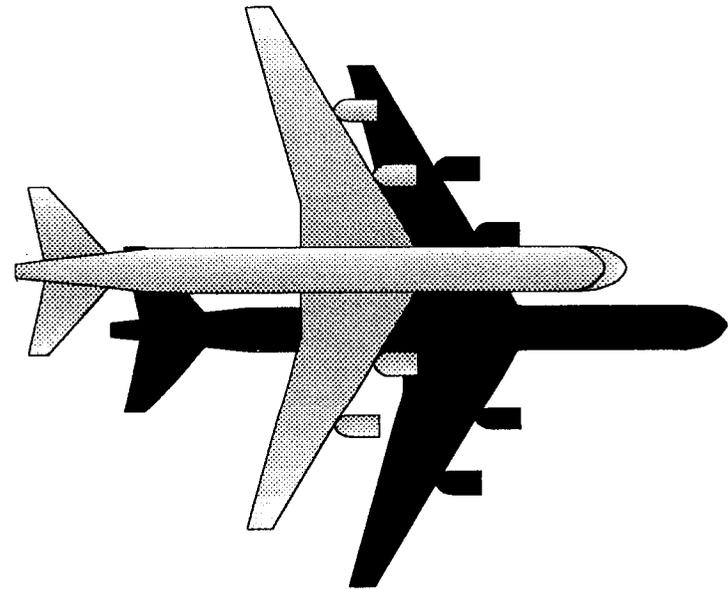
**5 Mile Set (IPDS)**

**500 Gallon Drums**

**125 GPM Pumps**

**350 GPM Pumps**

**600 ROWPUs**



**Sierra 4/25/95**

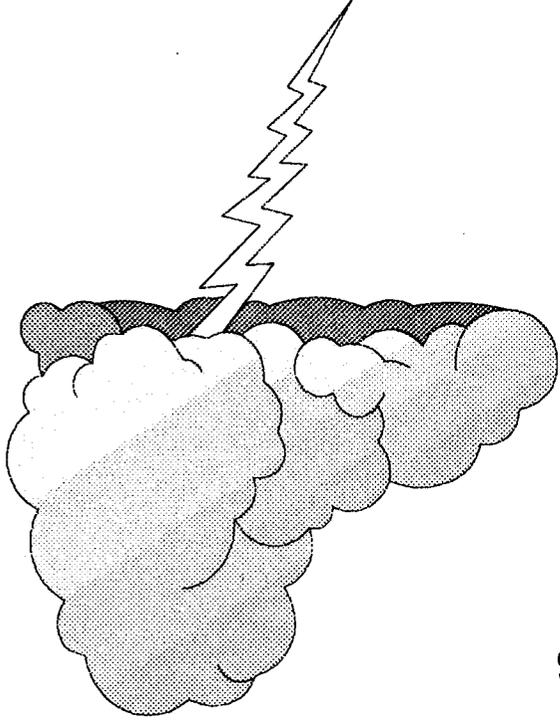
**6/7**



Chart 6/7 Emergency Shipments by Sierra

Charts 6 and 7 show emergency shipments made by Sierra Army Depot. The majority of these shipments were made from Sierra's Amedee Army Airfield to units supporting these missions. This airfield will handle all current military aircraft including the C-5A and C-17.

# Emergency Shipments by SIAD Humanitarian Relief



Florida 600 GPM ROWPUS

Guam 3K GPM ROWPUS

Hawaii 3K GPM ROWPUS

Arizona 3K GPM ROWPUS

Haiti FP Components

Rwanda 3K GPM ROWPUS



# Sierra Army Depot

## Base Realignment and Closure (BRAC) Manpower Briefing 25 April 1995

Briefer: Alice H. Allison

Chief, Program, Budget and Manpower Division

(916) 827-4163

Sierra 4/25/95

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Chart 1/12 Sierra Army Depot Manpower Briefing

Presenter: Alice H. Allison  
Chief, Budget and Manpower Division

Sierra Army Depot  
Directorate of Resources Management  
SDSSI-REB  
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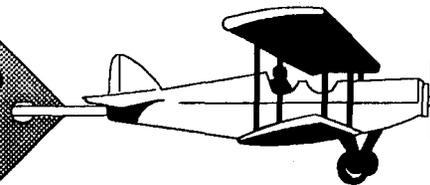
Sierra Army Depot is fully committed to supporting the Department of the Army recommendation if it becomes permanent.

In this spirit of cooperation, this briefing will point out a critical manpower and funding shortfall which could seriously impair the depot's ability to implement this decision.

# Base Realignment and Closure (BRAC)

DA Recommendation: "Realign Sierra Army Depot by eliminating the conventional ammunition mission and reducing it to a depot activity. Retain an enclave for the Operational Project Stocks mission and the static storage of ores."

*Remaining enclave  
is 240*



Impact: The 240 proposed enclave does not leave sufficient jobs to support the recommendation.

Results: The manpower and cost savings are overstated, the cost to implement is understated.

Chart 2/12 The BRAC Recommendation/Impact/Results

The Department of the Army recommendation is to realign Sierra Army Depot by eliminating the Conventional Ammunition mission and reducing it to a depot activity. We are to retain an enclave for the Operational Project Stocks mission and the static storage of ores. The recommendation further stated the remaining enclave would consist of 240 personnel.

The figure of 240 currently being used as the enclave was taken from our response to a data call, but is not sufficient to use as the basis for an enclave.

# Operational Project Stocks Enclave

- BRAC 95 Data Certification:  
Memo, 6 Jan 95, Industrial Operations Command, subject: BRAC 95 Data Call. "Personnel Requirements for Operational Project Stocks."
- Sierra's response : Funded direct and indirect workyear requirement as of 11 Jan 95 - 240



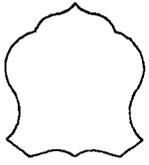
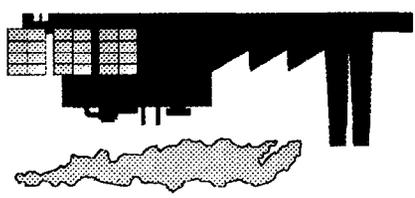
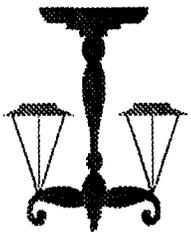
• The proposed enclave excludes the following :

✓ Evolving mission requirements

✓ Base support such as fire protection, security, safety, environmental, budget, manpower, personnel, legal,

communications, engineering support, utilities, maintenance of buildings, roads, and grounds . . .

✓ Radiation Survey Mission



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Chart 3/12 Operational Project Stocks Enclave (Continued)

We recognized these numbers as direct project orders funded earlier in the fiscal year. Our response of 240 was based on an updated review of project orders plus indirect mission support stratified as follows:

Inland Petroleum Distribution System	
Water Support System	187
Army Field Feeding System - Future	17
Force Provider	26
Clam Shelters	8
Bridging	1
Landing Mats	1
	-----
Total	240

The correct question was never asked. We were not asked for the base operations portion of the support that would be required to support an enclave.

Also specifically excluded is any workload other than Operational Projects. We currently perform critical radiation survey functions required to divest Department of Defense facilities identified by BRAC. We have assisted at the Sacramento Army Depot facility, a TMDE Command facility, Pueblo Army Activity, Ft. Devens and are about to begin a radiation survey project at Ft. Ord.



Chart 3/12 Operational Project Stocks Enclave

Sierra Army Depot received a memorandum, dated 6 January, 1995 from the BRAC Office of the Industrial Operations Command, subject: BRAC 95 Data Certification. The manpower data needing certification was displayed as follows:

Personnel requirements for Operational Project Stocks:

- 94 Inland Petroleum Distribution System/Water Support System
- 13 Army Field Feeding System - Future
- 19 Force Provider
- 6 Clam Shelters
- 0 Bridging
- 0 Landing Mats

---

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# **What is the correct enclave figure ?**

## **Post BRAC Assumptions:**

- **No Special Weapons**
- **No Conventional Ammunition**
- **Projected FY96 Operational Project Stocks workload validated by the Program Managers**
- **No intermediate depot for Base Support per the Commanding General, i.e., report directly to Industrial Operations Command**

Chart 4/12 What is the Correct Enclave Figure?

This recommendation does not recognize that we are in the final phase of eliminating the Special Weapons mission from Sierra Army Depot. However, our post-BRAC enclave does specify we will support only the Operational Project Stocks and strategic ores.

The FY96 Operational Project Stocks workload is based on a \$21 million program that has been validated by the Aviation and Troop Command and included in the Industrial Operations Command Budget Mark process.

Per the Industrial Operations Command, the enclave to support the revised footprint of the depot will include all resources required to provide maintenance and repair of remaining facilities; roads, grounds and utilities; fire prevention and protection; security; safety and environmental support; resource management and personnel; automation and communications support; equipment management, maintenance and acquisition; legal; public affairs; internal review and audits, and all other normal base operations functions.

# **Validated Strength Requirements**

## **- Method 1**

- **Reconstructed Operational Project Stocks mission workyears**
- **Zero-based Base Support**
- **Added Radiation Surveys**

## **- Method 2**

- **Cost comparisons of FY94 and FY95 Ammo and Special Weapons requirements**
- **Identified related Base Support**
- **Subtracted mission and support costs from depot total**

Chart 5/12 Validated Strength Requirements

We approached the creation of an enclave two ways. The first is simply a complete, bottom-up review of current funded Operational Project Stocks mission, base operations, and general and administrative support requirements. The second method was used to verify that our approach in Method 1 was valid. We identified the Conventional Ammo and Special Weapons direct, indirect, and base operations support then subtracted that amount from the total FY94 actual workyears and the FY95 planned workyears.

# Method 1

a. Convert orders to workyears:

Direct Labor Hours 389,000

Divided By  
Productive Manyear factor of 1,714 = 227

Direct	227	80%
Indirect	<u>57</u>	20%
	284	

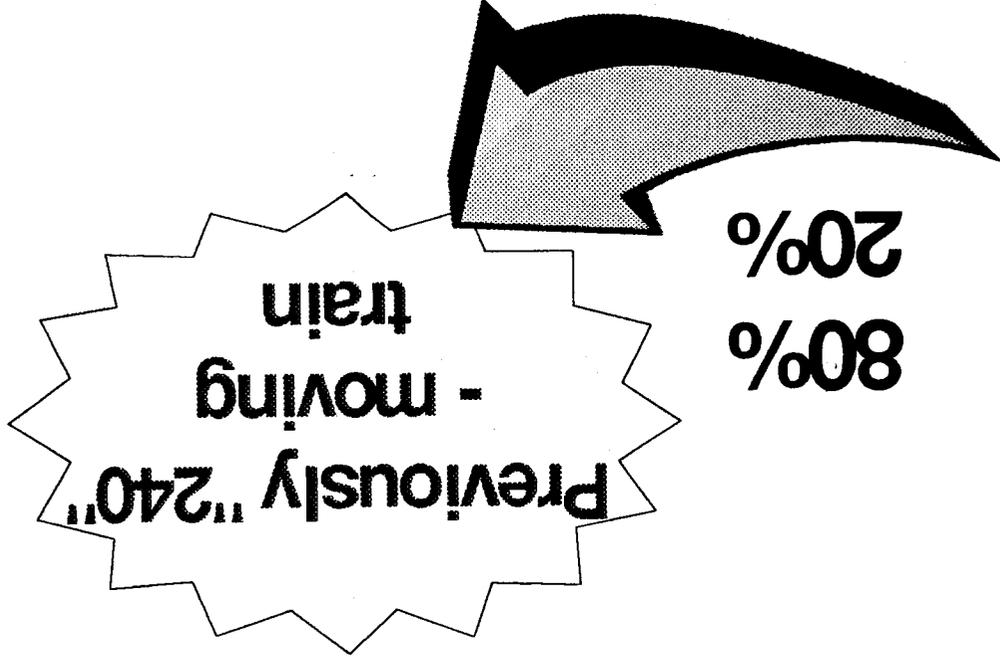


Chart 6/12 Method 1

The direct labor hours are based on current (March 1995) funding levels, detailed cost estimates, and historical manhour standards. Some of the functions Sierra Army Depot performs include: receiving, shipping, care of supplies in storage (COSIS), Prepositioned (PREPO) Ships Maintenance Cycle, Systems Integration, Technical Assist Teams - Worldwide, preservation and packaging, environmental compliance, inspections, cost estimates, maintenance, logistics management, soldier training, and fielding. All indications point to a growing operational stocks workload.

The summary of the FY96 regular direct labor projection is as follows:

Major Items	385,645	
Secondary Items	2,961	
	-----	
Total	388,606	(Divided by 1714 [Productive work year factor] equals 227 direct work years).

The indirect workyears are driven by a historical factor of 20 percent, which in this case adds 57 workyears. This covers first and second line supervisors, administrative and clerical support, production planning and control which cannot be charged directly to a particular order, down time such as vehicle and equipment issues, union meetings, etc. (This support is not to be confused with base operations).

# Method 1 (Cont'd)

- b. **Zero-based Base Support:**  
Identified 218 base operations TDA positions .
  
- c. **Recognized level of effort to support radiation surveys of facilities required at Sierra and other BRAC'd installations: 10**
  
- d. **Total Civilian Requirement:**

<b>Mission</b>	<b>284</b>
<b>Base Support</b>	<b>218</b>
<b>Radiation Surveys</b>	<b><u>10</u></b>

**512**

Chart 7/12 Method 1 continued...

The zero-based base support refers to a complete bottom-up review of all base operations requirements, leaving only those positions needed to maintain the employees and facilities in the new depot footprint. This Table of Distribution and Allowances has been submitted to the Industrial Operations Command BRAC office.

The level of effort we included for radiations surveys is 10 workyears.

# Method 2

Costed Civilian Workyears	FY94	FY95
Total Regular Workyears	774	759
Less Conventional Ammo (CA)	-182	-194
Less Special Weapons (SW)	-41	-29
Less Base Support to CA & SW	-29	-15
Total	507	521

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Chart 8/12 Method 2

The second method was used to verify that our approach in Method 1 was valid. We took the FY94 AND FY95 cost figures applied to conventional ammunition, special weapons, and the related base support level of effort from the total workyears (using the actual workyears in FY94 and the projected workyears in FY95). This process confirmed that the 512 civilian figure is reasonable.

# BRAC vs Sierra Requirements *Civilians Only*

Support Area	BRAC	Sierra
Operational Project Stocks	240	284
Base Support	0	218
Radiation Surveys	0	10
Total	240	512

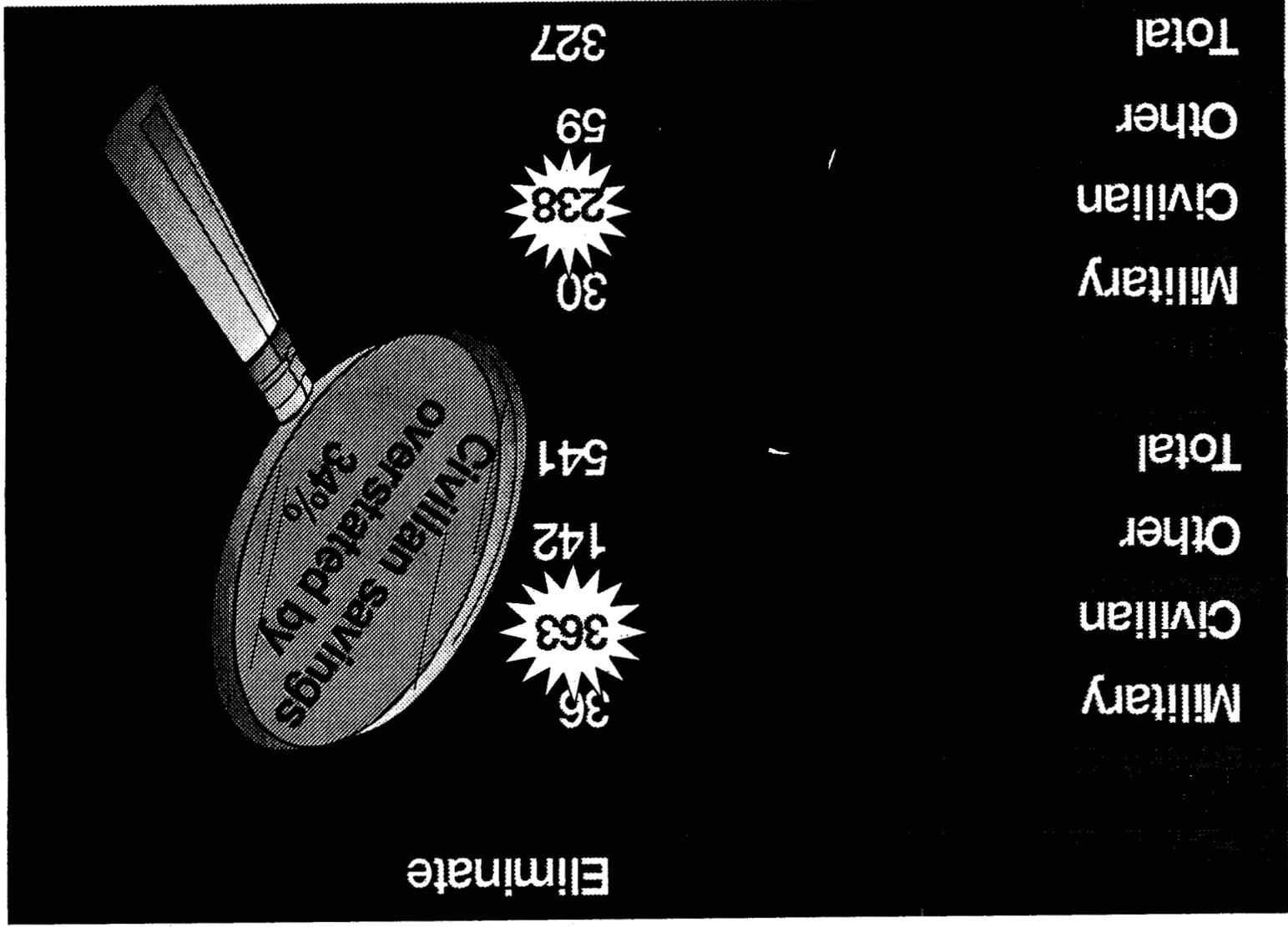
In addition, Sierra will need 4 Officers and 2 Enlisted.

Chart 9/12 BRAC vs. Sierra Requirements

The Department of the Army recommendation to BRAC states that the enclave will be supported by 240 civilian positions.

Sierra's calculations indicate that the correct figure is 512 positions. The shortfall of 272 spaces is more than half of what is required and would prevent the accomplishment of the Operational Project Stocks mission at this location.

# BRAC vs Sierra Manpower Savings



Sierra 4/25/95

10/12

Chart 10/12 BRAC vs. Sierra Manpower Savings

According to the Impact Statement, the Army expects a reduction of 363 civilian positions. In reality, only 238 positions would be eliminated.

The Department of the Army Total Army Basing Study recommendation has overstated the civilian savings by 34 percent.

# Estimated One-time Cost to Implement

Unprogrammed Cost \*

\$38 Mill  
 -0-  
7 Mill  
 \$45 Mill

\$91 Mill  
 -0-  
7 Mill  
 \$98 Mill

\$75 Mill  
 -0-  
7 Mill  
 \$82 Mill

11/12

Total

\$38 Mill  
 19 Mill  
7 Mill  
 \$64 Mill

\$91 Mill  
 19 Mill  
7 Mill  
 \$117 Mill

\$75 Mill  
 19 Mill  
7 Mill  
 \$101 Mill

Estimated minimum additional costs:

✓ Ammo short tons to closest depot

✓ Ammo Demilitarization

✓ Ammo Radiological Surveys

Estimated maximum additional costs:

✓ Ammo short tons to farthest depot

✓ Ammo Demilitarization

✓ Ammo Radiological Surveys

Estimated probable additional costs:

✓ Ammo short tons to move (average)

✓ Ammo Demilitarization

✓ Ammo Radiological Surveys

\* Does not include avoidable environmental clean-up costs

• COBRA \$14 Mill

Sierra 4/25/95

Chart 11/12 One-time Cost to Implement

The Cost of Base Realignment model estimated Sierra Army Depot's one time implementation cost for the recommended drawdown to be \$14 million. The depot's estimated minimum additional costs above the \$14 million that were not considered in the model equal an additional \$45 million and the probable additional costs above the \$14 million would be \$82 million. These amounts consist of:

<u>Minimum Additional Costs</u>	
Ammo short tons to closest depot	\$38M
Ammo Demil	- 0 -
Ammo Radiological Surveys	7
	-----
Total	\$45M
 <u>Probable Additional Costs</u>	
Ammo short tons to farthest depot	\$75M
Ammo Demil	- 0 -
Ammo Radiological Surveys	7
	-----
Total	\$82M

# Conclusion

- **Savings are overstated**
  - ✓ **COBRA did not consider the cost to move Ammunition, \$82 Mil**
  - ✓ **Personnel savings overstated by 34%**
- **To ensure the DA TABS proposal can be implemented, the BRAC process MUST:**
  - ✓ **Recognize the correct enclave to fully support the required Operational Project Stocks Mission:**

<b>Civilians</b>	<b>512</b>
<b>Military</b>	<b>6</b>
	<hr/>
	<b>518</b>

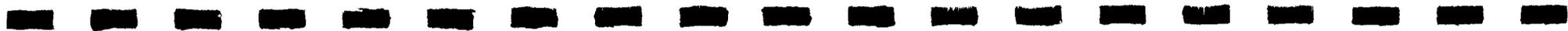
Chart 12/12 Conclusion

In order to ensure the BRAC recommendation can be implemented it is imperative that the BRAC process consider two major issues discussed:

1. The correct enclave to support Operational Project Stocks:

- a. 512 civilian positions
- b. 6 military positions
- c. Total of 518

2. An additional bill to implement the recommendation to move conventional ammunition out of Sierra Army Depot is \$82 million.





PRIDE IN EXCELLENCE  
• Readiness Since 1942 •

# Conventional Ammunition FY96 Shipping/Receiving

Standard	Sierra 4/25/95
Manhour	1.902
SVDA	2.695
TEAD	2.640
SIAD	2.440
BGAD	3.610
ANAD	3.840
LEAD	1.768
SEDA	4.619
RRAD	

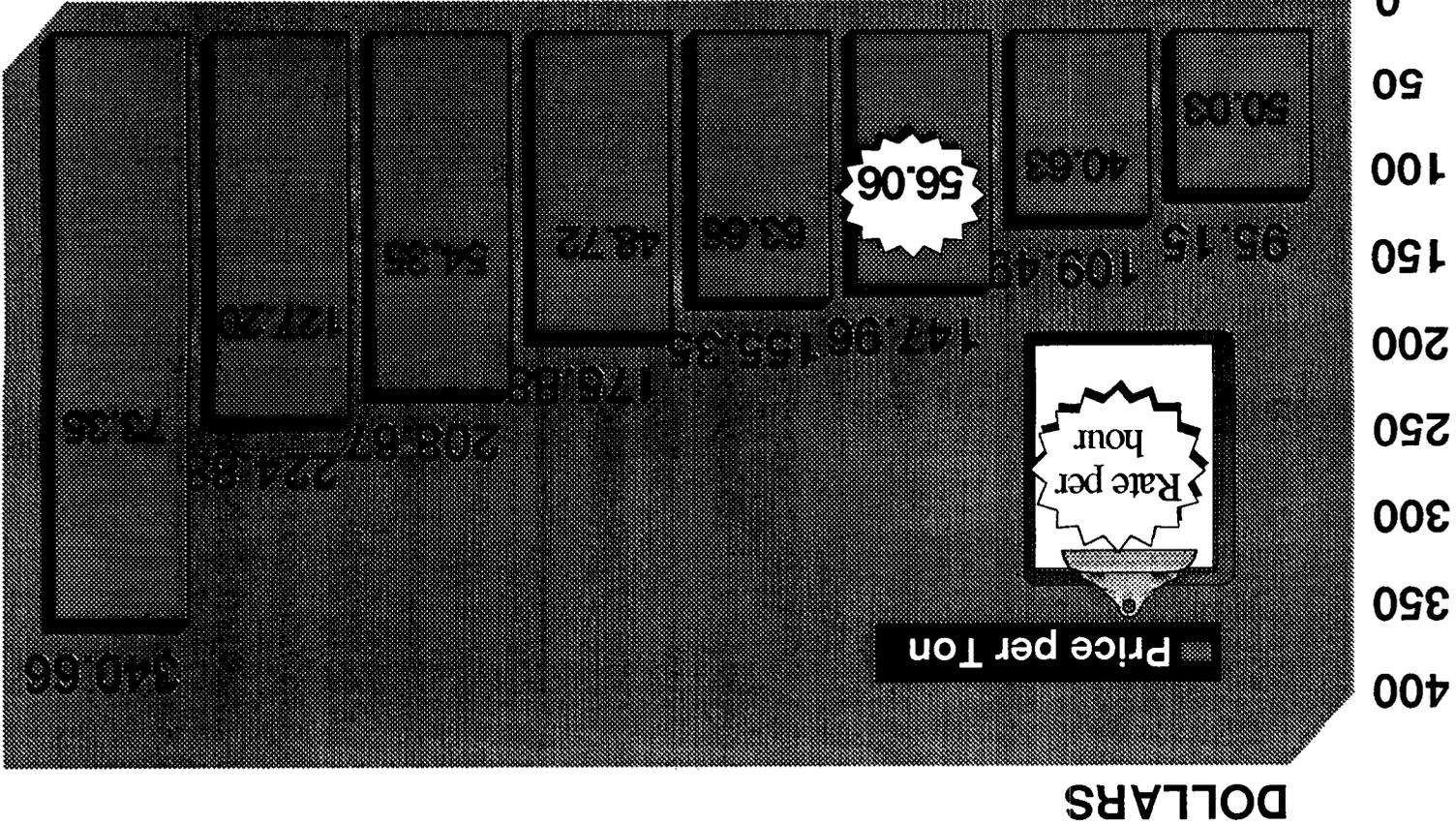


Chart 1/2 Conventional Ammunition Demilitarization Revenue Per Ton

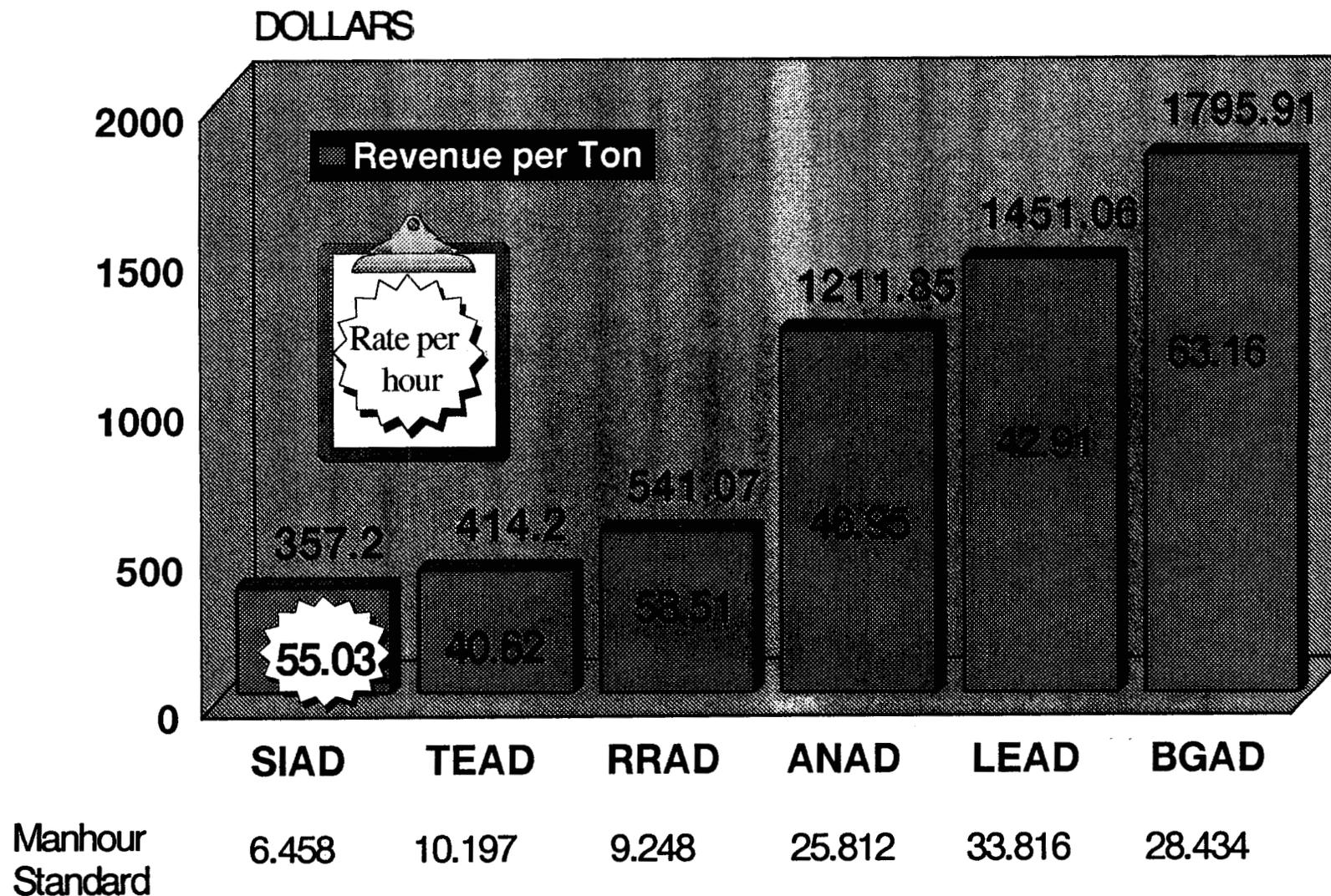
As you saw, our briefings dealt with FY95 data. We have just received the FY96 fixed prices and rates for the Conventional Ammunition program.

At \$357.20 per short ton, Sierra's fixed price for conventional ammunition demil is the best among the depots. Our mix of proposed workload items includes several programs which require labor intensive disassembly actions.

For example: 105mm cartridges; quantity 6,615 short tons utilizing 70,470 direct labor hours and 90mm cartridges; quantity 3,093 short tons utilizing 46,389 direct labor hours. In spite of these labor intensive programs, our manhour standard remains the most efficient.

**"THE MOST "BANG" FOR YOUR DWINDLING TAX DOLLARS!!!"**

# Conventional Ammunition FY96 Demilitarization



Sierra 4/25/95

2/2

**SURVIVORS** Group, Inc

Western Region Office

**FAX COVER PAGE**

To: Robert K. Sorvaag	For Information Call: 916-362-8276
From: John Murphy	At: Survivors Group, Inc
Pages: 16	Fax Number : 916-362-4966

Bob -

Per conversation. Should be 15 pages.

John

## SLIDE 1

GOOD MORNING .... MY NAME IS JACK LENSING, CHAIRMAN OF THE COMMITTEE TO RETAIN THE SIERRA ARMY DEPOT (SIAD) AND PAST PRESIDENT OF THE LASSEN COUNTY CHAMBER OF COMMERCE. I'M PLEASED TO HAVE LYLE LOUGH, LASSEN COUNTY SUPERVISOR AND JAMES JESKEY, MAYOR OF THE CITY SUSANVILLE SPEAKING WITH ME THIS MORNING. ALSO, WE WANT TO MAKE SURE WE THANK THE DEPOT PERSONNEL FOR THEIR SUPPORT OF THE COMMUNITY, NOT JUST TODAY, BUT ALL THE TIME.

AS YOU'VE ALREADY HEARD, SIAD HAS CAPABILITIES WHICH WERE NOT ADEQUATELY ASSESSED IN THE ARMY'S DELIBERATIONS WHICH LED TO THEIR BRAC 95 RECOMMENDATION TO REALIGN THE DEPOT. MOREOVER, THE PROJECTED ONE-TIME COSTS ARE ESTIMATED TO BE TOO LOW AND ANTICIPATED MANPOWER AND RECURRING SAVINGS ARE TOO HIGH. THE COMBINATION MAKES SIAD'S REALIGNMENT A BAD BUSINESS DECISION FOR THE TAXPAYER. BECAUSE THE DEPOT STAFF HAS DONE SUCH A SUPERB JOB OF POINTING OUT THESE, AND MANY OTHER, FAILINGS, WE'RE NOT GOING TO DWELL HEAVILY UPON THEM. ALTHOUGH WE'LL OVERLAP A LITTLE ON A COUPLE OF KEY POINTS, WE'RE GOING TO SPEND MOST OF OUR TIME HIGHLIGHTING OTHER SIGNIFICANT ISSUES. WE HOPE THAT BY THE END OF THE DAY YOU'LL AGREE THAT SIAD'S LOCATION, EFFICIENCIES, AND CAPABILITIES MAKE IT "THE PERFECT FIT FOR AMERICA'S ARMY AND THE NATION." [NEXT SLIDE]

## SLIDE 2

AS WE STUDIED THE PROCESS THAT PUT SIAD ON THE BLOCK, WE CAME TO REALIZE THE ARMY FAILED TO CREDIT SIAD PROPERLY FOR ITS MANY STRENGTHS, SOME UNIQUE OR SHARED BY ONLY A COUPLE OF INSTALLATIONS. AT THE SAME TIME, THE ARMY FAILED TO ENSURE ITS WORK WAS COMPLETED USING ACCURATE DATA AND FOLLOWING LOGICAL CONSTRUCTS THROUGHOUT THEIR ANALYSES. WE'LL ADDRESS THESE TWO AREAS IN DETAIL.

PUTTING THE BOTTOMLINE UP FRONT, WE BELIEVE SIAD SHOULD NOT BE DOWNSIZED. IN FACT, WE THINK ITS MANY ATTRIBUTES DEMAND AN EXPANSION OF BOTH THE OPERATION PROJECT STOCKS AND AMMUNITION STORAGE MISSIONS. BY THE TIME THE ARMY ADDS BACK THE PERSONNEL NECESSARY TO SUPPORT THE OPERATION PROJECT STOCKS MISSION, THE POTENTIAL TO LEVERAGE AN ACCEPTED BUSINESS PRINCIPLE – ECONOMY OF SCALE – SHOULD PROVIDE SUFFICIENT INCENTIVE TO GROW, NOT REDUCE THE MISSION. [NEXT SLIDE]

## SLIDE 3

THESE ARE THE AREAS THE DEPOT STAFF HAS BEEN, OR WILL BE, DISCUSSING TODAY. I'D LIKE YOU TO NOTE THE ARMY'S GUIDANCE SHOWN AT THE TOP OF THE SLIDE.

THE ESSENCE OF AFFORDABLY PROJECTING AMERICA'S MILITARY POWER IS REPRESENTED ON THIS SLIDE. LOWEST COSTS, BEST LOCATION, AN ON-SITE AIRFIELD CAPABLE OF HANDLING THE LARGEST OF OUR AIR FORCE'S AIRCRAFT, AND A DEMIL CAPABILITY THAT WILL DO 31% OF ALL DOD'S

WORK THIS YEAR. ADD THE TWO MAIN LINES FOR THE MAJOR EAST-WEST RAILROADS, AN UNLIMITED ABILITY TO EXPAND THE OPERATION, AND AN IDEAL CLIMATE TO STORE THE RAPIDLY GROWING MUNITIONS STOCKPILE OF ALL SERVICES AND ITS CLEAR SIAD IS A WORLD-CLASS POWER PROJECTION PLATFORM . THEREFORE, IT SHOULD BE CAREFULLY PROTECTED IN THE NATIONAL INTEREST, NOT THROWN AWAY BY QUESTIONABLE, SHORT TERM EXPEDIENCIES. [NEXT SLIDE]

#### SLIDE 4

HERE'S THE HEART OF WHAT WE'D LIKE TO ADDRESS THIS MORNING. THE ARMY'S PROCESS WAS SPECIFICALLY CRITICIZED IN LAST WEEK'S GAO REPORT FOR "THE ACCURACY OF SOME DATA USED IN THE MILITARY VALUE ANALYSIS FOR AMMUNITION STORAGE INSTALLATIONS." (GAO REPORT, PG 78) IN THEIR REVIEW, THEY VALIDATED EXISTENCE OF SOME DATA INACCURACIES. WE BELIEVE THESE PROBLEMS ARE SIGNIFICANT FACTORS FOR SIAD. ADDITIONALLY, WE BELIEVE THERE ARE OTHER MAJOR WEAKNESSES NOT IDENTIFIED BY THE GAO. IN TOTAL, THE ERRORS RANGE FROM THOSE ASSOCIATED WITH INCORRECT CLASSIFICATION OF INSTALLATIONS, THE FAILURE TO RESOLVE QUESTIONS RAISED BY CONFLICTING STUDIES, AND THE USE ON BAD DATA; THROUGH TO BASING THE MILITARY VALUE ANALYSIS ON A SERIOUSLY FLAWED, SUBORDINATE STUDY. [NEXT SLIDE]

## SLIDE 5

THE FIRST PROBLEM IS THAT THE ARMY USED A MISSION AREA – MUNITIONS STORAGE – TO CHARACTERIZE THE FUNCTION OF THE ENTIRE INSTALLATION AND ITS WORKFORCE. OBVIOUSLY, THIS STEMMED FROM A LACK OF APPRECIATION FOR WHAT ACTUALLY TAKES PLACE AT SIAD AND LED THE ANALYSTS TO MAKE BAD ASSUMPTIONS. THESE ASSUMPTIONS, AS REFLECTED IN THE COBRA ANALYSES, LED THE ARMY'S LEADERSHIP TO BELIEVE THE COSTS ARE LOWER AND THE SAVINGS HIGHER THAN POSSIBLE.

AS THE DEPOT STAFF HAS HIGHLIGHTED, THERE ARE SIGNIFICANTLY MORE POSITIONS WHICH MUST REMAIN THAN ACKNOWLEDGED. THIS WILL REDUCE THE PROJECTED STEADY-STATE SAVINGS BY APPROXIMATELY 34% PER YEAR. (THAT \$5.7 MILLION, GIVE OR TAKE, IS A SUBSTANTIAL PIECE OF EVEN BILL GATES' PERSONAL INCOME TAXES.) ALSO, IT'S IMPORTANT TO NOTE THE OPS STOCK MISSION IS ONE WHICH HAS BEEN INCREASING. CURRENTLY SIAD MAINTAINS 5 OF THE 16 OPS STOCK ITEMS IN THE ARMY INVENTORY. AS THE ARMY'S CENTER OF TECHNICAL EXCELLENCE FOR OPS STOCKS, ITS REASONABLE TO EXPECT MUCH OF THE MATERIAL MOVED AS A RESULT OF BRAC TRANSITIONS WOULD COME THIS WAY. ALSO, AS OUR ARMY TRANSITIONS TO A CONUS BASED FORCE AND RETURNS WITH ITS EQUIPMENT, THE REQUIREMENT WILL GROW. [NEXT SLIDE]

## SLIDE 6

ONE OF THE STUDIES REFERENCED IN THE ARMY'S DOCUMENTATION IS CALLED THE WHOLESAL AMMUNITION STOCKPILE PROGRAM OR WASP. IT WAS COMPLETED WITH PARTICIPATION FROM EACH OF THE SERVICES AND TOOK A COMPREHENSIVE LOOK AT THE CURRENT (FY94) AND FUTURE STOCKPILE MANAGEMENT FUNDING DILEMMA. ITS FOCUS: CONCERN THAT "DEGRADATION IN STOCKPILE SAFETY, READINESS, AND QUALITY WAS OCCURRING BASED UPON THE REDUCED LEVEL AT WHICH ESSENTIAL STOCKPILE READINESS FUNCTIONS WERE BEING ACCOMPLISHED." MR. HOFFMAN HIT ON THIS ISSUE FAIRLY WELL. I'D JUST LIKE TO ADD THAT ITS HARD TO UNDERSTAND HOW THESE TWO ANALYSES CAN COME TO SUCH DIAMETRICALLY OPPOSED CONCLUSIONS.

WE PLAN TO PROVIDE MORE DETAILED COMMENTS TO THE COMMISSION ABOUT THIS PLAN. [NEXT SLIDE]

## SLIDE 7

NOW, HERE ARE SOME POINTS WHICH SCREAM FOR ATTENTION. THE DATA USED IN 6 OF 17 AREAS WAS WRONG. SIMPLY, IRREFUTABLY INCORRECT IN 35% OF THE CASES. IN FACT, THE SITUATION WAS SO BAD, THAT THE GAO RAISED IT IN BOTH THEIR REPORT AND TESTIMONY TO YOU LAST WEEK. THE QUOTATION IS FROM THEIR REPORT, BUT WE FEEL SURE YOU HAVE A BETTER APPRECIATION FOR THIS AREA THAN THE WORDS CONVEY.

WE'VE INCLUDED A MATRIX WHICH IDENTIFIES THE ERRORS FOR SIAD IN THE MATERIALS WE'VE PROVIDED. IT ALSO SHOWS HOW, IF THE CORRECT

DATA IS USED, SIAD'S RANKING MOVES FROM NUMBER 7 UP TO NUMBER 3. OF SPECIAL NOTE IS THAT THE ARMY CONTRIBUTED TO THIS PROBLEM BY DEPARTING FROM THEIR PROCEDURES IN PREVIOUS BRAC ROUNDS. UNLIKE BRAC 91 AND 93, THE DEPARTMENT OF THE ARMY MADE NO EFFORTS TO RECONCILE DIFFERENCES BETWEEN WHAT THEY CHOSE TO USE AND THE DATA SUBMITTED BY THE INSTALLATION. HAD THEY DONE SO, THERE WOULD HAVE EITHER BEEN NO BAD DATA USED, OR NO OPPORTUNITY FOR COMMUNITIES TO RAISE THE QUESTION. BECAUSE THEY DID NOT – WE ARE – AND BELIEVE THE GAO'S REPORT SUPPORTS THE ASSERTION. [NEXT SLIDE]

#### SLIDE 8

THE FIRST ATTRIBUTE MEASURED IN THE ARMY'S ANALYSIS WAS ABOUT 57,000 SQUARE FEET IN ERROR. THIS RESULTED WHEN SIAD INCORRECTLY USED THE CATEGORY DEFINITIONS PROVIDED. THE FACT REMAINS HOWEVER, THAT THE NUMBER USED IN THE ARMY'S ANALYSIS WAS WRONG. IT WOULD SEEM THE PROCESS OF DATA COLLECTION, CERTIFICATION, AND VALIDATION SHOULD HAVE CAUGHT THIS MISTAKE. PERHAPS, IF THE DEPARTMENT OF THE ARMY HAD TAKEN SOME EFFORTS TO RECONCILE APPARENT ERRORS WITH THE INSTALLATION, BAD DATA WOULD NOT BE FOUND IN SUFFICIENT AMOUNTS TO WARRANT THE GAO'S COMMENTS.

IN THIS CASE, THE DIFFERENCE BETWEEN THE FIGURES REPRESENTS A SIGNIFICANT TONNAGE OF MUNITION STORAGE CAPACITY. [NEXT SLIDE]

## SLIDE 9

THIS CHART REFLECTS THE DIFFERENCE BETWEEN INCLUDING THE RENO, NEVADA AREA IN THE ECONOMIC AREA OF SIAD FOR BRAC 95. OBVIOUSLY, ADDING THE RENO AREA HAS A DRAMATIC EFFECT OF SIAD RESOURCE POOL FOR ASSESSING AVAILABLE WORKFORCE. WE BELIEVE THAT, BASED ON USING THE "DETERMINATION OF ECONOMIC AREAS" GUIDANCE FROM DOD POLICY MEMORANDUM THREE (APPENDIX C, PG C-85 TO THE DOD REPORT) THAT THE RENO AREA SHOULD HAVE BEEN INCLUDED IN SIAD'S ECONOMIC AREA – IT WAS DURING BRAC 93. IN FAIRNESS, WE HAVE TO ACKNOWLEDGE THE EFFORTS DOD MADE TO ENSURE CONSISTENCY OF DATA MEASUREMENT ACROSS INSTALLATIONS. HOWEVER, ALTHOUGH CONSISTENCY CAN BE A VIRTUE, TOO RIGID AN APPROACH DISTORTS, NOT CLARIFIES, THE ANALYSIS. [NEXT SLIDE]

## SLIDE 10

ONE FINAL EXAMPLE OF DATA ERRORS. SIAD REPORTED TWO NUMBERS FOR THE COST OF USING A LANDFILL. THE HIGHER APPLIES TO AN OFF-BASE SITE, THE LOWER TO THE ON-BASE LOCATION. THEY ALSO INDICATED THEY USED THE ON-BASE SITE AT \$37, NOT THE MORE EXPENSIVE ONE OFF-BASE. HOWEVER, THE ARMY ANALYSIS USED THE \$110 FIGURE WHICH LED TO AN INDICATION OF POSSIBLE OUT-YEAR PROBLEMS WHICH IS INCORRECT.

AGAIN, RECONCILIATION EFFORTS WOULD HAVE PREVENTED THIS.

[NEXT SLIDE]

## SLIDE 11

THERE WERE ADDITIONAL ERRORS IN THESE ATTRIBUTE AREAS. INSTEAD OF WALKING THROUGH EACH ONE, WE'VE PROVIDED A CHART SHOWING THE DIFFERENCES BETWEEN WHAT SIAD REPORTED AND THE DA BRAC STAFF USED. IN ALL CASES, SIAD HAS VALIDATED THEIR ORIGINAL INPUT. IN SOME CASES, THE VALUE IS EVEN HIGHER THAN ORIGINALLY SUBMITTED.

ONE FINAL POINT BEFORE LEAVING THE ISSUE OF BRAC DATA ACCURACY. THERE MAY BE EVEN MORE ERRORS THAN WE'VE NOTED. THE REASON I SAY THIS IS THE DIFFICULTY WE'VE HAD OBTAINING THE CERTIFIED DATA USED IN THE ANALYSIS. IN FACT, WE UNDERSTAND THAT EVEN THE DEPOT STAFF HAS STILL NOT RECEIVED A COPY OF THE DATA ACTUALLY USED BY THE ARMY IN THE ANALYSIS. WE KNOW THAT NEITHER SENATOR'S FEINSTEIN OR BOXER, NOR CONGRESSMAN HERGER HAVE RECEIVED THIS INFORMATION, IN SPITE OF REPEATED ATTEMPTS BY THEIR STAFFS.

WE HAD EXPECTED THE DEPARTMENT OF THE ARMY TO BE MUCH MORE RESPONSIVE TO REQUESTS FOR INFORMATION ABOUT THE PROCESS. AFTERALL, IT'S SUPPOSE TO BE AN OPEN ONE – IT DOESN'T APPEAR THE ARMY SHARES THIS VIEW. [NEXT SLIDE]

## SLIDE 12

ERRORS IN THE DATA ARE NOT UNIQUE TO SIAD. THIS CHART SHOWS THE MUNITIONS STORAGE CAPACITY CREDITED TO FIVE LOCATIONS IN BOTH BRAC 93 AND 95. IT WOULD SEEM TO US THAT THIS TYPE OF CAPACITY WOULD BE RELATIVELY FIXED. WE REALLY DON'T UNDERSTAND HOW THIS KIND OF CAPACITY COULD CHANGE SO MUCH. SIERRA HAD THE SMALLEST CHANGE, WITH AN INCREASE OF ABOUT 7.8%. THE NEXT LOWEST WAS AT 30% WHILE TOOELE GREW AN AMAZING 114% BETWEEN THE TWO BRACS. THIS KIND OF GROSS INCONSISTENCY SHOULD CERTAINLY WARRANT THE COMMISSIONS SCRUTINY PRIOR TO ACCEPTING THE ARMY'S RECOMMENDATION. [NEXT SLIDE]

## SLIDE 13

WE'VE ALSO IDENTIFIED PROBLEMS WITH THE ARMY'S BRAC PROCESS. FOR EXAMPLE, THE ARMY'S REPORT STATES THAT "AMMUNITION STORAGE FACILITIES SUPPORT THE OPERATIONAL REQUIREMENT OF POWER PROJECTION." HOWEVER, THE BRAC ANALYSIS FAILED TO USE ANY MEANINGFUL MEASURES OF MERIT TO ASSESS THE ABILITY TO PROJECT POWER.

FIRST, THEY ONLY EVALUATED DISTANCES TO AIRFIELDS, PORTS, RAILHEADS, AND INTERSTATE HIGHWAYS. THEY DID NOT MEASURE THE ABILITY TO PREPARE, LOAD, OR DELIVER MUNITIONS TO ANY OF THESE TRANSPORTATION NODES. WE'LL SKIP THE NEXT BULLET AND ADDRESS THE ISSUE OF OUTLOAD CAPACITY LATER. SECOND, THEY IGNORED THE COST DIFFERENCES BETWEEN INSTALLATIONS. THIS PENALIZED COST EFFECTIVE DEPOTS AND REWARDED THE MORE EXPENSIVE ONES.

FINALLY, NO WEIGHT WAS GIVEN TO THE EFFICIENCY OF MOVING THE MUNITIONS. CERTAINLY, SIAD'S TWO MAIN RAIL LINES CAN FEED MATERIAL TO THE WESTERN PORTS FASTER THAN OTHER INSTALLATIONS WITHOUT SUCH DIRECT ACCESS. ALSO, THEIR ON-SITE AIRFIELD ALLOWS TREMENDOUS RESPONSIVENESS FOR TIME CRITICAL ITEMS. [NEXT SLIDE]

#### SLIDE 14

ANOTHER CRITICISM OF THE ARMY'S BRAC PROCESS IS THAT THE MUNITIONS STORAGE ANALYSIS WAS BASED ON A SUBORDINATE PRODUCT CALLED THE "TIER DEPOT ANALYSIS." (THE PRODUCT FROM HELL) IT TOO HAS LARGE PROBLEMS. AND THE DECISION TO INSERT ITS RESULTS IN THE BRAC PROCESS INTRODUCED FATAL ERRORS INTO THE ARMY'S ANALYSIS.

FIRST, NOT ALL FACILITIES CONSIDERED BY ARMY BRAC IN THIS CATEGORY WERE CONSIDERED IN THE TIERING STUDY. THIS IMMEDIATELY UNLEVELED THE PLAYING FIELD AND ESSENTIALLY EXCLUDED CERTAIN BASES FROM POTENTIAL CLOSURE OR REALIGNMENT. SECOND, ONLY FOUR OF THE TIERING STUDY'S MEASURES WERE EVEN ADDRESSED IN THE BRAC MATRIX. AS PREVIOUSLY MENTIONED THOSE FOUR MEASURES OF MERIT WERE LOOKED AT ABOUT AS SUPERFICIALLY AS WAS POSSIBLE.

MOST IMPORTANTLY, THE DATA USED IN THE TIERING STUDY WAS NOT CERTIFIED. THEREFORE, THE ARMY BASED IT'S BRAC RECOMMENDATIONS ON NON CERTIFIED DATA IN VIOLATION OF PUBLIC LAW 101-510, AS

AMENDED. FINALLY, AND ALMOST AS IMPORTANTLY, THE DATA USED WAS NOT CORRECT. [NEXT SLIDE]

### SLIDE 15

COMPARING THE INSTALLATIONS EVALUATED AND PLACED IN "TIER CATEGORIES" BY THE TIER DEPOT ANALYSIS WITH THOSE ON PAGE 113 OF THE ARMY'S BRAC 95, VOL II SHOWS THAT TWO INSTALLATIONS WERE NOT CONSIDERED FOR TIER CLASSIFICATION. SINCE THE OPERATIONAL BLUEPRINT, I.E., THE PURPOSE OF THE MUNITIONS STORAGE BRAC ANALYSIS WAS TO "ELIMINATE TIER III...INSTALLATIONS", THESE TWO FACILITIES WERE EXCLUDED FROM POTENTIAL CLOSURE OR REALIGNMENT. SIMILARLY, THE "TIER I AND TIER II" INSTALLATIONS LISTED ON PAGE 113 WERE ALSO EXCLUDED. THIS MEANS THAT THE ONLY FACILITIES WHICH COULD BE RECOMMENDED FOR CLOSURE OR REALIGNMENT IN THIS CATEGORY DURING BRAC 95 HAD BEEN TARGETED BY THE TIER DEPOT ANALYSIS. IN EFFECT, THE TIER III INSTALLATIONS HAD BEEN SET UP FOR CLOSURE BY A PROCESS WHOLLY OUTSIDE OF THE REQUIREMENTS OF PUBLIC LAW 101-510. THE STATED PURPOSE OF THE MILITARY VALUE ANALYSIS – "SELECTING STUDY CANDIDATES FOR ADDITIONAL STUDY" (ARMY BRAC 95, VOL III, PG 11) – WAS NOT PERFORMED. SINCE THE TIER III INSTALLATIONS HAD BEEN IDENTIFIED BY THE TIER DEPOT ANALYSIS, AND GUIDANCE DIRECTED THE ELIMINATION OF TIER III INSTALLATIONS, THE OUTCOME WAS PREDETERMINED. IN EFFECT, THE ANTICIPATED PRODUCT OF THE MVA WAS ACTUALLY AN INPUT TO IT VIA THE TIER DEPOT ANALYSIS. THE ARMY CONDUCTED A RESULTS ORIENTED EXERCISE TO ATTACK PREVIOUSLY TARGETED INSTALLATIONS. THIS WAS WRONG AND WE DON'T BELIEVE THEY SHOULD BE ALLOWED TO GET AWAY WITH IT. [NEXT SLIDE]

## SLIDE 16

A FEW OTHER ERRORS IN THE TIER ANALYSIS RESULTED FROM NO, OR TOO LITTLE, CREDIT BEING GIVEN FOR SIGNIFICANT FUNCTIONS. THE DEMIL CAPACITY ERROR SHOULD HAVE BEEN OBVIOUS TO THE ARMY STAFF SINCE IT'S WELL KNOWN THAT SIERRA HAS THE MOST CAPABILITY IN THE ARMY. HOWEVER, THE WORST THING ABOUT THE TIER ANALYSIS IS THAT EVEN WHEN THE LEADERSHIP ACKNOWLEDGED THAT THE DATA USED WAS WRONG, THEY MADE LIGHT OF IT. THEY SEEMED MORE CONCERNED ABOUT PROTECTING THEIR PROCESS THAN HAVING USED INACCURATE DATA TO BASE THEIR DECISIONS ON.

HOWEVER MUCH GEN HOLMES WISHED HIS DATA WAS "ACCURATE, CORRECT, AND VALID," IT WAS NOT. THE EXAMPLE OF THE DEMIL CAPACITY POINTS THAT OUT FAIRLY DIRECTLY. THEREFORE, IF THE DEMIL VALUES WERE INCORRECT, HOW MUCH MORE OF THE DATA WAS IN ERROR? SHOULDN'T THE DISCOVERY OF A MISTAKE IN DATA ASSUMED TO BE SO PURE HAVE TRIGGERED SOME SORT OF REVIEW? WE THINK SO, BUT IT DID NOT. INSTEAD THE ARMY STOOD ON A PAT STATEMENT TO THE EFFECT THAT "THERE WAS NO NEED FOR AUDIT." AGAIN, THIS FLAWED DATA DROVE THE TIER PLACEMENTS AND THAT IS WHAT DROVE THE BRAC RECOMMENDATIONS. [NEXT SLIDE]

## SLIDE 17

A FEW MINUTES AGO, WE MENTIONED OUTLOAD CAPABILITY. THIS CAPABILITY IS SYNONYMOUS WITH THE POWER PROJECTION ELEMENT AS DEFINED IN THE TIER DEPOT ANALYSIS. POWER PROJECTION WAS THE

MOST IMPORTANT ATTRIBUTE IN THE TIER STUDY, BUT THE ARMY EMPHASIZED THE WRONG ELEMENTS. WE BELIEVE THAT THE PRESENCE OF VERY EXPENSIVE INFRASTRUCTURE CAPABILITIES – USUALLY REFERRED TO AS PHYSICAL CONSTRAINTS – IS MUCH MORE IMPORTANT THAN THE NUMBER OF FORKLIFTS OR TRUCKS ON STATION. EQUIPMENT, PEOPLE AND VEHICLES CAN BE OBTAINED OR REDISTRIBUTED WITH A LITTLE LEADERSHIP INITIATIVE – IT'S PRETTY HARD TO BUILD A MAJOR RAIL LINE TO THE FRONT GATE AND AIRFIELDS ARE VERY EXPENSIVE. YET, THIS IS WHAT THE ARMY DID. THEY WEIGHTED THE ACTIVITIES, I.E., THOSE THINGS DEPENDENT ON PEOPLE, EQUIPMENT, ETC. HEAVILY, WHILE THEY GAVE LITTLE WEIGHT TO THE LACK OF PHYSICAL CONSTRAINTS. [NEXT SLIDE]

### SLIDE 18

TO WRAP THIS UP, WE BELIEVE THE REAL STRENGTHS OF SIAD ARE LARGELY THINGS WHICH CAN NOT BE REPLICATED AT ANOTHER PLACE. FIRST, SIAD IS EXTRAORDINARILY WELL SERVED BY TRANSPORTATION SYSTEMS. ALSO, THERE ARE NO BETTER CLIMATIC CONDITIONS FOR MUNITIONS STORAGE – THERE IS NO NEED TO BURY THEM TO STAVE OFF DETERIORATION AT SIERRA. SECOND, SIERRA IS SOLID ENVIRONMENTALLY. WITH 10-YEAR PERMITTING BY THE NATION'S MOST STRINGENT REGULATORS (CALIFORNIA EPA) JUST A FEW MONTHS OFF, THERE SHOULD BE NO QUESTION OF THE VIABILITY OF SIERRA'S DEMILITARIZATION PROGRAM. ADDITIONALLY, THE TESTING ON ENVIRONMENTAL EFFECTS OF OPEN BURN/OPEN DETONATION DEMIL BEING DONE AT DUGWAY PROVING GROUNDS IS POSITIVE. THIRD, THE REMOTENESS OF SIAD AND THE COUNTY'S MILE WIDE PUBLIC SAFETY ZONE FURTHER PROTECTS IT FROM ENCROACHMENT. ADD THE FOURTH

LARGEST STORAGE, LOWEST COSTS, AND HIGHEST DEMIL CAPACITY AND YOU HAVE A WORLD CLASS POWER PROJECTION PLATFORM.

HOWEVER THE RETENTION OF SUCH A VALUABLE NATIONAL ASSET HAS BEEN PUT AT RISK BY CONFLICTING STUDIES, BAD DATA, FLAWED ANALYSIS, AND RESULTS ORIENTED EXERCISES. AS TAXPAYER'S WE CAN NOT AFFORD TO SACRIFICE THE ADVANTAGES OF SIAD ON THE ALTER OF SUCH POOR STAFF WORK. [NEXT SLIDE]

### SLIDE 19

AS WE SAID AT THE BEGINNING, THE SIERRA ARMY DEPOT MATCHES THE ARMY GUIDANCE TO RETAIN AFFORDABLE, WORLD-CLASS POWER PROJECTION PLATFORMS. WE UNDERSTAND THE NEED TO CLOSE INEFFICIENT AND OUT-MODED OPERATIONS. HOWEVER, CLOSURE OF SUCH AN EFFICIENT PROFIT CENTER TO MAINTAIN MORE COSTLY ALTERNATIVES IS NOT ONLY ARGUABLE, IT DEFIES COMMON SENSE.

SIAD TRULY IS "THE PERFECT FIT FOR AMERICA'S ARMY AND THE NATION." WE URGE YOU TO REVERSE THE ARMY'S RECOMMENDATION FOR REALIGNMENT AND, IF THE OPPORTUNITY PRESENTS ITSELF, EXPAND THE MUNITIONS STORAGE MISSION.

THANK YOU FOR THE OPPORTUNITY TO PRESENT OUR VIEWS. WE HAVE INTENTIONALLY STAYED AWAY FROM ECONOMIC IMPACT COMMENTS IN THIS PRESENTATION, BUT HAVE PROVIDED A COMPREHENSIVE LOOK AT THE DEVASTATION WHICH WILL RESULT FROM THIS ACTION IN YOUR PACKAGE. WE TRUST YOU'LL REVIEW THIS MATERIAL CAREFULLY DURING YOUR DELIBERATIONS. WE ALSO UNDERSTAND HOW DIFFICULT

A TASK THE COMMISSION FACES AND APPRECIATE YOUR EFFORTS TO MAKE THE BEST POSSIBLE DECISIONS IN A COMPLICATED PROCESS. [NEXT SLIDE] WE'D BE HAPPY TO ANSWER ANY QUESTIONS YOU MAY HAVE.

SLIDE 20

LEAVE DURING QUESTIONS.

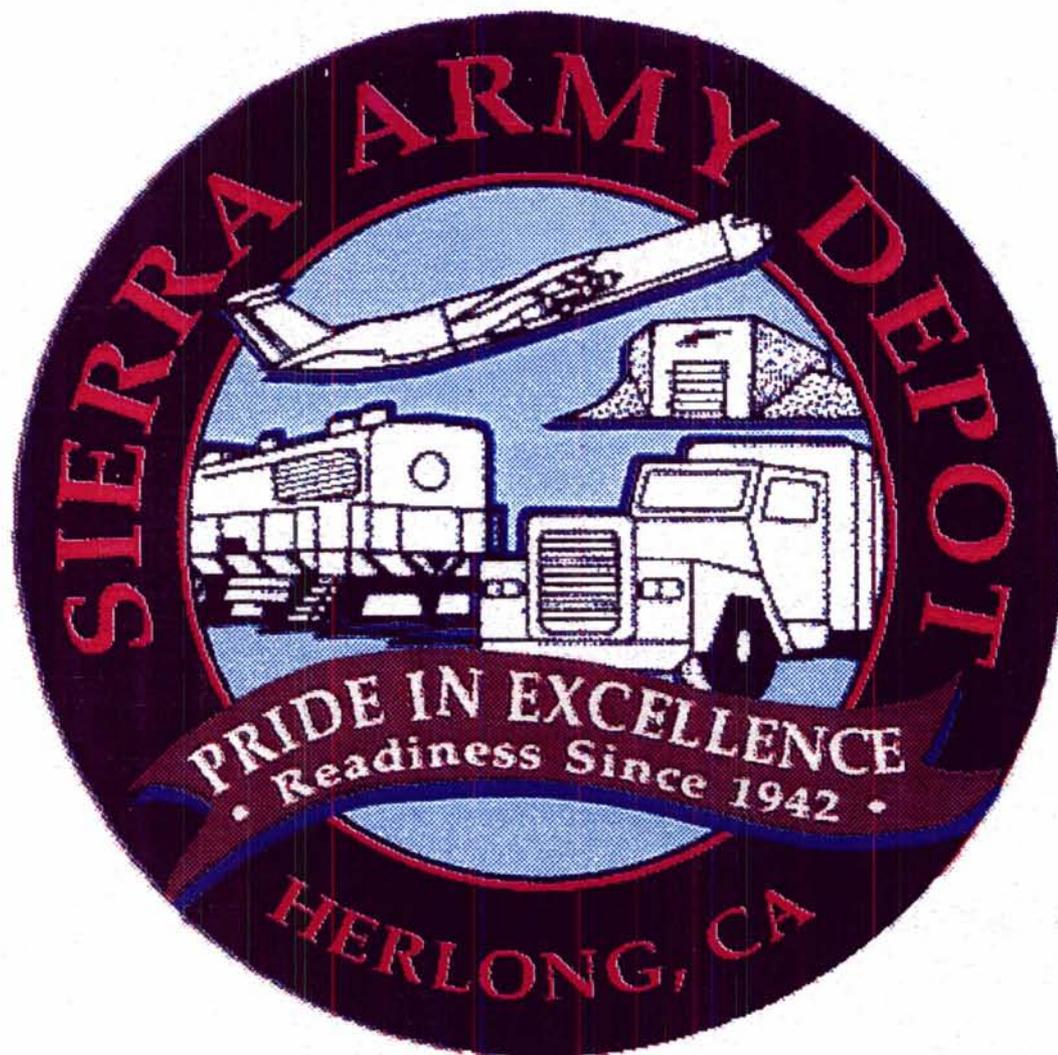
END      END      END      END      END

Chart 2/2 Conventional Ammunition Shipping and Receiving  
Revenue Per Ton

Every year, our price will fluctuate due to prior year gains and loses, workload volume, workload mix, and surcharges imposed by higher headquarters. Sierra's fixed price is consistantly competitive due to our low expense rates and high productivity and expertise in this arena.

Sierra's fixed price per short ton for shipping, receiving for FY96 is \$147.96; or the third best price among the depots.

# Document Separator



**Base Realignment and Closure  
(BRAC) Visit  
25 April 1995**

**Volume III**

# Sierra Army Depot

Base Realignment and Closure (BRAC)

Operational Project Stocks Tour

Briefing

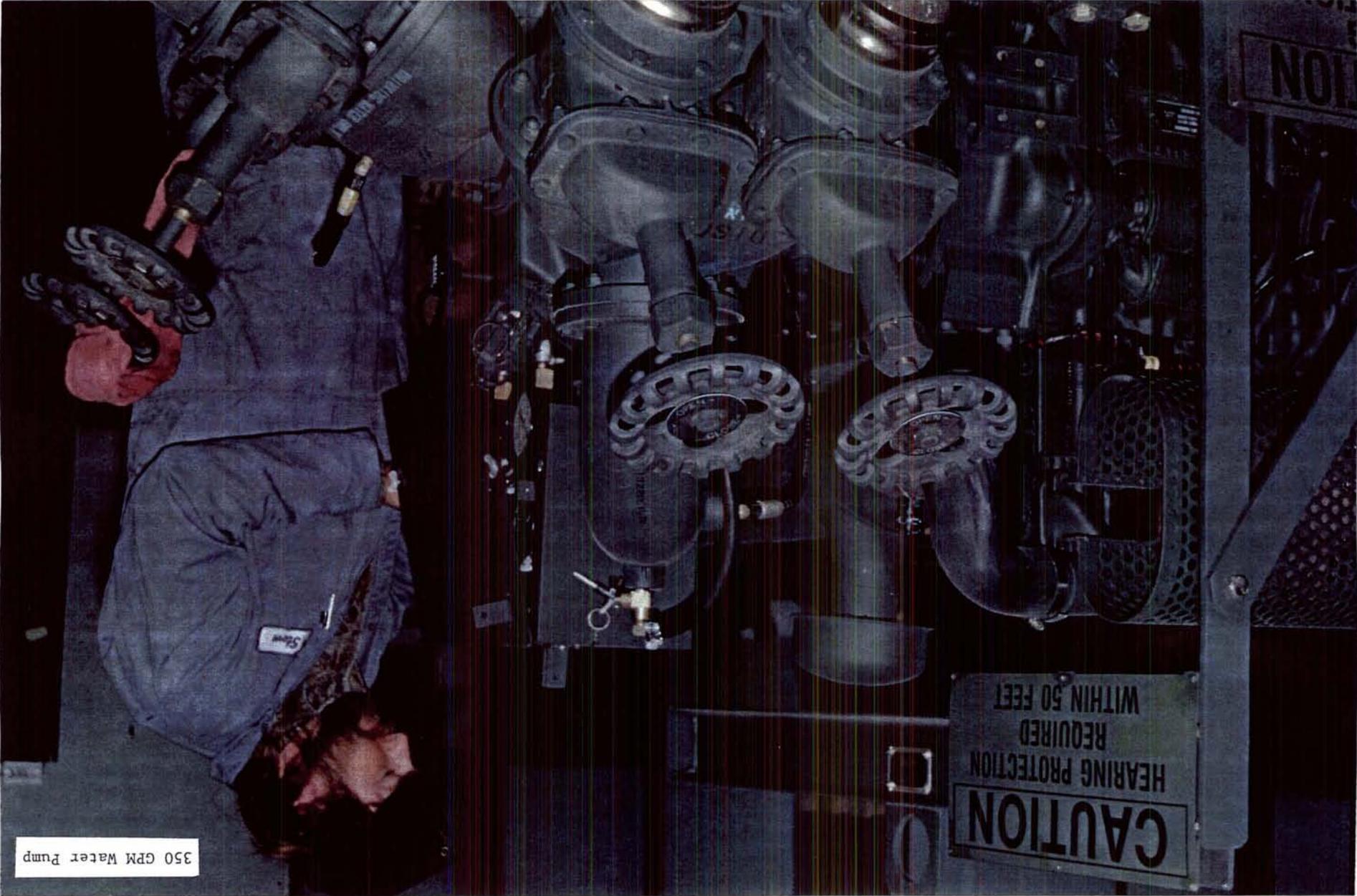
25 April 1995

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**CAUTION**  
HEARING PROTECTION  
REQUIRED  
WITHIN 50 FEET

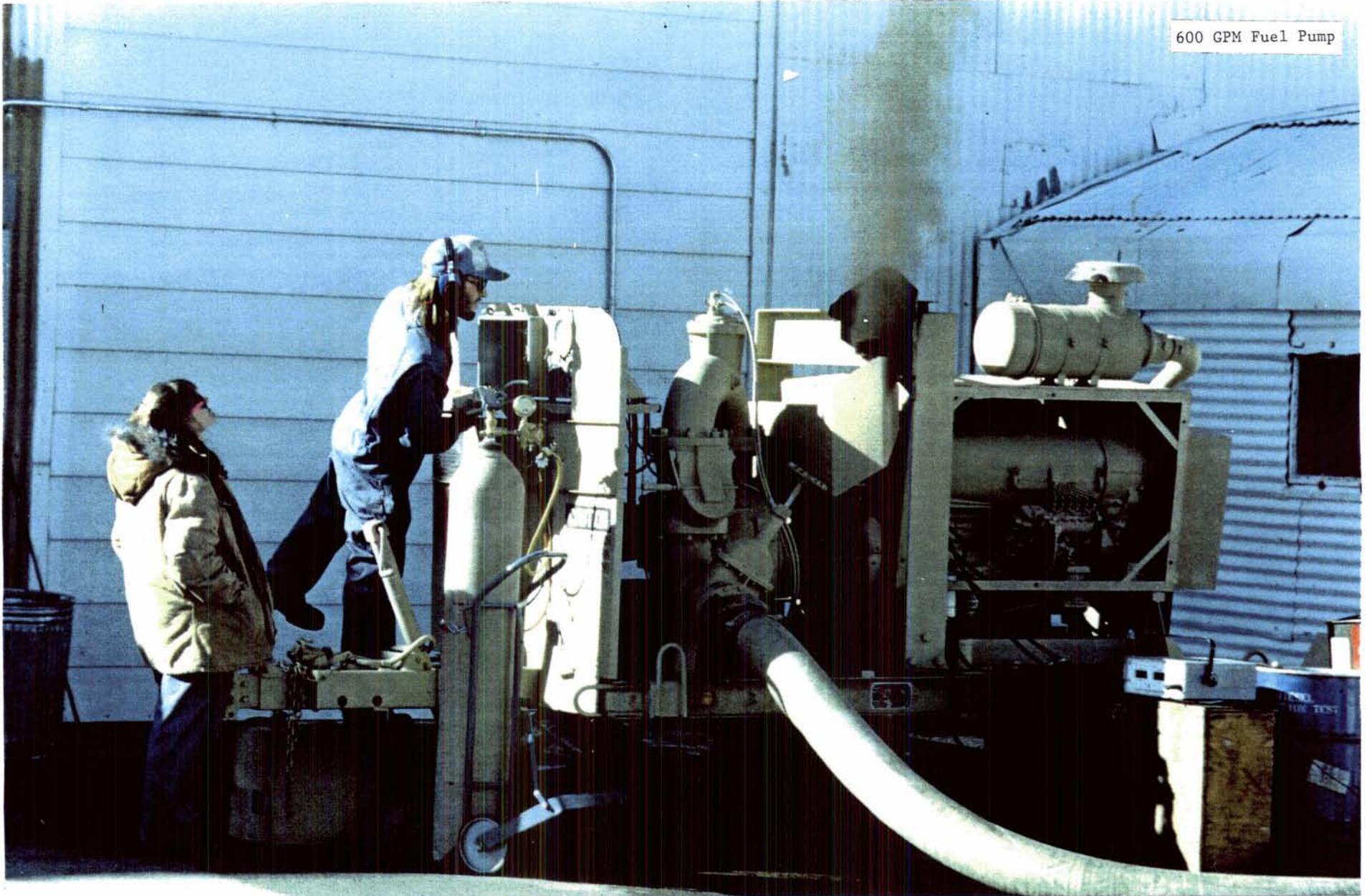


350 GPM Water Pump

Sierra Army Depot  
Directorate of Operational Stocks  
Tour Itinerary for BRAC Commissioners  
25 April 1995

Depart Skedaddle Inn	Enroute Operational Project Stocks
Arrive at Bldgs 208, 209 and 210	Maintenance Operations
Bldg 301	View Force Provider
Drive through Bldg 307	Forward Area Water Point Supply System and Small Mobile Water Chillers
Bldg 306	View Preservation and Packing Operations
Drive through	Hose Test Operations for Tactical Water Distribution System
Inland Petroleum Distribution System Postage Stamp	View completed fuel assemblies, pump stations and 5 mile pipe sets, superstacker demonstration
Drive through Bldgs 353 and 357	View pipe packaging and containerization and containerization
Enroute Skedaddle Inn for lunch	Drive by outside storage and view High Mobility Multipurpose Vehicles, landing mat, and bridging material

600 GPM Fuel Pump



## BRAC COMMISSIONER'S TOUR

### Narrative Summary

Good morning ladies and gentlemen. On behalf of the employees of Sierra Army Depot, I'd like to thank you for giving us the opportunity to show you our installation. My name is Glenda and I work as a preservation packer in Warehouse 302. Over the next hour I'll be guiding you through the Army's Center of Technical Excellence for Operational Project Stocks. Once this portion of the tour is complete, you will be taken back to the Skedaddle Inn for lunch. After lunch, you will be greeted by Mr. Claude Chun, representing the Directorate of Ammunition Operations who will show you our demilitarization and ammunition missions. Please feel free to ask questions anytime during the tour.

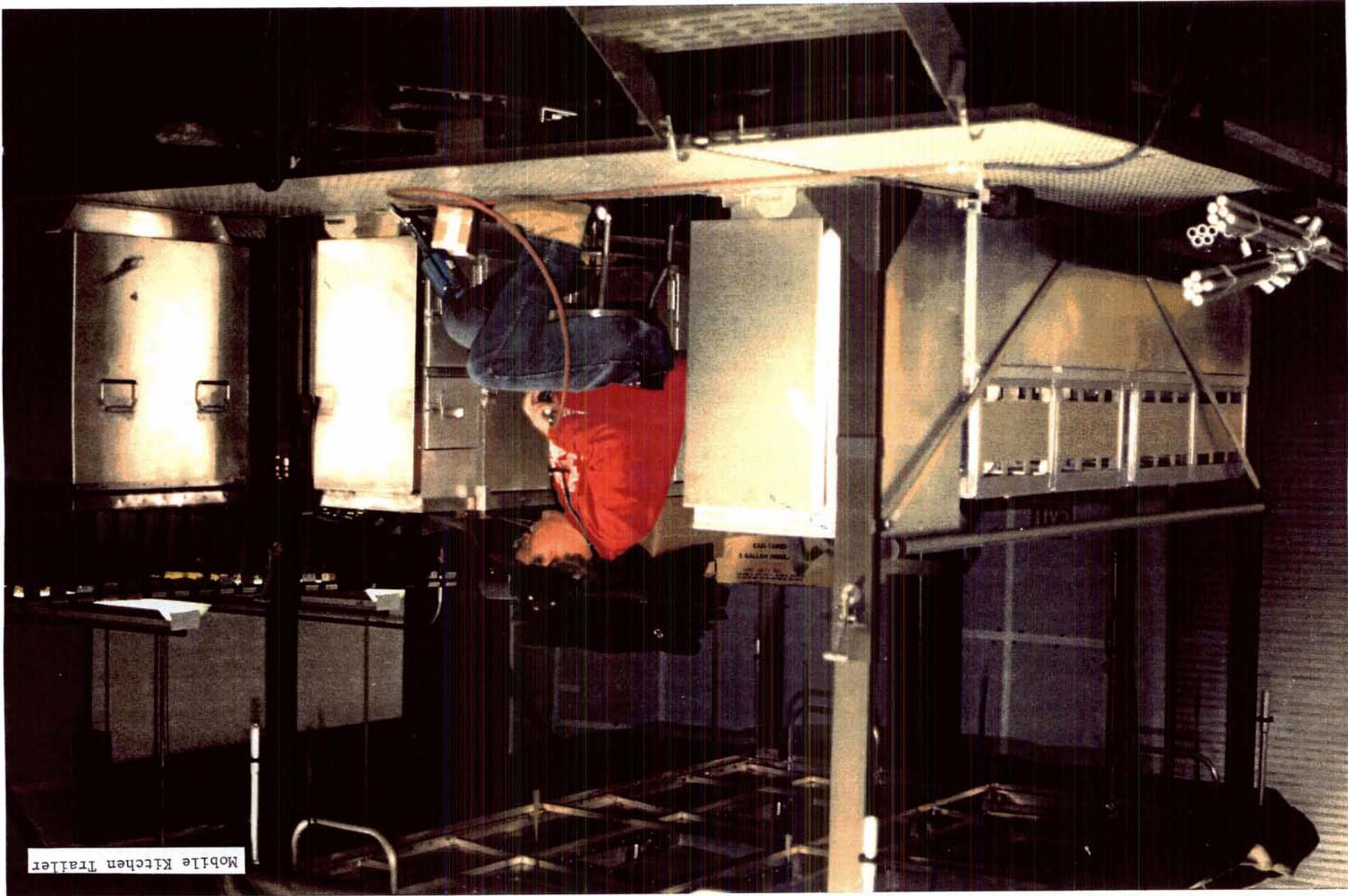
Before entering the maintenance facilities, I'd like to cover a few safety tips. We have not interrupted our daily operations, so we ask you wear the safety glasses and ear plugs when appropriate. I will cue you before entering these areas. If you are not familiar with this type of ear plug, simply roll it between your thumb and forefinger, insert it, and allow 15 seconds for it to expand.

As we pass through the security gates into the Operational Project Stocks area, you'll notice a group of 46 steel storage tanks off to your left. These tanks were built for vehicle storage in 1946. Today we use them primarily to store furniture and equipment for the housing areas and directorates.

Just ahead and to the left is the outside storage area used by the Defense Reutilization and Marketing Office. They receive equipment from several Federal Agencies to reallocate surplus government equipment or sell it to private organizations through public auctions and sealed bids.

In the distance there are 26 general purpose warehouses with over 2.3 million square feet of covered storage space. We currently have 17.6 acres of improved hard stand in support of our missions. As you can see, we have unlimited outside storage space to support future missions.

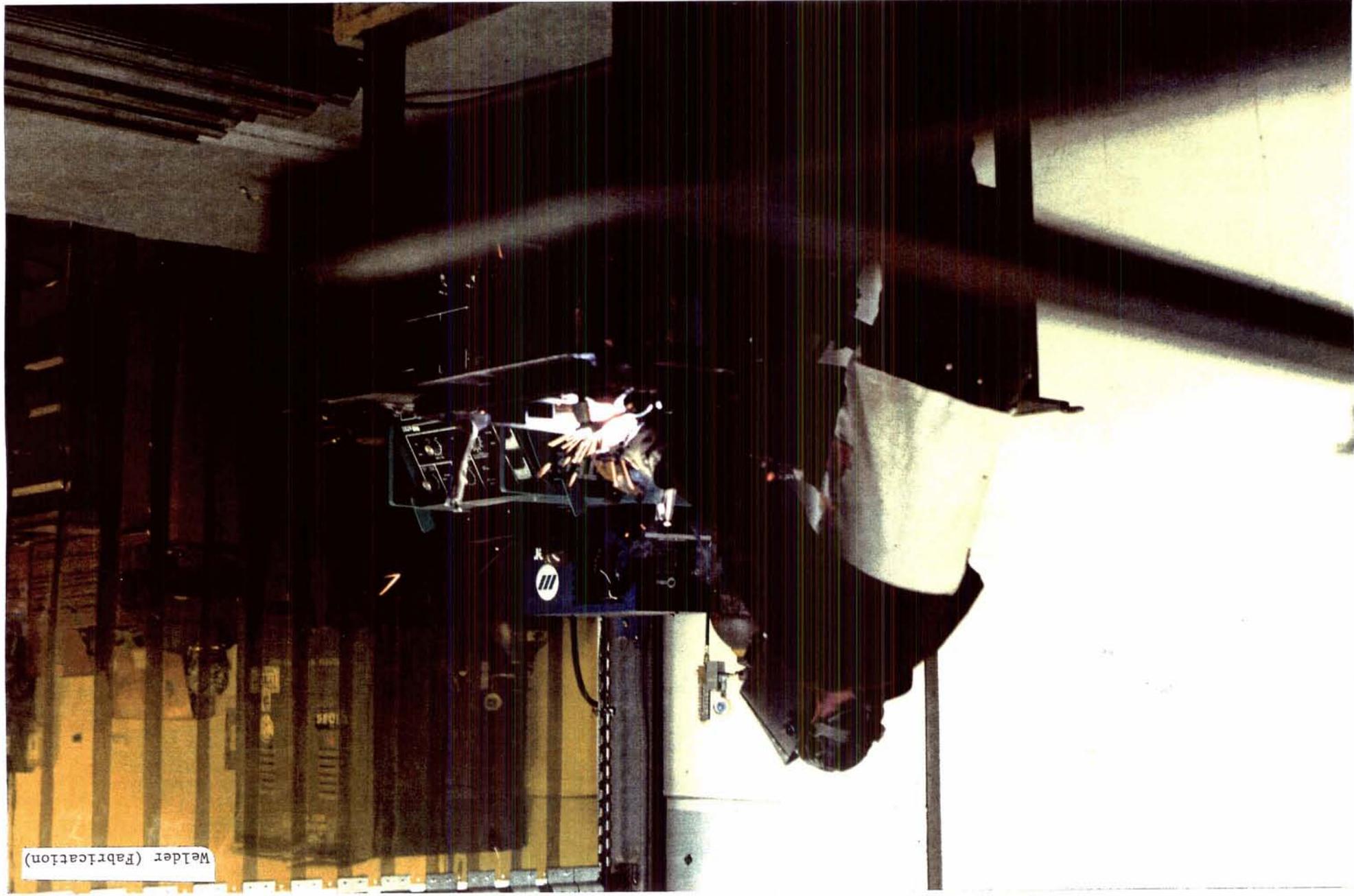
We have an excellent transportation network consisting of an on-site 7168 foot airfield capable of supporting the C-5A Galaxy or C-17 aircraft, access to two major rail lines and U.S. Highway 395.



Mobile Kitchen Trailer

The large building, Building 201, coming up on your left is primarily used by administrative personnel who support the requirements of the Ammunition and Operational Project Stocks missions. The employees who occupy this structure are setting the framework of the operations by meeting our customers expectations. They carefully plan, budget, establish storage and transportation requirements, inventory and quality check each and every item in our 1.3 billion dollars worth of stored materials.

Our first stop on the tour allows for a quick walk-through of our maintenance facilities. Please feel free to ask questions at anytime.



Welder (Fabrication)

## MAINTENANCE OPERATIONS

Buildings 208, 209, and 210 are maintenance repair facilities. We repair various types of equipment including water and fuel pumps, water purification units, and all the secondary items associated with these units. Other technical equipment includes water chillers, refrigeration units, large and small generators, and light plants, and all components of either the Water Support System, Inland Petroleum Distribution System, or Force Provider.

Our welding shop has an ongoing mission that involves the repair, modification, and fabrication of storage containers. They also support all the maintenance projects requiring weld repair, straightening and/or fabrication.

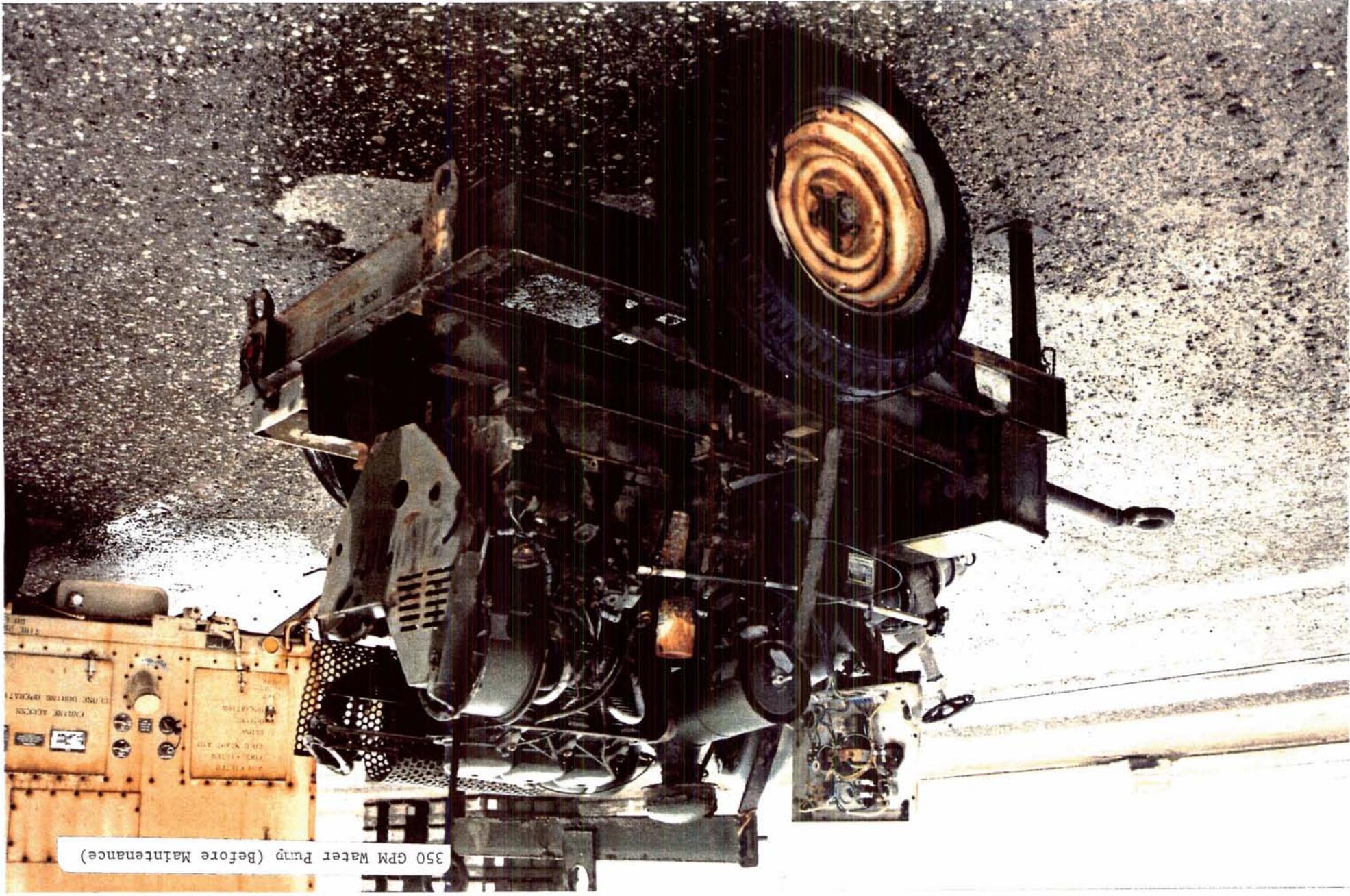
Our state of the art sand blasting and spray paint booths are not only large enough to accommodate all of the major end items associated with the Operational Project Stocks, but the containers we ship them in as well.

One of our newest projects includes repairing and modifying Mobile Kitchen Trailer units. Our goal is to make them more efficient and safer for the user in the field.

We hope to start the landing mat project soon. It will involve cutting, machine work, welding, pneumatic gluing, testing, blasting, and painting.

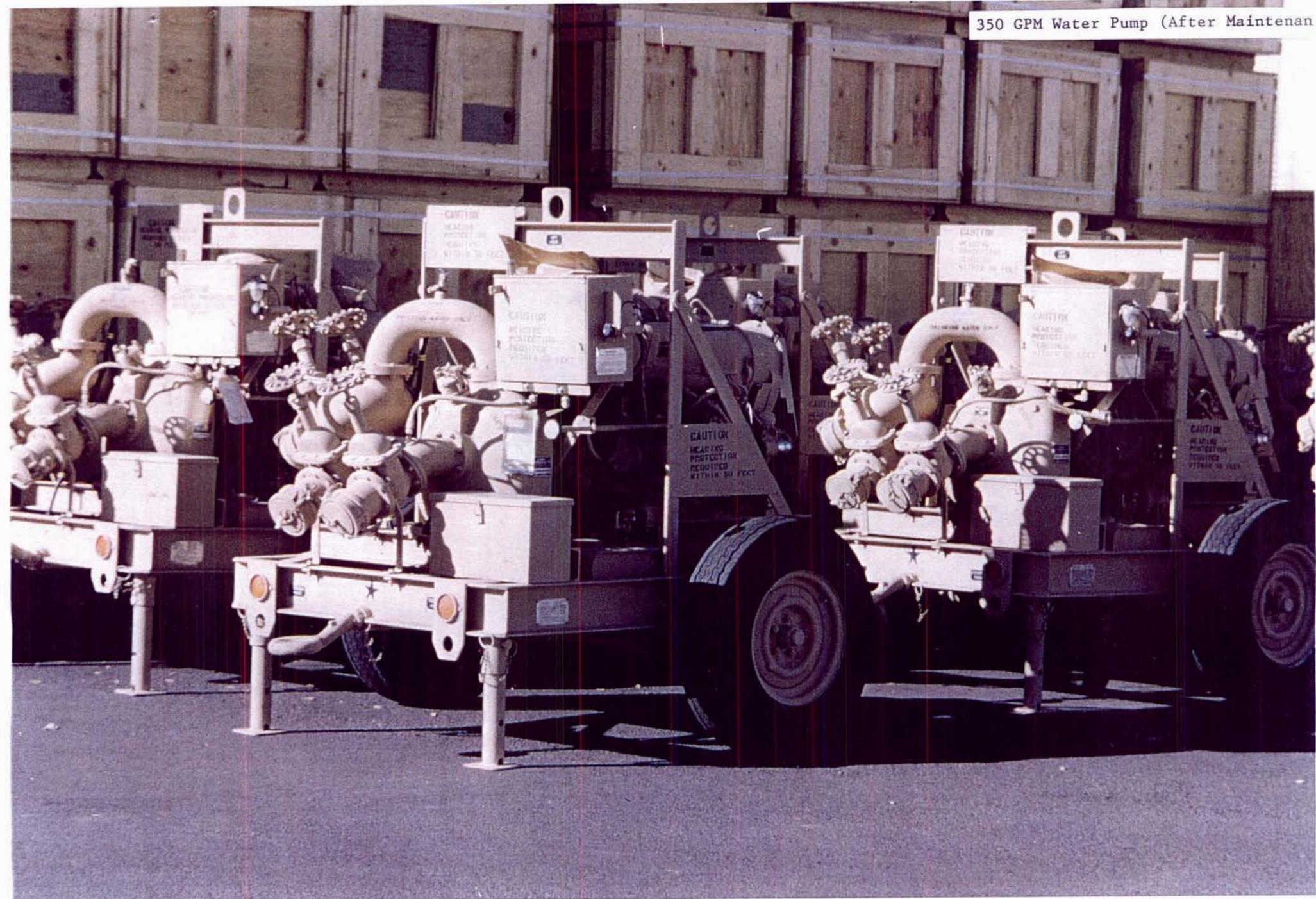
Another major function we perform is bringing Condition Code "F" stock (repairs required/missing parts) up to Condition Code "A" stock (serviceable, without qualification). Each item is inspected, repaired, function tested, steam cleaned, sand blasted, and repainted before sending it to the preservation and packaging personnel.

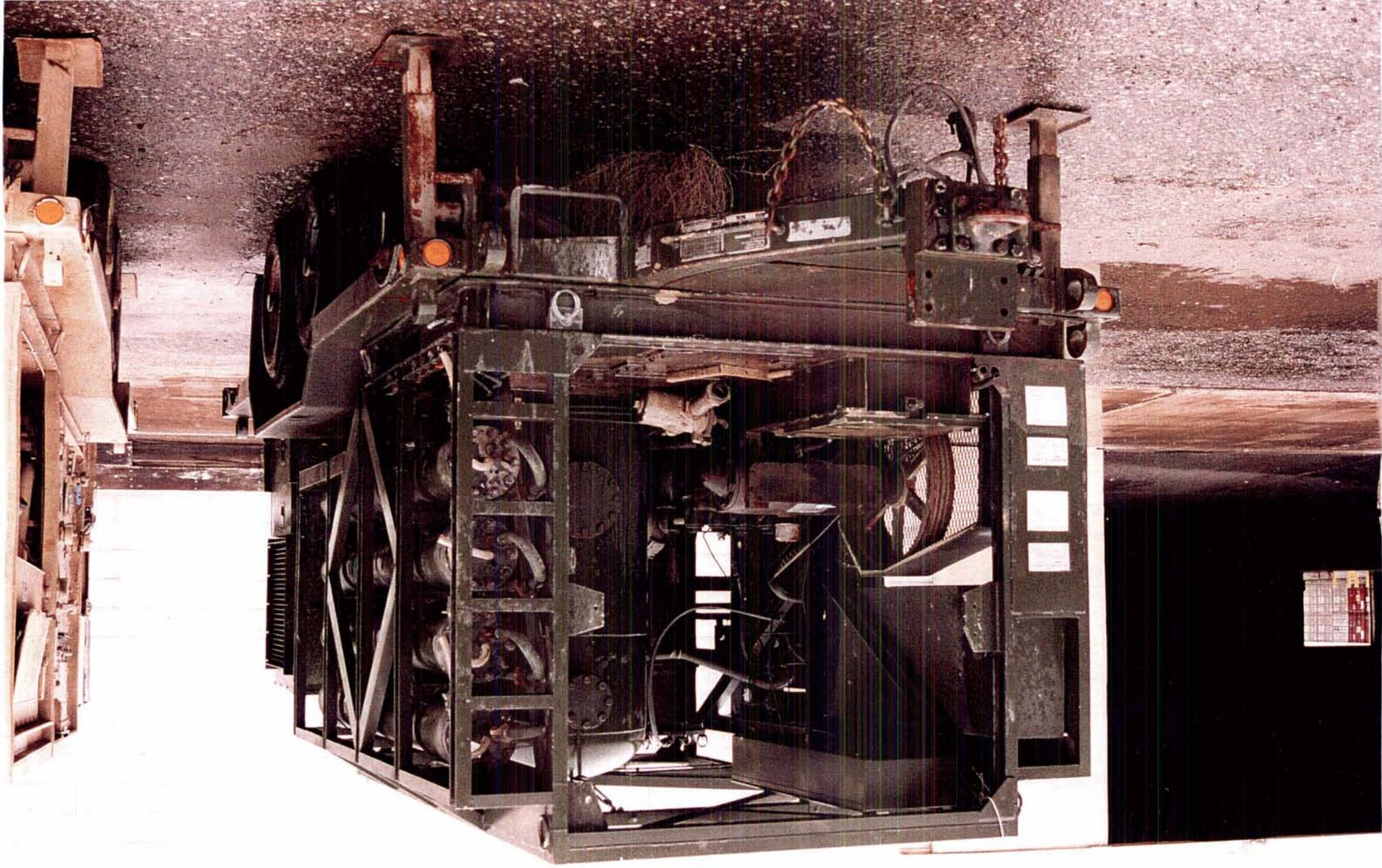
We also replenish prepositioned ships with equipment that is vital to national defense and the support of our troops. We receive it, run it through the maintenance cycle, function test it, and bring it up to Condition Code "A." After preserving and packaging it, we ship it to the prepositioned ship adhering to a critical timeline.



350 GPM Water Pump (Before Maintenance)

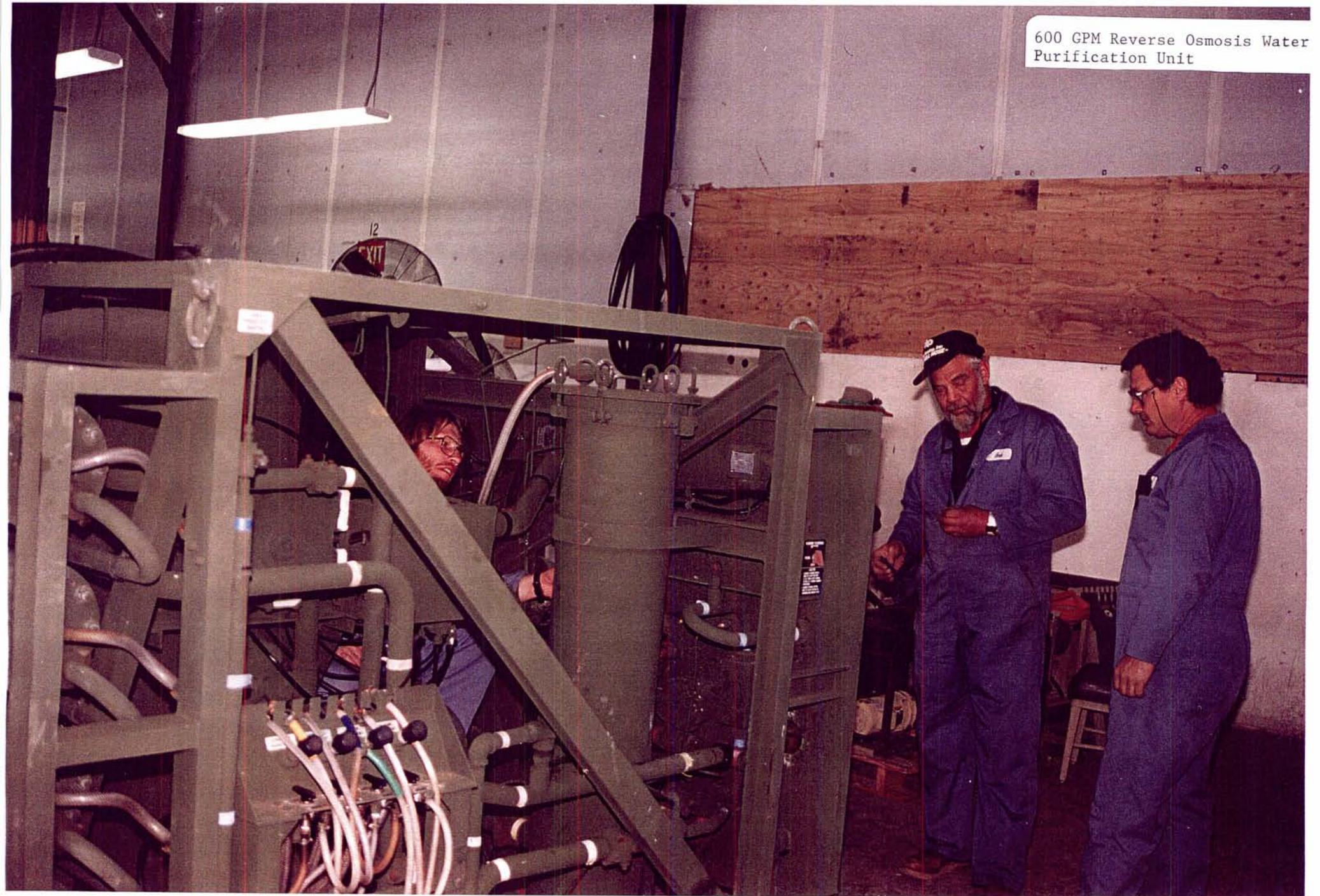
350 GPM Water Pump (After Maintenance)





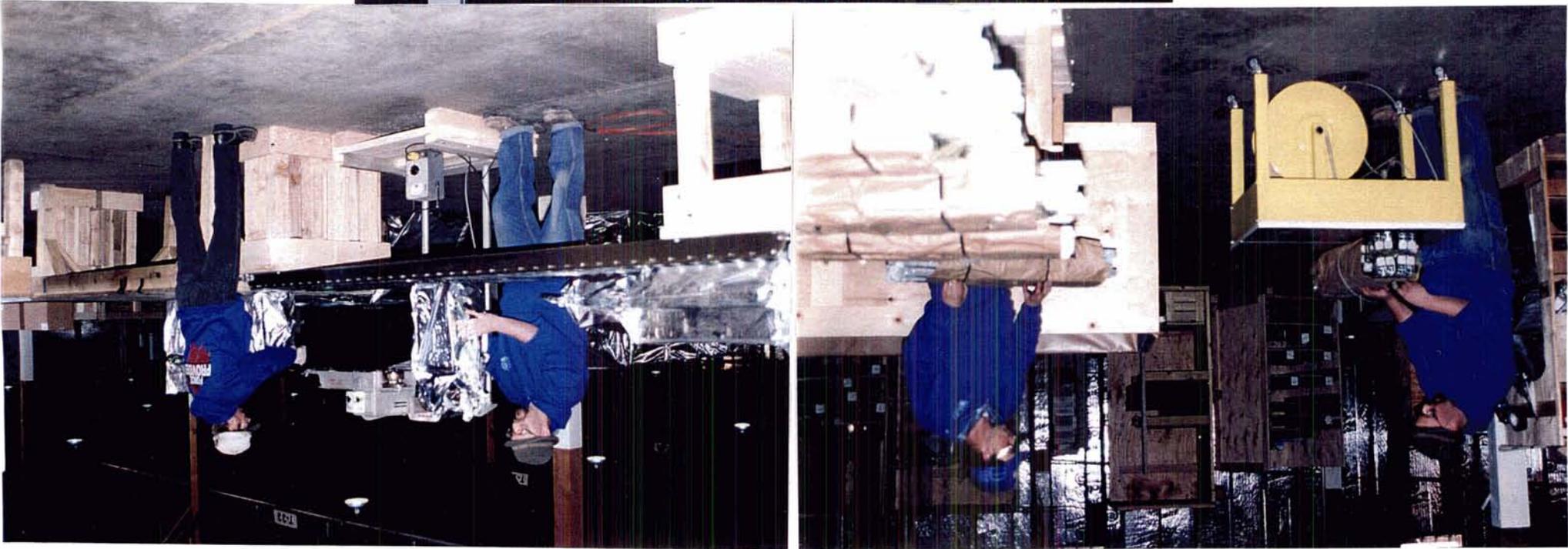
600 GPM Reverse Osmosis Water Purification Unit

600 GPM Reverse Osmosis Water  
Purification Unit





Force Provider 100,000 Watt Generator



Force Provider 100,000 Watt Generator

## FORCE PROVIDER

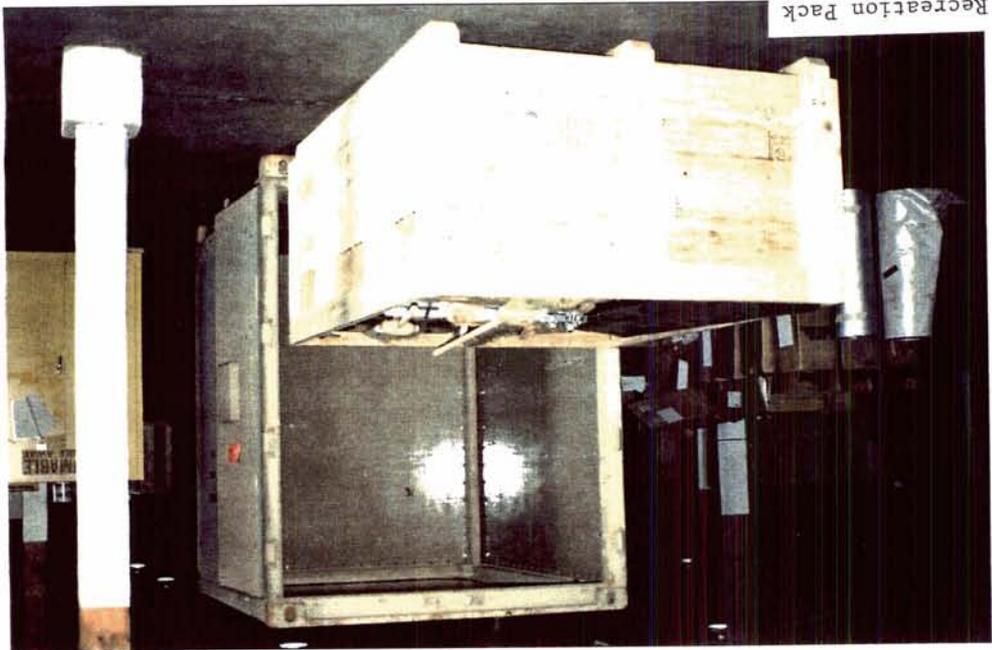
Our mission is to provide quality packaging and preservation for two configurations of Force Provider. One configuration includes 242 International Standardization Organization containers which consist of six separate modules with the capability of supporting 3,300 people. The second configuration includes 10 containers and 109 tricons with the capability of supporting 550 people. We use the term "tricon" because 3 tricons can be linked together and shipped like a standard container. Once delivered to the field, the user can break the units apart to accommodate smaller equipment for handling and movement. Force Provider's design plan of packaging resists damage, and deterioration during storage, and transportation via air, rail car, truck, and sea. Force Provider's goal is to furnish the soldier with all the comforts of home, away from home.

Both units consist of 10 separate systems as follows:

- a. Billeting - sleeping quarters including tents, cots, footlockers, air conditioning, and heating units
- b. Laundry Facilities
- c. Latrines - toiletries
- d. Showers - towels, shaving kits, and soap
- e. Power Distribution
- f. Potable Water Systems
- g. Fuel Storage Units
- h. Food Service - module field kitchens with refrigeration units
- i. Administration - chaplain kits, field desks, and supplies
- j. Morale Support - communication satellite dishes for immediate contact with Army hospitals or entertainment, refrigerators, projection televisions, board games, athletic equipment, weights, stereos, and video cassette recorders



Force Provider Recreation Pack



Force Provider is well suited to support civilian or military humanitarian relief efforts worldwide. The Rwanda and Haiti relief efforts or natural disasters such as Hurricane Andrew in Florida or the flooding in California could be excellent opportunities for deployment.

All of the wooden crates used to pack Force Provider are made by our own Box and Crate Factory. These crates are designed, manufactured and assembled for reuse in the field. Each crate is secured to the inside of the container by blocking, bracing, and strapping. The containers are individually weighed, marked to a center of balance, stenciled, then marked for shipment.

We package 42 major items (pumps, generators, laundry machines and etc.) and 191 secondary items. Each of the 65,790 items required to form an Interim Support Package is received in Central Receiving (Building 304) and stored in Warehouse 305 for Force Provider. We use computer generated picking lists to have the items delivered which begins the packing process of the Interim Support Package. Each item is preserved to standard, from lubrication and wrapping, to sealing and vacuum packaging. After attaching the packing list and logging it onto the permanent record, Force Provider kits are placed into storage for ready deployment.

The shipment of Interim Support Package #1 destined for Port Charleston, South Carolina departed Sierra Army Depot by truck in January 1994. Mr. Gary Higgins, a Force Provider supervisor and Mr. Phil Locke, a Quality Assurance Specialist, accompanied the shipment. The containers were reinspected and loaded on the prepositioned ship GOPHER STATE as a supplement to the floating depot for 30 months. If unused, the Interim Support Package #1 will be reinspected and reissued for another tour among the prepositioned ships. If used or damaged, it can quickly be replaced with Interim Support Package #2 currently being stored at Sierra Army Depot. Our experience with Interim Support Package #1, coupled with the pride and dedication of the Force Provider crew, enabled us to preserve and package Interim Support Package #2 in just 60 days (half the time it took to prepare Interim Support Package #1). Most of the expertise surrounding the packing, preservation and packaging was developed and customized by our own employees. Special thanks and appreciation goes to Mr. Rick E. Martin and Mr. Mikeal K. Roseburrough. Their suggestion for repackaging the tents reduced the number of crates and containers, which consequently saved the Army about \$500,000 per Interim Support Package.

## WAREHOUSE 307 DRIVE THROUGH BRIEF

Welcome to Warehouse 307. This warehouse is primarily used as a holding area for shipments awaiting transportation. We gather all the secondary items, or smaller component parts associated with a larger system, from the various storage facilities within the Operational Project Stocks mission and stage them for shipment. After all the secondary items are linked with the major items, we compute the weight and cube of the containers to be shipped. We send this information to the Transportation Division for cargo manifesting and carrier assignments. When the carriers arrive, we're ready to load and ship.

Much of the warehouse inventory currently contains Water Support Systems from 55 gallon water drums to 50,000 gallon bladders. You'll also notice some Hypochlorination Units used for distributing measured amounts of calcium chloride when purifying water, and some Forward Area Water Point Supply Systems. Each Forward Area Water Point Supply System consists of six 500 gallon tanks and a 125 gallon per minute water pump. Water chillers are also stored here. These chillers are typically used by battalion sized units and essential for desert operations.





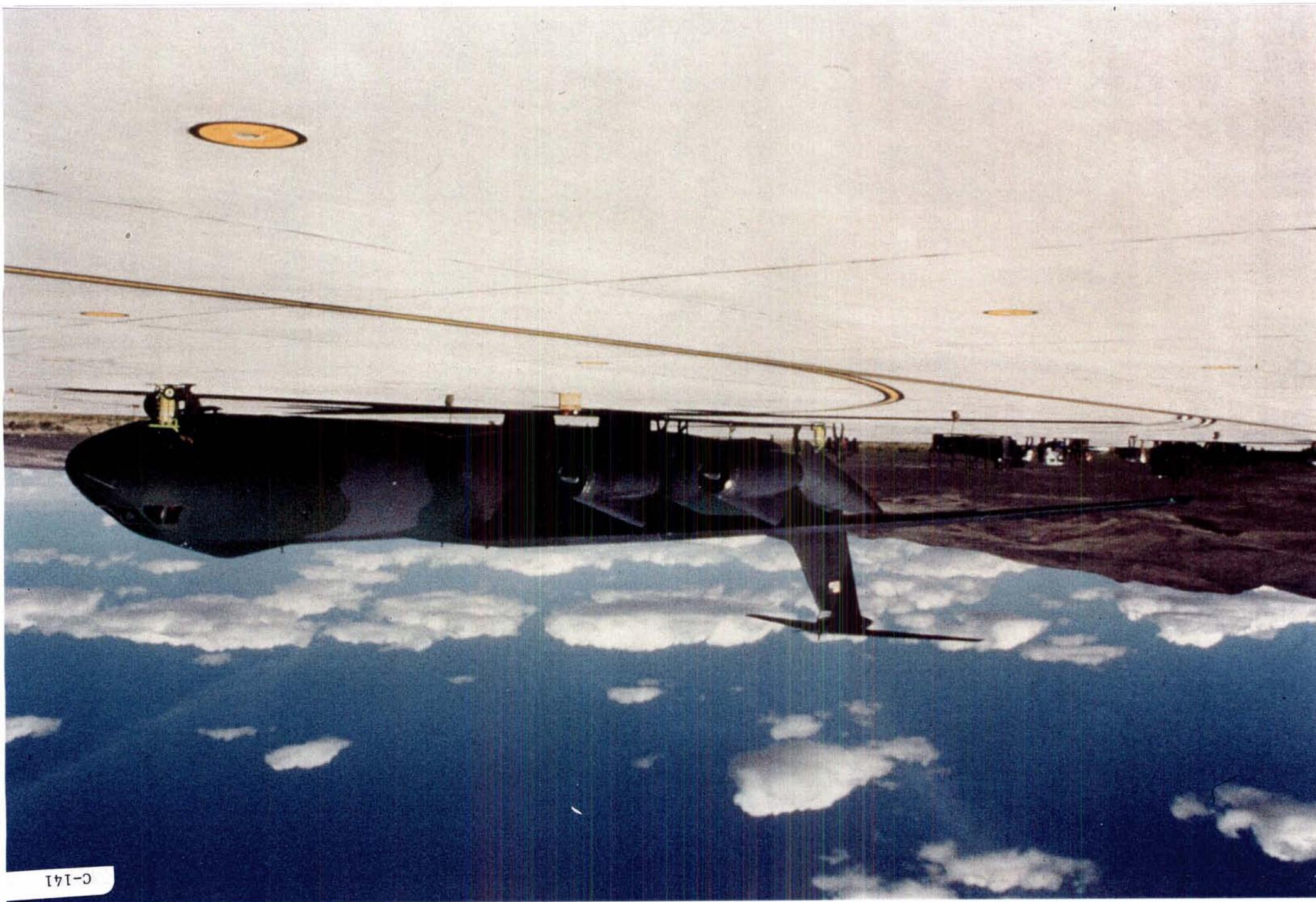
## WAREHOUSE 308 DRIVE THROUGH

We are now entering Warehouse 308. To your left we are storing 600 gallon per minute pumps. Just next to the 600 pumps are 350 pumps. The Marine Corps is interested in adding the next group of 600 pumps that you see to their inventory of equipment. All of these pumps are designed to move water through the Tactical Water Distribution System. The open spaces seen throughout the warehouse have been assigned to incoming shipments.

The North end of the warehouse also contains pumps and kits associated with the movement of water. Most contain distribution materials such as hoses and smaller pumps.

If you look to the right as we leave the warehouse, you will be able to see the Hose Testing Equipment. Our hose test procedures call for unrolling each 6 inch, 500 foot discharge hose and hydrostatically testing it to 200 pounds of pressure per square inch. If it passes the function test, it is cleaned, stenciled with the test date, preserved and repacked into flaking crates. The qualifying hoses are then returned to storage as Condition Code "A" stock. Any time a hose is used, it is retested to ensure it meets the standard.

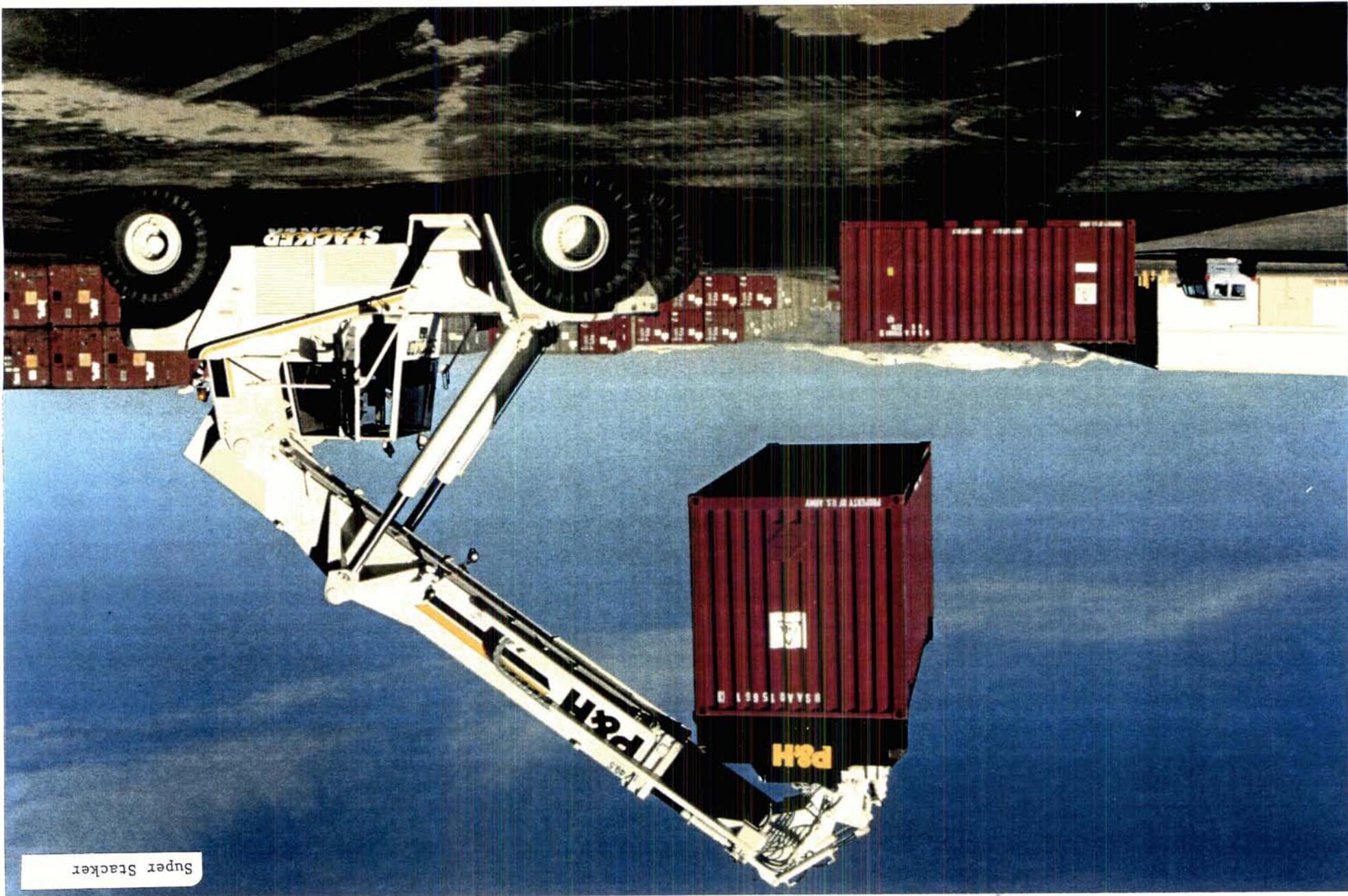




C-141

## RECEIVING

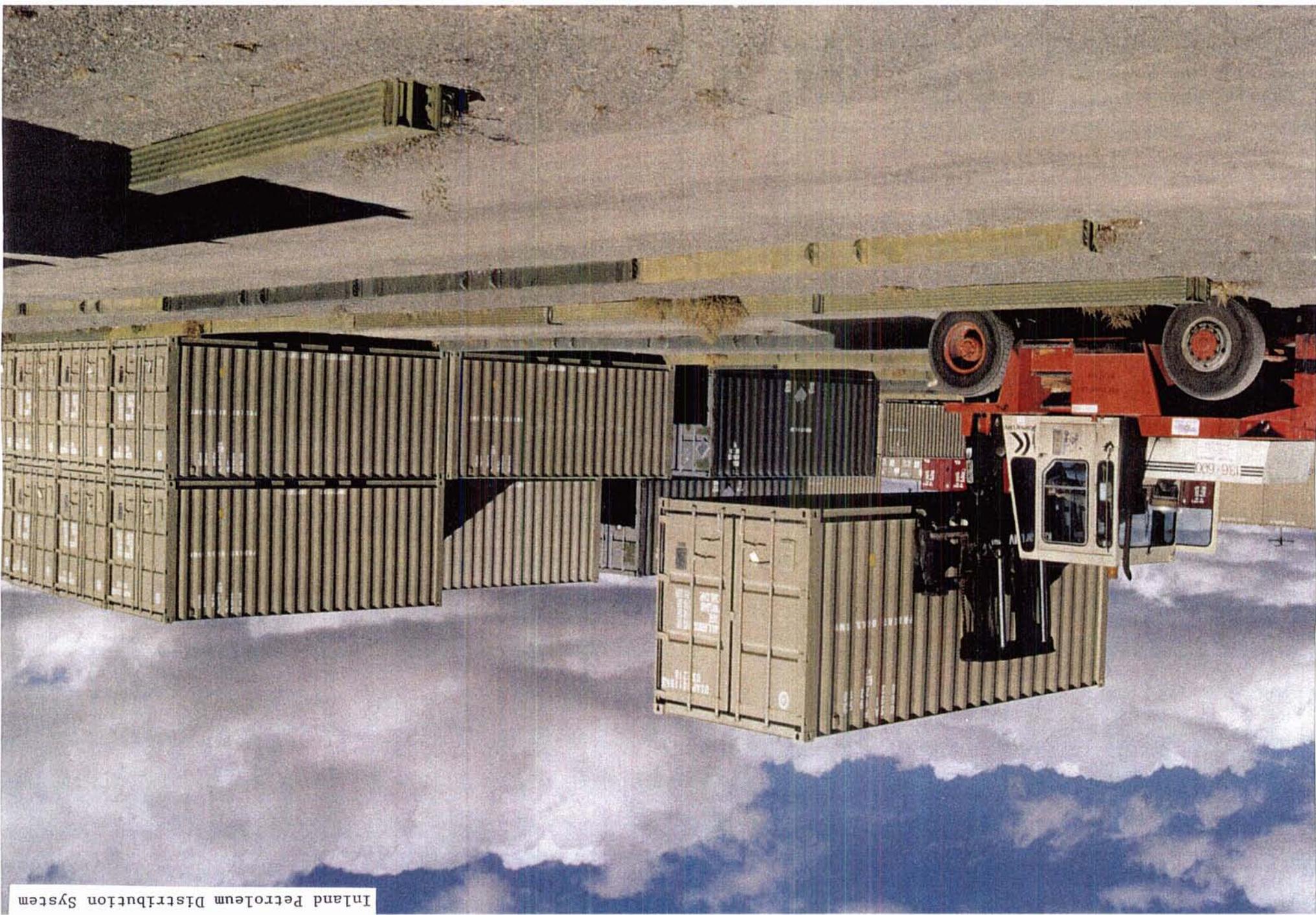
We are capable of receiving cargo via air, rail, and ground transportation. When delivery is made, we determine the best location for storage depending on the turn-around time and the maintenance and packing requirements needed to bring the material up to Condition Code "A." Our material handlers off load the cargo in an area closest to the assigned warehouse as possible. Then the cargo is assigned a storage location by our material handlers and uploaded into the accountable record portion of the Standard Depot System at the main office.



Super Stacker

## SHIPPING

We receive shipping documents from the Transportation Division located in Building 201. We then locate the cargo and physically move it to the central holding area (Warehouse 307 South) where we label it, and compute the weight and cube of the containers to be shipped. This information is returned to the Transportation Division to actually set up the type of transportation necessary to ship the cargo. When the transporters arrive, they are issued government bills of lading by the Transportation personnel. We load the cargo and our shipment begins its journey.



Inland Petroleum Distribution System

## STORAGE

When our material handlers receive cargo at the designated storage locations, they physically move the cargo to specific locations within the warehouse. We carefully inspect the cargo's stock numbers, and condition codes, and load the information into the Standard Depot System. Any changes in location and inventory are made by the material handler assigned to that particular site.



Preservation and Packaging 600 GPM Reverse Osmosis Water Purification Unit



Preservation and Packaging 350 GPM Reverse Osmosis Water Purification Unit

MAJOR END ITEMS  
PRESERVATION/PACKING

We preserve and package all the major end items, and secondary items associated with the Operational Project Stocks including the Water Supply System, Inland Petroleum Distribution System, and Force Provider. Major end items are equipment such as pumps, hypochlorinators, and water chillers. Secondary items are the component parts of the major items such as hoses, valves, and tees.

Our containerization operation in support of the Water Support System is just one of the innovative concepts we've implemented at Sierra Army Depot. We are constantly developing ways of packaging material to better support the soldier's needs in the field. This process of packaging not only preserves the system against damage and decay, but allows for easier access to perform Care of Supplies in Storage maintenance.



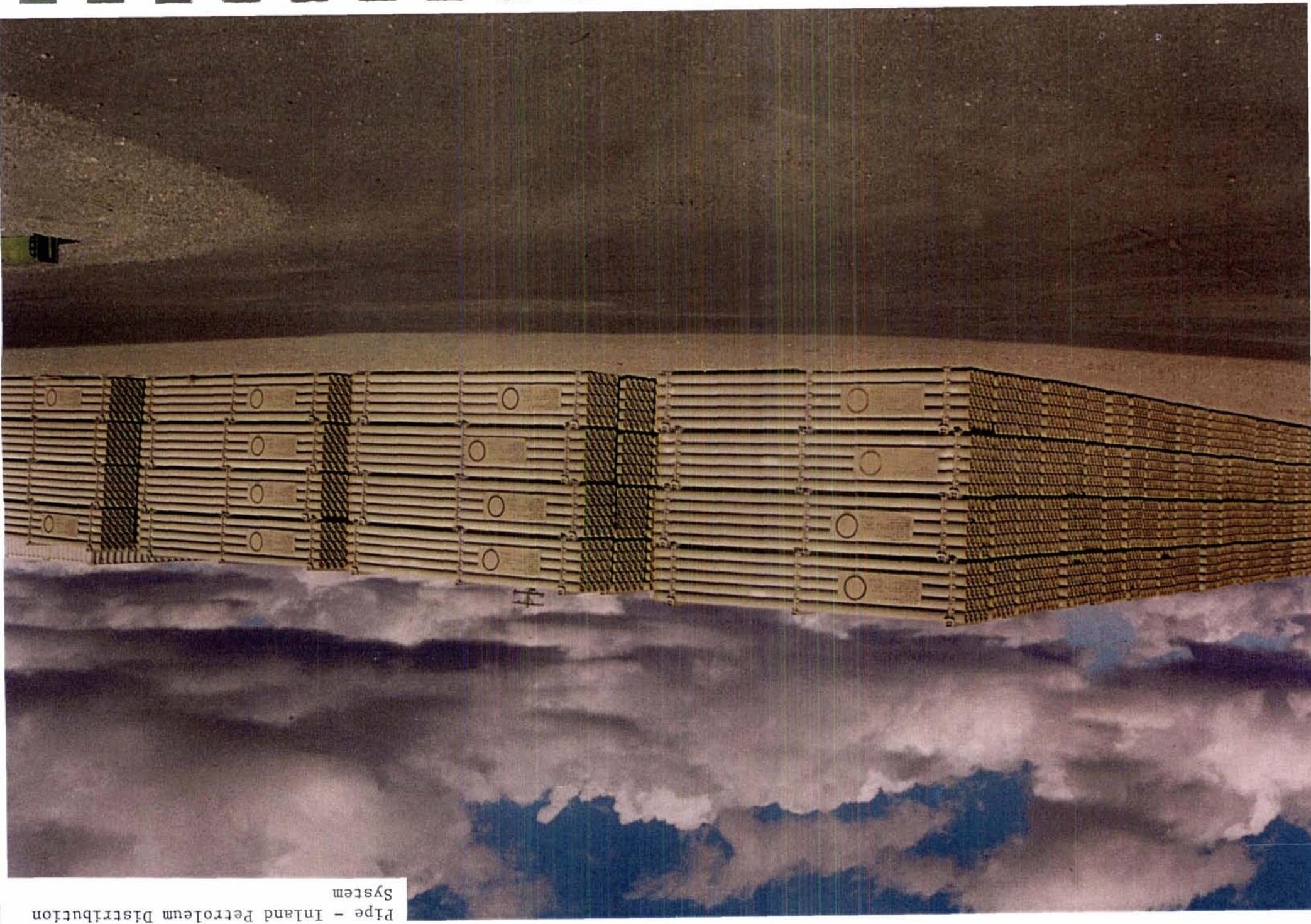
Shop Floor Supply Stock

## SHOP FLOOR/GENERAL SUPPLIES/TOOLS/INERT AMMUNITION

The Shop Floor System stores Class IX repair parts. Most of these items are requisitioned through the supply system, received at Building 306, and transferred to the Shop Floor in Building 302 until they are needed in the maintenance cycle. Accurate inventory is a must. We also receive parts from other installations as a result of the Base Realignment and Closure process. We view the folks working on the Operational Project Stocks within our organization as our customers. The customer submits a "pick" ticket via computer at Building 302 for items needed in the field (Maintenance, Inland Petroleum Distribution System, Water Support System). We retrieve the items from our Shop Floor System and deliver them to our customers. A copy of the pick ticket stays with the order and, a copy is returned to Building 302 for processing and removing the item from record. The storage, order, issue, and receipt circle is now complete.

We store inert ammunition in Warehouses 360, 361, 364 and 365. The inert ammunition includes everything from bomb fins and suspension lugs to chaff (used to counteract radar).

We manage a tool room, and mail and receive United Parcel Service shipments. Our work force includes a mobile labor team which is cross trained and available to support other crews.



Pipe - Inland Petroleum Distribution System

## INLAND PETROLEUM DISTRIBUTION SYSTEM

The technical configuration of the Inland Petroleum Distribution System incorporates three major groups of equipment.

### BULK PETROLEUM STORAGE SYSTEM

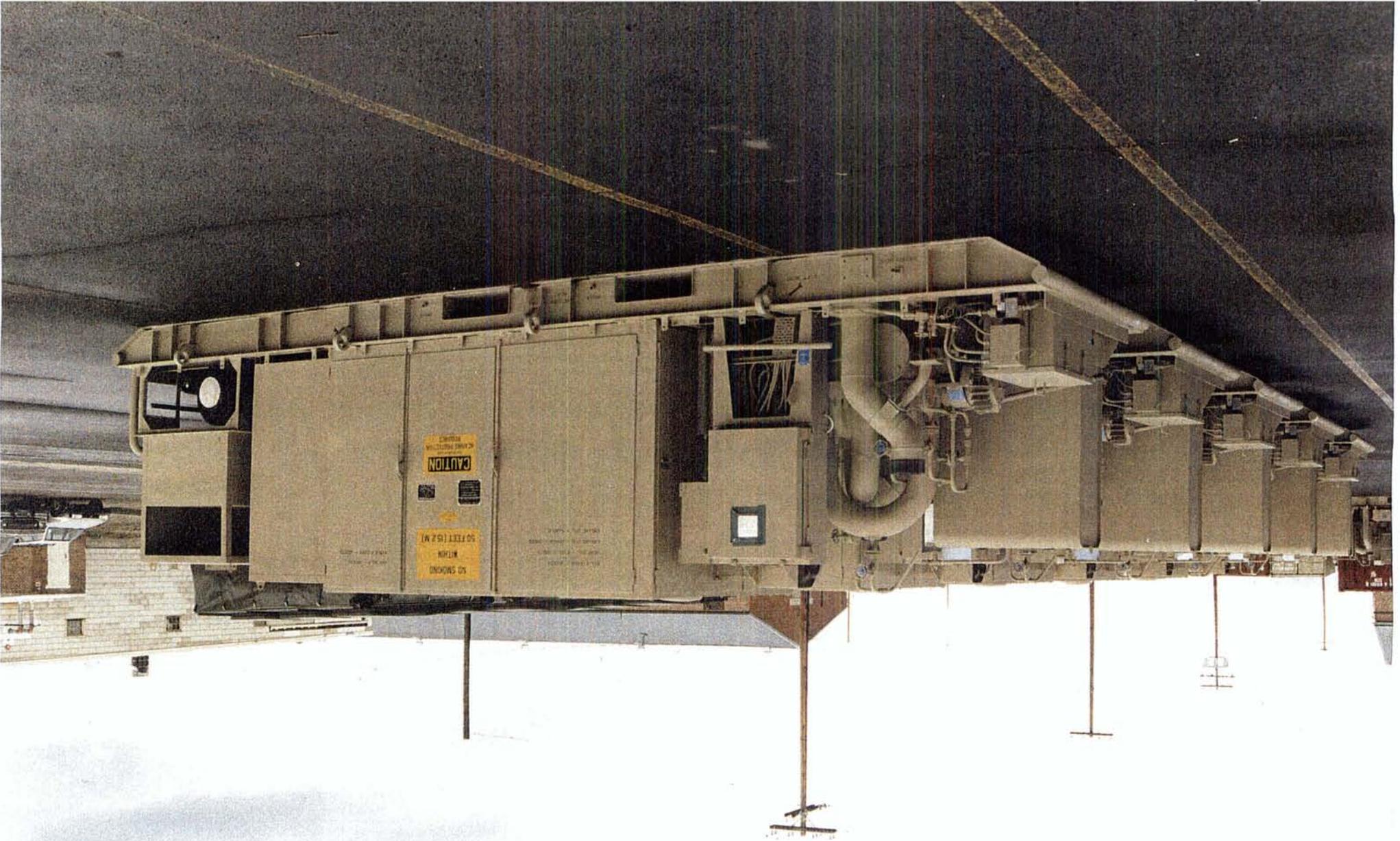
The Bulk Petroleum Storage System consists primarily of fuel units and pipeline connection assemblies. It's primary function is receiving, storing and issuing fuel. For flexibility, fuel units can be used as independent end items or combined together with a pipeline connection assembly to form a Tactical Petroleum Terminal. Three fuel units and one pipeline connection assembly are combined to make one standard Tactical Petroleum Terminal (77 International Standardization Organization containers).

### PIPELINE SYSTEM

The pipeline system consists of pipeline sets, pipeline pump stations, and pipeline support equipment. Its primary function is to transport fuel from one area to another. The pipeline sets (five miles each) and pump stations can be combined, as many as needed, to meet theater operational requirements. There are 808 miles of Condition Code "A" petroleum pipe located at Sierra Army Depot. We shipped an additional 140 miles of pipe to Sagami Army Depot for Far East contingencies. Several of our prepositioned ships are also loaded with pipe to enhance the Army's rapid deployment capabilities.

### SPECIAL PURPOSE EQUIPMENT

Special purpose equipment provides specific purpose components that are incorporated into the pipeline design to overcome specific topographical problems or pipeline design problems. In addition, components from the Special Purpose Equipment group such as, bridges and critical gap crossings, can be incorporated into the pipeline design to cope with specific topographic features, as rivers and swamp crossings.

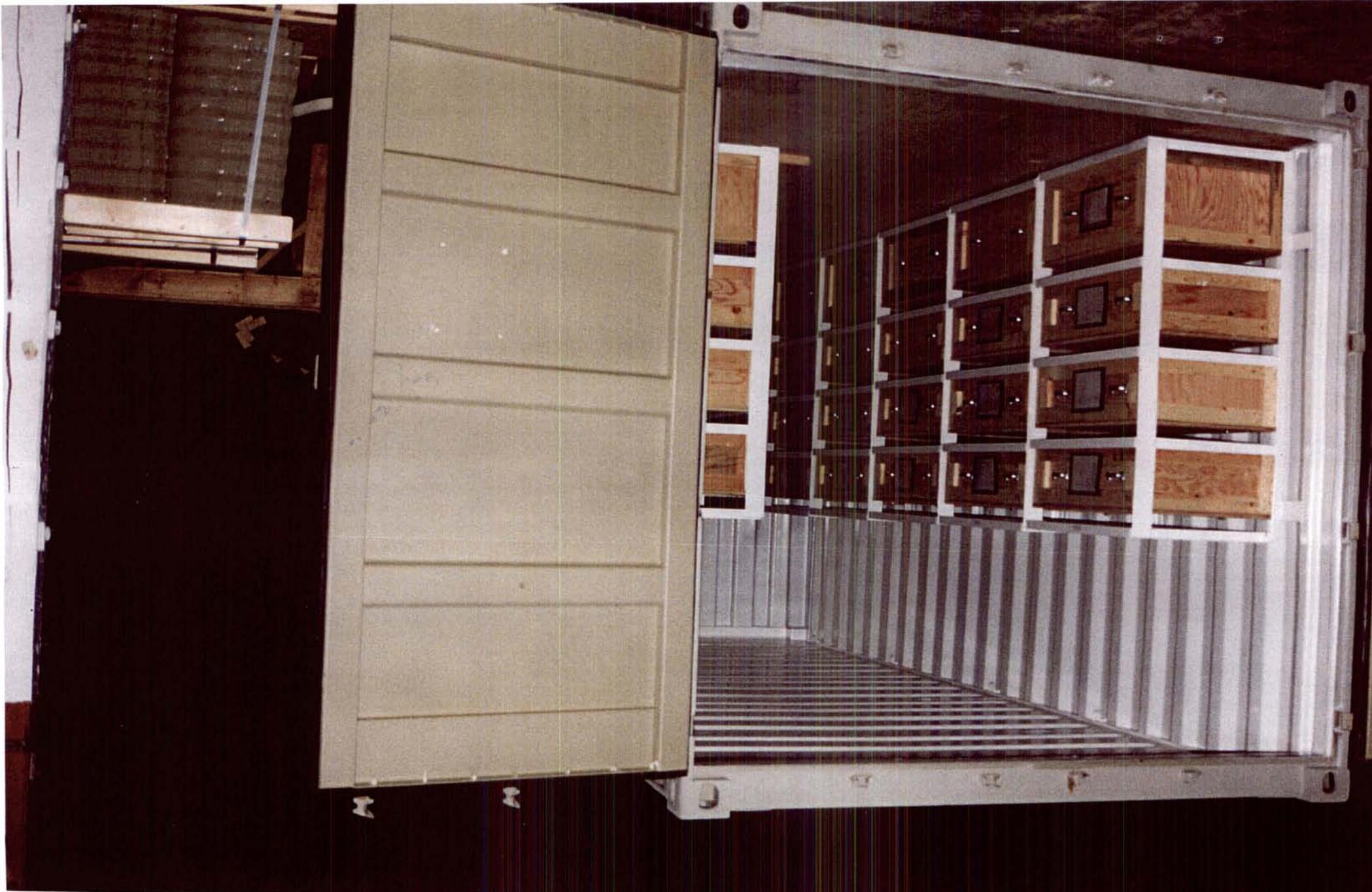


800 GPM Fuel Pump

## FUEL UNITS

The function of the fuel unit is to receive, store and issue fuel.

Fuel units can be operated independently or combined with other fuel units. As an independent unit, it is designed only for loading or unloading operations involving tanker trucks. They can be directly attached to a pipeline by use of a pipeline connection assembly. Its storage capacity is 30,000 barrels (1,260,000 gallons) of fuel.



Inland Petroleum Distribution System  
Secondary Items/Parts

## PIPELINE SYSTEM

The function of a pipeline system is to transport fuel via pipeline from one area to another.

In operation, the pipeline system can incorporate as many pump stations as necessary to meet the operational requirements. The system is flexible in design to provide a pipeline system that can cope with field conditions and topographical problems.

## INLAND PETROLEUM DISTRIBUTION SYSTEM OPERATIONS

The process begins when we receive a work order from our planners stating how many fuel units, pipeline connection assemblies, pump stations or 5 mile sets of pipe are scheduled for containerization.

A pick list is generated through our supply system, materials and hardware arrive via the Shop Floor System. Orders are also placed with the Box and Crate Factory for skids or special boxes that might be needed for this particular assembly. The Box and Crate Factory also manufactures risers for wheeled items, bins, shelves, and drawers for the containers.

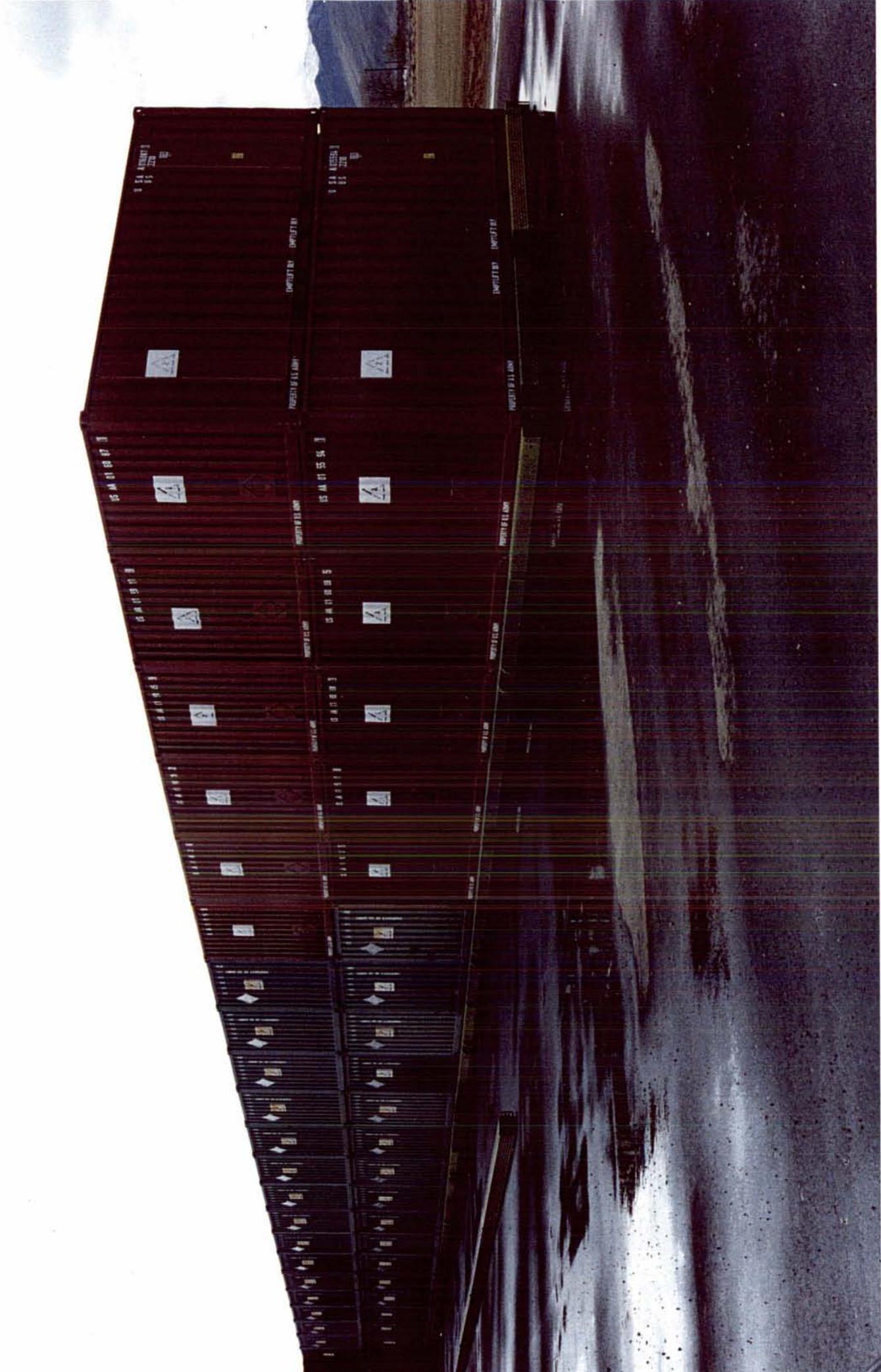
An empty container is brought into the warehouse where lumber is mounted to the walls and floors to brace the bins and shelves.

We then inventory, inspect, preserve, package, and label all of the materials required for the shipment. We pack the material into the bins and drawers stored on shelves or blocked and braced to the floor. The Inland Petroleum Distribution System uses wood, web straps, plastic ties, chain, and Air Force binders to secure the material in the container.

Each container is marked according to a marking plan that identifies which part and to which system the container belongs. The container is then weighed and a center of balance is computed and marked on the container.

Containers are then stacked in sets and certain configurations for storage.

Inland Petroleum Distribution System  
Storage



#### HARD STAND DRIVE BY BRIEF

As we turn right you'll notice 253 jeep-like vehicles called High Mobility Multipurpose Vehicles. We expect to receive 200 more within a week or so. These vehicles have been shipped here as a component of the Army Field Feeding System-Future. The major components include these vehicles, a kitchen, 22 ton trailers, sanitation centers, refrigeration units, and temperature controlled tents. After all of the components of the system have been received, assembled, and crated, we will determine how many systems or system components to ship to the various units according to their current table of distribution and allowances. We expect to begin the shipping effort in October of this year.

## LANDING MAT STORAGE

Next to the High Mobility Multi-purpose Vehicles, you will notice our Landing Mat storage. These "honeycomb" aluminum interlocking sections create a portable air strip capable of handling C130 aircraft. Each landing mat assembly contains 7,448 sections that cover 125,000 square feet. We are currently storing 21 sets of Landing Mat. The Landing Mat assets were shipped to Sierra Army Depot as a result of BRAC 89 and 91 actions. The project was moved from Pueblo and Tooele Army Depots. There are no active programs to upgrade or refurbish the project, but if the funding was made available, we have the capabilities right here at Sierra Army Depot.

Landing Mat



## BAILEY BRIDGING STORAGE

Next to the Landing Mat you can see Bailey Bridging. These are fixed erection bridges that are stored, shipped to a site, and assembled for use when transporting troops and equipment across rivers, gorges and ravines. These portable bridges can then be disassembled, transported and restored at a selected site. The assembly and disassembly is normally accomplished by elements of the U. S. Army Engineering Brigades using specialized tools. Currently we store six sets of Bailey Bridging. The Bailey Bridge assets were also moved from Pueblo Army Depot as a result of past BRAC actions. If funding was made available, we could upgrade or refurbish the project right here at Sierra Army Depot.

Thank you for the opportunity of being your guide today. I hope you enjoyed the tour.





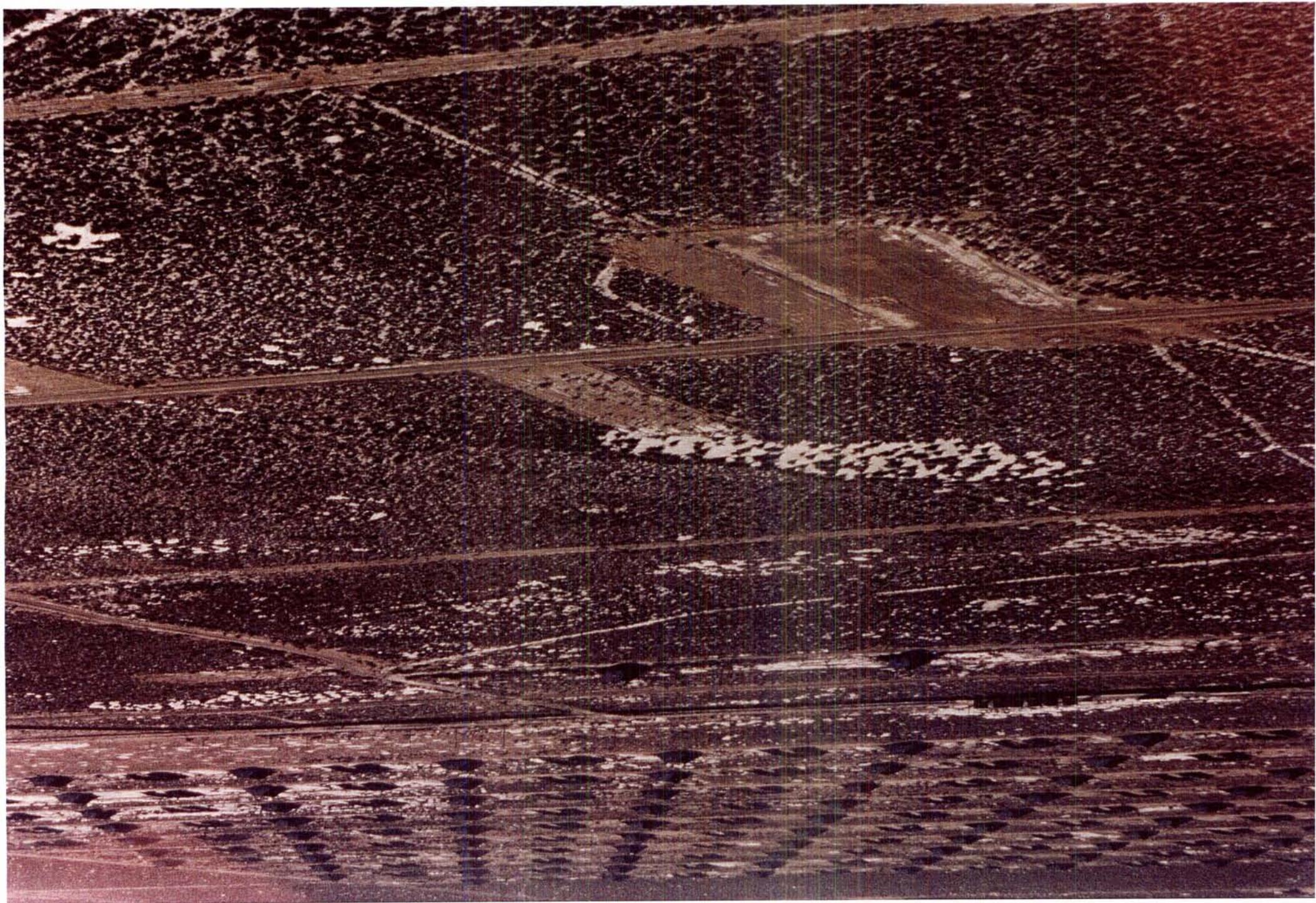


# **Sierra Army Depot**

**Base Realignment and Closure (BRAC)**

**Ammunition Operations Tour Briefing**

**25 April 1995**



Sierra Army Depot  
Directorate of Ammunition Operations  
Tour Itinerary for BRAC Commissioners  
25 April 1995

Depart Skedaddle Inn	Enroute to Directorate of Ammunition Operations
Arrive at Deactivation Furnace	View Hazardous Waste Incinerator
Bldg 403	Unpack Operation for 106mm Rifle
Bldg 544	Shipping Office and Operations of Shipping Munitions that are less-than-truckload
Bldg 541	Receiving Office and Operations for Receiving Munitions less than 10,000 pounds per truck
Bldg 640	General Purpose Renovation/Maintenance Building
Igloo	View Ammunition Igloo
Demolition Grounds	View a Burn Operation



BRAC COMMISSIONER'S TOUR  
Narrative Summary

BRIEFER: Mr. Claude Chun, Directorate of Ammunition Operations

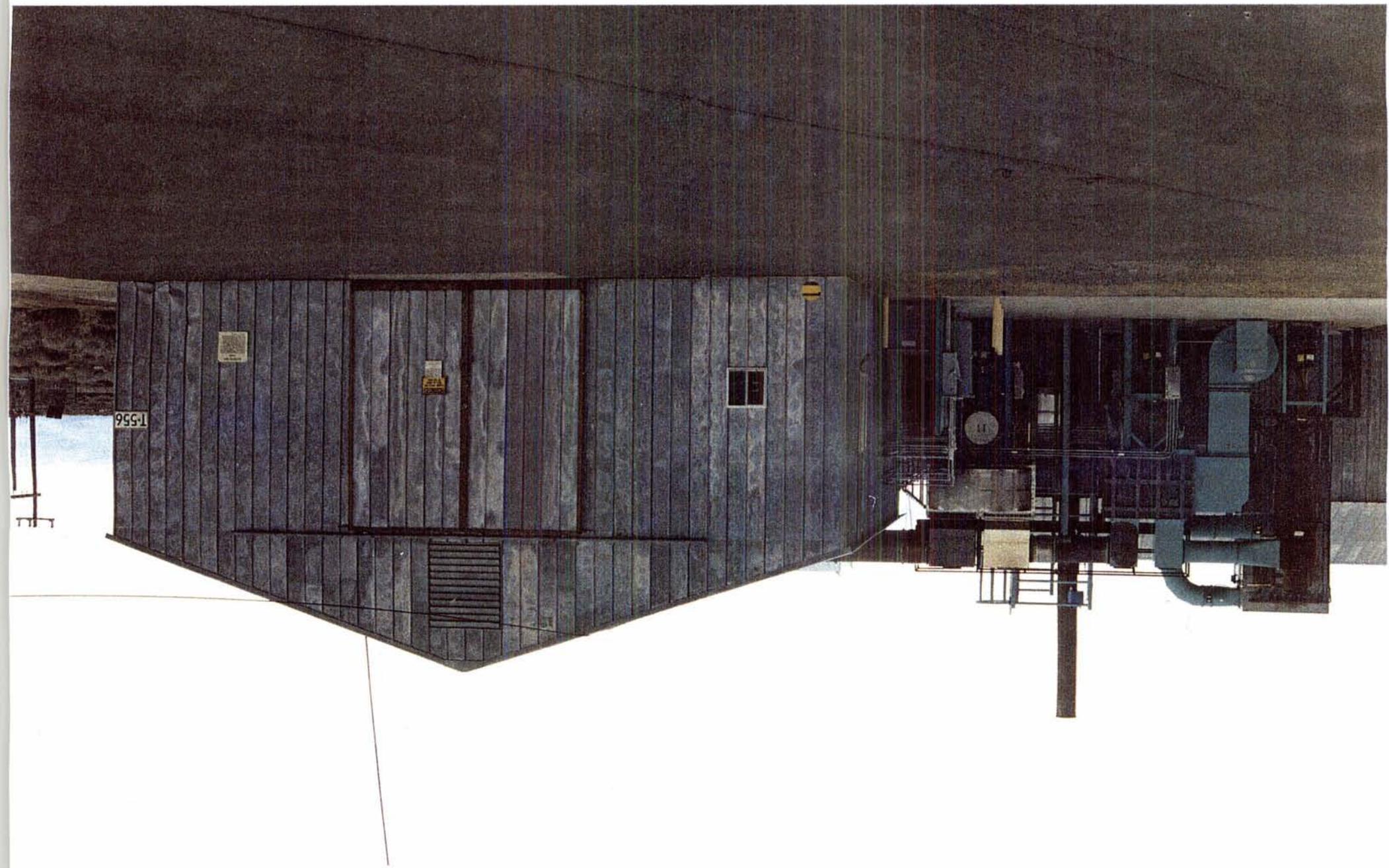
I would like to discuss some facts with you. Within the Directorate, we have 16,000 acres that include 4,000 acres for the Demolition Grounds. Over 225,000 short tons of ammunition, valued over \$1.6 billion, are stored in igloos and standard magazines. We have over 1.9 million gross square feet for both covered and improved open storage.

We have excellent transportation capabilities. We have U.S. Highway 395 that intersects Interstate Highway 80 (major all weather East/West highway) in Reno, Nevada (55 miles) and rail service by both the Union Pacific on our Southern boundary and Southern Pacific on our Northern boundary. We have our own depot operated airfield (Amedee) with a 7,168 feet runway that can handle C-141, C-5A and C-17. We have truck and rail safe havens and easy access to major air/sea ports (Concord 250 miles, Oakland 265 miles and Travis Air Force Base 225 miles).

I want to welcome you to the Ammunition Storage Area. If you have any matches, lighters, or flame producing items you will have to leave them here. I will show you this area with the facilities we are using and also the Demolition Grounds which is approximately 11 miles from here.

On your left is the Ammunition Office. This is where the ammunition personnel and truck drivers report every morning. Within the Ammunition Storage Area there is approximately 12,000 acres with 799 igloos, 12 standard magazines, and 671 usable improved open storage sites. Our igloos are the normal stradley igloos and vary in length from 60 feet to 80 feet.

The building in front of you is the Deactivation Furnace. This is actually Ammunition Peculiar Equipment 1236M1 Incinerator, Hazardous Waste. The Ammunition Peculiar Equipment was modified to satisfy Resource Conservation Recovery Act requirements. We are the only depot that has approval to incinerate up to .50 cal. This is important as we are the only depot that has authorization to use the Deactivation Furnace. We are expecting approval from the State of California for our Part B Permit that will allow us to incinerate small arms ammunition, primers, fuzes, and booster for ten years. Mr. Kirk Bausman will brief you on the Deactivation Furnace.



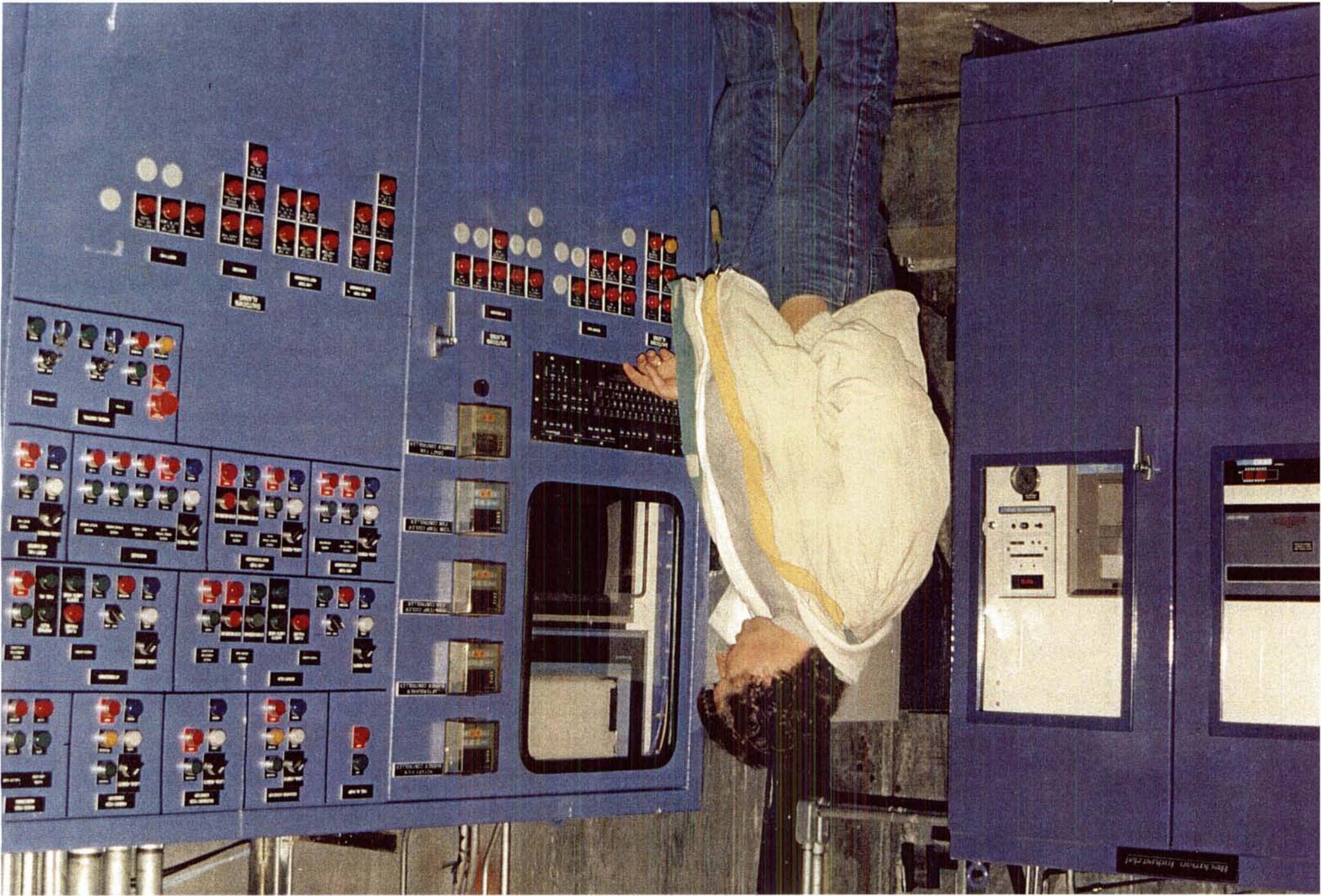
1-556

BLDG 556

PURPOSE: To demilitarize small explosive items up to .50 cal which are no longer safe.

FACTS:

- a. State of California and Federal Environmental Protection Agency approved and certified
- b. Only system currently permitted on line
- c. Upgraded to meet newest standard - at a cost of \$1.2M
- d. Estimated government savings \$600K
- e. Recycling



DEACTIVATION FURNACE  
APE-1236M1

BRIEFER: Mr. Kirk Bausman, Supervisor/Deactivation Furnace

The Deactivation Furnace has been designed to demilitarize small explosive items in an environmentally controlled manner. The munitions are processed through the furnace for a variety of reasons, but no matter what the reasons, the munitions are no longer safe to be issued to the troops.

The Deactivation Furnace works on the principle of heating the rounds to a temperature that causes the explosive portions of the items to function. The items are moved to the rotary kiln by two feed conveyors. Then the items fall into the rotary kiln. The kiln moves the material towards the heated end of the kiln. The furnace runs at approximately 800 degrees. As the material moves through the kiln, the explosive function and the metal drop onto the discharge conveyor. The admissions from the explosives flow through the stack into an afterburner. The afterburner runs at a temperature of 1,400 degrees. This burns off any particulate that may not have burnt at the 800 degree level. From there the admissions run through, to cool down units, to drop the temperature for admission control sensors. It then goes through a cyclone and bag house to pull out any possible particulate that may have still been remaining. This ensures that no pollutants are released.

The control unit consist of the gas calibration unit, an Industrial Process Controller and an IBM computer. Together the three units monitor and control the entire Deactivation Furnace. The system has been programmed to run only within the Environmental Protection Agency's acceptable level of admissions. If the unit senses any portion of the process out of control levels, it sounds alarms and begins the shutdown procedures. At this point the control unit has shut off the feed conveyors and will not allow any more material to be processed until the problems are corrected.

The control unit also charts and prints the temperatures and admission levels as records required by the state and federal Environmental Protection Agency. The charts will be filed along with a description of the material that was demilitarized.



BLDG 403

PURPOSE: To perform Renovation and Disassembly of Conventional Ammunition

FACTS:

a. 16 Bays

Bay 1 - Unpack

Bay 2 - Pull-Apart

Bay 3-4,  
6-7,  
12-15 - Holding

Bay 5 - Deprime

Bay 8 - Mutilation

Bay 9 - Repack

Bay 10 - Paint Booth

Bay 11 - Stencil

Bay 16 - Incoming

b. Intrusion Detection System

c. Rapid Response Deluge System

d. Vacuum collection house

e. Recycling

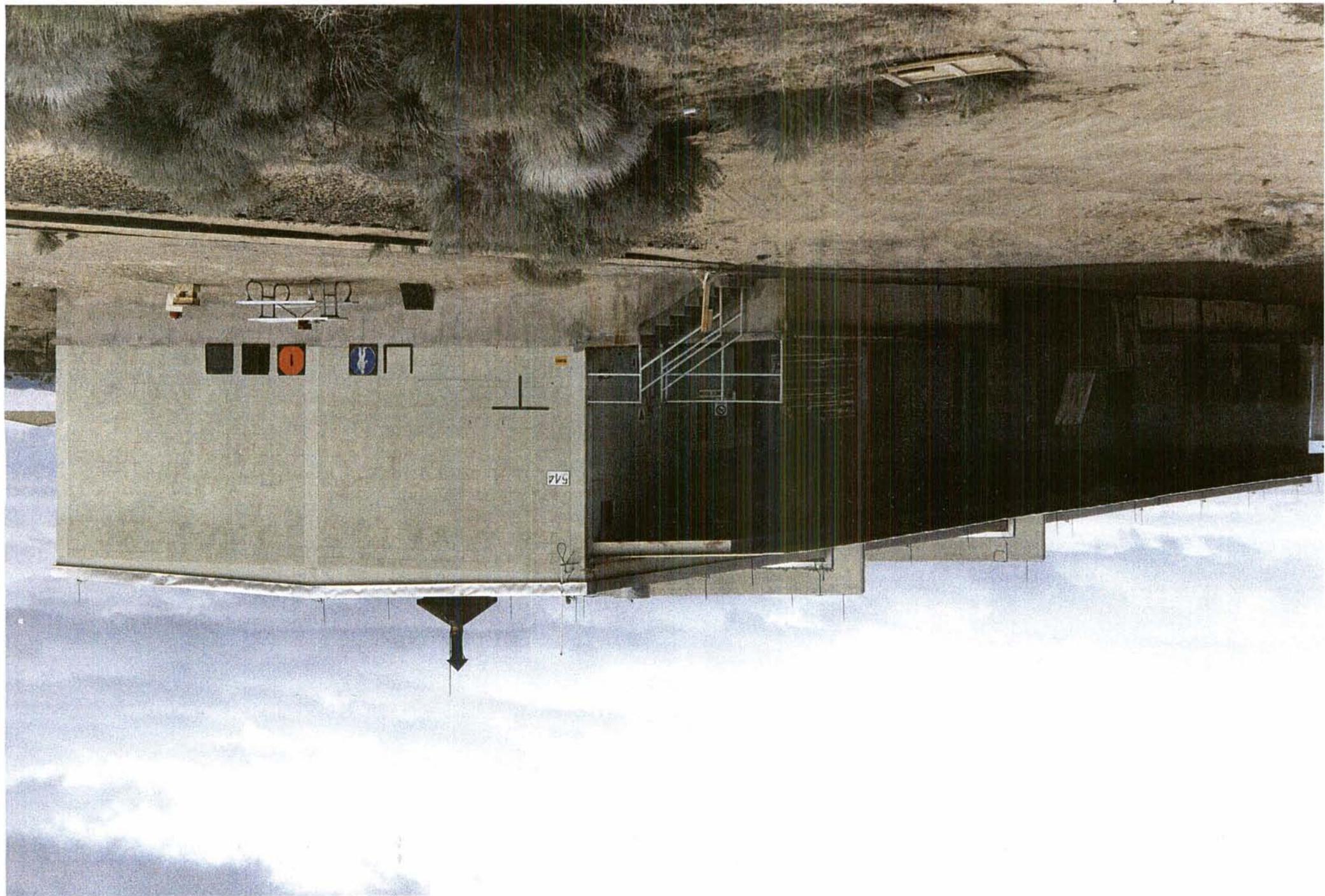


BUILDING 403

BRIEFER: Mr. Kirk Bausman, Supervisor, Building 403.

Building 403 is one of two maintenance line facilities which are currently operational here at Sierra Army Depot. The building is designated to run lines on both the North and South sides of the building. Each bay is constructed to withstand an explosion of 425 pounds net explosive weight and still protect the materiel and personnel in the adjacent bays. This building is also equipped with the Rapid Response Deluge and Intrusion Detection Systems.

At the present time, this line is running a 106mm disassembly program. These rounds are obsolete and are no longer required for the military. The operation consists of moving the materiel from storage to the building, depalletizing and unpacking the materiel, and then placing the round onto the conveyor. At this point the rounds move into the next bay (Bay 2) where it is placed into the Ammunition Peculiar Equipment Pull-Apart Machine. The door on the machine is closed, and the machine is activated. Once the round is pulled apart, the door is opened and the projectile is removed and placed on the conveyor. The cartridge case is removed from the machine, the propellant bag is cut and the propellant is poured into the vacuum system. The vacuum system pulls the propellant away from the building out to the Powder Collection House. One Hundred pounds of propellant is collected into barrels to be moved to the Burning Grounds. The cartridge case is then placed on the conveyor to move to the next operation. In Bay 5, the cases are removed from the conveyor and placed into the Ammunition Peculiar Equipment Deprime Machine. This machine pushes the primer out. The operator will remove the case from the machine, place the primer into a box, remove the liner from the case, and place the case back on the conveyor. Prior to sending the cases to the Defense Reutilization and Marketing Office, the end of the case is bent to prevent the casing from being reused. The casings are then sent to the Defense Utilization and Marketing Office and sold as salvaged steel. The projectiles are packaged to be placed into storage. The high explosive projectile will be moved to the Demolition Grounds and detonated. The primer will also be moved to the Demolition Grounds to be detonated.



BLDG 544

PURPOSE: To open, pack, prepare, mark, and label all types of munitions for safe transport via all modes of transportation

FACTS:

a. 6 Bays

Bay 1-5 - Short Term Storage

Bay 6 - Packing light boxes

b. Certifying shipment for air/ground transport:

Fine for failure to properly label, pack, or mark a shipment for transport - \$25,000 per violation per day for the Certifier - not the depot

c. Explosives

1.1 - mass explosion

1.2 - fragment producing

1.3 - mass fire

1.4 - moderate fire, no blast hazard

d. Safety Equipment



BUILDING 544

BRIEFER: Mr. Doug Medici

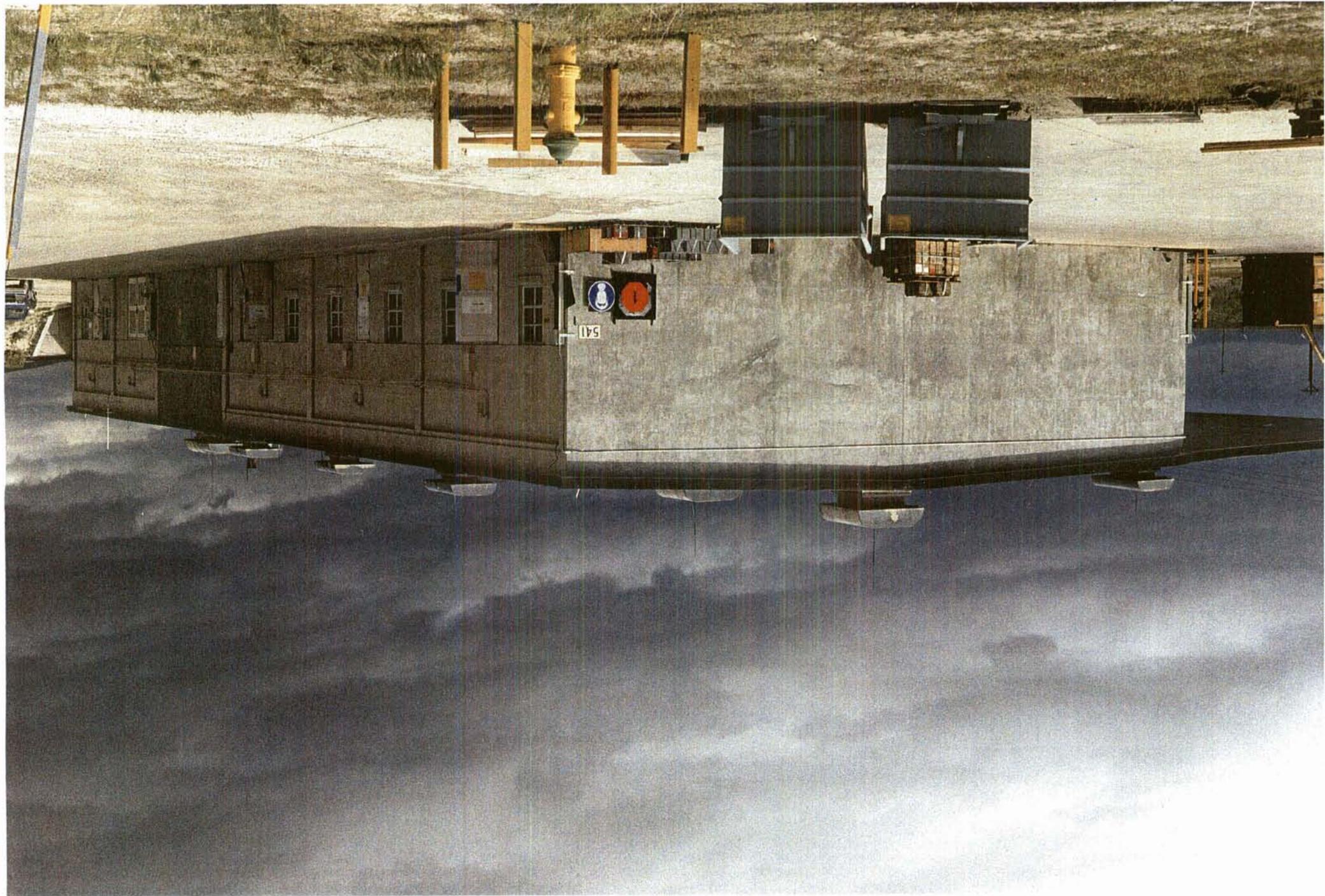
I will brief you on my shipping functions to include less-than-truckload (Bldg 544) and field shipping.

Less-than-truckload and less-than-carload mean under ten thousand pounds gross aggregate weight. The buildings net explosive weight is fifteen thousand pounds. There are six bays: five for storage and one bay for packing and preparing material for shipments.

Mission of less-than-truckload is to prepare, repalletize, and band all type of material and explosives for shipment by all modes of transportation. The ammunition is packed in accordance with standards established by the Department of Transportation.

Shipments in excess of ten thousand pounds gross aggregate weight are prepared, pulled, palletized, and loaded at the igloo or loading docks.

I ensure the ammunition loads are properly packed, marked, and labeled in accordance with standards established by the Department of Transportation, and also ensure the carriers are properly placarded.

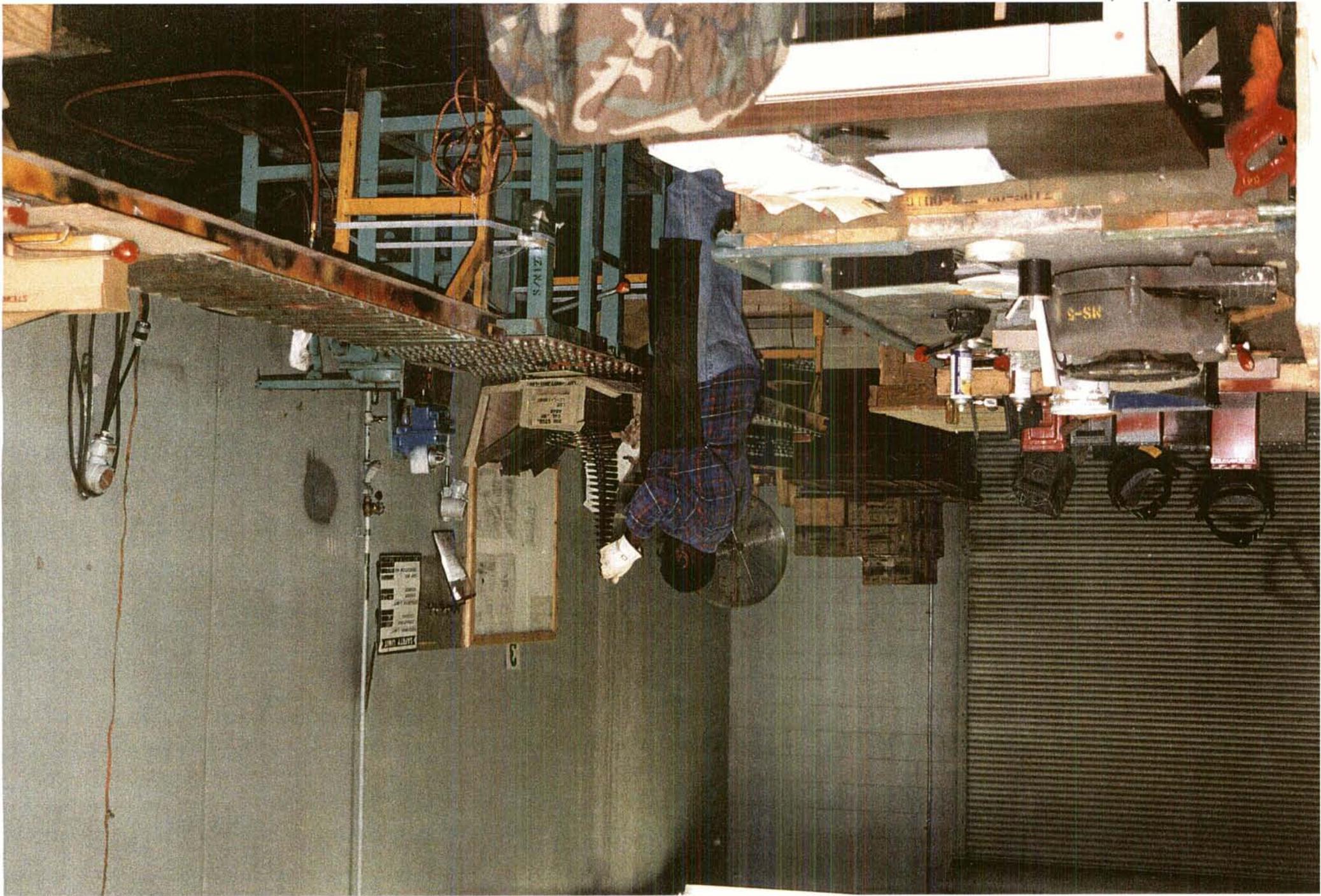


BLDG 541

PURPOSE: To receive ammunition from posts, camps, stations, and depots - worldwide

FACTS:

- a. Inspect, Preserve and Pack Ammunition and Explosives
- b. 6 Bays
  - Bay 1, 2, 3 - Inspection Bays
  - Bay 4, 5, 6 - Holding Bays
- c. Intrusion Detection System
- d. Net Explosive Weight maximum limit 35,000 lbs.
- e. Recycling



BUILDING 541

BRIEFER: Mr. Larry Draper, Chief, Ammunition Receiving

I will brief you on receiving functions, inspection procedures, storage requirements, and Bldg 541 capabilities.

Sierra Army Depot receives ammunition, explosives, and ammunition related items from other depots, manufacturers, posts, camps, stations and using units, that are located not only within the boundaries of the United States, but worldwide.

All less-than-truckload in-bound receipts, and all full truck loads of mixed miscellaneous ammunition or explosives are processed through Bldg 541. Full truck loads of ammunition and explosives, other than mixed miscellaneous loads are processed directly to ammunition storage for offload and immediate storage.

The mission of Bldg 541 is to unpack items for Quality Assurance personnel to inspect, determine the correct condition code, then repack, properly classify and mark each outer pack, palletize or containerize for storage. Many discrepancies have been discovered during past inspections of ammunition and explosives that were returns from South West Asia, European Retrograde, Guam, Korea, and Japan. Concealed discrepancies (shortages or overages) of ammunition or explosives are routinely discovered during Receipt Inspections. The accuracy of information marked on the outer pack, (National Stock Number, Nomenclature, Lot Number and Quantity) are verified prior to removal from Bldg 541 for storage. Accountability is the TOP priority for all material processed through Bldg 541.

Locations are obtained from the Storage Planners, material is located, verified against documents, and transported via 5-ton truck, 10-ton flatbed or strado-lift truck from Bldg P-541 to the storage structure. Material is stored in accordance with applicable storage drawings, or procedures.

Building 541 has three inspection bays with 4,056 square foot, three holding bays with 1,326 square foot of storage space, a 3,381 square foot central storage apron and a 7,000 square foot receiving dock. The net explosive weight of Bldg 541 may not exceed 35,000 pounds of 1.1 hazardous class and division.



BLDG 640

PURPOSE: To perform renovation and disassembly of conventional ammunition

FACTS:

- a. Newest general purpose renovation/maintenance facility (1968)
- b. Four service magazines
- c. Vacuum collection house
- d. Battery charger
- e. Material Handling Equipment
- f. Heated paint locker
- g. Shower/laundry facility
- h. 5 Bays
  - Bay 9 - Deprime
  - Bay 10 - Repacking Projectile
  - Bay 17 - Liner Removal
  - Bay 18 - Pull Apart
  - Bay 19 - Unpacking
- i. Protected by Intrusion Detection System for security
- j. Protected by Rapid Response Deluge System for fire protection
- k. Center dividing wall is 23" thick



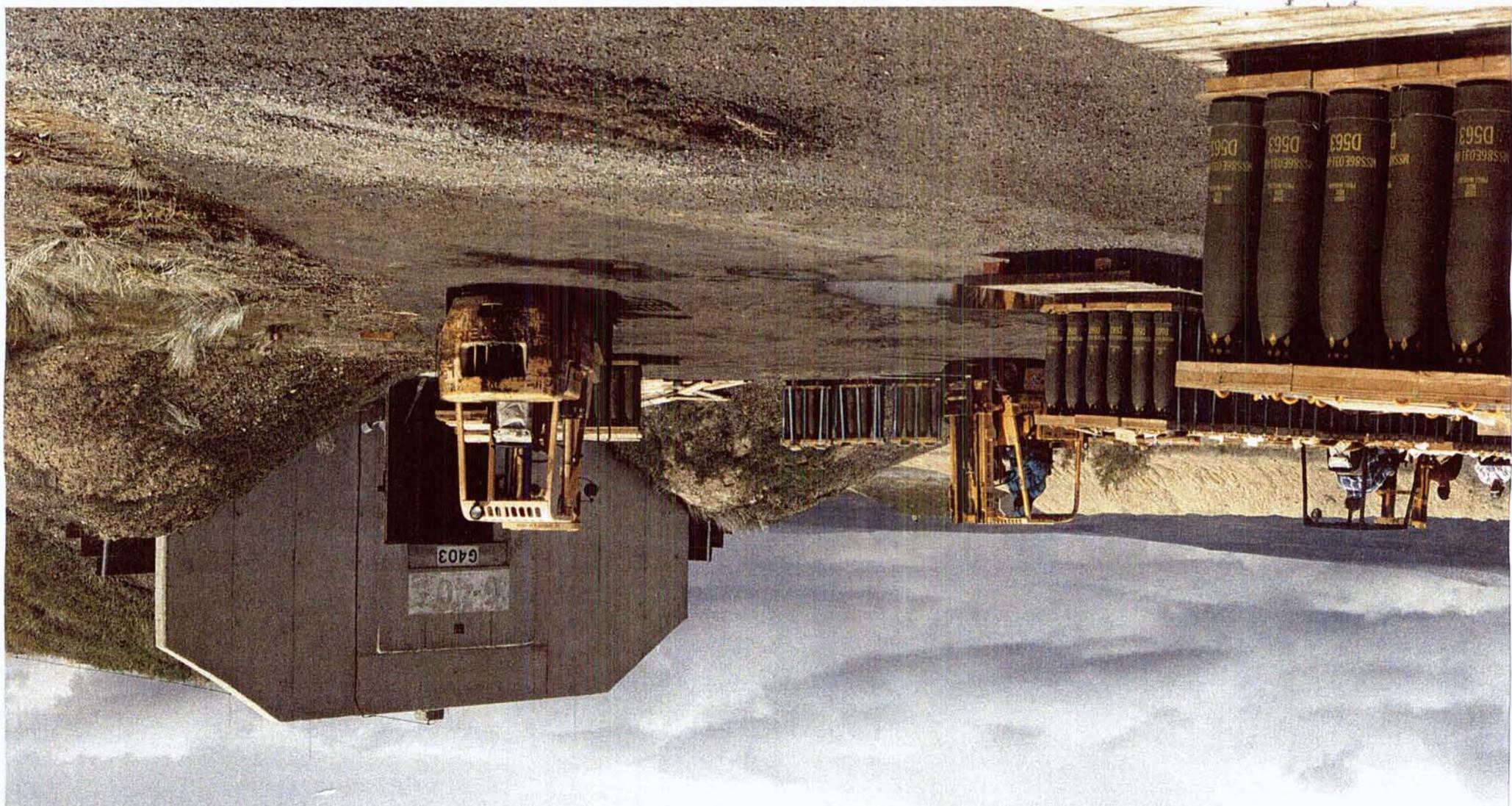
BUILDING 640

BRIEFER: Mr. Steve Hamilton, Supervisor/75mm Operation at Bldg 640

This is the newest general purpose renovation/maintenance facility at Sierra Army Depot. The building was built with a 23 inch thick concrete dividing wall that allows us to operate two separate operations at the same time. The bays are 18 inches thick with the outside walls and roof are constructed of thin steel sheets. A blast will blow the walls and roof rather than promulgate the explosion to the next bay. The building is equipped with a Intrusion Detection System for security reasons and Rapid Response Deluge System for fire.

The entire complex is totally fenced-in and has its own guard house. Besides the main building there are 4 service magazines, #635 through 638. These can hold 5,000 pounds of 1.1 explosives. The Vacuum Collection House (Bldg 641), houses a wet vacuum system for propellant collection. We have our own battery charger for material handling equipment in Bldg 642, and our own heated paint locker (Bldg 639). The break room (Bldg 634) contains complete shower facilities and a laundry facility for washing clothing used in explosive work.

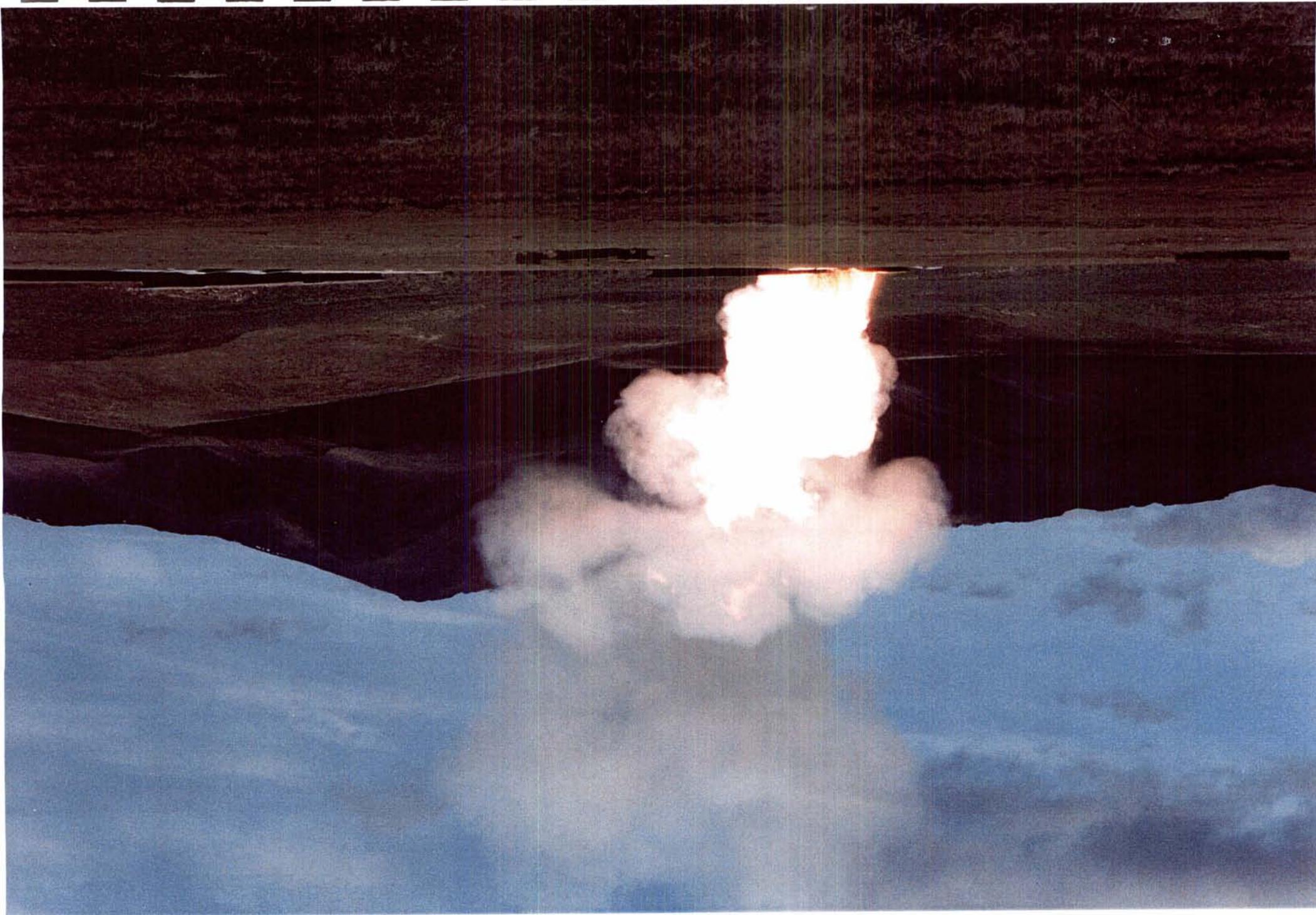
At the present time we are running a disassembly operation for 75mm recoilless rifle ammunition. These rounds are obsolete, therefore, they have no military use. The operation consists of receiving palletized 75mm ammunition from storage on the North end of the building. The rounds are unpacked in Bay 19. The unpacked rounds are placed on a conveyor and moved to Bay 18 and placed in a pull-apart machine. This removes the projectile from the cartridge case. Once the projectile is removed, it is placed back on the conveyor. The cartridge is then removed, the inner plastic liner is cut, and the propellant is dumped into the vacuum collection system. The cartridge case with liner and primer is placed on the conveyor for liner removal in Bay 17. The dumped propellant travels by way of stainless steel tubes to Bldg 641 where it is collected in drums, weighed, and unitized for shipment to the Demolition Grounds. Bay 10 is where the explosive projectiles are packed (8 per box) and unitized for shipment to the Demolition Grounds. The cartridge cases go to Bay 9 where they are placed in the deprime machine. The primer is packed and unitized for shipment to the Demolition Grounds. The inert cartridge cases are mutilated to prevent reuse and sent to the Defense Reutilization and Marketing Office to be sold as scrap steel.



Outside Of An Ammunition Igloo

Inside Of An Ammunition Igloo





DEMOLITION GROUNDS

- a. Largest most cost effective range in the system
- b. 4,000 Acres
- c. Limits:
  - Above ground detonation - 10,000 Lbs
  - Open burn - 100,000 Lbs
  - Rocket motor burns - 140,000 Lbs
- d. Develop/Test new disposal procedures
- e. Will have completed Part B Permit in 1995
  - Part B Permit certifies demolition for 10 years
- f. FY95 workload is 28,000 short tons (56,000,000 Lbs)
  - 31% of organic base demil workload scheduled by Industrial Operations Command



## DEMOLITION GROUNDS

BREIFER: Mr. Dan Galbreath, Chief of Demolition Operations

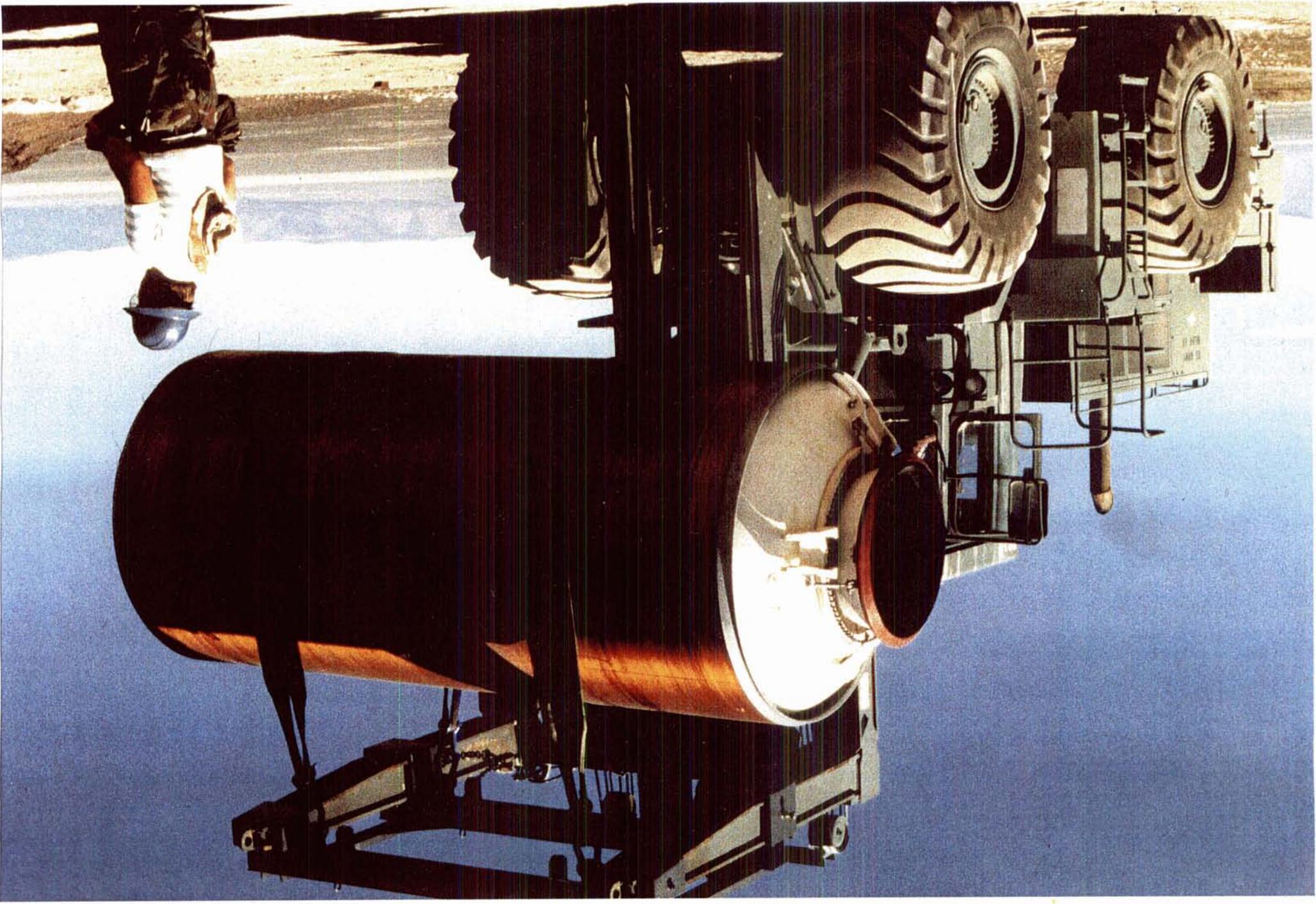
I will brief you on Sierra Army Depot's Open Burn/Open Detonation capabilities.

This site is the largest and most cost effective in the system, covering 4,000 acres with 10,000 pounds net explosive weight limit for detonations, 100,000 pounds for open burn, and 140,000 pounds for large rocket motors. For many of our customers, we are the only facility capable of accomplishing their demolition requirements due to the nature and size of their items. Our detonations and large rocket motors disposal take place in 14 pits, while artillery propellant is burned in large trays at the South Burning Site.

In addition to our normal workload activities, we frequently develop and test new disposal procedures, which when validated, are distributed world-wide. In the large rocket motor arena, Sierra Army Depot has disposed of more motors than any one facility in the world using technology developed here, to include manufacture of the shaped-charges required. We are currently scheduled for motor disposal for the Department of the Navy into the year 1999, and are involved in discussion with the Army Missile Command concerning a 10-year project to dispose of all Multiple-Launch-Rocket Systems whose disposal techniques were also developed here. Due to our above ground detonation capabilities and the nature of the payload in Multiple-Launch-Rocket Systems, it is not feasible to complete this project anywhere else. To coincide with our long range workload forecast, Sierra Army Depot is in the final stages of obtaining a Part B Permit from the State of California. The application for the permit was initiated in 1987, and to date has cost \$2.1 million dollars. When full permit is granted this year Sierra will be able to receive and treat hazardous waste (explosive) for a 10-year term before having to renew the permit.

This fiscal year we are scheduled to destroy over 28,000 short tons (56,000,000 lbs) of munitions which is 31% of all organic base demil workload scheduled by the Industrial Operations Command. Although, this is a very energetic schedule, our goal is to exceed it.

Enclosed are some of the items (rockets and motors) that we have validated procedures for demilitarization and have actually demilitarized. We continue to validate and establish new procedures. On 1 May 1995, we will begin validation procedures on demilitarizing cluster bomb units using 750 pound bombs as donors.



# AMMUNITION DEMILITARIZATION

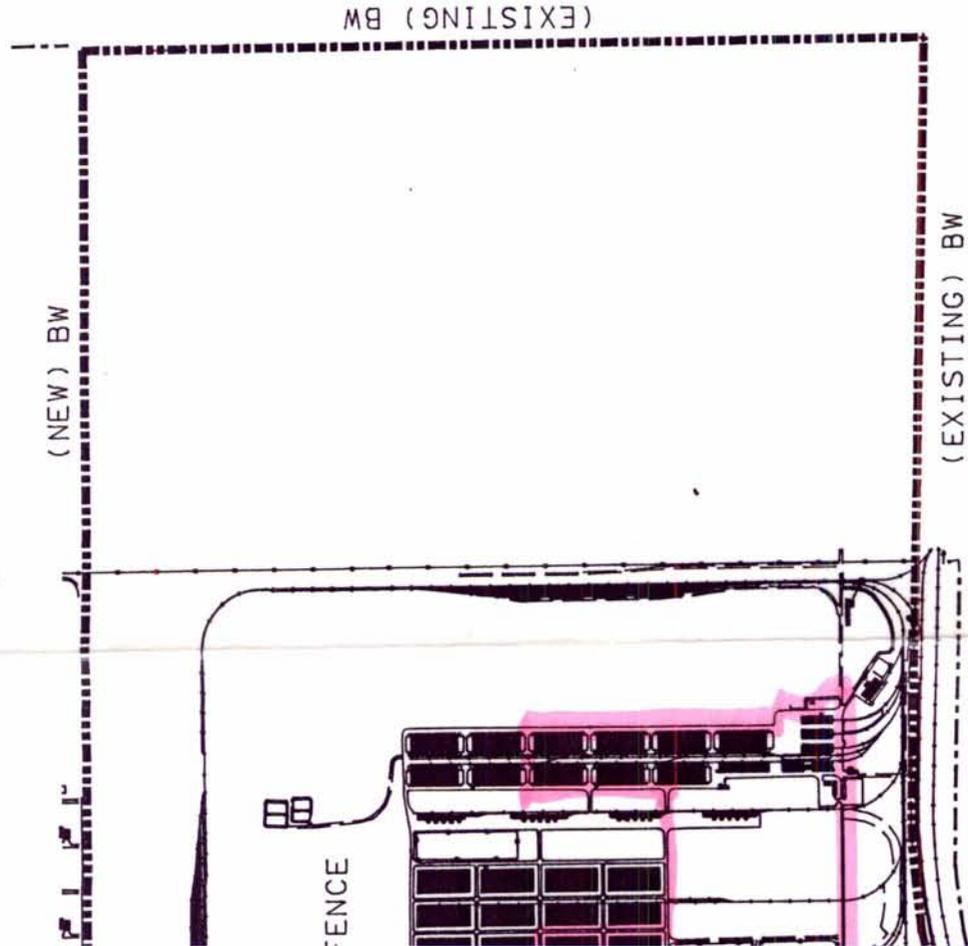
## HISTORICAL DATA

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SIERRA HAS VALIDATED THE DEMIL PROCEDURES AND DEMILED:

C-3 POSIDON FIRST STAGE  
MINUTEMAN III STAGE I & III  
PEACEKEEPER STAGE II  
POLARIS A-3 STAGE I & II  
MULTIPLE LAUNCHED ROCKET SYSTEM (MLRS)  
NIKE HERCULES MOTORS  
TOMAHAWK BOOSTERS  
HONEST JOHN MOTORS  
LANCE MOTORS  
SIDEWINDER MOTORS

SIERRA IS CONTINUALLY VALIDATING AND ESTABLISHING NEW  
DEMILITARIZATION PROCEDURES ON A VARIETY OF  
CONVENTIONAL AMMUNITION AND ROCKET MOTORS



## LEGEND

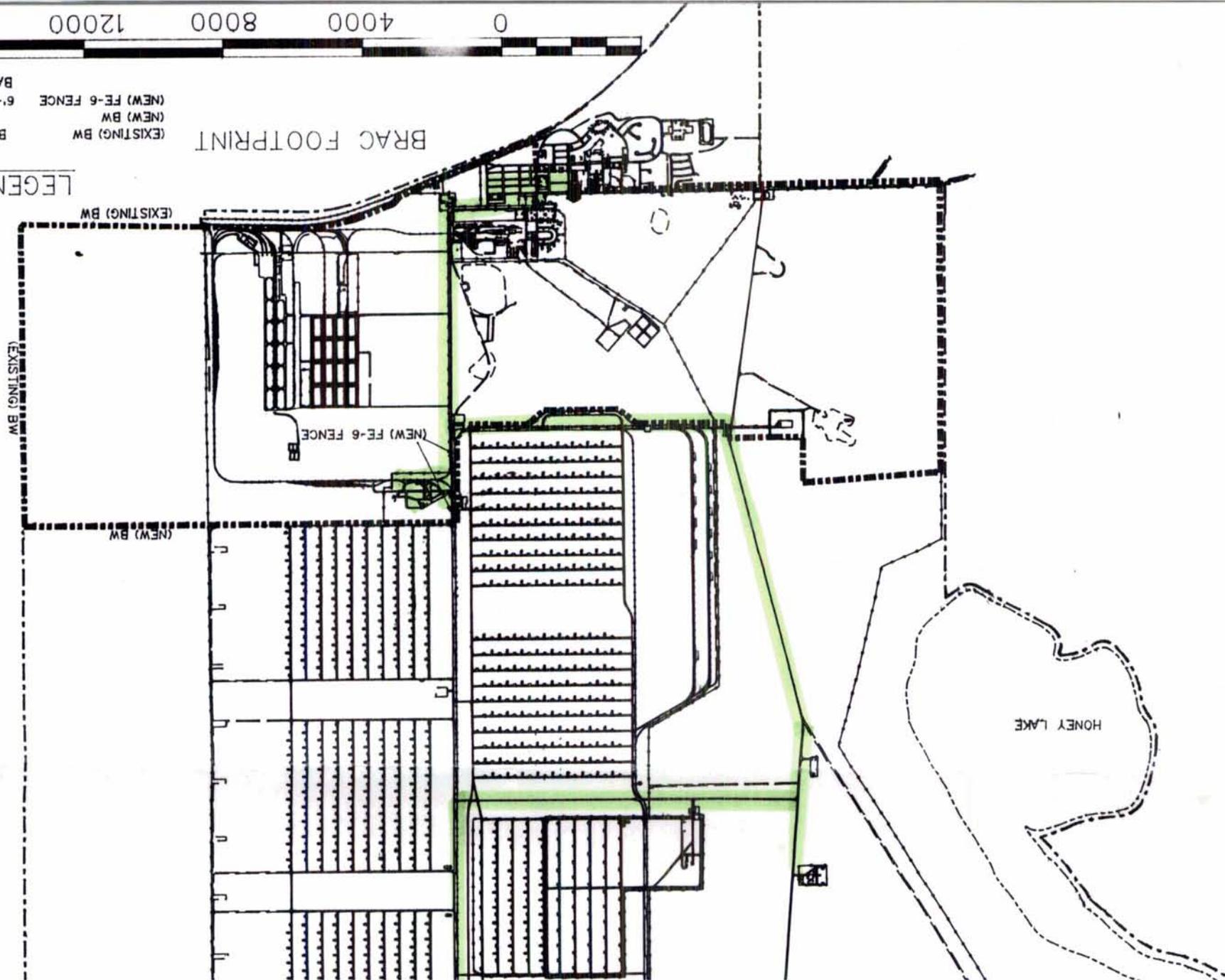
- |                  |   |
|------------------|---|
| (EXISTING) BW    | BARBED WIRE                                       |
| (NEW) BW         | NEW BARBED WIRE                                   |
| (NEW) FE-6 FENCE | 6' -0" CYCLONE FENCE WITH<br>BARBED WIRE OVERHANG |

DEPOT



BARBED WIRE  
NEW BARBED WIRE  
6'-0" CYCLONE FENCE WITH  
BARBED WIRE OVERHANG  
(EXISTING) BW  
(NEW) BW  
(NEW) FE-6 FENCE

LEGEND





SIERRA ARMY DEPOT

PRIDE IN EXCELLENCE  
• Readiness Since 1942 •

HERLONG, CA

# Document Separator

This document was too large to be scanned in for electronic view. It is regarding Sierra Army Depot in Herlong, CA

# WORLDWIDE TROOP SUPPORT

## ***Prepared to support troops, whatever the mission***

The IOC is structured to support U.S. Armed Forces and allies throughout the world. As threats change, and humanitarian needs occur, the IOC continues to reshape its facilities to support the Defense strategy.

## ***Conflict Planning Strategy***

The current Defense strategy is based on two Major Regional Conflict scenarios and allows an interval of time to replenish expended war reserve stocks after termination of the conflict. The replenishment of war reserves comes from a warm base that is in production, a long leadtime base that would take some time to produce, and a cold base which is in layaway. This strategy requires the ability to respond rapidly to deter and, if necessary, to fight in a wide variety of regional conflicts with little or no advance notice. Since our Army is predominantly based in the U.S., we need the ability to rapidly project a ready force capable of fighting and fully sustaining itself with little

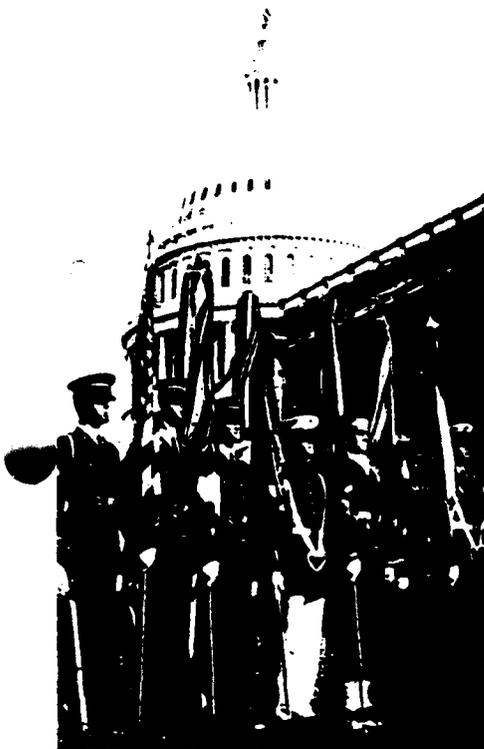
warning in any theater of operation. The base force and war reserves must be adequate to deal with these situations. The IOC stands ready to support any conflict or contingency operation.

## ***Other Military Contingencies***

The IOC provides support to other military contingency operations and stands ready to support service members wherever they are around the world. The concept of a "Contingency Depot," ready to quickly deploy and sustain soldiers, is now part of Army doctrine.

## ***Peacetime***

In addition to conflicts and contingency operations, the IOC supports national and international humanitarian missions. Natural disasters and conflict aftermath cause the command to react with special effort and attention to detail to resolve the crisis. The Rwanda crisis depicts the volunteer spirit of command employees.



*Shipping materiel for quick response*



*Bradley maintenance*

***FACING PAGE: Loading equipment for power projection  
UPPER RIGHT: Computerized wiring inspection  
LOWER LEFT: 155mm projectiles***

# TIER DEPOT STUDY

## A) BACKGROUND

- 1) BRAC 95 - DOD Selection Criteria (Encl 1)
- 2) Military Value Assessment (Encl 2)
  - Installation Assessment (Encl 2, 3)
  - Operational Blueprint (Encl 2)
- 3) Conclusion (Encl 4)

## B) TIER DEPOT CONCEPT

- 1) Background
- 2) Objectives (Encl 5)
- 3) Methodology (Encl 6)
- 4) Conclusion (Encl 7)

## C) CONCERNS

- 1) Lacks Depot Involvement
- 2) No Staff Visits
- 3) Methodology is Questionable/flawed
- 4) Conclusion Questionable Considering Objectives & CSA  
Guidance

## D) SENECA CONCLUSIONS

1) Tier Depot Study did not provide Best Solution to Problem.

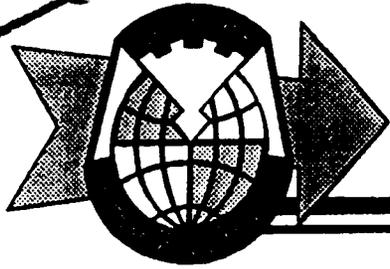
2) Storage Capacity vs Requirements indicates that any stockpile storage configuration will satisfy MRC Requirement and Required Storage.

3) Outloading capability vs requirements indicates that rank order of Eastern Region is immaterial to meeting MRC requirements.

4) More manpower and money could have been saved.

5) Seneca should be Tier I (see Qualitative Analysis, Item 1-6).

6) Air Drop Pallets for XVIII ABN and 75th Rangers from ANAD to SEDA



# ***BRAC 95 - DOD SELECTION CRITERIA***

## ● MILITARY VALUE:

- CURRENT / FUTURE MISSION REQUIREMENTS
- AVAILABILITY / CONDITION OF LAND / FACILITIES
- ABILITY TO ACCOMMODATE CONTINGENCY, MOBILIZATION AND FUTURE REQUIREMENTS
- COST AND MAN POWER IMPLICATIONS

## ● RETURN ON INVESTMENT:

- EXTENT AND TIMING OF SAVINGS

## ● COMMUNITY IMPACTS:

- ECONOMIC IMPACT
- ENVIRONMENTAL IMPACT
- ABILITY OF COMMUNITY TO SUPPORT FORCES, MISSIONS AND PERSONNEL



## DOD SELECTION CRITERIA

IN SELECTING MILITARY INSTALLATIONS FOR CLOSURE OR REALIGNMENT, DoD, GIVING PRIORITY CONSIDERATION TO MILITARY VALUE (THE FIRST FOUR CRITERIA BELOW), WILL CONSIDER:

### MILITARY VALUE:

1. THE CURRENT AND FUTURE MISSION REQUIREMENTS AND THE IMPACT ON OPERATIONAL READINESS OF DOD'S TOTAL FORCE.
2. THE AVAILABILITY AND CONDITION OF LAND AND FACILITIES AT BOTH THE EXISTING AND POTENTIAL RECEIVING LOCATIONS.
3. THE ABILITY TO ACCOMMODATE CONTINGENCY, MOBILIZATION, AND FUTURE REQUIREMENTS AT BOTH THE EXISTING AND POTENTIAL RECEIVING LOCATIONS.
4. THE COST AND MANPOWER IMPLICATIONS.

### RETURN ON INVESTMENT:

5. THE EXTENT AND TIMING OF POTENTIAL COST SAVINGS, INCLUDING THE NUMBER OF YEARS, BEGINNING WITH THE DATE OF COMPLETION OF THE CLOSURE OR REALIGNMENT, FOR THE SAVINGS TO EXCEED THE COSTS.

### COMMUNITY IMPACTS:

6. THE ECONOMIC IMPACT ON COMMUNITIES.
7. THE ABILITY OF BOTH THE EXISTING AND POTENTIAL RECEIVING COMMUNITIES' INFRASTRUCTURE TO SUPPORT FORCES, MISSIONS, AND PERSONNEL.
8. THE ENVIRONMENTAL IMPACT.

Figure 5.

(1) **Installation Inventory.** As in earlier BRAC studies, the Army conducted a comprehensive review of all installations. This review identified 97 primary installations and a number of lease sites. See Figures 6 & 7.

## INSTALLATION CATEGORIES

MANEUVER AREAS	MAJOR TNG AREAS	C2/ADMIN SUPPORT	TRAINING SCHOOLS	PROFESSIONAL SCHOOLS
BRAGG CAMPBELL CARSON DRUM HOOD LEWIS RICHARDSON RILEY STEWART WAINWRIGHT SCHOFIELD BKS	AP HILL CHAFFEE DIX GREELY HUNTER-LIGGETT INDIANTOWN GARRISON IRWIN MCCOY PICKETT POLK	BELVOIR BUCHANAN GILLEM KELLY SPT HAMILTON McPHERSON MEADE MONROE MYER PRICE SPT PRESIDIO, SF RITCHIE SELFRIDGE SHAFTER TOTTEN	BENNING BLISS EUSTIS/STORY GORDON HUACHUCA JACKSON KNOX LEE LEONARD WOOD MCCLELLAN POM RUCKER SAM HOUSTON SILL	CARLISLE BKS LEAVENWORTH McNAIR WEST POINT  LEASES  ARO ATCOM HQ, AMC OPTEC HQ, PERSCOM HQ, SSDC JAG SCHOOL MTMC NGIC JAG USACAA ISC ARPERCEN ARSPACE SSDC

Figure 6.

Three levels, or tiers, of installations are organized within each region for identifying the level of activity an installation performs. Tier 1 supports a normal/full-up daily activity level with a stockage configuration of primarily required stocks and minimal non-required stocks for demilitarization. Tier 2 performs static storage of follow-on war reserve requirements and will eventually store production offset stocks and limited non-required demilitarization stocks. Tier 3 will be minimally staffed until the non-required stocks are completely reduced to a zero balance and the facility is closed.

**(2) Military Value Assessment.**

A Military Value Assessment (MVA) was conducted for each installation category. The MVA integrates the quantitative Installation Assessment with the qualitative operational blueprint discussed earlier in The Army Stationing Strategy. The result is the Army's best judgment on the military value of its installations. The MVA provides the basis for identifying BRAC study candidates and is summarized below.

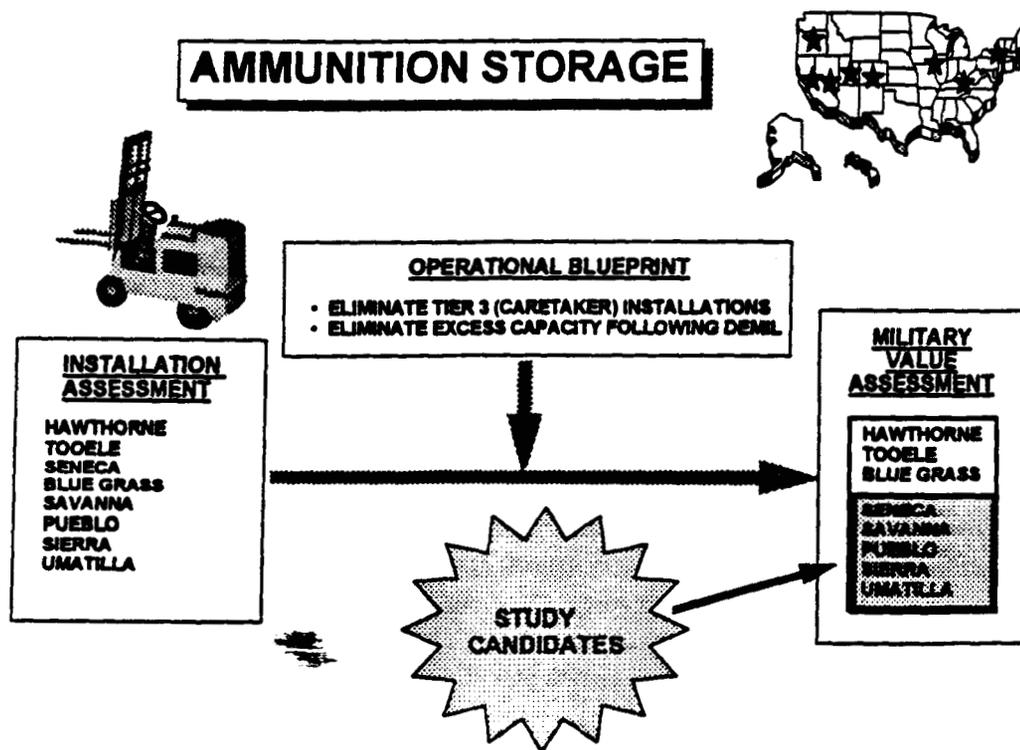


Figure 24.

Cost of Living Index is a measurement of the relative cost of living for military and civilian personnel in communities surrounding the installation. This is an indicator of location costs to the Army to live and conduct business at the installation. This attribute was rated at 25% of the Cost and Manpower weight.

MCA (Military Construction Army) Cost Factor indicates the relative difference between installations for construction of the same facility. The cost factor provides a relative index of the cost of capital investment for modernization of expansion of facilities. This attribute received 25% of the Cost and Manpower weight.

BASOPS (base operations) /Mission Population measures the relative cost of operating an installation in support of the mission requirements. This attribute has the highest rating at 50% of the Cost and Manpower weight.

### (2) Installation Assessment Rankings - AMMUNITION STORAGE

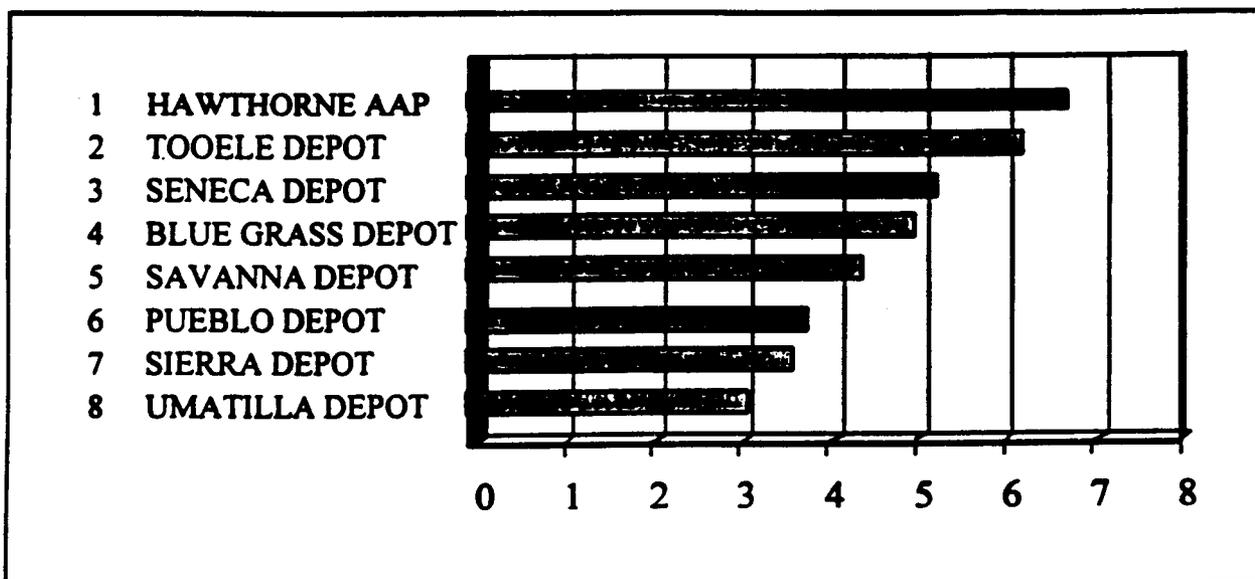


Figure 11. Installation Assessment Rankings - AMMUNITION STORAGE

ENC 3

		BLUE GRASS DEPOT	HAWTHORNE AAP	SAVANNA DEPOT ACT
	WEIGHT			
AMMO STORAGE	240	2240.00-	7662.00++	2427.00-
RESERVE TRAINING	40	3.2	0.6	2.8
DEPLOYMENT NETWORK	80	8.1	5.7-	5.5-
AVAILABLE WORKFORCE	40	224637.00++	2747.00	8170.00
MAINT FLEXIBILITY	50	8.00+	0.00-	2.00
MISSION REQUIREMENTS	--- 450	4.3	6.4	2.3
FACILITIES AVG AGE	50	49	50	57--
INFRASTRUCTURE	25	2.1	7.1	5.6
% PERMANENT FACILITY	50	94%+	96%+	96%+
QUANTITY-DISTANCE	75	0	0	0
ENVIRONMENTAL CAP	25	8.6	8.5	7.6
LAND AND FACILITIES	--- 225	8.2	8.7	7.1
EXCESS CAP STORAGE	50	0.00	0.00	137.00+
BUILDABLE ACRES	35	6000.00	132572.00+	494.00
ENCROACHMENT	30	284.9-	2.6	37.2
IMA	10	715.00	435.00	885.00
FUTURE REQUIREMENTS	--- 125	0.4	5.2	4.5
BASOPS/MSN Pop	100	12,990+	5,882++	17,377
MCA COST FACTOR	50	0.96	1.26	1.08
COL INDEX	50	100	107-	93
COST AND MANPOWER	--- 200	5.5	5.3	5.6
	---			
SCORE	1000	4.9	6.6	4.3
RANK		4	1	5

Table 47. Ammunition Storage Installations Decision Pad Model (Table 1 of 3)

		SIERRA DEPOT	TOCKLE DEPOT	UMATILLA DEPOT ACT
	WEIGHT			
AMMO STORAGE	240	1940.00--	4375.00++	1801.00--
RESERVE TRAINING	40	3.6	10.0+	0.7
DEPLOYMENT NETWORK	80	6.9	7.6	9.3+
AVAILABLE WORKFORCE	40	10082.00	11883.00	27975.00
MAINT FLEXIBILITY	50	1.00-	9.00+	0.00-
MISSION REQUIREMENTS	--- 450	2.1	5.9	2.2
FACILITIES AVG AGE	50	48	45+	51
INFRASTRUCTURE	25	2.8	8.8+	3.5
% PERMANENT FACILITY	50	51%--	59%--	68%--
QUANTITY-DISTANCE	75	0	0	0
ENVIRONMENTAL CAP	25	5.9	9.4	9.2
LAND AND FACILITIES	--- 225	6.1	8.2	6.8
EXCESS CAP STORAGE	50	76.00	0.00	0.00
BUILDABLE ACRES	35	10600.00	23500.00	6000.00
ENCROACHMENT	30	6.2	3.9	18.8
IMA	10	1010.00	1240.00	880.00
FUTURE REQUIREMENTS	--- 125	4.2	3.7	2.8
BASOPS/MSN Pop	100	26,882-	13,699+	37,599--
MCA COST FACTOR	50	1.43	1.00	1.25
COL INDEX	50	97	93	103-
COST AND MANPOWER	--- 200	3.1	6.1	1.2
	---			
SCORE	1000	3.5	6.2	3.1
RANK		7	2	8

Table 48. Ammunition Storage Installations Decision Pad Model (Table 2 of 3)

		SENECA DEPOT ACT	PUEBLO DEPOT ACT
	WEIGHT		
AMMO STORAGE	240	1492.00--	2164.00--
RESERVE TRAINING	40	4.3	0.0-
DEPLOYMENT NETWORK	80	9.6+	6.8
AVAILABLE WORKFORCE	40	15451.00	48906.00
MAINT FLEXIBILITY	50	9.00+	0.00-
MISSION REQUIREMENTS	--- 450	3.3	2.0
FACILITIES AVG AGE	50	47	49
INFRASTRUCTURE	25	2.2	3.3
% PERMANENT FACILITY	50	97%+	74%
QUANTITY-DISTANCE	75	0	0
ENVIRONMENTAL CAP	25	8.2	8.9
LAND AND FACILITIES	--- 225	8.6	7.4
EXCESS CAP STORAGE	50	282.00++	0.00
BUILDABLE ACRES	35	1000.00	14388.00
ENCROACHMENT	30	104.5	52.5
IMA	10	1105.00	590.00
FUTURE REQUIREMENTS	--- 125	6.2	2.4
BASOPS/MSN Pop	100	11,290+	40,785--
MCA COST FACTOR	50	1.19	0.92
COL INDEX	50	103-	85+
COST AND MANPOWER	--- 200	5.0	3.4
	---		
SCORE	1000	5.2	3.6
RANK		3	6

Table 49. Ammunition Storage Installations Decision Pad Model (Table 3 of 3)

		BLUE GRASS DEPOT	HAWTHORNE AAP	SAVANNA DEPOT
		WEIGHT		
MILES TO RAIL TRANS	30	0	0	0
MILES TO AIR TRANS	30	45	325--	76
MILES TO SEA TRANS	30	577	300+	926--
MILES TO HIGHWAY	10	6	100-	52
DEPLOYMENT	--- 100	8.1	5.7	5.5
ANNUAL TNG (# PEOPLE)	25	1069.00+	27.00	95.00
IDT (MANDAYS)	75	4485.00-	1506.00--	7061.00
RESERVE TRAINING	--- 100	3.2	0.6	2.8
ARCH/HIST BLDGS	10	0	0-	0
ENDGRD FAUNA/FLORA	15	1-	0+	1-
WETLANDS	15	0	0	0-
AIR QUALITY	15	1	1	1
WATER QUALITY	15	1	0	0
NOISE QUAL - ZONE II	10	1138	0	0
NOISE QUAL -ZONE III	15	0	0	0
CONTAMINATED SITES	5	54	126	75
ENV CAR CAPACITY	--- 100	7.9	8.5	6.8
CAPACITY WATER	25	0.72	5.40+	0.36-
CAPACITY SEWAGE	25	0.12-	3.00	7.60+
CAPACITY ELECT	25	75.00-	3900.00++	3833.00+
LANDFILL COST	25	\$24	\$2+	\$46
INFRASTRUCTURE	--- 100	2.1	7.1	5.5

Table 50. Ammunition Storage Installations Sub Models (Table 1 of 3)

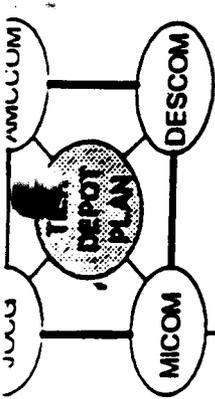
		SIERRA DEPOT	TOOLE DEPOT	UMATILLA DEPOT ACT
	WEIGHT			
MILES TO RAIL TRANS	30	1--	0	0
MILES TO AIR TRANS	30	0	35	35
MILES TO SEA TRANS	30	210+	711	315+
MILES TO HIGHWAY	10	7	15	1
DEPLOYMENT	--- 100	6.9	7.6	9.3
ANNUAL TNG (# PEOPLE)	25	287.00	1800.00++	475.00
IDT (MANDAYS)	75	8600.00+	20000.00++	252.00--
RESERVE TRAINING	--- 100	3.6	10.0	0.7
ARCH/HIST BLDGS	10	0	0	0
ENDGRD FAUNA/FLORA	15	0+	0+	1-
WETLANDS	15	1-	0	0
AIR QUALITY	15	1	1	1
WATER QUALITY	15	0	0	0
NOISE QUAL - ZONE II	10	68000-	5200	5
NOISE QUAL - ZONE III	15	10510-	1400	0
CONTAMINATED SITES	5	23	75	11
ENV CAR CAPACITY	--- 100	6.0	9.4	8.5
CAPACITY WATER	25	4.00	8.90++	0.56
CAPACITY SEWAGE	25	0.50-	12.00++	3.38
CAPACITY ELECT	25	2441.00	2652.00	330.00-
LANDFILL COST	25	\$110--	\$15	\$1+
INFRASTRUCTURE	--- 100	2.7	8.9	3.4

Table 51. Ammunition Storage Installations Sub Models (Table 2 of 3)

		SENECA	PUEBLO
		DEPOT ACT	DEPOT ACT
	WEIGHT		
MILES TO RAIL TRANS	30	0	0
MILES TO AIR TRANS	30	0	8
MILES TO SEA TRANS	30	293+	1005--
MILES TO HIGHWAY	10	14	13
DEPLOYMENT ---	100	9.6	6.8
ANNUAL TNG (# PEOPLE)	25	213.00	0.00-
IDT (MANDAYS)	75	10608.00++	0.00--
RESERVE TRAINING ---	100	4.3	0.0
ARCH/HIST BLDGS	10	0	0
ENDGRD FAUNA/FLORA	15	0+	1-
WETLANDS	15	0	0
AIR QUALITY	15	1	1
WATER QUALITY	15	10-	0
NOISE QUAL - ZONE II	10	7	0
NOISE QUAL - ZONE III	15	0	0
CONTAMINATED SITES	5	55	49
ENV CAR CAPACITY ---	100	8.2	8.2
CAPACITY WATER	25	1.60	1.20
CAPACITY SEWAGE	25	0.63-	3.50
CAPACITY ELECT	25	620.00-	150.00-
LANDFILL COST	25	\$55	\$10
INFRASTRUCTURE ---	100	2.1	3.3

Table 52. Ammunition Storage Installations Sub Models (Table 3 of 3)





# OBJECTIVES

- To Support and Store Training and Power Projection Requirements for Two MRC's as Directed in DOD Planning Guidance
- To distribute Stockpile Within Geographically Oriented Regions
  - EAST
  - CENTRAL
  - WEST
- To Assure End State Asset Distribution Maximizes Outloading Capabilities
- To Develop Storage Base Infrastructure That Supports the Depot Tiering Concept

# TIER METHODOLOGY

## A. QUANTITATIVE ANALYSIS

- 1) Power Projection vs Outloading
- 2) Storage Capability
  - a) Conforming warehouses
  - b) Too much Emphasis
- 3) Location
  - No credit for airfield
- 4) Costs
  - Misleading (Relative to size)
- 5) Maintenance
  - Only 3 got credit
- 6) Demil
  - Only attrib (accurate)

## B. Qualitative Analysis

- Basically meaningless

Tier Depot Analysis

# QUANTITATIVE ANALYSIS

## OVERALL RANKINGS

POWER PROJECT (5)

- Container
- Breakbulk
- 70/30 Split
- Transportation

STORAGE (4)

- NET SqFt
- ECM SqFt

LOCATION (3)

- To SPOE
- To APOE
- To TRNG
- \$ To SPOE

COSTS (2)

- Receipt / Issue Inventory
- Surveillance
- Maintenance

MAINT (2)

- Missile
- Buildings
- NEW
- Square Feet

INSPECT & TEST (2)

- Function Test
- Missile
- Modern Surveillance
- X-Ray Facility

DEMIL (1)

- RRR
- OB / OD
- Stocks in Storage

## SUPPORTING QUANTITATIVE DATA

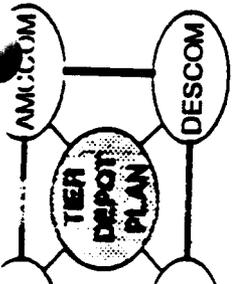
## DEFINITION

**POWER PROJECTION:**

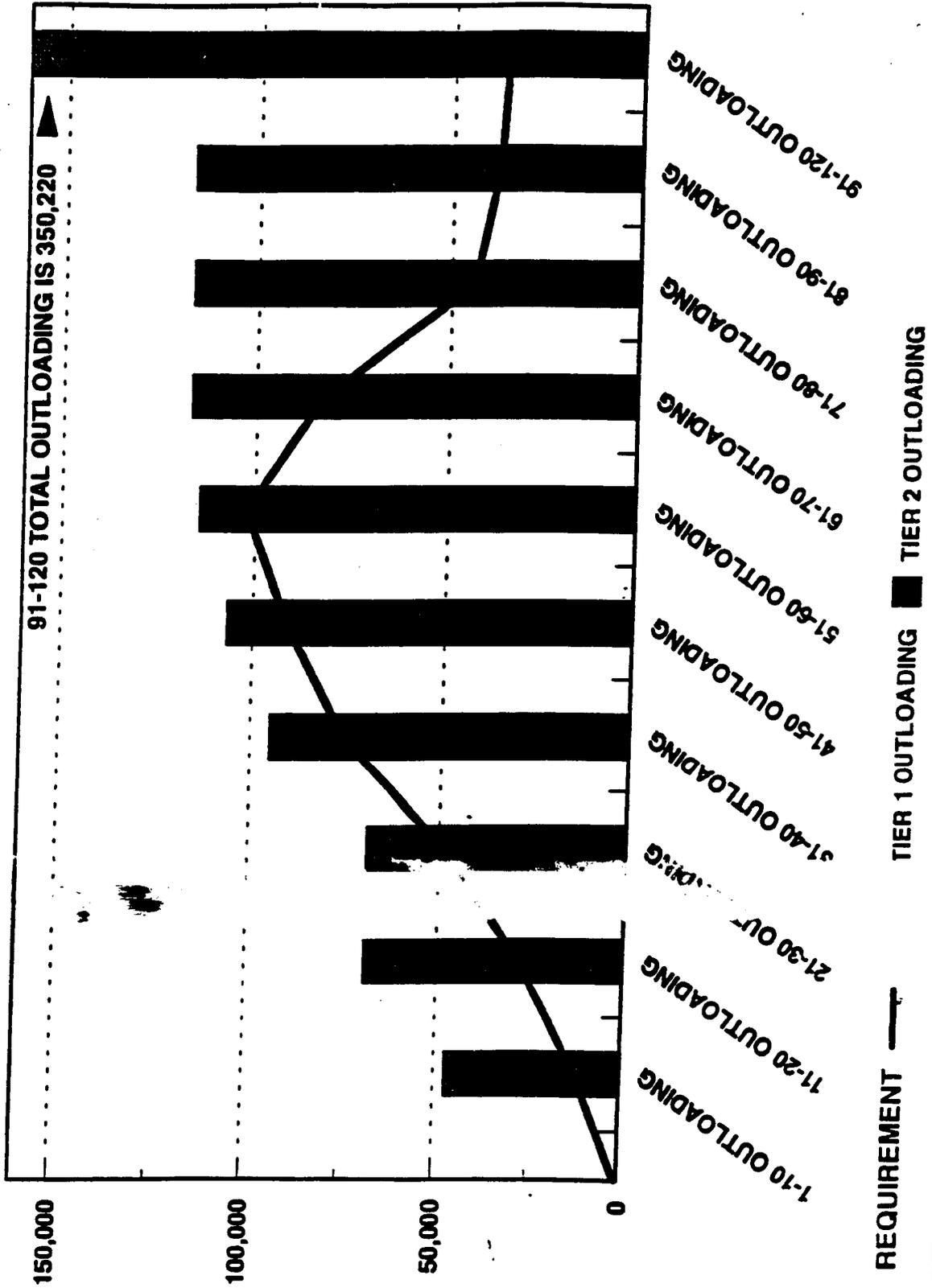
**DEVELOP AND MAINTAIN THE  
CAPABILITY TO RAPIDLY DEPLOY AND  
SUSTAIN DECISIVE COMBAT FORCES  
FROM BASES IN THE UNITED STATES TO  
ANY REGION OF THE WORLD.**

Tier Depot Analysis

# SUPPORTING TWO MRCs



ST



ENC 6

04/04/95 14:53

☐

DPM-DC

☐073

04/04/95 12:00

☐7032748011

AMC DCS AMMO

☐008

# POWER PROJECTION

## OUTLOADING CAPABILITY

### FACTORS

DEPOT	CNTR/SCR	BB/SCR	70-30/SCR
<b>WEIGHT:</b>	<b>4</b>	<b>2</b>	<b>3</b>
ANAD	1040/2.9	800/1.8	968/2.4
BGAD	2080/5.9	3760/3.7	2584/6.5
CAAA	780/2.2	11300/11.0	3936/9.8
HWAAP	923/2.6	1280/1.2	1030/2.6
LEAD	520/1.5	3480/3.4	1408/3.5
MCAAP	3900/11.0	5560/5.4	4398/11.0
RRAD	728/2.1	2840/2.8	1362/3.4
SEDA	104/3	1060/1.0	391/1.0
SIAD	1144/3.2	2000/1.9	1401/3.5
SVDA	1989/5.8	1700/1.7	1902/4.8
TEAD	1170/3.3	8600/8.4	3399/8.5

MEASUREMENTS ARE IN ST PER DAY BASED ON MAX CAPABILITY OF DEPOT TO OUTLOAD. ARMY GOAL TO GO CONTAINERIZED, THUS GIVING MAX WEIGHT, FOLLOWED BY 70/30 SPLIT, THEN TOTAL BB.

# REGIONAL COMPARISON

## OUTLOADING CAPABILITY

### WEST

		TOTAL TONS
TEAD	I	140,400
HWAAP	II	110,760
SIAD	III	137,280

### CENTRAL

MCAAP	I	468,000
RRAD	II	87,360
SVDA	III	238,680

### EAST

CAAA	I	93,600
BGAD	I	249,600
ANAD	II	124,800
LEAD	II	62,400
SEDA	III	12,480

---

1,725,360

**SMCA STORAGE BASE**  
**AMMUNITION MAGAZINE STORAGE FACILITIES**  
**(CONVENTIONAL AMMUNITION)**  
**(REPORTING DEPOTS)**

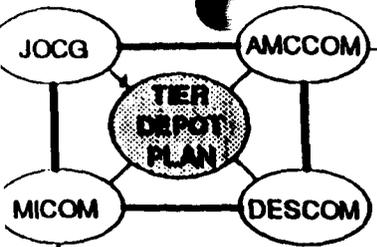
	EARTH COVERED MAGAZINES						ABOVE GROUND MAGAZINES		
	80' SGL DOOR	80' DBL DOOR	80' STRADLEY	60' SGL DOOR	60' DBL DOOR	40' SGL DOOR	TOTAL EARTH COVERED	STANDARD	OTHER
ANNISTON (1)	0	64	478	582	0	0	1124	6	0
BLUE GRASS (1)	551	100	0	199	0	2	852	10	0
LETTERKENNY	596	104	0	200	0	2	902	10	0
RED RIVER	377	23	0	300	0	2	702	18	0
SENECA	<sup>24</sup> 100	<sup>28</sup> 17	0	* <sup>772</sup> 390	<sup>18</sup> 10	2	<sup>969</sup> 519	8	0
SIERRA	560	37	0	200	0	2	799	12	0
SAVANNA	0	0	8	383	23	23	437	100	56(2)
TOOELE	600	100	0	200	0	2	902	12	0
<b>TOTAL</b>	<b>2784</b>	<b>445</b>	<b>486</b>	<b>2454</b>	<b>33</b>	<b>35</b>	<b>6237</b>	<b>176</b>	<b>56</b>

(1) REDUCTION DUE TO ELIMINATION OF TOXIC CHEMICAL REPORTING.

(2) 30 - HE (1500GSF) AND 26 - SMKL POWD (3850 GSF)

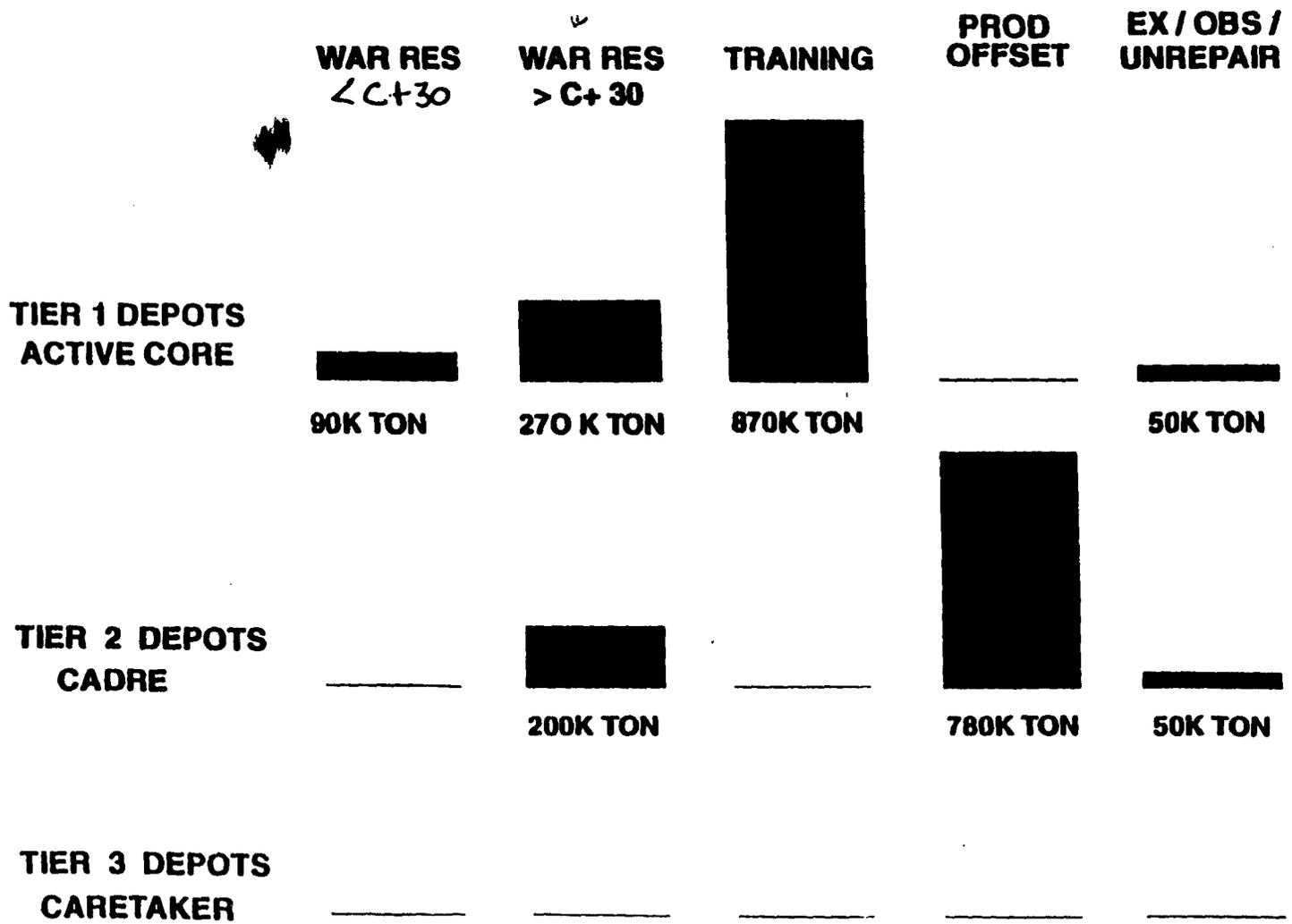
\* Includes 3 conforming small arms warehouses (68,640 tons) equivalent to 390 magazines

ENC 6



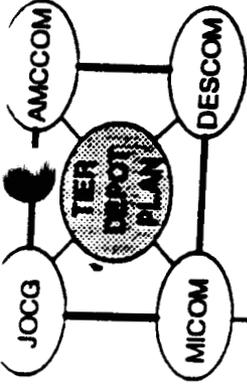
**Integrated Planning**

**END STATE STRATIFICATION**



ENCL 6

# Integrated Planning



## STRATIFICATION OF CONUS STOCKPILE

<b>TOTAL NON APPLICABLE 801K TONS</b>	<b>OTHER NON-APPLICABLE 388K TONS</b>
	<b>DEMIL 413K TONS</b>
<b>TOTAL APPLICABLE 2,210 TONS</b>	<b>OTHER SERVICE RQMTS 942K TONS</b>
	<b>PRODUCTION OFFSETS 448K TONS</b>
	<b>WAR RESERVE 350K TONS</b>
	<b>TRAINING 470K TONS</b>
<b>TOTAL CONUS STOCKPILE 3,011K TONS</b>	

ENCL 4

# REGIONAL COMPARISON

## STORAGE CAPABILITY

### WEST

		TOTAL TONS	ECM TONS	OTHER TONS
TEAD	I	289,136	186,521	102,615
HWAAP	II	985,523	481,943	503,580
SIAD	III	304,868	163,945	140,923

### CENTRAL

MCAAP	I	830,615	606,858	223,757
RRAD	II	200,447	147,084	53,363
SVDA	III	333,307	76,000	257,307

### EAST

CAAA	I	742,261	491,162	251,099
BGAD	I	259,664	188,261	71,403
ANAD	II	262,353	222,364	39,999
LEAD	II	244,943	199,950	44,993
SEDA	III	213,392	107,376	106,016*
		4,666,509	2,871,464	1,795,045

\*Includes 3 conforming small arms ammunition warehouses (68,640 tons) Equivalent to 390 magazines



## Seneca Army Depot Activity

### SEDA Financial Posture

	Employee	Expenses	Direct Labor Hours	Rate/Hour	(Adjusted) Rate/Hour
FY 94	302	\$25,111	199,962	125.58	-
FY 95	300	\$25,057	199,955	125.31	179.90
FY 95 (Adj)	300	\$25,057	255,590	98.03	152.62
FY 95 (Adj)	350	\$26,807	340,190	78.80	-
FY 95 (Adj)	400	\$28,557	424,790	67.23	-

**COSTS****FACTORS**

DEPOT	R/I/SCR	INV/SCR	SURV/SCR	MAINT/SCR
WEIGHT:	4	3	2	1
ANAD	✓ 248.66/3.0	14.45/4.6	359.85/4.4	45.55/8.2
BGAD	✓ 125.08/5.9	50.17/1.3	304.55/5.2	59.01/6.3
CAAA	66.86/11.0	10.69/8.2	224.89/7.1	40.93/9.1
HWAAP	148.71/4.9	38.33/1.7	144.87/11.0	51.97/7.2
LEAD	✓ 130.83/5.6	16.44/4.0	438.20/3.6	33.86/11.0
MCAAP	107.49/6.8	27.22/2.4	146.34/10.9	48.78/7.6
RRAD	✓ 134.22/5.5	6.00/11.0	505.24/3.2	49.22/7.6
SEDA	✓ 145.75/5.0	90.55/7	794.97/2.0	88.33/4.2
SIAD	✓ 142.21/5.2	57.11/1.2	386.06/4.1	59.39/6.3
SVDA	✓ 112.94/6.5	101.57/6	535.92/3.0	81.20/4.6
TEAD	✓ 122.38/6.0	27.24/2.4	275.58/5.1	55.21/6.7

R/I = COST PER ST; INV = COST PER GRID; SURV = COST PER LOT;  
 MAINT = COST PER MANHOUR FIXED.

DEMIL COSTS EXCLUDED DUE TO FUNDING FROM PAA.

ASSIGNED WEIGHTS ARE IN AGREEMENT WITH OMA PRIORITIZATION AS BRIEFED  
 IN THE AMMUNITION FAA.

# SHIPPING & RECEIVING RATE PER TON

FY94 TON

STANDARD

ANNISTON	203.00 (6)	4.457 (9)
BLUE GRASS	175.96 (3)	2.982 (4)
LETTERKENNY	133.00 (2)	3.928 (6)
RED RIVER	203.48 (7)	4.134 (7)
SENECA	177.45 (4)	2.009 (2)
SIERRA	182.55 (5)	3.074 (5)
SAVANNA	118.00 (1)	1.453 (1)
TOOELE	234.97 (8)	4.256 (8)
UMATILLA	291.85 (9)	2.426 (3)

# SHIPPING & RECEIVING COSTS PER TON

## STANDARD

ANNISTON	248.66	5.459 (9)
BLUE GRASS	125.08	2.119 (4)
LETTERKENNY	130.83	3.863 (8)
RED RIVER	134.22	2.726 (7)
SENECA	145.75	1.650 (2)
SIERRA	142.21	2.394 (6)
SAVANNA	112.34	1.383 (1)
TOOELE	122.36	2.216 (5)
UMATILLA		(3)

# SUMMARY

*Review of Data*

POWER PROJ	WEIGHTED	STORAGE CABABL	WEIGHTED	LOCAT ION	WEIGHTED	COSTS	WEIGHTED	MAINTANCE	WEIGHTED	NSP & TEST	WEIGHTED	DEML CAPABL	WEIGHTED	TOTAL WEIGHTED	R A
ANAD	3.3	16.5	3.8	8.0	24.0	5.5	11.0	11.0	22.0	6	18	6.1	6.1	110.8	6
BOAD	6.8	34.0	3.4	6.4	19.2	5.7	11.4	7.2	11.4	6	12	7.0	7.0	104.2	6
CAAA	7.8	39.5	8.4	5.5	16.5	11.0	22.0	7.4	14.8	11	22	8.5	8.5	160.9	2
HWAAP	2.9	14.5	10.9	8.5	25.5	6.9	13.8	6.1	11.2	11	22	11.0	11.0	141.6	3
LEAD	3.4	17.0	3.4	8.1	24.3	6.7	13.4	6.3	12.6	10	20	6.0	6.0	112.5	5
MCAAP	11.0	55.0	11.0	6.5	19.5	8.2	16.4	9.5	19.0	6	16	8.7	8.7	178.6	1
RRAD	3.6	18.0	2.7	4.7	14.1	8.8	17.8	10.1	20.2	8	18	8.2	8.2	106.7	2
SEDA	1.4	7.0	2.1	6.8	20.4	3.9	7.8	12.2	12.6	6	12	5.4	5.4	61.0	11
SIAD	4.1	20.5	3.5	11.0	33.0	6.0	10.0	1.7	3.4	6	12	10.7	10.7	103.6	6
SVDA	5.4	27.0	2.9	4.5	13.5	4.9	9.8	3.6	7.2	8	16	5.0	5.0	92.1	10
TEAD	7.3	36.5	3.6	6.5	19.5	6.3	12.6	4.8	9.6	7	14	8.2	8.2	114.8	4

## QUALITATIVE ANALYSIS

- 1) On-Post Airfield
- 2) Only Depot east of California with a runway. Runway is 7000 feet long, totally fenced in, C5A capable and directly connected to the Ammunition Area.
- 3) Seneca use to be the largest bulk special weapons storage area in the Free World, storing critical, classified material of vital importance to National Security. The facilities, equipment and expertise still exists at Seneca, so we have the capability to store anything that requires special security measures today.
- 4) Only Chemical Agent Resistant Coating (CARC) Capable Paint Facility within Ammunition Area in CONUS.
- 5) Machine Shop with Ammunition Prototype Capability
- 6) Ideal site for Pre-Positioned stocks because of Rapid Deployment Capability.
- 7) Conforming small arms warehouses enhance efficiencies to receipt/issue.
- 8) Only installation with NRC License for 25mm DU.
- 9) Provide explosive storage requirement for the 174th Tactical Fighterwing (Deployed during Desert Storm).
- 10) Stores hazardous materials. Currently has 96% of Army's DS2 Inventory.
- 11) PCB Testing Capability
- 12) Radiation Decontamination Team (RAT)

# QUANTITATIVE SUMMARY

## RANKING ORDER

1. MCAAP	1. MCAAP
2. CAAA	2. CAAA
3. HWAAP	3. HWAAP
4. TEAD	4. SEDA
5. LEAD	5. TEAD
6. ANAD	6. LEAD
7. RRAD	7. ANAD
8. BGAD	8. RRAD
9. SIAD	9. BGAD
10. SVDA	10. SIAD
11. SEDA	11. SVDA

## REGIONAL SUMMARY

### WEST

### CENTRAL

### EAST

HWAAP - 3

MCAAP - 1

CAAA - 2

TEAD - 5

RRAD - 8

LEAD - 6

SIAD - 10

SVDA - 11

ANAD - 7

BGAD - 9

SEDA - 4

# Document Separator



REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
OFFICE OF THE CHIEF OF STAFF  
200 ARMY PENTAGON  
WASHINGTON DC 20310-0200

17 APR 1995



Mr. Edward A. Brown III  
Defense Base Closure and Realingment Commission  
1700 N. Moore Street, Suite 1425  
Arlington, VA 22209

Dear Mr. Brown:

The attached response is being provided per AMC's request dated April 10, 1995 regarding Tier Depot Analysis. This information was requested as a result of the Seneca Army Depot Activity visit on April 5, 1995.

Point of contact for this action is Mr. Anderson, (703)693-0077.

*Jack Marriott, LTC, GS*  
for MICHAEL G. JONES  
COL, GS  
Director, The Army Basing Study

Attachment



REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
HEADQUARTERS, U.S. ARMY MATERIEL COMMAND  
5001 EISENHOWER AVENUE, ALEXANDRIA, VA 22333 - 0001



AMCSO

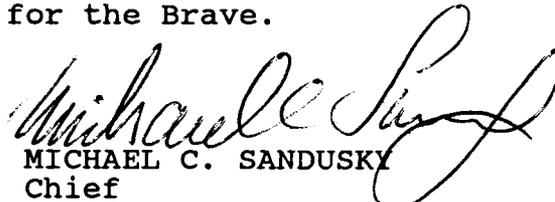
10 April 1995

MEMORANDUM FOR COL MIKE JONES, HQDA, DIRECTOR, THE ARMY  
BASING STUDY (DACS-TABS), 600 ARMY PENTAGON,  
WASH DC 20310-0001

SUBJECT: Tier Depot Analysis - Seneca Army Depot Activity

1. Request Integrated Ammunition Stockpile Management Plan (enclosure) be forwarded to the Base Closure and Realignment Commission. An interest in the Tier III was expressed last week while the Commission was visiting Seneca.
2. Would appreciate your efforts in providing this study to the commission.
3. Point of contact for this action is Leigh Lindenberger, 274-3410.
4. AMC -- America's Arsenal for the Brave.

Encl

  
MICHAEL C. SANDUSKY  
Chief  
Special Analysis Office

# INTEGRATED AMMUNITION STOCKPILE MANAGEMENT PLAN



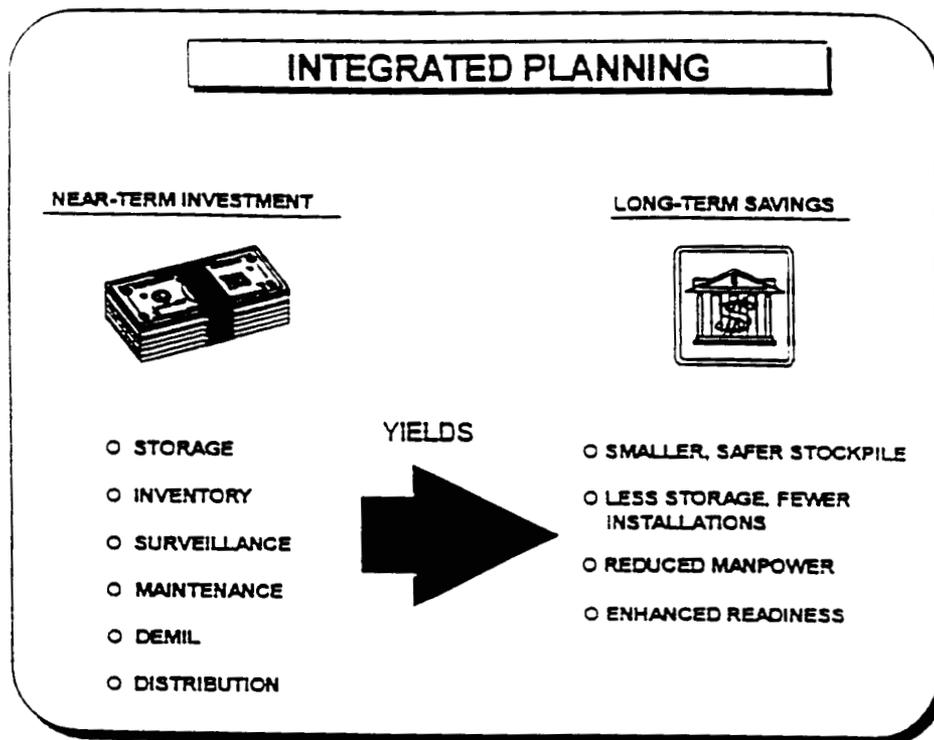
MAY 1994

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# I. PURPOSE

a. This document presents an Integrated Ammunition Stockpile Management Plan that outlines near term investments for achieving long term efficiencies. The plan provides a methodology for restructuring the current wholesale ammunition storage base. The plan also addresses changes in stockpile management methodologies for distribution, storage, inventory, surveillance, maintenance, and demilitarization.



b. The changing worldwide geopolitical environment, reduced military force structure, decreased ammunition Operation and Maintenance, Army (OMA) funding, and revised military strategies focusing on a CONUS based power projected Army has necessitated an evaluation outlining how we intend to conduct daily ammunition stockpile management operations. Unlike pre-1991 war reserve requirements that were based on a global, protracted war in three theaters, current requirements support two Major Regional Contingency (MRC) scenarios and require a stronger emphasis on support from our CONUS wholesale ammunition storage base. Consequently, streamlining of the storage base into an efficient and effective operation has become imperative to maintain optimum readiness.

## II. OBJECTIVES

To develop a storage base and ammunition policies resulting in a smaller, safer stockpile on fewer installations using less manpower. This plan will provide a common reference and vision for both near and far term as we reduce our stockpile. It will provide the foundation for future programming and budgeting based on realistic financial resources.

## III. SCOPE

a. In consonance with the Army mission of the Single Manager for Conventional Ammunition (SMCA), this plan addresses the stockpile of wholesale ammunition for all of the Services. The tier storage base was developed encompassing the following primary wholesale stockpile storage installations:

Crane AAA	Red River AD
Hawthorne AAP	Savanna ADA
McAlester AAP	Seneca ADA
Anniston AD	Sierra AD
Blue Grass AD	Tooele AD
Letterkenny AD	

b. The realignment of each installation is focused solely on the ammunition related functional mission at each installation. This includes work being performed on SMCA items, U.S. Army Missile Command (MICOM) items, and Service unique items.

## IV. BACKGROUND

### a. Chief of Staff - Army tasking

(1) The requirement to formulate an Integrated Ammunition Management Plan was outlined in a 19 Oct 93 memorandum from the Chief of Staff of the Army (CSA), General Gordon R. Sullivan. His letter stated that the Army will produce a plan containing a common reference and vision for both the near and far term with an ultimate objective of achieving a smaller, safer ammunition stockpile with fewer installations using less manpower. To accomplish this ambitious goal, near term investments in rewarehousing, redistribution, disposal and modernization of the stockpile, will be identified to achieve long term efficiencies. Since availability of additional resources cannot be assumed, the CSA directed that the Army take steps for more efficient use of the resources that are programmed and budgeted in the near term and out years. An important step in ensuring efficient use of resources would be to

construct a plan that contained a solid foundation for future programming and budgeting projections. As a springboard for the development of the plan, the CSA tasked the Deputy Chief of Staff for Operations (DCSOPS) to undertake and outline an Ammunition Functional Area Assessment (FAA) to the Vice Chief of Staff Army (VCSA) which would identify measures to be taken in refocusing stockpile management philosophies.

(2) The CSA tasking occurred as a result of several briefings and studies outlining the difficulties associated with the current wholesale ammunition stockpile. In March 1993, the Deputy Chief of Staff for Logistics (DCSLOG) received a briefing on Operation and Maintenance, Army (OMA) funding shortfalls and the impact on the stockpile. In May 1993, the Joint Ordnance Commanders Group (JOCG) initiated the Wholesale Ammunition Stockpile Program (WASP) review and assessment based on the possible degradation in stockpile safety, readiness, and quality resulting from the reduced level at which essential stockpile readiness functions were being funded. In July 1993, the CSA was briefed by the Army Materiel Command (AMC) Deputy Chief of Staff for Ammunition (DCS AMMO) who outlined the growing stockpile concerns associated with funding shortfalls. The WASP Study was accomplished between June and September of 1993. The study, representing the efforts of 43 major participants from all military services, provided a detailed analysis of the impacts of not performing critical functions at an appropriate funding level. Of primary concern was the lack of funding being applied to the essential stockpile readiness functions of inventory accountability, surveillance, maintenance, and rewarehousing.

(3) In October 1993, a second briefing by the DCS AMMO to the CSA outlined the results and findings from the WASP study. The direction from the CSA to accomplish a functional area assessment and develop an Integrated Ammunition Stockpile Management Plan resulted.

## **b. CHANGES IN THE STOCKPILE**

(1) Over the past few years, the wholesale ammunition storage infrastructure and the stockpile have undergone significant changes. This rapid change has been a major contributing factor to the current stockpile deficiencies as identified in the WASP study.

(2) A number of key events have occurred to reshape the size and structure of both the wholesale storage base and the ammunition stockpile.

a) The 1988 Base Realignment and Closure (BRAC) commission recommended the cessation of conventional ammunition operations at four depot activities: Fort Wingate, Navajo, Pueblo, and Umatilla. That decision reduced the CONUS wholesale storage base by six million gross square feet and required the absorption of 92,165 short tons, the equivalent of 830,000 square feet, into the remaining wholesale storage base.

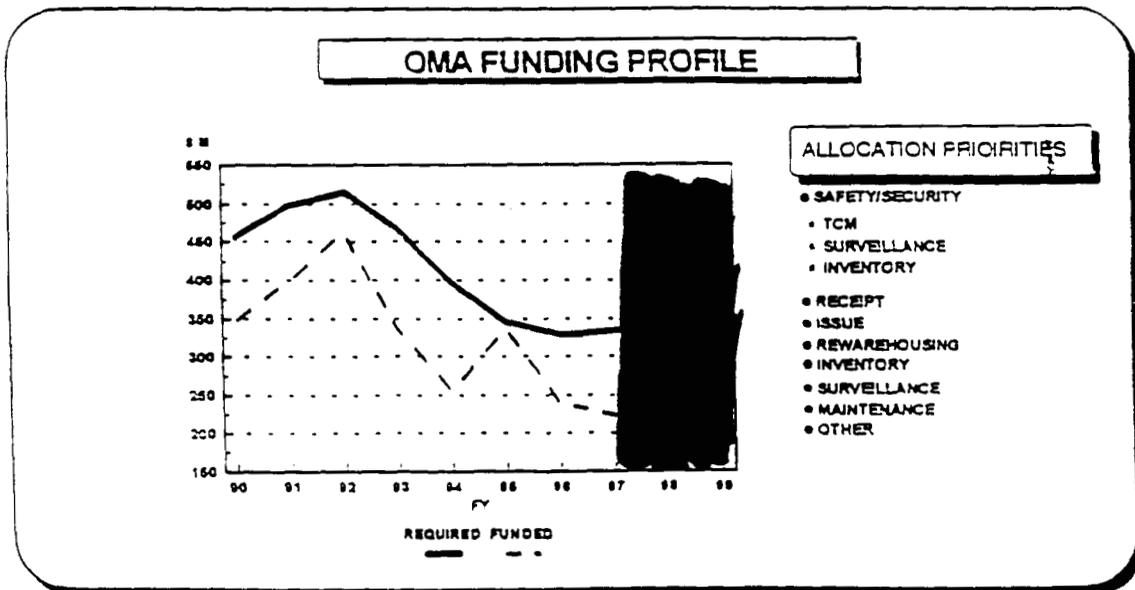
b) During Operation Desert Shield/Desert Storm, nearly 500,000 short tons were shipped from the CONUS storage base. Simultaneously, stocks aboard afloat prepositioned ships were downloaded, Europe based stocks were shipped to SouthWest Asia (SWA), and basic load and uploaded systems were arriving in theater. Nearly all stocks remaining after the Gulf War, regardless of origin, were retrograded to the CONUS storage base. The impact of this additional storage requirement on the already strained storage base and storage base operations was soon amplified significantly as stocks were received back into the wholesale system and were no longer configured in predominately large lots; a configuration which optimizes storage space, lends itself to economical surveillance and inventory, and requires little or no rewarehousing.

c) In FY 92-FY93 all services began a total realignment and right-sizing. The Department of Army announced a roll back of troops and munitions from Europe, an ammunition movement which by end state would place more than one half million short tons back into the CONUS storage base. To compound the problem, the Navy and Air Force also have roll back programs containing significant tonnages that have yet to be identified.

(3) Ultimately, significant force and funding reductions have reduced the capability of the storage installations to perform many basic storage functions to include rewarehousing, inventory, surveillance, and even the capability to efficiently and effectively receive and issue stock.

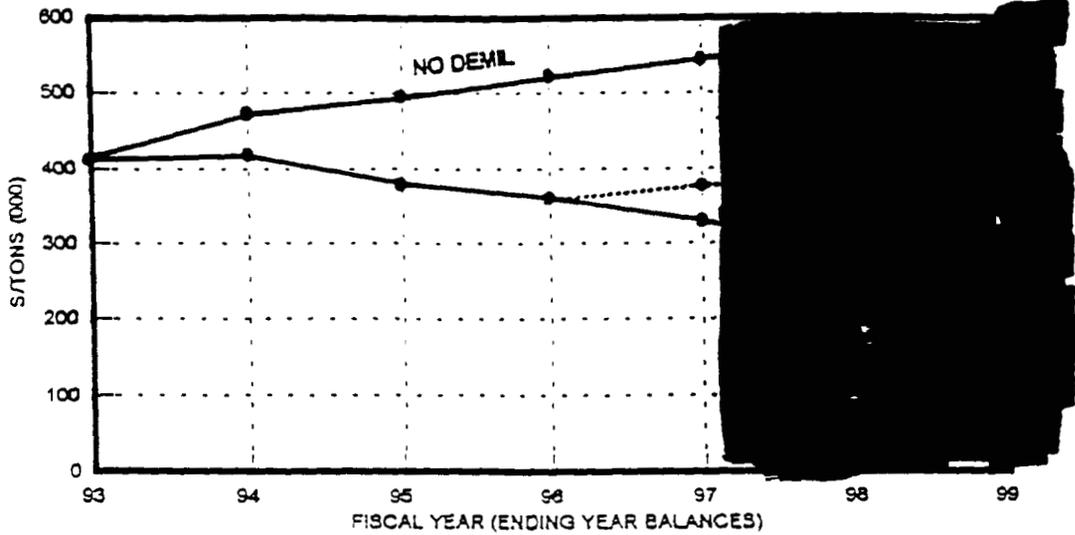
**c. FUNDING**

(1) In recent years, OMA funding has been sporadic and on the decline. Although funding levels for FY95 and FY99 are favorable, FY96/97/98 are significantly under funded. As programmed, planned funding levels result in an overall inability to meet the receipt/issue requirements for a full FY.



(2) Another major element of stockpile management is demilitarization. With the growing demilitarization stockpile, currently at 413,000 short tons, funding to accomplish demilitarization programs has become critical. With the augmentation of contractor support to the government base capacities, funding levels increase to levels whereby the actual backlog will start to decline in FY95. Without any funding, the backlog would continue to grow significantly. Demilitarization is currently funded to full capacity in FYs 94/95/96 by Procurement Appropriation [REDACTED]

## PROGRAM ALTERNATIVES

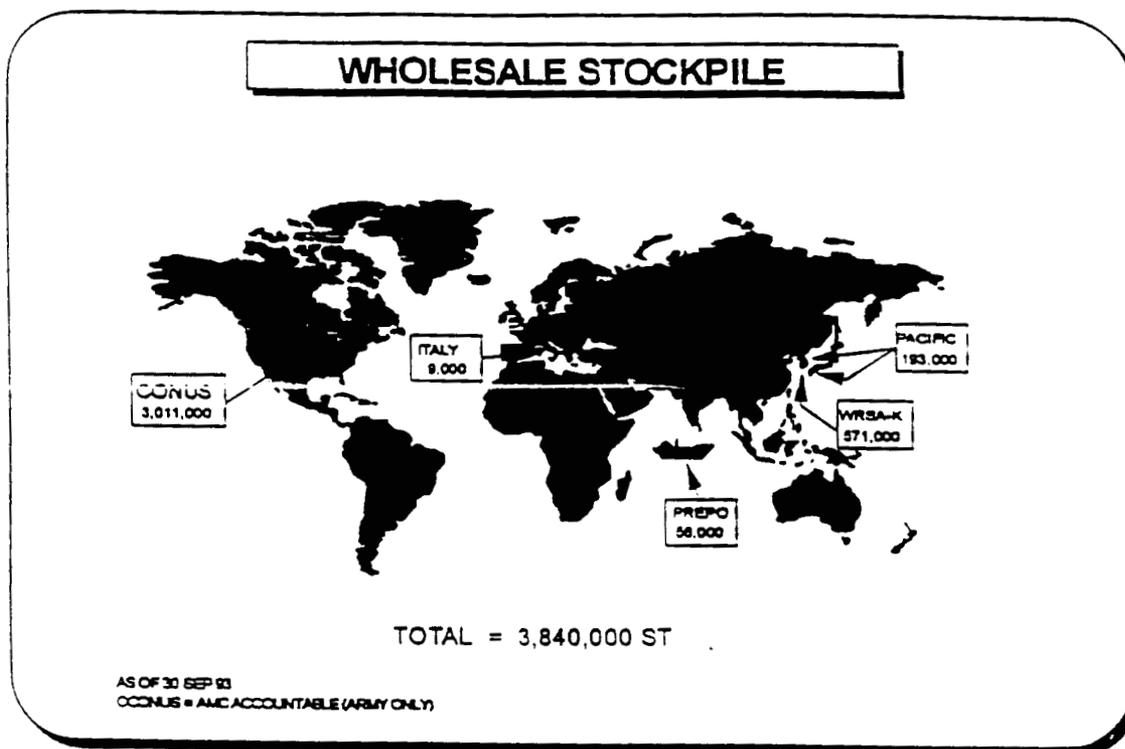


FUNDS PER FISCAL YEAR

POM	\$ 70.00M	\$ 100.00M	\$ 100.00M	\$ 35.00M	[REDACTED]	[REDACTED]
CAPABILITY	\$ 70.00M	\$ 100.00M	\$ 100.00M	\$ 110.00M	[REDACTED]	[REDACTED]

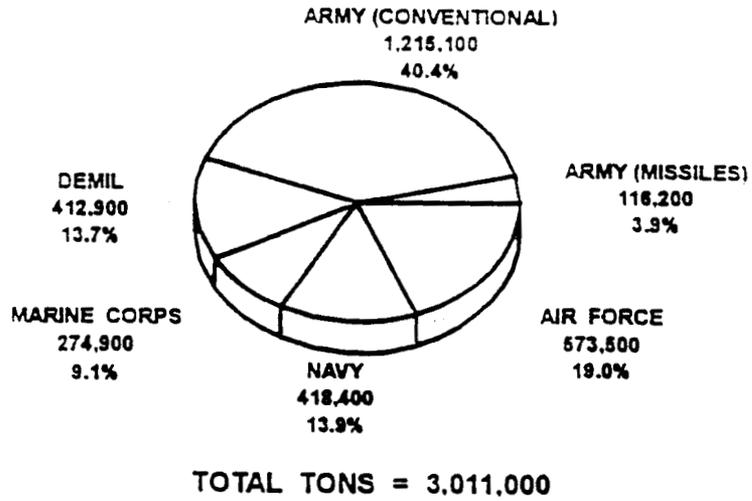
## V. STOCKPILE ASSESSMENT

a. As the Single Manager for Conventional Ammunition (SMCA), the Army has oversight of wholesale assets of all services, as well as Army Reserve (AR) and Operational Projects stored in forward deployed theaters and aboard Army Prepositioned Afloat vessels. The overall stockpile for which SMCA maintains accountability totals approximately 3,840,000 short tons. A total of 3,011,000 short tons resides in the CONUS wholesale storage base.



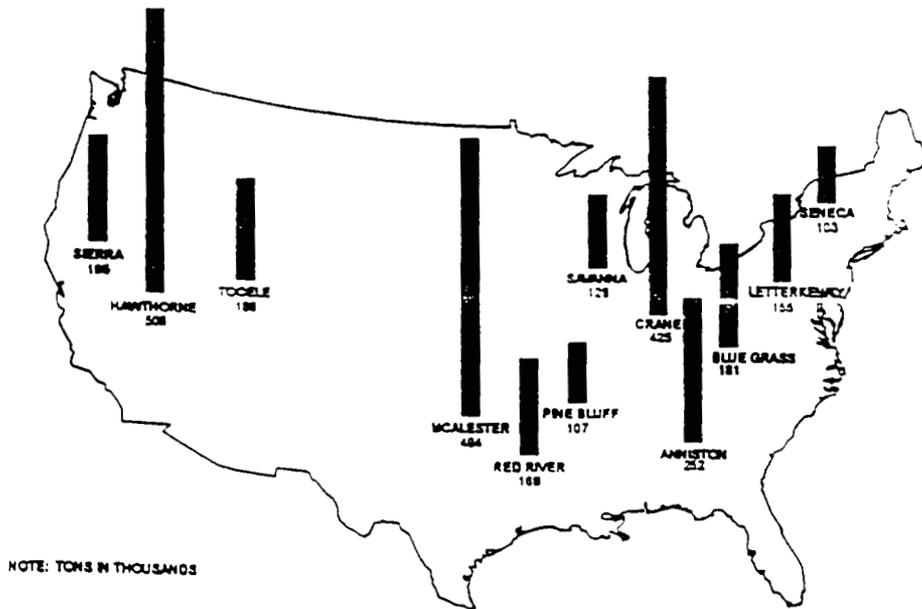
b. The CONUS wholesale stockpile is further broken down into individual account owners. The base is responsible for the storage of Army (conventional and missile), Navy, Marine Corps, Air Force, and demilitarization account stocks. The Army accounts for approximately 44 percent (40 percent conventional, 4 percent missiles) of the total base. An additional 14 percent, or 413,000 short tons of the 3,011,000 short tons resides in the demilitarization account. Significantly, 42 percent of the CONUS wholesale stockpile belongs to the other services.

## CONUS WHOLESALE STOCKPILE



c. The ammunition wholesale stockpile is primarily configured within several CONUS base installations as depicted in this chart:

## PRIMARY STORAGE LOCATIONS



d. Essential to the Integrated Ammunition Stockpile Management Plan is the separation and segregation of the current stockpile into two distinct subsets, based on the requirements for which the stocks are designated. Currently, the stockpile is intermingled with many types of diverse stocks for varying requirements. In order to classify the stockpile into distinct and separate requirements, or purposes, the following terms must be defined:

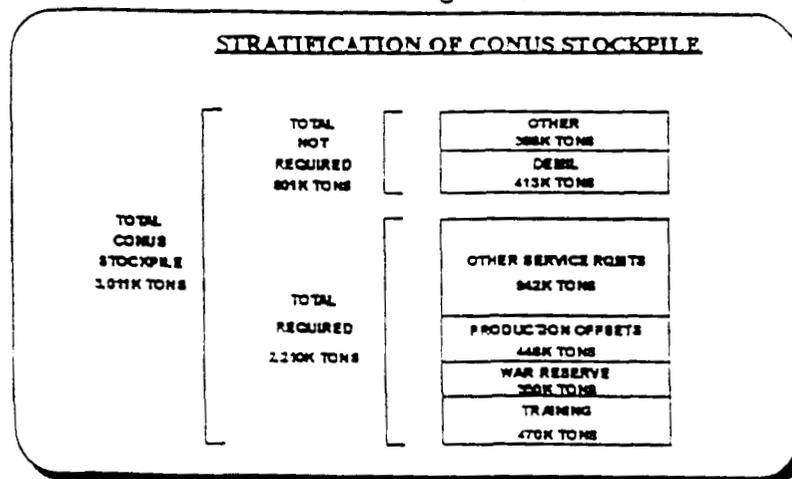
(1) **Required Stocks:** That portion of the stockpile that has an identifiable requirement. This includes all stocks in storage that have a requirement for:

- a) War reserve: Stocks required from CONUS base to meet service requirements for the two MRCs.
- b) Training: Peacetime utilization stocks.

c) Production Offset: Those stocks that are over and above established requirement levels but are retained under the provisions of the Office of Secretary of Defense (OSD) stockpile retention policy. Examples include economic retention stocks to support training beyond the Program Objective Memorandum (POM) years and contingency retention stocks wherein stocks of older items are held to meet the shortfalls of newer, technologically advanced improved items. Stocks in this category are normally long lead time production items, that, in the event of a consumption of war reserve stocks during wartime, they could readily be transitioned for war reserve replenishment as directed in Department of Defense (DOD) planning guidance.

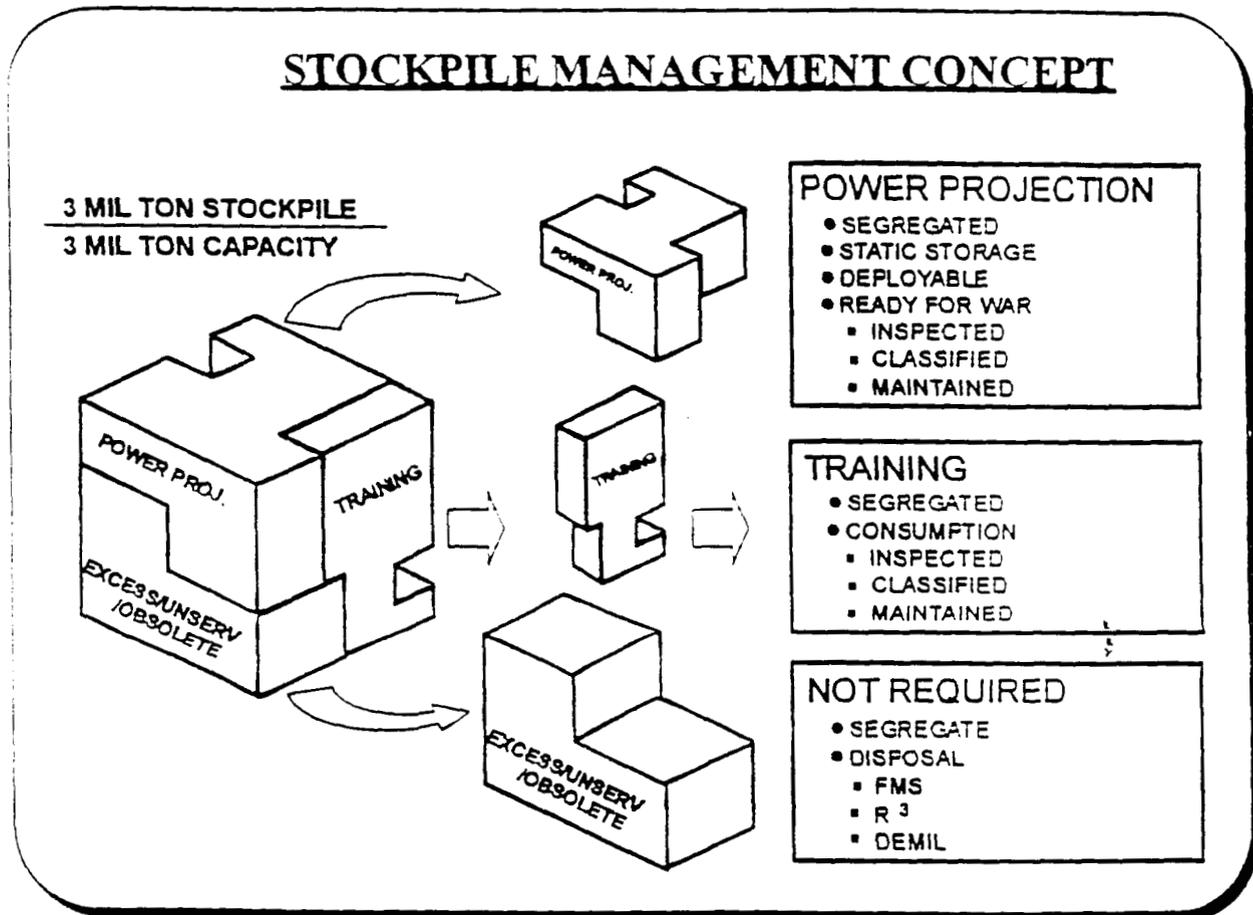
(2) **Non-required Stocks:** That portion of the stockpile that has no identifiable requirements. Included in this segment are stocks located within the demilitarization account and excess stocks awaiting final disposition.

e. The identification of the current CONUS stockpile of 3,011,000 short tons into required and non-required stocks indicates that approximately 2,210,000 short tons are to be considered as required and the remaining 801,000 short tons to be non-required.

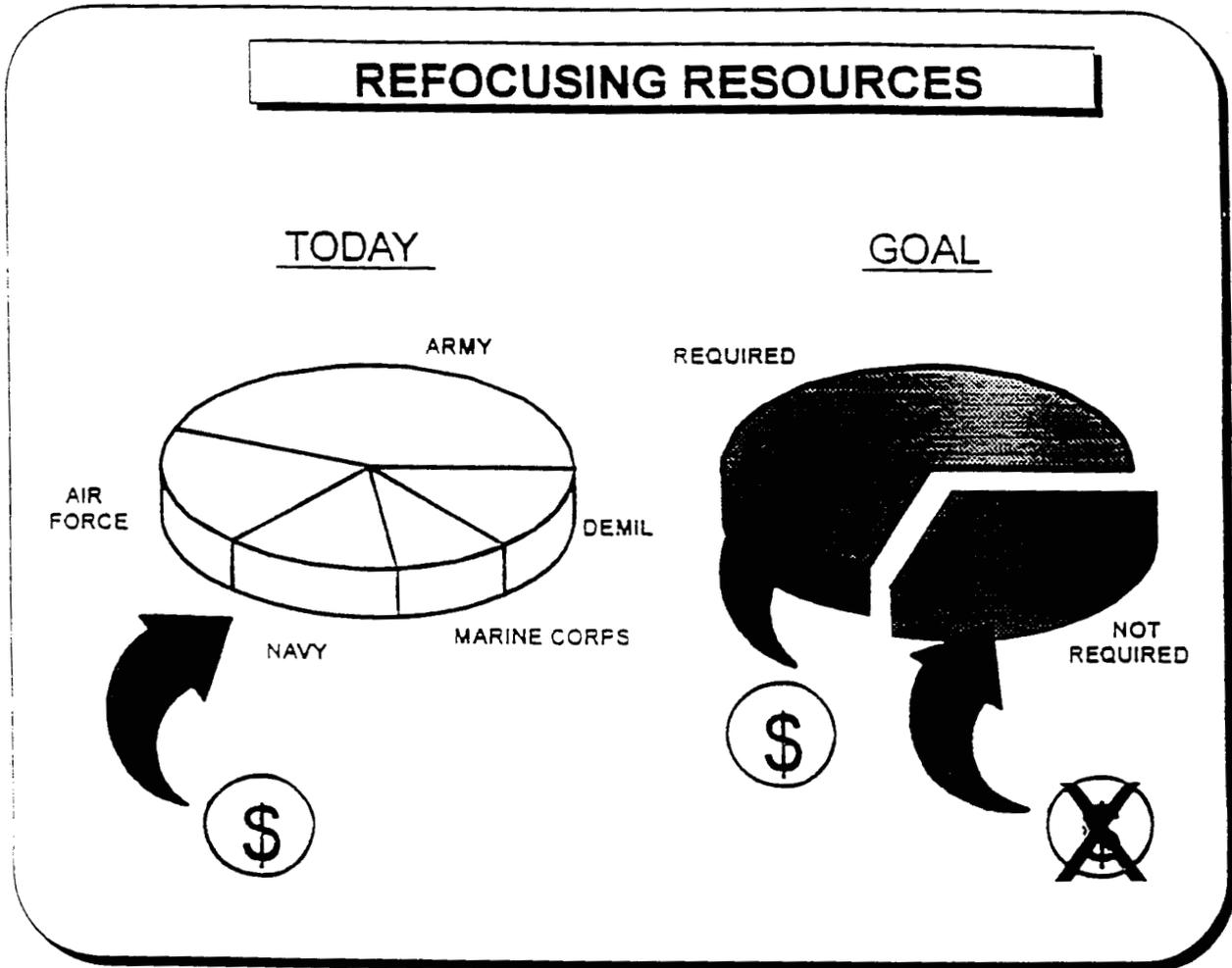


## VI. SEGREGATING AND SEPARATING THE STOCKPILE

a. The basis for successful implementation of this plan involves the separation and segregation of required power projection and training stocks from non-required excess, obsolete, and unrepairable stocks. Much of the segregation will be through redistribution, rewarehousing, aggressive demil programs, and intensive distribution forecasting. Segregating the stockpile in this fashion will increase installation efficiencies in supporting power projection principles. Stocks required to support power projection and training will be set aside and not co-mingled with other assets.



b. Under the current system, available funding and resources are allocated against the total stockpile, regardless of how the stocks are classified. By separating the required and non-required stocks significant reductions in resource requirements can be realized. Scarce resources will concentrate almost exclusively on that portion of the stockpile that has valid training and war reserve requirements. The remainder of the stockpile, the non-required stocks, will receive minimal resource allocations for safety and security considerations until disposition can be made. In each of the assessment areas outlined in this plan, this segregated operational philosophy is applied. The segregated operational philosophy also forms the basis for revised management of the stockpile.



## VII. TIER DEPOT CONCEPT

### a. OVERVIEW

(1) The "Tier Depot Concept" was developed to support the CSA objectives of reducing the current CONUS base storage infrastructure, decreasing manpower requirements, increasing efficiencies and managing a smaller, safer stockpile. This concept acknowledges five basic categories of ammunition subject to three levels of activity.

a) Required war reserve Stocks needed for immediate use to support contingency operations, normally < C+30: Level of activity is minimal during peacetime, but intensive during the first 30 days of a conflict.

b) Required war reserve stocks not immediately needed during contingency operations, normally > C+30: Level of activity is minimal during peacetime, but intensive beyond the first 30 days of a conflict.

c) Required Training Stocks for peacetime utilization: Level of activity is steady during peacetime.

d) Required production offset stock storage: Level of activity is considered minimal with a static stock storage configuration primarily inventory, surveillance, maintenance and moderate receipt/issue workload.

e) Non-required Stocks awaiting demilitarization or other disposition (such as sale of stocks): Level of activity includes primarily demilitarization operations.

(2) The Tier Depot Concept reduces the number of active storage sites and creates efficiencies by realigning the required and non-required stockpile into an appropriate tier activity level. Three levels, or tiers, of installations are used for identifying the level of activity an installation performs. They are:

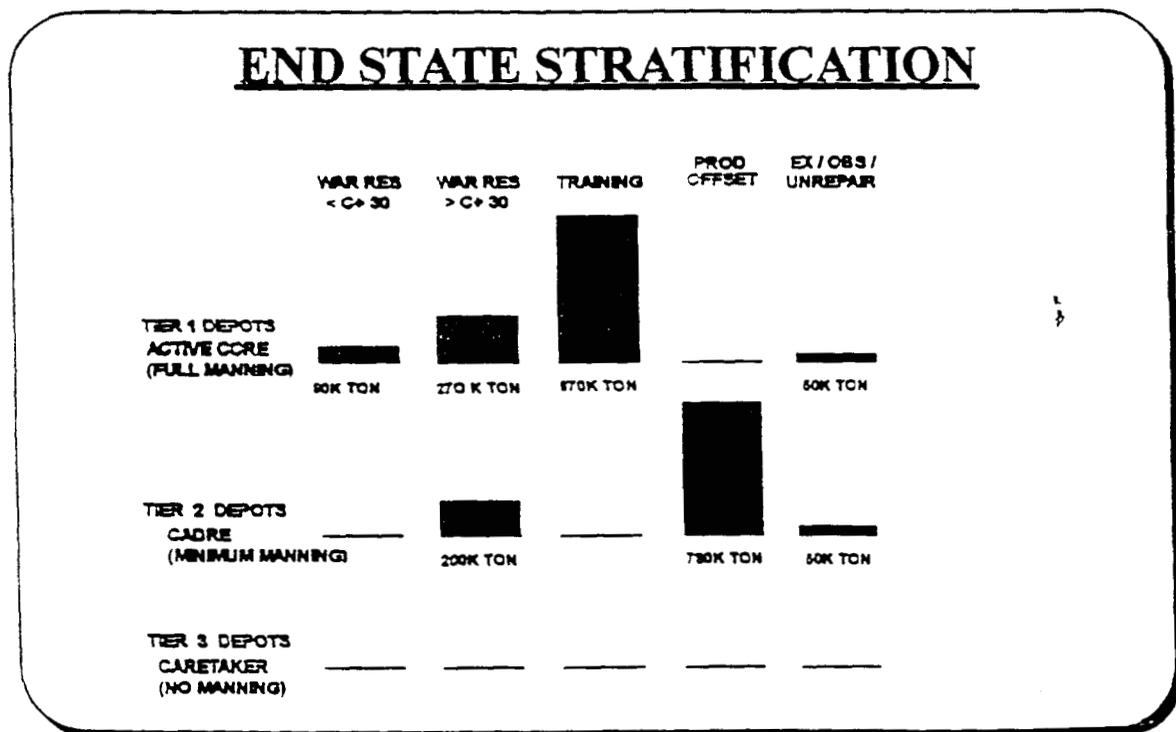
a) **Tier I - Active Core Depots;** Installations designated as Tier I will support a normal/full-up daily activity level with a stockage configuration of primarily required stocks and minimal non-required stocks requiring demilitarization. Normal activity includes daily receipts/issues of training stocks, storage of war reserve stocks required in contingency operations < C+30, and additional war reserve stocks > C+30 to augment lower level tier installation power projection capabilities. Installations at this activity level will retain the need for requisite levels of storage support, surveillance, inventory, maintenance and demilitarization.

b) **Tier II - Cadre Depots;** Installations designated as Tier II will normally be utilized to perform static storage of follow-on war reserve requirements > C+30, and, at the end-state objective, store production offset stocks and limited non-required

demilitarization stocks. Daily activity will be minimal for receipt issues, while workload will be primarily focused on maintenance, surveillance, inventory and demilitarization operations. Tier II installations will have minimal staffing to accomplish assigned workload and will not achieve full staffing levels of Tier I activities until contingency operations require the Tier II installations to begin supporting power projection shipping initiatives of the war reserve assets.

c) **Tier III - Caretaker Depots;** Installations designated as Tier III will be minimally staffed and will contain static non-required stocks in static storage until disposition can be made. The end state objective for activities at this level is to inactivate the ammunition support mission and completely drawdown stockage levels to zero balances.

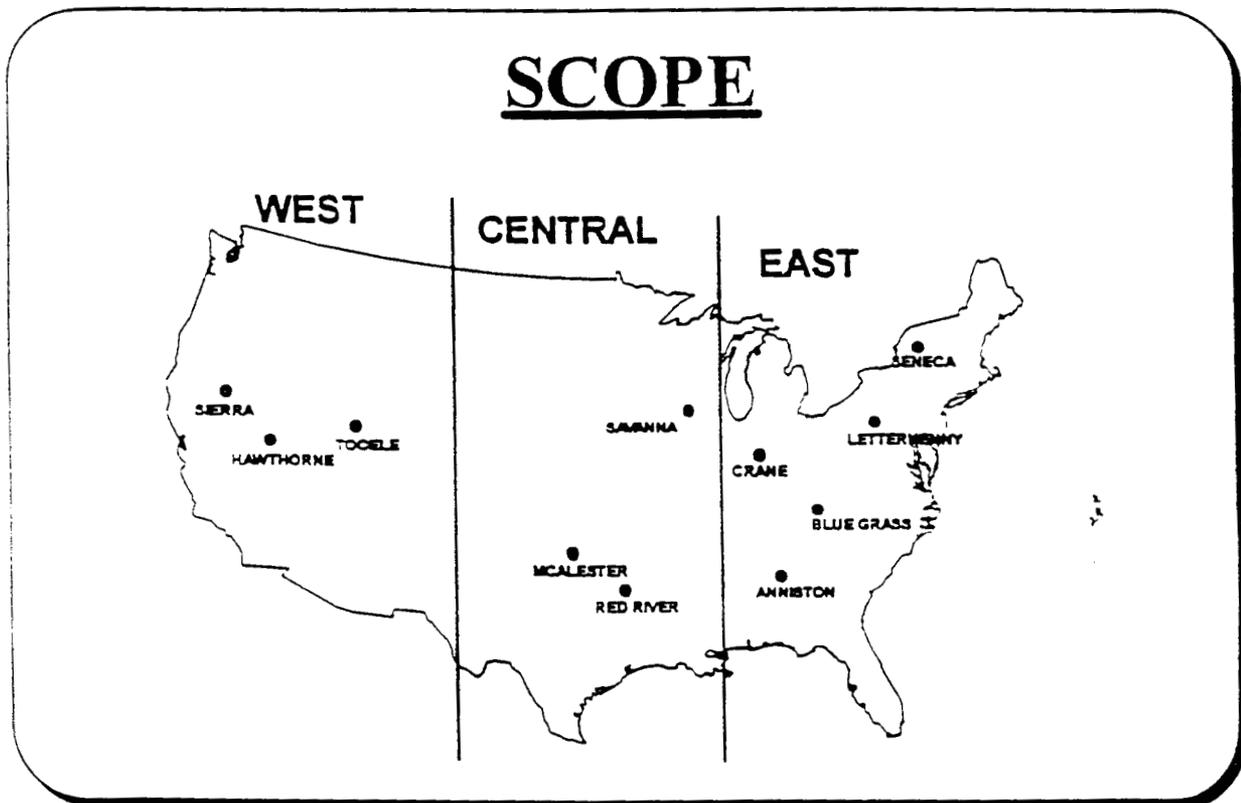
(3) Balances within each tier at the end state objective indicates that, given today's requirements and wholesale postures, approximately 90,000 war reserve short tons would be stratified against Tier I installations to support the first 30 days of a two MRC contingency. War reserve assets required beyond the first 30 days of a two MRC sustainment equate to 470,000 short tons, with the majority, 270,000 short tons, positioned in Tier I installations and the balance in Tier II. Current training unique and training standard items will place approximately 870,000 short tons (470,000 Army, 400,000 other services) in Tier I installations. Some production offset stocks (780,000 short tons) located at Tier II installations, at end state, may transition into the demilitarization account. The end state objective for demilitarization stocks is to reduce the backlog level to 100,000 short tons and be equally distributed among Tier I and II installations.



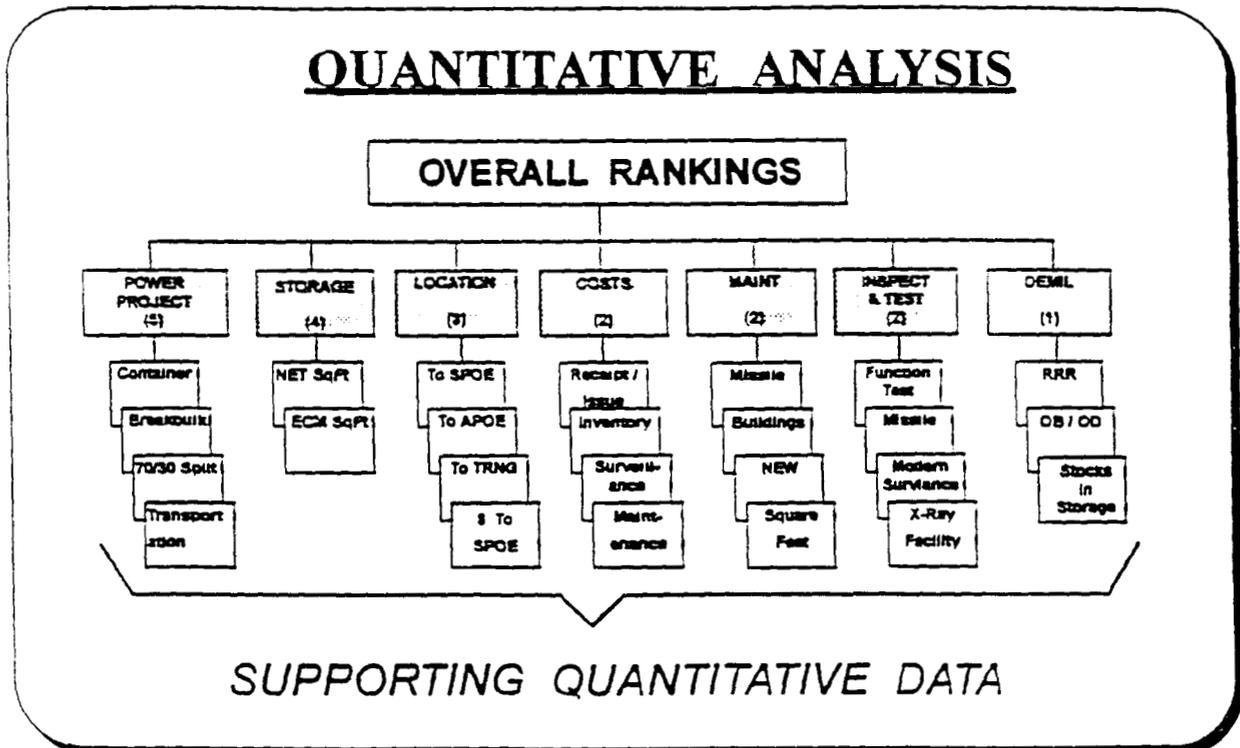
## b. TIER DEPOT ANALYSIS

(1) The Tier Depot Concept, in its end state alignment, must support two primary objectives: the power projection requirements of the two MRCs as outlined in Defense Planning Guidance (DPG) and provision of sufficient storage space for assigned tier stockage configurations. Current asset distribution is mal-aligned placing shipping directives on some installation during a contingency operation that exceed their organic capabilities to outload, while in other installations, based on stockage configurations, only a small percentage of their capabilities are utilized. The end state asset distribution of the Tier Depot Concept will maximize the outloading capabilities at Tier I and II installations.

(2) The Tier Depot Concept allows the stockpile to be distributed within geographically oriented regions with a minimum of one Tier I and one Tier II installation configured within each region. Regional distribution fully supports area training requirements and provides an active installation within the proximity of the two sea ports of embarkation for supporting MRC power projection requirements.



(3) A Tier Depot Analysis was performed February through March 1994 in an effort to identify and assign appropriate tier levels for each of the eleven primary wholesale storage installations. The analysis was conducted using both quantitative and qualitative considerations to achieve a final overall installation ranking. The quantitative data was derived from major criteria considered critical in the management and operations of the ammunition stockpile. The major criteria were then further divided into contributing sub-factors. Each sub-factor and major criteria were assigned a weight identifying the importance of the factors and criteria in relation to each other. As portrayed in this chart, power projection capability was considered the most important of all criteria, followed by storage, cost, etc....



(4) The scoring system for each criteria utilized an 11 point scale, giving the highest score, 11, to the installation determined to possess the greatest capability, lowest cost, or best physical location. Each of the other installations were awarded a percentage of the 11 point maximum depending on the difference between the installation's capability, cost, or location, and that of the installation receiving the maximum score.

(5) Development of an 11 point scale was predicated upon the inability to measure some individual factors with hard data numbers. Those factors, such as "yes/no" questions (does an installation have the capability to perform function tests?), were assigned a score from 1 to 11, giving 11 points to the installations with the

maximum subjective score. Subsequent scores for the remainder of the installations ranged from 10 to 1 as applicable. All scores, utilizing both hard data and subjective data were normalized on the 11 point scale.

(6) The final quantitative analysis provided an overall order ranking of installations. Qualitative considerations were then applied to achieve overall final rankings and tier assignment conclusions. Qualitative considerations included multi-mission installations, customer preferences and toxic chemical missions. To assure that the tier assignment conclusions could support and store both the power projection requirements of two MRCs and peacetime training requirements, a comparison of requirements to capabilities was conducted. Assuming an end state stockpile distribution that maximized capabilities, installations identified as Tier I and II would support all power projection requirements during contingency operations. An additional Tier I and II installation is required in the east region to support training and power projection requirements of MRC east.

(7) The Tier Depot Analysis resulted in the following realignment of the CONUS wholesale storage infrastructure:

a) West Region;

Tooele Army Depot - Tier I  
Hawthorne Army Ammunition Plant - Tier II  
Sierra Army Depot - Tier III

b) Central Region;

Mcalester Army Ammunition Plant - Tier I  
Red River Army Depot - Tier II  
Savanna Army Depot Activity - Tier III

c) East Region;

Crane Army Ammunition Activity - Tier I  
Blue Grass Army Depot - Tier I  
Letterkenny Army Depot - Tier II  
Anniston Army Depot - Tier II  
Seneca Army Depot Activity - Tier III

### c. TIER IMPLEMENTATION

(1) A complete, detailed implementation/redistribution plan has not been developed. Prior to the development of the redistribution plan the end state stockage configuration must be identified that: assures maximum utilization of outloading capabilities; supports a geographical orientation of stocks to support MRC

requirements; and supports a regional orientation of training stocks. Redistribution of the stockpile will be accomplished tier by tier, DODIC by DODIC, FY by FY. Milestone for completion of the current state/end-state stratification and the year-by-year redistribution plan is 30 Sep 1994. Assuming resources are made available to support stock redistribution, end state asset stratification is estimated to take approximately six years. The implementation/redistribution plan will concentrate efforts as follows:

(2) Issues: Issues of training ammunition will be accomplished through prioritization from Tier II/III installations. War reserve stocks requisitioned for storage in forward theaters and PREPO ship locations will be priority issued from Tier III installations.

(3) Receipts: All training ammunition will be receipted into Tier I installations. War reserve receipts into Tier I/II installations (stockage configuration at end state when developed) will provide breakout based on storage and outloading capabilities. Field return receipts of non-required stocks will be receipted into installations where stocks will likely be demilitarized. Receipts of production offset stocks will be positioned in Tier II installations.

(4) Demilitarization: Initial Demilitarization efforts will concentrate on Tier I installations for space generation. Follow-on efforts will be Tier II/III.

(5) Reworking: Priorities will be targeted at Tier I/II installations for segregation/separation of required/non-required stocks and to increase storage space utilization efficiencies. No further intra-installation reworking efforts will take place at Tier III installations.

(6) Inter-installation Movements: Movements between depots will be required to position remaining stocks located in an incorrect tier or installation within a tier, and for maximization of outloading and geographical positioning of stocks to support MRC requirements. Inter-installation movement of training stocks will be minimal. The majority of training stocks will be moved in support of training requirements.

(7) Army Strategic Mobility Plan (ASMP) projects: The ASMP projects will be realigned to concentrate efforts on Tier I/II installations. Some ASMP projects slated for Tier III installations could still be funded if the project is considered critical through end state projection.

(8) Prior to the final development of the implementation/redistribution plan, issues and receipts of training stocks can begin to be implemented within current FY.

(9) The Functional Area Assessment (FAA) portion of this plan provides additional implementation strategies for each of the stockpile management functions of distribution, storage, inventory, surveillance, maintenance and demilitarization.

## VIII. FUNCTIONAL AREA ASSESSMENTS

### a. DISTRIBUTION

(1) The ability to support the CONUS based power projection requirements of two near simultaneous MRCs remains as the most critical element in establishing an efficient and effective realigned tier installation infrastructure. Necessary actions are being identified and taken for optimizing outloading capabilities and overcoming issues that limit our current capabilities.

#### a) **LIMITING FACTORS** - Mal-distribution of assets.

1 Current stockage profiles at the CONUS installations are not configured or aligned IAW Operational Plans conducted for the two MRC scenarios. This requires cross country shipments of some stocks within short timeframe windows for onward movement. Additionally, assets are not distributed amongst the wholesale storage base adequately to assure maximum utilization of the installation's infrastructure.

2 Current asset distribution is mal-aligned placing shipping directives on some installation during a contingency operation that exceed their organic capabilities to outload, while in other installations, based on stockage configurations, only a small percentage of their capabilities are utilized.

#### b) **LIMITING FACTORS** - Outdated facilities.

The current state of the CONUS distribution base is biased towards the distribution of munitions utilizing breakbulk methodologies. The Army goal is to process future movement requirements through the utilization of the Containerized Ammunition Distribution System (CADS). Containerized movements significantly improve port handling capabilities.

#### c) **LIMITING FACTORS** - Unable to fully support early movement requirements of Ammunition Basic Load (ABL).

Current distribution of assets prevents the CONUS base from providing full support of the Services Power Projection initiatives. Certain early deploying units will not be capable of deploying with total munitions support in the projected quick turn-around timeframes. Wholesale assets are not identified and reserve specifically for ABL movements and the probability exists that movements may be required from installations that are unable to support requirements due to their physical proximity to early deploying units.

(2) Several initiatives to overcome these limitations have been identified and submitted for funding approval.

a) **INITIATIVES** - Redistribution of Stocks.

1 The tier concept requires munition stocks to be positioned at installations capable of supporting war reserve (Tier I/II) and training requirements (Tier I). Stocks will be redistributed IAW Commander in Chief (CINC) developed munitions movement requirements in such a manner that provides war reserve geographical regional support to shipping ports of embarkation. Multi-use/multi-scenario items will be appropriately positioned at installations that can support either conflict, MRC East or West.

2 The stock distribution plan would consist of several initiatives that would allow this Command to reposition stocks through daily transactions. These initiatives consist of participating in Sealift Emergency Deployment Readiness Exercises and other exercises requiring munitions movement. Projects have also been submitted to the ASMP for funding redistribution of stocks into the appropriate tier installations for optimizing Tier I and II outloading capabilities. It is estimated that approximately 50,000 Short Tons per year, FY96-99, will require redistribution to support outloading optimization. The cost for this redistribution is being programmed at \$21.4 million per year. Additional redistribution during these same years will be required for movement of stocks into correct tier locations.

3 To enhance our ability to meet early deploying unit ABL requirements, depot/combat unit partnership arrangements may be established. Deployment requirements for specific early deploying units will be identified by depot, and detailed quick load-out plans will be established.

4 Other efforts such as Europe and Pacific Retrograde and CONUS training requirements will be utilized to maximize redistribution of stocks in support of the Tiering distribution plan. The efforts identified are being utilized whenever economically feasible in an effort to reduce the overall effects on the OMA budget.

b) **INITIATIVES** - Army Strategic Mobilization Program (ASMP) Initiatives.

1 The AMCCOM is currently identifying and submitting projects into the ASMP for funding. These projects will be implemented to enhance the container output capabilities of the CONUS base as well as ensuring the current structure remains fluid in supporting Power Projection. They also identify projects for railroad upgrade/repair, magazine modifications, and road repairs.

2 The ASMP program prioritization will be influenced by the tiering plan of action. Continued monitoring of the installation ASMP project submissions and coordination with HQ AMC personnel will ensure that the tiering concept is fully supported for available funding. Concentration of efforts will be on Tier I and II installations.

## ASMP PROJECTS FY93-99

PROJECT	FUNDED (\$M)	UNFUNDED (\$M)
● Railroad Upgrades/Repairs	[REDACTED]	[REDACTED]
● Road Repairs	[REDACTED]	[REDACTED]
● CADS Facilities	[REDACTED]	[REDACTED]
● Magazine Modifications	[REDACTED]	[REDACTED]
● Rapid Deployment Facilities	[REDACTED]	[REDACTED]
● Security System Upgrades	[REDACTED]	[REDACTED]
TOTAL	[REDACTED]	[REDACTED]

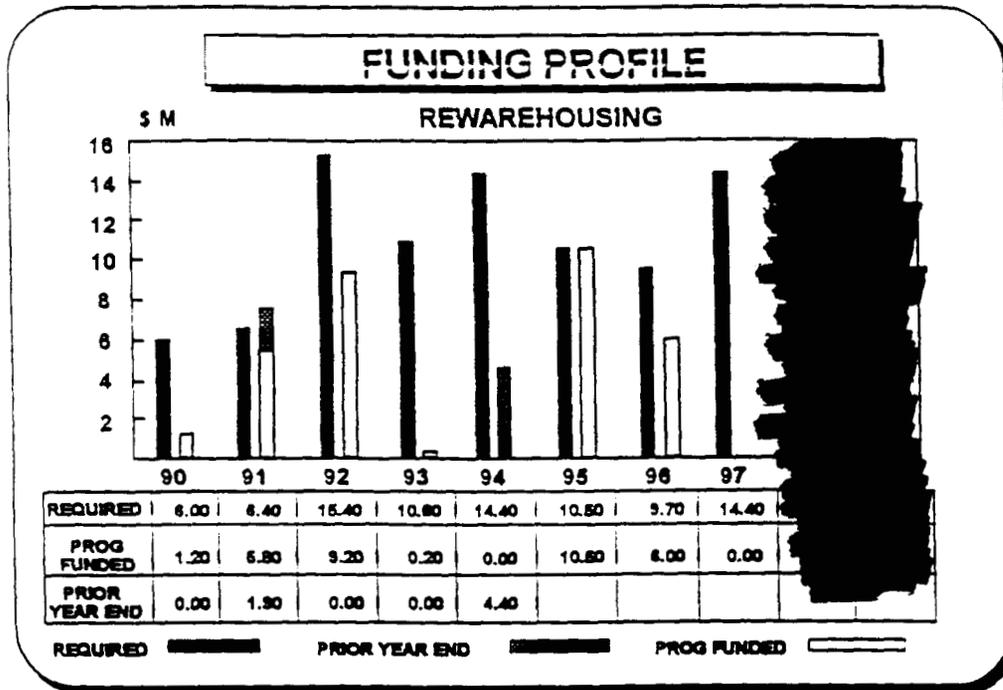
### c) INITIATIVES - Preconfigured containers.

1 One of the key ASMP projects, in support of early deploying units, is a test of the possibility of prepositioning munitions in containers at the CONUS installations. These containers would be utilized to augment the installation workforce in meeting early deploying unit movement requirements of ABL. This project is currently under submission to HQ AMC and will be prioritized for immediate implementation to ensure test results are available ASAP.

2 This concept could have an application at Tier II installations whereby reduced manpower at the Cadre level would prevent significant tonnage issues during the early days of deployment, but allow for quick outload of preconfigured containers.

b. STORAGE

(1) Reworkhousing is the primary means of increasing efficiencies of space utilization and overall storage space capabilities. Funding for reworkhousing has been historically sporadic. As projected in the POM, sporadic funding patterns will continue with no funding for reworkhousing programmed in FYs 97 [REDACTED]

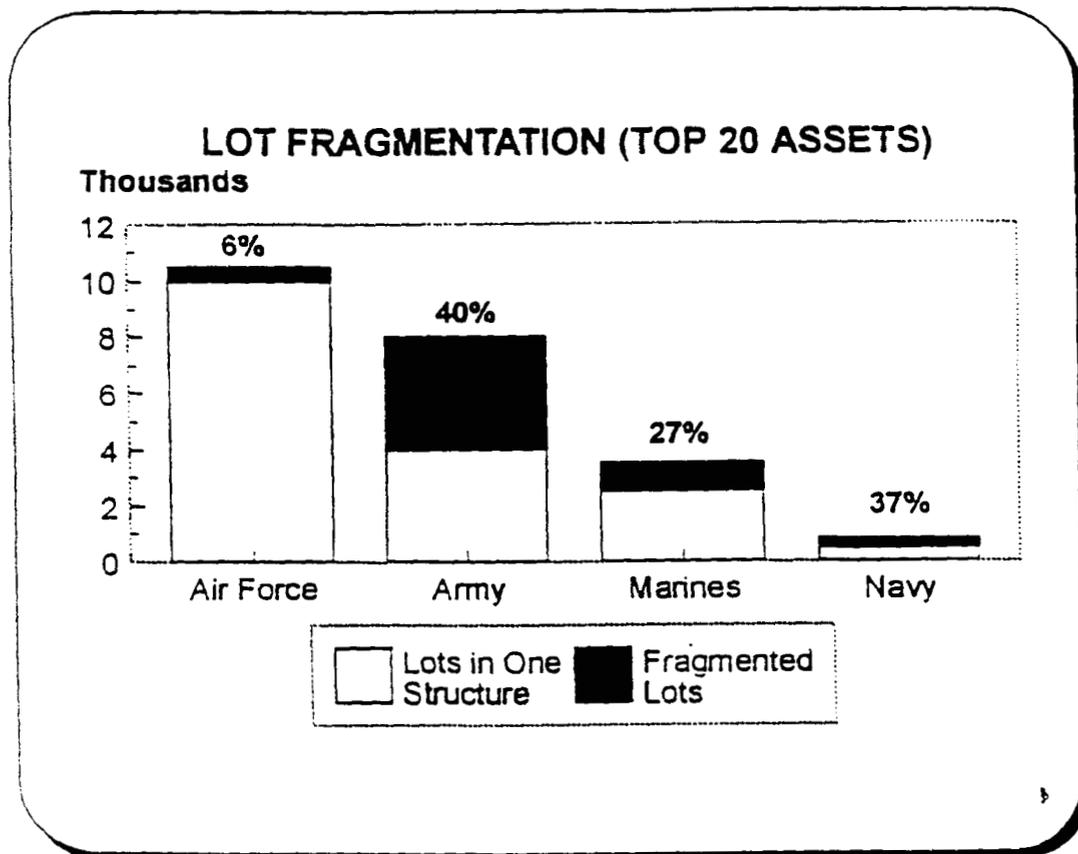


(2) The reworkhousing chapter of the WASP study concentrated on three storage concerns: safety, security, and space utilization within an installation. The follow on FAA emphasized the overall distribution of the ammunition stockpile between installations for alignment into a tiering structure. Tiering of the wholesale ammunition storage base will require intra-depot reworkhousing and redistribution of assets between installations. This portion of the assessment addresses intra-depot reworkhousing for consolidation of assets at the Tier I and II installations. The initial classification of assets as required or non-required is needed, and once accomplished, reworkhousing for segregation, separation, and consolidation of like lots can begin.

(3) The focus of intra-depot reworkhousing will be the separation of required from non-required assets at the tier I and II installations. Maximum utilization of storage space without hindering deployment or normal storage operations is the primary goal. The storage structures at the tier III installations are to be fully utilized with non-required stocks commensurate with safety/security limitations. The ultimate goal is to have assets safely, securely, and efficiently stored based on their tier level requirements.

At the end state objective, tier III installations will no longer have an ammunition mission as all stocks will be stored in higher tier level echelons.

(4) Positioning of war reserve, training and production offset stocks at tier I and II installations is the long range objective (production offset stock will be stored only in tier II installations at end state objective). Lots with the same condition code should be, ideally, located in no more than one storage structure. The WASP study identified approximately fifteen percent (15%) of the stockpile as being fragmented (stored in two or more storage structures). Further analysis indicated the degree of fragmentation varied by service for their "Top Twenty Assets" ranging from a low of 6 to a high of 40 percent.



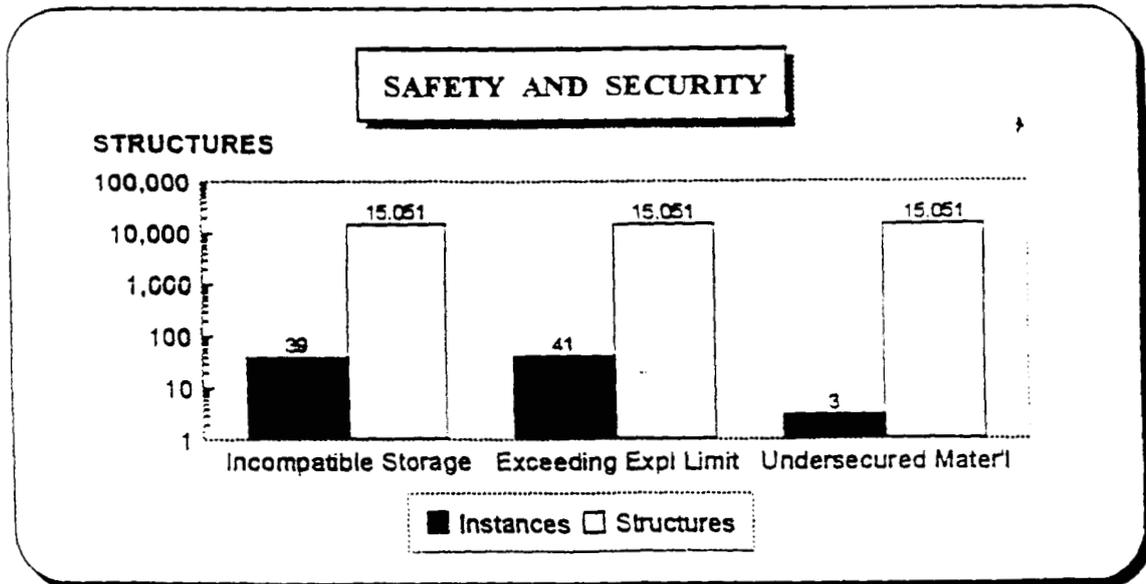
(5) The top twenty assets consisted of 132 NSNs identified by the services as their top managed assets to be assessed during the WASP study. A listing identifying the required stocks and requirements were not available for developing the lot consolidation estimates. In order to prepare a cost estimate, the overall WASP fragmented lot percentage and the FY96 projected stockpile tonnage had to be used. The projected tonnage for each installation was provided by AMCCOM automated projection models. This could be a one time cost if receipts were consolidated by lot/condition code at the tier I and II installations. The only recurring cost would be a base operating cost to correct safety and security deficiencies and for rewarehousing

incidental to receipts/issues. The rewarehousing costing rate of \$50.00 per short ton was provided by the AMCCOM ammunition product line. The projected one time cost, spread over a three year time period, of rewarehousing all required stocks is reflected below:

SEGREGATION OF REQUIRED STOCKS				
	Short Tons	15 % of ST	Cost Rate	TOTAL
FY 96	2,153,000	107,650	\$50.00	\$5,382,500
FY 97		107,350	\$50.00	\$5,382,500

(6) An analogy was drawn between the Service's top twenty assets and the required stocks as a basis to verify the rewarehousing costs. The VISTA database (detailed storage visibility) was used since it contains segments of the Standard Depot System (SDS) lot and magazine files. The Service's top twenty assets were identified for each installation as well as the specific storage structures containing each lot. The lots were consolidated by condition code. The assets in each location were classified as required (top twenty assets) or non-required. The weight of each classification was calculated within the structure to determine if the required or non-required stocks would be more economically relocated. The overall costs for the top twenty assets were significantly lower than the projected rewarehousing cost estimate. The lower cost is due to the greater quantity of required stocks in comparison to using the top twenty assets. The results provided a "ball park" assurance for using the WASP fragmented lot percentages.

(7) A base level of funding will be required to rewarehouse improperly stored assets violating safety and security requirements.



(8) The low level of deficiencies identified during the WASP study reflected the installations efforts to immediately correct such violations. The WASP study discovered that if funding is not available to correct these deficiencies, the costs will be absorbed as a receipt/issue function. The premise used to develop base cost is a historical average of rewarehousing costs applied to a percentage of tonnage on hand at an installation. The base level costs should, over time, decline due to a reduced level of activity at the various tier installations. The base level funding, tier III installations not included, is as follows:

<b>BASE LEVEL REWAREHOUSING</b>				
	Short Tons	2% of ST	\$ per ST	TOTAL \$
FY 96	2,153,000	43,060	\$50.00	\$2,153,000
FY 97	2,077,000	41,540	\$50.00	\$2,077,000

(9) The total cost associated with consolidation of required assets and maintaining a base rewarehousing level at the tier I and II installations (consolidation cost is a one time cost spread over three years) is as follows:

<b>CONSOLIDATION AND BASE LEVEL REWAREHOUSING COSTS</b>			
	Consolidation	Base Level	TOTAL \$
FY 96	\$5,382,500	\$2,153,000	\$7,535,500
FY 97	\$5,382,500	\$2,077,000	\$7,459,500

(10) The projected wholesale stockpile occupancy, levels without rewarehousing, is bleak. The WASP study has projected reaching a 100% occupancy level during FY95. Outside storage of field service and demilitarization assets is currently being utilized as an alternate storage method at many installations.

(11) Initiatives can be taken to generate the needed storage space prior to FY96. Several initiatives, some of which were in the WASP study, include aggressive demilitarization programs, rewarehousing of low hazard and inert stocks to maximize explosive storage space utilization, consolidation of less than one half pallet of B5A (demil) materiel into box pallets, proliferation of storage racks and utilization of cargo pallets for light pallets of field service stocks. Below are proposed milestones for some of these initiatives:

a) FY94: Less than 1/2 pallet of B5A assets:

- 1 Develop LOI and drawings for the procedure.
- 2 Develop bid packages for the installations identifying the potential B5A assets to be palletized.
- 3 Fund installations according to tiering priority.

b) FY94: Use of storage racks:

- 1 Develop bid packages for the installations identifying potential assets for storage racks.
- 2 Fund installations for purchase of storage racks and rewarehousing of assets.

c) FY95: Less than 1/2 pallet of field service assets:

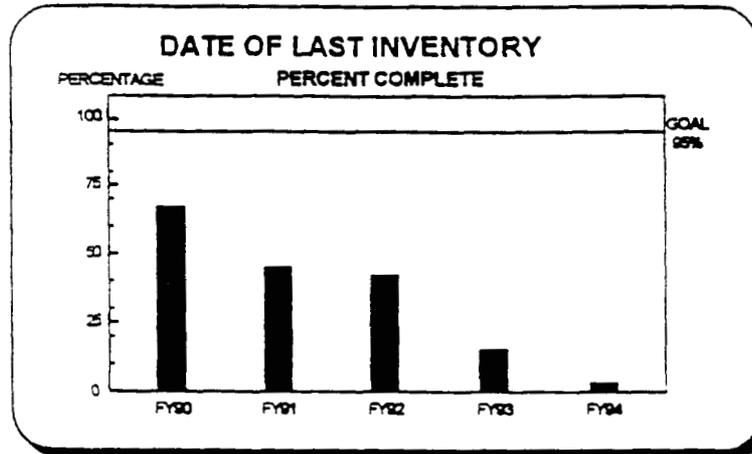
- 1 Coordinate procedure within the IOC to include safety, surveillance, packaging, and functional areas.
- 2 Develop drawings for the procedures.
- 3 Develop bid packages for the installations identifying potential field service assets.
- 4 Fund installations for the purchase of cargo pallets and rewarehousing of field service assets.

(12) Implementation of the above recommendations would improve storage space efficiency. However, an aggressive demilitarization program funded to full capability through FY99 will generate permanent storage space and eliminate from the stockpile a big contributor to inefficient use of storage space.

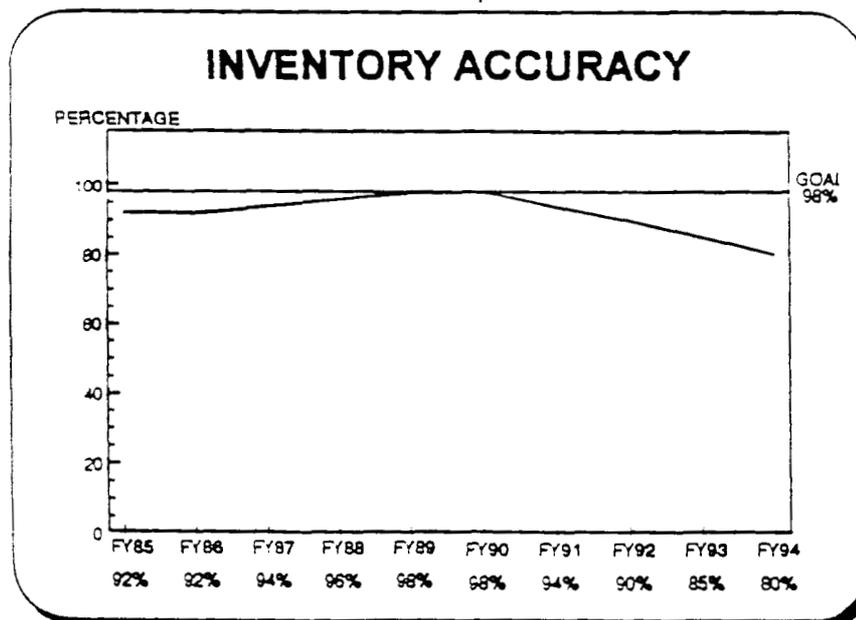
## c. INVENTORY

(1) The inventory program is the basis provided to meet the Army's obligation to Public Laws requiring fiscal accountability. This is normally accomplished by performing an annual inventory of all stocks and a subsequent reconciliation to the accountable records.

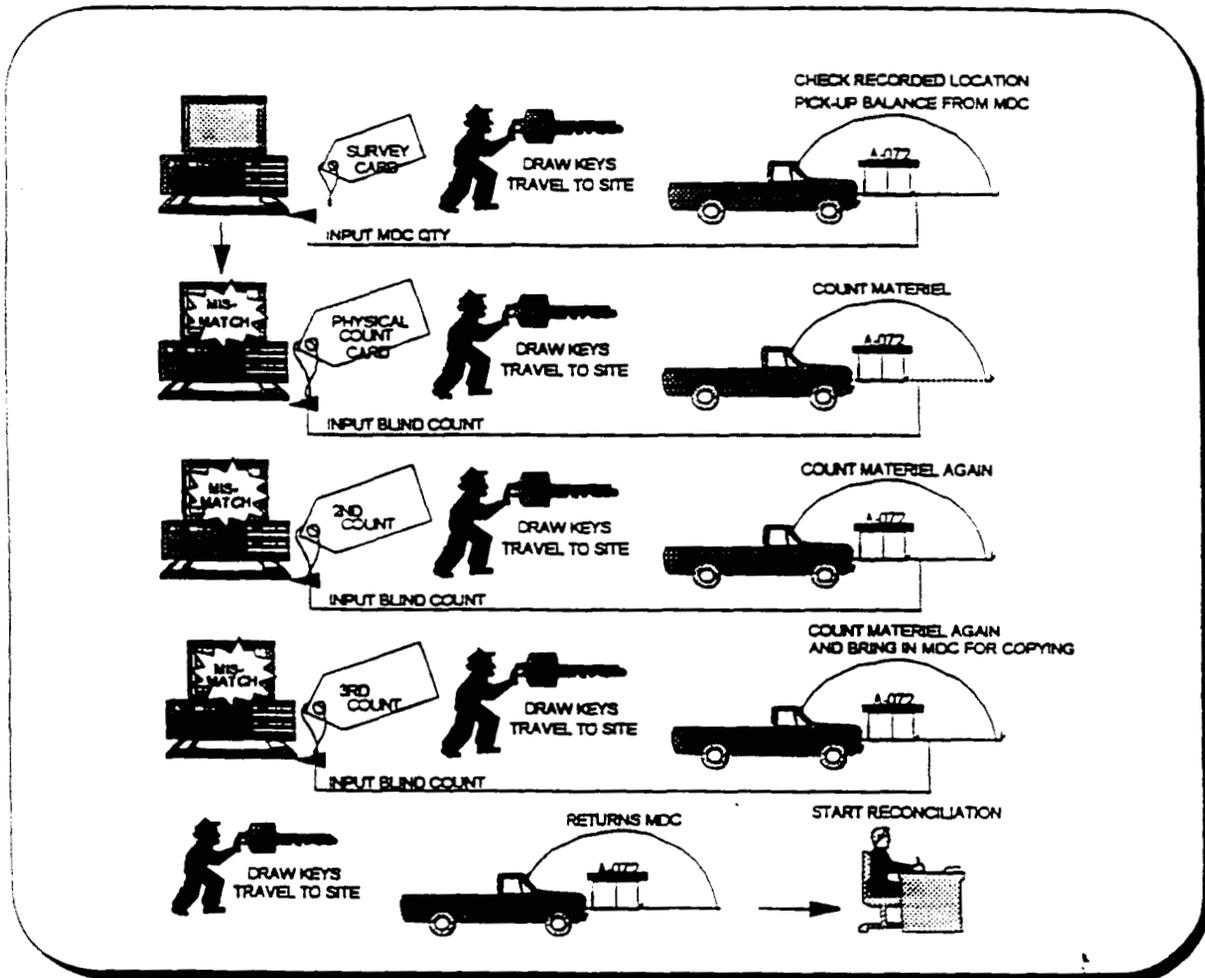
(2) Prior to FY90, annual inventories occurred at all installations. At the completion of the FY89 inventory, accuracy was documented at 98.5 percent. Beginning in FY90 and continuing through the current Fiscal Year, funding has been inadequate and each year less inventory is being accomplished.



(3) In late FY93, the JOCG commissioned the WASP study to measure the health of the stockpile as the result of several years of underfunding in the functions that provide care for stocks in storage. The inventory team determined that accuracy of the inventory had decreased to a maximum of 85 percent.

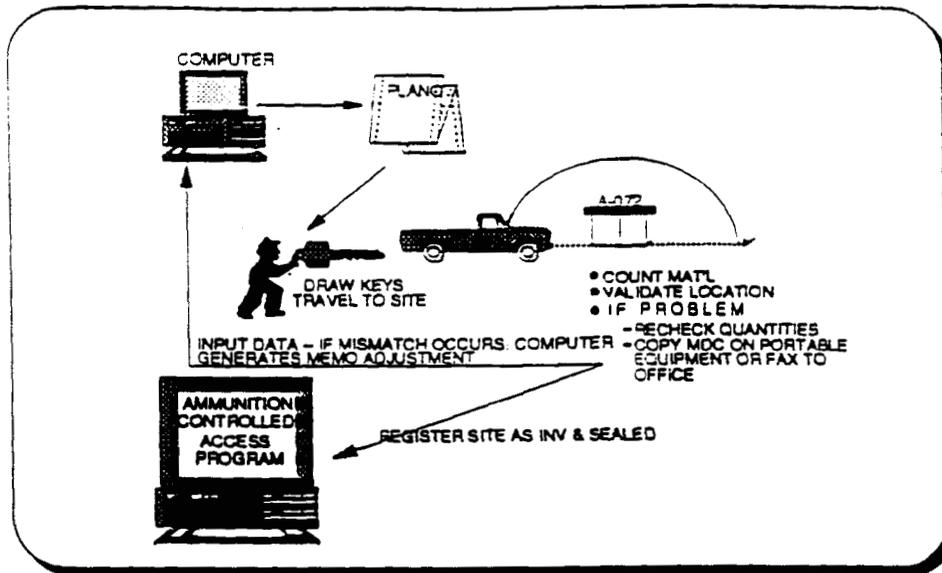


(4) Additional findings concluded that significant inventory resources were required to support the current structured inventory program. The greatest extent of this cost centered around the methodology of conducting the inventory and required reconciliations at the National Stock Number (NSN) level. This system requires numerous visits to a single structure throughout the inventory cycle by requiring the inventory verification process of a multitude of NSNs.



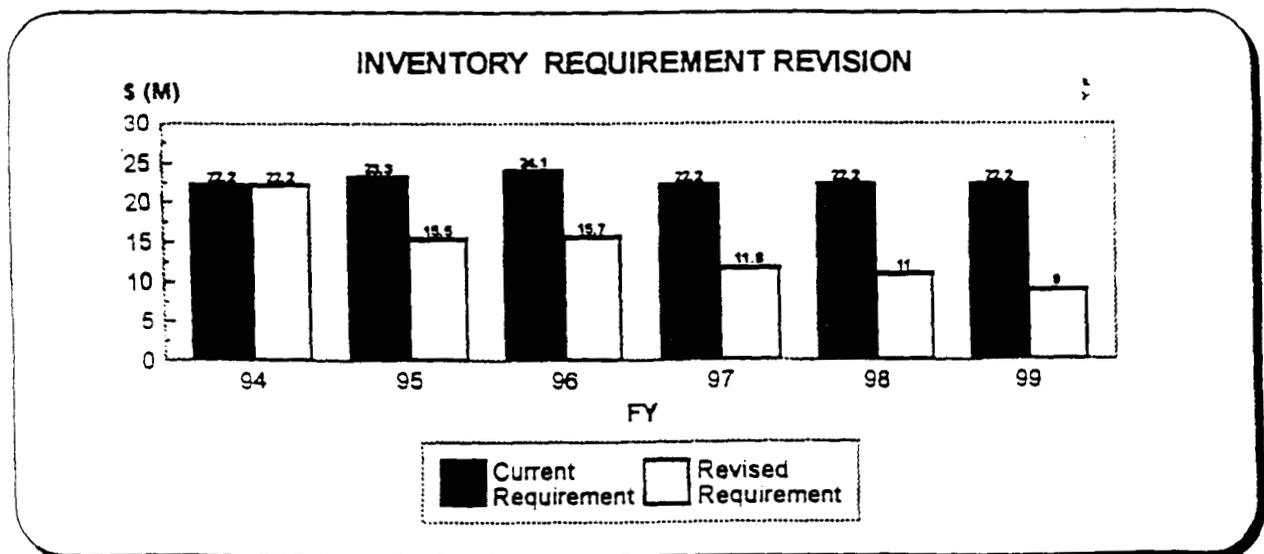
(5) Ammunition stocks in storage are recorded by grid location within a storage structure. The WASP study recommended a revised and rewritten inventory program that encompassed a grid based inventory system that would achieve increased efficiencies and effectiveness resulting in lower operating costs. Memo adjustments would be prepared for each discrepancy as it was identified in lieu of at the end of the process. Once the system identifies that all recorded grid locations for a given NSN have occurred, a flasher report would be produced and a subsequent computer reconciliation occurs for any memo adjustments made throughout the inventory. Only those reconciliations that are not correctable will require additional manual research

and reconciliation. An analysis of this approach indicated that by deleting the requirement to enter the same structure on a number of occasions and accepting the stock posture as is, an appreciable manpower and resource reduction would occur.



(6) Modifications in the inventory program are also reflected in the development of a controlled access program. Once a particular structure has had a complete inventory accomplished, adjustments made, and file maintenance performed, it is identified as a sealed structure requiring no future inventories unless keys have been drawn for activity that would result in movement of stocks. This program involves storing non Category I and II materiel. An annual sample of sites are conducted for validation and verification of the sealing of static storage site process.

(7) These revisions and modifications to the existing inventory program will result in immediate reductions in inventory funding requirements and allow for a more efficient and effective operation.



(8) Milestones have been established for program modification and execution as follows:

a) FY94

- 1 Identify modification requirements.
- 2 Establish the controlled access program.
- 3 Prototype modified system.
- 4 Prototype revised grid based and controlled access programs.

b) FY95

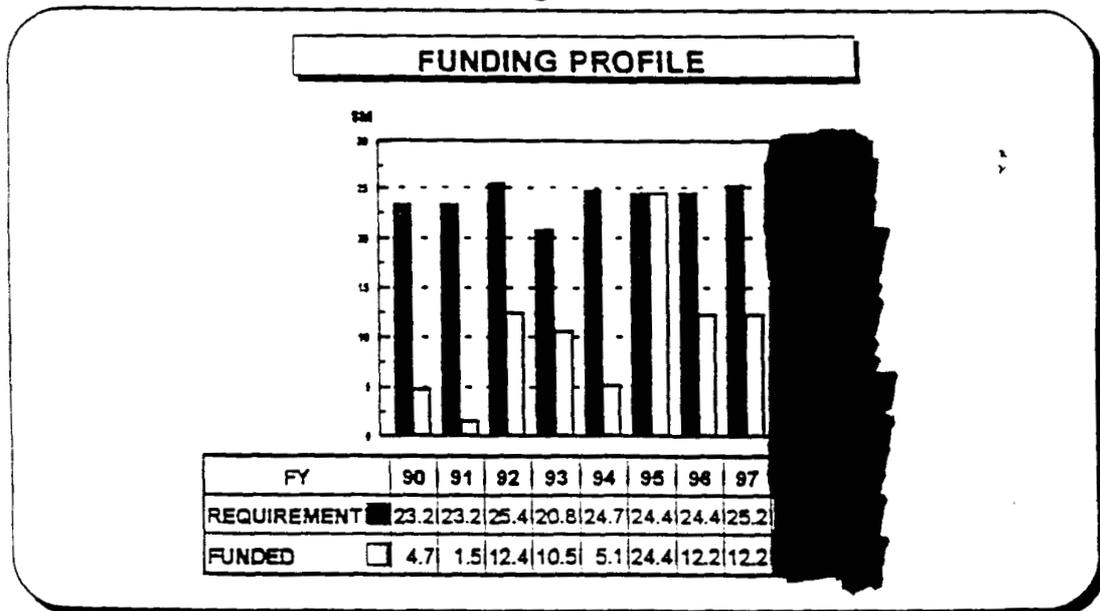
- 1 Execute grid based program at all Standard Depot System (SDS) storage installations.
- 2 Assistance to installations as required.
- 3 Revalidate the LOGMARS program and integrate if applicable.
- 4 Develop an automated key room program.

#### d. SURVEILLANCE

(1) The Ammunition Stockpile Surveillance Program is comprised of several major programs. The purpose of these programs is to assure that the condition, performance capabilities, and safety margins of ammunition are known throughout their life cycle. This is accomplished through periodic sampling, inspection, and testing of stocks. Test/inspection results are used to make appropriate stockpile decisions such as identifying items for maintenance and demilitarization, and withdrawing or restricting items considered to be of marginal serviceability. In addition, surveillance supports several key safety and logistical requirements: inspection of storage structures and safety of ammunition stored therein; transportation conveyances; and inspection of maintenance and demilitarization facilities and operations.

(2) Programs devoted exclusively to safety have been and are projected to be fully funded. However, two key programs, Large Caliber Testing and Periodic Inspection, devoted primarily to determining the serviceability of the stockpile are significantly behind schedule. The Large Caliber Test Program currently has 42 percent of items beyond its test interval. Twenty percent of the lots in the wholesale stockpile are beyond their periodic inspection interval. There has been a significant historical inspection failure or reclassification rate for items/lots included in these programs. For periodic inspection, the reclassification rate has been 7 percent and for large caliber testing, the rate has been 17 percent. Continued tolerance and growth of this backlog runs the risk of eroding our confidence in the true condition of the stockpile. It also prevents the identification of unserviceable stocks for appropriate corrective action; i.e., perform maintenance, suspend or restrict ammunition lots.

(3) Relative to this background, several issues have emerged. The Army is now faced with such a diminished ammunition surveillance program that knowledge of stockpile readiness is critically reduced. Moreover, projected funding does little or nothing to improve on this shortfall in the long term.



(4) In reality, the unbalanced nature of funding through FY 99 will only further diminish the skill base necessary to complete even the most critical surveillance functions. Accordingly, the ammunition surveillance community, working in tandem with other logisticians, has tried to address these problems through several progressive initiatives.

(5) What follows is a discussion of some key actions in progress or proposed to effectively meet the challenge of the above issues. Caution must be exercised when considering cost savings or avoidance's discussed below. Any savings realized through these initiatives are only valid against a backdrop of full surveillance inspection/test compliance. For example, in recent years the number of periodic inspections completed have fallen to nearly zero. There is obviously no cost avoidance against a base of zero. Funding at the requirement level must serve as the baseline to determine the value of the process.

a) **Balanced program:** [REDACTED]

[REDACTED]

This erratic funding profile raises serious concerns about the Army's ability to retain the highly trained specialists necessary to perform the surveillance test and inspection function. T [REDACTED]

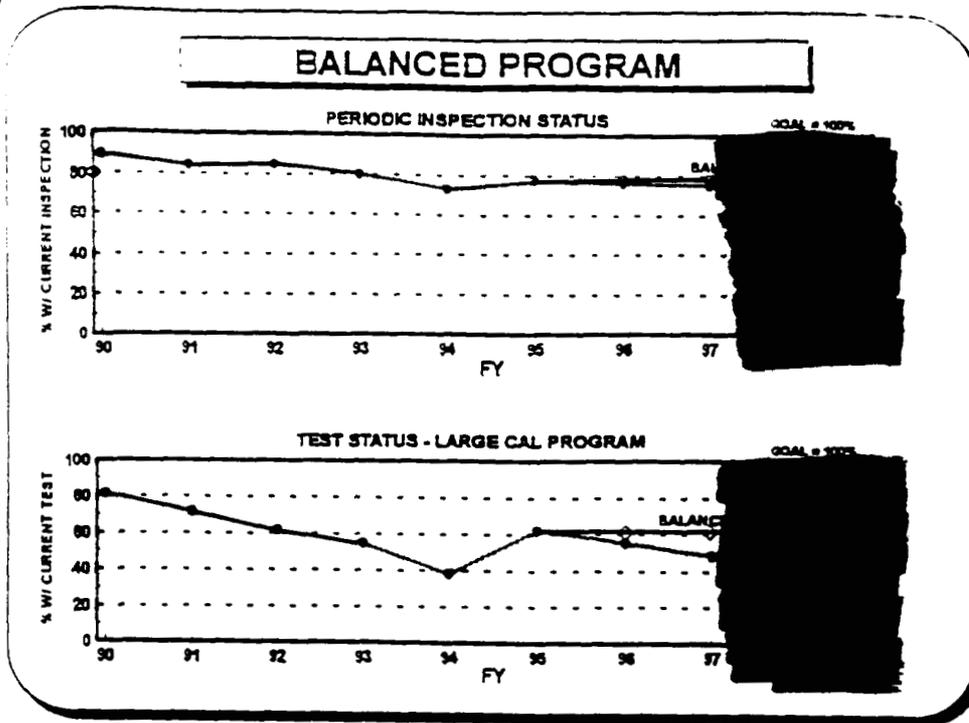
[REDACTED]

[REDACTED] A funding profile which is balanced over the FY 96-99 (approximately \$14M per year) would assure the continuing availability of trained and skilled personnel for this function. [REDACTED]

[REDACTED]. Any possibility of closing this gap should be pursued. To this end, the balanced funding approach will significantly improve the readiness posture of the Army. [REDACTED]

[REDACTED]

[REDACTED]. In summary, a balanced funding program through FY 96-99 assures availability of trained personnel to perform necessary work and actually results in an appreciably reduced backlog while spending the exact same amount of funds.



b) Prioritize Inspection of Required Stocks: [REDACTED]

[REDACTED] It is therefore important to the readiness of the Army that inspection and test dollars be wisely invested. To achieve this goal, the ammunition surveillance community has joined with our supply manager counterparts to embrace the concept of dividing the wholesale stockpile into two separate pieces; required and non-required. Given that required stocks satisfy both current power projection and training requirements, inspection and test of these assets will be of the greatest importance. It is envisioned that these lots will receive periodic inspection IAW SB 742-1, be represented in testing programs as described in AR 702-6, and be stored IAW standard storage drawings. Of course, all safety related inspections, to include magazine inspection of storage structures, will be assured for required stocks. Conversely, non-required stocks, those assets currently in excess of both power projection and training requirements, may be deemed suitable for a lesser degree of scrutiny. Barring unforeseen circumstances, it is envisioned that inspection requirements can be reduced to at least a Safety in Storage (SIS) inspection. For items deemed suitable due to their durability in storage, further inspection reductions or possible elimination is possible. Examples may be small arms ammunition, inert components, HE projectiles, etc. Block storage may be deemed appropriate, but such considerations will hinge on completion of associated rewarehousing and reconfiguration to separate required and non-required stocks. These stocks cannot however be abandoned. Accordingly, all safety related inspections, to include magazine inspection of storage structures and their contents, must also be assured for non-required stocks. In terms of cost analysis, given completion of associated

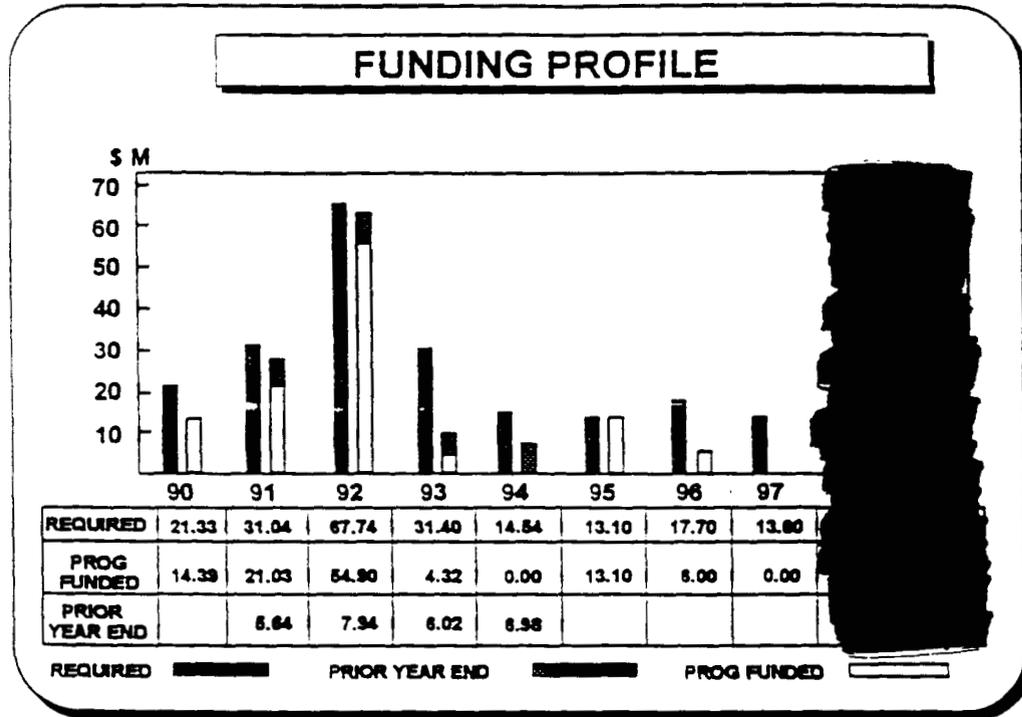
rewarehousing and reconfiguration, conversion to an required versus non-required approach for the wholesale stockpile can result in cost avoidance for ammunition surveillance functions. Depending on stockpile breakouts, most notably with "production offset" stocks, a savings of \$500-2000K per year is projected as early as FY 97.

c) Lot Clustering: Ammunition lot clustering is a procedure to administratively combine homogeneous ammunition lots into groups for the purpose of periodic inspection. Each installation establishes its own clusters IAW with a Letter of instruction (LOI) jointly developed by DESCOM and AMCCOM and approved by HQ, AMC. Through statistical modeling it has been demonstrated that inspection of one lot in the cluster would apply to all other lots in the cluster, reducing the number of inspections and saving resources without sacrificing quality or safety. The LOI contains specific instructions such as: all lots must be of the same model/series; same manufacture; same lot interfix; similar method of pack; same condition code, and have similar histories. It is estimated that a potential 10-15 percent reduction in inspection requirements can be realized through lot clustering. On the basis of a population of serviceable, unserviceable (minor maintenance), and suspended (emergency combat only) of approximately 185,500 lots, institution of this process represents a potential cost avoidance of \$500-725K per year.

d) Modification of Inspection Intervals: Prior to 1988, periodic inspection of ammunition lots in storage were being conducted at conservatively established intervals of 2 to 5 years depending on the type of munition and expected rate of deterioration. The local chief of surveillance had authority to increase the interval between inspections by up to 2 years if local conditions (such as climate, storage conditions, and previous inspections) so justified. In 1988 an in-depth study of these intervals was initiated at AMCCOM. Goal was to increase intervals between inspections whenever possible without decreasing confidence in knowledge of stockpile serviceability. It was soon established that some intervals could be extended based on findings of the study. Study involved close scrutiny of installation surveillance inspection records to determine the onset of significant deterioration. Taking one item, or family of items, at a time, inspection records were solicited from installations worldwide, carefully compiled and evaluated and a new and statistically sound interval assigned. Thus far, 18 items have been evaluated and intervals extended. The previous (pre 1988) range of lot inspection intervals has been expanded from 2-5 years to the present range of 2-10 years. Authority and guidance to incorporate these new intervals for selected items was most recently detailed to the ammunition community in an AMCCOM Ammunition Information Notice (AIN) 58-93, dated April 1993. The interval study is a continuous process and future cost avoidance associated with this effort could be significant. For example, scrutiny of the 81MM HE, M374 series jungle packed mortar cartridge results in a potential overall cost avoidance of \$7800.00 per year due to a shift from a four to a six year inspection interval. This example assumes a balanced workload distribution and a CONUS stockpile of 222 lot segments.

e. MAINTENANCE

(1) In FY94 the ammunition major maintenance program was zero funded. Obligations of approximately \$7.0M from FY93 year end funding were used to support FY 94 requirements. An additional \$4.0M in high priority requirements remain unfunded and will impact ability to support training and readiness requirements. Overall \$7.5M in priority programs remain unfunded and the preventive maintenance program remains totally unfunded.



(2) The 10 year funding profile chart indicates several trends; (1) in post years, except FY92, where \$47M in SWA dollars were provided, the maintenance program has been funded significantly less than required; (2) since FY91, year end funding has become an increasingly larger portion of the program; (3) outyear funding will not meet our requirements.

(3) The continual use of year end funds to support maintenance limits management flexibility and does not allow the projection of workloading data to our installations. If funding levels projected for FY 96-98 remain unchanged, there will be a definite impact on training and/or readiness. Additionally, at these funding levels it will be extremely difficult to maintain a maintenance workforce at our facilities, thus resulting in a loss of expertise and capability.

(4) Internally, the AMCCOM National Maintenance Point (NMP) has reorganized the management team structure to improve maintenance planning efforts through development of a prioritized system. The system reflects the required/non-required

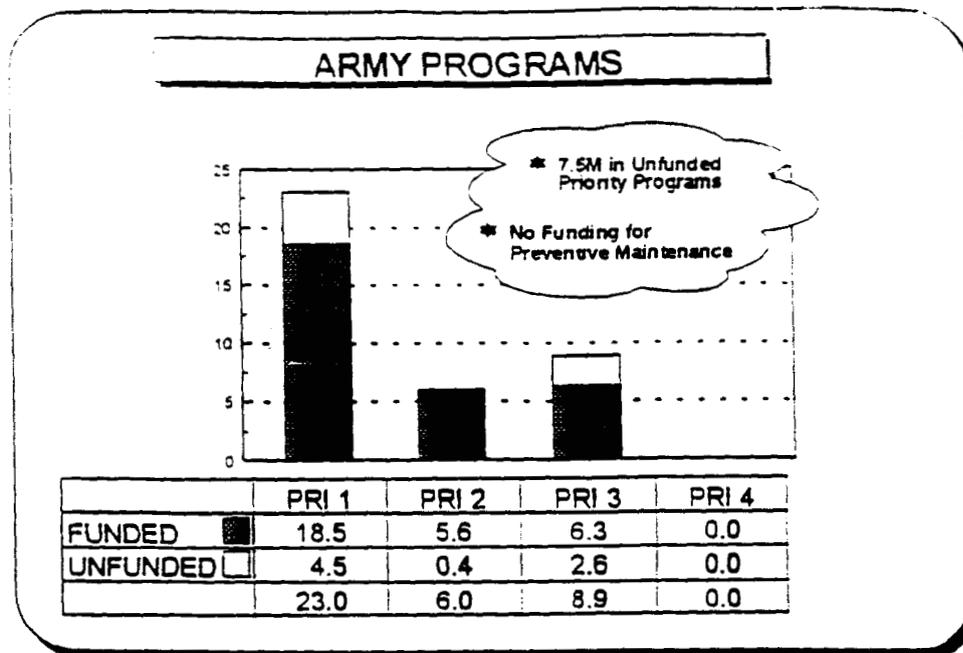
concept for maintaining only the training and war reserve stockpile. Only those stocks needed to support immediate training or critical war reserve shortfalls are submitted for renovation funding. Quarterly reviews are conducted on all priority programs, both funded and unfunded, to ensure limited resources are focused on the most urgent needs. If a priority one item remains unfunded, it results in a critical war reserve shortfall or severely impacts training within one year.

(5) Priorities are determined by applying on-hand assets to war reserve and training requirements. Maintenance priority one, for example, are those stocks satisfying less than 25% of the war reserve requirement, or meeting less than one year's training requirements.

## ESTABLISHING PRIORITIES

### CONDITIONS

PRIORITY	WAR RESERVE		TRAINING
1	< 25%	OR	< 1 Year
2	25-49%	OR	< 2 Years
3	50-74%	OR	< 3 Years
4	75-99%	OR	< 4 Years



(6) Current and projected funding levels continue to maintain limited readiness at the expense of mortgaging the stockpile. Lack of preventive maintenance will continue to deteriorate the stockpile and eventually cause these assets to become high priority programs requiring significantly more funding than is currently needed.

(7) Funding of ammunition renovation provides a cost avoidance of approximately 70%-80% of new production cost. It also avoids the cost of demilitarization, and helps support overhead at our installations while maintaining a valuable capability.

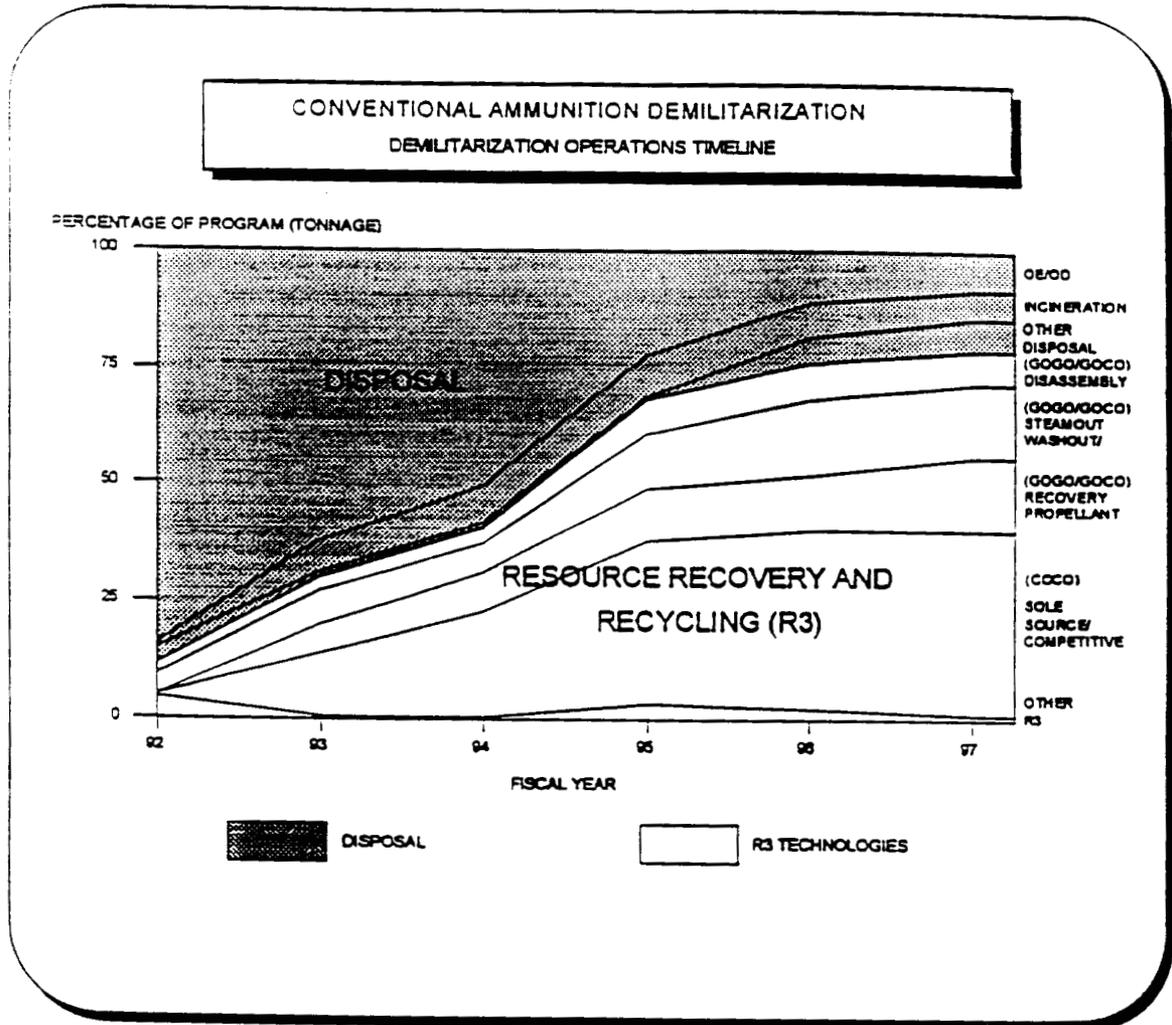
(8) Another concern involves the downsizing of the ammunition industrial base and reduced maintenance funding. There will eventually be a significant loss of expertise and capability to perform a major item maintenance mission. Accordingly, if future funding increases, the ability to provide timely response for renovation of large portions of the stockpile will be limited. Future spikes in funding will not provide an immediate solution to aid a deteriorating stockpile. Efforts to offset a possible reduction in maintenance capability have centered around a refocus of the Ammunition Peculiar Equipment (APE) program to improve depot support and provide new technologies.

## f. DEMILITARIZATION

(1) The conventional ammunition demilitarization program continues to be a major element of the Single Manager for Conventional Ammunition (SMCA) mission. Stockpiles of excess, unserviceable, and/or obsolete munitions are continuing to grow as a result of a myriad of factors, to include global changes in the military community and national environmental issues that are threatening to restrict operations. The Army, as the SMCA, has pursued a number of initiatives and has conducted studies to determine the best strategy to minimize the stockpile while considering environmental and economical factors. Because of this increased emphasis, a demilitarization master plan was developed to serve as a tool in assisting the effective and efficient management of the overall demilitarization program. This plan has been assessed and found to be compatible with the tier depot plan approach. In accordance with the 1982 and 1986 Blue Ribbon Panels (BRP) on Ammunition Demilitarization, a 40,000 short ton stockpile is considered a manageable demilitarization inventory. These parameters, however were based on an inventory level of 150,000 to 200,000 short tons and a standard annual generation rate of 20,000 short tons. The demilitarization climate has changed considerably since the last BRP, and although the ultimate goals may be similar, the factors effecting today's program are significantly distinctive from any other program. Today's inventory level is over 413,000 short tons and has growth potential; annual generations are at an all time high and are likely to continue along that trend. The magnitude of a stockpile backlog of approximately 413,000 short tons can best be visualized using logistical frames of reference. This size of inventory could fill almost 6,883 rail cars, equating to a train that would stretch for 65 miles; or it would require over 20,000 truck trailers to transport, producing a 1,428 mile convoy. In logistics terms, storing the inventory in standard igloos would completely fill Blue Grass, Letterkenny, and Red River Army Depots (2753 igloos) with about 250 igloos remaining. For this reason, demilitarization operations at the installation level have taken on a much more urgent commitment priority in order to meet annual program goals. The loss of authority to hire additional temporary employees will undoubtedly impact the ability to perform demilitarization operations at the Government-owned, Government-operated facilities in a timely and efficient manner. Augmentation of contractor support will alleviate some of these shortfalls by increasing overall capabilities.

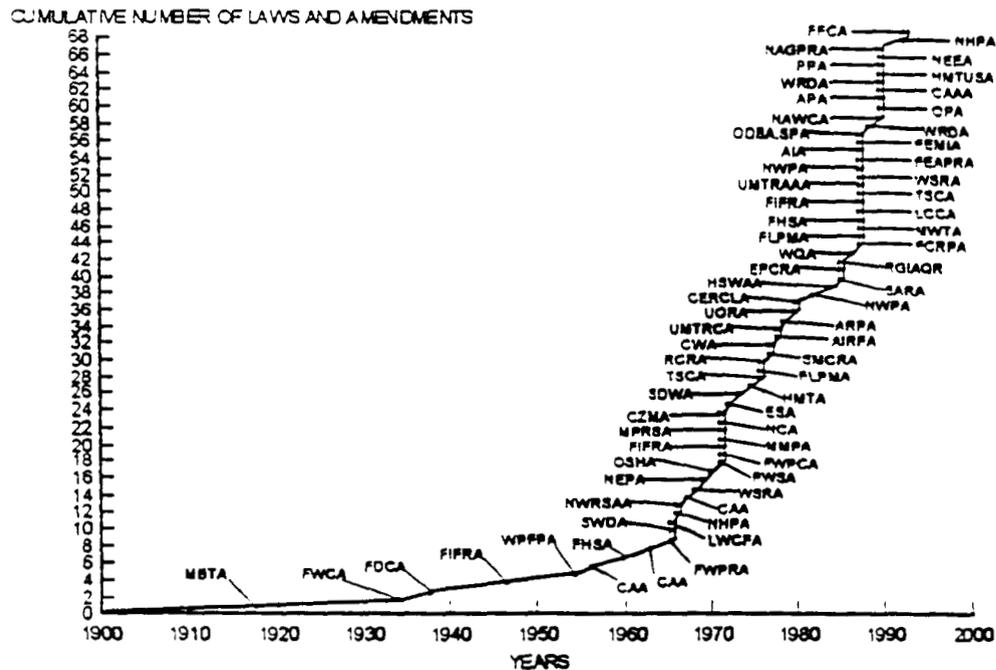
(2) Environmental considerations are continuing to be critical components to accomplishing the demilitarization program. The Conventional Ammunition Demilitarization Master Plan presents the SMCA's methodology for migrating from a disposal focus to one of Resource, Recovery and Recycling (R3). The plan is not budget driven, but rather each program element has been evaluated individually to determine funding requirements. The master plan is constrained only by present and projected capabilities. This chart illustrates the trend of the fully funded SMCA demilitarization program for the time period from fiscal year 1992 through 1997. Disposal procedures accounted for 88 percent of the total program in FY 92, a stark contrast to the projected 22 percent in FY 97. Further, one third of those disposal programs planned, offer new environmentally sound procedures that will be brought on

line through on-going research and development efforts, and support the SMCA's pledge to decrease reliance on open burning/open detonation (OB/OD) operations.



(3) Increasing the focus on cost effective resource recovery and recycling (R3) efforts is a goal of the SMCA. Development of new technologies, increased emphasis on contractor and industry support, and establishment of new and improved facilities are some of the means by which the SMCA's goal can be attained. Heavy reliance on OB/OD in the future is not only a negative from a R3 point of view, but is strategically unsound given the increasingly restrictive environmental regulations. This chart graphically depicts major federal environmental legislation and its explosive expansion over the last 20 years.

## FEDERAL ENVIRONMENTAL LEGISLATION



(4) The growing demilitarization stockpile has caused critical safety concerns. Long term storage of a large demilitarization inventory increases the possibility of accidental and potentially fatal self initiating catastrophic events. Some munitions tend to become less stable with time. A good example would be conventional ammunition propellant. As it ages, its stabilizer content becomes reduced, thus increasing the chance of auto-ignition. The demilitarization inventory will be significantly safer by reducing the demilitarization inventory to a size that allows for closer monitoring and earlier detection and mitigation of safety concerns.

**(5) END STATE DEMILITARIZATION OBJECTIVES**

a) The first objective for demilitarization is the reduction in the growing backlog allowing for critical storage space within the Tier I and II installations. Reducing the backlog to a level whereby annual generations are equal to annual accomplishments will allow for a 100 percent stable stockpile. Utilizing both government and industrial/contractor support and assuming that funding through the POM can be provided to a level that meets capabilities, the goal is to obtain a 100,000 short ton backlog by FY04.

**TEN YEAR FUNDING SCENARIO  
(DEMIL)**

	FY94	FY95	FY96	FY97	
COST PER S/TON	1400	1700	2200	1800	
REQUIRED (\$M)	70	100	100	110	
BEGIN BALANCE	412858	422858	389035	368580	
GEN	60000	25000	25000	25000	
ACCOMP	50000	58823	45455	61111	
ENDING BALANCE	422858	389035	368580	332489	

b) The second program objective is to reduce our reliance on OB/OD methods while gradually increasing reliance on Resource, Recovery and Recycling effort to a 75 percent level by FY97.

c) In order to achieve the above end state objectives, the SMCA has established a strategic plan that involves a short term and long term plan of action.

**1 Short Term:**

a) Our short term emphasis is on maximizing OB/OD opportunities and to clear storage space at Tier I and II installations through innovative ideas and approaches. We are aggressively funding OB/OD projects at all Tier levels when economically feasible and environmentally acceptable. We are fully utilizing our large capacity OB/OD locations to include shipping assets from tier I locations with minimal OB/OD capability.

b One of the innovative ways that we are expanding the capacity of the demilitarization base short term is in the area of contracting for conventional ammunition demilitarization. During FY 93 and FY 94, contracts with 100 percent options which may be exercised in FY 95/96 have been/are being let. Additional contracts are being planned for award in FY 95. These contracts plus the options from previous year contracts will total \$30-40M. The final value of the contracts to be awarded depends upon cost effectiveness weighed against organic government capability to perform demilitarization.

c We are investing heavily in Tier I and Tier II installations in Ammunition Peculiar Equipment (APE) and plant facilitization. A good example of strategic APE placement is that which is being employed in distributing APE 1236 furnaces. Our plans revolve around regionally locating these facilities at Tier I and II installations where the generations and support staff will continue to exist to operate such equipment. Regional dispersion minimizes EPA regional policy impacts on the furnaces while reducing the shipments of hazardous materials. We are also helping to facilitize and workload Tier I and Tier II facilities. Such is the case at Hawthorne Army Ammunition Plant's (HWAAP) Western Area Demilitarization Facility (WADF). We are also planning location of autoclave equipment at certain Tier I and II facilities. Short term we are also utilizing existing wash out and steam out and white phosphorous facilities when economically feasible.

d In addition to utilizing demilitarization, we are actively pursuing propellant and explosive sales. These sales will help to reduce the demilitarization inventory while generating additional funding for future demilitarization efforts.

## **2 Long Term:**

Our long term goal is to establish demilitarization centers of excellence at Tier I and Tier II installations focused on R3. Site selection for transitioning Research and Development (R&D) initiatives will be carefully selected to assure maximum utility. Current R&D projects include such efforts as Super Critical Water Oxidation, Carbon Dioxide Blast Vacuum Demilitarization, Cryofracture Technology and Cryogenic Washout to name a few. At the end state, demilitarization operations will be conducted either commercially or in house depending upon economic factors, with a certain minimum government capability being maintained as insurance for uneconomical or one-time projects. We will also maintain unique government capability such as the Western Area Demilitarization Facility at HWAAP and the White Phosphorus plant at Crane Army Ammunition Activity (CAAA).

## IX. SUMMARY

a) This plan documents actions requiring near term investments for achieving long term efficiencies and savings through a smaller, safer stockpile using a reduced level of manpower. It provides a methodology for restructuring the wholesale storage base into fewer installations while identifying initiatives required to maintain critical power projection capabilities. Additionally, it outlines the limitations in today's environment and identifies the necessary restructuring of ammunition management operations within each functional area.

b) Near term investments are required to achieve long term benefits. Investments to stockpile improvements are made through the OMA appropriation for supply, maintenance, and transportation functions, and PAA for demilitarization functions. The OMA funding is apportioned based on priorities, therefore, lower priority functions can be supported only after higher priority functions are satisfied. Success of this Integrated Management Plan is possible only if the total minimum requirement level is fully funded. Lower funding levels would mean that investments in such areas as inventory, surveillance, rewarehousing, redistribution and maintenance will not be made. Full funding for receipts and issues are required to maintain peacetime capabilities and ultimately lower the overall cost of redistribution by allowing the issue of training stocks from Tier II/III installations. Investments and balancing funding of maintenance and surveillance of required, high priority stocks, are required to maintain readiness and preclude the declining critical skill base. The revised inventory program requires no additional investment over the current requirement, but must be fully funded at the lower requirement level to assure success. The program as outlined in this plan will actually require fewer resources than are being programmed in the POM.

[REDACTED]

[REDACTED]

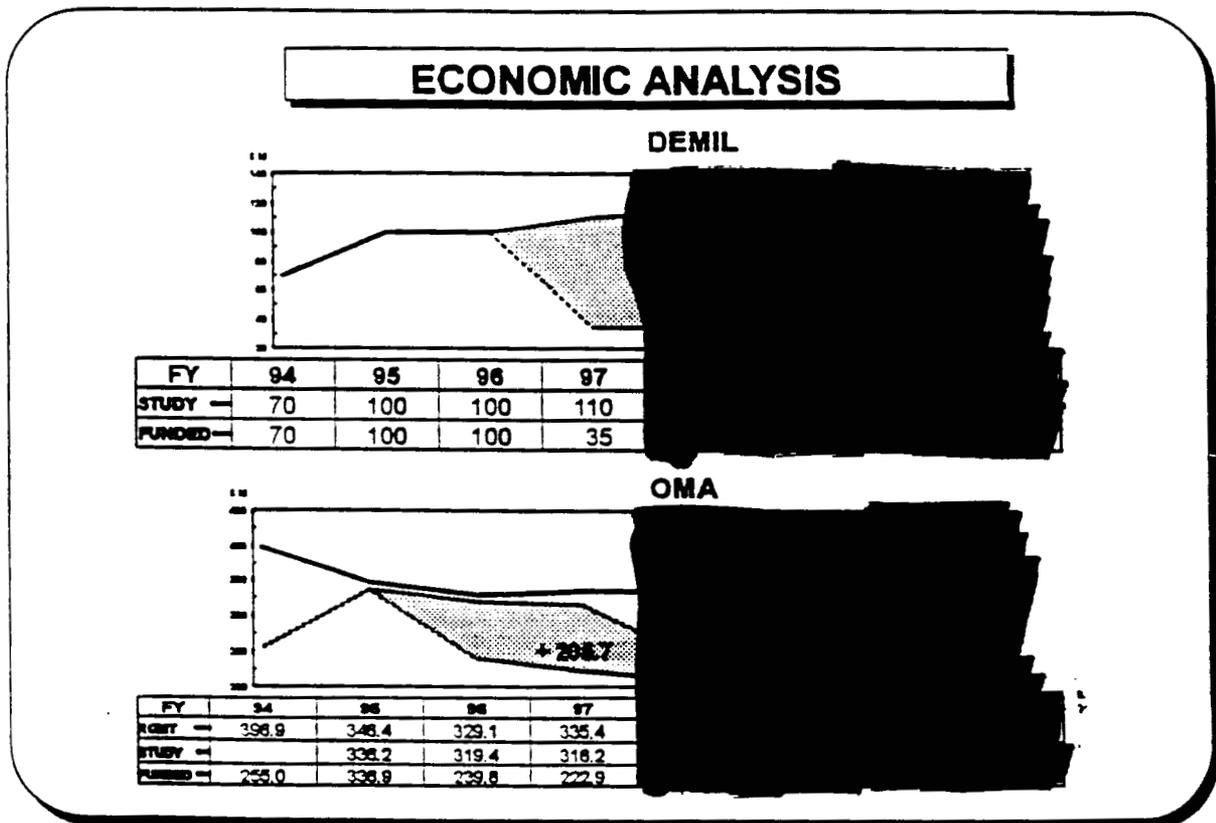
[REDACTED] This figure includes all OMA requirements, however, does not include redistribution to maximize outloading capabilities. That program has submitted funding requirements through the ASMP. [REDACTED]

[REDACTED]

c) This plan has also outlined the initiatives required to reduce the backlog of the demilitarization stockpile to a manageable 100,000 short tons within a ten year time frame. An aggressive program is required to provide storage space for realignment into a tier infrastructure and allow the operational functional area to perform efficiently and effectively. A program that provides the necessary funding to match capabilities is initially required through FY99. The demilitarization program will then be gradually

reduced to an ultimate goal whereby annual generations equate to annual accomplishments.

d) The economic analysis shown in the following charts is based on rates and workload forecasts available at the time of the tier depot simulation. Changes in the actual rates and workloads will effect actual results. Detailed execution planning beyond the simulation level will be used to update the expected investments and savings, and will be reflected in future editions of this plan.



# ASSESSMENT SUMMARY

PROGRAM	STATUS	CURRENT RQMT FY96-99	REVISED RQMT FY96-99	FUNDED FY96-99	AMBER FIX	GREEN FIX
OMA:						
REC/ISS/SDT						
REWSING						
INVENTORY						
SURVEIL						
MAINT						

DEMIL:

DOLLARS IN M

• Operatic

**QUANTITATIVE DATA  
FOR TIER DEPOT ANALYSIS**

# POWER PROJECTION

## OUTLOADING CAPABILITY

### FACTORS

DEPOT	CNTR/SCR	BB/SCR	70-30/SCR
	WEIGHT: 4	2	3
ANAD	1040/2.9	800/.8	968/2.4
BGAD	2080/5.9	3760/3.7	2584/6.5
CAAA	780/2.2	11300/11.0	3936/9.8
HWAAP	923/2.6	1280/1.2	1030/2.6
LEAD	520/1.5	3480/3.4	1408/3.5
MCAAP	3900/11.0	5560/5.4	4398/11.0
RRAD	728/2.1	2840/2.8	1362/3.4
SEDA	104/.3	1060/1.0	391/1.0
SIAD	1144/3.2	2000/1.9	1401/3.5
SVDA	1989/5.6	1700/1.7	1902/4.8
TEAD	1170/3.3	8600/8.4	3399/8.5

MEASUREMENTS ARE IN ST PER DAY BASED ON MAX CAPABILITY OF DEPOT TO OUTLOAD. ARMY GOAL TO GO CONTAINERIZED, THUS GIVING MAX WEIGHT, FOLLOWED BY 70/30 SPLIT, THEN TOTAL BB.

# POWER PROJECTION

## TRANSPORTATION FACTORS

DEPOT	TRUCK/WT	RAIL/WT	AIR/WT	TOTAL	SCR
WEIGHT:	2	3	1		
ANAD	2/4	1/3	0	7	9
BGAD	2/4	2/6	0	10	11
CAAA	2/4	2/6	0	10	11
HWAAP	0	0	0	0	5
LEAD	1/2	0	0	2	7
MCAAP	2/4	2/6	0	10	11
RRAD	1/2	1/3	0	5	8
SEDA	0	0	1/1	1	6
SIAD	2/4	1/3	1/1	8	10
SVDA	1/2	1/3	0	5	8
TEAD	1/2	2/6	0	8	10

FACTORS BASED ON THE INSTALLATIONS CAPABILITY TO MOVE MUNITIONS  
OUT OF THE GATE BY TRUCK, RAIL, OR AIR.

RANKINGS ARE BASED ON DEPOT ASSESSMENT FOR EACH FACTOR AS FOLLOWS:

GOOD -- 2 POINTS

FAIR -- 1 POINTS

POOR -- 0 POINTS

# STORAGE CAPABILITY

## FACTORS

DEPOT	NET SQ FT/SCR	ECM SQ FT/SCR
	WEIGHT: 2	1
ANAD	1831200/3.3	1623258/4.0
BGAD	1745600/3.1	1374304/3.4
CAAA	4891200/8.8	3585484/8.9
HWAAP	6136800/11.0	3518186/8.7
LEAD	1693600/3.0	1459635/3.6
MCAAP	5593600/10.0	4430063/11.0
RRAD	1351200/2.4	1073715/2.7
SEDA	1119200/2.0	783846/1.9
SIAD	1929600/3.5	1196800/3.0
SVDA	1892800/3.4	554803/1.4
TEAD	1895200/3.4	1361600/3.4

# LOCATION

## FACTORS

DEPOT	TO SPOE/SCR	TO APOE/SCR	TO TRNG/SCR	\$ TO SPOE
	WEIGHT: 4	2	3	1
ANAD	4/5.5	383/5.2	459/11.0	240/7.7
BGAD	5/5.4	551/3.6	600/8.4	221/8.4
CAAA	7/3.1	700/2.8	602/8.4	267/7.0
HWAAP	3/7.3	300/6.6	582/8.7	203/9.2
LEAD	5/4.4	180/11.0	587/8.6	221/8.4
MCAAP	7/3.1	1057/1.9	515/9.8	427/4.4
RRAD	10/2.2	926/2.1	595/8.5	376/4.9
SEDA	6/3.7	233/8.5	705/7.2	258/7.2
SIAD	2/11	233/8.5	527/9.6	169/11.0
SVDA	7/3.1	935/2.1	756/6.7	379/4.9
TEAD	4/5.5	687/2.9	603/8.4	280/6.6

DATA IS # OF RAIL TRANSIT DAYS TO CLOSEST SPOE AND ACTUAL MILEAGE TO CLOSEST APOE. FOR SPOE, MILEAGE DOES NOT NECESSARILY MEAN THE BEST. RAIL MEASURED DUE TO # TONS MOVED. THE COST TO SPOE IS THE COST TO THE CLOSEST SURFACE PORT. IT IS ADDITIVE OF BOTH CONTAINER AND BB (MOTOR AND RAIL). WEIGHTS ASSIGNED: LARGEST TONNAGE OUT OF SPOE, THUS HIGHEST RANKING TRNG IS AVG MILES TO MAJOR TRNG SITES W/I 1000 MILES. (W/I 50MI = SAME)

# COSTS

## FACTORS

DEPOT	R/I/SCR	INV/SCR	SURV/SCR	MAINT/SCR
WEIGHT:	4	3	2	1
ANAD	248.66/3.0	14.45/4.6	359.85/4.4	45.55/8.2
BGAD	125.08/5.9	50.17/1.3	304.55/5.2	59.01/6.3
CAAA	66.86/11.0	10.69/6.2	224.69/7.1	40.93/9.1
HWAAP	148.71/4.9	38.33/1.7	144.87/11.0	51.97/7.2
LEAD	130.83/5.6	16.44/4.0	438.20/3.6	33.86/11.0
MCAAP	107.49/6.8	27.22/2.4	146.34/10.9	48.78/7.6
RRAD	134.22/5.5	6.00/11.0	505.24/3.2	49.22/7.6
SEDA	145.75/5.0	90.55/7	794.97/2.0	88.33/4.2
SIAD	142.21/5.2	57.11/1.2	386.05/4.1	59.39/6.3
SVDA	112.34/6.5	101.57/6	535.92/3.0	81.20/4.6
TEAD	122.36/6.0	27.24/2.4	275.56/5.8	55.21/6.7

R/I = COST PER ST; INV = COST PER GRID; SURV = COST PER LOT;  
MAINT = COST PER MANHOUR FIXED.

DEMIL COSTS EXCLUDED DUE TO FUNDING FROM PAA.

ASSIGNED WEIGHTS ARE IN AGREEMENT WITH OMA PRIORITIZATION AS BRIEFED  
IN THE AMMUNITION FAA.

# MAINTENANCE

## FACTORS

DEPOT	MISSILE/SCR	MULTUSE Bldg /SCR	NEW Limit/SCR	SQ FT Avail/SCR
WEIGHT:	4	3	2	1
ANAD	Y/11	4/5.5	44000/.4	66895/5.5
BGAD	N/0	3/4.1	128000/1.1	80602/6.7
CAAA	N/0	8/11.0	97700/.8	122360/10.2
HWAAP	N/0	4/5.5	515000/4.4	102537/8.5
LEAD	Y/11	1/1.4	20000/.2	23073/1.9
MCAAP	N/0	6/8.3	1300000/11.0	132606/11.0
RRAD	Y/11	3/4.1	65000/.6	47203/3.9
SEDA	N/0	1/1.4	60000/.5	21200/1.8
SIAD	N/0	2/2.8	37000/.3	17832/1.5
SVDA	N/0	2/2.8	255000/2.2	106920/8.9
TEAD	N/0	5/6.9	139000/1.2	71203/5.9

MISSILE FACTOR: YES OR NO FOR MISSILE MAINTENANCE CAPABILITY.

DEPOTS WITH THIS CAPABILITY RECEIVE A SCORE OF 11 BASED UPON ITS IMPORTANCE AS DISCUSSED DURING 17-18 FEB MEETING.

MISSILE MAINTENANCE FACILITIES ARE CONSIDERED AS HIGH DOLLAR INVESTMENTS AND ARE UNIQUE TO MISSILE SYSTEM REQUIREMENTS. NOT EASILY INTER-CHANGEABLE.

# INSPECTION/TEST

## FACTOR

DEPOT	FUNCTION	MISSILE	MOD SURV	X-RAY	TOTAL	SCR
WEIGHT:	4	3	2	1		
ANAD	0	1	0	0	3	8
BGAD	0	0	0	0	0	6
CAAA	1	0	1	1	7	11
HWAAP	1	0	1	1	7	11
LEAD	0	1	1	1	6	10
MCAAP	0	0	1	1	3	8
RRAD	0	1	0	1	4	9
SEDA	0	0	0	0	0	6
SIAD	0	0	0	0	0	6
SVDA	1	0	0	0	4	9
TEAD	0	0	0	1	1	7

RANKING: 1 = HAS CAPABILITY  
0 = HAS NO CAPABILITY

# DEMIL

## FACTORS

DEPOT	RRR/SCR	OB-OD/SCR	DEMIL STORAGE/SCR
WEIGHT:	3	2	1
ANAD	10/7	1600/.9	24973/2.7
BGAD	17/9	300/.2	17944/1.9
CAAA	18/10	2000/1.1	30972/3.3
HWAAP	20/11	1600/.9	102154/11.0
LEAD	6/6	3200/1.8	29753/3.2
MCAAP	17/9	3300/1.8	88930/9.6
RRAD	12/8	1000/.6	7486/.8
SEDA	10/7	2100/.4	6877/.7
SIAD	10/7	20000/11.0	15475/1.7
SVDA	6/6	1800/1.0	7163/.8
TEAD	12/8	8400/4.6	8756/.9

RESOURCE RECOVERY AND RECYCLING CAPABILITY INCLUDES:

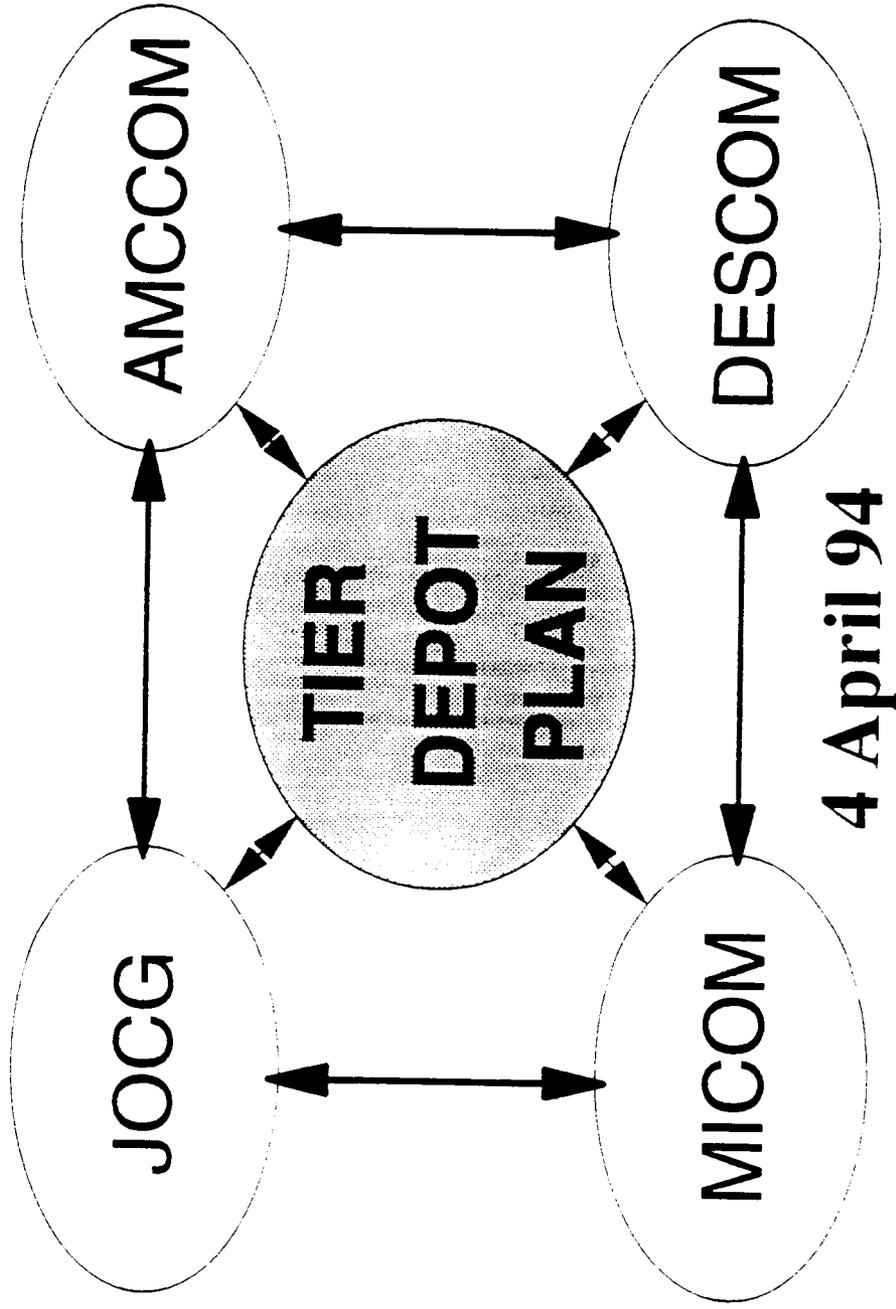
DISASSEMBLY, UNIQUE DEMIL CAP, WASHOUT/STEAMOUT/MELTOUT CAP, APE 1236

OPEN BURN/OPEN DET CAPABILITY INCLUDES;

DEMIL ST IN STORAGE BY LOCATION

-- TAKING OB/OD AND DEMIL IN STG OUT DOES NOT AFFECT FINAL RANKING ORDER.

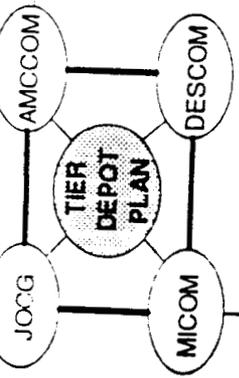
# TIER DEPOT ANALYSIS



4 April 94

## INTEGRATED AMMUNITION STOCKPILE MANAGEMENT PLAN

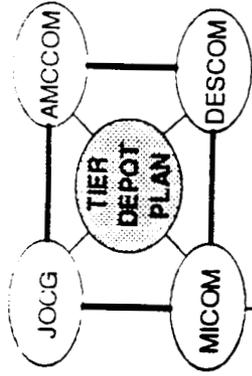
COL Scott Hull, HQ AMCCOM  
Mr. Ron Herter, HQ, DESCOM



# OUTLINE

- Background
- Scope / Objectives
- Quantitative Analysis
- Qualitative Considerations
- Service / Installation Comments
- Conclusion
- Recommendation

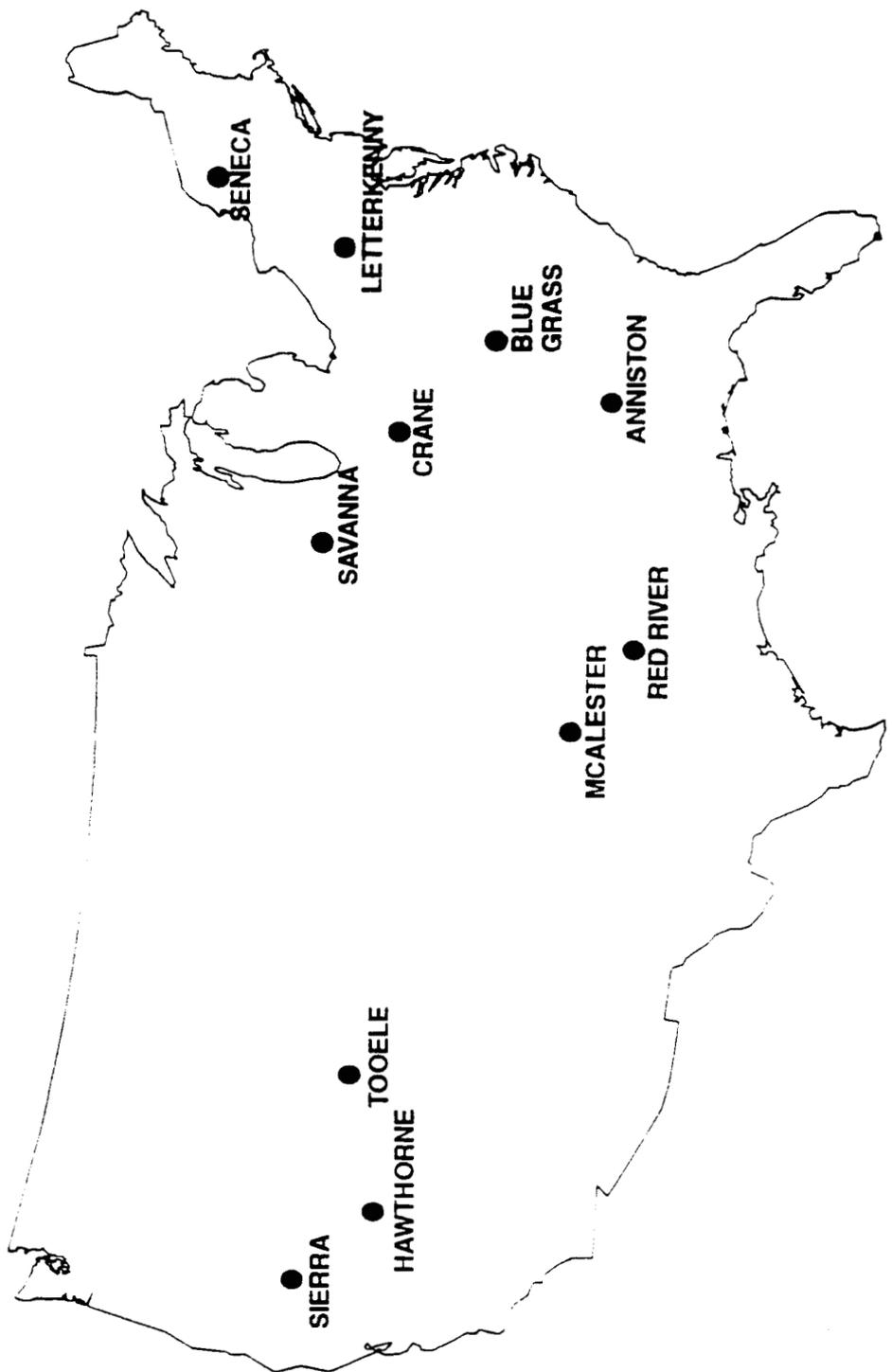
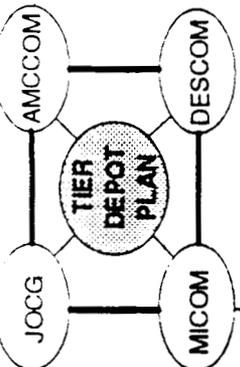
# BACKGROUND

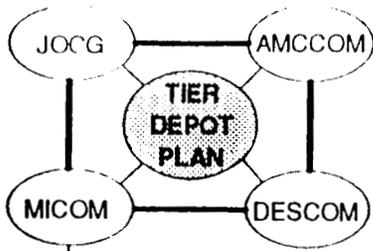


- **OCT 93**
  - Study Assessment Ranking
- **NOV 93**
  - Simulation Conducted (All Services, MICOM, DESCOM)
- **17-18 FEB 94**
  - Joint Service Working Group (All Services, MICOM, DESCOM)
  - Developed Criteria and Identified Weights
  - Performed Preliminary Analysis
- **21 FEB - 4 APR 94**
  - Developed Detailed Analysis

# Tier Depot Analysis

# SCOPE

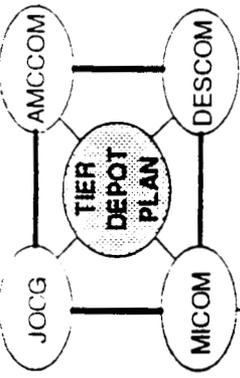




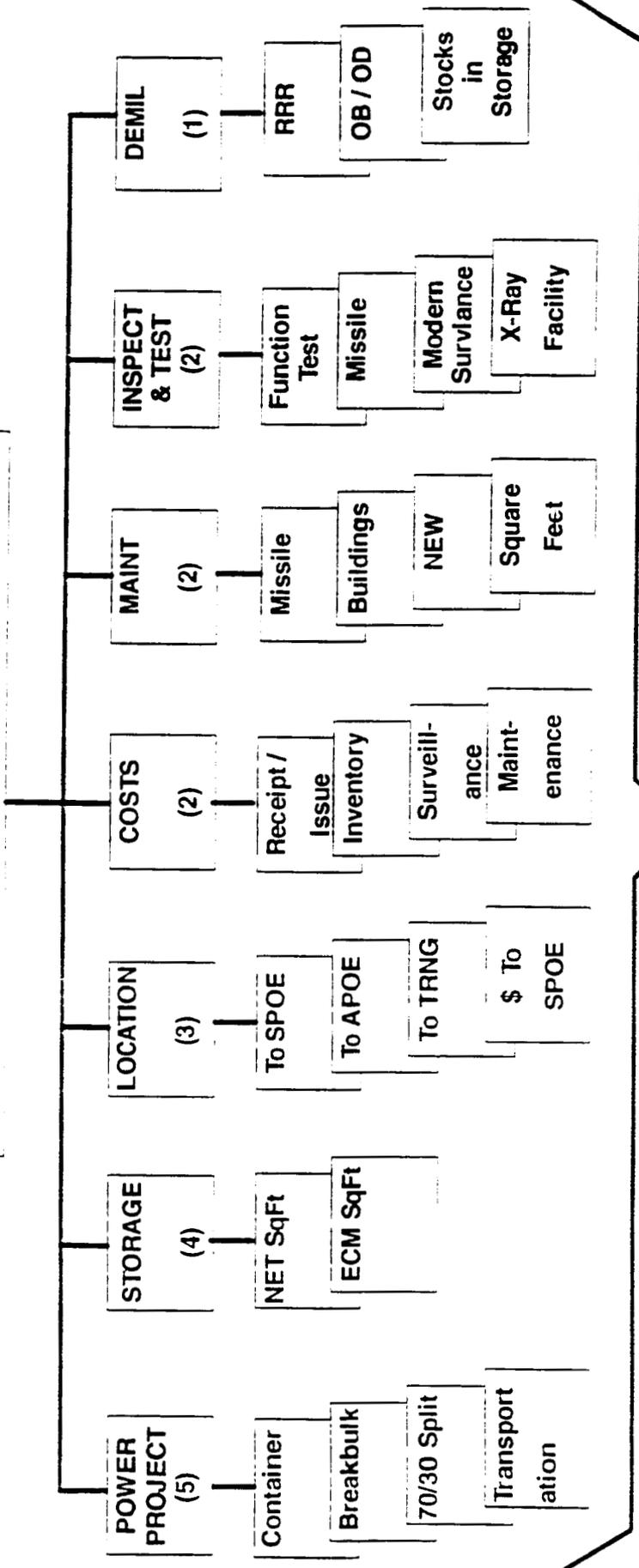
## OBJECTIVES

- To Support and Store Training and Power Projection Requirements for Two MRC's as Directed in DOD Planning Guidance
- To distribute Stockpile Within Geographically Oriented Regions
  - EAST
  - CENTRAL
  - WEST
- To Assure End State Asset Distribution Maximizes Outloading Capabilities
- To Develop Storage Base Infrastructure That Supports the Depot Tiering Concept

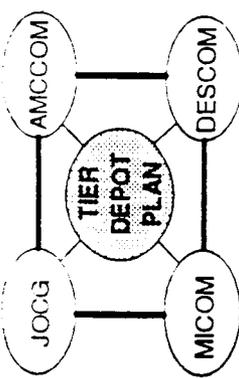
# ANALYTICAL APPROACH



## OVERALL RANKINGS



## SUPPORTING QUANTITATIVE DATA



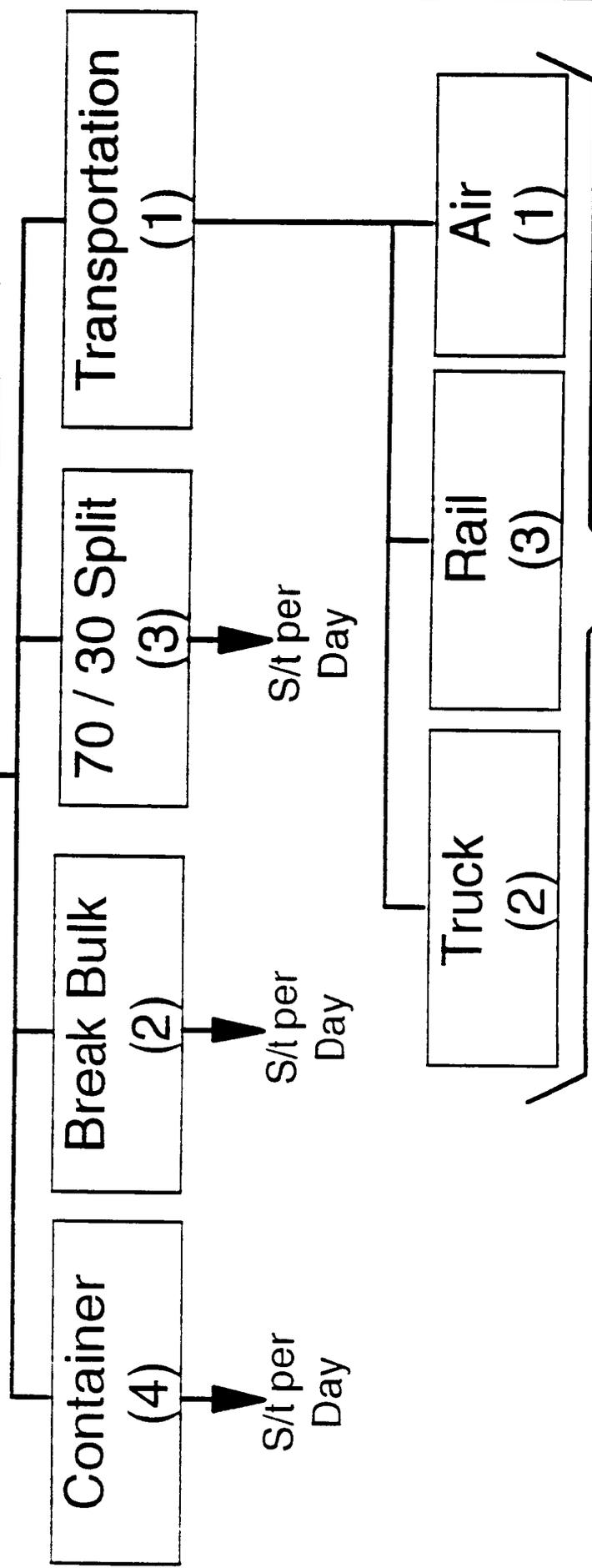
Tier Depot Analysis

# ANALYTICAL APPROACH

## • POWER PROJECTION

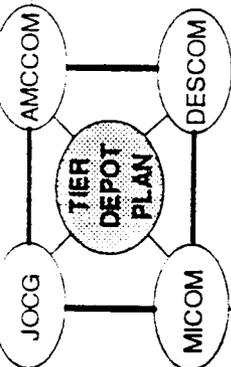
- Capability of Installation to Load and Ship Material During a Contingency

### POWER PROJECTION (5)

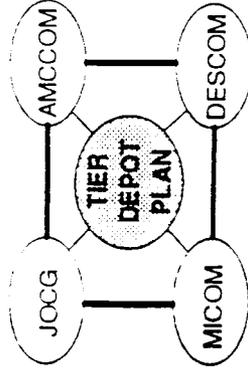


- Assessments:**
- Good
  - Fair
  - Poor

# POWER PROJECTION CAPABILITIES

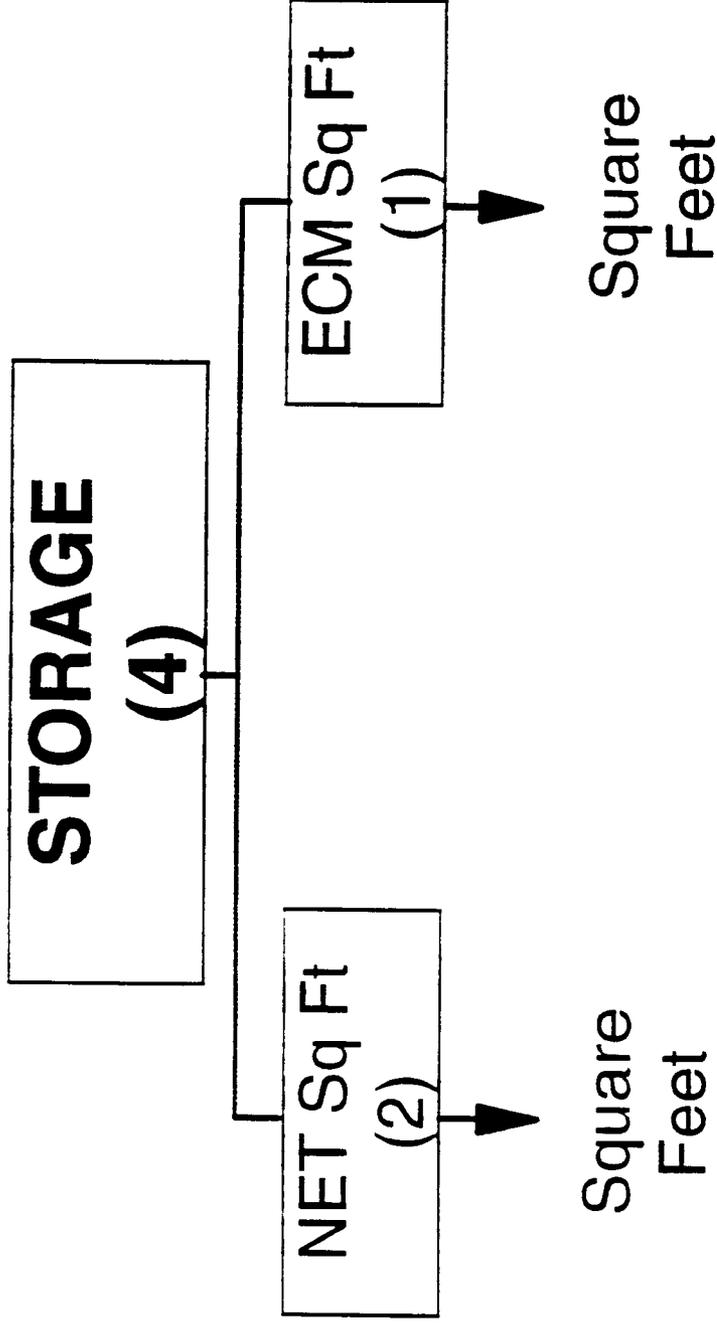


	Container Score	Weight	Brk Bulk Score	Weight	70/30 Split Score	Weight	Transport Score	Weight	Total Score	Adjusted Score
		4.0		2.0		3.0		1		
ANAD	2.9	11.6	0.8	1.6	2.4	7.2	9	9	29.4	3.3
BGAD	5.9	23.6	3.7	7.4	6.5	19.5	11	11	61.5	6.8
CAAA	2.2	8.8	11.0	22.0	9.8	29.4	11	11	71.2	7.9
HWAAP	2.6	10.4	1.2	2.4	2.6	7.8	5	5	25.6	2.9
LEAD	1.5	6.0	3.4	6.8	3.5	10.5	7	7	30.3	3.4
MCAAP	11.0	44.0	5.4	10.8	11.0	33.0	11	11	98.8	11.0
RRAD	2.1	8.4	2.8	5.6	3.4	10.2	8	8	32.2	3.6
SEDA	0.3	1.2	1.0	2.0	1.0	3.0	6	6	12.2	1.4
SIAD	3.2	12.8	1.9	3.8	3.5	10.5	10	10	37.1	4.1
SVDA	5.6	22.4	1.7	3.4	4.8	14.4	8	8	48.2	5.4
TEAD	3.3	13.2	8.4	16.8	8.5	25.5	10	10	65.5	7.3



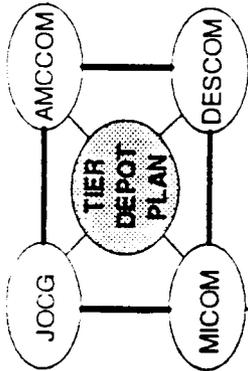
# ANALYTICAL APPROACH

- STORAGE
  - The Installations Capability to Store Class V Materiel

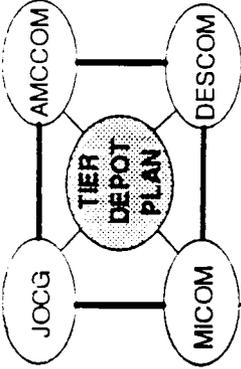


# Tier Depot Analysis

# STORAGE CAPABILITIES



	NET SqFt Score	Weight	ECM SqFt Score	Weight	Total Score	Adjusted Score
		2.0		1.0		
ANAD	3.3	6.6	4.0	4.0	10.6	3.8
BGAD	3.1	6.2	3.4	3.4	9.6	3.4
CAAA	8.8	17.6	8.9	8.9	26.5	9.4
HWAAP	11.0	22.0	8.7	8.7	30.7	10.9
LEAD	3.0	6.0	3.6	3.6	9.6	3.4
MCAAP	10.0	20.0	11.0	11.0	31.0	11.0
RRAD	2.4	4.8	2.7	2.7	7.5	2.7
SEDA	2.0	4.0	1.9	1.9	5.9	2.1
SIAD	3.5	7.0	3.0	3.0	10.0	3.5
SVDA	3.4	6.8	1.4	1.4	8.2	2.9
TEAD	3.4	6.8	3.4	3.4	10.2	3.6



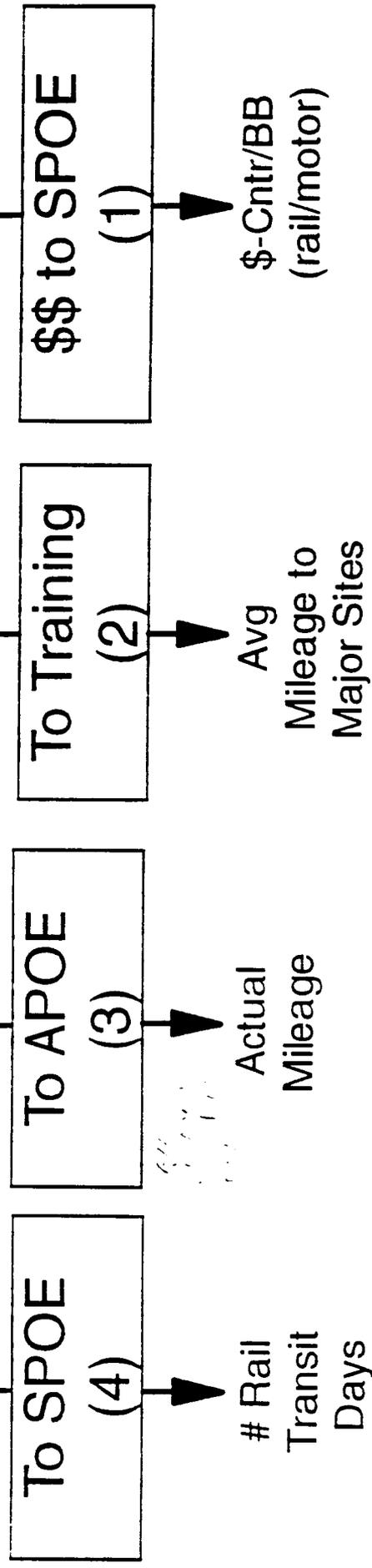
# ANALYTICAL APPROACH

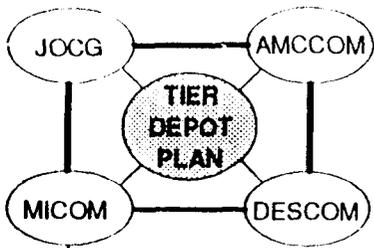
## • LOCATION

- ▶ Installations Geographic Orientation to Support Movement Requirements



*Support*  
*Creation*

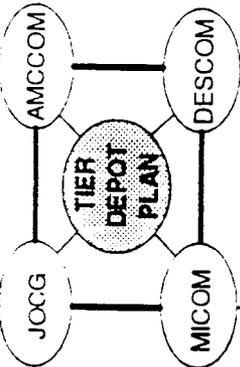




# Tier Depot Analysis

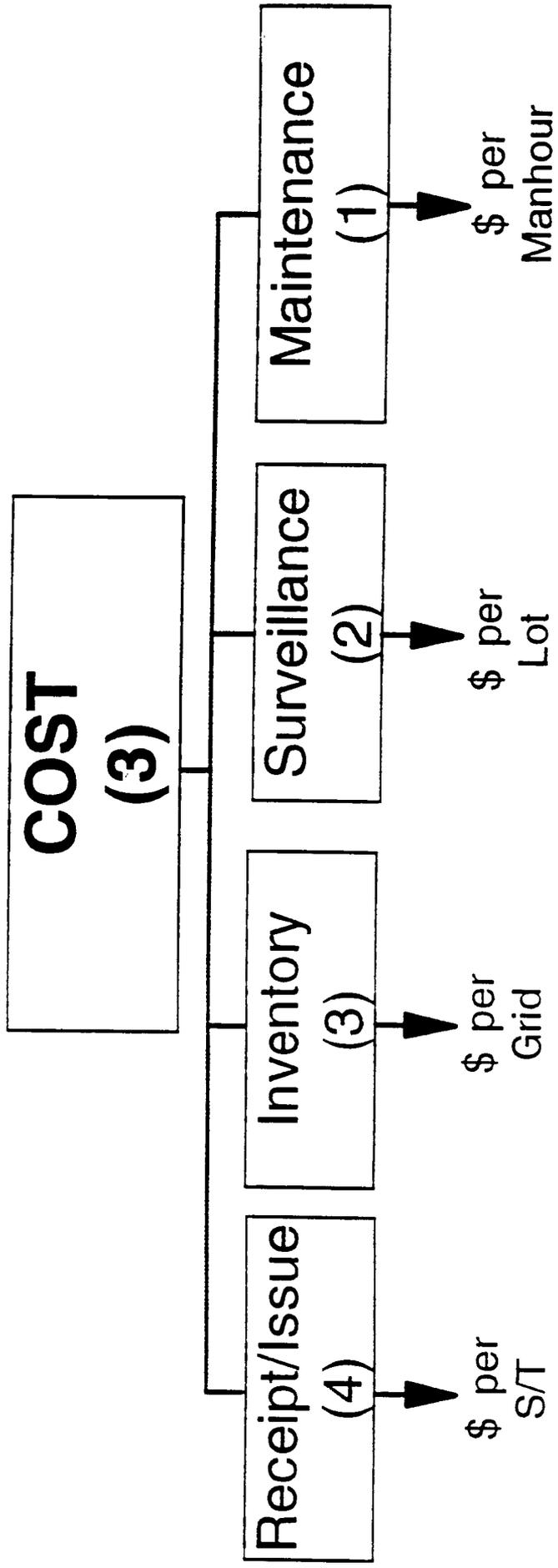
## LOCATION

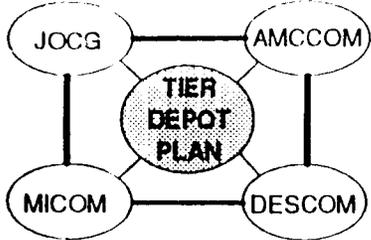
	To SPOE		To APOE		To Tmg		Cost to SPOE		Total	Adjusted
	Score	Weight	Score	Weight	Score	Weight	Score	Weight	Score	Score
		4.0		2.0		3.0		1.0		
ANAD	5.5	22.0	5.2	10.4	11.0	33.0	7.7	7.7	73.1	8.0
BGAD	4.4	17.6	3.6	7.2	8.4	25.2	8.4	8.4	58.4	6.4
CAAA	3.1	12.4	2.8	5.6	8.4	25.2	7.0	7.0	50.2	5.5
HWAAP	7.3	29.2	6.6	13.2	8.7	26.1	9.2	9.2	77.7	8.5
LEAD	4.4	17.6	11.0	22.0	8.6	25.8	8.4	8.4	73.8	8.1
MCAAP	3.1	12.4	1.9	3.8	9.8	29.4	4.4	4.4	50.0	5.5
RRAD	2.2	8.8	2.1	4.2	8.5	25.5	4.9	4.9	43.4	4.7
SEDA	3.7	14.8	8.5	17.0	7.2	21.6	7.2	7.2	60.6	6.6
SIAD	11.0	44.0	8.5	17.0	9.6	28.8	11.0	11.0	100.8	11.0
SVDA	3.1	12.4	2.1	4.2	6.7	20.1	4.9	4.9	41.6	4.5
TEAD	5.5	22.0	2.9	5.8	8.4	25.2	6.6	6.6	59.6	6.5



# ANALYTICAL APPROACH

- COST
  - Installations Cost to Perform Ammunition Operations



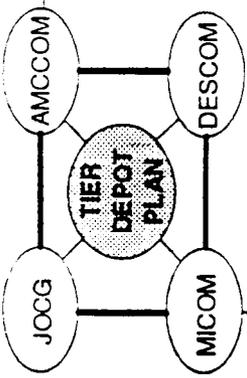


# Tier Depot Analysis

# COSTS

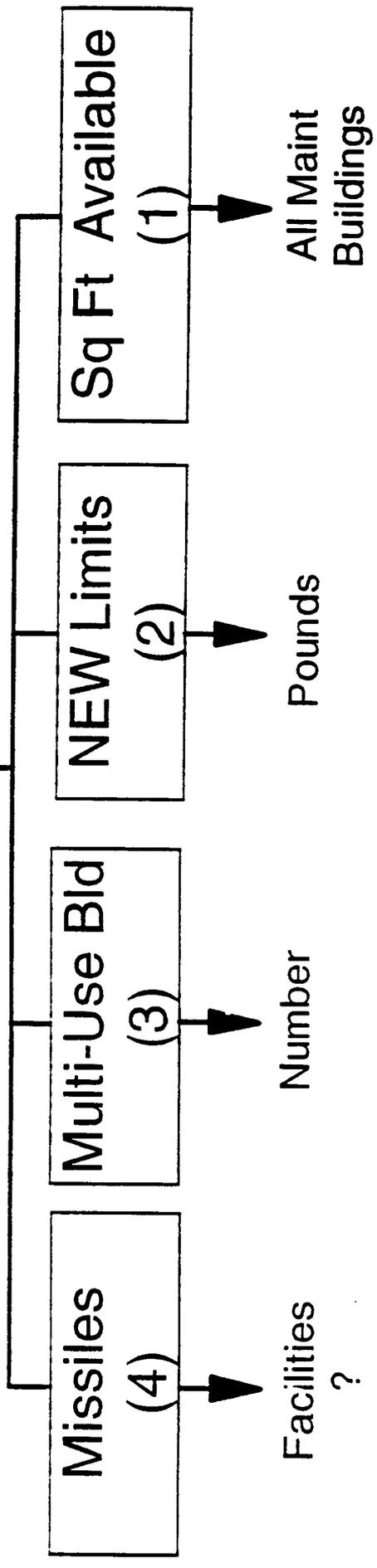
	Rec/Iss Score	Weight	Inv/Grld Score	Weight	Surv/Lot Score	Weight	Maint Fix Score	Weight	Total Score	Adjusted Score
		4.0		3.0		2.0		1.0		
ANAD	3.0	12.0	4.6	13.8	4.4	8.8	8.2	8.2	42.8	5.5
BGAD	5.9	23.6	1.3	3.9	5.2	10.4	6.3	6.3	44.2	5.7
CAAA	11.0	44.0	6.2	18.6	7.1	14.2	9.1	9.1	85.9	11.0
HWAAP	4.9	19.6	1.7	5.1	11.0	22.0	7.2	7.2	53.9	6.9
LEAD	5.6	22.4	4.0	12.0	3.6	7.2	11.0	11.0	52.6	6.7
MCAAP	6.8	27.2	2.4	7.2	10.9	21.8	7.6	7.6	63.8	8.2
RRAD	5.5	22.0	11.0	33.0	3.2	6.4	7.6	7.6	69.0	8.8
SEDA	5.0	20.0	0.7	2.1	2.0	4.0	4.2	4.2	30.3	3.9
SIAD	5.2	20.8	1.2	3.6	4.1	8.2	6.3	6.3	38.9	5.0
SVDA	6.5	26.0	0.6	1.8	3.0	6.0	4.6	4.6	38.4	4.9
TEAD	6.0	24.0	2.4	7.2	5.8	11.6	6.7	6.7	49.5	6.3

# ANALYTICAL APPROACH



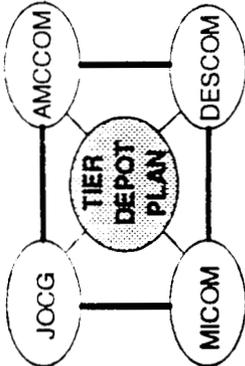
- MAINTENANCE
  - Installations Capabilities for Performing Major Ammunition Maintenance

## MAINTENANCE (2)

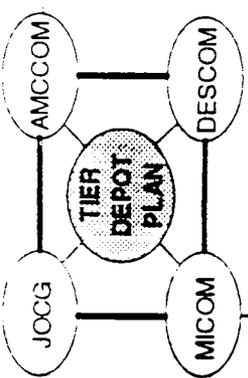


# Tier Depot Analysis

# MAINTENANCE



	Missile Score	Weight	MultiUseBid Score	Weight	Total NEW Score	Weight	Total SqFt	SqFt Wt	Total Score	Adjusted Score
		4		3.0		2.0		1.0		
ANAD	11	44	5.5	16.5	0.4	0.8	5.5	5.5	66.8	11.0
BGAD			4.1	12.3	1.1	2.2	6.7	6.7	21.2	3.5
CAAA			11.0	33.0	0.8	1.6	10.2	10.2	44.8	7.4
HWAAP			5.5	16.5	4.4	8.8	8.5	8.5	33.8	5.6
LEAD	11	44	1.4	4.2	0.2	0.4	1.9	1.9	50.5	8.3
MCAAP			8.3	24.9	11.0	22.0	11.0	11.0	57.9	9.5
RRAD	11	44	4.1	12.3	0.6	1.2	3.9	3.9	61.4	10.1
SEDA			1.4	4.2	0.5	1.0	1.8	1.8	7.0	1.2
SIAD			2.8	8.4	0.3	0.6	1.5	1.5	10.5	1.7
SVDA			2.8	8.4	2.2	4.4	8.9	8.9	21.7	3.6
TEAD			6.9	20.7	1.2	2.4	5.9	5.9	29.0	4.8

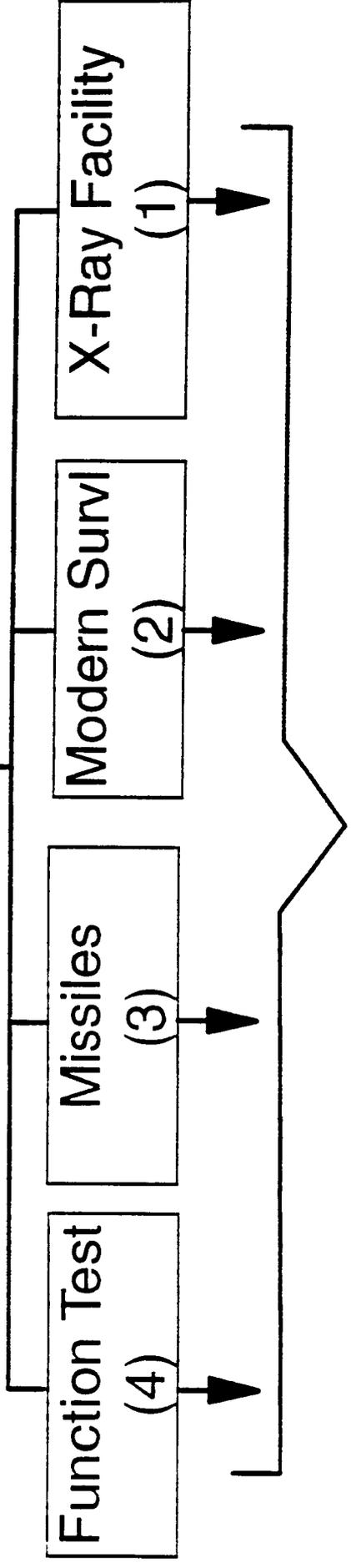


Tier Depot Analysis

# ANALYTICAL APPROACH

- INSPECTION / TEST
  - Installations Capabilities Support Major Surveillance Missions

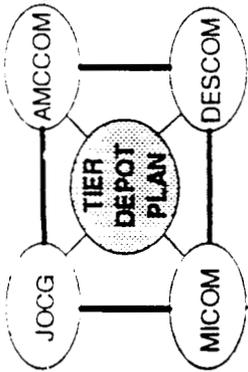
## INSPECTION / TEST (2)



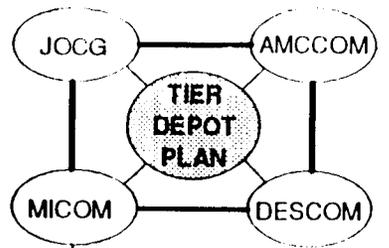
Existing Capabilities

Tier Depot Analysis

# INSPECTION / TEST



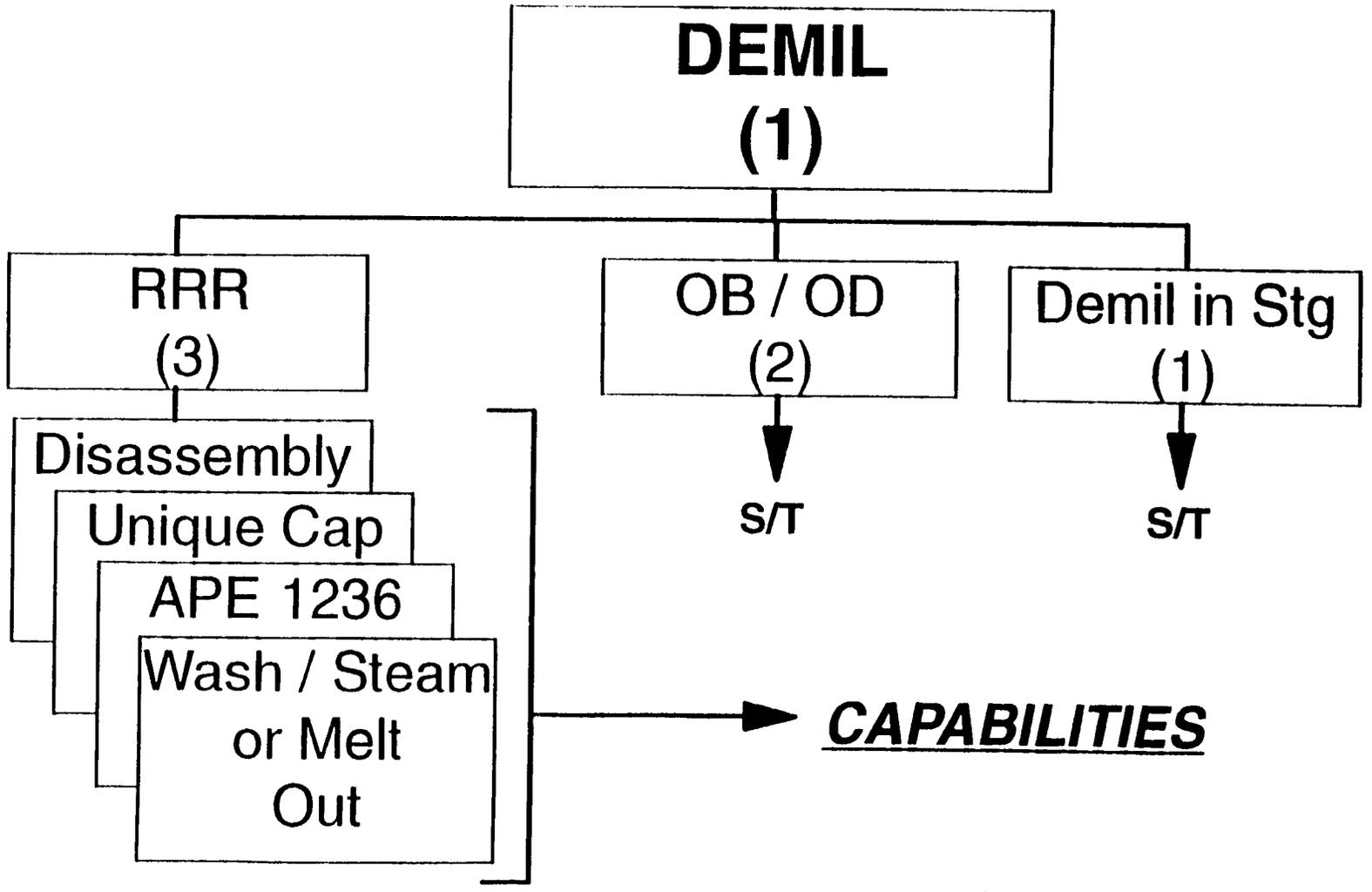
	Funcnt Test Score	Weight	Missiles Score	Weight	ModIn Surv Score	Weight	X-Ray Cap Score	Weight	Total Score	Adjusted Score
ANAD		4	1	3		2		1	3	9
BGAD				3						6
CAAA	1	4			1	2			6	11
HWAAP	1	4			1	2			6	11
LEAD			1	3	1	2	1	1	6	11
MCAAP					1	2			2	8
RRAD			1	3					3	9
SEDA										6
SIAD										6
SVDA	1	4							4	10
TEAD							1	1	1	7



# ANALYTICAL APPROACH

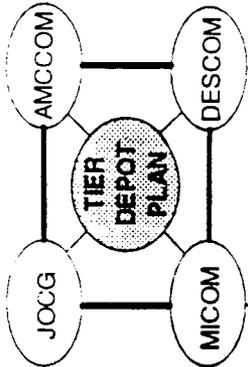
## • DEMIL

- The Installations Capability to Support Demil Operations

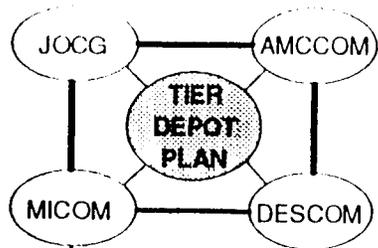


# Tier Depot Analysis

# DEMIL



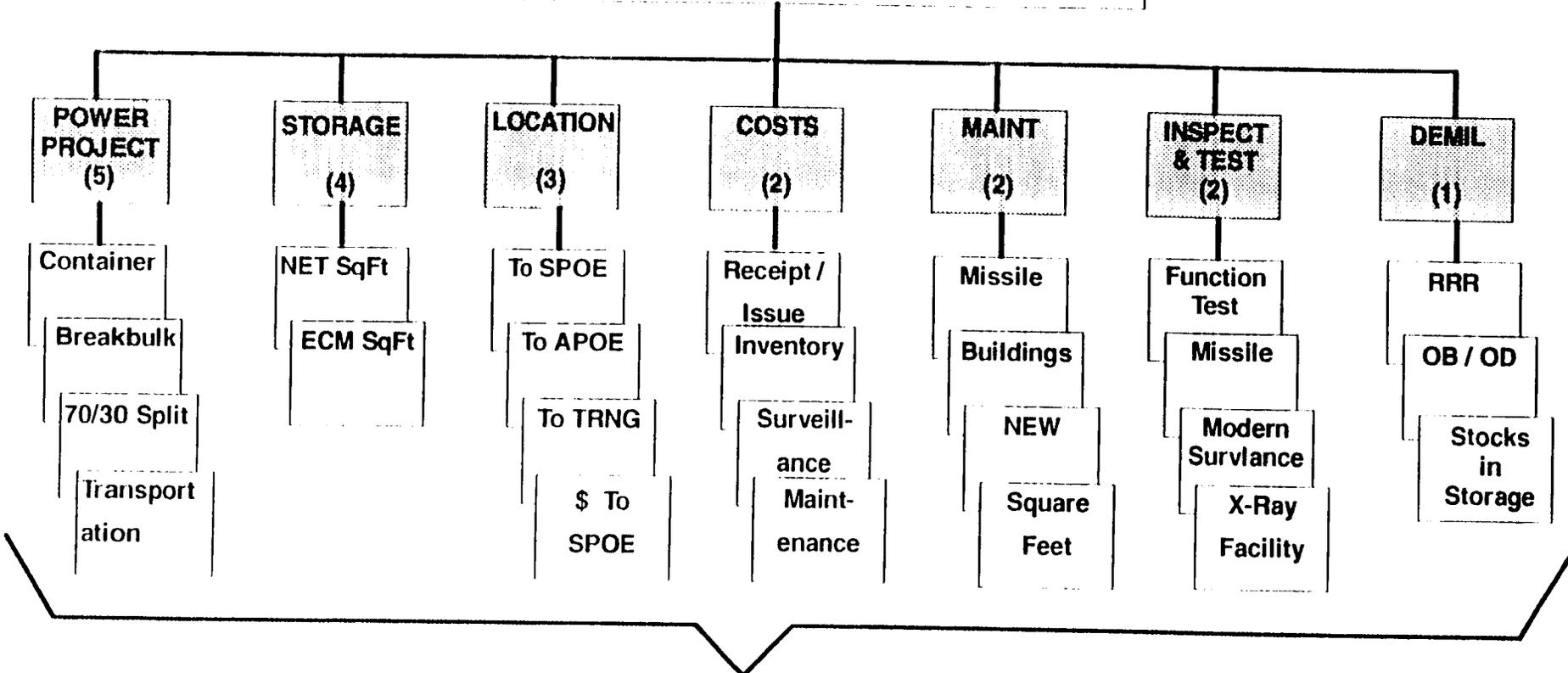
	RRR Cap Score	Weight	OBOD Cap Score	Weight	ST In Stg Score	Weight	Total Score	Adjusted Score
		3		2.0		1.0		
ANAD	7	21	0.9	1.8	2.7	2.7	25.5	6.1
BGAD	9	27	0.2	0.4	1.9	1.9	29.3	7.0
CAAA	10	30	1.1	2.2	3.3	3.3	35.5	8.5
HWAAP	11	33	0.9	1.8	11.0	11.0	45.8	11.0
LEAD	6	18	1.8	3.6	3.2	3.2	24.8	6.0
MCAAP	9	27	1.8	3.6	9.6	9.6	40.2	9.7
RRAD	8	24	0.6	1.2	0.8	0.8	26.0	6.2
SEDA	7	21	0.4	0.8	0.7	0.7	22.5	5.4
SIAD	7	21	11.0	22.0	1.7	1.7	44.7	10.7
SVDA	6	18	1.0	2.0	0.8	0.8	20.8	5.0
TEAD	8	24	4.6	9.2	0.9	0.9	34.1	8.2



Tier Depot Analysis

# QUANTITATIVE ANALYSIS

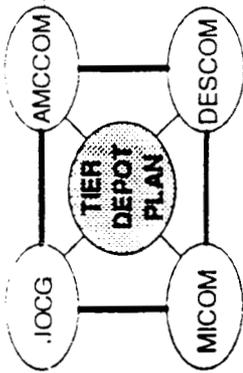
## OVERALL RANKINGS



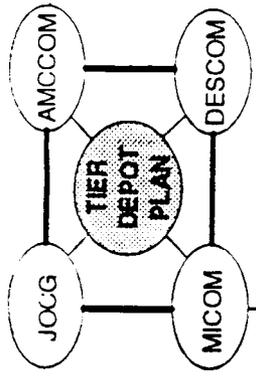
## SUPPORTING QUANTITATIVE DATA

# Tier Depot Analysis

# SUMMARY



	POWER PROJ WEIGHTED	STORAGE CABABL WEIGHTED	LOCAL ION WEIGHTED	COSTS WEIGHTED	MAINTENANCE WEIGHTED	INSP & TEST WEIGHTED	DEMIL CAPABL WEIGHTED	TOTAL WEIGHTED	R A N K
	50	40	30	20	20	2	1.0		
ANAD	3.3	15.2	8.0	5.5	11.0	9	6.1	112.8	6
BGAD	6.8	3.4	6.4	5.7	3.5	6	7.0	104.2	8
CAAA	7.9	9.4	5.5	11.0	7.4	11	8.5	160.9	2
HWAAP	2.9	10.9	8.5	6.9	5.6	11	11.0	141.6	3
LEAD	3.4	3.4	8.1	6.7	8.3	11	6.0	112.9	5
MCAAP	11.0	11.0	5.5	8.2	9.5	8	9.7	176.6	1
RRAD	3.6	2.7	4.7	8.8	10.1	9	6.2	104.9	7
SEDA	1.4	2.1	6.6	3.9	1.2	6	5.4	62.8	11
SIAD	4.1	3.5	11.0	5.0	1.7	6	10.7	103.6	9
SVDA	5.4	2.9	4.5	4.9	3.6	10	5.0	94.1	10
TEAD	7.3	3.6	6.5	6.3	4.8	7	8.2	114.8	4

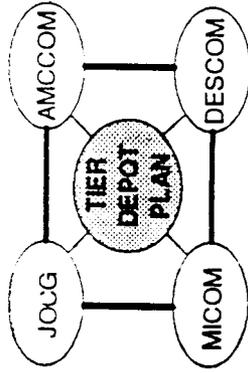


# QUANTITATIVE RANK SUMMARY

<u>WEST</u>	<u>CENTRAL</u>	<u>EAST</u>
-------------	----------------	-------------

- |           |           |           |
|-----------|-----------|-----------|
| HWAAP - 3 | MCAAP - 1 | CAAA - 12 |
| TEAD - 4  | RRAD - 7  | LEAD - 5  |
| SIAD - 9  | SVDA - 10 | ANAD - 6  |
|           |           | BGAD - 8  |
|           |           | SEDA - 11 |

# QUALITATIVE - EAST

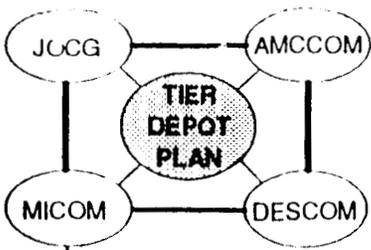


## CAAA

- Supports USMC / Navy Training
- Good Rail Access to Earth Covered Sites
- Active Production
- Tenant on Navy Installation
- Naval Warfare Support Center
- White Phosphorous Demil

## ANAD

- TCM Mission
- Hub of Eastern Region Training Support
- Large Hard Iron Mission
- Tactical Missile System Mission Depot (Class V)
- Air Drop Pallets for XVIII ABN & 75th Rangers
- Contractor Presence - North American Rockwell (Hellfire)
- DLA Presence



## Tier Depot Analysis

# QUALITATIVE - EAST

## LEAD

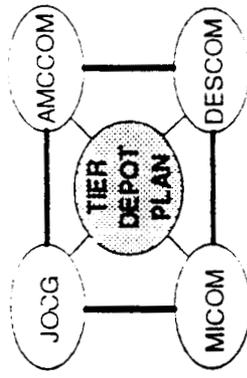
- Primary Mission - Tactical Missile Systems Maintenance Area (Non-Class V)
- DLA Presence
- Contractor Presence - FMC (Paladin), Raytheon (Phoenix and AMRAMM)

## BGAD

- TCM Mission
- Contractors - Raytheon (Stinger)
- Chemical Defense Equipment Supply & Maintenance
- Potential ABL Partnership with 101st ABN

## SEDA

- Radiation Decontamination Team
- Depot Activity



# QUALITATIVE - CENTRAL

## MCAAP

- Hub of Central and Southwest Regional Training Support
- Active Production

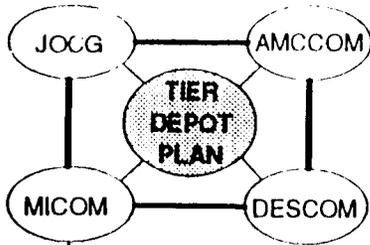
## RRAD

- Large Hard Iron Mission
- Tactical Missile Mission Depot
- DLA Presence
- Contractor - Raytheon
- Potential ABL Partnerships w/ 1st CAV & 3rd ACR

## SVDA

- APE Fabrication
- CTX for Depleted Uranium
- Depot Activity

# QUALITATIVE - WEST



## TEAD

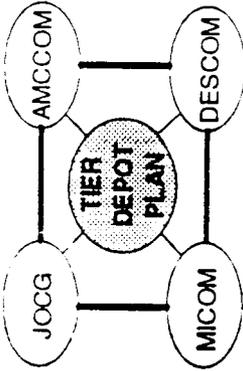
- USAF Desire to Spt Critical Airlift Mission Out of Hill AFB
- TCM Mission
- 25th & 7th ID Airdrop
- Maintenance Mission - BRAC 93
- APE Fabrication /Design / Procurement

## HWAAP

- Lay Away Production
- Contractor Operated
- Western Area Demil Facility (WADF)

## SIAD

- CTX for Operational Projects
- Primary Site for OB/OD Demil



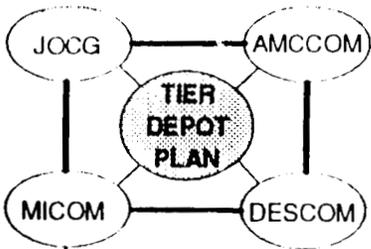
# CUSTOMER COMMENTS

## **U.S. Air Force:**

- Should be Joint Service
- Creates Bottlenecks in Early Days of War
- Destroys Current Stg & Shipping Partnerships (TEAD / Hill AFB)
- Require More Funds than Available
- Combat Readiness Should be Primary Focus
- Solution Should be Adopted by JOCG
- Criteria Should be Derived by Each Services Highest Priorities

## **Response:**

- Joint Meeting
- JOCG Briefings
- Dist Plan / ASMP Initiatives Maximizes Capabilities
- Could Require Revised Partnerships
- Funding is Prime Consideration
- Power Projection is Top Priority
- JOCG Buy-In is a Necessity
- Priorities Derived Through Joint Decision



# CUSTOMER COMMENTS

## **MICOM:**

- Retention of RRAD as Primary Stg/Maint Site for Patriot & Hawk
- Retention of LEAD as Primary Stg Site for Army ATACMs
- Redistribution of MLRS Pods

## **USMC:**

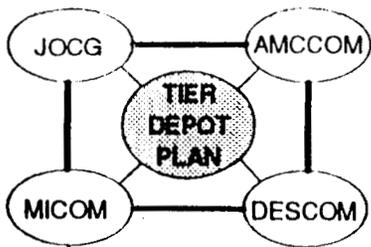
- Desire to Review & Comment on Analysis Prior to Consideration for Implementation
- Retain CAAA for Trng

## **NAVY:**

- Retain CAAA for Trng

## **Response:**

- Concur with Retaining Tactical Missile Maint Mission
- Concur
- End State Objective May Require Selective Redistribution
- Concur
- Concur
- Concur



# INSTALLATION COMMENTS

## **BGAD:**

- Consider Impact of \$2.1M MCA Project to Improve Shipping Facility
- ABL Partnerships

## **LEAD:**

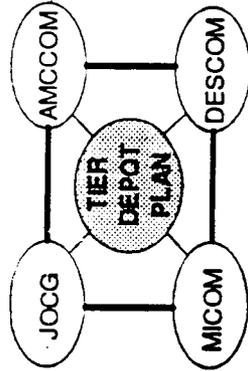
- Cost & Responsiveness Not Considered
- Maintain Tactical Missile Mission

## **SVDA:**

- Effect on Designation as DU CTX
- Will Demil Continue?
- MLRS Pods in WR Equation?

## **Response:**

- No Impact on Final Ranking as BGAD was Already 2nd in Power Projection
- Look at Feasibility
- Cost Criteria Added
- Responsiveness Considered in all Criteria
- Concur
- No Effect Envisioned
- No Immediate Effect on Demil
- Applicable Stocks will be Stored at Tier I/II



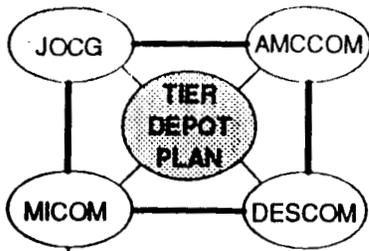
# INSTALLATION COMMENTS

## **TEAD:**

- Tier Plan Inadequate to Solve Problems
- Immediate Reduction in Workload Biases P1ng
- Important Criteria Not Used:
  - Desert Storm Performance
  - Cost Data
  - Demil Capability
- Cost Implication for Tier II/III
- DESCOM / Depot Personnel Not Included

## **Response:**

- Tier Study Combined with FAA Recommendations Increases all Efficiencies
- No Immediate Reductions in Workload Envisioned
- All Installations Performed Superior
  - Cost Data Analyzed in Study
  - Demil Capability Criteria Added
- Concept Reduces Overall Operational Cost
- DESCOM Personnel Represented Depots



## Tier Depot Analysis

# CONCLUSION - EAST

### • CAAA

- Quantitative: 2
- Qualitative
  - Supports USMC & USN Trng
  - Active Production
  - WP Demil Capability

### • LEAD

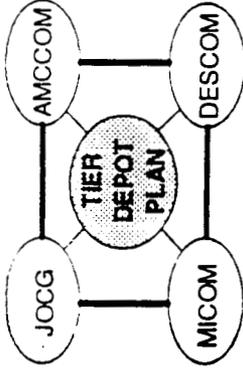
- Quantitative: 5
- Qualitative
  - Multi Mission

### ▸ CONCLUSION

- **Best Suited for Active Status**
- Supports USMC & USN Concerns
- Good Power Proj Capability

### ▸ CONCLUSION

- **Best Suited for Cadre status**
- Retain Tactical Missile Maintenance Mission



# CONCLUSION - EAST

## • ANAD

- ▶ Quantitative: 6
- ▶ Qualitative
  - Multi Mission
  - Hub for Eastern Region Training
  - Air Drop for XVIII ABN & 75th Rangers
  - Computing Outload with DLA
  - TCM Mission

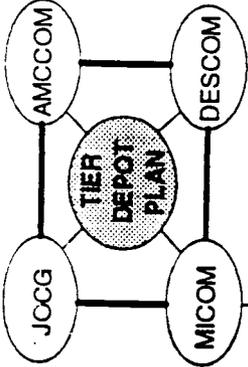
- ▶ CONCLUSION
  - **Best Suited for Active Status**
  - Retain Tactical Missile Maintenance Mission
  - Develop Partnerships
  - Strong Qualitative Considerations
  - Reported Outloading Capability is Poor

## • BGAD

- ▶ Quantitative: 8
- ▶ Qualitative
  - TCM Mission
  - No Multi Mission

- ▶ CONCLUSION
  - **Best Suited for Cadre Status**
  - Outstanding Power Projection Capabilities
  - Required Retention to Meet MRC Outloading Requirements

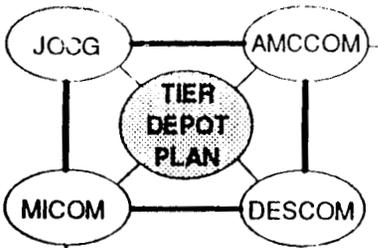
# CONCLUSION - EAST



- **SEDA**

- ▶ Quantitative: 11
- ▶ Qualitative
  - Radiation Decon Team
  - Depot Activity

- ▶ CONCLUSION
  - Best Suited for Caretaker Status
  - Low Overall Capabilities



# CONCLUSION - CENTRAL

## • MCAAP

- Quantitative: 1
- Qualitative
  - Hub for Central / SW Region Training Support
  - Active Production

## ▸ CONCLUSION

- **Best Suited for Active status**
- Best Overall capabilities

## • RRAD

- Quantitative: 9
- Qualitative
  - Large Multi Mission
  - ABL Partner 1st CAV / 3rd ACR

## ▸ CONCLUSION

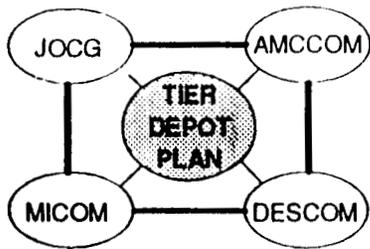
- **Best Suited for Cadre Status**
- Must Retain Missile Maint Mission
- Strong Qualitative Considerations
- Poor Overall Capability

## • SVDA

- Quantitative: 10
- Qualitative
  - APE Mission
  - DU Center for Excellence

## ▸ CONCLUSION

- **Best Suited for Caretaker Status**
- Poor Overall Capabilities



## Tier Depot Analysis

# CONCLUSION - WEST

### • HWAAP

- Quantitative: 3
- Qualitative
  - Lay Away Production
  - Western Area Demil Facility
  - Contractor Operated

### ▸ CONCLUSION

- **Best Suited for Cadre Status**
- Good Overall Capabilities
- Excellent Storage Capabilities for Non-Applicable Stocks

### • TEAD

- Quantitative: 4
- Qualitative
  - TCM Mission
  - Critical AF Requirement
  - 25th ID/7th LID Airdrop
  - APE Mission

### ▸ CONCLUSION

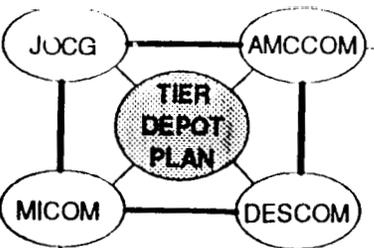
- **Best Suited for Active Status**
- Good Overall Capabilities

### • SIAD

- Quantitative: 9
- Qualitative
  - Large Op Project Mission

### ▸ CONCLUSION

- **Best Suited for Caretaker Status**
- Poor Overall Capabilities



# TIER ASSIGNMENT RECOMMENDATION

## WEST

TEAD - I

HWAAP - II

SIAD - III

## CENTRAL

MCAAP - I

RRAD - II

SVDA - III

## EAST

CAAA - I

ANAD - I

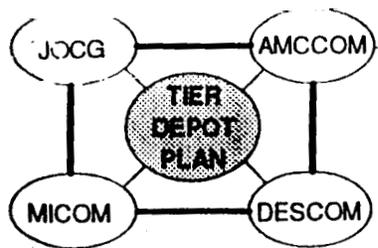
LEAD - II

BGAD - II

SEDA - III

### **TIER III CONSIDERATIONS:**

- SEDA: Decon Mission
- SIAD: Op Project Mission
- SVDA: APE and DU Missions



Tier Depot Analysis

# RECOMMENDATION

- **To Approve the Tier Assignment Recommendation as Presented**

# Document Separator



*"Committed to Quality"*

# ***Seneca Army Depot Activity***

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***Missile Maintenance Capabilities***

# **Seneca Army Depot Activity**

---

Welcome to Seneca Army Depot Activity. Since established as an ammunition storage depot in August, 1941, Seneca's missions have expanded to also include:

- Conventional ammunition maintenance and demilitarization;
- General supply, strategic, and hazardous materials storage;
- Industrial plant equipment storage;
- Troop support - providing over 15,000 man-days of training for Army Reserve and National Guard soldiers annually.

Seneca Army Depot Activity consists of approximately 11,000 acres and 927 structures, including 8 standard magazines, 519 igloos - 110 with installed intrusion detection systems, 28 major warehouses - 6 with humidity control, and some 35 maintenance shops. Unique among east-coast depots, Seneca also has a 7000-foot controlled access runway capable of handling aircraft as large as the C-5A. Seneca is the only east-coast Army depot with this capability.

Moreover, Seneca Army Depot Activity is ideally situated to support the Army's needs. Located in the Fingerlakes region of central New York, midway between Rochester and Syracuse, access is easy by highway, rail, and air. During Operations Desert Shield and Desert Storm, all three modes of transportation were used to ship more than 43,000 tons of ammunition and general supplies to our soldiers in the Persian Gulf.

This booklet focuses on those facilities that make Seneca an ideal site for maintenance of missile and smart munitions. The self contained former special weapons area, with its secure storage, excellent maintenance shops, and new air assisted "airless" painting and multi-media blast facility are tailor made for such purposes. In fact, this CARC capable facility is the only one in the U.S. Army located within an approved ammunition area and requiring no quantity distance waivers. The unique combination of skills and experience we possess from our work with conventional ammunition, special weapons, and industrial plant equipment makes us exceptionally well qualified to do the work you might require.

We invite you to visit Seneca and see our outstanding facilities, meet our people, and then decide for yourself. We believe we have much to offer - at competitive prices and with a real commitment to quality.

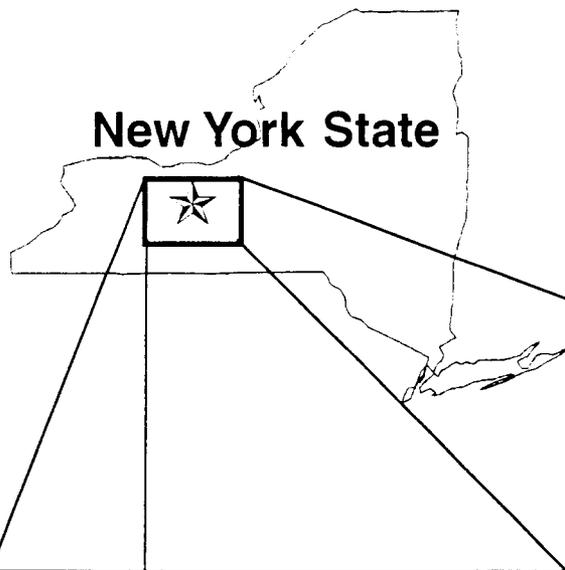
ROY E. JOHNSON

Lieutenant Colonel, Ordnance Corps

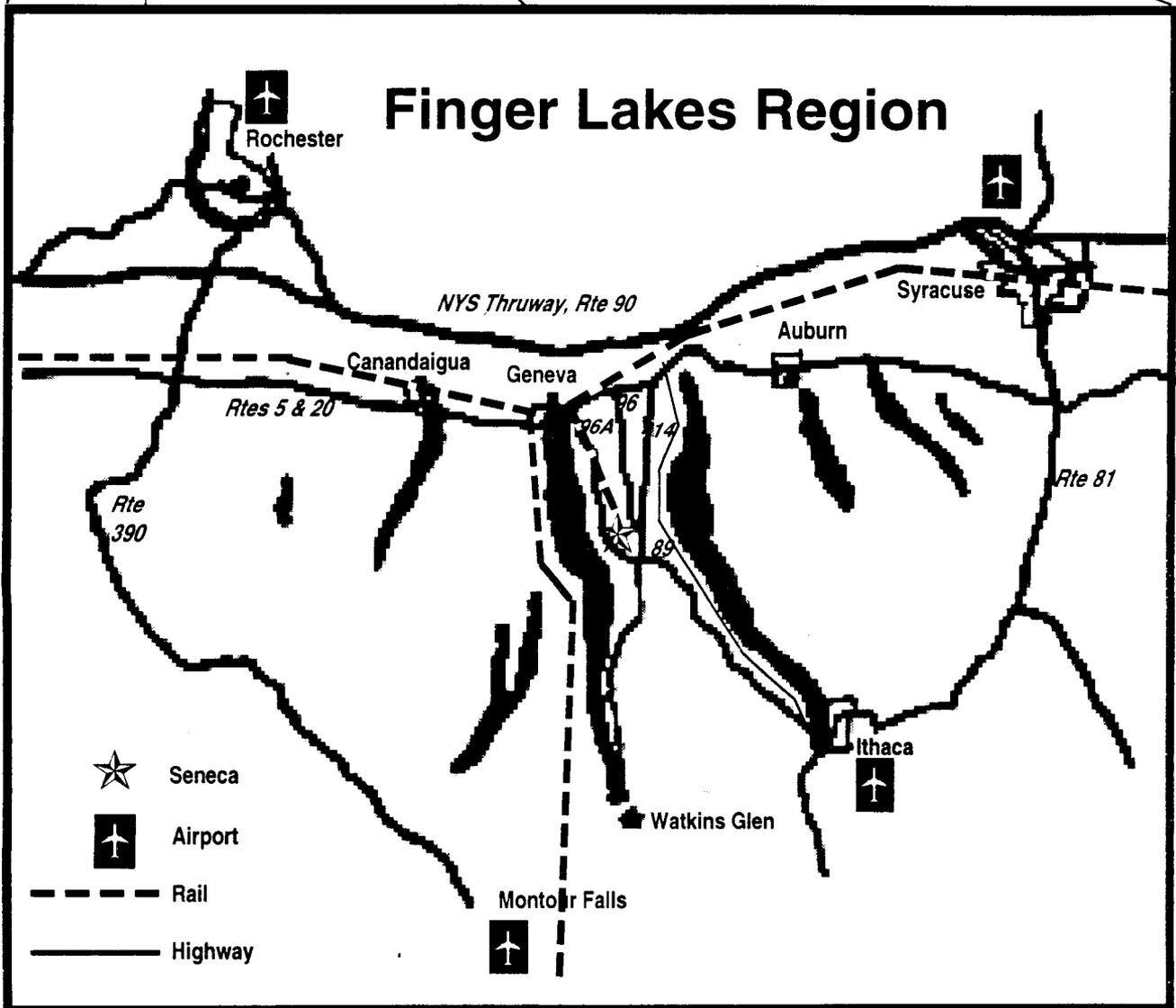
Commanding



# Seneca - access

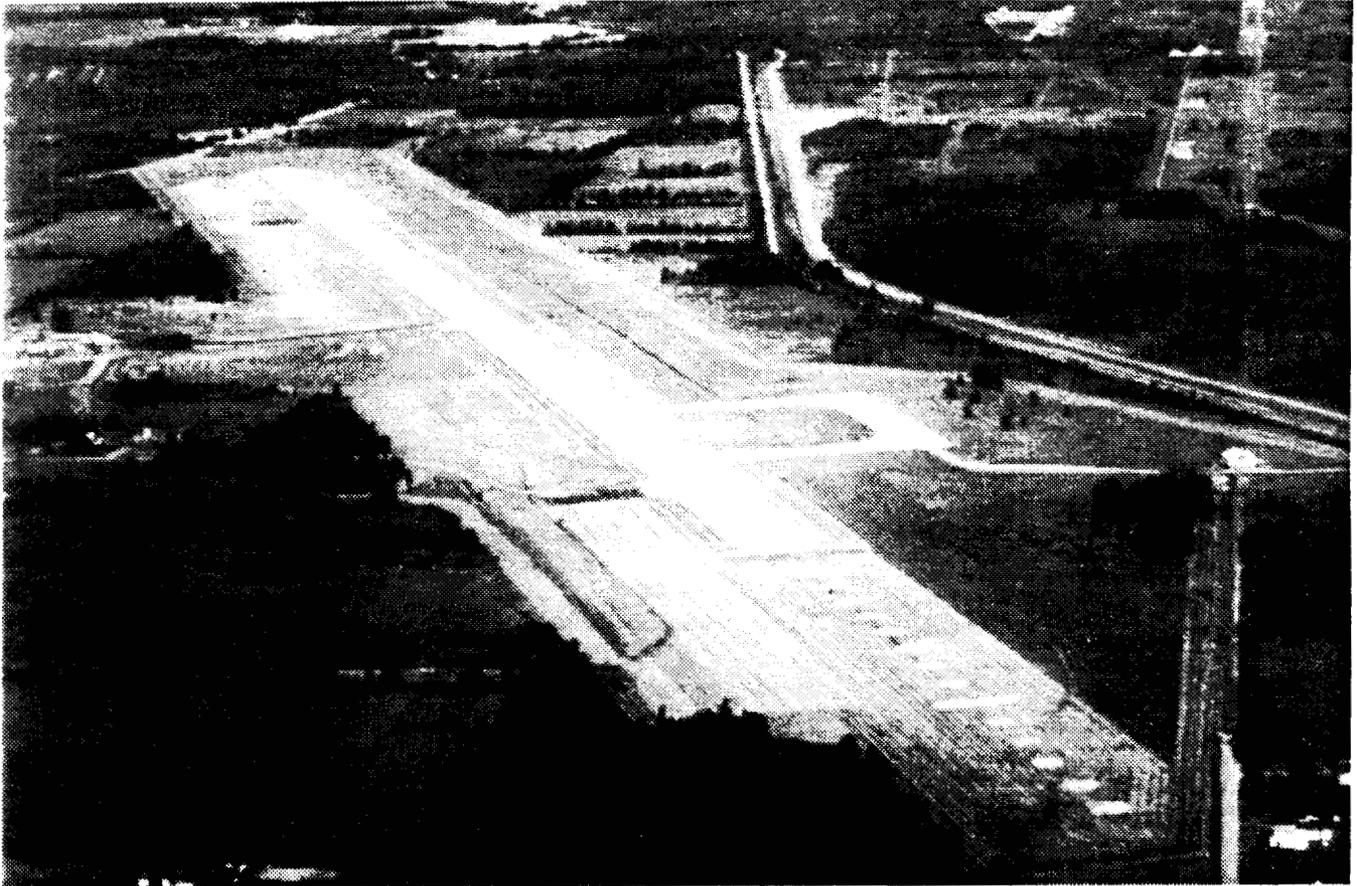


Seneca Army Depot Activity is located convenient to major air, rail and trucking routes.



# *Seneca - access*

---



Air



Truck



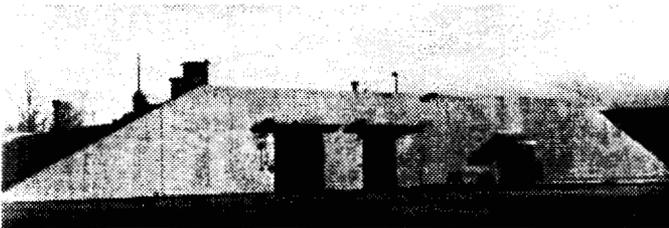
Rail

# ***Seneca - facilities***

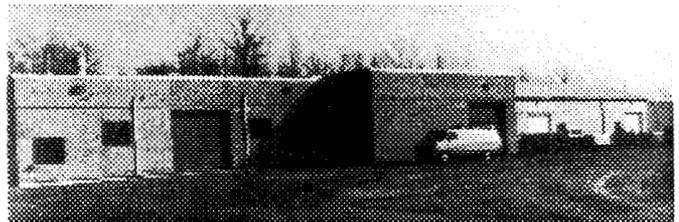
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**Self-contained high security  
maintenance and storage area**



**Maintenance Facility, building 815/816**



**Refinishing Facility, building 813**



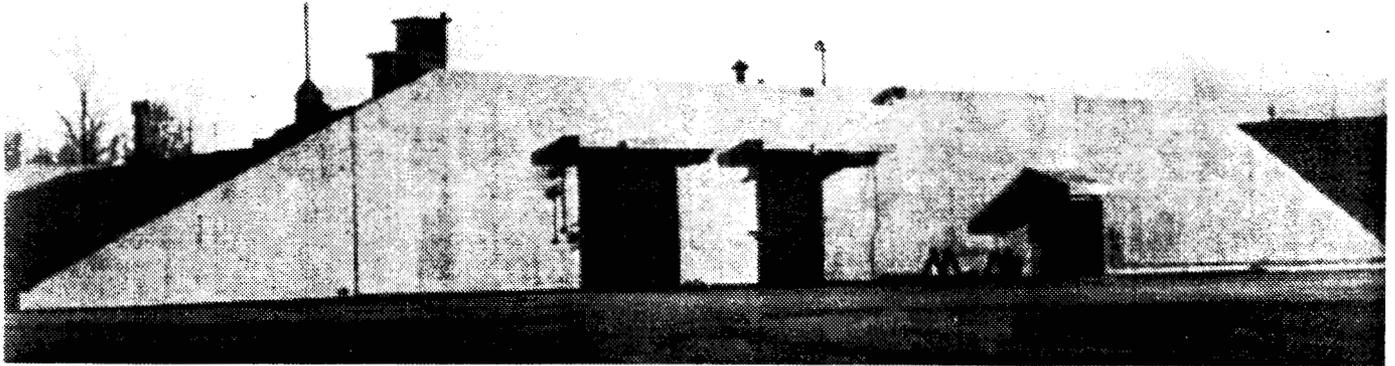
**Warehouse Storage, building 810**



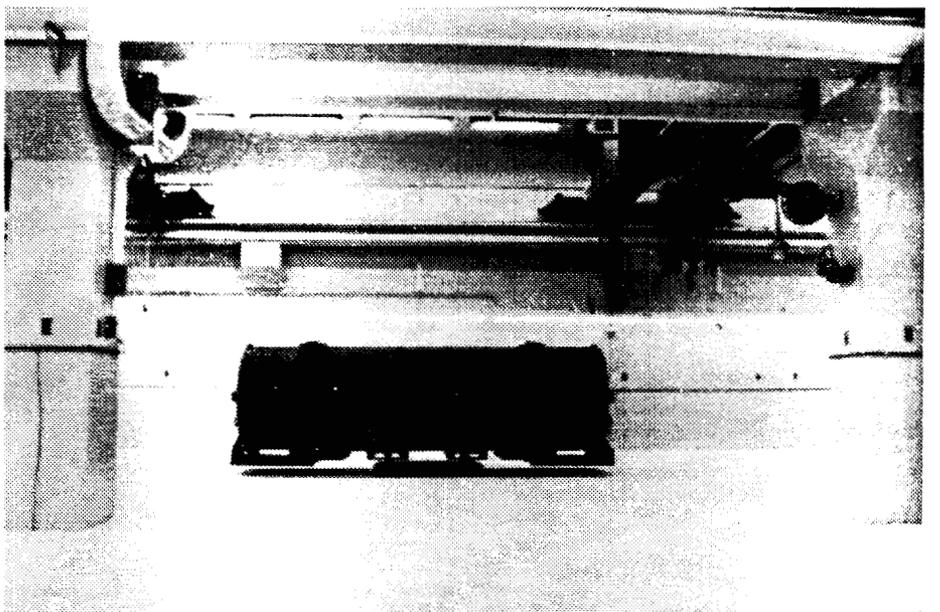
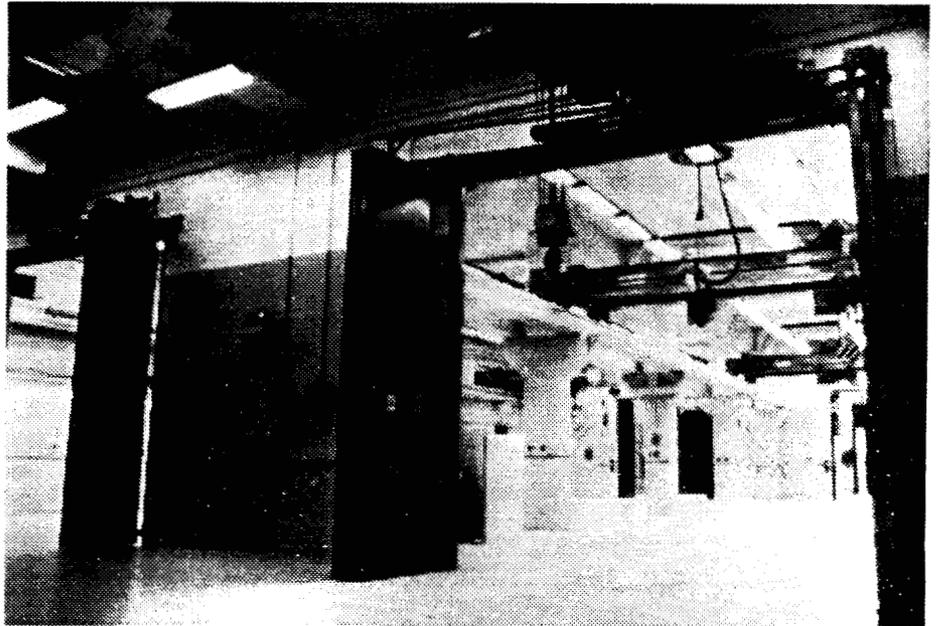
**Igloo Storage**

# Missile Maintenance

Maintenance Facility, bldg. 815/816



- Earth covered, igloo-type construction
- Open bay concept
- Fully equipped, air conditioned, and humidity controlled

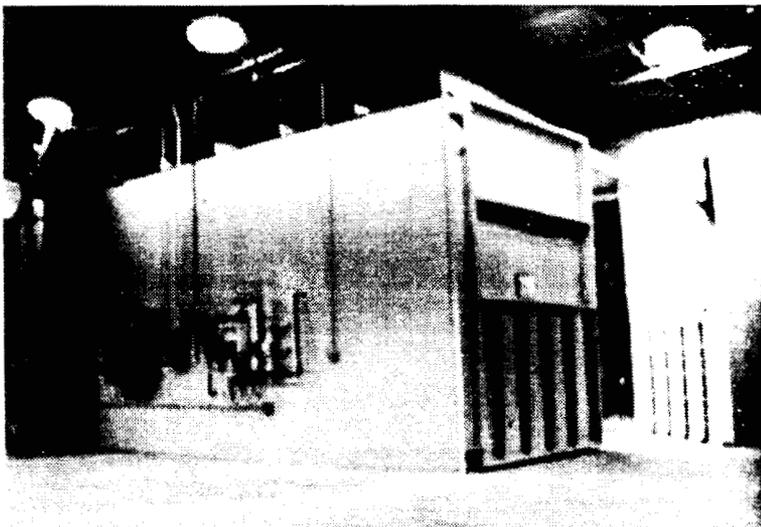
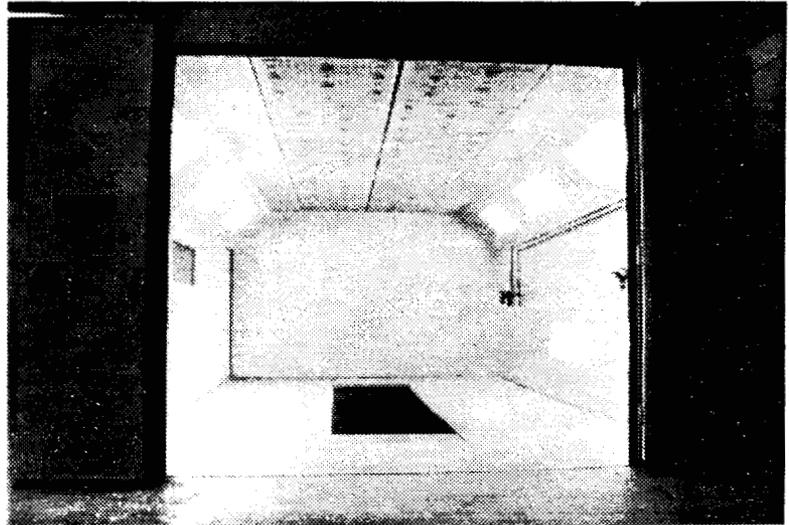


# Missile Maintenance Refinishing Facility, bldg. 813



- State-of-the-art
- Ammunition compatible

- Air assisted "Airless" CARC-capable paint booth

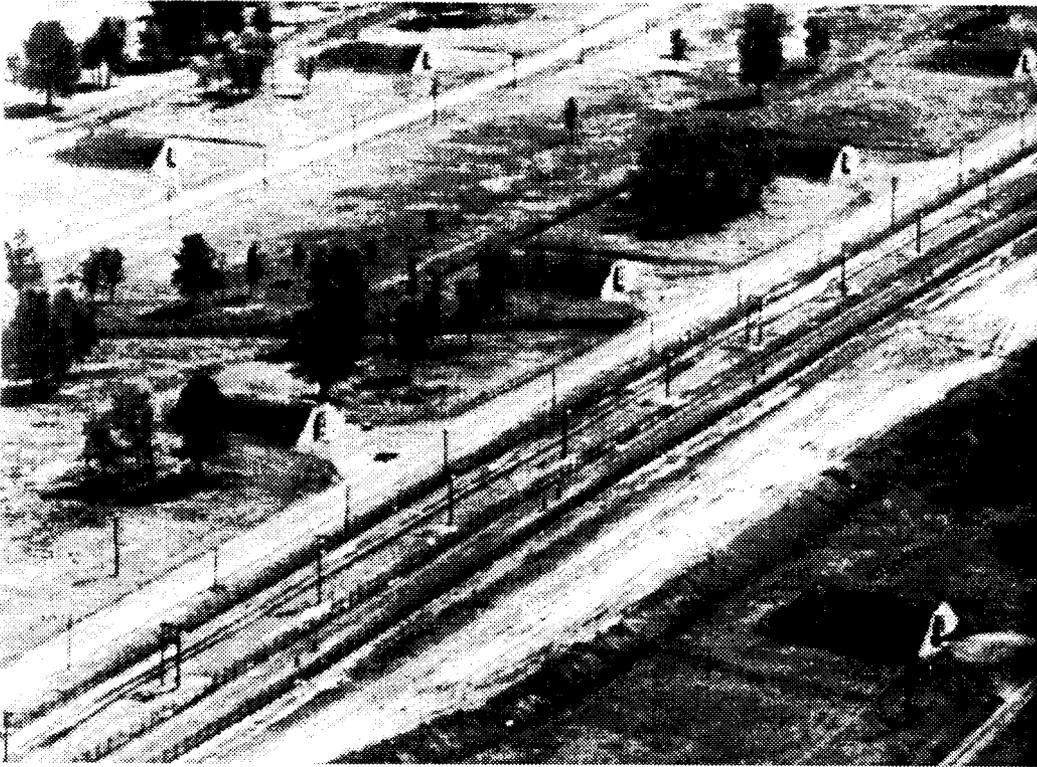


- Multi-media blasting booth



# Missile Maintenance

## High Security Storage



Igloos

Warehouse bldg. 810

- Self-contained and collocated
- Intrusion Detection System equipped

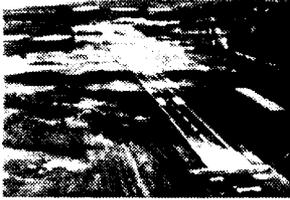


## Army Tactical Missile System (TACMS) Cold Weather Test Site

The Army TACMS Cold Weather test Site is a fenced, covered concrete pad, 40' x 32'. Initial receiving of TACMS began in the 3rd quarter of 1991 and will conclude the 2nd quarter of 1995. All TACMS stocks will be shipped to test location by the year 2015. This site is located in the conventional ammo area.



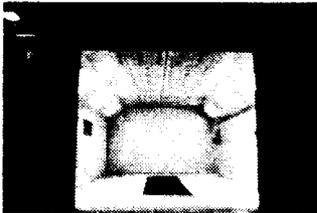
# Seneca Facility Specs



**Seneca Army Airfield:** Restricted use, prior permission required. Length 7000 feet, elevation 646 ASL, asphalt surface capable of accommodating C5A Galaxy class aircraft. Equipped with NDB and VOR/DME non-precision instrument approaches, pilot controlled PAPI system, simplified short approach lighting system. Airport advisory service available on-call 0700-

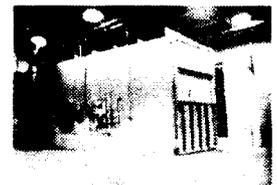
1630 weekdays. Paved apron and taxiways equipped with standard taxiway lighting system. Portable apron lighting equipment available on request. JP4 refuelling available by prior arrangement, 43,200 gallon capability includes 30,000 gallons in-ground and 13,200 in mobile tankers. JP8 fuel only available after April 1994.

**Missile Maintenance Facility:** Earth-covered igloo-type construction, 8,800 square feet of air-conditioned and humidity controlled work space, 18' 9" ceiling. Installed equipment includes eleven rail-mounted traversing overhead cranes: two single speed 2000-lb, four single speed 5000-lb, one manually operated 20,000-lb, and four variable speed control with 6-ton lifting capacities.



**Paint Booth:** Internal dimensions 24'L x 14'W x 9'H, equipped with dual 10:1 Monark wall mount systems and Graco Model AA2000 air-assisted "airless" manual sprayguns. Maximum working fluid pressure 950 PSI and maximum working air pressure 100 PSI. Suitable for wood and metal applications, applying adhesives, sealers, lacquers, glazes, wiper stains, catalyzed varnishes, standard solvent base enamels, urethanes, CARC, waterbase coatings, and zincs.

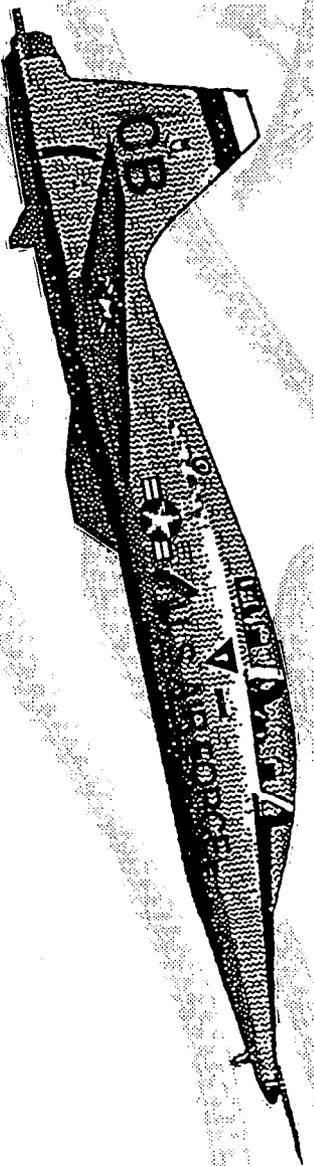
**Multi-media Blast Booth:** Internal dimensions 25'L x 15'W x 12'H, equipped with full opening front door, a Clemco recessed hopper abrasive recovery system, and a 406 volt, 50 HP, air-cooled LeROI Dresser Model WH50SS rotary screw air compressor with 185 CFM capacity at 150 PSIG. Multi-media capabilities include aluminum oxide, walnut/pecan shell, silicon carbide, garnet grain, steel shot, plastic, cob grit, steel grit, and glass beads. Also available: Blast-It-All 3-cubic foot Dry Blast Tumble Barrel System equipped with a 900 CFM capacity reclaim-separator for use with glass beads and fine abrasives.



**High Security Storage:** Self-contained 624-acre site collocated with maintenance facilities. Storage capability includes one 25,750 square foot standard warehouse and 64 igloo-type magazines totalling 110,995 square feet of earth-covered storage. Igloos consist of: 17 80-foot double door (96"W x 107" H opening) structures, 45 60-foot double door structures, and two 40-foot single door (48"W x 87"H opening) structures. All storage facilities are equipped with installed interior lighting, Intrusion Detection, and Lightning Protection Systems.

**For information contact:  
Commander  
Seneca Army Depot Activity  
SDSTO-SECO  
Romulus, New York 14541-5001  
(607) 869-1206, DSN: 489-5206  
(607) 869-1352, DSN: 489-5352**

# Document Separator



# COLUMBUS

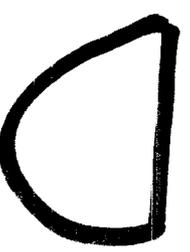
*Where the Future is Flying*

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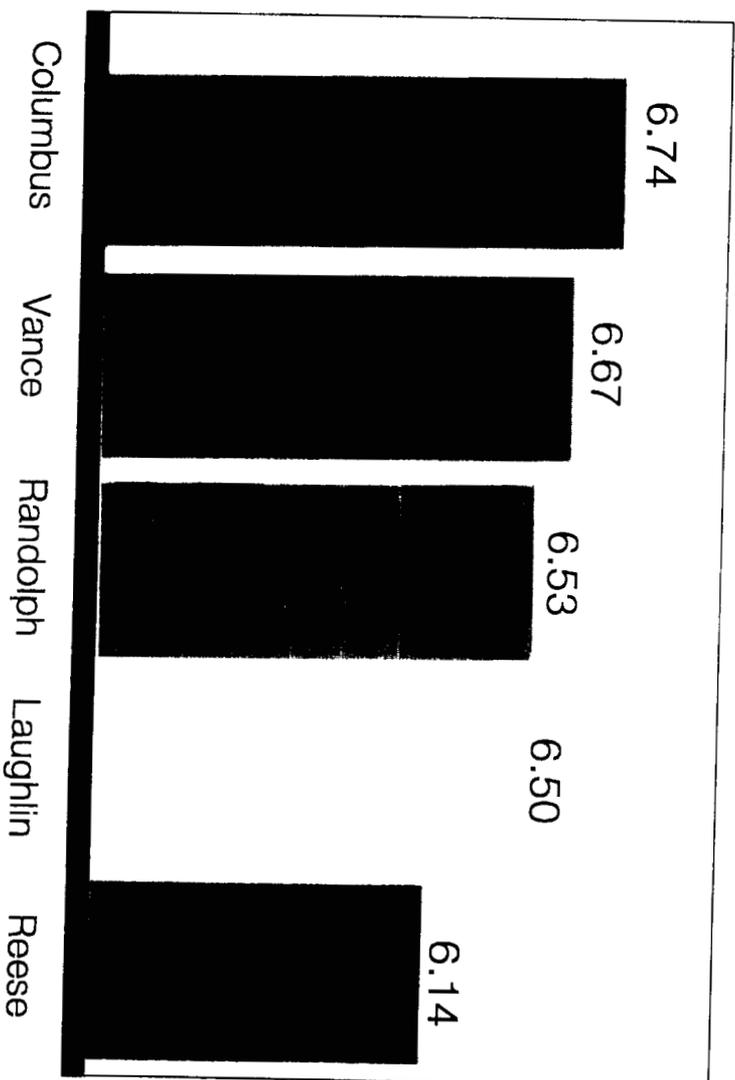
A CAHFB 2000 Briefing

May 1, 1995



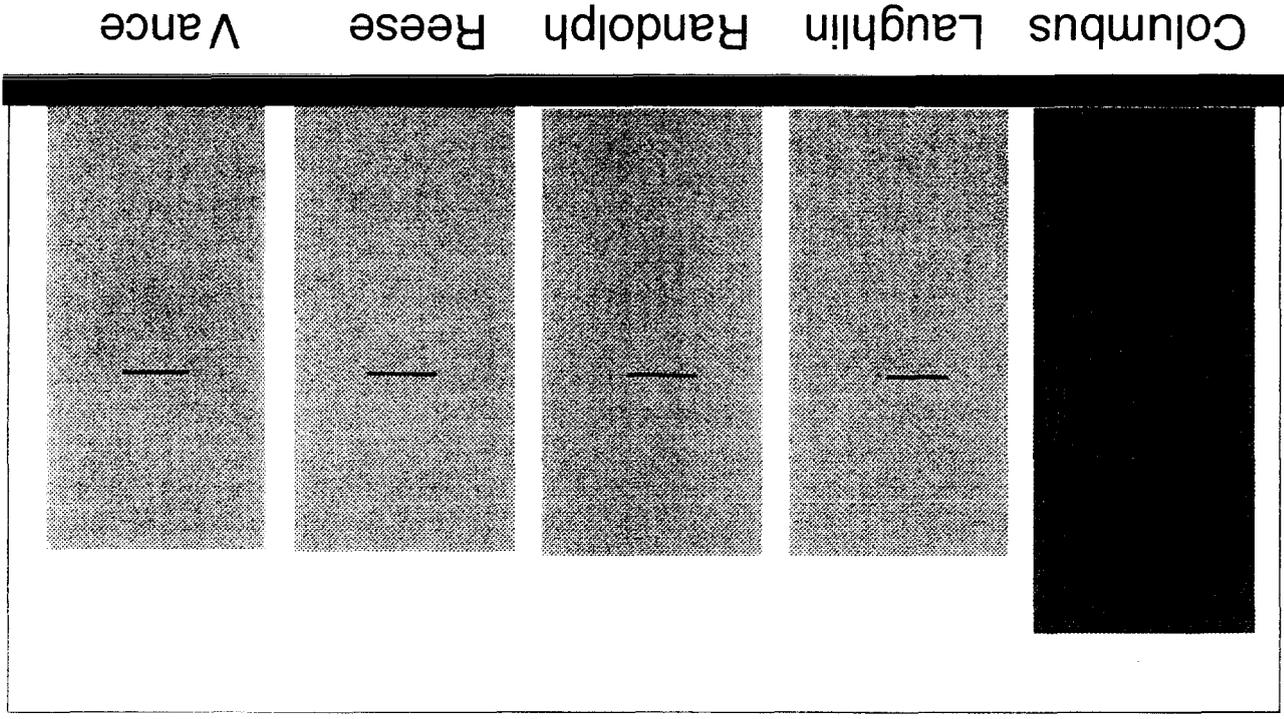
# MILITARY VALUE

Columbus Air Force Base received the highest ranking of the Air Force UPT bases on Criterion I, Flying Training Mission.

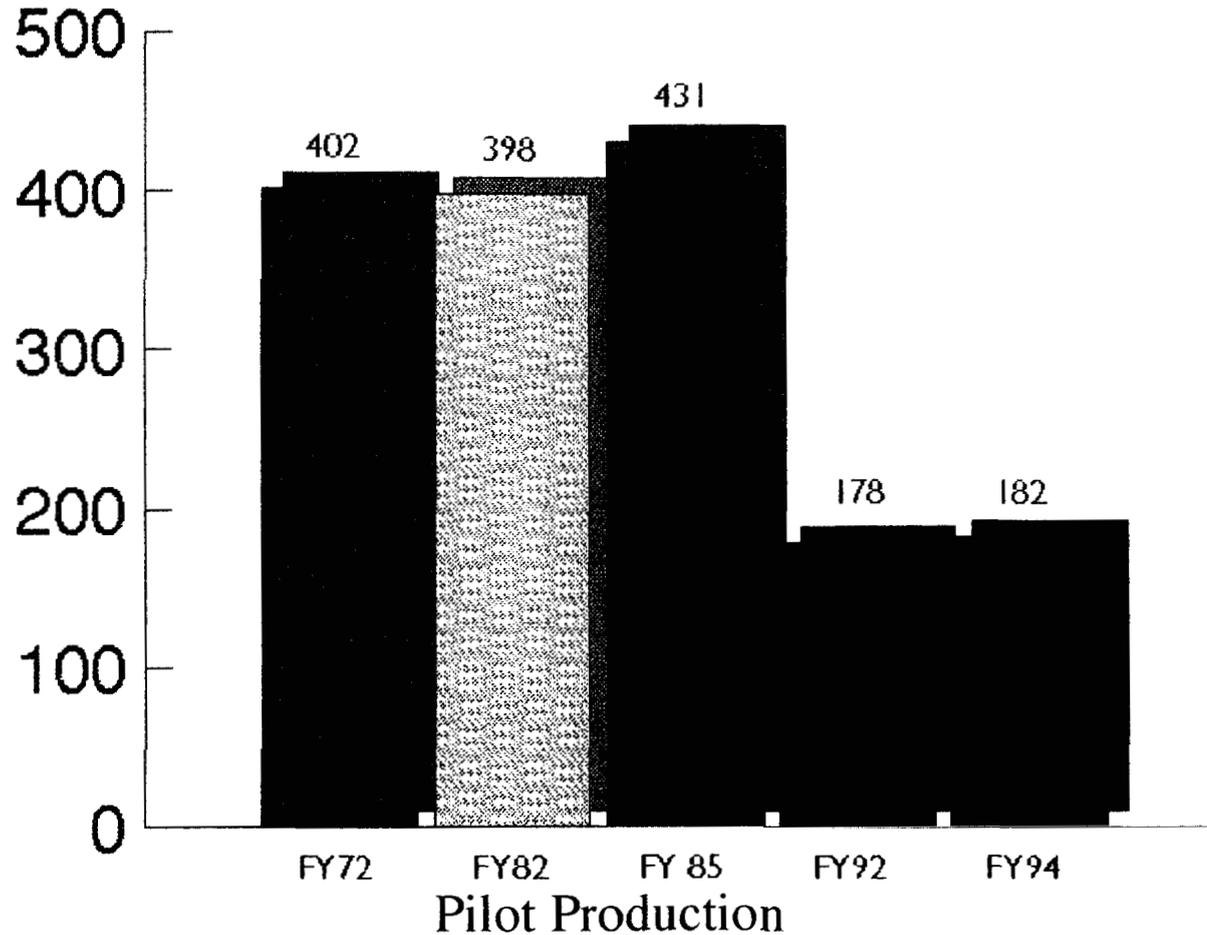


**MILITARY VALUE**

Columbus Air Force Base was the *only* UPT base to earn a GREEN rating on Criterion II, Facilities and Infrastructure. All others received a GREEN MINUS.



## MILITARY VALUE



Columbus AFB has the infrastructure to support increased pilot production as demonstrated by past graduation rates, without additional expenditure on facilities. An increase in pilot production at CAFB, would greatly reduce the cost per graduate for the Air Force.



## MILITARY VALUE

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Columbus AFB attributes which offer  
flexibility in missions:

- ★ Runways
- ★ Taxi-Ways
- ★ Excellent Airspace
- ★ Lack of Altitude & Crosswind Problems
- ★ Hydrant Fueling System Pits
- ★ Ramps
- ★ Security



**CAFB's three parallel runway configuration, complemented by the efficient taxiway and ramp layout, can support trainer, fighter, bomber, tanker or transport missions.**



The T-37 Auxiliary Field at Shuqualak enhances the flexibility of CAFB.



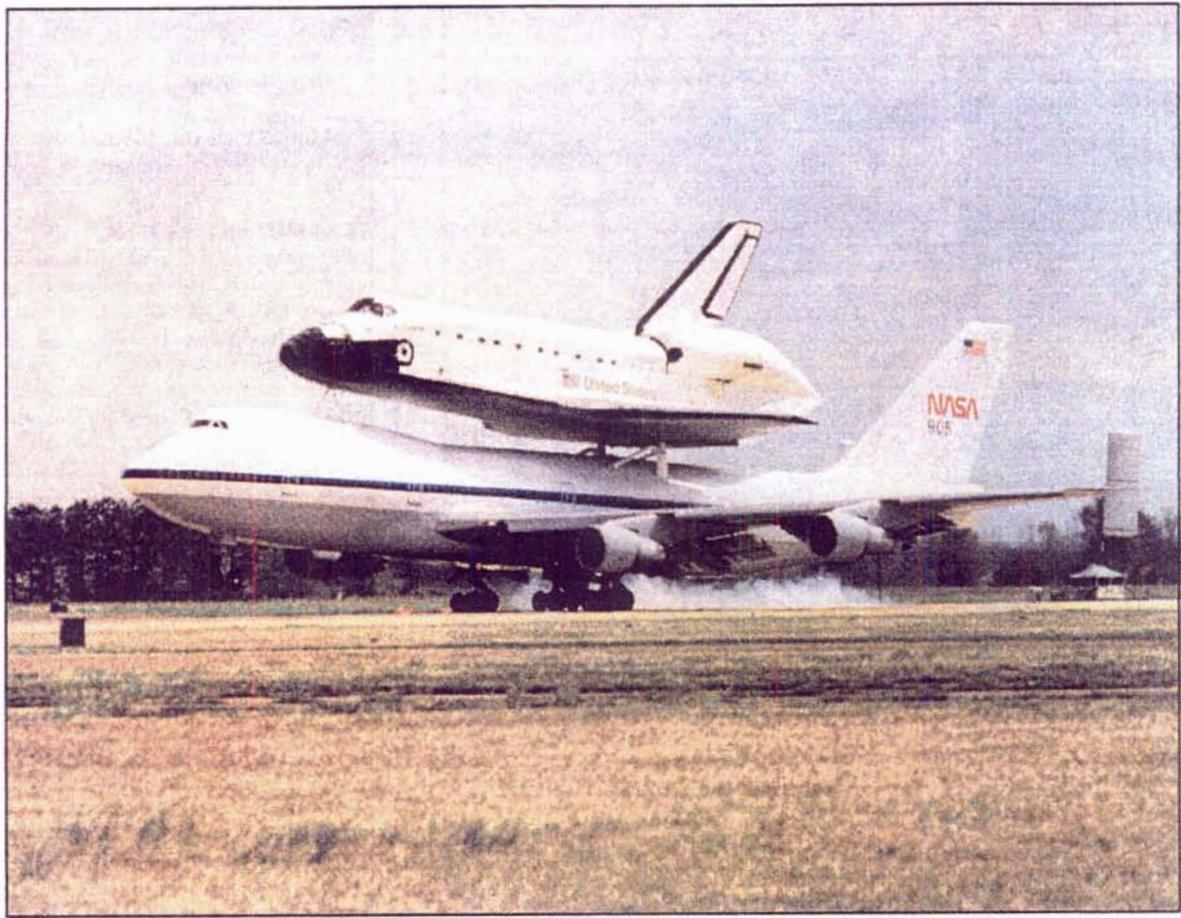
Sea Ray, the AT-38 Range, Meridian.

# THE COMMERCIAL DISPATCH

The Commercial Est. 1894, The Dispatch Est. 1879/Consolidated March 12, 1922©1994

COLUMBUS, MISSISSIPPI

TUESDAY, MARCH 28, 1995



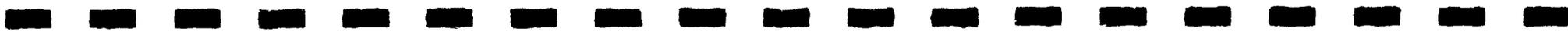
Space Shuttle Landing Exemplifies the Versatility of CAFB.

Staff Photo By Frank Roberts

## *Touching Down Again*

Smoke puffs from the tires as the space shuttle Endeavour, riding high atop a modified 747, touches down at Columbus Air Force Base enroute back to Florida to prepare for another mission.

# Endeavour Pays A Visit

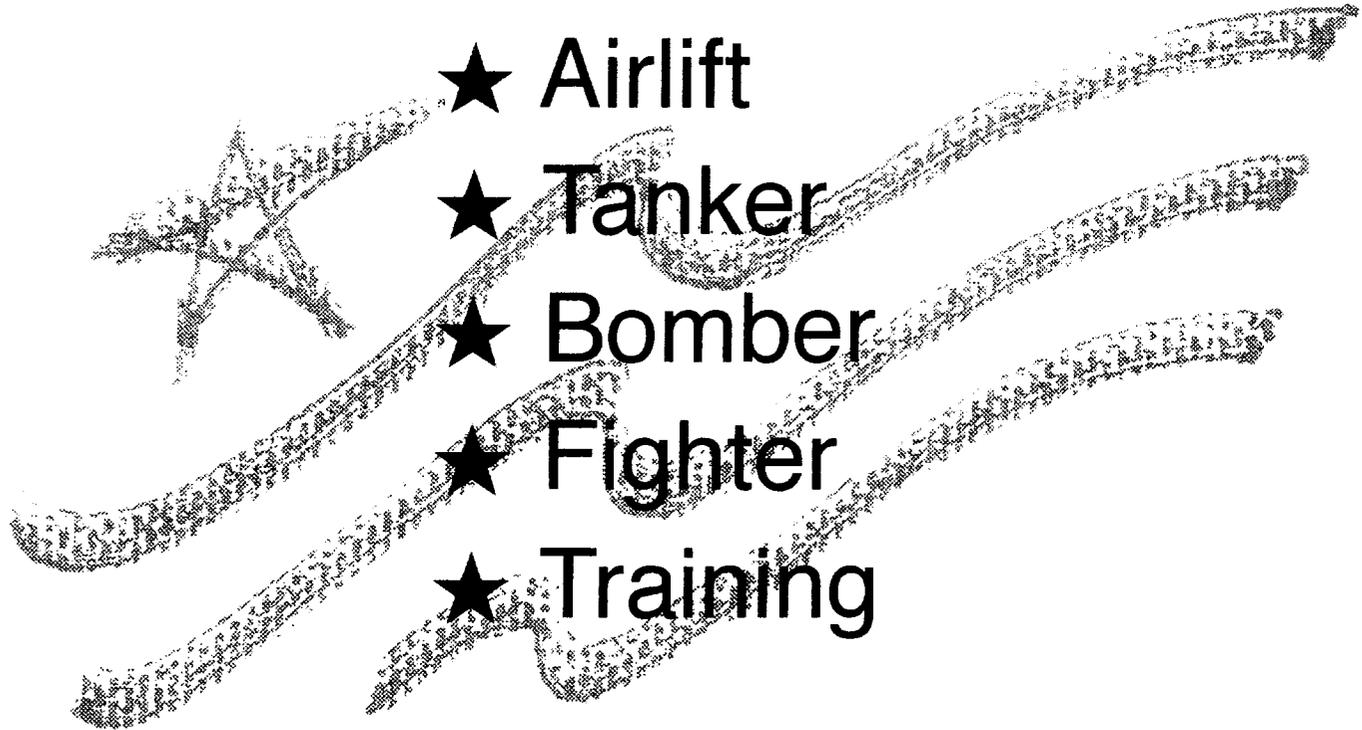


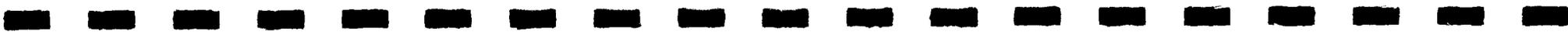
## MILITARY VALUE

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Columbus AFB offers flexibility. It is the only UPT base well-suited to support any of the five Air Force flying missions:

- 
- ★ Airlift
  - ★ Tanker
  - ★ Bomber
  - ★ Fighter
  - ★ Training

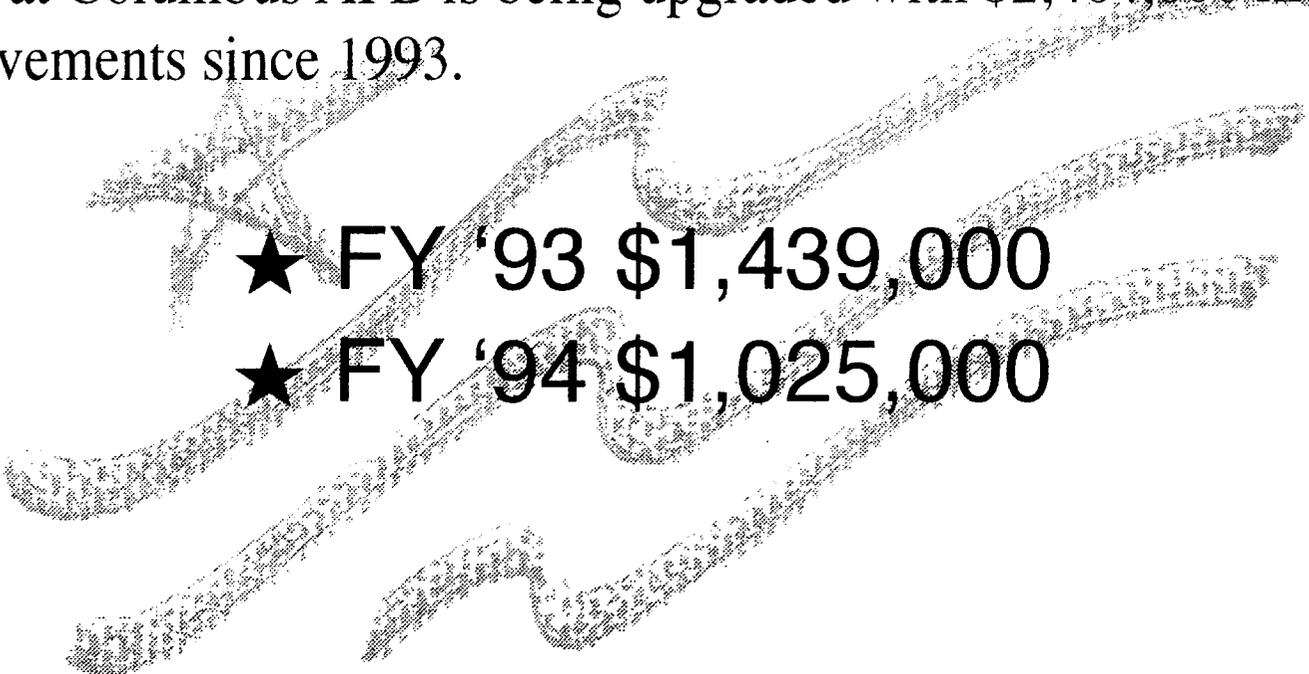
  
**MILITARY VALUE**  

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## Housing

Housing at Columbus AFB is being upgraded with \$2,464,000 invested in improvements since 1993.



★ FY '93 \$1,439,000

★ FY '94 \$1,025,000





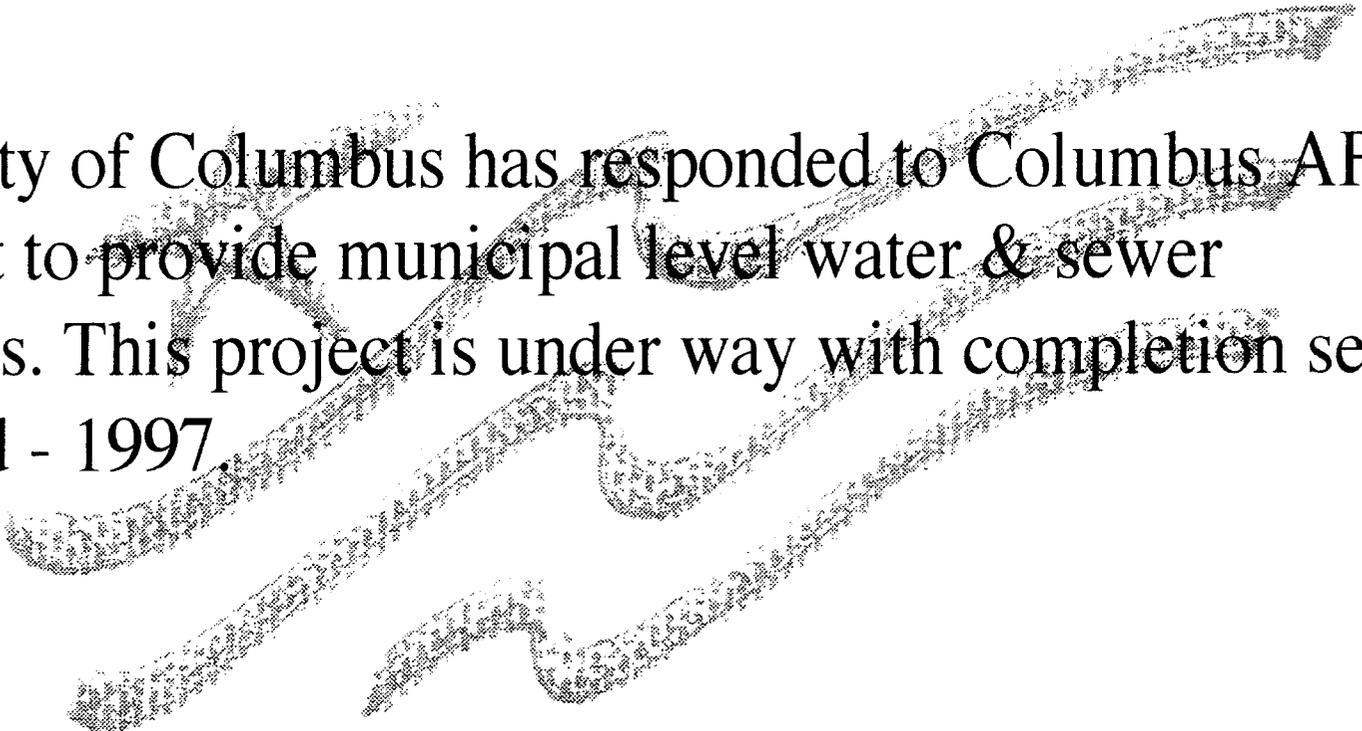
## MILITARY VALUE

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### Community Response

The City of Columbus has responded to Columbus AFB request to provide municipal level water & sewer services. This project is under way with completion set for mid - 1997.



# QUALITY OF LIFE

## Education

Student/Teacher ratio in Columbus Municipal Schools is lower than required by the State Department of Education.

	<i>Columbus Municipal Schools</i>	<i>State Department of Education</i>
<b>Elementary</b>	<b>16.7:1</b>	<b>22:1</b>
<b>Secondary</b>	<b>13.9:1</b>	<b>27.1/30.1</b>





## QUALITY OF LIFE

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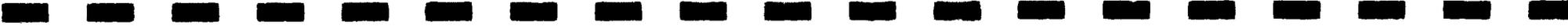
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### Education - College

Graduate degrees are offered at two universities in the local area.

- ★ Mississippi University for Women in Columbus offers graduate as well as undergraduate degrees.
  - ★ Mississippi State University, Mississippi's largest comprehensive university, is located within less than a 30-minute drive of CAFB. MSU offers undergraduate, graduate and doctoral degrees.
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## QUALITY OF LIFE

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### Medical

Improvements at Baptist Memorial Hospital - Golden Triangle are significant. A \$44 million renovation/expansion project is set to begin June 1.

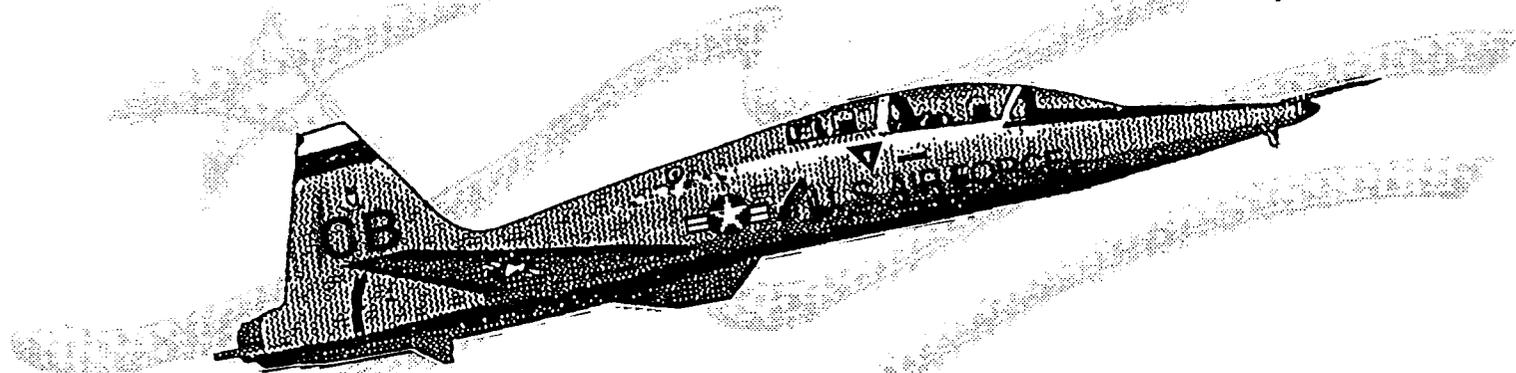
- ★ \$7 million invested in capital improvements since 1993.
- ★ The 328-bed regional hospital has 85 physicians on staff.



## CONCLUSION

Columbus Air Force Base earned its #1 ranking from the Air Force because of its strategic military value. Key among its military assets are CAFB's

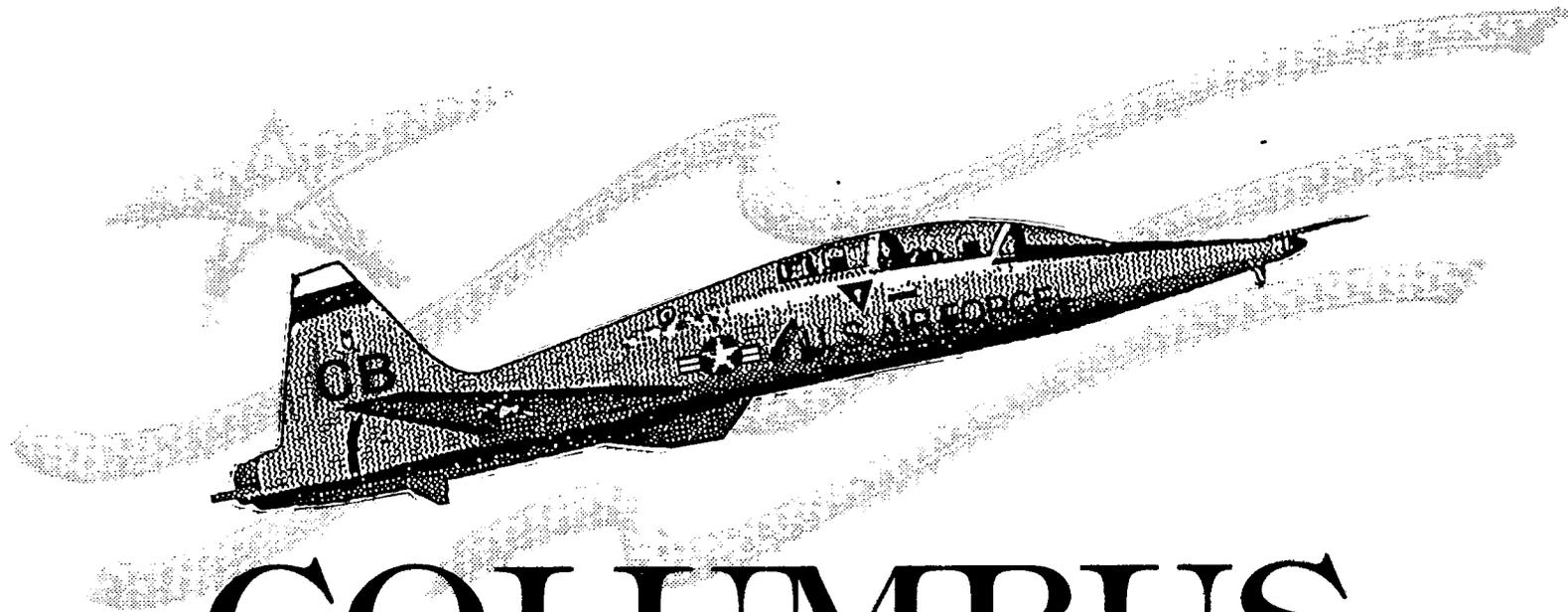
★ Flexibility   ★ Infrastructure   ★ Surge capabilities



# COLUMBUS

*Where the Future is Flying*





# COLUMBUS

*Where the Future is Flying*

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Support Documents

# Support Documents

- ▶ Columbus Pilot Production Data
- ▶ Columbus Light & Water Department Letter  
RE: Water & Sewer Services
- ▶ Columbus Municipal School District Letter  
RE: Student/Teacher Ratios
- ▶ Mississippi University for Women Letter  
RE: Graduate Programs
- ▶ Baptist Memorial Hospital--Golden Triangle Letter  
RE: Improvements
- ▶ Welcome To Columbus AFB: Briefing Document

# COLUMBUS PILOT PRODUCTION

Fiscal Year	UPT	IFF (Introduction to Fighter Fundamentals)	UPT	IFF
1972	402			
1973	319			
1974	310			
1975	287			
1976	285			
1977	234			
1978	327			
1979	311			
1980	273			
1981	315			
1982	398			
1983	371			
1984	396			
1985	431			
1986	352			
1987	291			
1988	309			
1989	322			
1990	291			
1991	301			
1992	178			
1993	239			
1994	182	167		

# COLUMBUS MUNICIPAL SCHOOL DISTRICT

REUBEN E. DILWORTH, Ed.D., SUPERINTENDENT

320 7th STREET NORTH

P. O. BOX 1308

COLUMBUS, MISSISSIPPI 39703

(601) 328-2598

FAX (601) 329-3371

JOHNNY JOHNSON  
Assistant Superintendent

BOB HUDSON, Ed.D.  
Assistant Superintendent

April 4, 1995

Mr. Fred Hayslett  
P.O. Box 949  
Columbus, MS 39703

Dear Mr. Hayslett,

As per your request on March 31, 1995 concerning specific educational information to give The Base Education Office at Columbus Air Force Base, I submit the following:

1. From Bulletin 171, 11th Edition, issued February, 1994, concerning the maximum number of students allowed by the SDE for any school in the state:
  - a. Kindergarten: 22 students to 1 teacher unless each teacher has a full-time teacher's aide. In that case, the ratio could not exceed 27 students to 1 teacher.
  - b. Grades 1-4: 27 students to 1 teacher.
  - c. Grades 5-8: For self-contained classes, the ratio must not exceed 30-1.
  - d. Grades 5-12: For departmentalized classes, the ratio must not exceed 33-1. A teacher in the academic core departmentalized classes may not teach more than 150 students.



COLUMBUS  
LIGHT AND WATER DEPARTMENT

420 4th Avenue South  
P.O. Box 949

Columbus, Mississippi 39703  
Telephone: (601) 328-7192  
Fax: (601) 243-7408

ROBERT C. GRONDIN  
COMPTROLLER

S. A. HEAD, Jr.  
GENERAL MANAGER

April 11, 1995

Mr. Fred Hayslett  
CAFB 2000  
Columbus, MS 39703

Dear Fred:

In 1992, Columbus Air Force Base began exploring the possibility of receiving municipal level water and sewer services. In November of 1993, CAFB requested that the City of Columbus explore a capital improvement project to extend water and sewer lines to the base.

The 1994 Mississippi Legislature authorized a program to provide \$13.5 million to the City of Columbus for the explicit purposes of providing water and sewer line extension to Columbus Air Force Base. Both of these projects have begun construction and will be completed by mid 1997.

These services will help the Air Force avoid \$15 - \$17 million dollars in military construction funds to the 1940's vintage water and sewer plants currently on the base and an annual expenditure of \$500,000 for operation and maintenance.

We look forward to being a partner with the base well into the next century.

Sincerely,

S. A. Head, Jr.  
General Manager

1ft



Baptist Memorial  
Hospital Golden Triangle

April 5, 1995

Mr. Fred Hayslett  
CAFB 2000  
Post Office Box 949  
Columbus, Mississippi 39701

Dear Mr. Hayslett:

The past year has been one of growth and activity for Baptist Memorial Hospital-Golden Triangle. The success and accomplishments of the past year are the result of the outstanding achievements and activities of many people - our employees, medical staff, volunteers, and community.

BMH-GT has made a long-term commitment to the citizens of Lowndes County and the surrounding area to provide quality, cost efficient health care.

As a 328-bed regional hospital, we currently have more than 85 physicians on staff, representing most medical specialties. We plan to break ground on June 1st for a \$44 million renovation and expansion project - the largest ever undertaken by a hospital in Mississippi. We have also received approval to establish cardiac catheterization and open-heart surgery services - another first for our community. Plans also include the establishment of a comprehensive cancer treatment center.

The new services will be built upon the strong foundation already in place, in part through the \$7 million invested in capital improvements at the hospital over the past two years.

We currently maintain an active physician recruitment program, concentrating on attracting primary care physicians to our staff. We also expect the addition of several specialty physicians when our new services are put into place.

# COLUMBUS MUNICIPAL SCHOOL DISTRICT

REUBEN E. DILWORTH, Ed.D., SUPERINTENDENT

320 7th STREET NORTH

P. O. BOX 1308

COLUMBUS, MISSISSIPPI 39703

(601) 328-2598

FAX (601) 329-3371

JOHNNY JOHNSON  
Assistant Superintendent

BOB HUDSON, Ed.D.  
Assistant Superintendent

2. In Columbus, as of February 28, 1995, there were 3223 elementary students and a total of 193.55 elementary teacher units, or a ratio of 16.7 - 1. For the secondary schools, there were 2480 students and a total of 179.10 teacher units, or a ratio of 13.9 to 1.

The method used obviously divided the number of students by the number of teachers units to give the ratio. This does not mean to say that every teacher has no more than 16 students at one given time. There are programs that demand a much lower teacher/student ratio, and there are certainly teachers, especially in the elementary, that have the maximum number of students allowable.

If this does not adequately address all of the concerns you had, please don't hesitate to call me at 328-2598.

Sincerely,



Dr. Bob J. Hudson, Ed.D.  
Assistant Superintendent for Instruction

BJH/pw



MISSISSIPPI  
UNIVERSITY  
FOR WOMEN

Columbus, MS 39701

Office of the President  
Eudora Welty Hall  
P. O. Box W-1600  
(601) 329-7100  
Fax (601) 329-7297

April 10, 1995

Mr. Fred Hayslett  
CAFB 2000  
P.O. Box 949  
Columbus, Mississippi 39703

Dear Fred:

Over the years Mississippi University for Women and the Columbus Air Force Base have worked cooperatively in a number of endeavors, not the least of which are the valued personal relationships which have developed.

We are proud to have had a presence at CAFB through our Continuing Education program since 1984 and are pleased that enlisted and civilian base personnel take advantage of the classes of "The W," both at the Education Center at CAFB and on our campus through our graduate and undergraduate programs. We offer 39 majors/areas of concentration in our six undergraduate degree programs and degrees in four majors at the graduate level.

Mississippi University for Women is committed to providing quality higher education to CAFB, the region, the State of Mississippi, and the entire nation. We are pleased that *U.S. News and World Report* ranked MUW as number one for "best value" among our 126 Southern peer institutions.

Thank you for the work you are doing as the leader for CAFB 2000. Please let us know what we may do to help.

My very best and highest regards.

Sincerely,

Clyda S. Rent  
President

Mr. Fred Hayslett  
April 5, 1995  
Page Two

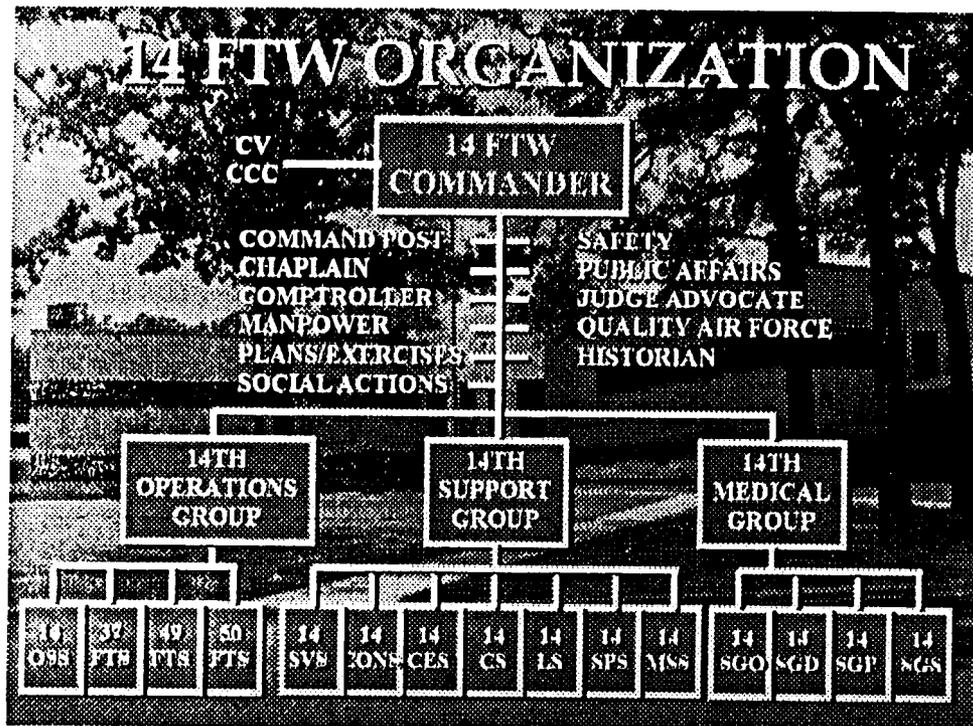
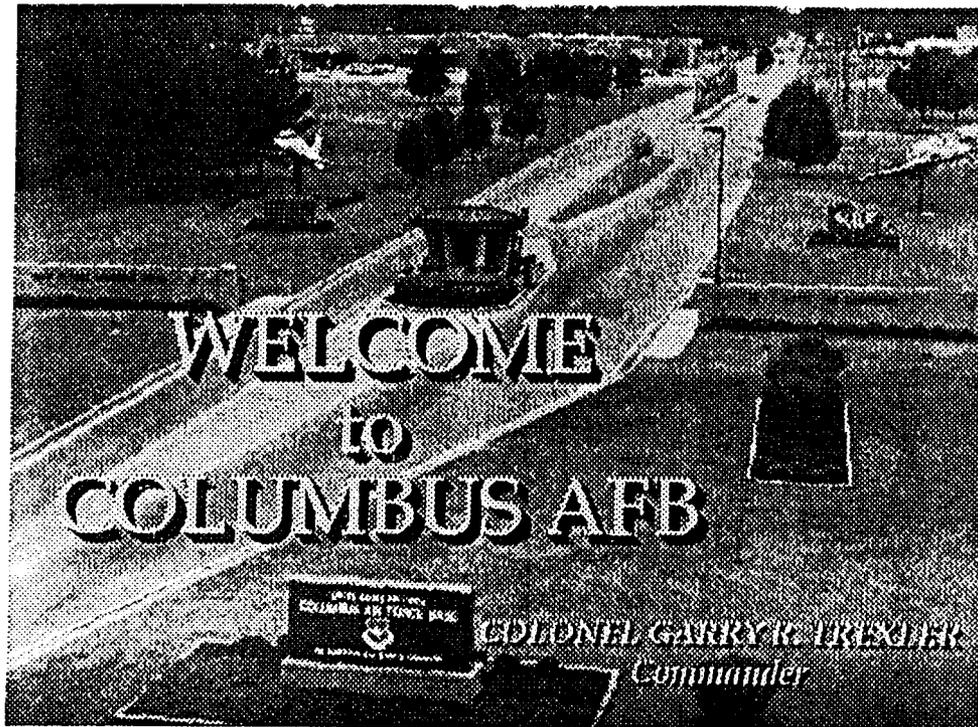
By being a leader with a strong vision for the future, rather than follower, BMH-GT will bring enormous resources to our community and significantly elevate the quality and availability of comprehensive health services. Our future plans for expansion will position BMH-GT to become an even more competitive, effective health resource of which our community will be proud.

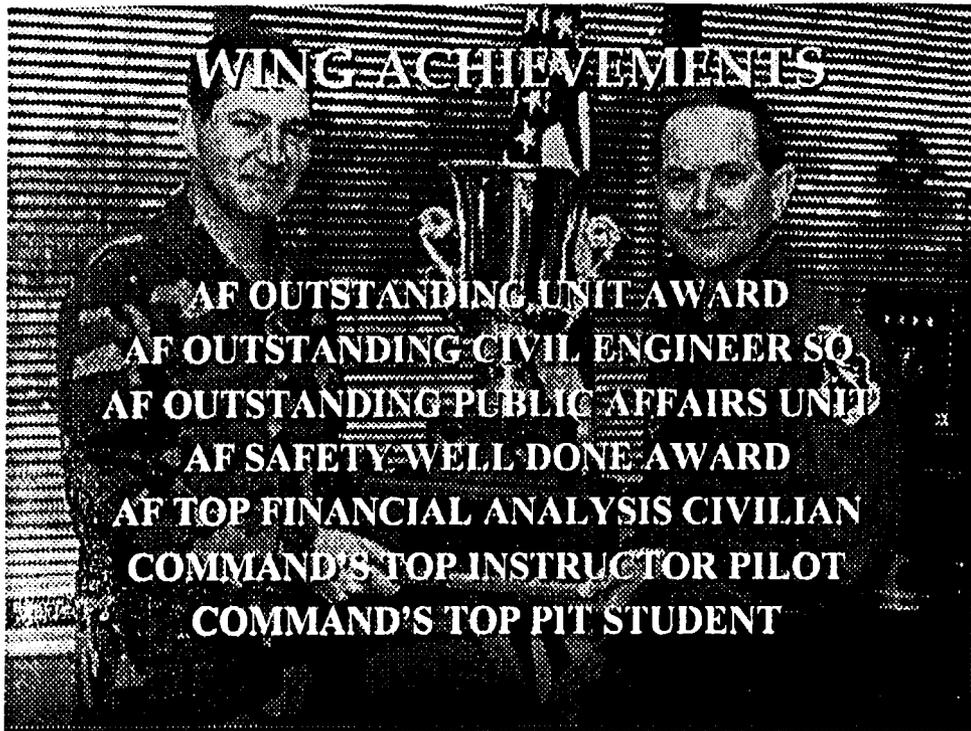
Sincerely,



Stuart Mitchell  
Administrator

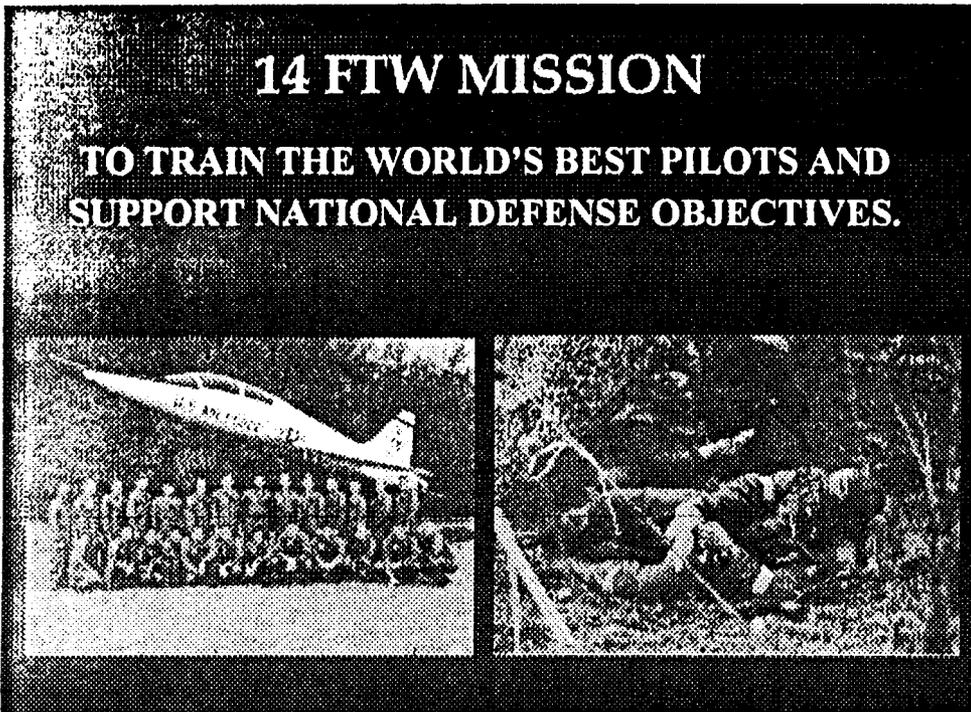
ccw





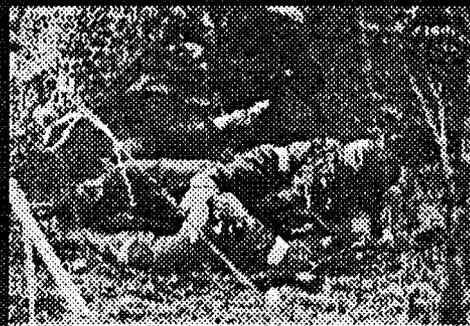
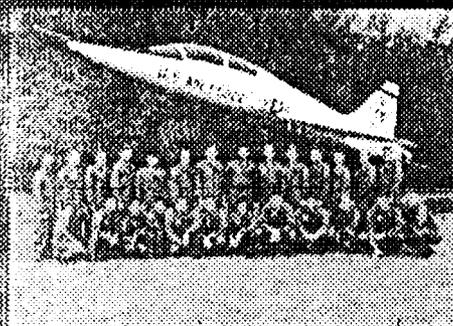
## WING ACHIEVEMENTS

AF OUTSTANDING UNIT AWARD  
AF OUTSTANDING CIVIL ENGINEER SQ  
AF OUTSTANDING PUBLIC AFFAIRS UNIT  
AF SAFETY WELL DONE AWARD  
AF TOP FINANCIAL ANALYSIS CIVILIAN  
COMMAND'S TOP INSTRUCTOR PILOT  
COMMAND'S TOP PIT STUDENT



## 14 FTW MISSION

TO TRAIN THE WORLD'S BEST PILOTS AND  
SUPPORT NATIONAL DEFENSE OBJECTIVES.



# DEPLOYED PERSONNEL

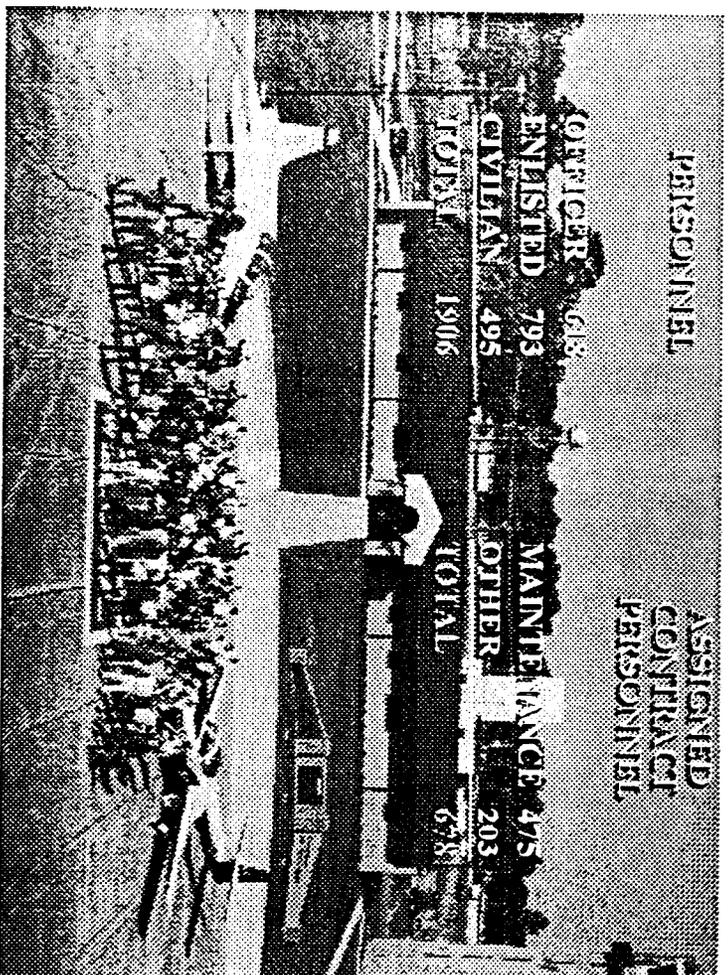
UNIT	LOCATION	NUMBER DEPLOYED
CIVIL ENGINEERING	HONDURAS	1
	ITALY	1
	SAUDI ARABIA	3
DEAS	SAUDI ARABIA	1
LOGISTICS	SAUDI ARABIA	4
GHABEL	SAUDI ARABIA	1
OPS GROUP	TURKEY	1
	HONDURAS	1
SECURITY	CORONET ASPEN	1
POWCE	SAUDI ARABIA	2

TOTAL DEPLOYED: 16

## PERSONNEL

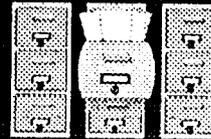
## ASSIGNED CONTRACT PERSONNEL

CORPORAL	ENLISTED	CIVILIAN	TOTAL	MAINTENANCE	OTHER	TOTAL
648	793	495	1306	475	203	678



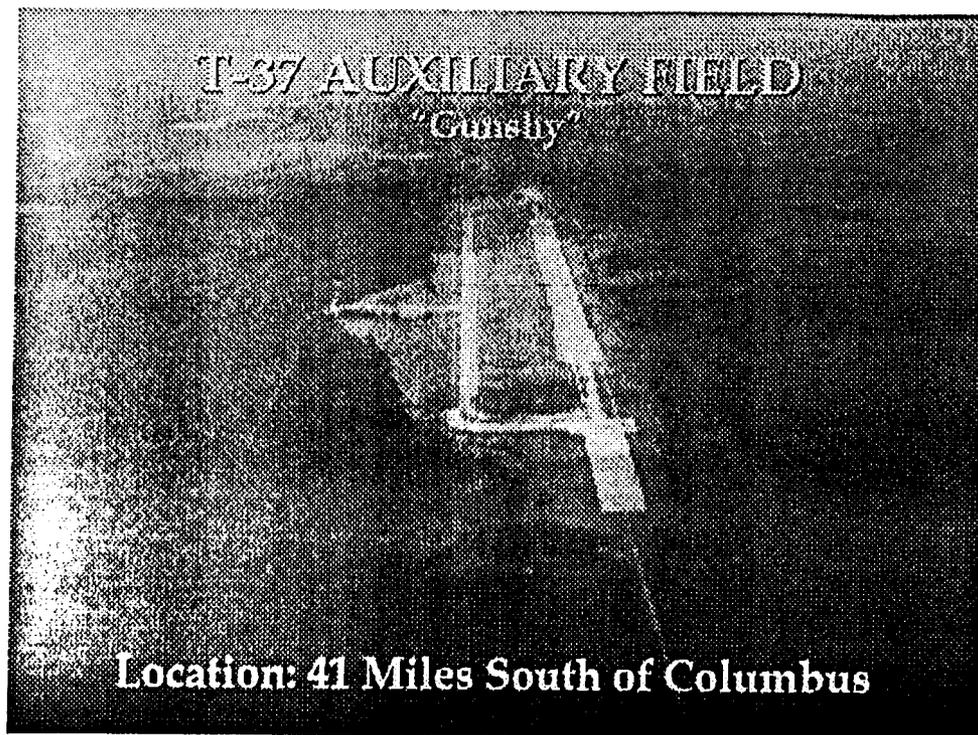
# MAJOR SERVICE CONTRACTS

AIRCRAFT MAINTENANCE	\$ 17,858,000
CONTRACT INSTRUCTORS	1,336,000
VEHICLE OPS & MAINT	838,000
COMM ELECTRONIC SERVICE	819,000
FUELS MANAGEMENT	738,000
FULL FOOD SERVICE	628,000
GROUNDS MAINTENANCE	444,000
AIRFIELD MANAGEMENT	292,000
REFUSE COLLECTION	275,000
RADIOLOGY SERVICES	294,000
BASE CUSTODIAL SERVICE	275,000
VISUAL INFORMATION	244,000
FLOORING REPLACEMENT	170,000
HOSP ASEPTIC MGT SVCS (HAMS)	120,000
PDO/BITS/POSTAL	96,000
MISCELLANEOUS CONTRACTS (6)	220,000



**TOTAL:**  
**\$24,611,000**

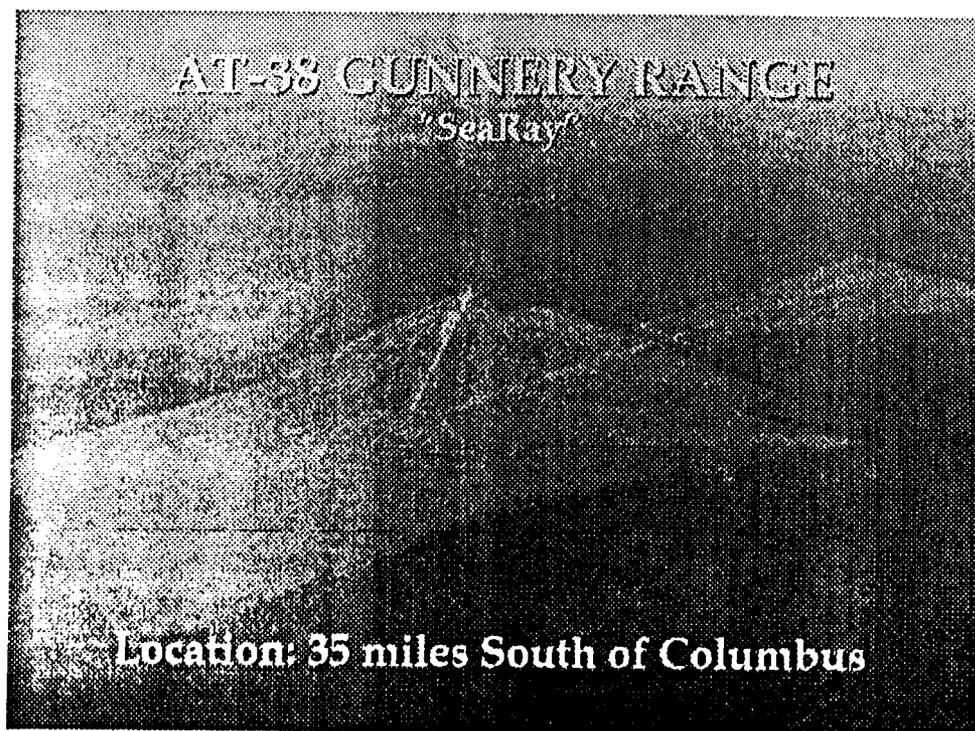




**T-37 AUXILIARY FIELD**

*'Gunsby'*

**Location: 41 Miles South of Columbus**



**AT-38 GUNNERY RANGE**

*'SeaRay'*

**Location: 35 miles South of Columbus**

# COLUMBUS AFB

COMPUTERS		MISSION ASSETS		MOTOR VEHICLES	
Mini-Mainframe	5	T-37	77	Total	227
Small Computers	975	T-38	66		
	<u>980</u>	AT-38	<u>28</u>		
			179		

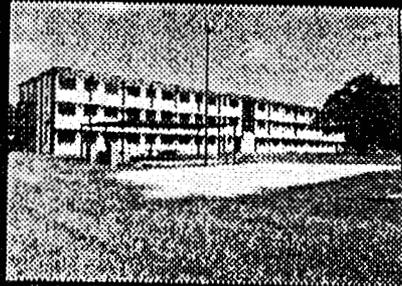
BASE FACILITIES		
THEATER	CHAPEL	COLUMBUS CLUB
BOWLING ALLEY	SUPERMARKET	DEPARTMENT STORE
GYMNASIUM	HOSPITAL	BANK
SERVICE STATION	GOLF COURSE	CHILD DEVELOPMENT
POOLS (2)	HOBBY CENTER	RECREATION CENTER

178 BASE BUILDINGS WITH 1,274,171 SQUARE FEET

# COLUMBUS AFB

GUEST QUARTERS  
 UNACCOMPANIED 57 ROOMS  
 ACCOMPANIED 26 UNITS

UNACCOMPANIED QUARTERS  
 FIVE DORMITORIES 244 BEDS  
 SINGLE HOUSING 61 UNITS



## FAMILY HOUSING

	2-BR	3-BR	4-BR	6-BR	Total
Officer	0	208	44	0	252
Enlisted	94	345	46	5	490
TOTAL	94	553	90	5	742

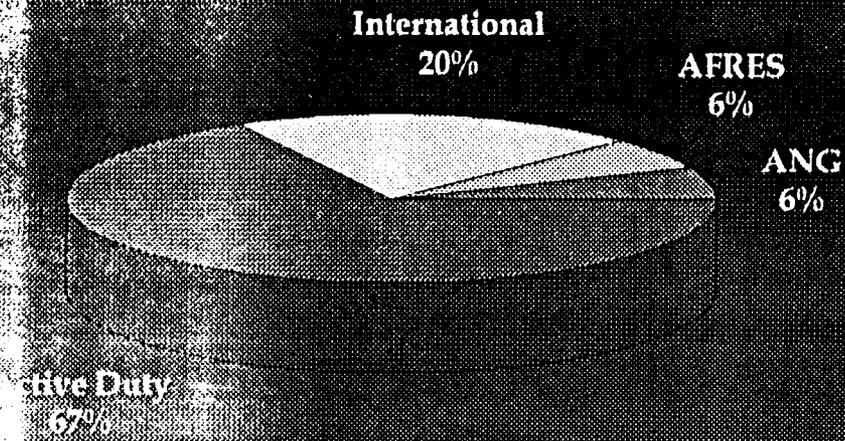
## INSTRUCTOR MANNING

	T-37	T-38	AT-38
<b>AUTHORIZED</b>	96	75	34
<b>ASSIGNED</b>	96 / 100%	87 / 116%	29 / 85%
<b>EFFECTIVE</b>	92 / 96%	84 / 112%	26 / 76%

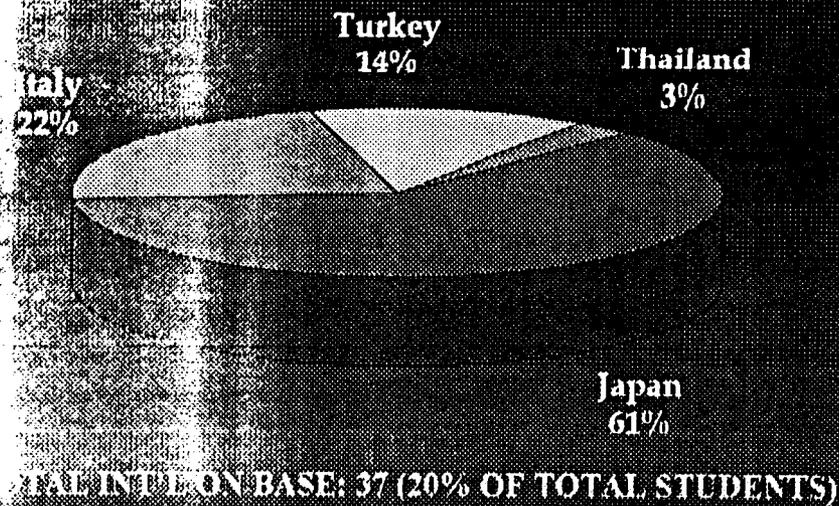
## COLUMBUS PILOT PRODUCTION

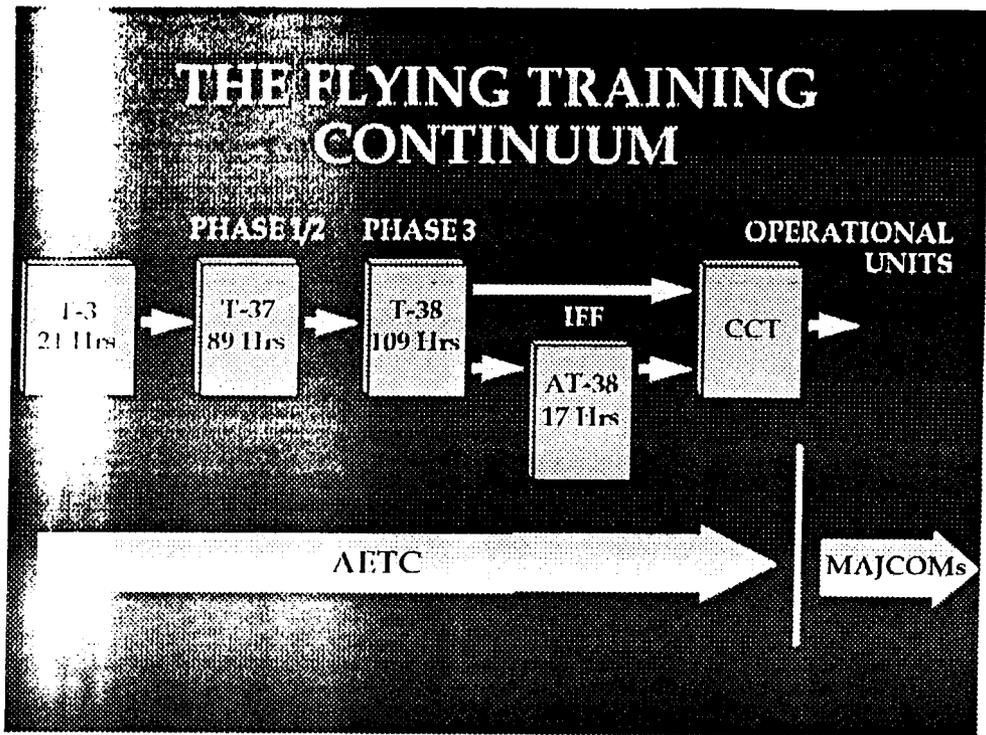
	UPT	IEF
<b>FY 92</b>	229	N/A
<b>FY 93</b>	208	N/A
<b>FY 94</b>	182	167
<b>FY 95</b>	140	214
<b>FY 96</b>	134	220
<b>FY 97</b>	158	220

# STUDENT BREAKDOWN



# INTERNATIONAL STUDENT DEMOGRAPHICS





## OPT PHASE 1

SYLLABUS 4 WEEKS  
ACADEMICS AND PHYSIOLOGICAL TRAINING

## UPT PHASE 2

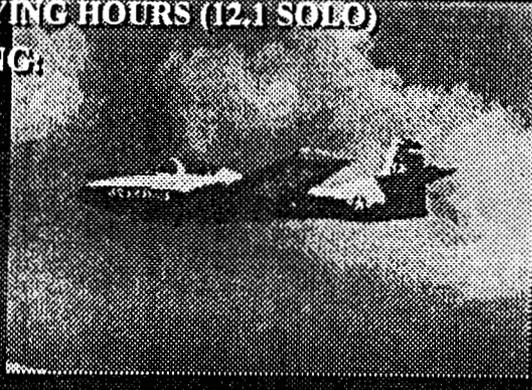


\* SYLLABUS - 5 MONTHS

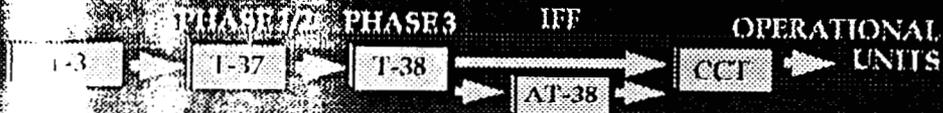
\* 61 SORTIES, 80.9 FLYING HOURS (12.1 SOLO)

\* PHASES OF TRAINING:

- \* CONTACT
- \* INSTRUMENT
- \* NAVIGATION
- \* FORMATION



## UPT PHASE 3



\* SYLLABUS - 6 MONTHS

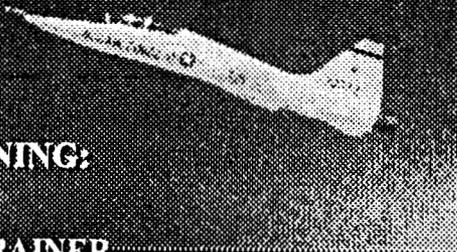
\* 87 SORTIES, 108.8 FLYING HOURS (22.0 SOLO)

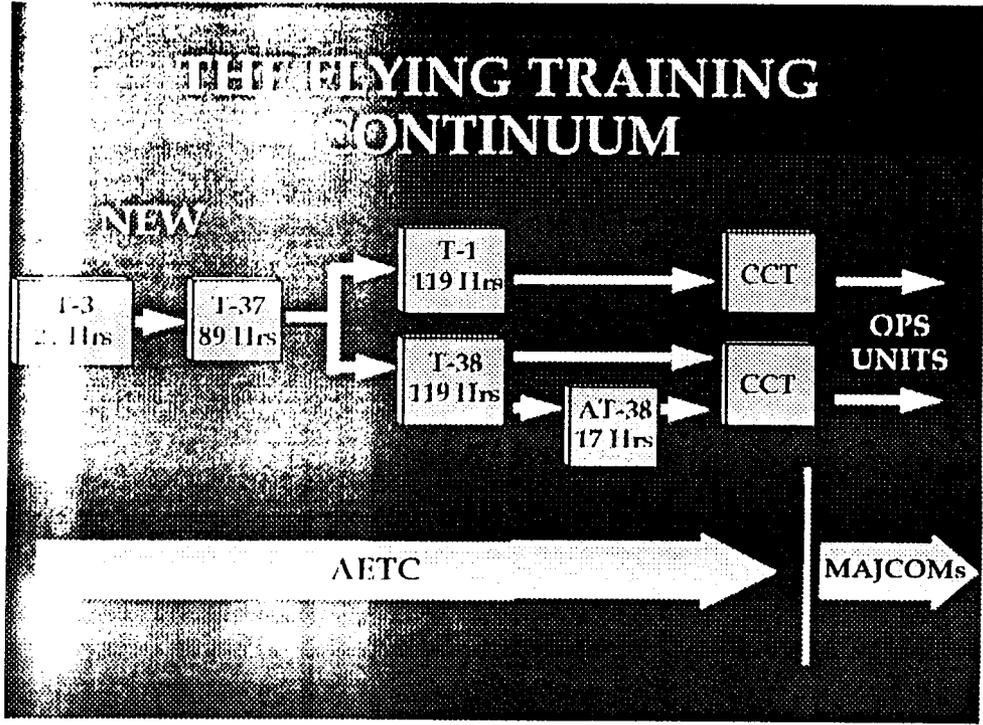
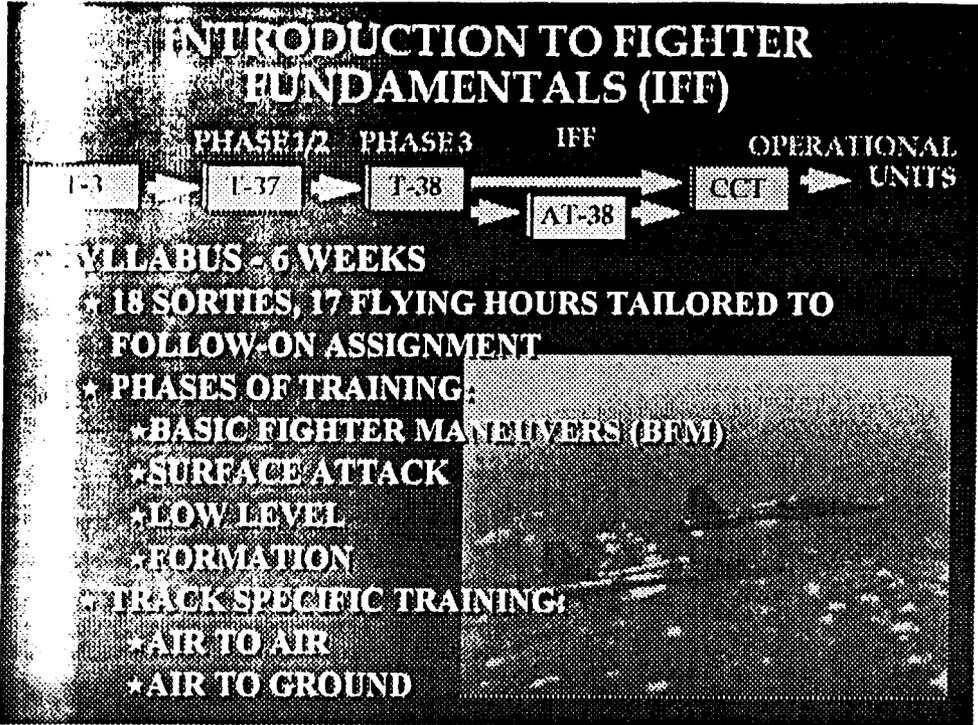
\* PHASES OF TRAINING:

- \* CONTACT
- \* INSTRUMENT
- \* NAVIGATION
- \* FORMATION

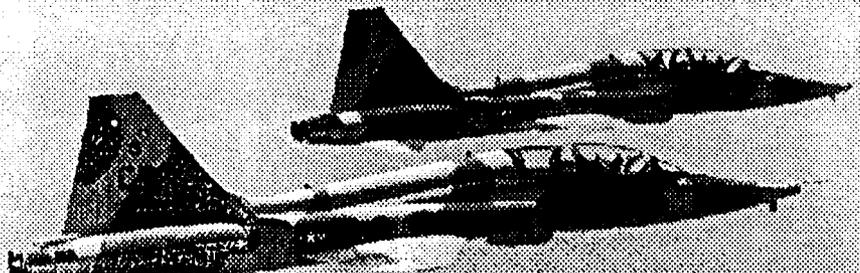
\* TRACK SPECIFIC TRAINING:

- \* TANKER, TRANSPORT
- \* FIGHTER, BOMBER, TRAINER





**PRIORITIES**

• SAFE & EFFECTIVE TRAINING  
 • ACCIDENT-FREE  
 • DISCIPLINED MILITARY PROFESSIONALS

**PRIORITIES**



**F-16A BEDDOWN**

• FIRST AIRCRAFT ARRIVES:	FEB '96
• STUDENT TRAINING BEGINS:	SEP '96
• INITIAL OPERATING CAPABILITY:	MAR '97



# HISTORY OF MAJOR CONSTRUCTION SPENDING

## COLUMBUS CLASS

	<u>RPMC</u>	<u>MILCON</u>
FY 92	\$5,237,000	\$633,000
FY 93	\$6,039,000	\$0
FY 94	\$8,647,000	\$4,519,000
FY 95	\$7,725,000	\$12,300,000

## FY 93 MAJOR CONSTRUCTION PROJECTS (\$6,039,000)

OPERATIONS	\$1,128,000
ALTER/REPAIR MUNITIONS	\$41,000
REPAIR TOWER EXTERIOR	\$18,000
ADDITION TO 14-0SS	\$294,000
RENOVATE PARACHUTE SHOP	\$77,000
BRICK EXTERIOR OF AVIONICS	\$140,000
REPAIR AIRFIELD DRAINAGE	\$153,000
MODIFY BOMBING RANGE TOWER	\$51,000
REPLACE TOWER ELEC SYSTEMS	\$37,000

**FY 93 MAJOR CONSTRUCTION PROJECTS**

<b>INFRASTRUCTURE</b>	<b>\$1,144,000</b>
<b>AIRFIELD PAVEMENTS</b>	<b>\$343,000</b>
<b>ROADS AND STREETS</b>	<b>\$324,000</b>
<b>ROOFS</b>	<b>\$334,000</b>

**FY 93 MAJOR CONSTRUCTION PROJECTS**

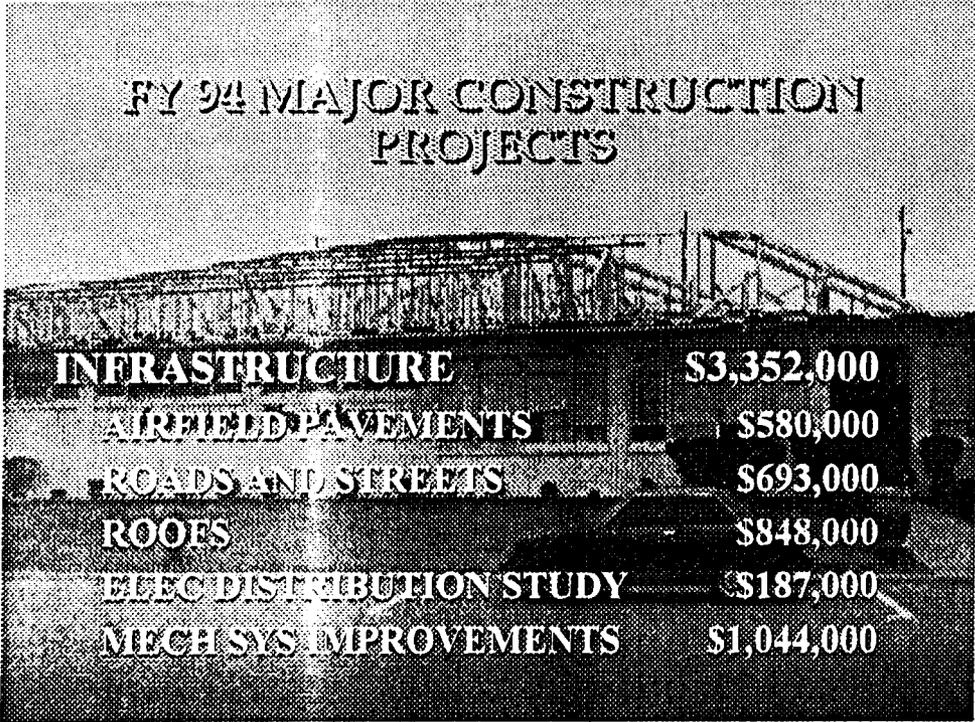
<b>SUPPORT</b>	<b>\$2,135,000</b>
<b>INSTALL FENCES</b>	<b>\$123,000</b>
<b>ALTER INDOOR FIRING RANGE</b>	<b>\$78,000</b>
<b>ASBESTOS ABATEMENT</b>	<b>\$204,000</b>
<b>ALTER MOBILITY CENTER</b>	<b>\$1,126,000</b>
<b>REPAIR BASE SUPPLY EXTERIOR</b>	<b>\$72,000</b>
<b>BASE SUPPLY COVERED STORAGE</b>	<b>\$79,000</b>
<b>ALTER BILLETING LOBBY</b>	<b>\$147,000</b>
<b>ADDITION TO CE READINESS</b>	<b>\$94,000</b>
<b>DRYIO COVERED STORAGE</b>	<b>\$72,000</b>

**FY 93 MAJOR CONSTRUCTION PROJECTS**

QUALITY OF LIFE	\$1,632,000
MILITARY HOUSING	\$1,439,000
NON-APPROPRIATED FUNDS	\$194,000

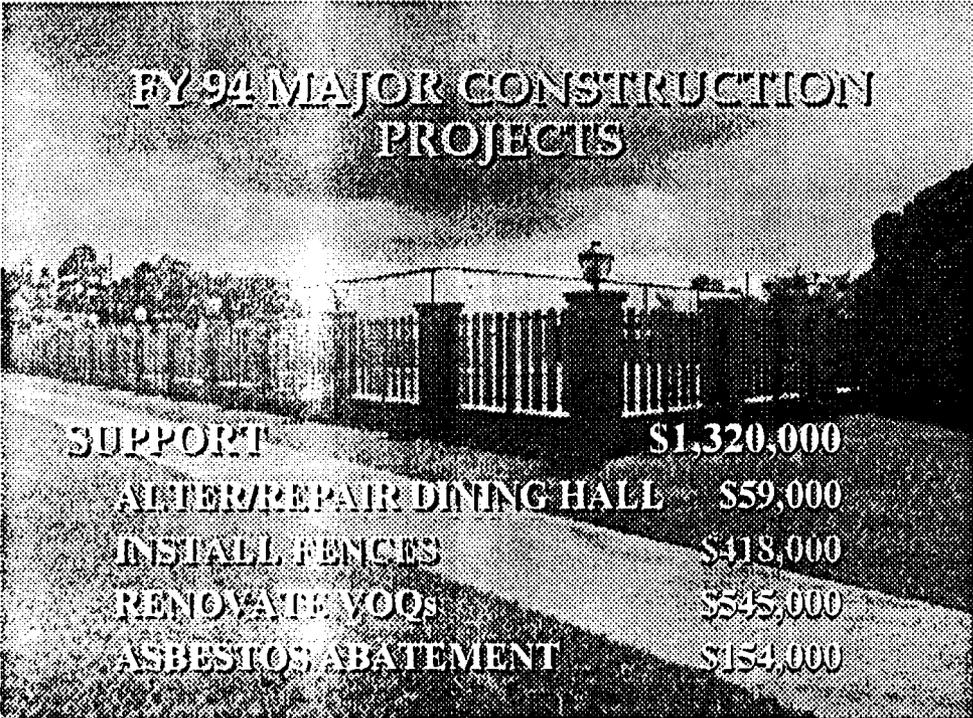
**FY 94 MAJOR CONSTRUCTION PROJECTS**  
**(\$8,647,000)**

OPERATIONS	\$1,323,000
ADDITION TO PMEL	\$212,000
ADDITION TO 37 & 50 FTS	\$289,000
REPAIR EXTERIOR OF 49 FTS	\$189,000
MODERNIZE CHEMICAL SHOP	\$148,000
RELOCATE ASR ANTENNA	\$118,000
REPLACE CONCRETE AT LOX STORAGE	\$65,000
MAINTAIN HANGAR FLOOR	\$70,000



FY 94 MAJOR CONSTRUCTION  
PROJECTS

<b>INFRASTRUCTURE</b>	<b>\$3,352,000</b>
AIRFIELD PAVEMENTS	\$580,000
ROADS AND STREETS	\$693,000
ROOFS	\$848,000
ELEC DISTRIBUTION STUDY	\$187,000
MECH SYS IMPROVEMENTS	\$1,044,000



FY 94 MAJOR CONSTRUCTION  
PROJECTS

<b>SUPPORT</b>	<b>\$1,320,000</b>
ALTER/REPAIR DINING HALL	\$59,000
INSTALL FENCES	\$418,000
RENOVATE YOODS	\$545,000
ASBESTOS ABATEMENT	\$154,000

**FY 94 MAJOR CONSTRUCTION PROJECTS**

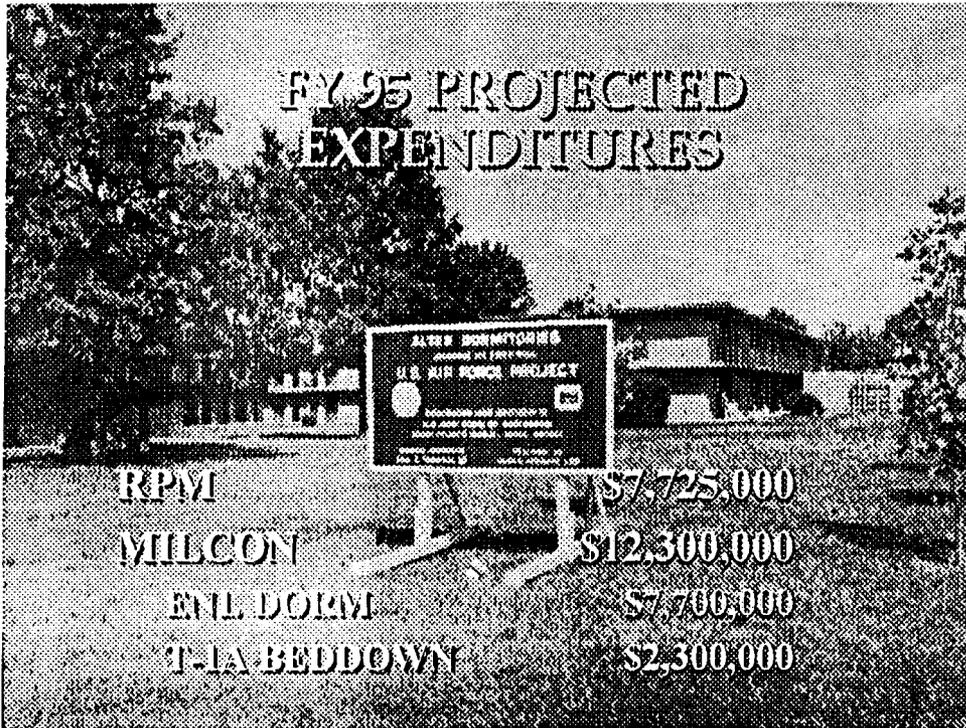
**DC  
EL  
NI  
TN  
AI  
LMEDICAL** **1,418,000**

<b>CEILING &amp; WALL COVERINGS</b>	<b>\$299,000</b>
<b>REPAIR DENTAL CLINIC</b>	<b>\$535,000</b>
<b>REPLACE ROOF</b>	<b>\$584,000</b>

**FY 94 MAJOR CONSTRUCTION PROJECTS**

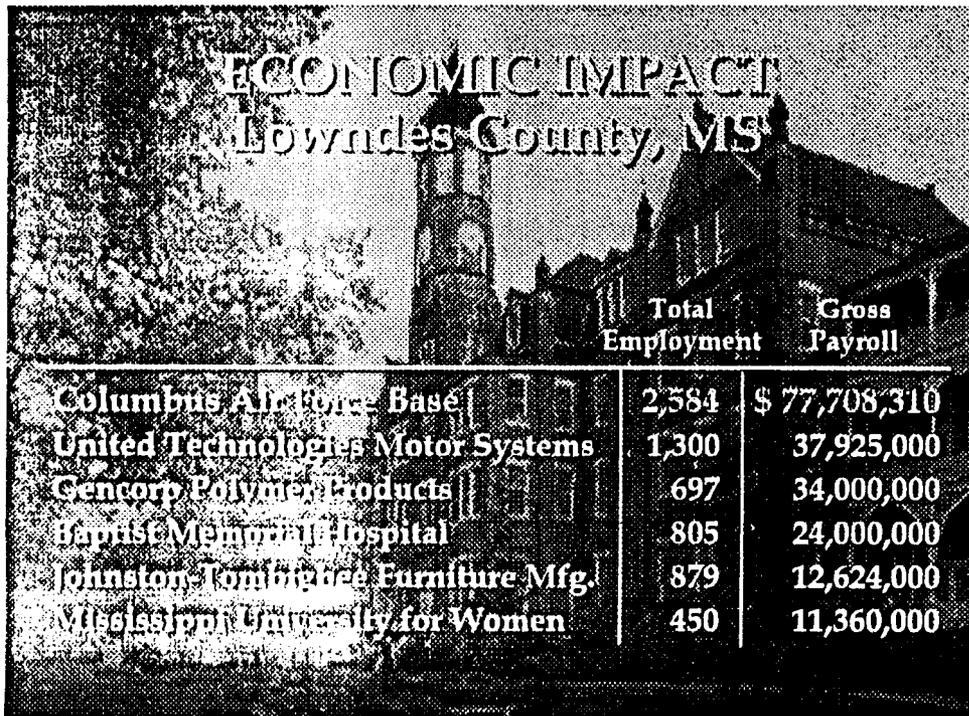
<b>QUALITY OF LIFE</b>	<b>\$1,234,000</b>
<b>MILITARY HOUSING</b>	<b>\$1,025,000</b>
<b>NON-APPROPRIATED FUNDS</b>	<b>\$210,000</b>

## FY 95 PROJECTED EXPENDITURES



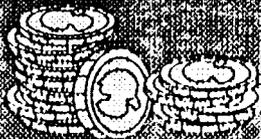
RPM	\$7,725,000
MILCON	\$12,300,000
ENL DORM	\$7,700,000
T-1A-BEDDOWN	\$2,300,000

## ECONOMIC IMPACT Lowndes County, MS



	Total Employment	Gross Payroll
Columbus Air Force Base	2,584	\$ 77,708,310
United Technologies Motor Systems	1,300	37,925,000
Gencorp Polymer Products	697	34,000,000
Baptist Memorial Hospital	805	24,000,000
Johnston-Tombigbee Furniture Mfg.	879	12,624,000
Mississippi University for Women	450	11,360,000

# ECONOMIC IMPACT FY 94



	Amount	Total Impact
Appropriated Fund Payroll	\$ 57,189,895	\$ 91,160,962
NAF, Other Civilian Payroll	20,518,415	32,706,353
Construction and Services	24,440,758	45,271,616
Materials, Equipment, Supplies	24,943,686	45,424,947
<b>TOTAL BASE EXPENDITURES</b>		<b>\$127,092,754</b>

**TOTAL ECONOMIC IMPACT: \$214,563,609**

## "COMBAT" PROGRAMS

\*PROFESSIONAL DEVELOPMENT

\*COMBAT NIGHTHAWK

\*COMBAT COMPANY

\*COMBAT NCO

\*COMBAT EDUCATION

\*AREAS OF EMPHASIS

\*COMBAT RECRUITER

\*COMBAT ENVIRONMENT

\*COMBAT ENERGY

\*COMBAT MOBILITY

\*COMBAT BATTLE STAFF



## **Columbus Air Force Base**

Enjoys Award-Winning Year

Recently won awards by Units at CAFB include:

### **14th Civil Engineering Squadron:**

- Finalist for the outstanding civil engineer unit in the Air Force
- AETC Outstanding Civil Engineer Unit Award (small base)
- AETC runner up Brig. Gen. Archie S. Mayes Award
- AETC Outstanding Resources Flight
- AETC Outstanding Environmental Flight
- AETC Gen. Thomas D. White Natural/Cultural Resources Management

### **Public Affairs:**

- AETCPA Director's Excellence Award (small unit)

### **14th Communications Squadron:**

- AETC 1994 Maintenance Effectiveness Award Small Communications Electronics Award

### **Financial Management:**

- AETC Best Financial Analysis Office

# Document Separator



# **Relocation Profile**

**Proposed Charleston, S.C.**

**Naval Nuclear Power Training Command**

*Presented to*

1995 Base Closure and Realignment Commission

*Submitted by*

In Defense of Charleston

a strategic team of the Charleston Metro Chamber of Commerce

May 1, 1995

April 26, 1995

The Honorable Alan Dixon, Chairman  
BRAC Commission  
1700 N. Moore Street, Suite 1425  
Arlington, Va. 22209

Dear Chairman Dixon:

Let me first congratulate you and your fellow BRAC Commission members on being selected to review the 1995 list of base closure recommendations submitted by Secretary William Perry. While yours is a thankless job, we in the Charleston metro region of South Carolina realize that military downsizing is unfortunately necessary. The Charleston metro region has accepted the fact that our Naval Station and Shipyard are closing and have started looking toward the future. If the BRAC '95 recommendations are upheld, our future will be even brighter than expected.

The following pages are in reference to Secretary Perry's recommendation to move the Naval Nuclear Power Training Command (NNPTC) from Orlando, Fla. to Naval Weapons Station (WPNSTA) Charleston. As you know, one part of the nuclear power school, the Nuclear Propulsion Training Unit (NPTU), is already located at the WPNSTA. We believe WPNSTA Charleston will be an excellent home for the NNPTC and its students as well.

We have put two sections in this information packet to help orient you with the WPNSTA. The first is a short Briefing Paper summarizing why the decision to redirect the NNPTC to Charleston was recommended by Secretary Perry. The second section visually shows you parts of the WPNSTA and various quality of life programs and facilities. It is our hope that after seeing this information packet, the BRAC Commission will concur with Secretary Perry and the Department of Defense that it is a sound decision to redirect the NNPTC to WPNSTA Charleston.

If there are any questions regarding this information, please do not hesitate to call our In Defense of Charleston team at (803) 577-2510, ext. 3039. Thanks for your time and support in this matter.

Sincerely,

*William A. Moody, Jr.*

William A. Moody, Jr., President  
Charleston Metro Chamber of Commerce

*Claudius E. Watts III*

Lt. General Claudius E. Watts III, Chairman  
In Defense of Charleston



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# BRIEFING PAPER



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## BRAC '93 ACTIONS

During the 1993 BRAC hearings, decisions were made affecting the future of the Naval Nuclear Power Training Command (NNPTC). BRAC actions include:

- Directing the relocation of the Naval Nuclear Power Training Command (NNPTC) as part of the overall closure of the entire Naval Training Center (NTC) Orlando. The Department of Navy (DON) had recommended NNPTC be relocated to New London to take advantage of the facilities expected to become available as a result of the DON BRAC '93 recommendation to close the piers at New London.
- Overturning the recommendation to close the piers at New London, necessitating the construction of new facilities at New London for the NNPTC. Thus in BRAC '95, DON determined that significant additional savings in both up-front construction costs as well as recurring annual Base Operating Systems (BOS) and Permanent Change of Station (PCS) savings would be available by collocating the NNPTC with the follow-on training at the Nuclear Propulsion Training Unit (NPTU) located at the Naval Weapons Station (WPNSTA) Charleston. These savings are in addition to the original savings associated with the closure of NTC Orlando.
- Closing the Charleston Naval Base with considerable economic impact throughout the South Carolina Lowcountry area. New London suffered no significant loss as a result of BRAC '93. The DON BRAC '95 recommendation regarding the NNPTC is a redirection and does not reflect a loss to New London.

## NUCLEAR POWER TRAINING BACKGROUND

Officer/enlisted nuclear power training is accomplished in two phases of approximately six months each. The first phase is basically classroom training done at the NNPTC, currently held in Orlando. The second phase is hands-on training on a prototype nuclear power plant at the NPTU on board two demilitarized decommissioned nuclear powered submarines moored at the WPNSTA Charleston.

Both surface force — primarily nuclear carrier — and submarine force personnel attend the NNPTC and the NPTU. There is no tie-in between the Submarine School at New London and nuclear power training. Submarine School can precede or follow nuclear training. Neither the NNPTC nor the NPTU curriculums gain from proximity to the Fleet or the Submarine School.

There is considerable benefit in the collocation of NNPTC and NPTU, both in reducing the student training pipeline and in operating and travel costs.



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# DESCRIPTION OF THE NAVAL WEAPONS STATION CHARLESTON

- **17,221 Acres (27 Square Miles)**

- **Major Tenants**

  - Nuclear Power Training Unit (NPTU)

  - Military Traffic Management Command

  - Naval Command Control & Ocean Surveillance Center, In-Service Engineering, East Coast Division (NISE EAST)

  - Army Strategic Mobility Logistics Base (SMLB)

  - Navy Consolidated Brig

- **Facilities**

  - Extensive family housing units are available along with recreational and other quality of life support facilities, such as medical/dental services, Commissary and Naval Exchange.

- **Explosive Quantity Safety Distance (ESQD)**

  - The proposed location for the NNPTC is well clear of the ESQD arc.

- **Environment**

  - There are no environmental problems associated with the proposed NNPTC site. In fact, the few wetlands/ponds in the general area would enhance the atmosphere of the campus.



# ADVANTAGES OF NAVAL WEAPONS STATION CHARLESTON

## SAVINGS

Cost Data by Locale			
Cost Data	Charleston	New London	Orlando
One Time Costs	\$147 M	\$163 M	N/A
Annual Operating Costs	\$11.5 M	\$10.5 M	\$21.0 M
Annual Permanent Change of Station Savings	\$6.2 M	\$0	\$0
Variable Housing Allowance Rates:			
Officer (O3/0 DEPS)	\$69.43	\$215.80	\$130.17
Enlisted (E5/0 DEPS)	\$38.90	\$142.40	\$119.86
Construction Cost Factors	0.85	1.22	0.80
Cost of Living Index	98.9%	126.4%	98.2%

As illustrated above, relocating the NNPTC to Charleston vs. New London would result in savings of \$16 million in *one time* costs and continuing annual savings of at least \$5.2 million.

Continued operation at Orlando would result in the following: reversing the BRAC '93 decision and the loss of some of the savings projected from that decision; annual operating costs for a stand-alone facility of at least \$21 million vs. \$11.5 million at Charleston; continued annual PCS costs to move students from Orlando to Charleston of \$6.2 million; and imposition of constraints on the City of Orlando in the re-use of the vacated Naval Training Center complex.

At both New London and Orlando, officer students would be required to live off-base on the economy drawing Variable Housing Allowance (VHA). However, in Charleston, on-base housing will be available for both married and bachelor officers with negligible VHA costs.

### STATE SUPPORT

The State of South Carolina is highly supportive of the Navy's desire to locate the NNPTC at WPNSTA Charleston and is willing to provide whatever support it can such as assisting in negotiating new utility rates for the WPNSTA.



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## ***QUALITY OF LIFE***

The WPNSTA has a wide array of quality of life facilities such as available military housing, medical/dental support and extensive recreational facilities.

The Lowcountry area surrounding the WPNSTA has an extensive variety of year-round recreational and cultural activities for both officers and enlisted personnel.

The relatively low cost of living in the Charleston area, as indicated in the prior *cost data* section, is very advantageous to military personnel, and particularly to enlisted personnel.

Other on-base facilities and programs within the Community Center Complexes include:

- Two chapels
- Navy Exchange, Commissary and Two Mini-Marts
- Credit Union
- Dispensary
- Library
- Child Development Center
- Bowling Center
- Barber Shop
- Post Office
- Service Station
- Auto Hobby Shop
- Conference Center
- Redbank Club
- Three Snack Bars
- 18-Hole Golf Course
- Three Swimming Pools
- Tennis and Racquetball Courts
- Gymnasium and Physical Fitness Center
- Archery Range
- Outdoor Recreation/Picnic Facilities
- Boat Land and Fishing Piers
- Stables
- Theater
- SATO Leisure Travel Office
- Information Ticket and Tours Office
- Frame Shop
- Extensive Fishing and Hunting Programs
- Youth Center
- Family Service Center and Navy Relief Office

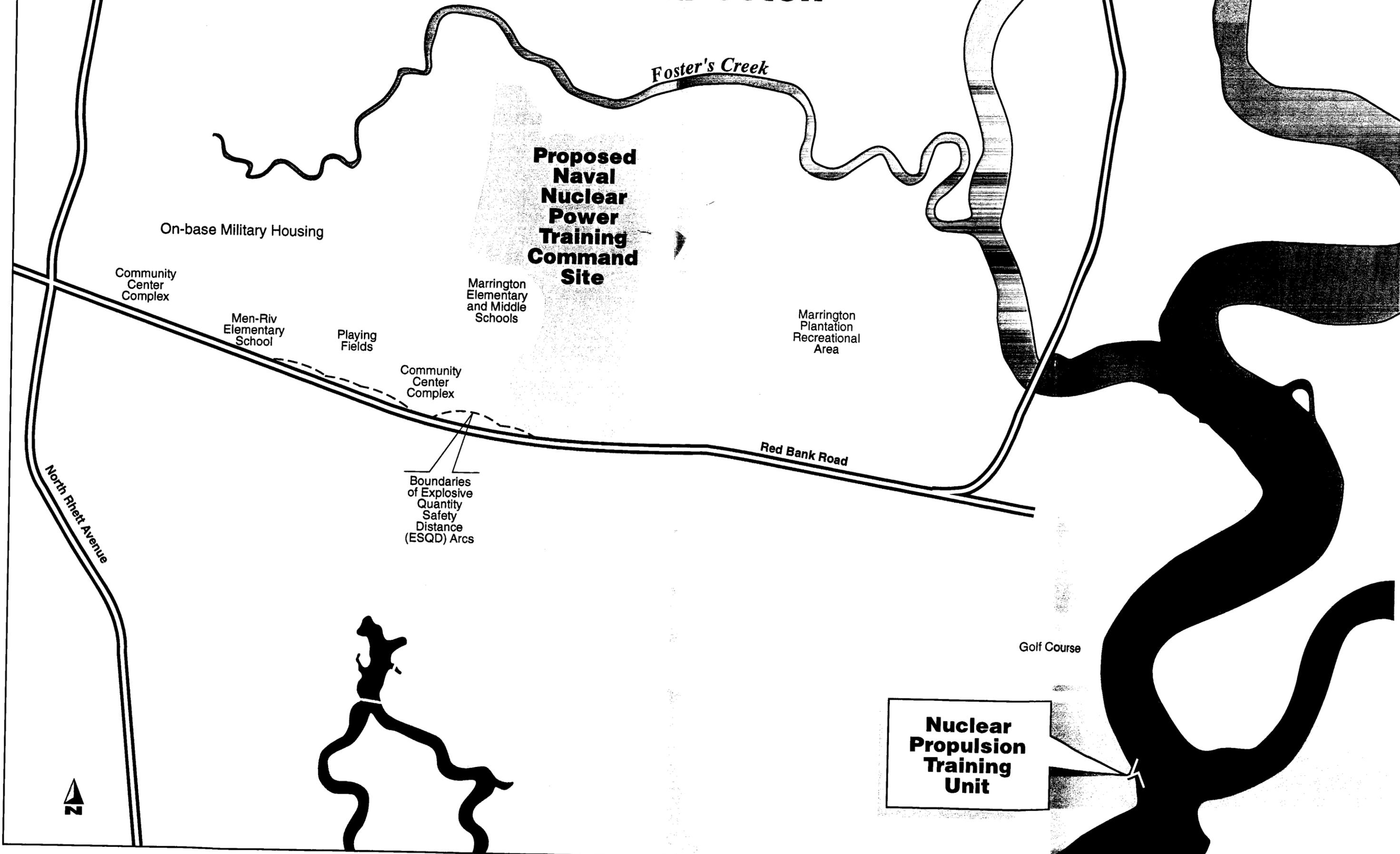


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# SITE MAP & PHOTOS



# Naval Weapons Station Charleston





*North of Redbank Road, the preferred NNPTC site sits near on-base schools, a community center and navy housing. Site has approximately 100 acres of wooded highlands, adjacent to a major thoroughfare.*



*The close proximity of the elementary school and housing (foreground) to the NNPTC proposed site would provide convenience for the students.*





*Existing NPTU Charleston uses two nuclear subs for prototype hands-on training. NPTU training follows classroom training offered through NNPTC.*



*Adjacent to NPTU is Wharf Alpha (background), which is the off-load site for the Army's Strategic Mobility Logistics Base.*





*Recently renovated, MenRiv is the largest Navy housing complex in the continental United States. The complex is comprised of 2,089 units.*



*The Commissary provides convenient shopping for on-base personnel and families.*





*Marrington Elementary School is one of three on-base public schools operated as part of the Berkeley County School system.*



*The area child care center sits next to one of two on-base chapels.*



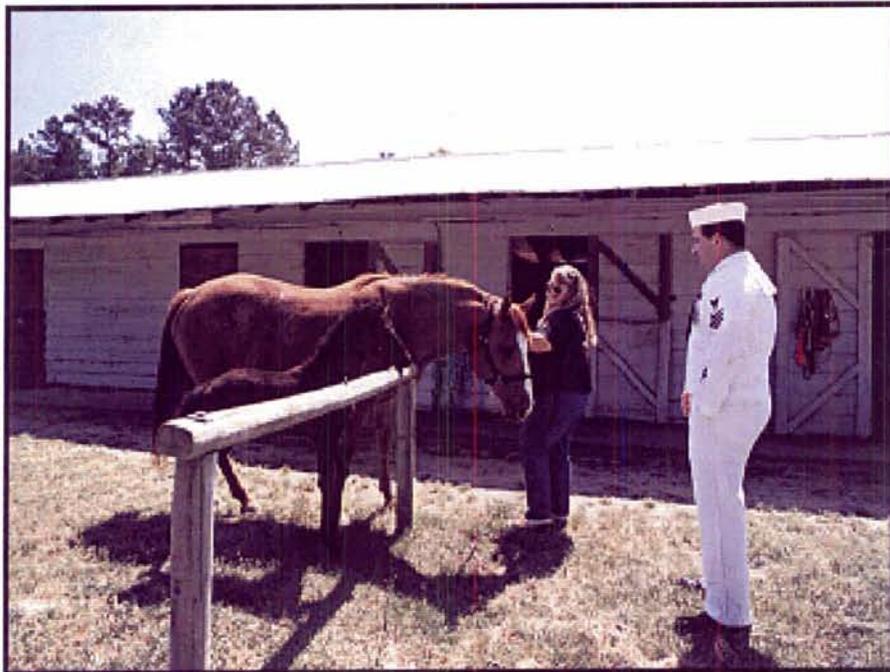


*Marrington Bowling Center is part of the on-base recreational complex. The newly renovated facility has the most modern equipment in the region.*



*Navy Exchange mini-mart is located close to the preferred NNPTC site.*





*As added features to the base, the equestrian center (above) and special fishing spots (below) provide multiple opportunities for recreation.*

