David Lyles

DCN 7

SCHEDULE

0800-0830	COMMUNITY REPRESENTATIVES
0830-0930	WORKING BREAKFAST
	LEAD OVERVIEW — COL FAIRALL DDLP OVERVIEW — LTC CARLOW
0930-1020	TOUR MISSILE ELECTRONICS BLDG (MR GOODMAN)
1020- 1110	TOUR VEHICLE SHOPS DIVISION (MR SHIVELY)
1110-1145	TOUR UNITED DEFENSE (MR SCOTT)
1145-1200	PRESS AVAILABILITY

OUTLINE

DEPOT MANAGEMENT

LETTERKENNY ARMY DEPOT

WHAT DO WE DO?

HOW ARE WE DOING

SUMMARY

LETTERKENNY ARMY DEPOT

700 acres industrial area

12,000 acres ammo storage (around ... remain gov't land)

FACILITIES
- 19430 ACRES
- 54 MILES RAILROAD
- 1863 BUILDINGS
  - 1.3M SQ FT INDUSTRIAL
  - .8M SQ FT ADMIN
- 902 AMMO IGLOOS
  - 3M SQ FT STORAGE

LARGEST EMPLOYER IN FRANKLIN COUNTY

ENVIRONMENTAL
- 2 SUPERFUND SITES
- $43.2M SPENT THRU FY94
- EST $500M THRU COMPLETION

in 2015-2020

$25M IN INFRASTRUCTURE MAINTENANCE IN LAST SEVEN YEARS

MISSIONS

RECENTLY DESIGNATED A NATIONAL PERFORMANCE REVIEW LABORATORY

AMMUNITION
- RECEIPT/STORE/ISSUE
- DEMIL

MAINTENANCE
- DOD TAC MSL
- ARTILLERY

BASEOPS
- FULL SERVICE TO MISSION AND TENANTS

902 igloos
- permit for open burning/open detonation

FY 93 BRAC

FY 95 BRAC

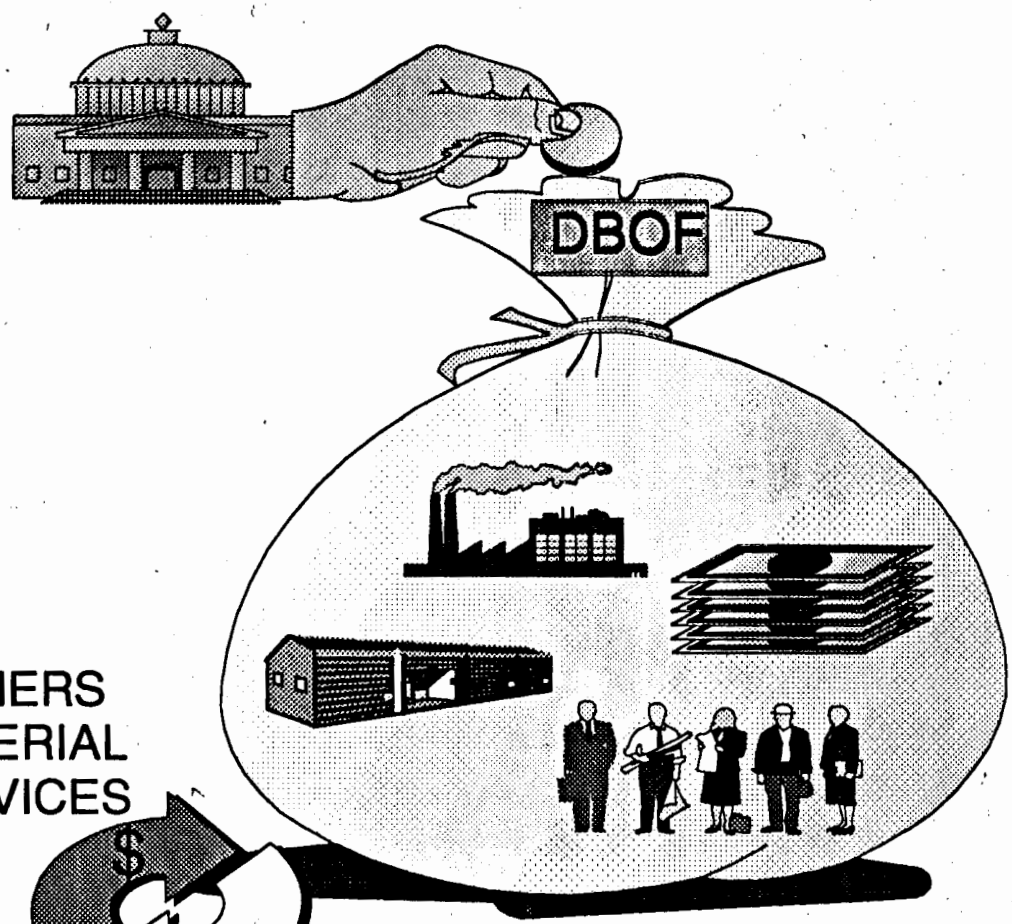
LETTERKENNY ARMY DEPOT

DEPOT	
• MAINTENANCE	- 1333
• AMMUNITION	- 166
• BASOPS	- 636
• TOTAL	- 2135

TENANTS		
• HQ U.S. ARMY DEPOT SYSTEM COMMAND	- 335	already going to Rock Island
• SYSTEMS INTEGRATION & MANAGE MENT ACTIVITY	- 198	
• U.S. ARMY LOGISTICS SUPPORT ACTIVITY	- 129	
• U.S. ARMY TMDE	- 55	
• DEFENSE LOGISTICS AGENCY	- 450	– depot
• DEFENSE MEGA CENTER	- 149	
• DEFENSE FINANCE & ACCOUNTING SERVICE	- 72	– would go away anyway
• OTHERS	- 95	
• TOTAL	- 1483	

Not many tenants to take care of

DEFENSE BUSINESS OPERATING FUND

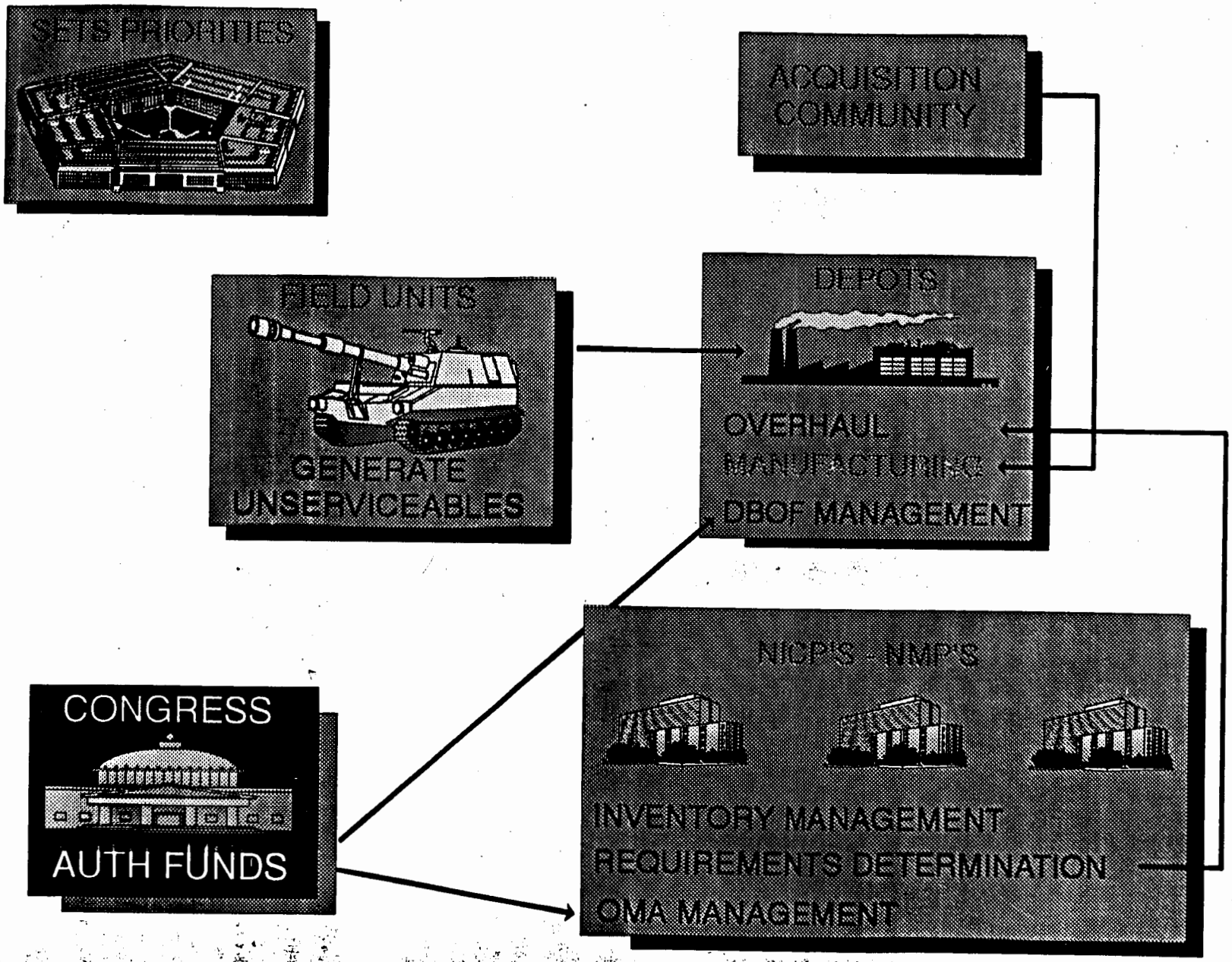


CUSTOMERS BUY MATERIAL AND SERVICES

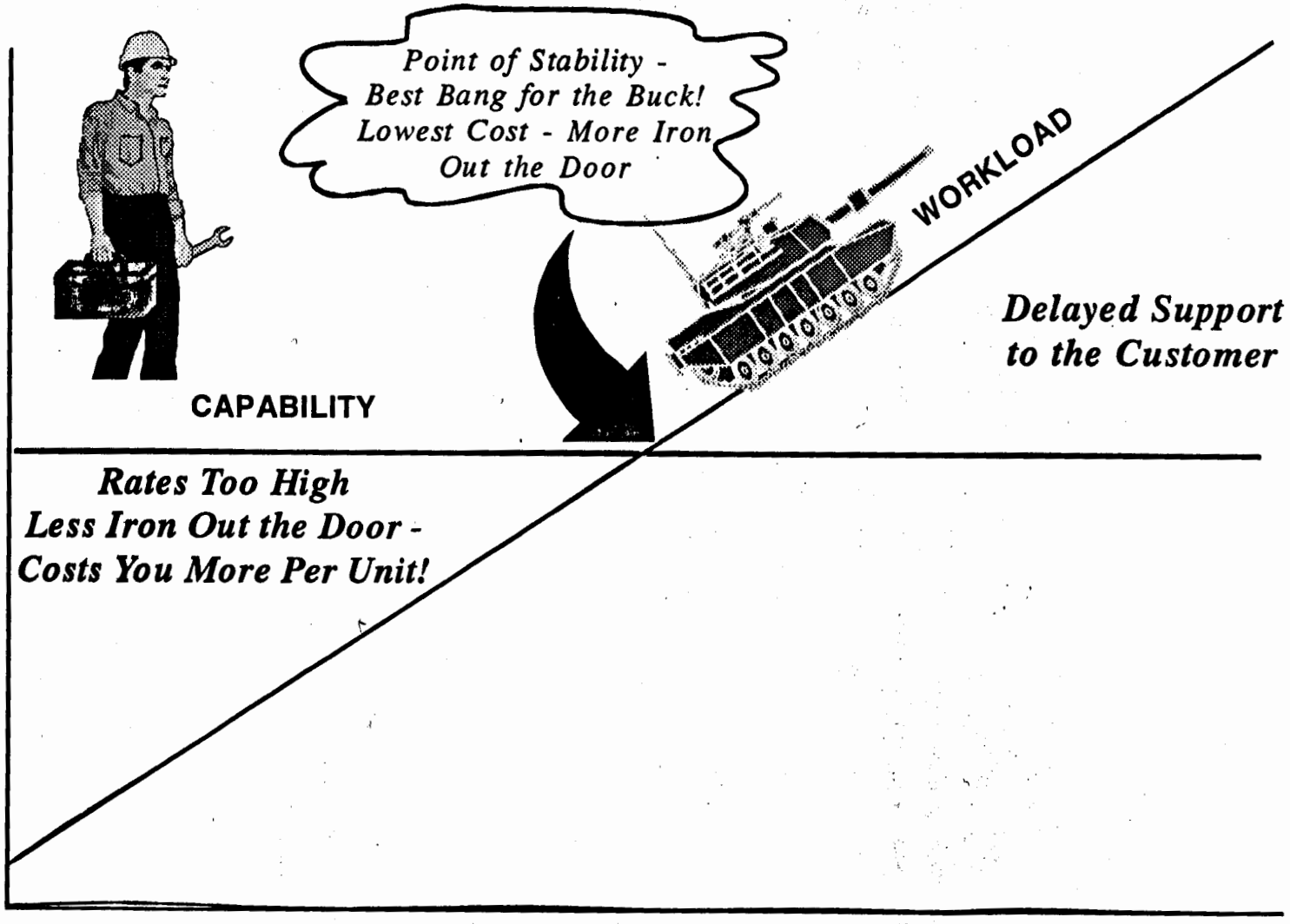
DEPOT DELIVERS

THE DBOF TURNS A DEPOT INTO A BUSINESS!

DEPOT WORKLOADING



CAPABILITY vs WORKLOAD



LETTERKENNY ARMY DEPOT
FIFTY THREE YEARS OF HISTORY

1940'S 1950'S 1960'S 1970'S 1980'S 1990'S

SECRETARY OF WAR AUTHORIZES ACQUISITION OF LAND

AMMUNITION MISSION

WWII SUPPORT

KOREA SUPPORT

MAINTENANCE MISSION

TANKS & ARTILLERY

VIET NAM SUPPORT

WHEEL VEHICLES

MISSILES

OPERATION JUST CAUSE SUPPORT

TENANTS

DESERT STORM SUPPORT

BRAC!

LEAD BRAC HISTORY

DMRD 908

CONSOLIDATE DOD TACTICAL MISSILES AT LETTERKENNY

SEP 1990

$7M IN INFRASTRUCTURE IMPROVEMENTS TO ACCOMMODATE BRAC 88

DLA - keeping staff coming to LEAD

CONSOLIDATE DOD TACTICAL MISSILES AT LETTERKENNY

DEFENSE DEPOT MAINTENANCE COUNCIL CORPORATE BUSINESS PLAN

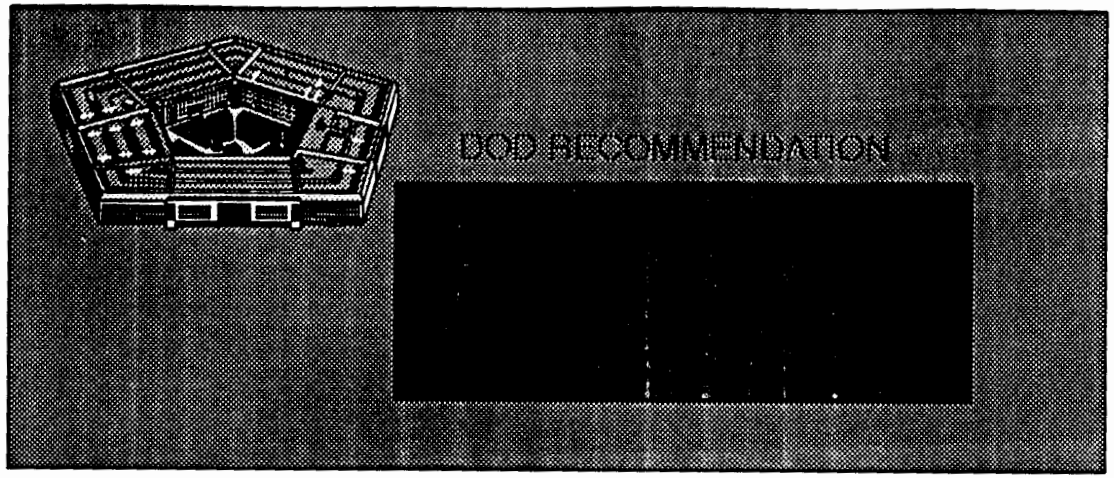
MAY 1991

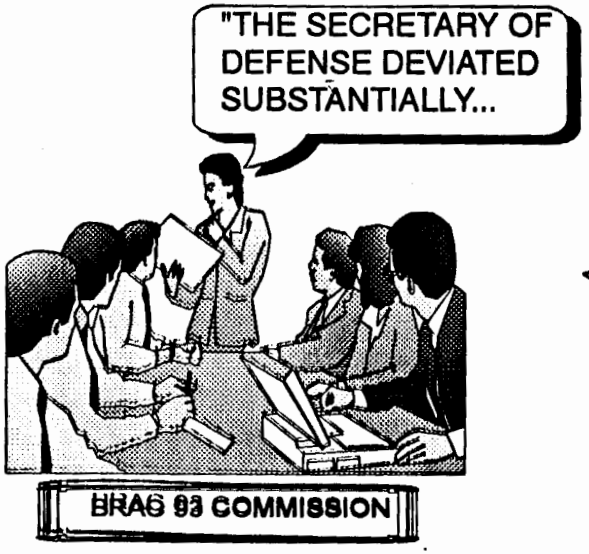
- ANNISTON INJUNCTION (OCT 92)
- BIRMINGHAM COURT DECISION (DEC 92)
- OSD DIRECTION TO CEASE ACTION (DEC 92)

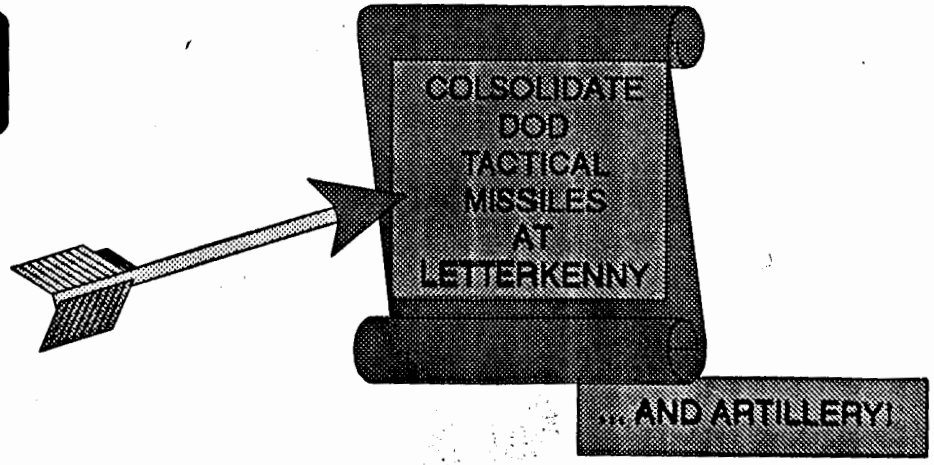
delay led to unused capability and increased costs

BRAC 93...

BRAC 93

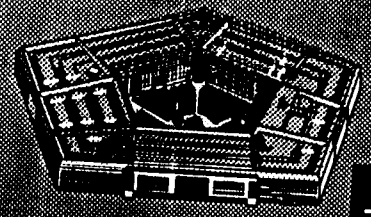






BRAC 95...

BRAC 95



DOD RECOMMENDATION

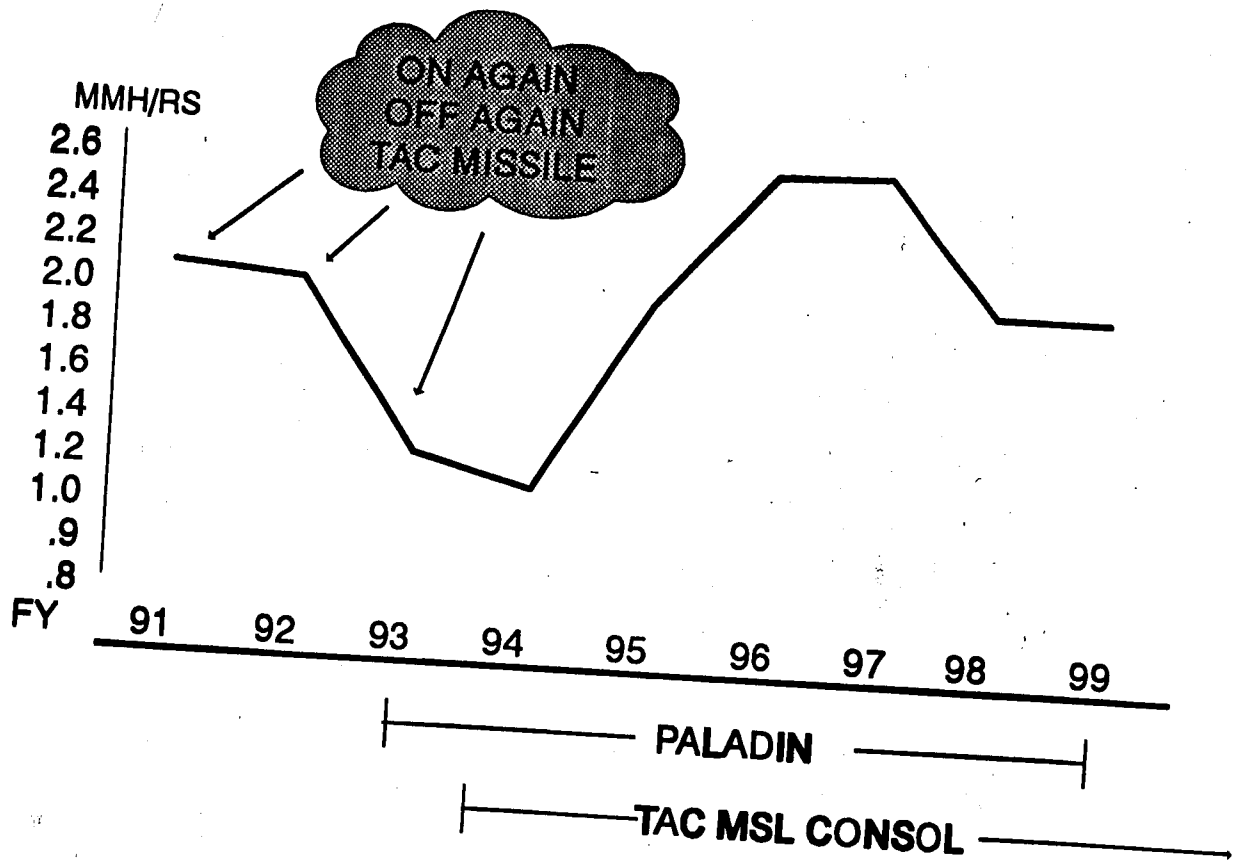
- MISSILES TO TOBYHANNA
- ARTILLERY TO ANNISTON
- REALIGN LETTERKENNY FOR AMMUNITION ONLY

CONSOLIDATE MISSILES AT TOBYHANNA

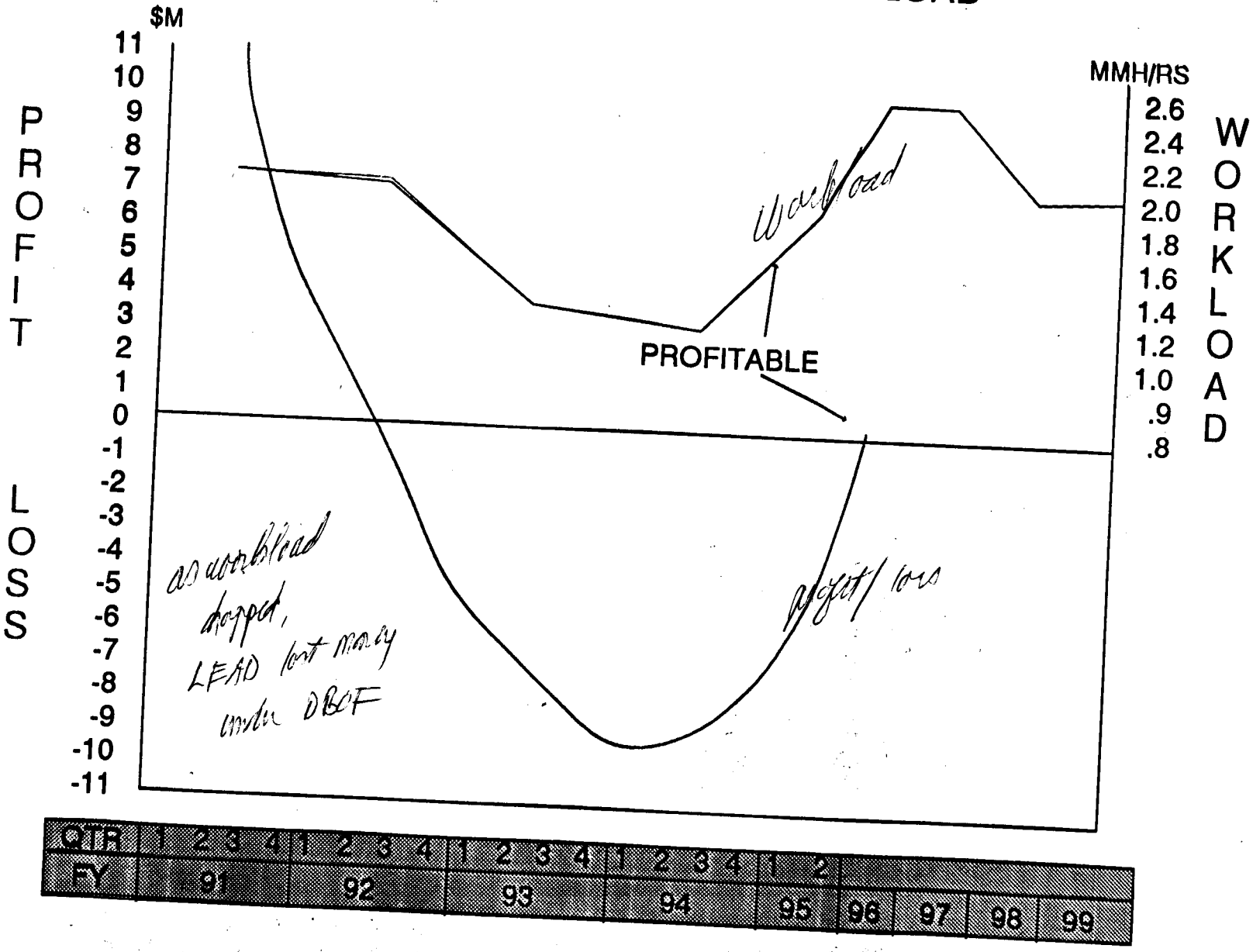
BRAC 95 RECOMMENDATION SAME AS BRAC 93...

...EXCEPT INTERSERVICING MISSILES NOW MORE IMPORTANT

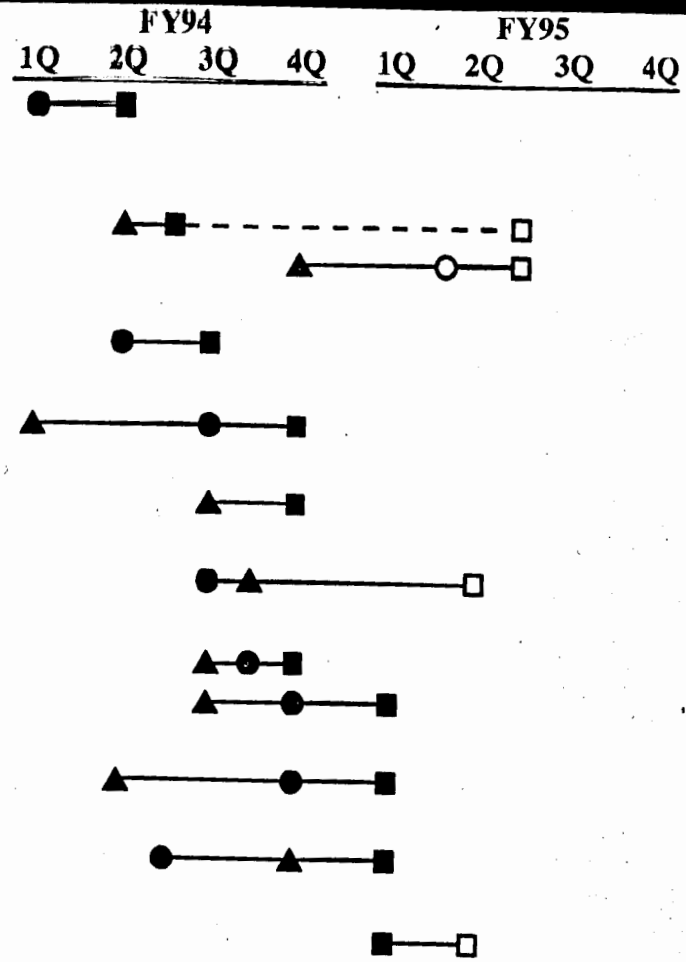
LEAD WORKLOAD



LEAD PROFIT AND LOSS VS WORKLOAD



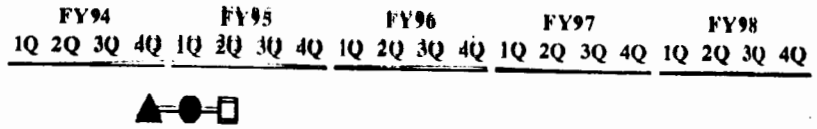
LEAD TACTICAL MISSILE CONSOLIDATION



	FY99 MNHR (K)	FY99 $ (K)
Avenger/ATAS	82	5,833
MLRS Electronic / Elec/Mech	85	6,044
ATACMS	11	782
Sparrow	31	2,204
Hellfire	9	640
HARM PSE		
Dragon Ph 1 / Dragon Ph 2	15	1,066
Phoenix	13	924
TOW BFVS	36	2,560
HAWK Ph 1		

△- Training ○- Equipment □- FAT/Production △○□- In process ▲●■- Completed As of 22 Mar 95

LEAD TACTICAL MISSILE CONSOLIDATION



	FY99 MNHR (K)	FY99 $ (K)
Sidewinder (N)	95	6,755
TOW Cobra	39	2,773
TOW 2	72	5,191
HAWK Ph 2	92	6,541
Sidewinder (AF)		
Maverick	46	3,270
PATRIOT (CTR)	7	498
LCSS	18	1,280
Shillelagh	8	569
AMRAAM	54	3,838
HARM (GS)	47	3,341
Total	760	54,109

△ - Training ○ - Equipment □ - FAT/Production △○□ - In process ▲●■ - Completed As of 22 Mar 95

OVER 100 LEAD TECHNICIANS TRAINED

$100M OF EQUIPMENT MOVED FROM OVER 8 LOCATIONS

72 TECHNICIANS HIRED FROM ORIGINAL SOURCE OF REPAIR

PROJECT	COST
CONSTRUCTION	4.9
RELOCATIONS	
PEOPLE	4.0
EQUIPMENT	6.1
TRAINING	7.5
PROCUREMENT	4.1
	26.6
CONSTRUCTION	2.6
RELOCATIONS	
PEOPLE	5.3
EQUIPMENT	2.1
TRAINING	4.7
PROCUREMENT	.6
	15.3
	41.9

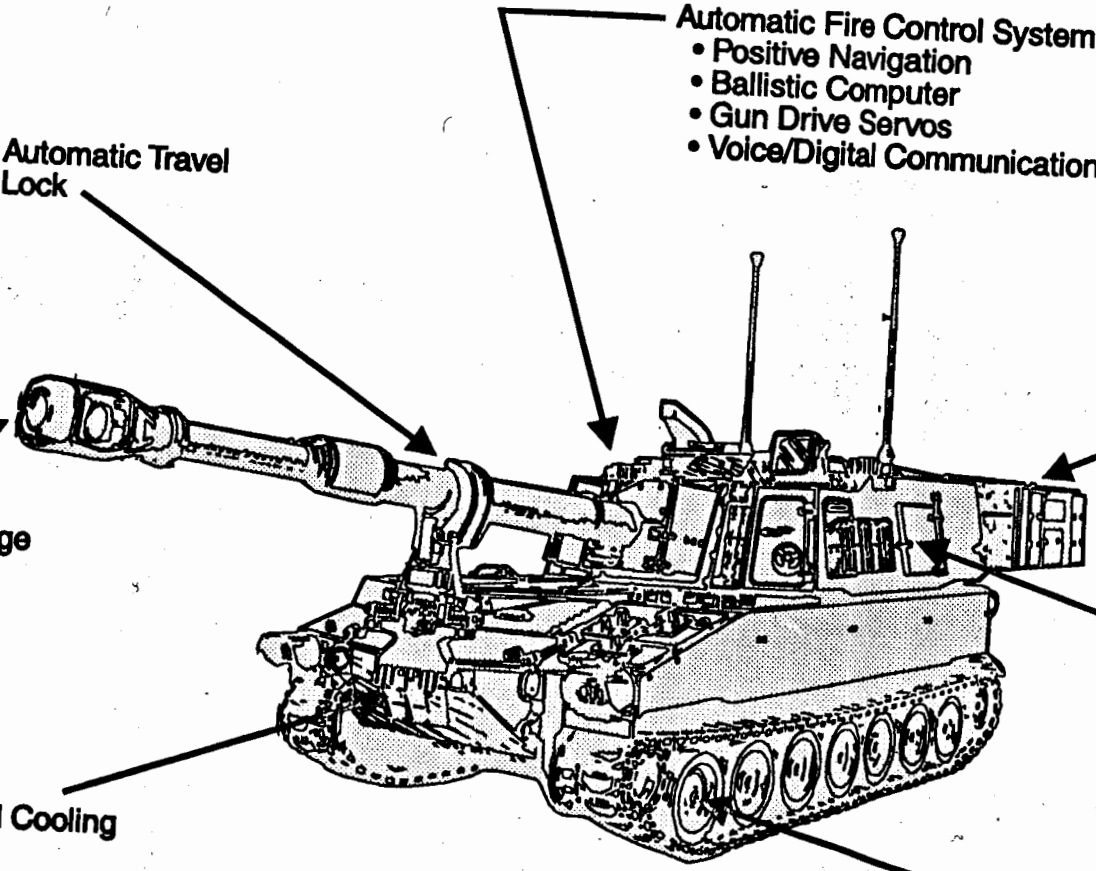
already obligated or spent

not obligated yet

15

Paladin Enterprise

Paladin Upgrade



Paladin Enterprise

United Defense
FMC/BMY

Production Schedule

Schedule	1994			1995												1996											
	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Enterprise	1	2	4	5	5	6	6	6	8	8	9	10	10	11	12	13	15	15	16	17	17	17	17	17	18	18	18
Contract			1	2	4	5	5	6	6	6	8	8	9	10	10	11	12	13	15	15	16	17	17	17	17	17	18
Completed	1	2	4	5	5																						

Schedule	1997												1998											
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Enterprise	18	18	18	18	18	18	16	18	18	18	18	18	18	18	18	18	18	18	18	17				
Contract	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	17		
Completed																								

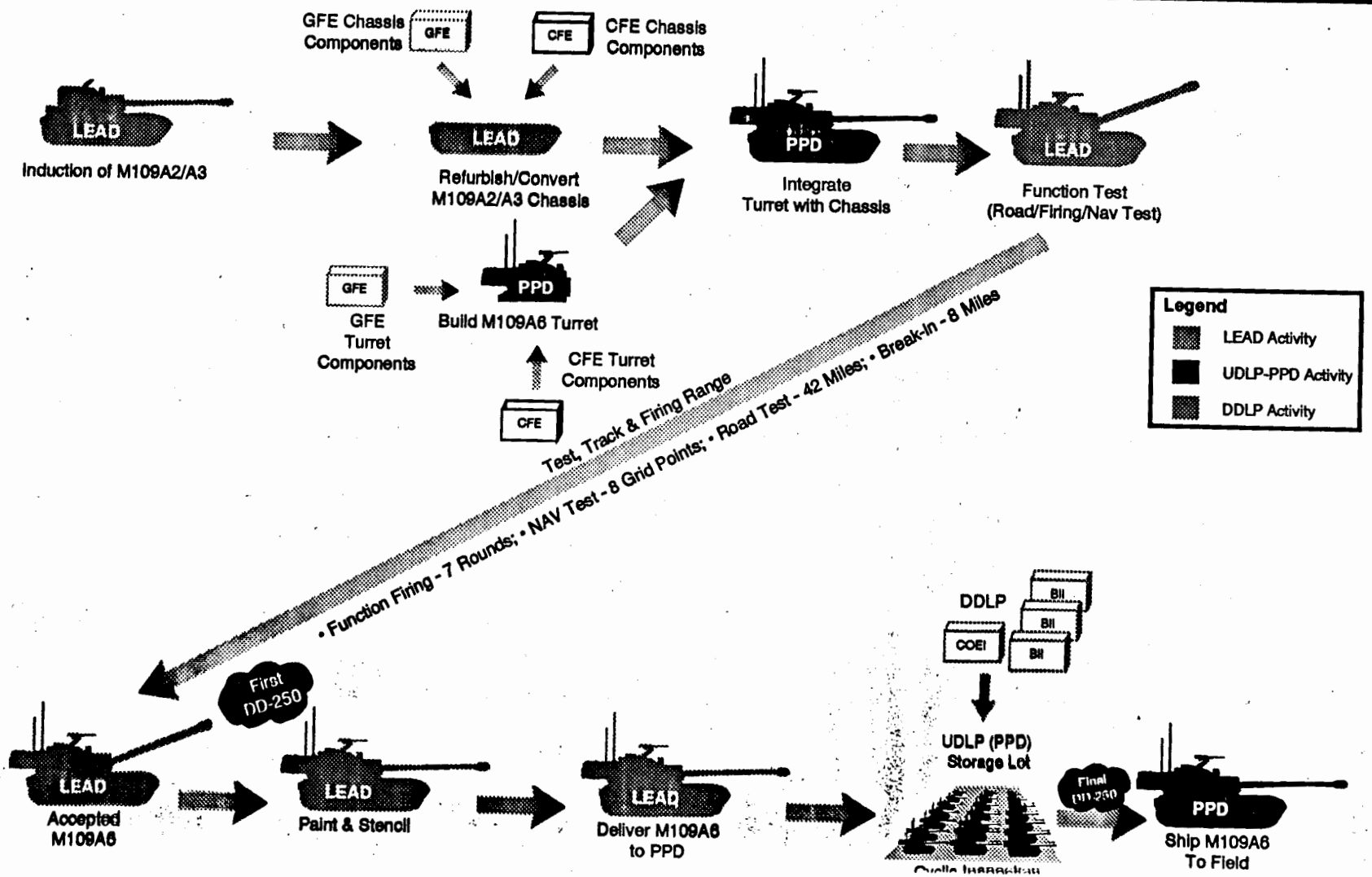
Low Rate Production Dec 91 thru Sep 94 (1-164)
Full Rate Production Oct 94 thru Aug 98 (165-824)

As of 28 Feb 95

How would Palladin production be affected by BRAC proposal

17

Product Manager
PALADIN/FAASV
Paladin Full Rate Production Sequence



CAPACITY & UTILIZATION CALCULATIONS

CAPACITY UTILIZATION

DOD RULES FOR MAINT DEPOTS ONLY

ANNUAL MANHOURS OF WORKLOAD

[WORK POSITIONS] [95% AVAIL] [TOTAL POSSIBLE HOURS OF WORK PER DIRECT LABORER]

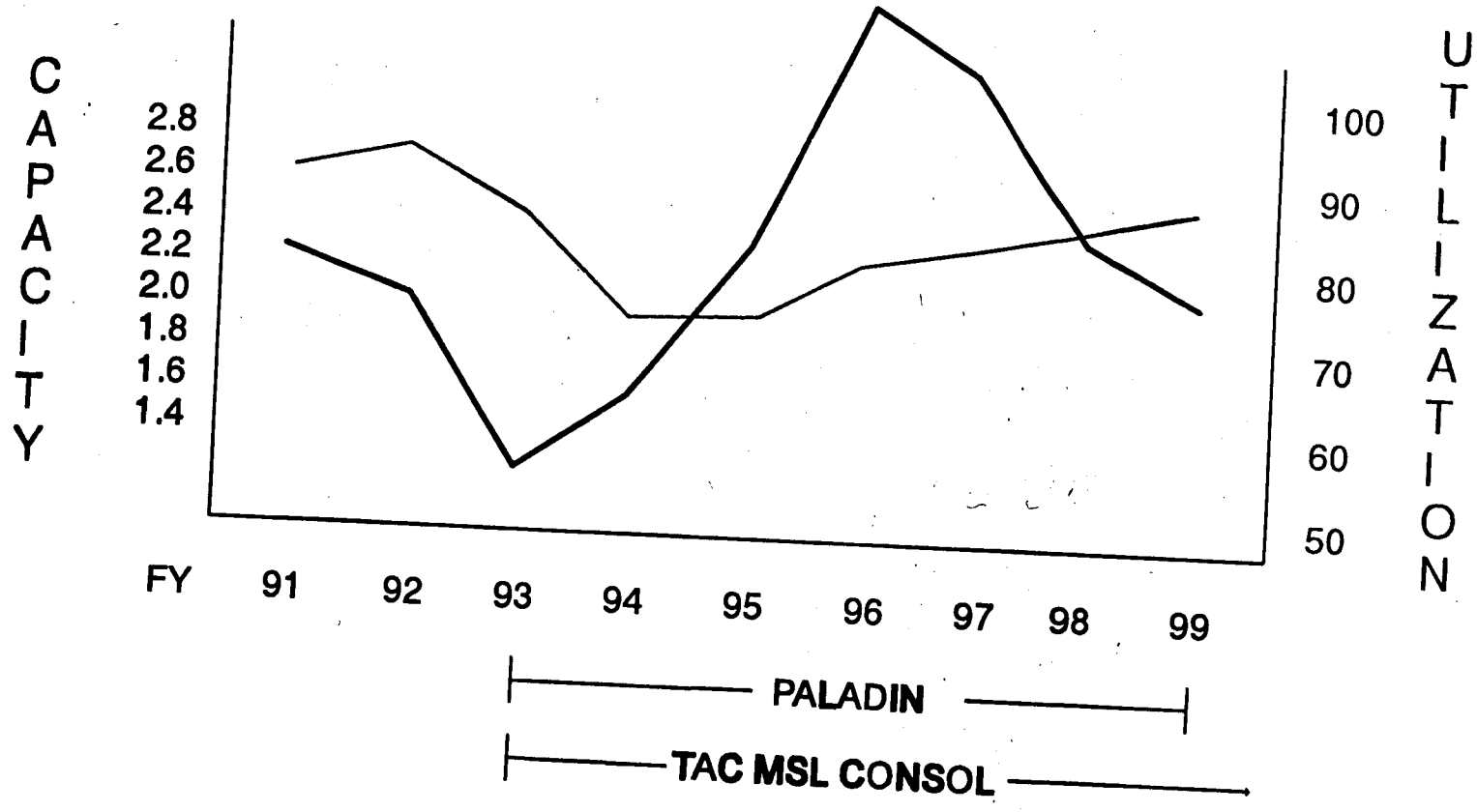
DENOMINATOR = CAPACITY

CAUSES ENTIRE ANALYSIS TO BE WEAPON SYSTEM UNIQUE

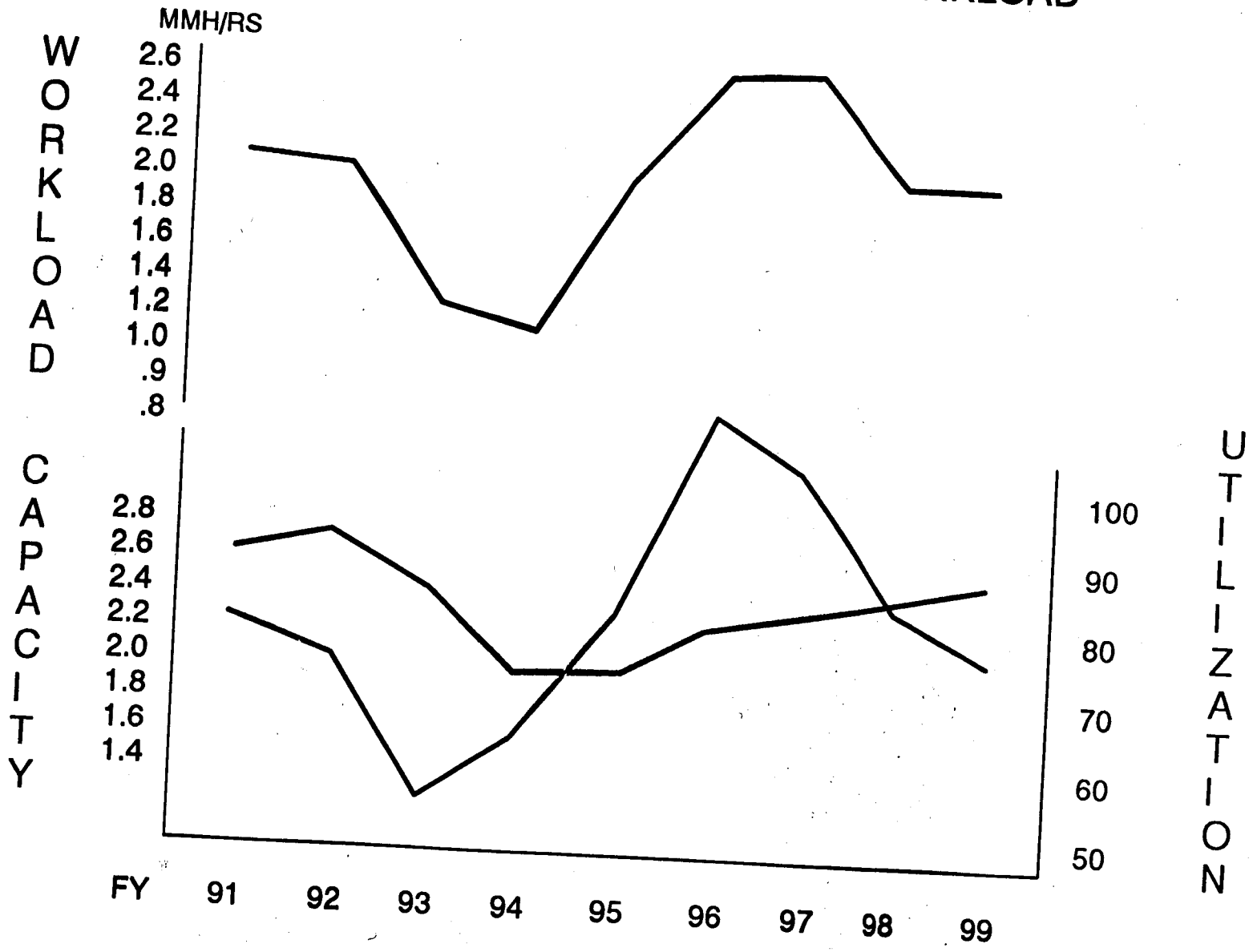
FIXED AT 1615 HOURS

No square footage taken into consideration

LEAD CAPACITY VS UTILIZATION



LEAD CAPACITY & UTILIZATION VS WORKLOAD



COSTS VS RATES: TWO METHODS

BASEOPS / MISSION OVERHEAD RATES =

TOTAL COSTS

[WORK POSITIONS] | 96% AVAIL | TOTAL POSSIBLE HOURS OF WORK PER DIRECT LABORER

DENOMINATOR = CAPACITY

IBOE RATE = IBOE COSTS / CAPACITY

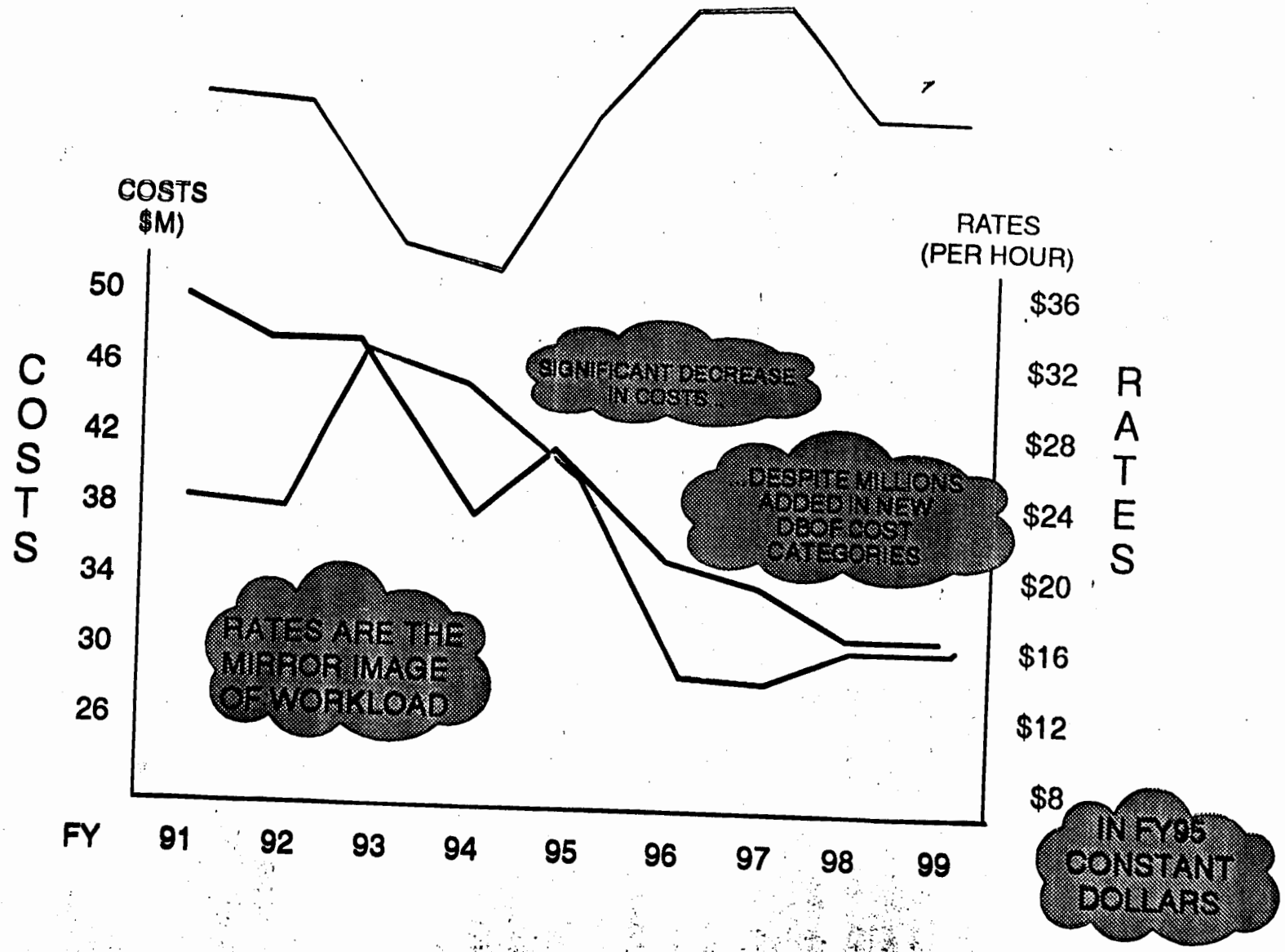
MOH RATE = MOH COSTS / CAPACITY

BRAC ANALYSIS

ACTUAL COSTS

RATES = COSTS / WORKLOAD

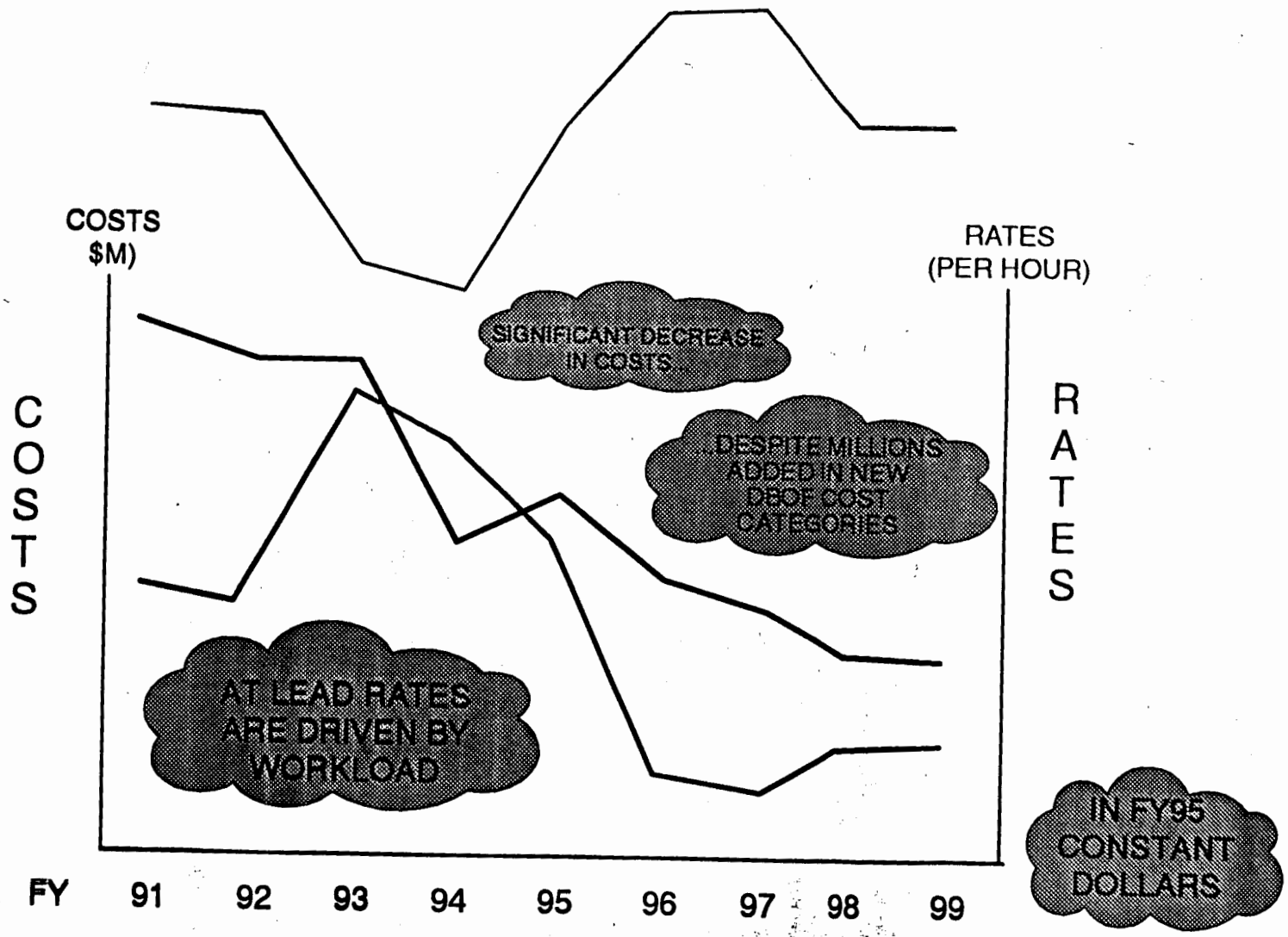
IBOE COSTS VS RATES VS WORKLOAD



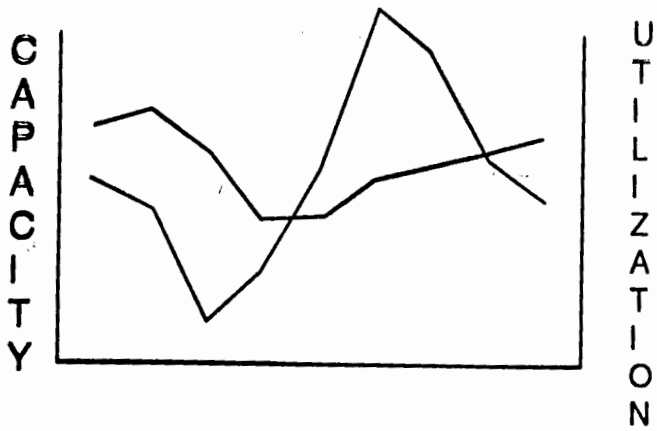
Mission overhead

things look good when business growing

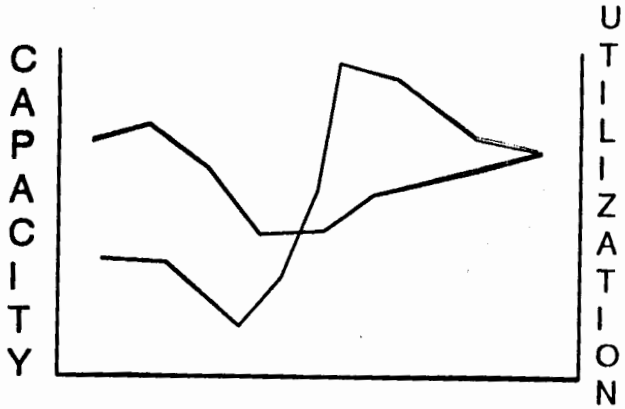
MOH COSTS VS RATES VS WORKLOAD



FUTURE PLANNING



CAUSED BY PALADIN REDUCTION BY FY99



BY REPLACING PALADIN WITH OTHER PRODUCT LINES...

WE'VE ALREADY STARTED PLANNING

BRAC 93 HAS SOME SHORTCOMINGS

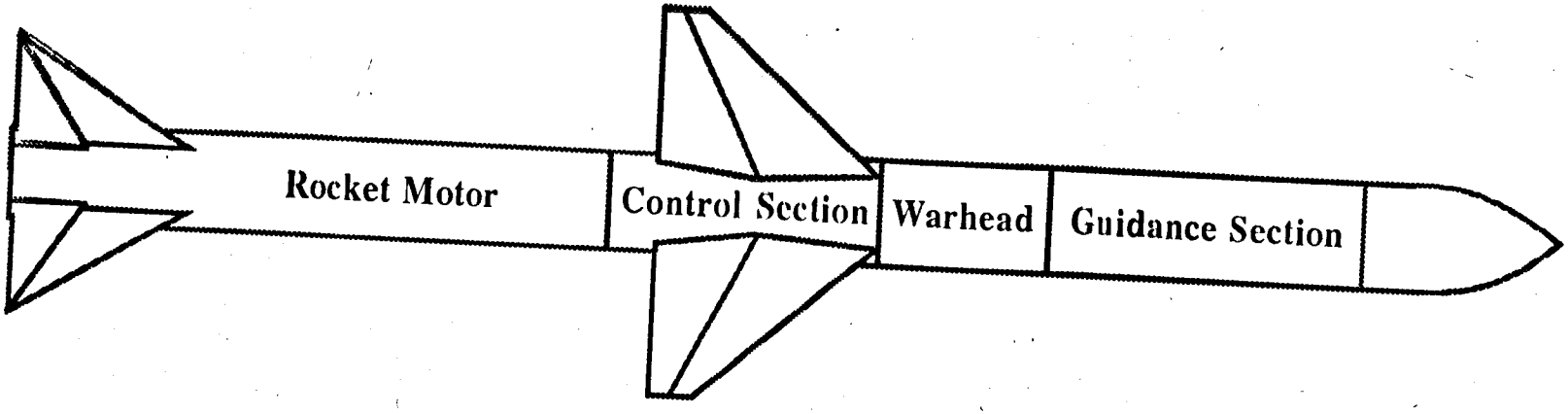
BRAC 93 does:

- Identify selected systems for consolidation

BRAC 93 does not:

- Consolidate all future DOD missile systems to LEAD
- Expand all-up-round/and certification capability
- Provide a one-stop service for DOD customers

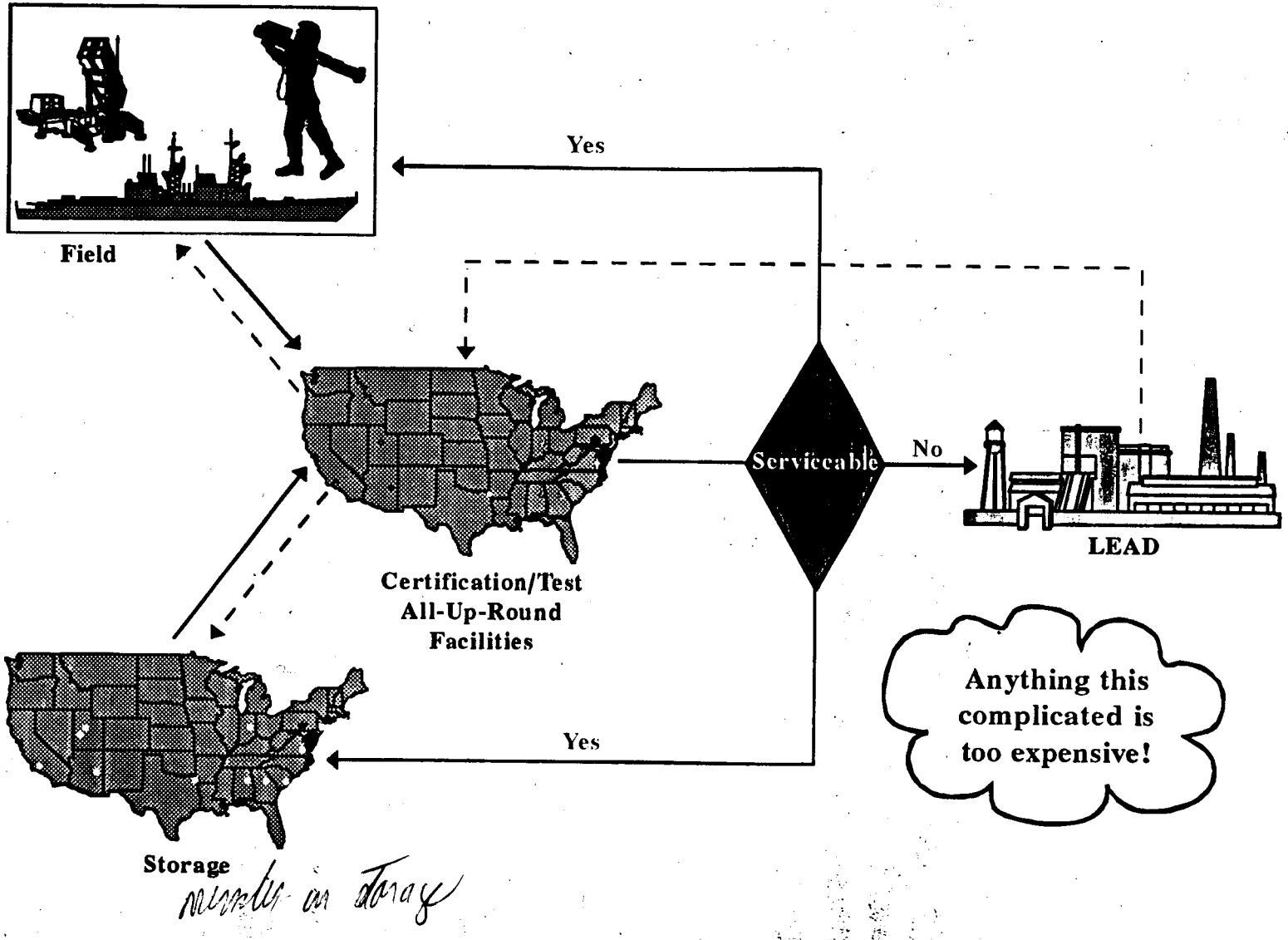
MISSILE CERTIFICATION/SURVEILLANCE



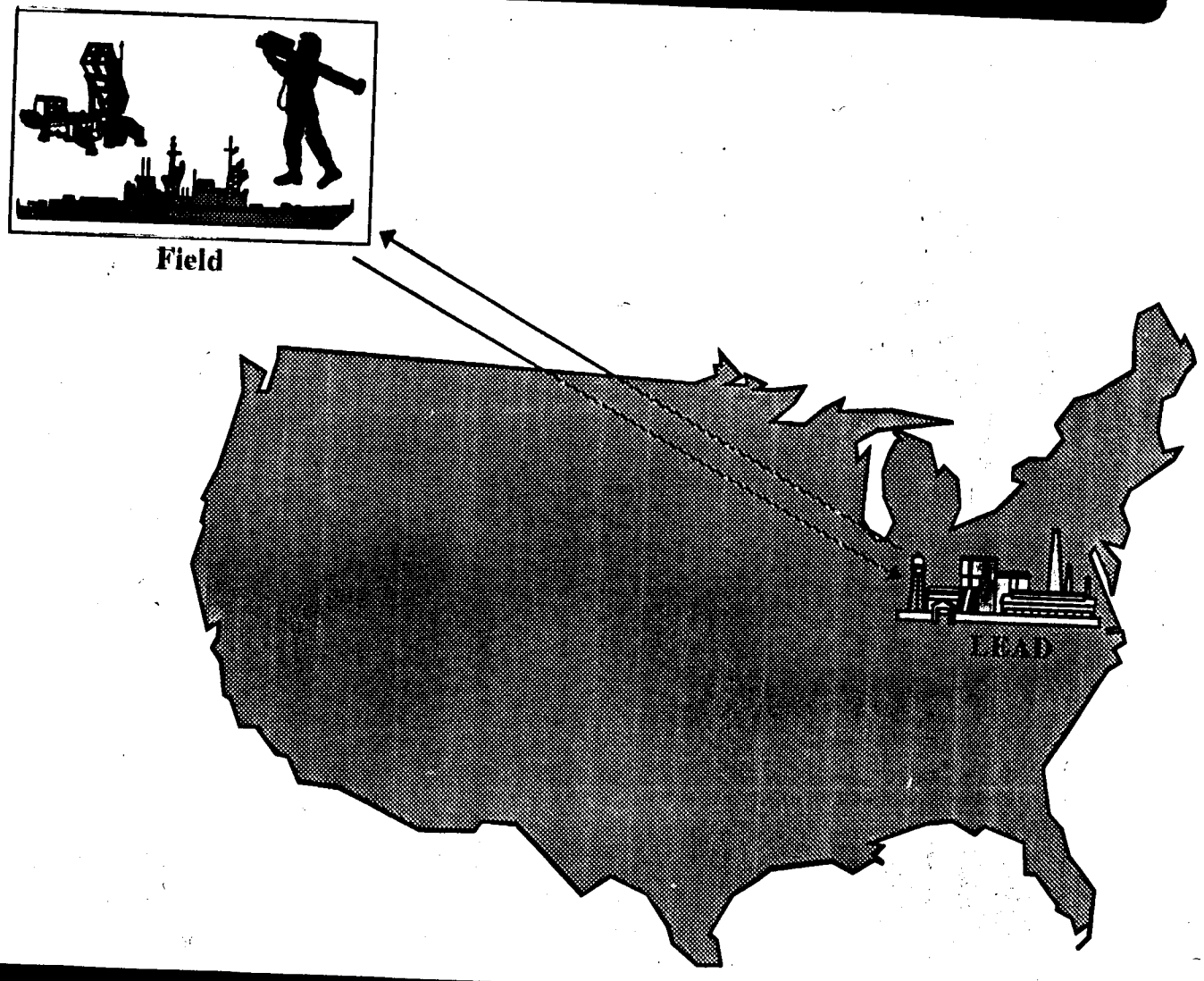
All-
Up-Round

BRAC 93
LEAD repairs
workload for
green book
missiles

TACTICAL MISSILE CURRENT OPERATIONS

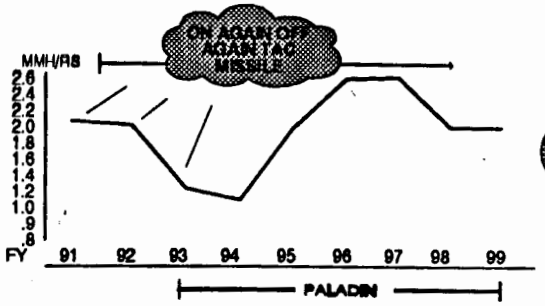


ONE-STOP SERVICE CONCEPT



Storage + Up-Round + Repair + Demil = One-Stop Service

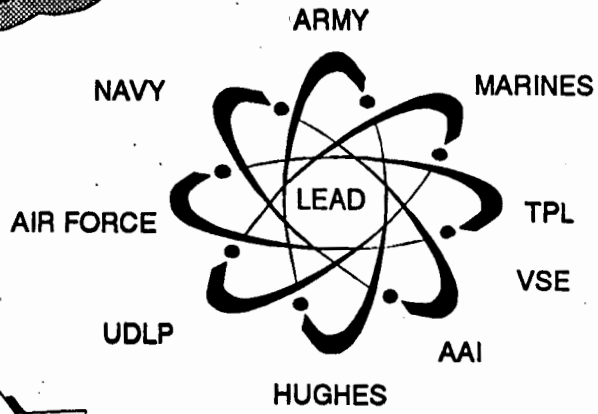
SUMMARY



WORKLOAD AND TIMING DRIVE EVERYTHING

CUSTOMER SUPPORT

LETTERKENNY IS A WORLD CLASS INDUSTRIAL FACILITY



ONE STOP MISSILE AND ARTILLERY SHOPPING

TEAMING

LEAD IS ALREADY POSTURED TO SUPPORT ALL KNOWN FUTURE MISSILE SYSTEMS

DRAFT

DEFENSE BASE CLOSURE AND REALIGNMENT COMMISSION

STAFF VISIT REPORT

LETTERKENNY ARMY DEPOT

CHAMBERSBURG, PA.

18 MAY 1995

COMMISSION STAFF:

Mr. Glenn Knoepfle, Cross Service Team

LIST OF ATTENDEES:

Ms. Hallie Bunk, Chief BRAC Office, Letterkenny
Mr. Ed Averill, Chief, Ammo Directorate, Letterkenny
Mr. James (Bill) Bunn, CTX PM Army TACMS, Letterkenny Tactical Misssile Center
Mr. Bill Stone, Consultant employed by LSA

BASE'S PRESENT MISSION:

- Letterkenny's maintenance depot overhauls tactical missiles, artillery systems, and other support equipment to like-new condition for far less than the cost of buying new items. Entire systems are repaired, modified, and integrated.
- Under a teaming effort, United Defense has collocated on-site to work with depot personnel to modify M109 Howitzers into the Paladin configuration.
- The depot's Directorate of Ammunition Operations stores, ships, and demilitarizes ammunition; and maintains and up-rounds missiles.
- Letterkenny supports more than 15 tenants, including a DLA distribution depot and DISA megacenter.

DOD RECOMMENDATION

- Realign Letterkenny Army Depot by transferring the towed and self-propelled combat vehicle mission to Anniston Army Depot.
- Retain an enclave for conventional ammunition storage and tactical missile disassembly and storage.

- Change the 1993 Commission's decision regarding the consolidating of tactical missile maintenance at Letterkenny by transferring missile guidance workload to Tobyhanna Army Depot.

DOD JUSTIFICATION: Letterkenny Army Depot is one of the Army's five maintenance depots and one of three ground vehicle maintenance depots. Over time, each of the ground maintenance facilities has become increasingly specialized. Anniston performs heavy combat vehicle maintenance and repair. Red River performs similar work on infantry fighting vehicles. Letterkenny Army Depot is responsible for towed and self-propelled artillery as well as DoD tactical missile repair. Like a number of other Army depots, Letterkenny receives, stores, and ships all types of ammunition items. A review of long range operational requirements supports a reduction of Army depots, specifically the consolidation of ground combat workload at a single depot.

The ground vehicle maintenance capacity of the three depots currently exceeds programmed work requirements by the equivalent of one or two depots. The heavy combat vehicle mission from Anniston cannot be absorbed at Letterkenny without major construction and facility renovations. Available maintenance capacity at Anniston and Tobyhanna makes the realignment of Letterkenny the most logical in terms of military value and cost effectiveness. Closure of Letterkenny is supported by the Joint Cross-Service Group for Depot Maintenance. The Army's recommendation to transfer missile workload to Tobyhanna Army Depot preserves Letterkenny's missile disassembly and storage mission. It capitalizes on Tobyhanna's electronics focus and retains DoD missile system repair at a single Army depot.

MAIN FACILITIES REVIEWED:

Ammunition Management Office
ATACMS and Sidewinder Uprounding Facility, Tactical Missile storage area
Strategic Business Office / BRAC Implementation Office

KEY ISSUES IDENTIFIED

Uprounding facilities

The facility that the Army currently uses for uprounding of ATAMS missiles was built in the mid 70's for support of the Nike / Hercules missile. The ATACMS uprounding mission transferred to Letterkenny from Anniston in 1993. The building is approximately 25,000 square feet. The missile enters one end of the building, passes thru several different work stations and exits on the other end. Overhead 5-ton cranes pass the uploaded missile from station to station. The building requires ceilings to be at least 12 feet high to enable movement and lifting of the munitions. The building is humidity and temperature controlled. Six personnel are assigned to this work.

Staff also toured the Sidewinder uprounding building which the Army uses for uprounding of Air Force owned missiles. The upcoming June 1 base visit to Letterkenny will begin at this location. The Army plans to demonstrate to the Commissioners HARM, SPARROW and SIDEWINDER uprounding procedures.

The Letterkenny ammunition directorate currently employs 169 personnel, compared to an authorization of 179. Of this total, 48 personnel are involved in missile disassembly, storage, testing, and uprounding.

Letterkenny's ammunition directorate has 902 igloos, of which 122 are currently used for storage of tactical missiles and component parts. About half of the igloos may be needed for storage of tactical missile systems by fiscal year 1999. The Army is currently trying to validate the projected fiscal year 1999 storage requirement for tactical missiles at Letterkenny. Preliminary numbers are estimated at about 1,000,000 square feet.

I asked the Letterkenny personnel what 490 personnel would be doing post BRAC 95, assuming DOD's recommendation to realign Letterkenny is approved. Letterkenny personnel replied that they anticipate an increase in the missile disassembly and uprouding missile workload mission. Specifically, they expect to receive expanded responsibility for Patriot, Hawk, Maverick, Hellfire, AMMRAM, and TOW missile systems. Under DOD's proposal, Letterkenny personnel believe they will eventually disassemble and assemble all of these systems. Failed guidance and control sections will be sent to Tobyhanna for depot-level repairs, and then returned to Letterkenny for assembly, uprounding and possibly storage.

The Army is currently trying to validate the projected fiscal year 1999 storage requirement for tactical missiles at Letterkenny. Preliminary numbers are estimated at about 1,000,000 square feet.

Letterkenny Personnel and Tactical Missile Consolidation Savings

The Letterkenny BRAC office provided a chart indicating the depot expects to be assigned 1205 direct labor man years by FY 1999 -- 543 man years for Patriot and Hawk work which Letterkenny performed prior to BRAC 93, 431 man years for depot repairs of tactical missile systems resulting from the BRAC 93 consolidation effort, 27 man years for the Paladin partnership program which is due for completion in October 1998, and 204 man years for projected combat vehicle workload. Briefing chart is attached. The Letterkenny BRAC also provided a Tactical Missile Consolidation spreadsheet showing the quarterly man year break-out for fiscal years 1994 thru 1999. Copy is attached.

According to the Letterkenny officials, the savings estimates to be generated from completion of the tactical missile consolidation have not been updated recently. The most recent savings estimate was developed in 1992 and predeicted recurring annual savings of $32 million.

COMMUNITY CONCERNS RAISED:

LEAD Coalition members plan to present the Commission with briefing materials which take issue with the Army's COBRA for closing Tobyhanna and transferring electronics work to Letterkenny. The proposal to incorporate Tobyhanna's mission within Letterkenny's

infrastructure assumes that DLA would be willing to vacate several warehouses currently being used by the DLA. It is not certain that DLA would want to dispose of these buildings.

Glenn Knoepfle/Cross Service Team

LETTERKENNY ARMY DEPOT
Storage Posture
for
AUR/MISSILE COMPONENTS

SPARROW	-	79,168 square feet
ATACMS (Micom)	-	77,292 square feet
HARM	-	43,073 square feet
PHOENIX	-	17,259 square feet
SIDEWINDER	-	30,530 square feet
MAVERICK	-	4,354 square feet
AMMRAM	-	15,029 square feet
SHRIKE	-	79,439 square feet (Air Force)
SHRIKE	-	4,727 square feet (Navy)

350,871 Total square feet occupied

110 g Lao

OPTIONAL FORM 99 (7-90)

FAX TRANSMITTAL # of pages ▶ 1

To John Gray | From Melinda Hollar
Dept./Agency DRM | Phone # 9687
Fax # 8253 | Fax # 9299

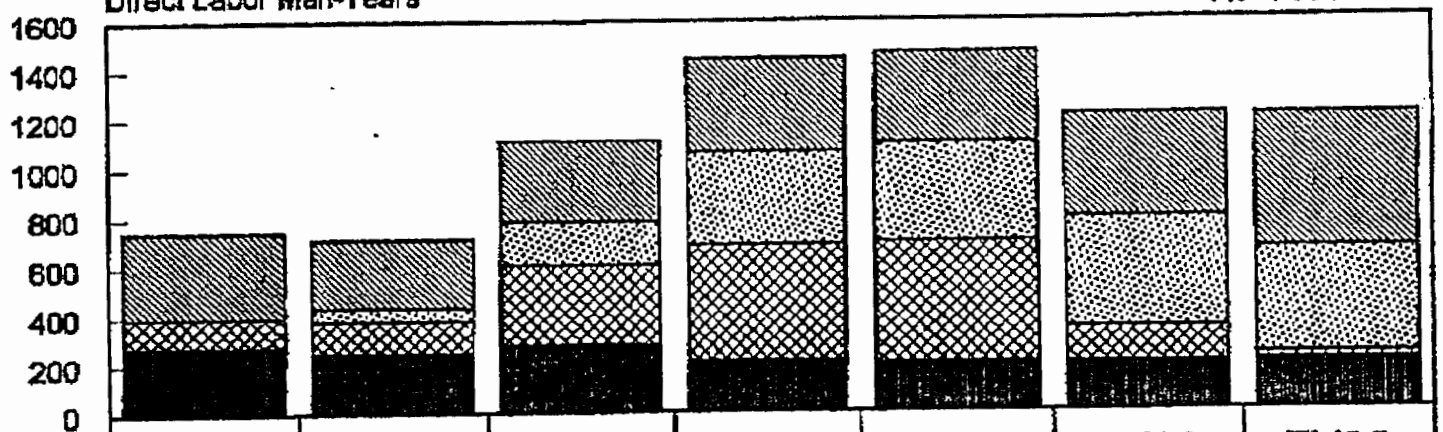
NSN 7540-01-317-7368 5099-101 GENERAL SERVICES ADMINISTRATION

Letterkenny Army Depot

Maintenance Mission Workload
New Order Base

24 Apr
As of ~~13 Feb~~ 95

Direct Labor Man-Years



	FY93	FY94	FY95	FY96	FY97	FY98	FY99
PAT/HK/OTH	349	276	328	377	369	419	543
** MSL TRANS	0	54	177	377	401	449	431
PALADIN	123	134	330	481	498	147	27
ARTILLERY	271	247	277	207	197	196	204
DL MYRS	743	711	1110	1442	1465	1211	1205

CORE
427 (P.Hawk)
39 Avenger
31 TOW System

19

Prod Man-year factor: 1615
Source FY93-FY94 - Actual (DESCOM 984 Report & MFM)
* FY95-FY99 - OPS dtd Jun 94/Reimb Estimate
** Msl Trans dtd Feb 95 (JSWG)

■ ARTILLERY ▨ PALADIN
▩ MSL TRANS ▧ PAT/HK/OTH

* DESCOM does not expect a New OPS until July.

** changed from your Oct 94 chart.

ATCH "A"

DEFENSE BASE CLOSURE & REALIGNMENT COMMISSION
1700 NORTH MOORE STREET, SUITE 1425
ARLINGTON, VIRGINIA 22209
(703) 696-0504

MEMORANDUM OF MEETING

DATE: April 24, 1995

TIME: 11 a.m.

MEETING WITH: Letterkenny Army Depot representatives

SUBJECT: Letterkenny Army Depot (COBRA issues)

PARTICIPANTS:

Name/Title/Phone Number:

Mike Joyce, Office of Rep. Bud Shuster (R-PA)
Hallie Bunk, LEAD Coalition
Bob Jameson, Consultant
John Metz, LEAD Coalition
Dave Stevens, LEAD Coalition

Commission Staff:

Jim Schufreider; Manager, House Liaison
Bob Cook, Interagency Issues Team Leader
Bob Bivins, Interagency Issues TeamLeader
Jim Owsley, Cross-Service Team Leader
Glenn Knoepfle; Cross-Service Team

MEETING PURPOSE: The meeting was requested by the LEAD Coalition to discuss the community's analysis of the Cost of Base Realignment (COBRA) estimates. The coalition members provided a briefing which suggests that the one time cost to close Letterkenny could be as high as $231 million, compard to the Army's estimate of $50.3 million. The coalition members also provided summary documents describing various aspects of the tactical missile consolidation program. Copies of the briefing charts are attached.

COBRA REALIGNMENT SUMMARY (COBRA v5.08) - Page 1/2
Data As Of 20:35 12/23/1994, Report Created 07:49 03/10/1995

Department : DLA
Option Package : DEPOTU3
Scenario File : C:\COBRA95\INTER\DEPOTU3.CBR
Std Fctrs File : C:\COBRA95\INTER\DEPOTS.SFF

Defense Distribution Depot
Letterkenny, PA

Starting Year : 1996
Final Year : 2000
ROI Year : 2003 (3 Years)

NPV in 2015($K): -102,138
1-Time Cost($K): 44,912

Net Costs ($K) Constant Dollars

	1996	1997	1998	1999	2000	2001	Total	Beyond
MilCon	1,481	0	7,054	7,054	0	0	15,590	0
Person	0	0	0	-768	-3,602	-5,747	-10,116	-5,747
Overhd	211	159	119	852	-2,762	-6,603	-8,024	-6,603
Moving	0	0	243	8,713	9,064	0	18,021	0
Missio	0	0	0	0	0	0	0	0
Other	0	0	0	2,852	2,924	0	5,776	0
TOTAL	1,693	159	7,417	18,704	5,624	-12,350	21,246	-12,350

	1996	1997	1998	1999	2000	2001	Total
POSITIONS ELIMINATED							
Off	0	0	0	1	1	0	2
Enl	0	0	0	1	1	0	2
Civ	0	0	0	61	113	0	174
TOT	0	0	0	63	115	0	178
POSITIONS REALIGNED							
Off	0	0	0	0	0	0	0
Enl	0	0	0	0	0	0	0
Stu	0	0	0	0	0	0	0
Civ	0	0	0	105	95	0	200
TOT	0	0	0	105	95	0	200

Summary:

Close Letterkenny. Move maintenance workload and associated stocks to DDAA. Move other fast-moving stock to DDSF. Remaining material moves to Base X. Personnel will move commensurate with stock.

Marilyn,

I've taken a quick look at these and I highlighted some questionable areas.

Bob

COBRA REALIGNMENT SUMMARY (COBRA v5.08) - Page 2/2
Data As Of 20:35 12/23/1994, Report Created 07:49 03/10/1995

Department : DLA
Option Package : DEPOTU3
Scenario File : C:\COBRA95\INTER\DEPOTU3.CBR
Std Fctrs File : C:\COBRA95\INTER\DEPOTS.SFF

Costs ($K) Constant Dollars

	1996	1997	1998	1999	2000	2001	Total	Beyond
MilCon	1,481	0	7,054	7,054	0	0	15,590	0
Person	0	0	0	253	292	0	544	0
Overhd	211	159	119	2,398	3,205	729	6,821	729
Moving	0	0	243	8,713	9,064	0	18,021	0
Missio	0	0	0	0	0	0	0	0
Other	0	0	0	2,852	2,924	0	5,776	0
TOTAL	1,693	159	7,417	21,271	15,484	729	46,752	729

Savings ($K) Constant Dollars

	1996	1997	1998	1999	2000	2001	Total	Beyond
MilCon	0	0	0	0	0	0	0	0
Person	0	0	0	1,020	3,893	5,747	10,661	5,747
Overhd	0	0	0	1,547	5,966	7,332	14,845	7,332
Moving	0	0	0	0	0	0	0	0
Missio	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0
TOTAL	0	0	0	2,567	9,860	13,079	25,506	13,079

INPUT DATA REPORT (COBRA v5.08)
Data As Of 20:35 12/23/1994, Report Created 18:43 04/12/1995

Department : DLA
Option Package : DEPOTU3
Scenario File : C:\COBRA95\INTER\DEPOTU3.CBR
Std Fctrs File : C:\COBRA95\INTER\DEPOTS.SFF

INPUT SCREEN ONE - GENERAL SCENARIO INFORMATION

Model Year One : FY 1996

Model does Time-Phasing of Construction/Shutdown: Yes

Base Name	Strategy:
DDLP, PA	Closes in FY 2000
DDAA, AL	Realignment
DDSP, PA	Realignment
XDEPOT	Realignment

Summary:

Close Letterkenny. Move maintenance workload and associated stocks to DDAA. Move other fast-moving stock to DDSP. Remaining material moves to Base X. Personnel will move commensurate with stock.

INPUT SCREEN TWO - DISTANCE TABLE

From Base:	To Base:	Distance:
DDLP, PA	DDAA, AL	692 mi
DDLP, PA	DDSP, PA	127 mi
DDLP, PA	XDEPOT	800 mi

INPUT SCREEN THREE - MOVEMENT TABLE

Transfers from DDLP, PA to DDAA, AL

	1996	1997	1998	1999	2000	2001
Officer Positions:	0	0	0	0	0	0
Enlisted Positions:	0	0	0	0	0	0
Civilian Positions:	0	0	0	95	95	0
Student Positions:	0	0	0	0	0	0
Missn Eqpt (tons):	0	0	732	733	733	0
Suppt Eqpt (tons):	0	0	0	0	0	0
Military Light Vehicles:	0	0	0	0	0	0
Heavy/Special Vehicles:	0	0	0	0	0	0

Transfers from DDLP, PA to DDSP, PA

	1996	1997	1998	1999	2000	2001
Officer Positions:	0	0	0	0	0	0
Enlisted Positions:	0	0	0	0	0	0
Civilian Positions:	0	0	0	10	0	0
Student Positions:	0	0	0	0	0	0
Missn Eqpt (tons):	0	0	0	0	0	0
Suppt Eqpt (tons):	0	0	0	0	0	0
Military Light Vehicles:	0	0	0	0	0	0
Heavy/Special Vehicles:	0	0	0	0	0	0

Department : DLA
Option Package : DEPOTU3
Scenario File : C:\COBRA95\INTER\DEPOTU3.CBR
Std Fctrs File : C:\COBRA95\INTER\DEPOTS.SFF

INPUT SCREEN FOUR - STATIC BASE INFORMATION

Name: DDLP, PA

Total Officer Employees:	2	RPMA Non-Payroll ($K/Year):	4,494
Total Enlisted Employees:	2	Communications ($K/Year):	562
Total Student Employees:	0	BOS Non-Payroll ($K/Year):	2,568
Total Civilian Employees:	455	BOS Payroll ($K/Year):	0
Mil Families Living On Base:	0.0%	Family Housing ($K/Year):	0
Civilians Not Willing To Move:	6.0%	Area Cost Factor:	1.02
Officer Housing Units Avail:	0	CHAMPUS In-Pat ($/Visit):	0
Enlisted Housing Units Avail:	0	CHAMPUS Out-Pat ($/Visit):	0
Total Base Facilities(KSF):	3,469	CHAMPUS Shift to Medicare:	20.9%
Officer VHA ($/Month):	20	Activity Code:	16
Enlisted VHA ($/Month):	58		
Per Diem Rate ($/Day):	66	Homeowner Assistance Program:	No
Freight Cost ($/Ton/Mile):	0.07	Unique Activity Information:	No

Name: DDAA, AL

Total Officer Employees:	1	RPMA Non-Payroll ($K/Year):	4,125
Total Enlisted Employees:	0	Communications ($K/Year):	1,880
Total Student Employees:	0	BOS Non-Payroll ($K/Year):	1,833
Total Civilian Employees:	379	BOS Payroll ($K/Year):	0
Mil Families Living On Base:	0.0%	Family Housing ($K/Year):	0
Civilians Not Willing To Move:	6.0%	Area Cost Factor:	0.77
Officer Housing Units Avail:	0	CHAMPUS In-Pat ($/Visit):	0
Enlisted Housing Units Avail:	0	CHAMPUS Out-Pat ($/Visit):	0
Total Base Facilities(KSF):	2,825	CHAMPUS Shift to Medicare:	20.9%
Officer VHA ($/Month):	0	Activity Code:	6
Enlisted VHA ($/Month):	0		
Per Diem Rate ($/Day):	67	Homeowner Assistance Program:	No
Freight Cost ($/Ton/Mile):	0.07	Unique Activity Information:	No

Name: DDSP, PA

Total Officer Employees:	7	RPMA Non-Payroll ($K/Year):	15,742
Total Enlisted Employees:	2	Communications ($K/Year):	5,418
Total Student Employees:	0	BOS Non-Payroll ($K/Year):	4,566
Total Civilian Employees:	2,054	BOS Payroll ($K/Year):	11,554
Mil Families Living On Base:	40.0%	Family Housing ($K/Year):	0
Civilians Not Willing To Move:	6.0%	Area Cost Factor:	0.98
Officer Housing Units Avail:	0	CHAMPUS In-Pat ($/Visit):	0
Enlisted Housing Units Avail:	0	CHAMPUS Out-Pat ($/Visit):	0
Total Base Facilities(KSF):	10,963	CHAMPUS Shift to Medicare:	20.9%
Officer VHA ($/Month):	120	Activity Code:	27
Enlisted VHA ($/Month):	175		
Per Diem Rate ($/Day):	89	Homeowner Assistance Program:	No
Freight Cost ($/Ton/Mile):	0.07	Unique Activity Information:	No

Name: XDEPOT

Total Officer Employees:	3	RPMA Non-Payroll ($K/Year):	5,734
Total Enlisted Employees:	1	Communications ($K/Year):	1,557
Total Student Employees:	0	BOS Non-Payroll ($K/Year):	2,554
Total Civilian Employees:	686	BOS Payroll ($K/Year):	1,844
Mil Families Living On Base:	0.0%	Family Housing ($K/Year):	0
Civilians Not Willing To Move:	6.0%	Area Cost Factor:	0.98
Officer Housing Units Avail:	0	CHAMPUS In-Pat ($/Visit):	0
Enlisted Housing Units Avail:	0	CHAMPUS Out-Pat ($/Visit):	0
Total Base Facilities(KSF):	3,806	CHAMPUS Shift to Medicare:	20.9%
Officer VHA ($/Month):	130	Activity Code:	63
Enlisted VHA ($/Month):	31		
Per Diem Rate ($/Day):	86	Homeowner Assistance Program:	No
Freight Cost ($/Ton/Mile):	0.07	Unique Activity Information:	No

INPUT DATA REPORT (COBRA v5.08) - Page 3
Data As Of 20:35 12/23/1994, Report Created 18:43 04/12/1995

Department : DLA
Option Package : DEPOTU3
Scenario File : C:\COBRA95\INTER\DEPOTU3.CBR
Std Fctrs File : C:\COBRA95\INTER\DEPOTS.SFF

INPUT SCREEN FIVE - DYNAMIC BASE INFORMATION

Name: DDLP, PA

	1996	1997	1998	1999	2000	2001
1-Time Unique Cost ($K):	0	0	0	2,569	2,569	0
1-Time Unique Save ($K):	0	0	0	0	0	0
1-Time Moving Cost ($K):	0	0	0	6,254	6,255	0
1-Time Moving Save ($K):	0	0	0	0	0	0
Env Non-MilCon Reqd($K):	0	0	0	0	0	0
Activ Mission Cost ($K):	0	0	0	0	0	0
Activ Mission Save ($K):	0	0	0	0	0	0
Misc Recurring Cost($K):	0	0	0	0	0	0
Misc Recurring Save($K):	0	0	0	610	2,838	2,838
Land (+Buy/-Sales) ($K):	0	0	0	0	0	0
Construction Schedule(%):	0%	0%	0%	0%	0%	0%
Shutdown Schedule (%):	0%	0%	0%	0%	0%	0%
MilCon Cost Avoidnc($K):	0	0	0	0	0	0
Fam Housing Avoidnc($K):	0	0	0	0	0	0
Procurement Avoidnc($K):	0	0	0	0	0	0
CHAMPUS In-Patients/Yr:	0	0	0	0	0	0
CHAMPUS Out-Patients/Yr:	0	0	0	0	0	0

Facil ShutDown(KSF): 3,469 Perc Family Housing ShutDown: 0.0%

Name: DDAA, AL

	1996	1997	1998	1999	2000	2001
1-Time Unique Cost ($K):	0	0	0	0	0	0
1-Time Unique Save ($K):	0	0	0	0	0	0
1-Time Moving Cost ($K):	0	0	0	0	0	0
1-Time Moving Save ($K):	0	0	0	0	0	0
Env Non-MilCon Reqd($K):	0	0	0	0	0	0
Activ Mission Cost ($K):	0	0	0	0	0	0
Activ Mission Save ($K):	0	0	0	0	0	0
Misc Recurring Cost($K):	0	0	0	346	693	693
Misc Recurring Save($K):	0	0	0	0	0	0
Land (+Buy/-Sales) ($K):	0	0	0	0	0	0
Construction Schedule(%):	0%	0%	0%	0%	0%	0%
Shutdown Schedule (%):	0%	0%	0%	0%	0%	0%
MilCon Cost Avoidnc($K):	0	0	0	0	0	0
Fam Housing Avoidnc($K):	0	0	0	0	0	0
Procurement Avoidnc($K):	0	0	0	0	0	0
CHAMPUS In-Patients/Yr:	0	0	0	0	0	0
CHAMPUS Out-Patients/Yr:	0	0	0	0	0	0

Facil ShutDown(KSF): 0 Perc Family Housing ShutDown: 0.0%

Name: DDSP, PA

	1996	1997	1998	1999	2000	2001
1-Time Unique Cost ($K):	0	0	0	0	0	0
1-Time Unique Save ($K):	0	0	0	0	0	0
1-Time Moving Cost ($K):	0	0	0	0	0	0
1-Time Moving Save ($K):	0	0	0	0	0	0
Env Non-MilCon Reqd($K):	0	0	0	0	0	0
Activ Mission Cost ($K):	0	0	0	0	0	0
Activ Mission Save ($K):	0	0	0	0	0	0
Misc Recurring Cost($K):	0	0	0	36	36	36
Misc Recurring Save($K):	0	0	0	0	0	0
Land (+Buy/-Sales) ($K):	0	0	0	0	0	0
Construction Schedule(%):	0%	0%	0%	0%	0%	0%
Shutdown Schedule (%):	0%	0%	0%	0%	0%	0%
MilCon Cost Avoidnc($K):	0	0	0	0	0	0
Fam Housing Avoidnc($K):	0	0	0	0	0	0
Procurement Avoidnc($K):	0	0	0	0	0	0
CHAMPUS In-Patients/Yr:	0	0	0	0	0	0
CHAMPUS Out-Patients/Yr:	0	0	0	0	0	0

Facil ShutDown(KSF): 0 Perc Family Housing ShutDown: 0.0%

Department : DLA
Option Package : DEPOTU3
Scenario File : C:\COBRA95\INTER\DEPOTU3.CBR
Std Fctrs File : C:\COBRA95\INTER\DEPOTS.SFF

INPUT SCREEN FIVE - DYNAMIC BASE INFORMATION

Name: XDEPOT

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

Facil ShutDown(KSF): 0 Perc Family Housing ShutDown: 0.0%

INPUT SCREEN SIX - BASE PERSONNEL INFORMATION

Name: DDLP, PA

	1996	1997	1998	1999	2000	2001
Off Force Struc Change:	0	0	0	0	0	0
Enl Force Struc Change:	0	0	0	0	0	0
Civ Force Struc Change:	-35	-14	-14	-10	-8	0
Stu Force Struc Change:	0	0	0	0	0	0
Off Scenario Change:	0	0	0	-1	-1	0
Enl Scenario Change:	0	0	0	-1	-1	0
Civ Scenario Change:	0	0	0	-61	-113	0
Off Change(No Sal Save):	0	0	0	0	0	0
Enl Change(No Sal Save):	0	0	0	0	0	0
Civ Change(No Sal Save):	0	0	0	0	0	0
Caretakers - Military:	0	0	0	0	0	0
Caretakers - Civilian:	0	0	0	0	0	0

INPUT SCREEN SEVEN - BASE MILITARY CONSTRUCTION INFORMATION

Name: DDAA, AL

Description	Categ	New MilCon	Rehab MilCon	Total Cost($K)
36 acre hardstand	OTHER	0	0	15,590

INPUT DATA REPORT (COBRA v5.08) - Page 5
Data As Of 20:35 12/23/1994, Report Created 18:43 04/12/1995

Department : DLA
Option Package : DEPOTU3
Scenario File : C:\COBRA95\INTER\DEPOTU3.CBR
Std Fctrs File : C:\COBRA95\INTER\DEPOTS.SFF

STANDARD FACTORS SCREEN ONE - PERSONNEL

Percent Officers Married:	90.33%	Civ Early Retire Pay Factor:	9.00%
Percent Enlisted Married:	74.07%	Priority Placement Service:	60.00%
Enlisted Housing MilCon:	0.00%	PPS Actions Involving PCS:	50.00%
Officer Salary($/Year):	54,869.06	Civilian PCS Costs ($):	28,800.00
Off BAQ with Dependents($):	757.48	Civilian New Hire Cost($):	534.41
Enlisted Salary($/Year):	28,664.00	Nat Median Home Price($):	114,600.00
Enl BAQ with Dependents($):	562.86	Home Sale Reimburse Rate:	10.00%
Avg Unemploy Cost($/Week):	174.00	Max Home Sale Reimburs($):	22,385.00
Unemployment Eligibility(Weeks):	18	Home Purch Reimburse Rate:	5.00%
Civilian Salary($/Year):	32,060.00	Max Home Purch Reimburs($):	11,191.00
Civilian Turnover Rate:	15.00%	Civilian Homeowning Rate:	64.00%
Civilian Early Retire Rate:	10.00%	HAP Home Value Reimburse Rate:	22.90%
Civilian Regular Retire Rate:	5.00%	HAP Homeowner Receiving Rate:	5.00%
Civilian RIF Pay Factor:	39.00%	RSE Home Value Reimburse Rate:	19.00%
SF File Desc:	Depots (Alone & Co)	RSE Homeowner Receiving Rate:	12.00%

STANDARD FACTORS SCREEN TWO - FACILITIES

RPMA Building SF Cost Index:	0.93	Rehab vs. New MilCon Cost:	59.00%
BOS Index (RPMA vs population):	0.00	Info Management Account:	3.20%
(Indices are used as exponents)		MilCon Design Rate:	10.50%
Program Management Factor:	10.00%	MilCon SIOH Rate:	6.00%
Caretaker Admin(SF/Care):	162.00	MilCon Contingency Plan Rate:	5.00%
Mothball Cost ($/SF):	1.25	MilCon Site Preparation Rate:	15.20%
Avg Bachelor Quarters(SF):	500.00	Discount Rate for NPV.RPT/ROI:	2.75%
Avg Family Quarters(SF):	2,000.00	Inflation Rate for NPV.RPT/ROI:	0.00%

APPDET.RPT Inflation Rates:
1996: 0.00% 1997: 3.00% 1998: 3.00% 1999: 3.00% 2000: 3.00% 2001: 3.00%

STANDARD FACTORS SCREEN THREE - TRANSPORTATION

Material/Assigned Person(Lb):	0	Equip Pack & Crate($/Ton):	284.00
HHG Per Off Family (Lb):	14,500.00	Mil Light Vehicle($/Mile):	0.00
HHG Per Enl Family (Lb):	9,000.00	Heavy/Spec Vehicle($/Mile):	0.00
HHG Per Mil Single (Lb):	6,400.00	POV Reimbursement($/Mile):	0.18
HHG Per Civilian (Lb):	18,000.00	Avg Mil Tour Length (Years):	3.00
Total HHG Cost ($/100Lb):	35.00	Routine PCS($/Pers/Tour):	6,192.20
Air Transport ($/Pass Mile):	0.20	One-Time Off PCS Cost($):	6,656.00
Misc Exp ($/Direct Employ):	700.00	One-Time Enl PCS Cost($):	4,620.00

STANDARD FACTORS SCREEN FOUR - MILITARY CONSTRUCTION

Category	UM	$/UM	Category	UM	$/UM
Horizontal	(SY)	0	ADP Construction	(SF)	141
Waterfront	(LF)	0	Cold Storage	(SF)	136
Air Operations	(SF)	0	Hazardous Storage	(SF)	92
Operational	(SF)	122	Classroom/Training	(SF)	106
Administrative	(SF)	111	Cafeteria	(SF)	144
School Buildings	(SF)	0	Child Devel Center	(SF)	122
Maintenance Shops	(SF)	98	Convert Whse to Admi	(SF)	88
Bachelor Quarters	(SF)	94	Lease	(SF)	0
Family Quarters	(SF)	67	Optional Category I	( )	0
Covered Storage	(SF)	59	Optional Category J	( )	0
Dining Facilities	(SF)	0	Optional Category K	( )	0
Recreation Facilities	(SF)	99	Optional Category L	( )	0
Communications Facil	(SF)	181	Optional Category M	( )	0
Shipyard Maintenance	(SF)	0	Optional Category N	( )	0
RDT & E Facilities	(SF)	0	Optional Category O	( )	0
POL Storage	(BL)	38	Optional Category P	( )	0
Ammunition Storage	(SF)	0	Optional Category Q	( )	0
Medical Facilities	(SF)	0	Optional Category R	( )	0
Environmental	( )	0			

DEFENSE BASE CLOSURE & REALIGNMENT COMMISSION
1700 NORTH MOORE STREET, SUITE 1425
ARLINGTON, VIRGINIA 22209
(703) 696-0504

MEMORANDUM OF MEETING

DATE: April 24, 1995

TIME: 11 a.m.

MEETING WITH: Letterkenny Army Depot representatives

SUBJECT: Letterkenny Army Depot (COBRA issues)

PARTICIPANTS:

Name/Title/Phone Number:

Mike Joyce, Office of Rep. Bud Shuster (R-PA)
Hallie Bunk, LEAD Coalition
Bob Jameson, Consultant
John Metz, LEAD Coalition
Dave Stevens, LEAD Coalition

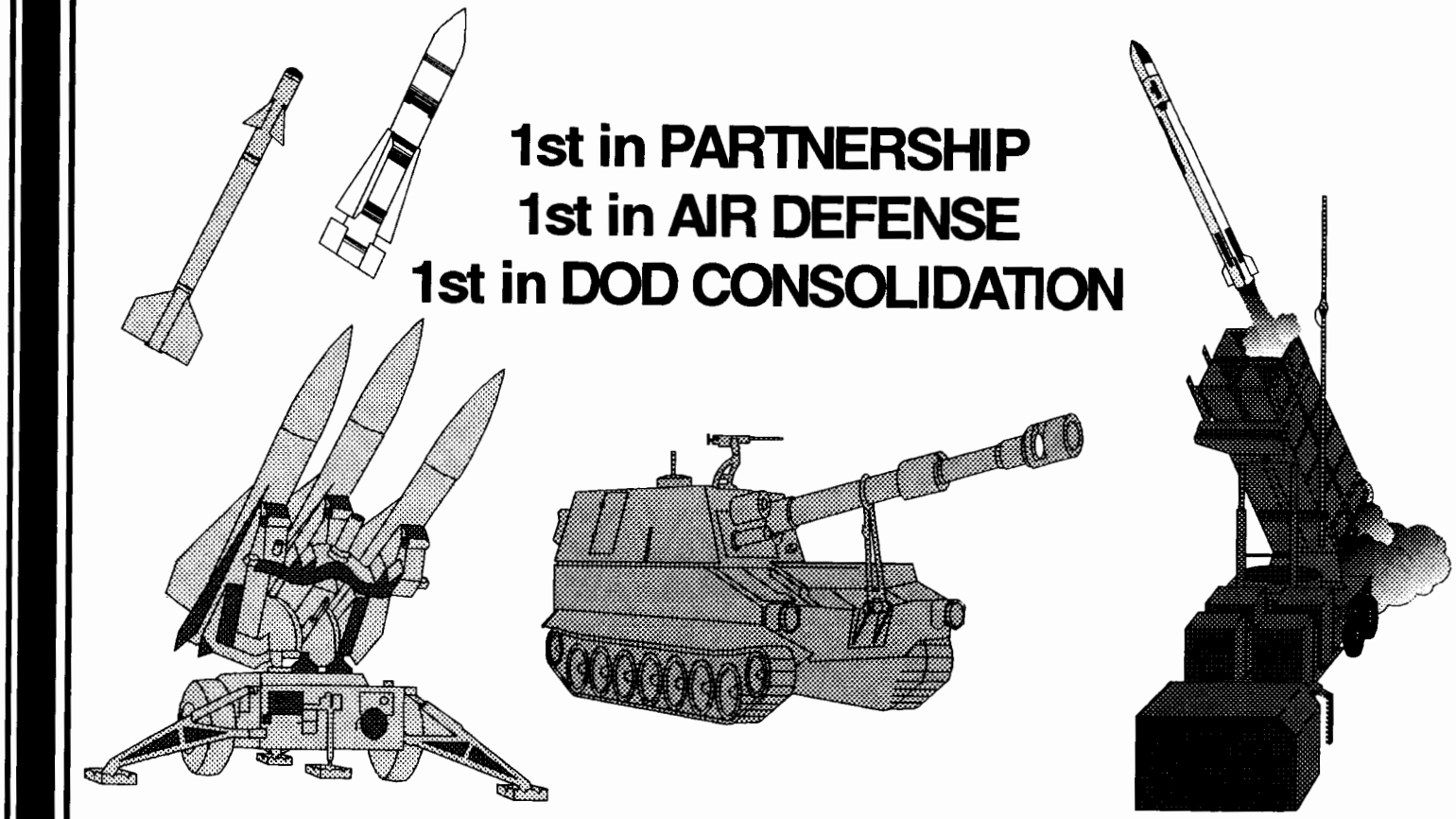
Commission Staff:

Jim Schufreider; Manager, House Liaison
Bob Cook, Interagency Issues Team Leader
Bob Bivins, Interagency Issues TeamLeader
Jim Owsley, Cross-Service Team Leader
Glenn Knoepfle; Cross-Service Team

MEETING PURPOSE: The meeting was requested by the LEAD Coalition to discuss the community's analysis of the Cost of Base Realignment (COBRA) estimates. The coalition members provided a briefing which suggests that the one time cost to close Letterkenny could be as high as $231 million, compard to the Army's estimate of $50.3 million. The coalition members also provided summary documents describing various aspects of the tactical missile consolidation program. Copies of the briefing charts are attached.

ANALYSIS of COBRA 95

Letterkenny Army Depot



ARMY MILITARY WORTH ANALYSIS

Letterkenny ranked last.....

Problem

CAPACITY

CAPACITY

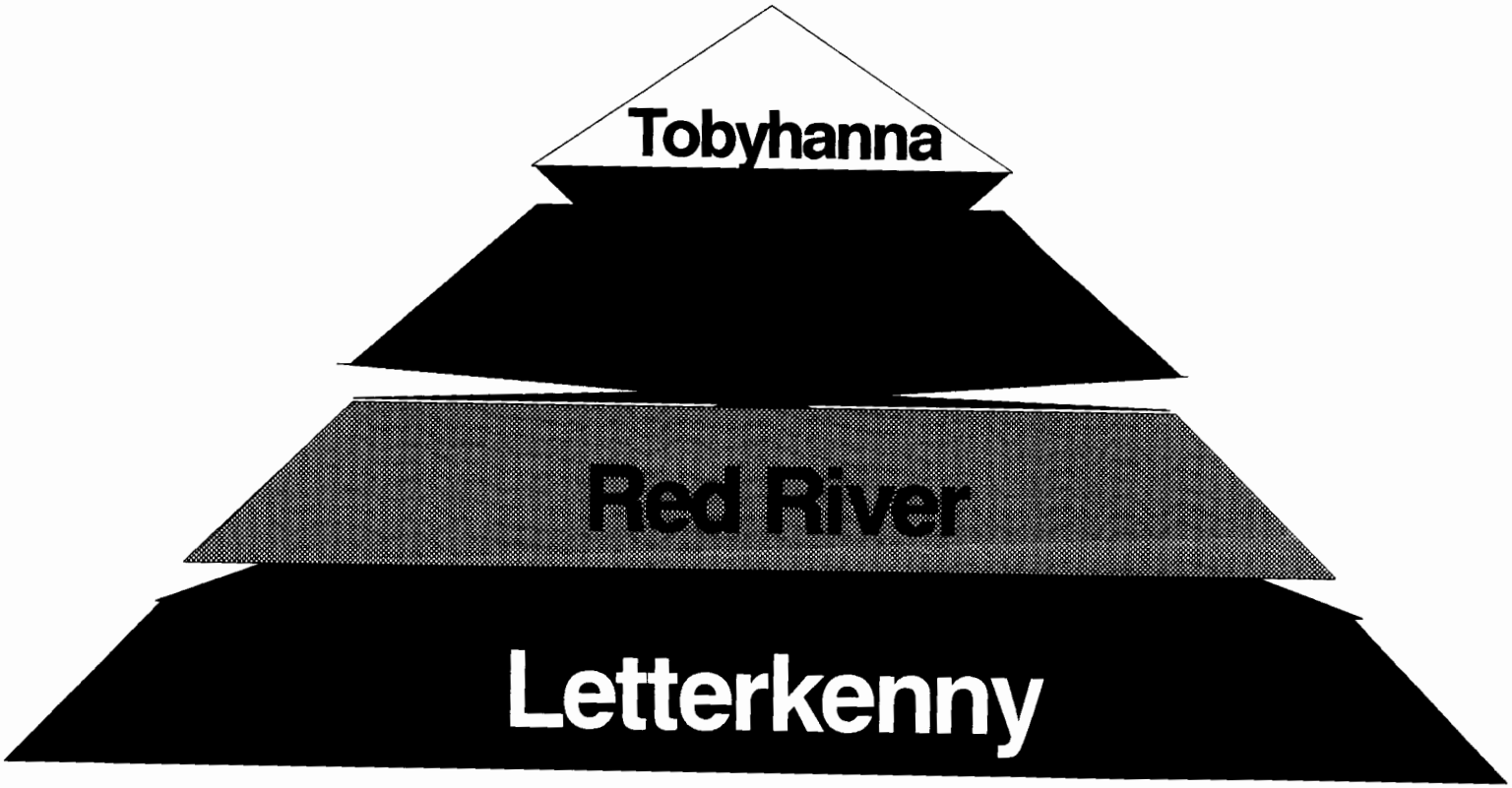
CAPACITY

MORE SPACE!

LESS CAPACITY?

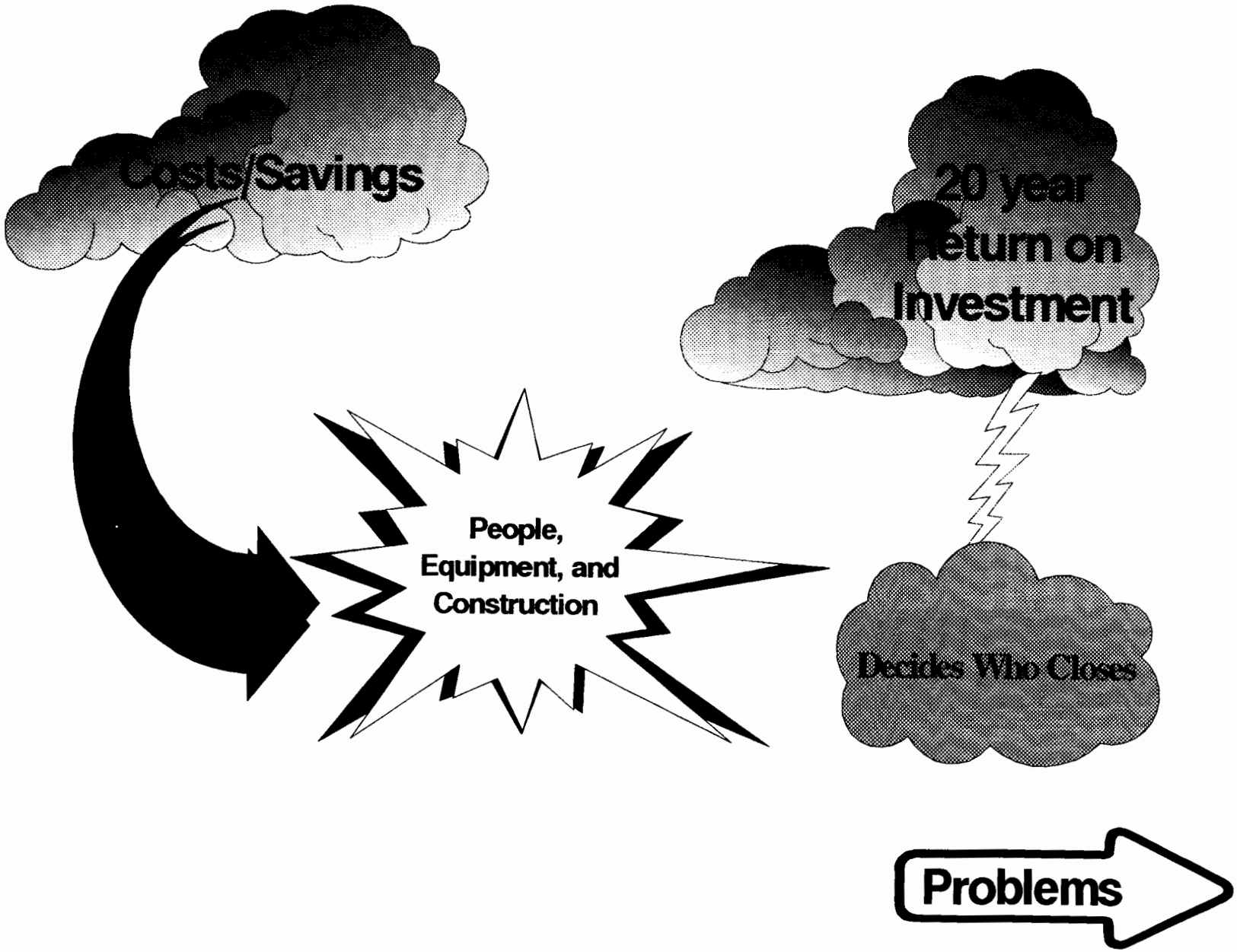
Lead to

Army Only Runs COBRA On

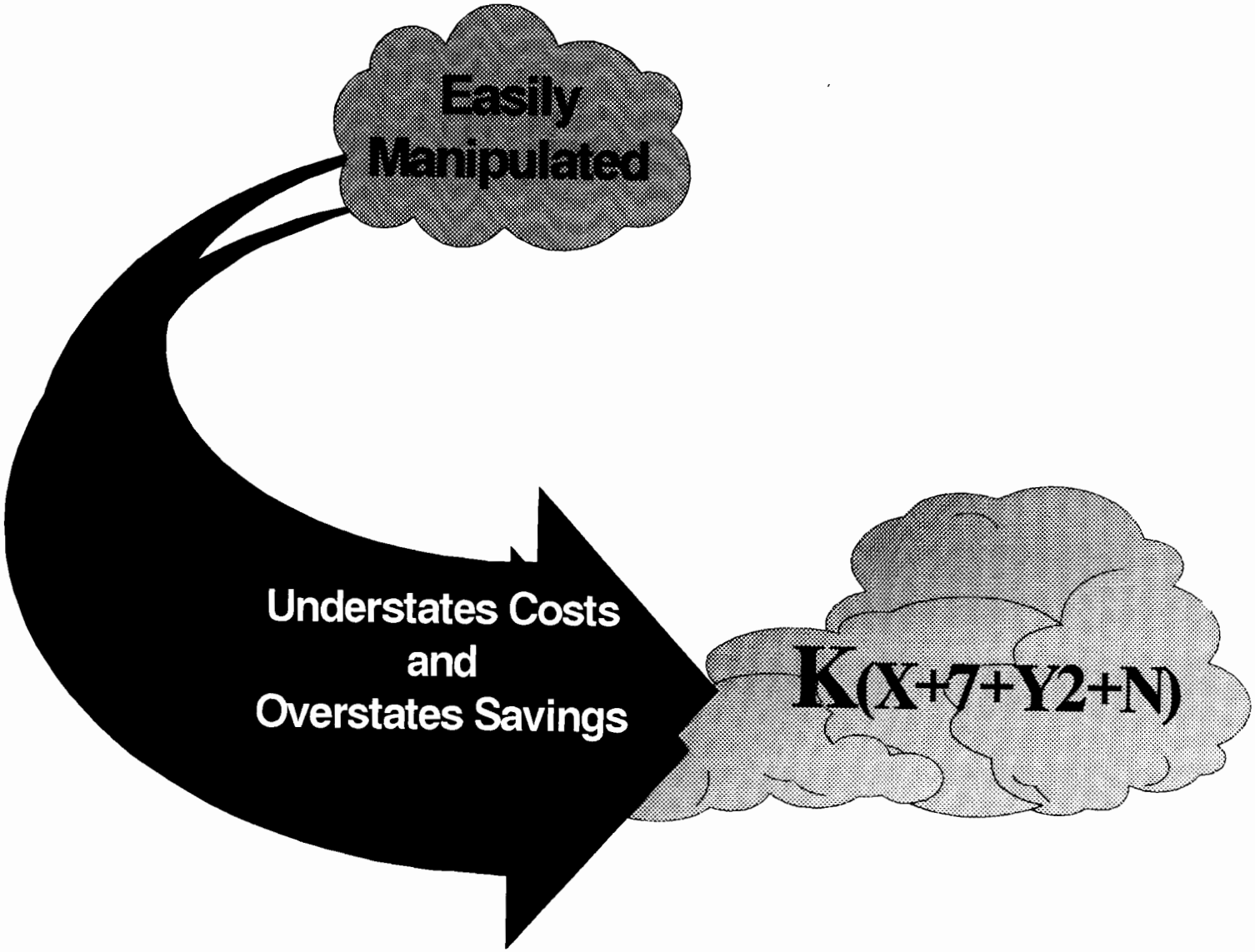


Bottom Two Depots

What is COBRA



What is wrong with COBRA?



One Of Two Scenarios Is True

CORE Workload Transferred

PATRIOT, TOW, and Avenger Electronics to Tobyhanna
Tactical Missile Guidance & Control Sections to Contract
PATRIOT and Avenger Ground Support to Anniston
Artillery to Anniston

All Workload Transferred

Tactical Missile Guidance & Control and Electronics to Tobyhanna
Tactical Missile Ground Support Equipment to Anniston
Artillery to Anniston

Tactical Missile Workload

- WHAT IS CORE?
  - PATRIOT major items
  - TOW major and secondary items
  - Avenger major and secondary items
- WHAT IS NOT CORE?
  - Missiles (Guidance & Control Sections) - Maverick, Sparrow, Phoenix, Sidewinder, AMRAAM, HARM, HAWK, PATRIOT, Stinger, Hellfire
  - HAWK Ground Support Equipment

Data call 6

Above CORE Tactical Missile Transfer From Letterkenny

COBRA ASSUMES THE WORK AWAY AT NO COST!

Missile Guidance & Control, HAWK, PATRIOT, Stinger, Hellfire, Maverick, Standard, Sparrow, Phoenix, Sidewinder, HARM, and AMRAAM

Above CORE Workload Transfer

COBRA

- Eliminated 1180 Letterkenny workers = $54.3M
- Base Operations Savings = 19.0M

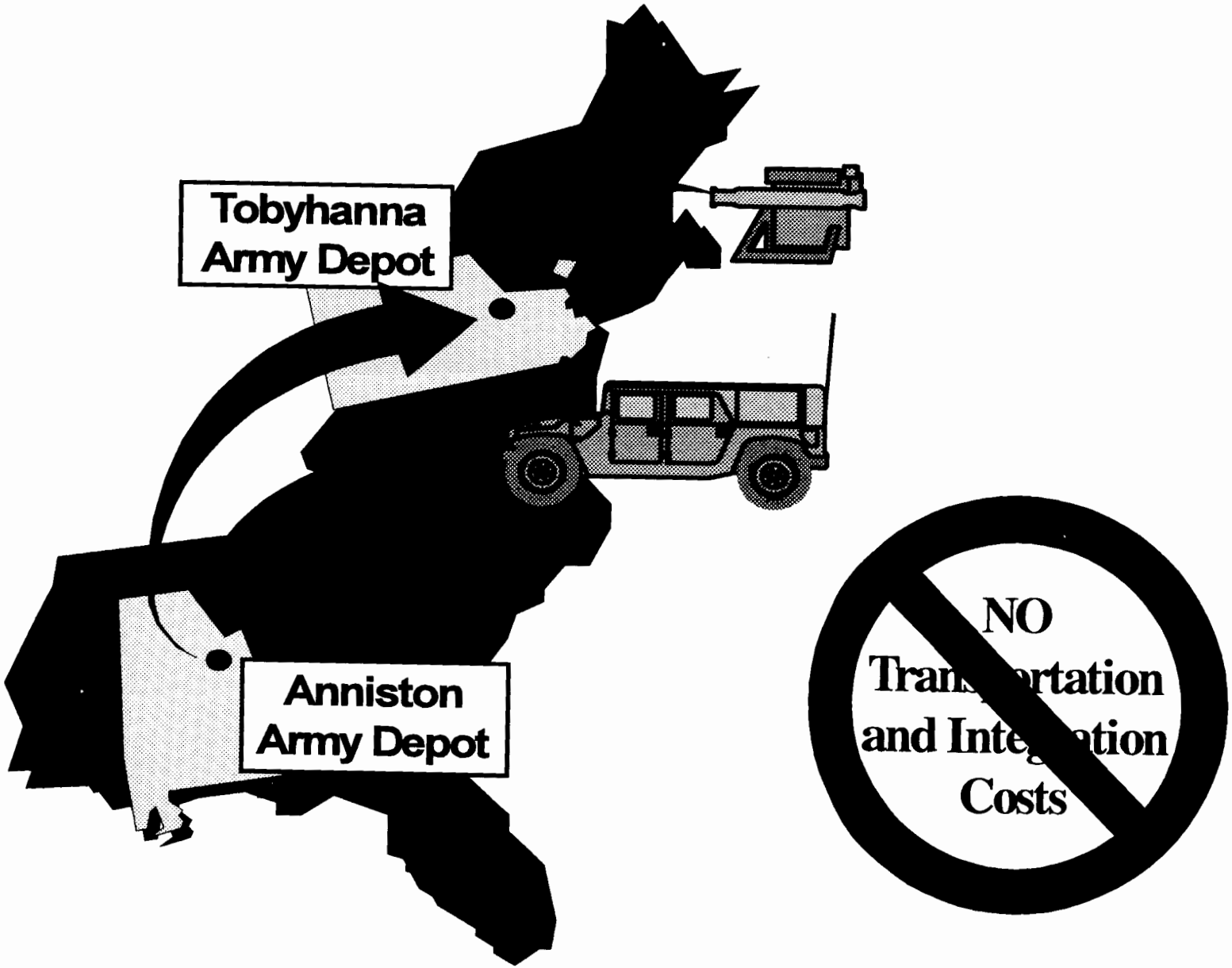
$73.3M

COBRA DID NOT

- Consider cost to contract
  606 workers ≈ 1 Million Manhours of work
- Contract Cost
  70 to 100/Hr
  $70M - $100M

THERE ARE NO SAVINGS!

Recurring Costs For Missile Major Items



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All Workload Transferred

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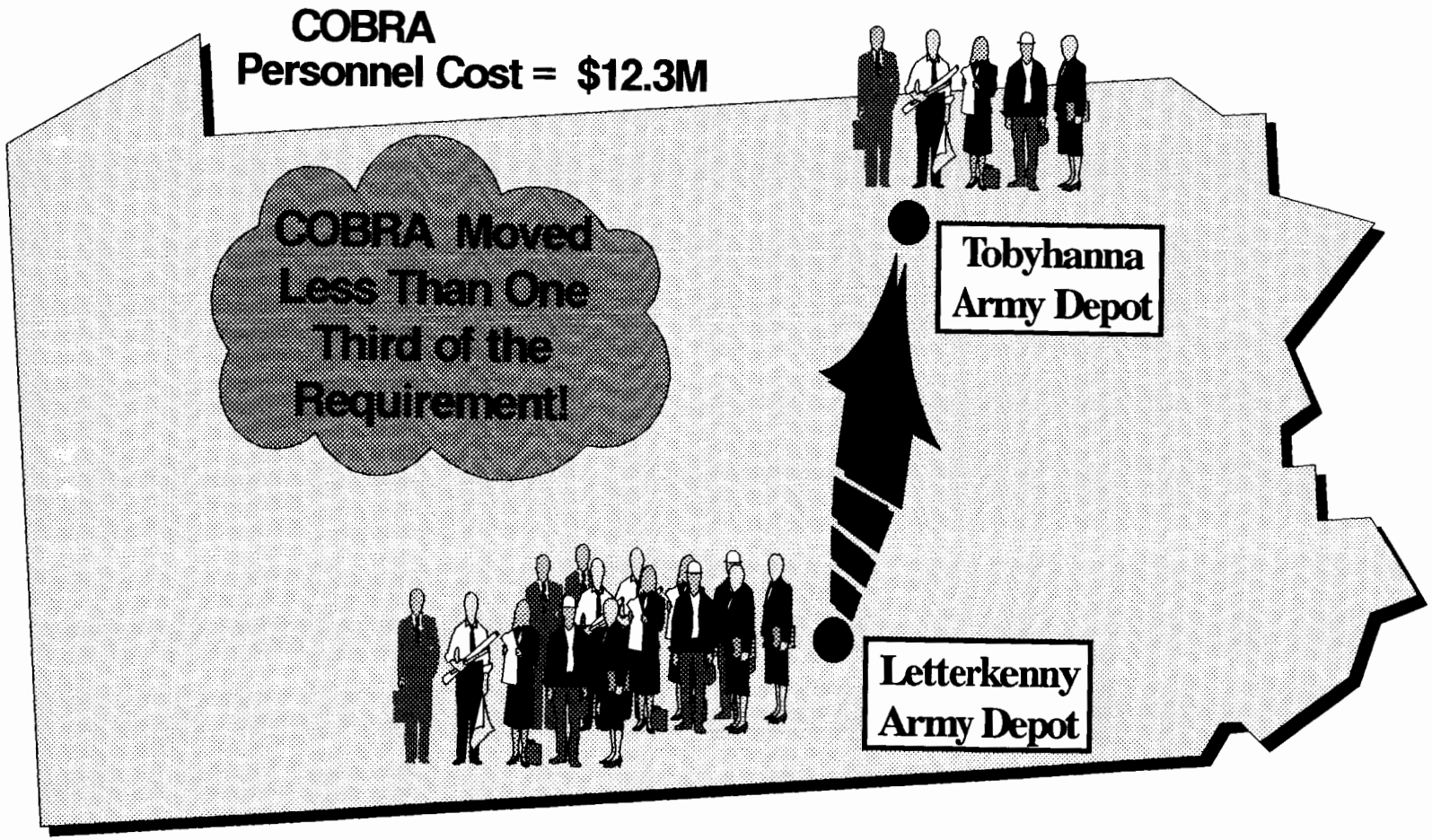
Tactical Missile Ground Support Equipment to Anniston
Artillery to Anniston

Missile Transfer from Letterkenny to Tobyhanna



Actual Personnel Cost = $33M

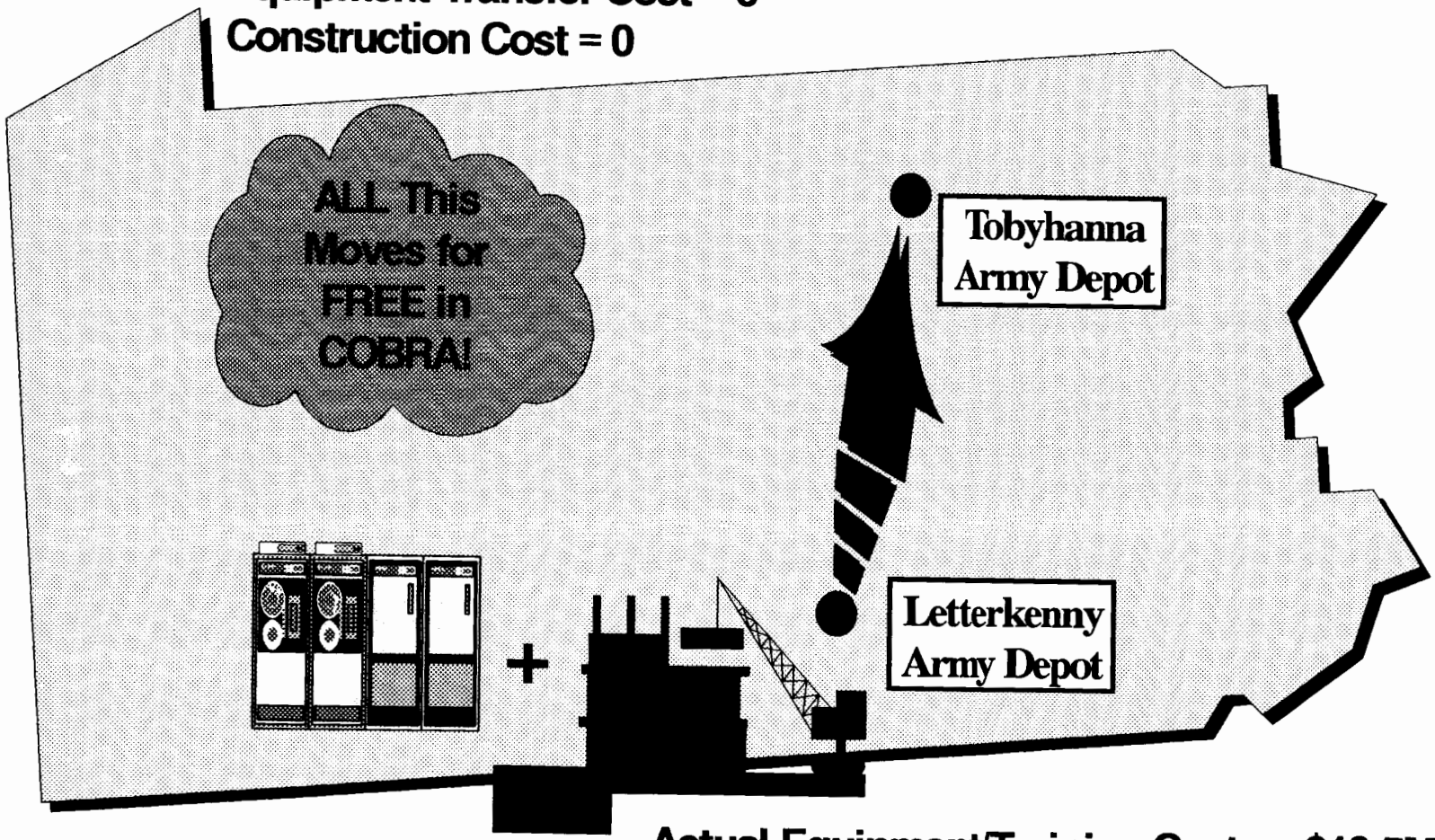
900 people vs 300 people

931 people do missile work in FY99

Missile Transfer from Letterkenny to Tobyhanna

COBRA

Equipment Transfer Cost = 0
Construction Cost = 0

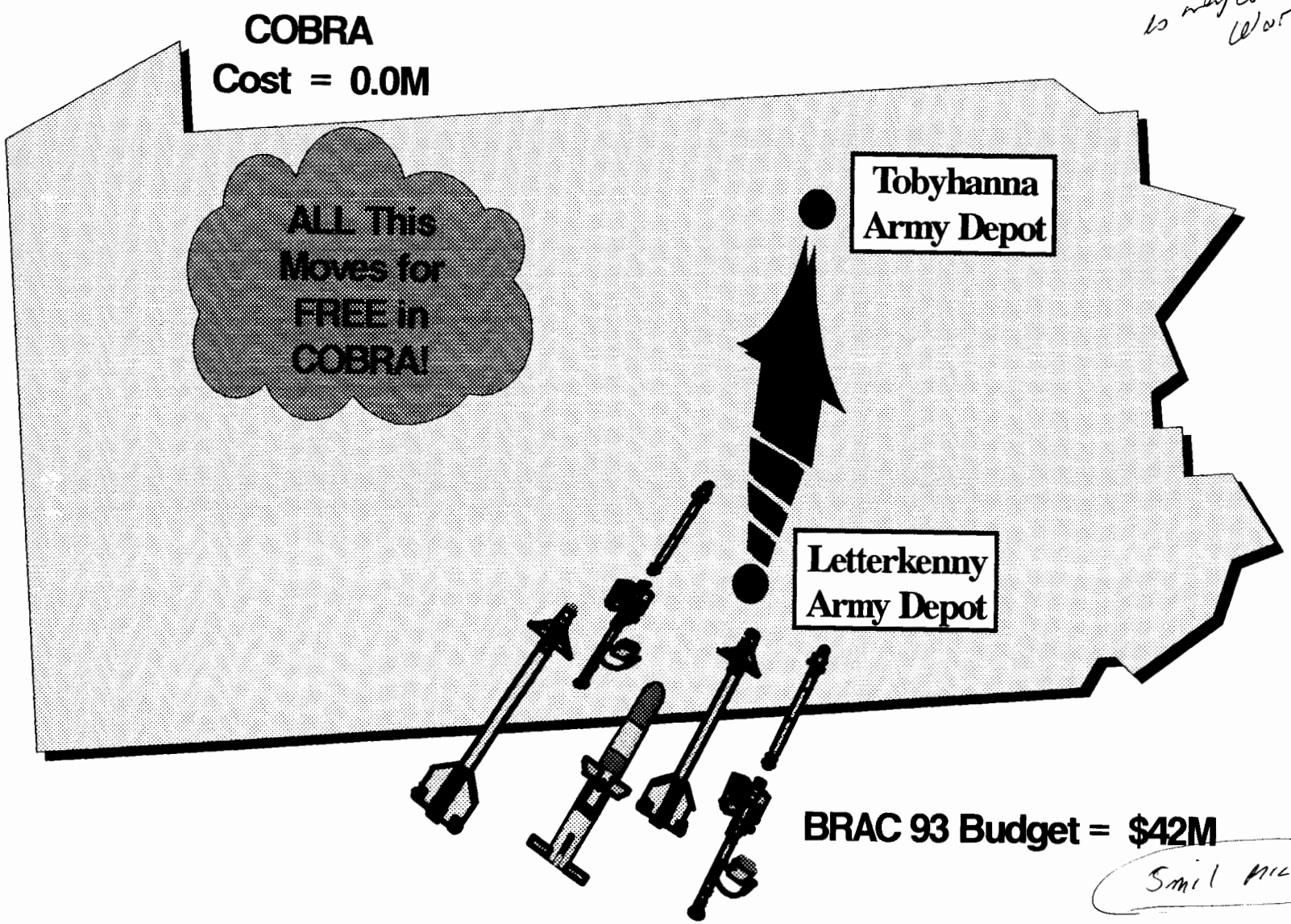


Actual Equipment/Training Cost = $10.5M - Patriot/Hawk

Patriot/Hawk — **BRAC 93 Construction Cost = $9.6M**

DOD Tactical Missile Transfer to Tobyhanna

Hawk / Patriot is major core workload

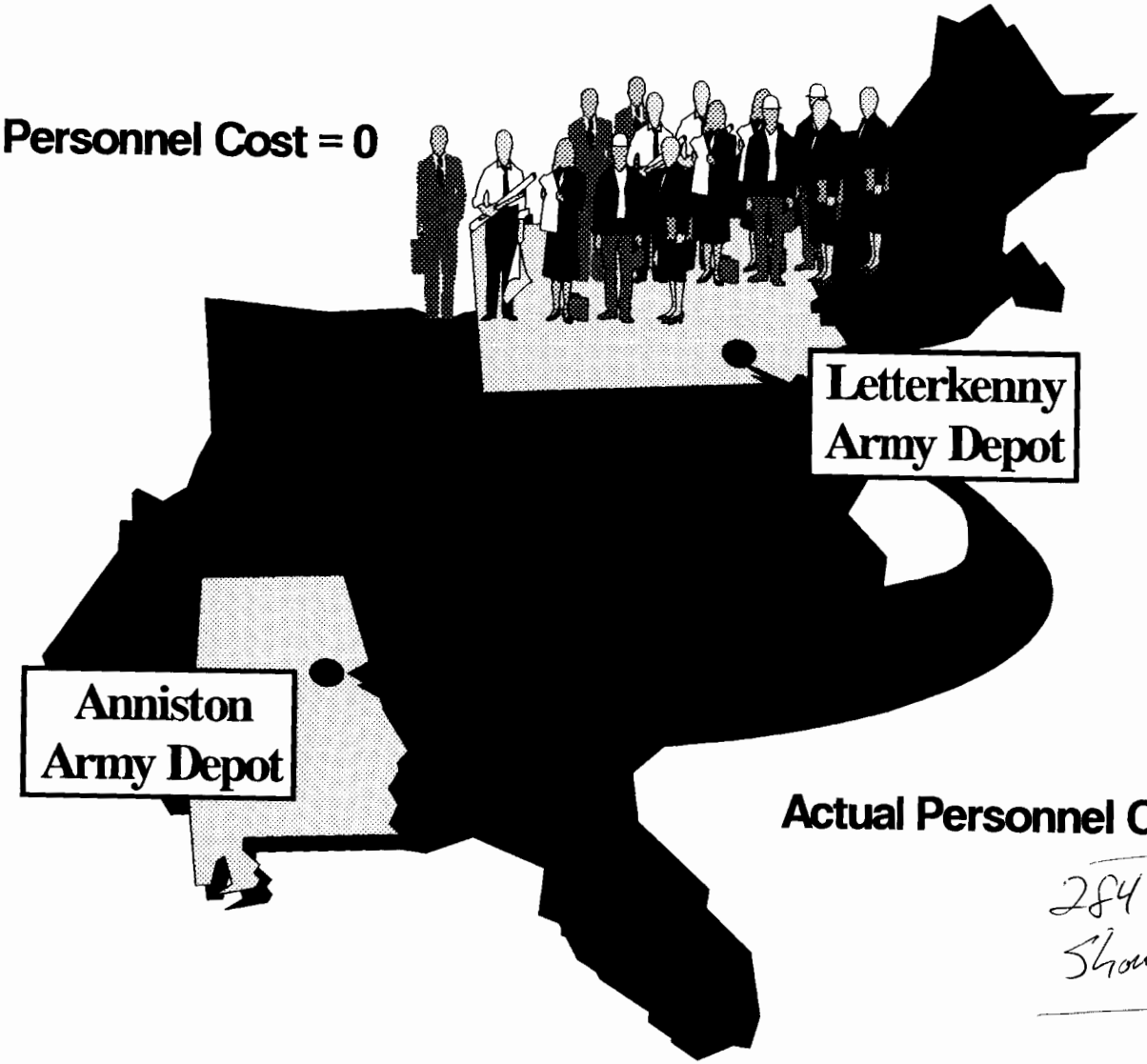


BRAC 93 Budget = $42M

Small missiles

Artillery Transfer from Letterkenny to Anniston

COBRA Personnel Cost = 0



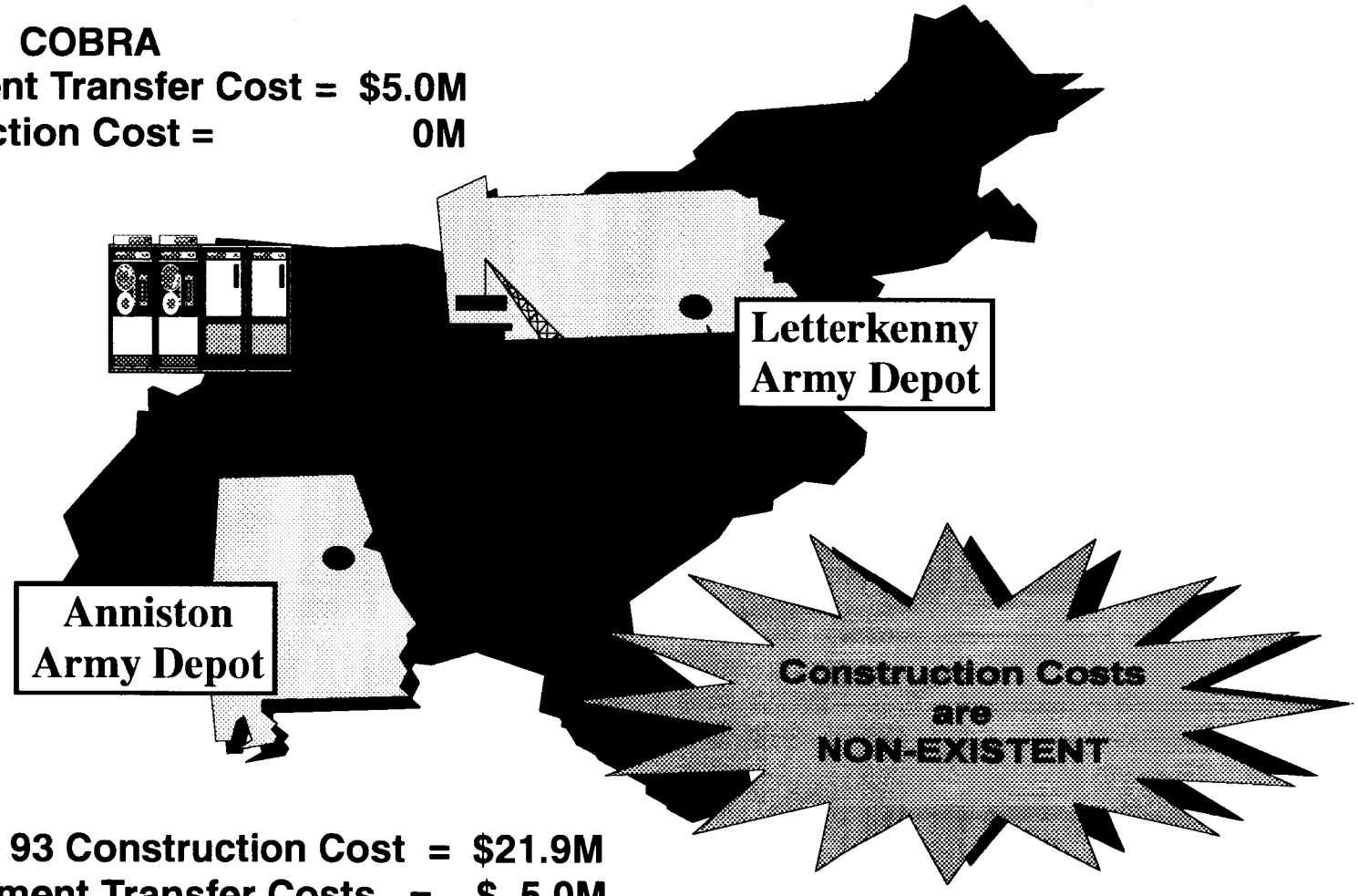
Actual Personnel Cost = $9.9M

284 people
Showed for to Anniston

all is core

Artillery Transfer from Letterkenny to Anniston

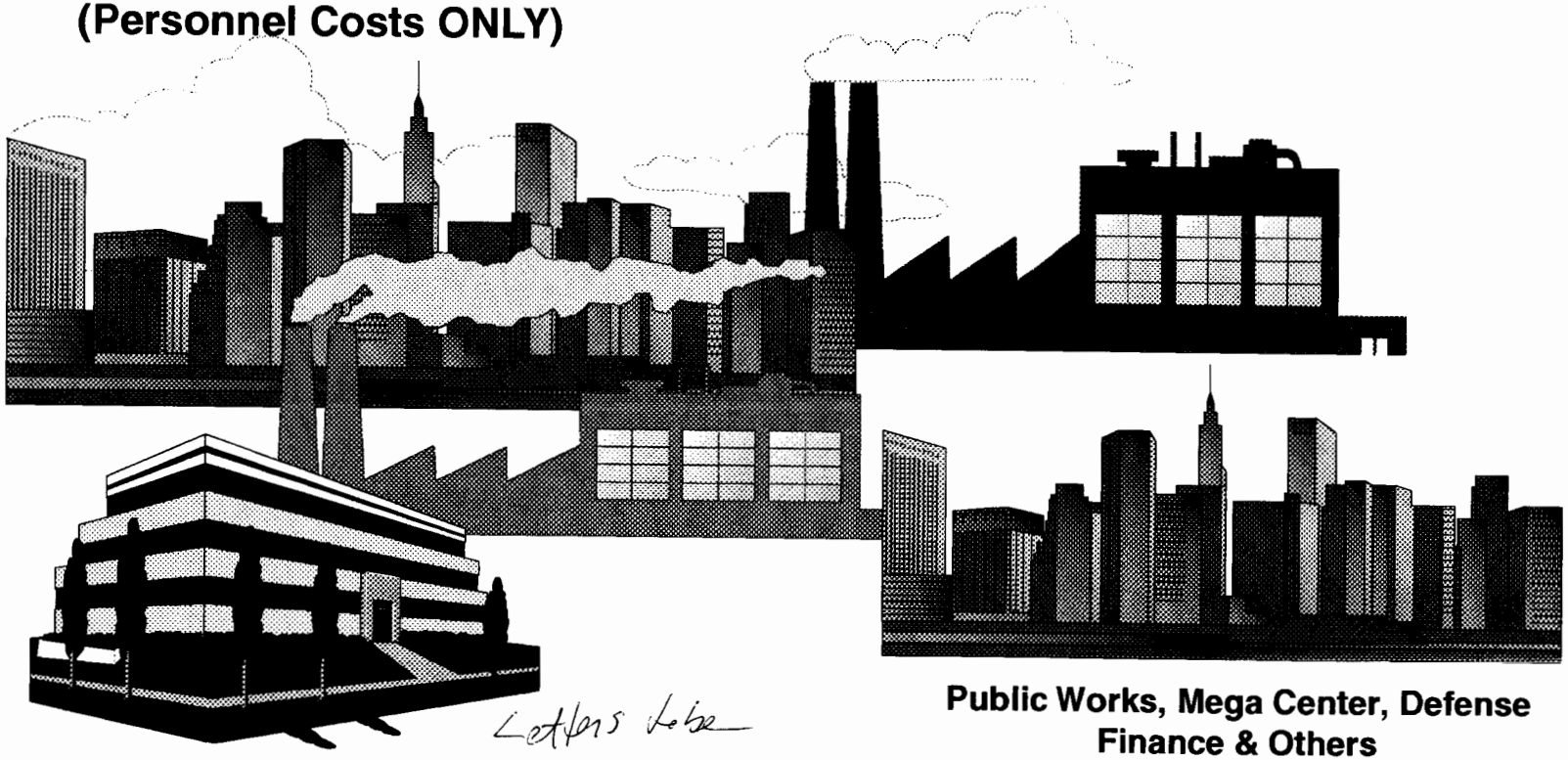
COBRA
Equipment Transfer Cost = $5.0M
Construction Cost = 0M



BRAC 93 Construction Cost = $21.9M
Equipment Transfer Costs = $ 5.0M

Tenants Directed to Move

Cost to Move Tenants = $20.7M
(Personnel Costs ONLY)



LOGSA, SIMA

142 310

Letters to be provided

Public Works, Mega Center, Defense Finance & Others

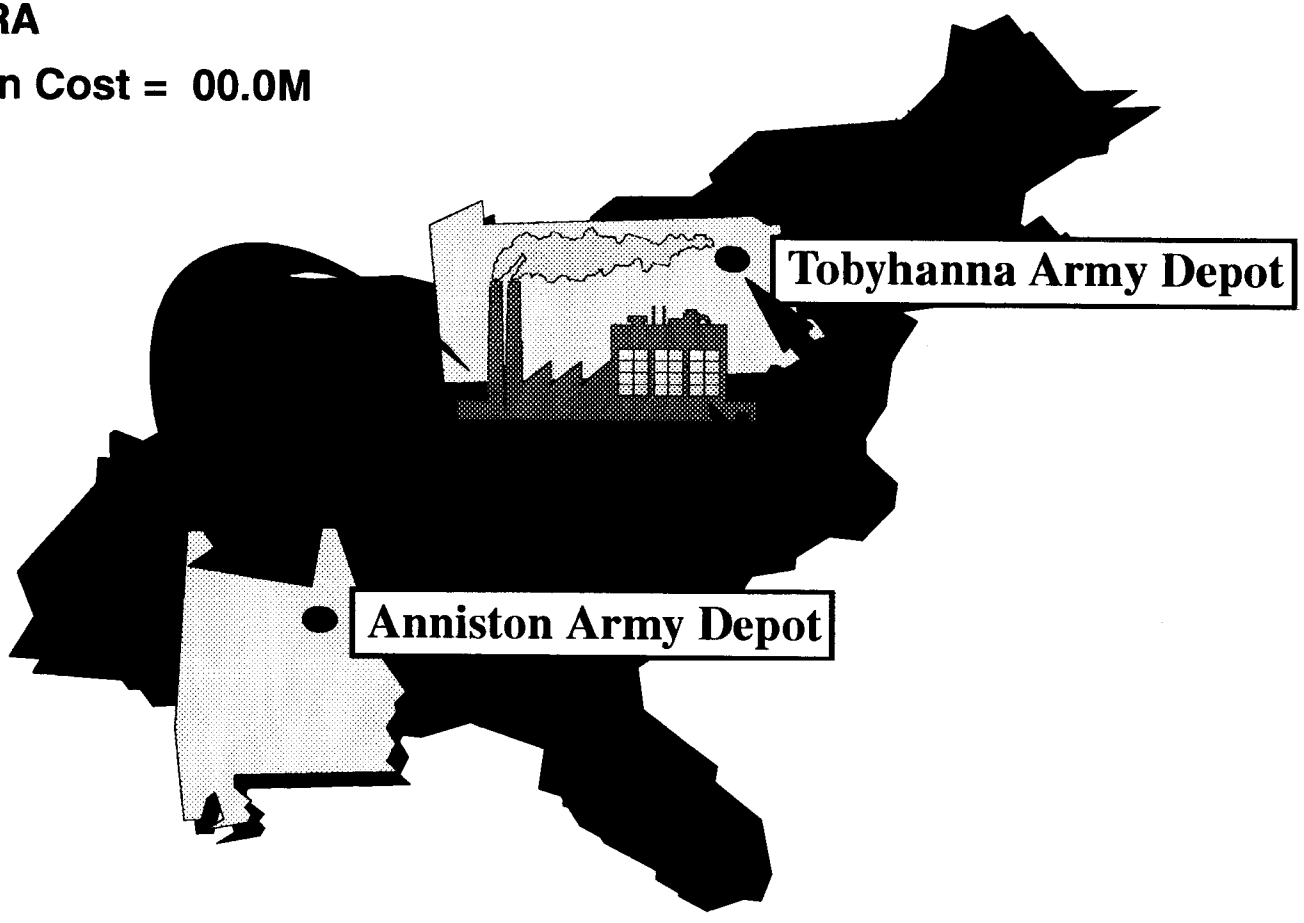
Actual Cost to Move Tenants = $54.3M

Cobra provided for moves of 510 persons compared to 1,485 employed

DLA Relocation NOT Considered

COBRA

Relocation Cost = 00.0M

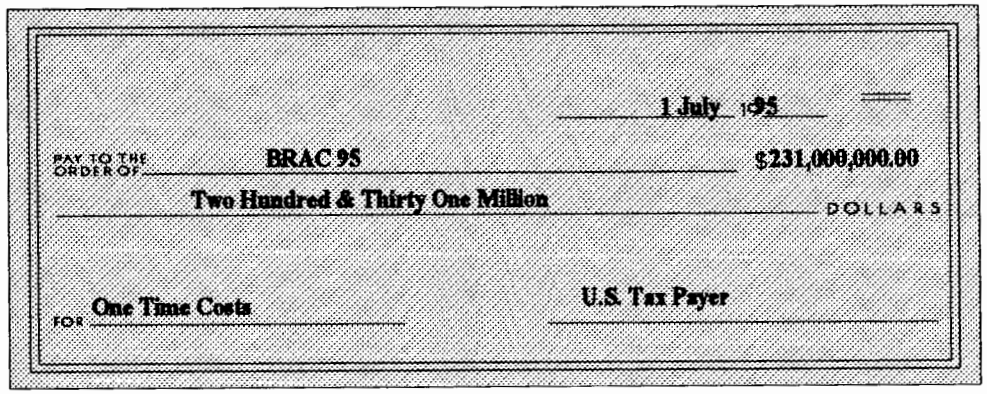


Actual Relocation Cost = $44.9M

Cost to move material

Letterkenny Army Depot
Realignment Costs

COBRA
One - Time Cost = $50.3M



Actual One - Time Cost

- Construction (TOAD/ANAD) $ +31.5
- Equipment/Trng (TOAD) $ +15.5
- Missile Consolidation $ +42.0
- LEAD & Tenant Moves $ +142.0

$ 231.0M

SUMMARY

CORE Workload Transferred

ALL Workload Transferred

EITHER OPTION DESTROYS TACTICAL MISSILE CONSOLIDATION

BASE VISIT REPORT

LETTERKENNY ARMY DEPOT
DEFENSE DISTRIBUTION DEPOT - LETTERKENNY

MARCH 24, 1995

LEAD COMMISSIONER: Al Cornella

ACCOMPANYING COMMISSIONER: None

COMMISSION STAFF:
David Lyles, Staff Director
Glenn Knoepfle, Senior Analyst, Cross Service Team

LIST OF ATTENDEES:
Senator Rick Santorum
Congressman Bud Shuster
Col James P. Fairall, Commander, Letterkenny Army Depot
LTC Leslie Carlow, Commander, Defense Distribution Depot - Letterkenny
Mr. Peter Scott, General Manager, United Defense, Paladin Production Division - Letterkenny
Mr. Robert Shively, Chief, Vehicles Shop Division, Directorate of Maintenance, Letterkenny Army Depot
Mr. David Goodman, Chief, Missile Electronics Shop Division, Directorate of Maintenance, Letterkenny Army Depot
Ms. Hallie Bunk, Chief BRAC Implementation Office, Letterkenny Army Depot
Mr. Ed Averill, Chief Ammunition Storage Directorate, Letterkenny Army Depot

BASE'S PRESENT MISSION:

- Letterkenny's maintenance depot overhauls tactical missiles, artillery systems, and other support equipment to like-new condition for far less than the cost of buying new items. Entire systems are repaired, modified, and integrated.
- Under a teaming effort, United Defense has collocated on-site to work with depot personnel to modify M109 Howitzers into the Paladin configuration.
- The depot's Directorate of Ammunition Operations stores, ships, and demilitarizes ammunition; and maintains and up-rounds missiles.
- Letterkenny supports more than 15 tenants, including a DLA distribution depot and DISA megacenter.

SECRETARY OF DEFENSE RECOMMENDATION:

- Realign Letterkenny Army Depot by transferring the towed and self-propelled combat vehicle mission to Anniston Army Depot.
- Retain an enclave for conventional ammunition storage and tactical missile disassembly and storage.
- Change the 1993 Commission's decision regarding the consolidating of tactical missile maintenance at Letterkenny by transferring missile guidance workload to Tobyhanna Army Depot.

SECRETARY OF DEFENSE JUSTIFICATION:

Letterkenny Army Depot is one of the Army's five maintenance depots and one of three ground vehicle maintenance depots. Over time, each of the ground maintenance facilities has become increasingly specialized. Anniston performs heavy combat vehicle maintenance and repair. Red River performs similar work on infantry fighting vehicles. Letterkenny Army Depot is responsible for towed and self-propelled artillery as well as DOD tactical missile repair. Like a number of other Army depots, Letterkenny receives, stores, and ships all types of ammunition items. A review of long range operational requirements supports a reduction of Army depots, specifically the consolidation of ground combat workload at a single depot.

The ground vehicle maintenance capacity of the three depots currently exceeds programmed work requirements by the equivalent of one or two depots. The heavy combat vehicle mission from Anniston cannot be absorbed at Letterkenny without major construction and facility renovations. Available maintenance capacity at Anniston and Tobyhanna makes the realignment of Letterkenny the most logical in terms of military value and cost effectiveness. Closure of Letterkenny is supported by the Joint Cross-Service Group for Depot Maintenance. The Army's recommendation to transfer missile workload to Tobyhanna Army Depot preserves Letterkenny's missile disassembly and storage mission. It capitalizes on Tobyhanna's electronics focus and retains DOD missile system repair at a single Army depot.

MAIN FACILITIES REVIEWED:

Letterkenny Army Depot Missile Electronics Shops Division
Letterkenny Army Depot Vehicle Shops Division
United Defense Enterprise for Paladin Conversion

Windshield Tour of Defense Distribution Depot Letterkenny facilities including selected vehicle storage yards
Ammunition storage area (staff visit only)

KEY ISSUES IDENTIFIED

Letterkenny Army Depot now includes more than 19,000 acres. Under DOD's proposal about 12,000 acres would be retained for storage of conventional ammunition and uprounded missiles. The ammunition storage activity would also continue to have responsibility for periodically testing and recertifying uprounded missiles.

The DOD recommendation would retain tactical missile maintenance at one central site, however the consolidation point would be established at Tobyhanna Army Depot, rather than Letterkenny. The guidance and control sections will be removed from uprounded missiles stored at Letterkeny, or other established storage locations and then trucked to Tobyhanna for repair and overhaul. The repaired sections would be returned to the storage site for uprounding. Vehicles which provide the platforms for missiles or command and control apparatus for Army missile systems would be transported between Tobyhanna and Anniston,Alabama. Anniston would refurbish the vehicles, and Tobyhanna would integrate and test the complete system.

Tactical Missile Maintenance:

BRAC 93 established Letterkenny as the consolidated DOD depot for tactical missile maintenance. Letterkenny has made substantial progress toward implementing the missile maintenance plan. As of March 1995, workload transfers for 12 of the 21 missile systems designated for consolidation at Letterkenny have been completed. Maintenance work on 10 of the transferred systems have completed first article testing and are in full production. Workloads for 9 more missile systems are scheduled to transfer during the period FY 1995 through FY 1998. By FY 1999, the consolidated missile maintenance work will provide Letterkenny about 760 million direct labor manhours of work. Letterkenny has work spaces totaling 290,000 square feet for repair and overhaul of guidance and control sections. Interservicing, now accounts for 35 percent of the total tactical missile maintenance workload. Upon completion of the consolidation effort, about 55 percent of the total workload will be derived from Interservicing actions.

Letterkenny has established radar testing ranges to integrate all subsystems of overhauled Patriot missile systems. According to the Letterkenny officials this requires at least 28 acres of flat open land space.

About $26.6 million has already been expended to facilitate the tactical missile maintenance consolidation -- $4.9 million for building renovation, $4.0 million to move 72 personnel and their families from the losing activities, $7.5 million to recruit and train about 190 newly hired electronics technicians, $6.1 million to transport and install equipment from 8 different losing sites, and $4.1 million for procurement of new equipment. Also, equipment valued at about $100 million has been recovered from 8 losing sites and then installed at Letterkenny.

Artillery work - Paladin

In accordance with the BRAC 1993 recommendation, Letterkenny continues to perform major overhaul and maintenance on small to medium tracked vehicles. In addition the depot refurbishes a variety of wheeled vehicles that transport Army missile systems and components. A tour of the vehicle shops disclosed that the depot recently completed construction of a new high tech painting booth costing $6.2 million. Letterkenny has one of three DOD X-ray facilities for examining the quality of steel welded products. The vehicle shops total more than 350,000 square feet of work space.

Letterkenny has established an ongoing teaming arrangement with a private sector firm, United Defense, to produce 630 upgraded M109A6 Paladin artillery systems. Under this arrangement, dubbed "Paladin Enterprise" the old gun turret is removed in Letterkenny shops. The Letterkenny shop overhauls the chassis to like new condition and returns it the contractor.

United Defense fabricates a new turret at its York, Pennsylvania plant, and sends the turret to the Letterkenny depot , where it is outfitted with new wiring, hydraulic hosing and component parts. The completed turret is then installed on a refurbished chassis received from the Letterkenny vehicle shop. Lastly, the completed system is test driven and fired on the Letterkenny test track and range. The joint project has saved the taxpayers about $15 million and is scheduled for completion in October 1998.

Discussions with Letterkenny and United Defense officials revealed that 120 more systems could be upgraded if contract options are exercised. United Defense is also looking to expand its business into other tracked vehicle systems. The company is closing its California production facility and consolidating its work at the York, Pennsylvania plant, which is located about 50 miles from Letterkenny. The company manager indicated that United Defense has produced and worked on all current tracked vehicles used by the U. S. military except the main M1 battle tank.

Defense Distribution Depot - Letterkenny

The distribution depot is comprised of 29 masonry warehouses and 60 covered storage shelters. The depot is about 73 percent full. About 49 percent of the distribution depots business is derived from the Letterkenny maintenance depot. They are currently receiving supply items from Lexington - Bluegrass Army was closed during BRAC 88.

The distribution depot is responsible for the storage of approximately 7500 vehicles of various types and in conditions ranging brand new to unserviceable awaiting major overhaul or disposal. Outside vehicle storage covers about 100 acres, and presently 33 acres are occupied. The depot vehicle parking grounds are either blacktop or packed gravel. They have no cement hard stand storage. Based on DLA's military value, the Letterkenny distribution depot was ranked third from a total of 17 distribution depots collocated with a maintenance depot. While,

the Letterkenny Distribution Depot is a highly valued DLA resource, if the Letterkenny maintenance depot mission is terminated, the distribution depot would also no longer be needed.

Lower Capacity in Comparison to Other Army Depots

The Letterkenny Army Depot believes it received a lower military value rating because its capacity was low, compared to other Army Depots. If capacity were based on the number of useable square feet, instead of workstations, the Letterkenny Army Depot would be ranked among the most valuable. For example a single bay could accommodate two work positions and a large tracked vehicle or 50 workstations configured to repair hundreds of individual circuit cards.

The Letterkenny Army Depot workload fell off during the 1991 and 1992 time period due the "on again / off again" transfer of missile work from Anniston Army Depot. During this time, Letterkenny transferred some vehicle work to other areas, anticipating missile work in its place. However the transfer of missile work was challenged by Anniston labor unions and a court injunction blocked the transfers. Therefore Lewtterkenny's assigned workload dropped substantially, capacity utilization was low, and average direct labor hour rates increased to the point where Letterkenny was no longer competitive.

Letterkenny's capacity utilization and labor rates are driven by assigned workload. The commanders briefing indicates that utilization will exceed 100 percent in the 1996 and 1997 timeframe and then fall to between 70 and 80 percent in 1999 upon completion of the Paladin upgrade program.

Letterkenny's One-Stop Proposal for Tactical Missile

While Letterkenny is proceeding with implementation of the consolidated tactical missile maintenance program as directed by BRAC 93, the base believes it should be the designated storage and intermediate maintenance site for all future missile systems. In addition, they believe they should have responsibility for storage and intermediate maintenance (periodic testing) for all other DOD missile systems. Currently, Letterkenny stores and maintains uprounded missiles for a significant portion of the Army's inventory, and almost all Air Force tactical missiles except AMMRAM. Navy systems are stored and uprounded at either Fallbrook, California or Yorktown, Virginia.

COMMUNITY CONCERNS RAISED:

Congressman Shuster, provided a briefing on behalf of the community organization. The community organization calls itself the LEAD Coalition. Essentially, Congressman Shuster's group is concerned about keeping the base open and keeping the current staff of trained personnel employed. He reiterated the BRAC 1993 recommendations, the benefits of Paladin Enterprise and questioned the logic behind the Army's evaluation which placed Letterkenny among the least valued depots.

The community pitch was critical of the DOD BRAC 95 recommendation which decentralizes electronics and maintenance functions. The community questions whether or not (1) the receiving activity can store guidance and control sections which are "Class C" explosives, (2) if the receiver can paint Patriot systems in a high bay with antenna and outriggers attached, and (3) if space and facilities are available to support radar testing of Patriot systems. Finally, the community stated that reversal of the BRAC 93 recommendation will increase maintenance costs, turnaround time, and that additional military construction projects would be required at the receiving sites.

REQUESTS FOR STAFF AS A RESULT OF VISIT: None noted.

Glenn Knoepfle, Cross Service Team, 3/27/1995

THE DEFENSE BASE CLOSURE AND REALIGNMENT COMMISSION

EXECUTIVE CORRESPONDENCE TRACKING SYSTEM (ECTS) # 950502-3

FROM: CHAPMAN, GERALD	TO: DIXON
TITLE: PATRIOT LOGISTICS MANAGR	TITLE: CHAIRMAN
ORGANIZATION: LETTERKENNY	ORGANIZATION: DBCRC
INSTALLATION (s) DISCUSSED: LETTERKENNY ARMY DEPOT	

OFFICE OF THE CHAIRMAN	FYI	ACTION	INIT	COMMISSION MEMBERS	FYI	ACTION	INIT
CHAIRMAN DIXON				COMMISSIONER CORNELLA			
STAFF DIRECTOR	✓			COMMISSIONER COX			
EXECUTIVE DIRECTOR	✓			COMMISSIONER DAVIS			
GENERAL COUNSEL	✓			COMMISSIONER KLING			
MILITARY EXECUTIVE				COMMISSIONER MONTOYA			
				COMMISSIONER ROBLES			
DIR./CONGRESSIONAL LIAISON		✓		COMMISSIONER STEELE			
DIR./COMMUNICATIONS				REVIEW AND ANALYSIS			
				DIRECTOR OF R & A	✓		
EXECUTIVE SECRETARIAT				ARMY TEAM LEADER	✓		
				NAVY TEAM LEADER			
DIRECTOR OF ADMINISTRATION				AIR FORCE TEAM LEADER			
CHIEF FINANCIAL OFFICER				INTERAGENCY TEAM LEADER	✓		
DIRECTOR OF TRAVEL				CROSS SERVICE TEAM LEADER		X	
DIR./INFORMATION SERVICES							

TYPE OF ACTION REQUIRED

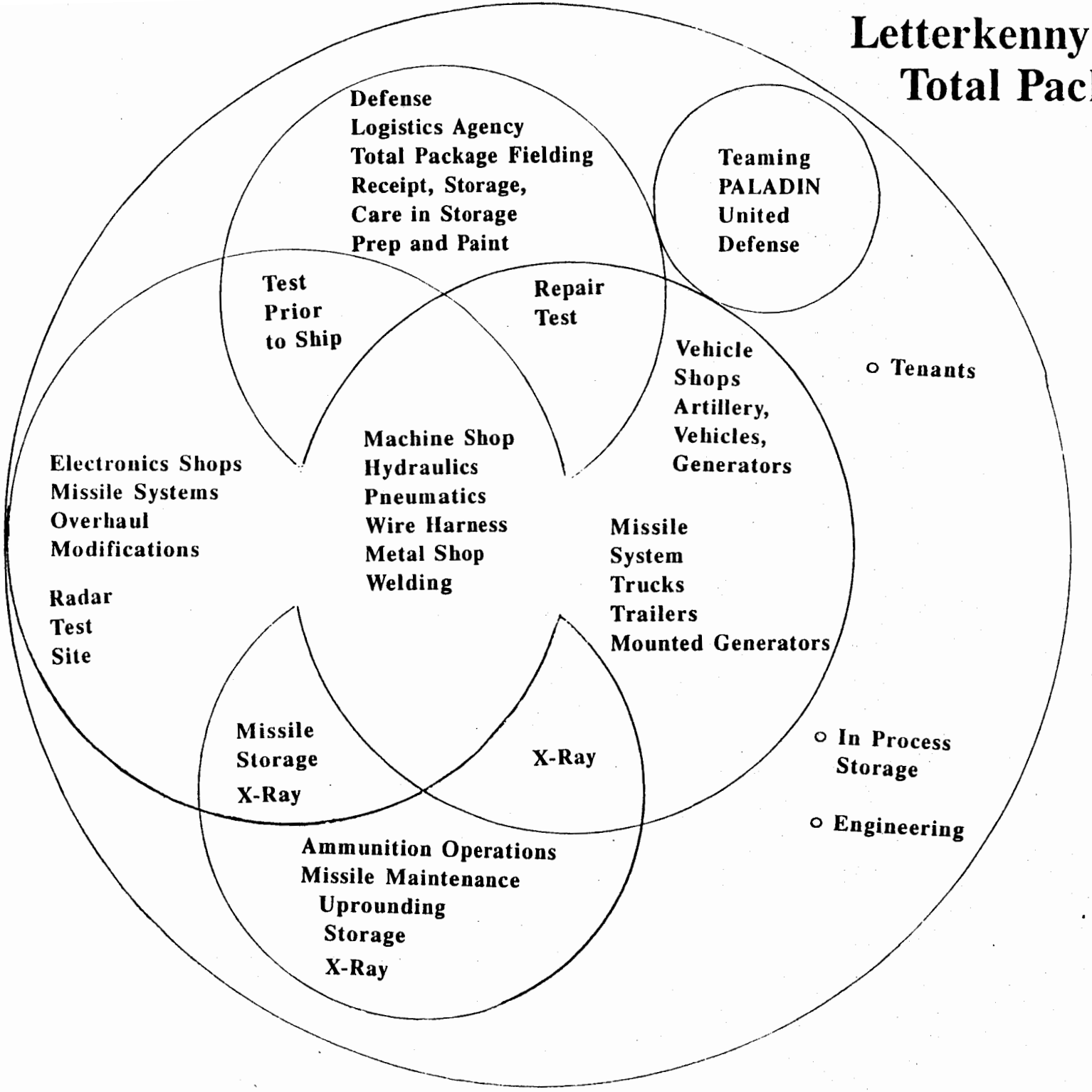
✓	Prepare Reply for Chairman's Signature		Prepare Reply for Commissioner's Signature
	Prepare Reply for Staff Director's Signature		Prepare Direct Response
X	ACTION: Offer Comments and/or Suggestions	✓	FYI

Subject/Remarks:

PROVIDING ISSUE PAPER DETAILING REASONS THE PATRIOT SYSTEM SHOULD REMAIN AT LETTERKENNY.

Due Date: 950509	Routing Date: 950502	Date Originated: 950428	Mail Date:

Letterkenny Army Depot
Total Package



- Tenants
- In Process Storage
- Engineering

Also

- Capacity for Tenanats
- Interstate Highway
- Rail Access
- 50 Miles to C5A capable airport

Please take this number
when responding 950502-3

28 April 1995

Dear Commission Chairman Dixon,

As the PATRIOT Logistics Manager at Letterkenny, I would like to present some background on establishing a depot level maintenance source for the most complex electronic system in the U.S. Army inventory.

This letter will be lengthier than most. I will try not to insult your intelligence by over simplifying, nor over-burden you with military jargon.

I won't get into my personal background too deeply. Prior to managing PATRIOT Logistics, I have trained Army personnel in Germany to repair computers, supervised forty plus people in electronics systems maintenance and have been a PATRIOT Logistics Representative for Letterkenny and U.S. Army Depot Systems Command (DESCOM) since 1987. If the future follows past actions, I will be given several options. Retire with a 10 percent reduction in benefits, move to another government job, follow PATRIOT to a new location (past practice for my position on other relocating systems) or continue to work at Letterkenny if the commission recommends that it remain open supporting PATRIOT in its present capacity.

I have served in the Army and my son has served in the Air Force so I have the perspective at receiving support, giving support and the costs involved. I also live in an area where service in the military is held in high regard. Those same people who served their country well are also living with very tight budgets. Our tax dollars they are providing should be spent wisely.

I will attempt to list the logistics elements that will require intensive management to move the PATRIOT Maintenance and Modification Facilities. The logistics elements I want to discuss are:

1. New Equipment Training (NET)
2. Facilities
3. Depot Maintenance Plant Equipment (DMPE)
4. Technical Data Packages (TDP)
5. Repair Parts Stock
6. Depot Maintenance Work Requirements (DMWR)

1. PATRIOT NET - is really an intermediate step for depot personnel. Letterkenny required prerequisite missile system level background for PATRIOT technicians. System level meant having operations and maintenance experience. Mechanical and electrical expertise was required for the most complex missile systems in the Army and Marine Corps inventory.

Systems level personnel are normally developed through a progression of skill level tasks. During the mechancial overhaul functions they learn missile specifications and the quality requirements to develop the proper standards of workmanship. They also learn the use and format of technical manuals and DMWRs. DMWR's being the procedures for repair and test of a product. Missile system specifications are more stringent than other military standards.

Technicians will then move on to tests of various complexity at general and specialized test stations before qualifying to become system level technicians. The percentage who get the opportunity or qualify at system level is limited.

I have been to the other depots, and I am deeply concerned about trying to move the PATRIOT system. Skill base can not be measured by the number of schools attended, but by the work demonstrated and production of assets in quantities required.

The Department of Defense (DoD) is going to lose most of its PATRIOT skill base during a move to a new installation. The recovery time to develop a new skill base will be five years minimum . Even if 30 percent of the people move there will not be enough people to train and execute workload at the same time for required production. You cannot guarantee the distribution of skill level will transfer since a lot of the system level people are closest to retirement.

System level people in PATRIOT have undergone specialized training on PATRIOT and developed their skills during the overhaul and modification process at the depot and at all PATRIOT locations worldwide. The Army cannot support the overhaul and modification effort at its present level during a move to a new installation. The Army needs to increase depot support to execute its PATRIOT overhaul and modification programs during the same time a transition would take place. I'm sure there will be expenses and requirements for the move that were never considered during the savings evaluation process. The cost of developing a new skill base and the decrease in the level of support that will occur will be a major impact to the PATRIOT overhaul and modification program.

As an additional note on the complexity of the PATRIOT System. Without the PATRIOT unique hardware mounted on trucks and semi-trailers, the PATRIOT System contains systems that are managed by other Army Project Managers.

2a. FACILITIES - There are manufacturing, maintenance and storage faciliates required for the PATRIOT hardware and additional floor space for administrative offices. I won't discuss all of the security and building maintenance requirements.

Letterkenny was the total package fielding site for the PATRIOT Missile System. Total package fielding meant that when you shipped the total package of equipment all you had to add was personnel.

The Total Package Fielding (TPF) for a PATRIOT Battalion involved staging and moving over 300 support and tactical vehicles at one time. People have to be licensed to load and operate different classes of trucks. They had to use material handling equipment such as cranes and forklifts to get the job done at depot or at deployed locations.

At some point in time the twelve battalions of equipment plus additional pieces of equipment not assigned to PATRIOT battalions will be returning for storage. When you look around Letterkenny at the excess equipment now stored from reduced requirements from other Missile Systems, you can see the extensive "ACREAGE" required to store the equipment.

As missile systems age and parts become difficult to find in the military supply system; and manufacturers no longer exist or choose to manufacture small quantities of necessary parts, the excess equipment becomes the only source of supply. The importance of having storage and maintenance of equipment at the same location becomes obvious to those overhauling the equipment. The size and condition of older vehicles and carriers impedes movement of the complete major items while reuseable repair parts remain within them.

Inside storage at the maintenance location is also a critical consideration. To give you some idea of the amount of material

handled during an overhaul process while the major item is disassembled. Without considering the trucks, trailers, and shelters, there are presently being processed at Letterkenny at this time with secondary items workload returned from the field being shown in the second column.

Circuit Cards	Size 5 in. x 7 in.	7,750	1,200
Power Supplies	Typical 4 in. x 5 in. x 9 in.	450	250
	Non-Typical 3 ft. x 4 ft. x 3 ft. (1400 lbs)	6	50
	Cables/Wire/Harnesses	4,300	100
	Motors and Fans	200	120
Circuit Card Holder Racks	3 ft. x 8 in. x 2 ft.	300	200
	TOTALS	13,006	1,920

As this large volume of subassemblies is repaired the smaller piece parts must be ordered, stored and distributed. While I don't have an exact number, I can tell you that they number in thousands.

The Defense Logistics Agency (DLA) stores subassemblies, classified and unclassified, for maintenance and modification programs. There are instances when the maintenance technicians are requested for help in identifying configurations, condition codes, and minor repairs. The interrelationship of DLA and Letterkenny provides a valuable asset to PATRIOT and the other missile systems maintained by Letterkenny.

The storage and movement of PATRIOT major items is comparable to moving semi-trucks and trailers around a truck terminal. Add the maintenance of those trucks while stored and periodic checks and it gives you a better picture of what takes place during maintenance and storage.

Letterkenny is presently applying all the PATRIOT modifications to major item equipment in the field worldwide. Raytheon produces a portion of the kits that are used, and Letterkenny fabricates or procures a portion of the kits that are used as directed by the PATRIOT Project Office.

The kits which can number in hundreds, there are approximately 800 Launching Stations fielded, must then be consolidated and shipped in the proper quantity to a location. There are cost advantages to consolidating the kits, classified and unclassified, at Letterkenny. The kits are readily available to apply to major items as they pass through the overhaul program at Letterkenny. Reuseable hardware and modifiable assemblies are also redistributed by Letterkenny or DLA. A disruption of the relationship with DLA in the modification program is going to cost money and create delays in responding to the Modification Teams in the field.

The schedule of events for PATRIOT modifications is based on the application cycle for each battalion and the teams can only work as fast as kit hardware is supplied to them. There are occasions when a piece will not function or it breaks. Letterkenny presently has a system for delivering another piece within one day U.S. and one to two days overseas.

There is also a liaison office at Letterkenny which is a part of the PATRIOT Project Office at Huntsville, AL and a tenant to Letterkenny. The liaison office organizes battalion level deployments (TPF) for the U.S. Army and foreign military customers. They have special project code storage accounts for storing hardware with DLA. I'm certain that additional costs will be involved in moving hardware accounts and personnel from the liaison office.

The packaging of missile repair parts ranges from the delicate requiring foam and bubble wrap to 1400 lb power supplies bolted to construction size lumber and built into wooden boxes. The amount of material and space required for packaging and reprocessing residue should not be underestimated

The PATRIOT system uses insulating oils, ethylene glycol (anti-freeze), sealants, glues, and coatings which will require shelf-life monitoring, and safety data sheet review for storage and handling requirements. The PATRIOT Launching Station has its own diesel generator with coolants and lubricants which must be prepared for storage and shipment.

2b. MAINTENANCE FACILITIES - PATRIOT is a major user of floor space during maintenance operations at Letterkenny. I won't discuss square footage requirements as I'm sure that has been supplied by other sources.

Some points I would like to cover are those which may not readily show up on a floor plan.

[redacted] PATRIOT radar requires a 20 ton crane to remove it from its trailer. This requires indoor space with sufficient overhead (high-bay) clearance.

The high bay area must also serve as an assembly, disassembly, and test area during overhaul. There is extensive material handling equipment for the major pieces of the radar set, trailer, shelter, antenna, and three subassemblies in the 1000 lb category. When five to six radar sets are in-process with the other major items, space and movement of material becomes critical.

The test consoles for PATRIOT are quite varied in size and complexity. I can assure you that our PATRIOT secondary (sub-assembly) console operators are qualified to operate system level consoles for other missile systems as has been demonstrated during missile consolidation from BRAC 93.

There are automated consoles and manually operated consoles. The automated consoles are restricted in distance from the concentrators that act as software repositories and interact with the consoles during testing. Floor plan layouts must take this into consideration.

The maintenance facility is also supported by PATRIOT unique test equipment maintenance and calibration requirements. There are spare pieces of test equipment to be stored.

Has anyone considered how the required load testing will be performed for the 20 ton cranes, associated lifting slings, and the associated carts and dollies for the shelters and sub-assemblies? How will the trailers and dollies be moved? I have found that these types of things cause as many problems as high tech issues.

Power generation equipment or utilities has to be a consideration with PATRIOT. **A PATRIOT radar uses 150 thousand watts of power during full test.** Operating several radars simultaneously plus the other PATRIOT major items and missile systems consumes tremendous amounts of electricity. **The utility company had to upgrade the substation providing power to the depot when PATRIOT was introduced to Letterkenny.** Special power distribution boxes and converters are required for PATRIOT and I'm not certain they have been considered in any movement of PATRIOT from Letterkenny.

A new system, Ground Based Radar, is scheduled to come to Letterkenny in the year 2000 timeframe. It requires a 1 million watt generator (small city). The complete radar will probably require a stand alone generator, but I am sure the subassemblies will be high level power users. I haven't even begun to look at radiation pattern requirements during test. A radar with power of that magnitude will require special authorization and plenty of free space to operate.

The radar test site requires a classified building with radiation space of approximately 30 acres. There are special setup requirements that would require Raytheon involvement. The fabrication of support structures was accomplished by Letterkenny, site surveys and engineering studies by Letterkenny and Raytheon were quite extensive.

Software and test equipment must be customized for the site. Approximately two years would be needed to move the Test Site if an existing structure and site is available.

Having just returned (Apr 21) from Raytheon in Boston, they were surprised and concerned that no one has contacted them for cost and magnitude of effort to move their manufactured equipment.

The <u>additional cost</u> of grounds keeping 30 acres, maintaining equipment, and fencing adds to the cost of supporting a depot with PATRIOT operations.

There are <u>significant costs</u> associated with paying utility bills and equipment handling maintenance when supporting Missile Systems the size and complexity of PATRIOT and similar Air Defense Systems.

2c. MANUFACTURING FACILITIES - There are a significant number of gears, metal supports, latches, handles, covers, upholstery items, and other nonstocked repair parts that Letterkenny supplies within its own machine, welding, metal fabrication, and upholstery shop.

Why is having these capabilities important to a depot supporting PATRIOT? Finding a supplier for small quantities that require minimum buys of raw material can be a problem. Providing the technical drawings to a supplier and verifying the quality of the product to missile specifications is an added requirement. Metal fabrication, metal treatment, and special coatings at times takes several vendors and more work done at the depot reduces procurement and processing time.

PATRIOT has a gear assembly approximately seven feet in diameter. It requires a machine shop operation to apply new fittings. There are no spare gear assemblies. Risking damage or loss of a gear assembly would be a severe impact to the whole PATRIOT System until another assembly could be bought and the manufacturer produced it.

Upholstery shop capability is not limited to chair coverings and shelter interiors. There are canvas covers for various applications on the PATRIOT System. One of them includes a protective series of canvas covers for maintenance personnel while they work on the radar during inclement weather. Another has electronic signal absorption material attached.

Letterkenny is presently investigating repair or fabrication procedures for a recently introduced cover made of canvas and radio frequency absorption material.

The varied skills of our maintenance personnel include electronics, welding, machinist, sheet metal, hydraulics, pneumatics, upholstery, air conditioning, air compressors, automotive, power generation and heavy equipment operation.

3. The DMPE for PATRIOT is provided by several sources.

a. Raytheon, automated and manually operated.
b. General Electric Test Sets (now Martin Marietta) automated.
c. Martin Marietta automated and manual.
d. Letterkenny developed, manual.

With a constantly changing missile system the hardware and software is modified. Implementing the changes to the DMPE has been an ongoing process between Letterkenny and the DMPE manufacturers. Modification and repair of DMPE at system level requires a certain degree of PATRIOT system operations background.

Planning is in process for modifications to PATRIOT DMPE over the next five years incrementally. Movement of the DMPE and loss of repair expertise is going to have a major impact to support the DMPE and the production of subassemblies and systems.

Lengths of cables, supporting test fixtures and adapters, supporting commercial test equipment, spare built in test equipment, repair parts, maintenance contracts. Ask anyone who maintains DMPE at Letterkenny if PATRIOT DMPE has unique requirements and be prepared to spend a day listening.

Power conditioners, grounding systems, security requirements, signal interference with commercial activities. The problem of moving PATRIOT DMPE is not just a matter of transportation **unless a facility has overhauled missile systems, there will be a period of adjustment to meet all the requirements that will be significent.**

There are twenty six PATRIOT unique DMPE level stations in place at Letterkenny. There are DITMCO (commercial cable, rack, wire harness test station) and motor test stations with PATRIOT unique interfaces and adapters. These are shared with other missile systems.

First article tests on these consoles would amount to a pilot project for PATRIOT to insure the integrity of the test stations and processes. The time to start production over again would be measured in years.

Our equipment maintenance support multiple missile system test station and movement of portions of Letterkennys test stations will dilute the expertise, repair parts, supporting test equipment, and calibration equipment. The benefits of having missile systems support at Letterkenny would be reversed if changes are made.

Let me reemphasize the importance of Raytheon involvement in the movement of PATRIOT DMPE. There is no one at Letterkenny or any other government installation who has the expertise to resolve all the problems that will be encountered in DMPE equipment. The cost factors will not be determined until Raytheon is directly involved and that has not been done.

Letterkenny fabricated approximately 100 each DMPE support fixtures with an additional 50 each (approximate numbers) provided by DMPE manufacturers. The capability to fabricate and support these fixtures; which range from small templates in inches to antenna holders in feet that carry 3 tons, is contained within Letterkennys machine shop.

4. Technical Data Packages (TDP) - The TDP is extensive on PATRIOT. The apperture cards are stored in the technical library within the electronics shops. The revisions and changes are an ongoing process which must be controlled and drawings properly stamped and dated to prevent older drawings from being used.

Letterkenny receives TDP's from MICOM, CECOM, TACOM, AMCCOM, and TROSCOM. There are also contractor prepared manuals and procedures stored within our library. The distribution of information will have to be reestablished for PATRIOT if it is moved. The notification of sources and lapses in information will be a problem to deal with.

The TDP for a three circuit card modular rack is more extensive in volume and contains more military standards/specifications and repair parts listings than most Army systems at other depots. PATRIOT subassemblies are systems within themselves when the technical knowledge TDP and DMPE are considered.

5. Repair Parts Stockage - There are parts that are provisioned (planned for and bought) and stocked in storage to support overhaul programs. There are also nonstocked parts.

Letterkenny has established contracts and accounts for nonstocked parts. There are computer programs for numerically controlled machines that are at Letterkenny. Some of the nonstocked parts have recurring demand and other demands are generated by crash damage or harsh field conditions. The disruption of this extensive (hundreds) parts supply system

will require recovery time that will take years. There would be impacts to implementation and sustainment of an overhaul program for PATRIOT.

Repair parts for PATRIOT range from microscopic in size to hundreds of pounds and measured in feet. Material movement and handling require the proper material handling equipment.

6. Depot Maintenance Work Requirements (DMWR's) - DMWR's are written by Raytheon, Letterkenny and commodity command sources.

As part of the reinvention of government initiative, DMWR requirements are to be reduced or eliminated and best practices implemented. The transition to performing work without DMWR's can be done more easily by a workforce that is already doing the work. After the Pilot Overhaul of a system much of the work is done by those familiar enough with the DMWR that constant reference to each line and paragraph is not required.

The loss of key people and transition away from DMWR's will have an impact on any gaining activity's ability to quickly establish PATRIOT capability.

There are presently 65,000 pages of Technical Manuals (TM's) for PATRIOT with 20% of them changing each year. The DMWR's also have thousands of pages with changes incorporated yearly. It will be difficult to establish repair capability and keep up with changes at the same time.

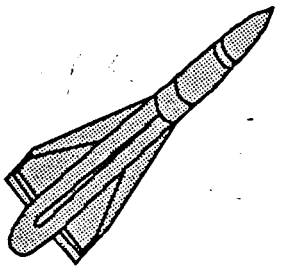
Hopefully this will be of some value in deciding whether or not to move PATRIOT. I don't believe the immensity of it is comprehended by those making the recommendations.

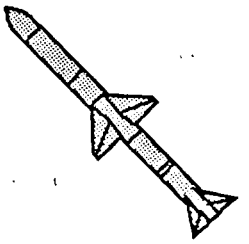
The interrelationship of vehicle shops, electronics shops, and the Defense Logistics Agency at Letterkenny has served PATRIOT well and allowed for easier transition of other missile systems. I would recommend that it remain that way.

Sincerely yours,

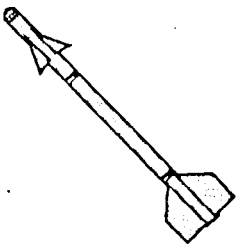
Gerald L. Chapman

GERALD L. CHAPMAN
CTX-PM f/PATRIOT
Letterkenny Army Depot





Joint Services Update of the Tactical Missile Maintenance Consolidation Savings and Cost Analysis



1 August 1992
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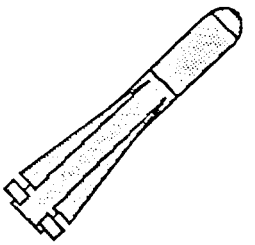

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PURPOSE

The purpose of this study is to estimate the costs of the DoD tactical missile maintenance consolidation and associated savings using a standard methodology. There are some differences in accounting for costs between the services and even between different locations within the same service. As a result, a standard methodology was developed so that costs provided by the services could be presented on an equal basis. The methodology developed was driven by the time period given for completing the study report. The study is based on known requirements and information readily available as of June 1992.

The purpose of the study is not to serve as a basis for future decision making. The purpose is to serve as a "sanity check" that prior decisions were made based upon reasonable assumptions and facts. Because of time constraints and the "sanity check" purpose of the analysis, the DoD Cost Comparability Handbook was not used. The Cost Comparability Handbook states that it is to be used for consolidation studies and competing depot maintenance workloads in public to public and public to private competitions. This study, as a sanity check on the original decision, only develops savings and cost estimates for the one alternative of consolidating missile work at Letterkenny Army Depot. It is not intended as a comprehensive consolidation study in strict accordance with the Cost Comparability Handbook, nor is it to be used for budgetary purposes. Wherever reasonable, standard factors were developed and expert opinion was applied in response to the time available. The study participants included members of each service and representatives from both the logistics and the cost analysis fields.

obtained from the DoD Priority Placement Program, other government installations, and outside the government. The skill base will also be developed through retraining of LEAD personnel. It is assumed that this requirement can be met by LEAD personnel becoming available due to reductions in workload and/or transfer of missions to other depots such as Artillery to RRAD. A more detailed plan for obtaining the necessary skills base is to be developed by LEAD in Sep 92.

(8) Additional costs include $5,000 per system for follow-on support by the current SOR to LEAD after transition. This category also included interim contractor support costs. These were identified by each system requiring such support.

(9) It was assumed that it would take LEAD direct labor personnel a few years after each missile system transition to become as efficient at maintaining and repairing that system as the losing SOR. Each Service proposed different "learning curve" rates by year for different missile systems. The joint service methodology development team consensus was that a single "learning curve" should be applied to all systems and that a "learning curve" cost of 26 percent, 12 percent, and 5 percent over the first 3 years was most representative of the various expert opinions. This "learning curve" is intended to reflect the reality that LEAD must expand its high technology missile skills base and overcome a period of adjustment as employees develop hands-on skills for each new missile system. The number of direct labor hours required at LEAD are assumed to equal the number at the losing SOR prior to any adjustment for learning curve.

(10)(a) There are economies of scale at LEAD which serve to decrease the labor rate in terms of FY91 constant dollars. This is because direct labor hours (DLH) for missile work are increasing faster than the variable portion of any missile related mission overhead and base operations overhead. Consequently, increasing overhead costs are spread over a more rapidly increasing direct labor base. The comparative rates at the current SOR are assumed to not change significantly. This is because, in some cases, other workload coming to the current SOR can compensate for missile work going to LEAD. For example, Anniston Army Depot will be getting tank work from Europe and will, it is assumed, win the competition for Sacramento Army Depot (SAAD) work. Red River Army Depot is getting work from Europe, LEAD, and competing for SAAD work. Tobyhanna Army Depot is losing only one system and is assumed will win a larger amount of SAAD competition work. Similarly, other service locations are planning to use their employees in other areas and no military service is planning a reduction-in-force due to transition of missile work. Also, since approximately 17 missile systems are leaving seven organic locations not planned for closure, the impact on each current SOR would not be nearly as great as on LEAD gaining 21 systems from organic and contractual sources.

(16) Only those costs identified and received from the services and program offices were included in the study. For example, only the equipment identified for procurement is costed. However, during transition additional equipment may be identified because of the age of the current equipment, damage in transit, or it may be required for another program and a replacement piece will be required. It is assumed that necessary equipment identified for transfer is more valuable and economical to transfer than to buy new. In some cases, a piece of equipment may be fully depreciated, but still be very functional and of real value. No attempt was made to adjust LEAD rates based on the remaining depreciation value of equipment transferring to LEAD. Also, it is assumed that the cost to move non-missile type equipment from areas at LEAD designated for future missile work will be nominal and may be compensated by any gain in equipment sold through property disposal. Artillery equipment transferring from a LEAD future missile area to Red River Army Depot is considered a cost of the artillery mission transfer and not the missile consolidation.

(17) A rate per hour analysis was used in lieu of a unit cost analysis because the scope of work and repair processes to be used by Letterkenny are not definitized.

(18) One-time/non-recurring costs, except training costs where schedules have identifed otherwise, will occur in the fiscal year of transition of the missile system as displayed in the Tactical Missile Maintenance Consolidation Plan for Letterkenny Army Depot as revised 30 April 1992. Costs for renovation of facilities will occur in FY93.

(19) Workload is expressed as DLH as displayed in the Tactical Missile Maintenance Consolidation Plan for Letterkenny Army Depot as revised 30 April 1992, page 13, Table 3-5. The one exception is MLRS-RRAD where DLHs were reduced to reflect a more definitized workload as outlined in the Depot Source of Repair Analysis Group (DSRAG) decision of 19 Jun 92. This DSRAG was required since the Line Replaceable Units (LRU) workload was not finalized in the LEAD consolidation plan (page 6, paragraph 3.f.) and some components, such as hydraulics, were imporoperly identified for transition. As a result, the MLRS-RRAD DLHs to transfer to LEAD are:

FY93	FY94	FY95	FY96	FY97
23,500	57,000	57,000	53,000	62,000

(20) Since this is a differential type of analysis, and does not estimate the total cost of operations at any installation, current missile work at LEAD is not included as part of the recurring cost calculation. However, the latest complete year (FY91) of LEAD missile/electronics related costs and direct labor hours does serve as a baseline for the adjustment of LEAD labor rates as additional outside missile work is consolidated at LEAD.

COST/SAVINGS SUMMARY (in thousands)

SYSTEM	TRANSITION COSTS	TRANSITION DATE	STEADY STATE ANNUAL SAVINGS	MILCON SAVINGS
SPARROW	1,706.17	FY93	1,412.08	
TOW COBRA	870.24	FY93	697.97	
BFVS TOW	1,135.74	FY93	475.19	
SIDEWINDER	1,314.10	FY93	1,318.02	
MLRS-RRAD	2,842.56	FY93	884.74	
ATACMS	795.98	FY93	179.38	
AVENGER	277.39	FY93	1,056.72	
HELLFIRE	302.52	FY93	175.82	
LCSS	970.26	FY93	301.92	
DRAGON	817.47	FY93	280.61	
SHILLELAGH	365.02	FY93	92.35	
TOW/TOW II	1,311.96	FY94	918.19	
CHAPARRAL	3,223.16	FY94	1,003.18	
PHOENIX	1,514.89	FY94	496.31	
STANDARD	3,397.34	FY94	250.69	
STINGER (CONT)	490.13	FY94	463.77	
AN/TSQ-73	3,112.74	FY95	302.2	
HARM (CONT)	110.95	FY95	290.67	
AVENGER (CONT)	10.0	FY95	5,666.51	
ATAS (CONT)	10.0	FY95	4,327.45	
HELLFIRE (CONT)	10.0	FY95	32.66	
HAWK (CONT)	10.0	FY95	1,910.61	
PATRIOT (CONT)	10.0	FY95	4,435.23	
MAVERICK	7,458.79	FY96	849.71	
MLRS (CONT)	50.0	FY96	2,707.51	
TOW (CONT)	500.0	FY96	1,087.58	
CONSTRUCTION	6,450.0			
MILCON COST AVOIDANCE				5,500.0
TOTALS	39,067.41		31,617.08	5,500.0

8714.82
817.47
9532.29

8714.82
(Anniston) 2109.89
6604.93

savings from systems transferred to LEAD (non-reporting and non-contractor)

Total MILCON and transition costs are one time costs. Total steady state annual savings are recurring each year after the learning curve costs disappear by FY99. MILCON cost avoidance is for an ATACMS facility at Anniston Army Depot (See Methodology, page 16).

93 → 2003
93 → 97 58.101
189.702
247.803

31,617.08
8714.82
22,902.26 × 20% =
4580.42
8714
13,294

METHODOLOGY

The following methodology was used to determine the costs and associated savings from the DoD tactical missile maintenance consolidation at the Letterkenny Army Depot (LEAD).

Costs were divided into two categories. The one-time costs to complete the consolidation, and the recurring labor costs to perform the missile repair work at the current source of repair (SOR) or only at LEAD.

Savings were determined by subtracting the recurring cost to perform the missile repair work at LEAD from the recurring cost to perform all the work at the current SORs. Additional savings were obtained from the avoidance of new military construction (MCA) at the current SORs. These savings were generated because LEAD has facilities that will accomodate the workload without new construction. Not part of the computation were savings that could not be quantified such as: (1) cross-training between systems at LEAD; (2) increased management and worker expertise; (3) better customer service from a single site; and (4) better utilization of equipment and personnel.

Annual Savings shown as the Differential Recurring Cost on the Summary Sheet, were computed by:

Recurring Repair Costs at current SORs

\- Recurring Repair Costs at LEAD

= Recurring Savings

\- Learning Curve Costs

= Annual Savings of Consolidation

Net Savings are Annual Savings minus one-time/non-recurring costs. Detailed explanations of the methodology used to compute the recurring costs, one-time costs, and associated savings are shown below:

(1) Recurring Costs

(a) Recurring repair costs at the current SORs is the FY91 fully-burdened labor rate multiplied by the manhours to perform the workload. The fully-burdened rate consists of direct labor, fringe, leave, general and administrative expense, indirect mission overhead, and Base Operations costs. No direct materiel costs were considered because they will be equal wherever the work is performed.

(b) Recurring labor costs at LEAD are the future cost of operations to perform the missile work transitioning in between FY93 and FY97. These costs were determined by multiplying the total workload, expressed in direct labor manhours, by the LEAD FY91 fully-burdened labor rate (composed of the above cost elements).

BASOPS Overhead (missiles and electronics)

	Cost	divided by	DLH	=	Rate
FY93	$ 9,645,741		734,180	=	$13.14
+ Increase	1,728,000		1,326,400		
FY97	$11,373,741		2,060,580	=	$ 5.52

The BASOPS cost increase is for 60 additional people at an average cost of $28,800. The range is 13.14 - 5.52 = 7.62

And the BASOPS OH rates are:

			Rate
FY93			$13.14
FY94	$13.14 - (.39 x $7.62)	=	$10.17
FY95	$13.14 - (.58 x $7.62)	=	$ 8.72
FY96	$13.14 - (.91 x $7.62)	=	$ 6.21
FY97			$ 5.52

In summary, the rates for LEAD as adjusted for economies of scale are:

	FY93	FY94	FY95	FY96	FY97
Direct Labor	18.68	18.68	18.68	18.68	18.68
MSN OH	20.13	15.96	13.93	10.40	9.44
BASOPS	13.14	10.17	8.72	6.21	5.52
Total Rate	$51.95	$44.81	$41.33	$35.29	$33.64

(e) Army Rate Increase due to Unfunded Fringe Benefits. Army depot rates were increased to reflect the fact that unfunded government contributions to fringe benefits are in Navy/Air Force rates, but not in Army rates. The Army rates were adjusted as follows based on the fact that LEAD fringe benefits are approximately 20% of salary and this percentage can be applied to other Army depots:

Salary	plus	Fringe	=	Total Rate
X	+	.2X	=	$51.95 (LEAD FY93)
		1X	=	$43.29

The OPM percentage of salary for unfunded government contribution to fringe is 14.7% Therefore,

$$.147 \times 43.29 = Y \times 51.95$$
$$Y = .1225$$

so that 12.25% of Army Salary plus Fringe is the unfunded fringe that should be added to Army rates. Therefore, the Army rates are adjusted as follows:

LEAD Rates					
FY93	$51.95	x	1.1225	=	$58.31
FY94	$44.81	x	1.1225	=	$50.30
FY95	$41.33	x	1.1225	=	$46.39
FY96	$35.29	x	1.1225	=	$39.61
FY97	$33.64	x	1.1225	=	$37.76

Engineers, or the Corps of Engineers, depending on who performs the work. Costs are LEAD Engineering cost estimates.

(b) Procurement of test equipment not transferring to LEAD. This cost was determined by obtaining a list of equipment not transferring to LEAD and estimating the procurement cost.

(c) Transfer of Equipment. (Disassemble, Pack, Load, Ship, Unload, Unpack, Assemble, and Calibrate) The Defense Logistics Agency (DLA) is likely to perform much of this work, but depot employees are also likely to be involved. The DLA reimbursement rate for a WG-07 employee ranged from $31.57 per hour at Tobyhanna Army Depot (TOAD) to $37.11 per hour at Red River Army Depot. Army depot maintenance fully burdened labor rates ranged from a low of approximately $38.00 per hour at TOAD to an averaged high of approximately $56.00 per hour for missile/electronics maintenance at LEAD. For this analysis, a higher cost conservative approach is used by costing labor hours at an upward rounded average of $50.00 per hour fully burdened rate rather than the lower DLA rate. The calculation is: (37.11 + 56.00) /2 = 46.56, rounded to $50.00. Where the Air Force and Navy provided a different factor or cost for their personnel or systems, then that number was used.

(d) Training. Formal classroom training is provided by service schools and contractors. Courses provided by contractors have a tuition cost while courses provided by the service schools did not. All formal training and OJT included travel costs, per diem and the fully burdened rate multiplied by the number of manhours. Estimates are unique to each system.

(e) Technical Data Costs. Costs to reproduce manuals where applicable and ship manuals was considered a nominal cost. Technical manuals should have no increased cost if new manuals are shipped from the appropriate central distribution center. Manuals transitioning from the current SOR to LEAD would incur minimal costs to pack and ship. Manufacturers' manuals for equipment will be shipped with the equipment and are included with the equipment transition. Aperature card costs would be to pack and ship from the current SOR to Letterkenny, and would be minimal. Technical data costs would only be included if a specific missile system could show a significant cost.

(f) Transfer of Inventory. The fully burdened labor rate of $50.00 per hour was used as identified under Transfer of Equipment. Costs were computed using the number of lines times 0.25 hours per line multiplied by the fully burdened labor rate. Ten percent of this figure was estimated for materials and transportation costs. The cost to receive the inventory was considered equal to the labor cost to ship.

(g) Contract Modification. The only contract modification identified is for the Army Tactical Missile System. The increased first destination charges were estimated to be $60,000 per year for four years or $240.000.

(h) Demo/Validation. The services certify the processes and the equipment when a depot comes on line to repair a new missile system. When this occurs, personnel are sent to LEAD for a period of up to one

16 Nov 92

	SPARROW	TOW/wCOBRA	BFVS	SIDEWINDER	MLRS-RRAD	ATACMS	AVENGER	HELLFIRE	TOTALS
1. EQUIPMENT									
A. PROCUREMENT	235.00	0.00	0.00	140.00	2500.00	100.5	0.00	0.00	2975.50
B. TRANSFER	401.32	22.50	138.75	261.40	24.16	281.80	0.00	15.00	1144.93
2. TRAINING COSTS	844.85	463.87	578.89	637.70	237.40	147.68	192.39	193.31	3296.09
3. TRANSFER INVENTORY	0.00	228.87	133.10	15.00	31.00	16.00	0.00	44.21	468.18
4. CONTRACT MODIFICATION	0.00	0.00	0.00	0.00	0.00	240.00	0.00	0.00	240.00
5. DEMO/VALIDATION	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	80.00
6. PERSONNEL/PCS/PER DIEM TRAVEL/HOUSE HUNTING	210.00	140.00	70.00	245.00	35.00	0.00	70.00	35.00	805.00
7. OTHER									
A. CONTRACTOR INTERIM SUPPORT	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	200.00
B. FOLLOW ON SUPPORT	5.00	5.00	5.00	5.00	5.00	0.00	5.00	5.00	35.00
TOTAL	1706.17	870.24	1135.74	1314.10	2842.56	795.98	277.39	302.52	9244.70

*ALL FIGURES ARE 1,000'S
BASED ON FY 92 PRICES,
EXCEPT TRAINING WHICH IS FY93

16 Nov 92

	STINGER CONT.	AN/TSQ-73	HARM CONT.	AVENGER CONT.	ATAS CONT.	HELLFIRE CONT.	HAWK CONT.	PATRIOT CONT.	TOTAL
1. EQUIPMENT									
A. PROCUREMENT	0.00	1794.00	0.00	0.00	0.00	0.00	0.00	0.00	1794.00
B. TRANSFER	0.00	44.50	0.00	0.00	0.00	0.00	0.00	0.00	44.50
2. TRAINING COSTS	475.13	373.24	100.95	0.00	0.00	0.00	0.00	0.00	949.32
3. TRANSFER INVENTORY	0.00	81.00	0.00	0.00	0.00	0.00	0.00	0.00	81.00
4. CONTRACT MODIFICATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5. DEMO/VALIDATION	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	80.00
6. PERSONNEL/PCS/PER DIEM TRAVEL/HOUSE HUNTING	0.00	105.00	0.00	0.00	0.00	0.00	0.00	0.00	105.00
7. OTHER									
A. CONTRACTOR INTERIM SUPPORT	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	700.00
B. FOLLOW ON SUPPORT	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00
TOTALS	490.13	3112.74	110.95	10.00	10.00	10.00	10.00	10.00	3763.82

*ALL FIGURES ARE 1,000'S BASED ON FY 92 PRICES, EXCEPT TRAINING WHICH IS FY93

Pilot and transfer and training

373.24
105.00
478.24

16 Nov 1992

	PAGE 1	PAGE 2	PAGE 3	PAGE 4	TOTALS
1. EQUIPMENT					
A. PROCUREMENT	2975.50	53.50	1794.00	0.00	4823
B. TRANSFER	1144.93	1528.71	44.50	247.24	2965.38
2. TRAINING COSTS	3296.09	7174.08	949.32	1671.55	13091.04
3. TRANSFER INVENTORY	468.18	1366.81	81.00	10.00	1925.99
4. CONTRACT MODIFICATION	240.00	0.00	0.00	0.00	240.00
5. DEMO/VALIDATION	80.00	100.00	80.00	30.00	290
6. PERSONNEL/PCS/PER DIEM TRAVEL/HOUSE HUNTING	605.00	525.00	105.00	210.00	1645
7. OTHER					
A. CONTRACTOR INTERIM SUPPORT	200.00	817.00	700.00	5825.00	7542
B. FOLLOW ON SUPPORT	35.00	35.00	10.00	15.00	95
TOTAL	9244.70	11600.10	3763.82	8008.79	32617.41

*ALL FIGURES ARE 1,000'S
BASED ON FY 92 PRICES.
EXCEPT TRAINING WHICH IS FY93

*(4558.44) + (3112.74)(TSQ-73)

7041.66 651.08

-7671.18

24,946.23

** 7,100

$17,846.23 (000).

Personnel Transfers and Training costs

13091.04
1645
15736.04
3852.54
11,883.50

LCSS 630.86
Shill 365.31
Chap 2438.13
ATSQ-73 418.24
3852.54

GAO 11 MAR 93

** Training 2.2M
Travel .8
Salaries 1.3
EQ Transfer .2
EQ Purchase .8
Design/Const 1.7
Other .1
$7.1M

* LCSS - 970.26
Shillelagh - 365.02
Chaparral - 3223.16
4558.44

Transition Costs
Total 32,617.41

less systems not transferring
LCSS (970.26)
Shillelagh (365.02)
Chaparral (3223.16)
ATSQ-73 (3112.74)
24,946.23

A 16 Nov 92	B	C WORKLOAD DLH-K	D CURRENT SOR HOUR RATE	E SOR COST (C x D)	F LEAD HOUR RATE	G LEAD COST (C x F)	H SAVINGS (E - G)	I LEARNING CURVE	J NET SAVINGS (H-I)
SYSTEM									
SPARROW	FY 95	44.10	69.78	3077.30	46.39	2045.80	1031.50	94.79	936.71
TOW COBRA		44.20	55.52	2453.98	46.39	2050.44	403.55	95.00	308.54
BFVS		34.80	52.03	1810.64	46.39	1614.37	196.27	74.80	121.47
SIDEWINDER		66.00	57.73	3810.18	46.39	3061.74	748.44	166.08	582.36
MLRS-RRAD		57.00	52.03	2965.71	46.39	2644.23	321.48	101.60	219.88
ATACMS		9.60	55.52	532.99	46.39	445.34	87.65	13.59	74.06
AVENGER		37.80	55.52	2098.66	46.39	1753.54	345.11	81.25	263.87
HELLFIRE		8.20	55.52	455.26	46.39	380.40	74.87	17.63	57.24
LCSS		40.90	55.52	2270.77	46.39	1897.35	373.42	87.91	285.51
DRAGON		17.40	55.52	966.05	46.39	807.19	158.86	37.40	121.46
SHILLELAGH		6.20	55.52	344.22	46.39	287.62	56.61	13.33	43.28
TOW/TOWII		51.30	55.52	2848.18	46.39	2379.81	468.37	166.74	301.63
CHAPARRAL		51.40	52.03	2674.34	46.39	2384.45	289.90	167.07	122.83
PHOENIX		15.50	69.78	1081.59	46.39	719.04	362.54	73.13	289.41
STANDARD		34.00	42.49	1444.66	46.39	1577.26	-132.60	185.37	-317.97
STINGER (CONT)		11.80	70.42	830.96	46.39	547.40	283.55	64.34	219.22
AN/TOS-73		50.80	42.78	2173.22	46.39	2356.61	-183.39	276.97	-460.36
HARM (CONT)		2.00	70.42	140.84	46.39	92.78	48.06	10.90	37.16
AVENGER (CONT)		17.80	70.42	1253.48	46.39	825.74	427.73	97.05	330.68
ATAS (CONT)		26.10	70.42	1837.96	46.39	1210.78	627.18	142.30	484.88
HELLFIRE (CONT)		3.10	70.42	218.30	46.39	143.81	74.49	16.90	57.59
HAWK (CONT)		15.90	70.42	1119.68	46.39	737.60	382.08	86.69	295.39
PATRIOT (CONT)		77.80	70.42	5478.68	46.39	3609.14	1869.53	424.18	1445.35
TOTALS		723.70		41887.65		33572.44	8315.21	2495.03	5820.18
SPARROW	FY 96	44.10	69.78	3077.30	39.61	1746.80	1330.50	34.68	1295.82
TOW COBRA		40.80	55.52	2265.22	39.61	1616.09	649.13	32.08	617.04
BFVS		34.50	52.03	1795.04	39.61	1366.55	428.49	27.13	401.36
SIDEWINDER		66.00	57.73	3810.18	39.61	2614.26	1195.92	69.20	1126.72
MLRS-RRAD		53.00	52.03	2757.59	39.61	2099.33	658.26	27.79	630.47
ATACMS		11.10	55.52	616.27	39.61	439.67	176.60	2.91	173.69
AVENGER		49.40	55.52	2742.69	39.61	1956.73	785.95	38.85	747.11
HELLFIRE		3.90	55.52	216.53	39.61	154.48	62.05	3.07	58.98
LCSS		29.90	55.52	1660.05	39.61	1184.34	475.71	23.51	452.20
DRAGON		16.10	55.52	893.87	39.61	637.72	256.15	12.66	243.49
SHILLELAGH		5.20	55.52	288.70	39.61	205.97	82.73	4.09	78.64
TOW/TOWII		51.60	55.52	2864.83	39.61	2043.88	820.96	73.04	747.92
CHAPARRAL		69.70	52.03	3626.49	39.61	2760.82	865.67	98.66	767.02
PHOENIX		15.50	69.78	1081.59	39.61	613.96	467.63	33.32	434.32
STANDARD		47.00	42.49	1997.03	39.61	1861.67	135.36	118.27	17.09
STINGER (CONT)		14.20	70.42	999.96	39.61	562.46	437.50	35.73	401.77
AN/TOS-73		59.60	42.78	2549.69	39.61	2360.76	188.93	193.72	-4.79
HARM (CONT)		9.00	70.42	633.78	39.61	356.49	277.29	49.07	228.22
AVENGER (CONT)		176.10	70.42	12400.96	39.61	6975.32	5425.64	830.88	4594.76
ATAS (CONT)		131.10	70.42	9232.06	39.61	5192.87	4039.19	618.56	3420.63
HELLFIRE (CONT)		1.00	70.42	70.42	39.61	39.61	30.81	4.72	26.09
HAWK (CONT)		60.00	70.42	4225.20	39.61	2376.60	1848.60	283.10	1565.50
PATRIOT (CONT)		151.40	70.42	10661.59	39.61	5996.95	4664.63	714.34	3950.29
MAVERICK		7.70	65.17	501.81	39.61	305.00	196.81	41.98	154.83
MLRS (CONT)		19.90	70.42	1401.36	39.61	788.24	613.12	108.50	504.62
TOW (CONT)		9.60	70.42	676.03	39.61	380.26	295.78	52.34	243.43
TOTALS		1177.40		73046.24		46636.81	26409.42	3532.20	22877.23

Summary Chart Adjustments for Inflation

This section converts all costs to FY91 Constant dollars (Page B-2) and then inflates to Current Year dollars (Page B-3). Most Non-Recurring Costs were estimated based on the thinking of the services during FY92. Therefore, FY92 Constant dollars best serves as the base year for expressing these costs. However, training costs were largely estimated by using the FY93 LEAD labor rate and other FY93 costs, so training costs are treated as FY93 Current dollars. The Recurring Costs are based on the last complete year of historical information which was FY91 and, therefore, Recurring Costs are adjusted for inflation using FY91 as the base year. The MILCON cost avoidance was budgeted for construction starting in FY92 and is treated as FY92 Current dollars. Similarly, the LEAD construction/renovation is budgeted for and starts in FY93, so it is treated as FY93 Current dollars. The inflation/conversion factors below are from the Comptroller of the DoD (Memorandum, AMCRM-E, 10 Jan 92, Subject: Inflation Guidance).

(a) Conversion Factors.

FY92 Current to FY91 Constant dollars, divide by 1.0785 (MCA)
FY93 Current to FY91 Constant dollars, divide by 1.1140 (MCA)
FY93 Current to FY91 Constant dollars, divide by 1.0916 (OMA)
FY92 Constant to FY91 Constant dollars, divide by 1.0310 (OMA/OPA)

(b) Inflate Factors. (Constant to Current Year Dollars)

	OPA	OMA	MCA
FY91 dollars to FY93 dollars	1.1356	1.0916	1.1140
FY91 dollars to FY94 dollars	1.1724	1.1275	N/A
FY91 dollars to FY95 dollars	1.2100	1.1641	N/A
FY91 dollars to FY96 dollars	N/A	1.2013	N/A
FY91 dollars to FY97 dollars	N/A	1.2398	N/A

ADJUSTMENTS FOR INFLATION

TACTICAL MISSILE MAINTENANCE CONSOLIDATION

SUMMARY of COSTS and SAVINGS

(CURRENT $M)

	FY93	FY94	FY95	FY96	FY97	TOTALS
NON-RECURRING COSTS (OMA, except)						
1. Equipment						
a. Procurement (OPA)	3.292	.046	2.105	--	--	5.443
b. Transfer	1.337	1.544	.051	.288	--	3.220
2. Training Cost	5.315	6.305	--	1.840	--	13.460
3. Transfer Inventory	.689	1.294	.092	.012	--	2.087
4. Contract Modification	.063	.065	.068	.070	--	.266
5. Demo/Validation	.148	.054	.079	.035	--	.316
6. Personnel/PCS/Per Diem/etc.	1.038	.382	.119	.245	--	1.784
7. Renovation (MCA)	6.450	--	--	--	--	6.450
8. Other						
a. Contractor Interim Support	.334	.767	.790	6.787	--	8.678
b. Follow-on Support	.052	.027	.006	.018	--	.103
TOTAL NON-RECURRING COST	18.718	10.484	3.310	9.295	--	41.807
RECURRING COSTS (OMA)						
1. SORs	5.497	34.768	48.762	87.750	99.333	276.110
2. LEAD	6.187	34.302	41.987	60.268	62.606	205.350
DIFFERENTIAL RECURRING COST	-0.690	.466	6.775	27.482	36.727	70.760
NET SAVINGS	-19.408	-10.018	3.465	18.187	36.727	28.953

Note: MCA Cost Avoidance $ 5.681 — Net Savings Including Cost Avoidance 34.634

Calculation of Composite Factors

Begin Transition Quarter	Yr1 Factor	Yr2 Factor	Yr3 Factor	Yr4 Factor
1st	.75 X 26 = 19.5	.25 X 26 + .75 X 12 15.5	.25 X 12 + .75 X 5 6.75	.25 X 5 + Ø 1.25
2nd	.5 X 26 = 13	.5 X 26 + .5 X 12 19	.5 X 12 + .5 X 5 8.5	.5 X 5 + Ø 2.5
3rd	.25 X 26 = 6.5	.75 X 26 + .25 X 12 22.5	.75 X 12 + .25 X 5 10.25	.75 X 5 + Ø 3.75
4th	--	26	12	5

Table 1

LETTERKENNY'S Current MISSILE STORAGE

Army Tactical Missile System (TACMS)

Army Multiple Rocket Launch System (MLRS)

Army Nike-Hercules

Air Force Sidewinder

Air Force Sparrow

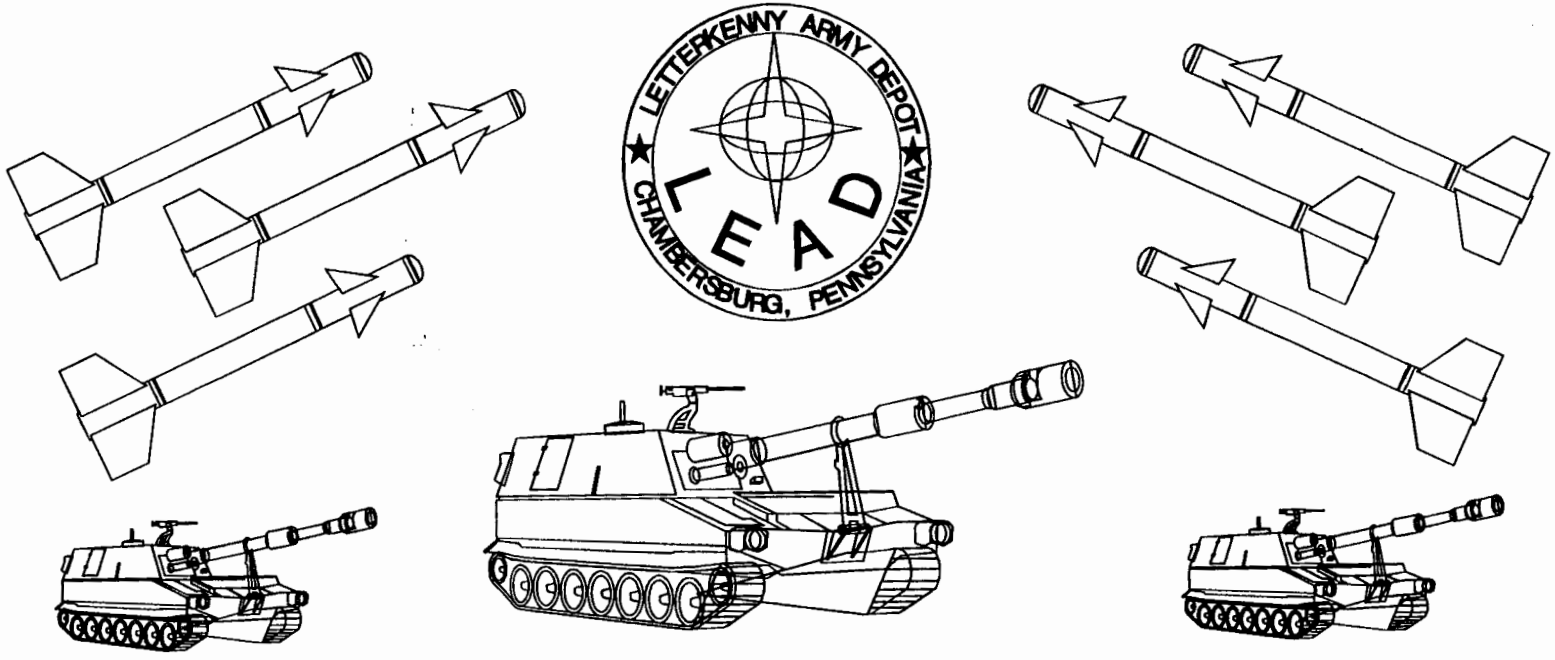
Air Force High-Speed Anti Radiation Missile (HARM)

Air Force Shrike

Air Force Advanced Medium Range Air-to-Air Missile (AMRAAM)

Air Force Maverick

LETTERKENNY ARMY DEPOT



MISSIONS, FUNCTIONS, AND CAPABILITIES

March 1995

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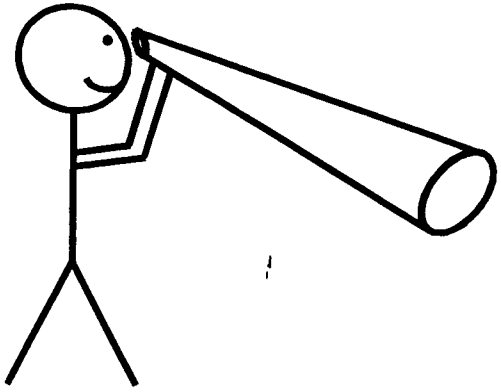
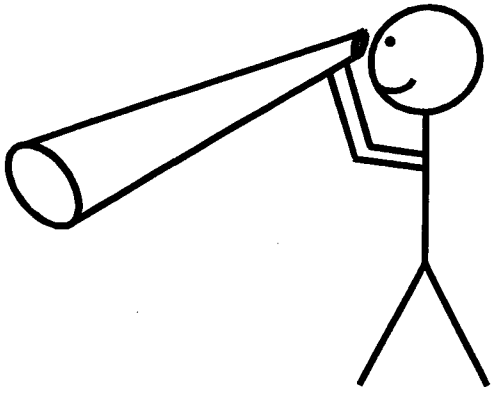
Depot Overview





DEPOT OVERVIEW

HISTORICAL/EMPLOYMENT INFORMATION

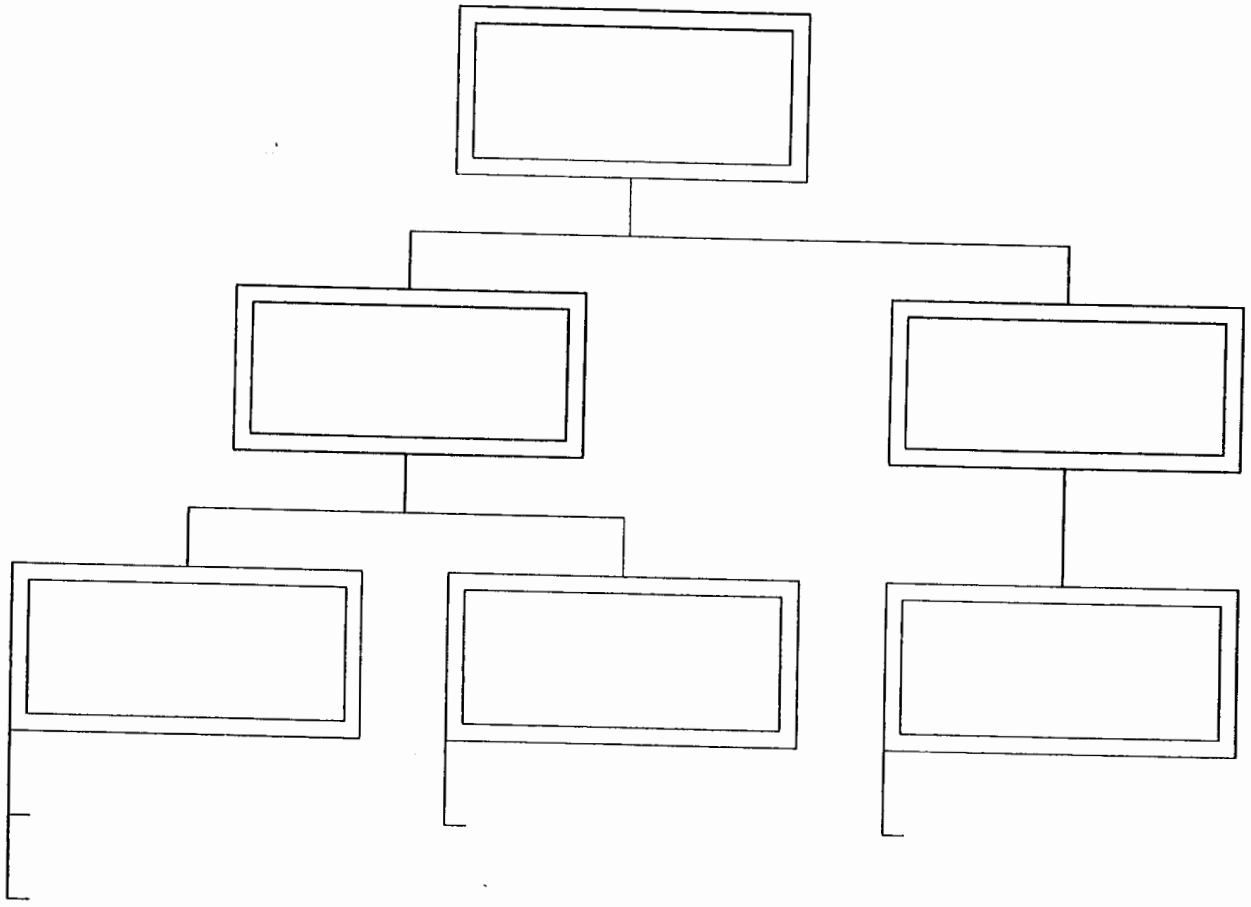
Letterkenny Army Depot was born during the hectic war atmosphere of 1941. As a result of its highly skilled workforce, the installation has evolved into a premier multi-mission organization known by customers the world over for excellence in missile maintenance, artillery, and ammunition services.

The factors which caused the War Department to select 19,243 acres in south central Pennsylvania for the site of an Army depot remain in place today. Located in the beautiful Cumberland Valley, Letterkenny is at a major crossroad between Interstate 81 and U.S. Route 30, with railhead facilities and easy access for air travel. The installation itself is supported by 212 miles of road and 54 miles of railroad. This geographical area has an available and diversified work force that is productive, dependable, and grounded with an extremely strong work ethic. Letterkenny's physical assets and empowered work force ensure the depot's ability for growth and for customer satisfaction in expanded missions.

Letterkenny is home to a total of 3,625 personnel. Of this number, 2,138 are employed by the depot and 1,487 are employed by other collocated activities.

Organizations at

ORGANIZATIONS AT LETTERKENNY



MAINTENANCE

The Directorate of Maintenance Mission is to perform repair, overhaul, modification, and/or conversion of equipment and materiel. Letterkenny serves as a center of technical excellence (CTX) for HAWK, PATRIOT, PALADIN, AVENGER, SPARROW, HELLFIRE, and HAZMIN (chemical paint stripping). Complementary functions include: providing project development/design services, providing worldwide NBC air filtration system support, and providing training/technical assistance to users of Army materiel. Public Law 101-510 directed that Letterkenny be "postured as the DoD specialized missile components and missile support equipment center of technical excellence and integrated depot-level maintenance facility." This consolidates guidance and control section repair for all current and future air, ground, and surface launched missiles.

PUBLIC WORKS

The U.S. Army Central Pennsylvania Regional Public Works Center provides a widerange of services including building maintenance and remodeling, utility and facility operation, equipment operation, engineering, environmental restoration, waste management, energy conservation, recycling and fire protection.

ENVIRONMENTAL

RESTORATION

Through FY94, Letterkenny's Installation Restoration Program has spent $57 million in DERA funds for investigation and cleanup of Letterkenny's two Superfund (Southeastern Area and Property Disposal Office Area) sites.

Recent projects include the following:

- $2.4 million for the K-Area cleanup

- Initiation of Remedial Designs for groundwater cleanup at Rocky Spring and Rowe Spring

- Temporary repairs of Industrial Wastewater Sewers to eliminate contamination of groundwater, and groundwater dye tracing study to understand on-post to off-post groundwater flow.

RESOURCE RECOVERY AND RECYCLING PROGRAM

The Letterkenny Army Depot Resource Recovery and Recycling Program was established and developed in February 1989 to recover scrap from waste streams, prevent pollution and conserve natural resources. The major objective of this program is to be in compliance with all laws/regulations, to include municipalities and to provide full reimbursement of funds generated back to the installation and municipalities, that produced the waste products. The program has met a goal of over 50 percent reduction in waste and realized a cost avoidance savings of $3.3 million.

MAJOR ACCOMPLISHMENTS

- Recycling manager was elected to Rural Area Recycling Community for National Recycling Coalition
- (Job 1) award FORSCOM
- HQDA Letter of Commendation
- Letter of Commendation from Congressman Shuster
- Recycling Manager selected to teach at U.S. Army Logistics Management College on Installation Recycling

OTHER SUPPORT ORGANIZATIONS

DIRECTORATE OF PRODUCT ASSURANCE is responsible for assuring the overall depot quality program is established and responsive to the needs of its customers.

DIRECTORATE OF CONTRACTING provides advice and assistance to activities concerning purchasing and contracting matters involving appropriated and nonappropriated funds, manages the Advanced Acquisition Plans of Letterkenny, Savanna and collocated activities, and administers the Small Business Program.

DIRECTORATE OF RESOURCE MANAGEMENT performs support functions such as: budgeting, financial services, cost analysis, managerial accounting, review/analysis management studies, competition and bid proposals, management of productivity improvement programs, and manpower/organizational management.

DIRECTORATE OF PERSONNEL AND COMMUNITY ACTIVITIES provides customer oriented services such as administering employee compensation programs, development of job descriptions, classifying jobs, and identifying methods/sources of candidates for staffing organizations. Letterkenny served as the Department of the Army (DA) pilot for implementation of the Automated Civilian Personnel System (ACPERS), completing the conversion within 60 days (one-third the projected implementation time). The directorate also provides downsizing assistance, employee assistance programs such as stress management, and operates an extensive quality of life program for military/civilian personnel that includes self-sustaining morale, welfare, and recreation programs. These programs provide assistance to and opportunities for the hobbyist, sports/fitness enthusiast, child development center, school-age latch key services, youth activities, and personal/family management programs.

COLLOCATED ACTIVITIES

- **DEFENSE LOGISTICS AGENCY (DLA)** whose mission is to plan, coordinate, and manage the physical distribution functions relative to the receipt, storage, preservation/package, issue, and transportation of major and secondary items.

- **HEADQUARTERS, U.S. ARMY DEPOT SYSTEM COMMAND (HQDESCOM)** has the principal mission of command and control of all Army depots and depot activities worldwide.

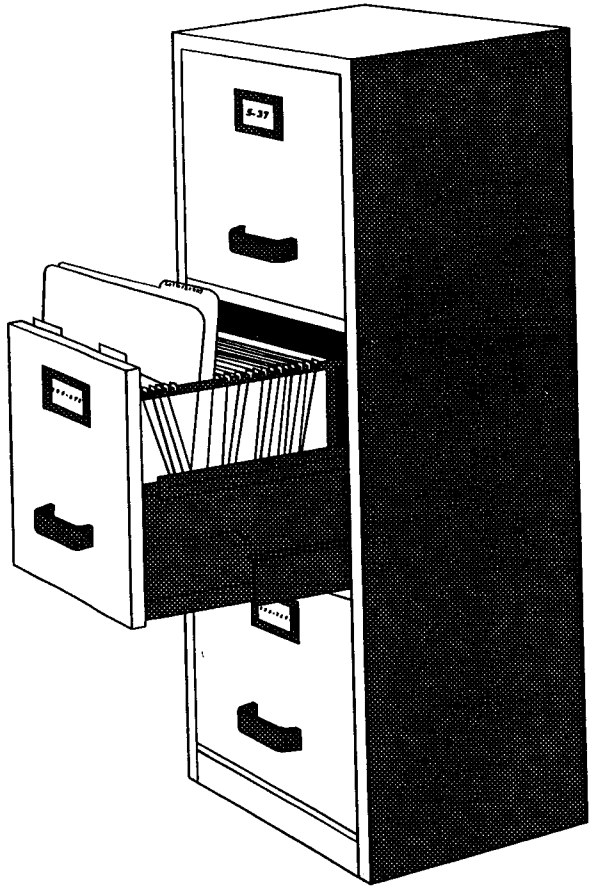
- **AMC SYSTEMS INTEGRATION AND MANAGEMENT ACTIVITY (SIMA-EAST)** provides integrated automation support to the U.S. Army AMC installation, industrial, and financial business processes. Critical to AMC Future Power Projection Missions are: strategic stocks worldwide, single stock fund Army-wide implementation, integrated sustainment maintenance initiative, and Force 21. SIMA-EAST employs approximately 200 organic staff in addition to 35 contractor staff. The organization operates with an annual budget of $20 million, expending $18 million in the local economy.

COLLOCATED ACTIVITIES (continued)

- **U.S. ARMY AUDIT AGENCY** assists the Army in satisfying statutory and fiduciary responsibilities as well as assisting Army managers in making informed decisions, resolving issues and using resources effectively. It provides Army leadership with a full range of objective and independent services, including financial/performance audits, and consulting services. The agency has the authority to audit all organizations, activities, programs, and functions of the Army.

- **DEFENSE MEGACENTER (DMC) CHAMBERSBURG** provides information processing support and services to war fighters and their supporting organizations 24 hours a day, seven days a week. The support includes providing our customers around the world on-line access to the mainframe computer. The Megacenter has three large capacity AMDAHL computers that are capable of executing 390 million instructions per minute. The Megacenter processes 2,000 batch jobs a day and over 31,000 users have real-time access to their data stored on DMC Chambersburg computers. As part of the DoD Data Center consolidation, DMC Chambersburg is receiving workload from three Navy sites currently located at Arlington, VA; Cleveland,OH; and New Orleans, LA. The migration of that workload is scheduled to be completed by September 1995. The DMC Chambersburg workload will be increased by 2,000 daily batch jobs and 10,000 on-line users with the addition of the Navy processing. In addition to providing supply, maintenance, finance, and payroll support to Army and DLA customers, DMC Chambersburg will be processing the payroll and manpower assignments for the entire U.S. Navy.

MISSION HISTORY



MISSION HISTORY

In 1942, construction began on 902 underground and 12 above the ground magazines for ammunition storage. In 1943, Letterkenny's mission expanded to include reserve storage of parts, supplies, tools, and equipment for combat vehicles, tanks, artillery, small arms, and fire control equipment for vehicles. When the war ended in 1945, Letterkenny had shipped more than 3 million tons of ammunition and had made maintenance modifications on more than 3,300 tanks/artillery items.

1952 - Korea Support

In 1954, Letterkenny was assigned the mission for rebuild of guided missile ground control, launching, and handling equipment; missile propellant systems; and internal guidance systems.

During the following years, Letterkenny developed into a multi-mission installation responsible for maintaining and overhauling trucks, artillery, and various missile systems.

1960/1970 - Vietnam Support

- Assumed command of Savanna Army Depot Activity, IL

1990 - Operation Just Cause

1991 - Desert Storm Support

TACTICAL MISSILE MAINTENANCE CONSOLIDATION HISTORY (continued)

March 1992	General Ross letter reaffirming that the missile consolidation was approved under BRAC 1991 and that BRAC funds could be used
August 1992	Joint Services Update of the Tactical Missile Maintenance Consolidation Savings and Cost Analysis showing a $26.5 million savings over a 5-year period
August 1992	Environmental Assessment for missile consolidation at Letterkenny found no adverse environmental impact
October 1992	Defense Appropriations Bill signed
October 1992	Defense Authorization Bill signed
November 1992	Army Tactical Missile Systems (ATACMS) began to be transferred to Letterkenny
December 1992	Judge Robert Propst decision halting the transfer of the Anniston missile workload

TACTICAL MISSILE MAINTENANCE CONSOLIDATION HISTORY (continued)

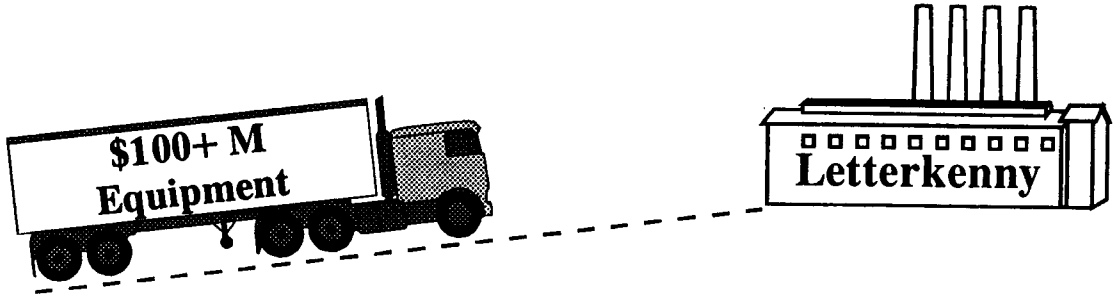
November 1993	Environmental Assessment (EA) completed and published in the Federal Register
December 1993	Environmental Assessment (EA) approved with no public comments
February 1994	Anniston injunction dissolved

During the following year, Letterkenny successfully transitioned 12 of the 21 missile systems slated for consolidation, system-trained 190 employees, moved over $100 million of equipment from all over the country, improved facilities, and spent over $16.1 million in the overall consolidation effort.

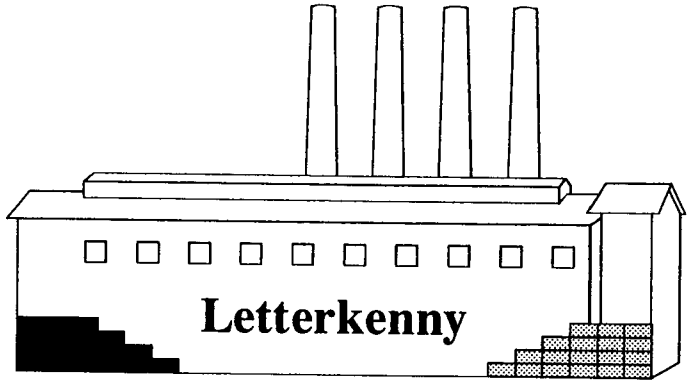
March 1995	DoD again recommends that the tactical missile consolidation not be consolidated at Letterkenny

BRAC 93 IMPLEMENTATION

Equipment



Facilities



Training

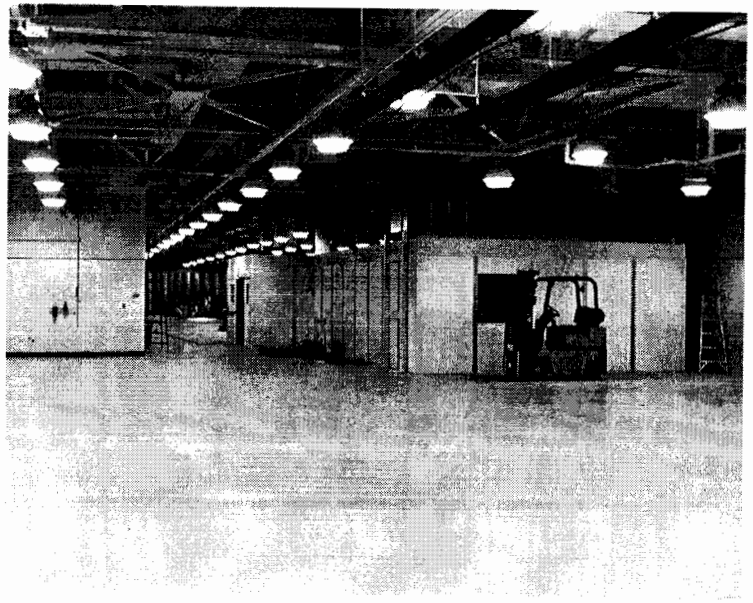
TACTICAL MISSILE CONSOLIDATION TRANSITION SCHEDULE

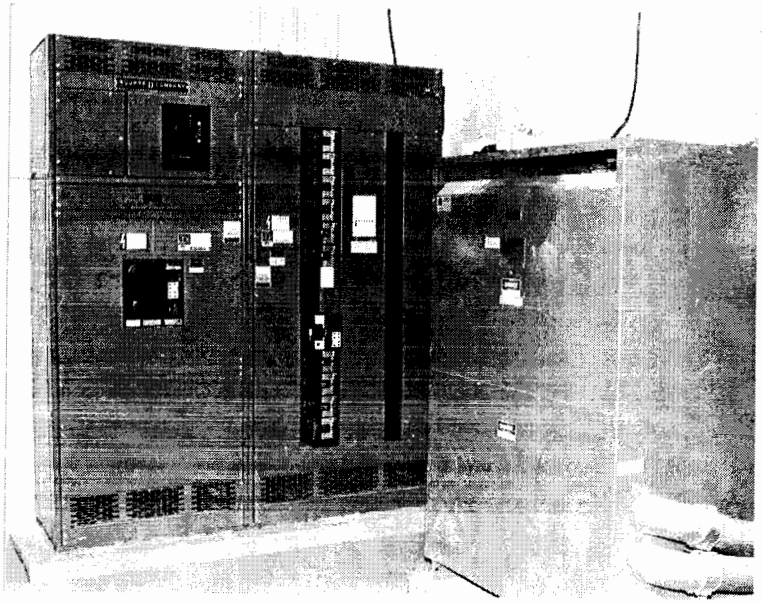
FY94	FY95	FY96	FY98
(CTR) ATAS	(N) Phoenix	(AF) Maverick	(CTR) AMRAAM
(CTR) Avenger	(CTR) HARM PSE	(CTR) HAWK	(CTR) HARM GS
(A) ATACMS	(MC) HAWK Ph 1	(AF) Sidewinder	
(A) MLRS	(A) TOW BFVS	(A) LCSS	
(A) Hellfire	(A) TOW2	(A) Shillelagh	
(A) Dragon	(A) TOW Cobra	(CTR) HARM CS	
(N) Sparrow	(N) Sidewinder	(MC) HAWK Ph 2	
	(CTR) MLRS		
	(CTR PATRIOT		

(Source of Repair) - System

BLDG. 426

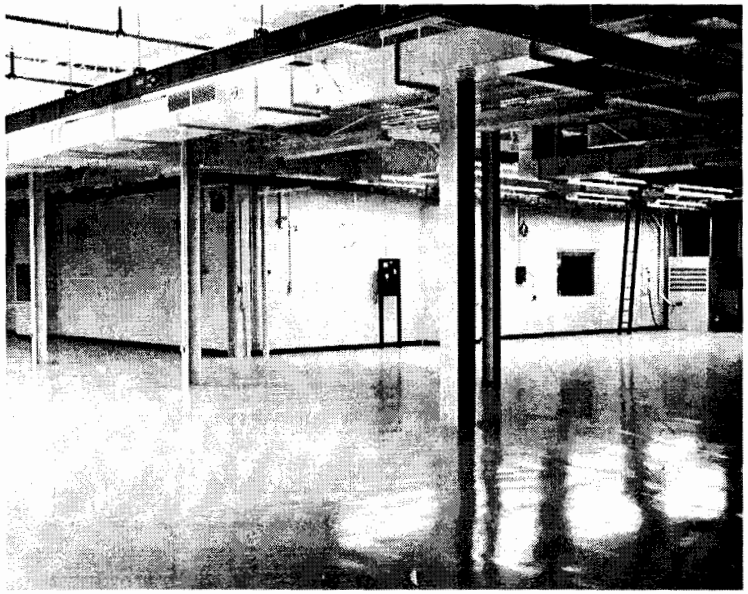
Building 426 is a 20,000 square foot facility which was converted from an industrial operations facility to a missile maintenance facility. Construction involved a complete interior renovation to include: gypsum wall board throughout the facility, metal halide lighting fixtures, electrical upgrades, resinous floor coverings, HVAC, fire protection system upgrades, and specialized finishes as required by specific missile systems.





BLDG. 370

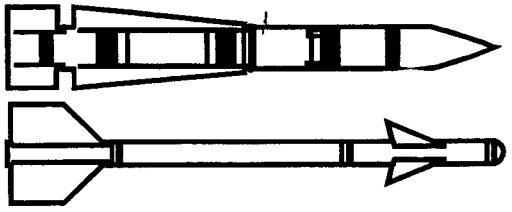
Building 370 is a 296,000 square foot missile maintenance facility. Some renovations were required throughout the facility to create additional floor space and renovate existing floor space to accommodate specific missile systems. Construction consisted of the following: construct two mezzanines and finish space to missile maintenance specifications, upgrade HVAC, upgrade fire protection systems, electrical and lighting upgrades, construction of two-room enclosures in rear garage area, and upgrade to missile maintenance specifications.



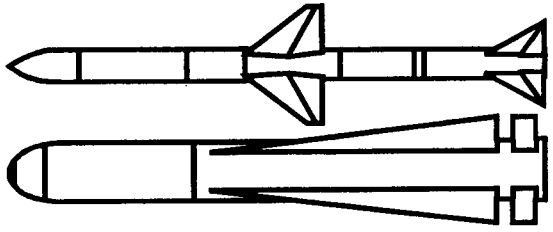
TRAINING PROVIDED FY93-FY95

BASIC ELECTRONICS - Hagerstown Junior College, Hagerstown, MD
ADVANCED ELECTRONICS - Hagerstown Junior College, Hagerstown, MD
SPARROW THEORY OF OPERATIONS - Conducted at LEAD by Alameda
TOW COBRA OJT - Huntsville, AL
AVENGER FAMILIARIZATION - Redstone, AL
LAND COMBAT SUPPORT SYSTEM (LCSS) - U.S. Army Missile and Munitions School, Redstone, AL
MULTIPLE LAUNCH ROCKET SYSTEM (MLRS) Repair Course - Redstone, AL
MULTIPLE LAUNCH ROCKET SYSTEM OJT, Texarkana, TX
SIDEWINDER THEORY OF OPERATION - Naval Air Warfare Center, Norfolk, VA
SIDEWINDER OJT - Norfolk, VA
AVENGER BASIC THEORY - Redstone, AL
GROUND TOW OJT - Anniston, AL
DRAGON OJT - Anniston, AL
SPARROW DATA COLLECTION - LEAD
TOW COBRA THEORY OF OPERATION - LEAD
DIGITAL ELECTRONICS and MICROPROCESSORS - LEAD from Hane Industrial

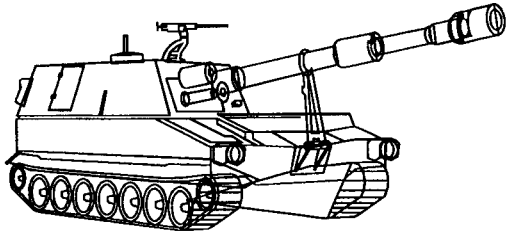
MISSIONS



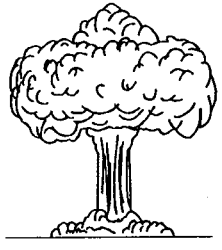
Tactical Missile Consolidation



Artillery



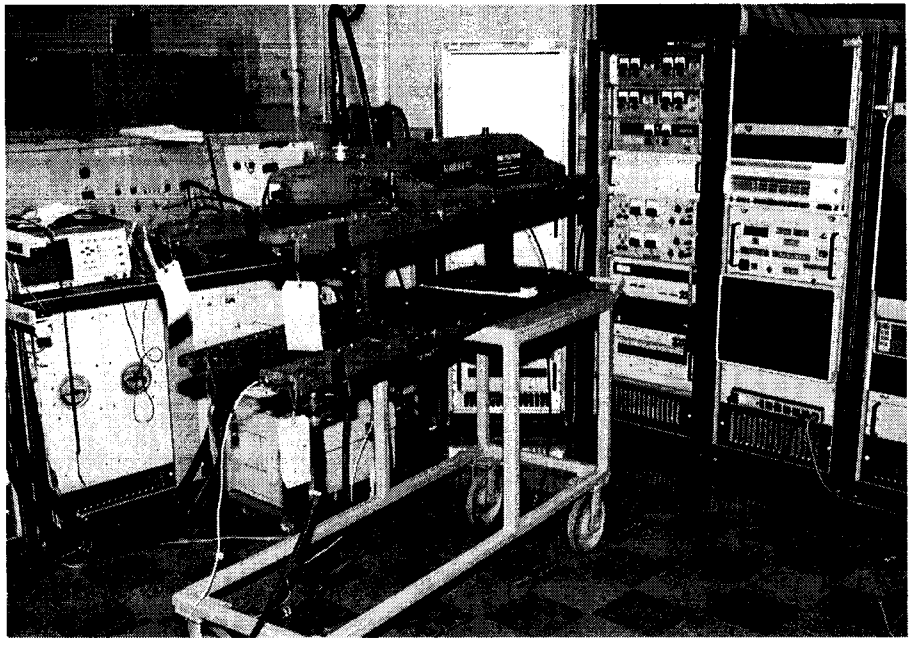
Ammunition



HELLFIRE

Letterkenny is the organic depot for overhaul, test, repair, and modification of Hellfire M272 and M279 launchers, the platforms used to launch the semiactive AGM-114 missiles. To accomplish this mission, Letterkenny utilizes an AN/USM-410 (EQUATE) with unique AH-64 Augmentation and a Rail Tension Tester. Letterkenny is the prime depot for the U.S. Army, Marine Corps, Army National Guard and Reserve, and foreign military customers. We also provide field support services to all customers and system engineering support to U.S. Army Missile Command (MICOM).

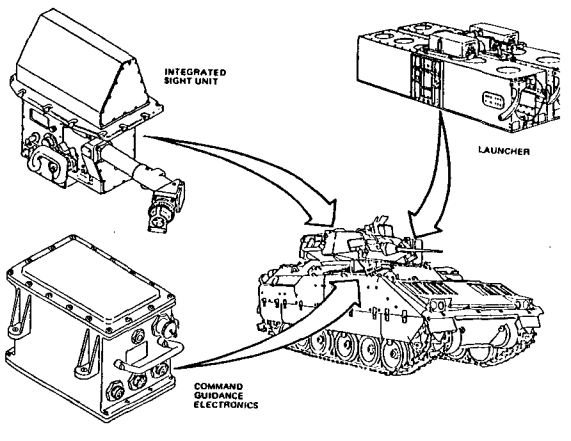
This system successfully transitioned to Letterkenny in October 1994



TOW BRADLEY

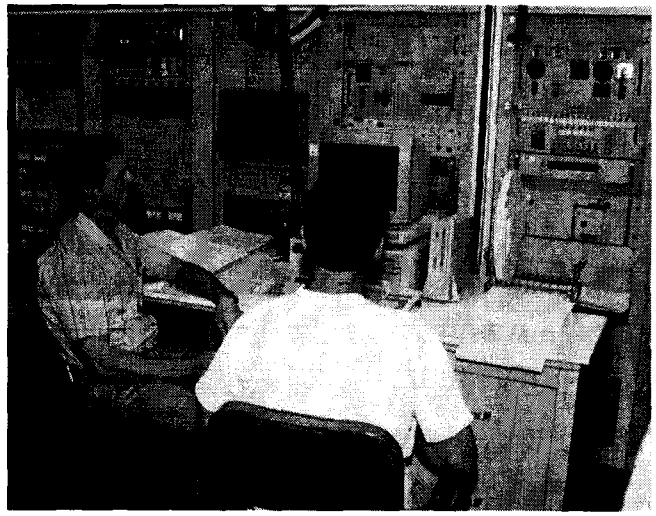
Letterkenny is the organic depot for overhaul, test, repair, and modification of the TOW missile subsystem for the Bradley fighting vehicle. The TOW Bradley is used to launch and guide the TOW missile to targets such as armored vehicles and other hard targets. Letterkenny is the prime depot for the U.S. Army, Marine Corps, and foreign military sales. To accomplish this mission, Letterkenny has the ability to overhaul, repair, and test the Command Guidance Electronics, Missile Guidance Set, and the launcher. The types of equipment required to perform this mission are Table Alignment Test Stands, Launcher Test Stands, EPROM Programmers, Versatile Automatic Test equipment (VATE), and Hot Mock Up capability. Letterkenny provides field support for modifications and technical support.

This system successfully transitioned to Letterkenny in December 1994



PHOENIX

Letterkenny is the organic depot for overhaul, test, repair, and modification of the Phoenix AIM-54C missile. The AIM-54 is the only long range, radar-guided air-to-air missile developed. It is used for long range standoff and intercept of aircraft and cruise missiles. To accomplish this mission, Letterkenny has developed capability to overhaul, test and repair the guidance section, control section, and lower level assemblies of these sections. Letterkenny also performs the Reprogramable Program Memory modification. The types of equipment required to perform these missions involve numerous integrated support systems for section and lower level test, an anechoic chamber, hydraulic test stations, and environmental screening equipment. Letterkenny is the prime depot for the U.S. Navy and provides both production and systems engineering support.



FORWARD AREA AIR DEFENSE (FAAD)
AVENGER/ATAS/STINGER

Letterkenny is the organic depot for overhaul, test, repair, and modification of Avenger and Air-to-Air Stinger (ATAS). FAAD consists of both Avenger and ATAS. FAAD provides air defense support to counter low-flying, high-speed, fixed-wing aircraft and helicopters. ATAS supports the Stinger missiles and controls their launching in response to commands from the helicopter fire control system. To accomplish this mission, Letterkenny has the ability to overhaul, test, repair, and modify the Standard Vehicle Launcher, Line Replaceable Units, argon bottles, and the Heavy Mobile Multipurpose Vehicle. Letterkenny is the sole source depot for argon bottle refurbishment. Field team support is provided by LEAD for modifications and engineering change proposal applications. LEAD performs the new production of the S-250 and S-280 direct and general support maintenance shelters in support of FAAD. The types of equipment required to support this mission are an Integrated Family of Test Equipment, Test Program Sets, and associated Depot Maintenance Plant Equipment (DMPE).

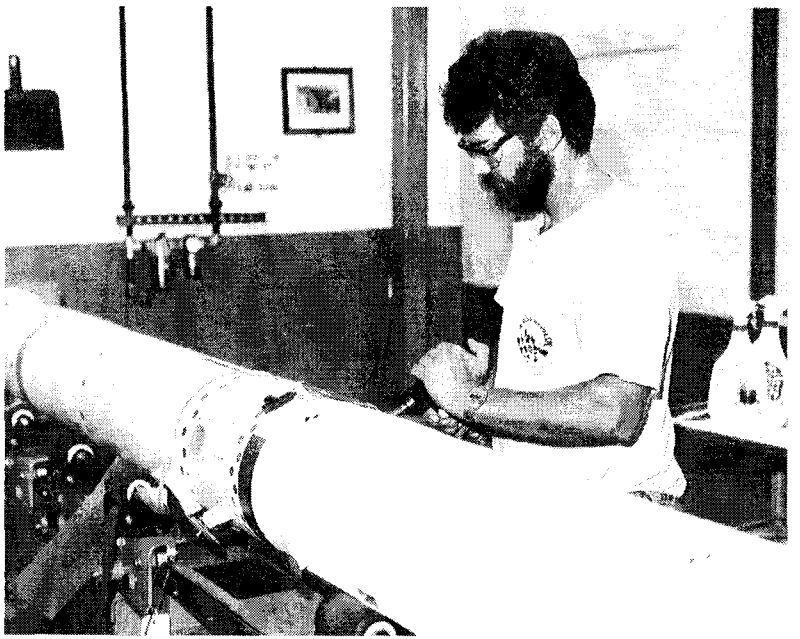
Letterkenny is the prime FAAD depot for the U.S. Army performing total package fielding, prototype development, and engineering support.

AVENGER and ATAS have successfully transitioned to Letterkenny in June 1994

Transition planning is on-going for Stinger

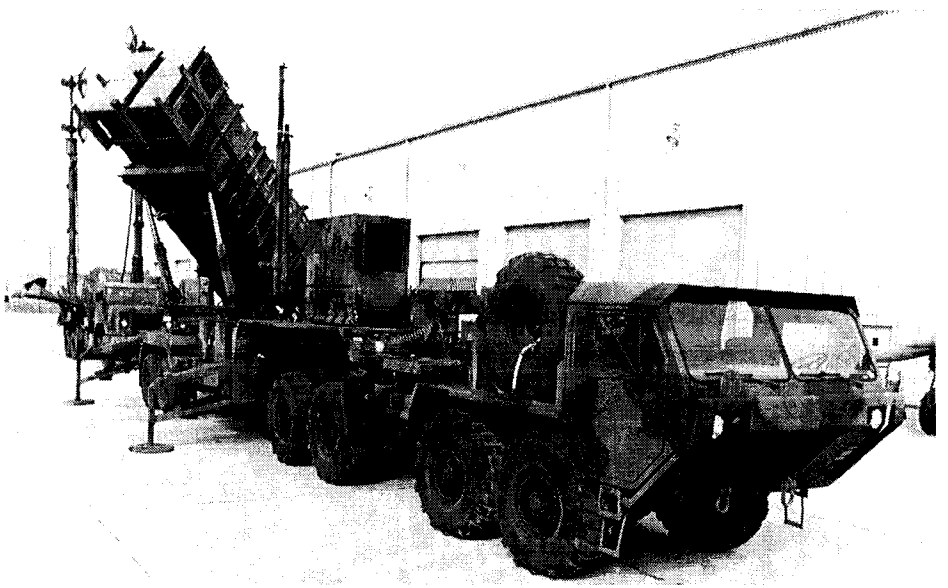
HIGHSPEED ANTI-RADIATION MISSILE (HARM) PECULIAR SUPPORT EQUIPMENT (PSE)

Letterkenny is the organic depot for test and repair of HARM PSE circuit card assemblies. HARM PSE is used by the U.S. Navy and Air Force to perform Intermediate Level Maintenance. To accomplish this mission, Letterkenny has the ability to test and repair nine circuit card assemblies. Types of equipment required to perform this mission are Missile Test Set and Calibration Test Set. Letterkenny is the prime depot for both the Navy and Air Force. Our Ammunition Directorate currently performs All-Up-Round testing, environmental stressing, x-ray, interpretation of x-ray, and storage of HARM missiles for the Air Force.



PATRIOT

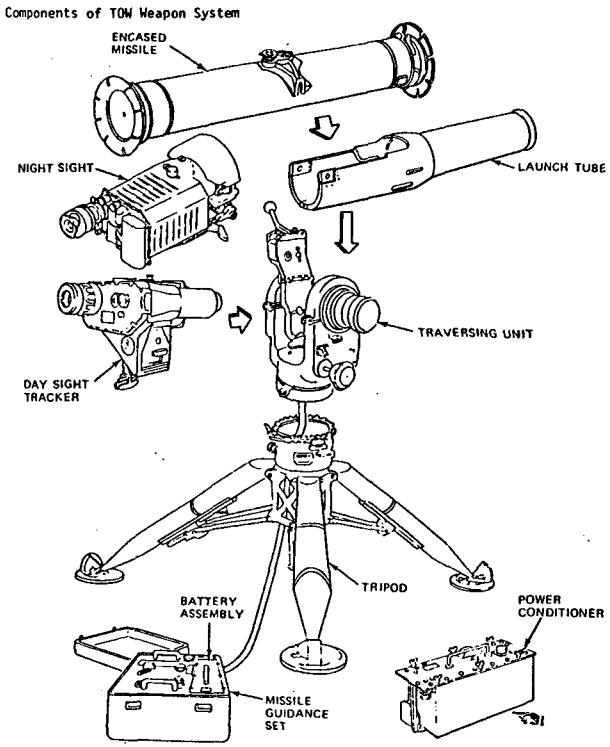
Letterkenny is the organic depot for the overhaul and test of the PATRIOT missile system. Various test consoles are utilized during overhaul of PATRIOT system components. The test consoles perform automated and manual checks on PATRIOT circuit cards, power supplies, equipment racks, microwave (RF) subassemblies, wire harnesses, cables, and major end items. Letterkenny has the capability to overhaul, repair, and test the following PATRIOT major end items: ECS, Radar Set, ICC Station, CRG, and AMG. After the overhaul process, completed PATRIOT system components are acceptance tested at the radar test site. In addition to the major end item overhaul capabilities, Letterkenny performs PATRIOT secondary item repairs, system modifications, and system upgrades.



GROUND TOW

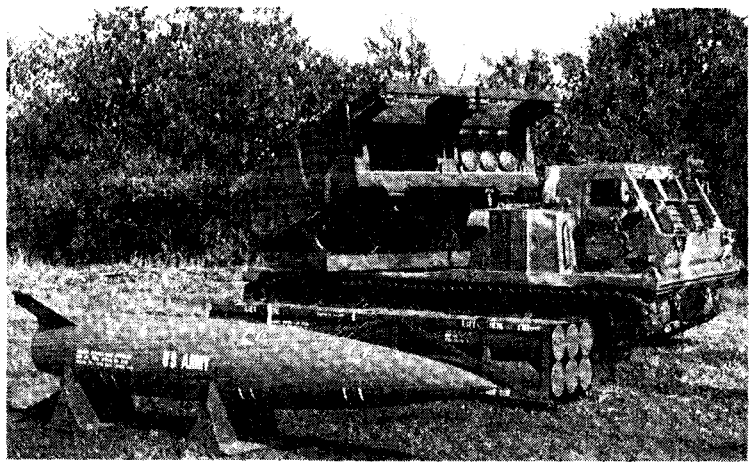
The tube-launched, optically-sighted, wire-guided (TOW) weapon system consists of a launcher and encased missile. It is an easily moved, heavy, antitank weapon designed to defeat armored vehicles and other hard targets such as field fortifications. The system may be configured for several different vehicles, in addition to the standard tripod mount. Additional configurations include the Jeep (M232 Mount), Armored Personnel Carrier (M236 Mount), and the HMMWV (M233 Mount). Letterkenny will perform depot level maintenance and provide field support to the U.S. Army, the National Guard, and foreign military sales customers.

Components of TOW Weapon System



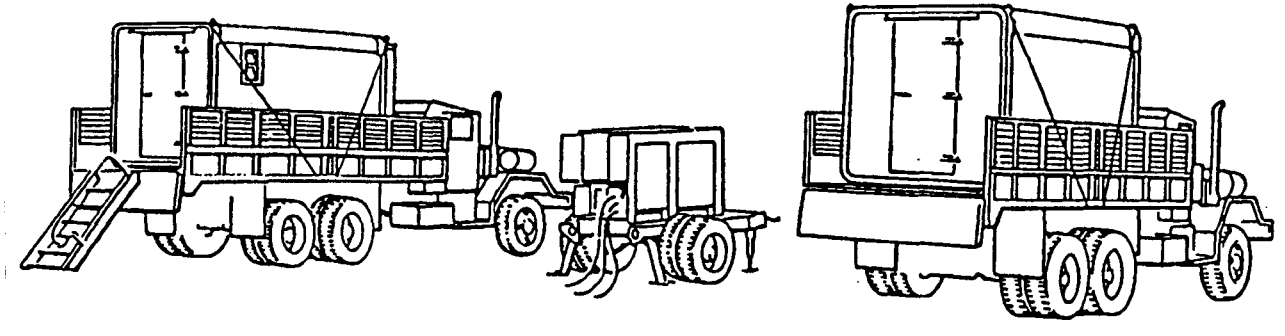
ATACMS

A long-range guided missile, Army TACMS is packaged in launch pod containers similar to those used for MLRS, and is launched by MLRS crews from the dual use M270 weapons platform. Army TACMS is designed for mission versatility and growth. Payload capacity, delivery accuracy, targeting flexibility and short-range response time make Army TACMS suited for a wide range of targets. Letterkenny will repair unserviceable missiles utilizing depot plant equipment. In addition, 10 percent of the missiles will be returned the first year to Letterkenny for inspection, test, and repair as part of the missile surveillance requirement. After the first year, quantities will decrease by 2 percent per year until stabilized at 4 percent. Procedures include a comprehensive test of components, calibration, and installation of any necessary improvements/modifications. Repair of the missiles will include: replacement of major assemblies, subassemblies and/or components of the subassemblies.



LCSS

The AN/TSM-93 is a digital-controlled automatic electronic test set. It consists of rack-mounted power, stimuli, switching, measuring, optical equipment, and a clean booth. Digital control of the system is accomplished by a test program or, under certain maintenance operation, a manual keyboard. The AN/TSM-93 can make static and dynamic self-test of its control, switching, stimuli, and measuring equipment. It is fault isolated by continuous monitoring devices and programmed self-tests.



AN/TSM-93 | ENGINE GENERATOR SET | AN/TSM-94

SHILLELAGH

The Shillelagh is a missile fired from the M551, Armored Airborne Reconnaissance Vehicle. The Shillelagh subsystem mounted on the assault vehicle replaced the M41 light gun and the M56 airborne assault weapon. The Missile is a solid propellant guided missile with a shaped charge warhead and is launched from the 152 MM gun/launcher on the M551 vehicle. The Shillelagh missile has an effective range of approximately 3,000 meters. The missile is guided by a closed loop electronic system using infrared transmitters in the launcher and receivers.

The Shillelagh systems consist of a missile, launcher, infrared transmitter, signal data converter, infrared tracker, modulator, rate sensor, test checkout panel and a power supply.

AMMUNITION SHIPPING/RECEIVING

Letterkenny Ammunition Operations ship and receive all types of Class V items from small arms ammunition to large bombs and missile items. The majority of the workload comes from the conventional ammunition single manager, the U.S. Army Armament, Munitions, and Chemical Command (AMCCOM); however, large amounts of ammunition and missiles are shipped/received for U.S. Army Missile Command (MICOM), Navy Air Systems Command (NAVAIR), and Warner Robins Air Logistics Center.

The ammunition area contains 128 miles of road, 31 miles of railroad track, and 25 loading docks to facilitate shipping and receiving.

PROCESSING CAPTURED FOREIGN MILITARY MATERIALS

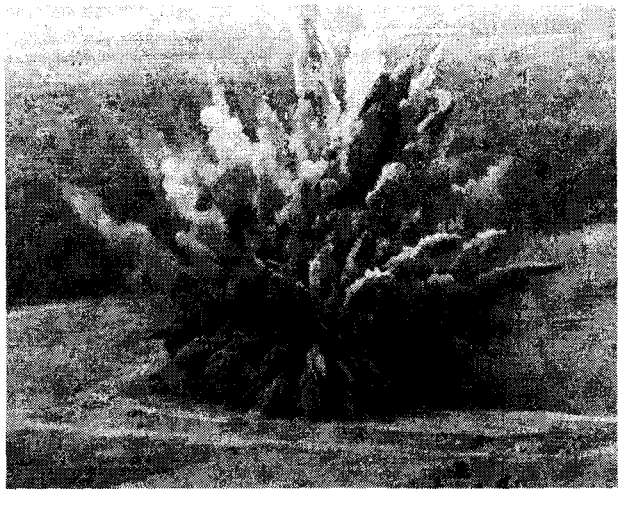
The DoD Intelligence Community secures foreign munitions through capture or acquisition for certification test calibration and training DoD personnel. The Directorate of Ammunition Operations is responsible for the receipts, identification, classification repackaging, storage, and shipments of the foreign ammunition. Letterkenny has processed ammunition from Grenada, Operation Just Cause, and Operation Desert Storm.

DEMILITARIZATION

Letterkenny Ammunition Operations destroy obsolete or hazardous bulk explosives and Class A, B, and C ammunition by demolition, burning, or processing through the deactivation furnace in a designated, strictly controlled access area located a safe distance from other operations.

Detonation by mechanical or electrical procedures is the preferred method for high explosives (i.e., projectiles, bombs) items. We have the capability to destroy 500 pounds per explosive shot or a maximum of 10,000 pounds per day.

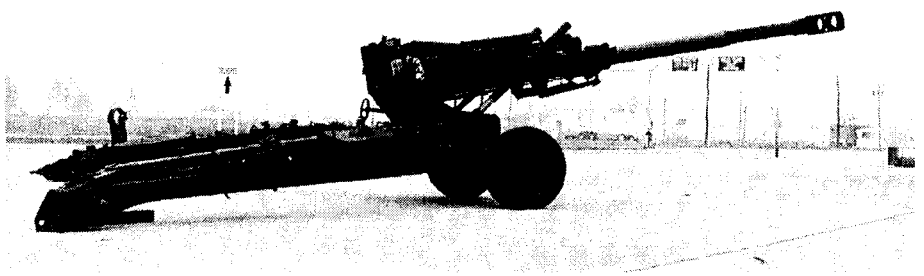
Open air burning is used to destroy bulk wet and dry propellants, rocket motors, and the majority of low explosives (i.e., small arms) items. This is done either in a perforated armor-plated chamber which restricts the fragmentation hazard, or on a bed of combustible materials. All burning is done by permit in compliance with the Environmental Protection Agency (EPA) and the Pennsylvania Department of Environmental Resources (DER).



ARTILLERY

TOWED HOWITZERS

Letterkenny is the prime depot for towed howitzers performing overhaul, modification, repair, and conversion of various Army and Marine Corps units. This includes the M101, M101A1, M102, M102A1, M114, M114A1, M114A2, M115, M116, M119, M120, and M198. Letterkenny has also supported the Air Force by overhauling the 105mm and 40mm armament systems for C130 aerial gunships. In addition to U.S. forces, howitzers have also been overhauled for foreign customers such as Indonesia, Columbia, and New Zealand. Letterkenny also provides field support to artillery units in places such as El Salvador, Hawaii, and Alaska.



SELF-PROPELLED HOWITZERS

Since 1971, Letterkenny has performed overhaul, modification, and conversion of various self-propelled howitzers. This includes overhaul of vehicles for foreign military sales customers and the training of foreign maintenance personnel. Letterkenny has converted several models of the M109 Self-propelled Howitzer and is the prime depot for the M110A2 Heavy Self-propelled Howitzer, the M578 Recovery Vehicle, and the Field Artillery Ammunition Support Vehicle.

PALADIN ENTERPRISE (continued)

All participants in the Paladin Enterprise are benefiting from the partnership.
Major benefits achieved through this relationship include the following:

- Contractor can deliver parts directly to Letterkenny production line and receive parts from the Letterkenny line in Just In Time (JIT) quantities. Parts flow between Letterkenny and PPD as they would in an integrated plant.

- Utilization of Letterkenny's painting facilities reduced the potential generation of additional hazardous wastes.

- Reduction in average unit price per vehicle. An estimated 71 percent in cost reduction will result from low rate initial production (LRIP) to full rate production.

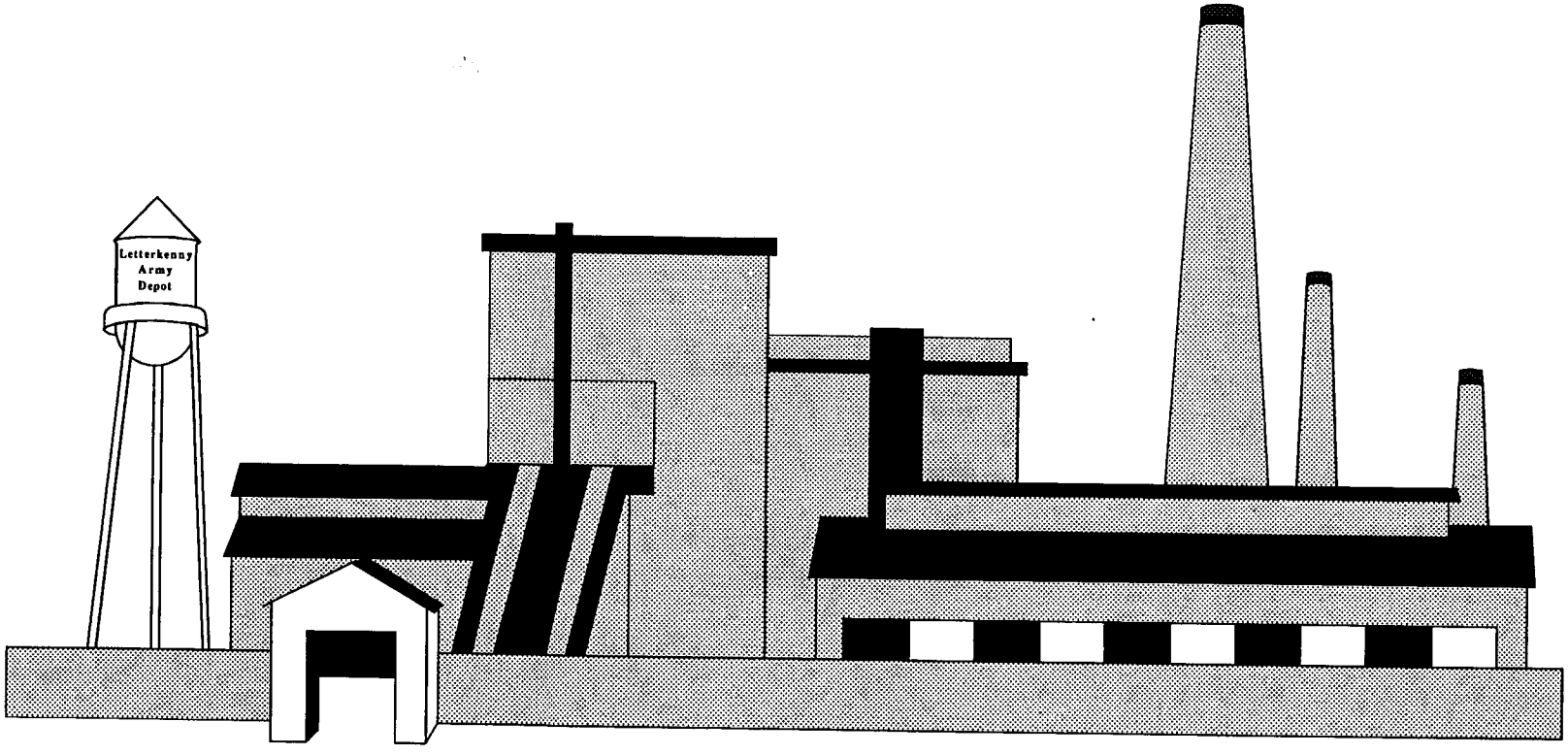
- Optimized program economies by dividing the participant responsibilities into specific functions that each party can perform in a manner that reflects total quality.

The Paladin Multiyear Contract is serving as **THE** model for government/industry restructuring. **This effort is the first of its kind within DoD** pioneering the integration of contractor, program manager, and depot work activities for the overall benefit of the product and the government.

The delivery of the first, full-rate Paladin occurred on 31 Oct 94 and was produced two months ahead of schedule and under budget. Gilbert F. Decker, Assistant Secretary of the Army and Army Acquisition Executive, the keynote speaker at the ceremony, said, "*This experiment enterprise is a hallmark of something we should try to replicate. I am extremely proud of what I've seen here today and take my hat off to this.*"

Manufacturing

MANUFACTURING CAPABILITIES

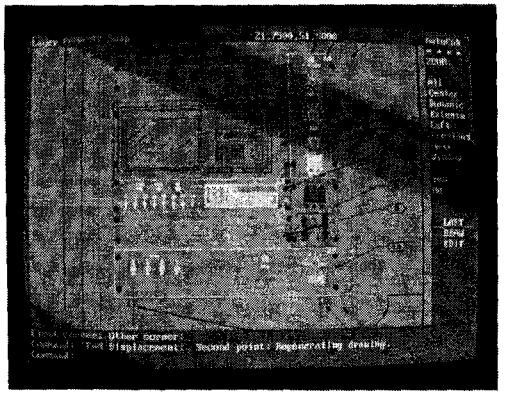


COMPUTER NUMERICAL CONTROLLED/MANUAL DATA INPUT (CNC/MDI) MACHINING

Letterkenny currently has a wide range of versatile CNC/MDI machining capabilities to include turning, milling, grinding, punching, cutting, electrical discharge machining, and boring. Letterkenny has the capability to machine from the smallest component up to an M109 hull or turret.

CAD/CAM

COMPUTER AIDED DESIGN (CAD): Soft technology which aids manufacturing through engineering drawing and animation, floor plans, technical data packages, 3-D and 2-D graphics and solid modeling.
COMPUTER AIDED MANUFACTURING (CAM): Soft technology assisting manufacturing processes through computer numerical control programming, computer process planning for machine operations, tool design and direct numerical control

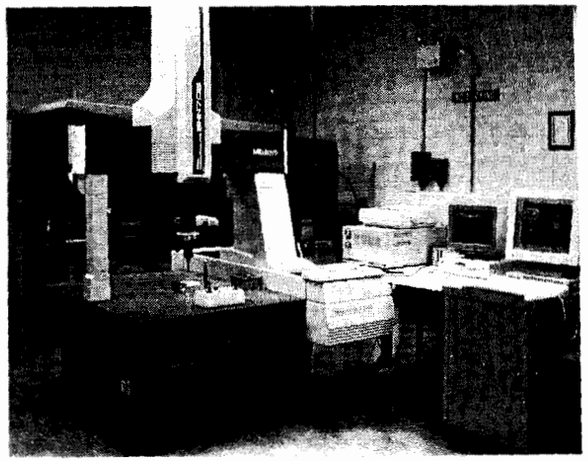


F1

FLEXIBLE COMPUTER INTEGRATED MANUFACTURING (FCIM)

Letterkenny's FCIM program integrates equipment, software, business practices, and human resources to rapidly manufacture, repair, and deliver items to support DoD Tactical Missile and Paladin missions. This program focuses on networking our business and technical resources with our customers for shortened manufacturing/repair cycles and customer satisfaction.

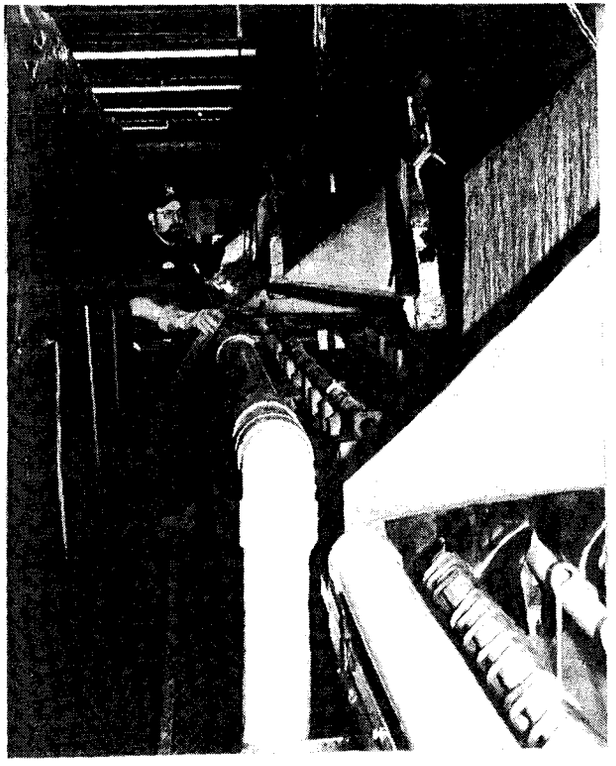
TECHNICAL MEASUREMENT FACILITY

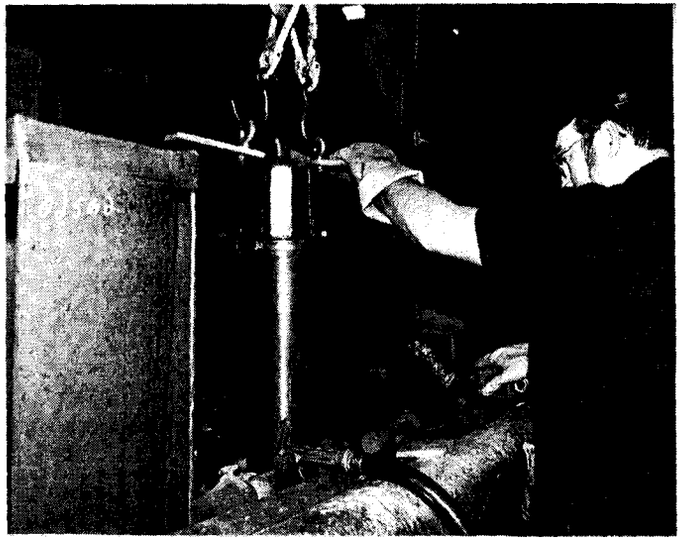


Within the vehicle rebuild complex at Letterkenny is located a technical measurement facility. This 836-square foot, environmentally-controlled room houses equipment utilized for precision measurements of machined material and components. Equipment includes a coordinate measuring machine with granite table, computer (with 3-D software), printer, and math coprocessor. This machine has infinite fine adjustment on all axis (x, y, z). Machine resolution is .00080 inch; display resolution for digital readout and computer is .0001 inch; repeatability is .0001; and work piece weight is 4,500 pounds. Also available is an optical comparator with 10 to 100 times magnification, a maintenance inspection center for the measurement of smaller parts, and a hardness tester.

CHROME PLATING FACILITY

Letterkenny applies engineering plating, per Fed Spec QQ-C-320, through both conventional and reversible rack/conformal anode processes. Electroplating of back chrome, per MIL-C-14538, is also performed. Parts with diameters up to 9 inches and lengths up to 7 feet are normally plated. Thicknesses from .0001 to .060 inches are applied. Metals commonly brush plated include chrome, nickel, gold, silver, copper, and cadmium. Complete pre- and post-machining processes are available including interior and exterior honing and drawlapping.





TEST CAPABILITIES
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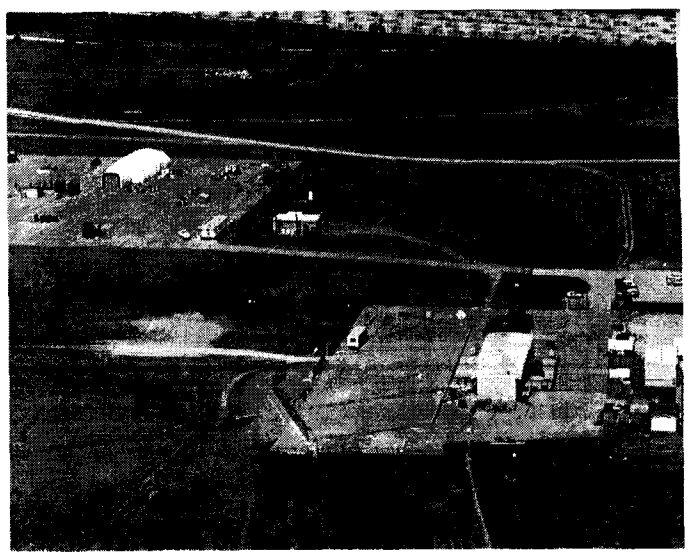
28 ACRE RADAR TEST SITE
(including HAWK Test Site and PATRIOT Test Station)

Missile systems at Letterkenny are tested at the Radar Test Site, a specially designed facility that simulates a tactical emplacement. The system is first put through the paces of daily, weekly, and monthly checks. After a long series of tests and checks, Systems Integrated Check Out (SICO) is begun. This procedure puts the system through an exhaustive test which includes a series of preliminary checks, target acquisition and identification, concluding in a simulated missile launch.

This facility is one-of-a-kind within DoD and one of two in the world.

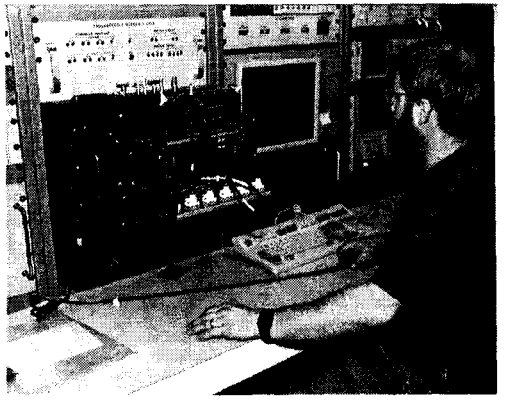


HAWK TEST SITE: 160,000 square feet of hard stand allows simulation of tactical deployment for (3) assault fire units. The controlled access, free space radiation zone allows actual on-air operation and testing.

PATRIOT TEST STATION: 2,500 square feet of environmentally controlled space for computerized test station P2275. The test station can perform complete analysis of an operational PATRIOT Radar and simulate tactical conditions. A van-enclosed environmental generator provides a hostile (jammed) electromagnetic environment. The controlled access radiation zone allows on-air operation.

DIT-MCO, A2000, MISSILE AUTOMATED TEST EQUIPMENT

Letterkenny's entire harness operation is supported by a programmable automatic continuity and insulation breakdown tester to analyze cable and wiring. With recently added modules, our testing capacity is up to 10,000 pins per unit. The semiautomatic test stations provide a limitless capacity for electrical testing. An entire complement of specialized depot-level microwave equipment is also available.



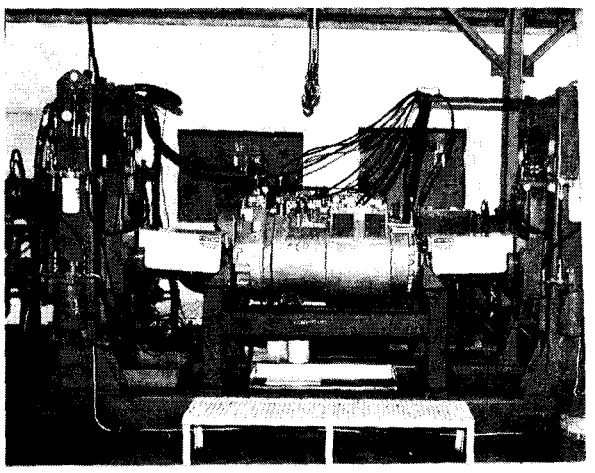
MULTILAYER CIRCUIT CARD REPAIR AND TEST

Letterkenny's Electronics Shops Division has the capability to repair multilayer circuit cards down through three layers. Letterkenny's personnel have the option of using lap flow (dissolving the epoxy layers) or a grinding method when repairing the multilayer boards. Associated equipment includes: modern PACE equipment; micro-blast (soda or walnut shell) equipment to remove conformal coatings; aqueous circuit card cleaning equipment; hot jet soldering equipment for Surface Mount Technology circuit card repair; wave soldering equipment; 15 to 30 power microscopes for miniature soldering; board and chip EPROM programming and validation test equipment; and bed-of-nails and edge connector based test equipment. All personnel who use soldering techniques are certified for MIL-STD-2000 (Task F & G) soldering.

ENGINE TEST CELL

A Distributed Numerical Control (DNC) system is connected to all of the CNC machine tools. It provides electronic management of information required to support CNC manufacturing. The DNC system is state-of-the-art technology that electronically connects engineers, drafters, programmers, and quality, to computer numerical control machines on the shop floor.

ENGINE AND CROSS DRIVE TRANSMISSION TEST STAND

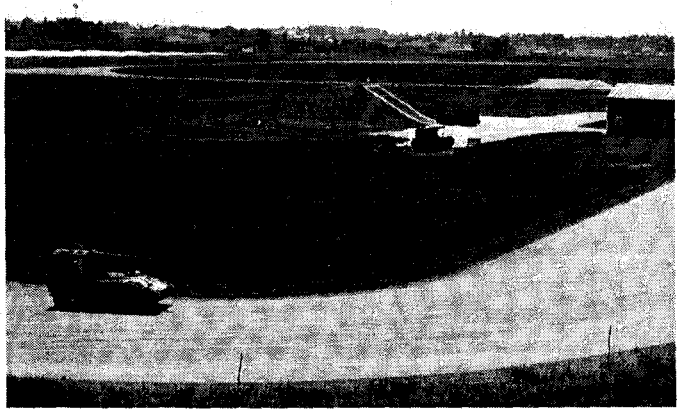


Letterkenny recently purchased a transmission test stand and has a second one on order to accomplish test requirements of the M109A XTG-411 PALADIN cross-drive transmission. The test stand is powered by a remotely located diesel engine and generates drive power and dynamic loading of each output by hydrostatic pressure. The control console features computerized data and storage. This test stand provides increased capability, accuracy, and reliability of cross-drive transmission overhauled at Letterkenny.

This test stand is one-of-a-kind within DoD.

VEHICLE TEST TRACK COMPLEX

A 1-mile, macadam (asphalt) surface, closed loop oval test track accommodates the full dynamic and static testing of tracked and wheeled vehicles at Letterkenny. The track includes straight-aways and banked curves sufficient to allow full speed testing. The complex also includes 30/60 percent slopes, pivot steer spin pad (concrete), brake/acceleration area, turning radius (wheeled/geared steer track area), undulation area, lockout cylinder area, fording/flotation pit, boresighting/synchronizing platform with slope, and a weapon's stabilization course. The track is also capable of accommodating numerous tracked and wheeled vehicles simultaneously. Two inspect/repair buildings provide six bays where timely repairs can be made to tested vehicles. An in-ground pit in one bay provides easy access for inspections/repairs to the components on the underside of vehicles.



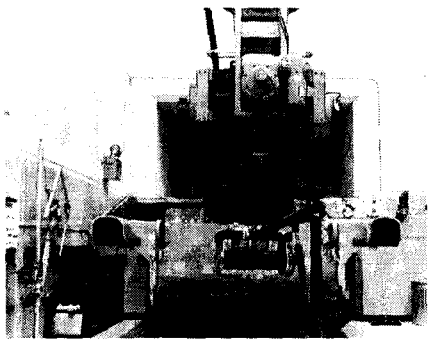
RADIOGRAPHIC INSPECTION FACILITY

Letterkenny's radiographic (x-ray) inspection facility houses a 25 megavolt Betatron x-ray machine and a 320 kilovolt x-ray machine. The Betatron unit is located in a concrete chamber with 5 to 8-foot thick walls and a 96-ton steel concrete filled door that moves on railroad type tracks. The Betatron unit can x-ray through 20 inches of steel and is used for inspection of large items (i.e., the interior of large rocket motors). A 10-ton bridge crane and a 25,000 pound "track-tread" carrier are used for movement and placement of large material. The 320 kilovolt machine is used for smaller explosive/nonexplosive devices and has the capability to x-ray through 2 inches of steel. An area monitoring system is an integral part of the built-in radiation safety system.

The facility is constructed of concrete and steel and is equipped with three portable x-ray machines. It also has a darkroom that houses an automatic film processor with automatic chemical replenishment features and a unit to enable the recovery of silver from chemical solutions.

Although the facility is used primarily for explosive devices, gun tubes, self-propelled howitzer hulls, and major items requiring safety or quality inspections can be processed as well. Extensive savings in labor are possible when items can be inspected by x-ray rather than disassembled and visually inspected.

This facility is one of only three within DoD.

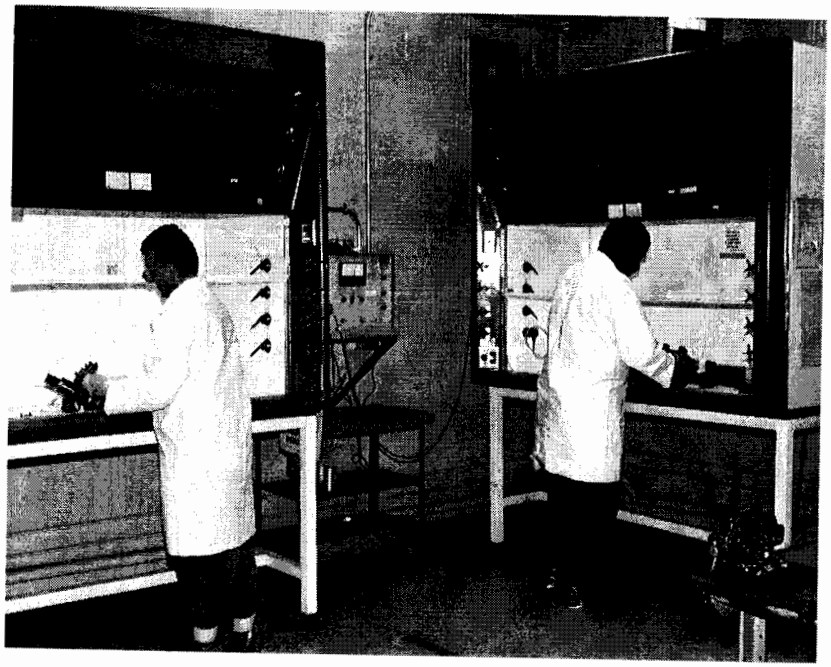


Other Advanced

OTHER ADVANCED TECHNOLOGY

TRITIUM FACILITY

Located in Bldg. 14, Letterkenny's facility includes a Tritium Instrument Repair Room approximately 20 feet by 20 feet. This room is specially designed and designated for repair work related to self-luminous sources (tritium) into fire control instruments. Letterkenny has been licensed by the Nuclear Regulatory Commission (NRC). The facility contains required tritium air monitors and fume hoods. All tritium instrument repair personnel are properly trained and skilled in repair/replacement of tritium light sources. Facilities also exist for the shipping, receiving, and storage of tritium items.

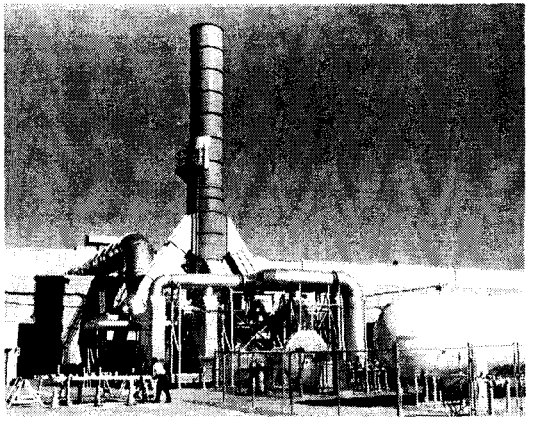


VOC EMISSION CONTROL SYSTEM

Letterkenny's painting operations include 53 painting facilities spread throughout the depot complex. These facilities range from small open-face booths to semiautomated paint carousels to large drive-thru booths (the largest being 22 feet wide by 18 feet high by 60 feet long). Chemical agent resistant coatings (CARC) (primer and top coat) are applied within these facilities to a wide variety of parts and end items.

Our recently installed Volatile Organic Compound (VOC) emission control system utilizes filters, zeolite absorbing rotors, and anoxidizer to remove over 95 percent of the VOCs. The system greatly increases the painting capability at Letterkenny, complies with Pennsylvania Department of Environmental Resources regulations, and postures Letterkenny to deal with more stringent environmental regulations in the future. Pennsylvania currently ranks as one of the most stringent states in the nation and yet has approved Letterkenny's capability.

This system is one-of-a-kind within the Department of the Army.



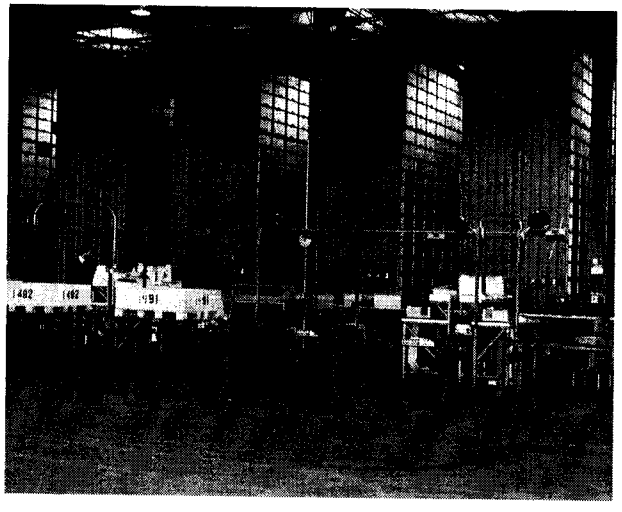
ASRS PLUS

The Automated Storage and Retrieval (ASRS) located in Bldg. 370 is a storage management recordkeeper that provides material visibility, accountability, and job control planning processes.

Incoming materials and parts are assigned a storage location and stored there for later use. Upon request, items are picked and delivered automatically. Automated Guided Vehicles (AGVs) deliver parts and materials throughout the shops.

ASRS operates as a "Real Time" system in which the occurrence of an event (storage or requisition) is recorded almost simultaneously.

Estimated annual savings realized with the utilization of the ASRS is $2,168,227.



NITROGEN SUPPLY AND DISTRIBUTION SYSTEM

Letterkenny's state of the art Nitrogen Supply and Distribution System has been certified by the Naval Warfare Assessment Division at China Lake for purity and particulate count. The liquid nitrogen is 99.999% pure and in its gaseous state has been measured in fractional parts per million for trace gasses. The delicate cryogenics of the Sidewinder seeker demands these rigid purity requirements.

Our nitrogen supply and distribution system consists of an 11,000 gallon vertical tank, two 250scfm pumps, four vaporizers, 10 receivers, and stainless steel high pressure tubing installed throughout Bldg. 370. The system provides nitrogen gas to Bldg. 370 at pressures up to 3500psig. A programmable control system provides full automation for selecting a pump and vaporizers and starting and stopping the system. The liquid vessel also has a liquid tap for filling Dewars.

Currently the system has 12 pressure reduction panels providing gas for Sidewinder missile testing. It is also being used to purge gas of the Avenger argon bottle program. The Phoenix missile system uses liquid nitrogen through a special tap on the system. The system has enough capacity to support future nitrogen requirements in Bldg. 370, including Maverick Missile System.

APPENDICES

Letterkenny Army Depot (LEAD) Maintenance Interservice Support

U.S. Marine Corps

HAWK Missile Systems - (Major and Secondary Items)

NASA

HERC Modifications

U.S. Navy

MK42 Boresight
HERC Target Tracking Radar
HERC Target Tracking Station
HERC Launching Control Trailer
HERC Missile Tracking Radar
HERC Battery Control
HERC Radar Control

U.S. Air Force

Microscopes
Fiber Optic Scope
Binocular, M18
Watches
Clocks
AF Borescopes
Infrared Periscopes
N127 Articular Telescopes
M21 Periscopes
M19 Periscopes
M49 Periscopes
Range Finder
M100 Periscopes
M32 Periscopes
Air Force Caterpillar
M2A2 Aim Circle
Scoop Loader
40 K Loader
Tractor HD21P
HAWK Launchers
HAWK High Power Illuminators.

National Guard

5000 Gal. Trailer Tank
M750 6-Ton Semitrailer Van
M35A2 2½-Ton Truck
M49A2C 2½-Ton Truck
M820 5-Ton Van Truck Exp
M109A3 Shop Van Truck
M129A2 Semitrailer
M54 5-Ton Cargo Truck
M292 2½-Ton Van Truck
M50A1 2½-Ton Truck
M129A1 12-Ton Semitrailer Van
M146 6-Ton Semitrailer Shop Van
M313 6-Ton Semitrailer Van Exp
M870 Semitrailer
M600 Liquid Storage Tank
M50A2 2½-Ton Truck
Refrigerator Container Assy
Fuel Tank Truck
16 Cu. Ft. Concrete Mixer
M131A4C Semitrailer Tank
M131A5C Semitrailer Tank
HAWK Missile Systems
Crusher Screen Plant (75-Ton)

LEAD Maintenance Experience in Support of Foreign Military Sales

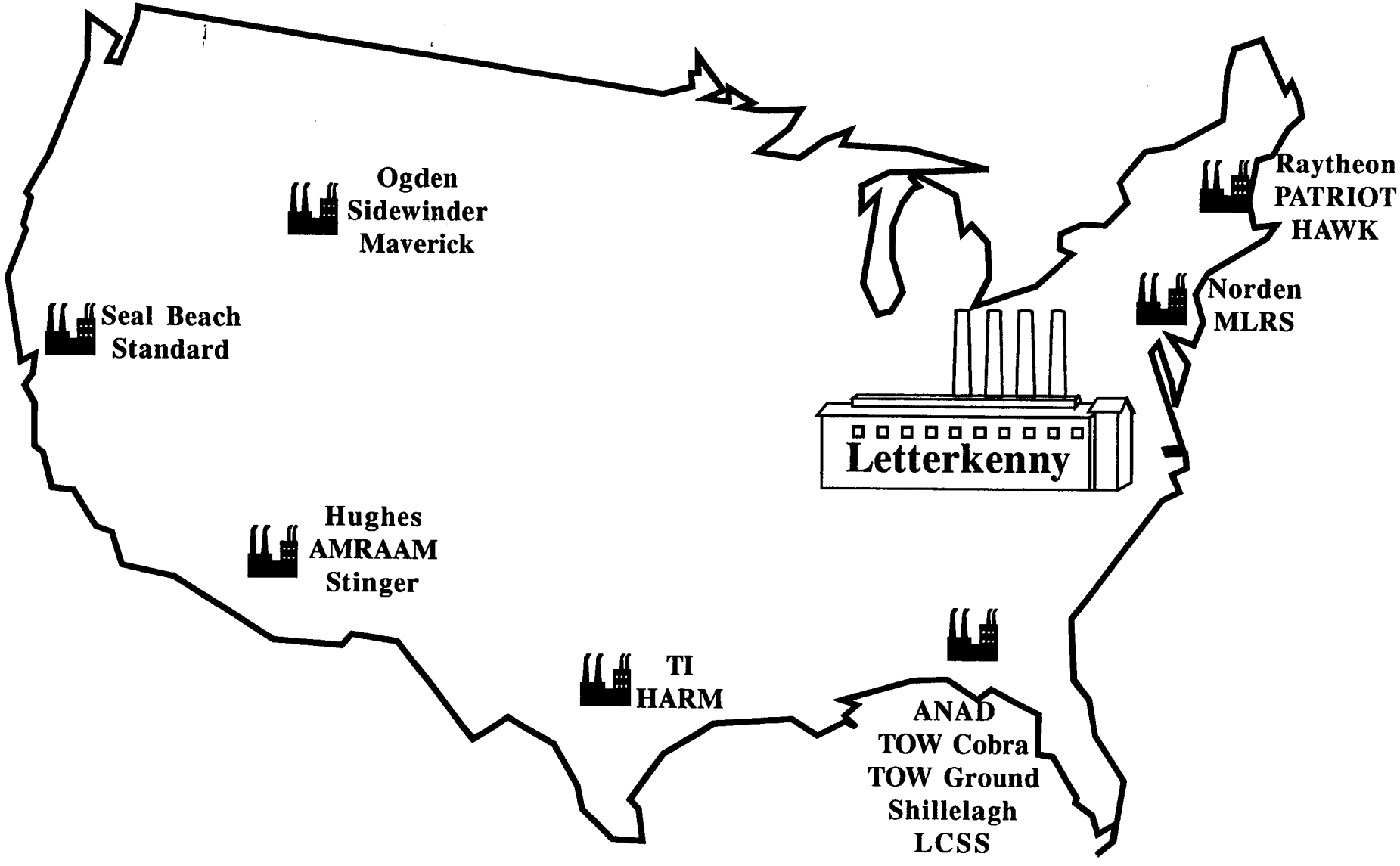
Greece
Lebanon
Great Britian
Israel
Austria
Turkey
Germany
Morocco
Norway
Denmark
Panama
Korea
Honduras
Dj ibouti
China
Pakistan
Portugal
Iran
Netherlands
Costa Rica
Italy
New Zealand
Switzerland
United Arab Emirates
Dominican Republic
Oman
Nauru Africa
Saudi Arabia
Chad
El Salvador
Philippines
Haiti
Singapore
Indonesia
Egypt
Australia
Columbia
Spain
Thailand
England
Yeman
Somalia
Tunisia
Sudan
Bolivia
Bahrain
Japan
Jamaica
Ecuador
Niger
Sweden
Canada
Kuwait
United Kingdom
Jordan
Mexico
Taiwan

LEAD Unique Fabrication Capabilities (cont.)

Other Customers

- Modification Kits
- Conversion Kits
- Cable Assemblies
- Cable Carriages
- Cable Connector Assemblies
- Relay Box
- Adapters
- Antenna Mast Group Assemblies
- FME Shop Modification Kits
- HAWK Loader Modifications
- Sweepdown I, PIP (Modification Kits)
- Sweepdown II, PIP (Modification Kits)
- Radio Mounts
- Plant Equipment
- MEPSCAT, Strength Machines
- Cartridge Assemblies
- FADAC Parts
- Camshafts
- Shop Equipment
- Guided Missile Transporters
- Teflon Hose Kits
- Pneumatic Wheel
- Semi-Trailer GM Trans (Retrofit on HEMTT)
- Resistors II
- Remote Function Kit
- Engine Head Assembly
- CWAR High Voltage Power Supply Modification Kit
- PATRIOT Battalion Maint Center
- PATRIOT Battery Maint Center
- Demi-Trailer M1032 Small Repair Parts Transporter
- Miscellaneous Combat Items
- M3A4 Smoke Generators
- Adapters
- Retrofit Kit
- Drawbar Kit
- Relay Box
- M109A4 Self-Propelled Howitzer (MWO Kits)
- 155mm Towed Howitzer (Misc Parts)
- M157 Smoke Generator (Misc Fixtures)

TRANSITIONS UNDERWAY

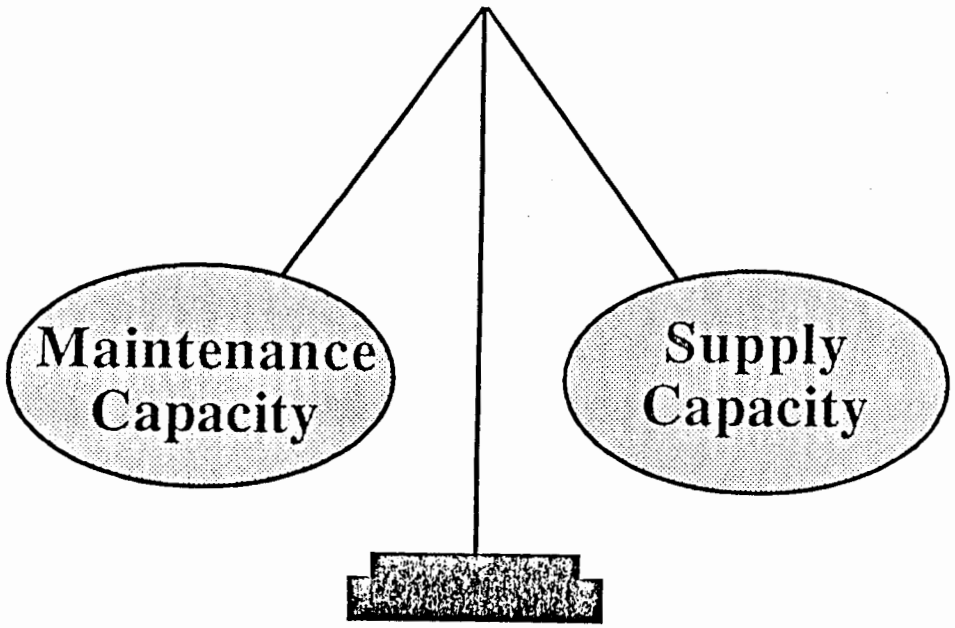


MILITARY WORTH ANALYSIS BRAC 95

IMPACT TO LETTERKENNY ARMY DEPOT

INSTALLATION ASSESSMENT
300 pts.

BRAC 95 Attributes & Weights



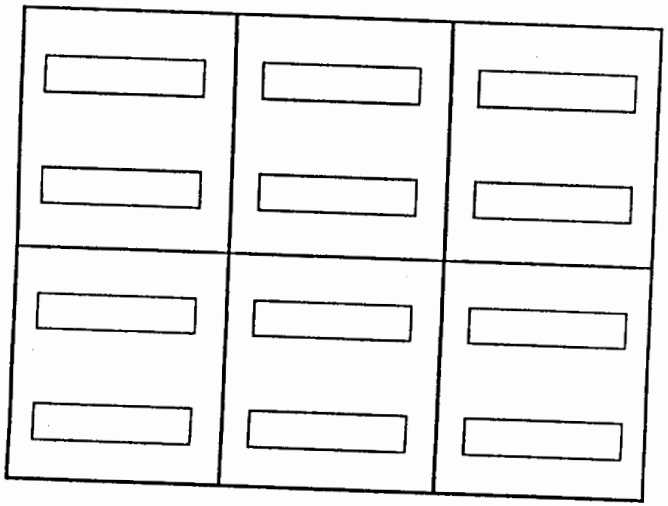
Value

Maintenance Capacity	≠	Supply Capacity
Provides:		Provides:
• Power Projection • Sustainment • Reconstitution		• Inert Storage Sq. Ft.

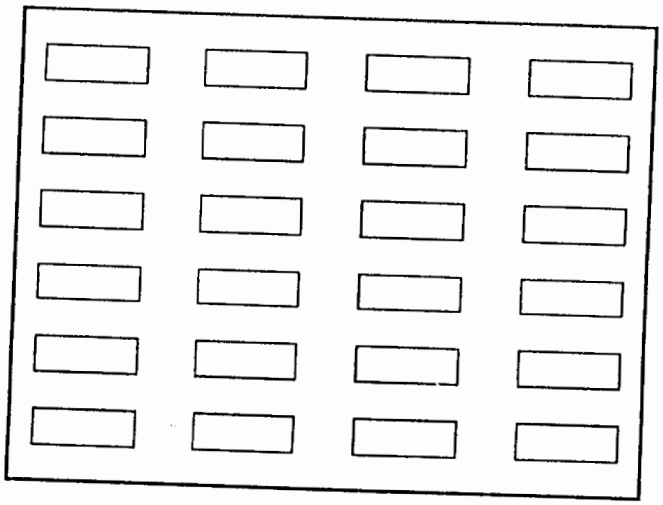
Bottom line: maintenance capacity should be weighted more than supply

DEPOT MAINTENANCE CAPACITY
150 pts.

*Artillery Bay Operation



**Missile/Electronics Circuit Card Repair



*Artillery bay operation capacity - 12 work positions x .95 availability x 1615 manhours = 18,411 manhours

**Missile/electronics capacity - 24 work positions x .95 availability x 1615 manhours = 36,822 manhours

Available capacity increased by 100% with no change in physical plant size

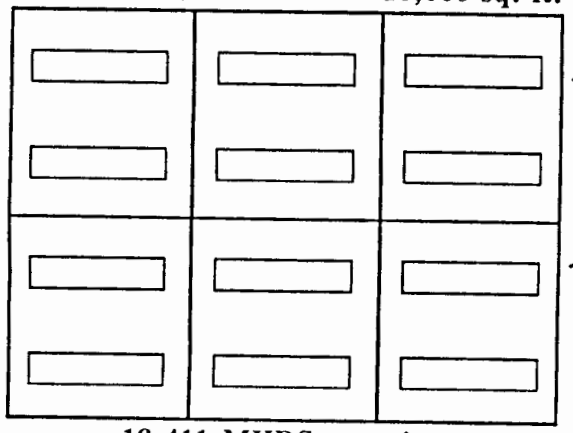
Bottom line: manhours do not adequately portray capacity

IBOE AND MISSION OVERHEAD RATES

150 pts.

IBOE = $100,000
MOH = $50,000

10,000 sq. ft.



18,411 MHRS capacity

IBOE = cost ÷ .85 (capacity)
MOH = cost ÷ .85 (capacity)

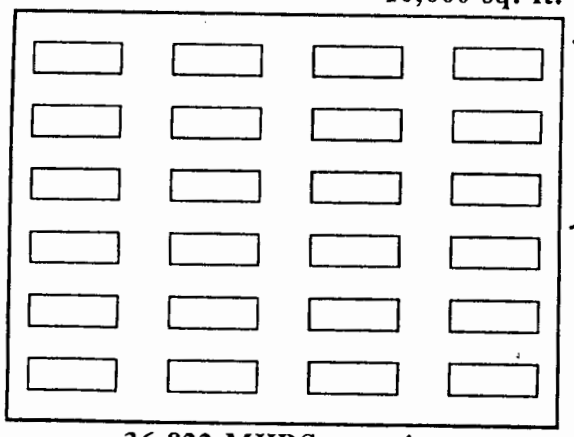
MHRS

IBOE = $100,000 ÷ .85 (18,411) = $6.39 hr
MOH = $50,000 ÷ .85 (18,411) = $3.20 hr

Sq. Ft.

IBOE = $100,000 ÷ 10,000 = $10 sq. ft.
MOH = $50,000 ÷ 10,000 = $5 sq. ft.

10,000 sq. ft.



36,822 MHRS capacity

MHRS

IBOE = $100,000 ÷ .85 (36,822) = $3.19 hr
MOH = $50,000 ÷ .85 (36,822) = $1.60 hr

Sq. Ft.

IBOE = $100,000 ÷ 10,000 = $10 sq. ft.
MOH = $50,000 ÷ 10,000 = $5 sq. ft.

Bottom line: larger manhour of capacity smaller IBOE and MOH rate/hour

EXCESS CAPACITY
40 pts.

- Measurement in square feet
- High number receives more points
- LEAD penalized because of BRAC 93 implementation
  - No major construction
  - Utilization of existing facilities
  - Renovation of existing facilities

Bottom line: excess capacity meaningless - expandability better measurement

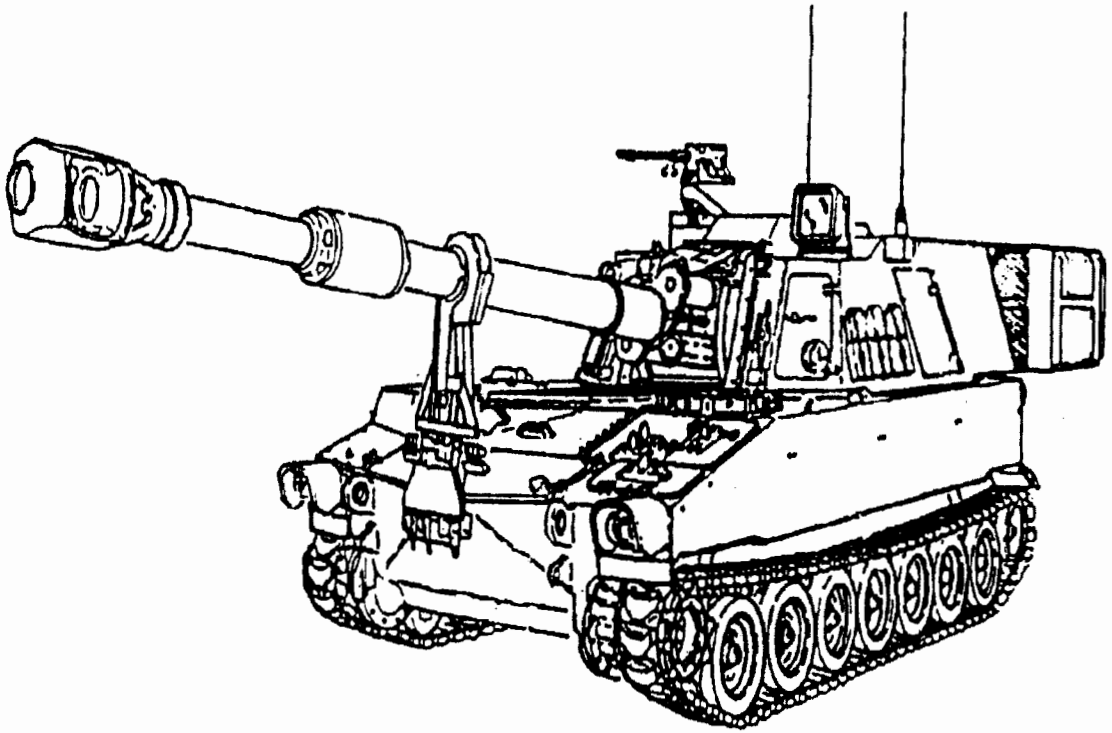
MODEL DEFICIENCIES

- Measures past workloading decisions not operational readiness
- Skews cost considerations
- Penalizes efficient capacity utilization initiatives
- Interservice value not considered
- Not tied to force structure support

Paladin Production Enterprise

for

Mr. Al Cornella
BRAC-95 Commissioner
24 March 1995



Messages

- **Letterkenny is Defense pioneer of innovation for efficiency**
  - Interservicing (for missile maintenance)
  - Government/industry cooperation (Paladin Enterprise)
- **BRAC-95 could consolidate light/medium tracked combat vehicle workload in <u>established</u> government/industry center of excellence (Letterkenny/York, PA).**

What is "Paladin Enterprise"?

Government/industry partnership between Letterkenny and United Defense for Paladin production

- **Army's largest multiyear combat vehicle production contract**
- **Integrated manufacture utilizing strengths of both parties**
  - » Letterkenny disassembles old howitzers and refurbishes chassis using parts provided by United Defense
  - » United Defense builds new turret and integrates onto chassis from Letterkenny
  - » Letterkenny tests and paints
- **Successful - two months ahead of schedule, under budget, high quality validated by independent government test and inspection**

Military Worth of Paladin Enterprise

- Cost avoidance = $15M
  - Process streamlining - Waived 3 DOD and 27 Army regulations
  - Less material handling - Just-in-time parts delivery directly to work stations
  - Integrated testing - Automotive, navigation, armament
- Risk reduction
  - Integrated computer systems and shared information enable proactive management
  - Close cooperation, vice "arms length" confrontation, yields rapid problem resolution
- Higher quality from system level test
- Preserves strengths of public and private sectors and promotes shared learning
- Model of government/industry cooperation for rationalization of defense industrial base

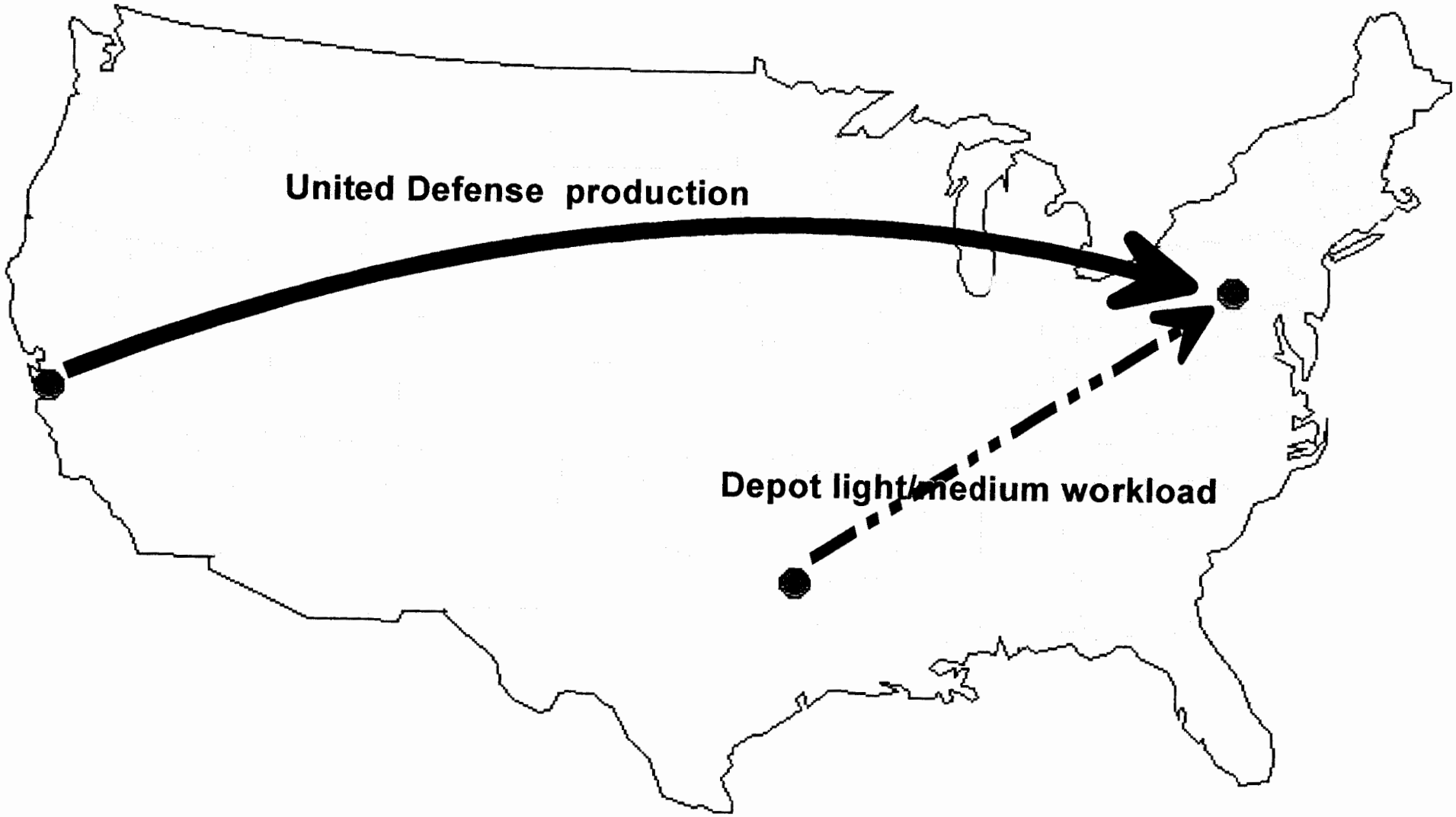
Who is United Defense?

- Partnership of FMC and Harsco
- World's largest developer/producer of tracked combat vehicles
- Prime contractor for all light/medium tracked combat vehicles in U.S. inventory including those at Red River
- Consolidating production operations in south central PA
- Letterkenny partner in Paladin Enterprise

BRAC Facts

- BRAC-93 established Letterkenny as center of excellence for DoD missile maintenance and artillery systems
- Letterkenny has experience, facilities, and skills to readily accommodate all light/medium tracked combat vehicle maintenance

BRAC-95 Opportunity



Bottom Line

- Letterkenny . . . Not just a depot. Pioneer of innovation for depot efficiency
- South central PA could be government/ industry center of excellence for light/medium tracked vehicles - development, production, and support

Defense Distribut Depot Letterke

Defense Distribution Re
Defense Logistics Ag

DDLP MISSION

PLAN, DIRECT, COORDINATE, AND MANAGE PHYSICAL DISTRIBUTION FUNCTIONS.

DEFENSE DISTRIBUTION DEPOT LETTERKENNY FUNCTIONS

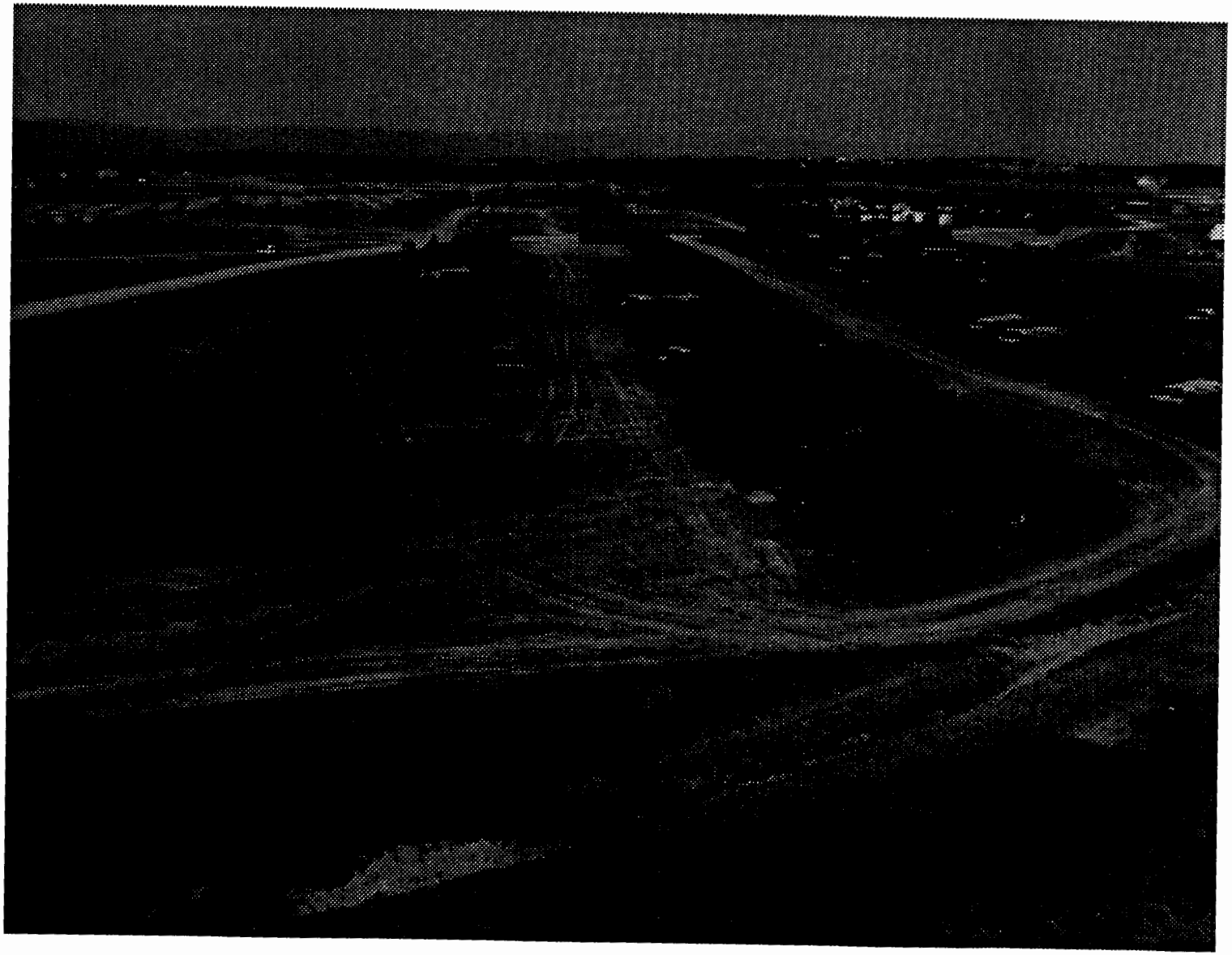
* RECEIVE
* STORE
* ISSUE
* PRESERVATION/PACKAGE
* TOTAL PACKAGE FIELDING
* SUPPLY SUPPORT TO MAINTENANCE
* SET ASSEMBLY
* INVENTORY
* REPAIR & RETURN
* TRANSPORTATION

DEFENSE DISTRIBUTION DEPOT LETTERKENNY
MATERIAL/RESOURCES

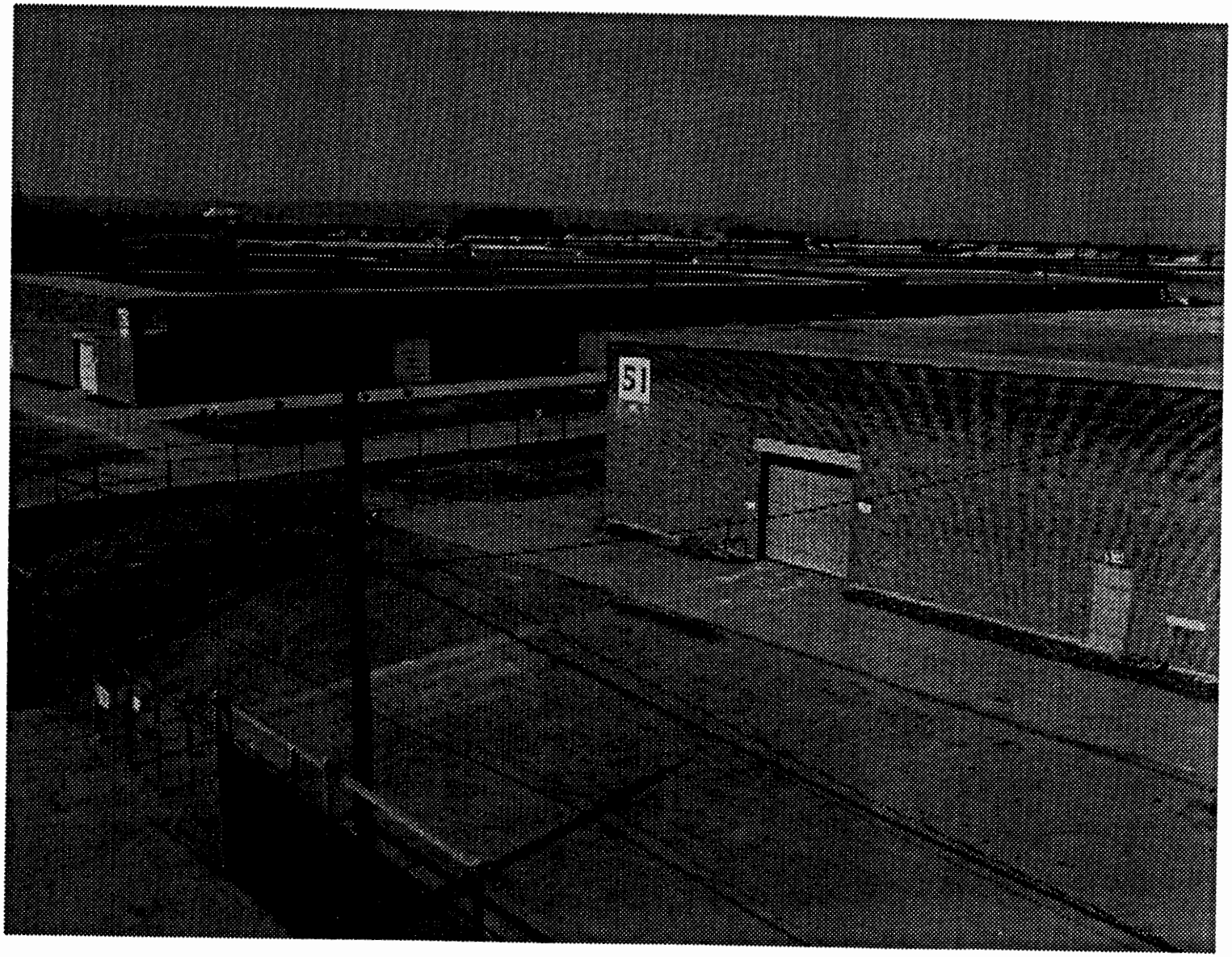
* INVENTORY
  - 84,718 TOTAL LINE ITEMS
  - $4.1 BILLION
* COVERED STORAGE OCCUPANCY 73% full
  - 29 WAREHOUSES (2,290,627 GROSS SQ.FT.)
  - 60 SHELTERS/SHEDS (1,149,022 GROSS SQ.FT.)
* OPEN STORAGE
  - 20 OPEN AREAS (4,206,981 GROSS SQ.FT.) 33% occupied
* SPECIAL STORAGE AREAS
  - CLASSIFIED STORAGE (99,720 GROSS SQ. FT.)
  - WEAPONS STORAGE (31,860 GROSS SQ. FT.)
  - HAZARDOUS STORAGE (65,139 GROSS SQ. FT.)
  - TANK FARM (156 TANKS) (341,760 GROSS SQ.FT.)
* 449 PERSONNEL

AS OF 28 FEB 95

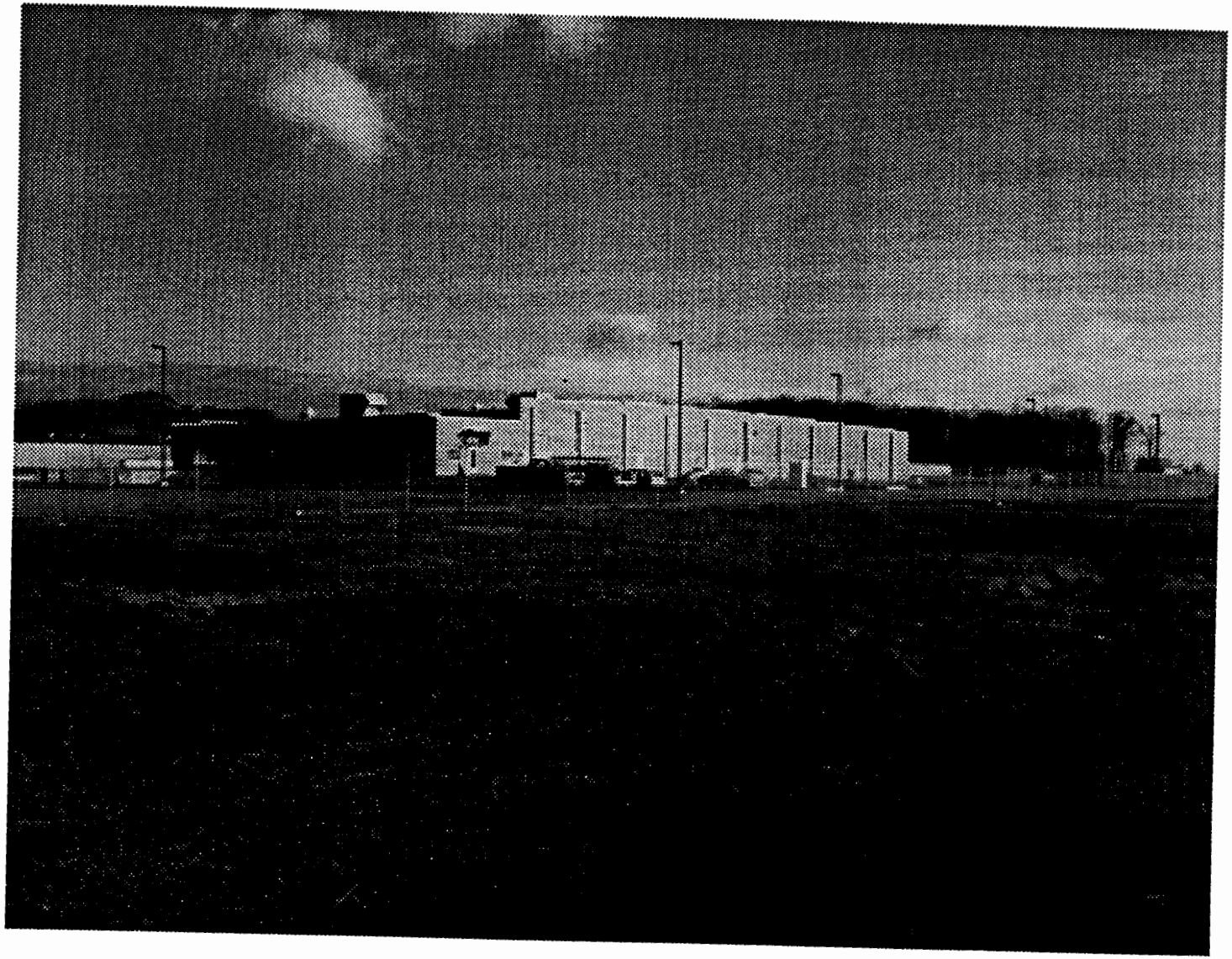
Open Storage Areas



Weapons and Classified Storage



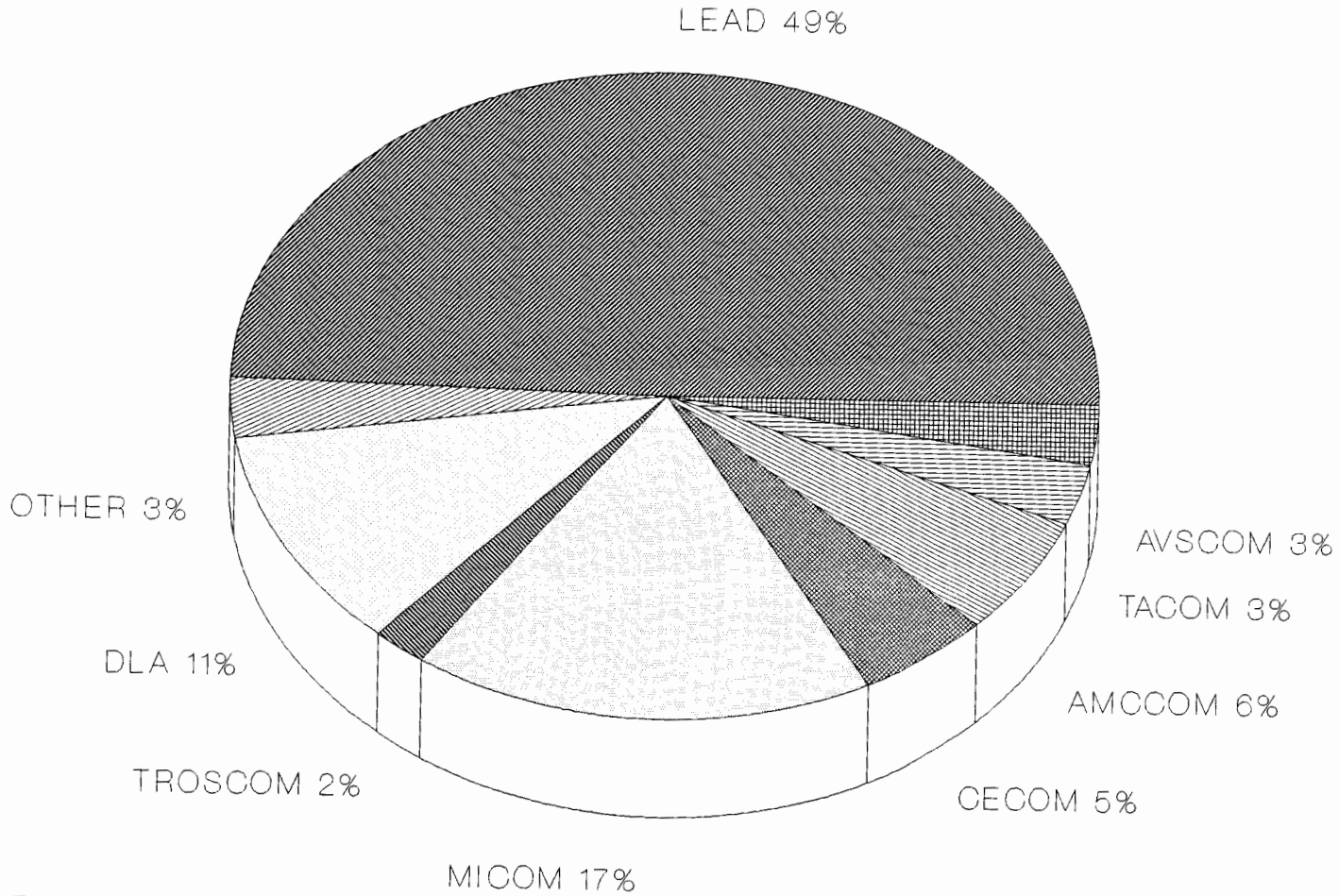
Hazardous Materials Building



DEFENSE DISTRIBUTION DEPOT LETTERKENNY
UNIQUE MISSIONS

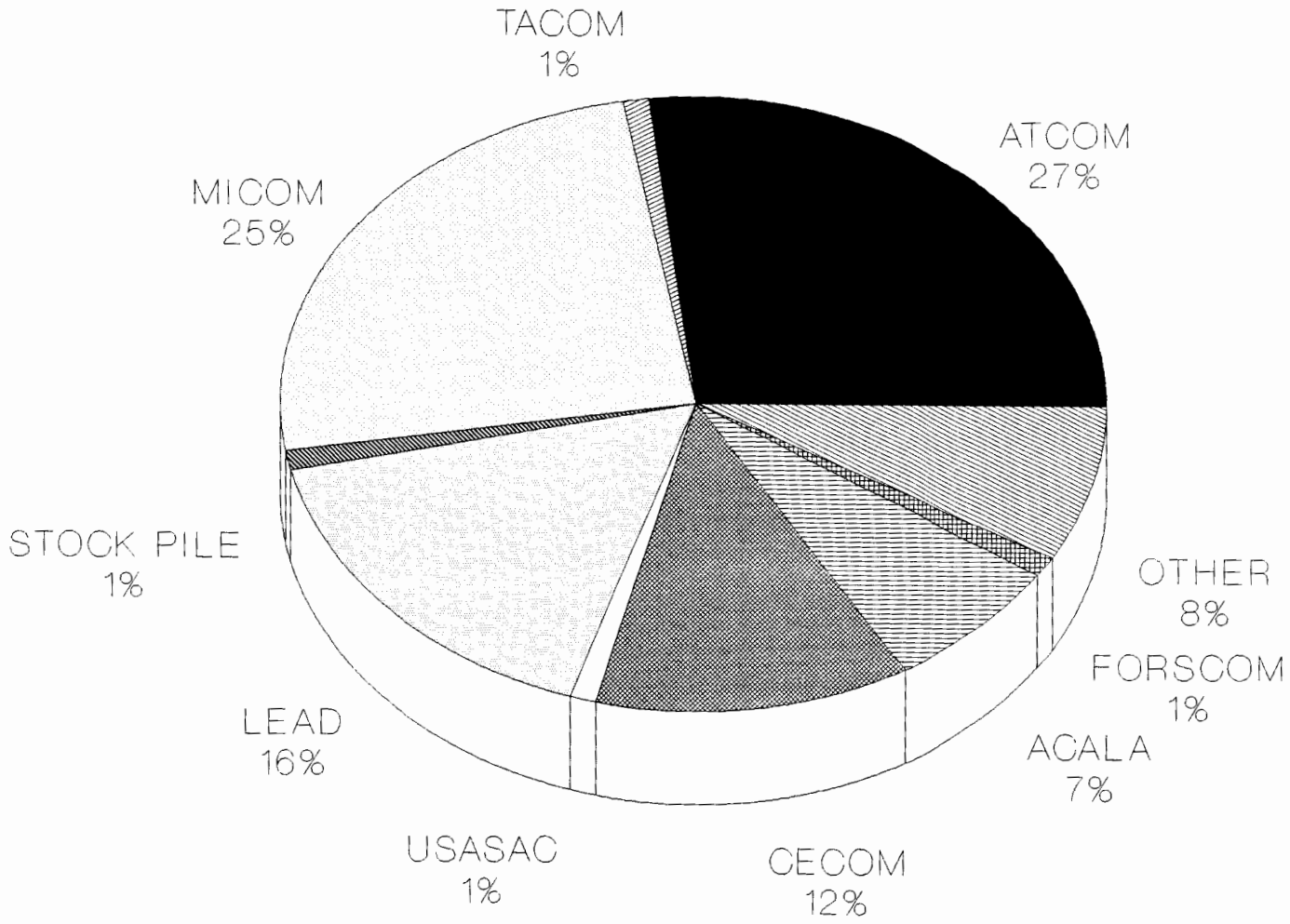
- PALADIN
- FOREIGN MILITARY SALES
- SET ASSEMBLY
- PATRIOT/HAWK/AVENGER FIELDINGS
- ACCOMODATE PAST BRAC DECISIONS
- TACTICAL MISSILE CONSOLIDATION

DEFENSE DISTRIBUTION DEPOT LETTERKENNY MATERIEL CUSTOMERS



THRU FEB FY 95, FIGURES ARE FROM SDS

DEFENSE DISTRIBUTION DEPOT LETTERKENNY
FY 94 REIMBURSABLE CUSTOMERS



DEFENSE DISTRIBUTION DEPOT LETTERKENNY
PERFORMANCE

EXCEEDING ALL PERFORMANCE GOALS:

FASTER,

BETTER,

CHEAPER

DEFENSE DISTRIBUTION DEPOT LETTERKENNY

BOTTOM LINE

* DDLP RESOURCES AND PERFORMANCE HIGHLY VALUED

* COLLOCATED DEPOTS EXIST PRIMARILY TO SUPPORT MAINTENANCE

IF LEAD GOES DDLP GOES

DEFENSE DISTRIBUTION DEPOT LETTERKENNY
MILITARY VALUE ANALYSIS

DEPOT	VALUE
1. DD__	---
2. DD__	---
3. DDLP	**645**
4. DD__	---
5. DD__	---
6. DD__	---
7. DD__	---
8. DD__	---
9. DD__	---
10. DD__	---
11. DD__	---
12. DD__	---
13. DD__	---
14. DD__	---
15. DD__	---
16. DD__	---
17. DD__	---

DDLP WAS EVALUATED WITH THE OTHER 17 DLA COLLOCATED DEPOTS.
TOTAL AVAILABLE POINTS WERE 1000.

DEFENSE REUTILIZATION AND MARKETING OFFICE
LETTERKENNY

MISSION STATEMENT

PROVIDE FULL DISPOSAL SUPPORT FOR HAZARDOUS AND NON HAZARDOUS EXCESS AND SURPLUS PROPERTY AND ADMINISTER ENVIRONMENTAL DISPOSAL CONTRACTS FOR ALL DOD ACTIVITIES IN SOUTH CENTRAL AND WESTERN PA, CENTRAL AND WESTERN MARYLAND, AND EASTERN AND NORTHERN WEST VIRGINIA.

* DISTRIBUTION CENTER FOR PRECIOUS METAL RECOVERY EQUIPMENT AND SUPPLIES FOR MILITARY INSTALLATIONS EAST OF MISSISSIPPI AND EUROPE; OPERATES REGIONAL PRECIOUS METAL DEFINITION AND PROCESSING CENTER.
* FY 94: RECEIVED AND PROCESSED APPROXIMATELY 88,500 LINES WITH A TOTAL ACQUISITION COST OF $473,763,124.
* COVERED STORAGE: 114,800 SQ. FT.
* OPEN STORAGE: 35 ACRES / 1,456,560 SQ. FT.
* 35 PERSONNEL

Glen Knoff

SCHEDULE

0800-0830	COMMUNITY REPRESENTATIVES
0830-0930	WORKING BREAKFAST
	LEAD OVERVIEW — COL FAIRALL DDLP OVERVIEW — LTC CARLOW
0930-1020	TOUR MISSILE ELECTRONICS BLDG (MR GOODMAN)
1020- 1110	TOUR VEHICLE SHOPS DIVISION (MR SHIVELY)
1110-1145	TOUR UNITED DEFENSE (MR SCOTT)
1145-1200	PRESS AVAILABILITY

16.1
10 FY 95
10.3 x-ray process
190 hours
72 hours from other locations

7000 acres
13,000 acres - Ammo

OUTLINE

DEPOT MANAGEMENT

LETTERKENNY ARMY DEPOT

WHAT DO WE DO?

HOW ARE WE DOING

SUMMARY

LETTERKENNY ARMY DEPOT

FACILITIES
- 19430 ACRES
- 54 MILES RAILROAD
- 1863 BUILDINGS
  - 1.3M SQ FT INDUSTRIAL
  - .8M SQ FT ADMIN
- 902 AMMO IGLOOS
  - 3M SQ FT STORAGE

LARGEST EMPLOYER IN FRANKLIN COUNTY

ENVIRONMENTAL
- 2 SUPERFUND SITES
- $43.2M SPENT THRU FY94
- EST $500M THRU COMPLETION

$25M IN INFRASTRUCTURE MAINTENANCE IN LAST SEVEN YEARS

MISSIONS

RECENTLY DESIGNATED A NATIONAL PERFORMANCE REVIEW LABORATORY

AMMUNITION
- RECEIPT/STORE/ISSUE
- DEMIL

MAINTENANCE
- DOD TAC MSL
- ARTILLERY

BASEOPS
- FULL SERVICE TO MISSION AND TENANTS

PALADIN

BRADLEY

LETTERKENNY ARMY DEPOT

DEPOT

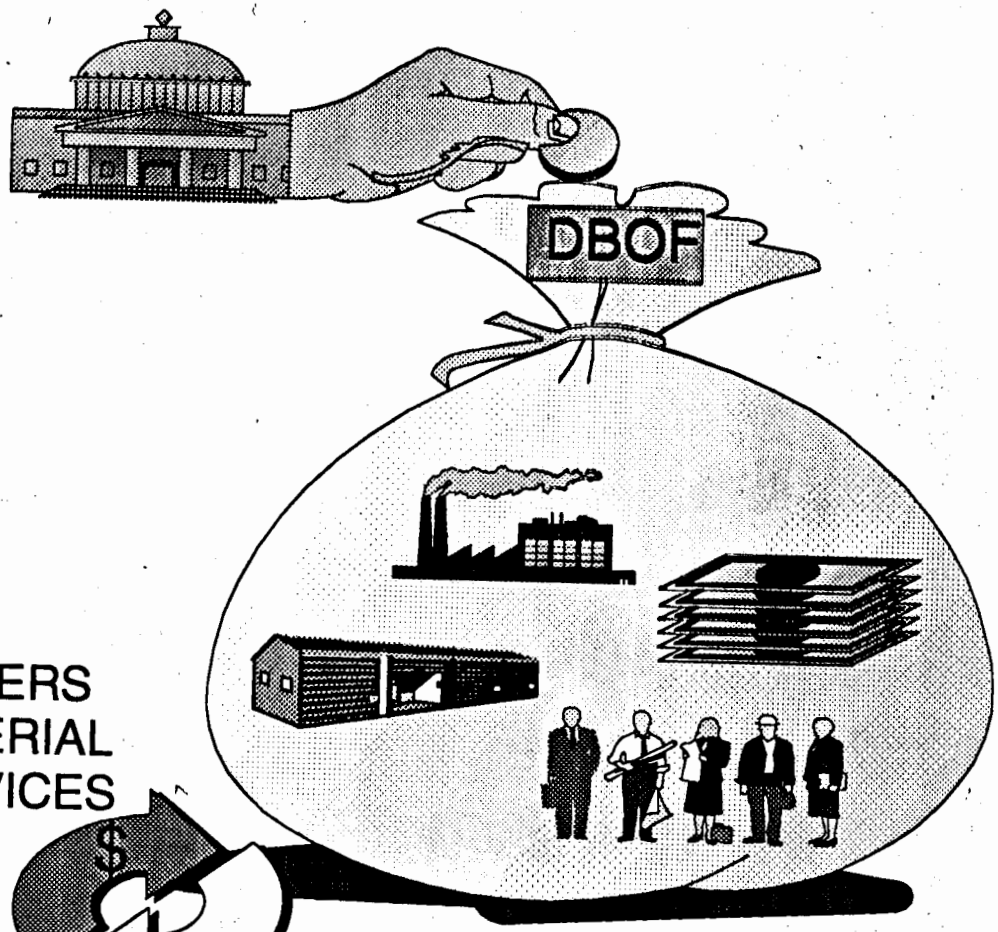
- MAINTENANCE - 1333
- AMMUNITION - 166
- BASOPS - 636
- TOTAL - 2135

TENANTS

- HQ U.S. ARMY DEPOT SYSTEM COMMAND - 335
- SYSTEMS INTEGRATION & MANAGE MENT ACTIVITY - 198
- U.S. ARMY LOGISTICS SUPPORT ACTIVITY - 129
- U.S. ARMY TMDE - 55
- DEFENSE LOGISTICS AGENCY - 450
- DEFENSE MEGA CENTER - 149
- DEFENSE FINANCE & ACCOUNTING SERVICE - 72
- OTHERS - 95
- TOTAL - 1483

?

DEFENSE BUSINESS OPERATING FUND

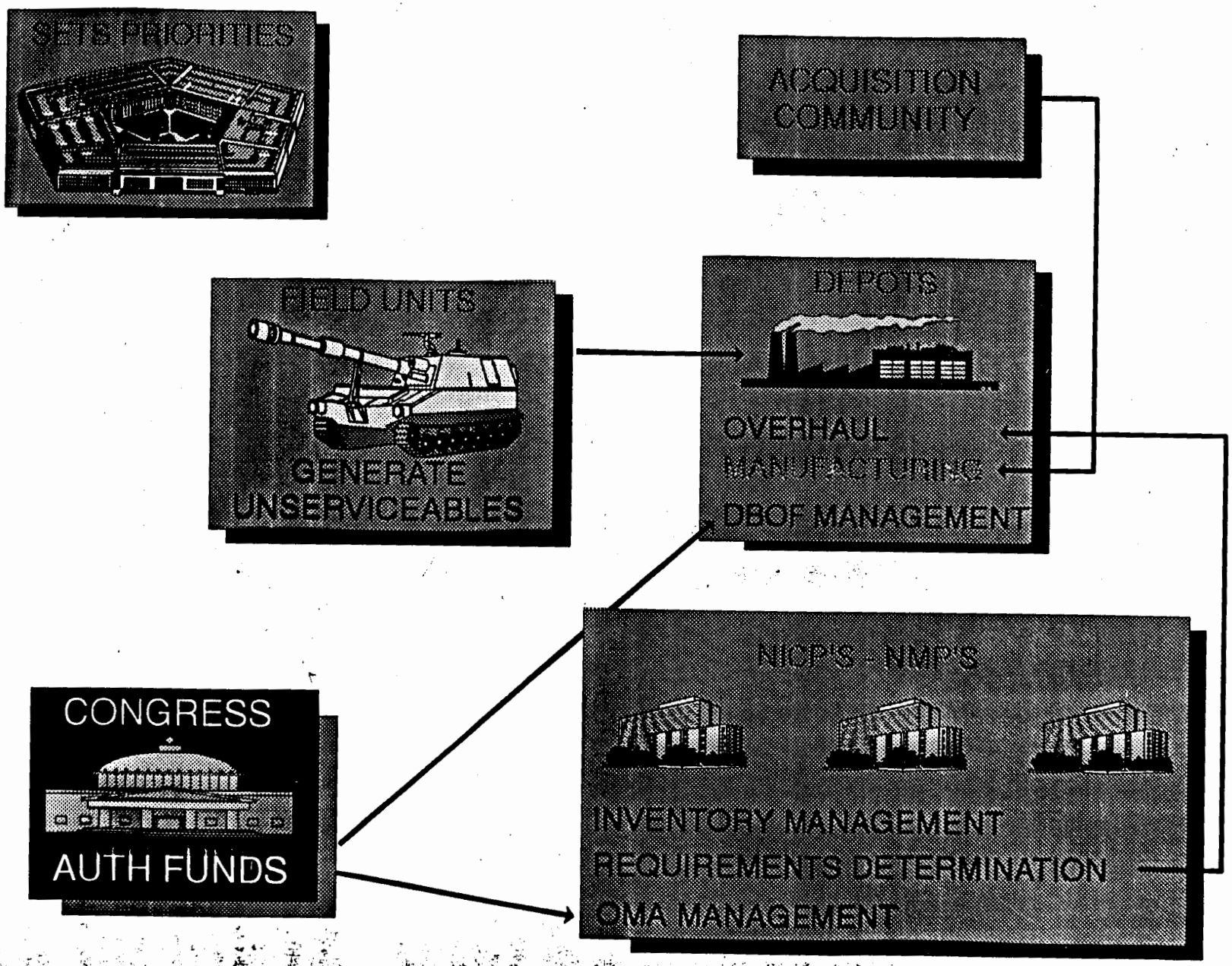


CUSTOMERS BUY MATERIAL AND SERVICES

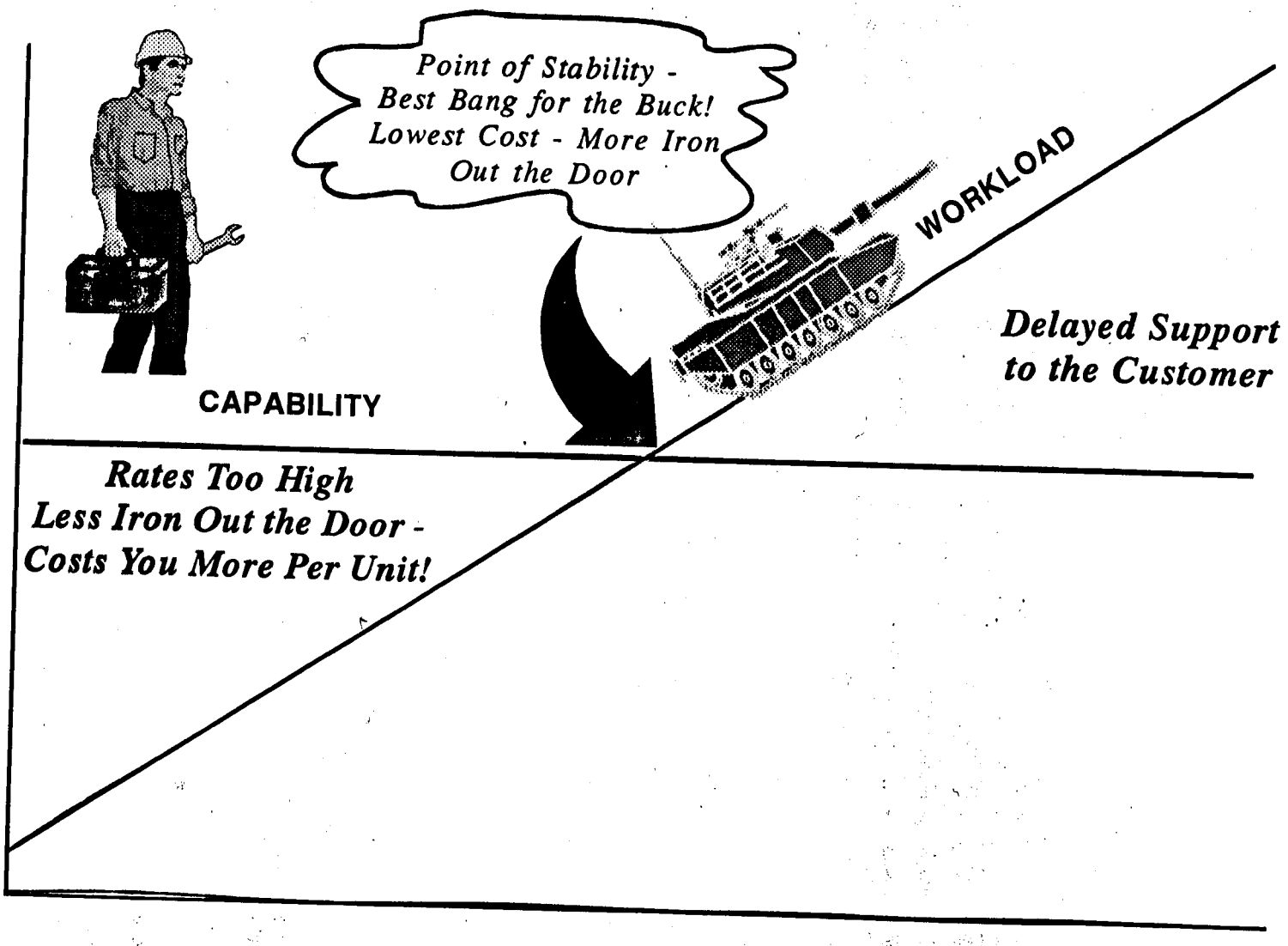
DEPOT DELIVERS

THE DBOF TURNS A DEPOT INTO A BUSINESS!

DEPOT WORKLOADING



CAPABILITY vs WORKLOAD



LETTERKENNY ARMY DEPOT
FIFTY THREE YEARS OF HISTORY

1940'S 1950'S 1960'S 1970'S 1980'S 1990'S

SECRETARY OF WAR AUTHORIZES ACQUISITION OF LAND

AMMUNITION MISSION

WWII SUPPORT

KOREA SUPPORT

MAINTENANCE MISSION

TANKS & ARTILLERY

VIET NAM SUPPORT

WHEEL VEHICLES

MISSILES

OPERATION JUST CAUSE SUPPORT

TENANTS

DESERT STORM SUPPORT

BRAC!

LEAD BRAC HISTORY

DMRD 908

CONSOLIDATE DOD TACTICAL MISSILES AT LETTERKENNY

SEP 1990

$7M IN INFRASTRUCTURE IMPROVEMENTS TO ACCOMMODATE BRAC 88

DLA
Lex/Blue

CONSOLIDATE DOD TACTICAL MISSILES AT LETTERKENNY

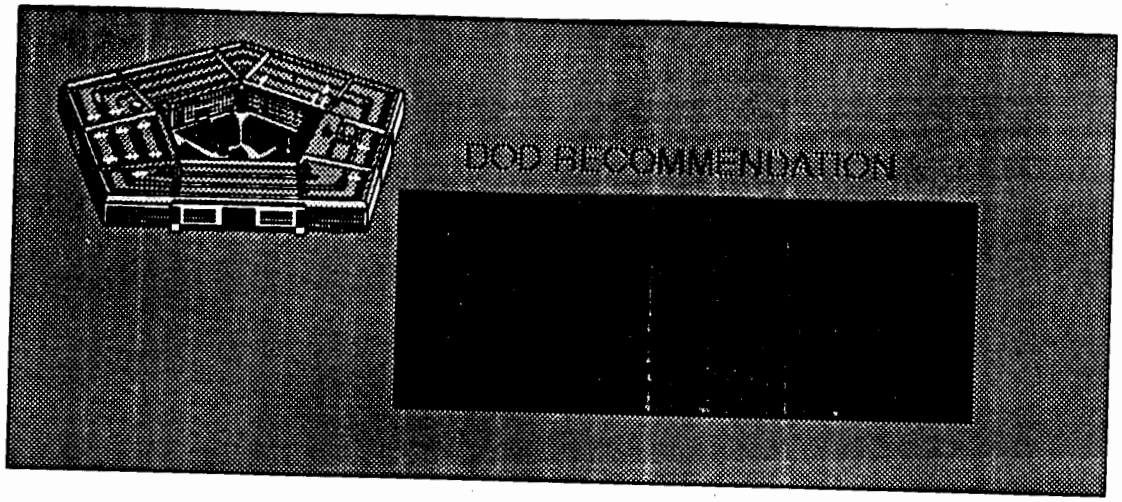
DEFENSE DEPOT MAINTENANCE COUNCIL CORPORATE BUSINESS PLAN

MAY 1991

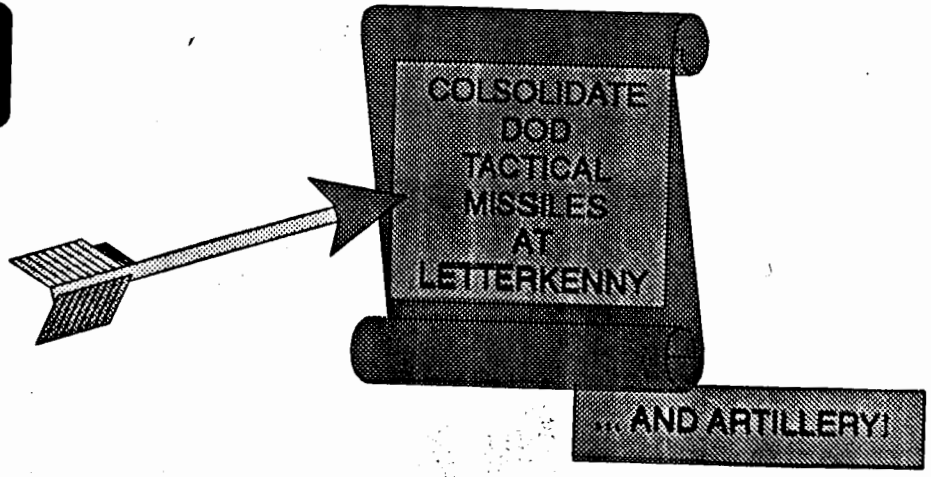
- ANNISTON INJUNCTION (OCT 92)
- BIRMINGHAM COURT DECISION (DEC 92)
- OSD DIRECTION TO CEASE ACTION (DEC 92)

BRAC 93...

BRAC 93

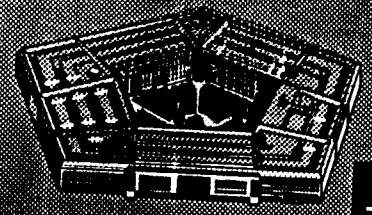


No mention of missile work



BRAC 95...

BRAC 95



DOD RECOMMENDATION

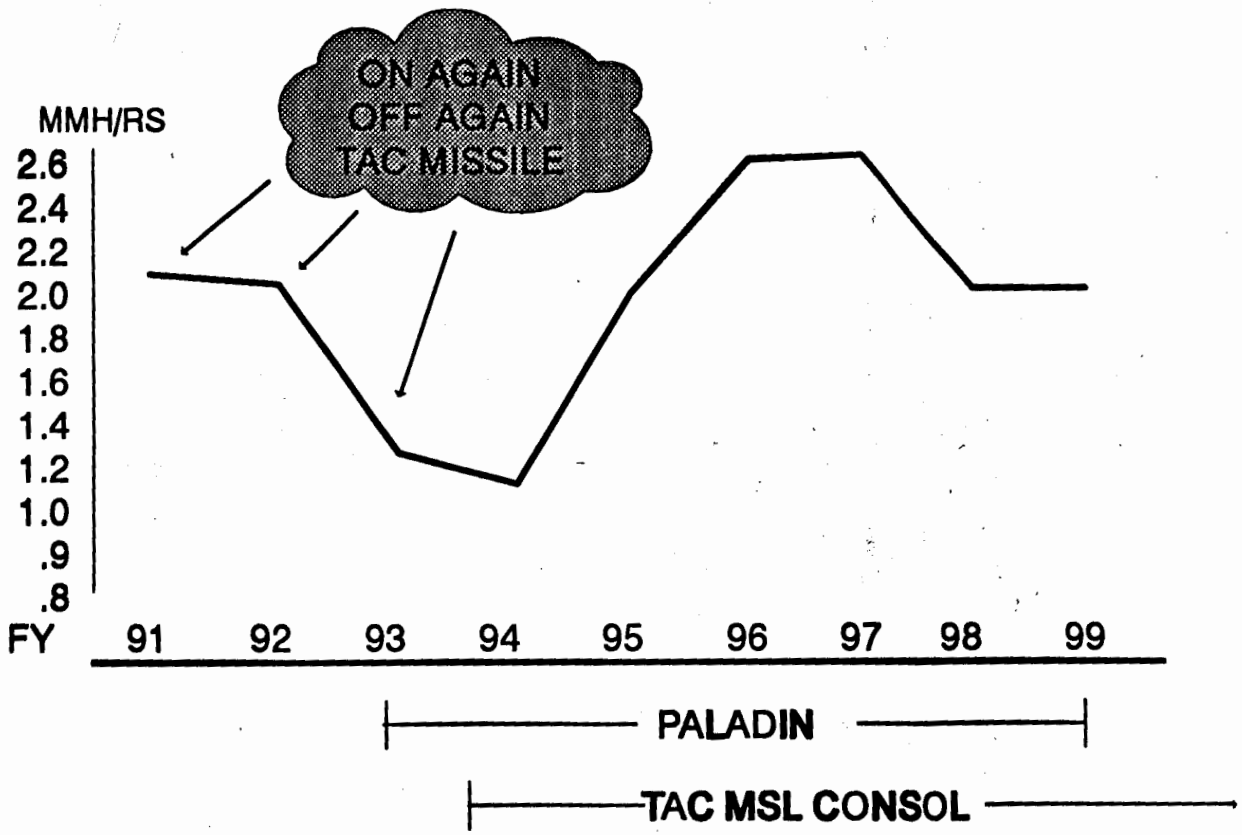
- MISSILES TO TOBYHANNA
- ARTILLERY TO ANNISTON
- REALIGN LETTERKENNY FOR AMMUNITION ONLY

CONSOLIDATE MISSILES AT TOBYHANNA

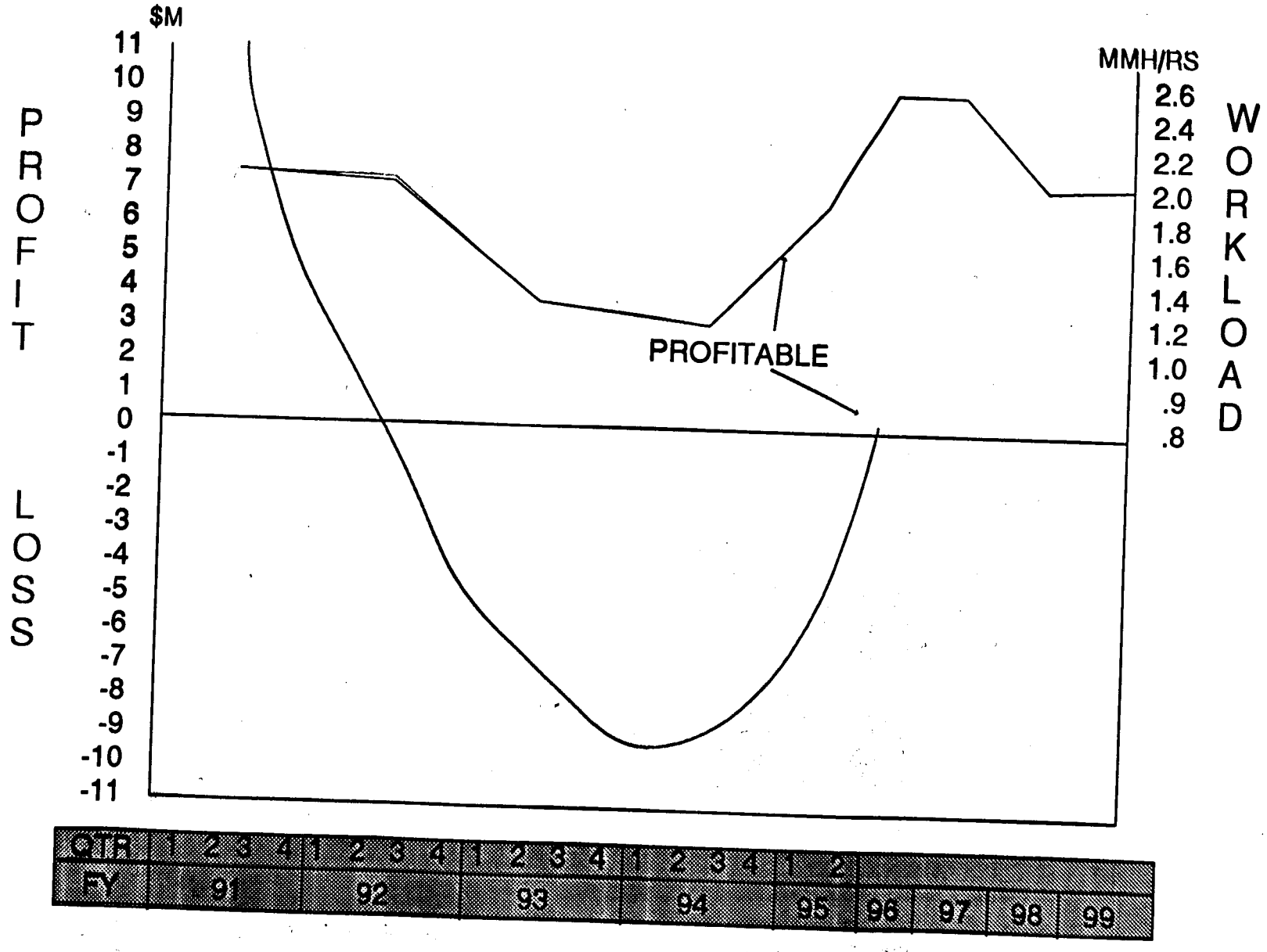
BRAC 95 RECOMMENDATION SAME AS BRAC 93...

...EXCEPT INTERSERVICING MISSILES NOW MORE IMPORTANT

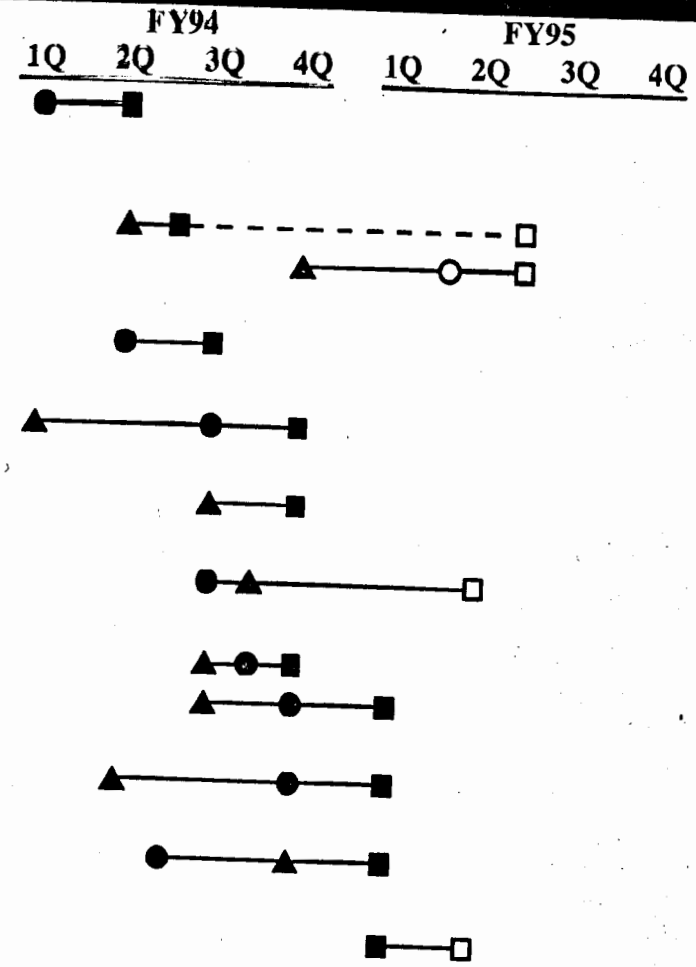
LEAD WORKLOAD



LEAD PROFIT AND LOSS VS WORKLOAD



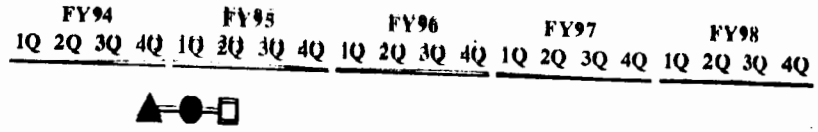
LEAD TACTICAL MISSILE CONSOLIDATION



	FY99 MNHR (K)	FY99 $ (K)
Avenger/ATAS	82	5,833
MLRS Electronic / Elec/Mech	85	6,044
ATACMS	11	782
Sparrow	31	2,204
Hellfire	9	640
HARM PSE		
Dragon Ph 1 / Dragon Ph 2	15	1,066
Phoenix	13	924
TOW BFVS	36	2,560
HAWK Ph 1		

△- Training ○- Equipment □- FAT/Production △○□- In process ▲●■- Completed As of 22 Mar 95

LEAD TACTICAL MISSILE CONSOLIDATION



	FY99 MNHR (K)	FY99 $ (K)
Sidewinder (N)	95	6,755
TOW Cobra	39	2,773
TOW 2	72	5,191
HAWK Ph 2	92	6,541
Sidewinder (AF)		
Maverick	46	3,270
PATRIOT (CTR)	7	498
LCSS	18	1,280
Shillelagh	8	569
AMRAAM	54	3,838
HARM (GS)	47	3,341
Total	760	54,109

△ - Training ○ - Equipment □ - FAT/Production △○□ - In process ▲●■ - Completed

As of 22 Mar 95

PROJECT	COST	
CONSTRUCTION	4.9	
RELOCATIONS		
PEOPLE	4.0	
EQUIPMENT	6.1	
TRAINING	7.5	
PROCUREMENT	4.1	
		26.6
CONSTRUCTION	2.6	
RELOCATIONS		
PEOPLE	5.3	
EQUIPMENT	2.1	
TRAINING	4.7	
PROCUREMENT	.6	
		15.3
		41.9

OVER 100 LEAD TECHNICIANS TRAINED

$100M OF EQUIPMENT MOVED FROM OVER 8 LOCATIONS

72 TECHNICIANS HIRED FROM ORIGINAL SOURCE OF REPAIR

1.7m 2nd floor

1.0 m mezzanine

.5 m Bulk Notes

Building

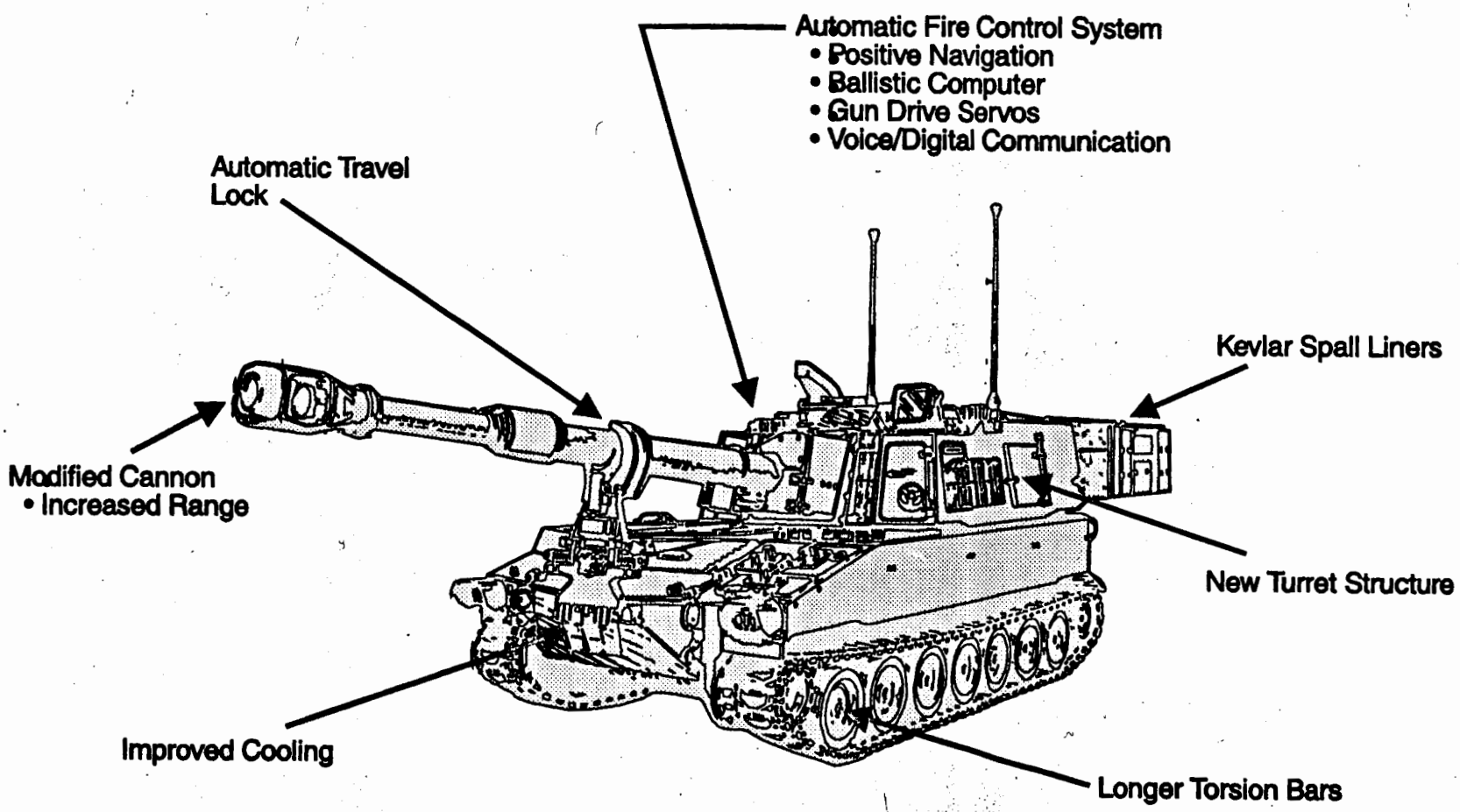
warehouse

for cable / wire

1.6 TOW Bldg.

Paladin Enterprise

Paladin Upgrade



Paladin Enterprise

United Defense
FMC/BMY

Production Schedule

Schedule	1994			1995												1996											
	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Enterprise	1	2	4	5	5	6	6	6	8	8	9	10	10	11	12	13	15	15	16	17	17	17	17	17	18	18	18
Contract			1	2	4	5	5	6	6	6	8	8	9	10	10	11	12	13	15	15	16	17	17	17	17	17	18
Completed	1	2	4	5	5																						

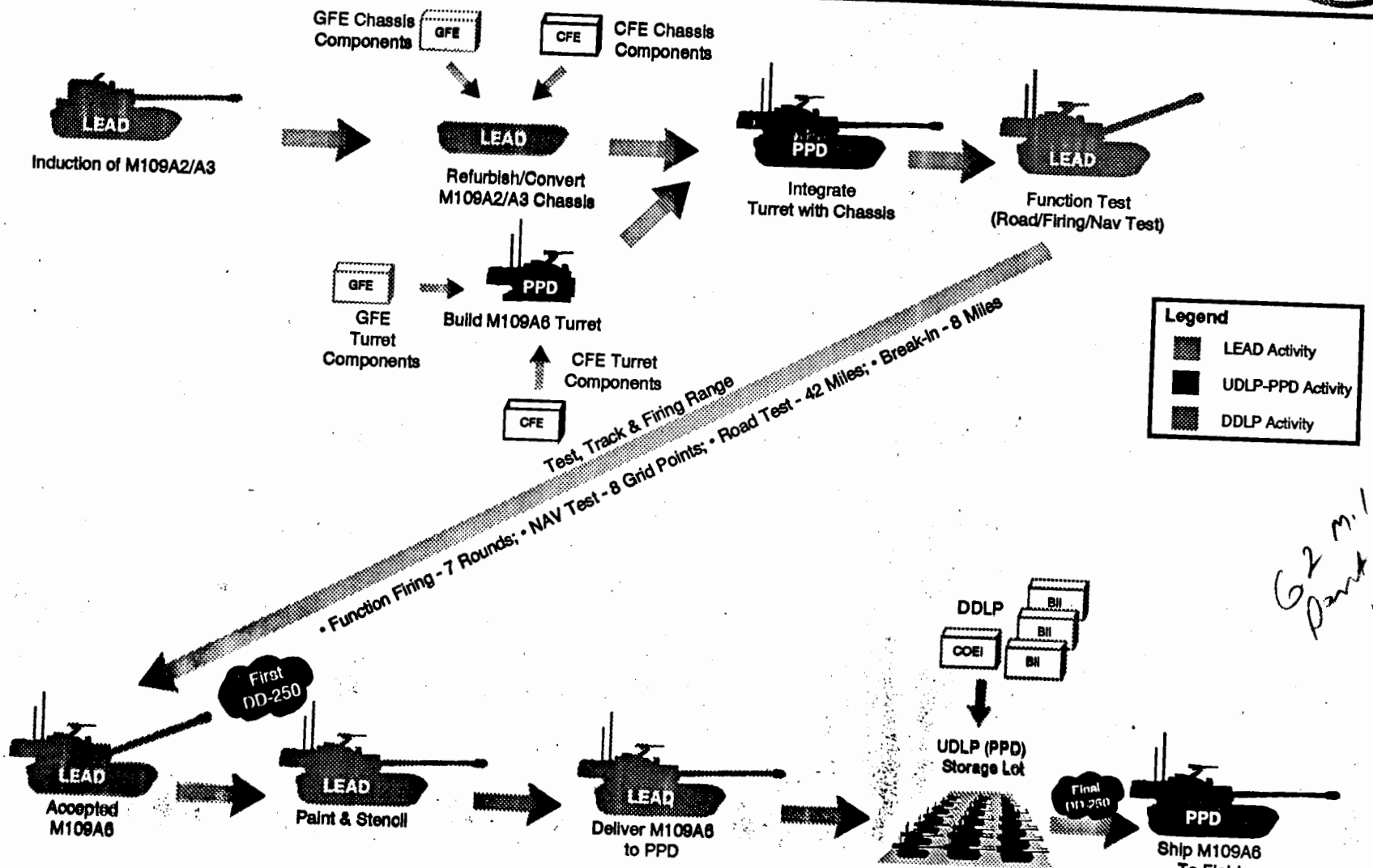
Schedule	1997												1998											
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Enterprise	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	17				
Contract	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	17		
Completed																								

Low Rate Production Dec 91 thru Sep 94 (1-164)
Full Rate Production Oct 94 thru Aug 98 (165-824)

As of 28 Feb 95

Product Manager PALADIN/FAASV

Paladin Full Rate Production Sequence



62 mi
Paint Booth
Vol
Supp
Compound

CAPACITY & UTILIZATION CALCULATIONS

CAPACITY UTILIZATION =

DOD RULES FOR MAINT DEPOTS ONLY

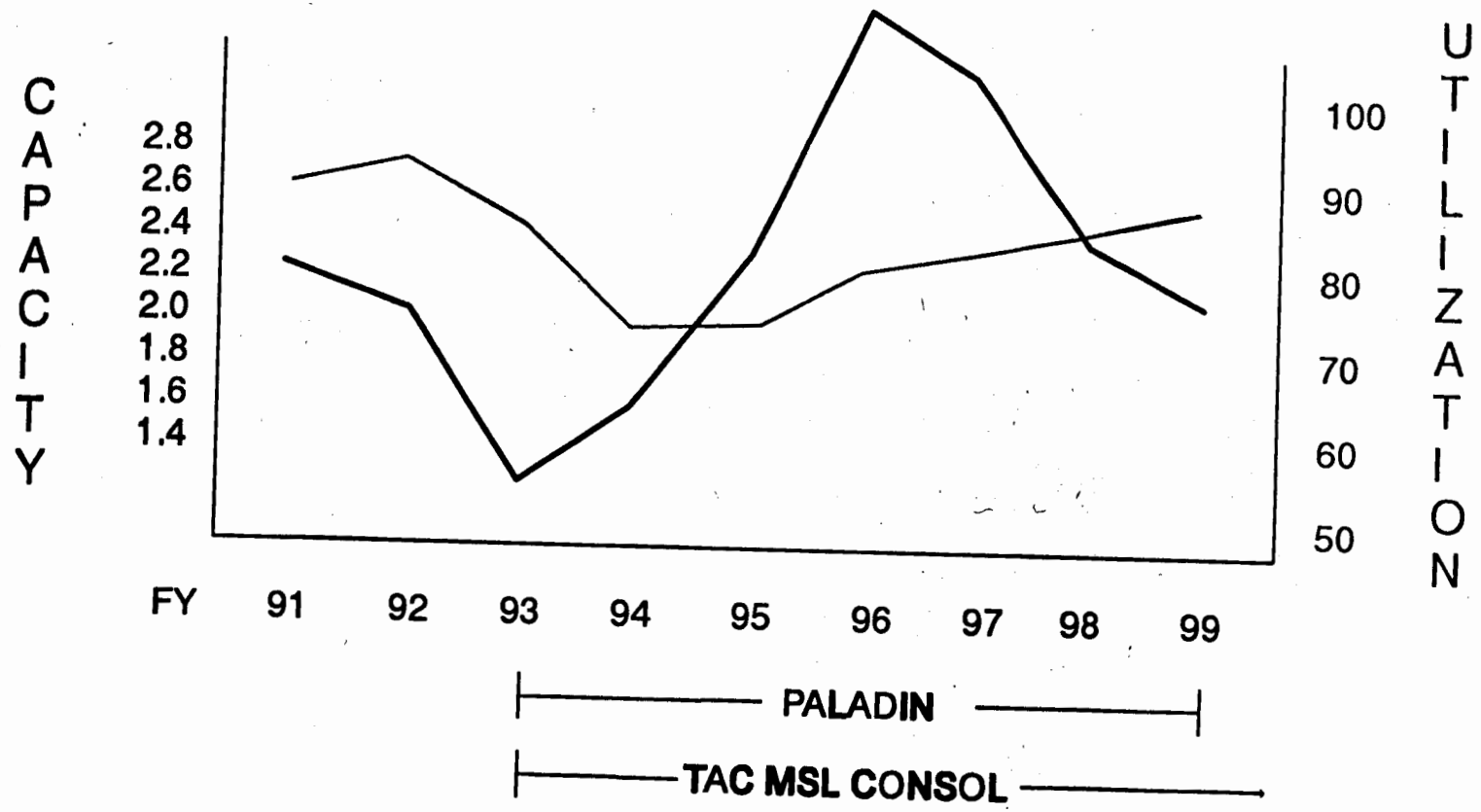
$$\frac{\text{ANNUAL MANHOURS OF WORKLOAD}}{[\text{WORK POSITIONS}] \; [95\% \text{ AVAIL}] \; [\text{TOTAL POSSIBLE HOURS OF WORK PER DIRECT LABORER}]}$$

DENOMINATOR = CAPACITY

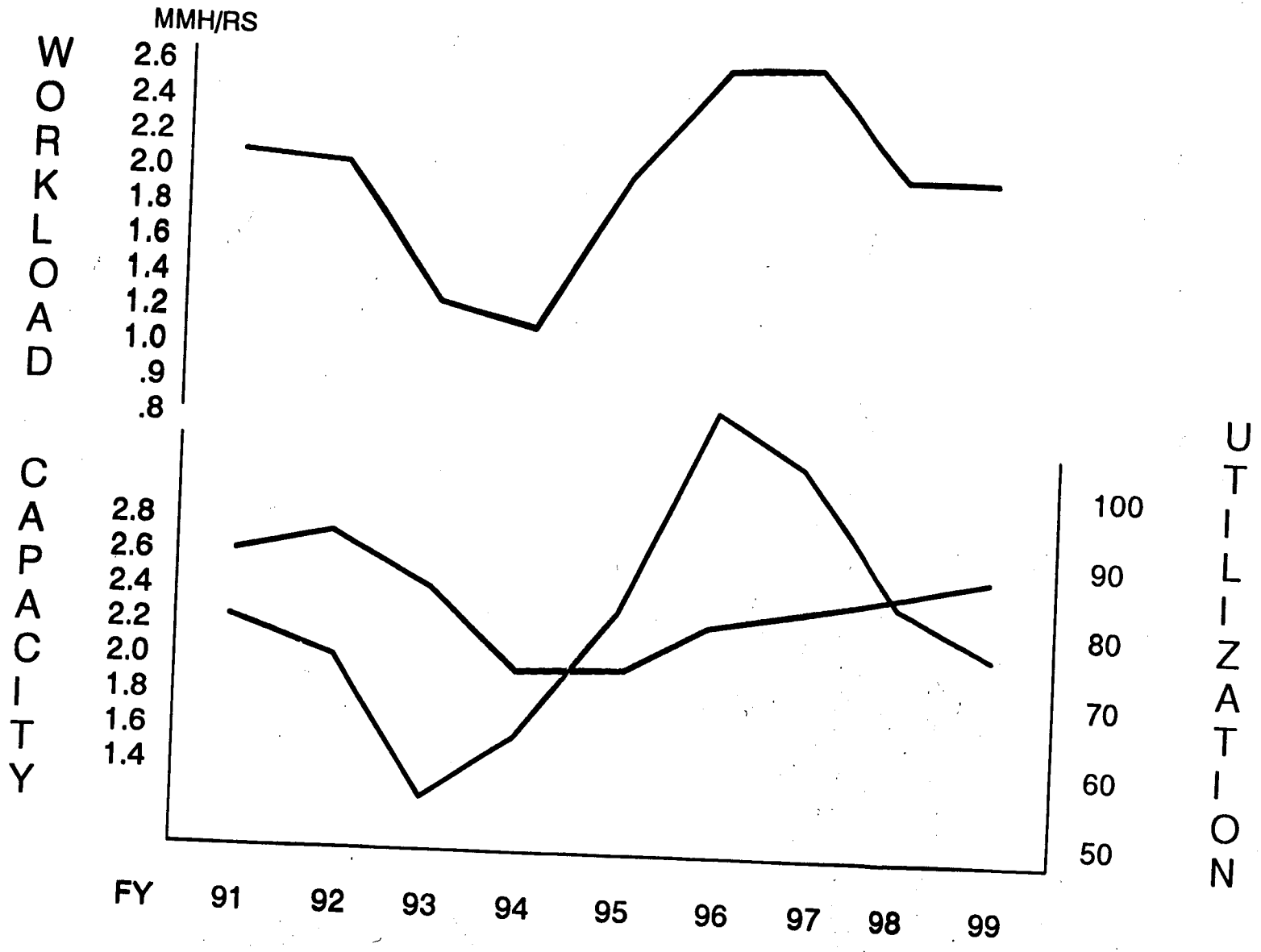
CAUSES ENTIRE ANALYSIS TO BE WEAPON SYSTEM UNIQUE

FIXED AT 1615 HOURS

LEAD CAPACITY VS UTILIZATION



LEAD CAPACITY & UTILIZATION VS WORKLOAD



COSTS VS RATES: TWO METHODS

BASEOPS / MISSION OVERHEAD RATES =

TOTAL COSTS

[WORK POSITIONS] [85% AVAIL] [TOTAL POSSIBLE HOURS OF WORK PER DIRECT LABORER]

DENOMINATOR = CAPACITY

IBOE RATE = IBOE COSTS / CAPACITY

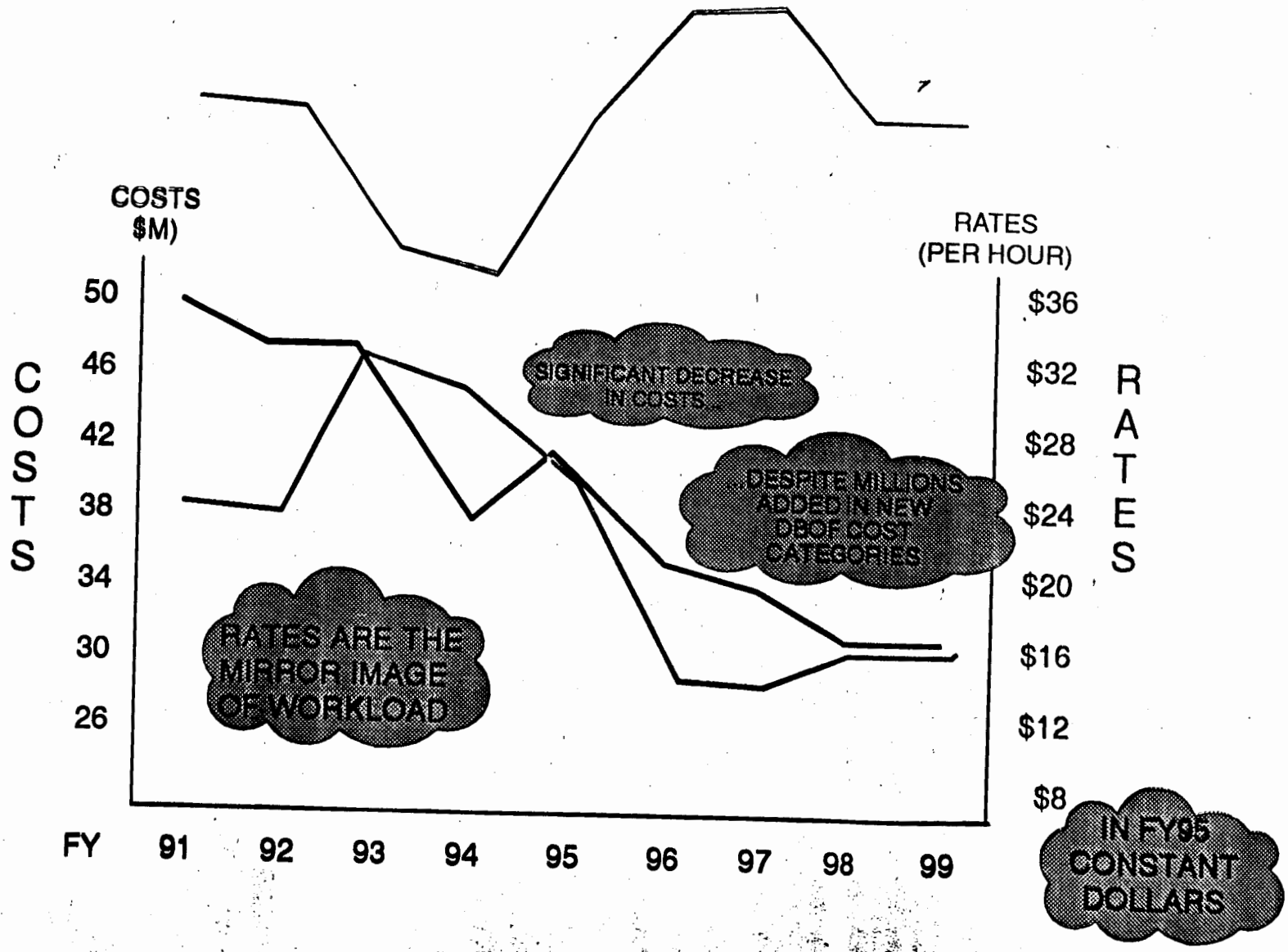
MOH RATE = MOH COSTS / CAPACITY

BRAC ANALYSIS

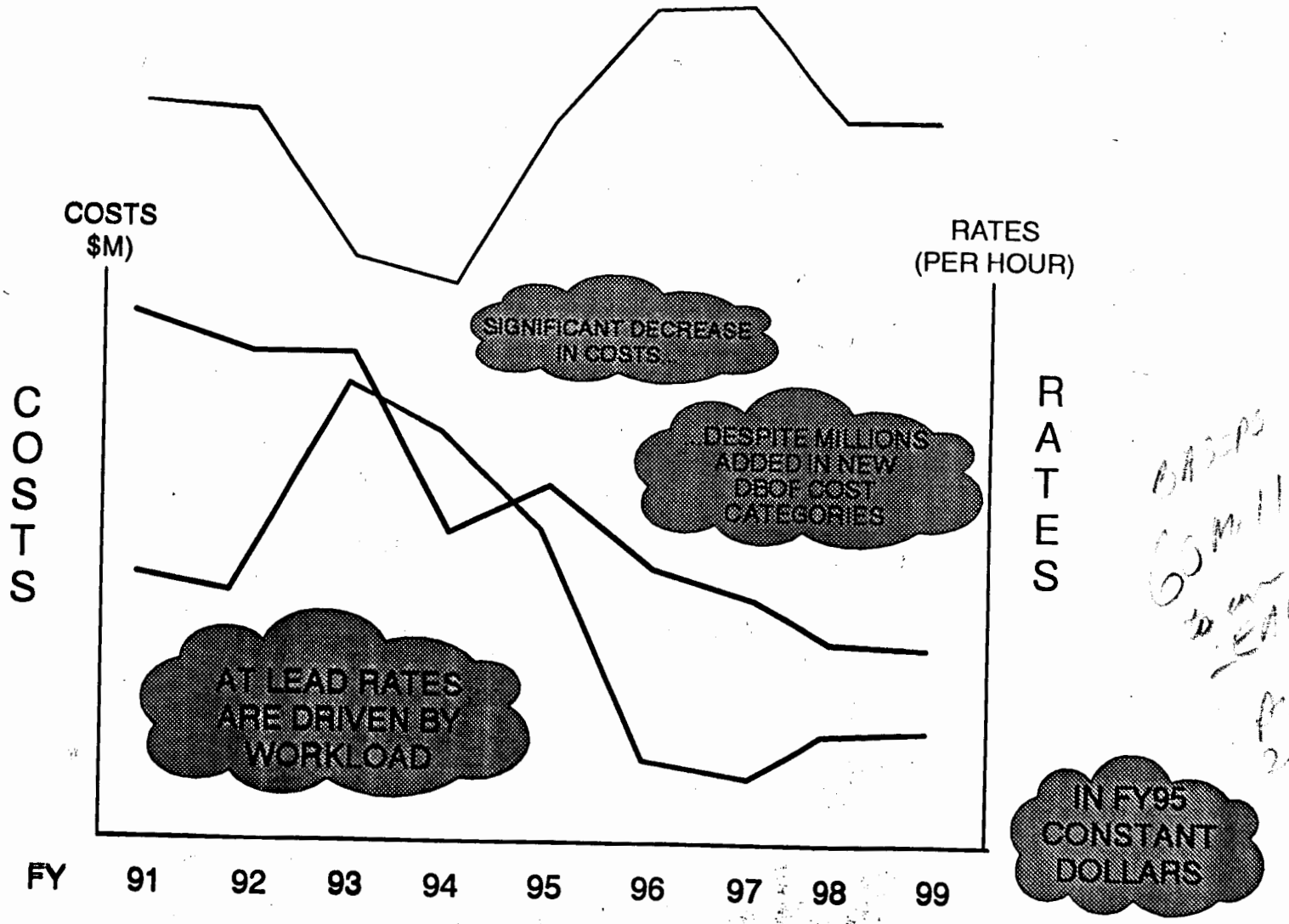
ACTUAL COSTS

RATES = COSTS / WORKLOAD

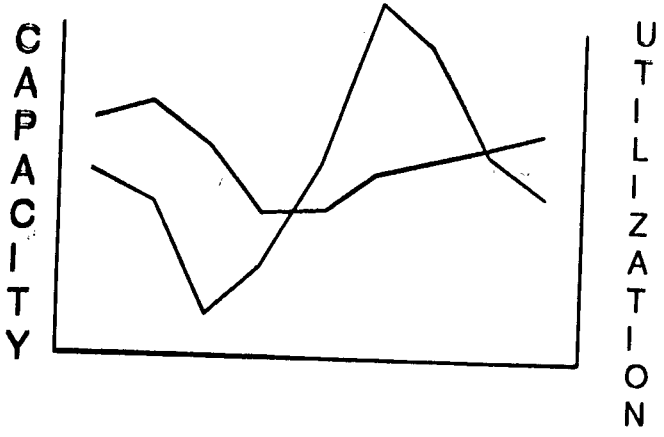
IBOE COSTS VS RATES VS WORKLOAD



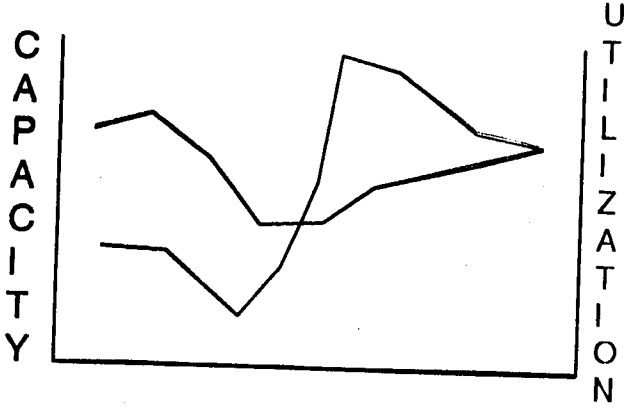
MOH COSTS VS RATES VS WORKLOAD



FUTURE PLANNING



CAUSED BY PALADIN REDUCTION BY FY99



BY REPLACING PALADIN WITH OTHER PRODUCT LINES...

WE'VE ALREADY STARTED PLANNING

BRAC 93 HAS SOME SHORTCOMINGS

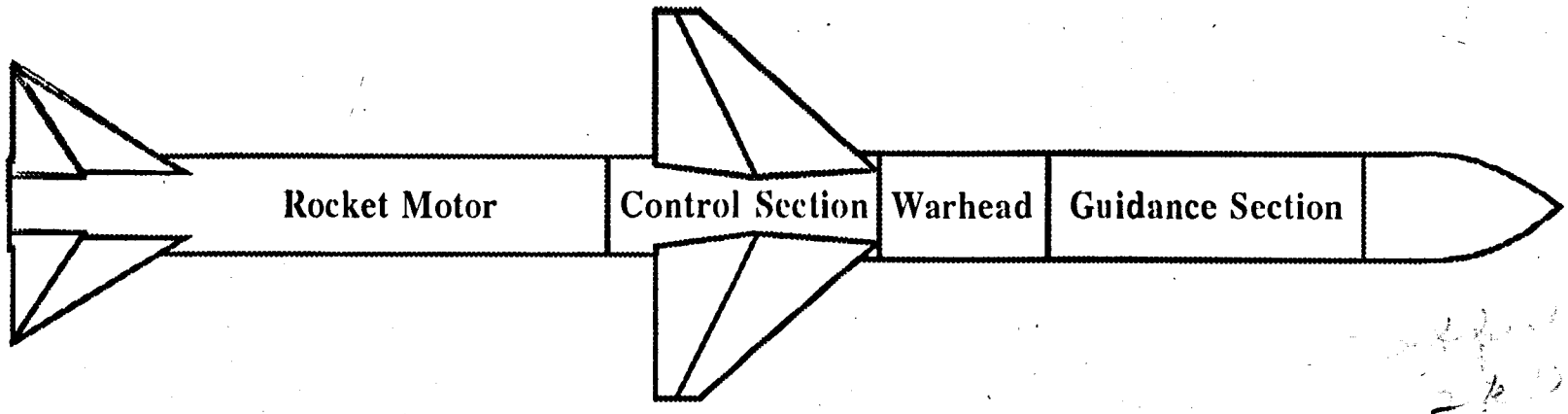
BRAC 93 does:

- Identify selected systems for consolidation

BRAC 93 does not:

- Consolidate all future DOD missile systems to LEAD
- Expand all-up-round/and certification capability
- Provide a one-stop service for DOD customers

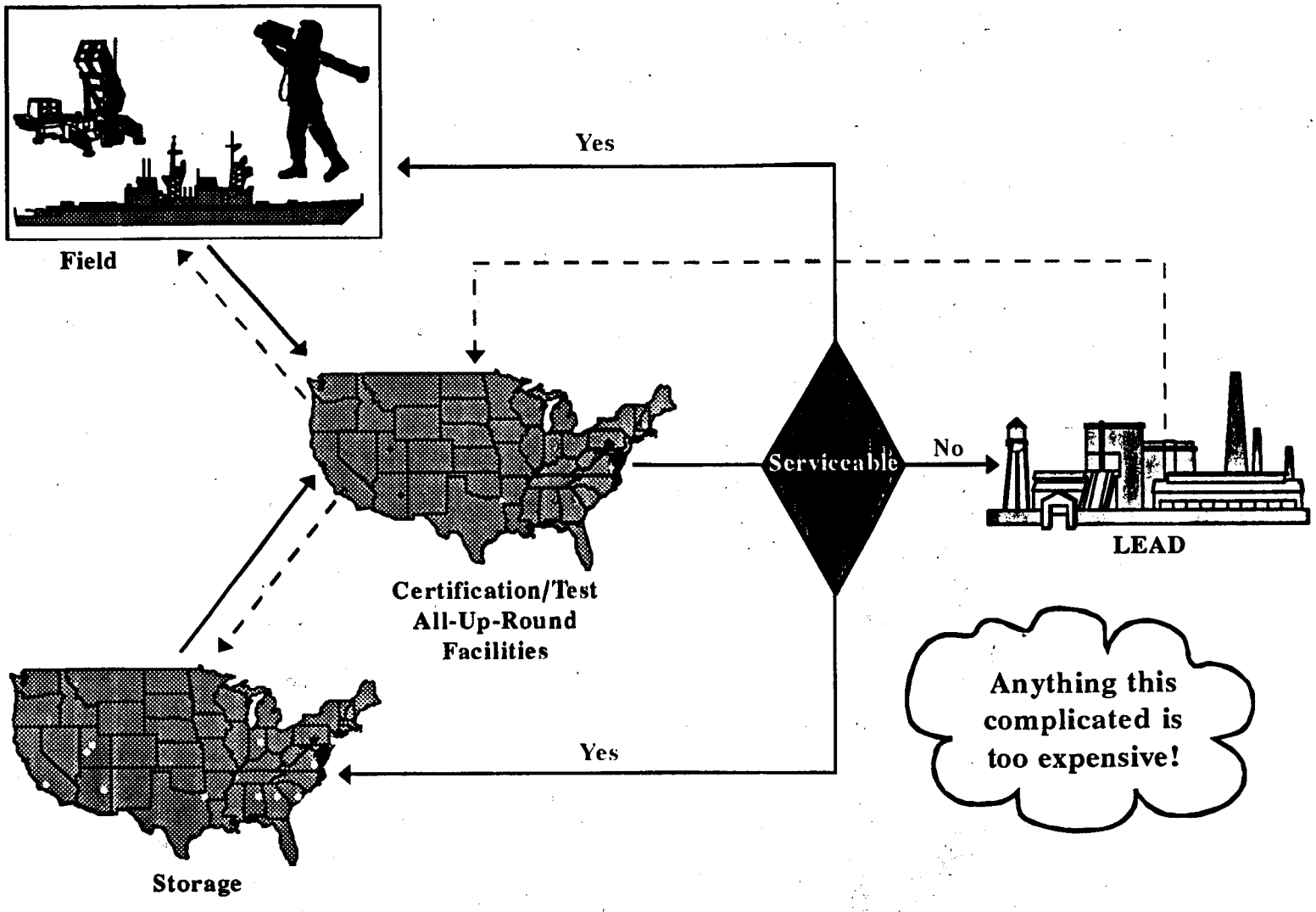
MISSILE CERTIFICATION/SURVEILLANCE



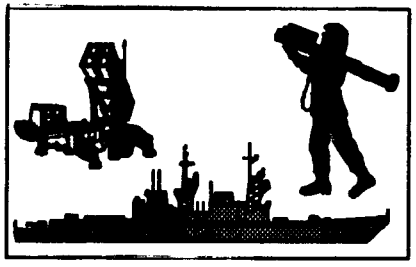
All-
Up-Round

BRAC 93
LEAD repairs
workload for
green book
missiles

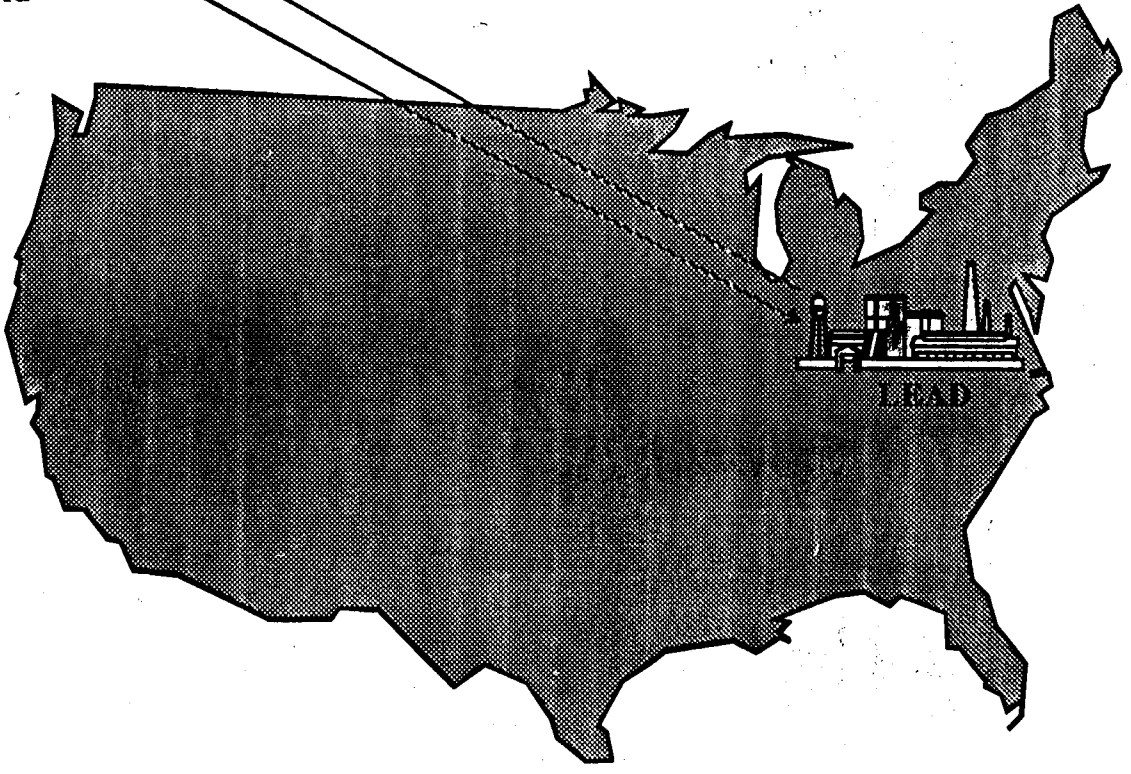
TACTICAL MISSILE CURRENT OPERATIONS



ONE-STOP SERVICE CONCEPT

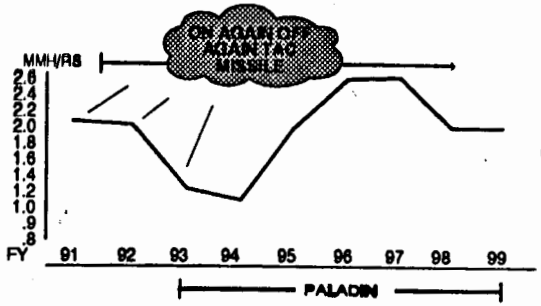


Field



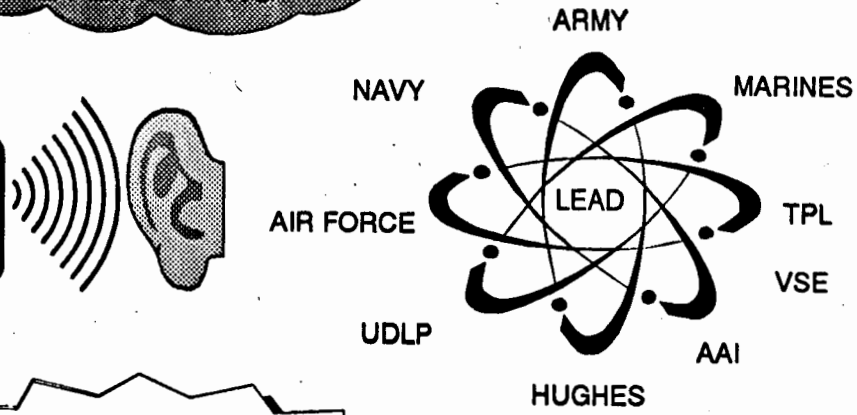
Storage + Up-Round + Repair + Demil = One-Stop Service

SUMMARY



WORKLOAD AND TIMING DRIVE EVERYTHING

CUSTOMER SUPPORT



LETTERKENNY IS A WORLD CLASS INDUSTRIAL FACILITY

ONE STOP MISSILE AND ARTILLERY SHOPPING

TEAMING

LEAD IS ALREADY POSTURED TO SUPPORT ALL KNOWN FUTURE MISSILE SYSTEMS

SUPPLY AREA REQUIREMENT

NET SPACE REQUIRED. . . . . 0.991M SQ FT

GROSS SPACE NEEDED. . . . . 1.75M SQ FT

1.75M SQ FT X $60 SQ FT = $105M

COST
TO DLA

ARMY DEPOT EXCELLENCE IN ELECTRONICS

15R

SUPPLY AREA REQUIREMENT

	CAPACITY	WORKLOAD	UTILIZATION
TOAD	1,231	.991	81%
LEAD	1,195	1,176	98%
TOAD → LEAD	1,195	2,167	181%

WILL NOT FIT!

COST TO DLA

DEFENSE DISTRIBUTION DEPOT TOBYHANNA MISSION

- Plan, program, manage, and accomplish efficient and effective receipt, storage, inventory, preservation packaging, issuing and shipping of retail and wholesale supplies.
- Perform quality renovation, demilitarization, set assembly, and proper disposal of materiel.
- Exercise leadership in analyzing supply programs and in executing major initiatives to improve quality, cost and productivity.

DEFENSE DISTRIBUTION DEPOT TOBYHANNA ORGANIZATION

DEFENSE DISTRIBUTION DEPOT TOBYHANNA

COMMANDER
JOHN J. SHANDOR, LTC, USA, 7600

DEPUTY COMMANDER
JOHN J. HEUBERGER, 7600

ADMINISTRATIVE SUPPORT OFFICE

6388

X

D

WAREHOUSING DIVISION

WALTER J. MARHELSKI
6646

S

INVENTORY INTEGRITY & CUSTOMER SERVICE DIVISION

DAVID C. MACDANIEL
7185

Q

TRANSPORTATION & SHIPPING DIVISION

DENNIS J. BARNUM
7270

T

PACKAGING & CONTAINERIZATION DIVISION

MARK A.M. MALINAK
7381

U

PRODUCT RECEIPT & INSPECTION DIVISION

RAYMOND J. MAJESKI
7278

E

STOCK MAINTENANCE & SET ASSEMBLY DIVISION

JAY B. GOULD
7359

M

DEFENSE DISTRIBUTION DEPOT TOBYHANNA
WORK FORCE PROFILE - AS OF 30 APR 95

	PERMANENT
WORK FORCE	285
MEN	239
WOMEN	46
MILITARY	3
GM	1
GS	68
WS	21
WL	4
WG	188

DEFENSE DISTRIBUTION DEPOT TOBYHANNA
EEO PROFILE - AS OF 30 APR 95

	TOTAL	% OF WORK FORCE
WORK FORCE	285 *	
MEN	239	84%
WOMEN	46	16%
MINORITIES	9	3%
HANDICAPPED	10	4%
VETERANS	213 **	75%

* INCLUDES 3 MILITARY

** INCLUDES 5 DISABLED VETERANS

DEFENSE DISTRIBUTION DEPOT TOBYHANNA BUILDINGS & GROUNDS

Covered Storage

- 3 General Purpose Heated Warehouses
- 3 Controlled Humidity Warehouses
- Refrigerated Warehouse
- Flammable Storage Warehouse
- Shelter Movement and Handling Facility
- 6 Three-Sided Buildings
- Gas Storage Facility
- 3 Transitory Shelters
- 2,042,000 Gross Sq Ft

Open Storage

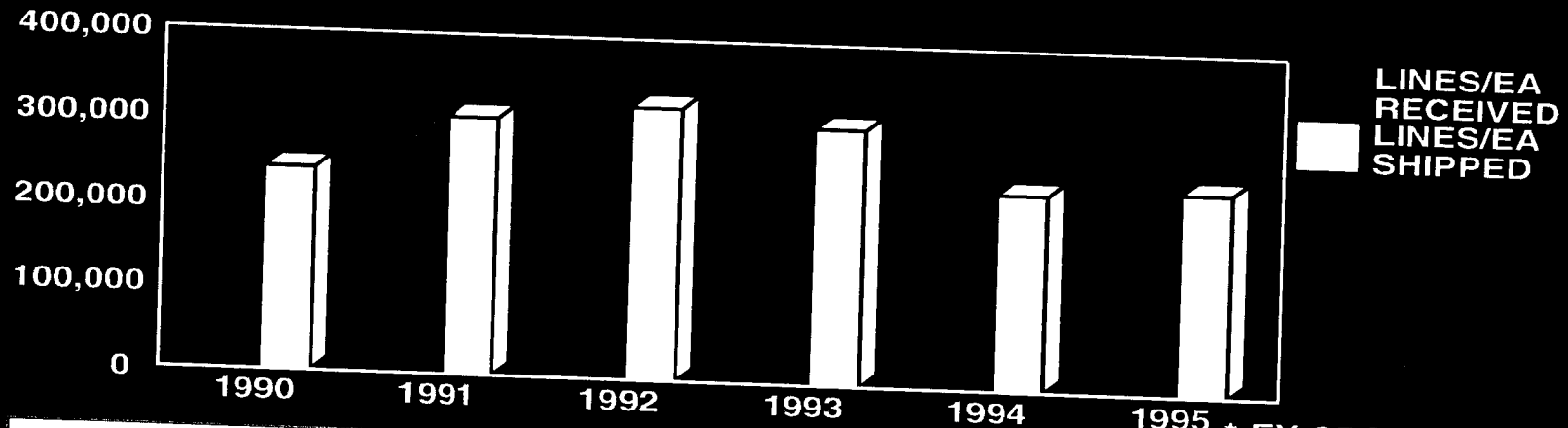
- 1,684,000 Sq Ft of Improved (Blacktop, Crushed Stone, Gravel) Open Storage Space
- 40,000 Sq Ft of Unimproved Open Storage Space

DEFENSE DISTRIBUTION DEPOT TOBYHANNA
BIG BUSINESS
30 APR 95

INVENTORY:	# LINES	%	$ VALUE
WHOLESALE	51,768	91%	$ 3,699,434,608
RETAIL	4,879	9%	$ 70,970,829
TOTAL	56,647	100%	$ 3,770,405,437

DEFENSE DISTRIBUTION DEPOT TOBYHANNA RECEIPT & ISSUE WORK LOAD AS OF 30 APR 95

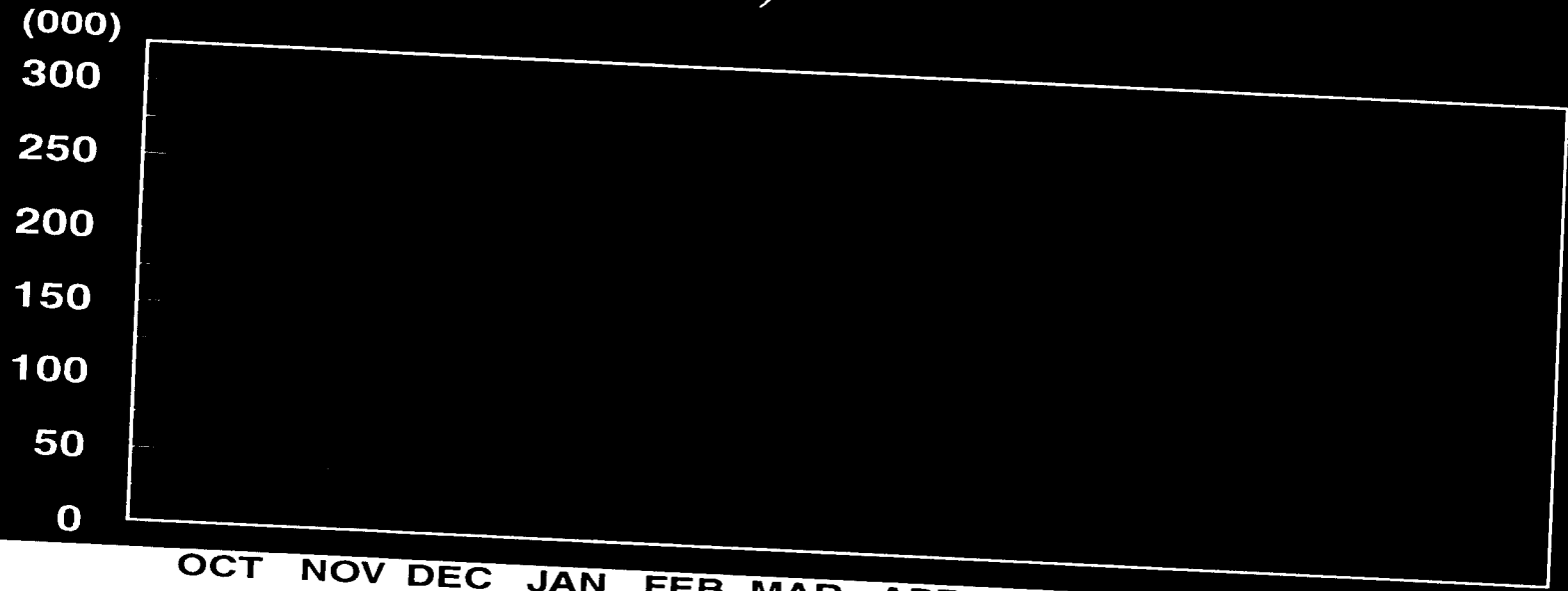
DEFENSE DISTRIBUTION DEPOT TOBYHANNA
WORK LOAD
RECEIPTS & ISSUES FY 90 TO FY 95



* FY 95 PROG MAR-

	LINES RECEIVED	LINES SHIPPED
1990	191,492	239,381
1991	282,240	303,283
1992	333,716	320,885
1993	309,470	302,225
1994	240,862	232,107
1995(PROG)	178,980	238,788

DEFENSE DISTRIBUTION DEPOT TOBYHANNA
LINE ITEMS RECEIVED & SHIPPED
(CUM)

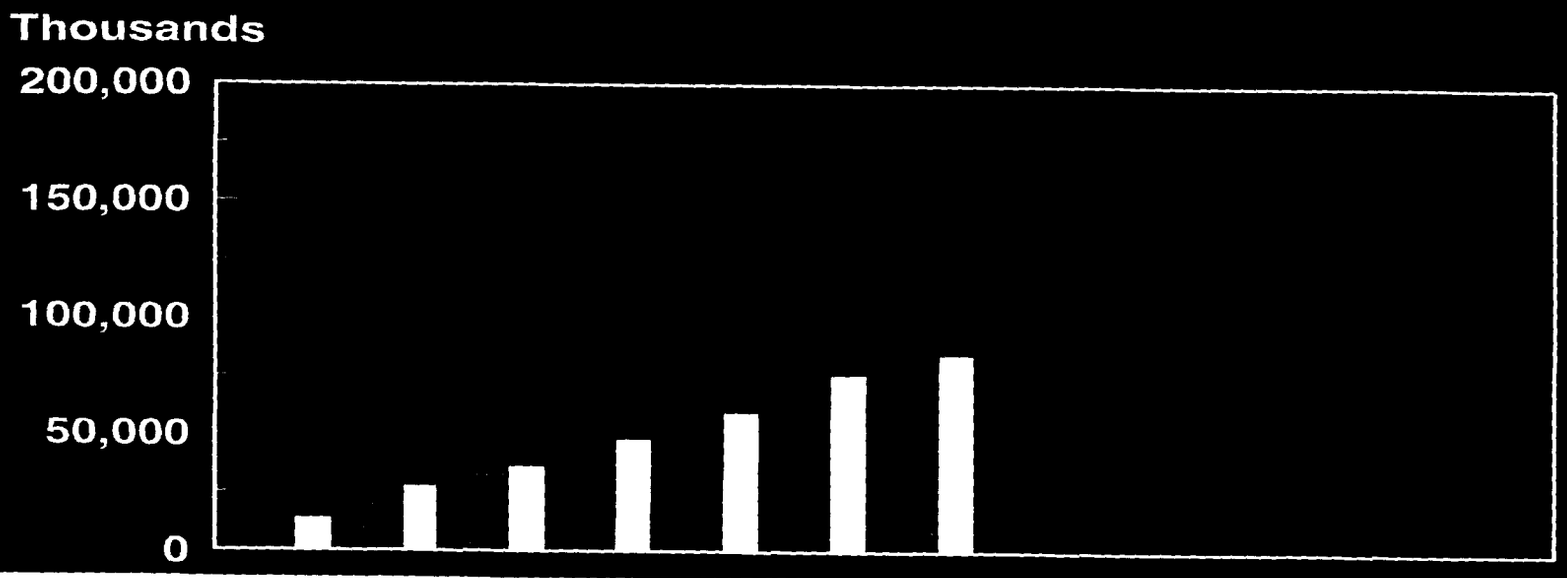


	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
94 ACCT —	24	49	69	90	116	144	169	196	226	253	278	304
95 PROG ···	23	46	70	93	115	141	164	189	214	237	264	286
95 ACT ■	21	43	64	83	104	132	158					

6.64% BELOW FY 94

3.8% BELOW FY 95 PROG

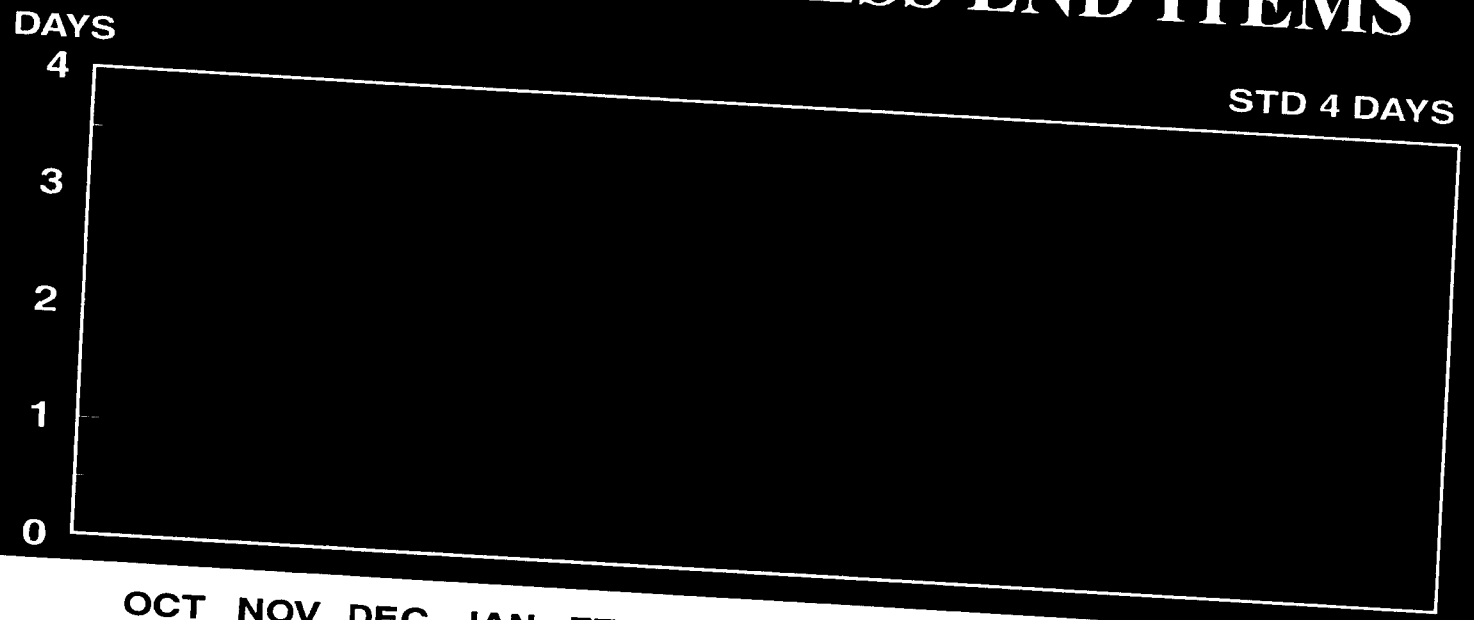
DEFENSE DISTRIBUTION DEPOT TOBYHANNA MAJOR END ITEMS RECEIVED & SHIPPED (CUM)



	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
FY94 ACT	7,856	20,652	33,606	52,791	65,273	86,299	99,765	117,311	133,256	145,288	156,010	168,854
FY95 ACT	14,490	28,337	37,089	48,650	60,496	76,503	85,291					

13.9% BELOW FY 94

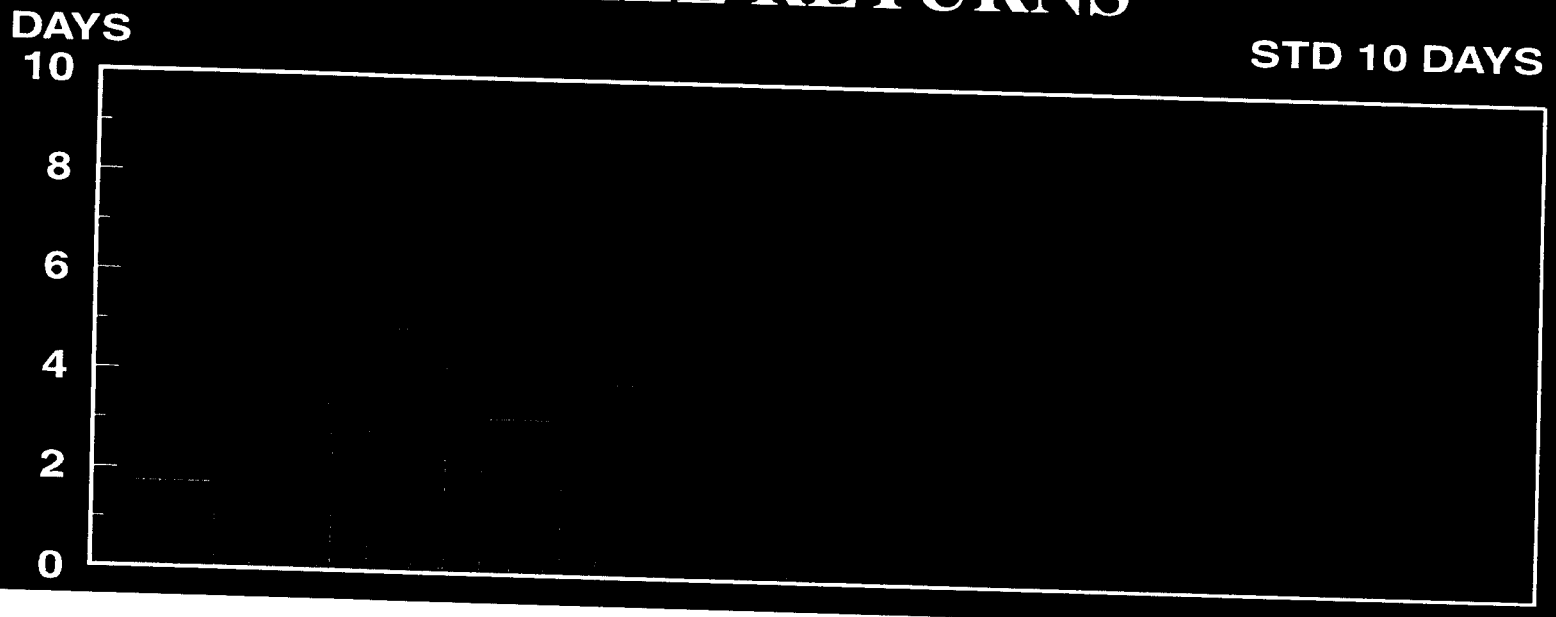
DEFENSE DISTRIBUTION DEPOT TOBYHANNA RECEIPT PROCESSING / TAILGATE TO STOW NEW PROCUREMENT LESS END ITEMS



	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
FY 95	1.86	2.40	2.35	1.84	2.54	2.40	2.33					

SOURCE: MIS 10117

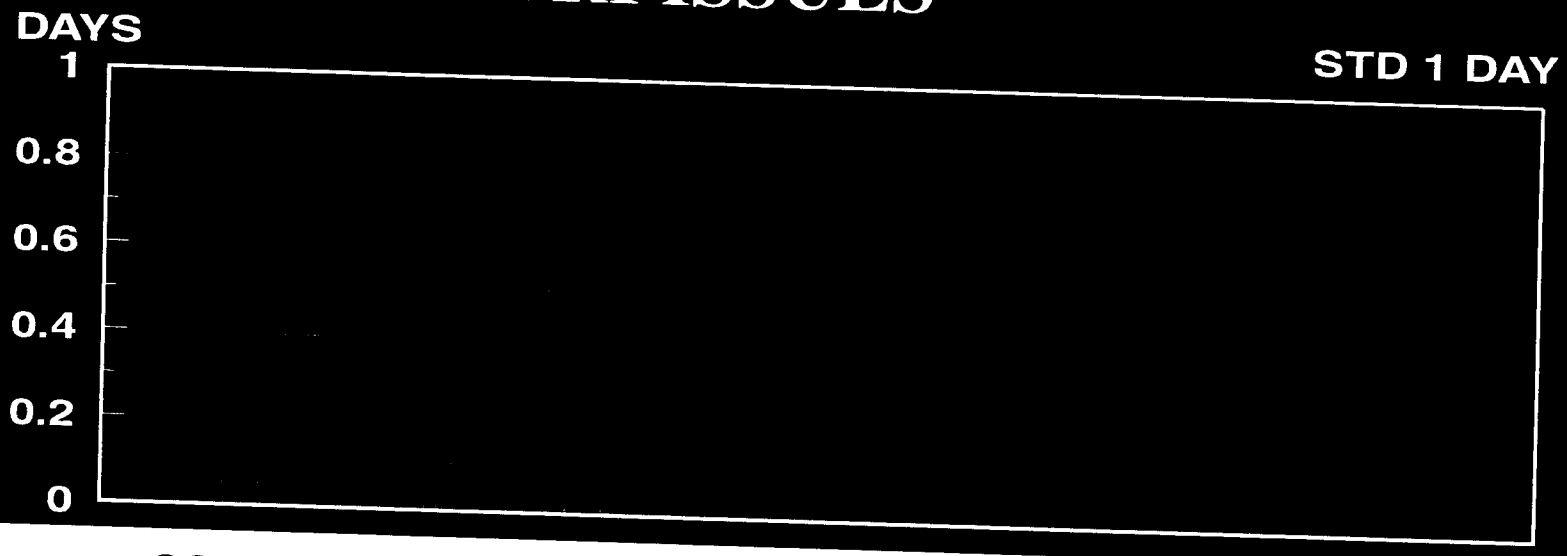
DEFENSE DISTRIBUTION DEPOT TOBYHANNA RECEIPT PROCESSING / TAILGATE TO STOW WHOLESALE RETURNS



	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
FY 95	1.78	3.41	4.96	3.18	3.94	3.67	4.20					

SOURCE: MIS 10817

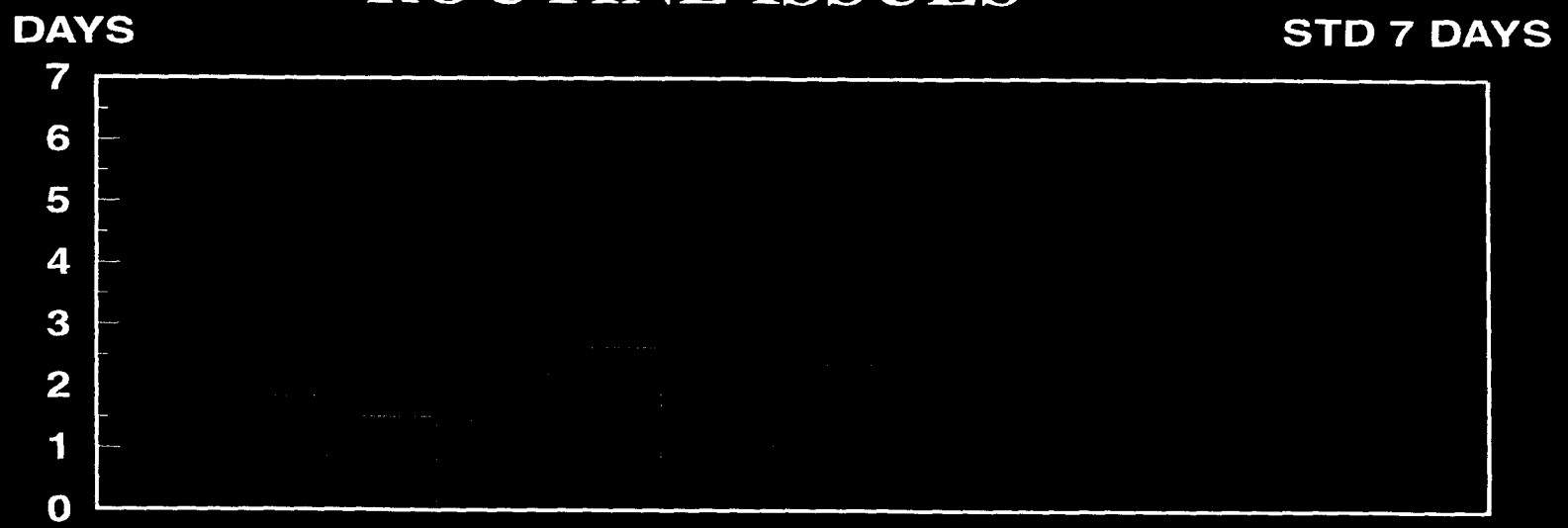
DEFENSE DISTRIBUTION DEPOT TOBYHANNA MRO PROCESSING: RECEIPT TO OFFER/SHIP HI PRI ISSUES



	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
FY 95	0.33	0.40	0.35	0.52	0.56	0.75	0.58					

SOURCE: MIS 21408 (-FEB) MIS 21411 (MAR-)
MIS CHANGED FROM OFFER TO SHIP IN MARCH

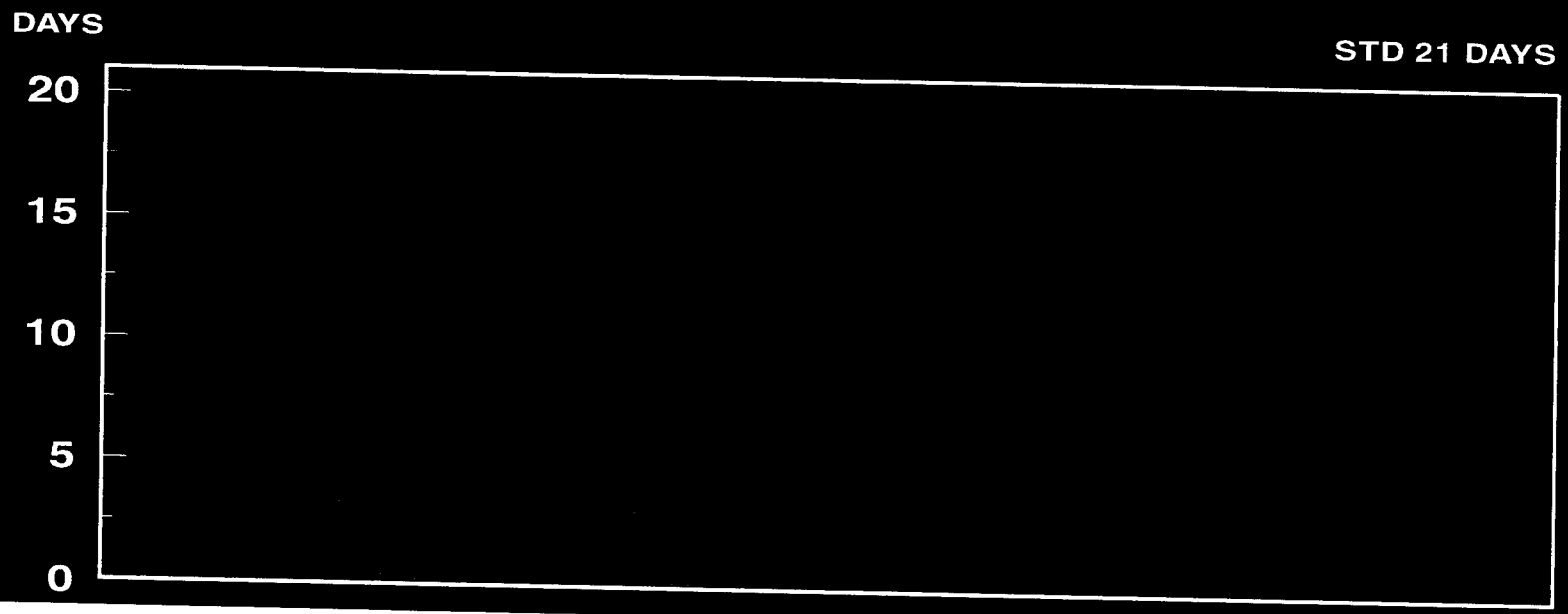
DEFENSE DISTRIBUTION DEPOT TOBYHANNA MRO PROCESSING: RECEIPT TO OFFER/SHIP ROUTINE ISSUES



	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
FY 95	2.24	1.88	1.55	2.33	2.68	2.35	2.41					

SOURCE: MIS 21419 (-FEB) MIS 21422 (MAR-)
MIS STD CHANGED FROM 8 TO 7 DAYS IN MAR

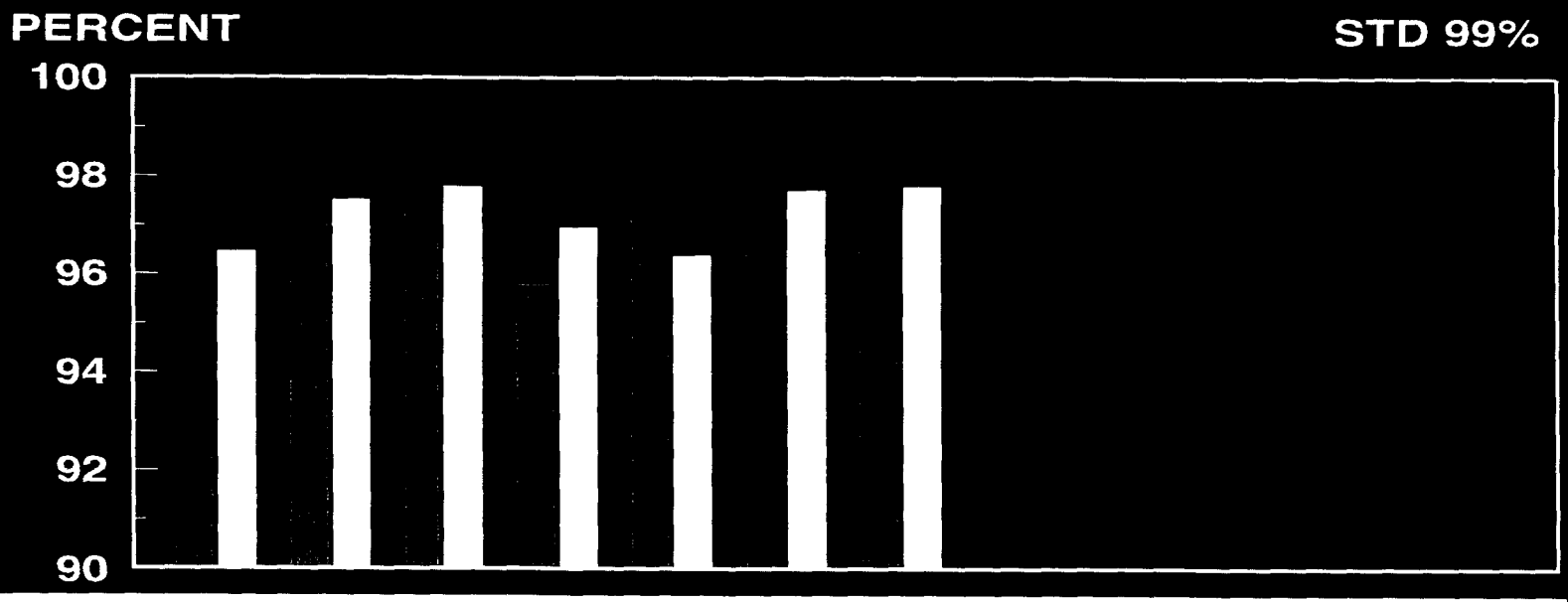
DEFENSE DISTRIBUTION DEPOT TOBYHANNA
FY 95 DISPOSAL RELEASE ORDERS



	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MON	6.09	6.57	6.03	5.94	3.20	1.73	1.51					

SOURCE: MIS 22007

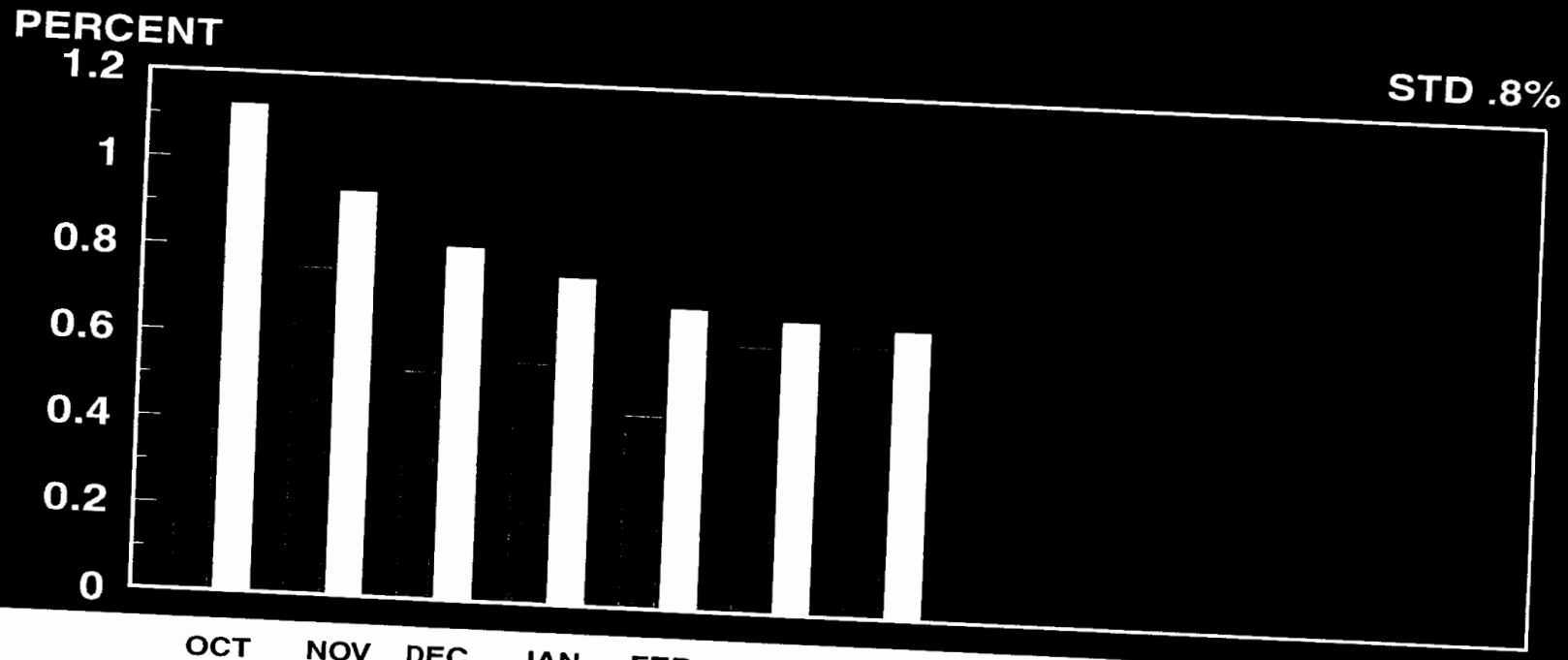
DEFENSE DISTRIBUTION DEPOT TOBYHANNA
FY 95 LOCATOR ACCURACY



	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MON	96.50	98.14	99.06	95.84	99.63	99.58	99.64					
CUM	96.50	97.55	97.83	96.99	96.42	97.75	98.29					

SOURCE: MANUAL

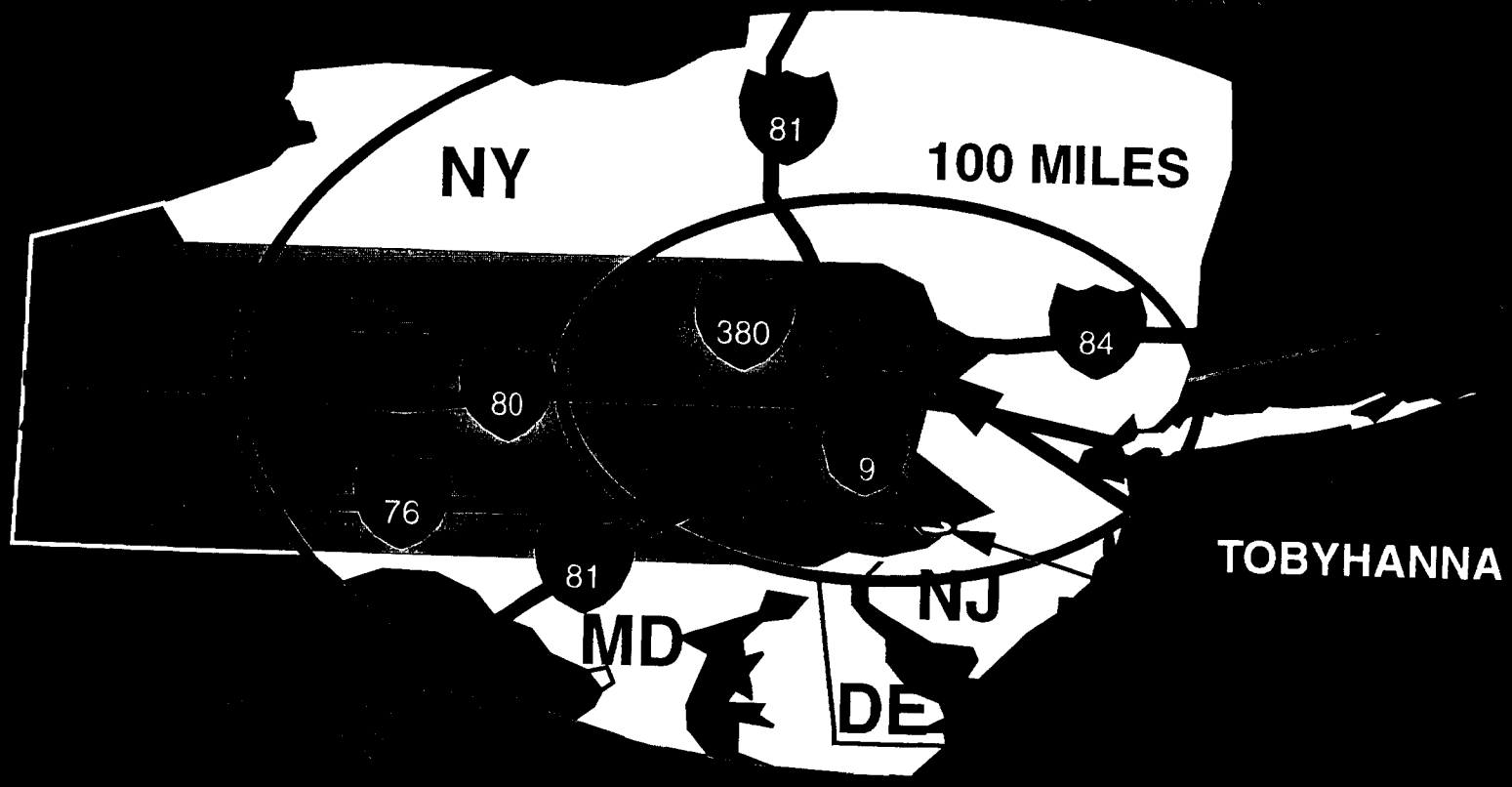
DEFENSE DISTRIBUTION DEPOT TOBYHANNA
FY 95 DENIAL RATE



	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MON	1.13	0.76	0.53	0.56	0.45	0.62	0.63					
CUM	1.13	0.94	0.82	0.76	0.70	0.68	0.67					

SOURCE: MIS 26330

DEFENSE DISTRIBUTION DEPOT TOBYHANNA



A CENTRAL, CONVENIENT LOCATION

DEFENSE DISTRIBUTION DEPOT TOBYHANNA CUSTOMER BASE

THE DISTRIBUTION MISSION AT DDTP IS NOT UNIQUE.

WHAT IS UNIQUE ABOUT DDTP
IS THE CUSTOMER BASE AND COMMODITY
HANDLED.

DEFENSE DISTRIBUTION DEPOT TOBYHANNA CUSTOMER BASE

DDTP'S MAJOR CUSTOMER IS TOBYHANNA ARMY DEPOT, THE DOD'S PREMIER DEPOT FOR THE OVERHAUL, REPAIR AND FABRICATION OF COMMUNICATIONS-ELECTRONICS EQUIPMENT.

OUR NEXT LARGEST CUSTOMER IS THE COMMUNICATIONS-ELECTRONICS COMMAND (CECOM) AT FORT MONMOUTH, NEW JERSEY.

DEFENSE DISTRIBUTION DEPOT TOBYHANNA
UNIQUE COMMODITY

AS A RESULT,
THE MAJOR ITEM WORK LOAD AT DDTP, WHILE NORMAL WORK LOAD FOR US, IS CONSIDERED UNIQUE IN THE WORLD OF DLA SECONDARY ITEM MANAGEMENT.

DEFENSE DISTRIBUTION DEPOT TOBYHANNA UNIQUE COMMODITY DRIVEN PROCESSES

- ELECTRO-STATIC DISCHARGE (ESD) PACKAGING
- BLOCKING AND BRACING OF MAJOR SYSTEMS
- TOTAL PACKAGE FIELDING (SECONDARY AND MAJOR ITEMS)
- MAJOR ITEM SET ASSEMBLY
- PROJECT COORDINATION

DEFENSE DISTRIBUTION DEPOT TOBYHANNA PROJECT COORDINATION

- DIGITAL GROUP MULTIPLEXER (DGM)
  - DGM SYSTEM CONSISTS OF MULTIPLEXERS, MODEMS, CABLE REPEATERS AND ORDERWIRE CONTROL UNITS WHICH ARE BOTH SHELTER MOUNTED AND FIELD DEPLOYED.
  - PROVIDES CAPABILITY FOR MORE EFFICIENT TRANSMISSION ON RADIO SYSTEMS AND CABLE LINK.
  - DDTP TECHNICAL ASSISTANCE TEAMS HAVE BEEN DEPLOYED TO KOREA, GERMANY AND MANY CONUS INSTALLATIONS.

DEFENSE DISTRIBUTION DEPOT TOBYHANNA PROJECT COORDINATION

- FOREIGN MILITARY SALES (FMS)
  - IN PREPARATION FOR FMS AND GRANT AID SHIPMENTS, DDTP COORDINATES WITH THE UNITED STATES SECURITY ASSISTANCE COMMAND AND SEVERAL MAJOR SUBORDINATE COMMANDS (MSC) TO PLAN AND ORGANIZE DEPOT SUPPORT.
  - DDTP PROVIDES NEW, RECONDITIONED AND SET ASSEMBLED MATERIAL WHICH NORMALLY REQUIRES OPERATIONAL TESTING AND PRESHIPMENT INSPECTION PRIOR TO SHIPMENT TO THE APPROPRIATE CONSOLIDATION POINT.

DEFENSE DISTRIBUTION DEPOT TOBYHANNA PROJECT COORDINATION

- COMPOSITE HEALTH CARE SYSTEM (CHCS)
  - DDTP RECEIVES, STORES, AND ISSUES VARIOUS COMPUTER SYSTEMS, MONITORS, KEYBOARDS, BAR CODE PRINTERS, BACKUP UNITS, POWER SUPPLIES AND OTHER ASSOCIATED EQUIPMENT FOR THE DEFENSE MEDICAL SYSTEMS SUPPORT CENTER (DMSSC)
  - CHCS FOR THE U.S. ARMY DEFENSE MANAGEMENT INFORMATION SYSTEM (A-DMIS), THE U.S. NAVY MEDICAL INFORMATION MANAGEMENT CENTER (NMIMC), AND THE U.S. AIR FORCE MEDICAL SUPPORT AGENCY (AFMSA)

DEFENSE DISTRIBUTION DEPOT TOBYHANNA PROJECT COORDINATION

- PROJECT MANAGER SATELLITE COMMUNICATIONS (SATCOM)
  - DDTP PROVIDES INTENSIVE MANAGEMENT IN THE RECEIPT, STORAGE, INVENTORY, AND SHIPMENT OF GROUND SATELLITE COMMUNICATIONS EQUIPMENT FOR THE DEFENSE SATELLITE COMMUNICATIONS SYSTEM (DSCS) WHICH SUPPORTS THE INTEGRAL PORTION OF THE GLOBAL DEFENSE COMMUNICATION SYSTEM.
  - THE DSCS SATELLITE AND GROUND TERMINALS PROVIDE SECURE, JAM RESISTANT COMMUNICATIONS TRANSMISSION SERVICES IN SUPPORT OF CRITICAL DOD USERS AS APPROVED BY THE JOINT CHIEFS OF STAFF.
  - SYSTEMS ARE LOCATED IN OVER 112 WORLDWIDE LOCATIONS.

DEFENSE DISTRIBUTION DEPOT TOBYHANNA PROJECT COORDINATION

- PROJECT MANAGER FIELD ARTILLERY TACTICAL DATA SYSTEMS (FATDS)
  - LIGHTWEIGHT COMPUTER SYSTEMS WHICH CAN BE INSTALLED IN ANY PLATFORM, VAN, SHELTER, TRUCK, HMMWV OR TRACK VEHICLE FOR ARMY AND MULTISERVICE USE.
  - SYSTEM AUTOMATES THE COMMAND, CONTROL AND COMMUNICATIONS OF ALL FIRE SUPPORT ASSETS TO INCLUDE MORTARS, FIELD ARTILLERY, ATTACK HELICOPTERS, TACTICAL AIR SUPPORT, NAVAL GUNFIRE AND OFFENSIVE ELECTRONICS WARFARE.

DEFENSE DISTRIBUTION DEPOT TOBYHANNA PROJECT COORDINATION

- PROJECT MANAGER BATTLEFIELD COMMUNICATIONS REVIEW (BCR)
  - SYSTEM CONSISTS OF SHELTERS, HMMWVS AND POWER UNITS TO SUPPORT SOLDIER-TO-SOLDIER COMMUNICATIONS IN THE FIELD.
  - DDTP IS A STAGING ACTIVITY FOR THE RECEIPT, STORAGE AND ISSUE OF BCR MATERIAL AND IS THE ARMY'S STAGING AREA FOR BCR DOWNSIZING EFFORTS THROUGHOUT DA.

DEFENSE DISTRIBUTION DEPOT TOBYHANNA PROJECT COORDINATION

- PROJECT MANAGER AIR DEFENSE COMMAND AND CONTROL SYSTEMS (ADCCS)
  - PROVIDES REAL TIME AIR THREAT ALERTING, CUEING, POSITION DATA AND AIR BATTLE MANAGEMENT INFORMATION.
  - DDTP IS THE STAGING ACTIVITY FOR THE ADCCS FIELDINGS.

DEFENSE DISTRIBUTION DEPOT TOBYHANNA PROJECT COORDINATION

- PROJECT MANAGER TEST MEASUREMENT AND DIAGNOSTIC EQUIPMENT (TMDE)
  - DDTP PERFORMS RECEIPT, STORAGE AND ISSUE FUNCTIONS FOR 2 PROGRAMS; THE INTEGRATED FAMILY OF TEST EQUIPMENT (IFTE) AND CONTACT TEST SETS (CTS).
  - IFTE CONSISTS OF A BASE SHOP TEST FACILITY, A STORAGE SHELTER, TWO 5 TON TRUCKS AND A POWER UNIT. THE CTS PROGRAM CONSISTS OF COMPUTERS CONFIGURED INTO VARIOUS SYSTEMS.
  - DDTP IS THE STAGING ACTIVITY FOR ALL IFTE AND CTS FIELDINGS.

DEFENSE DISTRIBUTION DEPOT TOBYHANNA PROJECT COORDINATION

- TACTICAL QUIET GENERATOR (TQG) PROGRAM
  - THREAT FORCES HAVE THE CAPABILITY OF LOCATING TACTICAL COMMAND POSTS AND OTHER CRITICAL TARGETS BY DETECTING THE HIGH AURAL SIGNATURE ASSOCIATED WITH ELECTRIC POWER GENERATION SOURCES.
  - VICE CHIEF OF STAFF DIRECTED THIS PROGRAM TO MINIMIZE SOUND GENERATED BY THE POWER SOURCE.
  - DDTP AND TOBYHANNA ARMY DEPOT PARTNERED IN MODIFYING TRAILERS, FABRICATING SWITCH BOXES AND ASSEMBLING THE TQG UNITS.

DEFENSE DISTRIBUTION DEPOT TOBYHANNA PROJECT COORDINATION

- ENVIRONMENTAL CONTROL UNITS (ECU) PROGRAM
  - CLEAN AIR ACT OF 1990 PROMPTED DOD TO REMOVE ALL FREON FROM EQUIPMENT HOLDINGS.
  - TOBYHANNA ARMY DEPOT WAS DESIGNATED TO CORRECT FREON PROBLEMS WITH EIGHT CECOM MANAGED WEAPON SYSTEMS.
  - TOAD MAINTENANCE ACTIVITY DESIGNED AND FABRICATED KITS WHICH DDTP DISTRIBUTES ACCORDING TO A STRICT FIELDING PLAN IN ORDER TO ADHERE TO WORLDWIDE ENVIRONMENTAL GUIDELINES.

DEFENSE DISTRIBUTION DEPOT TOBYHANNA PROJECT COORDINATION

- DEPLOYABLE MEDICAL SYSTEMS (DEPMEDS)
  - DDTP AND TOBYHANNA ARMY DEPOT PARTNER IN PROVIDING POWER SOURCES FOR THE DA DEPMEDS PROGRAM.
  - TRAILERS ARE FABRICATED BY THE MAINTENANCE ACTIVITY AND DDTP ASSEMBLES AND SHIPS THE POWER UNITS.

DEFENSE DISTRIBUTION DEPOT TOBYHANNA UNIQUE COMMODITY DRIVEN FACILITIES

- SHELTER HANDLING & STORAGE FACILITY
- SENSITIVE COMPARTMENTED INFORMATION FACILITY (SCIF)

DEFENSE DISTRIBUTION DEPOT TOBYHANNA INITIATIVES

- CUSTOMER SERVICE HOTLINE
- CORPORATE BOARD
- LABOR-MANAGEMENT PARTNERSHIP COUNCIL
- DDTP / DRMO PARTNERSHIP
- TOTAL QUALITY MANAGEMENT - BUSINESS PLAN
- LEGENDARY SERVICE
- LOCAL AREA NETWORK / AUTOMATION
- RESERVE TRAINING PROGRAM

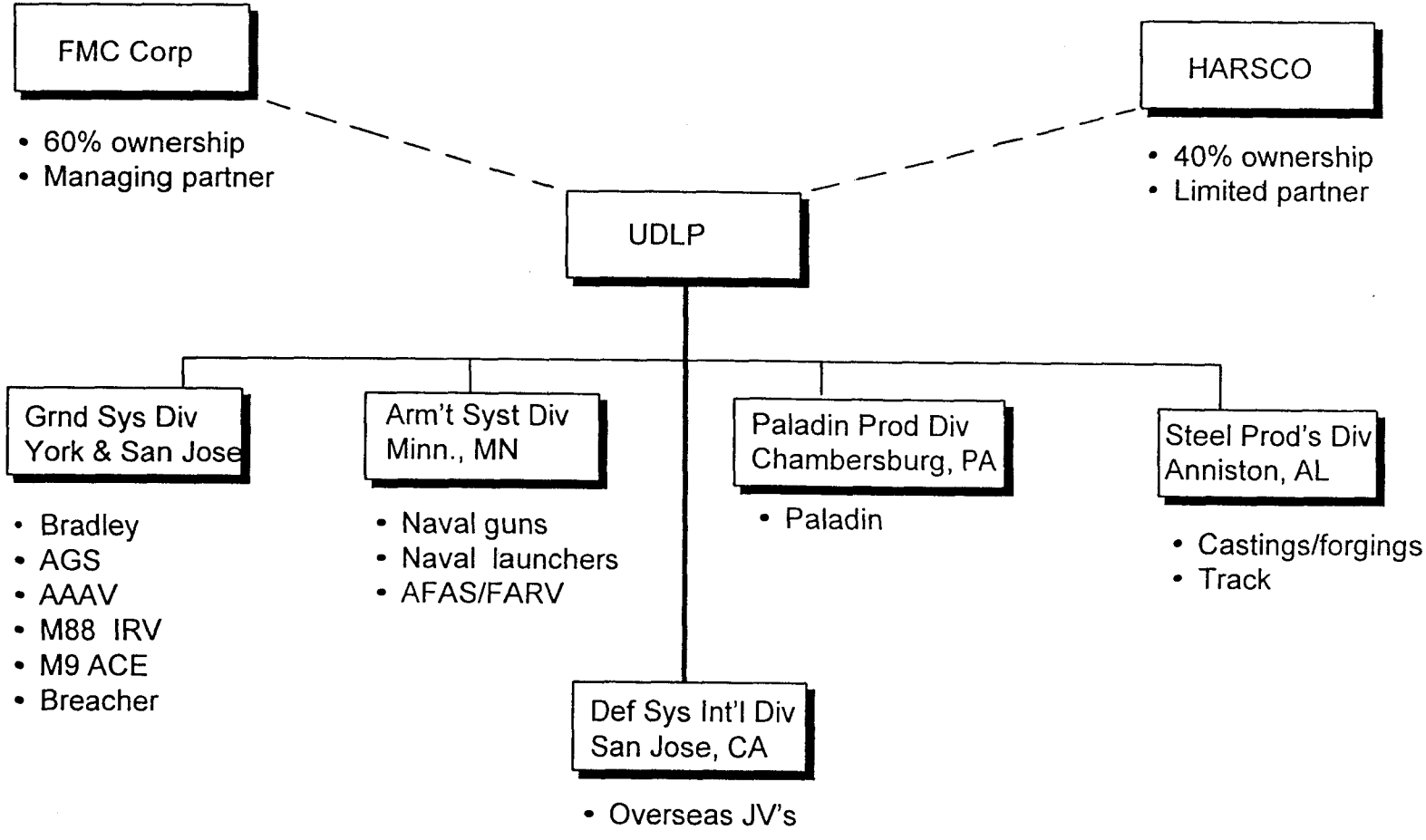
DEFENSE DISTRIBUTION DEPOT TOBYHANNA
VISION

"The Preferred Choice for Responsive and Accurate Worldwide Logistical Support at the Best Value"

Paladin Enterprise

United Defense
FMC/BMY

United Defense, Limited Partnership



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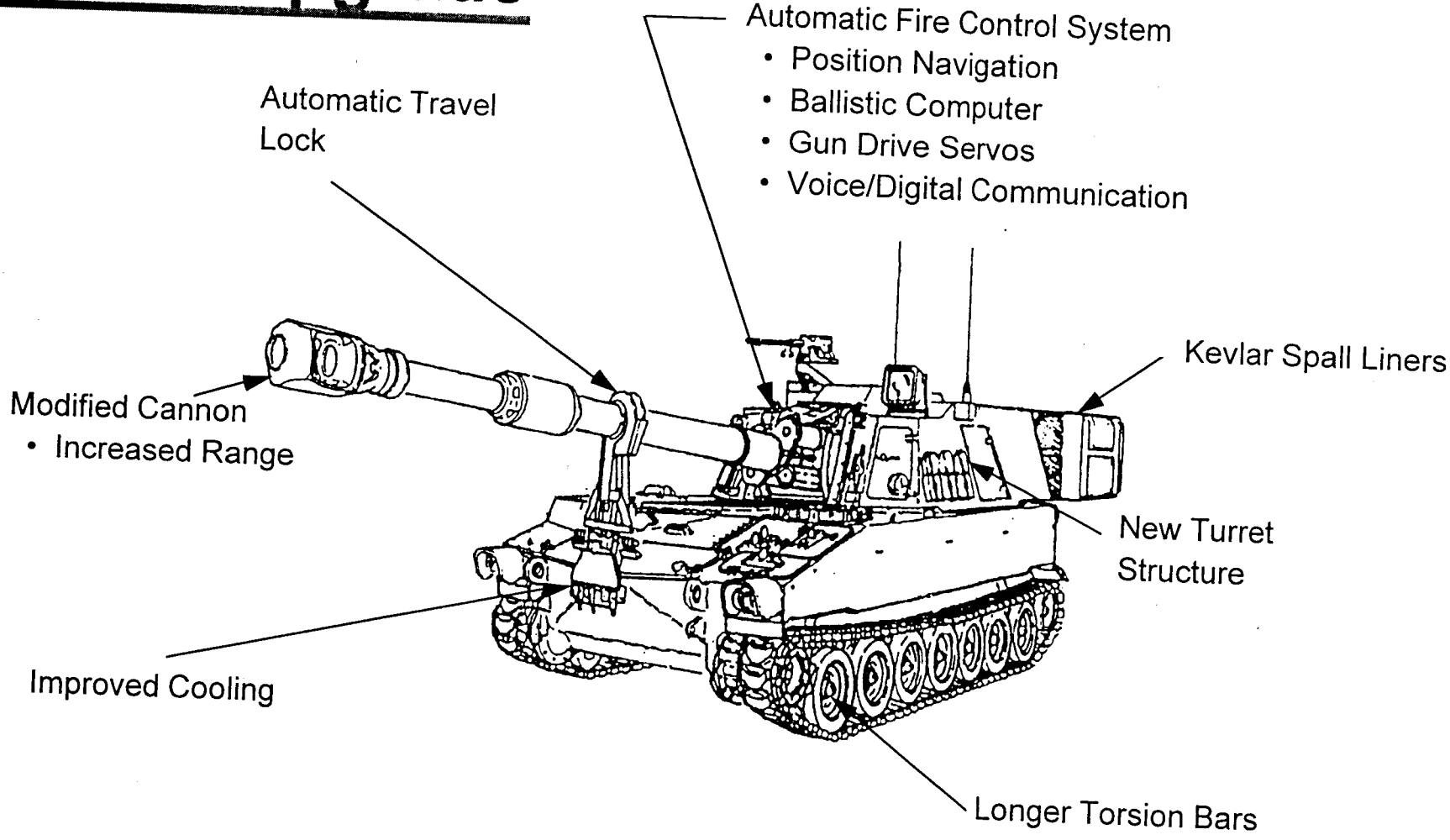
Paladin Upgrade



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Award Background

- "Best value" award, 9 Apr 93, to Paladin Production Division - Multiyear contract for 630 howitzers.

FY	Dollars	Quantity	Delivery Period
93	31M	60	Dec 94 - Oct 95
94	81M	160	Nov 95 - Oct 96
95	104M	205	Nov 96 - Oct 97
96	104M	205	Nov 97 - Oct 98
	320 M		

- Option for additional 120 howitzers for $57M

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Scope of Work

- Make/buy parts
  - Provide parts to Letterkenny Army Depot (LEAD) for chassis conversion
  - Acquire fire control and other turret components
  - Fabricate A6 turrets
- Assemble turrets using contractor furnished parts and GFM, e.g., armament
- Integrate turrets with GFM chassis
- Test and inspect, prep for storage/delivery, store, and ship

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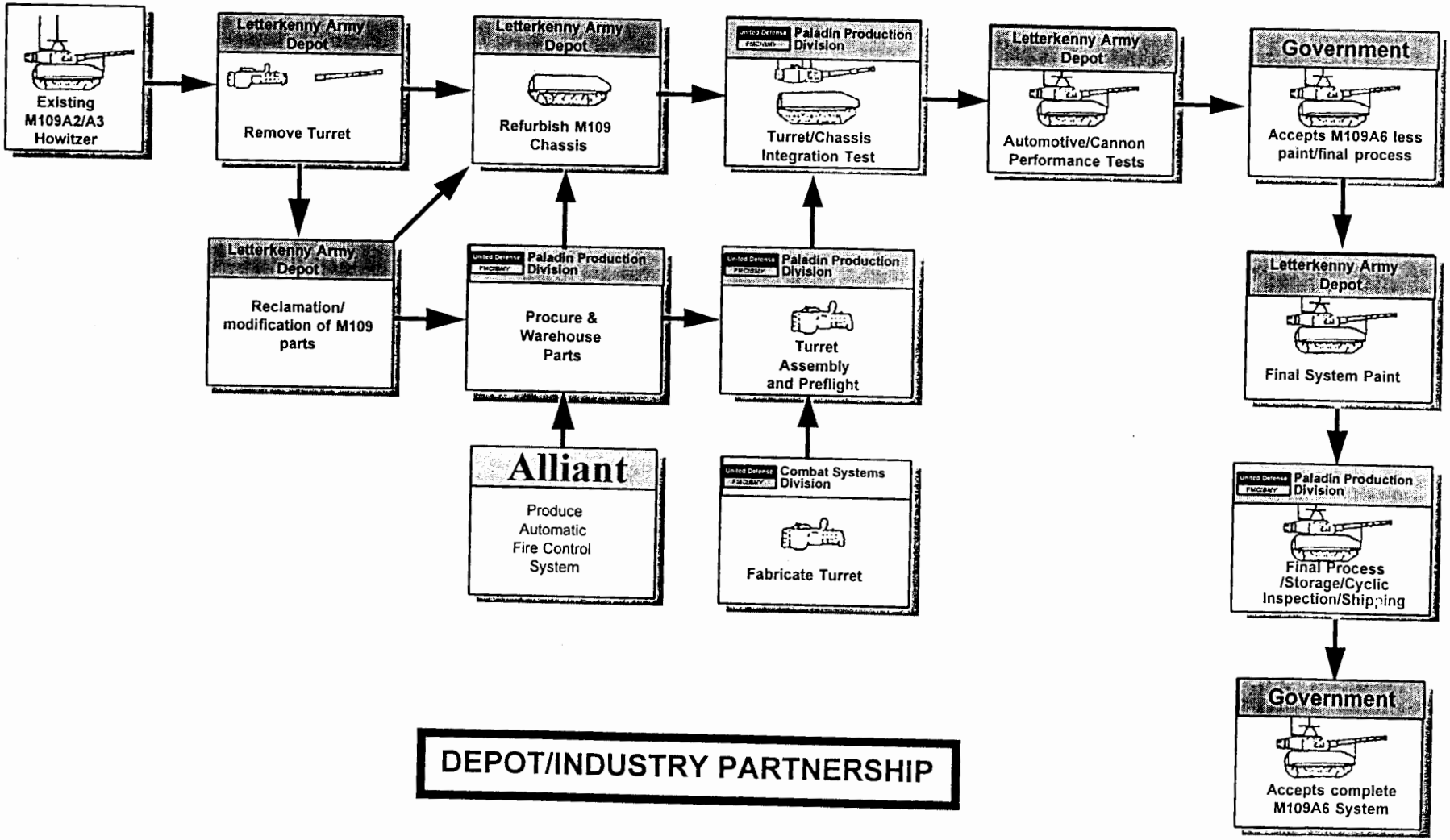
Integrated Production Flow



DEPOT/INDUSTRY PARTNERSHIP

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Major Milestones

Contract award	9 April 93
PPD facility complete	28 February 94
First chassis assembly parts to Letterkenny	30 June 94
First Paladin delivered	31 October 94
Rate production achieved	December 96
Last vehicle delivered	October 98 ?

TWO MONTHS AHEAD OF SCHEDULE

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PEO Challenge - May 93

"Identify non-value added tasks, requirements, procedures, etc. These things need to be removed to reduce cost. Focus on dumb things to eliminate ..."

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Teaming

- Better than alternative
- Hosted/facilitated three-day team building session month after contract award
- Participants
  - PMO - Deputy PM; Assistant PM, Production
  - PCO
  - Defense Contract Management Area Office - Commander; ACO
  - Letterkenny Army Depot - Chief, Production Engineering
  - Teammate, Alliant - Director, Fire Control Systems; PM AFCS
  - User - Deputy TRADOC Systems Manager
  - Paladin Production Division - Core management team

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Commitment

- **Vision**

  Team Paladin will be a model of government/industry cooperation for an efficient industrial base, utilizing best practices from all sectors. This high performance team will produce world-class howitzers to the satisfaction of all stakeholders (soldiers, employees, shareholders & taxpayers).

- **Operating principles**
  - Treat each other with mutual trust and respect by:
    - » Not speaking ill of other team member
  - Establish and maintain effective communications
  - Commit to ownership and improvement of process
  - Continually demonstrate value of team approach

Charter of Team Paladin

"This team management concept is based on recognition that program problems cross organizational boundaries within and between government and industry, and that proactive cooperation is the key to program success. 'Arms length' connotes not only the obligation of government and industry officials to look out for their respective interests, but sufficient closeness to shake hands and work together to jointly solve problems."

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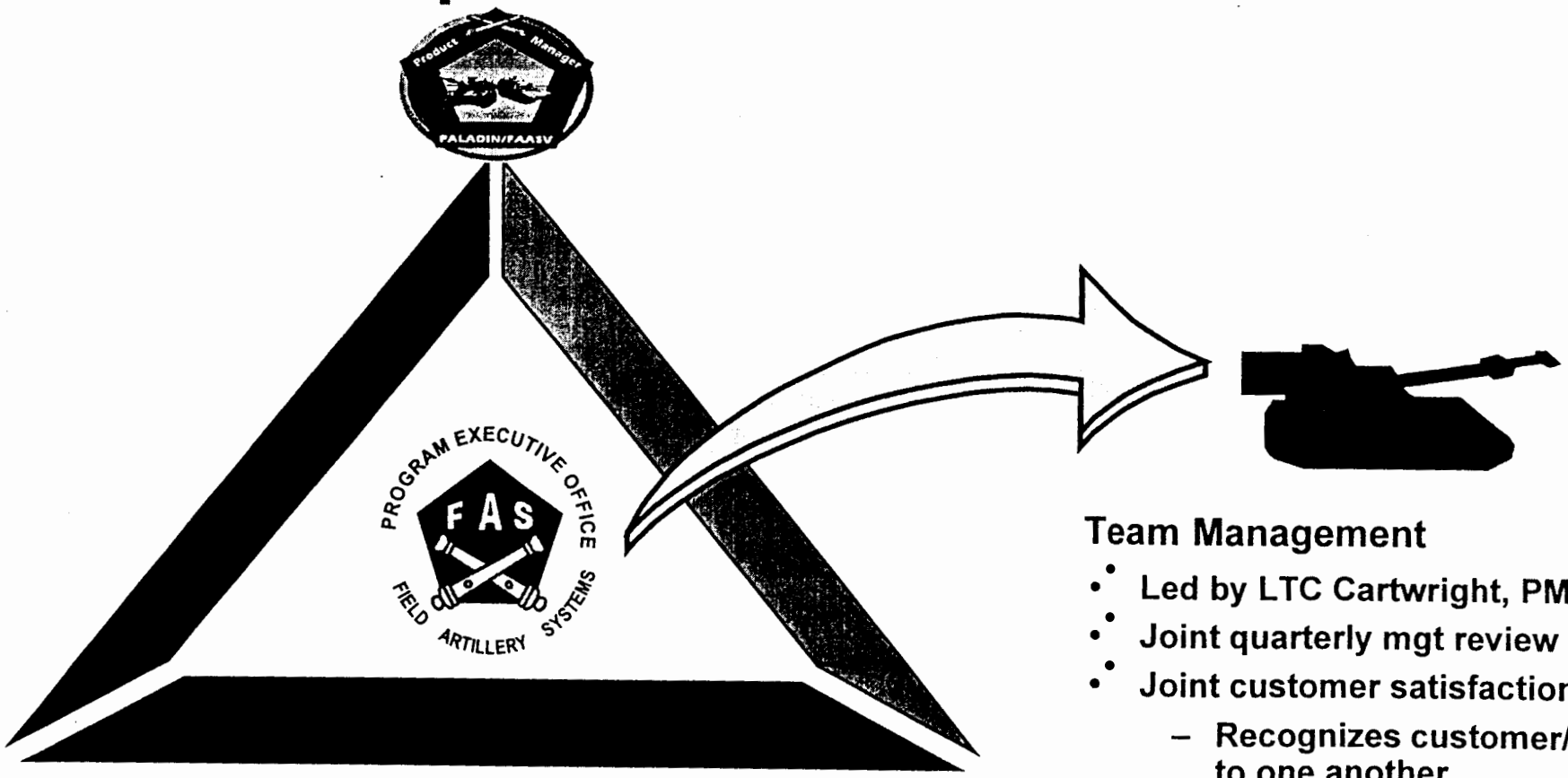
Partnership



Team Management

- Led by LTC Cartwright, PM
- Joint quarterly mgt review
- Joint customer satisfaction survey
  - Recognizes customer/supplier to one another
  - To reduce risk and promote continuous improvement

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Paladin Integration Team

- Conceived Jul 93
- Charter
  - Model five key points of process interface between United Defense and Letterkenny, e.g., delivering/receiving contractor furnished materials
  - Identify regulatory, organizational/cultural, and system impediments
  - Recommend actions to overcome
- Membership
  - PMO
  - LEAD
  - United Defense
  - AMCCOM
  - DLA
    - DESCOM
    - DCMAO
    - TACOM
    - CECOM

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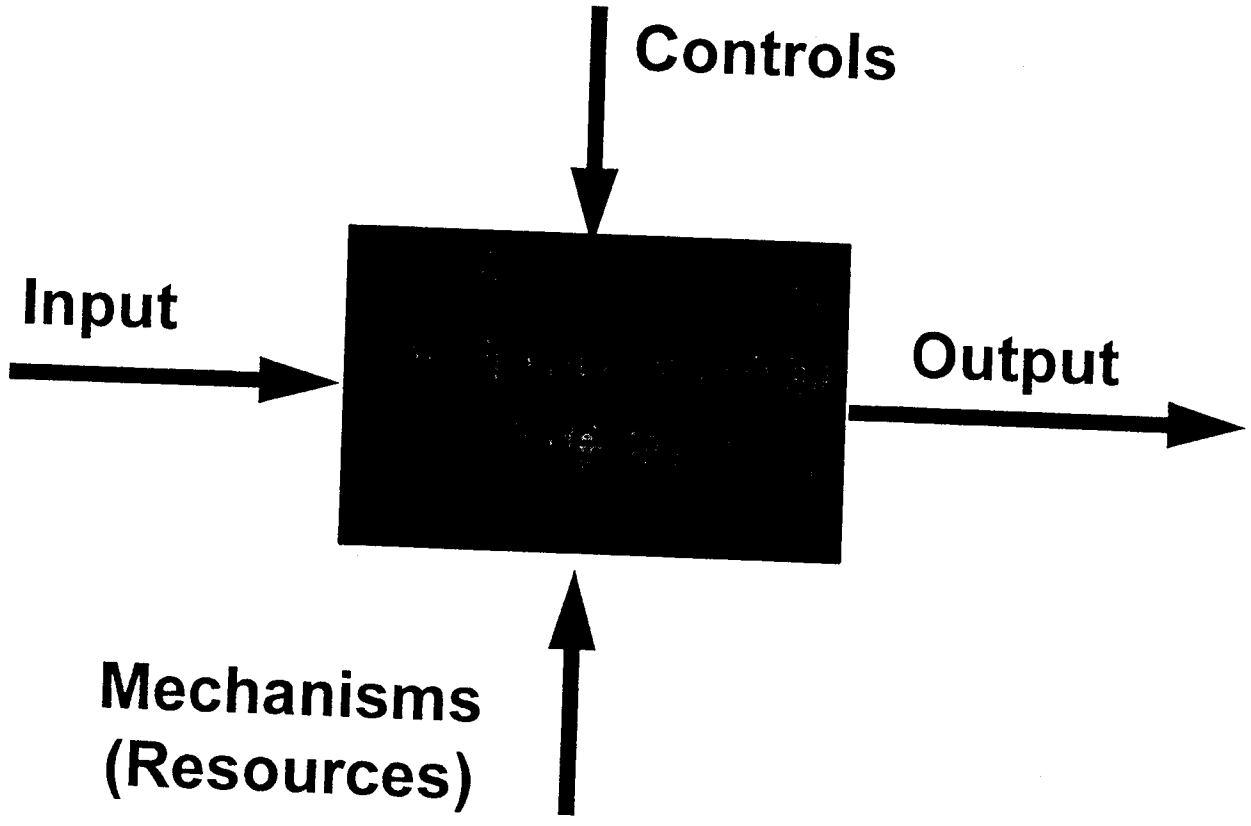
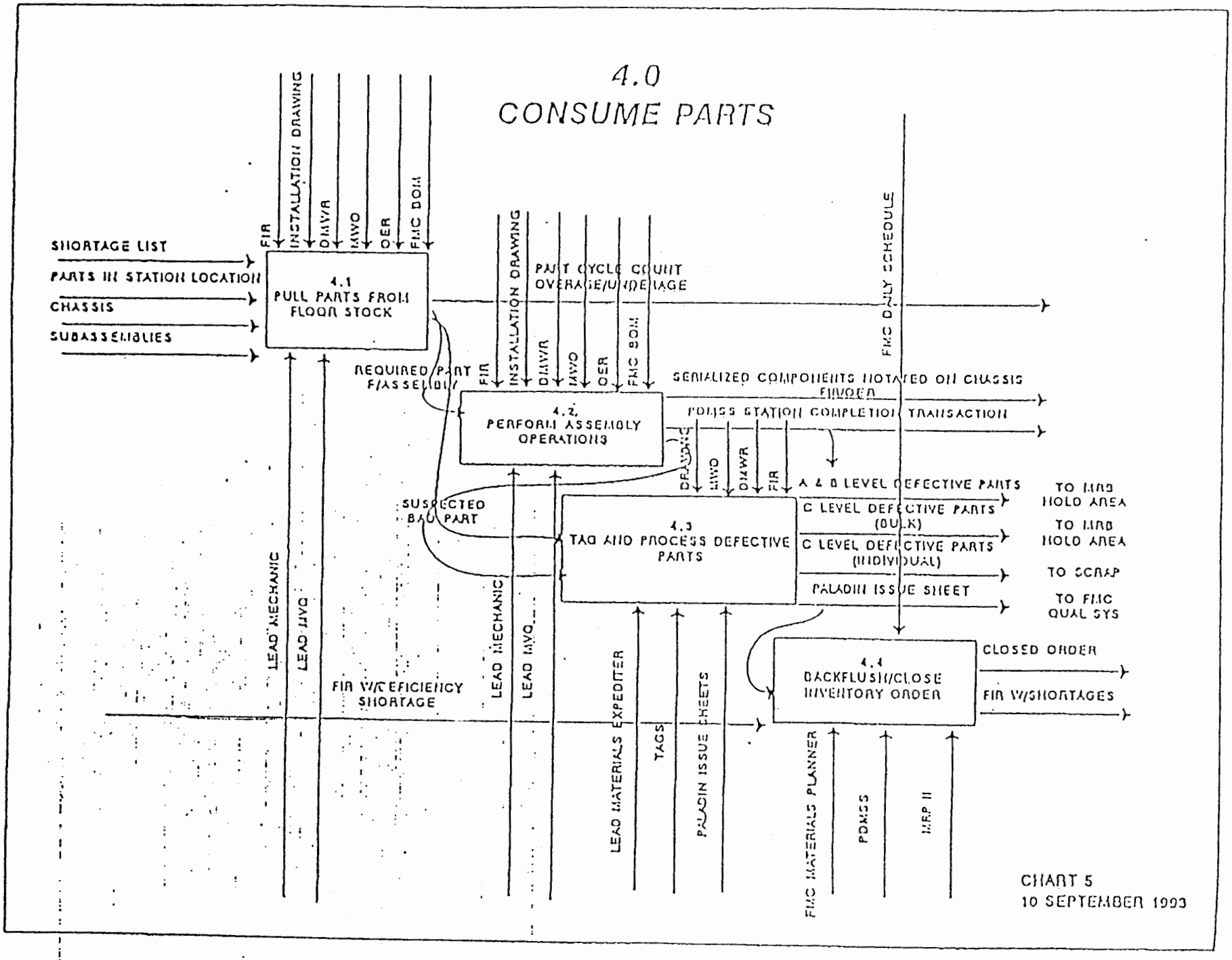
Integrated Definition (IDEF) Model




4.0
CONSUME PARTS
SHORTAGE LIST
PARTS IN STATION LOCATION
CHASSIS
SUBASSEMBLIES
FIR
INSTALLATION DRAWING
DMWR
MWO
OER
FMC BOM
4.1
PULL PARTS FROM FLOOR STOCK
PART CYCLE COUNT OVERAGE/UNDERAGE
FMC DAILY SCHEDULE
REQUIRED PART FASSEMBLY
4.2
PERFORM ASSEMBLY OPERATIONS
SERIALIZED COMPONENTS NOTATED ON CHASSIS FINDER
POMSS STATION COMPLETION TRANSACTION
DRAWING
A & B LEVEL DEFECTIVE PARTS
TO MRB HOLD AREA
SUSPECTED BAD PART
4.3
TAG AND PROCESS DEFECTIVE PARTS
C LEVEL DEFECTIVE PARTS (BULK)
TO MRB HOLD AREA
C LEVEL DEFECTIVE PARTS (INDIVIDUAL)
TO SCRAP
PALADIN ISSUE SHEET
TO FMC QUAL SYS
LEAD MECHANIC
LEAD MWO
FIR W/C EFICIENCY SHORTAGE
LEAD MATERIALS EXPEDITER
TAGS
PALADIN ISSUE SHEETS
4.4
BACKFLUSH/CLOSE INVENTORY ORDER
CLOSED ORDER
FIR W/SHORTAGES
FMC MATERIALS PLANNER
POMSS
MRP II
CHART 5
10 SEPTEMBER 1993

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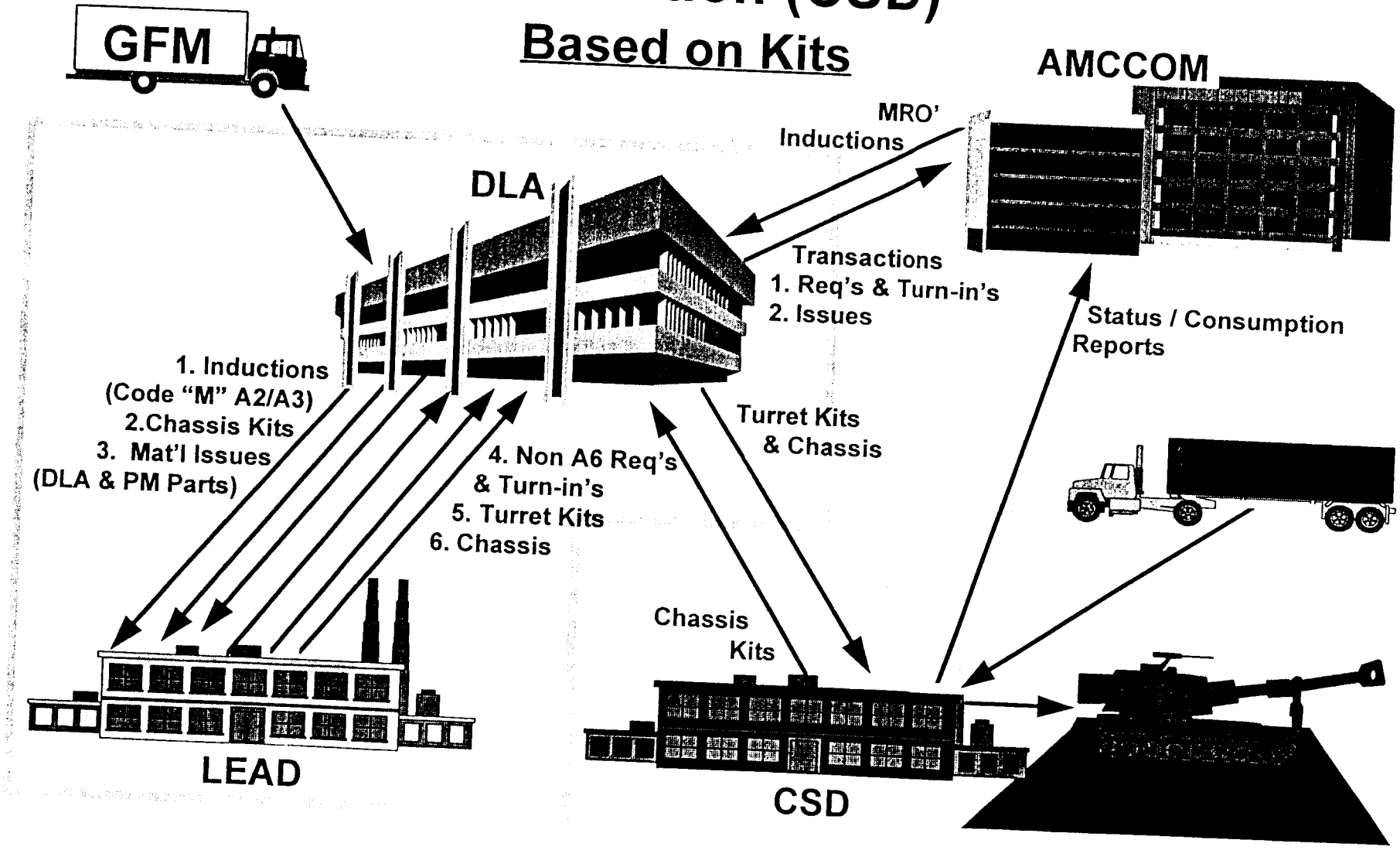
Paladin Limited Production (CSD)

Based on Kits



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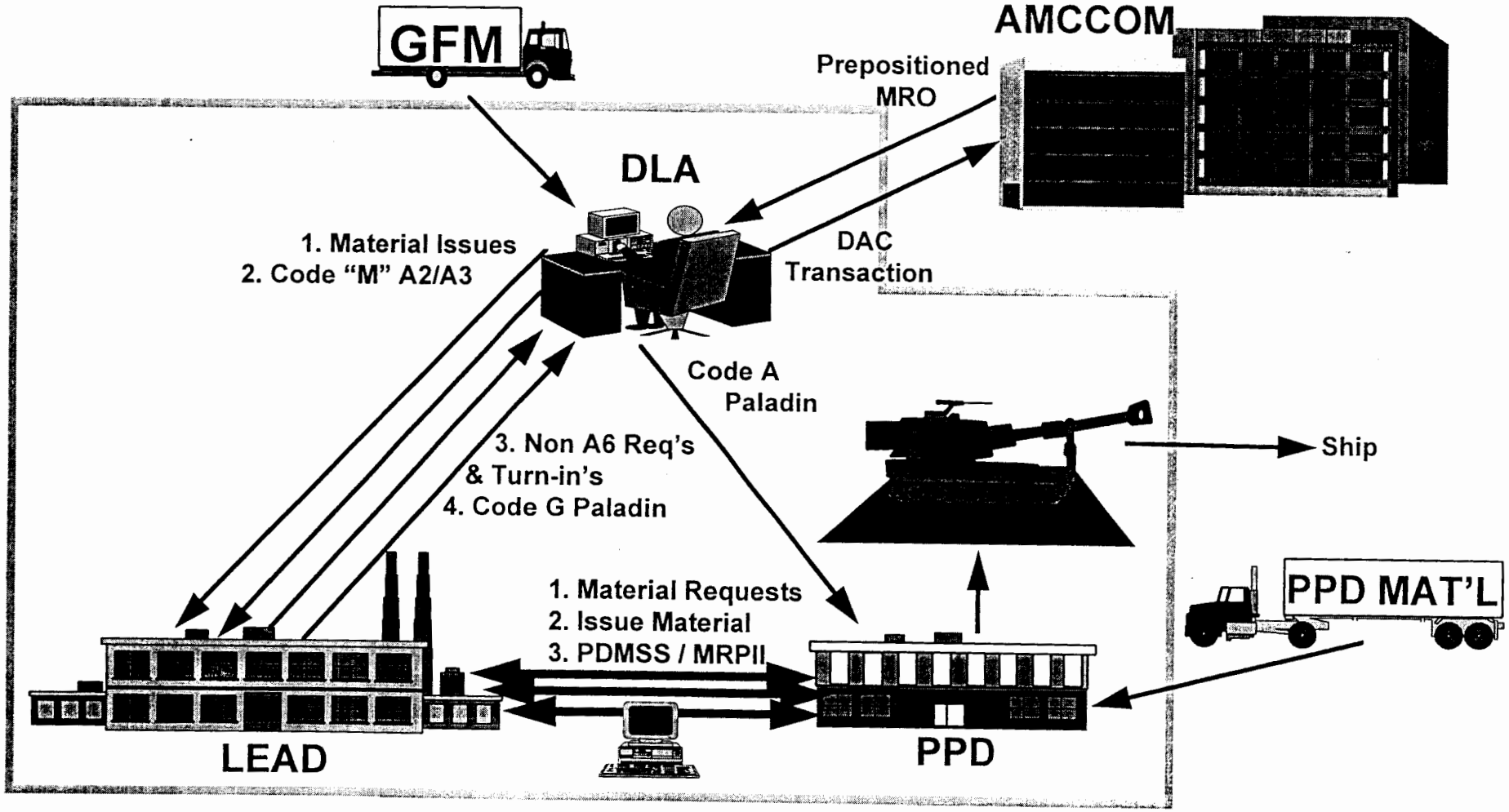
Paladin Full Scale Production

Enterprise "Best-Practice" Process



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Benefits of Partnership/Collocation

- Savings = $46M
  - AAE/PEO multiyear acquisition strategy
- Cost avoidance = $15M
  - Process streamlining - Waived 3 DOD and 27 Army/AMC regulations
  - Less material handling - Just-in-time parts delivery directly to work stations
  - Integrated testing - Automotive, navigation, armament
- Risk reduction
  - Integrated computer systems and shared information enable proactive management
  - Close cooperation, vice "arms length" confrontation, yields rapid problem resolution
- Higher quality from system level test

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Benefits (continued)

- Preserves strengths of public and private sectors and promotes shared learning
- Model of government/industry cooperation for rationalization of defense industrial base

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Paladin Production Division

MANUFACTURING TM

- Material handling
- Turret assembly
- Turret integration
- Chassis integration & test
- Cyclic inspection

MATERIAL TM

- Purchasing
- Subcontract admin
- Production scheduling
- BOM maintenance
- Cycle Count

CUSTOMER SPT TM

- Contract administration
- Customer relations
- Engineering
- Govt property mgt
- Security

GUIDANCE TM

- Strategic vision
- Coaching/counseling
- Focus process teams
- External customer interface

BUSINESS SVCS TM

- Financial administration
- Human resources
- Information resources

QUALITY SVCS TM

- TQM & SPC
- Quality information sys
- Corrective action sys
- Training and audit

Total strength = 78

TEAM OF EMPOWERED TEAMS

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Organizational Philosophy

- Recruit on basis of social and technical skills - McFletcher approach
- Minimize "we-theyisms"
  - All salaried workforce. Everyone on bonus
  - No manager/supervisor titles
  - No grades
  - No offices
  - Windows between office and manufacturing personnel
  - Integration of teammates
- Bonus based on team (division) performance
  - Individual performance feedback for development only
  - Feedback by teammates (peers)

Organizational Philosophy (continued)

- Bonus (cont)
  - 6% of pay at risk. Total bonus potential = 16%.
  - 1995 formula
    - » Quality (defects at FIR) - 28%
    - » Schedule (DD250) - 27%
    - » Profit - 25%
    - » Inventory accuracy - 10%
    - » Cycle time - 10%
- Cross training within teams to provide job enrichment, flexibility, and supplier/customer awareness for quality workmanship

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Organizational Philosophy (continued)

- Certified operators - SPC and self-inspection to control process and prevent defects
- On-line system access to team members, both government and industry
- Paperless environment including work instructions

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Operation Information

Work Station 900, Op 23-4-00, Install Dwg 12563217

SLIP RING - BRUSH BLOCKS INSTALLATION

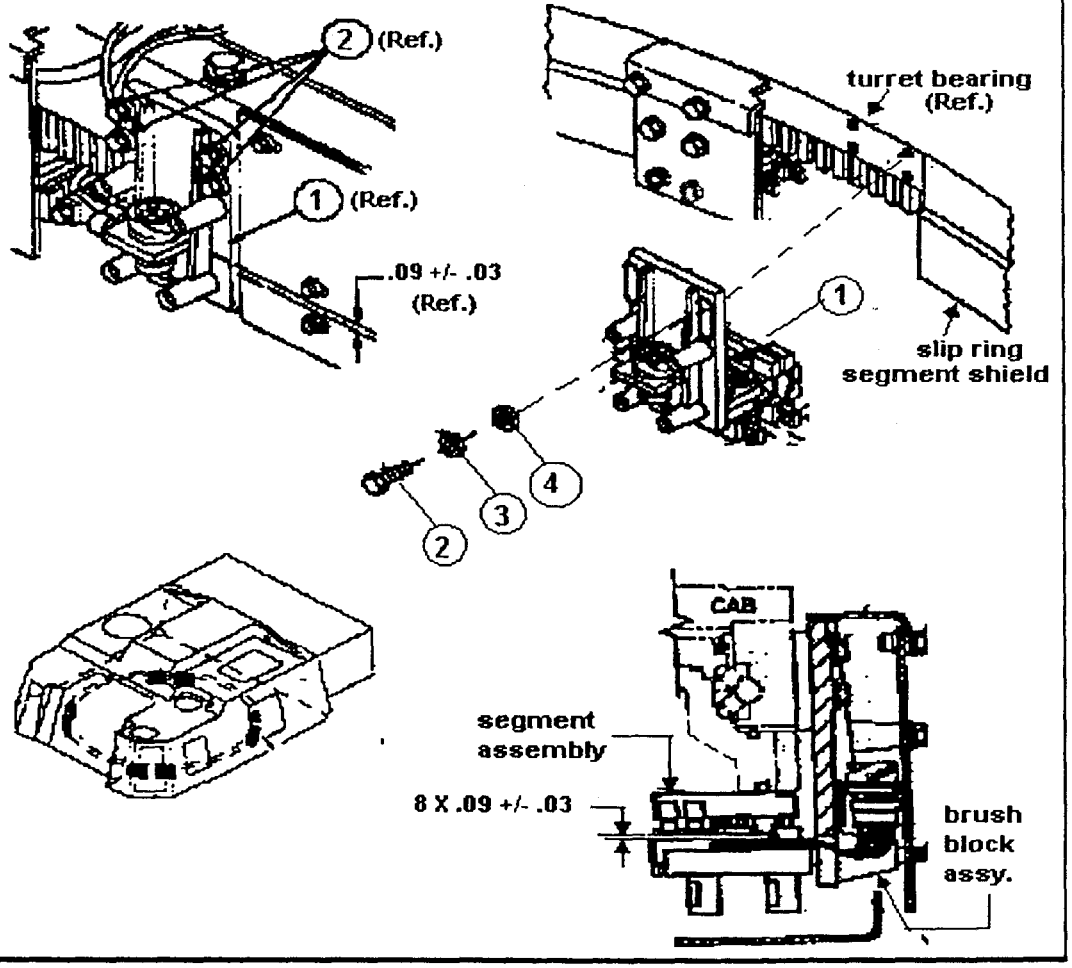
1. Install eight Brush Blocks (1) onto turret bearing and loosely secure each brush block with four Screws (2), four Lock Washers (3), and four Flat Washers (4).

   Position all eight brush blocks using the following procedure.

2. Slowly push brush block (1) upward until brushes just contact with slip ring segment.

3. Using assistance, scribe a reference mark on each side of brush block (1) and on slip ring segment shield.

4. Push brush block (1) upward .09 in. past the reference mark and then secure four screws (2).



THE DEFENSE BASE CLOSURE AND REALIGNMENT COMMISSION

EXECUTIVE CORRESPONDENCE TRACKING SYSTEM (ECTS) # 950329-7

FROM: SGROI, CAROL L.	TO: COX, REBECCA
TITLE: CITIZEN	TITLE: COMMISSIONER
ORGANIZATION: CHAMBERSBURG, PA	ORGANIZATION: DBCRC
INSTALLATION (s) DISCUSSED: LETTERKENNY ARMY DEPOT	

OFFICE OF THE CHAIRMAN	FYI	ACTION	INIT	COMMISSION MEMBERS	FYI	ACTION	INIT
CHAIRMAN DIXON				COMMISSIONER CORNELLA			
STAFF DIRECTOR	✓			COMMISSIONER COX	✓		
EXECUTIVE DIRECTOR	✓			COMMISSIONER DAVIS			
GENERAL COUNSEL				COMMISSIONER KLING			
MILITARY EXECUTIVE				COMMISSIONER MONTOYA			
				COMMISSIONER ROBLES			
DIR. CONGRESSIONAL LIAISON		✓		COMMISSIONER STEELE			
DIR. COMMUNICATIONS				REVIEW AND ANALYSIS			
				DIRECTOR OF R & A	✓		
EXECUTIVE SECRETARIAT				ARMY TEAM LEADER			
				NAVY TEAM LEADER			
DIRECTOR OF ADMINISTRATION				AIR FORCE TEAM LEADER			
CHIEF FINANCIAL OFFICER				INTERAGENCY TEAM LEADER	✓		
DIRECTOR OF TRAVEL				CROSS SERVICE TEAM LEADER	✓		
DIR. INFORMATION SERVICES							

TYPE OF ACTION REQUIRED

✓	Prepare Reply for Chairman's Signature		Prepare Reply for Commissioner's Signature
	Prepare Reply for Staff Director's Signature		Prepare Direct Response
	ACTION: Offer Comments and/or Suggestions	✓	FYI

Subject/Remarks:

REQUESTING COMMISSION VISIT LETTERKENNY ARMY DEPOT.

Due Date: 950405	Routing Date: 950329	Date Originated: 950326	Mail Date:

Please refer to this number
when responding 950329-7

Carol L. Sgrai
2913 Adams Drive
Chambersburg, PA 12
March 26, 1995

Dear Commissioner Cox,

I am writing to invite you to make a return visit to Letterkenny Army Depot.

I feel that BRAC '93 made a wise decision when it consolidated tactical missiles and artillery at Letterkenny and initiated interservicing and partnerships at this location.

Much has been accomplished since your last visit. Over half of the missile systems are now in place and construction is almost completed insuring that we can remain on track with the established target dates for the remaining systems. We have entered into a successful partnership with United Defense. Discussions are proceeding with other private sector contractors.

As you will remember Letterkenny had many important people against the depot remaining open in '93; let alone becoming even more vital to the military.

The arrival of the missile systems

d. Summary

- The military value spreadsheets for this category are provided below.

	WEIGHT		ANNISTON	BLJE GRASS	LETTERKENNY
Capacity - Supply	75		1,417,000	484,000	1,314,000
Capacity - Maint	95		4,330,000	0	2,605,000
Capacity - Ammo Stor	85		1,882,000	1,715,000	1,677,000
Reserve Comp Support	45		1.0	3.4	1.1
ESSENTIALITY:	---	300	7.4	3.8	6.0
Deployment Network	70		6.8	6.4	7.4
Location	40		Y	Y	Y
Environ Compliance	30		9	2	11
Construction Invest	45		$139.0	$1.0	$8.0
IMA Support	30		6.2	6.3	8.4
Quantity-Distance	35		0	0	0
SUITABILITY:	---	250	7.3	6.6	6.3
Var Hsg Allowance	10		$0.00	$167.09	$143.88
AFH Cost/Unit	10		$8,200.00	$7,765.00	$6,311.00
Avg Civilian Salary	45		$23,923.00	$22,733.00	$24,371.50
BASOPS MER Factor	30		5.82	5.29	6.56
BASOPS CER Factor	30		$4,591.00	$7,544.00	$4,849.00
MCA Cost Factor	25		0.79	1.08	1.00
OPER EFFICIENCY:	---	150	5.8	5.5	5.4
Tot Buildable Acres	10		924	6,000	4,557
Unused Build - Admin	15		2,234	0	0
Multi-function	10		7	3	18
Encroachment	10		91.0	159.3	147.6
Environment Capacity	10		7.5	8.7	8.0
Infrastructure	10		5.0	1.9	3.3
Work Force Available	15		166,012	96,200	323,980
Unused Maint Capac	40		966,000	0	556,000
Unused Supply Capac	30		169,000	66,000	208,000
EXPANDABILITY:	---	150	3.8	1.9	3.9
% Permanent Facility	35		98%	94%	82%
ACOE Score	10		1	1	1
Army Family Housing	10		13	17	270
Unacc Officer Hsg	10		0	0	0
Unacc Enlisted Hsg	10		0	0	6
Community Facilities	25		38,742	2,479	53,176
Places Rated Almanac	25		282	66	261
Health Care Index	25		5	4	4
QUALITY OF LIFE:	---	150	4.8	5.0	4.5
		===			
SCORE		1000	6.2	4.7	5.4
RANK			2	7	4

MILITARY VALUE ASSESSMENT - DEPOTS

	WEIGHT		PUEBLO	RED RIVER	SAVANNA
Capacity - Supply	75		1,797,000	1,083,000	429,000
Capacity - Maint	95		0	3,544,000	0
Capacity - Ammo Stor	85		0	1,238,000	1,715,000
Reserve Comp Support	45		0.3	3.7	2.9
ESSENTIALITY:	---	300	2.6	6.2	3.6
Deployment Network	70		5.2	8.2	3.2
Location	40		Y	Y	Y
Environ Compliance	30		1	3	4
Construction Invest	45		$7.0	$109.0	$7.0
IMA Support	30		4.8	5.8	5.9
Quantity-Distance	35		0	0	0
SUITABILITY:	---	250	6.2	8.1	5.4
Var Hsg Allowance	10		$78.52	$258.51	$15.69
AFH Cost/Unit	10		$6,850.00	$6,963.00	$2,226.00
Avg Civilian Salary	45		$21,475.00	$23,474.00	$24,146.50
BASOPS MER Factor	30		1.46	6.75	3.39
BASOPS CER Factor	30		$11,291.00	$4,528.00	$6,843.00
MCA Cost Factor	25		0.98	0.88	1.02
OPER EFFICIENCY:	---	150	5.1	6.1	5.0
Tot Buildable Acres	10		1,808	4,690	1,992
Unused Build - Admin	15		0	0	33,502
Multi-function	10		4	12	9
Encroachment	10		39.3	44.7	67.6
Environment Capacity	10		7.4	8.9	5.9
Infrastructure	10		4.0	5.4	4.7
Work Force Available	15		270,921	85,046	101,665
Unused Maint Capac	40		0	721,000	0
Unused Supply Capac	30		481,000	147,000	81,000
EXPANDABILITY:	---	150	3.8	4.0	3.2
% Permanent Facility	35		74%	89%	96%
ACOE Score	10		4	1	1
Army Family Housing	10		15	37	31
Unacc Officer Hsg	10		0	8	0
Unacc Enlisted Hsg	10		0	76	0
Community Facilities	25		5,765	70,788	36,356
Places Rated Almanac	25		254	311	284
Health Care Index	25		4	4	2
QUALITY OF LIFE:	---	150	3.6	4.6	3.7
		===			
SCORE		1000	4.2	6.1	4.2
RANK			9	3	9

MILITARY VALUE ASSESSMENT - DEPOTS

	WEIGHT		SENECA	SIERRA	TOBYHANNA
Capacity - Supply	75		1,561,000	1,304,000	1,014,000
Capacity - Maint	95		0	0	5,209,000
Capacity - Ammo Stor	85		1,097,000	1,799,000	0
Reserve Comp Support	45		5.1	1.8	6.4
ESSENTIALITY:	---	300	4.9	4.7	6.1
Deployment Network	70		8.8	8.2	8.8
Location	40		Y	Y	Y
Environ Compliance	30		7	5	10
Construction Invest	45		$12.0	$20.0	$30.0
IMA Support	30		6.0	7.7	8.0
Quantity-Distance	35		0	1	0
SUITABILITY:	---	250	6.9	5.8	7.0
Var Hsg Allowance	10		$619.67	$395.31	$163.45
AFH Cost/Unit	10		$6,339.00	$4,194.00	$9,167.00
Avg Civilian Salary	45		$24,230.00	$22,456.00	$24,530.50
BASOPS MER Factor	30		2.27	2.50	8.76
BASOPS CER Factor	30		$10,227.00	$13,559.00	$3,186.00
MC Cost Factor	25		1.15	1.43	1.14
OPER EFFICIENCY:	---	150	2.8	3.6	5.7
Tot Buildable Acres	10		790	10,600	682
Unused Build - Admin	15		0	0	0
Multi-function	10		15	12	15
Encroachment	10		127.8	21.2	254.5
Environment Capacity	10		7.1	5.9	8.8
Infrastructure	10		2.5	3.8	3.4
Work Force Availabl	15		202,575	158,235	502,582
Unused Maint Capac	40		0	0	2,042,000
Unused Supply Capac	30		219,000	515,000	152,000
EXPANDABILITY:	---	150	2.7	4.6	5.2
% Permanent Facility	35		97%	50%	97%
ACOE Score	10		1	3	1
Army Family Housing	10		309	160	122
Unacc Officer Hsg	10		10	12	37
Unacc Enlisted Hsg	10		292	188	0
Community Facilities	25		137,444	45,860	142,409
Places Rated Almanac	25		21	136	36
Health Care Index	25		4	4	4
QUALITY OF LIFE:	---	150	8.4	4.2	7.6
		===			
SCORE		1000	5.3	4.7	6.3
RANK			6	7	1

MILITARY VALUE ASSESSMENT - DEPOTS

	WEIGHT		ANNISTON DEPOT	LETTERKENNY DEPOT	RED RIVER DEPOT
CAPACITY-MAINTENANCE	150		3,200,446	1,995,000--	3,350,808
CAPACITY-SUPPLY	150		1,962,600++	1,195,000--	1,707,000+
RESERVE TRAINING	30		0.30+	2.20	5.10
DEPLOYMENT NETWORK	50		6.1	6.2	6.1
AVAILABLE WORKFORCE	30		48,264	59,407+	52,006
MAINTENANCE FLEX	40		13	13	12-
MISSION REQUIREMENTS	---	450	7.2	2.8	5.1
AGE OF FACILITIES	75		44.00-	43.00	44.00-
INFRASTRUCTURE	50		7.6+	0.0-	6.8+
% PERMANENT FACILITY	75		99%+	83%-	91%
ENVIRONMENTAL CAP	25		7.9	5.3	9.2
LAND AND FACILITIES	---	225	6.5	1.0	4.8
EXCESS CAP-MAINT	40		164,600	56,421,000+	149,770
EXCESS CAP-SUPPLY	40		0	19,000	10,000
BUILDABLE ACRES	20		1,468	3,202	2,139
ENCROACHMENT	15		190.9	161.1	80.7
IMA	10		1195.0	1220.0	1275.0
FUTURE REQUIREMENTS	---	125	1.2	6.0	2.5
IBOE	100		$11.38+	$19.28--	$13.40
MCA Cost Factor	50		0.77	1.02	0.94
MISSION OVERHEAD	50		$15.32	$22.37-	$8.32+
COST AND MANPOWER	---	200	6.5	0.4	6.3
		===			
SCORE		1000	6.1	2.3	5.0
RANK			2	4	3

Table 60. Depots Decision Pad Model (Table 1 of 2)

	WEIGHT		TOBYHANNA DEPOT
CAPACITY-MAINTENANCE	150		4,633,435++
CAPACITY-SUPPLY	150		1,231,000--
RESERVE TRAINING	30		7.50-
DEPLOYMENT NETWORK	50		8.9
AVAILABLE WORKFORCE	30		51,934
MAINTENANCE FLEX	40		13
MISSION REQUIREMENTS	---	450	5.7
AGE OF FACILITIES	75		34.00++
INFRASTRUCTURE	50		4.0
% PERMANENT FACILITY	75		97%+
ENVIRONMENTAL CAP	25		6.6
LAND AND FACILITIES	---	225	8.2
EXCESS CAP-MAINT	40		520,000
EXCESS CAP-SUPPLY	40		240,000+
BUILDABLE ACRES	20		873
ENCROACHMENT	15		173.4
IMA	10		1195.0
FUTURE REQUIREMENTS	---	125	4.1
IBOE	100		$10.22+
MCA Cost Factor	50		1.20
MISSION OVERHEAD	50		$10.34
COST AND MANPOWER	---	200	7.2
		===	
SCORE		1000	6.4
RANK			1

Table 61. Depot Decision Pad Model (Table 2 of 2)

DEPARTMENT OF THE ARMY
LETTERKENNY ARMY DEPOT
CHAMBERSBURG, PENNSYLVANIA 17201 - 4150

REPLY TO
ATTENTION OF:

9 May 1994

MEMORANDUM THRU Commander, U.S. Army Depot System Command,
ATTN: COL Joseph A. Fields, AMSDS-MN,
Chambersburg, PA 17201-4170

FOR Commander, U.S. Army Armament, Munitions, and Chemical
Command, ATTN: AMSMC-ST, Rock Island, IL 61299-6000

SUBJECT: BRAC 95 Installation Assessment (IA) Data Call

1. Enclosed is the Letterkenny Army Depot submission to subject data call. As a result of updated guidance via E-mail and numerous telephonic discussions with identified points of contact, we have included the diskette requested and narrative clarification as appropriate.

2. For ease of reference, we display a copy of the diskette screen data and/or the attribute definition followed by elaborated information, clarification, or source references. Where this is the case, we have not, in many cases, made an entry to the data field on the diskette. If data is subsequently inserted, please inform us so that we can adjust our auditable files accordingly.

3. Finally, because Letterkenny has considerable ammunition maintenance and storage capabilities, we have included information for your use in completing segments of the "Ammunition Storage Installation" matrix as well.

4. With the foregoing identified, the information contained in this report is accurate and complete to the best of my knowledge and belief. My point of contact in this regard is Ms. Hallie Bunk, DSN 570-9585.

5. I have serious concerns with this model as expressed in the point paper enclosure 3.

Joe Arbuckle

3 ~~2~~ Encls
as

JOSEPH W. ARBUCKLE
Colonel, OD
Commanding

TOTAL P.01

SDSLE-I 9 May 94

POINT PAPER

SUBJECT: Military Worth Analysis for BRAC 95

1. PURPOSE. To provide the Department of Army (DA) Total Army Basing Study (TABS) Office with concerns relative to the Military Worth Analysis for Maintenance Facilities in support of BRAC 95.

2. FACTS.

a. Letterkenny Army Depot (LEAD) has recently completed the first Military Worth analysis data call in support of BRAC 95. The process involved a review of the data definitions, the collection of the information as prescribed by various data source documents, and finally the computation of data elements when required.

b. A thorough review of the proposed data submission revealed that in some cases where attributes had to be computed the definition of the primary attribute had direct influence over the outcome of the computed attribute. Of major concern is the maintenance capacity data element.

c. The data call requested capacity be reported in direct labor hours in accordance with DOD 4151.15H, "Depot Maintenance Capacity/Utilization Index Measurement Handbook" dated Nov 90. This DOD-mandated capacity reporting requirement does not include an assessment of the available industrial square footage of an installation. LEAD, because of its workload mix, reports the lowest direct labor manhours of available capacity for the remaining Army depots. However, LEAD is the second largest Army depot in actual available industrial square footage. The maintenance capacity attribute on its own is worth 150 of the total 1000 points associated with the military worth analysis.

d. The maintenance capacity attribute directly influences two other important attributes in the data call. The IBOE rate and the Mission Overhead rate worth 100 and 50 points respectively. The data call computation directs the division of the total maintenance base operations costs by 85 percent of the direct labor hours of capacity for the IBOE rate, and the same computation for the mission overhead rate. It is intuitively obvious that the higher the capacity data, the lower both the IBOE and mission overhead rates become. Based on this approach, LEAD will again be shown negatively as having the highest costs per hour.

e. The maintenance capacity computation in the military worth analysis therefore influences 300 of the total 1000 points or 30% of the outcome. As currently defined, it does not measure what is intended.

f. Another concern discovered during the analysis of the data submission is maintenance excess capacity. The data call required the installation report excess maintenance capacity in square footage. The attribute has a value of 40 points. The concern is two fold; first, there appears to be an inconsistency when available capacity is reported in manhours and excess capacity in square feet and secondly, the data call states that the more excess available the better.

g. LEAD is in the process of consolidating 23 DOD Tactical Missile systems into the depot, as directed by BRAC 93. Rather than new construction, LEAD is renovating existing space, or previously excess square footage to accommodate the consolidation. This was done to keep BRAC 93 costs down. Therefore, again because of the execution of the BRAC 93 recommendation, LEAD will be reported as the lowest on comparison with the other Army Depots for this attribute.

3. CONCLUSION.

a. It is very clear by analyzing this data call that LEAD will be viewed as the least valuable of all the Army depots in this military worth assessment. The reason is that the model simply rewards and reinforces what is already being done at a location defined by past workloading decisions. Those past decisions are not based on military worth. In fact, the effects of politics weigh heavily in this, though Congressionally-mandated workload actions.

b. A better assessment of military worth would be to evaluate the actual maintenance missions currently performed, and those slated to be performed, at each of the installations, and their overall value to DOD. This would include interservicing worth.

Hallie Bunk/DSN 570-9585

SECRETARY OF THE ARMY
WASHINGTON

March 19, 1995

Colonel James P. Fairall, Jr.
Commander
Letterkenny Army Depot
Chambersburg, Pennsylvania 17201-4150

Dear Colonel Fairall:

In accordance with the principles of the National Performance Review (NPR), I designate the Letterkenny Army Depot as a Reinvention Laboratory to develop labor management partnerships in a depot environment.

The purpose of the NPR is to create a Federal Government that "works better and costs less." The efforts you have outlined to regionalize public works to support Letterkenny, Carlisle Army Barracks, and Fort Indiantown Gap are a good example of the NPR concept of cutting back to basics through maximizing the potential of your empowered employees.

The Director of Management, as the HQDA proponent for the NPR, is prepared to provide you any necessary assistance. This designation should not, however, be construed as blanket waiver approval for those issues you have identified. Each waiver request must be prepared individually and should include the information detailed in the Delegation of Waiver Authority Message, DTG 092001Z AUG94. Additionally, a performance improvement plan with benchmark standards should be completed by May 1995.

The challenge you are undertaking is significant, but it has the potential for long-term payoffs not only within America's Army, but across the Department of Defense and throughout the Federal Government. I have asked the Director of Management, together with the Assistant Secretary of the Army for Installations, Logistics and Environment, to monitor your progress and I would like an update annually in order to provide feedback to the Vice President.

Sincerely,

Togo D. West, Jr.

DEPARTMENT OF THE ARMY
HEADQUARTERS, U. S. ARMY DEPOT SYSTEM COMMAND
CHAMBERSBURG, PENNSYLVANIA 17201-4170

REPLY TO
ATTENTION OF

AMSDS-LS-L

13 MAR 1995

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Tactical Missile Maintenance Consolidation at Letterkenny Army Depot (LEAD)

1. The Secretary of Defense recently forwarded the DoD Base Realignment and Closure 1995 (BRAC 95) recommendations to the BRAC Commission. The recommendations include the realignment of LEAD which would move the tactical missile maintenance consolidation mission to Tobyhanna Army Depot (TOAD), Tobyhanna, PA.

2. While the recommendations could be reviewed and even possibly altered by the BRAC 95 Commission before being sent to the President of the United States, the BRAC 93 still mandates the consolidation of tactical missile maintenance at LEAD and remains in effect until changed by the Congress. Final resolution is expected about October 1995.

3. In the interim, we must continue to execute the BRAC 93 missile maintenance consolidation at LEAD as planned. Contingency planning is ongoing to transition the tactical missile maintenance consolidation mission to TOAD if the DoD BRAC 95 Commission endorses the DoD recommendation and it subsequently becomes law in accordance with the BRAC 95 process.

4. Point of contact for this action is Mr. Billy Murphy, AMSDS-LS, DSN 570-8474 or commercial (717) 267-8474.

We continue to hold to our course!

Dennis L. Benchoff
DENNIS L. BENCHOFF
Major General, USA
Chairman, TMC-JSWG

DISTRIBUTION:
Chairman, JPCG-DM (Deputy Chief of Staff for Logistics), ATTN: AMCLG, 5001 Eisenhower Avenue, Alexandria, VA 22333-0001
Director, Supportability, Maintainability & Modernization Division, Office of Chief of Naval Operations, Code N43, 2000 Navy Pentagon, Washington, DC 20350-2000
Deputy Commander for Naval Shipyard & SUPSHIP, Management & Field Activity Support Directorate, Naval Sea Systems Command, Code SEA-07, 2531 Jefferson Davis Highway, Arlington, VA 22242-5160

OPTIONAL FORM 99 (7-90)

FAX TRANSMITTAL # of pages ▶ 6

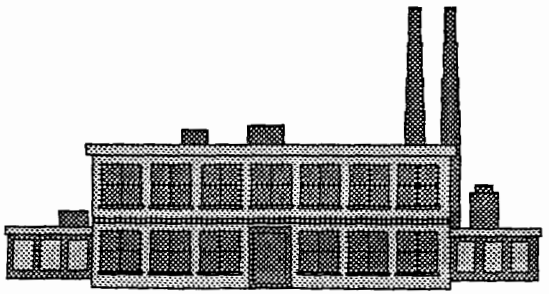
To Hallie	From Sharn D.
Dept./Agency	Phone #
Fax #	Fax #

NSN 7540-01-317-7368 5099-101 GENERAL SERVICES ADMINISTRATION

Vehicle Shops Division

MISSION

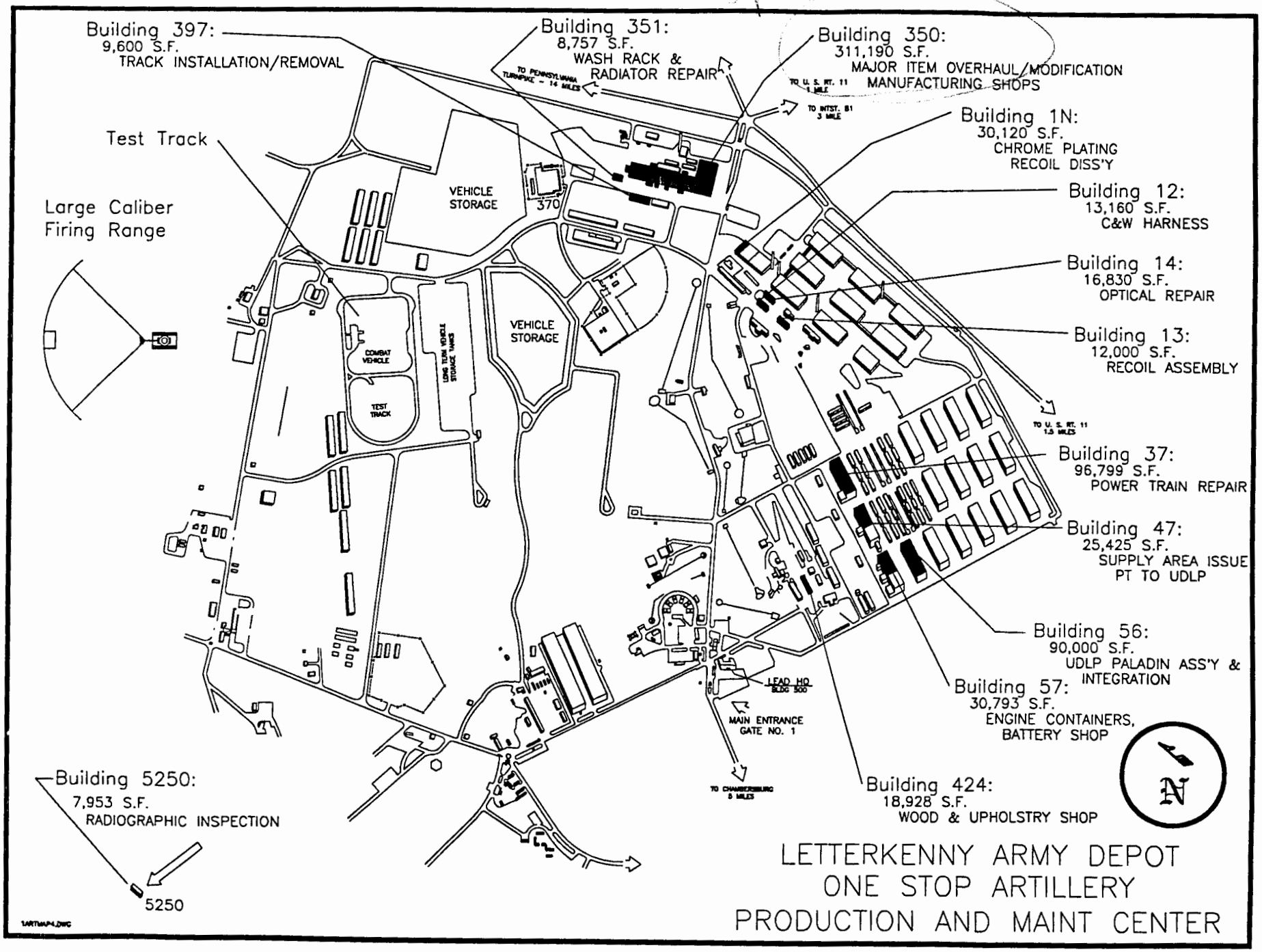
- OVERHAUL/REPAIR/MODIFY
  - Missile Ground Support Equipment and emerging systems
  - Other artillery systems
  - Other, i.e., engineer equipment/prototypes
- MANUFACTURE
  - Paladin chassis
  - Component parts for missile, Paladin, and other artillery systems



DEMOGRAPHICS

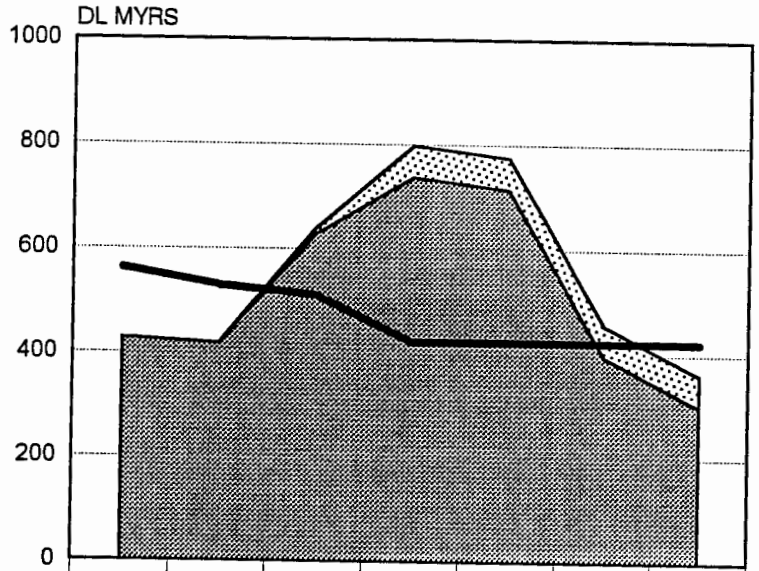
Personnel	640
Buildings	11
Specialized test facilities	3

1/2 mile square feet



Vehicle Shops Division

Planned New Orders Plus Additional Opportunities vs Direct On Board Strength



	FY93	FY94	FY95	FY96	FY97	FY98	FY99
ADDL MYRS			12	61	61	61	61
NOB DL MYRS	429	419	628	737	714	396	301
DIR OBS	563	530	512	423	423	423	423

FY93 - FY94 Actual
Prod Man-year Factor: 1615

Additional Workload Opportunities

- Refurbish and modify M109A2 SP howitzer turrets to Spanish configuration
- Modify Avenger S-250 GS/S-280 DS Maintenance Shelters
- Fabricate installation kits for Standardization Integrated Command Post System (SICPS)
- Modify M977 HEMTT truck chassis to Improved Common Bridge Transporter (ICBT)
- Overhaul M977 HEMTT trucks
- Test Bradley/MLRS vehicle for contractor

PROCESS SYNERGY

FASV
Fos-Amm
S

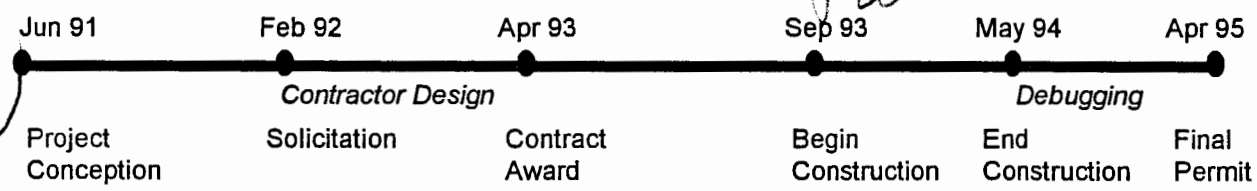
	ENGINE DIAGNOSTICS	TRANSMISSION TESTING	FIRING RANGE	RECOIL TESTING	SURFACE TREATMENT	RECOIL REWORK	SYSTEM TESTING AUTOMOTIVE	HYDRAULIC RECLAMATION	NON-DESTRUCTIVE TESTING	ABRASIVE CLEANING	WELDING	CLEAN ROOMS	OPTICS	CHROME PLATING	POWER GENERATION	FABRICATION/MANUFACTURING	HEAT TREATMENT
ARTILLERY SYSTEMS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
MISSILE SYSTEMS	X	X			X		X	X	X	X	X	X	X	X	X	X	X

VOC System

- Drive-thru booths
  - 22'W x 18'H x 60' L
  - 21'W x 16'H x 60' L
  - 2 bridge cranes with 3000 lb capacity per booth
- Carrousel painting
  - 470' of chain
  - Hooks spaced approx 2.5' with 100 lb capacity
- Pallet painting system with powered conveyor
- Particulate Filtering
  - 3 stage filter outside
  - Removes 99% of all particles larger than 1 micron (Red blood cell is approx 7 microns)
- Rotors
  - Rotating Zeolite wheels
  - 98% of VOCs absorbed
- Oxidizer
  - Bed temperature is 1800°F
  - Destroys over 98% of VOCs
- Overall system efficiency is 97%

VOC System - Continued

- Continuous inlet and outlet VOC monitoring
- Computer controlled allowing any combination of booths to operate
- Costs
  - Booths and emission control system - $6.2M
  - Projected annual operating costs - $212K



Paladin Enterprise Impacts

United Defense
FMC/BMY

$15M cost avoidance becomes expense

- Property Management Plan is void
- Government loses integration skills for howitzers
- Contract change for UDLP
  - Packaging/kitting/shipping of parts
  - MILSTRIP processes required
    - » Administrative burden
    - » Impact to schedules
    - » Increased warehousing of parts
    - » Kit handling
    - » Schedule slippages
- Program absorbs greater DLA cost
- Other costs
  - Maintain govn't testing facility
  - Install UDLP painting facility
    - » Construction cost
    - » Equipment cost
    - » Permitting
    - » Equipment maintenance/waste stream

BOTTOM LINE: Higher cost, lower quality, schedule slippages, model program of reinventing government destroyed

AMCOM

Competition

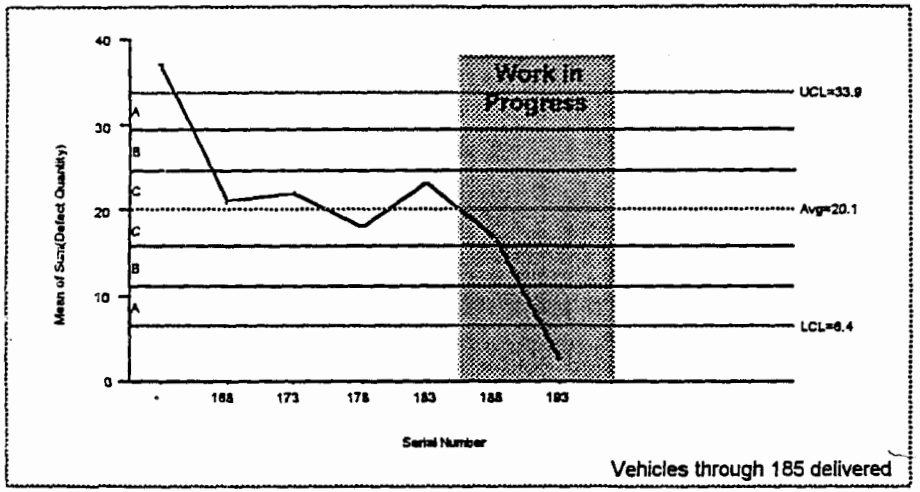
M12A1 Decontaminating Apparatus		**$953,053**
116	Overhaul	
91	Modify	
XTG 411-4 Transmission/Transfer Assemblies		**$1,716,974**
210	Overhaul & Modify	
XTG 411-4 Transmission/Transfer Assemblies		**$2,090,224**
260	Overhaul & Modify	
260	Option year	
M109A2 Self-Propelled Howitzer		**$3,283,461**
43	Support for private sector contract award Overhaul Cannon/Gun Mount/Powerpack Boresighting, Test Fire, & Technical Assistance	

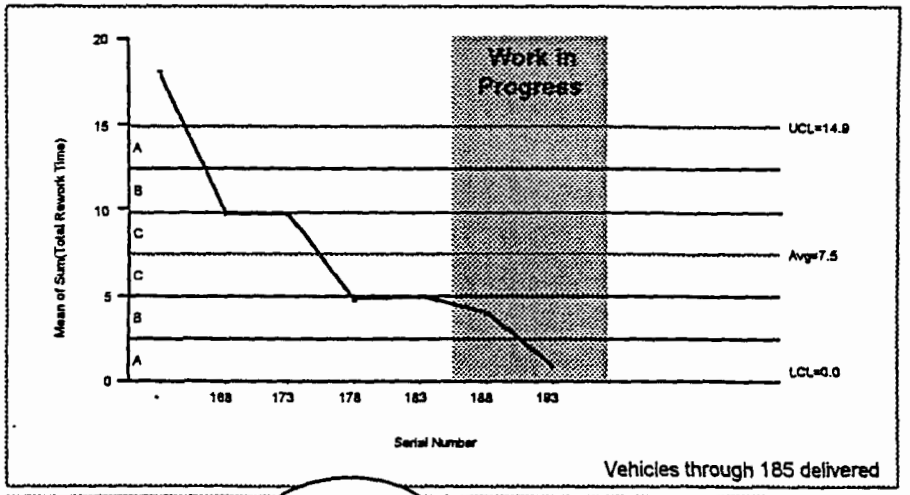
Lowest Fair
P. Hybarger

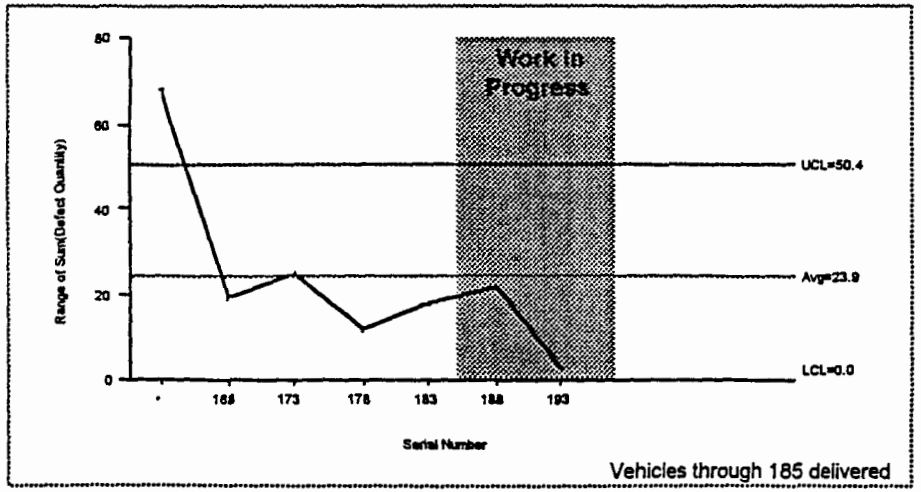
Paladin Enterprise

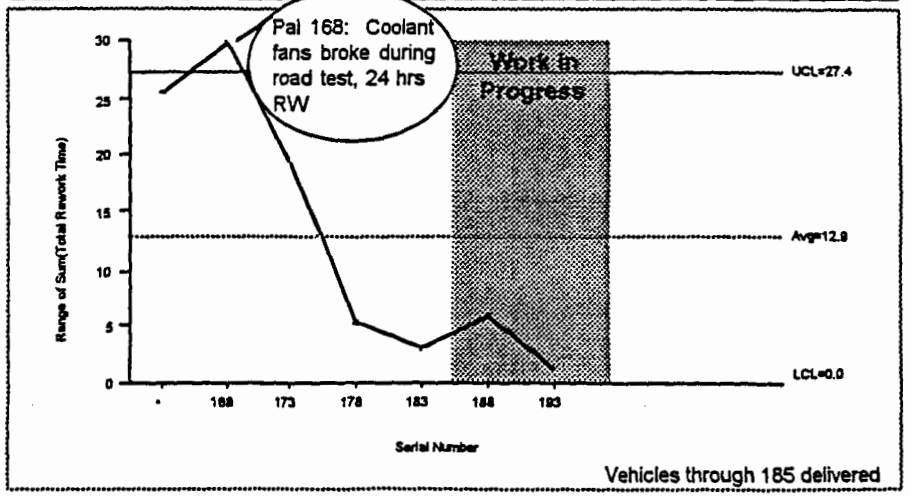
United Defense
FMC/BMY

FULL PRODUCTION by Serial Number









THE PALADIN ENTERPRISE SOLUTION

An Integration of Contractor New Production and Government Overhaul Activity at Letterkenny Army Depot to Modernize the M109 Howitzer

By LTC Charles A. Cartwright, Tom Carr and The Paladin Enterprise

Editorial Note: During the Paladin Full-Scale Production (FSP) program's source selection process (Nov. '92), FMC and HARSCO announced their intention to form a limited partnership of their Defense-related business units. In the early part of 1993, FMC became the managing partner (60 percent ownership) of United Defense, Limited Partnership. HARSCO's 40 percent was primarily composed of the BMY Combat Systems Division. The events discussed in this article span the period of transition, including the name change of the production contractor from FMC to United Defense. To avoid confusing the reader, we have continued to refer to FMC during the entire chronology; however, the proper name for Paladin's FSP contractor is currently United Defense, LP, Paladin Production Division (PPD), Chambersburg, PA.

Competitive Strategy

The Paladin Program is a consolidated package of product improvements to the M109A2/A3 self-propelled Howitzer. Downward budget adjustments and cost and schedule concerns mandated implementation of a competitive strategy for subsequent production activity. Several factors caused Paladin production to be perceived as unattractive to potential competitive bidders. The incumbent development contractor enjoyed an obvious, significant advantage in terms of program experience and technical understanding of the system. Additionally, evolutionary downsizing of the program from an initial production quantity of 1,700 to 824 units decreased the potential return on investment. The production strategy that emerged was dubbed "Producibility Evaluation Task" (PET). (See *Army RD&A Bulletin*, Jan-Feb 1994, "Paladin and PET.")

A market survey, in the form of an industry day, was held to familiarize industry with the Paladin Program and provide information on the PET effort. With PET, potential contractors could be paid to learn first-hand about the Paladin system, study the technical data package, and prepare a manufacturing plan and proposal for FSP. The program executive officer for Field Artillery Systems, procurement officials, and legal advisors supported the government's position for potential competitors to consider an innovative, streamlined approach to their FSP proposals. Letterkenny Army Depot (LEAD) officials encouraged innovative approaches by describing their organic production capability related to the self-propelled Howitzer.

The PET effort resulted in competitive FSP

proposals from three sources: the incumbent, BMY Combat Systems; FMC, Ground Systems Division; and General Dynamics, Land Systems Division. During PET, all sources discussed the use of government facilities with LEAD. These discussions, obviously competition sensitive, were carefully managed and scrupulously documented by LEAD officials. LEAD's intent was to be completely responsive and cooperative, while remaining passive to any suggestion of strategy or partnering concepts. Similar protective measures were implemented at the PMO. Some contractor requests to LEAD were declined due to the illegality of binding fixed price agreements and selling productive services directly to the contractors.

Best value source selection procedures and criteria were implemented through the FSP solicitation instructions and subsequent evaluation of the proposals. The FMC Ground Systems Division proposal was judged best value, and FMC was awarded the $334 million, multi-year, FSP contract. FMC's approach included creation of the Paladin Production Division (PPD), a collocated production facility at LEAD. PPD utilized the existing LEAD capability for chassis overhaul and conversion, armament testing, completed vehicle break-in, and performance testing. This strategy evolved from FMC's analysis of the business risks associated with the Paladin Production Program. They accurately perceived the value of a lower cost business environment and the benefits of avoiding duplication of the existing production infrastructure at LEAD. FMC planned to procure the new turret and then perform all system integration activity at LEAD facilities on a "rent-free" basis. Additionally, FMC planned to renovate and upgrade Building 56 (at their expense) and procure facilities' support services from LEAD (utilities, snow removal, rail service, etc.)

Benefits attributed to the Paladin Enterprise Strategy:

1. Delivery by LEAD of the first chassis to FMC-PPD two months early.
2. Delivery by FMC-PPD of the first completed Paladin System to the Government two months early.
3. Successfully completed all component first article testing prior to delivery of the first system to the Government.
4. $46 M in savings attributable to the competitive multi-year acquisition strategy.
5. $15 M in cost avoidance attributable tc process streamlining.
6. Risk reduction attributable to the integration of computer systems, shared information, and team management.
7. Consolidation of vehicle assembly and integration at one geographic location.
8. Higher product quality ensured by system-level performance tests.
9. The preservation of the production infrastructure strengths of both public and private sectors.
10. The promotion of shared learning and adoption of commercial best practices.
11. The resulting model of a successful Government-Industry cooperation and business partnership.

The Enterprise Solution

Soon after contract award, FMC hosted a three-day team building session for senior-level representatives from the primary organizations involved in Paladin FSP. A consensus vision evolved from that session: "Team Paladin will be a model of government/industry cooperation for an efficient industrial base, utilizing best practices from all sectors...". Mutual trust, open communication, and commitment to the ownership and continual improvement of the process were adopted as basic operating principles. Their charter stated, "This team management concept is based on recognition that program problems cross organizational boundaries, within and between government and industry, and that proactive cooperation is the key to program success... 'Arms length' connotes, not only the obligation of government and industry officials to look out for their respective interests, but also sufficient closeness to shake hands and work together to jointly solve problems."

Subsequent working sessions of the group coalesced into a true partnership environment as they mutually began to appreciate the scope of risk presented by the proposed new way of doing business. There was no precedent to follow and cultures had to change. Regulations and standards appeared to be insurmountable obstacles to the efficient inter-organization exchange of workload, materials, and information. Team Paladin concluded that achievement of their vision would require radical action. Dale Adams, PEO Field Artillery Systems, requested that PM Paladin and FMC executives "identify non-value added tasks, requirements, and procedures, etc." He suggested, "These things need to be removed to reduce cost," and further added: "Focus on dumb things to eliminate." The creation of an integrated partnership and operational system to manage and produce the required flow of information, materials and 660 Paladin systems was given the highest priority. Team Paladin conceived the "Enterprise Solution."

Steps to Achieving the Paladin Production Partnership:

1. Acquaint industry with Government's desire for innovative approaches.
2. Structure solicitations and source selection to achieve best value.
3. Actively disseminate information regarding Government production capability.
4. Implement management team building to achieve partnered leadership.
5. Use an integrated product team to achieve a new operational paradigm.
6. Document and train the entire enterprise on the new way of doing business.
7. Strive for continuous improvement.
8. Manage and evaluate performance on a single enterprise basis.

Implementation of the FMC proposal required significant change to the typical way government does business with a production contractor. Integration of the FMC-LEAD production operation complicated traditional oversight activity. Implementation of the proposed manufacturing strategy required streamlining and defining the organizational interactions required to produce an efficient flow of information and material.

The complexity of multi-organizational interaction was compounded by government regulations for property accountability, quarterly funding authorization for overhaul work at LEAD, and repair parts shortages that were incompatible with an integrated production partnership. The organizational interdependencies demanded efficiency and communication linkage typical of an integrated *enterprise.*

Team Paladin executives established the Paladin On-Site Integration Team (POINT) to address structuring the organizational interfaces to achieve FSP. This integrated product team was composed of operational managers from each organization of the partnership. Each manager had both intimate technical knowledge of his respective organization's contribution to the production enterprise and decision-making responsibility to commit to streamlined procedures. POINT

Paladin's innovative business practices have demonstrated the transition of modern theory into profitable practice.

was given top-level management commitment and resources to achieve top-down reform. The team was challenged to develop and accept a new paradigm for Paladin production that described the "should-be" way of doing business for the enterprise.

POINT used the Integrated Definition (IDEF) modeling technique to develop and document a structure for the "should-be" way of doing business. Each major activity of the production process was analyzed to describe its controls, resources, input and output. The IDEF modeling analysis produced a series of process maps that documented the Paladin FSP manufacturing strategy comprehensively.

The Paladin "should-be" process required the government to consider FMC as a set of work stations within LEAD's maintenance activity. (Building 56 is located within the confines of LEAD.) Under this scenario, it is neither necessary, nor cost effective, to process material transfers within the LEAD maintenance activity through utilization of the MILSTRIP/DLA process. Therefore, material transfers are processed using a new unified LEAD/FMC process. The new process provides a "real-time" validation of material movement through electronic tracking, and provides timely materials to—and from—FMC-LEAD to fill their respective production line requirements. Control of materials using FMC's Manufacturing Resource Planning (MRP) II system interlinked with LEAD's Programmed Depot Maintenance Scheduling System and the Standard Depot System is far more rigorous than the government property accounting procedures. Parts inventory, tracking, and control are supplemented by routine Defense Contract Management Area Operations (DCMAO) on-site audits. The intent of the new process is to allow LEAD/FMC "real-time" accountability procedures in lieu of more cumbersome, less accurate government procedures designed for depot maintenance activity—not volume production.

The POINT representatives reached numerous operational agreements that resolved much of the uncharted path to Paladin manufacturing strategy implementation. POINT commissioned the preparation of a "Paladin Enterprise Property Management Plan" to document the material flow, procedures, and agreements reached during the "should-be" process development. This document describes the policies and procedures necessary to account for parts and materials during the production process, and to control Contractor Furnished Material to LEAD and Government Furnished Material to FMC. It describes the production process flow and defines roles and responsibilities for all organizations involved. Management information flow and control interfaces are coordinated and efficient. The plan serves as the substitute for existing government accountability regulations that are not designed to support the efficient operation of an integrated production enterprise (such as the collocation of FMC and LEAD).

Organizational interdependencies are inherent to the enterprise partnership. PM Paladin has summarized the agreements that support the enterprise operation in a Memorandum of Understanding (MOU) that supplements the FMC contract and provides formal cohesion among the five Paladin partners: FMC, PM Paladin, LEAD, DCMAO, and Defense Logistics Agency (DLA) at LEAD. Management Plan and the Enterprise MOU provide the implementation mechanism for the "Paladin Enterprise Solution."

The Paladin Enterprise experience has highlighted some obstacles to the achievement of full partnership:

1. The culture change is difficult to achieve:
   - The traditional view of separate Government and commercial industrial bases, in competition with each other, is hard to change.
   - The traditional focus on winning business without consideration of overall long-term efficiency is well ingrained.
   - The pressure to preserve status-quo involving policy, regulation, procedure, bureaucracy, public jobs, and entitlements is strong.
   - The traditional perception that creating new infrastructure and abandoning old is the ideal strategy precludes optimum utilization of shared complementary industrial strengths.
2. The Arsenal Act and Federal Acquisition Regulations prevent/discourage formal teaming of industry and Government production organizations.
3. There is a need to protect competition sensitive information.
4. There are incompatibilities between current Government and Industry automated information systems and data networks.
5. There are difficulties in establishing common objectives and leadership for a true partnership.
6. There are difficulties in establishing and institutionalizing an integrated corporate vision.
7. It is illegal for the depot to quote binding fixed prices.
8. There is geographic dispersion of the "team".
9. There is the inability of the Government Supply System to adequately support timely delivery of common usage parts.
10. The Standard Depot System is insufficiently flexible to be tailored to the information processing and operational planning needs of a discrete production enterprise such as Paladin.

The temptation and convenience of "doing business as usual" had to be overcome. The organizational, cultural, and regulatory constraints were serious impediments. The team approach and the modeling process used to develop this enterprise were catalysts for identifying constraints, reaching agreement to solve the problems, and developing an implementation plan. Both contractor and government have committed significant resources to create the physical and managerial infrastructure that constitutes the Paladin Production Enterprise.

Initially, significant benefit was derived from the integrated product team approach and the modeling process used to establish the enterprise operational structure/strategy/procedures. This initial operational understanding was perpetuated by communicating to the entire production organization through extensive training based on the Paladin Enterprise Property Management Plan. Additionally, the Paladin Enterprise has implemented a joint LEAD/FMC Quarterly Management Review (QMR) where all presentations and progress reporting are done together with a consolidated audience. A comprehensive program risk and customer satisfaction survey is given to each QMR attendee to assess how the Enterprise (and each partner) is performing. This feedback is very important.

Development of the new paradigm for a contractor-government partnership caused introspection on how, and why, we do business the way we do. Paladin's vision was to create a "should be" process that streamlined production flow and the interaction of government agencies with each other *and* the contractor. The Paladin Enterprise Solution was born.

Benefits

Paladin has demonstrated the result is worth the effort. Major benefits resulting from the "Enterprise Solution" are:

• *Streamlined and defined organizational roles and responsibilities.* Collocation and teaming have reduced finger pointing and delays dealing with program issues. Daily contact between partners has alleviated unfounded suspicion and general mistrust between the public and private sectors. Non-value-added participation and transactions were eliminated. Organizational interfaces are now transparent with inter-linked electronic communication and data availability. The risk from inappropriate or late deliveries or non-performance has been reduced greatly.

• *The development and implementation of alternatives to conflicting government regulations.* The best practices of commercial industry have been established using MRP II techniques for tracking and control of materials, in-process activity, and finished product. Cumbersome, less accurate government accountability and transfer transactions have been replaced. The linkage of planning, scheduling, and tracking information systems between FMC and LEAD, with data access available to DCMAO, PM Paladin, and the U.S. Army Armament, Munitions and Chemical Command (AMCCOM)—now the U.S. Army Industrial Operations Command (Prov), provides real-time inventory control and project management.

• *Streamlined parts and material flow to the production lines.* The just-in-time flow of materials and parts—made possible by the MRP II capability—allows for an assembly-line facility configuration to replace LEAD's station/bay build configuration used during limited production. The assembly line provides efficiency and a rate capability to match FSP requirements.

• *Process flow improvements that reduce cost, enhance quality, and reduce schedule risk.* The collocation has encouraged the acceptance of best commercial business practices at LEAD. The production process flow is no longer dictated nor impeded by formal property accountability regulations that require a multitude of material transfer transactions. New materials, reclaimed parts, and product flow freely between FMC and LEAD. Division of work has been adjusted, resulting in more timely and reliable testing, less mileage incurred during break-in and final test, optimum utilization of production facilities (painting, test track, etc.) less "sit-time" from production inactivity, and reduced delivery schedule risk. Redundant government-contractor activities have been eliminated.

• *Improved repair parts availability.* The OMA-funded portion of the program, M109A2/A3 chassis and component overhaul, was at considerable risk because common repair parts were unavailable from the supply system. Availability of these parts is affected by funding, timely procurement action, and vendor performance. The impact of these constraints has been reduced significantly by securing authorization to fund parts procurement for overhaul activity annually at LEAD. The annual funding replaces a quarterly authorization cycle mandated previously at the depot. Annual funding permits LEAD to provide DLA with fully-funded one-year parts requisitions. This has reduced the risk of parts shortages substantially by providing DLA the lead-time to contract for—and preposition—production repair parts to satisfy LEAD's requisitions.

• *Cost reduction opportunities introduced to LEAD.* Placement of the Paladin workload at LEAD is critical to resourcing and preserving the depot work force and critical maintenance skills. Some of LEAD's underutilized capacity (i.e. Building 56) received $3.4 million in improvements at no cost to the government. The direct delivery of government-furnished parts to FMC lowers schedule risk and avoids LEAD costs associated with packaging, preservation, transportation, etc. FMC is paying a prorated share of the overall installation base operating cost. FMC is sharing corporate knowledge gained from extensive experience with other successful high-rate production programs (e.g., the Bradley Fighting Vehicle) with LEAD. FMC production and management techniques (such as MRP II, assembly line set-ups, and "just-in-time" inventory management) used for Paladin are applicable to other programs at LEAD. Paladin's innovative business practices have demonstrated the transition of modern theory into profitable practice. The modern manufacturing experience is a valuable by-product of this partnership that enhances LEAD's competitiveness for future programs.

THE PALADIN PRODUCTION ENTERPRISE IS A WIN-WIN STRATEGY FOR BOTH THE CONTRACTOR AND THE GOVERNMENT.

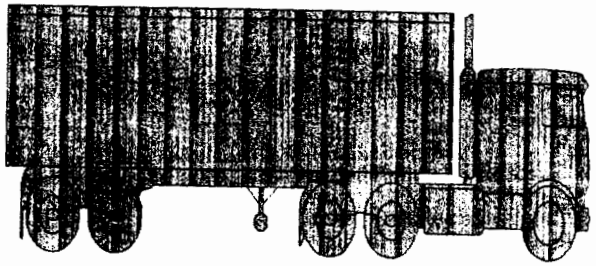
The Paladin Enterprise represents the team effort of many organizations. For more information, contact LTC Cartwright at (201)724-2572; Jerry Nitterhouse, chief, Production Engineering Division, Letterkenny Army Depot, at (717)267-9077; or Peter Scott, general manager, United Defense, L.P., Paladin Production Division, at (717)261-5903.

LTC CHARLES A. CARTWRIGHT is the product manager for Paladin/Field Artillery Ammunition Support Vehicle (FAASV) in the Program Executive Office for Field Artillery Systems. He holds a B.S. degree from Florida Southern College and an M.S. degree in contracting management from the Florida Institute of Technology.

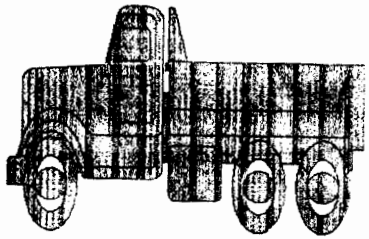
TOM CARR is a consultant for the Camber Corporation who specializes in support of product development programs. He has provided the Paladin Program with production analysis, strategy and planning since 1985. He has a B.S. degree in electrical engineering and has performed graduate study in project management and behavioral science.

Staff Visit 23 March 95

DEFENSE DISTRIBUTION DEPOT
LETTERKENNY, PENNSYLVANIA (DDLP)



1,222,332 sq ft blacktop - 28 acres
30 366 landing mat
2,954,283 crushed stone



35 Staff
Indiana
5 Mar 95
Bosnia Fms MRO
12,000 MRO

"C LESLIE G. CARLOW
COMMANDER

DDLP MISSION

PLAN, DIRECT, ASSEMBLE, AND MANAGE
PHYSICAL PARTICIPATION IN POLITICS

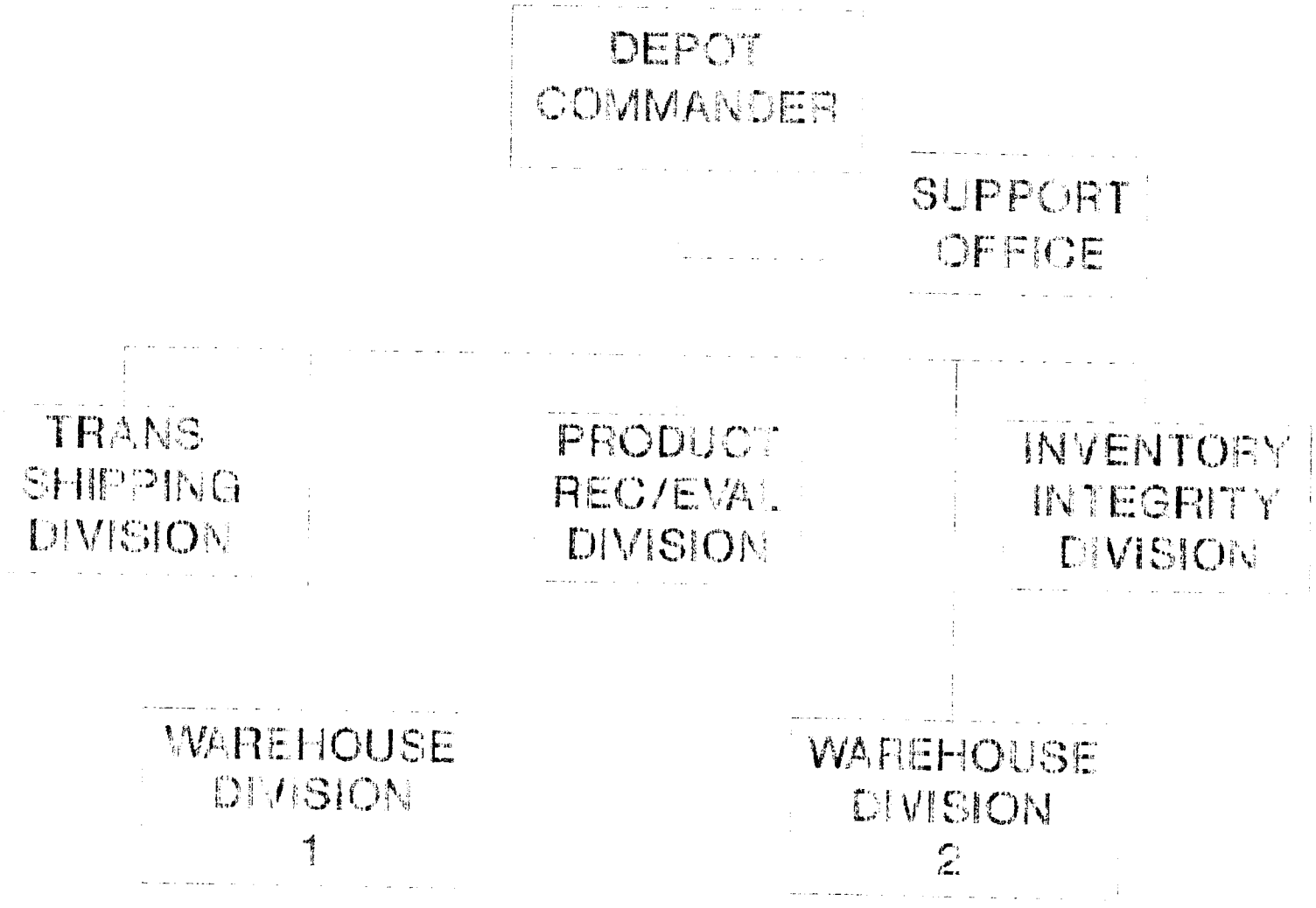
DEFENSE DISTRIBUTION DEPOT LETTERKENNY FUNCTIONS

* RECEIVE
* STORE
* ISSUE
* PRESERVATION/PACKAGE
* TOTAL PACKAGE FIELDING Patriot
* SUPPLY SUPPORT TO MAINTENANCE
* SET ASSEMBLY
* INVENTORY
* REPAIR & RETURN
* TRANSPORTATION

Ballistic missile headquarters USS Nat Guard

Patriot Pac Packers

DEFENSE DISTRIBUTION DEPOT LETTERKENNY



DEFENSE DISTRIBUTION DEPOT LETTERKENNY
MATERIAL/RESOURCES

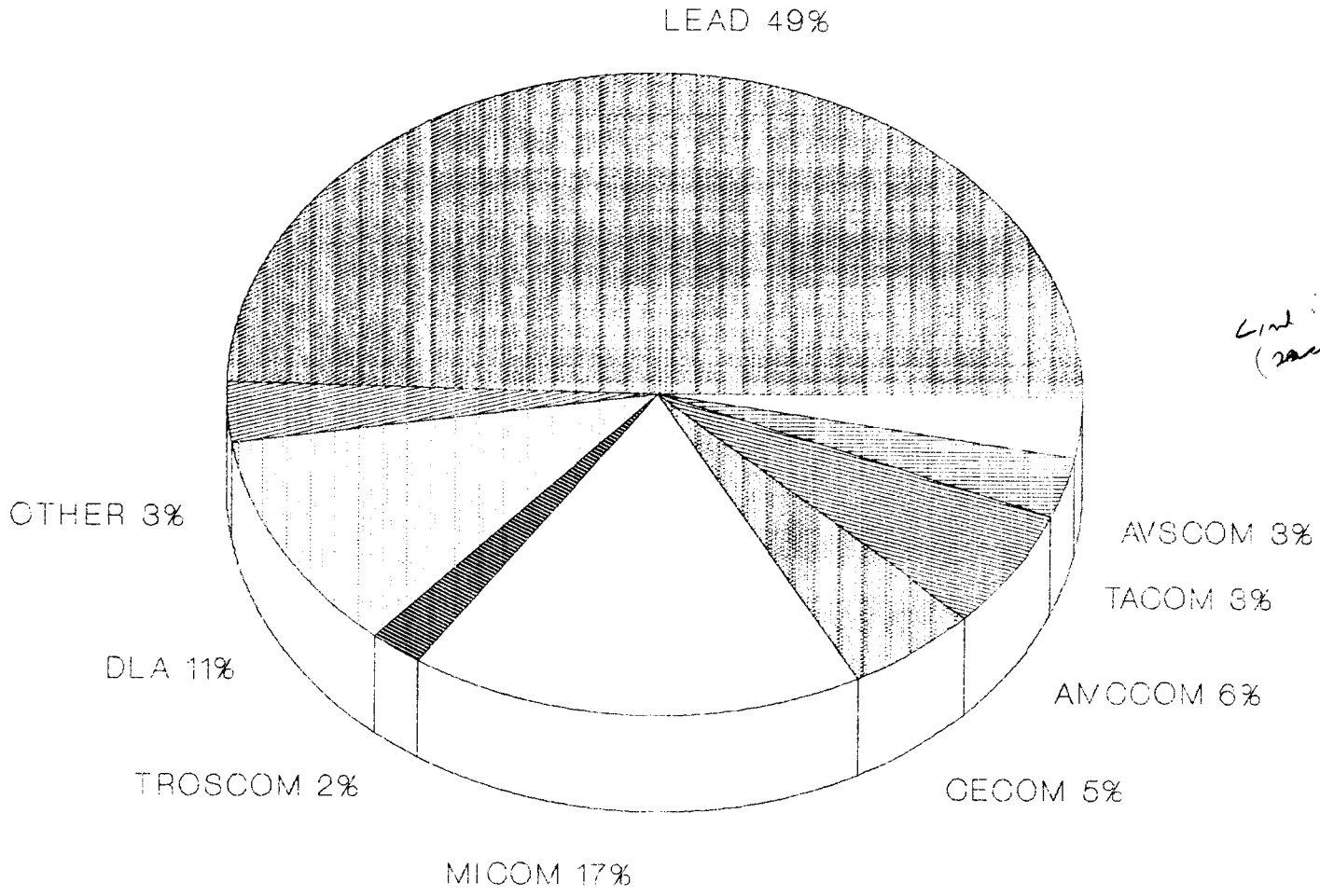
* INVENTORY
  - 84,718 TOTAL LINE ITEMS
  - $4.1 BILLION
* COVERED STORAGE OCCUPANCY
  - 29 WAREHOUSES (2,290,627 GROSS SQ.FT.)
  - 60 SHELTERS/SHEDS (1,149,022 GROSS SQ.FT.)
* OPEN STORAGE
  - 20 OPEN AREAS (4,206,981 GROSS SQ.FT.)
* SPECIAL STORAGE AREAS
  - CLASSIFIED STORAGE (99,720 GROSS SQ. FT.)
  - WEAPONS STORAGE (31,360 GROSS SQ. FT.)
  - HAZARDOUS STORAGE (65,139 GROSS SQ. FT.)
  - TANK FARM (156 TANKS) (341,760 GROSS SQ.FT.)
* 449 PERSONNEL

AS OF 28 FEB 95

DEFENSE DISTRIBUTION DEPOT LETTERKENNY
UNIQUE MISSIONS

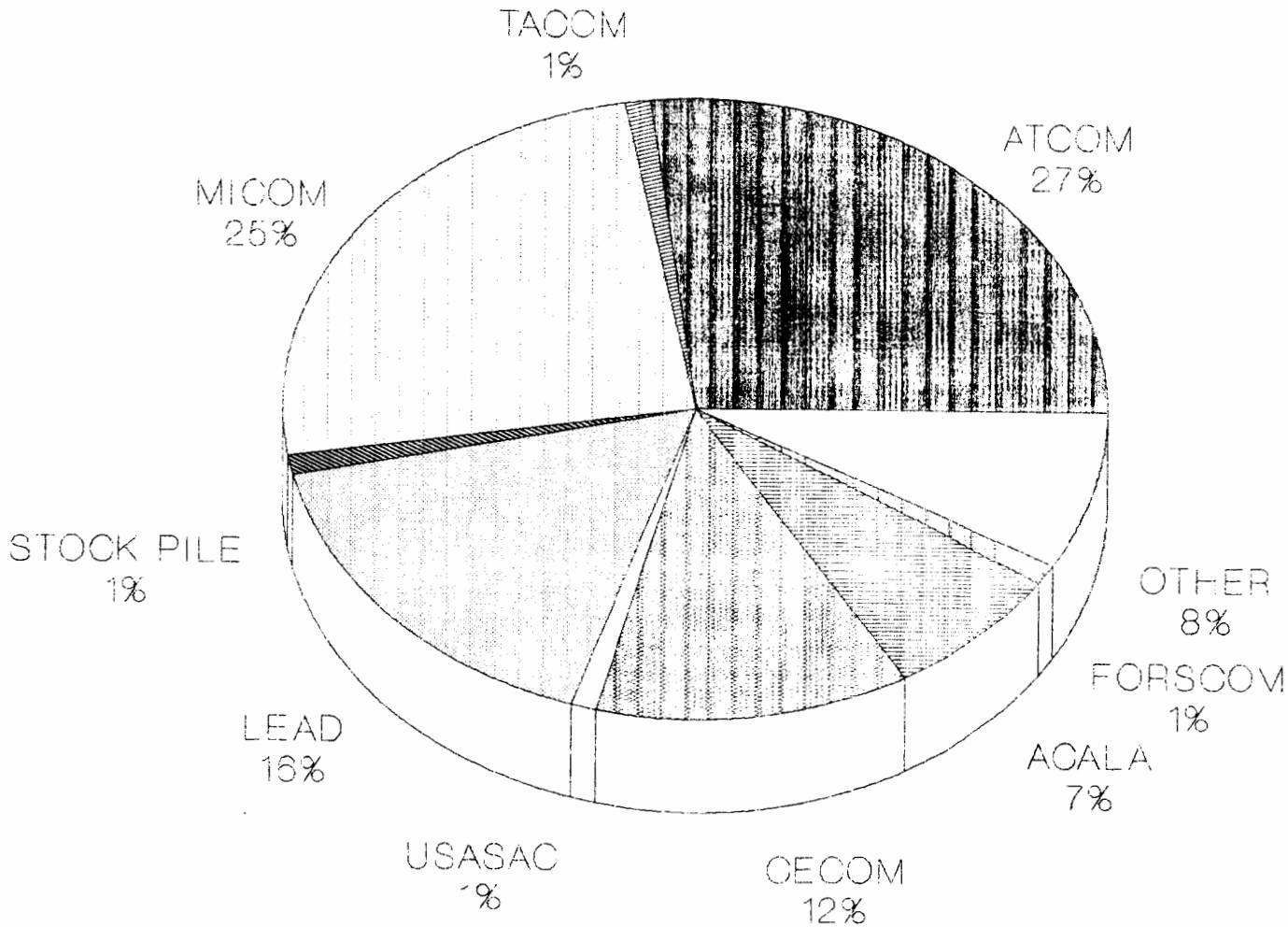
- PALADIN
- FOREIGN MILITARY SALES
- SET ASSEMBLY
- PATRIOT/HAWK/AVENGER FIELDINGS
- ACCOMODATE PAST BRAC DECISIONS
- TACTICAL MISSILE CONSOLIDATION

DEFENSE DISTRIBUTION DEPOT LETTERKENNY
MATERIEL CUSTOMERS



THRU FEB FY 95, FIGURES ARE FROM SDS

DEFENSE DISTRIBUTION DEPOT LETTERKENNY
FY 94 REIMBURSABLE CUSTOMERS



DEFENSE DISTRIBUTION DEPOT LETTERKENNY
PERFORMANCE

EXCEEDING ALL PERFORMANCE GOALS:

FASTER,

BETTER,

CHEAPER

DEFENSE DISTRIBUTION DEPOT LETTERKENNY
MILITARY VALUE ANALYSIS

DEPOT	VALUE
1. DD__	---
2. DD__	---
3. DDLP	645
4. DD__	---
5. DD__	---
6. DD__	---
7. DD__	---
8. DD__	---
9. DD__	---
10. DD__	---
11. DD__	---
12. DD__	---
13. DD__	---
14. DD__	---
15. DD__	---
16. DD__	---
17. DD__	---

DDLP WAS EVALUATED WITH THE OTHER 17 DLA COLLOCATED DEPOTS.
TOTAL AVAILABLE POINTS WERE 1000.

DEFENSE DISTRIBUTION DEPOT LETTERKENNY

BOTTOM LINE

* DDLP RESOURCES AND PERFORMANCE HIGHLY VALUED

* COLLOCATED DEPOTS EXIST PRIMARILY TO SUPPORT MAINTENANCE

IF LEAD GOES DDLP GOES

(362 → Transfer

DEFENSE REUTILIZATION AND MARKETING OFFICE
LETTERKENNY

MISSION STATEMENT

PROVIDE FULL DISPOSAL SUPPORT FOR HAZARDOUS AND NON HAZARDOUS EXCESS AND SURPLUS PROPERTY AND ADMINISTER ENVIRONMENTAL DISPOSAL CONTRACTS FOR ALL DOD ACTIVITIES IN SOUTH CENTRAL AND WESTERN PA, CENTRAL AND WESTERN MARYLAND, AND EASTERN AND NORTHERN WEST VIRGINIA.

- DISTRIBUTION CENTER FOR PRECIOUS METAL RECOVERY EQUIPMENT AND SUPPLIES FOR MILITARY INSTALLATIONS EAST OF MISSISSIPPI AND EUROPE. OPERATES REGIONAL PRECIOUS METAL DEFINITION AND PROCESSING CENTER.
- FY 94: RECEIVED AND PROCESSED APPROXIMATELY 88,000 LINES WITH A TOTAL ACQUISITION COST OF $473,763,124.
- COVERED STORAGE: 114,300 SQ. FT.
- OPEN STORAGE: 35 ACRES / 1,456,560 SQ. FT.
- 35 PERSONNEL

10,000 vehicles
other pieces of equipment
808 contractor [illegible]

DRAFT OF A
PROPOSED AUDIT REPORT

STATUS OF THE EFFORT TO CONSOLIDATE TACTICAL MISSILE MAINTENANCE AT LETTERKENNY ARMY DEPOT

Project No. 5LB-5013 **February 23, 1995**

This proposed audit report is being issued to management for review. The report may be revised as a result of comments received and further reviews by the Office of the Inspector General, DoD.

Distribution of this proposed audit report outside of the Department of Defense is not authorized. Safeguards must be taken to prevent publication or improper disclosure of the information contained in the report.

PREPARED BY THE

OFFICE OF THE INSPECTOR GENERAL
DEPARTMENT OF DEFENSE

DRAFT

Acronyms

BRAC	Base Realignment and Closure
LEAD	Letterkenny Army Depot
TMC-JSWG	Tactical Missile Consolidation Joint Service Working Group
TOW	Tube Launched, Optically Sighted, Wire Guided
HARM	High Speed Anti-Radiation Missile

INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
400 ARMY NAVY DRIVE
ARLINGTON, VIRGINIA 22202-2884

February 23, 1995

MEMORANDUM FOR UNDER SECRETARY OF DEFENSE FOR ACQUISITION AND TECHNOLOGY
COMMANDER, U.S. ARMY INDUSTRIAL OPERATIONS COMMAND (PROVISIONAL)
COMMANDER, LETTERKENNY ARMY DEPOT

SUBJECT: Audit of the Status of the Effort to Consolidate Tactical Missile Maintenance at Letterkenny Army Depot (Project No. 5LB-5013)

Introduction

We are providing this draft report for your review. This audit was performed in response to a request from Congressman James V. Hansen regarding the status of the 1993 Defense Base Closure and Realignment Commission (the 1993 Commission) recommendation to consolidate all tactical missile maintenance at Letterkenny Army Depot (LEAD), Chambersburg, Pennsylvania. In response to the recommendations of the 1993 Commission, the Services established a Tactical Missile Consolidation Joint Service Working Group (TMC-JSWG) and developed a time phased implementation plan to consolidate Army, Navy, Air Force, and Marine Corps tactical missile maintenance at LEAD. The consolidation is planned to be accomplished from FYs 1994 through 1998 at an estimated nonrecurring cost of about $44.1 million (see Enclosure 1). We concentrated our efforts in the Army, because the Army portion, funded by the Base Realignment and Closure (BRAC) Account, was $35 million.

Audit Results

21 systems 5 mod duplicated by Navy

The transition of tactical missile maintenance to LEAD and related military construction are generally proceeding within budget and on schedule. During FY 1994 and through the First Quarter of FY 1995, the Army obligated about $23.8 million, or 68 percent of the estimated $35 million for the consolidation effort (see Enclosure 2). As of January 31, 1995, 13 of the 36 missile system maintenance work loads identified for transition to LEAD were in place (8 of which have completed first-article testing with the owning Service having certified LEAD as the source of repair). An additional 13 missile system work loads are scheduled for transition from FYs 1995 through 1998. For the remaining 10 missile work loads, transition plans have not yet been developed to transfer 5 missile system work loads However, as directed by the Deputy Under Secretary of Defense for Logistics, the owning Service must transition this work load to LEAD or provide justification for not doing so. Work load on

the other 5 systems is currently not planned for transfer to LEAD, either because the missile system will soon be retired from active inventory or the projected work load is too small to warrant transitioning to LEAD. See Enclosure 3 for a detailed listing of the status of each missile system work load. The TMC-JSWG has begun action to obtain information on the organic maintenance requirements of emerging systems (those systems in the acquisition cycle and not yet fielded) so that when they are fielded LEAD will be capable of performing the required depot maintenance.

Objectives

Our objective was limited to evaluating the status of the consolidation effort from the standpoint of what had been accomplished, the cost, and what remains to be done to totally accomplish the consolidation. We also evaluated implementation of the internal control program established by the TMC-JSWG as it related to the audit objectives.

Scope and Methodology

We evaluated records and correspondence covering the period January 1992 through January 1995 relating to the consolidation of tactical missile maintenance at LEAD. Our review concentrated on the costs associated with the Army, which accounted for about 80 percent of the estimated $44.1 million of BRAC costs to consolidate tactical missile maintenance at LEAD. We reviewed transition plans and schedules, cost data, and FYs 1994 and 1995 BRAC funding authorizations, obligations, and expenditures. We did not attest to the reliability of the computer-processed BRAC financial data maintained by the Army with regard to obligations and disbursements, but we did verify the BRAC authorizations for FYs 1994 and 1995. We did not use statistical sampling procedures for this audit.

We also held discussions with representatives of the Depot System Command and LEAD. The Depot System Command is in the process of combining with the U.S. Army Armament, Munitions and Chemical Command to form the U.S. Army Industrial Operations Command (Provisional).

This economy and efficiency audit was made from November 1994 through January 1995 in accordance with auditing standards issued by the Comptroller General of the United States as implemented by the Inspector General, DoD. Accordingly, the audit included tests of internal controls as considered necessary. The organizations visited or contacted during the audit are in Enclosure 4.

Internal Controls

We evaluated the effectiveness of the internal controls that were applicable to the consolidation of tactical missile maintenance at LEAD. Those controls are principally the procedures defined in the "Tactical Missile Maintenance Consolidation at Letterkenny Army Depot Implementation Plan," May 6, 1994. The implementation plan establishes the policy, responsibilities, and procedures to be followed to accomplish the consolidation of tactical missile maintenance at LEAD. Our evaluation included reviews of programmatic controls and included interviews, analyses of data, and an examination of records. No material internal control weaknesses were identified as defined by DoD Directive 5010.38, "DoD Internal Management Control Program," April 14, 1987. Because of the time-sensitivity of the report, the internal management control program for LEAD was not evaluated.

Prior Audit Coverage

There has been no prior audit coverage on the status of the implementation of the 1993 Commission recommendation to consolidate tactical missile maintenance at LEAD.

Background

The 1993 Commission recommended that action be taken to implement a plan developed in January 1992 that would consolidate and relocate tactical missile maintenance being performed at DoD depots and contractor facilities to LEAD. In addition to the systems identified in the January 1992 plan, the 1993 Commission recommended that maintenance on the HAWK ground control system being performed at the Marine Corps Logistics Base, Barstow, California, be transferred to LEAD. The 1993 Commission concluded that the consolidation of tactical missile maintenance at LEAD would create efficiencies and reduce costs.

The TMC-JSWG, chartered February 1, 1994, developed a plan to implement the consolidation of tactical missile maintenance at LEAD. The plan identified 36 missile system work loads as candidates for transition to LEAD. In April 1994, the Deputy Under Secretary of Defense for Logistics issued a memorandum directing that all missile systems identified by the 1993 Commission be transferred to LEAD, including those systems maintained by contractor support. A Service choosing not to transition the maintenance work load of an affected system to LEAD must notify the Deputy Under Secretary of Defense for Logistics and provide justification for not doing so.

Discussion

The Office of the Inspector General, DoD, received a letter dated October 11, 1994, from Congressman Hansen, requesting that we review the status of the consolidation of tactical missile maintenance at LEAD to determine what has been expended to date, what steps are remaining, and whether it would be prudent and cost-effective to postpone further effort on the consolidation pending the recommendations of the 1995 Commission. We mainly examined costs for the Army, which accounted for about 80 percent of the estimated cost of the consolidation effort, including more than $5 million for renovations of existing LEAD facilities. The remaining 20 percent of the cost was primarily for the other Services to tear down, pack, and crate maintenance equipment for transfer to LEAD.

The military construction and the consolidation of tactical missile maintenance at LEAD is generally proceeding within budget. As of December 31, 1994, the Army's nonrecurring costs for the consolidation at LEAD were estimated at $35 million and the nonrecurring costs to the other Services at $9.1 million, for a total of $44.1 million in BRAC funding to complete the consolidation effort. During FY 1994 and First Quarter FY 1995 about $23.8 million (68 percent of the Army's estimated nonrecurring cost) was obligated toward the consolidation effort. By the end of FY 1995, more than $40 million of the $44.1 million total is planned to be obligated (see Enclosure 1).

Military Construction. Military construction in process is generally on schedule. Three contracts, valued at $5 million, were awarded during FY 1994, and a fourth contract is planned for award in June 1995. The U.S. Army Corps of Engineers is responsible for awarding and administering the construction contracts. The status and scope of the work for the four renovation efforts follows.

Contract DACA31-94-C-0096. This contract was awarded on June 8, 1994, at a cost of $1 million and was originally scheduled for completion on January 18, 1995. The contract, according to the U.S. Army Corps of Engineers, is 80 percent complete as of January 31, 1995, and is scheduled for completion on March 25, 1995. About $752,000 has been paid to the contractor. The contract was awarded to modify building no. 370, an electronics maintenance shop. The scope of work included constructing backroom enclosures and installing air conditioning, heating, and ventilation; duct work; electrical power; fire protection; lighting; plumbing; and a 5,400-square foot mezzanine to increase floor space to accommodate maintenance work on the Navy and Air Force Sidewinder missiles. The contract also provided for removing, testing, and disposing of potentially contaminated soil.

Contract DACA31-94-C-0128. This contract also provided for modifications to building no. 370. The contract was awarded at $1.9 million on August 19, 1994, and had an estimated completion date of June 16, 1995. As of January 31, 1995, the contract was 19 percent complete and is scheduled to be completed on June 29, 1995. The contract was awarded to install air conditioning, heating, and ventilation; duct work; ceilings; doors; drywalls; electrical power; an elevator; fire protection; lighting; plumbing; and restrooms; and to construct a 10,500-square foot large mezzanine to support maintenance work on the Dragon, HAWK, Maverick, and Patriot missile systems. The contract also provided for removing, testing, and disposing of potentially contaminated soil.

Contract DACA31-94-C-0131. This contract was for renovations to building no. 12, a general maintenance shop, and building no. 426, a box and crate shop. The contract was awarded at about $2 million on August 26, 1994, and is 60 percent complete as of January 31, 1995. The contract, originally scheduled for completion on January 15, 1995, is scheduled to be completed on April 4, 1995. The contract's scope of work was to install air conditioning, heating, and ventilation; duct work; drywalls; electrical power; fire protection; insulation; lighting; masonry walls; restrooms; and a vestibule. The contract also required the floors to be coated and sealed.

Planned Contract. A contract is planned to be awarded by June 16, 1995, for renovations to building no. 11, a general maintenance shop. With an estimated completion date of April 27, 1996, the contract will provide for environmental and power upgrades to the building, which will support the maintenance work load of the Dragon, Land Combat Support System, Shillelagh, Standard, and emerging systems.

Missile System Transitions. Transition of missile system work load to LEAD is generally being accomplished in accordance with the schedule in the implementation plan. Additionally, the TMC-JSWG has begun logistics planning on emerging systems.

Active Missile Systems. The implementation plan identified 36 missle maintenance workloads systems as candidates for transition to LEAD. As of January 1995, the facilities; personnel; and testing, diagnostic, and maintenance equipment for 13 of the 36 system work loads are in place at LEAD. Eight of those missile system work loads have completed first-article testing and LEAD has been certified by the owning Service as the source of repair and is now performing that depot maintenance. Four missle system work loads are scheduled for transition during FY 1995, six in FY 1996, and three during FY 1998. Transition plans have not been developed to transfer the contractor maintenance work load for five systems. The work load on the remaining five systems is not planned for transition to LEAD, either because the system is scheduled to be retired from the active inventory or the projected work load is

too small to warrant transition. The TMC-JSWG will reevaluate those systems to decide whether the workload projections have changed and whether the transfer of the maintenance work load to LEAD would be prudent. Enclosure 3 lists the consolidation status of tactical missile system workloads identified for transition.

Emerging Systems. The TMC-JSWG has begun to facilitate LEAD becoming the certified source of repair for depot maintenance on emerging systems. In November 1994, the TMC-JSWG sent a memorandum to the Commander, Marine Corps Systems Command; the Program Executive Office, Theater Air Defense; Headquarters, Air Force Materiel Command; and the Commander, Naval Ordnance Center. The memorandum requested that LEAD and the Depot System Command be kept informed on all emerging systems, to include the points of contact for each system, the first unit equipment date, the depot capability for each system, and the current acquisition phase. The TMC-JSWG also requested that a representative from LEAD and the Depot Systems Command be added to each emerging system's Integrated Logistics Support Management Team and to the distribution lists for all program management documents and meetings concerning logistic support. The TMC-JSWG feels that this action will help ensure that LEAD and the Depot Systems Command will be better prepared to meet the user needs timely and cost-effectively.

Ongoing and Planned Activities

In January 1995, maintenance equipment required to support the work load of the Patriot Missile System, previously performed by contractor support, was scheduled to begin transitioning to LEAD. Equipment transfers that began before January 1995 to support the maintenance work load of the HAWK (contractor support), Tube Launched Optically Sighted Wire Guided 2 Missile (TOW 2), and the TOW COBRA will continue, as well as the first-article testing for systems already in place and not yet certified. Construction will also continue on the three contracts awarded during FY 1994 to modify existing facilities. The final facility renovation contract is planned for award in June 1995 with a planned completion date of April 1996, which is concurrent with when the facility will be required for missile maintenance operations.

Conclusion

The consolidation of tactical missile maintenance at LEAD generally appears to be proceeding within the projected cost estimate and on schedule. The BRAC 1995 Joint Cross-Service Group for Depot Maintenance is working with the Military Departments to assess the proper sourcing of DoD maintenance work

load to include tactical missiles; therefore, so as not to influence the Group's conclusions on depot maintenance, we have concluded that it would not be appropriate to make any recommendations regarding missile maintenance consolidation at LEAD.

We are, however, monitoring the internal DoD BRAC process and plan to adjust this report, if necessary, to reflect any effect of the scheduled March 1995 announcement of proposed base closures and realignments.

Management Comments

Because this report contains no findings or recommendations, written comments are not required. However, if you choose to comment, please do so by March 27, 1995, in order to have the comments considered in preparing the final report. Your comments may be included in the final report, which will normally be available for public release.

The courtesies extended to the audit staff are appreciated. If you have any questions on this audit, please contact Mr. John A. Gannon, Audit Program Director, at (703) 604-9427 (DSN 664-9427) or Mr. Bernard M. Baranosky, Acting Audit Project Manager, at (703) 604-9429 (DSN 664-9429). We will give you a formal briefing on the results of the audit within 5 days of this memorandum, should you desire it. The planned distribution of the report is listed in Enclosure 5.

Shelton R. Young
Director
Logistics Support Directorate

Enclosures

M.L COW ~ based on BRAC
Note: contract can be awarded.

Depot without mention PROS + CONS of LEAD or other sites
According to FG final report will mention prohibition about mix conn during BRAC
They should not RFP or for planned depot at Letterkenny until after July 1

Nonrecurring BRAC Costs for Consolidation of Tactical Missile Maintenance as of December 1994

(in millions)

	FY 94	FY 95	FY 96	FY 97	Total
Army	$15.5	$18.0	$1.5	$0.0	$35.0
Navy	1.8	0.6	1.7	0.1	4.2
Air Force	0.0	4.7	0.2	0.0	4.9
Total	**$17.3**	**$23.3**	**$3.4**	**$0.1**	**$44.1**

As shown by the above estimate of nonrecurring costs, more than $40 million of the total cost of $44.1 million is planned to be incurred by the end of FY 1995.

ENCLOSURE 1

Status of Army BRAC Authorizations and Obligations for FY 1994 and First Quarter of FY 1995

FY 1994

	Estimated	Authorized	Obligated
O&M[1]	$ 8.4	$ 9.1	$ 9.1
OPA[2]	2.1	1.7	1.4
MILCON[3]	5.0	5.0	5.0
Total	**$15.5**	**$15.8**	**$15.5**

First Quarter FY 1995

O&M[1]	$12.8	$11.0	$6.1
OPA[2]	2.6	3.0	2.2
MILCON[3]	0.0	0.0	0.0
Total	**$15.4**	**$14.0**	**$8.3**

FY 1994 Obligations	$15.5
FY 1995 Obligations	8.3
Total FY 1994 and First Quarter 1995	**$23.8**

These O&M and OPA funds are BRAC funds for nonrecurring costs such as permanent relocation of personnel; personnel training; and transporting, uncrating, and setting up maintenance equipment.

[1]Operations and Maintenance
[2]Other Procurement Army
[3]Military Construction

ENCLOSURE 2

Status of System Work Load Identified for Transition

Systems in Place and Certified

Air-to-Air Stinger (ATAS) Argon Bottles
Army Tactical Missile System
Avenger
Bradley Tube Launched Optically Sighted Wire Guided (TOW)
Dragon
Hellfire
Phoenix
Sparrow

Systems in Place and Not Yet Certified

ATAS Avenger - Contractor support
HAWK Phase I - U.S. Marine Corps, Barstow, CA
High Speed Anti-Radiation Missile - Peculiar Support Equipment (HARM PSE)
Multiple Launch Rocket System (MLRS)
MLRS - Contractor Support

FY 1995 Scheduled Transitions

Patriot - Contractor Support
Sidewinder - Navy
TOW - COBRA
TOW 2

FY 1996 Scheduled Transitions

Hawk - Contractor Support
HAWK Phase II - U.S. Marine Corps, Barstow, CA
Land Combat Support System (LCCS)
Maverick
Shillelagh
Sidewinder - Air Force

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Status of System Work Load Identified for Transition

FY 1998 Scheduled Transitions

Advanced Medium Range Air-to-Air Missile
HARM - Control Section
HARM - Guidance Section

Systems With Transition Plans Pending *

Bradley TOW - Contractor Support
Harpoon - Contractor Support
Hellfire - Contractor Support
Standard - Contractor Support
Stinger - Contractor Support

*Owning Service has not planned for the transition of contractor work on those systems. Work load must transition or owning Service must justify the reason for not doing so to the Deputy Under Secretary of Defense for Logistics

Systems Not Currently Planned for Transition

AN/TSQ73	Last year in inventory FY 1996.
Chaparral	No work after FY 1995.
Sidearm (Contractor)	Navy has put the system in deep storage.
Standard	Navy has zeroed work load after FY 1995. The Navy will seek a waiver from the Deputy Under Secretary of Defense for Logistics and the system may not transfer.
Walleye	The system is an old out-of-production Navy system planned for retirement in 2001. The Joint Working Group will reevaluate the transition of Walleye in FY-1996.

Organizations Visited or Contacted

Office of the Secretary of Defense

Office of the Deputy Under Secretary of Defense for Logistics

Department of the Army

U.S. Army Industrial Operations Command (Provisional)
Headquarters, Depot System Command, Chambersburg, PA
Letterkenny Army Depot, Chambersburg, PA
U. S. Army Corps of Engineers, Baltimore District, Construction Division, Harrisburg Area Office, New Cumberland, PA

ENCLOSURE 4

Report Distribution

Office of the Secretary of Defense

Under Secretary of Defense for Acquisition and Technology
Under Secretary of Defense (Comptroller)
Assistant Secretary of Defense (Economic Security)
Deputy Under Secretary of Defense for Logistics
Deputy Assistant Secretary of Defense (Economic Reinvestment and Base Realignment and Closure)

Department of the Army

Auditor General, Department of the Army
Commander, U.S. Army Industrial Operations Command (Provisional)
Commander, Depot System Command
Commander, Letterkenny Army Depot

When this report is produced in final form, it will be distributed to additional parties in the Department of Defense, as well as to each of the following non-Defense Federal organizations and individuals.

Office of Management and Budget
U.S. General Accounting Office
National Security and International Affairs Division, Technical Information Center
National Security and International Affairs Division. Defense and National Aeronautics and Space Administration Management Issues
National Security and International Affairs Division, Military Operations and Capabilities Issues

Chairman and Ranking Minority Member of each of the following Congressional Committees and Subcommittees:

Senate Committee on Appropriations
Senate Subcommittee on Defense, Committee on Appropriations
Senate Committee on Armed Services
Senate Committee on Governmental Affairs
House Committee on Appropriations
House Subcommittee on National Security, Committee on Appropriations
House Committee on Government Reform and Oversight
House Subcommittee on National Security, International Affairs, and Criminal Justice, Committee on Government Reform and Oversight
House Committee on National Security

Report Distribution

Congressman James V. Hansen, U.S. House of Representatives
Congressman Bud Shuster, U.S. House of Representatives

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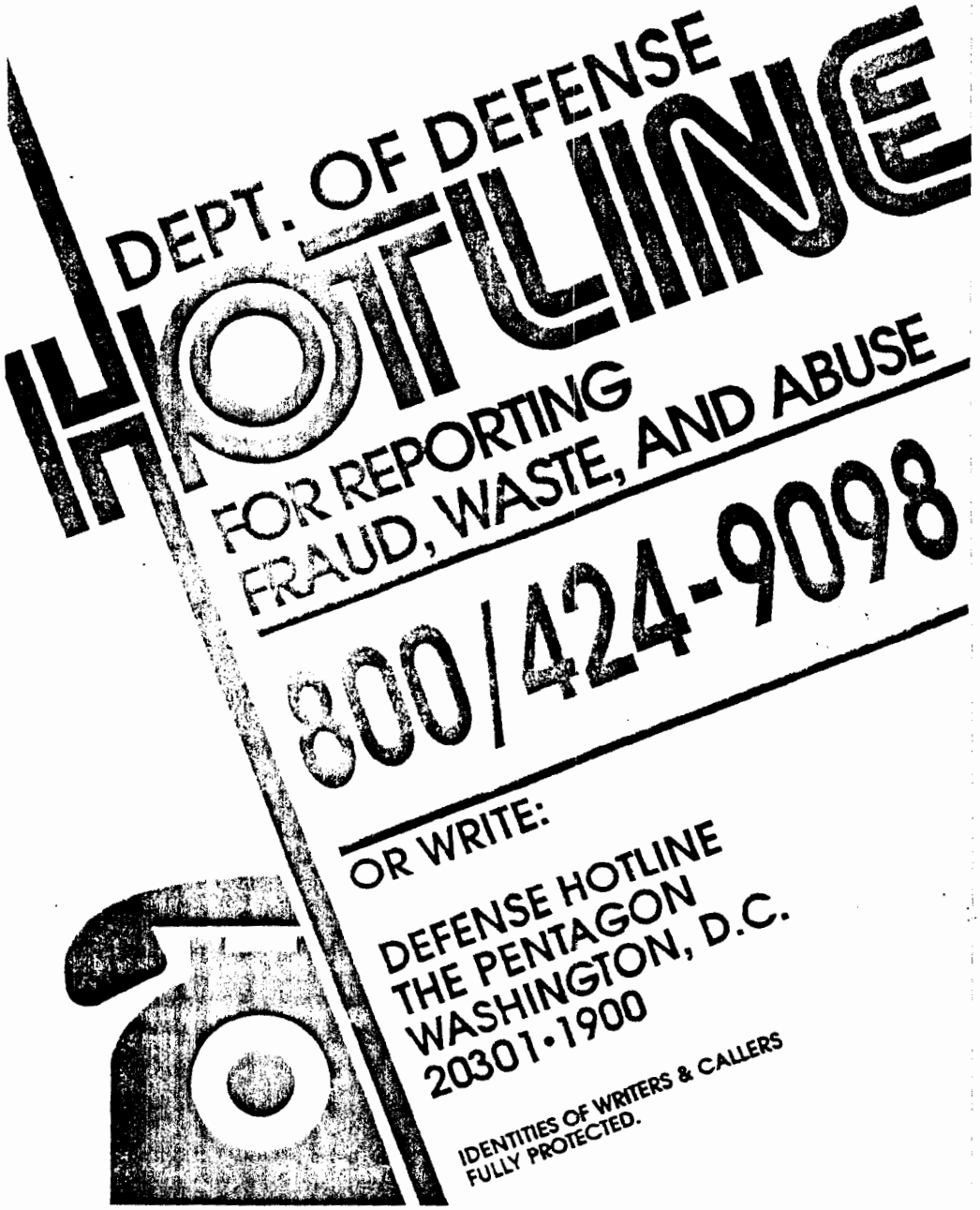
DRAFT OF A

PROPOSED AUDIT REPORT



DRAFT OF A

PROPOSED AUDIT REPORT

ARMY TEAM ROUTING SLIP						
ORIGINATED BY: ED BROWN					DATE: 12 Apr	
	ACTION	INFO	COORD	APPROVE	FILE	INITIAL
RICK BROWN						
J. J. GERTLER						
STEVE BAILEY						
BOB MILLER		✓				R
MIKE KENNEDY						
DAVE LEWIS						
CLIFF WOOTEN					✓	

COMMENTS:

Bronne Glenn gets a copy.

THE DEFENSE BASE CLOSURE AND REALIGNMENT COMMISSION

EXECUTIVE CORRESPONDENCE TRACKING SYSTEM (ECTS) # 950411-4

FROM: CLINE, NEIL C.	TO: DIXON
TITLE: CITIZEN	TITLE: CHAIRMAN
ORGANIZATION:	ORGANIZATION: DBCRC
INSTALLATION (s) DISCUSSED: LETTERKENNY ARMY DEPOT	

OFFICE OF THE CHAIRMAN	FYI	ACTION	INIT	COMMISSION MEMBERS	FYI	ACTION	INIT
CHAIRMAN DIXON				COMMISSIONER CORNELLA			
STAFF DIRECTOR	✓			COMMISSIONER COX	✓		
EXECUTIVE DIRECTOR	✓			COMMISSIONER DAVIS			
GENERAL COUNSEL				COMMISSIONER KLING			
MILITARY EXECUTIVE				COMMISSIONER MONTOYA			
				COMMISSIONER ROBLES			
DIR. CONGRESSIONAL LIAISON		✓		COMMISSIONER STEELE			
DIR. COMMUNICATIONS				REVIEW AND ANALYSIS			
				DIRECTOR OF R & A	✓		
EXECUTIVE SECRETARIAT				ARMY TEAM LEADER	✓		
				NAVY TEAM LEADER			
DIRECTOR OF ADMINISTRATION				AIR FORCE TEAM LEADER			
CHIEF FINANCIAL OFFICER				INTERAGENCY TEAM LEADER			
DIRECTOR OF TRAVEL				CROSS SERVICE TEAM LEADER			
DIR. INFORMATION SERVICES							

TYPE OF ACTION REQUIRED

✓	Prepare Reply for Chairman's Signature		Prepare Reply for Commissioner's Signature
	Prepare Reply for Staff Director's Signature		Prepare Direct Response
	ACTION: Offer Comments and/or Suggestions	✓	FYI

Subject/Remarks:

FORWARDING PETITION SIGNED BY 324 EMPLOYEES REQUESTING THAT DBCRC REVISIT THE DEPOT.

Due Date: 950418	Routing Date: 950411	Date Originated:	Mail Date:

324 Total Signatures

Commissioner Alan Dixon
c/o BRAC Commission
1700 N. Moore Street
Arlington, VA 22209

Please refer to this number when responding 950411-4

Dear Commissioner Dixon,

This letter is written on behalf of a concerned group of employees located at Letterkenny Army Depot and its collocated activities in Chambersburg, PA. The purpose of this letter is to request a return visit by the BRAC Commissioners to the Army installation in south central Pennsylvania.

Enclosed you will find a petition signed by some of the collocated activity employees from Letterkenny Army Depot. This petition signed by some 400 personnel requests your return visit to this installation to evaluate errors, omissions, and misstatements found within the Army proposal for realignment of Letterkenny Army Depot.

This same petition is being staffed with the GS and Wage grade unions on Letterkenny Army Depot and other collocated activities. We expect to send you the balance of those petitions within the next week.

Once we have finalized these petitions, we expect to have signatures from approximately 3,400 employees who are directly affected by the proposed realignment. We urge you to consider this petition and revisit Letterkenny as quickly as possible. We feel confident that we can point out the flaws in the Army's data.

Request that you contact the undersigned at area code 717-264-2379 and the necessary arrangements will be made for your visit. Thanks for you cooperation.

Sincerely,

Neil C. Cline

Neil C. Cline
1734 Blakewood Drive
Chambersburg, PA 17201
717-264-2379

Commissioner Rebecca Cox
c/o BRAC Commission
1700 N. Moore Street
Arlington, VA 22209

Dear Commissioner Cox,

We the employees of Letterkenny Army Depot (LEAD) and its collocated activities, including the Systems Integration and Management Activity (SIMA), Defense Megacenter (DMC-C), Defense Logistics Agency (DLA) and others respectfully request your return visit to LEAD as part of the BRAC 95 evaluation.

The DOD BRAC 95 proposal is a complete reversal of the recommendations which you and your fellow commissioners approved in BRAC 93. The recommendations which you made at that time are being implemented today here at LEAD. Specifically, LEAD is involved in missile interservicing, having begun work on over half of the missile systems and we have formed a partnership with private industry in the production of Paladin Howitzers.

We believe that the information on which the Defense Department has relied is inaccurate and unreliable. We believe the military value of the installation is understated due to changes in the criteria used to evaluate installations from earlier BRAC rounds. We believe the depot cost of doing business is overstated, is outdated and inflated cost data was used. We believe that the projected costs of closure are understated and future savings are overstated. Finally, we believe that environmental cleanup impacts were not properly considered.

Further, we point out that the economic impact on the region is understated as the internal defense plans to relocate the approximately 1000 collocated activity employees on this installation were not addressed in the BRAC proposal.

Therefore, we respectfully request that you make a return visit to Letterkenny and evaluate for yourself the actions taken by this depot in response to BRAC 93. After having done so, we feel confident that the information presented will reaffirm the conclusion made by BRAC 93 that LEAD and its collocated activities should remain open and workloaded to the fullest extent to minimize cost and maximize productivity. We recognize you have a very aggressive schedule, but if you could find time to visit Letterkenny just once, your support would be greatly appreciated.

Sincerely,

Signed by the Employees of Letterkenny
and Tenant Activities

BASE VISIT REPORT

LETTERKENNY ARMY DEPOT
DEFENSE DISTRIBUTION DEPOT - LETTERKENNY

MARCH 24, 1995

LEAD COMMISSIONER: Al Cornella

ACCOMPANYING COMMISSIONER: None

COMMISSION STAFF:
David Lyles, Staff Director
Glenn Knoepfle, Senior Analyst, Cross Service Team

LIST OF ATTENDEES:
Senator Rick Santorum
Congressman Bud Shuster
Col James P. Fairall, Commander, Letterkenny Army Depot
LTC Leslie Carlow, Commander, Defense Distribution Depot - Letterkenny
Mr. Peter Scott, General Manager, United Defense, Paladin Production Division - Letterkenny
Mr. Robert Shively, Chief, Vehicles Shop Division, Directorate of Maintenance, Letterkenny Army Depot
Mr. David Goodman, Chief, Missile Electronics Shop Division, Directorate of Maintenance, Letterkenny Army Depot
Ms. Hallie Bunk, Chief BRAC Implementation Office, Letterkenny Army Depot
Mr. Ed Averill, Chief Ammunition Storage Directorate, Letterkenny Army Depot

BASE'S PRESENT MISSION:

- Letterkenny's maintenance depot overhauls tactical missiles, artillery systems, and other support equipment to like-new condition for far less than the cost of buying new items. Entire systems are repaired, modified, and integrated.
- Under a teaming effort, United Defense has collocated on-site to work with depot personnel to modify M109 Howitzers into the Paladin configuration.
- The depot's Directorate of Ammunition Operations stores, ships, and demilitarizes ammunition; and maintains and up-rounds missiles.
- Letterkenny supports more than 15 tenants, including a DLA distribution depot and DISA megacenter.

SECRETARY OF DEFENSE RECOMMENDATION:

- Realign Letterkenny Army Depot by transferring the towed and self-propelled combat vehicle mission to Anniston Army Depot.
- Retain an enclave for conventional ammunition storage and tactical missile disassembly and storage.
- Change the 1993 Commission's decision directing the consolidation of tactical missile maintenance at Letterkenny. Transfer consolidated missile guidance workload to Tobyhanna Army Depot.

SECRETARY OF DEFENSE JUSTIFICATION:

Letterkenny Army Depot is one of the Army's five maintenance depots and one of three ground vehicle maintenance depots. Over time, each of the ground maintenance facilities has become increasingly specialized. Anniston performs heavy combat vehicle maintenance and repair. Red River performs similar work on infantry fighting vehicles. Letterkenny Army Depot is responsible for towed and self-propelled artillery as well as DOD tactical missile repair. Like a number of other Army depots, Letterkenny receives, stores, and ships all types of ammunition items. A review of long range operational requirements supports a reduction of Army depots, specifically the consolidation of ground combat workload at a single depot.

The ground vehicle maintenance capacity of the three depots currently exceeds programmed work requirements by the equivalent of one or two depots. The heavy combat vehicle mission from Anniston cannot be absorbed at Letterkenny without major construction and facility renovations. Available maintenance capacity at Anniston and Tobyhanna makes the realignment of Letterkenny the most logical in terms of military value and cost effectiveness. Closure of Letterkenny is supported by the Joint Cross-Service Group for Depot Maintenance. The Army's recommendation to transfer missile workload to Tobyhanna Army Depot preserves Letterkenny's missile disassembly and storage mission. It capitalizes on Tobyhanna's electronics focus and retains DOD missile system repair at a single Army depot.

MAIN FACILITIES REVIEWED:

Letterkenny Army Depot Missile Electronics Shops Division
Letterkenny Army Depot Vehicle Shops Division
United Defense Enterprise for Paladin Conversion

Windshield Tour of Defense Distribution Depot Letterkenny facilities including selected vehicle storage yards
Ammunition storage area (staff visit only)

KEY ISSUES IDENTIFIED

Letterkenny Army Depot now includes more than 19,000 acres. Under DOD's proposal about 12,000 acres would be retained for storage of conventional ammunition and uprounded missiles. The ammunition storage activity would also continue to have responsibility for periodically testing and recertifying uprounded missiles.

The DOD recommendation would consolidate tactical missile maintenance at one central site, however the maintenance consolidation point would be established at Tobyhanna Army Depot, rather than Letterkenny. The guidance and control sections will be removed from uprounded missiles stored at Letterkeny, or other established storage locations and then trucked to Tobyhanna for repair and overhaul. The repaired sections would be returned to the storage site for uprounding. Vehicles which provide the platforms for missiles or command and control apparatus for Army missile systems would be transported between Tobyhanna and Anniston, Alabama. Anniston would refurbish the vehicles, and Tobyhanna would integrate and test the complete system.

The DOD recommendation would retain conventional ammunition and tactical missile storage and disassembly at Letterkenny. Based on the Army's COBRA model, personnel authorizations of 490 civilian and one military would be retained at Letterkenny to support the realigned ammunition storage mission.

Tactical Missile Maintenance:

BRAC 93 established Letterkenny as the consolidated DOD depot for tactical missile maintenance. Similar workloads conducted at 12 different locations were to be consolidated at Letterkenny. The depot has made substantial progress toward implementing the missile maintenance consolidation plan. As of March 1995, workload transfers for 12 of the 21 missile systems designated for consolidation at Letterkenny have been completed. Maintenance work on 10 of the transferred systems have completed first article testing and are in full production. Workloads for 9 more missile systems are scheduled to transfer during the period FY 1995 through FY 1998. By FY 1999, the consolidated missile maintenance work will provide Letterkenny about 760 million direct labor manhours of work. Letterkenny has work spaces totaling 290,000 square feet for repair and overhaul of guidance and control sections. Interservicing, now accounts for 35 percent of the total tactical missile maintenance workload. Upon completion of the consolidation effort, about 55 percent of the total workload will be derived from Interservicing actions.

Letterkenny has established radar testing ranges to integrate all subsystems of overhauled Patriot missile systems. According to the Letterkenny officials this requires at least 28 acres of

flat open land space. Commission staff will follow-up to determine how Tobyhanna might accomplish Patriot testing.

About $26.6 million has already been expended to facilitate the tactical missile maintenance consolidation -- $4.9 million for building renovation, $4.0 million to move 72 personnel and their families from the losing activities, $7.5 million to recruit and train about 190 newly hired electronics technicians, $6.1 million to transport and install equipment from 8 different losing sites, and $4.1 million for procurement of new equipment. Also, equipment valued at about $100 million has been recovered from 8 losing sites and then installed at Letterkenny.

Artillery work - Paladin

In accordance with the BRAC 1993 recommendation, Letterkenny continues to perform major overhaul and maintenance on small to medium tracked vehicles. In addition the depot refurbishes a variety of wheeled vehicles that transport Army missile systems and components. A tour of the vehicle shops disclosed that the depot recently completed construction of a new high tech painting booth costing $6.2 million. Letterkenny has one of three DOD X-ray facilities for examining the quality of steel welded products. The vehicle shops total more than 350,000 square feet of work space.

Letterkenny has established an ongoing teaming arrangement with a private sector firm, United Defense, to produce 630 upgraded M109A6 Paladin artillery systems. Under this arrangement, dubbed "Paladin Enterprise" the old gun turret is removed in Letterkenny shops. The Letterkenny shop overhauls the chassis to like new condition and returns it the contractor.

United Defense fabricates a new turret at its York, Pennsylvania plant, and sends the turret to the Letterkenny depot , where it is outfitted with new wiring, hydraulic hosing and component parts. The completed turret is then installed on a refurbished chassis received from the Letterkenny vehicle shop. Lastly, the completed system is test driven and fired on the Letterkenny test track and range. The joint project has saved the taxpayers about $15 million and is scheduled for completion in October 1998.

Discussions with Letterkenny and United Defense officials revealed that 120 more systems could be upgraded if contract options are exercised. United Defense is also looking to expand its business into other tracked vehicle systems. The company is closing its California production facility and consolidating its work at the York, Pennsylvania plant, which is located about 50 miles from Letterkenny. The company manager indicated that United Defense has produced and worked on all current tracked vehicles used by the U. S. military except the main M1 battle tank.

Defense Distribution Depot - Letterkenny

The distribution depot is comprised of 29 masonry warehouses and 60 covered storage shelters. The depot is about 73 percent full. About 49 percent of the distribution depot's

business is derived from the Letterkenny maintenance depot. They are currently receiving supply items from Lexington - Bluegrass Army which was closed during BRAC 88.

The distribution depot is responsible for the storage of approximately 7500 vehicles of various types and in conditions ranging brand new to unserviceable awaiting major overhaul or disposal. Outside vehicle storage covers about 100 acres, and presently 33 acres are occupied. The depot vehicle parking grounds are either blacktop or packed gravel. They have no cement hard stand storage. Based on DLA's military value, the Letterkenny distribution depot was ranked third from a total of 17 distribution depots collocated with a maintenance depot. While, the Letterkenny Distribution Depot is a highly valued DLA resource, if the Letterkenny maintenance depot mission is terminated, the distribution depot would also no longer be needed.

Lower Capacity in Comparison to Other Army Depots

The Letterkenny Army Depot believes it received a lower military value rating because its capacity was low, compared to other Army Depots. If capacity were based on the number of useable square feet, instead of workstations, the Letterkenny Army Depot would be ranked among the most valuable. For example a single bay could accommodate two work positions and a large tracked vehicle or 50 workstations configured to repair hundreds of individual circuit cards.

The Letterkenny Army Depot workload fell off during the 1991 and 1992 time period due the "on again / off again" transfer of missile work from Anniston Army Depot. During this time, Letterkenny transferred some vehicle work to other areas, anticipating missile work in its place. However the transfer of missile work was challenged by Anniston labor unions and a court injunction blocked the transfers. Therefore Letterkenny's assigned workload dropped substantially, capacity utilization was low, and average direct labor hour rates increased to the point where Letterkenny was no longer competitive.

Letterkenny's capacity utilization and labor rates are driven by assigned workload. The commanders briefing indicates that utilization will exceed 100 percent in the 1996 and 1997 timeframe and then fall to between 70 and 80 percent in 1999 upon completion of the Paladin upgrade program.

Letterkenny's One-Stop Proposal for Tactical Missile

While Letterkenny is proceeding with implementation of the consolidated tactical missile maintenance program as directed by BRAC 93, the base believes it should be the designated storage and intermediate maintenance site for all future missile systems. In addition, they believe they should have responsibility for storage and intermediate maintenance (periodic testing) for all other DOD missile systems. Currently, Letterkenny stores and maintains uprounded missiles for a significant portion of the Army's inventory, and almost all Air Force tactical missiles except AMMRAM. Navy systems are stored and uprounded at either Fallbrook, California or Yorktown, Virginia.

COMMUNITY CONCERNS RAISED:

Congressman Shuster provided a briefing on behalf of the community organization. The community organization calls itself the LEAD Coalition. Essentially, Congressman Shuster's group is concerned about keeping the base open and keeping the current staff of trained personnel employed. He reiterated the BRAC 1993 recommendations, the benefits of Paladin Enterprise and questioned the logic behind the Army's evaluation which placed Letterkenny among the least valued depots.

The community pitch was critical of the DOD BRAC 95 recommendation which decentralizes missile electronics and vehicle maintenance functions. The community questions whether or not (1) the receiving activity can store guidance and control sections which are "Class C" explosives, (2) if the receiver can paint Patriot systems in a high bay area with antenna and outriggers attached, and (3) if space and facilities are available to support radar testing of Patriot systems. Finally, the community stated that reversal of the BRAC 93 recommendation will increase maintenance costs, turnaround time, and that additional military construction projects would be required at the receiving sites.

REQUESTS FOR STAFF AS A RESULT OF VISIT: Evaluate problems or concerns regarding the transfer of workloads between Letterkenny Army Depot and Tobyhanna Army Depot.

Glenn Knoepfle, Cross Service Team, 3/27/1995

Workload Comparisons

5 Year Trend - Pre BRAC

Work Years	FY95	FY96	FY97	FY98	FY99	Change 95-99
TOAD	1929	2227	2456	2305	2311	382
RRAD	1269	1216	1334	978	924	-345
ANAD	1692	1843	1471	1124	1092	-600
LEAD	1161	1524	1534	1228	1215	54

(*Source: BRAC Data Call #6*)

New Order Base (Only)	FY95	FY96	FY97	FY98	FY99
LEAD	1161	1524	1534	1228	1215
Artillery/Paladin	692	784	770	402	284
TACMSL/Partriot	469	740	764	826	931

BRAC 95 NOTES

Ref: Alternative Documentation Set, Alternative Number JDE2-10C$.

1. Section 2, Personnel and Organization Data. Letterkeny Army Depot, para 1, titled, "Personnel" quote:

"In addition, there is another 606 years of above core funded effort which will have to be contracted out in accordance with the JCSG scenario."

core combat vehicle 258 personnel 70

QUESTION: Letterkenny briefing, page 3, entitled "Accomplishments Since BRAC 93"...detail the $15M savings claimed under "teaming."

RESPONSE:

AVOIDING THE COST OF BUREAUCRACY

Background:

United Defense-PPD proposed the Paladin Multiyear Contract incorporating several major process streamlining steps which would lower the risk and cost associated with achieving full scale production on schedule. One of the major streamlining initiatives proposed called for the delivery of parts directly between LEAD and PPD. The effect would be a nearly "Just-in-time" approach supporting an integrated manufacturing process. It had been determined between LEAD and PPD, that the current limited rate production (LRP) practice of Chassis and Turret Kit deliveries through the DLA system did not provide the necessary responsiveness and cost efficiency required to meet the 18 vehicle per-month contract rate. Kits could be delivered short of parts which would not be discovered until the shipment had been transferred to LEAD from DLA. It was agreed that the only way to meet rate production would be to provide parts directly between LEAD and PPD without DLA handling.

Creating Bureaucracy:

The process of using DLA as a middleman was established by AMCCOM in response to three DoD and 27 supporting Army and AMC regulations that govern the movement of property between the government and a contractor. Under this approach all parts transactions between government and contractor must be passed through a DLA stock account to ensure that proper accountability is maintained. The collocation of PPD at LEAD allows alternative approaches to accountability which eliminates the need for a DLA pass-through.

Working closely with the Paladin Onsite Integration Team, DLA and AMCCOM assisted in the development of an alternative strategy for parts delivery which capitalized on collocation of PPD and LEAD and the linking of LEAD PDMMS/SDS system and the PPD MRP II system to provide real-time parts management and accountability. The basic approach calls for the development of links between PPD's MRP II system and LEAD PDMSS/SDS systems to allow the creation of material requests which serve the purpose of receipt and issue transactions currently handled through the DLA stock account. This approach minimizes the formal transfer of end items while the howitzer is in the maintenance/conversion process and makes all parts transfers through internal control documentation generated by the linked computer systems. This approach is documented in The Paladin Enterprise Property Management Plan and has been determined by DCMAO to provide the level of material control required by the FAR/DFAR. The plan has been approved by the Acquisition Executive, AMC and DA. The following reflects those costs avoided by the Paladin Program due to the implementation of a streamlined approach to part management and accountability.

COST OF BUREAUCRACY

KIT HANDLING COSTS

During limited rate production LEAD expended 2 man-years of supply technician effort per production year to perform the following functions. These functions do not apply to full scale production (FSP). PPD directly stocks LEAD production stations.

- Unpack/Account/Reconcile Kit
- Store Material (Bulk and Automated Storage)
- Post Accountable Records (Maint Shop Floor)
- Issue Material to Shop Floor

2	Man-yrs/Production yr
x 5	Production yrs (Term of Paladin FSP contract)
10	Man-yrs
x 1,615	Hr/Man-yr (Net productive hours per yr)
16,150	Hrs
x$65	/Hr (Supply labor rate)
$1,049,750	

END ITEM TRANSFERS

Regulatory guidance, if not waived, requires the following DLA transactions for major items. These costs do not apply to Paladin FSP because PPD & LEAD transfer material and major items directly between production stations.

640	Code G Vehicles LEAD to PPD for Turret Integration
x$38.44	
$24,602	

640	Code G Vehicles PPD to LEAD for Test and Paint
x$38.44	
+$24,602	
$49,204	

PART TRANSFERS

During full scale production, United Defense, PPD, delivers parts directly to LEAD production stations. These parts are placed into racks and bins within the stations. Regulatory guidance, if not waived, requires the following DLA transactions for parts.

65	Turret Part Numbers delivered to PPD
874	Chassis Paladin Peculiar Part Number delivered to LEAD
939	Total Part Number
x260	weeks of production
244,140	weekly part number callups
x2	transactions - receipt/issue for each part number callup
488,280	transaction over 5 year contract
x$29	Per DLA receipt/issue transaction
$14,160,120	

TOTAL COST AVOIDANCE

$ 1,049,750	- Kit Handling Cost
14,160,120	- Part Transfers
+49,204	- End Item Transfers
$15,259,074	TOTAL Cost Avoidance

ADDITIONAL FACTORS NOT INCLUDED IN COST AVOIDANCE:

This cost avoidance is conservative and does not reflect the total scheme of efficiencies and savings that are accrued through the Palaldin Enterprise Property Mangement Plan. Among the functions and efficiencies that are not costed are the following:

. Avoidance of DLA pass-throughs and implementation of direct stockage to LEAD production lines has eliminated a substantial level of material handling. This handling is in addition to that which would normally be applied to ASRS stockage and shop floor supply functions. Since parts are delivered directly to the line with minimum packaging, direct labor costs are conserved by eliminating the need to remove the packaging and/or unnecessary preservation. Installation of appropriate bins and racks not only conserves useful maintenance space, but provides for a more organized and efficient process.

. Since materials are delivered directly between PPD and LEAD, as though they were sister divisions, there is no need for level A packaging and preservation from the government perspective. Such costs savings for PPD were already accounted for in the $46M multi-year acquisition strategy. Government costs associated with such packaging have not been included or costed at this point. Given the volume of parts, cost avoidance associated with the elimination of level A packaging is significant.

. During limited rate production, AMCCOM provided administrative support to the contractor in order to expedite the Mil-strip process for shipment and receipt of government property by the contractor. Collocation of PPD and the Enterprise Property Management Plan eliminates the need for such an exceptional process and thereby avoids costs to the government. AMCCOM can reinvest that scarce manpower into other tasks that are more meaningful to the program and government needs.

. Direct stockage of LEAD lines and the station-to-station flow of material between LEAD and PPD also eliminates the need for kitting. The actual process is based upon a "just about in time" concept and therefore provides material in quantities that best suit the actual flow of production through any given station. Manpower is not required to further organize the material in specific kits for any given station. Under limited rate production LEAD did assemble material deliveries to the contractor in kit form.

COMPLETED TRAINING

COURSE TITLE	LOCATION OF TRAINING	NUMBER OF STUDENTS	NUMBER OF HOURS P/STUDENT	COST
TOW MISSILE SYSTEM	FT. EUSTIS, VA	5	128	$29,791
LCSS	HUNTSVILLE, AL	12	680	$203,213
MLRS	MICOM AT LEAD	8	8	$5,021
TOW COBRA	FT. CAMPBELL, KY	10	80	$82,003
EQUATE	TOBYHANNA	5	120	$55,423
MLRS-LRU	RRAD, TX	2	120	$19,433
TOW/DRAGON OMMCS	REDSTONE, AL	13	344	$309,304
CHAPARRAL	HUNTSVILLE, AL	12	456	$369,378
TOW BRADLEY	VSE CORP AT LEAD	24	56	$179,358
AVENGER FAMILIARIZATION	LEAD	13	72	$83,969
SPECTROMETER MEASUREMENT	LEAD	6	24	$7,762
AVENGER OMMCS	HUNTSVILLE, AL	6	160	$84,232
SPARROW THEORY OF OPERATIONS	VSE CORP AT LEAD	26	80	$164,685
SPARROW OJT	ALAMEDA, CA	16	216	$280,667
SPARROW OJT	ALAMEDA, CA	2	256	$44,163
MLRS IFTE/TPS OJT	RRAD, TX	4	40	$14,528
PHOENIX THEORY OF OPERATION	LEAD	16	80	$65,487
PHOENIX OJT	ALAMEDA, CA	11	256	$253,103
SPARROW EXPLOSIVE SAFETY	LEAD	23	6	$7,743
HELLFIRE OJT	ANAD, AL	2	104	$16,096
DRAGON OJT	ANAD	5	160	$117,014
SIDEWINDER THEORY OF OPERATION	LEAD	22	40	$46,516
SIDEWINDER EXPLOSIVE SAFETY	LEAD	17	6	$5,856
DRAGON OJT	ANAD	5	264	$23,634
TOW 2 OMMCS	HUNSTVILLE, AL	12	216	$209,440
OPTICAL TIME DOMAIN REFLECTOMETER	LEAD	4	8	$1,829
AVENGER BASIC THEORY	LEAD	7	8	$4,675
AVENGER OPERATION THEORY	LEAD	7	32	$15,886
SPARROW DATA COLLECTION	LEAD	17	6	$7,510
TOW 2/ BRADLEY OMMCS	HUNTSVILLE, AL	12	424	$387,511
MLRS	RRAD, TX	2	72	$16,289
TOW BRADLEY OJT	RRAD, TX	10	50	$45,202
HARM PSE CIRCUIT CARD REPAIR TEST	LEAD	2	160	$42,896
SIDEWINDER OJT	NORFOLK, VA	17	576	$740,670
PHOENIX EXPLOSIVE SAFETY	LEAD	12	6	$3,545
SPARROW EXPLOSIVE TRAINING	LEAD	11	6	$2,697
PHOENIX DATA COLLECTION	LEAD	13	16	$10,298
SIDEWINDER DATA COLLECTION	LEAD	10	6	$3,002
			TOTAL COMPLETED	$3,959,829

PLANNED TRAINING

TOW COBRA THEORY OF OPERATION	LEAD	12	40	$130,250
TOW COBRA - SOR OJT LCHR	ANAD	11	160	$191,370
TOW COBRA FACT II	ANAD	4	40	$68,137
TOW GROUND SOR OJT	ANAD	15	320	$576,901
SIDEWINDER THEORY OF OPERATIONS(AF)	LEAD	25	40	$70,020
SIDEWINDER SEEKER REPAIR (AF)	LEAD	6	80	$35,250
SIDEWINDER SOR OJT (AF)	OGDEN, UT	25	480	$1,307,140
SIDEWINDER SEEKER REPAIR (NAV)	LEAD	4	80	$25,166
MAVERICK THEORY OF OPERATION	LEAD	25	160	$417,381
MAVERICK THEORY FOLLOW-ON	LEAD	5	80	$25,208
MAVERICK OJT	OGDEN, UT	25	480	$1,124,380
LCSS FORMAL/LAR	REDSTONE ARSENAL, AL	10	320	$269,224
HAWK OJT LMU	BARSTOW, CA	2	80	$17,381
LCSS OJT	ANAD	10	250	$329,955
SHILLELAGH OJT	ANAD	2	120	$36,939
STANDARD THEORY	LEAD	10	480	$312,496
STANDARD OJT	SEAL BEACH, CA	11	800	$1,177,014
HARM CONTROL	LEAD	6	148	$55,962
HARM GUIDANCE	LEAD	6	80	$30,250
AMRAAM GUIDANCE & CONTROL	TUCSON, AZ	24	160	$360,543
AMRAAM REPAIR OF SPT EQUIP	TUCSON, AZ	6	220	$123,266
			TOTAL PLANNED	$6,684,233

ESTIMATED COSTS

HAWK	$6,208,697
PATRIOT	$15,832,554
TOTAL ESTIMATED	$22,041,251
GRAND TOTAL	$32,685,313

CROSS SERVICE

ARMY

Laboratories

Adelphi 1 ?	Redirect from 91 BRAC

Depots

Letterkenny	Close/Realign
Tobyhanna	Close Realign
ANNISTON	B B

NAVY

Test & Evaluation

Point Mugu	Realign

~~Navy Plant~~

~~Navy Industrial Reserve Munitions Plant~~

Aviation

Jacksonville	Close/REALIGN
~~Cherry Point~~	
~~North Island~~	
~~*Laboratory/ACQ~~	~~Realign~~
~~SPAWAR~~	

AIR FORCE

Depots

~~Hill AFB~~	~~Close or Realign~~
Kelly AFB	Close or Realign
McClellan AFB	Close or Realign
~~Robins AFB~~	~~Close or Realign~~
~~Tinker AFB~~	~~Close or Realign~~

Laboratories

~~Armstrong, Mesa~~	~~Redirect~~
*Hanscom ESC	Close
*Rome (on list to close)	Close

* Would be part of C4I consolidation at Fort Monmouth

L.A. Air Force Base to Kirtland

Biological Research

Rome 17

Letterkenny 16 or 18

THE DEFENSE BASE CLOSURE AND REALIGNMENT COMMISSION

EXECUTIVE CORRESPONDENCE TRACKING SYSTEM (ECTS) # 950426-24

FROM: BROWN, ED	TO: JONES, MICHAEL
TITLE: ARMY TEAM LEADER	TITLE: DIRECTOR
ORGANIZATION: DBCRC	ORGANIZATION: ARMY BASING STUDY
INSTALLATION (s) DISCUSSED: LETTERKENNY + TOBYHANNA ARMY DEPOTS	

OFFICE OF THE CHAIRMAN	FYI	ACTION	INIT	COMMISSION MEMBERS	FYI	ACTION	INIT
CHAIRMAN DIXON				COMMISSIONER CORNELLA			
STAFF DIRECTOR	✓			COMMISSIONER COX			
EXECUTIVE DIRECTOR				COMMISSIONER DAVIS			
GENERAL COUNSEL	✓			COMMISSIONER KLING			
MILITARY EXECUTIVE				COMMISSIONER MONTOYA			
				COMMISSIONER ROBLES			
DIR./CONGRESSIONAL LIAISON				COMMISSIONER STEELE			
DIR./COMMUNICATIONS				REVIEW AND ANALYSIS			
				DIRECTOR OF R & A	✓		
EXECUTIVE SECRETARIAT				ARMY TEAM LEADER	✓		
				NAVY TEAM LEADER			
DIRECTOR OF ADMINISTRATION				AIR FORCE TEAM LEADER			
CHIEF FINANCIAL OFFICER				INTERAGENCY TEAM LEADER	✓		
DIRECTOR OF TRAVEL				CROSS SERVICE TEAM LEADER	✓		
DIR./INFORMATION SERVICES							

TYPE OF ACTION REQUIRED

	Prepare Reply for Chairman's Signature		Prepare Reply for Commissioner's Signature
	Prepare Reply for Staff Director's Signature		Prepare Direct Response
	ACTION: Offer Comments and/or Suggestions	✓	FYI

Subject/Remarks:

REQUESTING COBRA ESTIMATES REGARDING THE COSTS OF REALIGNING THE DEPOTS UNDER VARIOUS SCENARIOS.

Due Date:	Routing Date: 950426	Date Originated: 950426	Mail Date: 950426

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

ALAN J. DIXON, CHAIRMAN

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

April 26, 1995

Colonel Michael G. Jones
Director, The Army Basing Study
200 Army Pentagon
Washington, D.C. 20310-0200

950426-24

Dear Colonel Jones:

Request that your office prepare COBRA estimates to address the costs of realigning Letterkenny and Tobyhanna Army Depots under the following alternative scenarios:

- Realign Letterkenny by relocating tactical missile workloads including missile disassembly and storage, and maintenance of guidance and control systems from Letterkenny Army Depot to Hill Air Force Base. Transfer ground support equipment and artillery maintenance workloads to meet DOD requirements and stationing strategy. Retain an enclave at Letterkenny for conventional ammunition storage.

- Close Letterkenny by relocating tactical missile workloads including missile disassembly and storage, and maintenance of guidance and control systems from Letterkenny Army Depot to Hill Air Force Base. Transfer ground support equipment and artillery maintenance workloads and conventional ammunition storage to meet DOD requirements and stationing strategy.

- Close Tobyhanna Army Depot and move ground communications and electronics workload to Letterkenny Army Depot. Retain tactical missile maintenance and artillery workloads at Letterkenny in accordance with the 1993 Commission's recommendation.

Request you provide the requested information no later than 8 May 1995. Thank you for your assistance. I appreciate your time and cooperation.

Sincerely,

Edward A. Brown III
Army Team Leader

EAB/mgk

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

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MG JOSUE ROBLES, JR., USA (RET)
WENDI LOUISE STEELE

25 April 1995

To: Ed Brown, Army Team Leader

Through: Jim Owsley, Cross Service Team Leader

From: Glenn Knoepfle, Cross Service Team Analyst

Subject: Request for Army COBRA's concerning Letterkenny and Tobyhanna Army Depots.

Request your assistance in requesting Army COBRA's for alternatives scenarios outlined on the attached draft memorandum to the TABS office.

Your help and cooperation is appreciated.

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

ALAN J. DIXON, CHAIRMAN

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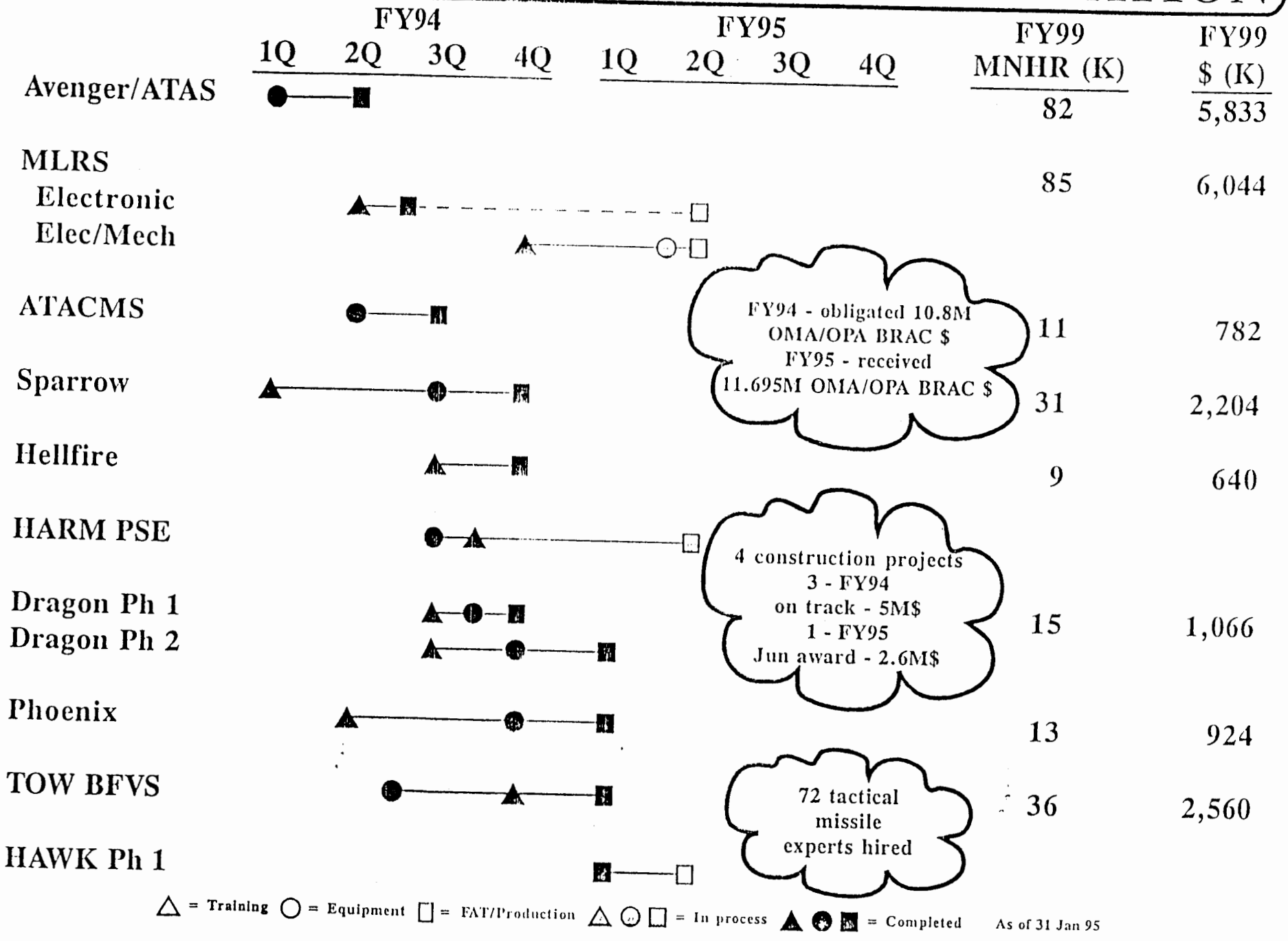
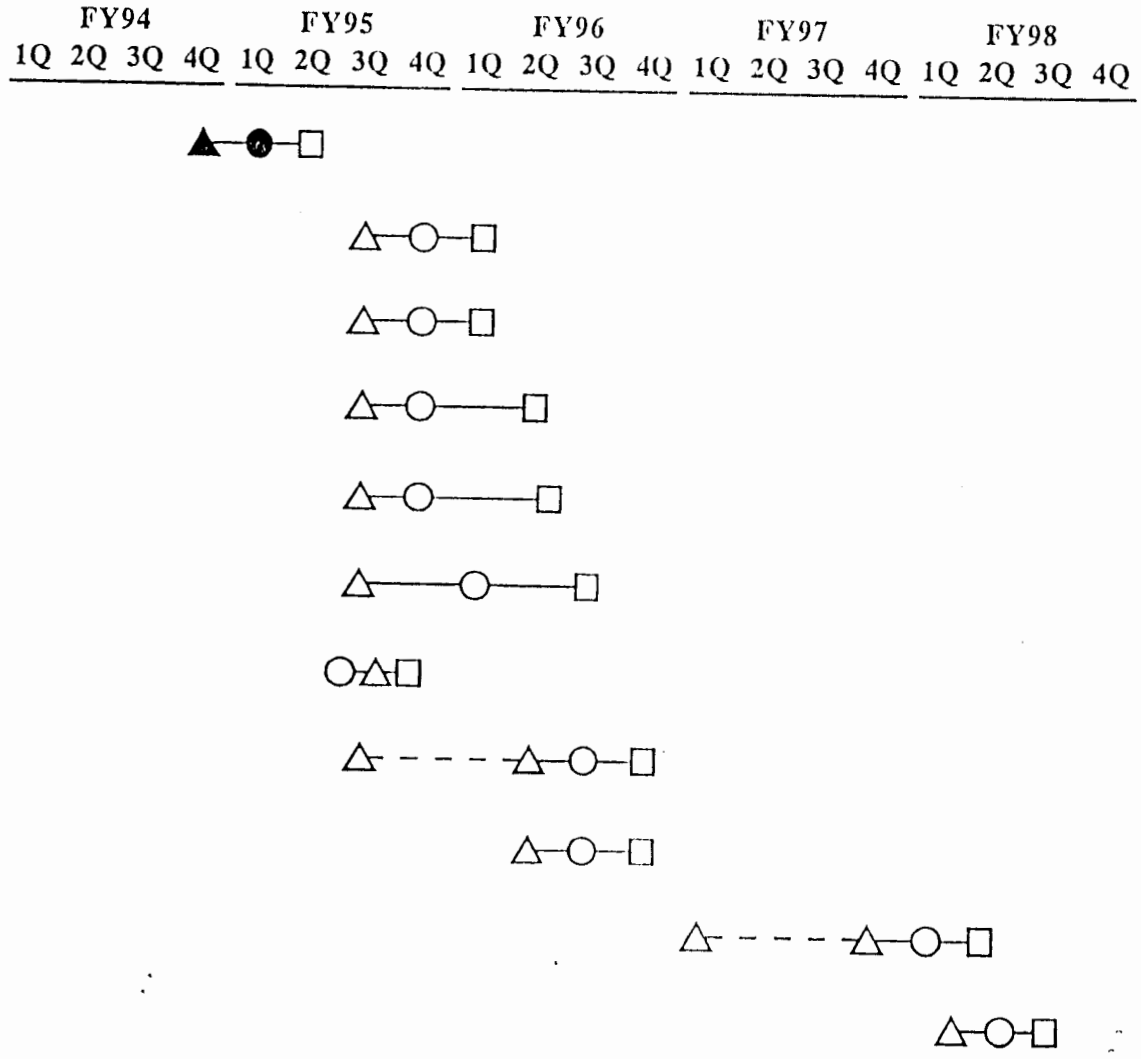
Edward A. Brown III
Army Team Leader

LEAD TACTICAL MISSILE CONSOLIDATION



LEAD TACTICAL MISSILE CONSOLIDATION



	FY99 MNHR (K)	FY99 $ (K)
Sidewinder (N)	95	6,755
TOW Cobra	39	2,773
TOW 2	72	5,191
HAWK Ph 2	92	6,541
Sidewinder (AF)		
Maverick	46	3,270
PATRIOT (CTR)	7	498
LCSS	18	1,280
Shillelagh	8	569
AMRAAM	54	3,838
HARM GS	47	3,341
Total	760	54,109

△ = Training ○ = Equipment □ = FAT/Production △ ○ □ = In process ▲ ● ■ = Completed As of 31 Jan 95

J

DoD TACTICAL MISSILE STUDY

PREPARED FOR:

DEFENSE DEPOT MAINTENANCE COUNCIL

18 JANUARY 1991

DEPARTMENT OF THE NAVY
NAVAL AIR SYSTEMS COMMAND
NAVAL AIR SYSTEMS COMMAND HEADQUARTERS
WASHINGTON, DC 20361

IN REPLY REFER TO

ABSTRACT

JOINT POLICY COORDINATING GROUP - DEPOT MAINTENANCE EXECUTIVE GROUP DECISION FOR TACTICAL MISSILES

This abstract provides a summary of the Joint Service tactical missile commodity study team's recommendations for depot maintenance of tactical missiles and the Joint Service decisions for this family of missiles.

A. The tactical missile study team's recommendations for depot level repair of this commodity were as follows:

1. Consolidate tactical missile depot level maintenance at Letterkenny Army Depot (LEAD) with the exception of Marine Corps Logistics Base (MCLB) Barstow workload for Hawk support equipment and Naval Ordnance Station (NOS) Indian Head energetic material workload.

2. Consolidate Navy tactical missile intermediate maintenance at Naval Weapons Station (NWS) Seal Beach (surface and air - West Coast), NWS Yorktown (air - East Coast), and NWS Charleston (surface - East Coast).

3. Assign various single management technology responsibilities.

4. Terminate ten (10) MILCON projects.

5. Reassign the Army tactical missile system (ATACMS) depot level maintenance and stockpile reliability program efforts from Anniston Army Depot (ANAD) to LEAD using existing facilities.

6. Select LEAD, the consolidated depot for tactical missiles, the pilot site for the proposed Defense Business Operations Fund (DBOF) program.

B. After reviewing the study, the JPCG-DM made the following decisions for repair of tactical missiles:

1. Consolidate tactical missile depot level maintenance for guidance and control sections and Army ground support equipment to LEAD, with the exception of Marine Corps Logistics Base (MCLB) Barstow workload for Hawk support equipment and Naval Ordnance Station (NOS) Indian Head energetic material workload. The JSBP decision focused on consolidating guidance and control section organic capability at LEAD. These missiles will be subjected to the Seven Step Process identified in Appendix I of the Joint Service Business Plan (JSBP). This Process will

ensure that cost, quality and schedules can be met. No missiles will be considered for transition unless a potential savings is identified. Guidance and control section workloads currently on contract may be reviewed for possible inclusion only if a cost analysis of benefits, conducted during the Seven Step Process, determines a transition from commercial to organic would be beneficial. In such case, LEAD would be the designated organic site. The Service owning the assets would be responsible for conducting cost analyses.

2. Consolidate Navy tactical missile intermediate level maintenance at NWS Seal Beach (surface and air - West Coast), NWS Yorktown (surface and air - East Coast), and NWS Charleston (surface - East Coast).

3. Terminate intermediate level MILCON projects at NWS Concord (P-271, P-282, and P-289), and depot level MILCON projects at ANAD (P-31515 and P-32320) and NWS Concord (P-310). MILCON projects P-98, P-99 at TOAD and P-417, P-506 at Yorktown are intended for use on programs other than missile maintenance and therefore, are reinstated.

4. Reassign ATACMS depot level maintenance and stockpile reliability program efforts from ANAD to LEAD using existing facilities, except for gyro workload which is assigned to the Air Force Aerospace Guidance and Metrology Center (AGMC), which currently possesses capability for the gyro workload and therefore would avoid developing duplicative capability at LEAD.

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Chief, Depot Maintenance Division
Headquarters, US Army Materiel
Command

DATE: 03 MAY 1991

DEPARTMENT OF THE ARMY
DEPARTMENT OF THE NAVY
DEPARTMENT OF THE AIR FORCE

JPCG-DM EXECUTIVE GROUP DECISION ABSTRACT

At the option of the owner (requiring Service) of a workload being consolidated under interservicing, the policy and procedures (seven-step process) defined in the Joint Service Business Plan, 28 Feb 91, will be used to ensure that the performing Service can deliver a product with acceptable cost, quality, and schedule to the requiring Service. The owner may defer any or all steps of the process in implementing the interservicing decision.

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DATE: 03 MAY 1991

TACTICAL MISSILE STUDY

EXECUTIVE SUMMARY

The tactical missile study was performed in response to Deputy Secretary of Defense memorandum of June 30, 1990 titled "Strengthening Depot Maintenance Activities". NAVAIR was assigned lead service responsibility for this study by the Defense Depot Maintenance Council (DDMC). The initial meeting was called by the lead service on 30 August 1990 with all Services represented. It was decided tactical missile categories to be analyzed were surface launched (fired from Navy ships), ground launched (fired from the ground - Army and Marine Corps), air launched (fired from aircraft - Navy, Army, Air Force, and Marine Corps), and missile support equipment (Army and Marine Corps. ALCM, ACM, SRAM, Tomahawk, ICBM, and Sub-launched Ballistic Missiles were considered to be outside the scope of tactical missiles. Emerging programs will be accommodated by each Service as they are released for Service use.

The study baseline was the FY 91 President's Budget. The study encompassed the organic and private sector efforts for depot and intermediate (I-level)) maintenance. Recommendations were made in both areas. Careful consideration was given to the operational requirements of each Service. No recommendation of the study group perturbates the effectiveness of each Service to perform its assigned mission.

The four alternatives considered ranged from status quo to a consolidation of all depot efforts (except MCLB Barstow) at one location plus I-level consolidations for Navy activities. The underlying assumption throughout the study was all private sector and organic efforts could be competed, without regard to whether or not the depot was organic or the private sector. Alternatives two and three were considered as permutations and/or combinations of possibilities to evaluate the feasibility of less than optimization of consolidation and are not to be considered as all encompassing of the myriad of possibilities that can be considered. Some savings are possible with the consolidation of any workload, however, full consolidation at one site has the greatest potential for savings and increased effectiveness.

The site selected that provided the needed infrastructure is Letterkenny Army Depot (LEAD) - Alternative four. LEAD is the only existing site that can perform the consolidation of all existing Services' depot workload.

The savings associated with alternative four is 35 % of the current cost of missile workload to be consolidated. 50 % of the cost of existing workload is associated with actual hands-on effort (this direct effort is necessary wherever the workload is located). 15 % of the cost is expended by overhead in support of the hands-on effort (this effort is necessary to be transferred

along with the direct hands-on effort). 35% of the cost is related to the physical facilities cost where the workload is located (this cost would not transfer). **The underutilized facilities at LEAD can accommodate the influx of all Services' depot workload without new construction.**

Although LEAD is the site of choice and can accommodate all Services' workload, major changes are absolutely required in the way workload and funding is planned and monitored for LEAD. Presently the workload planning and funding go through DESCOM. This results in delays and frustrates the work effort. Each Service must be allowed to deal with LEAD directly on their workload and funding. Technical requirements will be determined by each Service and any alteration to design parameters will require the express consent of the owning Service and is not open for negotiation. While the depot must comply totally with the design specifications of the owning Service the depot will have total freedom to design the infrastructure and test methodologies to accomplish the end result.

In addition to the analysis of depot maintenance for interservicing, consolidation, and competition, the study also recommends that certain technology monitoring and process improvement assignments be made to a single site within DoD. Also, depot activities must be totally complemented facilities that will allow for the failed article to be restored to original design parameters without having to rely on outside sources for some of the related industrial processes. These recommendations are further amplified within the text of this study.

The depot effort must be transparent to the owning Service, and any decision that results in cost reductions, firm schedules, and continued quality should be embraced. The performance of depot maintenance by the private sector is prima facie evidence that service parochialism must not be allowed to preclude consolidation of workload within another Service.

It is the firm opinion of the study team the depot maintenance effort is in need of overhaul. Additionally, the management philosophies that resulted in an inefficient operational mode must be changed. While 35% savings are realistic for the tactical missiles depot, a greater potential exists for improvement in the way that each Service manages and duplicates oversight of the depot operations.

18 January 1991

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A. Weapon System Matrices

B. Example of a Technology Center Assignment (PHS&T)

1. STUDY METHODOLOGY

a. Scope. The Tactical Missile Study is an analysis of Army, Navy, Air Force, and Marine Corps tactical missiles and associated Army/Marine Corps missile support equipment (launchers, radars, fire control,etc.). The results of this study provide recommendations concerning consolidation, competition, and interservicing for enhanced, efficient, and cost effective depot operations. Analysis of Navy and Air Force missile support equipment (radars, launchers, and fire control) are included in other DDMC commodity studies (ship, aircraft,etc.).

b. Assumptions/Definitions

Assumptions

(1) There shall be no degradation of Service operational or mission capabilities. Risk to operational support will not increase.

(2) CONUS organic and private sector depots and industrially funded intermediate maintenance were to be studied. OCONUS sites were to be excluded.

(3) All strategic systems and compartmentalized programs were to be excluded.

(4) Core will be accommodated and competition will be enhanced.

(5) DoD maintenance funding profiles will be relatively flat in the out years.

(6) Funding will be provided for consolidation recommendations, i.e., facility improvements/ modernization and relocation of required equipment.

(7) Direct to indirect ratio will increase at the gaining activity.

(8) Direct labor hours will not be reduced during the FY 91-95 timeframe.

(9) Number of personnel will be allowed to fluctuate as a function of workload.

(10) Personnel moving expenses and termination costs associated with workload consolidations were not considered.

(11) Skilled personnel will be available, however, peculiar system training will be required.

(12) Facilities will be available at the site selected without major construction.

Definitions

(13) Depot Level Maintenance. The most in-depth maintenance actions on missile and ground support end items,assemblies, and sub-assemblies.

(14) Intermediate Level Maintenance. Testing of all-up-rounds that are either unserviceable, expired serviceable time, or fleet returned captive flown missiles; isolating failures to major missile assembly; removes and replaces failed assemblies; and returns serviceable missiles to inventory.

c. Analysis Factors/Criteria. Analysis of tactical missile DoD depots and intermediate level facilities was based on workload, costs, capabilities, capacity utilization, skills, community infrastructure, and environmental impacts.

d. The tactical missile team composition was comprised of the following Service representatives:

NAME	ORGANIZATION	AUTOVON
Richard Eldridge (Team Leader)	NAVAIR (Navy)	222-0992
Gary Baker	MCLB (Marine Corps)	282-7225
Tommie Cutts	MICOM (Army)	746-4222
LtCol Sam Kelley	WR-ALC (Air Force)	468-0021
A. J. Meyer	DESCOM (Army)	570-5213
Kenneth Brooks	MICOM (Army)	746-3201
David Goodman	LEAD (Army)	570-8714
Gloria LaCroix	NAVSEA (Navy)	332-1195
Henry Szarek	MICOM (Army)	788-7474

e. The sources and methods of collection included team member expertise, budget submissions, depot briefings, data calls, and the following site visits:

OO-ALC (AF)

ANAD (Army)

SAAD (Army)

SM-ALC (AF)

NAC, Indianapolis (Navy)

NWS, Charleston (Navy)

NWS, Concord (Navy)

NADEP, Alameda (Navy)

MCLB, Barstow (Marine Corps)

AGMC (AF)

LEAD (Army)

TOAD (Army)

RRAD (Army)

NWS, Seal Beach (Navy, 3 locations)

NWS, Yorktown (Navy)

NWSC, Crane (Navy)

NADEP, Norfolk (Navy)

General Dynamics, Pomona (Contractor)

McDonnell Douglas, St. Louis (Contractor)

2. ANALYSIS

a. The baseline for the DDMC Tactical Missile Study is contained in each Services' O&M FY91 Presidents budget.

b. Missile systems evaluated for depot and intermediate level maintenance cost savings during the course of this study are at table 1.

c. The Weapon System Matrix, Appendix A, quantifies workload by weapon system. The analysis of the workload resulted in the identification of candidates for consolidations, interservic-

TABLE 1

COMMODITIES STUDIED BY TACTICAL MISSILE STUDY GROUP

NAME	SERVICE	MISSION	TYPE	SOURCE(S) OF DEPOT REPAIR	PRIME CONTRACTOR
ATACMS	USA	FIRE SUPPORT	INERTIAL GUIDANCE	LTV TRANSITIONING TO ANNISTON AD	LTV
AVENGER (PEDESTAL MOUNTED STINGER)	USA	SURFACE-TO-AIR	IR HOMING	GD TRANSITIONING TO ANAD	GENERAL DYNAMICS
CHAPARRAL	USA	SURFACE-TO-AIR	IR HOMING	RED RIVER AD	FORD AEROSPACE
DRAGON	USA(L) USMC	ANTI TANK	WIRE GUIDED	ANNISTON AD	McDONNELL DOUGLAS
HARM	USN(L) USAF	AIR-TO-SURFACE	ANTI RADIATION	TEXAS INSTRUMENTS TRANSITIONING TO NADEP ALAMEDA	TEXAS INSTRUMENTS
HARPOON	USN(L) USAF	AIR-TO-SURFACE	RADAR GUIDED	McDONNELL DOUGLAS TRANSITIONING TO NADEP ALAMEDA	McDONNELL DOUGLAS
HAWK	USA(L) USMC	SURFACE-TO-AIR	RADAR GUIDED	LETTERKENNY AD MCLB BARSTOW RED RIVER AD RAYTHEON	RAYTHEON
HELLFIRE	USA(L) USMC	ANTI TANK	LASER GUIDED	ROCKWELL MARTIN MARIETTA	ROCKWELL MARTIN MARIETTA
LANCE	USA	SURFACE-TO-SURFACE	INERTIAL GUIDANCE	ANNISTON AD	LTV
LCSS	USA	LAND COMBAT TEST EQUIPMENT	AUTOMATIC TEST EQUIPMENT	ANNISTON AD	RCA

TABLE 1

COMMODITIES STUDIED BY TACTICAL MISSILE STUDY GROUP

NAME	SERVICE	MISSION	TYPE	SOURCE(S) OF DEPOT REPAIR	PRIME CONTRACTOR
MAVERICK	USAF(L) USN	AIR-TO-SURFACE	TV/IR/LASER GUIDED	OGDEN-ALC HUGHES	HUGHES RAYTHEON
MLRS	USA	FIRE SUPPORT	FIRE CONTROL EQUIPMENT	RED RIVER AD BENDIX NORDEN	LTV
NIGHT SIGHTS	USA(L) USMC USAF USN	NIGHT VISION	INFRARED	SACRAMENTO AD BARSTOW MCLB	KOLLSMAN TEXAS INSTR
PATRIOT	USA	SURFACE-TO-AIR	RADAR GUIDED	LETTERKENNY AD RED RIVER AD RAYTHEON	RAYTHEON
PHOENIX	USN	AIR-TO-AIR	ACTIVE RADAR HOMING	NADEP ALAMEDA	HUGHES
REDEYE	USA	SURFACE-TO-AIR	IR HOMING	NO REPAIR	GENERAL DYNAMICS
SHILLELAGH	USA	SURFACE-TO-SURFACE	IR BEAM GUIDED	NO REPAIR	PHILCO FORD
SHRIKE	USN(L) USAF	AIR-TO-SURFACE	ANTI RADIATION	NADEP ALAMEDA	MOTOROLA
SIDEARM	USN(L) USMC	AIR-TO-SURFACE	ANTI RADIATION	MOTOROLA	MOTOROLA
SIDEWINDER	USN(L) USAF	AIR-TO-AIR	IR HOMING	OGDEN-ALC CRANE NAC NORFOLK	FORD AEROSPACE

TABLE 1

COMMODITIES STUDIED BY TACTICAL MISSILE STUDY GROUP

NAME	SERVICE	MISSION	TYPE	SOURCE(S) OF DEPOT REPAIR	PRIME CONTRACTOR
SKIPPER	USN	AIR-TO-SURFACE	SEMI-ACTIVE LASER	NO REPAIR	EMERSON ELECTRIC
SPARROW	USN(L) USAF	AIR-TO-AIR	SEMI-ACTIVE RADAR HOMING	NADEP ALAMEDA	RAYTHEON
STANDARD MISSILE SM I, II	USN	SURFACE-TO-AIR	ANTI RADIATION	GD RAYTHEON NWS SEAL BEACH MOTOROLA	RAYTHEON GENERAL DYNAMICS MOTOROLA
STINGER	USA(L) USAF USMC	SURFACE-TO-AIR	IR HOMING	NO REPAIR	GENERAL DYNAMICS
TOW (TOW/TOW2/BFVS)	USA(L) USMC	ANTI TANK	WIRE GUIDED	ANNISTON AD HUGHES	HUGHES
WALLEYE	USN(L) USAF	AIR-TO-SURFACE	TV DATA LINK IR HOMING	MARTIN MARIETTA NAC INDIANAPOLIS	MARTIN MARIETTA

ing, and public/private competition to achieve depot and intermediate level maintenance cost savings pursuant to the DEPSECDEF memorandum, 30 June 90,"Strengthening Depot Maintenance Activities".

d. Maintenance and Support Qualification and Analysis. The assumption by the team prior to the site visits was the greatest savings in performing depot and intermediate level maintenance could be accrued by consolidating at one location, provided the site could accommodate the workload without major construction. Each site visited provided information relative to the listed factors. The study completed by the team, concluded the optimum gain was associated with depot and intermediate level maintenance at one location.

(1) Facilities. An in-depth analysis of tactical missile depot and intermediate level maintenance facilities included the following:

(a) Buildings - utilization/availability/proposed construction.

(b) Accessibility - proximity to rail/port/air/road systems.

(c) Power - requirements/stability/availability.

(d) Security - fencing, lighting, fire protection, personnel.

(e) Industrial support - availability of internal/external support to meet surge requirements.

(f) Storage - piece parts, subassemblies, and inert/explosive capacities.

(g) Geographical Consideration - seismic zones and weather patterns.

(h) Environmental - compliance/noncompliance issues.

(2) Support Equipment. An analysis of support equipment required to accomplish depot and intermediate level maintenance for tactical missiles at each site visited concentrated on the availability of: 1) Standardized automatic test equipment (ATE) and test stations that could accommodate unique test program sets (TPS) software programs; 2) Class 100 - 100,000 particle count clean rooms; 3) Equipment modernization programs that enable maintenance test repair requirements to be accomplished on the latest technology of single level/multiple level circuit card assemblies; 4) Material Handling Equipment that supports repair action/processes with ease and efficiency.

(3) Skilled Labor. A multi-faceted highly skilled

labor force is required in support of the tactical missile depot and intermediate level maintenance facilities. The direct labor production skills are electronic integrated system mechanics, electronic mechanics, electronic measurements equipment mechanics, electrical equipment repairers, ordnance equipment mechanics, electronic computer equipment mechanics, air conditioning mechanics, instrument mechanics, electro/optical repairers, electronic integrated systems inspectors, munitions/explosive operators, and various production support personnel. In order to provide the organic capability to maintain, test and repair tactical missile components, skilled parts expediters, program planners and product assurance specialists are needed to enhance the maintenance function.

(4) Engineering/Technical Resources. An experienced team of planner, engineers, equipment specialists, parts expediters, and product assurance specialists are required to complement the direct labor force.

(5) Environmental Considerations. Environmental management programs must be in place to ensure that all mission and related activities can be accomplished while still maintaining compliance with federal, state, and local environmental regulations, laws, and directives. The following environmental factors were reviewed for adverse impact: air emissions, waste water discharge concentrations, and land fill capacity to accommodate solid waste.

e. Cost/Benefit Analysis

(1) Four alternatives were identified. The alternatives included consolidation, interservicing, and public/private competition. The alternatives are:

(a) Alternative 1 - Maintain the status quo

(b) Alternative 2 is representative of one of the possibilities that could be incorporated for either competition, interservicing, or consolidation, and demonstrates the possibility of combining similar products at a site within existing workload capabilities and capacity. As shown, NADEP Norfolk or OO-ALC could accomplish air and surface missiles as well as Chaparral. Chaparral is very similar to Sidewinder which is presently performed at NADEP Norfolk and OO-ALC. RRAD currently performs I-level ground missile maintenance and first level depot maintenance and could readily accommodate the depot efforts presently done by the private sector with little change to capability and capacity. LEAD would continue its present missile system support with Marine Corps and Chaparral depot missile systems added. The change in I-level maintenance would require the movement of Sidewinder effort from NWS Yorktown and Seal Beach to RRAD. Yorktown would continue to perform I-level maintenance for air and standard missiles with the exception of Sidewinder. Either NWS Seal Beach or Concord would perform I-level for air and standard missiles. This alternative would require MILCON and

therefore was discounted, considering existing facilities could accommodate workload without construction.

Depot Level		Intermediate Level
NADEP Norfolk - or OO-ALC	Air, Surface and Chaparral	RRAD - Sidewinder, HAWK, Patriot, Chaparral
RRAD-	Ground	Yorktown - Air and surface
LEAD - (No existing capacity elsewhere)	All missile systems	Seal Beach - Air and Surface or Concord

(c) Alternative 3 is presented as a potential to compete, interservice, or consolidate along technology requirements. While this alternative would result in cost efficiency gains, it would be more difficult to manage and control and would be a sub-optimum yield. If a single site won all the competition other than LEAD, additional construction would be required. Potential competing organic depots are LEAD, NADEPs Norfolk and Alameda and OO ALC. Alignment as follows:

Active -	Patriot, Hawk, Standard, Harpoon Phoenix and Sparrow
Passive -	Sidewinder, Harm, Maverick IR, Shrike and Chaparral
Terminally Guided -	Walleye, SLAM, Maverick Laser, Tow
Inertial Only -	Lance
Missile Support - Equipment	No change

(d) Alternative 4 - LEAD can satisfy all requirements as the single depot maintenance activity. Marine Corps workload will remain at MCLB Barstow. Hawk and Patriot Theater Readiness Monitoring Facility (TRMF) maintenance will remain at RRAD. MCLB Barstow and RRAD are fully utilized, centrally located, there is no economic advantage to move, and they best satisfy each Services' mission and readiness. West coast I-level maintenance for air and standard missiles will be combined at NWS Seal Beach. NWS Charleston will be the single east coast site for standard missile with the combining of standard missile workload presently performed at NWS Yorktown. NWS Charleston was chosen as the single site for standard missiles because a new facility for missile maintenance will be completed in mid 1991. This facility can accommodate all east coast standard missile workload and will allow the cancellation of the MILCON at NWS Yorktown. NWS Yorktown will retain the east coast site for air missiles.

Depot Level	Intermediate Level
Move all to LEAD except Marine Corps work at MCLB Barstow	RRAD - TRMF (HAWK and Patriot)
	Charleston - Surface
	Yorktown - Air
	Seal Beach - Air, Surface

(2) Potential cost savings for Alternative 4 are summarized as follows:

	FY91	FY92	FY93	FY94	FY95	Total
			($ Million)			
Army	0	1.50	7.67	21.49	40.60	71.26
Air Force	0	.20	1.90	5.70	8.20	16.00
Navy	0	.52	4.05	11.65	16.27	32.49
Marines	0	0	0	0	.51	.51
Total	0	2.22	13.62	38.84	65.58	120.26

(3) Personnel relocation costs were NOT included as part of this study. Building modifications and costs to move equipment are as follows:

(a) Alternative 1 - none

(b) Alternative 2 - $0 - 30M depending on the activity that wins the competition

(c) Alternative 3 - $0 - 30M depending on the activity that wins the competition

(d) Alternative 4 - D-level $29.2M I-level $.8M

(4) Net cost savings are as follows:

(a) Alternative 4 - $90.26M plus $63.64M MILCON avoidance (TABLE 2) totaling $153.90M.

(b) Alternative 3 - $37.32 to $67.32M

(c) Alternative 2 - $1.83 to $31.83M

(d) Alternative 1 - None

TABLE 2

ALTERNATIVE 4 MILCON AVOIDANCE

PROJECT	ACTIVITY	$ MIL	FACILITY
P-271	CO	2.44	Missile Integr. Fac.
P-282	CO	5.80	AMRAAM IMA Fac.
P-289	CO	1.25	Std Msl Test Cell
P-310	CO	7.60	AIWS Maint/Test fac.
P-31515	ANAD	5.50	ATACMS
P-32320	ANAD	1.75	Inertial Guide
P-98	TOAD	* 8.20	Shelter
P-99	TOAD	*14.00	Industrial Processes
P-417	YK	11.10	VLS SM2 Encan/Decan Fac.
P-506	YK	6.00	AIWS Maint/Test Fac.
	Total	$63.64	

*May be included in COM-EL Study

3. DIAGNOSTIC TEST AND REPAIR METHODOLOGY. Each service has developed policies for standard suites of ATE for the development of TPS and subsequent diagnostic and repair of electronic assemblies/subassemblies. Service unique ATE are: AF -MATE; Navy -CASS; Army -Equate/IFTE; and Marine Corps -MCATES. This individual service approach to diagnostic test and repair limits the sharing of TPS and associated repair capability. For example, an analysis of the Army and Marine Corps diagnostic test and repair of HAWK missile system performed by LEAD and MCLB, Barstow confirmed the development of service unique TPS's for common electronics assemblies/subassemblies. This action has resulted in the escalation of support costs. ATE/TPS development for depot maintenance operations costs in the 10 - 60 million dollar range for each weapon system. Precluding duplication of test methodology certainly could result in millions of dollars in savings. A common DoD approach to diagnostic test and repair of electronic assemblies/subassemblies will result in substantial savings of developmental costs for TPSs. The selection of a standard diagnostic test and repair capability must address total service requirements,endorse the principles of true "rack and stack" test methodology, and remain flexible to emerging technologies and unique test applications.

4. FULLY COMPLEMENTED DEPOT PHILOSOPHY. DoD depots postured for the future require fully integrated complemented facilities to provide support for emerging state-of-the-art weapon systems while retaining the capability to support first generation/older equipment. Inherent in a fully complemented depot are modern industrial support capabilities (milling, welding, painting, electro-plating, etc.), computer aided design/computer aided manufacture (CAD/CAM), circuit card assembly (CCA) diagnostic test and repair, test program development,and the acceptance of a philosophy of sub-system integration into a fully operational end item to insure system integrity. Micro electronics repair processes also require integration into the depot consistent with depot source of repair assignments. The fully complemented depot philosophy is not at odds with the principle of restricting dual siting within the organic sector. The necessity to provide effective and efficient depots of the future drives the demand for fully complemented facilities.

5. ENGINEERING PRINCIPLES AND TECHNOLOGIES. Analysis of the maintenance procedures at depots and I-level locations reveals a wide variety of business practices borne out of the way engineering principles are applied. The variations in application of engineering practices result in a base of depot and I-level operation that is difficult to standardize, consolidate, compete or interservice. This further creates an unhealthy and expensive competition which derives from parochial interests of the individual Service. Most activities complete repair and manufacture requirements in compliance with locally developed engineering methodologies/processes, and have no knowledge of, or share very little of, the state-of-the-art and productivity enhancements instituted at other activities. Of particular concern are the differences in processes for energetic material (warheads, rocket motors, etc.); gyros; shelters; weapon and combat systems packaging, handling, storage, and transportability functions; microwave tubes; micro electronics; circuit card manufacture; and image intensifier tube (night vision) workload. As previously stated fully complemented facilities are essential for total end item integrity, and the sharing of innovative and enhanced engineering principles, and repair/fabrication/manufacture processes are equally vital for a successful organic structure to support DoD demands at the least cost. To provide a unified competitive baseline the organic sector must embrace the productivity enhancements and state-of-the-art breakthroughs of the private sector and also benefit from the innovative processes developed by individual organic depot activities. The best approach for ensuring the integration of private sector technology advances into the organic sector and the sharing of innovations between the organic sectors is the assignment of particular technologies to a single manager. This single manager will insure all other activities engaged in similar repair/fabrication/manufacture benefit from and share the optimum approach to workload execution. In addition, the lead activity would operate as an extension of the DDMC and would serve all Services for their particular commodity as technical experts. As such, they would provide technical advice to organic sites; support all Service acquisi-

tion managers for disciplines, commodities, and functions assigned; monitor emerging technologies; and recommend process improvements to depots and manufacturers. An example assignment is at Appendix B.

6. CONCLUSIONS AND RECOMMENDATIONS

a. Conclusions

(1) Consolidation of depot and intermediate level maintenance results in savings for FY92 - 95 as shown in paragraph 2e(2).

(2) Single managers technology assignments enhance and provide for efficient and cost effective execution of maintenance.

(3) Future depots supporting sophisticated weapon systems demand fully complemented facilities capable of performing the full range of industrial processes.

(4) Army HAWK and Patriot missile support equipment workload is fully entrenched at LEAD and is not relocatable without major perturbations to the DoD organic infrastructure and Army operational mission assignments.

b. Recommendations

(1) Consolidate tactical missile depot level maintenance at LEAD with the exception of MCLB Barstow workload for HAWK support equipment and NOS Indian Head energetic material workload. All services will coordinate directly with LEAD for workload and funding matters.

(2) Consolidate Navy tactical missile intermediate maintenance at NWS, Seal Beach (surface and air - west coast), NWS, Yorktown (air - east coast), and NWS Charleston (surface - east coast). The Army HAWK and Patriot I-level (TRMF) will remain at RRAD.

(3) Assign single management technology responsibilities in accordance with the following:

a. ATE/test/repair methodology - Naval Air Systems Command (NAVAIR).

b. Energetic material - Naval Ordnance Station, Indian Head, MD.

c. Gyros - Aerospace Guidance and Metrology Center, Newark, OH.

d. Weapon and Combat Systems PHS&T - Naval Weapons Station - Earle, NJ. (Appendix B).

e. Shelters - Tobyhanna Army Depot, TOAD, PA.

f. Circuit card manufacturer -Naval Avionics Center - Indianapolis, IN.

g. Micro electronics - Naval Avionics Center, Indianapolis, IN.

h. Microwave tubes - Naval Weapons Support Center, Crane, IN.

i. Image Intensifier tubes (night vision) - Marine Corps Logistics Base, Barstow, CA.

(4) Terminate military construction projects identified in paragraph 2e(4).

(5) Reassign the Army tactical missile system (ATACMS) depot level maintenance and stockpile reliability program efforts from ANAD to LEAD using existing facilities.

(6) Select LEAD, the consolidated depot for tactical missiles, the pilot site for the proposed Defense Business Operations Fund (DBOF) program.

WEAPON SYSTEM MATRIX
SOR ACTION

PROGRAM CHARACTERISTICS				REPAIR PROGRAM			ACTION	SAVINGS DATA					
A	B	C	D	E	F	G	H	I					
ITEM	SERVICE USER LEAD(L)	NON-CORE(NC) CORE(C) ABOVE CORE(AC)	UNITS PER YEAR	SOR	ANNUAL WORKLOAD (DLH-K)	ANNUAL BUSINESS BASE ($M)	CONS,I/S OR P/PC DECISION (CONS-FY) (I/S-FY) (P/PC-FY)	PROJECTED SAVINGS ($M)					
								01	02	03	04	05	TOTAL
STANDARD	N(L)		N/A	IH	7	.5	N/A					0	0
				SL	144	10.3	I/S			1.8	3.6	3.6	9.0
				MOTOROLA	23	2.7	P/PC				.5	.9	1.4
				RAYTH/ GEN DY	122	14.6	P/PC				2.6	5.1	7.7

PROGRAM CHARACTERISTICS				REPAIR PROGRAM			ACTION	SAVINGS DATA					
A	B	C	D	E	F	G	H	I					
ITEM	SERVICE USER LEAD(L)	NON-CORE(NC) CORE(C) ABOVE CORE(AC)	UNITS PER YEAR	SOR	ANNUAL WORKLOAD (DLH-K)	ANNUAL BUSINESS BASE ($M)	CONS,I/S OR P/PC DECISION (CONS-FY) (I/S-FY) (P/PC-FY)	PROJECTED SAVINGS ($M)					
								01	02	03	04	05	TOTAL
SIDEARM	N(L)		N/A	FORD	1.2	.1	P/PC					.02	.02

WEAPON SYSTEM MATRIX
SOR ACTION

PROGRAM CHARACTERISTICS				REPAIR PROGRAM			ACTION	SAVINGS DATA					
A	B	C	D	E	F	G	H	I					
ITEM	SERVICE USER LEAD(L)	NON-CORE(NC) CORE(C) ABOVE CORE(AC)	UNITS PER YEAR	SOR	ANNUAL WORKLOAD (DLH-K)	ANNUAL BUSINESS BASE ($M)	CONS,I/S OR P/PC DECISION (CONS-FY) (I/S-FY) (P/PC-FY)	PROJECTED SAVINGS ($M)					
								81	82	83	84	85	TOTAL
I LEVEL SURFACE	N(L)		N/A	YO	77	2.3	CONS		.1	.2	.2	.2	.7
				WC	47	3.0	N/A						0
				SL	78	2.7	N/A						0
				SO	64	2.7	CONS		.1	.3	.3	.3	1.0

PROGRAM CHARACTERISTICS				REPAIR PROGRAM			ACTION	SAVINGS DATA					
A	B	C	D	E	F	G	H	I					
ITEM	SERVICE USER LEAD(L)	NON-CORE(NC) CORE(C) ABOVE CORE(AC)	UNITS PER YEAR	SOR	ANNUAL WORKLOAD (DLH-K)	ANNUAL BUSINESS BASE ($M)	CONS,I/S OR P/PC DECISION (CONS-FY) (I/S-FY) (P/PC-FY)	PROJECTED SAVINGS ($M)					
								81	82	83	84	85	TOTAL
I LEVEL AIR	N(L)		N/A	YO	109	4.8	N/A					0	0
				SL	85	3.6	N/A					0	0
				SO	46	2.3	CONS				.1	.2	.3

WEAPON SYSTEM MATRIX
SOR ACTION

PROGRAM CHARACTERISTICS				REPAIR PROGRAM			ACTION	SAVINGS DATA					
A	B	C	D	E	F	G	H	I					
ITEM	SERVICE USER LEAD(L)	NON-CORE(NC) CORE(C) ABOVE CORE(AC)	UNITS PER YEAR	SOR	ANNUAL WORKLOAD (DLH-K)	ANNUAL BUSINESS BASE ($M)	CONS,I/S OR P/PC DECISION (CONS-FY) (I/S-FY) (P/PC-FY)	PROJECTED SAVINGS ($M)					
								01	02	03	04	05	TOTAL
SPARROW	N(L)		N/A	AL	74.2	4.6	I/S			.8	1.6	1.6	4.0
				IH	3.4	.2	N/A					0	0
	F		N/A	AL	47.3	2.9	I/S			.5	1.0	1.0	2.5

PROGRAM CHARACTERISTICS				REPAIR PROGRAM			ACTION	SAVINGS DATA					
A	B	C	D	E	F	G	H	I					
ITEM	SERVICE USER LEAD(L)	NON-CORE(NC) CORE(C) ABOVE CORE(AC)	UNITS PER YEAR	SOR	ANNUAL WORKLOAD (DLH-K)	ANNUAL BUSINESS BASE ($M)	CONS,I/S OR P/PC DECISION (CONS-FY) (I/S-FY) (P/PC-FY)	PROJECTED SAVINGS ($M)					
								01	02	03	04	05	TOTAL
SIDEWINDER	N(L)		N/A	NF	14.6	2.3	I/S				.4	.8	1.2
				IH	3.4	.2	N/A				0	0	0
	F		N/A	FH	92.5	9.5	I/S				1.7	3.3	5.0
				NA	5.5	.4	N/A				0	0	0
				CR	12.7	1.7	I/S				.3	.6	.9

WEAPON SYSTEM MATRIX
SOR ACTION

PROGRAM CHARACTERISTICS				REPAIR PROGRAM			ACTION	SAVINGS DATA					
A	B	C	D	E	F	G	H	I					
ITEM	SERVICE USER LEAD(L)	NON-CORE(NC) CORE(C) ABOVE CORE(AC)	UNITS PER YEAR	SOR	ANNUAL WORKLOAD (DLH-K)	ANNUAL BUSINESS BASE ($M)	CONS,I/S OR P/PC DECISION (CONS-FY) (I/S-FY) (P/PC-FY)	PROJECTED SAVINGS ($M)					
								01	02	03	04	05	TOTAL
MAVERICK	F(L)		N/A	FH	88.5	6.4	I/S			1.1	2.2	2.2	5.5

PROGRAM CHARACTERISTICS				REPAIR PROGRAM			ACTION	SAVINGS DATA					
A	B	C	D	E	F	G	H	I					
ITEM	SERVICE USER LEAD(L)	NON-CORE(NC) CORE(C) ABOVE CORE(AC)	UNITS PER YEAR	SOR	ANNUAL WORKLOAD (DLH-K)	ANNUAL BUSINESS BASE ($M)	CONS,I/S OR P/PC DECISION (CONS-FY) (I/S-FY) (P/PC-FY)	PROJECTED SAVINGS ($M)					
								01	02	03	04	05	TOTAL
SHRIKE	N(L)		N/A	AL	.8	.05	I/S			.02	.02	.02	.06
	F		N/A	AL	14.2	.9	I/S		.2	.3	.3	.3	1.1

WEAPON SYSTEM MATRIX
SOR ACTION

PROGRAM CHARACTERISTICS				REPAIR PROGRAM			ACTION	SAVINGS DATA					
A	B	C	D	E	F	G	H	I					
ITEM	SERVICE USER LEAD(L)	NON-CORE(NC) CORE(C) ABOVE CORE(AC)	UNITS PER YEAR	SOR	ANNUAL WORKLOAD (DLH-K)	ANNUAL BUSINESS BASE ($M)	CONS,I/S OR P/PC DECISION (CONS-FY) (I/S-FY) (P/PC-FY)	PROJECTED SAVINGS ($M)					
								01	02	03	04	05	TOTAL
WALLEYE	N(L)		N/A	MM	15.4	1.6	P/PC			.3	.6	.6	1.5

PROGRAM CHARACTERISTICS				REPAIR PROGRAM			ACTION	SAVINGS DATA					
A	B	C	D	E	F	G	H	I					
ITEM	SERVICE USER LEAD(L)	NON-CORE(NC) CORE(C) ABOVE CORE(AC)	UNITS PER YEAR	SOR	ANNUAL WORKLOAD (DLH-K)	ANNUAL BUSINESS BASE ($M)	CONS,I/S OR P/PC DECISION (CONS-FY) (I/S-FY) (P/PC-FY)	PROJECTED SAVINGS ($M)					
								01	02	03	04	05	TOTAL
HARPOON	N(L)		N/A	MDAC	50.6	6.4	P/PC				1.1	2.2	3.3
	F		N/A	MDAC	7.9	1.0	P/PC				.2	.4	.6

WEAPON SYSTEM MATRIX
SOR ACTION

PROGRAM CHARACTERISTICS				REPAIR PROGRAM			ACTION	SAVINGS DATA					
A	B	C	D	E	F	G	H	I					
ITEM	SERVICE USER LEAD(L)	NON-CORE(NC) CORE(C) ABOVE CORE(AC)	UNITS PER YEAR	SOR	ANNUAL WORKLOAD (DLH-K)	ANNUAL BUSINESS BASE ($M)	CONS,I/S OR P/PC DECISION (CONS-FY) (I/S-FY) (P/PC-FY)	PROJECTED SAVINGS ($M)					
								01	02	03	04	05	TOTAL
HARM	N(L)		N/A	T.I.	2.9	.4	P/PC					.1	.1
	F		N/A	T.I.	16.2	2.0	P/PC					.4	.4

PROGRAM CHARACTERISTICS				REPAIR PROGRAM			ACTION	SAVINGS DATA					
A	B	C	D	E	F	G	H	I					
ITEM	SERVICE USER LEAD(L)	NON-CORE(NC) CORE(C) ABOVE CORE(AC)	UNITS PER YEAR	SOR	ANNUAL WORKLOAD (DLH-K)	ANNUAL BUSINESS BASE ($M)	CONS,I/S OR P/PC DECISION (CONS-FY) (I/S-FY) (P/PC-FY)	PROJECTED SAVINGS ($M)					
								01	02	03	04	05	TOTAL
SKIPPER	N(L)		N/A	AL	1.5	.09	I/S		.02	.03	.03	.03	.11

WEAPON SYSTEM MATRIX
SOR ACTION

PROGRAM CHARACTERISTICS				REPAIR PROGRAM			ACTION	SAVINGS DATA					
A ITEM	B SERVICE USER LEAD(L)	C NON-CORE(NC) CORE(C) ABOVE CORE(AC)	D UNITS PER YEAR	E SOR	F ANNUAL WORKLOAD (DLH-K)	G ANNUAL BUSINESS BASE ($M)	H CONS,I/S OR P/PC DECISION (CONS-FY) (I/S-FY) (P/PC-FY)	I PROJECTED SAVINGS ($M)					
								91	92	93	94	95	TOTAL
PHOENIX	N(L)		N/A	AL	26.3	1.6	I/S		.3	.6	.6	.6	2.1

WEAPON SYSTEM MATRIX
SOR ACTION

PROGRAM CHARACTERISTICS				REPAIR PROGRAM			ACTION	SAVINGS DATA					
A	B	C	D	E	F	G	H	I					
ITEM	SERVICE USER LEAD(L)	NON-CORE(NC) CORE(C) ABOVE CORE(AC)	UNITS PER YEAR	SOR	ANNUAL WORKLOAD (DLH-K)	ANNUAL BUSINESS BASE ($M)	CONS,I/S OR P/PC DECISION (CONS-FY) (I/S-FY) (P/PC-FY)	PROJECTED SAVINGS ($M)					
								01	02	03	04	05	TOTAL
MISSILE													
HAWK	A(L)		1,169	RE	49,604	2.36	N/A						
	M		847	RE	24,647	1.17	N/A						

PROGRAM CHARACTERISTICS				REPAIR PROGRAM			ACTION	SAVINGS DATA					
A	B	C	D	E	F	G	H	I					
ITEM	SERVICE USER LEAD(L)	NON-CORE(NC) CORE(C) ABOVE CORE(AC)	UNITS PER YEAR	SOR	ANNUAL WORKLOAD (DLH-K)	ANNUAL BUSINESS BASE ($M)	CONS,I/S OR P/PC DECISION (CONS-FY) (I/S-FY) (P/PC-FY)	PROJECTED SAVINGS ($M)					
								01	02	03	04	05	TOTAL
MISSILE													
HAWK	M		**		32,222	2.9(M)	P/PC					.507	.507
	A		**	RAYTH	53,333	4.8(A)	(FY95)					.840	.840

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WEAPON SYSTEM MATRIX
SOR ACTION

PROGRAM CHARACTERISTICS				REPAIR PROGRAM			ACTION	SAVINGS DATA					
A	B	C	D	E	F	G	H	I					
ITEM	SERVICE USER LEAD(L)	NON-CORE(NC) CORE(C) ABOVE CORE(AC)	UNITS PER YEAR	SOR	ANNUAL WORKLOAD (DLH-K)	ANNUAL BUSINESS BASE ($M)	CONS,I/S OR P/PC DECISION (CONS-FY) (I/S-FY) (P/PC-FY)	PROJECTED SAVINGS ($M)					
								01	02	03	04	05	TOTAL
GRD SUP EQ													
HAWK	A(L)		**	LK	691,380	47.0	N/A						
	M		**	BB	152,804	10.4	N/A						

PROGRAM CHARACTERISTICS				REPAIR PROGRAM			ACTION	SAVINGS DATA					
A	B	C	D	E	F	G	H	I					
ITEM	SERVICE USER LEAD(L)	NON-CORE(NC) CORE(C) ABOVE CORE(AC)	UNITS PER YEAR	SOR	ANNUAL WORKLOAD (DLH-K)	ANNUAL BUSINESS BASE ($M)	CONS,I/S OR P/PC DECISION (CONS-FY) (I/S-FY) (P/PC-FY)	PROJECTED SAVINGS ($M)					
								01	02	03	04	05	TOTAL
GRD SUP EQ													
HAWK	A(L)		**	TB	59,439	2.5	CONS (FY94)				.437	.875	1.312
	A(L)		**	RAYTH	25,555	2.3	P/PC					.402	.402

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WEAPON SYSTEM MATRIX
SOR ACTION

PROGRAM CHARACTERISTICS				REPAIR PROGRAM			ACTION	SAVINGS DATA					
A	B	C	D	E	F	G	H	I					
ITEM	SERVICE USER LEAD(L)	NON-CORE(NC) CORE(C) ABOVE CORE(AC)	UNITS PER YEAR	SOR	ANNUAL WORKLOAD (DLH-K)	ANNUAL BUSINESS BASE ($M)	CONS,I/S OR P/PC DECISION (CONS-FY) (I/S-FY) (P/PC-FY)	PROJECTED SAVINGS ($M)					
								01	02	03	04	05	TOTAL
MISSILE													
PATRIOT	A(L)		196	RE	117,969	5.6	N/A						

PROGRAM CHARACTERISTICS				REPAIR PROGRAM			ACTION	SAVINGS DATA					
A	B	C	D	E	F	G	H	I					
ITEM	SERVICE USER LEAD(L)	NON-CORE(NC) CORE(C) ABOVE CORE(AC)	UNITS PER YEAR	SOR	ANNUAL WORKLOAD (DLH-K)	ANNUAL BUSINESS BASE ($M)	CONS,I/S OR P/PC DECISION (CONS-FY) (I/S-FY) (P/PC-FY)	PROJECTED SAVINGS ($M)					
								01	02	03	04	05	TOTAL
GRD SUP EQ													
PATRIOT	A(L)		**	LK	192,703	13.1	N/A						
			**	RAYTH	311,111	28.0	P/PC (FY95)					4.9	4.9

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WEAPON SYSTEM MATRIX
SOR ACTION

PROGRAM CHARACTERISTICS				REPAIR PROGRAM			ACTION	SAVINGS DATA					
A ITEM	B SERVICE USER LEAD(L)	C NON-CORE(NC) CORE(C) ABOVE CORE(AC)	D UNITS PER YEAR	E SOR	F ANNUAL WORKLOAD (DLH-K)	G ANNUAL BUSINESS BASE ($M)	H CONS,I/S OR P/PC DECISION (CONS-FY) (I/S-FY) (P/PC-FY)	I PROJECTED SAVINGS ($M)					
								01	02	03	04	05	TOTAL
MISSILE CHAPARRAL	A(L)		287	RE	98,468	6.3	CONS (FY94)				1.10	2.20	3.30

PROGRAM CHARACTERISTICS				REPAIR PROGRAM			ACTION	SAVINGS DATA					
A ITEM	B SERVICE USER LEAD(L)	C NON-CORE(NC) CORE(C) ABOVE CORE(AC)	D UNITS PER YEAR	E SOR	F ANNUAL WORKLOAD (DLH-K)	G ANNUAL BUSINESS BASE ($M)	H CONS,I/S OR P/PC DECISION (CONS-FY) (I/S-FY) (P/PC-FY)	I PROJECTED SAVINGS ($M)					
								01	02	03	04	05	TOTAL
GRD SUP EQ CHAPARRAL	A(L)		**	RE	266,330	16.4	CONS (FY94)				2.87	5.74	8.61

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WEAPON SYSTEM MATRIX
SOR ACTION

PROGRAM CHARACTERISTICS				REPAIR PROGRAM			ACTION	SAVINGS DATA					
A ITEM	B SERVICE USER LEAD(L)	C NON-CORE(NC) CORE(C) ABOVE CORE(AC)	D UNITS PER YEAR	E SOR	F ANNUAL WORKLOAD (DLH-K)	G ANNUAL BUSINESS BASE ($M)	H CONS.I/S OR P/PC DECISION (CONS-FY) (I/S-FY) (P/PC-FY)	I PROJECTED SAVINGS ($M)					
								91	92	93	94	95	TOTAL
MISSILE LANCE	A(L)		128	AI	26,580	1.96	CONS (FY93)			.34	.68	.68	1.7

PROGRAM CHARACTERISTICS				REPAIR PROGRAM			ACTION	SAVINGS DATA					
A ITEM	B SERVICE USER LEAD(L)	C NON-CORE(NC) CORE(C) ABOVE CORE(AC)	D UNITS PER YEAR	E SOR	F ANNUAL WORKLOAD (DLH-K)	G ANNUAL BUSINESS BASE ($M)	H CONS.I/S OR P/PC DECISION (CONS-FY) (I/S-FY) (P/PC-FY)	I PROJECTED SAVINGS ($M)					
								91	92	93	94	95	TOTAL
GRD SUP EQ LANCE	A(L)		**	AI	26,766	1.9	CONS (FY93)			.332	.665	.665	1.662

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WEAPON SYSTEM MATRIX
SOR ACTION

PROGRAM CHARACTERISTICS				REPAIR PROGRAM			ACTION	SAVINGS DATA					
A ITEM	B SERVICE USER LEAD(L)	C NON-CORE(NC) CORE(C) ABOVE CORE(AC)	D UNITS PER YEAR	E SOR	F ANNUAL WORKLOAD (DLH-K)	G ANNUAL BUSINESS BASE ($M)	H CONS.I/S OR P/PC DECISION (CONS-FY) (I/S-FY) (P/PC-FY)	I PROJECTED SAVINGS ($M)					
								01	02	03	04	05	TOTAL
MISSILE													
TOW	A(L)		8536	AI	16,273	1.2	CONS (FY93)			.21	.42	.42	1.05

PROGRAM CHARACTERISTICS				REPAIR PROGRAM			ACTION	SAVINGS DATA					
A ITEM	B SERVICE USER LEAD(L)	C NON-CORE(NC) CORE(C) ABOVE CORE(AC)	D UNITS PER YEAR	E SOR	F ANNUAL WORKLOAD (DLH-K)	G ANNUAL BUSINESS BASE ($M)	H CONS.I/S OR P/PC DECISION (CONS-FY) (I/S-FY) (P/PC-FY)	I PROJECTED SAVINGS ($M)					
								01	02	03	04	05	TOTAL
GRD SUP EQ													
TOW	A(L)		**	AI	206,130	15.2	CONS (FY93)			2.66	5.32	5.32	13.3

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WEAPON SYSTEM MATRIX
SOR ACTION

PROGRAM CHARACTERISTICS				REPAIR PROGRAM			ACTION	SAVINGS DATA					
A ITEM	B SERVICE USER LEAD(L)	C NON-CORE(NC) CORE(C) ABOVE CORE(AC)	D UNITS PER YEAR	E SOR	F ANNUAL WORKLOAD (DLH-K)	G ANNUAL BUSINESS BASE ($M)	H CONS,I/S OR P/PC DECISION (CONS-FY) (I/S-FY) (P/PC-FY)	I PROJECTED SAVINGS ($M)					
								01	02	03	04	05	TOTAL
MISSILE HELLFIRE	A(L)		**	MARTIN MARIETTA	2,222	.2	P/PC (FY95)					.035	.035

PROGRAM CHARACTERISTICS				REPAIR PROGRAM			ACTION	SAVINGS DATA					
A ITEM	B SERVICE USER LEAD(L)	C NON-CORE(NC) CORE(C) ABOVE CORE(AC)	D UNITS PER YEAR	E SOR	F ANNUAL WORKLOAD (DLH-K)	G ANNUAL BUSINESS BASE ($M)	H CONS,I/S OR P/PC DECISION (CONS-FY) (I/S-FY) (P/PC-FY)	I PROJECTED SAVINGS ($M)					
								01	02	03	04	05	TOTAL
MISSILE STINGER	A(L)		**	GEN DY	47,777	4.32	P/PC (FY95)					.756	.756

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WEAPON SYSTEM MATRIX
SOR ACTION

PROGRAM CHARACTERISTICS				REPAIR PROGRAM			ACTION	SAVINGS DATA					
A ITEM	B SERVICE USER LEAD(L)	C NON-CORE(NC) CORE(C) ABOVE CORE(AC)	D UNITS PER YEAR	E SOR	F ANNUAL WORKLOAD (DLH-K)	G ANNUAL BUSINESS BASE ($M)	H CONS,I/S OR P/PC DECISION (CONS-FY) (I/S-FY) (P/PC-FY)	I PROJECTED SAVINGS ($M)					
								01	02	03	04	05	TOTAL
GRD SUP EQ (ATE) LCSS	A(L)		**	AI	43,396	3.2	CONS (FY93)			.56	1.12	1.12	2.8

PROGRAM CHARACTERISTICS				REPAIR PROGRAM			ACTION	SAVINGS DATA					
A ITEM	B SERVICE USER LEAD(L)	C NON-CORE(NC) CORE(C) ABOVE CORE(AC)	D UNITS PER YEAR	E SOR	F ANNUAL WORKLOAD (DLH-K)	G ANNUAL BUSINESS BASE ($M)	H CONS,I/S OR P/PC DECISION (CONS-FY) (I/S-FY) (P/PC-FY)	I PROJECTED SAVINGS ($M)					
								01	02	03	04	05	TOTAL
GRD SUP EQ DRAGON	A(L)		**	AI	44,751	3.3	CONS (FY93)			.57	1.15	1.15	2.87

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WEAPON SYSTEM MATRIX
SOR ACTION

PROGRAM CHARACTERISTICS				REPAIR PROGRAM			ACTION	SAVINGS DATA					
A	B	C	D	E	F	G	H	I					
ITEM	SERVICE USER LEAD(L)	NON-CORE(NC) CORE(C) ABOVE CORE(AC)	UNITS PER YEAR	SOR	ANNUAL WORKLOAD (DLH-K)	ANNUAL BUSINESS BASE ($M)	CONS,I/S OR P/PC DECISION (CONS-FY) (I/S-FY) (P/PC-FY)	PROJECTED SAVINGS ($M)					
								91	92	93	94	95	TOTAL
GRD SUP EQ													
MLRS	A(L)		**	BENDIX	28,888	2.6	P/PC (FY95)					.455	.455
	A(L)		**	RE	134,417	8.6	CONS (FY92)		1.5	3.0	3.0	3.0	10.5
	A(L)		**	NORDEN	35,555	3.2	P/PC (FY95)					.56	.56

PROGRAM CHARACTERISTICS				REPAIR PROGRAM			ACTION	SAVINGS DATA					
A	B	C	D	E	F	G	H	I					
ITEM	SERVICE USER LEAD(L)	NON-CORE(NC) CORE(C) ABOVE CORE(AC)	UNITS PER YEAR	SOR	ANNUAL WORKLOAD (DLH-K)	ANNUAL BUSINESS BASE ($M)	CONS,I/S OR P/PC DECISION (CONS-FY) (I/S-FY) (P/PC-FY)	PROJECTED SAVINGS ($M)					
								91	92	93	94	95	TOTAL
GRD SUP EQ													
APACHE-HELLFIRE FIRE CONTROL	A(L)		**	McDON DOUGLAS	128,888	11.6	P/PC (FY95)					2.03	2.03

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WEAPON SYSTEM MATRIX
SOR ACTION

PROGRAM CHARACTERISTICS				REPAIR PROGRAM			ACTION	SAVINGS DATA					
A ITEM	B SERVICE USER LEAD(L)	C NON-CORE(NC) CORE(C) ABOVE CORE(AC)	D UNITS PER YEAR	E SOR	F ANNUAL WORKLOAD (DLH-K)	G ANNUAL BUSINESS BASE ($M)	H CONS,I/S OR P/PC DECISION (CONS-FY) (I/S-FY) (P/PC-FY)	I PROJECTED SAVINGS ($M)					
								01	02	03	04	05	TOTAL
<u>GRD SUP EQ</u> TOW BRADLEY	A(L)		**	HUGHES	57,777	5.2	P/PC (FY94)				.91	1.82	2.73

PROGRAM CHARACTERISTICS				REPAIR PROGRAM			ACTION	SAVINGS DATA					
A ITEM	B SERVICE USER LEAD(L)	C NON-CORE(NC) CORE(C) ABOVE CORE(AC)	D UNITS PER YEAR	E SOR	F ANNUAL WORKLOAD (DLH-K)	G ANNUAL BUSINESS BASE ($M)	H CONS,I/S OR P/PC DECISION (CONS-FY) (I/S-FY) (P/PC-FY)	I PROJECTED SAVINGS ($M)					
								01	02	03	04	05	TOTAL
<u>GRD SUP EQ</u> NIGHT SIGHTS	A(L)		**	AD	197,059	12.6	CONS (FY94)				2.21	4.41	6.62

**IT IS NOT FEASIBLE TO INDICATE UNITS DUE TO VARIOUS ITEMS AND CONFIGURATION BEING REPAIRED

WEAPON SYSTEM MATRIX
SOR ACTION

PROGRAM CHARACTERISTICS				REPAIR PROGRAM			ACTION	SAVINGS DATA					
A	B	C	D	E	F	G	H	I					
ITEM	SERVICE USER LEAD(L)	NON-CORE(NC) CORE(C) ABOVE CORE(AC)	UNITS PER YEAR	SOR	ANNUAL WORKLOAD (DLH-K)	ANNUAL BUSINESS BASE ($M)	CONS.I/S OR P/PC DECISION (CONS-FY) (I/S-FY) (P/PC-FY)	PROJECTED SAVINGS ($M)					
								91	92	93	94	95	TOTAL
GRD SUP EQ MSL SYSTEMS (ALL OTHER CONTRACTORS)	A(L)		**	ALL OTHER CONTR	102,222	9.2	P/PC (FY94)				1.61	3.22	4.83

**IT IS NOT FEASIBLE TO INDICATE UNITS DUE TO VARIOUS ITEMS AND CONFIGURATION BEING REPAIRED

PROPOSAL FOR CONSOLIDATION OF TRI-SERVICE WEAPONS AND COMBAT SYSTEMS PACKAGING, HANDLING, STORAGE, AND TRANSPORTABILITY FUNCTIONS

1. Objective: To assign technology monitoring and process improvement functions to one organization in order to avoid duplication and to more effectively accomplish Weapons Combat Systems Packaging, Handling, Storage, and Transportability (PHS&T) functions within the Department of Defense (DOD).

2. Facts:

A. The Army, Navy (including the Marines), and Air Force each is responsible for the PHS&T function within its respective service.

B. There is no fixed organization with the authority and responsibility to set policy and coordinate tri-service PHS&T efforts. The Joint Ordnance Commanders Sub-Group for Packaging Handling and Logistics (JOCSG PHL) was established to review redundant tri-service PHS&T efforts and evaluate new technologies at the working level. However, the Sub-Group meets on a semi-annual basis and members frequently change. As a result the Sub-Group is able to deal with only the highest priorities while merely touching upon others. The group does not have authority to implement a policy which could enhance efficiency through consolidation and the establishment of single service centers of excellence. Representative members can be protective of their own service interests and may be reluctant to eliminate functions or transfer functions which may be more efficiently accomplished by another service.

3. Discussion:

A. Designation/establishment of a single organization to provide policy and oversee the execution of the PHS&T function within DOD would assist in resolving the fragmentation problem which presently exists. Monetary savings and improved efficiency would be gained through elimination of redundant facilities, designs, tests, procedures and documentation among the services. For example:

(1) Car loading/truck loading testing and documentation could be consolidated.

(2) Duplication of container and handling equipment testing facilities could be reduced.

(3) Container acquisition could be streamlined and consolidated.

(4) The use by more than one service of the same basic commodity would not result in different container designs for that commodity.

(5) Maintenance philosophies/plans could be reviewed and standardized.

(6) Design and maintenance technologies could be exchanged.

(7) Refurbishment procedures/documentation could be reduced.

(8) There would be a single DOD voice on civilian regulatory issues, including those proposed by DOT, EPA, and the UN.

(9) Sharing of data, e.g., Container Design Retrieval System, would be enhanced.

(10) Duplicative effort in management of equipment could be reduced.

(11) A single location would be provided to which industry could turn for answers to its PHS&T questions.

B. The organization established must be at a level where policies and procedures established by the organization are binding upon all services. For this reason, the organization should be a separate DOD office activity.

C. The policy and oversight organization would benefit from being collocated with a service organization which is presently responsible for the PHS&T function within that service.

(1) Collocation would provide readily available design, engineering, acquisition, and maintenance expertise to the policy making organization. Such expertise would be used to review, verify, and/or certify policies and procedures under consideration or promulgated. In essence this organization would be responsible for such things as technical and process improvement technology, certifying container maintenance and repair activities, and providing technical expertise in the packaging arena.

(2) Location at NWS Earle, Colts Neck, NJ would have the following advantages:

(a) Proximity to major service organizations dealing with PHS&T.

(b) NWS Earle already functions as the Program Manager for PHS&T for the Naval Sea Systems Command and as the Conventional Ordnance Systems Manager for the Naval Air Systems Command.

(c) NWS Earle is the only activity within DOD that has complete in-house facilities/resources/capabilities at one location; thus it is capable of carrying a project from the R&DT&E stage through acquisition to In Service Engineering (ISE).

(d) NWS Earle currently functions as POC for Performance Oriented Packaging (POP) for USN.

(e) NWS Earle has in-house design and test facilities.

(f) NWS Earle has tri-service lead in MIL-STD-648, Design Criteria for Specialized Shipping Containers, and MIL-STD-1365, General Design Criteria for Handling Equipment Associated with Weapons and Related Items.

(g) NWS Earle interfaces with DOT/UN/EPA on all Navy weapons packaging.

D. Assuming that the organization will be a DOD activity located at NWS Earle, a proposed organization is attached at Enclosure 1. The Director for DOD PHS&T would set policy and coordinate tri-service PHS&T efforts. The Deputy Director for PHS&T would act in the Directors absence. In addition, he would be responsible to the Director for overseeing the maintenance functions performed by the service depots.

E. The DOD organization would include representatives or liaison officers from all services.

(1) These liaison officers would be responsible for providing input to the policies and procedures being developed as well as carrying technology improvements back to their respective services. If the DOD organization is collocated with a service PHS&T activity, the head of that service PHS&T activity could function as that services liaison officer.

(2) Current Army, Navy and Air Force PHS&T activities would remain in place, at least initially.

F. A DOD PHS&T Policy Council, consisting of the service liaison officers as well as the Deputy Director for Depot Maintenance, would provide advice and recommendations to the Director for PHS&T.

G. Increased staffing requirements are as follow:

(1)	Office of Director for DOD PHS&T	- 3	
(2)	Office of Deputy Director for PHS&T and Depot Maintenance	- 5	
(3)	Army LNO	- 3	(Funded by Army)
(4)	AF LNO	- 3	(Funded by AF)
(5)	Navy PM (Increase only)	- 1	(Funded by Navy)
	Total	- 15	

H. Cost to implement:

(1) Increased staffing: 900K
(15 @ 60K)

(2) Travel 200K
Subtotal 1,100K

(3) Facilities: Facilities can be made available at NWS Earle to house and support the proposed DOD activity.

(4) Operating costs:
ISSA 200K
Programmatic 200K
Subtotal 400K

(5) Total Cost = 1500K

I. Milestone Chart to implement is attached at Enclosure 2.

4. Conclusions:

A. The establishment of a central agency for PHS&T functions would improve the execution of those functions, create savings, and enhance efficiency. The results would be:

(1) An increase in functional expertise at some PHS&T activities.

(2) Elimination of a variety of approvals, waivers, etc.

(3) Assurance that all services are receiving the benefits of the latest technology.

(4) Establishment of a single point of accountability to OSD.

(5) Provision of a clearing house for all services, FMS customers, and commercial activities.

B. The agency should be collocated with a service field activity. The most likely location is at NWS Earle since it currently is responsible for most Navy PHS&T.

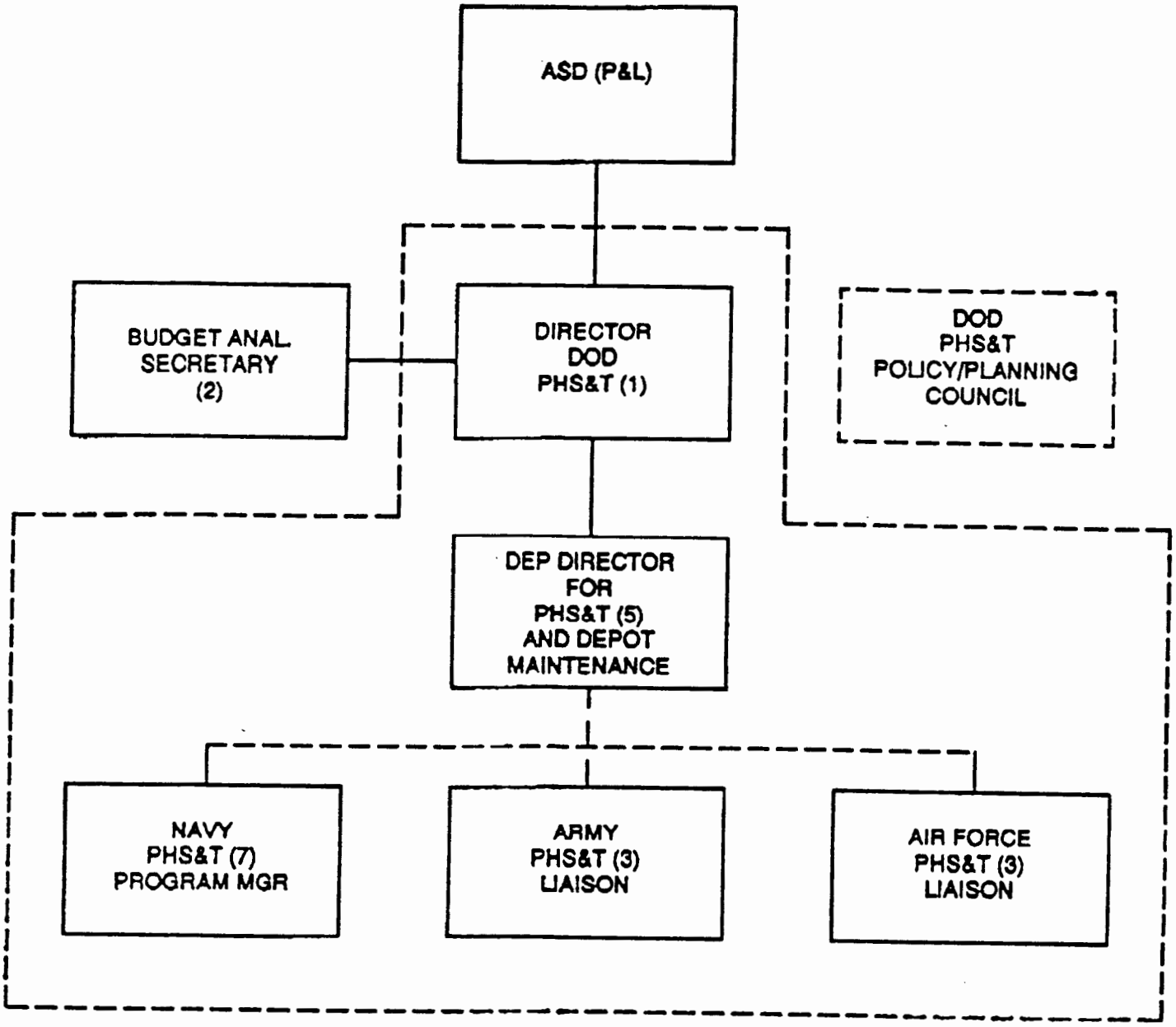
C. The staffing and funding estimates shown are rudimentary. Further study is required to develop detailed facility, staffing, and funding requirements as well as implementation milestones.

5. Recommendations:

A. That a Director for DOD PHS&T be designated, with his office to be established as a tennant activity at NWS Earle, Colts Neck, NJ.

B. That the Director for DOD PHS&T be responsible for establishing policy and procedures relative to the PHS&T functions for the DOD. This responsibility includes that of reviewing and standardizing service policy and procedures.

Organization of Office of Director for DOD PHS&T



POA&M for Consolidation of Tri-Service Packaging, Handling, Storage and Transportability Functions

Phase	Months After Beginning of Implementation Study											
	1	2	3	4	5	6	7	8	9	10	11	12
I Implementation Study Complete		▲										
II DOD Approval Granted for Organization			▲									
III • PHS&T Director Assigned				▲								
• Deputy PHS&T Director Assigned					▲							
• Director Staff Assigned					▲							
• Deputy Director Staff Assigned						▲						
• Army and Airforce Liaison Principals Assigned/ Inplace						▲						
• Army and Airforce Liaison Staff Assigned							▲					
• PHS&T Policy Council Operating							▲					
IV DOD PHS&T Charter Approved									▲			

DEPARTMENT OF THE ARMY
OFFICE OF THE UNDER SECRETARY
WASHINGTON, D.C. 20310-0102

16 DEC 1994

MEMORAND

SUBJECT:

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Lone Star. Letterkenny, however, is a "stand-alone" installation. Closure of the maintenance facilities will still require 18,100 acres of ammunition storage and the asociated staffing to be retained.

- Finally, closing Letterkenny would significantly complicate ongoing consolidation of virtually all tactical missile workload directed by BRAC-93. As you know, this consolidation was directed after DoD submitted its plan to close Letterkenny. Apart from the missile consolidation, arguments for closure today do not seem to be any more compelling than those previously rejected; and in fact, DoD would lose the synergy and efficiencies we hoped to gain by consolidating missile maintenance workload and missile storage. We have examined scenarios which would retain and "enclave" this missile maintenance at Letterkenny while closing the remainder, but these do not appear promising at this point in time.

We will continue our COBRA analysis of these two bases.

cc Reder

Ten Ow

DM1 + DM2

May 19, 1995

Glenn,

I'm faxing a copy of the Executive Summary with the $29M that Hallie Bunk used in her presentation. The $29M was net savings, not the "steady state" of $32M. Any questions please call me at 717-267-9819. Thank You!

Joe

Joseph T. Sgroi

OPTIONAL FORM 99 (7 90)

FAX TRANSMITTAL # of pages ▶ 2

To Glenn Knoepfle	From Joseph T. Sgroi
Dept./Agency	Phone # 717-267-9819
Fax # 703-696-0504	Fax # 717-267-9580

NSN 7540 01-317-7368 5099-101 GENERAL SERVICES ADMINISTRATION

EXECUTIVE SUMMARY

The Assistant Secretary for Defense (Production and Logistics) requested an analysis of the savings and costs of the tactical missile depot level maintenance consolidation at Letterkenny Army Depot (LEAD). The purpose of this analysis is not to revisit that decision, but to review the decision as a "sanity check" that DoD was not making a poor decision based on cost. The original recommendation to consolidate is from the DMRD 908 and supported by the DoD Tactical Missile Study, prepared for the Defense Depot Maintenance Council, 28 January 1991. This consolidation was further directed by the 1991 Base Realignment and Closure Act.

Cost information was gathered at the weapons system level by each service and consolidated for FY93-97. The one-time cost to transition a missile system to LEAD is a non-recurring cost. A differential recurring cost, or savings, is the annual difference in cost at the current source of repair vs. the estimated cost at LEAD. This difference is expressed as a negative (cost) or positive (savings). The original five-year costs and savings in millions of dollars are shown below. A summary of these values is displayed on page 7. Detailed supporting data are shown at Appendix A. It should be noted that the values on page 7 and Appendix A involve a mixture of different year constant and current year dollars depending on when the cost elements originally were estimated and historical information was available.

	Original Estimate
One-Time Non-Recurring Cost	$39.1M
Recurring Savings	$58.1M
Net Savings	$19.0M
Net Savings with Cost Avoidance	$24.5M

There is a one-time military construction cost avoidance of $5.5M. By FY00 all learning curve costs will have dissipated and economies of scale will have been in full effect since FY97. This Steady State, uninflated annual savings will be $31.6M per year. These values are displayed on page 8.

Because of the mixture of different year constant/current dollars, the original estimate values were adjusted to all FY91 constant dollars and then inflated to current dollars. These values are shown below. Appendix B discusses the inflation adjustments and presents attendant summary charts like page 7.

	FY91 Constant Dollars	Current Dollars
One-Time Non-Recurring Cost	$36.7M	$41.8M
Recurring Savings	$58.1M	$70.8M
Net Savings	$21.4M	$29.0M
Net Savings with Cost Avoidance	$26.5M	$34.6M

AMSDS-RM-A (AMSDS-SP-R/18 Nov 92) (11-18) 1st End J. Metz/ ext. 8136
SUBJECT: Joint Services Update of the Tactical Missile Maintenance Consolidation Savings and Cost Analysis (Revised 7 Jan 93) (Enclosure 1)

Deputy Chief of Staff for Resource Management 13 JAN 1993

FOR Chief, Strategic Business Office, ATTN: AMSDS-SP-R

1. The analysis has been validated IAW AMC Regulation 37-4.

2. The HQ CA log number assigned to this analysis is CA-93-002, subject: Tac Missile Maint Consol. The POC for this CA is John Metz, ext. 8136

2 Encl

Gerald A. Cuon Jr
for WALTER T. SIMMONS
Deputy Chief of Staff
for Resource Management

VALIDATION FOR JOINT SERVICES UPDATE
OF THE TACTICAL MISSILE MAINTENANCE CONSOLIDATION
SAVINGS AND COST ANALYSIS

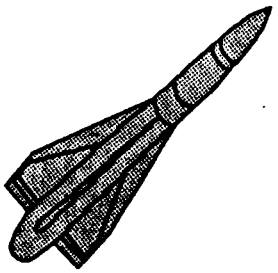
The analysis has been validated IAW AMC Regulation 37-4. We reviewed the analysis for internal logic and completeness as well as methodology used and stated assumptions. Sources of Army data have been identified but not verified due to time constraints.

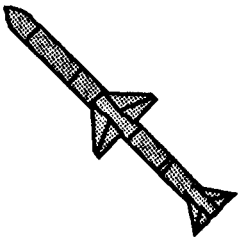
Some mathematical calculations vary within $10.00 of the stated savings and net savings; however, this amount is insignificant and does not materially impact the analysis.

Data from the other services have been accepted as provided. Given the scope and purpose of the analysis it is a reasonable reflection of the costs associated with the tactical missile consolidation.

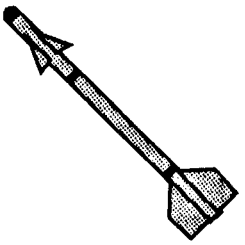
Validation is based on the analysis dated 1 August 1992 as revised 7 January 1993.

DEPOT SYSTEM COMMAND
MGT ANALYSIS DIV DSN 570-8136
ANALYST: John Mutz
SIGNATURE:
DATE 12 Jan 93 EXP DATE 12 Jan 94
LOG NO CA-93-002 VAL LEVEL II
SUPERVISOR'S INT
PRIMARY SOURCE DOCUMENT:
NUMBER DATE
REMARKS:



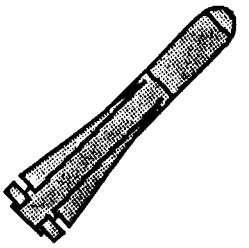


Joint Services Update of the Tactical Missile Maintenance Consolidation Savings and Cost Analysis



1 August 1992

(Revised 7 JAN 93)



COST/SAVINGS SUMMARY (in thousands)

SYSTEM	TRANSITION COSTS	TRANSITION DATE	STEADY STATE ANNUAL SAVINGS	MILCON SAVINGS
SPARROW	1,706.17	FY93	1,412.08	
TOW COBRA	870.24	FY93	697.97	
BFVS TOW	1,135.74	FY93	475.19	
SIDEWINDER	1,314.10	FY93	1,318.02	
MLRS-RRAD	2,842.56	FY93	884.74	
ATACMS	795.98	FY93	179.38	
AVENGER	277.39	FY93	1,056.72	
HELLFIRE	302.52	FY93	175.82	
LCSS	970.26	FY93	301.92	
DRAGON	817.47	FY93	280.61	
SHILLELAGH	365.02	FY93	92.35	
TOW/TOW II	1,311.96	FY94	918.19	
CHAPARRAL	3,223.16	FY94	1,003.18	
PHOENIX	1,514.89	FY94	496.31	
STANDARD	3,397.34	FY94	250.69	
STINGER (CONT)	490.13	FY94	463.77	
AN/TSQ-73	3,112.74	FY95	302.2	
HARM (CONT)	110.95	FY95	290.67	
AVENGER (CONT)	10.0	FY95	5,666.51	
ATAS (CONT)	10.0	FY95	4,327.45	
HELLFIRE (CONT)	10.0	FY95	32.66	
HAWK (CONT)	10.0	FY95	1,910.61	
PATRIOT (CONT)	10.0	FY95	4,435.23	
MAVERICK	7,458.79	FY96	849.71	
MLRS (CONT)	50.0	FY96	2,707.51	
TOW (CONT)	500.0	FY96	1,087.58	
CONSTRUCTION	6,450.0			
MILCON COST AVOIDANCE				5,500.0
TOTALS	39,067.41		31,617.08	5,500.0

Total MILCON and transition costs are one time costs. Total steady state annual savings are recurring each year after the learning curve costs disappear by FY99. MILCON cost avoidance is for an ATACMS facility at Anniston Army Depot (See Methodology, page 16).

LORAL
Vought Systems

Temp (Opr.) 50 – 104°F
Humidity (Opr.) 70 to 80%
Max Alt (Opr.) 8,000 ft

Operations Area.
Required for operating electronic test equipment.

Prepared for:
Army TACMS-BAT
U.S. Army Missile Command
SFAE-MSL-AB-S
Redstone Arsenal, AL 35898-5650

26 April 1995

R. L. Byrd
PREPARED

R. L. Byrd
ILS Manager
Army TACMS

W. I. Smart
APPROVED

W. I. Smart, Manager
Test Ops./Logistics/
Spec. Engr., Army TACMS

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Loral Vought Systems Corporation
P.O.Box 650003
Dallas, TX 75265-0003

1.0 INTRODUCTION

1.1 OBJECTIVE.

The primary objective of the Facilities Design Criteria Plan is to ensure adequate facilities to support Army TACMS Block IA. As support for Block I has been in existence for some time, this document will concentrate on any additional facilities to support Block IA.

1.2 SCOPE.

Facilities criteria addressed herein considers a CONUS depot facility at Letterkenny, Chambersburg, Pennsylvania and an OCONUS depot facility at Weilerbach, Germany. Both facilities are Government owned and Government operated. This document will provide the criteria required to modify these facilities to support Army TACMS Block IA.

1.3 GENERAL CONCEPT.

The depot facility must be capable of a full range of both scheduled and unscheduled maintenance activities. The facility should be sized to support up to 5 GMLAs per month on a single eight (8) hour work shift using up to (6) full time technicians.

2.0 SITE AND LAYOUT

2.1 SITE.

2.1.1 ACCESS REQUIREMENTS.

The GMLA dimensions in inches are 165.8 × 41.5 × 32.6. For Handling GMLAs with a forklift 16 ft. doors will be required. However, the utilization of hoists ,monorails, and transportation dollies can preclude the requirement for doors wider than 8 ft. Personnel doors within either 8 or 16 ft. doors is appropriate. An entrance from both ends of the facility is preferred.

2.1.2 RELATIONSHIPS BETWEEN OUTSIDE ELEMENTS.

With the exception of component repair, maintenance areas do not require cleanliness beyond what is considered normal shop cleanliness. Component repair areas require normal electronic/electrical shop cleanliness IAW MIL-STD-1695. Temperature and humidity control is required. Refer to paragraph 5.5 for temperature and humidity limits.

2.1.3 CLEARANCES.

The facility should have at a minimum 12 ft. clearances throughout all areas except office spaces. Office spaces can be 8 ft. ceilings. Lower ceiling heights can be accommodated by modification of lifting slings and hoists.

2.1.4 PARKING, LOADING, PAVING, ETC.

Parking should be sufficient for vans, pickups, automobiles, trucks and trailers.

2.1.5 EXPLOSIVE HAZARD DATA.

Net explosive weight for quantity distance and hazard classification is as follows:

	Block I	Block IA
GMLA	186.4Kg/1.1E	37.5 Kg/1.1E
Warhead	113.6Kg/1.1D	37.5 Kg/1.1D
Rocket Motor	727.3Kg/1.3C	727.3 Kg/1.3C
Fuze Assembly	94.5Mg/1.4D	94.5 Mg/1.4D
Igniter	50.3G/1.3G	50.3 G/1.3 G

With the exception of the Warhead, Block IA weights and classification are the same as Block I.

2.2 LAYOUT.

2.2.1 FUNCTIONAL ARRANGEMENT OF AREAS.

Figure (1) shows the layout of Letterkenney Army Depot. Figure (2) shows the layout of Wellerbach Army Depot. Both Depots have functioned satisfactorily for Block I and will require only small additions for Block IA. Figures (3) and (4) show the addition of External GPS antennas, Preamplifiers, PLGRs, KYK-13s and additional cable requirements.

2.2.2 TYPE AND SPACE REQUIREMENTS.

Table (1) provides data on the recommended type of space, square footage per space and any significant requirements for the space.

2.2.3 SPECIAL REQUIREMENTS.

The facility will require adequate security for storing classified material up to and including secret.

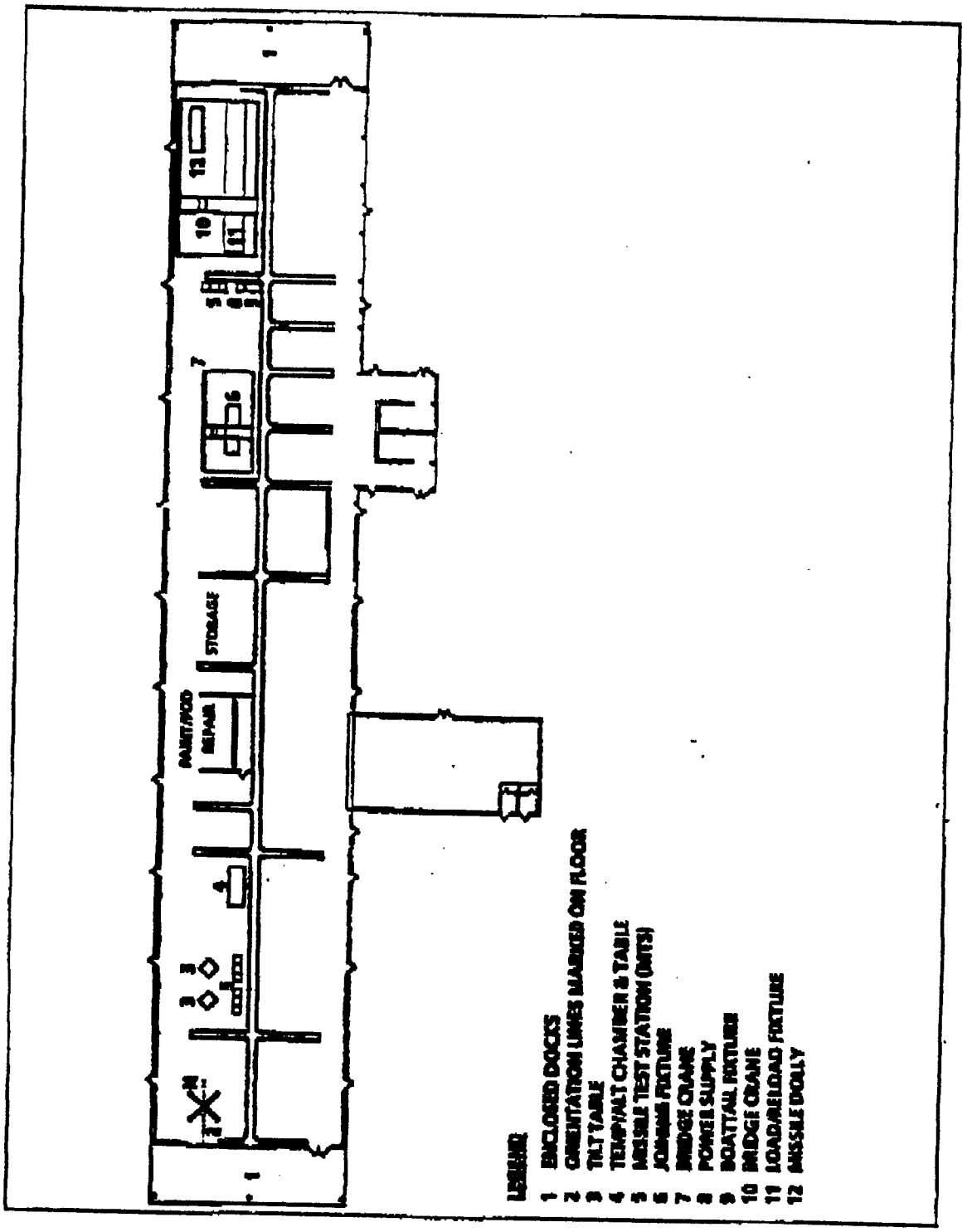

Figure 1 Letterkenny Army Depot Layout

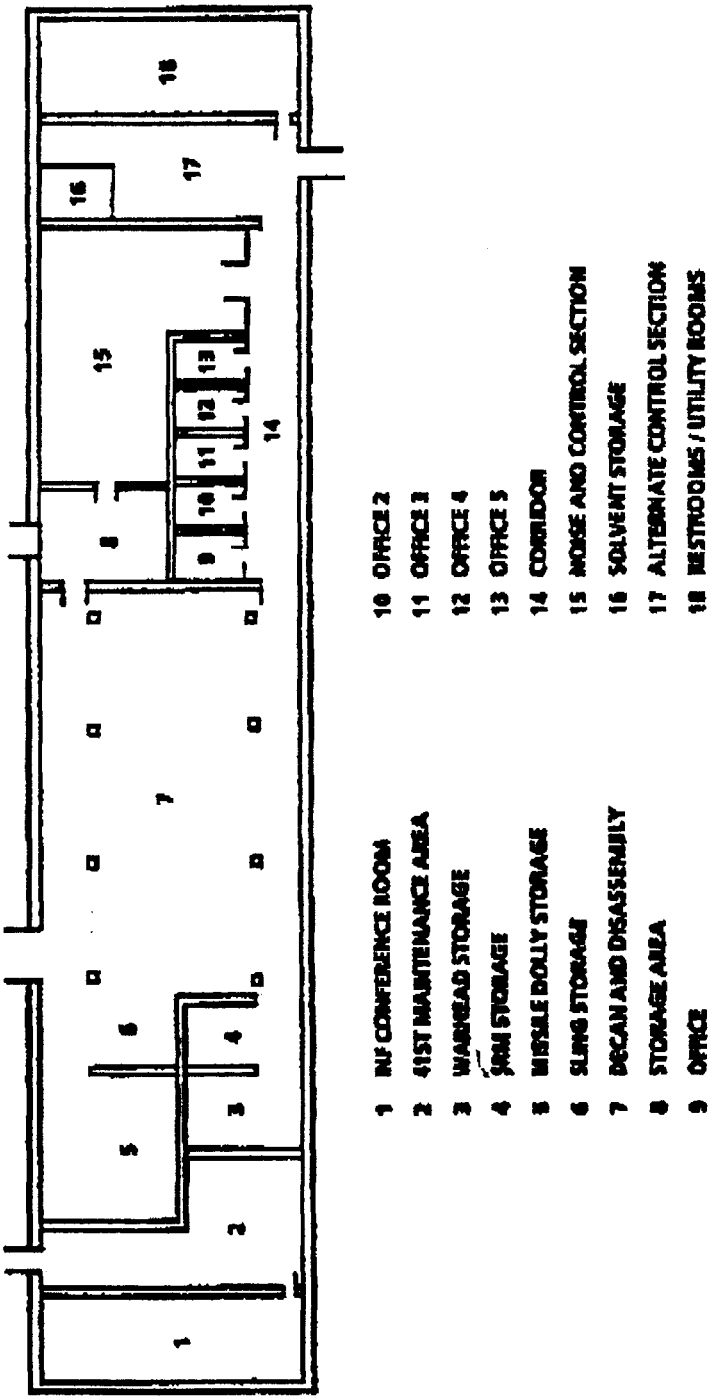

Figure 2 Weilerbach ATMF Building 630 Layout

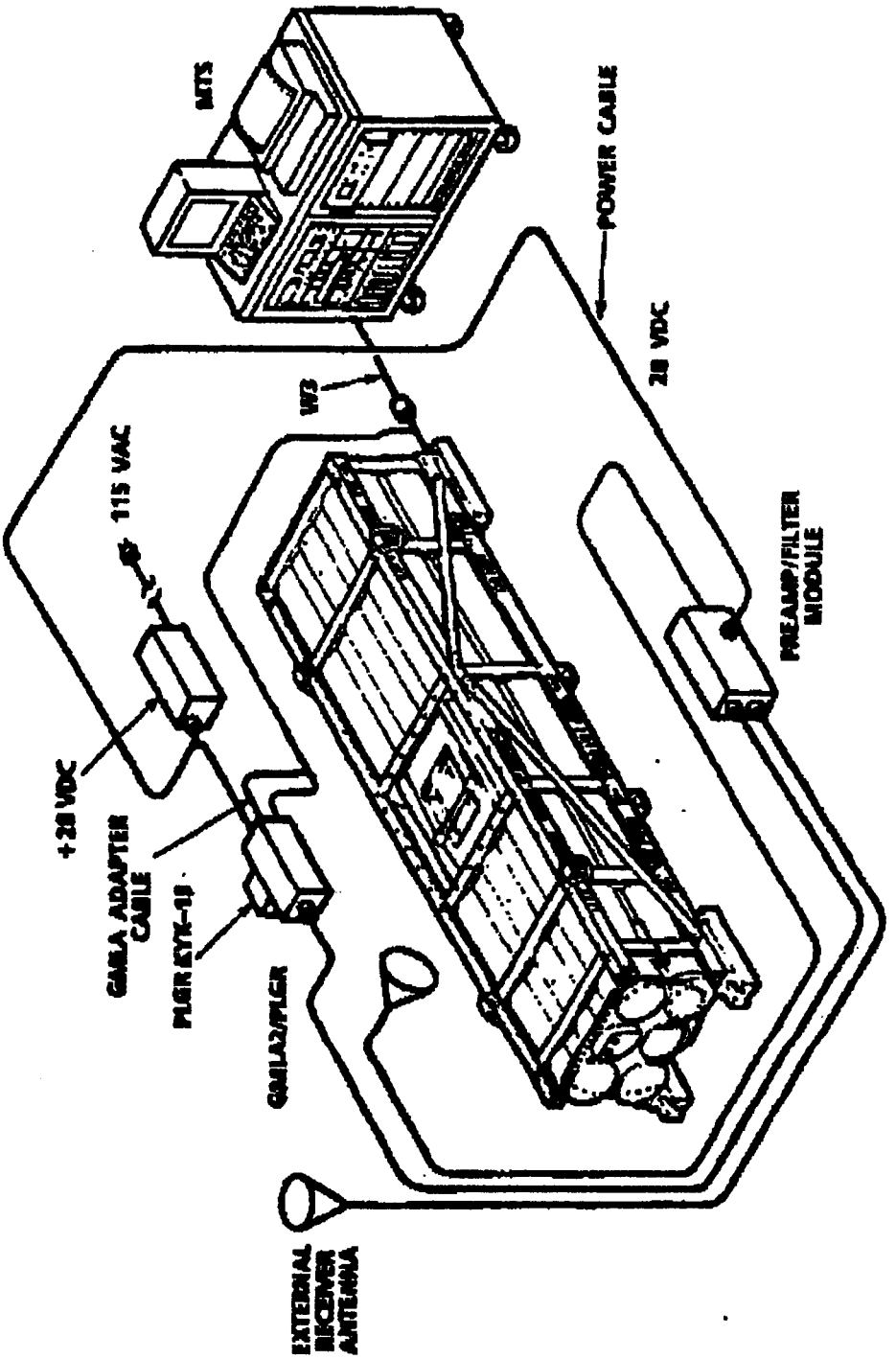

Figure 3 Block IA GMLA Test

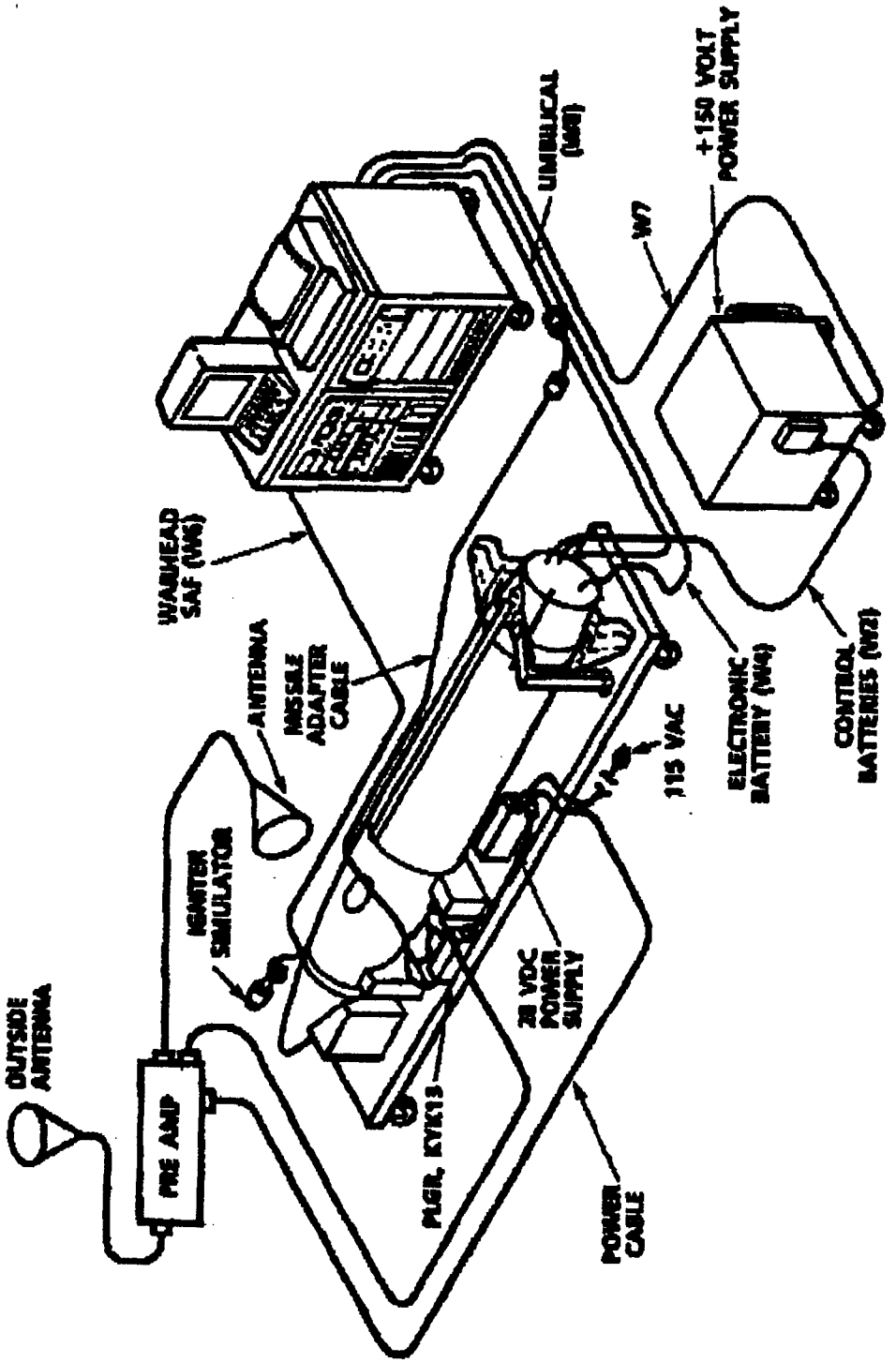

Figure 4 Block IA Missile Test

TABLE 1. TYPE AND RECOMMENDED SPACE REQUIREMENTS

TYPE SPACE	QTY. (SF)	SIGNIFICANT REQUIREMENTS
OFFICE	500	ELECTRICITY, AC, SOUND DAMPING
TEST AREA	900	COMPRESSED AIR, AC, BLAST WALLS AND CONDUCTIVE FLOORING
CANNING/DECANNING AREA	3,300	BLAST WALLS, CONDUCTIVE FLOORING, AC, BRIDGE CRANE, COMPRESSED AIR, CEILING HEIGHT OF 15 FEET
DISASSEMBLY/REASSEMBLY AREA	1,800	BLAST WALLS, CONDUCTIVE FLOORING, COMPRESSED AIR, BRIDGE CRANE, AC
TEST AND REPAIR CELL #1	600	BLAST WALLS, AC AND COMPRESSED AIR
TEST AND REPAIR CELL #2	1,100	BLAST WALLS, AC AND COMPRESSED AIR
WORK IN PROCESS HOLDING AREA AND PARTS AND TOOL STORAGE	1,000	BLAST WALLS, AC, COMPRESSED AIR
SHIPPING/RECEIVING AREA	2,790	MONO RAIL SYSTEM
REST ROOM/CHANGE HOUSE	600	AC, WATER, ELECTRICITY, SEWER
CORRIDORS	11,100	AC
PAINTING AREA	1,200	VENTILATION, COMPRESSED AIR
BREAK AREA	700	AC, WATER, SANITARY FACILITIES
MECHANICAL/ELECTRICAL/ COMPRESSOR	1,768	
SUBTOTAL:	27,358	
BLAST WALL	2,142	
TOTAL:	29,500	

3.0 GENERAL CRITERIA

3.1 CIVIL.

3.1.1 AXLE LOADS.

Truck and Trailer type vehicles involving gross weights of up to 40,000 lbs. would operate on roads serving the depot facility.

3.1.2 LANE WIDTHS.

Suitable for Trucks and Trailers.

3.1.3 TURN AND WEIGHT PROVISIONS.

None

3.1.4 PARKING.

Suitable parking for 4–5 cars, pickups or vans. Covered storage for forklifts and material handling equipment/special tooling.

3.1.5 JACK LOADS AND TRANSFER REQUIREMENTS.

None

3.1.6 GRADES ON ROADS.

Grades appropriate for support of industrial facilities. Suitable for forklift operation.

3.1.7 SPECIAL WATER AND SEWAGE.

Effective storm drainage design.

3.1.8 SPECIAL FIRE PROTECTION.

Equipment suitable for protection of Class A explosives with alarms and detection capability.

3.1.9 FENCING AND SECURITY.

Suitable for Class A explosives.

3.2 ARCHITECTURAL.

3.2.1 PERSONNEL OCCUPANCY.

6–10 personnel per shift supporting depot maintenance actions.

3.2.2 SPECIAL DOORS.

Blast Doors per TM-5-1300, anti-panic hardware is appropriate for personnel doors.

3.2.3 FLOOR LEVEL.

No special water drain requirement.

3.2.4 WINDOW REQUIREMENTS.

None

3.2.5 CONTROLLING DIMENSION REQUIREMENTS.

A 54 ft. length of clear space is required in those areas designated for canning or decanning operations with no columnar obstructions. Forklift handling of the GMLA requires 16 ft. wide doors for intercell movement of GMLA or major assemblies thereof. Utilization of overhead cranes and transportation dollies in the decanning/canning area can preclude wide doors, however, 18 ft. doors are considered appropriate unless side loading or pivoting mast forklifts are available. Personnel doors within 8 or 16 ft. cargo doors are appropriate.

3.3 STRUCTURAL.

3.3.1 CRANE AND HOIST LOCATION AND LOADS.

Movement of a GMLA within the can/decan area can be done with an overhead crane and hoist enabling pickup and accurate placement on the load/reload fixture.

An overhead hoist would also move EALPs within cells for required maintenance. EALP maintenance can be performed in suitable location of choice, however, not in a cell storing explosives.

Overhead Hoists are considered mandatory requirements for decan cells, missile test areas or workstations handling major assemblies of the missile.

3.3.2 FLOOR LOADS.

Maximum floor loading of the facility would occur in each decanning area where two GMLAs could be processed simultaneously.

3.3.3 CLEAR SPACE AND COLUMN FREE AREAS.

No columns or obstructions in areas where forklifts are used.

Decanning Areas – no column obstructions.

Spares/Crib Areas – no restrictions in administrative or office areas. Clear space without obstruction for warehouse or binned areas.

Paint Shop Area – no column obstruction. (Refer to any available painting area, no specific requirement for TACMS.)

Missile Assembly Areas – no column obstructions where forklifts are used.

Component Test Areas – column obstructions allowed, not to exceed 1 per 200 sq. ft.

Final Inspection – no restrictions.

Note: Clear Space Restrictions can be significantly relaxed if hoist and monorail and/or side loading forklifts are to be utilized.

3.3.4 BLAST WALLS.

Provide protection to adjoining cells or functions possessing the same as similar explosive hazard. Can/Decan area should meet criteria of TM-5-1300 as an explosive hazard structure with blast doors and be of a fire resistant, permanent nature, reinforced concrete masonry on a concrete slab. Walls and ceilings should be insulated in accordance with DOD 4270.1M criteria.

3.3.5 TRANSFER PIERS, DOCK LOADS.

None

3.3.6 PERSONNEL LADDERS, ELEVATORS, ETC.

None

3.3.7 CLEAR CEILING HEIGHTS

12 ft. ceiling heights in Paint, Missile Assembly, Disassembly and Final Inspection

12 ft. height in the decanning and munitions areas, 10 ft. hook height

NOTE: Ceiling heights can be accommodated by modifying lifting sling and hoist lengths.

3.3.8 LOCATION AND SIZE OF DOORS.

Doors in receiving and final inspection areas should be 16–18 feet wide to accommodate missile length unless appropriate side loading forklift, overhead cranes or transportation dollies are provided.

3.4 ELECTRICAL.

3.4.1 POWER REQUIREMENTS:

440V AC	3 phase	50 or 60 Hz	300 A
120V AC	1 phase	50 or 60 Hz	200 A
220V AC	1 phase	50 or 60 Hz	100 A
28V DC			10A

3.4.2 LIGHT INTENSITIES.

50–60 footcandles. Explosive proof lighting is required.

3.4.3 COMMUNICATIONS REQUIREMENTS.

None

3.4.4 GROUNDING.

Low resistance earthen grounds in all work areas. Copper grounding points on Component Test area walls and overhead wherever practical. Convenient ground points in outside maintenance/storage areas.

Selected work areas should be equipped with electrostatic grounding capability, specifically mats and personnel grounding devices.

3.5 MECHANICAL.

3.5.1 INTERIOR POTABLE WATER.

For personnel consumption, industrial consumption in the paint shop and receiving docks. GMLAs would receive some cleaning, depending on previous storage conditions, road grime, etc., prior to entry into the facility.

3.5.2 ENVIRONMENTAL LIMITS.

Except for component test areas, facility should provide 60°–80°F, 30–50% relative humidity. For the component test areas, 65°–75°F, 30–50% humidity is required. A hot water heating system and air conditioning with humidity control is preferred.

3.5.3 COMPRESSED AIR.

Filtered low pressure air on all interior walls of canning/decanning, disassembly, assembly areas and more limited availability in component test areas. Total volume of 100–120 CFM.

3.5.4 FIRE PROTECTION.

Suitable for protection of Class A explosives sprinkler wet system without foaming agent, sprinkler control by groups, i.e., decanning, munitions subassembly with capacity of 50 liters/sec at 4 bar.

3.5.5 VIBRATION AND ACOUSTICAL REQUIREMENTS.

Suitable for light industrial standards. Government requirements for generic industrial building apply.

3.6 EQUIPMENT (INSTALLED).

Table (2) and Figure (5) list the equipment required for Army TACMS Block I. This same list constitutes the equipment requirements in the long term support of Army TACMS Block IA. Since there are no contractual requirements for developing support items needed beyond development and test, these items are subject to iteration and modification. Figure (6) lists the equipment required for testing GPS. Not included in this list are the general purpose or common test equipment items and tools.

3.7. SPECIAL FEATURE.

None

3.8. HAZARDS.

3.8.1 RF RADIATION.

Operation of any type of radio is prohibited within 100 feet of the GMLA missile assembly or subassemblies.

3.8.2 X-RAY RADIATION.

None

3.8.3 ELECTRICAL SHOCK.

The depot support equipment requires voltage levels up to 440 VAC and current levels up to 300A. To combat the possibility of electrical shock all equipment must be properly grounded and all personnel must adhere to prescribed safety procedures.

3.8.4 EXPLOSIVE.

Each Block I GMLA contains a net explosive weight per quantity distance of 186.4 KG or 410 LBS of class A explosives. (Block IA is 33.5 Kg) The explosive components of the GMLA are the Igniter/Arm Fire Device, Rocket Motor, Warhead and Fuze Assembly, Safe/Arm. These components should not be stored together except when the Missile and/or GMLA is assembled. Proper grounding procedures are a must. Personnel are required to be grounded when performing maintenance on the GMLA or its explosive components.

3.9 SAFETY.

Compliance with established industrial safety and OSHA standards is required.

3.10 WASTE DISPOSAL.

Compliance with state and federal environmental protection regulations and laws is required.

TABLE 2. PECULIAR SUPPORT EQUIPMENT

BLOCK IA	A REFERENCE DRAWING	B SPACE REQ SF	C POWER	D HEAT DISSAP	E ACCESS	F SUGGESTED QUANTITIES
1. GMLA, EALP SLING (TBD)	Y	118 SF	NA	NA	A	1
2. MISSILE ASSY SLING (TBD)	Y	20	NA	NA	A	1
3. RM, RM/BOATTAIL SLING (13293086)	Y	10	NA	NA	A	1
4. WARHEAD SLING (TBD)	Y	20	NA	NA	A	1
5. BOATTAIL SLING (13293082)	Y	5	NA	NA	A	1
6. *FLOOR ASSEMBLY FIXTURE WARHEAD, RM, BOATTAIL (13293090)	Y	350	NA	NA	F,B,S	1
7. *FLOOR ASSEMBLY FIXTURE BOATTAIL BUILDUP (13293082)	Y	50	NA	NA	F,B,S	1
8. *MTS AUGMENTATION EQUIPMENT (TBD)	Y	SAME AS ITEM 11				1
9. FIN RESTRAINT DEVICE (13293084)	Y	5	NA	NA	A	2
10. *MISSILE LOAD/RELOAD FIXTURE (13293078)	Y	500	440VAC,3PH 60HZ,15A/PH	600 BTU (INTER)	F,B,S	1
11. MISSILE TEST STATION (MTS) (TBD)	Y	85	440VAC,3PH 60HZ,15A/PH	400 BTU	F,B	2
12. ARMFIRE & CONTINUITY TEST SET (TBD)	Y	NA	NA	NA	A	2
13. BREAKOUT BOX SET (TBD)	Y	NA	NA	NA	A	2
14. SHORTING PLUG SET (13287730)	Y	NA	NA	NA	A	2
15. STRAY VOLTAGE TEST CABLE SET (13287780)	Y	NA	NA	NA	A	2
16. INITIATOR TEST CABLE SET (13287790)	Y	NA	NA	NA	A	2
17. GMLA W1J1 TEST CABLE (13293250)	Y	NA	NA	NA	A	2

TABLE 2. PECULIAR SUPPORT EQUIPMENT (CONT)

BLOCK IA	A REFERENCE DRAWING	B SPACE REQ SF	C POWER	D HEAT DISSAP	E ACCESS	F SUGGESTED QUANTITIES
18. FIN T HANDLE (13291879)	Y	NA	NA	NA	A	2
19. WARHEAD FIXTURE/DOLLY (13293889)	Y	20 SF	NA	NA	A	2
20. CONTROL SECTION DOLLY/TEST FIXTURE (13293882)	Y	20 SF	NA	NA	A	1
21. GUIDANCE SECTION DOLLY (13293881)	Y	20 SF	NA	NA	A	1
22. TRANSPORTATION DOLLY, BASIC (13293880)	Y	60 SF	NA	NA	A	1
23. GROUNDING CABLE SET (13287777)	Y	NA	NA	NA	NA	1
24. EXIT CONE INSERT/EXTRACT TOOL (13293891)	Y	NA	NA	NA	NA	2
25. MISSILE TEST DEVICE (TBD)	Y	400 SF	220VAC,50HZ OR 110VAC, 60HZ OR 24 VDC (VEHICLE POWER) OR 28 VDC (APU)	200 BTU	A	2 (OPTIONAL)
26. FIN PROTRACTOR (13291999)	Y	56 SF	NA	NA	A	1
27. FIXTURE, VERTICAL HOLDING, NOSE SECTION (13290080)	Y	50 SF	NA	NA	A	1

* FIXTURES AND CRADLES TO BE FLOOR MOUNTED. Y – YES, REFERENCE DRAWING(S) EXIST(S)

CU – CONSTANT USE WHEN UNDERGOING MAINTENANCE

COL "E" LEGEND
ACCESS CODE
F-FRONT
B-BACK
S-SIDES
A-ALL SIDES

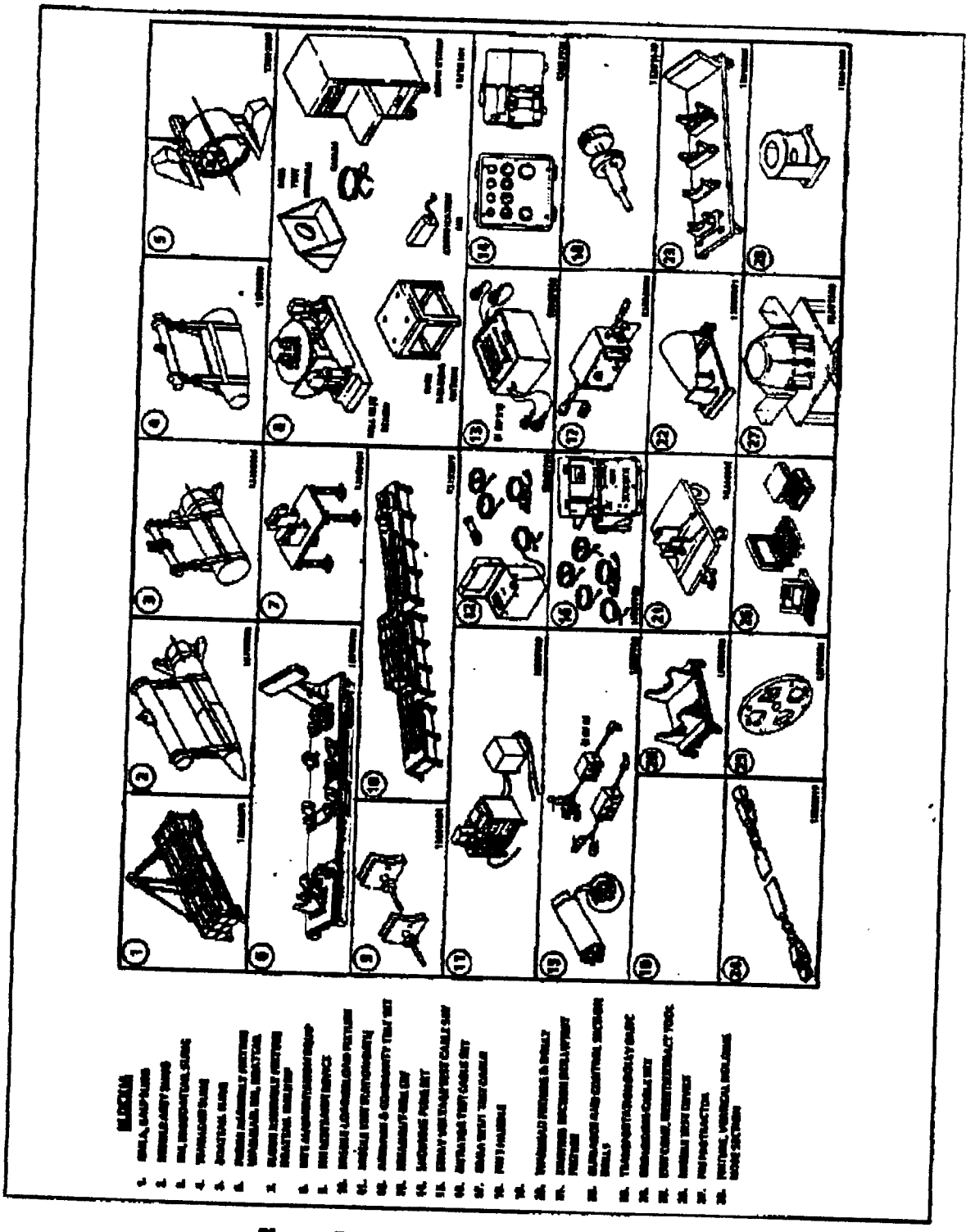

Figure 5 Depot Support Equipment

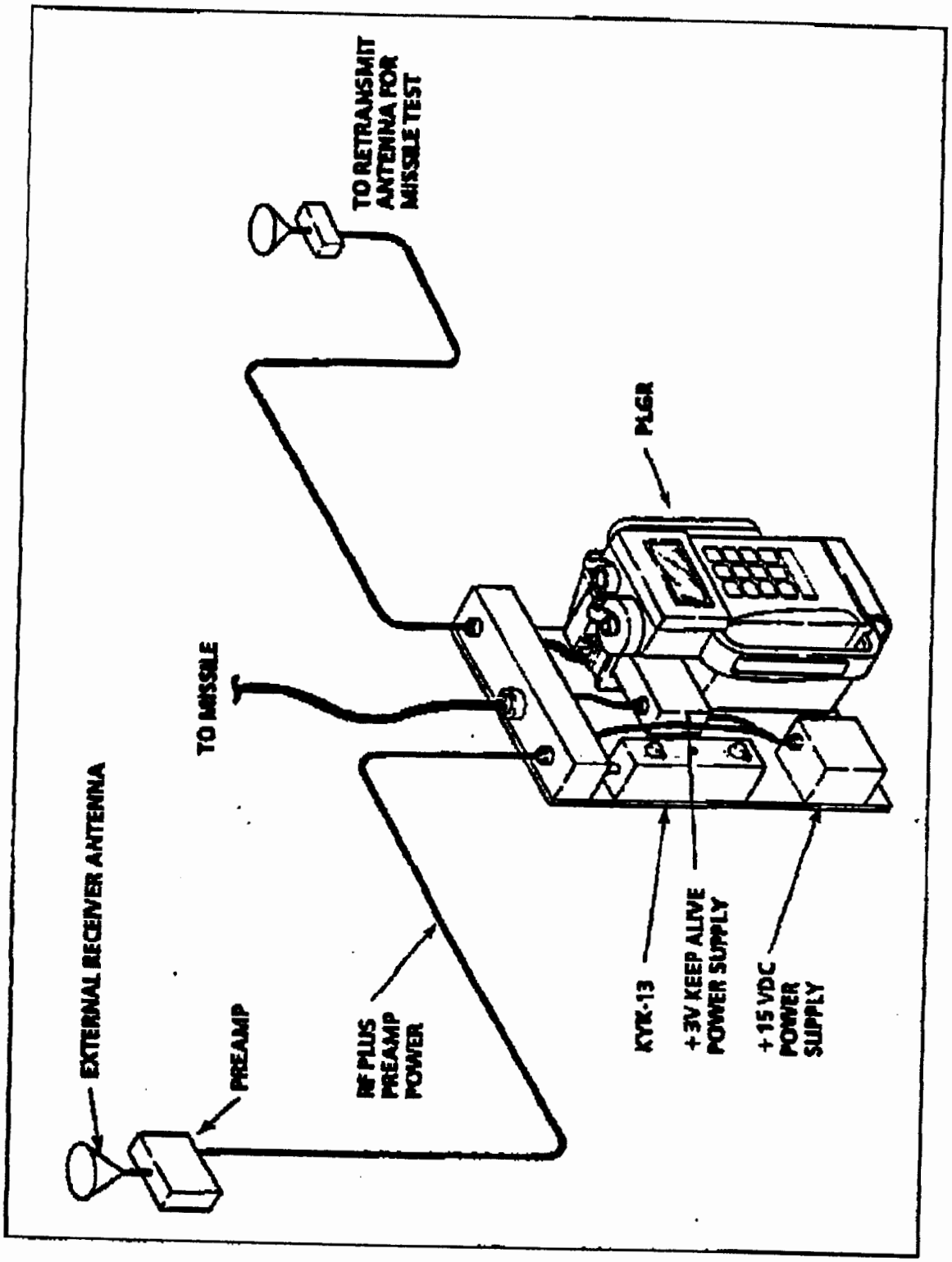

Figure 6 GPS Support Equipment

TABLE 3. COMMON EQUIPMENT*

PART NUMBER	NOMENCLATURE
100 MM (1809-0)	JUMPER, BANANA PLUG
MODEL 580	MICRO-OHMMETER
MODEL 716	WRIST STRAP TESTER
DITMCO 8210	CABLE TEST SET
6002A	POWER SUPPLY, PROG.
2445	OSCILLOSCOPE
8050A	DIGITAL MULTIMETER
J10131	PROTECTIVE TEST CHAMBER
SP-014 (MAKE FM)	FILL VALVE ADAPTER
A142/52	LEVEL
TO156634 (MAKE FM)	FIN PIN CLIPS
A00101	CLAMPING TOOL
SP-015 (MAKE FM)	FILL VALVE ADP WRENCH
CM-S-389T	BKSHL ASSY TORQUE KIT
CM-S-389TR	BKSHL ASSY TORQUE KIT
SP-017 (P/N TBD)	LINE LEVEL
LFT550	HTR, GUN TYPE 1000W
TBD (MAKE FM)	FIN REMOVAL AND TORQUE TOOL
FA-10-CH-SS	TEMP/ALTITUDE CHAMBER
CC-80739	PRESSURE GAGE
MODEL 810	BRAIDING MACHINE
450AKT	DIG TEMP READOUT
6VF4-316	SHUT OFF VALVE
FE60-24	FORKLIFT

* Equipment quantity as required

TABLE 4. GPS SUPPORT EQUIPMENT

NOMENCLATURE	P/N	QTY
ANTENNA, GPS	TBD	2
PREAMP	TBD	1
KYK-13	KYK-13	1
POWER SUPPLY, +3V	TBD	1
POWER SUPPLY, +15V	TBD	1
PRECISION LIGHTWEIGHT GPS RECEIVER (PLGR)	AN/PSN-11	1
CABLE	TBD	1

Requirements for clean environment for electronic repair of missile guidance set and control electronic unit,

2.2 Other publications. The following documents form a part of this standard to the extent specified herein. Unless otherwise indicated, the issue in effect on date of invitation for bids or request for proposal shall apply.

American Society of Heating, Refrigeration and Air-Conditioning Engineers, Incorporated (ASHRAE)

ASHRAE 52-76 - Method of Testing Air Cleaning Devices used in General Ventilation for Removing Particulate Matter.

(Application for copies should be addressed to the American Society of Heating, Refrigerating and Air-Conditioning Engineers, Incorporated, 345 East 47th Street, New York, NY 10017.)

American National Standards Institute (ANSI)

ANSI S1.4-1971 - Specification for Sound Level Meters.

(Application for copies should be addressed to the American National Standards Institute, Incorporated, 1430 Broadway, New York, NY 10018.)

Technical society and technical association specifications and standards are generally available for reference from libraries. They are also distributed among technical groups and using Federal agencies.

3. DEFINITIONS

3.1 General. For the purposes of this standard, definitions shall be in accordance with the notes to Table I and as defined herein.

3.2 Working environment. The term working environment refers to those environmental factors which may affect the operator's performance or quality of work, or may affect the quality characteristics of the work in process. Those factors include: cleanliness, lighting, air temperature, relative humidity, dust control, ventilation or exhaust, noise, and habitat.

3.3 Audit. An audit is a scheduled periodic inspection or evaluation to verify conformance to specified criteria.

3.4 Work station. A work station encompasses the specific area used to perform work. A work station, as an example, includes bench tops, bench mounted material and equipment shelves, drawers for tool storage, and all areas within reach of the operator. The definition of work station specifically excludes drawers and shelves designated for storage of personal material (lunch bags, purses, etc.).

3.5 Work area. A work area consists of a room or designated and segregated portion thereof which contains one or more work stations.

3.6 Supplier. A supplier is any private company or Government activity supplying systems, subsystems, components, or assemblies under contract or purchase order to any other company or Government activity for eventual inclusion as a part of an end item or system for delivery to the Government under a contract.

4. GENERAL STATEMENTS OF REQUIREMENTS

4.1 Working environments. Minimum standards for working environments shall be in accordance with Table I and the notes thereto.

5. DETAILED STATEMENTS OF REQUIREMENTS

5.1 Working environments. The supplier shall establish working environments in accordance with Table I and the notes thereto for all work stations and work areas where materials to be delivered under the contract or purchase order are fabricated, processed, assembled, tested, inspected, handled, and stored.

5.2 Environmental control plan. The supplier shall establish and implement an environmental control plan which defines in detail each applicable work area and work station, the environment to be maintained at each work area and work station, the permissible tolerance limits for each environmental factor of Table I, the methods of control (including the necessary instrumentation), and schedules preventive maintenance, i.e., periodic air filter cleaning, light fixture cleaning and relamping, and clean-up requirements. The environmental control plan shall be made a part of the Quality Assurance Program Plan, Inspection Plan, or Internal Quality Procedures and shall be made available for review by the Government representive.

5.3 Audit. The supplier shall conduct scheduled audits of the controlled work areas and work stations to verify that the working environments are in accordance with the environmental control plan (see 5.2). Audit frequencies shall be adjusted by experience as required to assure continued conformance to the provisions of Table I.

TABLE I. Minimum Standards for Working Environments (See Note: 1)

Type of Work (Note 2)	Cleanliness (Note 3)	Lighting Footcandles (Lux) (Note 4)	Air Temperature °F(°C) (Note 5)	Relative Humidity (Note 6)	Dust Control (Note 7)	Ventilation or Exhaust (Note 8)	Noise dBA (Note 9)	Habitat (Note 10)
Work Area 1 Mechanical Fabrication								
Tolerance to 0.01 in (0.254 mm)	Class D	70 fc (750 lx)	Note 11	10-90%	Class D	Note 8	90 dBA	Class D
Tolerance to 0.001 in (25.4 μm)	Class C	100 fc (1100 lx)	Note 11	10-90%	Class D	Note 8	80 dBA	Class C
Tolerance to 0.0001 in (2.54 μm)	Class B	200 fc (2200 lx)	Note 12	30-70%	Class C	Note 8	80 dBA	Class C
Tolerance finer than 0.0001 in (2.54 μm)	Class BA	500 fc (5400 lx)	68-75.2°F (20-24°C)	35-55%	Class B	Note 8	75 dBA	Class B
Work Area 2 Foundry Operations								
Tolerance to 0.005 in (127 μm)	Class D	70 fc (750 lx)	Note 13	>10%	Class D	Note 8	90 dBA	Class D
Tolerance finer than 0.005 in (127 μm)	Class C	100 fc (1100 lx)	Note 13	>10%	Class C	Note 8	80 dBA	Class D
Work Area 3 Plastics Operations	Class B	100 fc (1100 lx)	Note 11	10-90%	Class C	Note 8	80 dBA	Class B
Work Area 4 Plating and Heat Treating	Class C	70 fc (750 lx)	Note 13	>10%	Class C	Note 8	90 dBA	Class C
Work Area 5 Electronic Parts	Class B	100 fc (1100 lx)	Note 12	30-70%	Class C	Note 8	75 dBA	Class B
Work Area 6 Hybrid Microcircuits	Class A	100 fc (1100 lx)	Note 12	30-70%	Class A	Note 8	70 dBA	Class A
Work Area 7 Mechanical Assembly								
Tolerance to 0.05 in (1.27 mm)	Class C	100 fc (1100 lx)	Note 11	10-90%	Class D	Note 8	75 dBA	Class D
Tolerance to 0.001 in (25.4 μm)	Class B	100 fc (1100 lx)	Note 11	10-90%	Class C	Note 8	75 dBA	Class C
Tolerance to 0.0001 in (2.54 μm)	Class BA	200 fc (2200 lx)	Note 12	30-70%	Class B	Note 8	75 dBA	Class B
Tolerance finer than 0.0001 in (2.54 μm)	Class A	500 fc (5400 lx)	68-75.2°F (20-24°C)	35-55%	Class A	Note 8	70 dBA	Class A
Work Area 8 Inspection Areas	At least equal to the type of work to be inspected							
Work Area 9 Inert Chemical Component Preparation and Assembly	Class B	100 fc (1100 lx)	Note 11	10-90%	Class C	Note 8	80 dBA	Class B
Work Area 10 Preparation, Mixing and Fabrication of Propellants, Pyrotechnics, and Explosives	Class BA	100 fc (1100 lx)	Note 12	30-70%	Class B	Note 8	80 dBA	Class B
Work Area 11 Ordnance Assembly								
Tolerance to 0.05 in (1.27 mm)	Class C	100 fc (1100 lx)	Note 11	10-90%	Class D	Note 8	75 dBA	Class D
Tolerance to 0.001 in (25.4 μm)	Class B	100 fc (1100 lx)	Note 11	10-90%	Class C	Note 8	75 dBA	Class C
Tolerance to 0.0001 in (2.54 μm)	Class BA	200 fc (2200 lx)	Note 12	30-70%	Class B	Note 8	75 dBA	Class B
Tolerance finer than 0.0001 in (2.54 μm)	Class A	500 fc (5400 lx)	68-75.2°F (20-24°C)	35-55%	Class A	Note 8	70 dBA	Class A
Work Area 12 Environmental Testing	Class C	100 fc (1100 lx)	Note 11	10-90%	Class D	Note 8	90 dBA	Class C
Work Area 13 Handling and Storage	Class D	70 fc (750 lx)	Note 13	>10%	Class C	Note 8	90 dBA	Class C

NOTES TO TABLE I

1. Reduced Environmental Limits

The requirements listed herein represent minimum requirements for normal manufacturing operations. Suppliers who are required to comply with the provisions herein and who may have special processes, such as X-Ray, video displays or light directed component insertion equipment, etc., may develop reduced environmental limits under the following conditions:

a. A valid engineering requirement exists for the reduced limit, and

b. The reduced limits are documented (including the reasons therefor) and subject to control and audit in the same manner as the remaining requirements listed herein, and

c. Such revised environmental limits, the reasons therefor, and the manner of control are subject to approval of the Government contracting officer.

2. Work Area Descriptions

a. Work Area 1: Mechanical Fabrication.

This work area includes machining and similar operations involving cutting, material removal, shaping, or joining metals and plastics. Typical operations include sawing, shearing, bending, punching, drawing, turning, boring, drilling, milling, grinding, welding, riveting, and similar operations.

b. Work Area 2: Foundry Operations.

This work area includes casting, extruding, rolling, and forging of metals and similar operations.

c. Work Area 3: Plastics Operations.

This work area includes the handling, mixing, potting, encapsulating, impregnating, spraying, and curing areas for chemicals, plastics, epoxies, paints, etc.

d. Work Area 4: Plating and Heat Treating.

This work area includes pickling, etching, plating, heat treating, and annealing operations.

Notes to Table I (Continued)

e. Work Area 5: Electronic Parts.

This work area includes handling, inspection, assembly and soldering or resistance welding of electronic parts, electronic assemblies, electromechanical devices and printed wiring boards.

f. Work Area 6: Hybrid Microcircuits.

This work area includes handling, inspection, assembly, bonding or soldering, adjustment or trimming, and sealing of hybrid microcircuits (see MIL-STD-1313).

g. Work Area 7: Mechanical Assembly.

This work area includes the joining of individual parts to form higher level assemblies.

h. Work Area 8: Inspection Areas.

An inspection area may be adjacent to, or removed from, the area in which the actual work is being done, such as a receiving inspection area. Inspection must be accomplished in a working environment at least equivalent to that in which the item to be inspected was fabricated, and, unless a subsequent cleaning operation is accomplished, the environment shall be equal to that required for the next assembly operation or processing step.

i. Work Areas 9, 10, and 11: Chemical, Propellant, Pyrotechnic, and Explosive Processing.

These areas are used exclusively for the manufacture, processing, and fabrication of propellants and related materials and devices. Some of the other work areas (1 through 7 in Table I) may be utilized to make up the entire assembly. However, areas 9 through 11 deal with the processes that make up the explosive subassembly itself, both live and inert. When these requirements conflict with safety considerations, the safety requirements shall take precedence. Unless otherwise specified, general safety requirements and definitions shall be in accordance with DoD publication 4145.26M. Work Area 8 (Inspection) applies to all types of work.

Notes to Table I (Continued)

j. Work Area 12: Environmental Test.

This work area is defined as being in the immediate vicinity of, or adjacent to, items under environmental test. A control station (e.g., a test console), whether remote from, in the immediate vicinity of, or adjacent to items under test, is considered a part of the environmental testing work area.

k. Work Area 13: Handling and Storage.

The environmental requirements for handling and storage of items in work shall at least equal the requirements for the type of work being accomplished except when items are covered or protected from contamination. Values listed in Table I apply to handling and storage of covered, bagged, or otherwise protected items.

3. Cleanliness Definitions

Class D - Daily Cleanup:

Removal of scrap, clean up all spilled oil, etc.

Class C - Prompt Cleanup:

Scrap, oil, and residue shall not be allowed to accumulate.

Class B - Prompt Cleanup:

Oil, residue, and spilled chemicals removed immediately. Floors, walls and work areas shall have easily cleaned surfaces. Cleanup of equipment and area shall be accomplished daily.

Class BA:

Oil, residue, spilled chemicals, and any foreign material which might develop in the area shall be cleaned immediately. Floors, walls, furniture, and work areas shall have hard, grease-resistant, easily cleaned surfaces. Materials and equipment shall be cleaned prior to acceptance into this area. In addition, parts and assemblies shall be kept in suitable covered containers when not in use. As a minimum, flushing or cutting fluids shall be filtered to remove contamination above 15.0 microns. Chips, particles, and dust generated during any and all mechanical operations shall be

Notes to Table I (Continued)

removed during the operation by vacuum. Clean, lint-free smocks are required for operators and inspectors. Complete cleaning and wipe-down of equipment, tools, fixtures, and the area shall be accomplished at the end of each 8 hours of operation or daily, whichever occurs first.

Class A:

Cleanliness shall be controlled in accordance with Fed-Std-209, Class 100,000 as a minimum, unless otherwise specified in the contract or purchase order.

4. Lighting

Indicated values are minimum light intensity values as measured at the work station using a light meter which is cosine and color corrected. Supplemental lighting shall be used when necessary to improve precision, minimize operator fatigue, and to provide illumination inside of cabinets and housings, but brightness ratios within the operator's field of view shall not exceed 10 to 1. Specialized equipment that requires a low ambient light level, i.e., TV displays, X-ray, etc., may require an exception to those levels specified in Table I (see Note 1, Reduced Environmental Limits).

5. Air Temperature

Designated temperature limits shown in Table I are dry bulb temperature measurements taken in proximity of the work stations during regular working hours. See Notes 11, 12, and 13 for those areas indicated in Table I.

6. Relative Humidity

Designated relative humidity shall be as measured at room ambient temperature in proximity to the work stations during regular working hours.

7. Dust Control Definitions

Class D - No dust control required.

Notes to Table I (Continued)

Class C - Outside and recirculated air shall be filtered to remove dust particles. Filter shall have a minimum arrestance of 65 percent in accordance with ASHRAE[1] Standard 52-76.

Class B - Outside and recirculated air shall be filtered to remove dust particles. Filter shall have a minimum efficiency of 60 percent in accordance with ASHRAE Standard 52-76.

Class A - Dust control shall be in accordance with Fed-Std-209, Class 100,000 as a minimum, unless otherwise specified in the contract or purchase order.

8. Ventilation or Exhaust

Air velocity at the work station shall be maintained at a velocity of less than 90 ft/minute (0.46 m/s) regardless of the season. Additionally, forced ventilation or exhaust shall be provided in areas where operations such as parts cleaning, vapor degreasing, and machine soldering are being accomplished. The maximum air velocity requirement shall not apply in these areas. Work areas for mechanical assembly of tolerances finer than 0.0001 in (2.54 μm) which utilize laminar flow benches shall maintain an air velocity of less than 110 ft/minute (0.56 m/s).

9. Noise

Noise is defined as the average sound level existing at the work station during normal operation when measured with a standard sound-level meter as specified in ANSI[2] S1.4-1971, Type 2, "A" weighted. Work stations for control of automatic equipment operations, which require operator loading and unloading only, may exceed the noise limits specified by 10 dBA but not exceed 90 dBA. Inspection and test work stations shall not exceed the values specified. Work areas for mechanical assembly of tolerances finer than 0.0001 in (2.54 μm) which utilize laminar flow benches may exceed by 5 dBA the value specified. For environmental testing, when the specified limit is exceeded, ear protection shall be provided.

[1] American Society of Heating, Refrigerating and Air-Conditioning Engineers.

[2] American National Standards Institute.

Notes to Table I (Continued)

10. Habitat

Class D - Uncontrolled

Class C - No food, drink, or personal grooming material is allowed at these work stations. No eating, drinking, or personal grooming is allowed in the work area. Drinking fountains are permissible.

Class B - No food, drink, personal grooming material, or smoking is allowed at these work stations. No eating, drinking, personal grooming, or smoking is allowed in the work area. Drinking fountains are permissible.

Class A - No food, drink, personal grooming material, or smoking material is allowed in these work areas. Drinking fountains are permissible.

11. Comfort Zone

The combination of air temperature and relative humidity shall not exceed the limits shown in the cross hatched area of Figure 1 for those areas specified in Table I.

12. Comfort Zone (Restricted)

The combination of air temperature and relative humidity shall not exceed the limits shown in the cross hatched area of Figure 2 for those areas specified in Table I.

13. Tolerance Zone

The combination of air temperature and relative humidity shall not exceed the limits shown in the cross hatched area of Figure 3 for those areas specified in Table I.

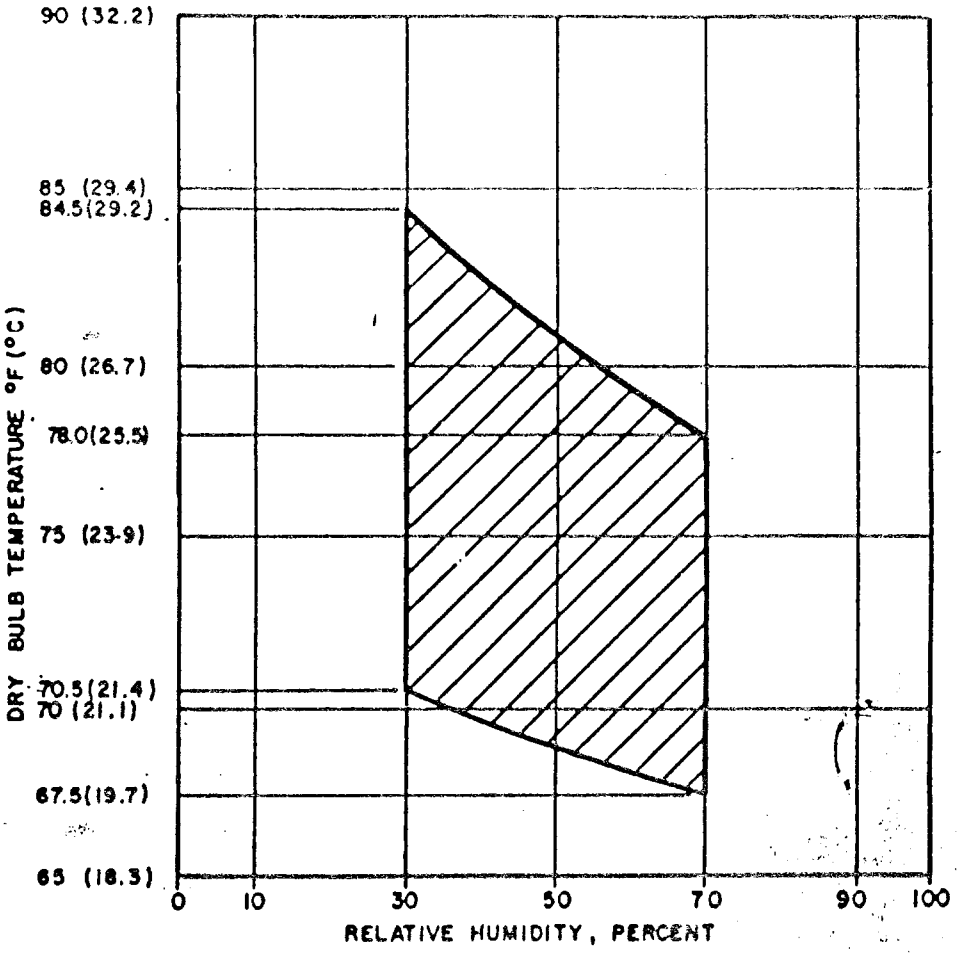

FIGURE 2. Personnel Comfort Limits
(Modified to Account for Humidity Effects on Equipment and Work In-Process)

IMPACT OF THE BASE REALIGNMENT AND CLOSURE 95 ON TACTICAL MISSILE CONSOLIDATION

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Tactical Missile Overview

Tactical Missile Consolidation

1. HISTORY.

Tactical missile maintenance consolidation has been scrutinized by a variety of organizations since the concept was developed in response to the Deputy Secretary of Defense's memorandum dtd. 30 June 1990, titled "Strengthening Depot Maintenance Activities". The plan prepared for the Defense Depot Maintenance Council (DDMC) was accepted as part of the Corporate Business Plan in 1991. With the endorsement of the recommendation by DDMC and the Joint Service Business Plan (JSBP), the Tactical Missile Interservice Working Group (TMIWG) was established. This group was established to plan and implement the consolidation of the tactical missile maintenance at Letterkenny Army Depot (LEAD).

While there was resistance from the services and Project Managers, with each meeting came progress. To assist in this effort, competition between depots was stopped. This leveled the field and resolved the parochial approach to reach commodity. The direction did not change with the BRAC 93 decision; it was validated and execution continued.

LEAD has taken an aggressive approach to the consolidation of the 21 systems; to date LEAD has achieved certification in 12 and continues to meet milestone requirements established by the TMIWG. LEAD has the capability to meet the current and future requirements of Department of Defense (DOD) tactical missile maintenance.

2. MAINTENANCE CONCEPT.

Tactical missile systems include missile guidance and control sections and electronic subassemblies, missile launchers, and large ground based trailer mounted radar and control stations. Depot level maintenance of these

be sent back to LEAD's Ammunition Directorate where they would be all-up-rounded or sent to an AUR location or the field. Missiles and sections would require shipment to LEAD's Ammunition Directorate because TOAD has no ammunition storage capability.

The maintenance concept for large ground based systems such as PATRIOT, HAWK, and Avenger will be decentralized because electronic repairs would be completed at TOAD and mechanical repairs at ANAD. These systems would be sent to TOAD where major items will undergo complete disassembly, test, repair, modification, and rebuild. The trucks, trailers, shelters, and generators would be sent to ANAD for overhaul and rebuild. These items would then be sent back to TOAD for major item integration and checkout. The HAWK and PATRIOT systems must be deployed to a radar test site in a tactical configuration, here the final system integration and checkout is performed, with the system operating at full power and radiating. The system will then be deployed, installed, and checked out in a joint effort between two separate depots (TOAD and ANAD) which is not an ideal situation in terms of extra costs, logistics coordination, and readiness delays for the customer. Performance of HAWK and PATRIOT repair at TOAD will require a test site equal in size and distance to LEADs'.

3. COST.

Readiness of all systems will be impacted by the BRAC 95 proposal and it is difficult to affix a cost to this serious element of military worth. Individual systems maintenance execution cost increases induced by the BRAC 95 recommendation are described in their respective section. Each section does not include costs associated with move of current organic missions from LEAD to TOAD.

a. Missile Sections. The BRAC 95 recommendation would require additional transportation, shipping, handling, blocking/bracing, and receipt/issue inspections. Missile sections would require additional transportation costs to ship them from LEAD to TOAD and back. This also requires additional handling by LEAD's ammunition crews and receipt/issue inspections by Quality Assurance Specialist Ammunition Surveillance.

would require use of another DLA depot incurring additional costs above those associated with maintenance execution costs.

The BRAC 95 recommendation decreases the efficiencies associated with performing missile section repair/test at the same location as missile and section storage, missile all-up-rounding and testing. TOAD has no storage capabilities for guidance and control sections. Missile sections containing explosive squibs are handled as ammunition Class C, Storage Type E, which requires storage in a explosives magazine. This would require guidance and control sections to be shipped and stored at LEAD prior to repair at TOAD.

The reversal of the BRAC 93 law to consolidate tactical missile maintenance at LEAD will increase maintenance execution costs, turnaround time, creates inefficient maintenance processes, and requires Military Construction Authority projects at TOAD.

TOAD will not be able to handle a surge associated with the lack of an ammunition storage facility and the added delay of transportation between LEAD and TOAD.

If the DOD community is truly looking forward to consolidation of like type commodities; then it should select a facility which truly can accomplish the tasks associated with the product line and accommodate the future business without added delay and costs. LEAD is not a "hard iron depot" LEAD is structured to meet all the needs of todays military and future expansions to include THAAD, ERINT, Javelin, Longbow, Ground Based Radar, etc.

Avenger

Avenger

1. DESCRIPTION.

Avenger provides air defense support to counter low-flying, high speed, fixed wing aircraft and helicopters. Avenger is used by the U. S. Army and Marine Corps. Letterkenny Army Depot (LEAD) performs depot level maintenance on the Standard Vehicle Mounted Launchers, High Mobility Multipurpose Wheeled Vehicle (HMMWV), turret fire unit, Test Program Set support for Line Replaceable Units, argon bottle refurbishment, and ground support equipment. LEAD also performs Total Package Fielding and training, produces air drop kits, and performs light to heavy vehicle modifications. LEAD has been the depot level source of repair since 1993.

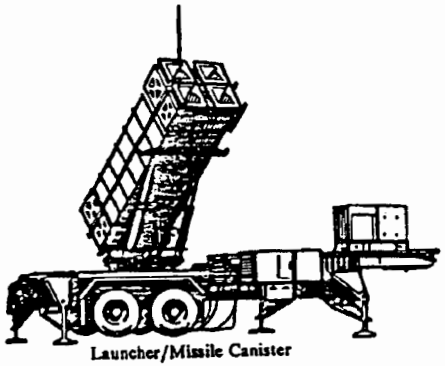
2. MAINTENANCE CONCEPT.

a. BRAC 93. Avenger Missile Systems are shipped to LEAD as a complete fire unit. Upon arrival at LEAD, the Avenger is sent to Building 350 for automotive checkout. The Avenger then moves on to Building 370 for a complete electronics system checkout, repair, and painting.

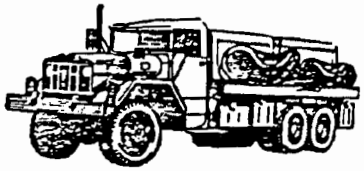
b. BRAC 95. HMMWV maintenance will be performed at Anniston Army Depot (ANAD). Turret maintenance will be performed at Tobyhanna Army Depot (TOAD). There are two possible maintenance scenarios with this proposal. Under the first the Avenger would be shipped to ANAD for automotive checkout, then shipped to TOAD for electronic checkout, repair, and remating. The second would require the

concept developed by the Avenger Program Office. This proposal increases repair costs and increases turnaround time. Performance of the air drop kit modification, at two locations, complicates reintegration due to critical tolerances involved in mating HMMWV and turret. Decentralization of expertise requires maintaining field and logistic support at dual locations. Due to the number of Avengers repaired and their size an alternate storage site may be required, further increasing transportation and handling costs.

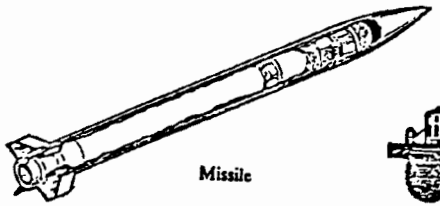
Phased Array Tracking Radar to Intercept of Target (PATRIOT)



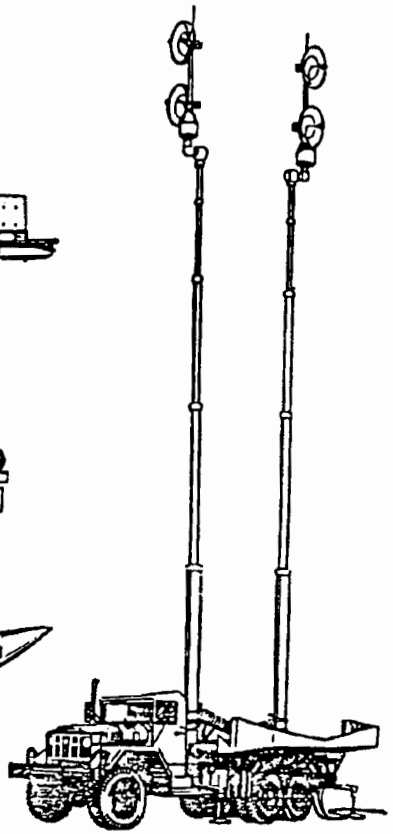
Launcher/Missile Canister

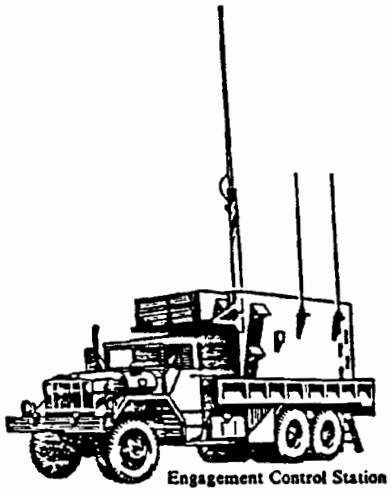


Electrical Power Plant

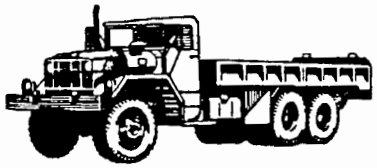


Missile

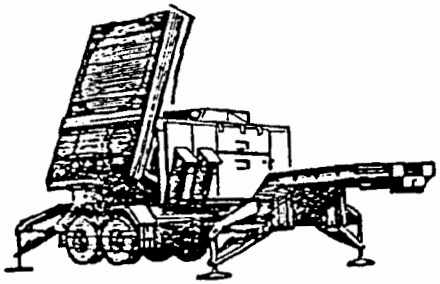




Engagement Control Station



System Vehicles
TACOM
Tank Automotive
Command



Radar Set

Phased Array Tracking Radar to Intercept of Target (PATRIOT)

1. DESCRIPTION.

The PATRIOT is a computer-based automated system combining digital processing with various software programs to effectively manage and defeat an ever improving air defense threat. The PATRIOT fire unit is the combat element of the system and consists of a Radar Set (RS), Engagement Control Station (ECS), and several remotely located Launching Stations (LS). Additional units complete the field equipment; Electrical Power Plant (EPP), Antenna Mast Group (AMG), and a Communications Relay Group (CRG) used for communications with other fire units and with higher echelon organizations. The single radar, using timeshared, phased array technology provides the tactical surveillance functions, target detection and track, and missile guidance. The ECS is the only manned element of the fire unit which provides control of automated functions. The LSs are mobile platforms each containing four ready to fire missiles sealed into canisters. The PATRIOT system is the most complex of the Army's Missile Systems.

2. MAINTENANCE CONCEPT.

a. BRAC 93. Letterkenny Army Depot (LEAD) has been designated as Center of Technical Excellence (CTX) for PATRIOT since March 1983. A dedicated and skilled workforce has been developed by selectively transitioning senior HAWK journeyman personnel into the system peculiar major item schools. This cross training philosophy has enabled LEAD to successfully develop a higher degree of technicians to meet the challenges of the PATRIOT system.

would be required back in a timely manner as there are no spares to serve as a "slave" vehicle. Upon return of the carrier(s), the mating processes would be the same as currently performed.

3. COSTS.

The BRAC 95 recommendation creates a fragmented maintenance concept which requires an additional eight DLA receipt and issue charges and transportation costs. Additional costs are $2,418 for DLA and $2,491 transportation costs. These additional costs will be incurred for every item (truck, trailer, generator, and shelter) sent to ANAD for rework.

4. SUMMARY.

PATRIOT major items are very expensive and there are limited floats to support flow problems which will occur with separation of this commodity line as suggested in the BRAC 95 recommendation. LEAD is a unique site, as it affords the customer "one-stop" for their process requirements, this is why LEAD was designated the CTX for PATRIOT. Additionally, the parts requirements for PATRIOT will require the need for an extensive machining operations as the supply system does not adequately support the demands. The PATRIOT system requires a test site to radiate into free space. LEAD test site facility is 28 acres in size and has been upgraded to accommodate PATRIOT requirements. PATRIOT enhancement modifications will require additional shop space as the schedule (FY97) is for two radars a month plus overhaul candidates for a 5-year program.

LEAD has also coordinated and responded to the total package fielding of PATRIOT. All PATRIOT equipment is assembled at LEAD prior to shipment to its customer; this requires a tremendously large staging area. LEAD was chosen as a consolidation point for Tactical Missiles because it was able to meet all present

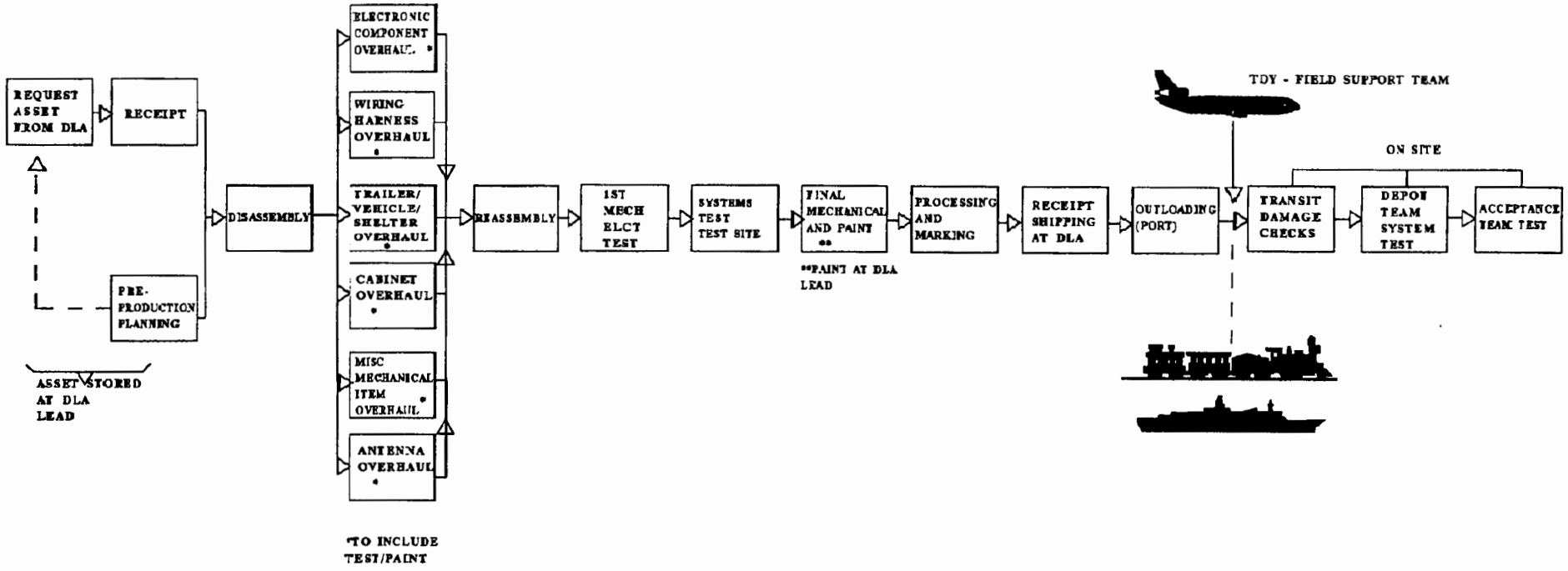
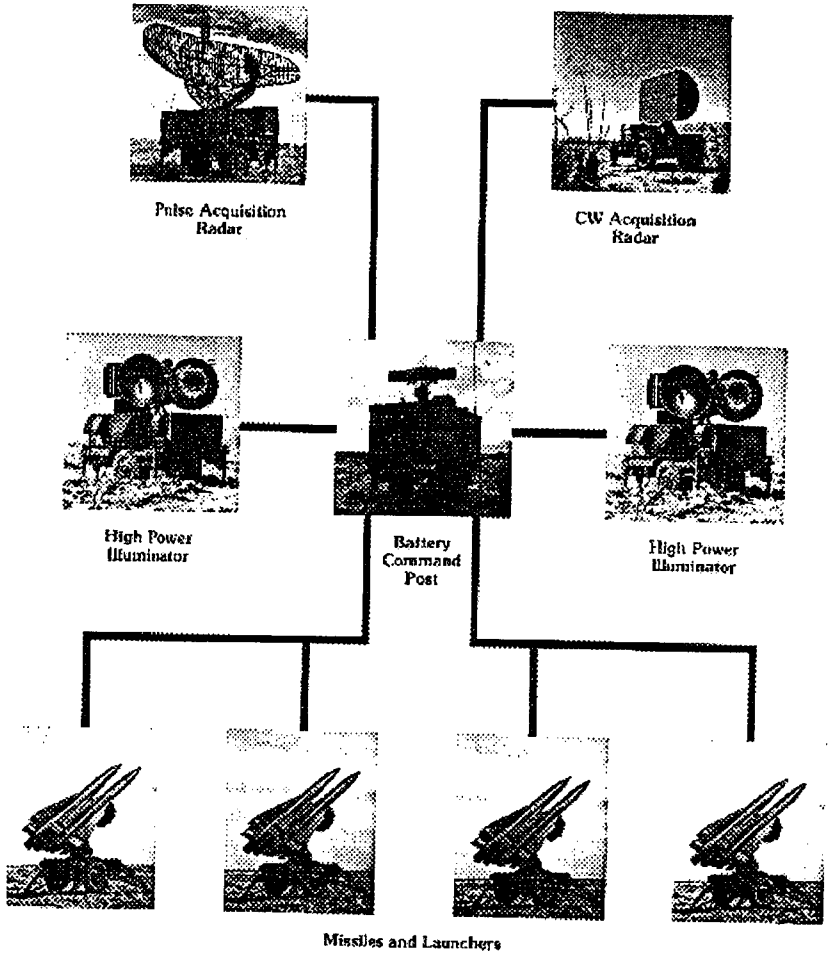


Figure 1. Current PATRIOT System Overhaul at LEAD

Homing All the Way Killer (HAWK)



Homing All the Way Killer (HAWK)

1. DESCRIPTION.

The HAWK Missile System is an all weather day and night, low to medium altitude air defense weapon system deployed through out the world. This system was initially deployed in 1958. Product improvement enhancements were developed and applied throughout the basic systems life cycle to its current Phase III configuration. This configuration supports all U.S. Army area and point defense requirements and the rapid deployment force. The Marine Corps deploys the system in support of amphibian forces and base defense missions or as an independent unit in a special tactical operation. HAWK is used by the U.S. Army National Guard, Marine Corps, and foreign militaries. Letterkenny Army Depot (LEAD) has been the U.S. Army's prime depot and Center for Technical Excellence for overhaul, repair, modification, and fabrication on the ground support equipment, field maintenance equipment, and secondary item support of the HAWK System for over 30 years.

2. MAINTENANCE CONCEPT.

a. BRAC 93. BRAC 93 directed the HAWK tactical missile maintenance workload from Barstow, CA and the HAWK workload, from contract, be transitioned to LEAD.

The HAWK major/principal end items and secondary items are received and stored by the Defense Depot Letterkenny Pennsylvania (DDLP).

This proposed maintenance concept will require secure storage. The HAWK Depot Maintenance Work Requirements states a SICO will be performed on the major item equipment. This requires a test site and a complete hot mock-up fire unit. LEAD presently has a 2 acre facility and a hot mock-up fire unit used for this purpose. There are no trucks to consider with this system; however, the Loader and the Launcher will require a track vehicle and hydraulic shop.

3. COSTS.

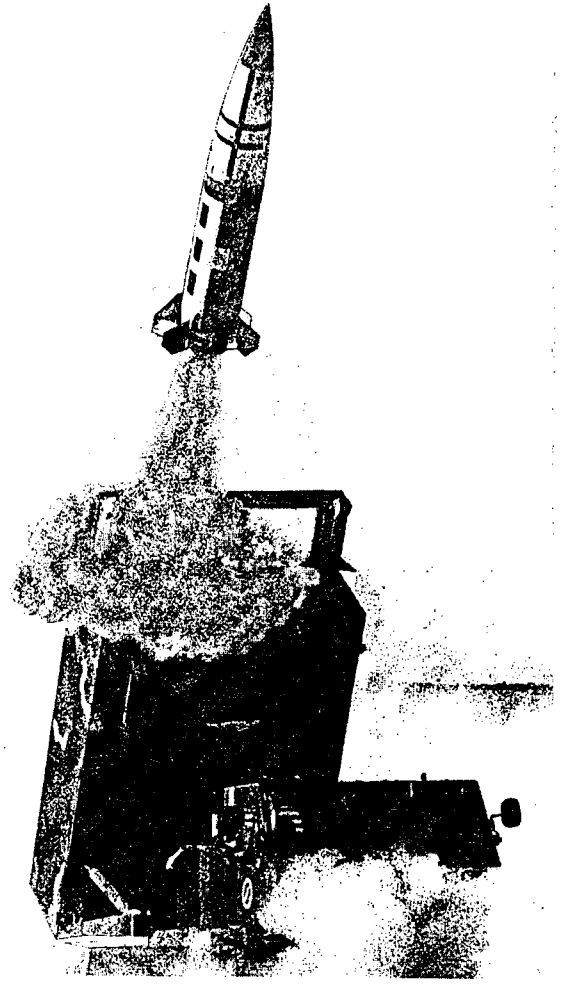
The BRAC 95 recommendation creates a fragmented maintenance concept which requires an additional eight Defense Logistics Agency receipt and issue charges and transportation costs. Additional costs are $2,418 for DLA and $2,491 for transportation costs. These additional cost will be incurred for every item sent to ANAD for rework.

4. SUMMARY.

The U.S. Army Missile Command, Security Assistance Management Directorate has been diligently working to resell retrofit HAWK assets returned during the downsizing of the U.S. Army forces. The majority of HAWK workload is now positioned within the foreign military sales community. LEAD has retained capability to diagnostically test Phase II and Phase III configured systems.

The entire receipt/storage, maintenance, and subsequent issue process of the individual major/principal end items, complete system, and secondary items is currently accomplished within one DOD installation and would not be fragmented as directed by this BRAC 95 recommendation.

Army Tactical Missile Systems (TACMS)



Army Tactical Missile Systems (TACMS)

1. DESCRIPTION.

The Army TACMS is a long range, surface-to-surface, antipersonnel/antimaterial, guided missile. It is launched from the Multi-Launch Rocket System M-270 launcher platform. The Army TACMS is used by the U.S. Army. Letterkenny Army Depot's (LEAD) Directorate of Ammunition tests, repairs, and modifies the Army TACMS. Army TACMS transitioned to LEAD from Anniston Army Depot, Anniston, AL.

2. MAINTENANCE CONCEPT.

LEAD's Directorate of Ammunition tests and repairs the missile by replacement of assemblies, subassemblies, or components. LEAD also performs stockpile surveillance and storage of the missile.

3. SUMMARY.

The Army TACMS is an explosive mission and will remain at LEAD. The Army TACMS is an example of the efficiencies associated with the performance of missile and section level maintenance performed at one location.

Phoenix

Phoenix

1. DESCRIPTION.

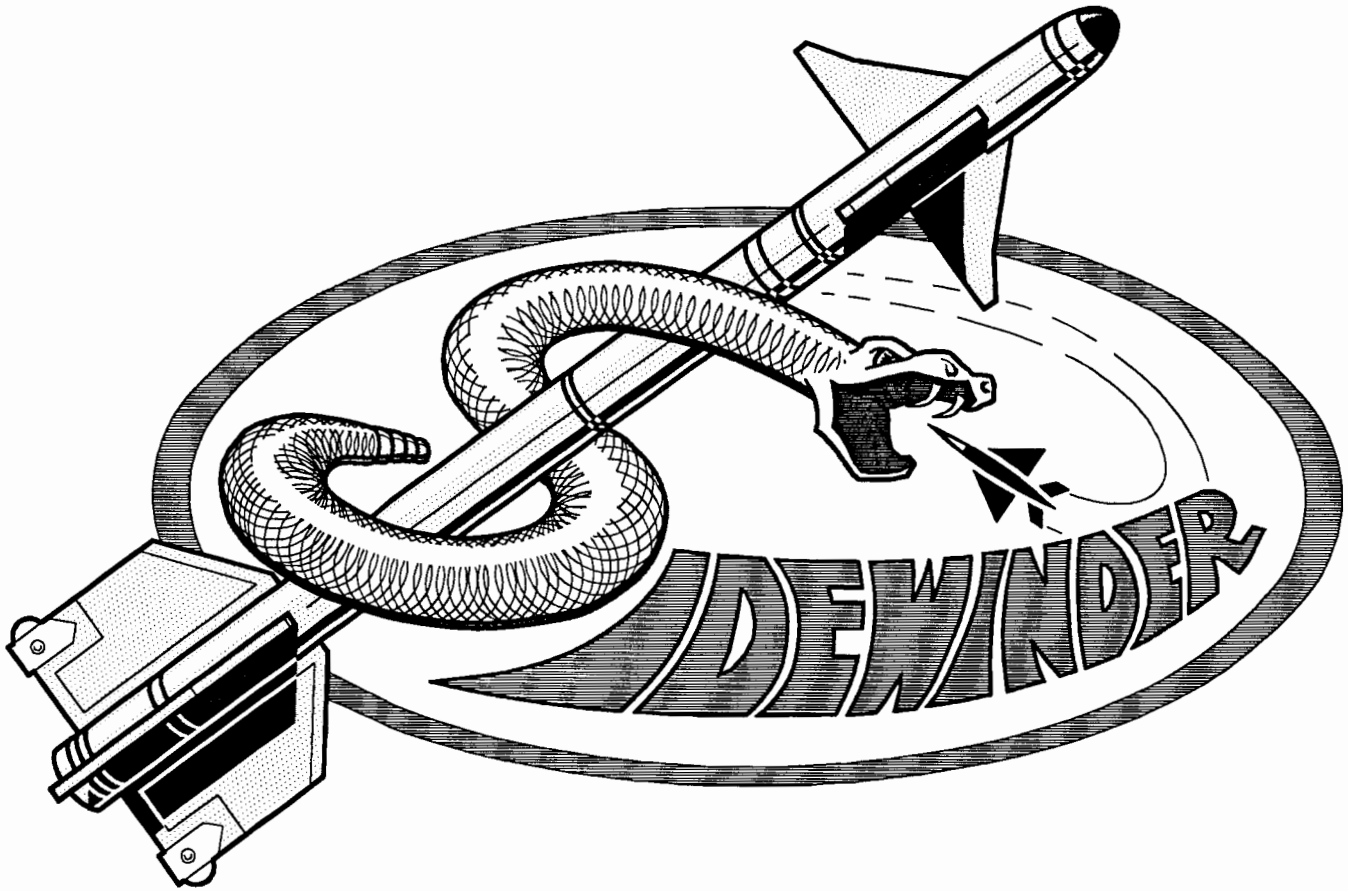
The Phoenix is a long-range, radar-guided, air-to-air missile. The Phoenix is a U. S. Navy missile. LEAD Army Depot's (LEAD) Directorate of Maintenance performs depot level maintenance and modifications on the Guidance Section (GS) and Control Section (CS). The Phoenix repair mission transferred to LEAD from Alameda Naval Aviation Depot, Alameda, CA.

2. MAINTENANCE CONCEPT.

a. BRAC 93. Phoenix GSs and CSs are sent to LEAD's Ammunition Directorate from Naval Weapon Stations (NWS), Fallbrook, CA and Yorktown, VA. The Directorate of Maintenance performs test and fault isolation on the GS, CS, and the Reprogrammable Program Memory modification.

b. BRAC 95. Phoenix GSs and CSs will be sent to LEAD's Ammunition Directorate from NWSs, Fallbrook, CA and Yorktown, VA. GSs and CSs will be sent from LEAD to Tobyhanna Army Depot (TOAD), Tobyhanna, PA for performance of test and fault isolation and Reprogrammable Program Memory modifications. Repaired sections will be sent back to LEAD for storage then shipment to the NWSs.

Sidewinder



Sidewinder

1. DESCRIPTION.

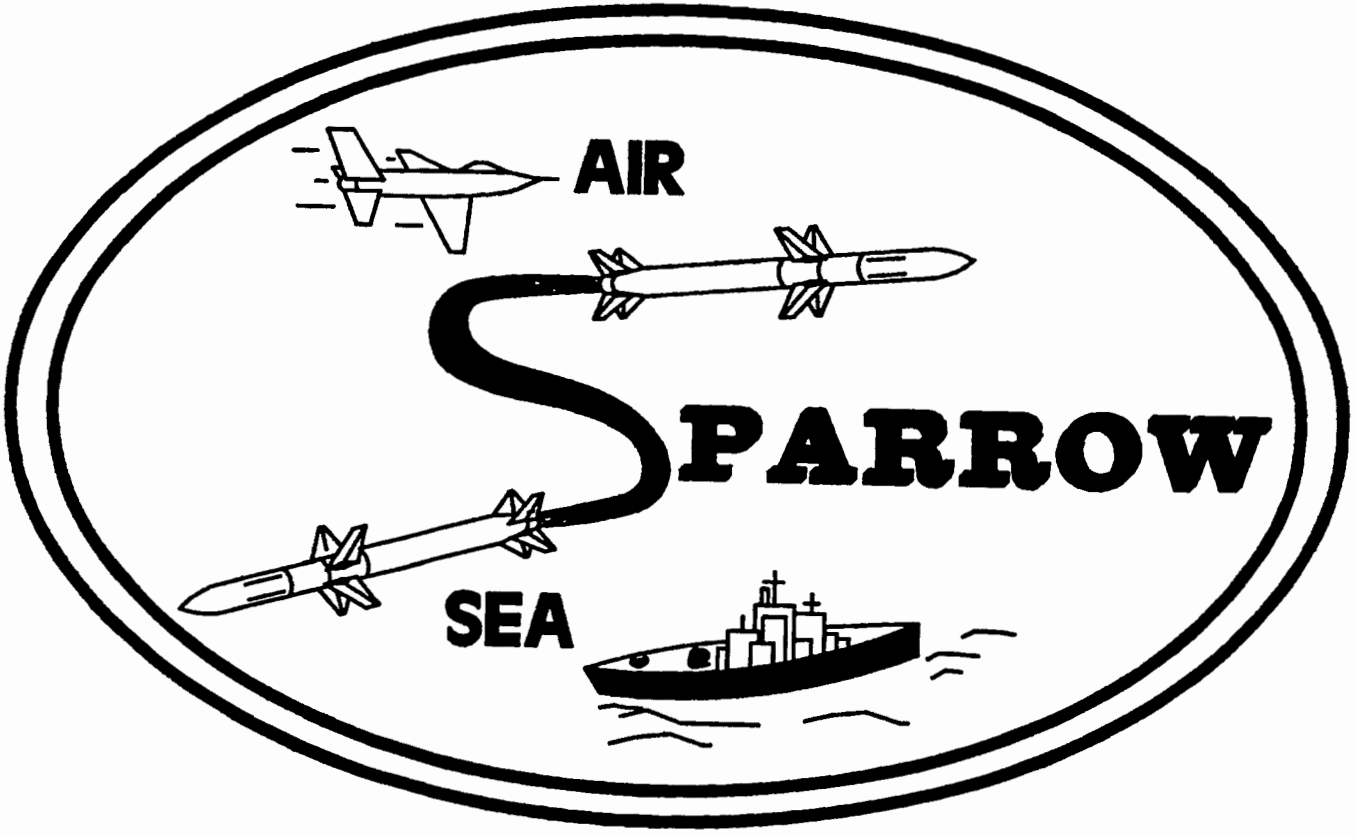
The Sidewinder is a short-range, supersonic, air-to-air heat seeking missile. The Sidewinder is used by the U. S. Air Force, Navy, and foreign militaries. Letterkenny Army Depot's (LEAD) Directorate of Maintenance performs depot level maintenance and modification to the Guidance Control Section (GCS). LEAD's Directorate of Ammunition all-up-rounds (AUR) and tests Air Force missiles. The Navy Sidewinder equipment transferred from Norfolk Naval Aviation Depot, Norfolk, VA. The Air Force equipment is scheduled to transfer from Odgen Air Logistics Center, Odgen, UT in July 1995.

2. MAINTENANCE CONCEPT.

a. BRAC 93. GCSs are repaired by LEAD's Directorate of Maintenance. Air Force sections are sent from LEAD's Ammunition Directorate or the field, and the Navy sections are sent from Naval Weapons Stations (NWS) Yorktown, VA and Fallbrook, CA. LEAD will perform fault isolation, test, repair, and modifications to the GCS.

b. BRAC 95. GCSs would be sent to Tobyhanna Army Depot (TOAD), Tobyhanna, PA from LEAD's Ammunition Directorate. TOAD will perform fault isolation, test, repair, and modifications to the GCSs. GCSs are then sent to LEAD for AUR and test. Navy GCSs are sent to LEAD for storage prior to shipment to NWSs.

Sparrow



Sparrow

1. DESCRIPTION.

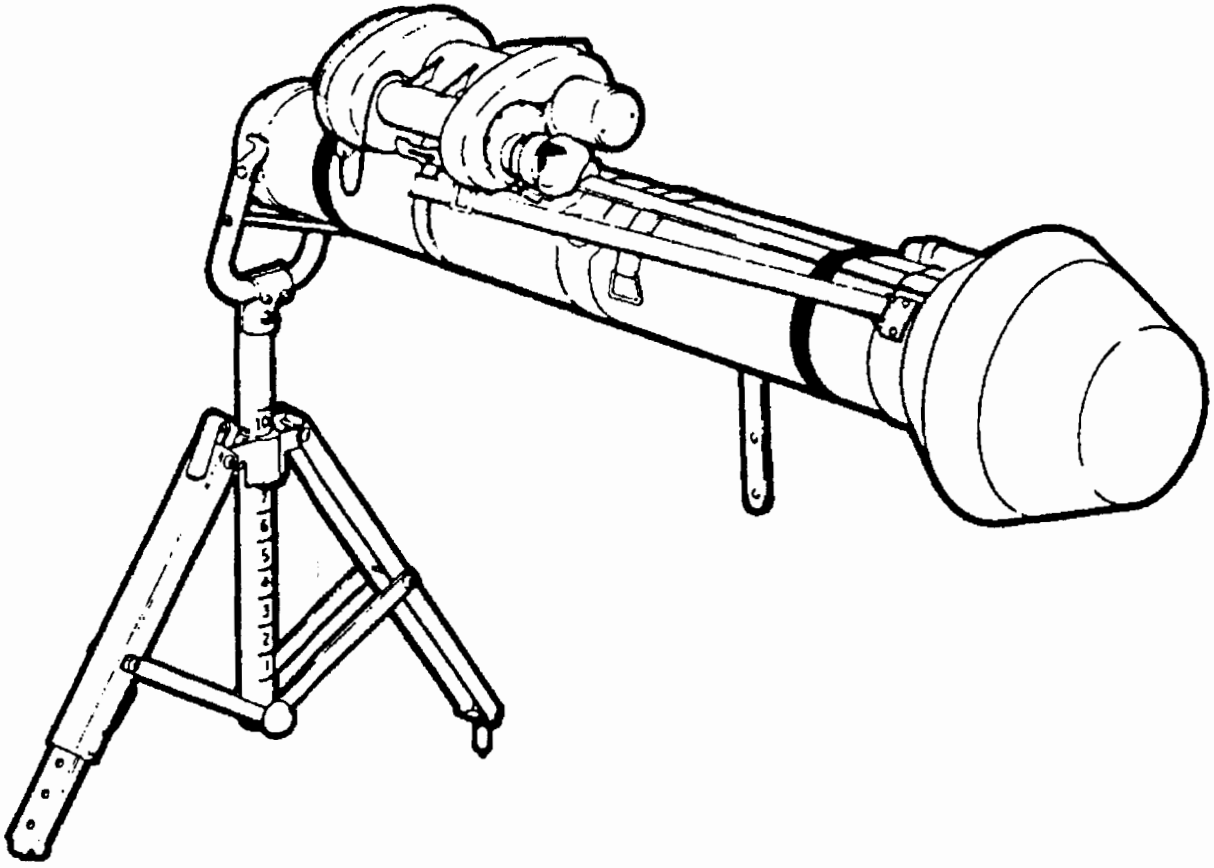
The Sparrow is a medium-range, all-weather, supersonic air-to-air guided missile. The Sparrow is used by the U. S. Air Force and Navy. Four cylindrical major sections comprise the missile and consist of the Guidance Section (GS), warhead, rocket motor, and Control Section (CS). Letterkenny Army Depot's (LEAD) Directorate of Maintenance performs depot level maintenance on the GS and CS. LEAD's Ammunition Directorate all-up-rounds (AUR) and tests Air Force missiles. The Sparrow depot level maintenance mission transferred to LEAD from Alameda Naval Aviation Depot, Alameda, CA.

2. MAINTENANCE CONCEPT.

a. BRAC 93. GSs and CSs are repaired by LEAD's Directorate of Maintenance. Air Force sections are sent from LEAD's Ammunition Directorate and Navy sections are sent from Naval Weapons Stations (NWS) Yorktown, VA and Fallbrook, CA. LEAD will perform fault isolation, test, repair, and modifications to the GS and CS.

b. BRAC 95. GSs and CSs would be sent to Tobyhanna Army Depot (TOAD), Tobyhanna, PA from LEAD's Ammunition Directorate. TOAD will perform fault isolation, test, repair, and modifications to the GSs and CSs. Repaired sections are then sent to LEAD for AUR and test or storage and shipment to the NWSs.

Dragon



Dragon

1. DESCRIPTION.

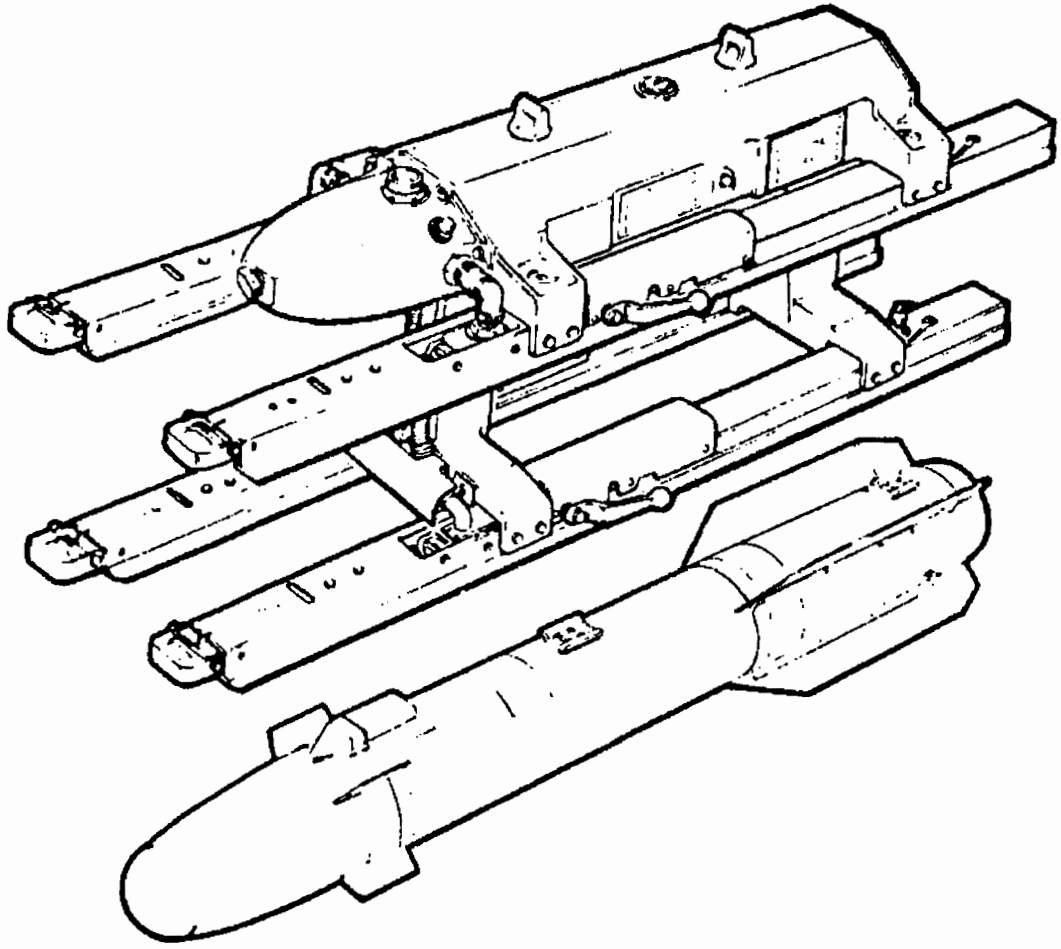
The Dragon is a lightweight, recoilless, antitank assault weapon. It is capable of defeating enemy armor, fortified positions, and other hardened targets. Dragon is used by the U. S. Army, Marine Corps, and foreign militaries. Letterkenny Army Depot's (LEAD) Directorate of Maintenance performs depot level maintenance and complete overhaul on major assemblies of the Dragon. The Dragon mission transferred from Anniston Army Depot (ANAD), Anniston, AL.

2. MAINTENANCE CONCEPT.

a. BRAC 93. LEAD's Directorate of Maintenance performs test, fault isolation, and repair to the component level on major assemblies and subassemblies of the Dragon. This includes both electronics and electro-optics. Dragon assemblies and subassemblies will be returned from the field to LEAD.

b. BRAC 95. Tobyhanna Army Depot (TOAD), Tobyhanna, PA will perform test, fault isolation, and repair to the component level on major assemblies and subassemblies of the Dragon. This includes both electronics and electro-optics. Dragon assemblies and subassemblies will be returned from the field to TOAD.

Hellfire



Hellfire

1. DESCRIPTION.

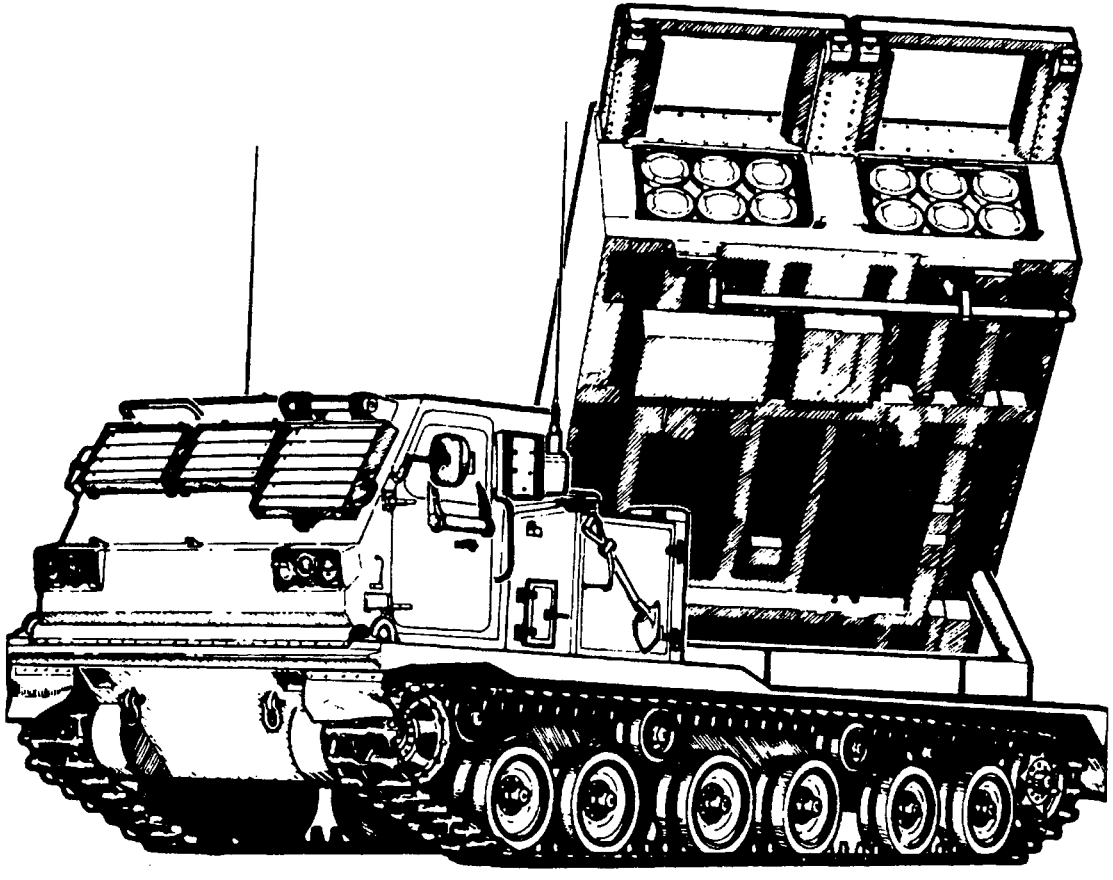
The Hellfire is a short-range, laser-guided, missile. Hellfire is employed in air-to-air roles against other helicopters, surface-to-surface against armor and ships, and air-to-surface against tanks, armored vehicles, ships, and bunkers. Hellfire is used by the U.S. Army, Navy, Marine Corps, and foreign militaries. Letterkenny Army Depot's (LEAD) Directorate of Maintenance repairs Hellfire launchers, circuit cards, power supplies, and cable assemblies. Hellfire launcher mission transferred from Anniston Army Depot (ANAD), Anniston, AL.

2. MAINTENANCE CONCEPT.

a. BRAC 93. LEAD's Directorate of Maintenance performs test, fault isolation, and repair to the component level on the Hellfire launcher and subassemblies. Hellfire launchers and subassemblies will be returned from the field to LEAD.

b. BRAC 95. Tobyhanna Army Depot (TOAD), Tobyhanna, PA will perform test, fault isolation, and repair to the component level on the Hellfire launcher and subassemblies. Hellfire launchers and subassemblies will be returned from the field to TOAD or designated Defense Logistics Depot.

Multiple Launch Rocket System (MLRS)



Multiple Launch Rocket System (MLRS)

1. DESCRIPTION.

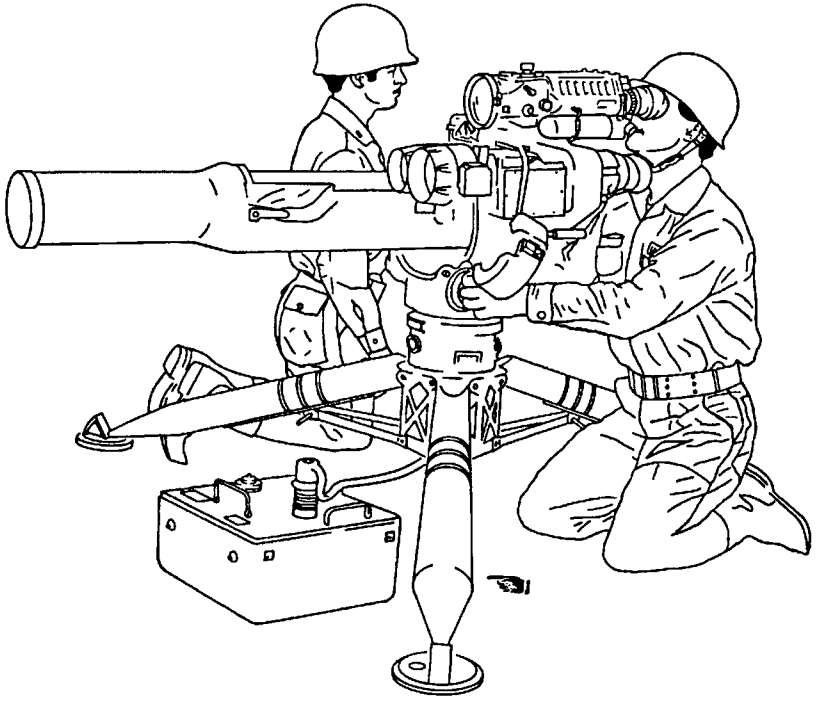
The MLRS is a mobile automatic system that fires surface-to-surface rockets. The MLRS launcher unit is comprised of an Armored Vehicle Mounted Rocket Launcher. The launcher is mounted on a Bradley derivative chassis loaded with 12 rockets contained in two 6-rocket pods. The MLRS is a self aiming, computer controlled, weapons system. The vehicle contains an on-board navigation system that continually locates it's own geographic location, thereby assuring accurate pin-point fire. MLRSs are used by U.S. Army, U.S. Co-Partners, and foreign militaries. Letterkenny Army Depot's (LEAD) Directorate of Maintenance will perform depot level maintenance on the MLRS fire control and selected launcher components. The MLRS mission transferred to LEAD from Red River Army Depot, TX.

2. MAINTENANCE CONCEPT

a. BRAC 93 LEADs Directorate of Maintenance performs test, fault isolation, and repairs to the component level of the MLRS fire control and launcher. MLRS assemblies will be returned from the field to LEAD.

b. BRAC 95 Tobyhanna Army Depot (TOAD), Tobyhanna, PA will perform test, fault isolation, and repairs to the component level of the MLRS fire control and launcher. MLRS assemblies will be returned from the field to TOAD.

Ground Tube-Launched, Optically-Sighted, Wire-Guided (TOW)



Ground Tube-Launched, Optically-Sighted, Wire-Guided (TOW)

1. DESCRIPTION.

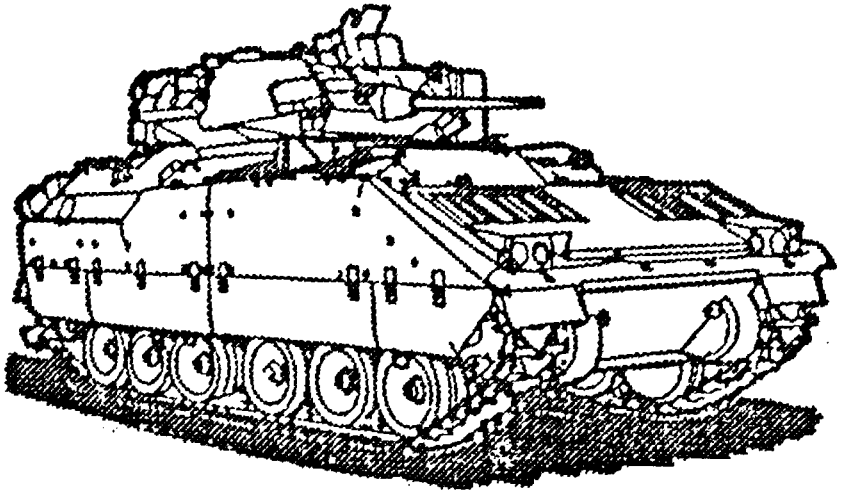
The Ground TOW Weapon System consists of a launcher and encased missile. The Ground TOW is a mobile, heavy antitank weapon designed to defeat armored vehicles and other hard targets, and is used by the U. S. Army, National Guard, and foreign militaries. Letterkenny Army Depot's (LEAD) Directorate of Maintenance will perform depot level maintenance on the launcher and subassemblies. The launcher subassemblies consist of; the launch tube, traversing unit, missile guidance set, night sight, battery unit, day sight tracker, and tripod. The Ground TOW mission is in the process of transitioning to LEAD from Anniston Army Depot (ANAD), Anniston, AL. All test equipment is at LEAD and undergoing checkout.

2. MAINTENANCE CONCEPT.

a. BRAC 93. LEAD's Directorate of Maintenance performs test, fault isolation, and repair to the component level on the Ground TOW launcher and its subassemblies. The Ground TOW launchers and subassemblies will be returned from the field to LEAD.

b. BRAC 95. Tobyhanna Army Depot (TOAD), Tobyhanna, PA will perform test, fault isolation, and repair to the component level on the Ground TOW launcher and its subassemblies. The Ground TOW launchers will be returned from the field or a designated Defense Logistics Agency Depot.

Tube-Launched, Optically Tracked and Wire-Guided (TOW) Bradley



Tube-Launched, Optically Tracked and Wire-Guided (TOW) Bradley

1. DESCRIPTION.

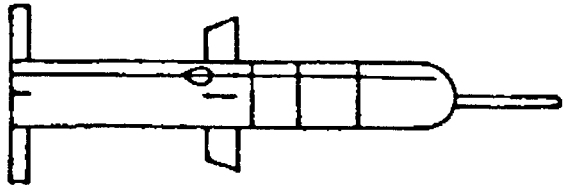
The TOW missile subsystem for the Bradley Fighting Vehicle is used to launch and guide the TOW missile to targets such as armored vehicles and other hard targets. TOW Bradley is used by the U. S. Army and Marine Corps. Letterkenny Army Depot's (LEAD) Directorate of Maintenance performs repair, rebuild, and modification to secondary and major items of the launcher, Digitized Missile Guidance Set (DMGS), and Command Guidance Electronics (CGE). The TOW Bradley mission transitioned to LEAD from Mainz Army Depot, Germany and Red River Army Depot, TX.

2. MAINTENANCE CONCEPT.

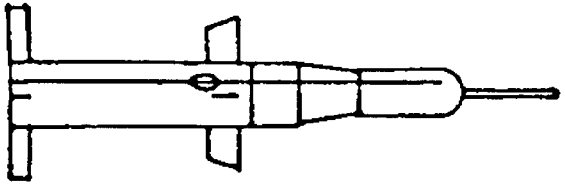
a. BRAC 93. LEAD's Directorate of Maintenance performs test, fault isolation, repair, and rebuild of the launcher, DMGS, and CGE. TOW Bradley major assemblies and secondary items are sent to LEAD from the field. LEAD also performs field modifications to the Armament Control Unit.

b. BRAC 95. Tobyhanna Army Depot (TOAD) will perform test, fault isolation, repair, and rebuild of the launcher, DMGS, and CGE. TOW Bradley major assemblies and secondary items are sent to TOAD from the field or a designated Defense Logistics Agency Depot.

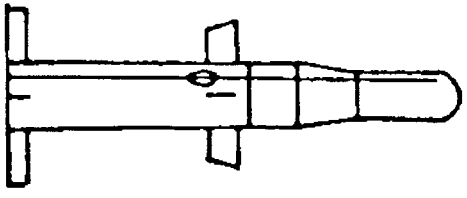
Tube-Launched, Optically Tracked and Wire-Guided (TOW) Cobra M65



TOW 2



ITOW



BASIC

Tube-Launched, Optically Tracked and Wire-Guided (TOW) Cobra M65

1. DESCRIPTION.

Utilized on the AH-1 series helicopter, the M65 TOW subsystem is a heavy assault weapon system. TOW M65 is used by the U. S. Army and Marine Corps. Letterkenny Army Depot's (LEAD) Directorate of Maintenance will perform repair, rebuild, and modifications on the Monitor and Control Amplifier (MCA), Electronic Power Supply (EPS) Launcher, Stabilization Control Amplifier, TOW Control Panel (TCP), TOW System Evaluation Missile, Sight Hand Control, and Forward Looking Infrared Radar variations of the EPS, TCP, and MCA. The TOW M65 will transition from Anniston Army Depot, Anniston, AL and is scheduled to begin equipment transition to LEAD in July 1995.

2. MAINTENANCE CONCEPT.

a. BRAC 93. LEAD's Directorate of Maintenance will perform test, fault isolation, repair, rebuild, and modification of M65 TOW and its subassemblies. The M65 TOW will be returned from the field to LEAD for repair.

b. BRAC 95. Tobyhanna Army Depot (TOAD), Tobyhanna, PA will perform test, fault isolation, repair, rebuild, and modification of M65 TOW and its subassemblies. The M65 TOW will be returned from the field or a designated Defense Logistics Agency Depot to TOAD for repair.

High Speed Anti-Radiation Missile (HARM)

High Speed Anti-Radiation Missile (HARM)

1. DESCRIPTION.

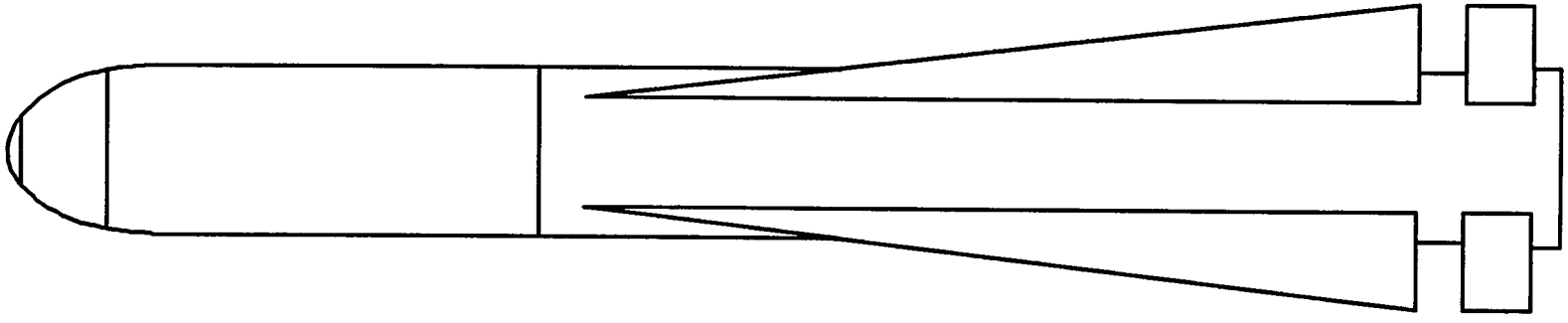
The HARM is used to detect, identify, and destroy enemy surface radar threats. The HARM is used by the U. S. Navy, Air Force, Marine Corps, and foreign militaries. The HARM is issued as an all-up-round and is comprised off a Guidance Section (GS), Control Section (CS), warhead, and rocket motor. Letterkenny Army Depot's (LEAD) Directorate of Maintenance will perform depot level maintenance to the GS, CS, and Peculiar Support Equipment (PSE). HARM PSE test equipment has transitioned to LEAD and the GS and CS will transition in 1998.

2. MAINTENANCE CONCEPT.

a. BRAC 93. HARM GSs and CSs will be sent to LEAD's Directorate of Ammunition from Naval Weapons Stations (NWS) Yorktown, VA and Fallbrook, CA. LEAD's Directorate of Maintenance will perform test, fault isolation, and repair of the HARM GS, CS, and PSE.

b. BRAC 95. HARM GSs and CSs will be sent to LEAD's Directorate of Ammunition from NWSs Yorktown, VA and Fallbrook, CA. GCs and CSs will be sent from LEAD to Tobyhanna Army Depot (TOAD), Tobyhanna, PA performance of test, fault isolation, and repair. Repaired sections will be sent to LEAD for storage then shipment to the NWSs.

Maverick



Maverick

1. DESCRIPTION.

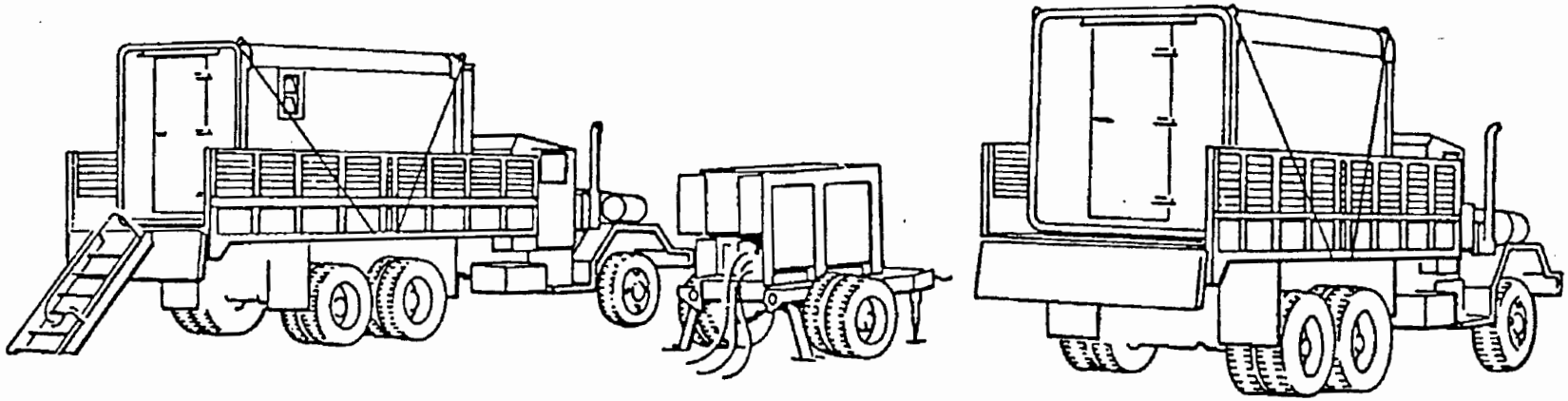
The Maverick is an Air-to-Ground TV/Infrared, LASER guided missile used against fortified ground installations, armored vehicles, and surface combatant ships. The Maverick is used by the U. S. Air Force, Navy, Marine Corps, and foreign militaries. The Maverick is issued as an all-up-round (AUR) missile which is comprised of three major components; the Guidance and Control Section (GCS), the center section, and aft section. Letterkenny Army Depot's (LEAD) Directorate of Maintenance will perform depot level maintenance and modification to the Maverick GCSs. Maverick will transition to LEAD in June 1996.

2. MAINTENANCE CONCEPT.

a. BRAC 93. Maverick GCSs will be sent to LEAD's Directorate of Ammunition from Naval Weapon Stations (NWS) Yorktown, VA and Fallbrook, CA, Red River Army Depot (RRAD), TX, and Odgen Air Logistics Center, Odgen, UT. LEAD's Directorate of Maintenance will perform test, fault isolation, and repair to Maverick GCSs.

b. BRAC 95. Maverick GCSs would be sent to LEAD's Directorate of Ammunition from NWSs Yorktown, VA and Fallbrook, CA, RRAD, and Odgen Air Logistics Center, UT. GCSs would be sent from LEAD to Tobyhanna Army Depot (TOAD), PA for performance of test, fault isolation, and repair. Repaired sections would be sent back to LEAD for storage, then shipment.

Land Combat Support System (LCSS)



AN/TSM-93

ENGINE GENERATOR SET

AN/TSM-94

Land Combat Support System (LCSS)

1. DESCRIPTION.

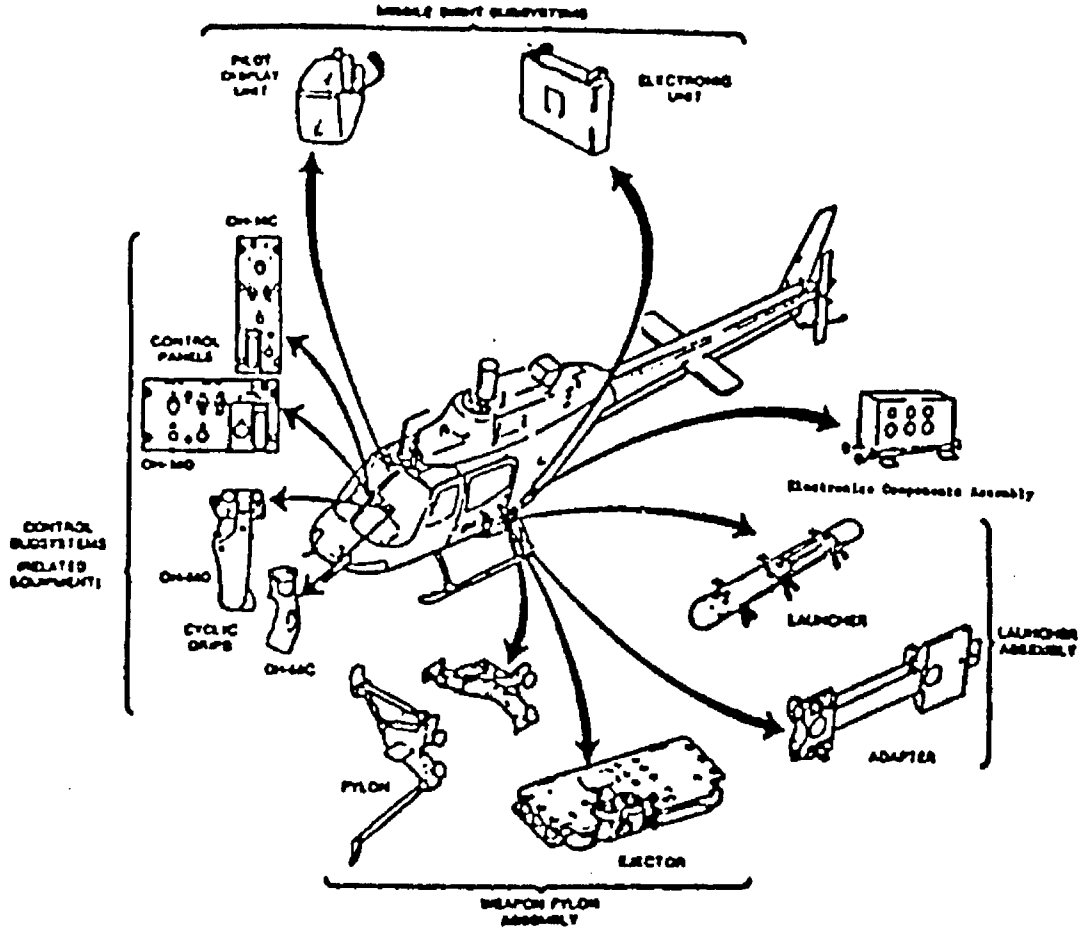
The LCSS is designed for automatic test and maintenance support of major assemblies and subassemblies of itself and its supported combat weapons systems: Shillelagh, Dragon, and TOW. The LCSS is adaptable for use at depot when augmented with commercial type acceptance and inspection equipment. The LCSS is used by the U.S. Army. Letterkenny Army Depot's (LEAD) Directorate of Maintenance will repair, rebuild, modify, and test major and secondary items, and assemblies/subassemblies. The LCSS is scheduled to transition from Anniston Army Depot (ANAD), Anniston, AL to LEAD beginning April 1996.

2. MAINTENANCE CONCEPT.

a. BRAC 93. LEAD's Directorate of Maintenance depot level maintenance, field support, rack/rail alignment, and technical support and assistance.

b. BRAC 95. Depot level maintenance, field support, rack/rail alignment, and technical support and assistance will transition from ANAD to Tobyhanna Army Depot (TOAD), Tobyhanna, PA.

Air-to-Air Stinger (ATAS)



Air-to-Air Stinger (ATAS)

1. DESCRIPTION.

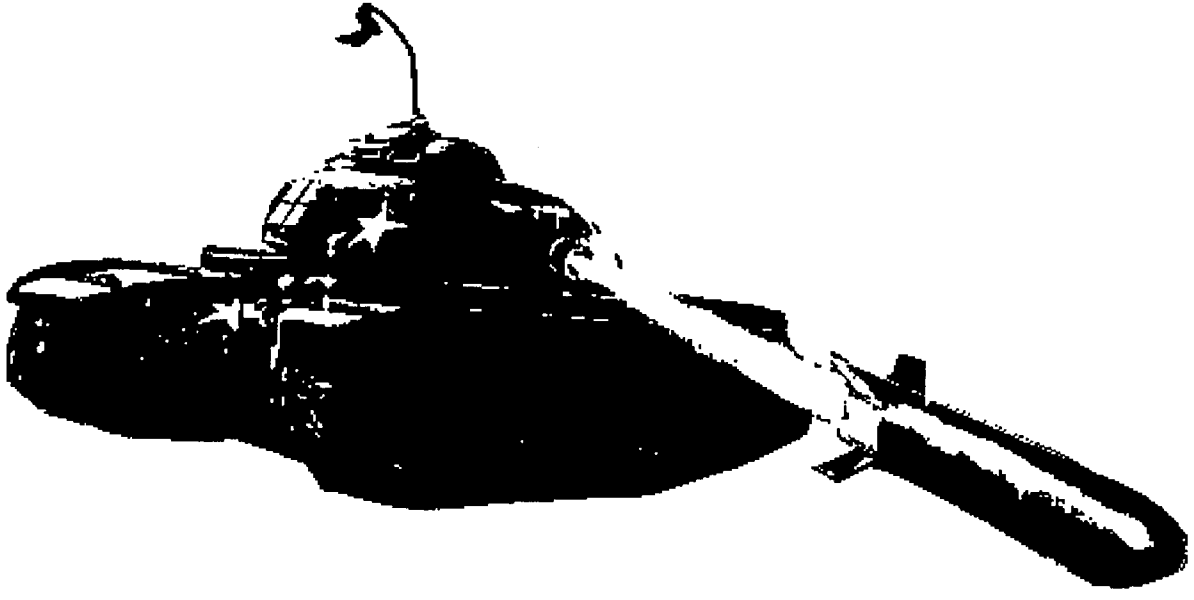
The ATAS is an air-to-air missile launching system designed to be mounted on a varity of helicopters and will accept all configurations of the STINGER missile without modification. The ATAS system is comprised of the launcher, launcher adapter, argon coolant bottle, sight subsystem, and launcher and interface electronics. The ATAS system is used by the U.S. Army. Letterkenny Army Depot's (LEAD) Directorate of Maintenance will repair and test the missile launcher and argon coolant bottles. The ATAS system mission transitioned from the contractor source of repair to LEAD in June 1994.

2. MAINTENANCE CONCEPT.

a. BRAC 93. LEAD's Directorate of Maintenance performs depot level maintenance on the launcher, launcher adapter, argon coolant bottle, sight subsystem, and launcher and interface electronics.

b. BRAC 95. Tobyhanna Army Depot (TOAD), Tobyhanna, PA will perform depot level maintenance of the launcher, launcher adapter, argon coolant bottle, sight subsystem, and launcher and interface electronics will be performed by TOAD.

Shillelagh



Shillelagh

1. DESCRIPTION.

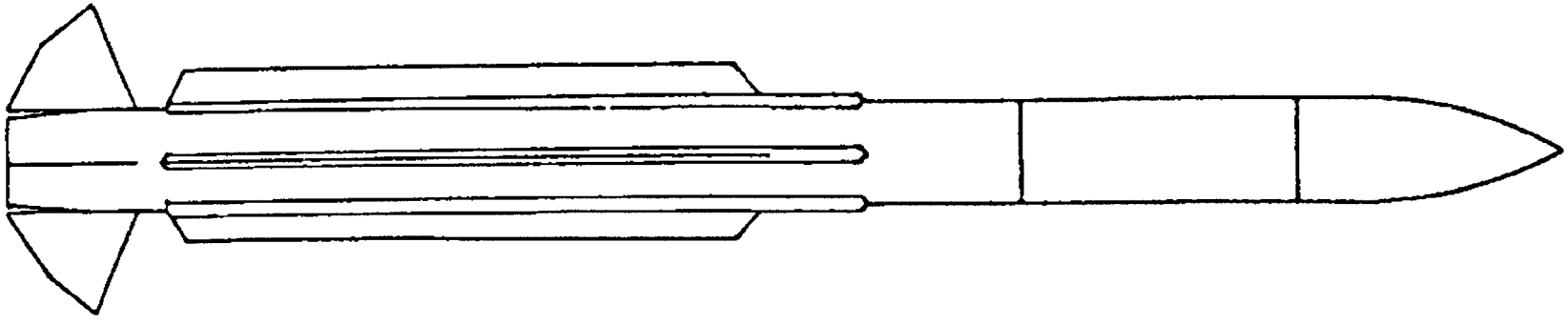
The Shillelagh is a solid propellant guided missile using a shaped charge warhead. The Shillelagh is launched from a 152 MM gun/launcher and has an effective range of 3000 meters. The Shillelagh is used by the U.S. Army. Letterkenny Army Depot's (LEAD) Directorate of Maintenance will repair and test the Line Replaceable Units (LRU), infrared transmitter and tracker, signal data converter, modulator, rate sensor, test check-out panel, and power supply. The Shillelagh is scheduled to transition from Anniston Army Depot (ANAD), Anniston, AL to LEAD beginning April 1996.

2. MAINTENANCE CONCEPT.

a. BRAC 93. LEAD's Directorate of Maintenance will perform depot level maintenance on LRU's, infrared transmitter and tracker, signal data converter, modulator, rate sensor, test check-out panel, and power supply.

b. BRAC 95. Tobyhanna Army Depot (TOAD), Tobyhanna, PA will perform depot level maintenance on LRU's, infrared transmitter and tracker, signal data converter, modulator, rate sensor, test check-out panel, and power supply.

Standard (Anti-Radar Missile)



Standard (Anti-Radar Missile)

1. DESCRIPTION.

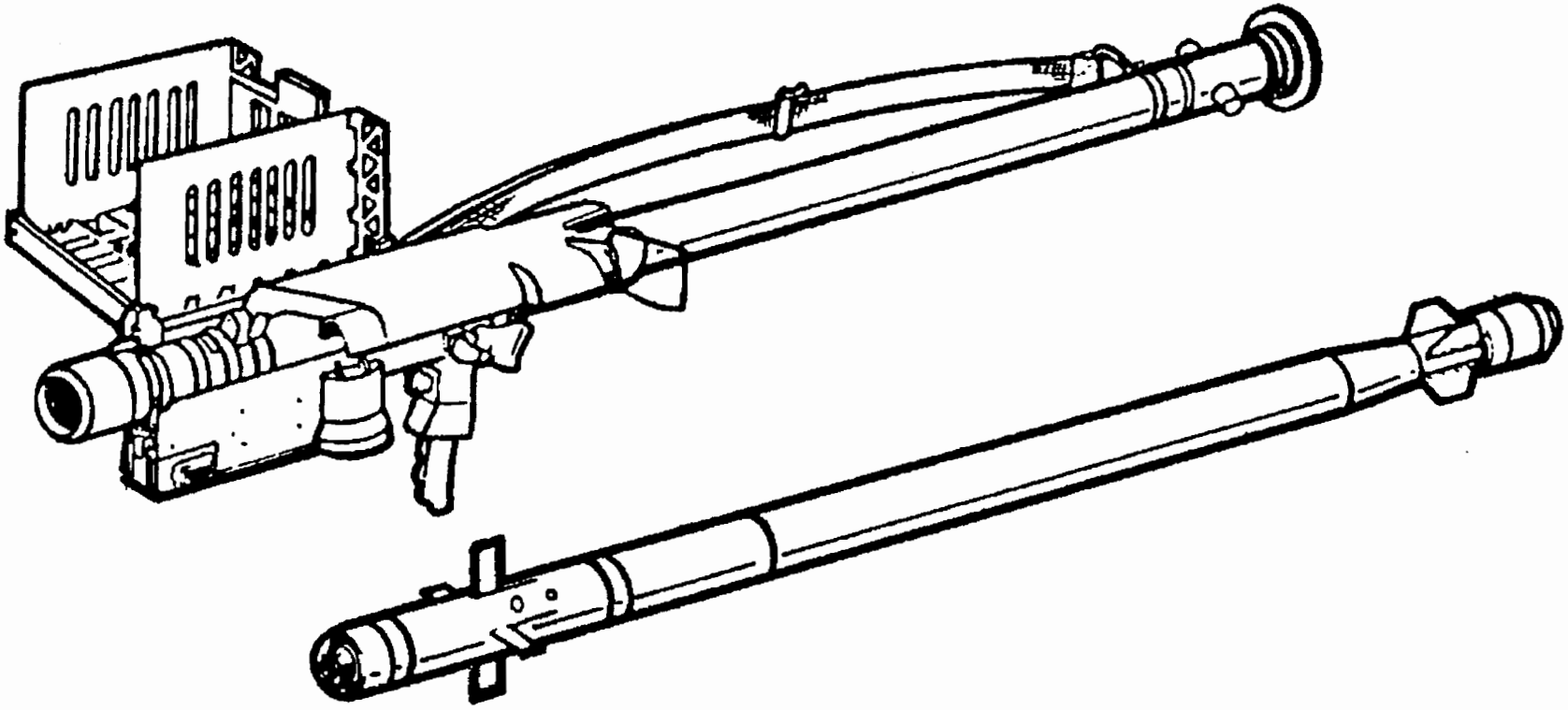
The STANDARD is a surface-to-air missile that also possesses significant surface-to-surface defensive capabilities and is issued in two versions; the SM-1 medium range version and SM-2 extended range version. The STANDARD missile is used by the U.S. NAVY and foreign militaries. Letterkenny Army Depot's Directorate of Maintenance (LEAD) will repair and test the Guidance Section (GS) components. The STANDARD workload is scheduled to transition from contractor source of repair to LEAD.

2. MAINTENANCE CONCEPT.

a. BRAC 93. Standard GSs will be shipped to LEAD's Directorate of Ammunition for all-up-round (AUR) locations. LEAD's Directorate of Maintenance will perform test, fault isolation, and repair to the GSs.

b. BRAC 95. Standard GSs will be shipped to LEAD's Directorate of Ammunition from AUR locations. LEAD will ship GSs to Tobyhanna Army Depot, Tobyhanna, PA for test, fault isolation, and repair. Repaired GS will be sent to LEAD for storage, then shipment.

Stinger



Stinger

1. DESCRIPTION.

The Stinger is a tube mounted, short-range, infrared, fire-and-forget, surface-to-air missile. The Stinger is designed to aquire and destroy enemy aircraft targets and is used by U.S. Army, Marine Corps, and foreign militaries. Letterkenny Army Depot's (LEAD) Directorate of Maintenance will repair, modify, and test the Guidance and Control Sections (GCS). The maintenance mission is scheduled to transition from the contractor source of repair to LEAD in 1995.

2. MAINTENANCE CONCEPT.

a. BRAC 93. The Stinger missile will be sent to LEAD's Directorate of Ammunition. Ammunition will perform all-up-round (AUR) test, GCS depot level repair, and storage.

b. BRAC 95. The Stinger missile will be sent to LEAD's Directorate of Ammunition for AUR test and removal of faulty GCS. Failed section will be sent to Tobyhanna Army Depot (TOAD), Tobyhanna, PA for repair then returned to LEAD. The repaired section will be reassembled in the missile, tested, then placed in storage.

Advanced Medium-Range Air-to-Air Missile (AMRAAM)

Advanced Medium-Range Air-to-Air Missile (AMRAAM)

1. DESCRIPTION.

The AMRAAM has been developed under joint sponsorship of the U.S. Air Force and U.S. Navy. AMRAAM consists of a Guidance Section (GS), Control Section (CS), Propulsion Section, and Armament Section. Letterkenny Army Depot's (LEAD) Directorate of Maintenance will perform depot level maintenance and surveillance testing on the GS and CS. The AMRAAM depot level maintenance mission will transfer from Hughes Missile Systems Company (HMSC), Tucson, AZ in February 1998.

2. MAINTENANCE CONCEPT.

a. BRAC 93. GSs and CSs will be sent to LEAD's Directorate of Ammunition from Naval Weapons Stations (NWS) Fallbrook, CA and Yorktown, VA. The Directorate of Maintenance will perform test, fault isolation, repair, and modification on the GS and CS. LEAD will also perform surveillance testing and failure analysis to the GS and CS.

b. BRAC 95. AMRAAM GSs and CSs will be sent to LEAD's Directorate of Ammunition from NWSs Fallbrook, CA and Yorktown, VA. They will then be sent to Tobyhanna Army Depot (TOAD), Tobyhanna, PA for test, fault isolation, repair, and modification. The sections will require reshipment back to LEAD, prior to being sent to the NWSs.

FOR OFFICIAL USE ONLY

DEPARTMENT OF DEFENSE

TACTICAL MISSILE MAINTENANCE CONSOLIDATION AT LETTERKENNY ARMY DEPOT

BASE REALIGNMENT AND CLOSURE 1993

FINAL IMPLEMENTATION PLAN

06 MAY 94

(COORDINATION COPY, AS OF ~~26 SEP 94~~ 7 Nov 94)

FOR OFFICIAL USE ONLY

FOREWORD

*

1. Purpose. To provide a macro-level plan to establish BRAC budget requirements and to provide first indenture level transition information: transition milestone schedules, requirements for facilities, training, personnel actions, etc. This document provides the framework for the implementation of the BRAC 93 law to consolidate DoD Tactical Missile Maintenance (TMC) at Letterkenny Army Depot (LEAD). It provides the broad guidance and scheduling information which will be used as a source document for the development of the detailed system specific transition plans.

2. Coordination.

a. This document will serve as an update to the Tactical Missile Maintenance Consolidation Plan for Letterkenny Army Depot, 31 Jan 92, revised 30 Apr 92 (Green Book). Coordination will be accomplished with all Services, culminating with a signature/concurrence from Services' JPCG-DM representatives. This Implementation Plan (Blue Book) will not be continually republished. Key sections will be revised (workload, transition schedules, etc.) and distributed as addendums, or updated as part of the minutes of the TMC-Joint Service Working Group (TMC-JSWG) meetings.

b. Each Service is responsible to formally request/adjust BRAC funding requirements with their Service BRAC offices using established procedures. Additional nonrecurring costs to transition tactical missile system workload, which is directed by BRAC 93, from contract to Letterkenny Army Depot may be funded by the BRAC office of the Service who has contracted the workload in accordance with the funding guidelines specified in Section 8.2.

c. Each system's transition plan will serve as the detailed plan of execution to transition, establish and consolidate tactical missile support at LEAD. Each missile system specific transition plan will be developed by a working group generally composed of representatives from the gaining and owning Service, current and gaining Source of Repair (SOR) and Defense Logistics Agency (DLA). Membership positions were agreed on by all Services at the TMC-JSWG Meeting in Chambersburg, PA, 17-19 Aug 93. The Services unanimously requested the Army take the lead regarding the transition plan development.

3. Guidance. The JPCG-DM is the steering group for TMC. The JPCG-DM approved a TMC-JSWG Charter on 1 Feb 94. The Army, represented by MG Benchoff, was appointed as the chairman. The TMC-JSWG was established to implement the transition of DoD tactical missiles into LEAD. Problems unresolvable by the TMC-JSWG will be taken to the JPCG-DM for resolution. The JPCG-DM will determine which issues must be elevated to the DDMC.

* A line in the margin indicates a change has been made from previous edition of the plan.

LETTERKENNY ARMY DEPOT

BASE REALIGNMENT AND CLOSURE 1993

IMPLEMENTATION PLAN

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SECTION 1

EXECUTIVE SUMMARY

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1.1 INSTALLATION PACKAGE. Letterkenny Army Depot, Chambersburg, PA. (Dated 15 Feb 94)

1.2 DESCRIPTION. Letterkenny Army Depot (LEAD) is a government owned-government operated (GOGO) installation established in 1941 and is located in south central Pennsylvania in the Cumberland Valley, approximately 25 miles west of Gettysburg, near Chambersburg, Pennsylvania. The Savanna Army Depot Activity in Savanna, IL reports to LEAD.

1.2.1 DESCRIPTIVE STATISTICS.

1.2.1.1 SIZE: LEAD contains 19,243 acres of Army owned-in-fee land; 2,500 acres of which is dedicated to industrial operations. The maintenance activity is performed in 1,279,482 square feet of floor space. There are 66 buildings within the maintenance complex and an additional 1,083 buildings in the ammunition area.

1.2.1.2 TRANSPORTATION ACCESS:

1.2.1.2.1 Interstate Route 81 and US Routes 11 and 30 serve the general area and are within five miles of the main entrance to the depot. LEAD's location provides highway access to convenient seaports of embarkation at Dundalk Marine Terminal, Baltimore, Maryland (80 miles); Military Ocean Terminal, Bayonne, New Jersey (215 miles); and Naval Weapons Station, Earle, New Jersey (200 miles). LEAD is approximately 474 miles from military ocean terminal Sunny Point, NC. which is the primary DoD receipt point for Class V.

1.2.1.2.2 LEAD is served by the Baltimore and Ohio Railway, which is part of the Chessie System. Government track connects with the Chessie System track at the extreme southeast section of the depot. The Government performs all internal switching. The Chessie System has a freight station at Culbertson, Pennsylvania, east of the depot along State Route 433. The Railway Express Office for Class A or B ammunition is Harrisburg, PA. Interchange service is provided with CONRAIL and the Norfolk and Western Railway.

1.2.1.2.3 There are more than 50 major trucklines serving the depot. Additionally, the depot has a 100' X 100' helicopter landing pad located north of Coffey Avenue, along Cargo Road. Military fixed wing aircraft and helicopters utilize the
Chambersburg Municipal Airport located one mile south of the Depot. LEAD is close to the Harrisburg (55 miles) and Baltimore, MD (70 miles) airports.

1.2.2 CURRENT MISSION.

- Receive, store, issue, repair, recertify, modify, renovate, demilitarize, and test conventional and missile munitions.

- Test, modify, overhaul and repair the ATAS/AVENGER, HAWK and PATRIOT ground support equipment.

- Command and control Weilerbach, GE ATACMS maintenance facility.

- Assemble and test Sidewinder, Sparrow, and Phoenix. Located on LEAD is Government-Owned, Contractor-Operated facility for all uprounding (AUR) of Phoenix missile.

- Overhaul, repair, and modify, towed and self-propelled howitzers.

- Teamed with United Defense, LP to produce M109A6 Paladin Howitzer.

1.3 COMMISSION RECOMMENDATION. The BRAC 93 Commission recommended and the President and Congress approved the following concerning LEAD. (BRAC 93 Public Law).

"The Commission finds the Secretary of Defense deviated substantially from final criteria 1 and 4. Therefore, the Commission rejects the Secretary's recommendation on Letterkenny Army Depot, PA, and instead, adopts the following recommendation: Letterkenny Army Depot will remain open. Consolidate tactical missile maintenance at the depot as originally planned by the Department of Defense in the Tactical Missile Maintenance Consolidation Plan for Letterkenny Army Depot, 31 January 1992 (revised 30 April 1992). Add tactical missile maintenance workload currently being accomplished by the Marine Corps Logistics Base Barstow, California, to the consolidation plan. Retain artillery workload at Letterkenny. The Commission finds this recommendation is consistent with the force-structure plan and final criteria."

1.4 SECTION 8112 OF THE DOD APPROPRIATION ACT FOR FISCAL YEAR 1994. The Act provides that: Notwithstanding any other provision of law, and in accordance with Section 2905 of the Defense Base Closure and Realignment Act of 1993, Public Law
101-510, DOD shall proceed with its implementation of the 1993 Defense Base Closure and Realignment Commission recommendation concerning consolidation of tactical missile maintenance at Letterkenny Army Depot.

1.5 DUSD-(Logistics) Guidance. On 19 Apr 94 MG(R) James R. Klugh, Deputy Under Secretary of Defense (Logistics), DUSD-L, issued guidance at enclosure 1 to the Under Secretaries of the Military Departments on tactical missile consolidation. This guidance noted that the BRAC 93 recommendation is binding and reaffirmed by section 8112 of the 1994 DoD Appropriations Act. Further, the tactical missile workloads specified by the Commission must be consolidated at Letterkenny, to include systems "currently maintained in the private sector, unless one of the provisions in the plan providing for continuous maintenance in the private sector applies. A Department choosing to not consolidate an affected system at Letterkenny must notify DUSD-L and provide supporting justification."

1.6 CONCEPT OF OPERATION. Consolidate Department of Defense tactical missile maintenance workload at LEAD.

1.7 TACTICAL MISSILE SYSTEM TRANSITION SCHEDULE.

1.7.1 This plan was developed with the intent of accomplishing workload transition at the earliest reasonable times in order to optimize the efficiencies from consolidations while maintaining maximum missile system readiness. Receipt of BRAC funding is crucial to the timely execution of schedules.

1.7.2 A Transition milestone schedule was developed for each system. These schedules depict the elements necessary to achieve capability at LEAD. There will be a First Article Test (FAT) conducted at LEAD after all other transition elements (movement/acquisition of equipment, recruitment and training of personnel, movement of assets and repair parts, etc.) have been accomplished. A FAT is the verification process of performing the initial overhaul/repair of a typical depot candidate. Successful accomplishment of the FAT signals that full capability has been established at LEAD to the satisfaction of the customer and LEAD is prepared to accept the full workload for the missile system as identified by the customers (includes both peacetime and wartime). Depending on the complexity of the system, the FAT process may be extended over several quarters to accommodate the testing of multiple assemblies/components. The system manager may waive the FAT or request a validation/ verification of LEAD's capability in lieu of the FAT. As soon as LEAD has demonstrated their capability for a particular assembly, the workload for that item will begin to be accomplished at LEAD. A Mission Transition First Article Test chart is provided at enclosure 2 which shows the planned First Article Test dates for each system.

1.7.3 The BRAC Commission discussed the possibility of four older systems not transitioning to LEAD due to potential retirement in the near future. These systems are: Shillelagh, Land Combat Support System (LCSS), Chaparral, and the AN/TSQ-73. This plan recognizes and supports the intent of the BRAC Commission to transition all DOD tactical missile maintenance to LEAD. Historically, there are many factors which have influenced the retirement of systems from the Army inventory (lack of funding for replacement systems, changes in the threat environment, modifications/upgrades of the existing system, etc.). In July 94 the Chairman of the TMC-JSWG approved the following disposition of these systems. **The Shillelagh and LCSS will transition to LEAD NLT 4FQ FY96. The Chaparral will retire at RRAD and the AN/TSQ-73 will retire at TOAD.**

1.8 CONSTRUCTION. New construction is not required since LEAD has enough space under roof to accomplish the expanded mission. However, upgrades of some current facilities will be required. Two construction projects for RRAD totalling $1.4M were canceled since artillery is staying at LEAD.

1.8.1 MINOR CONSTRUCTION. Four minor construction projects totalling $.305M are required. The projects are planned to be completed by the third quarter of FY94.

1.8.2 MILITARY CONSTRUCTION (MILCON). Several MILCON projects totalling $4.991M are scheduled for award in FY94. Additionally, one MILCON project totalling $1.7M is scheduled to be awarded in FY95.

1.9 EQUIPMENT. Equipment required to support the tactical missile consolidation will, to the maximum extent possible, be transferred from the losing installation. Equipment accountability will be maintained according to services' regulations and procedures. The procurement of new equipment to support the mission transfer will be held to the minimum necessary to replace equipment that cannot transfer because of obsolescence or continuing need at the losing installation.

1.10 FINANCIAL SUMMARY.

1.10.1 The total cost (all Services) for implementing TMC is $41.902M (excluding the cost of schedule pending systems identified in para 4.3.3.3). A summary of one time costs by element by fiscal year is attached at enclosure 3. A breakout of BRAC cost by service, by fiscal year is at enclosure 4. DoD inflation guidance dated 3 Mar 93 was used to express one time costs in current year (then year) dollars using compound indexes for both enclosures 3 and 4.

1.10.2 Office of the Assistant Secretary of Defence for Economic Security issued TMC funding guidance to all Services on 3 May 94. This guidance is at enclosure 5.

1.11 ASSUMPTIONS

1.11.1 The Implementation Plan development is based on the following assumptions:

1) Sufficient funds will be made available for execution.

2) LEAD will be given authority to fill vacant positions from external sources in support of missile consolidation.

3) Army will increase manpower authorizations for LEAD commensurate with manpower requirements needed to support programmed workload associated with missile consolidation.

4) Adequate skills will be obtained from losing SORs or through training programs for current LEAD employees.

5) Personnel actions resulting from Base Realignment will occur during the realignment period FY94-FY97. The impact of any Base Realignment related Reduction-in-Force during this period will be included in the tally of depot/Source of Repair eliminations.

6) Defense Logistics Agency (DLA) will be responsible for the design, funding, and construction of any DLA facilities to support this realignment action. The DLA will plan for and accomplish the transfer of personnel and material to support this realignment action.

7) Existing facilities will be utilized to the maximum extent possible at LEAD. New facilities are not required and altered facilities will be sized only to accommodate workload transfer to LEAD. All of the above will be accomplished in a timely manner to meet missile system transition schedules. As time progresses transition schedules, funding requirements, and other elements of this implementation plan will adjust to future realities. Follow-on missile system specific Transition Plans will address and adjust this Implementation Plan in more detail.

OFFICE OF THE UNDER SECRETARY OF DEFENSE

3000 DEFENSE PENTAGON
WASHINGTON DC 20301-3000

ACQUISITION AND TECHNOLOGY

19 APR 1994

(L/MP&R)

MEMORANDUM FOR THE UNDER SECRETARIES OF THE MILITARY DEPARTMENTS

SUBJECT: Tactical Missile Consolidation

The 1993 Defense Base Closure and Realignment Commission made a binding recommendation regarding Letterkenny Army Depot that stated, "...Consolidate tactical-missile maintenance at the depot as originally planned by the Department of Defense in the Tactical Missile Maintenance Consolidation Plan for Letterkenny Army Depot, 31 January 1992 (revised 30 April 1992). Add tactical-missile maintenance workload currently being accomplished by the Marine Corps Logistics Base Barstow, California, to the consolidation plan." This recommendation was then reaffirmed in section 8112 of the Department of Defense Appropriations Act, 1994.

Depot maintenance workloads on the tactical missile systems that were identified in the plan specified by the BRAC Commission must be consolidated at Letterkenny Army Depot. This includes those systems that are currently maintained in the private sector, unless one of the provisions in the plan providing for continuous maintenance in the private sector applies. A Department choosing to not consolidate an affected system at Letterkenny must notify this office and provide supporting justification.

James R. Klugh
Deputy Under Secretary
of Defense (Logistics)

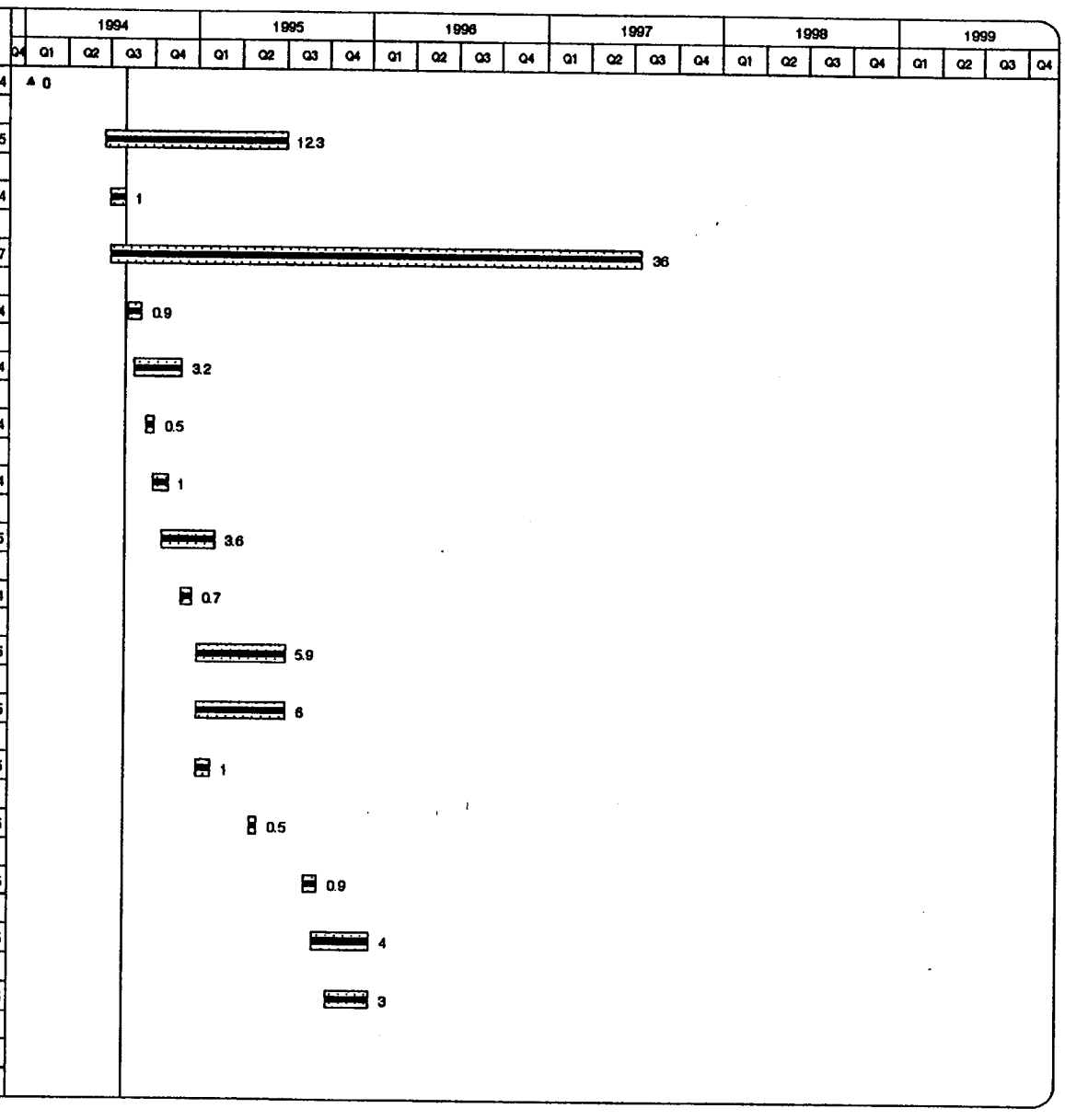
Enclosure 1

MISSION TRANSITIONS

FIRST ARTICLE TESTS

04 May FY94

	Task Name	Start Date	End Date
1	AVENGER	15 Oct FY94	15 Oct FY94
2	MLRS	21 Mar FY94	31 Mar FY95
3	ATAS (CTR) BOTTLES	01 Apr FY94	02 May FY94
	ATAS/AVENGER (CTR)	01 Apr FY94	15 Apr FY97
4	ATACMS	09 May FY94	03 Jun FY94
5	SPARROW	23 May FY94	26 Aug FY94
6	HELLFIRE	15 Jun FY94	30 Jun FY94
7	HARM PSE	29 Jun FY94	29 Jul FY94
8	DRAGON	18 Jul FY94	04 Nov FY95
9	PHOENIX	29 Aug FY94	19 Sep FY94
	MLRS (CTR)	03 Oct FY95	31 Mar FY95
10	HAWK (B-STOW) PH1	03 Oct FY95	03 Apr FY95
11	TOW BFVS	03 Oct FY95	31 Oct FY95
12	SWINDER (NAVY)	23 Jan FY95	03 Feb FY95
13	TOW COBRA	15 May FY95	09 Jun FY95
	TOW 2	01 Jun FY95	29 Sep FY95
14	PATRIOT (CTR)	03 Jul FY95	29 Sep FY95
15	STANDARD		



Filename: SYSTEM

NOTE: BAR INDICATES FIRST ARTICLE TEST (FAT).

Baseline

Actual

Milestone

Encl 2

MISSION TRANSITIONS

FIRST ARTICLE TESTS

04 May FY94

	Task Name	Start Date	End Date	1994 Q4	1994 Q1	1994 Q2	1994 Q3	1994 Q4	1995 Q1	1995 Q2	1995 Q3	1995 Q4	1996 Q1	1996 Q2	1996 Q3	1996 Q4	1997 Q1	1997 Q2	1997 Q3	1997 Q4	1998 Q1	1998 Q2	1998 Q3	1998 Q4	1999 Q1	1999 Q2	1999 Q3	1999 Q4
	HAWK (B-STOW) PH2	02 Oct FY96	01 Apr FY96													6												
16	SWINDER (AF)	04 Dec FY96	19 Jan FY96												1.6													
17	MAVERICK	01 May FY96	30 May FY96													1												
	HAWK (CTR)	01 Jul FY96	30 Sep FY96													3												
	CHAPARRAL																											
	AN/TSQ-73																											
	LCSS	02 Jun FY97	30 Jul FY97																2									
19	SHILLELAGH	02 Jun FY97	30 Jul FY97																2									
	HARM CS	01 Oct FY98	30 Oct FY98																		1							
20	AMRAAM	01 Jan FY98	30 Jan FY98																			1						
	HARM GS	01 Apr FY98	30 Apr FY98																				1					
	STINGER (CTR)	01 Oct FY99	01 Oct FY99																						0			
	HELLFIRE (CTR)	01 Oct FY99	01 Oct FY99																						0			
	STANDARD (CTR)	01 Oct FY99	01 Oct FY99																						0			
	TOW BFVS (CTR)	01 Oct FY99	01 Oct FY99																						0			
	SIDEARM (CTR)	01 Oct FY99	01 Oct FY99																						0			
	WALLEYE	01 Oct FY99	01 Oct FY99																						0			
	HARPOON (CTR)	01 Oct FY99	01 Oct FY99																						0			

Filename: SYSTEM

Baseline | Actual | Milestone

NOTE: BAR INDICATES FIRST ARTICLE TEST (FAT).

Encl 2a

TMC NONRECURRING COSTS
(ALL SERVICES)

ONE-TIME IMPLEMENTATION	FY 93	FY 94	FY 95	FY 96	FY 97	FY 98	FY 99	TOTAL ALL YEARS
COSTS: MDEP								
MILITARY CONSTRUCTION	0	4991	1700	0	0	0	0	6691
FAMILY HOUSING	0	0	0	0	0	0	0	0
CONSTRUCTION	0	0	0	0	0	0	0	0
OPERATIONS	0	0	0	0	0	0	0	0
ENVIRONMENTAL	0	0	0	0	0	0	0	0
O&M	0	10352	18496	1621	0	0	0	30469
MILITARY PERSONNEL	0	0	0	0	0	0	0	0
OTHER	0	2117	2541	84	0	0	0	4742
REVENUE FROM LAND SALES	0	0	0	0	0	0	0	0
TOTAL COSTS	0	17460	22737	1705	0	0	0	41902

Enclosure 3

FUND-1

TOTAL NONRECURRING COST BY SERVICE $M

(AS OF 15 SEP 94)

SERVICE	FY94	FY95	FY96	FY97	TOTAL
ARMY	15.428	17.072	1.553	0.000	*34.053
AIR FORCE	0.000	** 4.714	0.152	0.000	4.866
NAVY (INCL USMC)	2.032	0.951	0.000	0.000	*2.983
TOTAL	17.460	22.737	1.705	0.000	41.902

* INCLUDES EACH SERVICE PORTION OF TOTAL DLA COSTS $1.480M FOR SERVICE TRANSFER OF INVENTORY

** INCLUDES $1.2M USAF ICS FOR MAVERICK

ECONOMIC SECURITY

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

03 MAY 1994

MEMORANDUM FOR ASSISTANT SECRETARY OF THE ARMY (INSTALLATIONS, LOGISTICS AND ENVIRONMENT)
ASSISTANT SECRETARY OF THE NAVY (INSTALLATIONS AND ENVIRONMENT)
ASSISTANT SECRETARY OF THE AIR FORCE (MANPOWER, RESERVE AFFAIRS, INSTALLATIONS AND ENVIRONMENT)

SUBJECT: Tactical Missile Maintenance Consolidation Funding

The 1993 Defense Base Closure and Realignment Commission has made a binding recommendation that Letterkenny Army Depot (LEAD) remain open and that tactical missile maintenance be consolidated at the depot as originally planned by the DoD in the *Tactical Missile Maintenance Consolidation Plan for Letterkenny Army Depot*, January 31, 1992 (revised April 30, 1992). The recommendation also added the tactical missile maintenance workload being accomplished by the Marine Corps Logistics Base, Barstow, California, to the plan.

Military Departments will program and fund the resources required to implement the tactical missile maintenance consolidation to LEAD as delineated in the consolidation plan. Section 4 of the plan established a funding strategy and responsibilities which were developed as guidelines by a joint working group on which each Military Department was represented.

Any interim contractor support costs should be considered as being associated with the downtime due to transition to LEAD and will be funded by the Military Department which is the current source of repair. The Army is working to accelerate the implementation which should reduce maintenance downtime and lessen the impact of the transition.

Robert E. Bayer
Deputy Assistant Secretary of Defense
for Economic Reinvestment and
Base Realignment and Closure

Encl 5

SECTION 2

MANPOWER PLAN

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2.3	TRANSFERS	2-2
2.4	FORCE STRUCTURE CHANGES	2-2
2.5	ELIMINATIONS	2-2
2.6	BASELINE FY94	2-3
2.7	SCHEDULE OF MANPOWER CHANGES	2-3

2.1 RATIONALE. This section describes the manpower changes expected at LEAD resulting from passage of the Base Realignment and Closure 1993 (BRAC 93) law.

2.2. BASELINE. Department of the Army (DA) established the unadjusted Summer FY92 Army Stationing and Installation Plan (ASIP) FY94 column as the Manpower Baseline for the LEAD realignment.

2.2.1 The total LEAD manpower baseline was 100 military and 4,234 civilians, including all tenants. Subsequent to the date the baseline was established, 1 military and 530 civilian authorizations were transferred to DLA. The other tenants total 82 military and 1,245 civilian spaces. The transfer of HQDESCOM to the Industrial Operations Command at Rock Island Arsenal and the retention of SIMA-E at LEAD are outside the scope of this Implementation Plan. DLA and the other tenants are not addressed in this BRAC 93 realignment package and will not be addressed in the Migration Diagrams or the Schedule of Manpower Changes.

2.2.2 Force Structure changes, unrelated to BRAC 93, will reduce LEAD military by 7 authorizations and increase the civilian authorizations by 88. The net adjusted baseline used for planning the LEAD BRAC 93 realignment is 10 military and 2,547 civilians.

2.3 TRANSFERS.

2.3.1 This plan incorporates requirements for manpower authorizations for workload transferring to LEAD from ANAD, RRAD, Naval Aviation Depot Alameda, CA; Naval Aviation Depot Norfolk, VA; Ogden Air Logistics Center, Hill AFB, UT and Marine Corps Logistics Base, Barstow, CA; and requirement of manpower authorizations to accomplish workload transferring to LEAD from contract sources. Manpower requirements are identified to support Missile Maintenance Consolidation at LEAD.

2.3.2 Manpower requirements identified for transfer are based on first full year of transition. Requirements are based on direct labor hours converted to manyears (1615/workyear) plus a factor for indirect plus base ops support (average 12%). Fluctuations in workload after the first full year of transition will be accomplished through overtime, temporary employment, and other management prerogatives.

2.4 FORCE STRUCTURE CHANGES. The ASIP projects an increase of 88 civilian spaces in FY95. Additionally, a reduction of 7 military spaces will be taken during FY95 to reconcile the FY92 Summer ASIP FY94 column to FY97, the final year of BRAC 93 actions. Since these actions are unrelated to BRAC 93, an adjustment to the manpower baseline was made and there will be no further reference to these or any other non-BRAC 93 actions.

2.5 ELIMINATIONS. Implementation of the BRAC 93 Missile Maintenance Consolidation at LEAD will result in the elimination of civilian spaces at ANAD and TOAD. Additional eliminations may be achieved at Naval Aviation Depot Alameda, CA; Naval Weapons Station Seal Beach, CA; Naval Aviation Depot Norfolk, VA; Ogden Air Logistics Center, Hill AFB, UT; and Marine

Corps Logistics Base, Barstow, CA.

2.6 MANPOWER BASELINE FY94. See Appendix A.

2.7 SCHEDULE OF MANPOWER CHANGES. See Appendix B.

SECTION 3

PERSONNEL AND TRAINING ACTION PLAN

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3.2	ASSUMPTIONS	3-2
3.3	ESTIMATED CIVILIAN EMPLOYEE IMPACTS	3-2

3.1 INTRODUCTION. This section describes the expected impact on civilian personnel as a result of Base Realignment and Closure (BRAC) recommendations to consolidate Department of Defense (DOD) tactical missile maintenance at Letterkenny Army Depot (LEAD).

3.2 ASSUMPTIONS.

3.2.1 Letterkenny Army Depot will be realigned in accordance with the BRAC Commission recommendations and all pertinent DOD instructions. Department of Defense tactical missiles will be transferred to LEAD.

3.2.2 Since LEAD already performs tactical missile maintenance, the startup assumption was that the DOD missile consolidation is not a transfer of function. However, there are some missile peculiarities that need to be considered. Headquarters, U.S. Army Materiel Command/Headquarters, Department of the Army has recommended that all efforts be made to reach a consensus at the lowest possible level on the TOF/mission realignment issue for each depot transitioning missile systems to LEAD. If current SOR/LEAD agreement is not achieved by target dates established by LEAD/HQDESCOM, a final decision will be made at a later date based on submission of the following data to the HQDESCOM Personnel Office:

a. Occupational skills/grades of mission workers

b. Mission and Function Statements

c. Federal supply class of transitioning workload

3.3 ESTIMATED CIVILIAN EMPLOYEE IMPACTS.

3.3.1 Recruitment needs will be based on projected workload transitioning to LEAD. The recruitment will be accomplished in phases as the workload is transferred to LEAD.

3.3.2 Recruitment will initially target SOR installations through use of recruitment visits to solicit applications of employees associated with the workload transfer. This effort may be supplemented by merit promotion/placement and recruitment for hard-to-fill positions. Reassignments of employees associated with the workload transfer have been approved as an exception to DOD Priority Placement Program (PPP) procedures. Recruitment of fully qualified system specific technicians may, potentially, reduce training costs and speed up the transition process.

3.3.3 DOD PPP will be used as required to fill from sources other than the SOR.

3.3.4 Individuals recruited from or trained at current SOR will serve as a cadre to:

a. Train additional LEAD Electronics Technicians and Electrical

Measurement Equipment Mechanics.

b. Oversee the transitioning of equipment and assist with establishment of capability at LEAD.

c. Provide system unique On-the-Job-Training (OJT) at LEAD.

3.3.5 The remaining positions will be filled through a combination of reassignment of journeyman technicians and use of merit promotion announcements. These sources will be supplemented by programs such as Disabled Veterans, VRA eligibles, and other voluntary applicants.

3.3.6 Authorizations or overhire authority for an equivalent number of manyears will be used to accomplish the interservice workload. If authorizations are not forthcoming, LEAD must be released from manpower constraints to support the interservice workload.

3.3.7 Personnel expenses incurred with the transfer of workload will be funded as delineated in Section 8. Financial Management Plan.

3.3.8 Although LEAD has a large number of highly skilled electronics technicians, advanced electronics training will be provided for less experienced employees in the electronics field. Local sources, including junior colleges, will provide the training except for the Standards of Workmanship and MIL Std 2000 training, which are government courses. The Advanced Electronics course will include 240 hours of instruction in advanced electronics, with emphasis on diagnostic testing and troubleshooting.

3.3.9 Advanced system training will be provided via contractor or defense schools or structured OJT.

3.3.9.1 Familiarization with Army missile systems may be provided by the U.S. Army Missile and Munition School, Redstone Arsenal, Alabama, to include direct support and general support maintenance. Theory of operation and repair training may be provided by contract. In addition, system specific, supervised, structured OJT will be utilized at the current SOR.

3.3.9.2 Training for interservice missile systems may be contracted. System specific training at the current SOR will also be utilized. During the development of the Transition Plan, specific plans for course development and agreements for structured OJT support will be completed. The current SORs have indicated an ability to support structured, in-shop OJT for most systems.

3.3.9.3 In general, approximately one-third of the Electronic Technicians and Electrical Measurement Equipment Mechanics, plus at least one Electrical Integrated System Inspector and Quality Assurance Specialist per system will receive training. Twenty-five percent of the people formally trained will receive additional training at the current SOR. The remaining Electronic/Electrical Mechanics will receive structured OJT at LEAD. The

number of people requiring training will be system specific and detailed in the system transition plan.

3.3.9.4 Detailed training plans will be provided in the individual system Transition Plans.

SECTION 4

OPERATIONS ACTION PLAN

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4.4	ASSUMPTIONS	4-9
4.5	MISSION TRANSITION TIMELINES	4-10
4.6	WORKLOAD	4-10
4.7	POINTS OF CONTACT	4-11

4.1 INTRODUCTION.

4.1.1 This section provides the general strategy for the realignment/transition of the affected mission(s) from the current SOR to LEAD. It provides the assumptions and conventions, which were key to the development of the Mission Transition Timelines.

4.1.2 The Mission Transition Timelines were developed by the system managers, losing SOR, MICOM, HQDESCOM ILS, Maintenance, Engineering, Resource Management, Industrial Risk, Strategic Business Office, and LEAD.

4.1.3 The Operations Plan is written at the summary level. The information contained in the Plan was developed in cooperation with the affected Services, MSCs, PEO/PMs, and DLA. It is the nucleus for the detailed transition plans, which are the management blue-print for the execution of the system transitions. Each tactical missile system being consolidated will have an individual transition plan.

4.2 RESPONSIBILITIES.

4.2.1 ANAD/TOAD/RRAD

- Provide data on systems and workload to be consolidated at LEAD.
- Assist in identifying equipment to be transferred to LEAD.
- Provide assistance to transfer equipment.
- Provide OJT for LEAD personnel.

4.2.2 LEAD

- Hire and train personnel as necessary to establish capability and capacity for each system.
- Participate fully in the development of Implementation and Transition Plans.
- Prepare and submit Facility Engineering Projects (FEPs) and Military Construction (MILCON) projects.
- Prepare environmental documents.
- Prepare and submit equipment procurement documentation.
- Coordinate packing, shipping, reinstallation, and calibration of equipment.
- Maintain a tactical missile consolidation planning cell with a point of contact for each system.

4.2.3 HQDESCOM

4.2.3.1 DEPUTY CHIEF OF STAFF FOR INTEGRATED LOGISTIC SUPPORT

- Serve as executive secretary for the TMC-JSWG.

- Publish approved TMC implementation plan

- Perform as Transition Team Leader for Non-Army systems.

- Provide technical support for the TMC-JSWG in accordance with approved charter.

- Assist in the development of Army transition plans as the DESCOM point of contact.

- Manage the execution of system transitions.

4.2.3.2 DCS FOR STRATEGIC PLANNING

- Coordinate BRAC funding issues.

- Administer and account for all BRAC transition funding to a degree sufficient for an external formal audit.

- Perform as HQDESCOM focal point for all incoming BRAC taskings and official HQDESCOM data/information releases to external sources.

4.2.3.3 DEPUTY CHIEF OF STAFF FOR ENGINEERING

- Manage Minor Construction and MILCON projects and provide updated status as required.

- Manage equipment procurements, transfers, and installation.

- Resolve all issues associated with facilities and equipment.

4.2.3.4 DEPUTY CHIEF OF STAFF FOR MAINTENANCE

- Identify transition workload, provide updated workload figures as required, and make necessary Procurement Request Order Number (PRON) changes to effect transition.

- Coordinate changes to the automated return items list (ARIL).

- Staff, manage and coordinate quality requirements, i.e., First Article Test (FAT), initial reconditioning test, resolve problems with tech data, etc.

- Ensure that workload is directed to LEAD in consonance with the approved timeline transition schedules.

4.2.3.5 DEPUTY CHIEF OF STAFF FOR INDUSTRIAL RISK MANAGEMENT

- Ensure regulatory compliance for environmental, safety, and security requirements.

- Resolve environmental, safety, and security issues at losing and gaining depots.

4.2.3.6 DEPUTY CHIEF OF STAFF FOR AMMUNITION AND LOGISTICS OPERATIONS

- Assist in resolution of issues involving all pertinent classes of supply.

- Review transition plans for adequacy/accuracy to Class V requirements.

- Support transition as required.

4.2.3.7 DEPUTY CHIEF OF STAFF FOR RESOURCE MANAGEMENT

- Develop mechanism to track all costs budgeted and expended in support of the transition.

- Provide policy/guidance regarding funding and manpower issues.

4.2.3.8 DEPUTY CHIEF OF STAFF FOR PERSONNEL

- Identify and resolve personnel issues.

4.2.4 MICOM

- Develop detailed transition plans for Army systems.

- Actively participate in all transition functions.

- Identify and support FAT requirements for Army systems.

- Provide technical data to gaining depot.

- Update automated management systems.

4.2.5 PROGRAM/PROJECT/PRODUCT MANAGERS

- Support transition as required.

- Ensure LEAD receives current Depot Maintenance Work Requirements (DMWRs) and Test Program Set (TPSs).

4.2.6 OTHER SERVICES

- Assist in the development of detailed transition plans for their

systems.

- Provide data on systems and workload to be consolidated at LEAD.

- Assist in identifying equipment to be transferred to LEAD.

- Provide assistance to transfer equipment.

- Provide OJT for LEAD personnel, as required.

- Actively participate in all transition functions.

- Identify and support FAT and repair process certification.

- Support transition as required.

- Ensure LEAD receives current technical data and TPSs.

4.2.7 DLA

- Ensure general, classified, hazardous, and/or segregated storage areas are available to support the Tactical Missile Consolidation.

- Provide and coordinate the DLA areas of responsibility in each system specific transition plan.

- Design, fund, and execute DLA projects.

- Ensure adequate workforce will exist at DDLP to support the workload being transitioned.

- Evaluate, plan, and execute movement of necessary wholesale stock to support the workload being transitioned to LEAD/DDLP. This includes contract systems scheduled for transition which require storage of lifetime buys (i.e., 20 years of Class IX assets).

4.2.8 Navy SPCC

- Provide and coordinate the SPCC areas of responsibilities in the appropriate Transition Plans.

- Identify, plan, and coordinate the movement of wholesale stock of SPCC managed items to LEAD to support system timeline schedules.

- Designate LEAD as an authorized user and authorized source of repair for system specific SPCC managed items.

- Assist in providing continuity of requirements/usage data during transitions from current SOR to LEAD.

- Participate as Co-Principle with NAVAIR in the DMISA with LEAD in

the repair of SPCC managed reparables.

- Use Demand History Analysis (DHA) transaction to collect maintenance demands.

4.3 CONCEPT OF OPERATIONS.

4.3.1 The BRAC 93 Law directs DOD to consolidate DOD tactical missile maintenance at Letterkenny Army Depot as originally planned in the Tactical Missile Maintenance Consolidation Plan (Green Book), Jan 92, (revised April 92). It also adds tactical missile maintenance workload currently being accomplished by the Marine Corps Logistics Base, Barstow, CA, to the consolidation plan. Retain the artillery workload at Letterkenny. The BRAC 93 window covers the period of FY94 to the end of FY99, however Department of the Army intent is that BRAC 93 actions should be completed by the end of FY97.

4.3.2 The transitions of tactical missile systems to LEAD began in FY94 and will be completed by the end of FY97 with the exception of selected interservice systems which cannot be completed until FY98. The DOD Missile Consolidation at LEAD will include Army, Navy, Marine Corps, and Air Force systems and the related Foreign Military Sales (FMS) and Reserve Component workload.

4.3.3 To ensure compliance with BRAC 93 Law a reconciliation of Green Book systems was performed. This reconciliation is provided in two formats.

4.3.3.1 App C-1 shows tactical missiles systems in Green Book format.

4.3.3.2 App C-2 provides the same reconciliation, but in an expanded format. Systems are listed starting with the earliest year of transition.

4.3.3.3 There are five Green Book systems currently in a "schedule pending status." The Services responsible for the systems have not planned transition to LEAD. The status of these systems will be updated per the Services' response to the DUSD-L memorandum to the Under Secretaries of the Military Departments, Subject: Tactical Missile Consolidation, 19 Apr 94. See App. C-3. The systems are listed as follows:

4.3.3.3.1 System/SOR: Standard/Raytheon, General Dynamics
Proponent: NAVSEA
Green Book Transition Date: 1996

4.3.3.3.2 System/SOR: TOW (BFVS)/Hughes
Proponent: Army
Green Book Transition Date: 1996

4.3.3.3.3 System/SOR: Harpoon/McDonnell Douglas
Proponent: NAVAIR
Green Book Transition Date: 1994

4.3.3.3.4 System/SOR: Stinger/Hughes

Proponent: Army
Green Book Transition Date: 1994

4.3.3.3.5 System/SOR: Hellfire/Martin Marietta
Proponent: Army
Green Book Transition Date: 1995

4.3.4 There are several Green Book systems for which the owning, Service has currently planned only a partial transition of the contract workload (as of Implementation Plan Publication Date). Per BRAC 93 law and DUSD-L memo (App C-3) all workload must transition or the owning Service must justify non-transition to DUSD-L. The systems are listed as follows:

ATAS/AVENGER
MLRS
PATRIOT
HAWK

4.3.5 There are two systems not specifically identified in the Green Book for transition to LEAD: WALLEYE (previously TDB status) and SIDEARM (previously NA status). Navy has recently requested that both of these systems be studied for possible transition to LEAD. Joint Service Teams are being formed to conduct these studies. Since these are not required to transition by BRAC 93 Law, the Navy will make the transition decision.

4.3.6 The BRAC 93 Commission called out four Army systems (SHILLELAGH, CHAPARRAL, LCSS and AN/TSQ-73) as probable non-transitioning systems due to their expected retirement before or proximate to the end of the BRAC 93 Law window (FY99). Generally, it is not possible to predict exactly when a system will leave the inventory. Factors such as: funding for "replacement systems", threat environment, new missions, modifications, and use by reserve components or Foreign Military Sales could delay the retirement of the systems. In July 94 the Chairman of the TMC-JSWG approved the following disposition of these systems.

4.3.6.1 The Shillelagh will be replaced by the Armored Gun System. The AGS will be fielded between Feb 99 and Oct 99. [redacted] and MICOM agree to [redacted] Shillelagh black box assemblies to LEAD for depot support NLT 4Q FY96.

4.3.6.2 The LCSS tests Shillelagh, TOW, and Dragon black boxes. Transition to IFTE begins in FY97 and is expected to be completed by FY99 for Force Package 1 units. Dragon and TOW TPS development may cause retention of some LCSS systems in the field through FY01. DESCOM and MICOM agree to transition LCSS to LEAD NLT 4Q FY96.

4.3.6.3 Chaparral is out of the active Army inventory. All depot support requirements will be completed in FY96. DESCOM and MICOM have agreed not to transition it to LEAD. It will retire at RRAD NLT FY96.

4.3.6.4 The AN/TSQ-73 will remain in the active Army through FY96. All depot support requirements will be completed prior to FY99. DESCOM and

M[redacted] agree to retire it in place at TOAD NLT 4Q FY98.

4.3.7 Appendix C-4 identifies missile systems planned for consolidation and the respective macrolevel timelines. Appendix C-5 thru C-40 provide the detail level timelines for each transitioning system. Appendix C-41 identifies workload to transition to LEAD. Each topic will be discussed in greater detail later in this chapter.

4.3.8 Depot Maintenance Interservice Support Agreements (DMISAs) for Missile workload performed at LEAD will be negotiated and reviewed in accordance with AMC-R 750-10. DESCOM will serve as "agent" in all DMISAs for missile maintenance programs that do not require repair parts support from MICOM; only DMISAs requiring such support will be established with MICOM as "agent." All initial DMISA negotiation sessions for new workload will be attended by HQDESCOM maintenance interservice representatives(s) and LEAD personnel. When designated as "agent," DESCOM will chair the DMISA sessions. After the initial DMISA is approved and executed, LEAD will represent DESCOM at all yearly reviews and follow-on meetings; HQDESCOM will only attend if requested by the principal or LEAD. When serving as "agent," DESCOM will build "BY" PRONs to display such workload in the Master File for Maintenance and to pass the same to the Standard Depot system files at LEAD. Funds for these PRONs will be Military Interdepartmental Purchase Requested (MIPR) from the Principal directly to HQDESCOM, ATTN: AMSDS-MN. To facilitate maximum support for the associated principals, a single headquarters point of contact will be identified by DESCOM and assigned to handle all inquiries and program execution challenges. For "DESCOM as agent" DMISAs, the Principal will ensure that LEAD is listed as an authorized requisitioner of repair parts managed by non-Army ICPs. All other PRONs and related funds will be processed through the MICOM MISO.

4.3.9 LEAD has provided continuous organic missile support for the U.S. Army over a period spanning four decades. Support for maintenance and system fielding is worldwide. Prior to BRAC 93, LEAD provided support for a number of Army, Navy, and Air Force systems including PATRIOT, HAWK, AVENGER, SIDEWINDER, (ALL UP ROUND (AUR), SPARROW (AUR) and SHRIKE (AUR).

4.3.10 DEPOT MAINTENANCE INTERSERVICE (DMI) PROCESS FOR EMERGING TACTICAL MISSILE SYSTEMS (FUTURE SYSTEMS AND THOSE ALREADY IN DEVELOPMENTAL PHASE)

4.3.10.1 During the BRAC transition period 1994 thru 1 October 1999, a request for DMI study will be submitted to JDMAG by the Principal for each emerging tactical missile system in accordance with established DMI procedures. If an organic source of repair (SOR) is required, JDMAG will request a candidate from the Army only. The Army will submit LEAD as the Army candidate depot (ACD). JDMAG will perform a Summary Study (no cost analysis) and designate LEAD as the DOD SOR. The following are known developmental systems which have been identified for possible consolidation pending a production decision: LOSAT, CORPS SAM, JAVELIN, BAT, NLOS-LT, Ground Based Sensor, Ground Based Radar, Ground Based Interceptor, Anti-Satellite (ASAT), THAAD, and JTAGS.

4.3.10.2 After 1 October 1999, a request for DMI study will be submitted to JDMAG by the Principal for each emerging tactical missile system in accordance with established DMI procedures. JDMAG will perform a summary or comparative study, as appropriate, to determine a source of repair. Other services as well as Army may be requested to submit a candidate study.

4.3.11 The TMC-JSWG Charter requires all workload transitions be accomplished at the earliest reasonable times while maintaining maximum missile system readiness. The full support of the Services and transferring organizations is essential to meet this goal. Whenever possible, a break in depot capability will be avoided. Ideally, production will be surged at the losing source of repair prior to transition to build up serviceable assets. In instances when suitable equipment and facilities already exist at LEAD, a phased transition of the system may be planned to ensure continuous support. As a last resort, Interim Contractor Support (ICS) for a specific period of time may be utilized to facilitate a smooth transition of the system. The use of ICS will be coordinated by the system manager with the current Source of Repair (SOR) and LEAD.

4.4 ASSUMPTIONS.

4.4.1 Military Construction (MILCON) is contingent upon receipt of sufficient BRAC funding.

4.4.2 Funds for Equipment Procurement/Transfer and Training will be available when required.

4.4.3 DLA is responsible for the design, funding, and construction of DLA facilities at LEAD to support the transitioned workload, as required.

4.4.4 On-the-Job-Training (OJT) and formal classroom training will be provided. For organic SOR's, a cadre of system experts from the current SOR is expected to transition with the systems. OJT may be conducted at the current SOR or LEAD.

4.4.5 A First Article Test (FAT) will be conducted at LEAD for each transitioned system to verify processes, equipment, skills, and technical data, including TPS, unless waived by the customer. The system manager will be responsible to support the FATs and repair process certifications at LEAD.

4.4.6 The cognizant Service will provide the current Technical Data Package (TDP) to LEAD. The TDP will include system documentation for all levels of maintenance, documentation for support equipment, applicable prints, drawings, and specifications. All TPSs will be up-to-date. If proprietary documentation and TPSs are to transition to LEAD, they will be provided to LEAD prior to system workload transition without restriction or cost. TDPs are generally required to ensure proper maintenance of complex equipment. Systems with outdated or poorly documented technical data will require close coordination/negotiation between the system manager, current SOR and LEAD. The system transition plan should address

TDP availability and sufficiency.

4.5 MISSION TRANSITION TIMELINES.

4.5.1 The Mission Transition Timeline Documentation is composed of a First Article Test Chart (Appendix C-4), and supporting Detail Level Charts (Appendices C-5 through C-40) utilizing the Gantt format. The summary level chart shows all the systems scheduled for transition to LEAD. The First Article Test Chart provides a top indenture level view derived from a compilation of the Detail Charts. The FAT Chart differs from the Detail Charts regarding the items under the Task Name Column. The FAT Chart identifies the missile systems and the gross schedule for the transition (FAT) of each system. There is a Detail Level Chart for each system listed on the FAT Chart. These Detail Level Charts provide a milestone schedule for the movement/acquisition of all support elements (facilities, equipment, training, etc.) necessary to establish required capability for the tactical missile consolidation at LEAD.

4.5.2 The start and end for each task is shown by FY dates. There is also a graphic depiction of these timeframes using a black bar or a milestone symbol as appropriate. This is known as the task bar area. The calendar shown above the task bar areas is broken into Quarters by FY, not calendar year.

4.6 WORKLOAD.

4.6.1 The projected transition workload (direct labor only) is shown by fiscal year at Appendix C-41. Prior to the transition year, workload is shown as zero. All direct labor hour (DLH) workload is expressed in thousands of DLH. Conversion into man-years is calculated by dividing the DLHs by 1615 which is the productive hours per manyear.

4.6.2 All Army workload was calculated by using the current OPS-29 budget data developed by MICOM for FY94 through FY99. The exception being any contract workload being transitioned to organic which is provided by the individual tactical missile project offices at Redstone Arsenal, AL. All NAVAIR, NAVSEA, and Air Force workload was provided by their Services' respective points of contact and represents their current projections for tactical missile consolidation. All of the Marine Corps' workload was obtained from a data call to the Marine Corps at Albany, GA.

4.6.3 To eliminate redundancy, we have combined like systems, i.e., Sparrow, Sidewinder, etc. that are maintained by more than one military Service into a single entity on workload Appendix C-41. Army and other Services' workload is broken out by current organic and contract workload that is scheduled to transition to the organic arena.

4.6.4 The MICOM OPS-29 contains a weapon system titled, "Unmanned Aerial Vehicle Short Range (UAV-SR)." This system is not included in Appendix C-4 at this juncture. Initial depot repair requirements are not expected until at least FY98. Four versions of the UAV are being developed. They are the short range (SR), close range (CR), mid-range (MR), and long range (LR). MICOM has been the proposed command for providing logistical support for

the UAV. Updates to this plan concerning the UAV will be made as events occur.

4.7 POINTS OF CONTACT (POCs). The POCs for this plan are listed below.

POINTS OF CONTACT LIST

POINT OF CONTACT		OFFICE SYMBOL	DSN PHONE
AMC:			
RILLA NAMETH		AMCLG-MJ	284-9889
JAMES WOODARD		AMCLG-MJ	284-9751
HQDESCOM:			
B. G. MURPHY		AMSDS-LS	570-8474
GARY GERST (ILS)		AMSDS-LS-L	570-5213
HOWARD SCHAEFFER (ILS)		AMSDS-LS-L	570-8910
BILL HALKE (ILS)		AMSDS-LS-L	570-8910
GARY WALLETT (SP)		AMSDS-SP-W	793-7766
GEORGE TUREK (ENGR)		AMSDS-EN-F	570-9532
STAN GINGRICH (MAINT)		AMSDS-MN-CM	570-9991
DAVE VILLINGER (IN)		AMSDS-IN-E	570-9427
FRED HOLLINGSWORTH (PE)		AMSDS-PE-C	570-8556
ANN BUCCI (RM)		AMSDS-RM-M	570-8172
JOHN METZ (RM)		AMSDS-RM-P	570-8136
HQDESCOM POCs FOR OTHER SERVICE SYSTEMS:			
AMRAAM	JOE SAVEL	AMSDS-LS-L	570-5213
HARM	MIKE SPANGLER	AMSDS-LS-P	570-9731
HAWK	RON MCLAUGHLIN	AMSDS-LS-L	570-5213
MAVERICK	JOE SAVEL	AMSDS-LS-L	570-5213
SIDEWINDER	GAIL TILTON	AMSDS-LS-L	570-5213
STANDARD	HOWARD SCHAEFFER	AMSDS-LS-L	570-5213
SPARROW	SHARI DURFF	AMSDS-LS-L	570-5213
PHOENIX	SHARI DURFF	AMSDS-LS-L	570-5213

POINTS OF CONTACT LIST

POINT OF CONTACT		OFFICE SYMBOL	DSN PHONE
AIR FORCE:			
SERVICE POC	TERESA ROSS	HQAFMC-LGPW	787-5969
SPARROW	TOM EVANS	WR-ALC/LKG	468-2601
SIDEWINDER	BETTY THOMPSON	WR-ALC/LKGL	468-9730
HARM	WALLY WELCH	WR-ALC/LKGL	468-9731
AMRAAM	RAE ISENHOUR	EGLIN AFB ASC/YAN	872-9422EXT209
MAVERICK	LARRY SUGIHARA	OO-ALC/FMPB	458-0696
MARINE CORPS LIAISON (AT MICOM):			
CW4 STOURM			746-3515
MARINE CORPS MCLB, ALBANY, GA:			
GEORGE McINTOSH		CODE-844-1	567-5432
RANDY TUCKER		CODE-88-22	567-6803
MCLB BARSTOW:			
CPT. P. NEWSOME		CODE B887/3	282-7247
NAVY (NAVAIR):			
SERVICE POC	RAY SEALS	NOC-N827	354-6065 EXT 131 (Comm) 301 743-6065
SPARROW	DON DUNCAN	AIR-4101L3	664-3200 EXT 6592
PHOENIX	EVERETT WALLACE	NAWC P2631	351-6335
SIDEWINDER	TRENT MITSCH	AIR-4101L5	222-9773 EXT 6526
HARM	DARRELL MATICS	AIR-4101M1	664-3200 EXT 6569
AMRAAM	JOHN PALIOTTA	AIR-4101L7	222-9773 EXT 6521
MAVERICK	ART MOREAU	NAWC P2631	351-6290
HELLFIRE	DAN CHEEK	NAWC P2631	351-6290
NAVY (NAVSEA):			
PEO (TAD)	DANIEL JONES	PMS-422B	332-0662 (Comm) 703-602-0662
STANDARD	BRUCE BETTS	PHD 4R42	551-7935

POINTS OF CONTACT LIST

POINT OF CONTACT		OFFICE SYMBOL	DSN PHONE
HQMICOM:			
MARK WOLFSON		AMSMI-MMC-LE	746-4223
STEVE GEBERT		AMSMI-MMC-LE-T	788-7928
MICOM SYSTEM POCs:			
PATRIOT	DAVID DALTON	SFAE-MD-PA-AS	645-3460
CORPS SAM	GLEN SMITH	SFAE-MD-SM-L	788-1967
LCSS	DANNY SNODGRASS	AMSMI-WS-LC-PM	746-4179
TOW COBRA	DANNY SNODGRASS	AMSMI-WS-LC-PM	746-4179
JAVELIN	WATSON CHANEY	SFAE-MSL-AM-L	746-1932
ATACMS	MARY CARTER	SFAE-MSL-AT-S	746-8389
* STINGER	LAVELLE SMALLEY	SFAE-MSL-FAD	746-4927
* ATAS	LAVELLE SMALLEY	SFAE-MSL-FAD	746-4927
* AVENGER	LAVELLE SMALLEY	SFAE-MSL-FAD	746-4927
HELLFIRE	MICHAEL MCGEE	SFAE-MSL-HD-SS	746-3180
MLRS	TONY ADAMS	SFAE-MSL-ML-LO	746-8957
TOW SYS	JAY GORE	SFAE-WS-LC-PM	746-3392
CHAPARRAL	SANDRA GRACE	AMCPM-CF-S	788-2845
SHILLELAGH	DANNY SNODGRASS	AMSMI-WS-LC-PM	746-4179
DRAGON	DANNY SNODGRASS	AMSMI-WS-LC-PM	746-4179
HAWK	RUSSELL TOWNSEND	AMCPM-HA-L	788-6145

* NOTE: EFFECTIVE 8 AUG 93, STINGER, ATAS, AND AVENGER PMs MERGED INTO ONE PM.

LEAD:

HALLIE BUNK		SDSLE-I	570-9585

LETTERKENNY DEPOT SYSTEM POCs:

PATRIOT	WILLIAM MCNEW	SDSLE-I	570-9739
HAWK	WILLIAM MCNEW	SDSLE-I	570-9739
AN/TSQ-73	WILLIAM MCNEW	SDSLE-I	570-9739
DRAGON	RODNEY GIPE	SDSLE-I	570-9672
JAVELIN	RODNEY GIPE	SDSLE-I	570-9672
HELLFIRE	RODNEY GIPE	SDSLE-I	570-9672
SHILLELAGH	RODNEY GIPE	SDSLE-I	570-9672
LCSS	RODNEY GIPE	SDSLE-I	570-9672
TOW SYSTEMS	RICHARD NOLL	SDSLE-I	570-9672
AVENGER	ROBERT ROBINSON	SDSLE-I	570-9739
ATAS/STINGER	ROBERT ROBINSON	SDSLE-I	570-9739

POINTS OF CONTACT LIST

POINT OF CONTACT		OFFICE SYMBOL	DSN PHONE
ATACMS	JAMES BUNN	SDSLE-I	570-9672
MLRS	DAVID LEONARD	SDSLE-I	570-9564
CHAPARRAL	DAVID LEONARD	SDSLE-I	570-9564
SPARROW	FRED MOXLEY	SDSLE-I	570-9739
PHOENIX	FRED MOXLEY	SDSLE-I	570-9739
SIDEWINDER	JEFF SCHAFF	SDSLE-I	570-9564
AMRAAM	BOB WOOD	SDSLE-I	570-9739
HARM	CARL ARGENBRIGHT	SDSLE-I	570-9798
MAVERICK	SANDRA JACKSON	SDSLE-I	570-9564
STANDARD	SANDRA JACKSON	SDSLE-I	570-9564
OTHERS	DAVE LEONARD/ RICHARD NOLL	SDSLE-I	570-9672

CALIBRATION SUPPORT:

BUDDY DEHART	AMXTM-GA-L	570-8012

DLA:

JEANNE MASTERS	MMDBP	667-7225
LINDA KILPATRICK	DDRE-TMM	977-8215

SECTION 5

LOGISTICS PLAN

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5.1 INTRODUCTION. This section details facts, assumptions, and procedures to accomplish the tactical missile transfer and elimination of property items and supplies from Anniston Army Depot, Anniston, AL; Red River Army Depot, Texarkana, TX; U.S. Marine Corps Logistics Base at Barstow, CA; Naval Weapons Station, Seal Beach, CA; Naval Aviation Depot Alameda, CA; Naval Aviation Depot, Norfolk, VA; and Ogden Air Logistics Center, Hill Air Force Base, UT. The information in this plan relates only to the missions being transferred.

5.2 EQUIPMENT.

5.2.1 Procedures.

5.2.1.1 Mission equipment associated with the weapon system maintenance to be transferred to LEAD will be relocated according to the timelines established in Section 4, Operations Plan. System transition plans will update and supersede those herein. Equipment that is to transition from the losing depot may start the process (disassembly, packing, shipping, etc.) up to 2 months prior to the completion of facilities. Equipment that is being purchased will be contracted for so that delivery should occur 2 months prior to the completion of facilities.

5.2.1.2 Identification of equipment as candidates for transfer to LEAD has been determined by reviewing each losing activity's equipment list for comparison with LEAD's requirement. Decisions to transfer equipment required to support missile consolidation have been based on criteria of cost effectiveness and uniqueness. Most of the specific test equipment for the weapon systems will transfer to LEAD. This equipment is typically unique to the support of a single system. For equipment where there is dual use, the equipment will remain at the current source of repair (SOR). The exception to this rule is, if the missile system PM bought the equipment, it will transfer with the system. If the PM equipment has been modified for common use, these instances have been addressed on a case-by-case basis. Specific equipment items to be transferred have been identified in the individual missile system transition plans.

5.2.1.3 For weapon systems equipment transferring from Army depots, the losing depot will turn-in equipment and remove items from the property book. Equipment will then be turned in to the installation accountable property officer. The accountable property officer will then transfer the equipment to the LEAD stock record account in accordance with AR 710-2, Supply Policy Below the Wholesale Level, and DA Pamphlet 710-2-1, Using Unit
Supply System (Manual Procedures). Lateral transfer documents may be prepared by the losing depot on an exception basis in accordance with DA Pam 710-2-1, and routed through the HQDESCOM Deputy Chief of Staff for Engineering, Industrial Engineering Division, AMSDS-EN-I, for validation and approval. Instructions, transmittal memorandum, and sample lateral transfer document (DA Form 3161) are contained at Appendix D-1. All government property records, to include the Installation Equipment Management System (IEMS) database, will be updated to reflect deletions from the depot's property record. Losing depots will ensure that the

Continuing Balance System-Expanded (CBS-X) records are updated to reflect deletions of all reportable equipment in accordance with AR 710-2, Asset Transaction Reporting System. Any residual installation equipment declared excess by the losing depot will be processed in accordance with AMC Regulation 755-9, Redistribution and Acquisition of Excess Installation Equipment. Matters relating to the redistribution of equipment that are controversial in nature or not covered by this section will be addressed to the HQDESCOM Deputy Chief of Staff for Engineering for final resolution.

5.2.1.4 For other DOD services, the accounting for equipment transferred to LEAD will be in accordance with the regulatory guidance existing for that military department.

5.2.1.5 All test, measurement, and diagnostic equipment (TMDE) transferring to LEAD which requires calibration will be identified by the transition plan team to the District TMDE Support Center - LEAD, ATTN: AMXTM-GA-L, at least 180 days prior to shipment and documented in the system transition plan. This will ensure that appropriate calibration standards and procedures are available or can be obtained.

5.2.1.6 All equipment shipped to LEAD will be addressed to the Consolidated Property Officer, Retail Account (Building 5), Chambersburg, PA 17201-4150. DODAAC: W25G1Q; UIC: WOL6AA.

5.2.1.7 Letterkenny Army Depot will prepare equipment authorization documents, DA Form 4610-R, Request for MTOE/TDA Changes, in accordance with AR 71-13, The Department of the Army Equipment Authorization and Usage Program. These documents must be generated to reflect property justification based on mission transfer and maintenance workload validation. The following additional statement will be included in Part IV, justification section of the DA Form 4610-R: "Transfer of equipment is authorized as a result of the Tactical Missile Consolidation resulting from the 1993 Base Realignment and Closure decision. The equipment listed is required to assume mission workload transferred from other depots."

5.2.1.8 During the transfer of equipment, LEAD should have personnel at the current SOR to assist in inventorying, disassembling, documenting, and shipping the equipment. Upon arrival of the equipment at LEAD, personnel from the current SOR will assist LEAD in installing the equipment, getting it running, and certifying the equipment as required.

5.2.1.9 Accurate estimates of the costs to pack, transport, and install equipment may not be available until the completion of the individual transition plans. At that time, the exact pieces of equipment, their size, weight, and handling requirements will be known. ROM estimates were developed to provide a basis for funding requests and planning purposes. These equipment transfer costs are included in Section 8, Financial Management Plan.

5.2.2 Equipment Movements, Storage, and Disposition.

5.2.2.1 Equipment Disassembly.

5.2.2.1.1 Disconnection - All equipment operating service to include electrical, plumbing, ventilation, and auxiliary hookup will be disconnected and removed from the equipment. Connectors, receptacles, and assemblies that are integral to the operation of equipment will be retained with the equipment to facilitate reinstallation.

5.2.2.1.2 Preservation - Prior to and during equipment removal from plant locations, precautions will be taken to ensure equipment and components are protected from damage as a result of material handling equipment, lifting slings or devices, and the natural elements. Lubricants, coolants, and other fluids will be drained or contained in such manner as to prevent damage to equipment or the environment during shipment. Precision surfaces and delicate instruments will be protected via coatings, wrappings, or other means. All other removable or fixed assemblies will be preserved in a similar manner.

5.2.2.1.3 Preparation for Shipment - Equipment will be removed from shop floor locations appropriately marked and tagged to identify any hazardous materiel content prior to preparation for shipment. Small items and components may be multi-packed for shipment in single containerized units as long as separate inventory lists of such items in each container are provided. Large items such as industrial plant equipment will be appropriately palletized and crated in accordance with Army transportation standards. Reusable metal skids designed for this purpose are obtainable from the Defense General Supply Service (DGSC), Richmond, VA. These skids should be requisitioned and prepositioned at the packaging site.

5.2.2.2 Shipment.

5.2.2.2.1 Air/Land - The location transportation officer will receive items for shipment and determine the most expedient and cost effective mode of transportation, either air or land. Precautions will be taken to adhere to Military Traffic Management Command (MTMC) policies and regulations. Appropriate security requirements will be maintained during disassembly shipment and assembly operation.

5.2.2.2.2 Containers will be appropriately marked to indicate magnetic, flammable, radioactive, and hazardous materiel content.

5.2.2.3 Destination Receipt.

5.2.2.3.1 Inspection - Receipt inspections will be conducted at LEAD/DDLP to determine, if any, the extent of transit damage.

5.2.2.3.2 Inventory - All shipments will be inventoried to verify quantities received or losses enroute.

5.2.2.3.3 Documentation - Inspection records and inventory listings will

be completed to validate inspection and inventory results. Property transfer documents will be posted to the installation stock record for subsequent transfer to the installation property book. The CBS-X Coordinator or Central Collection Agency (CCA) will ensure controlled items are reported to the CBS-X database.

5.2.2.3.4 Consolidation Point - DLA at LEAD should be notified with a depot point of contact to establish a receipt consolidation point to prevent commingling of other mission stock, wholesale or retail materials.

5.2.2.4 Facilitization.

5.2.2.4.1 Site Preparation - LEAD will determine the requirement for equipment site preparation and plant layout to include support foundation, wiring, plumbing, etc., for equipment being reinstalled.

5.2.2.4.2 Environmental Controls - LEAD will determine the requirement for all environmental controls to include waste water treatment, coolant or lubricant reclamation, exhaust fume venting, and air emission controls.

5.2.3 New Equipment. New equipment will be required to be purchased in those cases where equipment has a dual use at the losing installation and cannot be transferred or to replace equipment whose value does not warrant the cost of moving. ROM estimate to purchase new equipment is included in Section 8, Financial Management Plan. A listing of new equipment purchases is at Appendix D-2. A more accurate estimate of new equipment requirements will be available with the individual missile system transition plans.

5.3 SUPPLIES.

5.3.1 Defense Logistics Agency will manage the movement of wholesale stocks as directly related to the tactical missile mission as directed by the wholesale stock manager to include all other Services involved.

5.3.2 The U.S. Army Missile Command (MICOM) and the other Services will evaluate their assets for current and future needs. All assets identified in the tactical missile transition plans will be evaluated against DLA stock positioning plan and DMRD 927. Dormant stocks should be purged.

5.3.3 The losing SOR will manage their retail supplies closely in order to minimize the cost of transitioning.

5.3.4 The transition dates of items will be individually planned to support transfer of mission.

5.3.5 U.S. Army Missile Command and the other Services will support and implement procedures to comply with the Base Closure and Realignment plan for tactical missile consolidation. This includes stopping receipts, redirecting field returns, redirecting fielding assets and associated equipment from contractors, directing issuables to area oriented depots, and initiating material release orders to ship material in accordance with

transition schedules from the losing SORs to LEAD. Type and amount of storage space will be coordinated in advance with Defense Logistics Agency to ensure availability.

5.3.6 Disposition of retail supplies that cannot be returned for credit to supply activity will be evaluated for transfer by gaining and losing installations.

5.4 ENERGY RESOURCE IMPACT STATEMENT.

- Based on an initial energy resource impact assessment, the impact of the energy requirements of tactical missile consolidation at LEAD is considered insignificant and not a factor for further consideration.

5.5 TACTICAL MISSILE ENGINEERING SUPPORT.

- LEAD's Production Engineering Division will provide engineering support services for tactical missile systems that have transitioned to the depot in support of the maintenance mission. Development and design engineering support responsibility will rest with the program management offices.

SECTION 6

ENGINEERING ACTION PLAN

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6.1 INTRODUCTION. This section addresses the engineering actions required to consolidate all DOD tactical missile maintenance at LEAD.

6.2 ASSUMPTIONS.

- Base Realignment and Closure 1993 (BRAC 93) FY94 and FY95 money will be available for funding military construction requirements.

6.3 ENVIRONMENTAL IMPACTS. Environmental impacts, and any mitigative requirements, were identified in NEPA documentation pursuant to the requirements of Public Law 101-510, the National Defense Authorization Act for FY1991.

6.3.1 Substantial planning was previously conducted to implement the recommendations of the Tactical Missile Maintenance Consolidation Plan for Letterkenny Army Depot, 31 January 1992 (revised 30 April 1992). Much of this planning was used to implement the BRAC 93 recommendations in an expedited manner. Therefore, to support this expedited implementation program, a supplemental environmental assessment (EA) was prepared in-house by LEAD personnel to analyze the environmental impacts of the BRAC 93 actions at LEAD. This EA identified changes to the proposed action and alternatives, and supplemented the analysis contained in the EA which was finalized in August 1992 to assess the environmental impacts of the planned consolidation of DOD missile maintenance work to LEAD. The waiting period for approval and public review of the National Environmental Policy Act (NEPA) documentation was completed 24 Dec 93.

6.3.2 Headquarters Army Materiel Command (AMC) BRAC Office responsibilities:

- Serve as the documentation proponent.

- Arrange with HQAMC and HQDA staffs and NEPA Support Team for timely review and comments to action plans and EAs.

- Schedule and chair EA review meetings.

- Provide necessary information, guidance, and direction regarding BRAC 93 issues in order to prepare the environmental documentation.

6.3.3 Letterkenny Army Depot responsibilities:

- Ensure EA is prepared and publicized in compliance with AR 200-2 and Council of Environmental Quality regulations.

- Draft all versions of the EA insuring timely and complete distribution for review and approval.

- Identify areas of analysis where expertise beyond the depot's capability is required.

- Contact and obtain necessary comments/concurrences from appropriate

review authorities, e.g., State Historic Preservation Officer.

6.3.4 The Headquarters Depot System Command (DESCOM/IOC) BRAC Office responsibilities:

- Act as the documentation proponent at the major subordinate command level.

- Provide information, guidance, and direction regarding BRAC 93 issues.

- Review draft and final submittals for BRAC 93 program sufficiency.

- Ensure draft and final submittals are appropriately staffed for comment and approval.

- Provide LEAD assistance as required.

6.3.5 The Headquarters DESCOM DCS FOR INDUSTRIAL RISK MANAGEMENT responsibilities:

- Provide information and guidance regarding the NEPA process and environmental issues.

- Review draft and final submittals for environmental sufficiency.

- Serve as the point of contact, under the auspices of the DESCOM BRACO, for all environmental issues related to BRAC 93.

- Provide LEAD assistance as required.

6.4 FACILITIES. Letterkenny Army Depot has 1,279,482 square feet of maintenance space with 367,603 square feet proposed for missile maintenance. A proposed layout of the tactical missile consolidation mission into LEAD facilities is at Appendix E-1 of this plan. There is sufficient space available under roof to accommodate the consolidation of the tactical missile mission without new construction. Some of the existing facilities, however are not entirely suited for missile repair without upgrade. In order to meet the missile consolidation timelines in Appendix C5-39, LEAD will accomplish the necessary facility upgrade with an aggressive renovation and alteration program using a combination of Base Closure Account (BCA) funded military construction (MILCON) and Minor Construction.

6.4.1 BCA MILCON Requirements. The DOD Missile Center - Letterkenny, PN 39697, and PN 43459 justification documents are at Appendix E-2. This MILCON involves four buildings. The execution of project design and construction will be accomplished by the Baltimore District of the Corps of Engineers.

6.4.1.1 Building 370 is a 241,561 square foot electronics shop facility, equipped with an Automatic Storage and Retrieval System (ASRS), which is

the primary building for the missile maintenance mission at LEAD. Several alterations are required in Building 370, phased to accommodate missile transition timelines. These include: construction of two mezzanines totalling 14,260 square feet in highbay areas; enclosing 12,460 square feet of open bay space; addition of a freight elevator; and electrical upgrade, lighting, and fire protection.

6.4.1.2 Building 11 is a 30,000 square foot supply warehouse (unheated) which will require renovation into a missile maintenance/electronics shop maintenance facility.

6.4.1.3 Building 12, formerly a 13,160 square foot heavy gun shop will require a general interior facility upgrade to accommodate the wire harness rebuild operations currently performed in building 370.

6.4.1.4 Building 426, a 18,928 square foot boxing and crating shop requires renovation into a missile maintenance/electronic shop maintenance facility.

6.4.2 Minor Construction Requirements. Minor construction projects required for the tactical missile mission total $305,000. These projects include: alternations to bldg 3810; vault expansion in bldg 370; hydraulics systems enclosure in bldg 370; alterations in bldg 370.

6.4.3 A chart depicting the key information associated with these projects is at Appendix E-3.

SECTION 7

INFORMATION MISSION AREA ACTION PLAN

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7.2	INFORMATION MISSION AREA	7-2

7.1 INTRODUCTION. This section addresses information mission area requirements necessary to support the consolidation of all DOD tactical missile maintenance at LEAD.

7.2 INFORMATION MISSION AREA (IMA). The construction project, DOD Missile Center - Letterkenny, PN 39697, includes IMA requirements. IMA in support of this project for line cards, telephone instruments, and local area network connectivity is estimated to be $144,000. IMA requirements are reflected in the 1391, dated 6 Aug 93.

SECTION 8

FINANCIAL MANAGEMENT PLAN

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8.1 FINANCIAL OVERVIEW.

8.1.1 The Financial Management Plan presents the financial resource requirements (All Services) for implementing the Base Realignment and Closure (BRAC) 1993 Law to consolidate the Defense Department's Tactical Missile Maintenance Mission at LEAD. Investments total $41.9 million (M) with 42 % required the first year, and $4.4 million of cost avoidance savings from the ATACMS military construction project at ANAD.

8.1.2 There are $1.4M of BRAC savings from the cancellation of two construction projects at Red River Army Depot. Additional substantial savings are anticipated due to the differences in fully burdened rates between the current sources of repair and the anticipated lower LEAD rates under consolidation. These rate driven savings are not displayed in the BRAC Financial Exhibits (Attachments 2-1 through 2-1-C) since they cannot be used to offset the BRAC one-time implementation costs. However, a January 1993 Joint Services Cost Analysis estimated these savings at $70.7 M for an FY93 to FY97 time period with FY97 alone showing savings of over $36 M with full missile consolidation at LEAD.

8.1.3 Funding timeliness is critical to the execution of this plan. If the receipt of funds slips, the expected savings will slip also. The most critical funding requirements are the projects to alter and renovate existing depot maintenance and warehouse facilities at LEAD.

8.2 FUNDING GUIDELINES. Office of the Assistant Secretary of Defense for Economic Secretary issued broad TMC Funding Guidance on 3 May 94. This document is at Appendix F. The Army BRAC Office has specified what costs they will and will not fund in the following paragraphs. Transition costs that are the responsibility of each service will be funded as the service deems appropriate but within regulatory guidelines. In order to determine the detailed financial requirements (element of expense by system by service), additional specific rules were developed. They are delineated as follows:

8.2.1 PERSONNEL

8.2.1.1 PCS and Real Estate. Army BRAC pays for PCS and Real Estate expenses for Department of Defense employees hired by LEAD for jobs directly related to missile maintenance, if the employee is not part of the Priority Placement Program.

8.2.1.2 The PCS and Real Estate costs incurred by employees registered with the Priority Placement Program will be the responsibility of the losing activity.

8.2.1.3 Each Service is responsible for all other PCS and Real Estate expenses incurred by employees whose registration in the PPP was directly related to a BRAC action (i.e., the Army BRAC Office will fund for impacted Army employees and the other Services will determine their funding source).

8.2.1.4 Severance, Unpaid Leave and All Other Costs Due to Change or Loss of Employment. Each Service is responsible for its employees (e.g., Army BRAC will fund for severance pay of Army employees whose severance was directly related to the BRAC action).

8.2.1.5 Training. Army pays for both formal and on-the-job training (OJT) for its employees only (to include any employees formerly employed by Air Force and Navy). Army BRAC will fund for student tuition, travel, per diem, labor and materials. Army BRAC will fund only for the actual writing of the Programs of Instruction (POI) (e.g., only for that portion charged against a project that includes the 2-3 week period a single action office takes to write a POI. Army BRAC will not fund for review, support, TDY, program management or other costs related to the development of a POI.

8.2.2 FACILITIES. Army BRAC funds to prepare Army facilities to accomplish missile maintenance work based on the Army's best estimates.

8.2.3 EQUIPMENT TRANSFER (Disassemble, Pack, Ship, Receive, Assemble, Calibrate).

8.2.3.1 Each Service funds to disassemble, pack and ship its equipment to LEAD. Each Service is responsible for costs of restoration of its facilities after equipment is removed. Army BRAC will fund to receive, assemble, install and calibrate all equipment.

8.2.3.2 Related Personnel. Should they deem it necessary to assist the losing site in the disassembly, packing and shipping of equipment to the gaining site, Army BRAC will pay for reasonable travel, per diem and direct labor to accomplish this mission. Losing Service will pay costs for its personnel sent to assist the gaining site in receipt, assembly, installation and calibration of the transferred equipment.

8.2.3.3 Equipment Acquisition. Army BRAC will fund to purchase, repair or fabricate equipment for valid requirements.

8.2.4 SUPPLIES (Inventory).

8.2.4.1 For service-requested movement of missile-specific supplies, each Service funds (DLA or other organizations) to pack and ship. Army funds to receive. Army BRAC funds all Army costs.

8.2.4.2 Defense Logistics Agency (DLA) will fund to pack and ship any of their non-missile system-specific organic assets that they decide to move based on the mission transfer, as well as all other costs to move DLA personnel, equipment and materiel.

8.2.5 Interim Contract (or Other) Support.

8.2.5.1 Each Service is responsible for meeting its readiness requirements. If interim contract support (ICS) is required, then each Service will provide and fund as it deems appropriate.

8.2.5.2 Army BRAC funds will not be used to pay for ICS.

8.2.6 Contracted Systems. The cost to bring missile systems from contract to organic will be paid by the Service that contracted the work if a transition to organic was envisioned without BRAC 93 influence. For systems under contract support with no prior plans to establish an organic capability, but now required to do so by BRAC 93 actions, transition costs will be paid for the same as specified herein for organic to organic transition. The service BRAC Accounts will not fund for upgrades/modifications to system unique hardware and software which remain as requirements within the procurement appropriations.

8.2.7 First Article Test and Certification. Army BRAC will pay for all reasonable travel, per diem (FAT and certification) and incremental FAT costs above the cost of production for the FAT, (Incremental = Labor FAT Cost - estimated first year unit labor cost). BRAC will only fund for the cost to reestablish the maintenance capability at LEAD. Any first-time FATs must be funded from production sources. Army BRAC will not reimburse for the actual production of the First Article, nor for salary costs, hourly rates, etc., of non-gaining site personnel involved in the FAT or certification. Other Services may fund for salary costs of their personnel participating in FAT or certification if allowed by their Service BRAC funding policy.

8.2.8 Any other costs not identified above will be resolved by interservice agreement, in consonance with DOD policy.

8.3 METHODOLOGY

8.3.1 Funding requirements are scheduled to coincide and support the mission transition timelines for systems moving from organic SOR to LEAD. Where current organic capability does not exist, this financial plan does not estimate one-time costs to establish a new organic capability nor potential savings.

8.3.2 The Defense Finance and Accounting Service, Letterkenny Army Depot provided per capita estimates of Permanent Change of Station (PCS) costs for each losing source of repair.

8.3.3 Savings are calculated for budgeted construction projects which are no longer needed due to this BRAC package. The canceled projects are a direct result of this BRAC recommendation to maintain the current artillery workload at LEAD.

8.3.4 Severed personnel were estimated by each service/activity. These estimates were analyzed and updated as necessary to reflect only personnel lost due to this BRAC action. Personnel reductions determined by workload were not included.

8.4 ASSUMPTIONS.

8.4.1 LEAD will have the authority to hire all the direct and indirect

labor employees required to meet new mission requirements.

8.5 DATA SOURCES.

8.5.1 The Joint Services Update of the Tactical Missile Maintenance Consolidation Savings and Cost Analysis, 1 Aug 92 (Revised 7 JAN 93) served as the original source document for identifying system specific one-time transition costs. These costs were revised or replaced with the most recent information based on current requirements and information provided by all the services.

8.5.2 All estimated cost and savings were adjusted/inflated (using DoD inflation guidance dated 3 Mar 93) to ensure that the amounts are properly stated for each fiscal year.

8.6 SUNK COSTS.

8.6.1 As of 31 Dec 92, LEAD obligated $7.1 M for costs related to consolidating missile maintenance. Costs outlined below were reported to the General Accounting Office and detailed in Enclosure 1 to a letter from the GAO (GAO/NSAID-93-156R) to the House of Representative's Committee on Armed Services, Subcommittee on Readiness and to the Honorable Glen Browder, on 11 Mar 93.

Table 8-1: Funds obligated for Missile Maintenance Consolidation at Letterkenny Army Depot

(Dollars in Millions)

Cost Category	Funds Obligated
Training	$2.2
Travel-related expenses	0.8
Salaries	1.3
Equipment transfer	0.2
Equipment purchases	0.2
Design/Construct	1.7
Other	0.1
Total	$7.1

8.6.2 The sunk costs in Table 8-1 are not included in this Financial Plan. They are costs related to the consolidation of missile maintenance at LEAD; however, these costs were incurred prior to the BRAC 1993 Law for which this plan was prepared.

8.7 FINANCIAL EXHIBITS.

8.7.1 The financial exhibits contained in this plan are those required by the Army BRAC Implementation Guidance. Attachment 2-1 is a summary of the costs and savings contained in this package. Attachments 2-1-A are summaries of the costs and savings which are identifiable to a specific installation. Attachments 2-1-B are the fiscal year summaries of the costs and savings which are identifiable to a specific missile system and installation. Attachments 2-1-C provide narrative justification for the costs and savings that appear on Attachments 2-1-B.

8.7.2 Financial summaries are provided for each service by fiscal year and missile system.

Base Closure Exhibit
Summary by Realignment Package
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

ATTACHMENT 2-1
Submitting Command/Package: AMC/DESCOM/LEAD BRAC 93

POC: John Metz
U.S. Army Depot System Command
AMSDS-RM-P
Chambersburg, PA 17201

DSN 570-8136
COMM (717) 267-8136

One-Time Implementation	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	TOTAL ALL YEARS
Costs: MDEP-								
Military Construction	0	4,991	1,700	0	0	0	0	6,691
Family Housing	0	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0	0
Operations	0	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0	0
O&M	0	10,352	18,496	1,621	0	0	0	30,469
Military Personnel	0	0	0	0	0	0	0	0
Other	0	2,117	2,541	84	0	0	0	4,742
Revenue From Land Sales	0	0	0	0	0	0	0	0
Total Costs	0	17,460	22,737	1,705	0	0	0	41,902
* Savings: MDEP-								
Military Construction	0	0	1,400	0	0	0	0	1,400
Family Housing	0	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0	0
Operations	0	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0	0
O&M	0	0	0	0	0	0	0	0
Military Personnel	0	0	0	0	0	0	0	0
Civilian ES	0	0	0	0	0	0	0	0
Cumulative Civilian ES	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0
Total Savings	0	0	1,400	0	0	0	0	1,400
Net Costs:								
Military Construction	0	4,991	300	0	0	0	0	5,291
Family Housing	0	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0	0
Operations	0	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0	0
O&M	0	8,872	18,496	1,621	0	0	0	28,989
Military Personnel	0	0	0	0	0	0	0	0
Revenue From Land Sales	0	0	0	0	0	0	0	0
Other	0	2,117	2,541	84	0	0	0	4,742
Total Net Cost								0
or Savings (-)	0	15,980	21,337	1,705	0	0	0	39,022

All manpower savings and/or gains are outlined in Section 2, paragraph 2.8.

* Under BRAC 91, the one time cost to move SIMA-E to Rock Island, IL was $7.6M in MCA (FY91 Constant dollars). BRAC 93 reversed this action. However, this Financial Summary does not attempt to reflect these costs as BRAC 93 savings.

Base Closure Exhibit
Summary by Realignment Package/Installation
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

ATTACHMENT 2-1-A
Submitting Command/Package/Installation: AMC / DESCOM / LEAD BRAC 93 / Letterkenny Army Depot

One-Time Implementation	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999
Costs: MDEP-							
Military Construction	0	4,991	1,700	0	0	0	0
Family Housing	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0
Operations	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
O&M	0	830	1,056	495	0	0	0
Military Personnel	0	0	0	0	0	0	0
Other	0	1,550	500	0	0	0	0
Revenue From Land Sales	0	0	0	0	0	0	0
Total Costs	0	7,371	3,256	495	0	0	0
Savings: MDEP-							
Military Construction	0	0	1,400	0	0	0	0
Family Housing	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0
Operations	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
O&M	0	0	0	0	0	0	0
Military Personnel	0	0	0	0	0	0	0
Civilian ES	0	0	0	0	0	0	0
Military ES	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Total Savings	0	0	1,400	0	0	0	0
Net Costs:							
Military Construction	0	4,991	300	0	0	0	0
Family Housing	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0
Operations	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
O&M	0	830	1,056	495	0	0	0
Military Personnel	0	0	0	0	0	0	0
Revenue From Land Sales	0	0	0	0	0	0	0
Other	0	1,550	500	0	0	0	0
Total Net Cost or Savings (-)	0	7,371	1,856	495	0	0	0

Base Closure Exhibit
Summary by Realignment Package/Installation/Organization
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

Submitting Command/Realignment Package/Installation/Organization: AMC/DESCOM/LEAD BRAC 93/Letterkenny Army Depot

System: Nonspecific Missile Systems

ATTACHMENT 2-1-B

One-Time Implementation	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	Annual Recurring Savings Begin FY
Costs: MDEP-								
Military Construction		4,991	1,700					
Family Housing								
Construction								
Operations								
Environmental								
O&M		809	1,056	495				
Military Personnel								
Other		1,550	500					
Revenue From Land Sales								
Total Costs	0	7,350	3,256	495	0	0	0	
Savings: MDEP-								
Military Construction			1,400					
Family Housing	0	0	0	0	0	0	0	
Construction								
Operations								
Environmental								
O&M								
Military Personnel								
Civilian ES								
Military ES								
Other								
Total Savings	0	0	1,400	0	0	0	0	
Net Costs:								
Military Construction	0	4,991	300	0	0	0	0	
Family Housing	0	0	0	0	0	0	0	
Construction	0	0	0	0	0	0	0	
Operations	0	0	0	0	0	0	0	
Environmental	0	0	0	0	0	0	0	
O&M	0	809	1,056	495	0	0	0	
Military Personnel	0	0	0	0	0	0	0	
Revenue From Land Sales	0	0	0	0	0	0	0	
Other	0	1550	500	0	0	0	0	
Total Net Cost or Savings (-)	0	7,350	1,856	495	0	0	0	

Base Closure Exhibit
Narrative Justification by Realignment Package
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

ATTACHMENT 2-1-C

Submitting Command/Realignment Package: DESCOM / LEAD BRAC 93 / Letterkenny Army Depot

Nonspecific Missile Systems

One-Time Implementation Costs:	Amount	FY	Narrative Justification
MILITARY CONSTRUCTION	$4,991	94	MCA project to alter and renovate existing depot maintenance and warehouse facilities at LEAD. Primary facilities are bldgs 370, 12 and 426. Project is not specifically for any single missile system.
MILITARY CONSTRUCTION	$1,700	95	MCA project to alter and renovate existing depot maintenance in bldg 11.
OPERATION & MAINTENANCE	$809	94	TOTAL O & M
	$0	94	Equate Training
	$292	94	Relocate equipment to/from designated missile maintenance workareas
	$479	94	Nonspecific Missile System Training
	$38	94	Purchase Equipment: $17,172.00 – Particle Counters $5,540.00 – Mobile Stacker $15,000.00 – RF Shielding
	$1,056	95	TOTAL O & M
	$50	95	Electrical modifications in LEAD bldg 370.
	$968	95	Nonspecific Missile System Training
	$24	95	Repair DITMCO to operational status
	$14	95	Upgrade DITMCO for TOW systems
	$495	96	TOTAL O & M
	$495	96	Nonspecific Missile System Training
OTHER	$1,550	94	TOTAL OTHER
	$395	94	Purchase equipment – Nitrogen Distribution System ($250K) for Sidewinder and Maverick systems; Vibration Test System ($145K) for Sidewinder system.
	$168	94	Purchase equipment to support TOW systems – 100,000 Clean Room (2)
	$40	94	* Vault expansion in LEAD bldg 370. Pertains to all missile systems.
	$164	94	Miscellaneous facility workorders, bldg 370
	$165	94	Relocate DLA operations from designated missile maintenance workareas
	$34	94	Purchase equipment supporting all systems – Travelling Gantry Crane
	$144	94	IMA purchases to support transition
	$440	94	Purchase equipment – Nitrogen Supply Station ($440K)
	$500	95	TOTAL OTHER
	$500	95	Purchase equipment supporting all systems – Clean Room 100,000/350 Hydraulic Room ($500K)
SAVINGS: MILITARY CONSTRUCTION	$1,400	95	MCA Total
	$1,050	95	Cancel project to Upgrade Firing Range @ RRAD from BRAC 91.
	$350	95	Cancel project for Electronic Maintenance Facility @ RRAD from BRAC 91.

Base Closure Exhibit
Summary by Realignment Package/Installation/Organization
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

Submitting Command/Realignment Package/Installation/Organization: AMC/DESCOM/LEAD BRAC 93/Letterkenny Army Depot

System: AVENGER

ATTACHMENT 2-1-B

One-Time Implementation	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	Annual Recurring Savings Begin FY
Costs: MDEP-								
Military Construction								
Family Housing								
Construction								
Operations								
Environmental								
O&M		21						
Military Personnel								
Other								
Revenue From Land Sales								
Total Costs	0	21	0	0	0	0	0	
Savings: MDEP-								
Military Construction								
Family Housing								
Construction								
Operations								
Environmental								
O&M								
Military Personnel								
Civilian ES								
Military ES								
Other								
Total Savings	0	0	0	0	0	0	0	
Net Costs:								
Military Construction	0	0	0	0	0	0	0	
Family Housing	0	0	0	0	0	0	0	
Construction	0	0	0	0	0	0	0	
Operations	0	0	0	0	0	0	0	
Environmental	0	0	0	0	0	0	0	
O&M	0	21	0	0	0	0	0	
Military Personnel	0	0	0	0	0	0	0	
Revenue From Land Sales	0	0	0	0	0	0	0	
Other	0	0	0	0	0	0	0	
Total Net Cost or Savings (-)	0	21	0	0	0	0	0	

Base Closure Exhibit
Narrative Justification by Realignment Package
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

ATTACHMENT 2-1-C

Submitting Command/Realignment Package: DESCOM / LEAD BRAC 93 / Letterkenny Army Depot

System: AVENGER

One-Time Implementation	Amount	FY	Narrative Justification
OPERATION & MAINTENANCE	$21	94	TOTAL O & M
O & M	$21	94	Training

Base Closure Exhibit
Summary by Realignment Package/Installation
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

ATTACHMENT 2-1-A

Submitting Command/Package/Installation: AMC / DESCOM / LEAD BRAC 93 / Anniston Army Depot

One-Time Implementation	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999
Costs: MDEP-							
Military Construction	0	0	0	0	0	0	0
Family Housing	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0
Operations	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
O&M	0	2,265	5,640	687	0	0	0
Military Personnel	0	0	0	0	0	0	0
Other	0	245	0	84	0	0	0
Revenue From Land Sales	0	0	0	0	0	0	0
Total Costs	0	2,510	5,640	771	0	0	0
Savings: MDEP-							
Military Construction	0	0	0	0	0	0	0
Family Housing	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0
Operations	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
O&M	0	0	0	0	0	0	0
Military Personnel	0	0	0	0	0	0	0
Civilian ES	0	0	0	0	0	0	0
Cumulative Civilian ES	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Total Savings	0	0	0	0	0	0	0
Net Costs:							
Military Construction	0	0	0	0	0	0	0
Family Housing	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0
Operations	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
O&M	0	2,265	5,640	687	0	0	0
Military Personnel	0	0	0	0	0	0	0
Revenue From Land Sales	0	0	0	0	0	0	0
Other	0	245	0	84	0	0	0
Total Net Cost or Savings (-)	0	2,510	5,640	771	0	0	0

Attachment 2-1-A-ANAD

Base Closure Exhibit
Summary by Realignment Package/Installation/Organization
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

Submitting Command/Realignment Package/Installation/Organization: AMC / DESCOM / LEAD BRAC 93 / Anniston Army Depot

System: ATACMS

ATTACHMENT 2-1-B

One-Time Implementation	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	Annual Recurring Savings Begin FY
Costs: MDEP-								
Military Construction								
Family Housing	0	0	0	0	0	0	0	
Construction								
Operations								
Environmental								
O&M		582						
Military Personnel								
Other								
Revenue From Land Sales								
Total Costs	0	582	0	0	0	0	0	
Savings: MDEP-								
Military Construction								
Family Housing	0	0	0	0	0	0	0	
Construction								
Operations								
Environmental								
O&M								
Military Personnel								
Civilian ES								
Military ES								
Other								
Total Savings	0	0	0	0	0	0	0	
Net Costs:								
Military Construction	0	0	0	0	0	0	0	
Family Housing	0	0	0	0	0	0	0	
Construction	0	0	0	0	0	0	0	
Operations	0	0	0	0	0	0	0	
Environmental	0	0	0	0	0	0	0	
O&M	0	582	0	0	0	0	0	
Military Personnel	0	0	0	0	0	0	0	
Revenue From Land Sales	0	0	0	0	0	0	0	
Other	0	0	0	0	0	0	0	
Total Net Cost or Savings (-)	0	582	0	0	0	0	0	

Base Closure Exhibit
Narrative Justification by Realignment Package
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

ATTACHMENT 2-1-C

Submitting Command/Realignment Package: AMC / DESCOM / LEAD BRAC 93 / Anniston Army Depot

System: ATACMS

One-Time Implementation Costs:	Amount	FY	Narrative Justification
OPERATION & MAINTENANCE	$582	94	Total O & M
	$415	94	Transfer equipment to LEAD
	$7	94	Transfer inventories to LEAD
	$89	94	First Article Test
	$44	94	PCS for 2 persons to LEAD
	$27	94	Real Estate for 2 persons to LEAD

Savings:

Base Closure Exhibit
Summary by Realignment Package/Installation/Organization
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

Submitting Command/Realignment Package/Installation/Organization: AMC / DESCOM / LEAD BRAC 93 / Anniston Army Depot

System: Dragon

ATTACHMENT 2-1-B

One-Time Implementation	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	Annual Recurring Savings Begin FY
Costs: MDEP-								
Military Construction								
Family Housing	0	0	0	0	0	0	0	
Construction								
Operations								
Environmental								
O&M		899	515					
Military Personnel								
Other		84						
Revenue From Land Sales								
Total Costs	0	983	515	0	0	0	0	
Savings: MDEP-								
Military Construction								
Family Housing	0	0	0	0	0	-0	0	
Construction								
Operations								
Environmental								
O&M								
Military Personnel								
Civilian ES								
Military ES								
Other								
Total Savings	0	0	0	0	0	0	0	
Net Costs:								
Military Construction	0	0	0	0	0	0	0	
Family Housing	0	0	0	0	0	0	0	
Construction	0	0	0	0	0	0	0	
Operations	0	0	0	0	0	0	0	
Environmental	0	0	0	0	0	0	0	
O&M	0	899	515	0	0	0	0	
Military Personnel	0	0	0	0	0	0	0	
Revenue From Land Sales	0	0	0	0	0	0	0	
Other	0	84	0	0	0	0	0	
Total Net Cost or Savings (-)	0	983	515	0	0	0	0	

Base Closure Exhibit
Narrative Justification by Realignment Package
(Dollars in Thousands)

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Revision 7

ATTACHMENT 2-1-C

Submitting Command/Realignment Package: AMC / DESCOM / LEAD BRAC 93 / Anniston Army Depot

System: DRAGON

One-Time Implementation Costs:	Amount	FY	Narrative Justification
OPERATION & MAINTENANCE	$899	94	Total O & M
	$54	94	Transfer equipment to LEAD
	$388	94	Transfer inventories to LEAD
	$30	94	First Article Test
	$141	94	Dragon Training
	$178	94	PCS 8 persons to LEAD
	$108	94	Real Estate for 8 persons to LEAD
OPERATION & MAINTENANCE	$515	95	Total O & M
	$278	95	Severance for 8 direct and 4 indirect persons
	$237	95	Repair LCSS test equipment
OTHER	$84	94	100,000 Class Clean Room (1)

Savings:

Base Closure Exhibit
Summary by Realignment Package/Installation/Organization
(Dollars in Thousands)

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Revision 7

Submitting Command/Realignment Package/Installation/Organization: AMC / DESCOM / LEAD BRAC 93 / Anniston Army Depot

System: HELLFIRE

ATTACHMENT 2-1-B

One-Time Implementation	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	Annual Recurring Savings Begin FY
Costs: MDEP-								
Military Construction								
Family Housing	0	0	0	0	0	0	0	
Construction								
Operations								
Environmental								
O&M		163	208					
Military Personnel								
Other								
Revenue From Land Sales								
Total Costs	0	163	208	0	0	0	0	
Savings: MDEP-								
Military Construction								
Family Housing	0	0	0	0	0	0	0	
Construction								
Operations								
Environmental								
O&M								
Military Personnel								
Civilian ES								
Military ES								
Other								
Total Savings	0	0	0	0	0	0	0	
Net Costs:								
Military Construction	0	0	0	0	0	0	0	
Family Housing	0	0	0	0	0	0	0	
Construction	0	0	0	0	0	0	0	
Operations	0	0	0	0	0	0	0	
Environmental	0	0	0	0	0	0	0	
O&M	0	163	208	0	0	0	0	
Military Personnel	0	0	0	0	0	0	0	
Revenue From Land Sales	0	0	0	0	0	0	0	
Other	0	0	0	0	0	0	0	
Total Net Cost or Savings (-)	0	163	208	0	0	0	0	

Base Closure Exhibit
Narrative Justification by Realignment Package
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

ATTACHMENT 2-1-C

Submitting Command/Realignment Package: AMC / DESCOM / LEAD BRAC 93 / Anniston Army Depot

System: HELLFIRE

One-Time Implementation Costs:	Amount	FY	Narrative Justification
OPERATION & MAINTENANCE	$163	94	Total O & M
	$26	94	Transfer equipment to LEAD
	$6	94	Transfer inventories to LEAD
	$43	94	First Article Test
	$17	94	Hellfire Training
	$44	94	PCS for 2 persons to LEAD
	$27	94	Real Estate for 2 persons to LEAD
OPERATION & MAINTENANCE	$208	95	Total O & M
	$208	95	Severance for 7 direct and 2 indirect

Savings:

Base Closure Exhibit
Summary by Realignment Package/Installation/Organization
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

Submitting Command/Realignment Package/Installation/Organization: AMC / DESCOM / LEAD BRAC 93 / Anniston Army Depot

System: LCSS

ATTACHMENT 2-1-B

One-Time Implementation	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	Annual Recurring Savings Begin FY
Costs: MDEP-								
Military Construction								
Family Housing	0	0	0	0	0	0	0	
Construction								
Operations								
Environmental								
O&M			327	417				
Military Personnel								
Other				84				
Revenue From Land Sales								
Total Costs	0	0	327	501	0	0	0	
Savings: MDEP-								
Military Construction								
Family Housing	0	0	0	0	0	0	0	
Construction								
Operations								
Environmental								
O&M								
Military Personnel								
Civilian ES								
Military ES								
Other								
Total Savings	0	0	0	0	0	0	0	
Net Costs:								
Military Construction	0	0	0	0	0	0	0	
Family Housing	0	0	0	0	0	0	0	
Construction	0	0	0	0	0	0	0	
Operations	0	0	0	0	0	0	0	
Environmental	0	0	0	0	0	0	0	
O&M	0	0	327	417	0	0	0	
Military Personnel	0	0	0	0	0	0	0	
Revenue From Land Sales	0	0	0	0	0	0	0	
Other	0	0	0	84	0	0	0	
Total Net Cost or Savings (-)	0	0	327	501	0	0	0	

Base Closure Exhibit
Narrative Justification by Realignment Package
(Dollars in Thousands)

15 SEPTEMBER 94
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ATTACHMENT 2-1-C

Submitting Command/Realignment Package: AMC / DESCOM / LEAD BRAC 93 / Anniston Army Depot

System: LCSS

One-Time Implementation Costs:	Amount	FY	Narrative Justification
OPERATION & MAINTENANCE	$327	95	Total O & M
	$45	95	PCS 2 persons to LEAD
	$31	95	Real Estate for 2 persons to LEAD
	$251	95	Training
OPERATION & MAINTENANCE	$417	96	Total O & M
	$64	96	Training
	$110	96	Transfer inventories to LEAD *
	$43	96	First Article Test *
	$81	96	Transfer equipment to LEAD *
	$119	96	Severance for 3 direct and 2 indirect personnel
OTHER	$84	96	Total Other
	$84	96	Clean Room

* Source: Joint Service Update of the Tactical Missile Maintenance Consolidation Savings and Cost Analysis, 1 Aug 92 (Revised 7 Jan 93), adjusted using latest (1 Mar 93) inflation guidance.

Savings:

Base Closure Exhibit
Summary by Realignment Package/Installation/Organization
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

Submitting Command/Realignment Package/Installation/Organization: AMC / DESCOM / LEAD BRAC 93 / Anniston Army Depot

System: TOW COBRA

ATTACHMENT 2-1-B

One-Time Implementation	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	Annual Recurring Savings Begin FY
Costs: MDEP-								
Military Construction								
Family Housing	0	0	0	0	0	0	0	
Construction								
Operations								
Environmental								
O&M		0	1,878					
Military Personnel								
Other		161						
Revenue From Land Sales								
Total Costs	0	161	1,878	0	0	0	0	
Savings: MDEP-								
Military Construction								
Family Housing	0	0	0	0	0	0	0	
Construction								
Operations								
Environmental								
O&M								
Military Personnel								
Civilian ES								
Military ES								
Other								
Total Savings	0	0	0	0	0	0	0	
Net Costs:								
Military Construction	0	0	0	0	0	0	0	
Family Housing	0	0	0	0	0	0	0	
Construction	0	0	0	0	0	0	0	
Operations	0	0	0	0	0	0	0	
Environmental	0	0	0	0	0	0	0	
O&M	0	0	1,878	0	0	0	0	
Military Personnel	0	0	0	0	0	0	0	
Revenue From Land Sales	0	0	0	0	0	0	0	
Other	0	161	0	0	0	0	0	
Total Net Cost or Savings (-)	0	161	1,878	0	0	0	0	

Base Closure Exhibit
Narrative Justification by Realignment Package
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

ATTACHMENT 2-1-C

Submitting Command/Realignment Package: AMC / DESCOM / LEAD BRAC 93 / Anniston Army Depot

System: TOW COBRA

One-Time Implementation Costs:	Amount	FY	Narrative Justification
OPERATION & MAINTENANCE	$1,878	95	Total O & M
	$107	95	Transfer equipment to LEAD
	$152	95	Transfer inventory to LEAD *
	$25	95	First Article Test
	$275	95	PCS for 12 persons to LEAD
	$189	95	Real Estate for 12 persons to LEAD
	$551	95	Tow Cobra Training
	$579	95	Severance for 16 direct and 9 indirect personnel
OTHER	$161	94	Total Other
	$161	94	MATE Modification (2)

* Source: Joint Service Update of the Tactical Missile Maintenance Consolidation Savings and Cost Analysis, 1 Aug 92 (Revised 7 Jan 93), adjusted using latest (1 Mar 93) inflation guidance.

Base Closure Exhibit
Summary by Realignment Package/Installation/Organization
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

Submitting Command/Realignment Package/Installation/Organization: AMC / DESCOM / LEAD BRAC 93 / Anniston Army Depot

System: TOW 2

ATTACHMENT 2-1-B

One-Time Implementation	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	Annual Recurring Savings Begin FY
Costs: MDEP-								
Military Construction								
Family Housing	0	0	0	0	0	0	0	
Construction								
Operations								
Environmental								
O&M		621	2,712					
Military Personnel								
Other								
Revenue From Land Sales								
Total Costs	0	621	2,712	0	0	0	0	
Savings: MDEP-								
Military Construction								
Family Housing	0	0	0	0	0	0	0	
Construction								
Operations								
Environmental								
O&M								
Military Personnel								
Civilian ES								
Military ES								
Other								
Total Savings	0	0	0	0	0	0	0	
Net Costs:								
Military Construction	0	0	0	0	0	0	0	
Family Housing	0	0	0	0	0	0	0	
Construction	0	0	0	0	0	0	0	
Operations	0	0	0	0	0	0	0	
Environmental	0	0	0	0	0	0	0	
O&M	0	621	2,712	0	0	0	0	
Military Personnel	0	0	0	0	0	0	0	
Revenue From Land Sales	0	0	0	0	0	0	0	
Other	0	0	0	0	0	0	0	
Total Net Cost or Savings (-)	0	621	2,712	0	0	0	0	

Base Closure Exhibit
Narrative Justification by Realignment Package
(Dollars in Thousands)

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Revision 7

ATTACHMENT 2-1-C

Submitting Command/Realignment Package: AMC / DESCOM / LEAD BRAC 93 / Anniston Army Depot

System: TOW 2

One-Time Implementation Costs:	Amount	FY	Narrative Justification
OPERATION & MAINTENANCE	$621	94	Total O & M
	$621	94	Tow 2 Training
	$2,712	95	Total O & M
	$35	95	First Article Test
	$481	95	PCS 21 persons to LEAD
	$331	95	Real Estate for 21 persons to LEAD
	$572	95	Tow 2 Training
	$555	95	Severance for 18 direct and 6 indirect personnel
	$325	95	Transfer equipment to LEAD
	$413	95	Transfer inventory to LEAD •

• Source: Joint Service Update of the Tactical Missile Maintenance Consolidation Savings and Cost Analysis, 1 Aug 92 (Revised 7 Jan 93), adjusted using latest (1 Mar 93) inflation guidance.

Savings:

Base Closure Exhibit
Summary by Realignment Package/Installation
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

ATTACHMENT 2-1-A
Submitting Command/Package/Installation: AMC / DESCOM / LEAD BRAC 93 / Red River Army Depot

One-Time Implementation	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999
Costs: MDEP-							
Military Construction	0	0	0	0	0	0	0
Family Housing	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0
Operations	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
O&M	0	584	312	0	0	0	0
Military Personnel	0	0	0	0	0	0	0
Other	0	0	1,338	0	0	0	0
Revenue From Land Sales	0	0	0	0	0	0	0
Total Costs	0	584	1,650	0	0	0	0
Savings: MDEP-							
Military Construction	0	0	0	0	0	0	0
Family Housing	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0
Operations	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
O&M	0	0	0	0	0	0	0
Military Personnel	0	0	0	0	0	0	0
Civilian ES	0	0	0	0	0	0	0
Military ES	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Total Savings	0	0	0	0	0	0	0
Net Costs:							
Military Construction	0	0	0	0	0	0	0
Family Housing	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0
Operations	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
O&M	0	584	312	0	0	0	0
Military Personnel	0	0	0	0	0	0	0
Revenue From Land Sales	0	0	0	0	0	0	0
Other	0	0	1338	0	0	0	0
Total Net Cost or Savings (-)	0	584	1,650	0	0	0	0

Base Closure Exhibit
Summary by Realignment Package/Installation/Organization
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

Submitting Command/Realignment Package/Installation/Organization: AMC / DESCOM / LEAD BRAC 93 / Red River Army Depot

System: TOW Bradley Fighting Vehicle System

ATTACHMENT 2-1-B

One-Time Implementation	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	Annual Recurring Savings Begin FY
Costs: MDEP-								
Military Construction								
Family Housing								
Construction								
Operations								
Environmental								
O&M		416	312					
Military Personnel								
Other								
Revenue From Land Sales								
Total Costs	0	416	312	0	0	0	0	
Savings: MDEP-								
Military Construction								
Family Housing	0	0	0	0	0	0	0	
Construction								
Operations								
Environmental								
O&M								
Military Personnel								
Civilian ES								
Military ES								
Other								
Total Savings	0	0	0	0	0	0	0	
Net Costs:								
Military Construction	0	0	0	0	0	0	0	
Family Housing	0	0	0	0	0	0	0	
Construction	0	0	0	0	0	0	0	
Operations	0	0	0	0	0	0	0	
Environmental	0	0	0	0	0	0	0	
O&M	0	416	312	0	0	0	0	
Military Personnel	0	0	0	0	0	0	0	
Revenue From Land Sales	0	0	0	0	0	0	0	
Other	0	0	0	0	0	0	0	
Total Net Cost or Savings (-)	0	416	312	0	0	0	0	

Base Closure Exhibit
Narrative Justification by Realignment Package
(Dollars in Thousands)

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Revision 7

ATTACHMENT 2-1-C

Submitting Command/Realignment Package: DESCOM / LEAD BRAC 93 / Red River Army Depot

System: TOW Bradley Fighting Vehicle System

One-Time Implementation Costs:	Amount	FY	Narrative Justification
OPERATION & MAINTENANCE	$416	94	Total O & M
	$413	94	TOW BFVS Training
	$3	94	Equipment transferring to LEAD
	$312	95	Total O & M
	$146	95	Equipment transferring to LEAD
	$143	95	Transfer inventories to LEAD *
	$23	95	First Article Test

* Source: Joint Service Update of the Tactical Missile Maintenance Consolidation Savings and Cost Analysis, 1 Aug 92 (Revised 7 Jan 93), adjusted using latest (1 Mar 93) inflation guidance.

Savings:

Base Closure Exhibit
Summary by Realignment Package/Installation/Organization
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

Submitting Command/Realignment Package/Installation/Organization: AMC / DESCOM / LEAD BRAC 93 / Red River Army Depot

System: Multiple Launch Rocket System

ATTACHMENT 2-1-B

One-Time Implementation	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	Annual Recurring Savings Begin FY
Costs: MDEP-								
Military Construction								
Family Housing	0	0	0	0	0	0	0	
Construction								
Operations								
Environmental								
O&M		168						
Military Personnel								
Other			1,338					
Revenue From Land Sales								
Total Costs	0	168	1,338	0	0	0	0	
Savings: MDEP-								
Military Construction								
Family Housing	0	0	0	0	0	0	0	
Construction								
Operations								
Environmental								
O&M								
Military Personnel								
Civilian ES								
Military ES								
Other								
Total Savings	0	0	0	0	0	0	0	
Net Costs:								
Military Construction	0	0	0	0	0	0	0	
Family Housing	0	0	0	0	0	0	0	
Construction	0	0	0	0	0	0	0	
Operations	0	0	0	0	0	0	0	
Environmental	0	0	0	0	0	0	0	
O&M	0	168	0	0	0	0	0	
Military Personnel	0	0	0	0	0	0	0	
Revenue From Land Sales	0	0	0	0	0	0	0	
Other	0	0	1,338	0	0	0	0	
Total Net Cost or Savings (-)	0	168	1,338	0	0	0	0	

Base Closure Exhibit
Narrative Justification by Realignment Package
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

ATTACHMENT 2-1-C

Submitting Command/Realignment Package: AMC / DESCOM / LEAD BRAC 93 / Red River Army Depot

System: Multiple Launch Rocket System

One-Time Implementation Costs:	Amount	FY	Narrative Justification
OPERATION & MAINTENANCE	$168	94	Total O & M
	$25	94	Transfer equipment to LEAD
	$33	94	Shipping & receiving costs for transferring inventories to LEAD
	$20	94	First Article Test
	$40	94	MLRS Training
	$50	94	System Peculiar Equipment
OTHER	$1,338	95	Total Other
	$1,338	95	Purchase 2 Test Program Sets

Savings:

Base Closure Exhibit
Summary by Realignment Package/Installation
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

ATTACHMENT 2-1-A

Submitting Command/Package/Installation: AMC / DESCOM / LEAD BRAC 93 / Navy Alameda

One-Time Implementation	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999
Costs: MDEP-							
Military Construction	0	0	0	0	0	0	0
Family Housing	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0
Operations	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
O&M	0	3,755	0	0	0	0	0
Military Personnel	0	0	0	0	0	0	0
Other	0	322	0	0	0	0	0
Revenue From Land Sales	0	0	0	0	0	0	0
Total Costs	0	4,077	0	0	0	0	0
Savings: MDEP-							
Military Construction	0	0	0	0	0	0	0
Family Housing	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0
Operations	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
O&M	0	0	0	0	0	0	0
Military Personnel	0	0	0	0	0	0	0
Civilian ES	0	0	0	0	0	0	0
Military ES	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Total Savings	0	0	0	0	0	0	0
Net Costs:							
Military Construction	0	0	0	0	0	0	0
Family Housing	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0
Operations	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
O&M	0	3,755	0	0	0	0	0
Military Personnel	0	0	0	0	0	0	0
Revenue From Land Sales	0	0	0	0	0	0	0
Other	0	322	0	0	0	0	0
Total Net Cost or Savings (-)	0	4,077	0	0	0	0	0

Base Closure Exhibit
Summary by Realignment Package/Installation/Organization
(Dollars in Thousands)

15 SEPTEMBER 94
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Submitting Command/Realignment Package/Installation/Organization: AMC/DESCOM/LEAD BRAC 93/Navy Alameda

System: Phoenix
Navy Point of Contact: Norm Shelton, DSN 354-6057 x169

ATTACHMENT 2-1-B

One-Time Implementation	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	Annual Recurring Savings Begin FY
Costs: MDEP-								
Military Construction								
Family Housing	0	0	0	0	0	0	0	
Construction								
Operations								
Environmental								
O&M		1,700						
Military Personnel								
Other								
Revenue From Land Sales								
Total Costs	0	1,700	0	0	0	0	0	
Savings: MDEP-								
Military Construction								
Family Housing	0	0	0	0	0	0	0	
Construction								
Operations								
Environmental								
O&M								
Military Personnel								
Civilian ES								
Military ES								
Other								
Total Savings	0	0	0	0	0	0	0	
Net Costs:								
Military Construction	0	0	0	0	0	0	0	
Family Housing	0	0	0	0	0	0	0	
Construction	0	0	0	0	0	0	0	
Operations	0	0	0	0	0	0	0	
Environmental	0	0	0	0	0	0	0	
O&M	0	1,700	0	0	0	0	0	
Military Personnel	0	0	0	0	0	0	0	
Revenue From Land Sales	0	0	0	0	0	0	0	
Other	0	0	0	0	0	0	0	
Total Net Cost or Savings (-)	0	1,700	0	0	0	0	0	

Base Closure Exhibit
Narrative Justification by Realignment Package
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

ATTACHMENT 2-1-C

Submitting Command/Realignment Package: AMC / DESCOM / LEAD BRAC 93 / Navy Alameda

System: Phoenix
Navy Point of Contact: Norm Shelton, DSN 354-6057 x169

One-Time Implementation Costs:	Amount	FY	Narrative Justification
			ARMY REQUIREMENTS
OPERATION & MAINTENANCE	$843	94	Total O & M
	$162	94	Transfer equipment to LEAD
	$219	94	PCS 7 persons to LEAD
	$136	94	Real Estate for 6 Persons
	$316	94	Phoenix Training
	$10	94	First Article Test
			NAVY REQUIREMENTS
OPERATION & MAINTENANCE	$857	94	Total O & M
	$803	94	Transfer Equipment to LEAD
	$19	94	Transfer inventory to LEAD
	$35	94	First Article Test

Savings:

Base Closure Exhibit
Summary by Realignment Package/Installation/Organization
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

Submitting Command/Realignment Package/Installation/Organization: AMC/DESCOM/LEAD BRAC 93/Navy Alameda

System: Sparrow
Navy Point of Contact: Norm Shelton, DSN 354-6057 x169

ATTACHMENT 2-1-B

One-Time Implementation	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	Annual Recurring Savings Begin FY
Costs: MDEP-								
Military Construction								
Family Housing	0	0	0	0	0	0	0	
Construction								
Operations								
Environmental								
O&M		2,055						
Military Personnel								
Other		322						
Revenue From Land Sales								
Total Costs	0	2,377	0	0	0	0	0	
Savings: MDEP-								
Military Construction								
Family Housing	0	0	0	0	0	0	0	
Construction								
Operations								
Environmental								
O&M								
Military Personnel								
Civilian ES								
Military ES								
Other								
Total Savings	0	0	0	0	0	0	0	
Net Costs:								
Military Construction	0	0	0	0	0	0	0	
Family Housing	0	0	0	0	0	0	0	
Construction	0	0	0	0	0	0	0	
Operations	0	0	0	0	0	0	0	
Environmental	0	0	0	0	0	0	0	
O&M	0	2,055	0	0	0	0	0	
Military Personnel	0	0	0	0	0	0	0	
Revenue From Land Sales	0	0	0	0	0	0	0	
Other	0	322	0	0	0	0	0	
Total Net Cost or Savings (-)	0	2,377	0	0	0	0	0	

Base Closure Exhibit
Narrative Justification by Realignment Package
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

ATTACHMENT 2-1-C

Submitting Command/Realignment Package: AMC / DESCOM / LEAD BRAC 93 / Navy Alameda

System: Sparrow
Navy Point of Contact: Norm Shelton, DSN 354-6057 x169

One-Time Implementation Costs:	Amount	FY	Narrative Justification
			ARMY REQUIREMENTS
OPERATION & MAINTENANCE	$1,570	94	Total O & M
	$170	94	Transfer equipment to LEAD
	$656	94	PCS 20 persons to LEAD
	$409	94	Real Estate for 19 persons
	$325	94	Sparrow Training ***(actual costs)***
	$10	94	First Article Test
OTHER	$322	94	Total Other
	$252	94	Purchase equipment required in addition to transferring equipment (A/C CONSOLE/HVAC $90K) (Hydraulic Pumping and Distribution Systems $130K) (Shielded room $32K)
	$70	94	Construct enclosure for Sparrow Hydraulics in LEAD bldg 370.
			NAVY REQUIREMENTS
OPERATION & MAINTENANCE	$485	94	Total O & M
	$324	94	Transfer Equipment to LEAD
	$59	94	Transfer inventory to LEAD
	$102	94	First Article Test

Savings:

Base Closure Exhibit
Summary by Realignment Package/Installation
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

ATTACHMENT 2-1-A
Submitting Command/Package/Installation: AMC / DESCOM / LEAD BRAC 93 / Navy Norfolk

One-Time Implementation	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999
Costs: MDEP-							
Military Construction	0	0	0	0	0	0	0
Family Housing	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0
Operations	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
O&M	0	1,207	348	0	0	0	0
Military Personnel	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Revenue From Land Sales	0	0	0	0	0	0	0
Total Costs	0	1,207	348	0	0	0	0
Savings: MDEP-							
Military Construction							
Family Housing							
Construction							
Operations							
Environmental							
O&M							
Military Personnel							
Civilian ES							
Military ES							
Other							
Total Savings	0	0	0	0	0	0	0
Net Costs:							
Military Construction	0	0	0	0	0	0	0
Family Housing	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0
Operations	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
O&M	0	1,207	348	0	0	0	0
Military Personnel	0	0	0	0	0	0	0
Revenue From Land Sales	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Total Net Cost or Savings (-)	0	1,207	348	0	0	0	0

Base Closure Exhibit
Summary by Realignment Package/Installation/Organization
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

Submitting Command/Realignment Package/Installation/Organization: AMC/DESCOM/LEAD BRAC 93/Navy Norfolk

System: Sidewinder
Navy Point of Contact: Norm Shelton, DSN 354-6057 x169

ATTACHMENT 2-1-B

One-Time Implementation	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	Annual Recurring Savings Begin FY
Costs: MDEP-								
Military Construction								
Family Housing	0	0	0	0	0	0	0	
Construction								
Operations								
Environmental								
O&M		1,207	348					
Military Personnel								
Other								
Revenue From Land Sales								
Total Costs	0	1,207	348	0	0	0	0	
Savings: MDEP-								
Military Construction								
Family Housing	0	0	0	0	0	0	0	
Construction								
Operations								
Environmental								
O&M								
Military Personnel								
Civilian ES								
Military ES								
Other								
Total Savings	0	0	0	0	0	0	0	
Net Costs:								
Military Construction	0	0	0	0	0	0	0	
Family Housing	0	0	0	0	0	0	0	
Construction	0	0	0	0	0	0	0	
Operations	0	0	0	0	0	0	0	
Environmental	0	0	0	0	0	0	0	
O&M	0	1,207	348	0	0	0	0	
Military Personnel	0	0	0	0	0	0	0	
Revenue From Land Sales	0	0	0	0	0	0	0	
Other	0	0	0	0	0	0	0	
Total Net Cost or Savings (-)	0	1,207	348	0	0	0	0	

Base Closure Exhibit
Narrative Justification by Realignment Package
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

ATTACHMENT 2-1-C

Submitting Command/Realignment Package: AMC / DESCOM / LEAD BRAC 93 / Navy Norfolk

System: Sidewinder
Navy Point of Contact: Norm Shelton, DSN 354-6057 x169

One-Time Implementation Costs:	Amount	FY	Narrative Justification
			ARMY REQUIREMENTS
OPERATION & MAINTENANCE	$1,207	94	Total O & M
	$150	94	PCS 6 persons to LEAD
	$75	94	Real Estate for 5 persons
	$130	94	Transfer Equipment to LEAD
	$852	94	Sidewinder Training
	$157	95	Total O & M
	$100	95	Transfer Equipment to LEAD
	$32	95	First Article Test
	$25	95	Sidewinder Training
			NAVY REQUIREMENTS
OPERATION & MAINTENANCE	$191	95	Total O & M
	$152	95	Transfer Equipment to LEAD
	$7	95	Transfer inventory to LEAD
	$32	95	First Article Test

Savings:

Base Closure Exhibit
Summary by Realignment Package/Installation
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

ATTACHMENT 2-1-A
Submitting Command/Package/Installation: AMC / DESCOM / LEAD BRAC 93 / Navy Seal Beach

One-Time Implementation	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999
Costs: MDEP-							
Military Construction	0	0	0	0	0	0	0
Family Housing	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0
Operations	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
O&M	0	231	3,127	0	0	0	0
Military Personnel	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Revenue From Land Sales	0	0	0	0	0	0	0
Total Costs	0	231	3,127	0	0	0	0
Savings: MDEP-							
Military Construction							
Family Housing							
Construction							
Operations							
Environmental							
O&M							
Military Personnel							
Civilian ES							
Military ES							
Other							
Total Savings	0	0	0	0	0	0	0
Net Costs:							
Military Construction	0	0	0	0	0	0	0
Family Housing	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0
Operations	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
O&M	0	231	3,127	0	0	0	0
Military Personnel	0	0	0	0	0	0	0
Revenue From Land Sales	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Total Net Cost or Savings (-)	0	231	3,127	0	0	0	0

Base Closure Exhibit
Summary by Realignment Package/Installation/Organization
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

Submitting Command/Realignment Package/Installation/Organization: AMC / DESCOM / LEAD BRAC 93 / Navy Seal Beach

System: Standard
Navy Point of Contact: Bruce Betts, DSN 551-7935

ATTACHMENT 2-1-B

One-Time Implementation	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	Annual Recurring Savings Begin FY
Costs: MDEP-								
Military Construction								
Family Housing	0	0	0	0	0	0	0	
Construction								
Operations								
Environmental								
O&M		231	3,127					
Military Personnel								
Other								
Revenue From Land Sales								
Total Costs	0	231	3,127	0	0	0	0	
Savings: MDEP-								
Military Construction								
Family Housing	0	0	0	0	0	0	0	
Construction								
Operations								
Environmental								
O&M								
Military Personnel								
Civilian ES								
Military ES								
Other								
Total Savings	0	0	0	0	0	0	0	
Net Costs:								
Military Construction	0	0	0	0	0	0	0	
Family Housing	0	0	0	0	0	0	0	
Construction	0	0	0	0	0	0	0	
Operations	0	0	0	0	0	0	0	
Environmental	0	0	0	0	0	0	0	
O&M	0	231	3,127	0	0	0	0	
Military Personnel	0	0	0	0	0	0	0	
Revenue From Land Sales	0	0	0	0	0	0	0	
Other	0	0	0	0	0	0	0	
Total Net Cost or Savings (-)	0	231	3,127	0	0	0	0	

Base Closure Exhibit
Narrative Justification by Realignment Package
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

ATTACHMENT 2-1-C

Submitting Command/Realignment Package: AMC / DESCOM / LEAD BRAC 93 / Navy Seal Beach

System: Standard
Navy Point of Contact: Bruce Betts, DSN 551-7935

One-Time Implementation Costs:	Amount	FY	Narrative Justification
ARMY REQUIREMENTS			
OPERATION & MAINTENANCE	$2,367	95	Total O & M
	$752	95	Transfer equipment to LEAD
	$196	95	First Article Test
	$93	95	PCS 3 persons to LEAD
	$127	95	Transfer inventory to LEAD *
	$101	95	Real Estate for 3 persons
	$30	95	Purchase equipment - Temperature Oven & Vacuum Chamber ($15K ea)
	$1,068	95	Standard Training
NAVY REQUIREMENTS			
OPERATION & MAINTENANCE	$231	94	Total NAVY O & M
	$231	94	Training - Preparation & development
	$760	95	Total NAVY O & M
	$32	95	Severance for 3 direct persons
	$388	95	Transfer equipment to LEAD
	$84	95	First Article Test
	$103	95	Transfer inventory to LEAD
	$153	95	Training - classroom & OJT

Savings:

Base Closure Exhibit
Summary by Realignment Package/Installation
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

ATTACHMENT 2-1-A
Submitting Command/Package/Installation: AMC / DESCOM / LEAD BRAC 93 / Air Force OGDEN

One-Time Implementation	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999
Costs: MDEP-							
Military Construction	0	0	0	0	0	0	0
Family Housing	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0
Operations	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
O&M	0	0	7,325	428	0	0	0
Military Personnel	0	0	0	0	0	0	0
Other	0	0	300	0	0	0	0
Revenue From Land Sales	0	0	0	0	0	0	0
Total Costs	0	0	7,625	428	0	0	0
Savings: MDEP-							
Military Construction	0	0	0	0	0	0	0
Family Housing	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0
Operations	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
O&M	0	0	0	0	0	0	0
Military Personnel	0	0	0	0	0	0	0
Civilian ES	0	0	0	0	0	0	0
Military ES	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Total Savings	0	0	0	0	0	0	0
Net Costs:							
Military Construction	0	0	0	0	0	0	0
Family Housing	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0
Operations	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
O&M	0	0	7,325	428	0	0	0
Military Personnel	0	0	0	0	0	0	0
Revenue From Land Sales	0	0	0	0	0	0	0
Other	0	0	300	0	0	0	0
Total Net Cost or Savings (-)	0	0	7,625	428	0	0	0

Base Closure Exhibit
Summary by Realignment Package/Installation/Organization
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

Submitting Command/Realignment Package/Installation/Organization: AMC/DESCOM/LEAD BRAC 93/Air Force Ogden

System: Maverick
Air Force Point of Contact: Larry Sugihara, DSN 458-0696

ATTACHMENT 2-1-B

One-Time Implementation	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	Annual Recurring Savings Begin FY
Costs: MDEP-								
Military Construction								
Family Housing	0	0	0	0	0	0	0	
Construction								
Operations								
Environmental								
O&M			3,947	276				
Military Personnel								
Other			300					
Revenue From Land Sales								
Total Costs	0	0	4,247	276	0	0	0	
Savings: MDEP-								
Military Construction								
Family Housing	0	0	0	0	0	0	0	
Construction								
Operations								
Environmental								
O&M								
Military Personnel								
Civilian ES								
Military ES								
Other								
Total Savings	0	0	0	0	0	0	0	
Net Costs:								
Military Construction	0	0	0	0	0	0	0	
Family Housing	0	0	0	0	0	0	0	
Construction	0	0	0	0	0	0	0	
Operations	0	0	0	0	0	0	0	
Environmental	0	0	0	0	0	0	0	
O&M	0	0	3,947	276	0	0	0	
Military Personnel	0	0	0	0	0	0	0	
Revenue From Land Sales	0	0	0	0	0	0	0	
Other	0	0	300	0	0	0	0	
Total Net Cost or Savings (-)	0	0	4,247	276	0	0	0	

Base Closure Exhibit
Narrative Justification by Realignment Package
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

ATTACHMENT 2-1-C

Submitting Command/Realignment Package: AMC / DESCOM / LEAD BRAC 93 / Air Force Ogden

System: Maverick
Air Force Point of Contact: Rodney Peterson, DSN 458-1124

One-Time Implementation Costs:	Amount	FY	Narrative Justification
	ARMY REQUIREMENTS		
OPERATION & MAINTENANCE	$1,219	95	Total O & M
	$1,219	95	Maverick Training
	$276	96	Total O & M
	$199	96	Transfer equipment to LEAD (assembly, install, calibrate)
	$11	96	Transfer Inventories to LEAD
	$66	96	First Article Test
OTHER	$300	95	Total Other
	$300	95	Purchase equipment - Clean Room 10,000 (1) ($300K)
	AIR FORCE REQUIREMENTS		
OPERATION & MAINTENANCE	$2,728	95	Total O & M
	$961	95	Severance for 22 people
	$137	95	Unemployment
	$1,200	95	Interim Contractor Support (incremental costs)
	$107	95	Specialized Contractual Services to move Card & Module Checker to LEAD
	$78	95	Transfer equipment to LEAD: Transportation $11.0; Assist Assembly $67.0; Total $78.0
	$23	95	Transfer supplies to LEAD
	$87	95	Real Estate for 6 persons
	$135	95	PCS 6 person to LEAD

Savings:

Base Closure Exhibit
Summary by Realignment Package/Installation/Organization
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

Submitting Command/Realignment Package/Installation/Organization: AMC/DESCOM/LEAD BRAC 93/Air Force Ogden

System: Sidewinder – AIM–9
Air Force Point of Contact: Larry Sugihara, DSN 458–0696

ATTACHMENT 2–1–B One–Time Implementation	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	Annual Recurring Savings Begin FY
Costs: MDEP–								
Military Construction								
Family Housing	0	0	0	0	0	0	0	
Construction								
Operations								
Environmental								
O&M			3,378	152				
Military Personnel								
Other								
Revenue From Land Sales								
Total Costs	0	0	3,378	152	0	0	0	
Savings: MDEP–								
Military Construction								
Family Housing	0	0	0	0	0	0	0	
Construction								
Operations								
Environmental								
O&M								
Military Personnel								
Civilian ES								
Military ES								
Other								
Total Savings	0	0	0	0	0	0	0	
Net Costs:								
Military Construction	0	0	0	0	0	0	0	
Family Housing	0	0	0	0	0	0	0	
Construction	0	0	0	0	0	0	0	
Operations	0	0	0	0	0	0	0	
Environmental	0	0	0	0	0	0	0	
O&M	0	0	3,378	152	0	0	0	
Military Personnel	0	0	0	0	0	0	0	
Revenue From Land Sales	0	0	0	0	0	0	0	
Other	0	0	0	0	0	0	0	
Total Net Cost or Savings (–)	0	0	3,378	152	0	0	0	

Base Closure Exhibit
Narrative Justification by Realignment Package
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

ATTACHMENT 2-1-C

Submitting Command/Realignment Package: AMC / DESCOM / LEAD BRAC 93 / Air Force Ogden

System: Sidewinder AIM-9
Air Force Point of Contact: Betty Thompson, DSN 468-2609

One-Time Implementation Costs:	Amount	FY	Narrative Justification
	ARMY REQUIREMENTS		
OPERATION & MAINTENANCE	$1,392	95	Total O & M
	$192	95	Transfer equipment to LEAD
	$1,168	95	Sidewinder Training
	$32	95	First Article Test
	AIR FORCE REQUIREMENTS		
OPERATION & MAINTENANCE	$1,986	95	Total O & M
	$1,682	95	Severance for 45 people
	$281	95	Unemployment
	$22	95	Transfer equipment to LEAD: Transportation $8.0; Assist Assembly $14.0; Total $22.0
	$1	95	Transfer supplies to LEAD
	$152	96	Total O & M
	$74	96	PCS 3 people to LEAD
	$37	96	Real Estate for 3 people
	$41	96	First Article Test – travel to LEAD

Savings:

Base Closure Exhibit
Summary by Realignment Package/Installation
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

ATTACHMENT 2-1-A
Submitting Command/Package/Installation: AMC / DESCOM / LEAD BRAC 93 / USMC Barstow

One-Time Implementation	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999
Costs: MDEP-							
Military Construction	0	0	0	0	0	0	0
Family Housing	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0
Operations	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
O&M	0	0	688	11	0	0	0
Military Personnel	0	0	0	0	0	0	0
Other	0	0	403	0	0	0	0
Revenue From Land Sales	0	0	0	0	0	0	0
Total Costs	0	0	1,091	11	0	0	0
Savings: MDEP-							
Military Construction	0	0	0	0	0	0	0
Family Housing	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0
Operations	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
O&M	0	0	0	0	0	0	0
Military Personnel	0	0	0	0	0	0	0
Civilian ES	0	0	0	0	0	0	0
Military ES	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Total Savings	0	0	0	0	0	0	0
Net Costs:							
Military Construction	0	0	0	0	0	0	0
Family Housing	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0
Operations	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
O&M	0	0	688	11	0	0	0
Military Personnel	0	0	0	0	0	0	0
Revenue From Land Sales	0	0	0	0	0	0	0
Other	0	0	403	0	0	0	0
Total Net Cost or Savings (-)	0	0	1,091	11	0	0	0

Base Closure Exhibit
Summary by Realignment Package/Installation/Organization
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

Submitting Command/Realignment Package/Installation/Organization: AMC / DESCOM / LEAD BRAC 93 / USMC Barstow

System: Hawk
Marine Corps Point of Contact: LTC Doug McGinley, DSN 567-6538

ATTACHMENT 2-1-B

One-Time Implementation	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	Annual Recurring Savings Begin FY
Costs: MDEP-								
Military Construction								
Family Housing	0	0	0	0	0	0	0	
Construction								
Operations								
Environmental								
O&M			688	11				
Military Personnel								
Other			403					
Revenue From Land Sales								
Total Costs	0	0	1,091	11	0	0	0	
Savings: MDEP-								
Military Construction								
Family Housing	0	0	0	0	0	0	0	
Construction								
Operations								
Environmental								
O&M								
Military Personnel								
Civilian ES								
Military ES								
Other								
Total Savings	0	0	0	0	0	0	0	
Net Costs:								
Military Construction	0	0	0	0	0	0	0	
Family Housing	0	0	0	0	0	0	0	
Construction	0	0	0	0	0	0	0	
Operations	0	0	0	0	0	0	0	
Environmental	0	0	0	0	0	0	0	
O&M	0	0	688	11	0	0	0	
Military Personnel	0	0	0	0	0	0	0	
Revenue From Land Sales	0	0	0	0	0	0	0	
Other	0	0	403	0	0	0	0	
Total Net Cost or Savings (-)	0	0	1,091	11	0	0	0	

Base Closure Exhibit
Narrative Justification by Realignment Package
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

ATTACHMENT 2-1-C

Submitting Command/Realignment Package: AMC / DESCOM / LEAD BRAC 93 / USMC Barstow

System: Hawk
Marine Corps Point of Contact: Randy Tucker, DSN 567-6308

One-Time Implementation Costs:	Amount	FY	Narrative Justification
ARMY REQUIREMENTS			
OPERATION & MAINTENANCE	$688	95	Total O & M
	$424	95	PCS for 15 persons to LEAD
	$241	95	Real Estate for 15 persons
	$21	95	HAWK Training
	$2	95	Transfer support equipment to LEAD
OPERATION & MAINTENANCE	$11	96	Total O & M
	$11	96	First Article Test
OTHER	$403	95	Total Other
	$403	95	Purchase application program sets

MARINE CORPS REQUIREMENTS

OPERATION & MAINTENANCE	95	Total O & M
	95	Transfer support equipment to LEAD

Base Closure Exhibit
Summary by Realignment Package/Installation
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

ATTACHMENT 2-1-A
Submitting Command/Package/Installation: AMC / DESCOM / LEAD BRAC 93 / DLA

One-Time Implementation	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999
Costs: MDEP-							
Military Construction	0	0	0	0	0	0	0
Family Housing	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0
Operations	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
O&M	0	1,480	0	0	0	0	0
Military Personnel	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Revenue From Land Sales	0	0	0	0	0	0	0
Total Costs	0	1,480	0	0	0	0	0
Savings: MDEP-							
Military Construction	0	0	0	0	0	0	0
Family Housing	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0
Operations	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
O&M	0	0	0	0	0	0	0
Military Personnel	0	0	0	0	0	0	0
Civilian ES	0	0	0	0	0	0	0
Military ES	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Total Savings	0	0	0	0	0	0	0
Net Costs:							
Military Construction	0	0	0	0	0	0	0
Family Housing	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0
Operations	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
O&M	0	1,480	0	0	0	0	0
Military Personnel	0	0	0	0	0	0	0
Revenue From Land Sales	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Total Net Cost or Savings (-)	0	1,480	0	0	0	0	0

Base Closure Exhibit
Summary by Realignment Package/Installation/Organization
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

Submitting Command/Realignment Package/Installation/Organization: AMC / DESCOM / LEAD BRAC 93 / DLA

System: All Systems
DLA Point of Contact: Jeanne Masters, DSN

ATTACHMENT 2-1-B

One-Time Implementation	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	Annual Recurring Savings Begin FY
Costs: MDEP-								
Military Construction								
Family Housing	0	0	0	0	0	0	0	
Construction								
Operations								
Environmental								
O&M		1,480	0	0	0			
Military Personnel								
Other								
Revenue From Land Sales								
Total Costs	0	1,480	0	0	0	0	0	
Savings: MDEP-								
Military Construction								
Family Housing	0	0	0	0	0	0	0	
Construction								
Operations								
Environmental								
O&M								
Military Personnel								
Civilian ES								
Military ES								
Other								
Total Savings	0	0	0	0	0	0	0	
Net Costs:								
Military Construction	0	0	0	0	0	0	0	
Family Housing	0	0	0	0	0	0	0	
Construction	0	0	0	0	0	0	0	
Operations	0	0	0	0	0	0	0	
Environmental	0	0	0	0	0	0	0	
O&M	0	1,480	0	0	0	0	0	
Military Personnel	0	0	0	0	0	0	0	
Revenue From Land Sales	0	0	0	0	0	0	0	
Other	0	0	0	0	0	0	0	
Total Net Cost or Savings (-)	0	1,480	0	0	0	0	0	

Base Closure Exhibit
Narrative Justification by Realignment Package
(Dollars in Thousands)

15 SEPTEMBER 94
Revision 7

ATTACHMENT 2-1-C

Submitting Command/Realignment Package: AMC / DESCOM / LEAD BRAC 93 / DLA

System: All Systems
DLA Point of Contact: Jeanne Masters, DSN

One-Time Implementation Costs:	Amount	FY	Narrative Justification
			ARMY COSTS
OPERATION & MAINTENANCE	$1,021	94	Total O & M
	$100	94	DLA requirement to move box shop @ DDLP
	$53	94	DLA requirement to relocate materiel from DDLP to DDSP
	$110	94	DLA requirement – transportation costs for relocating materiel @ DDLP
	$758	94	DLA requirement – transfer & receive stock
			NAVY COSTS
OPERATION & MAINTENANCE	$459	94	Total O & M
	$459	94	DLA requirement – transfer stocks to DDLP (Navy $151) (Marine Corps $308)

15 SEPTEMBER 94

MISSILE TRANSITION REQUIREMENTS

SERVICE	FY94	FY95	FY96	FY97	TOTAL
ARMY	15.428	17.072	1.553	0.000	* 34.053
AIR FORCE	0.000	** 4.714	0.152	0.000	4.866
NAVY (INCL USMC)	2.032	0.951	0.000	0.000	* 2.983
TOTAL	17.460	22.737	1.705	0.000	41.902

* INCLUDES EACH SERVICE PORTION OF TOTAL DLA COSTS $1.480 M FOR SERVICE TRANSFER OF INVENTORY

** INCLUDES $1.2M USAF ICS FOR MAVERICK

15 SEPTEMBER 94

FY94 SYSTEM REQUIREMENTS BY CATEGORY – ALL SERVICES

BAC CODE:	11	33	33	3*	3*	34	39	50	3*	32	32	31	
SYSTEM	MILCON	EQUIPMENT TRANSFERS	INVENTORY TRANSFERS	FAT	TRAINING	FACILITY RPM	O&M EQUIPMENT	OPA EQUIPMENT	ICS	PCS	REAL ESTATE	SEVERANCE	TOTAL
All Systems	4,991	292	0	0	479	0	38	1,550	0	0	0	0	7,350
ATACMS	0	415	7	89	0	0	0	0	0	44	27	0	582
AVENGER	0	0	0	0	21	0	0	0	0	0	0	0	21
DRAGON	0	54	388	30	141	0	0	84	0	178	108	0	983
HELLFIRE	0	26	6	43	17	0	0	0	0	44	27	0	163
LCSS	0	0	0	0	0	0	0	0	0	0	0	0	0
SHILLELAGH	0	0	0	0	0	0	0	0	0	0	0	0	0
TOW 2	0	0	0	0	621	0	0	0	0	0	0	0	621
TOW COBRA	0	0	0	0	0	0	0	161	0	0	0	0	161
MLRS	0	25	33	20	40	0	50	0	0	0	0	0	168
TOW BFVS	0	3	0	0	413	0	0	0	0	0	0	0	416
PHOENIX	0	965	19	45	316	0	0	0	0	219	136	0	1,700
SPARROW	0	494	59	112	325	0	0	322	0	656	409	0	2,377
NAVY SIDEWINDER	0	130	0	0	852	0	0	0	0	150	75	0	1,207
STANDARD	0	0	0	0	231	0	0	0	0	0	0	0	231
HAWK	0	0	0	0	0	0	0	0	0	0	0	0	0
MAVERICK	0	0	0	0	0	0	0	0	0	0	0	0	0
AIR FORCE SIDEWINDER	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	4,991	2,404	512	339	3,456	0	88	2,117	0	1,291	782	0	15,980
DLA	0	0	1,480	0	0	0	0	0	0	0	0	0	1,480
GRAND TOTAL	4,991	2,404	1,992	339	3,456	0	88	2,117	0	1,291	782	0	17,460

15 SEPTEMBER 94

FY95 SYSTEM REQUIREMENTS BY CATEGORY – ALL SERVICES

BAC CODE:	11	33	33	3*	3*	34	39	50	3*	32	32	31	
SYSTEM	MILCON	EQUIPMENT TRANSFERS	INVENTORY TRANSFERS	FAT	TRAINING	FACILITY RPM	O&M EQUIPMENT	OPA EQUIPMENT	ICS	PCS	REAL ESTATE	SEVERANCE	TOTAL
All Systems	1,700	0	0	0	968	50	38	500	0	0	0	0	3,256
ATACMS	0	0	0	0	0	0	0	0	0	0	0	0	0
AVENGER	0	0	0	0	0	0	0	0	0	0	0	0	0
DRAGON	0	0	0	0	0	0	237	0	0	0	0	278	515
HELLFIRE	0	0	0	0	0	0	0	0	0	0	0	208	208
LCSS	0	0	0	0	251	0	0	0	0	45	31	0	327
SHILLELAGH	0	0	0	0	0	0	0	0	0	0	0	0	0
TOW 2	0	325	413	35	572	0	0	0	0	481	331	555	2,712
TOW COBRA	0	107	152	25	551	0	0	0	0	275	189	579	1,878
MLRS	0	0	0	0	0	0	0	1,338	0	0	0	0	1,338
TOW BFVS	0	146	143	23		0	0	0	0	0	0	0	312
PHOENIX	0	0	0	0	0	0	0	0	0	0	0	0	0
SPARROW	0	0	0	0	0	0	0	0	0	0	0	0	0
NAVY SIDEWINDER	0	252	7	64	25	0	0	0	0	0	0	0	348
STANDARD	0	1,140	230	280	1,221	0	30	0	0	93	101	32	3,127
HAWK	0	2	0	0	21	0	0	403	0	424	241	0	1,091
MAVERICK	0	185	23	0	1,219	0	0	300	1,200	135	87	1,098	4,247
AIR FORCE SIDEWINDER	0	214	1	32	1,168	0	0	0	0	0	0	1,963	3,378
SUBTOTAL	1,700	2,371	969	459	5,996	50	305	2,541	1,200	1,453	980	4,713	22,737
DLA	0	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL	1,700	2,371	969	459	5,996	50	305	2,541	1,200	1,453	980	4,713	22,737

FY96 SYSTEM REQUIREMENTS BY CATEGORY – ALL SERVICES

BAC CODE:	11	33	33	3*	3*	34	39	50	3*	32	32	31	
SYSTEM	MILCON	EQUIPMENT TRANSFERS	INVENTORY TRANSFERS	FAT	TRAINING	FACILITY RPM	O&M EQUIPMENT	OPA EQUIPMENT	ICS	PCS	REAL ESTATE	SEVERANCE	TOTAL
All Systems	0	0	0	0	495	0	0	0	0	0	0	0	495
ATACMS	0	0	0	0	0	0	0	0	0	0	0	0	0
AVENGER	0	0	0	0	0	0	0	0	0	0	0	0	0
DRAGON	0	0	0	0	0	0	0	0	0	0	0	0	0
HELLFIRE	0	0	0	0	0	0	0	0	0	0	0	0	0
LCSS	0	81	110	43	64	0	0	84	0	0	0	119	501
SHILLELAGH	0	11	24	11	66	0	0	0	0	23	16	119	270
TOW 2	0	0	0	0	0	0	0	0	0	0	0	0	0
TOW COBRA	0	0	0	0	0	0	0	0	0	0	0	0	0
MLRS	0	0	0	0	0	0	0	0	0	0	0	0	0
TOW BFVS	0	0	0	0	0	0	0	0	0	0	0	0	0
PHOENIX	0	0	0	0	0	0	0	0	0	0	0	0	0
SPARROW	0	0	0	0	0	0	0	0	0	0	0	0	0
NAVY SIDEWINDER	0	0	0	0	0	0	0	0	0	0	0	0	0
STANDARD	0	0	0	0	0	0	0	0	0	0	0	0	0
HAWK	0	0	0	11	0	0	0	0	0	0	0	0	11
MAVERICK	0	199	11	66	0	0	0	0	0	0	0	0	276
AIR FORCE SIDEWINDER	0	0	0	41	0	0	0	0	0	74	37	0	152
SUBTOTAL	0	291	145	172	625	0	0	84	0	97	53	238	1,705
DLA	0	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL	0	291	145	172	625	0	0	84	0	97	53	238	1,705

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FY97 SYSTEM REQUIREMENTS BY CATEGORY – ALL SERVICES

BAC CODE:	11	33	33	3*	3*	34	39	50	3*	32	32	31	
SYSTEM	MILCON	EQUIPMENT TRANSFERS	INVENTORY TRANSFERS	FAT	TRAINING	FACILITY RPM	O&M EQUIPMENT	OPA EQUIPMENT	ICS	PCS	REAL ESTATE	SEVERANCE	TOTAL
All Systems	0	0	0	0	0	0	0	0	0	0	0	0	0
ATACMS	0	0	0	0	0	0	0	0	0	0	0	0	0
AVENGER	0	0	0	0	0	0	0	0	0	0	0	0	0
DRAGON	0	0	0	0	0	0	0	0	0	0	0	0	0
HELLFIRE	0	0	0	0	0	0	0	0	0	0	0	0	0
LCSS	0	0	0	0	0	0	0	0	0	0	0	0	0
SHILLELAGH	0	0	0	0	0	0	0	0	0	0	0	0	0
TOW 2	0	0	0	0	0	0	0	0	0	0	0	0	0
TOW COBRA	0	0	0	0	0	0	0	0	0	0	0	0	0
MLRS	0	0	0	0	0	0	0	0	0	0	0	0	0
TOW BFVS	0	0	0	0	0	0	0	0	0	0	0	0	0
PHOENIX	0	0	0	0	0	0	0	0	0	0	0	0	0
SPARROW	0	0	0	0	0	0	0	0	0	0	0	0	0
NAVY SIDEWINDER	0	0	0	0	0	0	0	0	0	0	0	0	0
STANDARD	0	0	0	0	0	0	0	0	0	0	0	0	0
HAWK	0	0	0	0	0	0	0	0	0	0	0	0	0
MAVERICK	0	0	0	0	0	0	0	0	0	0	0	0	0
AIR FORCE SIDEWINDER	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
DLA	0	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0

FY94 – FY97 SYSTEM REQUIREMENTS BY CATEGORY – ALL SERVICES

BAC CODE:	11	33	33	3*	3*	34	39	50	3*	32	32	31	
SYSTEM	MILCON	EQUIPMENT TRANSFERS	INVENTORY TRANSFERS	FAT	TRAINING	FACILITY RPM	O&M EQUIPMENT	OPA EQUIPMENT	ICS	PCS	REAL ESTATE	SEVERANCE	TOTAL
All Systems	6,691	292	0	0	1,942	50	76	2,050	0	0	0	0	11,101
ATACMS	0	415	7	89	0	0	0	0	0	44	27	0	582
AVENGER	0	0	0	0	21	0	0	0	0	0	0	0	21
DRAGON	0	54	388	30	141	0	237	84	0	178	108	278	1,498
HELLFIRE	0	26	6	43	17	0	0	0	0	44	27	208	371
LCSS	0	81	110	43	315	0	0	84	0	45	31	119	828
SHILLELAGH	0	11	24	11	66	0	0	0	0	23	16	119	270
TOW 2	0	325	413	35	1,193	0	0	0	0	481	331	555	3,333
TOW COBRA	0	107	152	25	551	0	0	161	0	275	189	579	2,039
MLRS	0	25	33	20	40	0	50	1,338	0	0	0	0	1,506
TOW BFVS	0	149	143	23	413	0	0	0	0	0	0	0	728
PHOENIX	0	965	19	45	316	0	0	0	0	219	136	0	1,700
SPARROW	0	494	59	112	325	0	0	322	0	656	409	0	2,377
NAVY SIDEWINDER	0	382	7	64	877	0	0	0	0	150	75	0	1,555
STANDARD	0	1,140	230	280	1,452	0	30	0	0	93	101	32	3,358
HAWK	0	2	0	11	21	0	0	403	0	424	241	0	1,102
MAVERICK	0	384	34	66	1,219	0	0	300	1,200	135	87	1,098	4,523
AIR FORCE SIDEWINDER	0	214	1	73	1,168	0	0	0	0	74	37	1,963	3,530
SUBTOTAL	6,691	5,066	1,626	970	10,077	50	393	4,742	1,200	2,841	1,815	4,951	40,422
DLA	0	0	1,480	0	0	0	0	0	0	0	0	0	1,480
GRAND TOTAL	6,691	5,066	3,106	970	10,077	50	393	4,742	1,200	2,841	1,815	4,951	41,902

15 SEPTEMBER 94

ALL SERVICES – TMC COSTS

($ IN M)

ONE TIME COSTS	FY94	FY95	FY96	FY97	TOTAL
MILCON	4.991	1.700	0.000	0.000	6.691
O & M	10.352	18.496	1.621	0.000	30.469
CODE 31 CIV SVC PAY	0.000	4.713	0.238	0.000	4.951
CODE 32 CIV PCS	2.073	2.433	0.150	0.000	4.656
CODE 33 TRANSPORTATION	4.396	3.340	0.436	0.000	8.172
CODE 34 RPM	0.000	0.050	0.000	0.000	0.050
CODE 39 UNDER $25,000	0.088	0.305	0.000	0.000	0.393
CODE 3* TRAINING, FAT, ICS	3.795	7.655	0.797	0.000	12.247
PA (ABOVE $25,000)	2.117	2.541	0.084	0.000	4.742
TOTAL	17.460	22.737	1.705	0.000	41.902

15 SEPTEMBER 94

FY94 SYSTEM REQUIREMENTS BY CATEGORY – ARMY FUNDED

BAC CODE:	11	33	33	3*	3*	34	39	50	3*	32	32	31	
SYSTEM	MILCON	EQUIPMENT TRANSFERS	INVENTORY TRANSFERS	FAT	TRAINING	FACILITY RPM	O&M EQUIPMENT	OPA EQUIPMENT	ICS	PCS	REAL ESTATE	SEVERANCE	TOTAL
All Systems	4,991	292			479		38	1,550					7,350
ATACMS		415	7	89						44	27		582
AVENGER					21								21
DRAGON		54	388	30	141			84		178	108		983
HELLFIRE		26	6	43	17					44	27		163
LCSS													0
SHILLELAGH													0
TOW 2					621								621
TOW COBRA								161					161
MLRS		25	33	20	40		50						168
TOW BFVS		3			413								416
PHOENIX		162		10	316					219	136		843
SPARROW		170		10	325			322		656	409		1,892
NAVY SIDEWINDER		130			852					150	75		1,207
STANDARD													0
HAWK													0
MAVERICK													0
AIR FORCE SIDEWINDER													0
SUBTOTAL	4,991	1,277	434	202	3,225	0	88	2,117	0	1,291	782	0	14,407
DLA			1,021										1,021
GRAND TOTAL	4,991	1,277	1,455	202	3,225	0	88	2,117	0	1,291	782	0	15,428

15 SEPTEMBER 94

FY95 SYSTEM REQUIREMENTS BY CATEGORY – ARMY FUNDED

BAC CODE:	11	33	33	3*	3*	34	39	50	3*	32	32	31	
SYSTEM	MILCON	EQUIPMENT TRANSFERS	INVENTORY TRANSFERS	FAT	TRAINING	FACILITY RPM	O&M EQUIPMENT	OPA EQUIPMENT	OTHER	PCS	REAL ESTATE	SEVERANCE	TOTAL
All Systems	1,700				968	50	38	500					3,256
ATACMS													0
AVENGER													0
DRAGON							237					278	515
HELLFIRE												208	208
LCSS					251					45	31		327
SHILLELAGH													0
TOW II		325	413	35	572					481	331	555	2,712
TOW COBRA		107	152	25	551					275	189	579	1,878
MLRS								1,338					1,338
TOW BFVS		146	143	23									312
PHOENIX													0
SPARROW													0
NAVY SIDEWINDER		100		32	25								157
STANDARD		752	127	196	1,068		30			93	101		2,367
HAWK		2			21			403		424	241		1,091
MAVERICK					1,219			300					1,519
AIR FORCE SIDEWINDER		192		32	1,168								1,392
SUBTOTAL	1,700	1,624	835	343	5,843	50	305	2,541	0	1,318	893	1,620	17,072
DLA			0										0
GRAND TOTAL	1,700	1,624	835	343	5,843	50	305	2,541	0	1,318	893	1,620	17,072

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FY96 SYSTEM REQUIREMENTS BY CATEGORY – ARMY FUNDED

BAC CODE:	11	33	33	3*	3*	34	39	50	3*	32	32	31	
SYSTEM	MILCON	EQUIPMENT TRANSFERS	INVENTORY TRANSFERS	FAT	TRAINING	FACILITY RPM	O&M EQUIPMENT	OPA EQUIPMENT	OTHER	PCS	REAL ESTATE	SEVERANCE	TOTAL
All Systems					495								495
ATACMS													0
AVENGER													0
DRAGON													0
HELLFIRE													0
LCSS		81	110	43	64			84				119	501
SHILLELAGH		11	24	11	66					23	16	119	270
TOW II													0
TOW COBRA													0
MLRS													0
TOW BFVS													0
PHOENIX													0
SPARROW													0
NAVY SIDEWINDER													0
STANDARD													0
HAWK				11									11
MAVERICK		199	11	66									276
AIR FORCE SIDEWINDER													0
SUBTOTAL	0	291	145	131	625	0	0	84	0	23	16	238	1,553
DLA			0										0
GRAND TOTAL	0	291	145	131	625	0	0	84	0	23	16	238	1,553

FY97 SYSTEM REQUIREMENTS BY CATEGORY – ARMY FUNDED

15 SEPTEMBER 94

BAC CODE:	11	33	33	3*	3*	34	39	50	3*	32	32	31	
SYSTEM	MILCON	EQUIPMENT TRANSFERS	INVENTORY TRANSFERS	FAT	TRAINING	FACILITY RPM	O&M EQUIPMENT	OPA EQUIPMENT	OTHER	PCS	REAL ESTATE	SEVERANCE	TOTAL
All Systems													
ATACMS													0
AVENGER													0
DRAGON													0
HELLFIRE													0
LCSS													0
SHILLELAGH													0
TOW II													0
TOW COBRA													0
MLRS													0
TOW BFVS													0
PHOENIX													0
SPARROW													0
NAVY SIDEWINDER													0
STANDARD													0
HAWK													0
MAVERICK													0
AIR FORCE SIDEWINDER													0
SUBTOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
DLA			0										0
GRAND TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0

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FY94 – FY97 SYSTEM REQUIREMENTS BY CATEGORY – ARMY FUNDED

BAC CODE:	11	33	33	3*	3*	34	39	50	3*	32	32	31	
SYSTEM	MILCON	EQUIPMENT TRANSFERS	INVENTORY TRANSFERS	FAT	TRAINING	FACILITY RPM	O&M EQUIPMENT	OPA EQUIPMENT	OTHER	PCS	REAL ESTATE	SEVERANCE	TOTAL
All Systems	6,691	292	0	0	1,942	50	76	2,050	0	0	0	0	11,101
ATACMS	0	415	7	89	0	0	0	0	0	44	27	0	582
AVENGER	0	0	0	0	21	0	0	0	0	0	0	0	21
DRAGON	0	54	388	30	141	0	237	84	0	178	108	278	1,498
HELLFIRE	0	26	6	43	17	0	0	0	0	44	27	208	371
LCSS	0	81	110	43	315	0	0	84	0	45	31	119	828
SHILLELAGH	0	11	24	11	66	0	0	0	0	23	16	119	270
TOW II	0	325	413	35	1,193	0	0	0	0	481	331	555	3,333
TOW COBRA	0	107	152	25	551	0	0	161	0	275	189	579	2,039
MLRS	0	25	33	20	40	0	50	1,338	0	0	0	0	1,506
TOW BFVS	0	149	143	23	413	0	0	0	0	0	0	0	728
PHOENIX	0	162	0	10	316	0	0	0	0	219	136	0	843
SPARROW	0	170	0	10	325	0	0	322	0	656	409	0	1,892
NAVY SIDEWINDER	0	230	0	32	877	0	0	0	0	150	75	0	1,364
STANDARD	0	752	127	196	1,068	0	30	0	0	93	101	0	2,367
HAWK	0	2	0	11	21	0	0	403	0	424	241	0	1,102
MAVERICK	0	199	11	66	1,219	0	0	300	0	0	0	0	1,795
AIR FORCE SIDEWINDER	0	192	0	32	1,168	0	0	0	0	0	0	0	1,392
SUBTOTAL	6,691	3,192	1,414	676	9,693	50	393	4,742	0	2,632	1,691	1,858	33,032
DLA	0	0	1,021	0	0	0	0	0	0	0	0	0	1,021
GRAND TOTAL	6,691	3,192	2,435	676	9,693	50	393	4,742	0	2,632	1,691	1,858	34,053

15 SEPTEMBER 94

Revision 7

ARMY – TMC COSTS

($ IN M)

ONE TIME COSTS	FY94	FY95	FY96	FY97	TOTAL
MILCON	4.991	1.700	0.000	0.000	6.691
O & M	8.320	12.831	1.469	0.000	22.620
CODE 31 CIV SVC PAY	0.000	1.620	0.238	0.000	1.858
CODE 32 CIV PCS	2.073	2.211	0.039	0.000	4.323
CODE 33 TRANSPORTATION	2.732	2.459	0.436	0.000	5.627
CODE 34 RPM	0.000	0.050	0.000	0.000	0.050
CODE 39 UNDER $25,000	0.088	0.305	0.000	0.000	0.393
CODE 3* TRAINING, FAT, ICS	3.427	6.186	0.756	0.000	10.369
PA (ABOVE $25,000)	2.117	2.541	0.084	0.000	4.742
TOTAL	15.428	17.072	1.553	0.000	34.053

TACTICAL MISSILE MAINTENANCE CONSOLIDATION

15 SEPTEMBER 94
Revision 7

ONE-TIME TRAINING REQUIREMENTS

FISCAL YEAR	SYSTEM	COURSE	LOCATION	# STUDENT	HOURS PER STUDENT	AIR FARE PER STUDENT	MILEAGE EXPENSE	PER DIEM	RENTAL CAR #	TRAVEL DAYS	LABOR COST	TRAVEL COST	TUITION	TOTAL COST	SYSTEM TOTAL COST
94	AVENGER	BASIC OVERVIEW	LEAD	12	8						$5,699			$5,699	
94	AVENGER	THEORY OF OPERATION	LEAD	8	32						$15,196			$15,196	$20,895
94	DRAGON	SOR OJT	ANNISTON, AL	11	185								actual cost:	$140,838	$140,838
94	SPARROW – NAVY	OJT-2 SESSIONS	ALAMEDA, CA	18	240								actual cost:	$324,830	$324,830
94	MLRS	SRU-ELCT OJT	RED RIVER, TX	4	40	$700		$66	1	14	$9,498	$6,986	$5,000	$21,484	
94	MLRS	MECH OJT	RED RIVER, TX	2	80	$700		$66	1	14	$9,498	$3,738	$5,001	$18,237	$39,721
94	SIDEWINDER – NAVY	THEORY	LEAD	22	40								actual cost:	$46,516	
94	SIDEWINDER – NAVY	SOR OJT	NORFOLK, VA	17	480		$150	$102		84	$484,378	$146,206	$173,361	$805,945	$852,461
94	TOW II	TOW GROUND-OMMCS	HUNTSVILLE, AL	12	440	$682		$53	3	72	$313,421	$61,536	$23,063	$398,020	
94	TOW II	TOW GROUND-OMMCS	HUNTSVILLE, AL	12	240	$682		$53	3	42	$170,957	$39,306	$12,580	$222,843	$620,863
94	TOW BFVS	VATE	LEAD	6	160						$56,966	$0	$154,000	$210,966	
94	TOW BFVS	SOR – OJT	Red River, TX	12	120	$700		$66	3	28	$85,478	$33,516	$83,000	$201,994	$412,980
94	PHOENIX	THEORY	LEAD	15	80								actual cost:	$63,385	
94	PHOENIX	OJT	ALAMEDA, CA	10	320	$462		$109	3	56			actual cost:	$253,103	$316,488
94	HELLFIRE	SOR OJT	ANNISTON, AL	2	120								actual cost:	$17,065	$17,065
94	ALL SYSTEMS	EQUATE	LEAD	4	2						$475	$0		$475	
94	ALL SYSTEMS	BASIC ELECTRONICS	HAGERSTOWN, MD	10	120								actual cost:	$74,497	
94	ALL SYSTEMS	BASIC ELECTRONICS	HAGERSTOWN, MD	10	120								actual cost:	$77,565	
94	ALL SYSTEMS	BASIC ELECTRONICS	HAGERSTOWN, MD	10	120		$250				$71,232	$2,500	$5,600	$79,332	
94	ALL SYSTEMS	BASIC ELECTRONICS	HAGERSTOWN, MD	10	120		$250				$71,232	$2,500	$5,600	$79,332	
94	ALL SYSTEMS	ADVANCED ELECTRONICS	HAGERSTOWN, MD	10	16								actual cost:	$12,688	
94	ALL SYSTEMS	ADVANCED ELECTRONICS	HAGERSTOWN, MD	10	240								actual cost:	$154,630	$478,519
94	TOTALS										$1,273,155	$298,288	$467,205	$3,203,765	$3,224,660

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ONE-TIME TRAINING REQUIREMENTS

FISCAL YEAR	SYSTEM	COURSE	LOCATION	# STUDENT	HOURS PER STUDENT	AIR FARE PER STUDENT FY94 $	MILEAGE EXPENSE FY94 $	PER DIEM FY94 $	RENTAL CAR #	TRAVEL DAYS	LABOR COST FY95 $	TRAVEL COST FY95 $	TUITION FY95 $	TOTAL COST FY95 $	SYSTEM TOTAL COST FY95 $
95	TOW COBRA	THEORY	LEAD	12	240						$174,889	$0	$102,300	$277,189	
95	TOW COBRA	FACT II	ANNISTON, AL	6	80						$29,148		$55,242	$84,390	
95	TOW COBRA	TOW COBRA SOR OJT LCHR/MSL	ANNISTON, AL	11	160	$422		$67	3	28	$106,876	$28,867	$53,438	$189,181	$550,760
95	TOW II	TOW GROUND SOR OJT	ANNISTON, AL	15	320	$422		$67	4	35	$291,481	$47,472	$233,244	$572,197	$572,197
95	STANDARD	STANDARD THEORY	LEAD	10	480						$291,481	$0	$10,230	$301,711	
95	STANDARD	STANDARD OJT	SEAL BEACH, CA	11	800	$504		$134	3	140	$534,382	$231,816		$766,198	$1,067,909
95	SIDEWINDER AIR FORCE	THEORY	LEAD	22	40						$53,438	$0	$7,161	$60,599	
95	SIDEWINDER AIR FORCE	SEEKER REPAIR	OGDEN, UT	6	80			$98	2	13	$29,148	$8,751	$5,115	$43,014	
95	SIDEWINDER AIR FORCE	SOR OJT	OGDEN, UT	19	480	$448		$98	5	84	$553,815	$183,751	$326,542	$1,064,108	$1,167,721
95	SIDEWINDER NAVY	SEEKER REPAIR	LEAD	4	80						$19,432		$5,115	$24,547	$24,547
95	LCSS	OMMCS FORMAL	RedstoneArsenal, AL	5	680	$700		$53	2	119	$206,466	$44,362		$250,828	$250,828
95	MAVERICK	THEORY	LEAD	30	56						$102,018	$0	$689,211	$791,229	
95	MAVERICK	OJT	OGDEN, UT	3	1040	$448		$98	1	182	$189,463	$62,630	$175,388	$427,481	$1,218,710
95	HAWK	LMU OJT	BARSTOW, CA	2	40	$788		$94	1	7	$4,858	$3,209	$2,660	$10,727	
95	HAWK	A45 OJT	BARSTOW, CA	2	40	$788		$94	1	7	$4,858	$3,209	$2,660	$10,727	$21,454
95	ALL SYSTEMS	ELECTRONICS 1-4 SESSIONS	HAGERSTOWN, MD	40	120		$250				$291,481	$10,230	$21,033	$322,744	
95	ALL SYSTEMS	ELECTRONICS II-4 SESSIONS	HAGERSTOWN, MD	40	240		$500				$582,963	$20,460	$42,066	$645,489	$968,233
95	TOTALS										$3,466,197	$644,757	$1,731,405	$5,842,359	$5,842,359

TACTICAL MISSILE MAINTENANCE CONSOLIDATION

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ONE-TIME TRAINING REQUIREMENTS

FISCAL YEAR	SYSTEM	COURSE	LOCATION	# STUDENT	HOURS PER STUDENT	AIR FARE PER STUDENT FY94 $	MILEAGE EXPENSE FY94 $	PER DIEM FY94 $	RENTAL CAR #	TRAVEL DAYS	LABOR COST FY96 $	TRAVEL COST FY96 $	TUITION FY96 $	TOTAL COST FY96 $	SYSTEM TOTAL COST FY96 $
96	LCSS	OJT	Anniston, AL	5	160	$422		$67	2	28	$49,700	$14,076		$63,776	$63,776
96	SHILLELAGH	Theory of Operations	Ft Bragg, NC	4	80	$400		$67	1	14	$19,880	$6,114	$2,093	$28,087	
96	SHILLELAGH	OJT	Anniston, AL	4	120	$422		$67	1	21	$29,820	$8,426		$38,246	$66,333
96	ALL SYSTEMS	ELECTRONICS 1-4 SESSIONS	Hagerstown, MD	20	120		$250				$149,099	$5,233	$10,759	$165,091	
96	ALL SYSTEMS	ELECTRONICS II-4 SESSIONS	Hagerstown, MD	20	240		$500				$298,198	$10,466	$21,518	$330,182	$495,273
96	TOTALS										$546,697	$44,315	$34,370	$625,382	$625,382

15 SEPTEMBER 94

FY94 SYSTEM REQUIREMENTS BY CATEGORY – NAVY FUNDED (INCLUDES MARINE CORPS)

BAC CODE:	11	33	33	3*	3*	34	39	50	3*	32	32	31	
SYSTEM	MILCON	EQUIPMENT TRANSFERS	INVENTORY TRANSFERS	FAT	TRAINING	FACILITY RPM	O&M EQUIPMENT	OPA EQUIPMENT	ICS	PCS	REAL ESTATE	SEVERANCE	TOTAL
PHOENIX		803	19	35									857
SPARROW		324	59	102									485
NAVY SIDEWINDER													0
STANDARD					231								231
HAWK													0
SUBTOTAL	0	1,127	78	137	231	0	0	0	0	0	0	0	1,573
DLA			459										459
GRAND TOTAL	0	1,127	537	137	231	0	0	0	0	0	0	0	2,032

15 SEPTEMBER 94

FY95 SYSTEM REQUIREMENTS BY CATEGORY – NAVY FUNDED (INCLUDES MARINE CORPS)

BAC CODE:	11	33	33	3*	3*	34	39	50	3*	32	32	31	
SYSTEM	MILCON	EQUIPMENT TRANSFERS	INVENTORY TRANSFERS	FAT	TRAINING	FACILITY RPM	O&M EQUIPMENT	OPA EQUIPMENT	ICS	PCS	REAL ESTATE	SEVERANCE	TOTAL
PHOENIX													0
SPARROW													0
NAVY SIDEWINDER		152	7	32									191
STANDARD		388	103	84	153							32	760
HAWK													0
SUBTOTAL	0	540	110	116	153	0	0	0	0	0	0	32	951
DLA													0
GRAND TOTAL	0	540	110	116	153	0	0	0	0	0	0	32	951

15 SEPTEMBER 94

FY96 SYSTEM REQUIREMENTS BY CATEGORY – NAVY FUNDED (INCLUDES MARINE CORPS)

BAC CODE:	11	33	33	3*	3*	34	39	50	3*	32	32	31	
SYSTEM	MILCON	EQUIPMENT TRANSFERS	INVENTORY TRANSFERS	FAT	TRAINING	FACILITY RPM	O&M EQUIPMENT	OPA EQUIPMENT	ICS	PCS	REAL ESTATE	SEVERANCE	TOTAL
PHOENIX													0
SPARROW													0
NAVY SIDEWINDER													0
STANDARD													0
HAWK													0
SUBTOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
DLA													0
GRAND TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0

15 SEPTEMBER 94

FY97 SYSTEM REQUIREMENTS BY CATEGORY – NAVY FUNDED (INCLUDES MARINE CORPS)

BAC CODE:	11	33	33	3*	3*	34	39	50	3*	32	32	31	
SYSTEM	MILCON	EQUIPMENT TRANSFERS	INVENTORY TRANSFERS	FAT	TRAINING	FACILITY RPM	O&M EQUIPMENT	OPA EQUIPMENT	ICS	PCS	REAL ESTATE	SEVERANCE	TOTAL
PHOENIX													0
SPARROW													0
NAVY SIDEWINDER													0
STANDARD													0
HAWK													0
SUBTOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
DLA													0
GRAND TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0

15 SEPTEMBER 94

FY94 – FY97 SYSTEM REQUIREMENTS BY CATEGORY – NAVY FUNDED (INCLUDES MARINE CORPS)

BAC CODE:	11	33	33	3*	3*	34	39	50	3*	32	32	31	
SYSTEM	MILCON	EQUIPMENT TRANSFERS	INVENTORY TRANSFERS	FAT	TRAINING	FACILITY RPM	O&M EQUIPMENT	OPA EQUIPMENT	ICS	PCS	REAL ESTATE	SEVERANCE	TOTAL
PHOENIX	0	803	19	35	0	0		0	0	0	0	0	857
SPARROW	0	324	59	102	0	0		0	0	0	0	0	485
NAVY SIDEWINDER	0	152	7	32	0	0		0	0	0	0	0	191
STANDARD	0	388	103	84	384	0		0	0	0	0	32	991
HAWK	0	0	0	0	0	0		0	0	0	0	0	0
SUBTOTAL	0	1,667	188	253	384	0		0	0	0	0	32	2,524
DLA	0	0	459	0	0	0		0	0	0	0	0	459
GRAND TOTAL	0	1,667	647	253	384	0		0	0	0	0	32	2,983

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NAVY (INCL MARINE CORPS) – TMC COSTS

($ IN M)

ONE TIME COSTS	FY94	FY95	FY96	FY97	TOTAL
MILCON	0.000	0.000	0.000	0.000	0.000
O & M	2.032	0.951	0.000	0.000	2.983
CODE 31 CIV SVC PAY	0.000	0.032	0.000	0.000	0.032
CODE 32 CIV PCS	0.000	0.000	0.000	0.000	0.000
CODE 33 TRANSPORTATION	1.664	0.650	0.000	0.000	2.314
CODE 34 RPM	0.000	0.000	0.000	0.000	0.000
CODE 39 UNDER $25,000	0.000	0.000	0.000	0.000	0.000
CODE 3* TRAINING, FAT, ICS	0.368	0.269	0.000	0.000	0.637
PA (ABOVE $25,000)	0.000	0.000	0.000	0.000	0.000
TOTAL	2.032	0.951	0.000	0.000	2.983

15 SEPTEMBER 94

FY94 SYSTEM REQUIREMENTS BY CATEGORY – AIR FORCE FUNDED

BAC CODE:	11	33	33	3*	3*	34	39	50	3*	32	32	31	
SYSTEM	MILCON	EQUIPMENT TRANSFERS	INVENTORY TRANSFERS	FAT	TRAINING	FACILITY RPM	O&M EQUIPMENT	OPA EQUIPMENT	ICS	PCS	REAL ESTATE	SEVERANCE	TOTAL
MAVERICK													0
SIDEWINDER													0
SUBTOTAL	0	0	0	0	0	0		0	0	0	0	0	0
DLA													
GRAND TOTAL	0	0	0	0	0	0		0	0	0	0	0	0

15 SEPTEMBER 94

FY95 SYSTEM REQUIREMENTS BY CATEGORY – AIR FORCE FUNDED

BAC CODE:	11	33	33	3*	3*	34	39	50	3*	32	32	31	
SYSTEM	MILCON	EQUIPMENT TRANSFERS	INVENTORY TRANSFERS	FAT	TRAINING	FACILITY RPM	O&M EQUIPMENT	OPA EQUIPMENT	ICS	PCS	REAL ESTATE	SEVERANCE	TOTAL
MAVERICK		185	23						1,200	135	87	1,098	2,728
SIDEWINDER		22	1									1,963	1,986
SUBTOTAL	0	207	24	0	0	0		0	1,200	135	87	3,061	4,714
DLA			0										
GRAND TOTAL	0	207	24	0	0	0		0	1,200	135	87	3,061	4,714

15 SEPTEMBER 94

FY96 SYSTEM REQUIREMENTS BY CATEGORY – AIR FORCE FUNDED

BAC CODE:	11	33	33	3*	3*	34	39	50	3*	32	32	31	
SYSTEM	MILCON	EQUIPMENT TRANSFERS	INVENTORY TRANSFERS	FAT	TRAINING	FACILITY RPM	O&M EQUIPMENT	OPA EQUIPMENT	ICS	PCS	REAL ESTATE	SEVERANCE	TOTAL
MAVERICK													0
SIDEWINDER				41						74	37		152
SUBTOTAL	0	0	0	41	0	0		0	0	74	37	0	152
DLA													
GRAND TOTAL	0	0	0	41	0	0		0	0	74	37	0	152

15 SEPTEMBER 94

FY97 SYSTEM REQUIREMENTS BY CATEGORY – AIR FORCE FUNDED

BAC CODE:	11	33	33	3*	3*	34	39	50	3*	32	32	31	
SYSTEM	MILCON	EQUIPMENT TRANSFERS	INVENTORY TRANSFERS	FAT	TRAINING	FACILITY RPM	O&M EQUIPMENT	OPA EQUIPMENT	ICS	PCS	REAL ESTATE	SEVERANCE	TOTAL
MAVERICK													0
SIDEWINDER													0
SUBTOTAL	0	0	0	0	0	0		0	0	0	0	0	0
DLA													
GRAND TOTAL	0	0	0	0	0	0		0	0	0	0	0	0

15 SEPTEMBER 94

FY94 – FY97 SYSTEM REQUIREMENTS BY CATEGORY – AIR FORCE FUNDED

BAC CODE:	11	33	33	3*	3*	34	39	50	3*	32	32	31	
SYSTEM	MILCON	EQUIPMENT TRANSFERS	INVENTORY TRANSFERS	FAT	TRAINING	FACILITY RPM	O&M EQUIPMENT	OPA EQUIPMENT	ICS	PCS	REAL ESTATE	SEVERANCE	TOTAL
MAVERICK	0	185	23	0	0	0	0	0	1,200	135	87	1,098	2,728
SIDEWINDER	0	22	1	41	0	0	0	0	0	74	37	1,963	2,138
SUBTOTAL	0	207	24	41	0	0	0	0	1,200	209	124	3,061	4,866
DLA	0	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL	0	207	24	41	0	0	0	0	1,200	209	124	3,061	4,866

15 SEPTEMBER 94

AIR FORCE – TMC COSTS

($ IN M)

ONE TIME COSTS	FY94	FY95	FY96	FY97	TOTAL
MILCON	0.000	0.000	0.000	0.000	0.000
O & M	0.000	4.714	0.152	0.000	4.866
CODE 31 CIV SVC PAY	0.000	3.061	0.000	0.000	3.061
CODE 32 CIV PCS	0.000	0.222	0.111	0.000	0.333
CODE 33 TRANSPORTATION	0.000	0.231	0.000	0.000	0.231
CODE 34 RPM	0.000	0.000	0.000	0.000	0.000
CODE 39 UNDER $25,000	0.000	0.000	0.000	0.000	0.000
CODE 3* TRAINING, FAT, ICS	0.000	1.200	0.041	0.000	1.241
PA (ABOVE $25,000)	0.000	0.000	0.000	0.000	0.000
TOTAL	0.000	4.714	0.152	0.000	4.866

15 SEPTEMBER 94

FY94 SYSTEM REQUIREMENTS BY CATEGORY – ALL SERVICES

BAC CODE:	11	33	33	3*	3*	34	39	50	3*	32	32	31	
SYSTEM	MILCON	EQUIPMENT TRANSFERS	INVENTORY TRANSFERS	FAT	TRAINING	FACILITY RPM	O&M EQUIPMENT	OPA EQUIPMENT	ICS	PCS	REAL ESTATE	SEVERANCE	TOTAL
All Systems	5,484	292	0	0	479	0	38	1,550	0	0	0	0	7,843
ATACMS	0	415	7	89	0	0	0	0	0	44	27	0	582
AVENGER	0	0	0	0	21	0	0	0	0	0	0	0	21
DRAGON	0	54	388	30	141	0	0	84	0	178	108	0	983
HELLFIRE	0	26	6	43	17	0	0	0	0	44	27	0	163
LCSS	0	0	0	0	0	0	0	0	0	0	0	0	0
SHILLELAGH	0	0	0	0	0	0	0	0	0	0	0	0	0
TOW 2	0	0	0	0	621	0	0	0	0	0	0	0	621
TOW COBRA	0	0	0	0	0	0	0	161	0	0	0	0	161
MLRS	0	25	33	20	40	0	50	0	0	0	0	0	168
TOW BFVS	0	3	0	0	413	0	0	0	0	0	0	0	416
PHOENIX	0	965	19	45	316	0	0	0	0	219	136	0	1,700
SPARROW	0	494	59	112	325	0	0	322	0	656	409	0	2,377
NAVY SIDEWINDER	0	130	0	0	852	0	0	0	0	150	75	0	1,207
STANDARD	0	0	0	0	231	0	0	0	0	0	0	0	231
HAWK	0	0	0	0	0	0	0	0	0	0	0	0	0
MAVERICK	0	0	0	0	0	0	0	0	0	0	0	0	0
AIR FORCE SIDEWINDER	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	5,484	2,404	512	339	3,456	0	88	2,117	0	1,291	782	0	16,473
DLA	0	0	1,480	0	0	0	0	0	0	0	0	0	1,480
GRAND TOTAL	5,484	2,404	1,992	339	3,456	0	88	2,117	0	1,291	782	0	17,953

APPENDIX A

MIGRATION DIAGRAM
REALIGN LETTERKENNY ARMY DEPOT

RED RIVER ARMY DEPOT

	OFF	ENL	TOT MIL	CIVS	GRAND TOTAL
BEFORE:	8	2	10	4268	4278
TRANS OUT:	0	0	0	98	98
FRC CHG:	0	0	0	0	0
ELIM:	0	0	0	0	0
AFTER:	8	2	10	4170	4180

MARINE CORPS LOGISTICS BASE

	OFF	ENL	TOT MIL	CIVS	GRAND TOTAL
BEFORE:	0	0	0	0	0
TRANS OUT:	0	0	0	97	97
FRC CHG:	0	0	0	0	0
ELIM:	0	0	0	0	0
AFTER:	0	0	0	-97	-97

NAVAL AVIATION DEPOT NORFOLK

	OFF	ENL	TOT MIL	CIVS	GRAND TOTAL
BEFORE:	0	0	0	0	0
TRANS OUT:	0	0	0	32	32
FRC CHG:	0	0	0	0	0
ELIM:	0	0	0	0	0
AFTER:	0	0	0	-32	-32

TOBYHANNA ARMY DEPOT

	OFF	ENL	TOT MIL	CIVS	GRAND TOTAL
BEFORE:	13	21	34	3318	3352
TRANS OUT:	0	0	0	8	8
FRC CHG:	0	0	0	-168	-168
ELIM:	0	0	0	17	17
AFTER:	13	21	34	3125	3159

LETTERKENNY ARMY DEPOT

	OFF	ENL	TOT MIL	CIVS	GRAND TOTAL
BEFORE:	30	70	100	4234	4334
TRANS IN:	0	0	0	646	646
FRC CHG:	-17	-7	-24	932	956
ELIM:	0	0	0	0	0
AFTER:	13	63	76	3948	4024

NAVAL WEAPONS STATION SEAL BEACH

	OFF	ENL	TOT MIL	CIVS	GRAND TOTAL
BEFORE:	0	0	0	0	0
TRANS OUT:	0	0	0	9	9
FRC CHG:	0	0	0	0	0
ELIM:	0	0	0	0	0
AFTER:	0	0	0	-9	-9

NAVAL AVIATION DEPOT ALAMEDA

	OFF	ENL	TOT MIL	CIVS	GRAND TOTAL
BEFORE:	0	0	0	0	0
TRANS OUT:	0	0	0	38	38
FRC CHG:	0	0	0	0	0
ELIM:	0	0	0	0	0
AFTER:	0	0	0	-38	-38

ANNISTON ARMY DEPOT

	OFF	ENL	TOT MIL	CIVS	GRAND TOTAL
BEFORE:	4	3	7	3707	3714
TRANS OUT:	0	0	0	133	133
FRC CHG:	0	-1	-1	-276	-277
ELIM:	0	0	0	143	143
AFTER:	4	3	6	3055	3061

CONTRACT

	OFF	ENL	TOT MIL	CIVS	GRAND TOTAL
MANYR EQUIV:	0	0	0	123	123

OGDEN AIR LOGISTICS CENTER

	OFF	ENL	TOT MIL	CIVS	GRAND TOTAL
BEFORE:	0	0	0	0	0
TRANS OUT:	0	0	0	108	108
FRC CHG:	0	0	0	0	0
ELIM:	0	0	0	0	0
AFTER:	0	0	0	-108	108

AS OF: 2 MAY 94

1.5 MIGRATION DIAGRAM.

	MIL	CIV	LEAD MIL	LEAD CIV
ANAD				
Before	7	3,707		
Trans to LEAD		133	0	133
Elimination		143		
Force Chg Red	-1	(276)		
After	6	3,155		
RIRAD				
Before	10	4,268		
Trans to LEAD		98	0	98
Elimination		0		
Force Chg Red	0	0		
After	10	4,170		
TOAD				
Before	34	3,318		
Trans to LEAD		8	0	8
Elimination		17		
Force Chg Red	0	(168)		
After	34	3,125		
ALAMEDA NAD				
Before				
Trans to LEAD		38	0	38
Elimination		0		
Force Chg Red				
After				
BARSTOW MCLB				
Before				
Trans to LEAD		97	0	97
Elimination		0		
Force Chg Red				
After				
NORFOLK NAD				
Before				
Trans to LEAD		32	0	32
Elimination		0		
Force Chg Red				
After				
OGDEN ALC				
Before				
Trans to LEAD		108	0	108
Elimination		60		
Force Chg Red				
After				
SEAL BEACH NWS				
Before				
Trans to LEAD		9	0	9
Elimination		3		
Force Chg Red				
After				
Contract				123
LEAD				
Before			100	4,234
Trans to LEAD			0	646
Elimination				
Force Chg Red			(28)	(932)
After			72	3,948

STARTING BASELINE: SUMMER FY92 ASIP (FY94 DATA)

22 MARCH 1994

SCHEDULE OF MANPOWER CHANGES

SUBMITTING COMMAND: AMC / DEPOT SYSTEM COMMAND

FY 1994

ACTIVITY	BASELINE		FORCE STRUCTURE CHANGES & OTHER ADJUSTMENTS		ADJUSTED BASELINE		TRANSFER**		ELIMINATION		ADJUSTED END TOTAL	
	MIL	CIV	MIL	CIV	MIL	CIV	MIL	CIV	MIL	CIV	MIL	CIV
LEAD – W0L6AA (AMC)	18	2,989	(8)	+88 – 530	10	2,547		575			10	3122
MICOM PRG BR – W0H832 (AMC)	2				2						2	0
TOAD – DIST FACILITY – W0ML02 (AMC)		2				2						2
USAAA – W0NTIP		15				15						15
MEA – W148AA		18				18						18
HEALTH CLINIC – W2KR20 (HSC)		16				16						16
SIMA EAST – W2S6AA (AMC)		347				347						347
HQDESCOM – W39QAA (AMC)	20	495	(20)	(495)	0	0					0	0
AIPC – W3T0AA	20	124			20	124					20	124
TMDE – W459–A	38	186	5	5	43	191					43	191
DRMO		32				32						32
PRINTING SERVICE		10				10						10
HQ USA DESCOM – NON ADD	2		(2)		0						0	0
TOTALS	100	4,234	(28)	(932)	75	3,302	0	575	0	0	75	3,877

* – ADJUSTMENT INCLUDES +88 FOR ADJUSTMENT TO FY99, AND –530 FOR TRANSFER OF DLA FUNCTION.
INITIAL MIGRATION DIAGRAM SHOWED FORCE STRUCTURE CHANGE OF 1032 WHICH INCLUDED –628 FOR DLA.

STARTING BASELINE: SUMMER FY92 ASIP (FY94 DATA)

22 MARCH 1994

SCHEDULE OF MANPOWER CHANGES

SUBMITTING COMMAND: AMC / DEPOT SYSTEM COMMAND

FY 1994

	BASELINE		FORCE STRUCTURE CHANGES & OTHER ADJUSTMENTS		ADJUSTED BASELINE		TRANSFER**		ELIMINATION		ADJUSTED END TOTAL	
ACTIVITY	MIL	CIV	MIL	CIV	MIL	CIV	MIL	CIV	MIL	CIV	MIL	CIV
ANAD – W0LXAA	7	3,666	(1)	–8 –267	6	3,399		(133)	0	(143)	6	3113
HEALTH CLINIC – W2ML		14				14					0	14
TMDE – W4LS		10				10						10
FLD INVEST – FRAUD BO		1				1						1
DLA PDO		17				17						17
TOTALS	7	3,707	(1)	(276)	6	3,431	0	(133)	0	(143)	6	3,166

* – ADJUSTMENT INCLUDES –9 FOR ADJUSTMENT TO FY93, AND –267 FOR TRANSFER OF DLA FUNCTION.

STARTING BASELINE: SUMMER FY92 ASIP (FY94 DATA)

22 MARCH 1994

SCHEDULE OF MANPOWER CHANGES

SUBMITTING COMMAND: AMC / DEPOT SYSTEM COMMAND

FY 1994

ACTIVITY	BASELINE		FORCE STRUCTURE CHANGES & OTHER ADJUSTMENTS		ADJUSTED BASELINE		TRANSFER**		ELIMINATION		ADJUSTED END TOTAL	
	MIL	CIV	MIL	CIV	MIL	CIV	MIL	CIV	MIL	CIV	MIL	CIV
RRAD – WOMCAA	6	3,127			6	3,127		(98)	0	0	6	3029
HEALTH CLINIC		7				7						7
8TH RGN RED RIVER ADEP	2				2						2	
TMDE		16				16						16
INTERN TRAINING CENTER		32				32						32
CECOM LIAISON OFFICE		1				1						1
DRMO		38				38						38
GSA REGION 7 OFFICE		2				2						2
DLA RED RIVER DIST SITE	3	1,047			3	1,047					3	1047
TOTALS	10	4,268	0	0	10	4,268	0	(98)	0	0	10	4,170

STARTING BASELINE: SUMMER FY92 ASIP (FY94 DATA)

22 MARCH 1994

SCHEDULE OF MANPOWER CHANGES

SUBMITTING COMMAND: AMC / DEPOT SYSTEM COMMAND

FY 1994

ACTIVITY	BASELINE		FORCE STRUCTURE CHANGES & OTHER ADJUSTMENTS		ADJUSTED BASELINE		TRANSFER**		ELIMINATION		ADJUSTED END TOTAL	
	MIL	CIV	MIL	CIV	MIL	CIV	MIL	CIV	MIL	CIV	MIL	CIV
TOAD – WOMLAA	10	3,043		–8 –180	10	2,875		–8	0	(17)	10	2,850
AGYUSA – SIGNAL PROC COSS	1	1			1	1					1	1
AGYUSA – MED EQ MAINT DIV	11	27			11	27					11	27
BRACO RELOCATION DEPLEX		64				64					0	64
USAMC SYS INT & MGT ACT		68				68					0	68
JOINT VIS INFO ACTIVITY		4				4					0	4
HEALTH CLINIC	2	16			2	16					2	16
LIAISON OFFICE – SIMA		48				48					0	48
TMDE OFFICE	1	3			1	3					1	3
DEFENSE COMST AGENCY		31				31					0	31
DPMO		13				13					0	13
DLA	3				3						3	0
NON–ADD RESERVE COORDINATOR	8				8						8	0
TOTALS	34	3,318	0	(188)	34	3,160	~ 0	(8)	0	(17)	34	3,126

* – ADJUSTMENT INCLUDES –8 FOR ADJUSTMENT TO FY93, AND –180 FOR TRANSFER OF DLA FUNCTION.

APPENDIX B

2 MAY 1994

Base Closure Exhibit
Schedule of Manpower Changes
U.S. Army Depot System Command
FY94

Submitting Command:

BRAC 93 LEAD	RELOCATION (from) MIL E/S	RELOCATION (from) CIV E/S	DEST	Elimination MIL E/S	Elimination CIV E/S
Anniston UIC: WOLXAA		21	LEAD		
Letterkenny UIC: WOL6AA					
Red River UIC: WOMCAA		72	LEAD		
Tobyhanna UIC: WOMLAA					
Alameda		25	LEAD		
Barstow					
Norfolk					
Ogden					
Seal Beach					
Contract		40	LEAD		

2 MAY 1994

Base Closure Exhibit
Schedule of Manpower Changes

Submitting Command: U.S. Army Depot System Command

FY95

BRAC 93 LEAD	RELOCATION (from) MIL E/S	RELOCATION (from) CIV E/S	DEST	Elimination MIL E/S	Elimination CIV E/S
Anniston UIC: WOLXAA		100	LEAD		143
Letterkenny UIC: WOL6AA					
Red River UIC: WOMCAA		12	LEAD		
Tobyhanna UIC: WOMLAA					
Alameda		13	LEAD		
Barstow		97	LEAD		
Norfolk		32	LEAD		
Ogden					40
Seal Beach					3
Contract		11	LEAD		

2 MAY 1994

Base Closure Exhibit
Schedule of Manpower Changes
Submitting Command: U.S. Army Depot System Command
FY96

BRAC 93 LEAD	RELOCATION (from) MIL E/S	RELOCATION (from) CIV E/S	DEST	Elimination MIL E/S	Elimination CIV E/S
Anniston UIC: WOLXAA					
Letterkenny UIC: WOL6AA					
Red River UIC: WOMCAA					
Tobyhanna UIC: WOMLAA					
Alameda					
Barstow					
Norfolk					
Ogden		108	LEAD		20
Seal Beach		9	LEAD		
Contract		3	LEAD		

2 MAY 1994

Base Closure Exhibit
Schedule of Manpower Changes

Submitting Command: U.S. Army Depot System Command

FY97

BRAC 93 LEAD	RELOCATION (from) MIL E/S	RELOCATION (from) CIV E/S	DEST	Elimination MIL E/S	Elimination CIV E/S
Anniston UIC: WOLXAA		12	LEAD		
Letterkenny UIC: WOL6AA					
Red River UIC: WOMCAA		14	LEAD		
Tobyhanna UIC: WOMLAA		8	LEAD		17
Alameda					
Barstow					
Norfolk					
Ogden					
Seal Beach					
Contract		47			

Revision 5, May 2, 1994

2 MAY 1994

Base Closure Exhibit
Schedule of Manpower Changes
Submitting Command: ~~U.S. Army Depot System Command~~
FY98

BRAC 93 LEAD	RELOCATION (from) MIL E/S	CIV E/S	DEST	Elimination MIL E/S	CIV E/S
Anniston UIC: WOLXAA					
Letterkenny UIC: WOL6AA					
Red River UIC: WOMCAA					
Tobyhanna UIC: WOMLAA					
Alameda					
Barstow					
Norfolk					
Ogden					
Seal Beach					
Contract		22	LEAD		

2 MAY 1994

Base Closure Exhibit
Schedule of Manpower Changes

Submitting Command: U.S. Army Depot System Command

SUMMARY OF ALL YEARS

BRAC 93 LEAD	RELOCATION (from) MIL E/S	CIV E/S	DEST	Elimination MIL E/S	CIV E/S
Anniston UIC: WOLXAA		133			143
Letterkenny UIC: WOL6AA					
Red River UIC: WOMCAA		98			0
Tobyhanna UIC: WOMLAA		8			17
Alameda		38			
Barstow		97			
Norfolk		32			
Ogden		108			60
Seal Beach		9			3
Contract		123			

STARTING BASELINE: SUMMER FY92 ASIP (FY94 DATA)

2 MAY 1994

SCHEDULE OF MANPOWER CHANGES

SUBMITTING COMMAND: AMC / DEPOT SYSTEM COMMAND

FY 1994	BASELINE		FORCE STRUCTURE CHANGES & OTHER ADJUSTMENTS		ADJUSTED BASELINE		TRANSFER**		ELIMINATION		ADJUSTED END TOTAL	
ACTIVITY	MIL	CIV	MIL	CIV	MIL	CIV	MIL	CIV	MIL	CIV	MIL	CIV
LEAD – W0L6AA (AMC)	18	2,989	(8)	+88 – 530	10	2,547		646			10	3193
MICOM PRG BR – W0H932 (AMC)	2				2						2	0
TOAD – DIST FACILITY – W0ML02 (AMC)		2				2						2
USAAA – W0NTIP		15				15						15
MEA – W149AA		18				18						18
HEALTH CLINIC – W2KR20 (HSC)		16				16						16
SIMA EAST – W2S5AA (AMC)		347				347						347
HQDESCOM – W39QAA (AMC)	20	495	(20)	(495)	0	0					0	0
AIPC – W3T0AA	20	124			20	124					20	124
TMDE – W459–A	38	186	5	5	43	191					43	191
DRMO		32				32						32
PRINTING SERVICE		10				10						10
HQ USA DESCOM – NON ADD	2		(2)		0						0	0
TOTALS	100	4,234	(25)	(932)	75	3,302	0	646	0	0	75	3,948

* – ADJUSTMENT INCLUDES +88 FOR ADJUSTMENT TO FY99, AND –530 FOR TRANSFER OF DLA FUNCTION.
INITIAL MIGRATION DIAGRAM SHOWED FORCE STRUCTURE CHANGE OF 1032 WHICH INCLUDED –628 FOR DLA.

STARTING BASELINE: SUMMER FY92 ASIP (FY94 DATA)

2 MAY 1994

SCHEDULE OF MANPOWER CHANGES

SUBMITTING COMMAND: AMC / DEPOT SYSTEM COMMAND

FY 1994

ACTIVITY	BASELINE		FORCE STRUCTURE CHANGES & OTHER ADJUSTMENTS		ADJUSTED BASELINE		TRANSFER**		ELIMINATION		ADJUSTED END TOTAL	
	MIL	CIV	MIL	CIV	MIL	CIV	MIL	CIV	MIL	CIV	MIL	CIV
ANAD – WOLXAA	7	3,665	(1)	−9 −267	6	3,389		(133)	0	(143)	6	3113
HEALTH CLINIC – W2ML		14				14					0	14
TMDE – W4L6		10				10						10
FLD INVEST – FRAUD BO		1				1						1
DLA PDO		17				17						17
TOTALS	7	3,707	(1)	(276)	6	3,431	0	(133)	0	(143)	6	3,155

* – ADJUSTMENT INCLUDES −9 FOR ADJUSTMENT TO FY99, AND −267 FOR TRANSFER OF DLA FUNCTION.

STARTING BASELINE: SUMMER FY92 ASIP (FY94 DATA)

2 MAY 1994

SCHEDULE OF MANPOWER CHANGES

SUBMITTING COMMAND: AMC / DEPOT SYSTEM COMMAND

FY 1994

ACTIVITY	BASELINE		FORCE STRUCTURE CHANGES & OTHER ADJUSTMENTS		ADJUSTED BASELINE		TRANSFER**		ELIMINATION		ADJUSTED END TOTAL	
	MIL	CIV	MIL	CIV	MIL	CIV	MIL	CIV	MIL	CIV	MIL	CIV
RRAD – WOMCAA	5	3,127			5	3,127		(98)	0	0	5	3029
HEALTH CLINIC		7				7						7
6TH RGN RED RIVER ADEP	2				2						2	
TMDE		16				16						16
INTERN TRAINING CENTER		32				32						32
CECOM LIAISON OFFICE		1				1						1
DRMO		36				36						36
GSA REGION 7 OFFICE		2				2						2
DLA RED RIVER DIST SITE	3	1,047			3	1,047					3	1047
TOTALS	10	4,268	0	0	10	4,268	0	(98)	0	0	10	4,170

STARTING BASELINE: SUMMER FY92 ASIP (FY94 DATA)

2 MAY 1994

SCHEDULE OF MANPOWER CHANGES

SUBMITTING COMMAND: AMC / DEPOT SYSTEM COMMAND

FY 1994

ACTIVITY	BASELINE		FORCE STRUCTURE CHANGES & OTHER ADJUSTMENTS		ADJUSTED BASELINE		TRANSFER**		ELIMINATION		ADJUSTED END TOTAL	
	MIL	CIV	MIL	CIV	MIL	CIV	MIL	CIV	MIL	CIV	MIL	CIV
TOAD – WOMLAA	10	3,043		−8 −160	10	2,875		−8	0	(17)	10	2,850
AGYUSA – SIGNAL PROC CCSS	1	1			1	1					1	1
AGYUSA – MED EQ MAINT DIV	11	27			11	27					11	27
BRACO RELOCATION DEPLEX		64				64					0	64
USAMC SYS INT & MGT ACT		68				68					0	68
JOINT VIS INFO ACTIVITY		4				4					0	4
HEALTH CLINIC	2	16			2	16					2	16
LIAISON OFFICE – SIMA		48				48					0	48
TMDE OFFICE	1	3			1	3					1	3
DEFENSE COMSY AGENCY		31				31					0	31
DRMO		13				13					0	13
DLA	3				3						3	0
NON–ADD RESERVE COORDINATOR	6				6						6	0
TOTALS	34	3,318	0	(168)	34	3,150	0	(8)	0	(17)	34	3,125

* – ADJUSTMENT INCLUDES −8 FOR ADJUSTMENT TO FY99, AND −160 FOR TRANSFER OF DLA FUNCTION.

APPENDIX C

14 Mar 94

GREEN BOOK PLANNED TRANSITION YEAR

VERSUS

BRAC-93 IMPLEMENTATION PLAN STATUS

SYSTEM	SOURCE OF REPAIR	GREEN BOOK PLANNED TRANSITION PERIOD	BRAC 93 I-PLAN TRANSITION PERIOD
SHRIKE	ALAMEDA	N/A	N/A
SKIPPER	ALAMEDA	N/A	N/A
PHOENIX	ALAMEDA	1994	94/94
MLRS	RRAD	1993	94/95
MLRS	CONTRACT	1996	95/95
STANDARD	SEAL BEACH	1994	95/95
SPARROW	ALAMEDA	1993	94/94
MAVERICK	OGDEN	1996	96/96
WALLEYE	MM/NAC	TBD	TBD
LANCE	ANAD	N/A	N/A
TOW	MZAD/RRAD/ANAD	95/95	
	SAAD	1993/94	N/A
LCSS	ANAD	1993	97/97
DRAGON	ANAD	1993	94/95
TOW	HUGHES	1996	SCHEDULE PEND
STANDARD	RAYTHEON GENERAL DYNAMICS	1995	SCHEDULE PEND
SIDEWINDER	NORFOLK/OGDEN	1993	95/96
	CRANE		N/A
HARPOON	MDAC	1994	SCHEDULE PEND
CHAPARRAL	RRAD	1994	97/97
ANTSQ-73	TOAD	1995	97/97
SIDEARM	FORD	N/A	TBD
HARM	TEXAS INSTRUMENTS	1995	94/98
HELLFIRE	MM	1995	SCHEDULE PEND
APACHE/HELLFIRE	MCDAC	N/A	N/A
STINGER	GENERAL DYNAMICS	1994	SCHEDULE PEND
HAWK	RAYTHEON	1995	96/96
PATRIOT	RAYTHEON	1995	95/95
SHILLELAGH	ANNISTON	1993	97/97
ATACMS	ANNISTON	1993	94/94
HELLFIRE	ANNISTON	1993	94/94
AVENGER	ANNISTON	1993	94/94
AVENGER	BOEING	1995	94/97
ATAS	BOEING/GENERAL DYNAMICS	1995	94/97
SLAM	OGDEN (SEEKER)	TBD	96/96
AMRAAM	HUGHES	TBD	98/98
PENGUIN	NORSK FORSVERSTREKOLGI	TBD	N/A
AIWS	NONE	TBD	TBD
LONGBOW HELLFIRE	ANAD	TBD	TBD

GREEN BOOK PLANNED TRANSITION FY VS BRAC 93 IMPLEMENTATION PLAN STATUS

AS OF 26 APR 94

SYSTEM/ SOR	GREEN BOOK PLANNED TRANS	CURRENT FAT STATUS START	COMPLETE	REMARKS
-AVENGER/ ANNISTON	93	94	94	WORKLOAD DID NOT COME FROM ANAD. ORIGINAL ESTABLISHMENT OF CAPABILITY WILL OCCUR AT LEAD. TRANSITION COMPLETED OCT 93.
-HELLFIRE/ ANNISTON	93	94	94	TRANSITION TO LEAD
-ATACMS/ ANNISTON	93	94	94	TRANSITION TO LEAD
-PHOENIX/ ALAMEDA	94	94	94	TRANSITION TO LEAD
-SPARROW/ ALAMEDA	93	94	94	TRANSITION TO LEAD
-MLRS/ RRAD	93	94	95	TRANSITION TO LEAD

SYSTEM/ SOR	GREEN BOOK PLANNED TRANS	CURRENT FAT STATUS START	--- COMPLETE	REMARKS
-DRAGON/ ANAD	93	94	95	TRANSITION TO LEAD
* -AVENGER BOEING	95	94	97	ATAS/AVENGER SCHEDULES NOW COMBINED, DUE TO COMMONALITY (SVML AND SELECTED LRUs) TRANSITION TO LEAD
* -ATAS BOEING & GENERAL DYNAMICS	95	94	97	ATAS/AVENGER SCHEDULES NOW COMBINED, DUE TO COMMONALITY (SVML AND SELECTED LRUs) TRANSITION TO LEAD
-HARM TEXAS INSTRUMENTS	95	94	98	TRANSITION TO LEAD IN THREE PHASES, FY94 (PSE) 1QFY98 (CS) 3QFY98 (GS)
* -MLRS/ CONTRACT	96	95	95	TRANSITION TO LEAD

* Owning Service has planned partial workload transition. Balance of workload must transition or Owning Service justify non-transition to DUSD-L.

JPCG-K2

SYSTEM/ SOR	GREEN BOOK PLANNED TRANS	CURRENT FAT STATUS START	--- COMPLETE	REMARKS
-TOW/				TOW2 AND TOW COBRA WORKOAD.
MZAD & ANAD	93/94	95	95	ANAD PERFORMED SAME WORK FOR CONUS. MZAD WORKLOAD TRANSFERRED TO ANAD PRIOR TO OCT 92. ALL TOW WORKLOAD WILL TRANSITION TO LEAD FROM ANAD IN FY95.
RRAD(BFVS)	93/94	95	95	TRANSITION TO LEAD TOW BFVS WORKLOAD
SAAD(EO)	93/94	N/A		EO PACKAGE AWARDED TO SACRAMENTO ALC BASED ON BRAC 91 DIRECTION AND GREEN BOOK (PG 6) NOT TRANSITIONING TO LEAD
-SIDEWINDER/				
NORFOLK	93	95	95	TRANSITION TO LEAD
OGDEN	93	96	96	TRANSITION TO LEAD
CRANE	NONE	N/A		CLASS V WORKLOAD NOT TRANSITIONING TO LEAD

SYSTEM/ SOR	GREEN BOOK PLANNED TRANS	CURRENT FAT STATUS START	--- COMPLETE	REMARKS
-STANDARD/				
SEAL BEACH	94	95	95	NAVY ORGANIC (SEAL BEACH) TRANSITION TO LEAD
*-PATRIOT				
RAYTHEON	95	95	95	TRANSITION TO LEAD
-MAVERICK/				
OGDEN	96	96	96	TRANSITION TO LEAD
*-HAWK/				
RAYTHEON	95	96	96	TRANSITION TO LEAD
-SLAM/	TBD			
SEEKER(OO-ALC)	TBD	96	96	USES MAVERICK SEEKER SEE MAVERICK SCHEDULE (OO-ALC TO LEAD) TRANSITION TO LEAD
COMPONENTS (McDAC)	TBD	NA		COMPONENTS SHARED WITH HARPOON, (SEE HARPOON)

* Owning Service has planned partial workload transition. Balance of workload must transition or Owning Service justify non-transition to DUSD-L.

JPCG-K4

CHART 4 OF 10

SYSTEM/ SOR	GREEN BOOK PLANNED TRANS	CURRENT FAT STATUS START	--- COMPLETE	REMARKS
-AMRAAM/				
HUGHES	TBD	98	98	TRANSITION TO LEAD
**-LCSS/				
ANAD	93	97	97	TRANSITION TO LEAD
**-CHAPARRAL/				
RRAD	94	97	97	TRANSITION TO LEAD
**-AN/TSQ73/				
TOAD	95	97	97	TRANSITION TO LEAD
**-SHILLELAGH/				
ANNISTON	93	97	97	TRANSITION TO LEAD

** Potential retiring systems identified by BRAC 93 Commission

SYSTEM/ SOR	GREEN BOOK PLANNED TRANS	CURRENT FAT STATUS START --- COMPLETE	REMARKS
-WALLEYE/			
NAWC, INDIANAPOLIS	TBD	TBD	OLD SYSTEM,TRANSITION TEAM CONDUCTING STUDY TO DETERMINE LIFE EXPECTANCY, AND FEASIBILITY OF TRANSITIONS TO LEAD
-AIWS(JSOW)/			
NOT ASSIGNED	TBD	TBD	DEVELOPMENTAL ITEM WILL BE SUBMITTED FOR DMI PROCESS TO DETERMINE SOR. IF ORGANIC SUPPORT REQUIRED BEFORE SEP 99, LEAD WILL BE THE SOR

SYSTEM/ SOR	GREEN BOOK PLANNED TRANS	CURRENT FAT STATUS START --- COMPLETE	REMARKS
-HELLFIRE LONGBOW/ (LAUNCHER)			
NOT ASSIGNED	TBD	TBD	PM DECISION PENDING, MAY MODIFY EXISTING LAUNCHERS IN ORGANIC DEPOT OR PURCHASE NEW LAUNCHERS. SYSTEM BEING. DEVELOPED. FIRST PRODUCTION IS FY98.
-PENGUIN/			
NORSK FORSVERSTEKOLGI	TBD	N/A	LOW DENSITY, WILL REMAIN CLS WITH FOREIGN MANUFACTURER, NO TECH DATA OR EQUIPMENT, NOT TRANSITIONING TO LEAD
-HELLFIRE APACHE			
McDAC	N/A	N/A	NOT TRANSITIONING TO LEAD

SYSTEM/ SOR	GREEN BOOK PLANNED TRANS	CURRENT FAT STATUS START --- COMPLETE	REMARKS
-LANCE/ANAD	N/A	N/A	SYSTEM PHASED OUT NOT TRANSITIONING TO LEAD
-SHRIKE/ ALAMEDA	N/A	N/A	SYSTEM PHASED OUT NOT TRANSITIONING TO LEAD
-SKIPPER/ ALAMEDA	N/A	N/A	SYSTEM PHASED OUT NOT TRANSITIONING TO LEAD
-SIDEARM/ MOTOROLA	N/A	TBD	CONTRACTOR HAS TERMINATED HIS CAPABILITY. JOINT SERVICE TEAM TO REVIEW SITUATION AND RECOMMEND FUTURE SUPPORT STRATEGY.

SYSTEM/ SOR	GREEN BOOK PLANNED TRANS	CURRENT FAT STATUS START --- COMPLETE	REMARKS
*** -HARPOON/ McDONNELL DOUGLAS	94	SCHEDULE PENDING	TRANSITION NOT PLANNED. PM RECOMMENDS CONTINUED CLS BASED ON CONTRACTOR/ORGANIC COST STUDY.
*** -STANDARD/ HUGHES & RAYTHEON	95	SCHEDULE PENDING	TRANSITION NOT PLANNED (TENTATIVE) NAVSEA PLANNING DID NOT INTEND TO TRANSITION FROM CONTRACT. DUSD-L WILL CONFIRM.
*** -TOW(BFVS)/ HUGHES (FIELD	96	SCHEDULE PENDING	TRANSITION NOT PLANNED

*** Owning Service has not planned any contract workload transition. If workload does not transition, Owning Service must justify non-transition to DUSD-L.

SYSTEM/ SOR	GREEN BOOK PLANNED TRANS	CURRENT FAT STATUS START --- COMPLETE	REMARKS
*** -STINGER			
GENERAL DYNAMICS	94	SCHEDULE PENDING	TRANSITION NOT PLANNED STINGER PROJECT OFFICE CONDUCTING EA TO CONSIDER ALL RISK FACTORS TO DETERMINE BEST METHOD OF SUPPORT (CONTRACT VS ORGANIC)
*** -HELLFIRE/			
RAYTHEON	95	SCHEDULE PENDING	TRANSITION NOT PLANNED WORKLOAD IS ACCOMPLISHED BY ROCKWELL AT ANAD GOCO. PM STUDY TO DETERMINE BEST METHOD OF SUPPORT.

*** Owning Service has not planned any contract workload transition. Workload must transition or Owning Service justify non-transition to DUSD-L.

OFFICE OF THE UNDER SECRETARY OF DEFENSE
3000 DEFENSE PENTAGON
WASHINGTON DC 20301-3000

ACQUISITION AND TECHNOLOGY

19 APR 1994

(L/MP&R)

MEMORANDUM FOR THE UNDER SECRETARIES OF THE MILITARY DEPARTMENTS

SUBJECT: Tactical Missile Consolidation

The 1993 Defense Base Closure and Realignment Commission made a binding recommendation regarding Letterkenny Army Depot that stated, "...Consolidate tactical-missile maintenance at the depot as originally planned by the Department of Defense in the Tactical Missile Maintenance Consolidation Plan for Letterkenny Army Depot, 31 January 1992 (revised 30 April 1992). Add tactical-missile maintenance workload currently being accomplished by the Marine Corps Logistics Base Barstow, California, to the consolidation plan." This recommendation was then reaffirmed in section 8112 of the Department of Defense Appropriations Act, 1994.

Depot maintenance workloads on the tactical missile systems that were identified in the plan specified by the BRAC Commission must be consolidated at Letterkenny Army Depot. This includes those systems that are currently maintained in the private sector, unless one of the provisions in the plan providing for continuous maintenance in the private sector applies. A Department choosing to not consolidate an affected system at Letterkenny must notify this office and provide supporting justification.

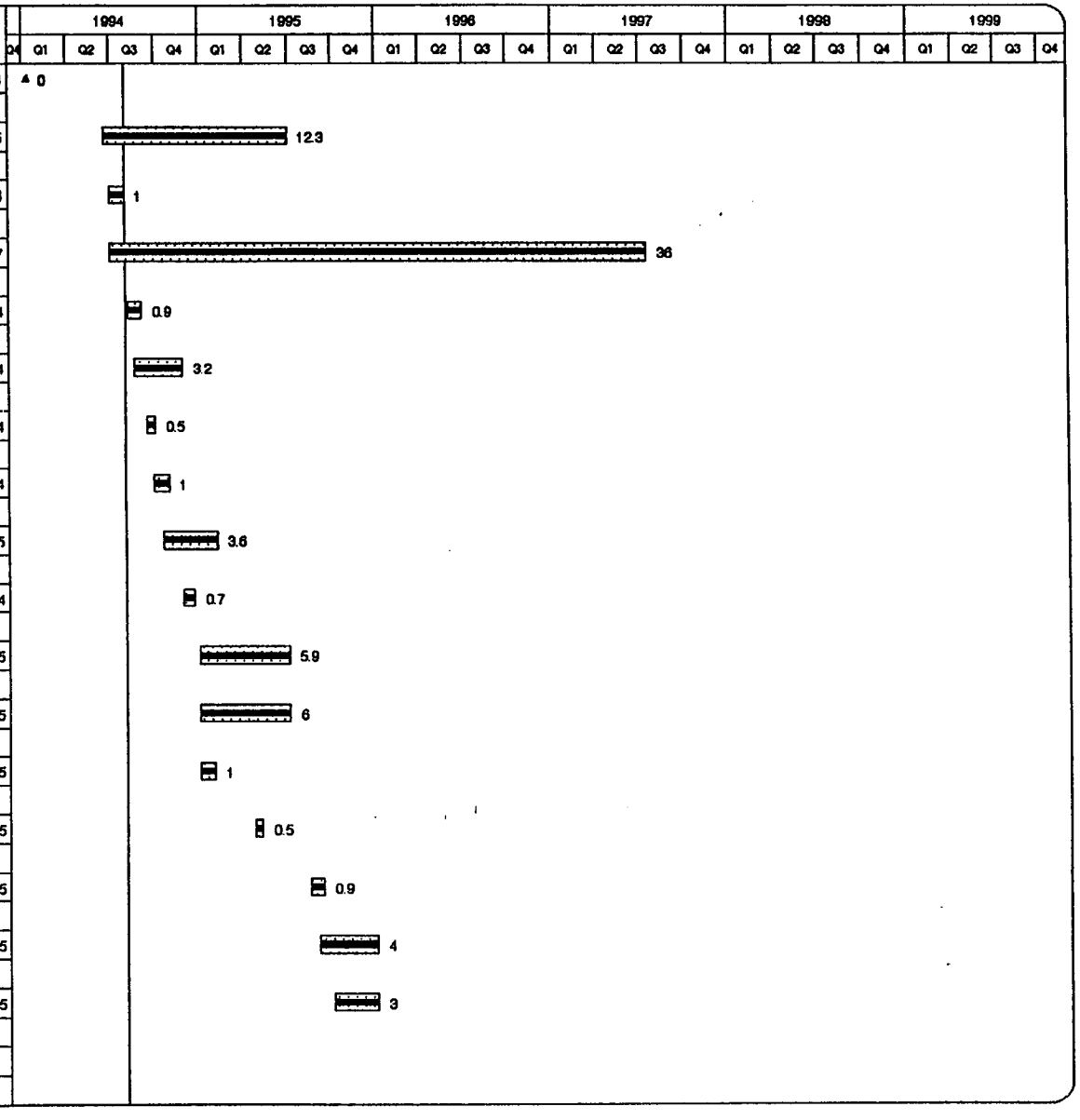
James R. Klugh
Deputy Under Secretary
of Defense (Logistics)

MISSION TRANSITIONS

FIRST ARTICLE TESTS

04 May FY94

Task Name	Start Date	End Date	
AVENGER	15 Oct FY94	15 Oct FY94	0
MLRS	21 Mar FY94	31 Mar FY95	12.3
ATAS (CTR) BOTTLES	01 Apr FY94	02 May FY94	1
ATAS/AVENGER (CTR)	01 Apr FY94	15 Apr FY97	36
ATACMS	09 May FY94	03 Jun FY94	0.9
SPARROW	23 May FY94	26 Aug FY94	3.2
HELLFIRE	15 Jun FY94	30 Jun FY94	0.5
HARM PSE	29 Jun FY94	29 Jul FY94	1
DRAGON	18 Jul FY94	04 Nov FY95	3.6
PHOENIX	29 Aug FY94	19 Sep FY94	0.7
MLRS (CTR)	03 Oct FY95	31 Mar FY95	5.9
HAWK (B-STOW) PH1	03 Oct FY95	03 Apr FY95	6
TOW BFVS	03 Oct FY95	31 Oct FY95	1
SWINDER (NAVY)	23 Jan FY95	03 Feb FY95	0.5
TOW COBRA	15 May FY95	09 Jun FY95	0.9
TOW 2	01 Jun FY95	29 Sep FY95	4
PATRIOT (CTR)	03 Jul FY95	29 Sep FY95	3
STANDARD			



Filename: SYSTEM

NOTE: BAR INDICATES FIRST ARTICLE TEST (FAT).

Baseline | Actual | Milestone

MISSION TRANSITIONS

FIRST ARTICLE TESTS

04 May FY94

Task Name	Start Date	End Date	1994 Q4	1994 Q1	1994 Q2	1994 Q3	1994 Q4	1995 Q1	1995 Q2	1995 Q3	1995 Q4	1996 Q1	1996 Q2	1996 Q3	1996 Q4	1997 Q1	1997 Q2	1997 Q3	1997 Q4	1998 Q1	1998 Q2	1998 Q3	1998 Q4	1999 Q1	1999 Q2	1999 Q3	1999 Q4
HAWK (B-STOW) PH2	02 Oct FY96	01 Apr FY96													6												
SWINDER (AF)	04 Dec FY96	19 Jan FY98												1.6													
MAVERICK	01 May FY96	30 May FY96													1												
HAWK (CTR)	01 Jul FY96	30 Sep FY96													3												
CHAPARRAL																											
AN/TSQ-73																											
LCSS	02 Jun FY97	30 Jul FY97																2									
SHILLELAGH	02 Jun FY97	30 Jul FY97																2									
HARM CS	01 Oct FY98	30 Oct FY98																		1							
AMRAAM	01 Jan FY98	30 Jan FY98																			1						
HARM GS	01 Apr FY98	30 Apr FY98																				1					
STINGER (CTR)	01 Oct FY99	01 Oct FY99																						0			
HELLFIRE (CTR)	01 Oct FY99	01 Oct FY99																						0			
STANDARD (CTR) *	01 Oct FY99	01 Oct FY99																						0			
TOW BFVS (CTR)	01 Oct FY99	01 Oct FY99																						0			
SIDEARM (CTR)	01 Oct FY99	01 Oct FY99																						0			
WALLEYE	01 Oct FY99	01 Oct FY99																						0			
HARPOON (CTR)	01 Oct FY99	01 Oct FY99																						0			

Filename: SYSTEM

* Owning Service has not planned any contract workload transition. If workload does not transition, Owning Service must justify to DUSD-L.

NOTE: BAR INDICATES FIRST ARTICLE TEST (FAT).

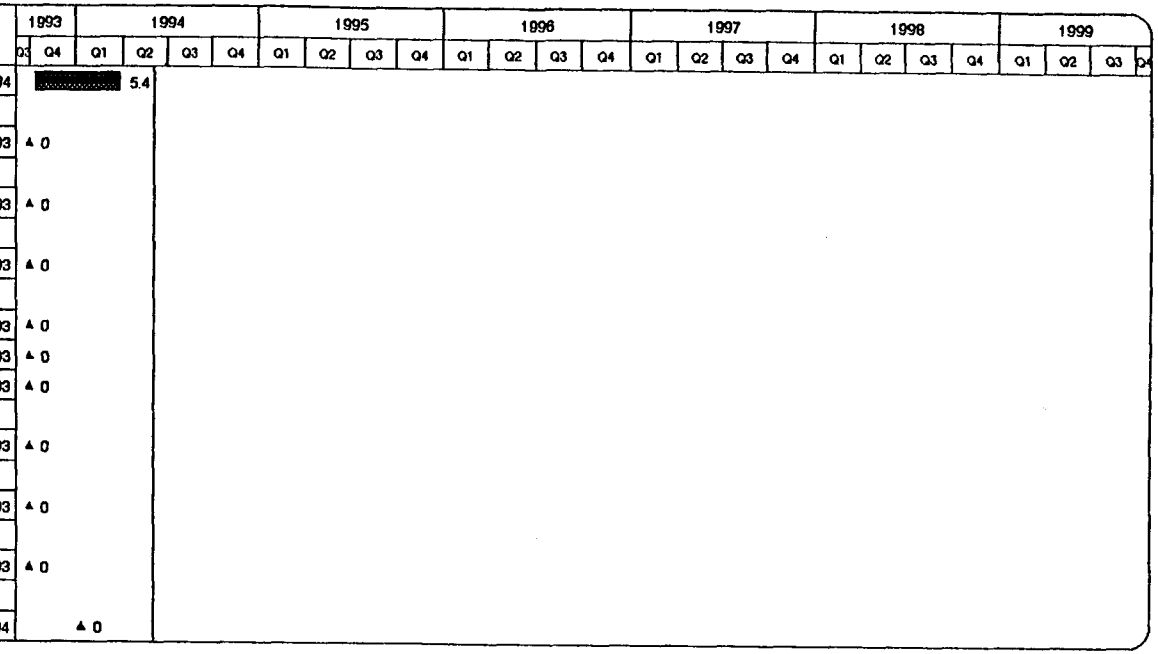
Baseline | Actual | Milestone

AVENGER (NEW WORKLOAD)

CURRENT SOR: BOEING/HUGHES

08 Mar FY94

Task Name	Start Date	End Date
ENVIR STUDIES	13 Jul FY93	24 Dec FY94
FACILITIES	01 Jul FY93	01 Jul FY93
EQUIPMENT	01 Jul FY93	01 Jul FY93
PERSONNEL	01 Jul FY93	01 Jul FY93
TRAINING	01 Jul FY93	01 Jul FY93
OJT	01 Jul FY93	01 Jul FY93
Formal	01 Jul FY93	01 Jul FY93
TECH DATA	01 Jul FY93	01 Jul FY93
SUPPLY	01 Jul FY93	01 Jul FY93
SUPPLY	01 Jul FY93	01 Jul FY93
FAT	15 Oct FY94	15 Oct FY94



Filename: AVENGER

POC: ROBERT ROBINSON DSN: 570-9739/9614

NOTE: FAT WAS WAIVED.

THIS IS NEW WORKLOAD.

Baseline

Actual

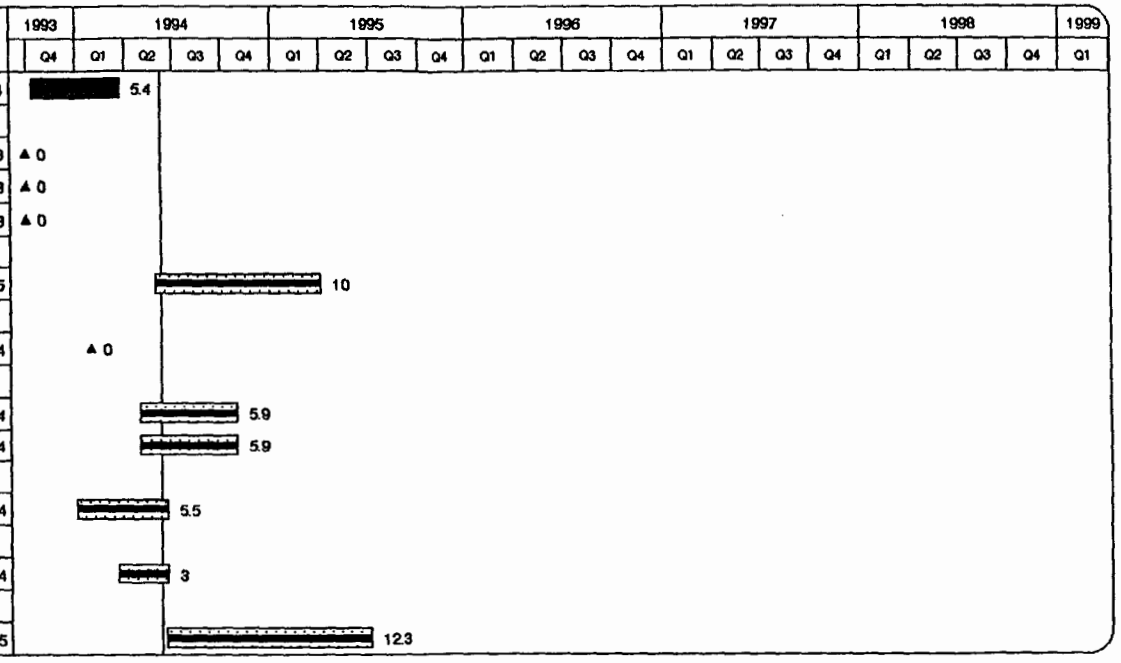
Milestone

MLRS

CURRENT SOR: RRAD

09 Mar FY94

Task Name	Start Date	End Date
ENVIR STUDIES	13 Jul FY93	24 Dec FY94
FACILITIES	01 Jul FY93	01 Jul FY93
Design/ALT	01 Jul FY93	01 Jul FY93
Construction	01 Jul FY93	01 Jul FY93
EQUIPMENT	01 Mar FY94	30 Dec FY95
PERSONNEL	01 Nov FY94	01 Nov FY94
TRAINING	31 Jan FY94	28 Jul FY94
OJT	31 Jan FY94	28 Jul FY94
TECH DATA	01 Oct FY94	21 Mar FY94
SUPPLY	20 Dec FY94	21 Mar FY94
FAT	21 Mar FY94	31 Mar FY95



Filename: MLRS-I

POC: DAVE LEONARD DSN: 570-9564

NOTE: EQUIPMENT MOVEMENT WILL NOT INTERFERE WITH OJT.

THIS TIMELINE INCORPORATES ORGANIC AND CONTRACT WORKLOAD TRANSITION.

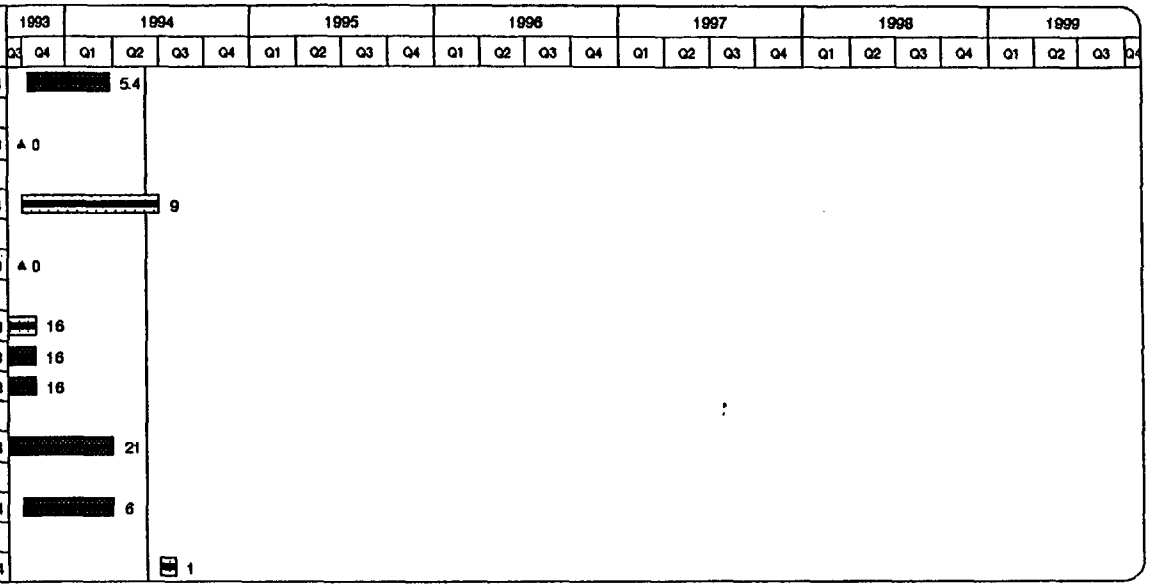
Baseline Actual Milestone

ATAS (CONTRACTOR-BOTTLE REFURBISHMENT)

CURRENT SOR: BOEING/HUGHES

08 Mar FY94

Task Name	Start Date	End Date	Duration
ENVIR STUDIES	13 Jul FY93	24 Dec FY94	5.4
FACILITIES	01 Jul FY93	01 Jul FY93	0
EQUIPMENT	30 Jun FY93	01 Apr FY94	9
PERSONNEL	01 Jul FY93	01 Jul FY93	0
TRAINING	30 Mar FY92	30 Jul FY93	16
OJT	30 Mar FY92	30 Jul FY93	16
Formal	30 Mar FY92	30 Jul FY93	16
TECH DATA	30 Mar FY92	30 Dec FY94	21
SUPPLY	30 Jun FY93	30 Dec FY94	6
FAT	01 Apr FY94	02 May FY94	1



Filename: ATASCTR
POC: ROBERT ROBINSON DSN: 570-9739/9614
NOTE: FAT WAS WAIVED. EQUIPMENT CERTIFICATION WILL BE COMPLETED.

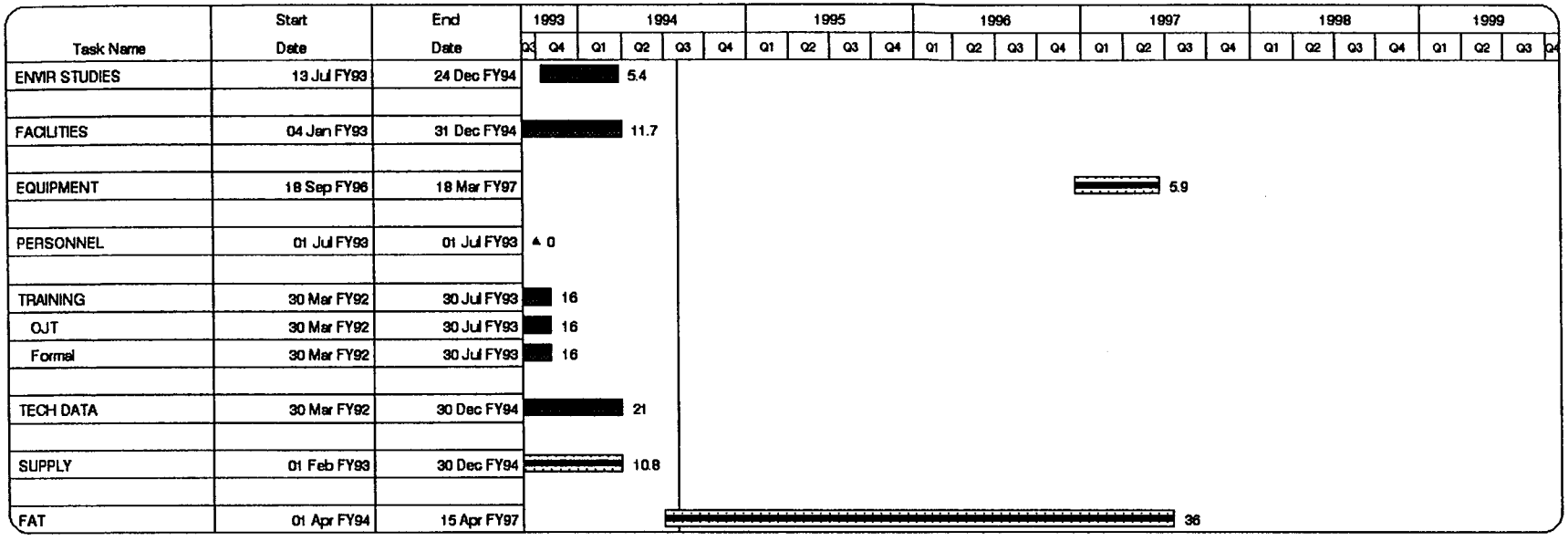
Baseline | Actual | Milestone

ATAS/AVENGER (CONTRACTOR)

CURRENT SOR: BOEING/HUGHES/MARTIN MARIETTA

04 May FY94

Task Name	Start Date	End Date	Duration
ENVIR STUDIES	13 Jul FY93	24 Dec FY94	5.4
FACILITIES	04 Jan FY93	31 Dec FY94	11.7
EQUIPMENT	18 Sep FY96	18 Mar FY97	5.9
PERSONNEL	01 Jul FY93	01 Jul FY93	0
TRAINING	30 Mar FY92	30 Jul FY93	16
OJT	30 Mar FY92	30 Jul FY93	16
Formal	30 Mar FY92	30 Jul FY93	16
TECH DATA	30 Mar FY92	30 Dec FY94	21
SUPPLY	01 Feb FY93	30 Dec FY94	10.8
FAT	01 Apr FY94	15 Apr FY97	36



Filename: AVENCTR

POC: ROBERT ROBINSON DSN: 570-9739/9614

FAT WAIVED. EQUIPMENT CERTIFICATION WILL BE COMPLETED WHEN INSTALLED BY MANUFACTURER. WORKLOAD INCLUDES LRU/SRU REPAIR CAPABILITIES.

ATACMS

CURRENT SOR: ANAD

09 Mar FY94

Task Name	Start Date	End Date	1993 Q4	1994 Q1	1994 Q2	1994 Q3	1994 Q4	1995 Q1	1995 Q2	1995 Q3	1995 Q4	1996 Q1	1996 Q2	1996 Q3	1996 Q4	1997 Q1	1997 Q2	1997 Q3	1997 Q4	1998 Q1	1998 Q2	1998 Q3	1998 Q4	1999 Q1
ENVIR STUDIES	13 Jul FY93	24 Dec FY94			5.4																			
FACILITIES	01 Jul FY93	01 Jul FY93	▲ 0																					
Design/ALT	01 Jul FY93	01 Jul FY93	▲ 0																					
Construction	01 Jul FY93	01 Jul FY93	▲ 0																					
EQUIPMENT	14 Feb FY94	06 May FY94				2.7																		
PERSONNEL	14 Feb FY94	18 Mar FY94				1.1																		
TRAINING	01 Jul FY93	01 Jul FY93	▲ 0																					
OJT	01 Jul FY93	01 Jul FY93	▲ 0																					
Formal	01 Jul FY93	01 Jul FY93	▲ 0																					
TECH DATA	01 Jul FY93	01 Jul FY93	▲ 0																					
SUPPLY	14 Feb FY94	09 May FY94				2.8																		
FAT	09 May FY94	03 Jun FY94					0.9																	

Filename: ATACMS

POC: BILL BUNN DSN: 570-9672

Baseline

Actual

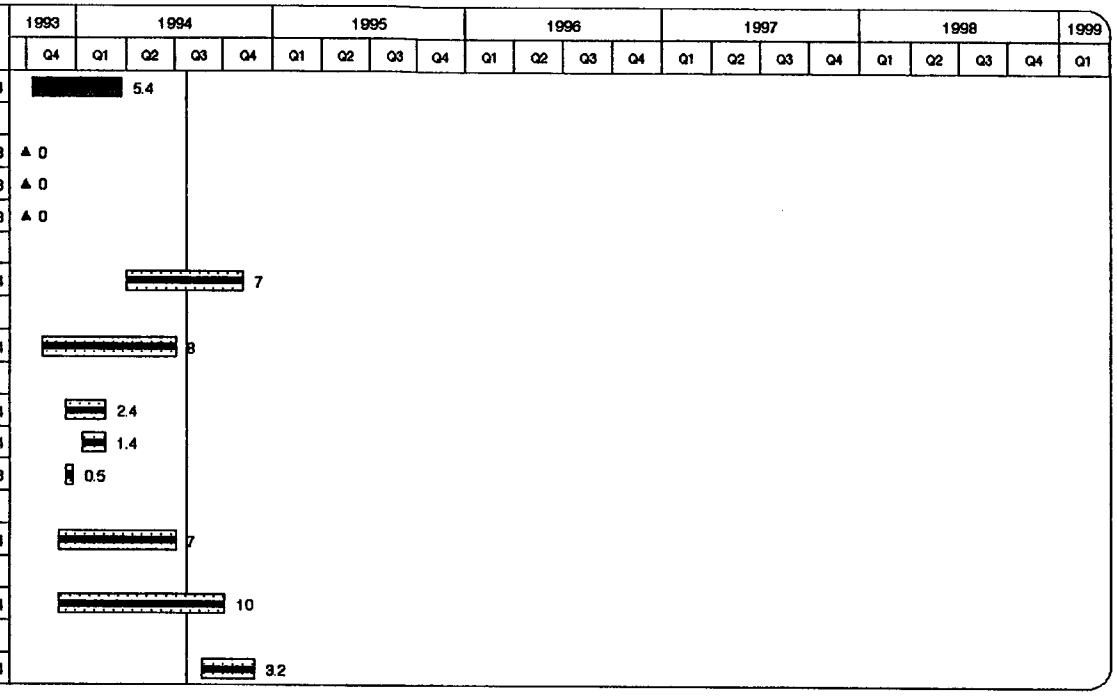
Milestone

SPARROW

CURRENT SOR: ALAMEDA

22 Apr FY94

Task Name	Start Date	End Date
ENVIR STUDIES	13 Jul FY93	24 Dec FY94
FACILITIES	01 Jul FY93	01 Jul FY93
Design/ALT	01 Jul FY93	01 Jul FY93
Construction	01 Jul FY93	01 Jul FY93
EQUIPMENT	04 Jan FY94	05 Aug FY94
PERSONNEL	30 Jul FY93	01 Apr FY94
TRAINING	13 Sep FY93	23 Nov FY94
OJT	13 Oct FY94	23 Nov FY94
Formal	13 Sep FY93	24 Sep FY93
TECH DATA	30 Aug FY93	01 Apr FY94
SUPPLY	30 Aug FY93	01 Jul FY94
FAT	23 May FY94	26 Aug FY94



Filename: SPARROW

POC: FRED MOXLEY DSN: 570-9614

CAPABILITY DATES: Lower level repairables - 24 Apr 94

7M GCS 01 Jul 94

7F GCS 29 Aug 94

Baseline

Actual

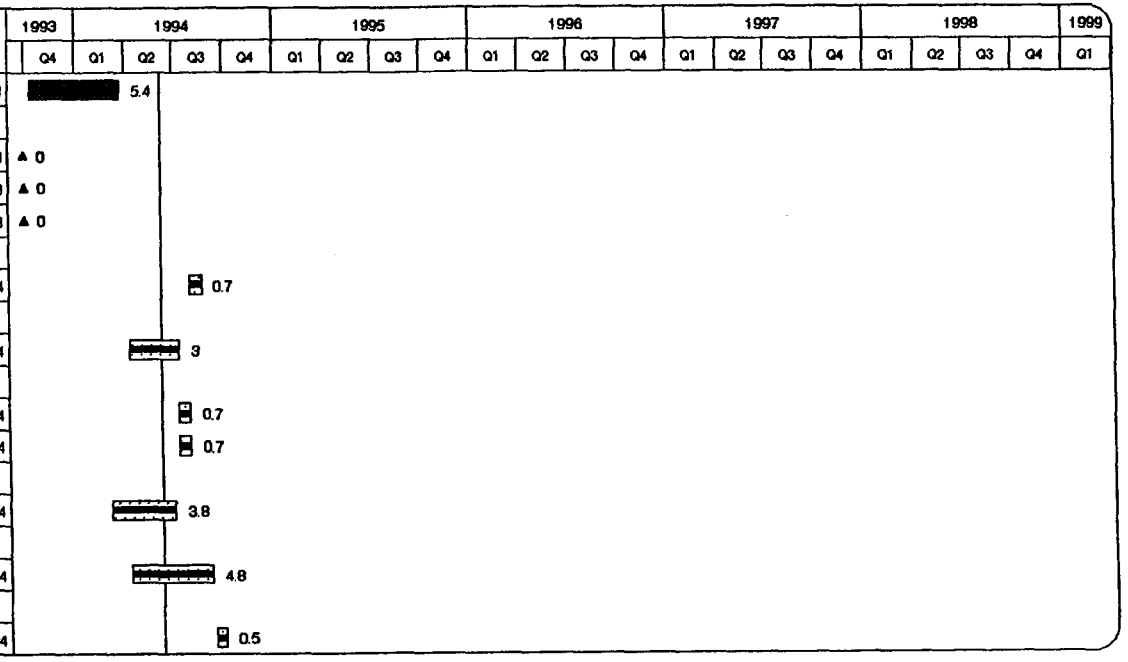
Milestone

HELLFIRE

CURRENT SOR: ANAD

09 Mar FY94

Task Name	Start Date	End Date	Duration
ENVIR STUDIES	13 Jul FY93	24 Dec FY94	5.4
FACILITIES	01 Jul FY93	01 Jul FY93	0
Design/ALT	01 Jul FY93	01 Jul FY93	0
Construction	01 Jul FY93	01 Jul FY93	0
EQUIPMENT	29 Apr FY94	20 May FY94	0.7
PERSONNEL	10 Jan FY94	11 Apr FY94	3
TRAINING	11 Apr FY94	29 Apr FY94	0.7
OJT	11 Apr FY94	29 Apr FY94	0.7
TECH DATA	06 Dec FY94	31 Mar FY94	3.8
SUPPLY	10 Jan FY94	06 Jun FY94	4.8
FAT	15 Jun FY94	30 Jun FY94	0.5



Filename: HELLFIRE

POC: ROD GIPE DSN: 570-9672

WORK AROUND - BLDG 370 WILL BE USED UNTIL BLDG 426 IS COMPLETE 17 JAN 95.

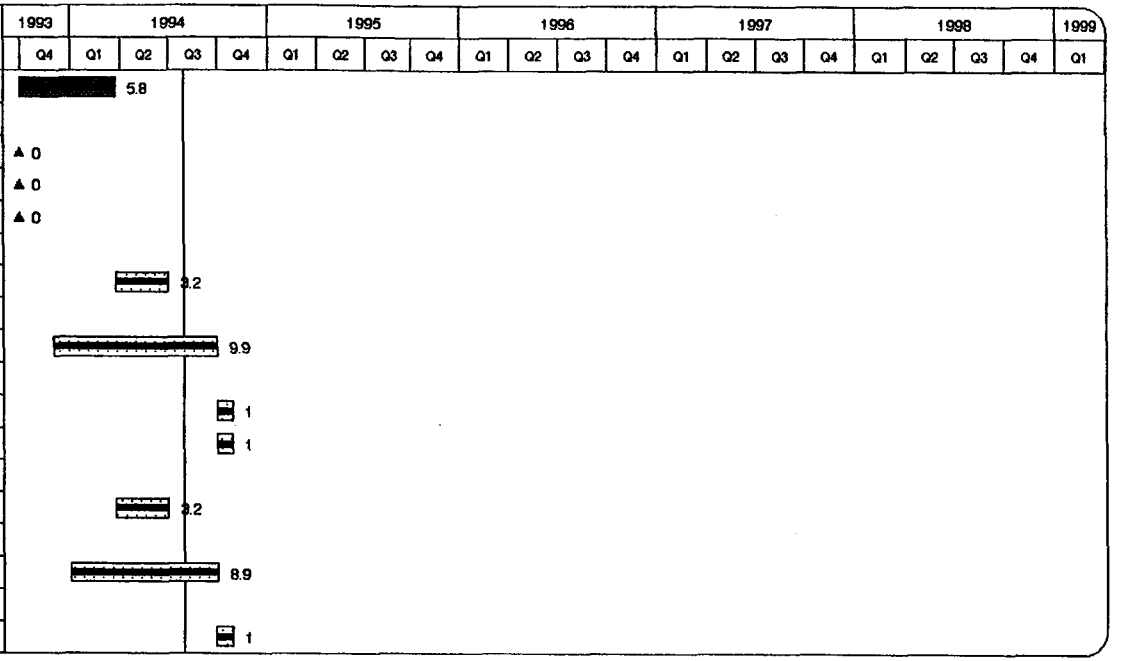
Baseline Actual Milestone

HIGH SPEED ANTI-RADIATION MISSILE - HARM (PSE)*

CURRENT SOR: TEXAS INSTRUMENTS, INC.

02 May FY94

Task Name	Start Date	End Date
ENVIR STUDIES	01 Jul FY93	24 Dec FY94
FACILITIES	01 Jul FY93	01 Jul FY93
Design/ALT	01 Jul FY93	01 Jul FY93
Construction	01 Jul FY93	01 Jul FY93
EQUIPMENT	24 Dec FY94	31 Mar FY94
PERSONNEL	01 Sep FY93	30 Jun FY94
TRAINING	01 Jul FY94	29 Jul FY94
OJT	01 Jul FY94	29 Jul FY94
TECH DATA	24 Dec FY94	31 Mar FY94
SUPPLY	01 Oct FY94	30 Jun FY94
FAT	29 Jun FY94	29 Jul FY94



Filename: HARMPSE

POC: CARL ARGENBRIGHT DSN: 570-9798

Baseline

Actual

Milestone

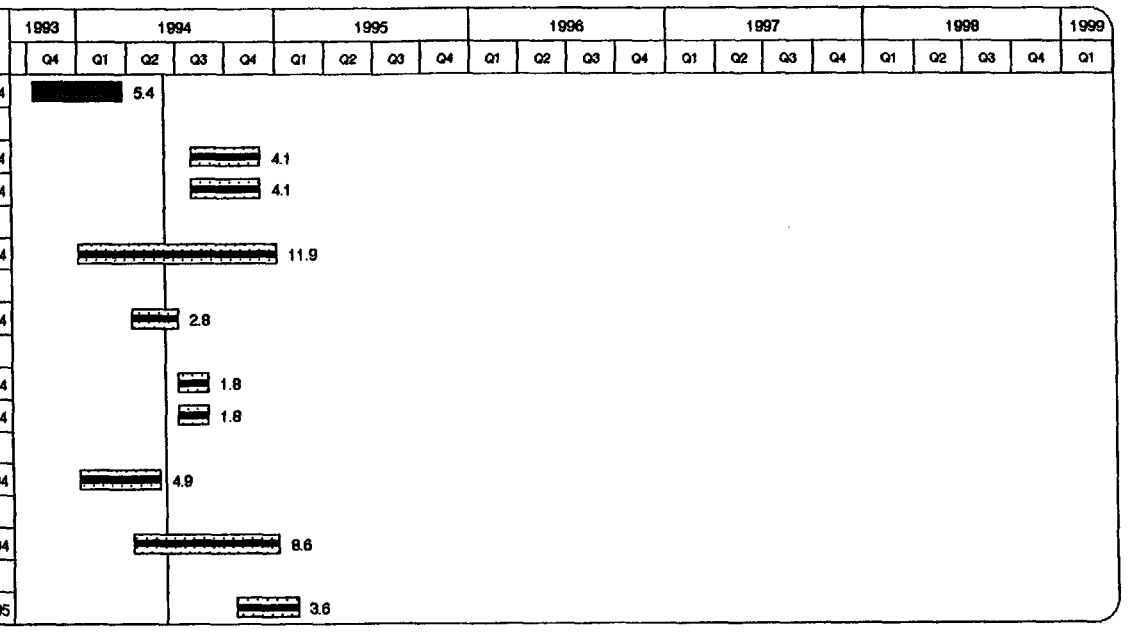
* INTERMEDIATE LEVEL PECULIAR GROUND SUPPORT EQUIPMENT ONLY.

DRAGON

CURRENT SOR: ANAD

09 Mar FY94

Task Name	Start Date	End Date
ENVIR STUDIES	13 Jul FY93	24 Dec FY94
FACILITIES	02 May FY94	02 Sep FY94
Construction	02 May FY94	02 Sep FY94
EQUIPMENT	01 Oct FY94	30 Sep FY94
PERSONNEL	10 Jan FY94	04 Apr FY94
TRAINING	04 Apr FY94	27 May FY94
OJT	04 Apr FY94	27 May FY94
TECH DATA	01 Oct FY94	28 Feb FY94
SUPPLY	10 Jan FY94	30 Sep FY94
FAT	18 Jul FY94	04 Nov FY95



Filename: DRAGON

POC: ROD GIPE DSN: 570-9672

NOTE: BLDG 370 LOCATION ESTABLISHED.

EQUIPMENT TIMELINE INCLUDES INSTALLATION OF MODULAR CLEANROOM.

EXISTING CLEANROOM WILL BE UTILIZED AS REQUIRED.

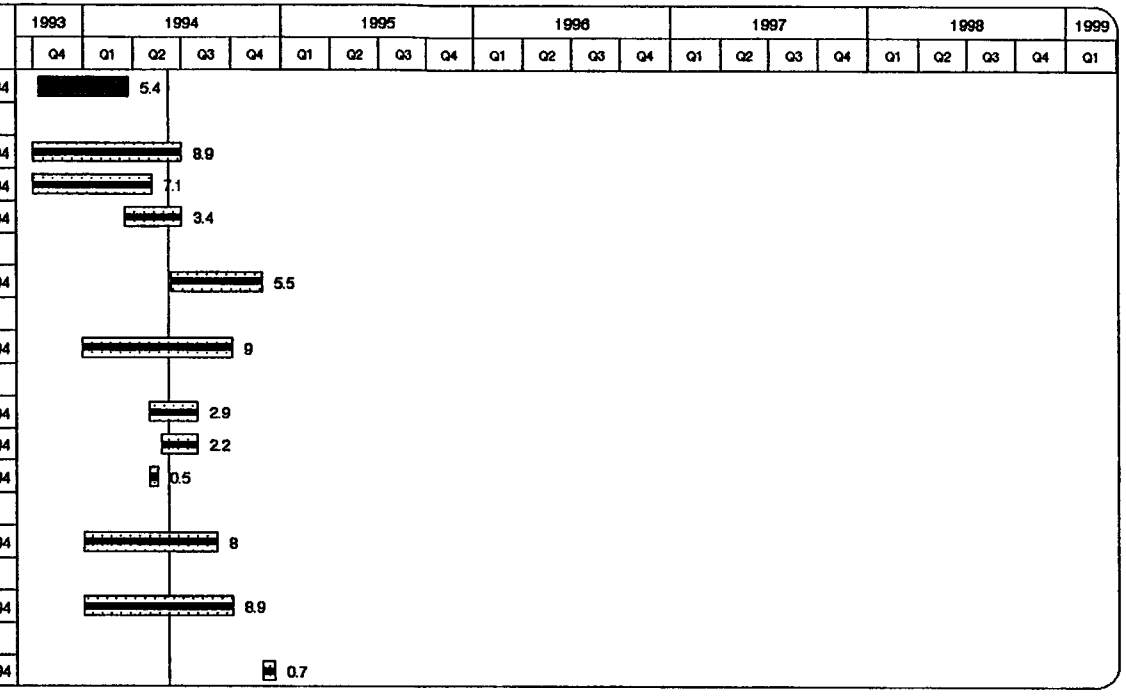
Baseline | Actual | Milestone

PHOENIX

CURRENT SOR: ALAMEDA

08 Mar FY94

Task Name	Start Date	End Date	Duration
ENVIR STUDIES	13 Jul FY93	24 Dec FY94	5.4
FACILITIES	01 Jul FY93	31 Mar FY94	8.9
Design/ALT	01 Jul FY93	04 Feb FY94	7.1
Construction	20 Dec FY94	31 Mar FY94	3.4
EQUIPMENT	14 Mar FY94	26 Aug FY94	5.5
PERSONNEL	30 Sep FY93	01 Jul FY94	9
TRAINING	02 Feb FY94	29 Apr FY94	2.9
OJT	23 Feb FY94	29 Apr FY94	2.2
Formal	02 Feb FY94	15 Feb FY94	0.5
TECH DATA	04 Oct FY94	03 Jun FY94	8
SUPPLY	04 Oct FY94	01 Jul FY94	8.9
FAT	29 Aug FY94	19 Sep FY94	0.7



Filename: PHOENIX
POC: FRED MOXLEY DSN: 570-9585
NOTE: FEP FOR POWER, AC, LIGHTING IN BLDG 370.

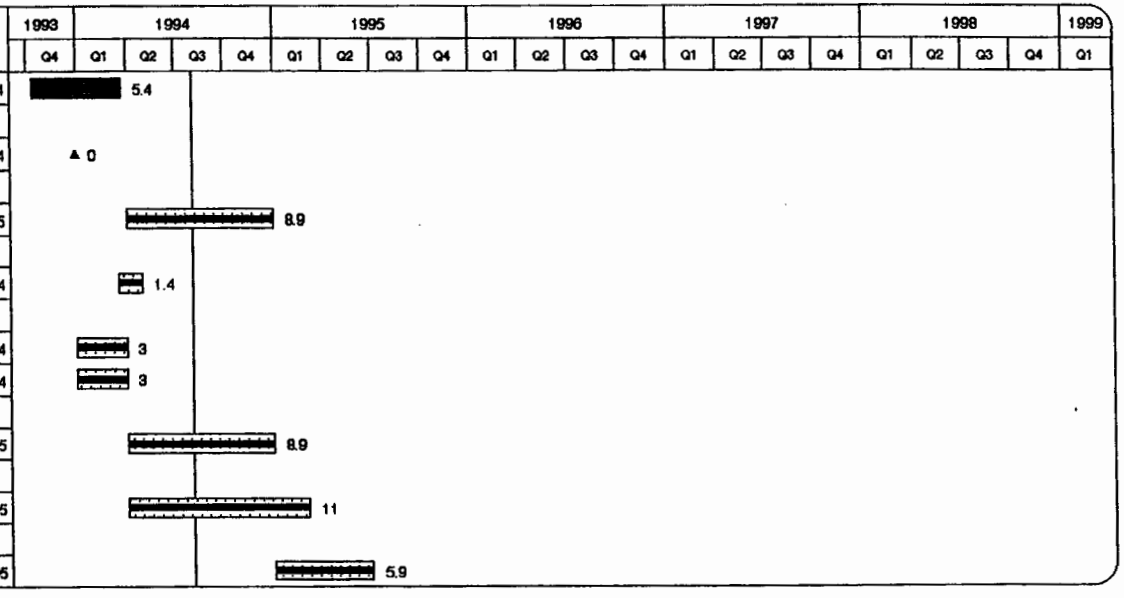
Baseline | Actual | Milestone

MLRS (CONTRACT)

CURRENT SOR: LORAL VOUGHT SYSTEMS (LVS)

04 May FY94

Task Name	Start Date	End Date
ENVIR STUDIES	13 Jul FY93	24 Dec FY94
FACILITIES	01 Oct FY94	01 Oct FY94
EQUIPMENT	03 Jan FY94	03 Oct FY95
PERSONNEL	20 Dec FY94	31 Jan FY94
TRAINING	01 Oct FY94	31 Dec FY94
Formal	01 Oct FY94	31 Dec FY94
TECH DATA	03 Jan FY94	03 Oct FY95
SUPPLY	03 Jan FY94	05 Dec FY95
FAT	03 Oct FY95	31 Mar FY95



Filename: MLRS-CTR

POC: BOB LEHR DSN: 788-0355

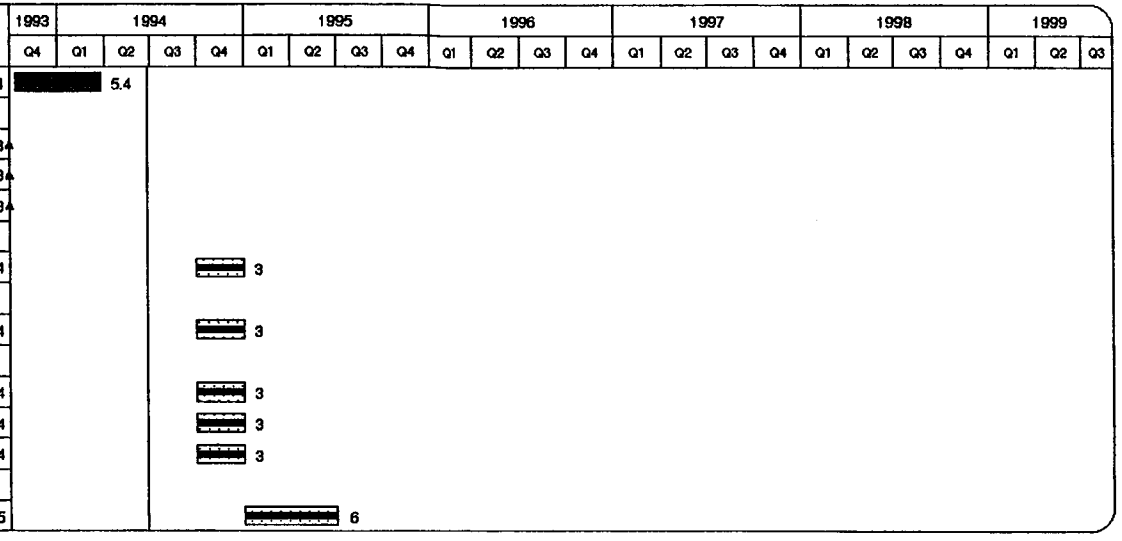
Baseline | Actual | Milestone

HAWK (BARSTOW) PHASE I

CURRENT SOR: BARSTOW

28 Mar FY94

Task Name	Start Date	End Date
ENVIR STUDIES	13 Jul FY93	24 Dec FY94
FACILITIES	01 Jul FY93	01 Jul FY93
Design/ALT	01 Jul FY93	01 Jul FY93
Construction	01 Jul FY93	01 Jul FY93
EQUIPMENT	01 Jul FY94	30 Sep FY94
TECH DATA	01 Jul FY94	30 Sep FY94
SUPPLY	01 Jul FY94	30 Sep FY94
MWS Assets	01 Jul FY94	30 Sep FY94
Resld Bench Stock	01 Jul FY94	30 Sep FY94
FAT	03 Oct FY95	03 Apr FY95



Filename: HAWKBST1

POC: BILL McNEW DSN: 570-9798

1. SYSTEM EXPERTISE IS CURRENTLY RESIDENT AT LEAD.
2. A VAL/VER WILL BE PERFORMED IN LIEU OF FAT.
3. MWS ASSETS ARE CODE F ASSETS THAT WILL BE SENT TO LEAD FOR DEPOT MAINT.
4. MC requires a signed DMISA prior to shipping MWS assets.
5. DMISA will be finalized by 1 Jul FY94.

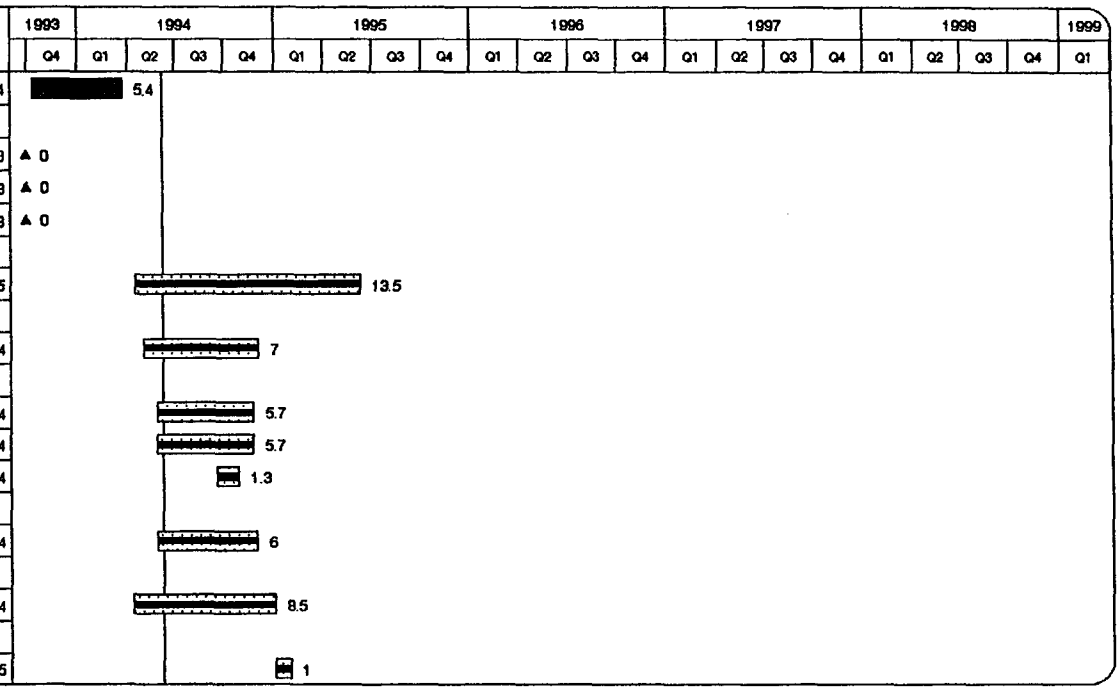
Baseline | Actual | Milestone

TOW BRADLEY

CURRENT SOR: RRAD

09 Mar FY94

Task Name	Start Date	End Date	
ENVIR STUDIES	13 Jul FY93	24 Dec FY94	5.4
FACILITIES	01 Jul FY93	01 Jul FY93	▲ 0
Design/ALT	01 Jul FY93	01 Jul FY93	▲ 0
Construction	01 Jul FY93	01 Jul FY93	▲ 0
EQUIPMENT	18 Jan FY94	09 Mar FY95	13.5
PERSONNEL	01 Feb FY94	01 Sep FY94	7
TRAINING	01 Mar FY94	23 Aug FY94	5.7
OJT	01 Mar FY94	23 Aug FY94	5.7
Formal	20 Jun FY94	27 Jul FY94	1.3
TECH DATA	01 Mar FY94	30 Aug FY94	6
SUPPLY	12 Jan FY94	30 Sep FY94	8.5
FAT	03 Oct FY95	31 Oct FY95	1



Filename: TOWBRADL

POC: RICHARD NOLL DSN: 570-9672

NOTE: FORMAL TRAINING IS ON VATE ATE WORKAROUND CAPABILITY WILL BE ESTABLISHED IN BLDG 370 PRIOR TO BLDG 426 COMPLETION 22 MAY FY94 TO 17 JAN FY95.

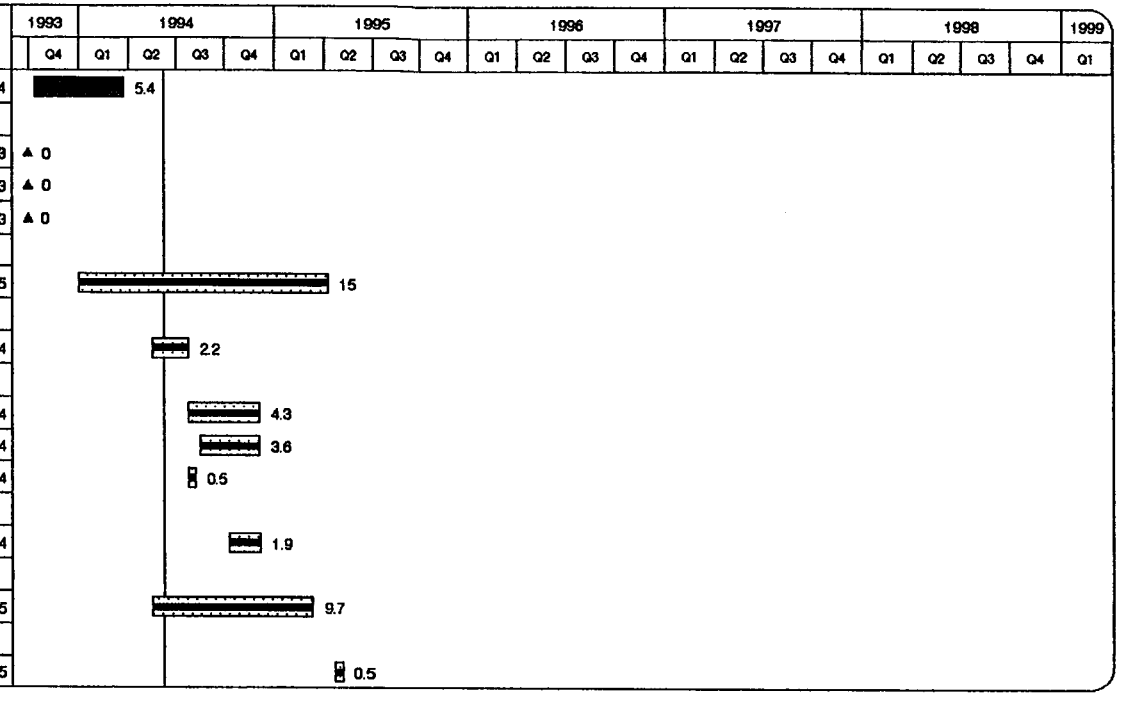
Baseline | Actual | Milestone

SIDEWINDER (NAVY)

CURRENT SOR: NORFOLK

10 Mar FY94

Task Name	Start Date	End Date
ENVIR STUDIES	13 Jul FY93	24 Dec FY94
FACILITIES	01 Jul FY93	01 Jul FY93
Design/ALT	01 Jul FY93	01 Jul FY93
Construction	01 Jul FY93	01 Jul FY93
EQUIPMENT	01 Oct FY94	06 Jan FY95
PERSONNEL	16 Feb FY94	22 Apr FY94
TRAINING	25 Apr FY94	02 Sep FY94
OJT	16 May FY94	02 Sep FY94
Formal	25 Apr FY94	06 May FY94
TECH DATA	12 Jul FY94	06 Sep FY94
SUPPLY	16 Feb FY94	09 Dec FY95
FAT	23 Jan FY95	03 Feb FY95



Filename: SWINDERN
POC: JEFF SCHAAF DSN: 570-9564
NOTE: EQUIPMENT TIMELINE INCLUDES
8 MONTHS FOR PROCUREMENT ACTIONS,
HAVING NO EFFECT ON TRAINING.

Baseline Actual Milestone

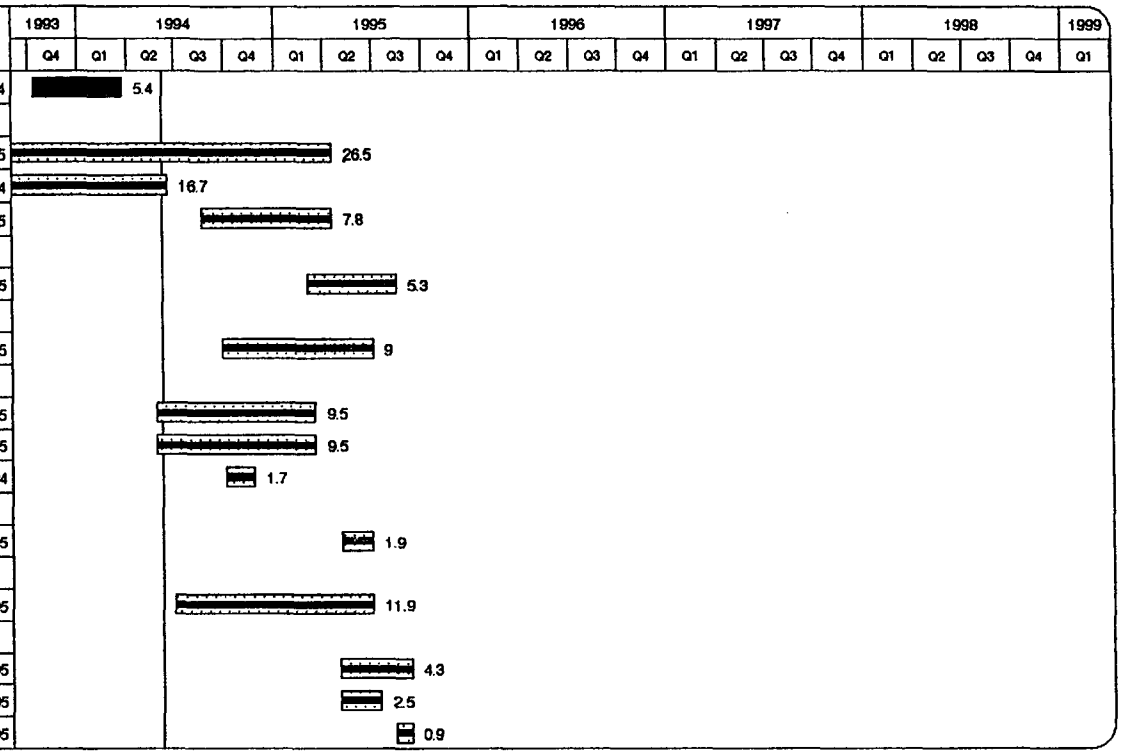
NOTE: Facility workaround will utilize Temporary HARM System in Bldg 370. Objective project (Bldg 370, under Small Mezzanine) construction period 9 May 94 - 5 Dec 94.

TOW COBRA

CURRENT SOR: ANAD

09 Mar FY94

Task Name	Start Date	End Date	Duration
ENVIR STUDIES	13 Jul FY93	24 Dec FY94	5.4
FACILITIES	14 Oct FY93	17 Jan FY95	26.5
Design/ALT	14 Oct FY93	18 Mar FY94	16.7
Construction	23 May FY94	17 Jan FY95	7.8
EQUIPMENT	05 Dec FY95	15 May FY95	5.3
PERSONNEL	30 Jun FY94	03 Apr FY95	9
TRAINING	28 Feb FY94	15 Dec FY95	9.5
OJT	28 Feb FY94	15 Dec FY95	9.5
Formal	06 Jul FY94	25 Aug FY94	1.7
TECH DATA	03 Feb FY95	31 Mar FY95	1.9
SUPPLY	01 Apr FY94	31 Mar FY95	11.9
FAT	31 Jan FY95	09 Jun FY95	4.3
Phase 1	31 Jan FY95	14 Apr FY95	2.5
Phase 2	15 May FY95	09 Jun FY95	0.9



Filename: TOWCOBRA

POC: RICHARD NOLL DSN: 570-9672

NOTE: CONSTRUCTION IS FEP

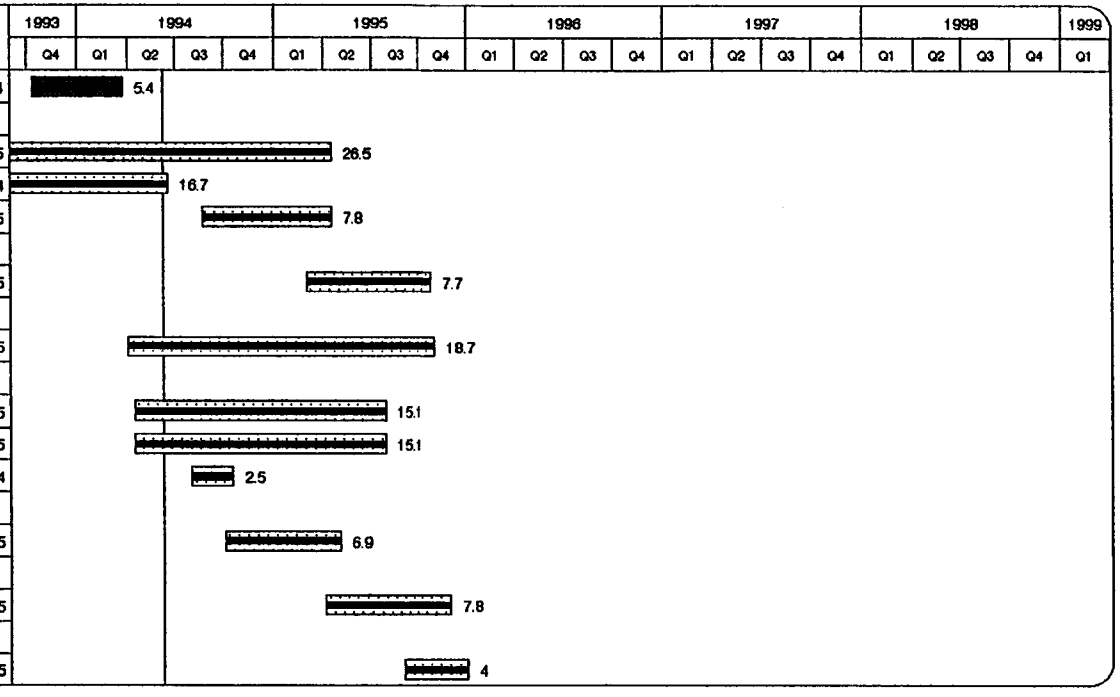
Baseline Actual Milestone

TOW 2

CURRENT SOR: ANAD

09 Mar FY94

Task Name	Start Date	End Date
ENVIR STUDIES	13 Jul FY93	24 Dec FY94
FACILITIES	14 Oct FY93	17 Jan FY95
Design/ALT	14 Oct FY93	18 Mar FY94
Construction	23 May FY94	17 Jan FY95
EQUIPMENT	01 Dec FY95	26 Jul FY95
PERSONNEL	04 Jan FY94	01 Aug FY95
TRAINING	18 Jan FY94	26 Apr FY95
OJT	18 Jan FY94	26 Apr FY95
Formal	02 May FY94	15 Jul FY94
TECH DATA	05 Jul FY94	01 Feb FY95
SUPPLY	04 Jan FY95	30 Aug FY95
FAT	01 Jun FY95	29 Sep FY95



Filename: TOW2

POC: RICHARD NOLL DSN: 570-9672

NOTE: CONSTRUCTION IS FEP.

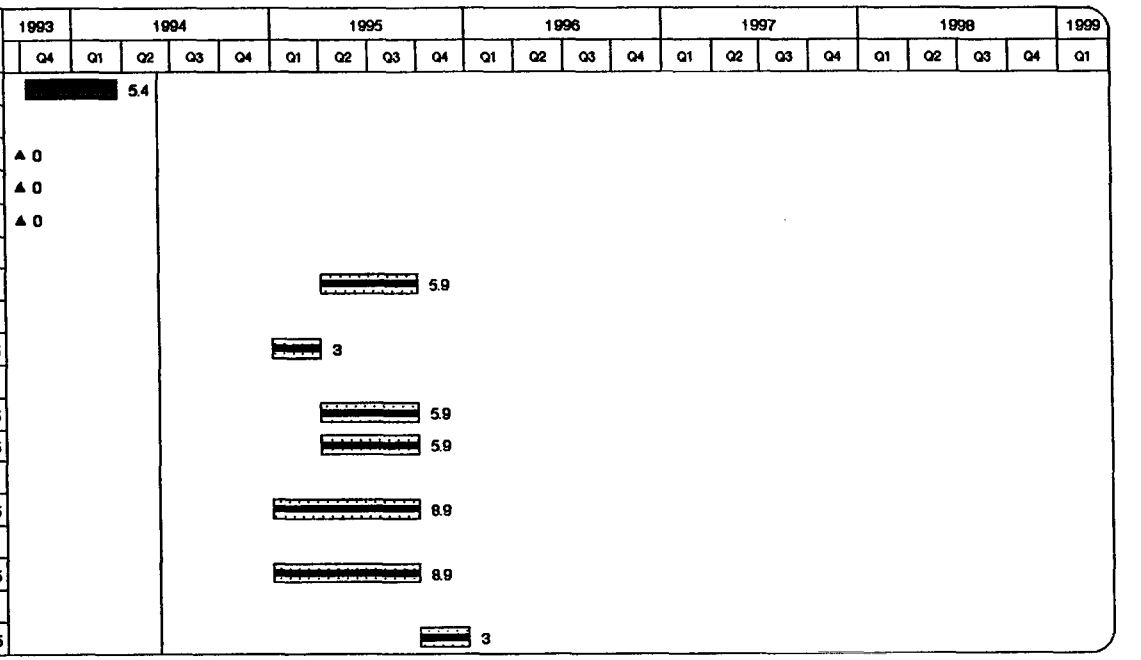
Baseline Actual Milestone

PATRIOT (CONTRACT)

CURRENT SOR: RAYTHEON

08 Mar FY94

Task Name	Start Date	End Date
ENVIR STUDIES	13 Jul FY93	24 Dec FY94
FACILITIES	01 Jul FY93	01 Jul FY93
Design/ALT	01 Jul FY93	01 Jul FY93
Construction	01 Jul FY93	01 Jul FY93
EQUIPMENT	03 Jan FY95	30 Jun FY95
PERSONNEL	03 Oct FY95	30 Dec FY95
TRAINING	02 Jan FY95	30 Jun FY95
Formal	02 Jan FY95	30 Jun FY95
TECH DATA	03 Oct FY95	30 Jun FY95
SUPPLY	03 Oct FY95	30 Jun FY95
FAT	03 Jul FY95	29 Sep FY95



Filename: PATRIOTC

POC: BILL McNEW DSN: 570-9798

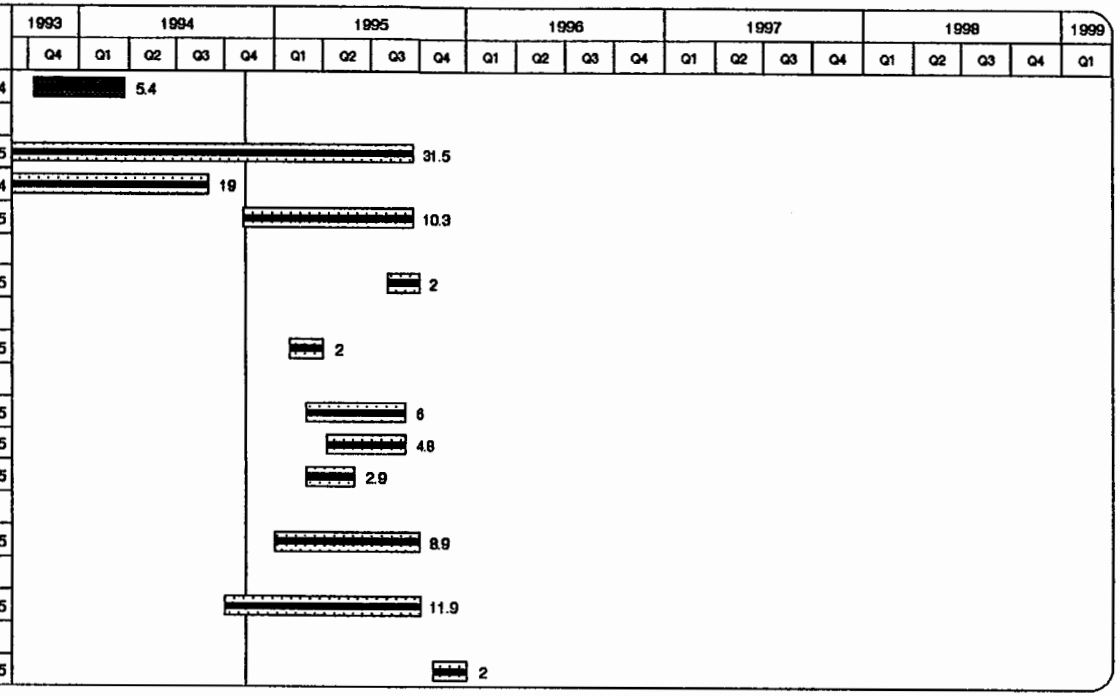
Baseline Actual Milestone

STANDARD

CURRENT SOR: SEAL BEACH

10 Aug FY94

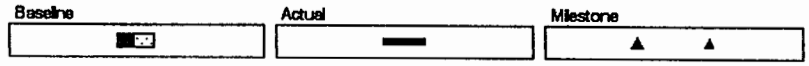
Task Name	Start Date	End Date
ENVIR STUDIES	13 Jul FY93	24 Dec FY94
FACILITIES	14 Oct FY93	19 Jun FY95
Design/ALT	14 Oct FY93	31 May FY94
Construction	08 Aug FY94	19 Jun FY95
EQUIPMENT	01 May FY95	30 Jun FY95
PERSONNEL	01 Nov FY95	30 Dec FY95
TRAINING	01 Dec FY95	02 Jun FY95
OJT	09 Jan FY95	02 Jun FY95
Formal	01 Dec FY95	28 Feb FY95
TECH DATA	03 Oct FY95	30 Jun FY95
SUPPLY	01 Jul FY94	03 Jul FY95
FAT	01 Aug FY95	29 Sep FY95



Filename: STANDARD

POC: SANDRA K. JACKSON DSN: 570-9564

NOTE: EQUIPMENT TIMELINE INCLUDES PROCUREMENT ACTIONS WHICH WILL NOT AFFECT TRAINING.



Note below reflects new information since the staffing of the I-Plan.

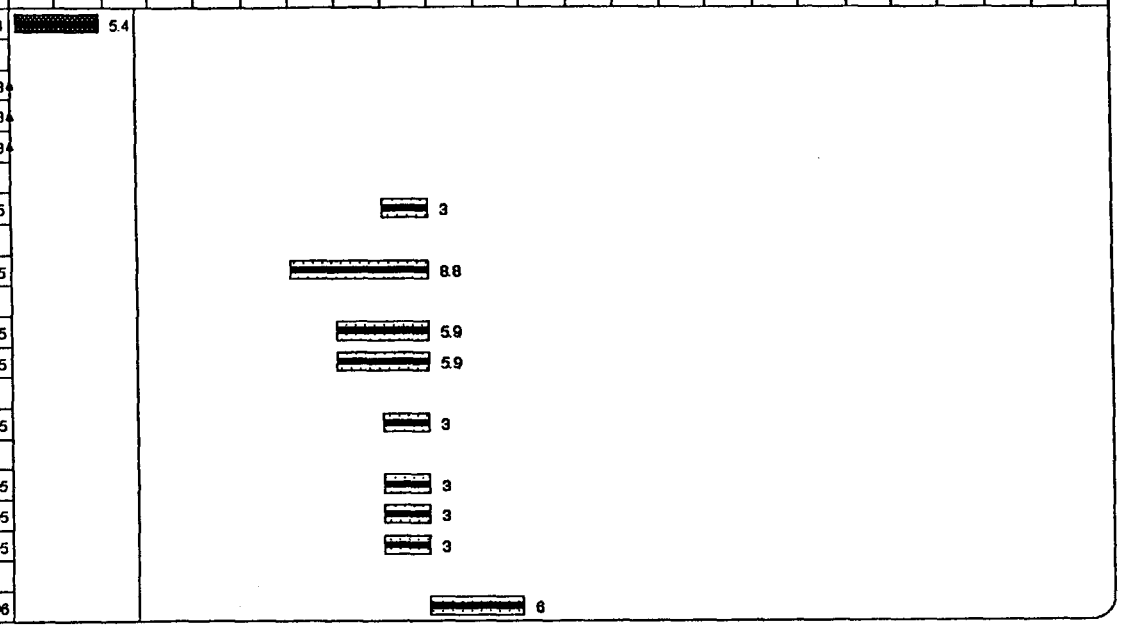
Due to reduced missile inventory requirements, ship retirements and PCM96 O&M reductions, sufficient RFI steering controls and SM-1 autopilot battery units will exist in inventory to preclude the need for any depot repairs beyond FY95. Since a requirement for this repair capability will no longer exist, this capability will not transition from Seal Beach to LEAD.

HAWK (BARSTOW) PHASE II

CURRENT SOR: BARSTOW

08 Mar FY94

Task Name	Start Date	End Date	1993 Q4	1994 Q1	1994 Q2	1994 Q3	1994 Q4	1995 Q1	1995 Q2	1995 Q3	1995 Q4	1996 Q1	1996 Q2	1996 Q3	1996 Q4	1997 Q1	1997 Q2	1997 Q3	1997 Q4	1998 Q1	1998 Q2	1998 Q3	1998 Q4	1999 Q1	1999 Q2	1999 Q3
ENVIR STUDIES	13 Jul FY93	24 Dec FY94																								
FACILITIES	01 Jul FY93	01 Jul FY93																								
Design/ALT	01 Jul FY93	01 Jul FY93																								
Construction	01 Jul FY93	01 Jul FY93																								
EQUIPMENT	03 Jul FY95	29 Sep FY95																								
PERSONNEL	03 Jan FY95	29 Sep FY95																								
TRAINING	03 Apr FY95	29 Sep FY95																								
OJT (PIPs)	03 Apr FY95	29 Sep FY95																								
TECH DATA	03 Jul FY95	29 Sep FY95																								
SUPPLY	03 Jul FY95	29 Sep FY95																								
MWS Assets	03 Jul FY95	29 Sep FY95																								
Resid Bench Stock	03 Jul FY95	29 Sep FY95																								
FAT(Phase 2 PIP)	02 Oct FY96	01 Apr FY96																								



Filename: HAWKBST2

POC: BILL McNEW DSN: 570-9798

1. EXECUTION OF PHASE 2 DEPENDS ON ARMY DEMONSTRATED PERFORMANCE OF PHASE 1 ITEMS.

2. MWS ASSETS ARE CODE F ASSETS THAT WILL BE SENT TO LEAD FOR DEPOT MAINT.

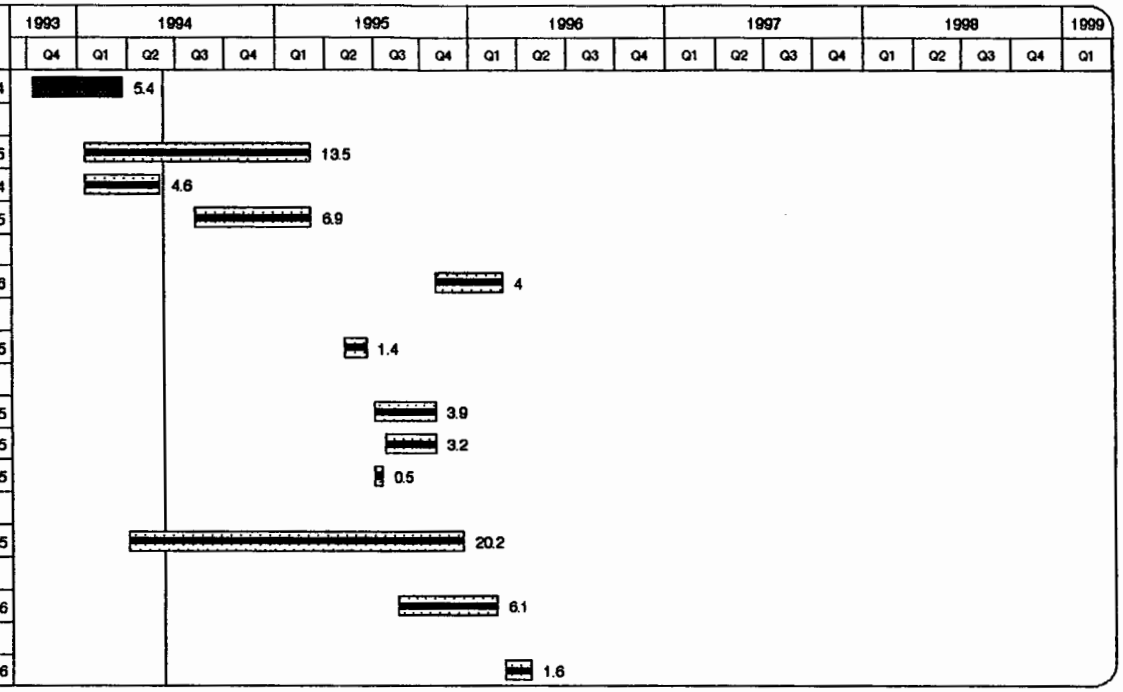
Baseline | Actual | Milestone

SIDEWINDER (AIR FORCE)

CURRENT SOR: OGDEN

10 Mar FY94

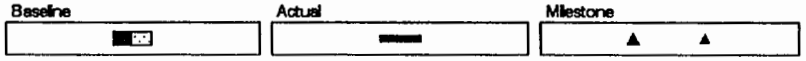
Task Name	Start Date	End Date
ENVIR STUDIES	13 Jul FY93	24 Dec FY94
FACILITIES	14 Oct FY94	05 Dec FY95
Design/ALT	14 Oct FY94	03 Mar FY94
Construction	09 May FY94	05 Dec FY95
EQUIPMENT	31 Jul FY95	30 Nov FY96
PERSONNEL	06 Feb FY95	17 Mar FY95
TRAINING	03 Apr FY95	28 Jul FY95
OJT	24 Apr FY95	28 Jul FY95
Formal	03 Apr FY95	14 Apr FY95
TECH DATA	03 Jan FY94	15 Sep FY95
SUPPLY	15 May FY95	17 Nov FY96
FAT	04 Dec FY96	19 Jan FY96



Filename: SWINDERA

POC: JEFF SCHAAF DSN: 570-9564

NOTE: EQUIPMENT TIMELINE INCLUDES PROCUREMENT ACTIONS, WHICH WILL NOT AFFECT TRAINING.



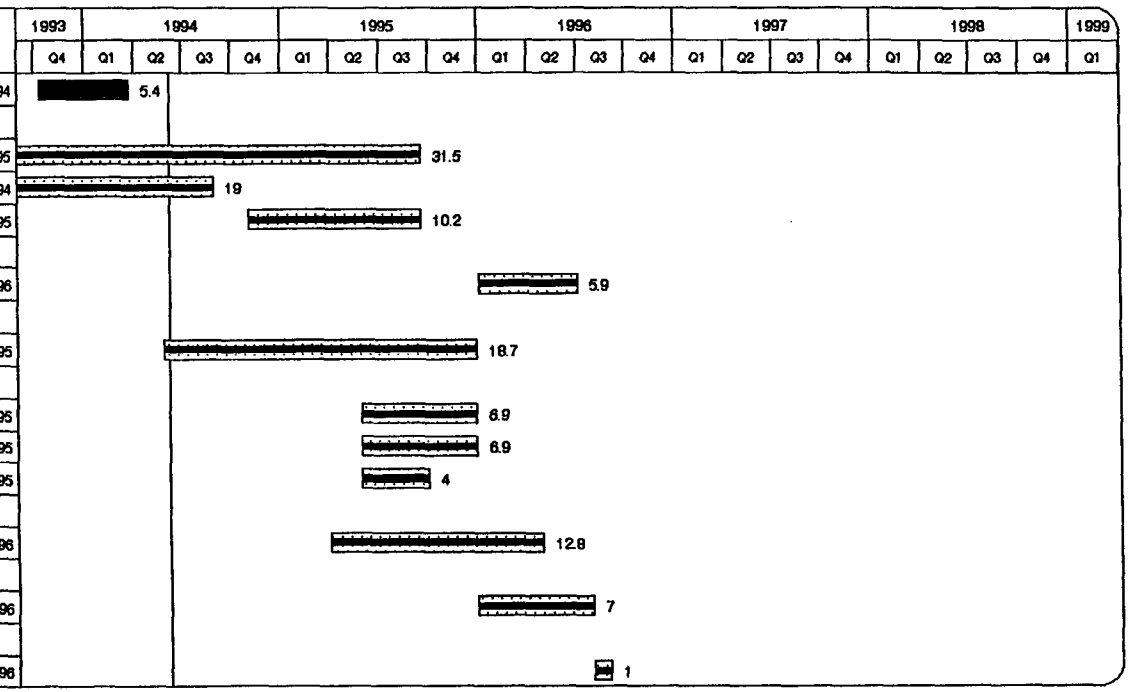
The FAT dates may be altered when requirements are definitized during transition planning.

MAVERICK

CURRENT SOR: OGDEN

09 Mar FY94

Task Name	Start Date	End Date	Duration
ENVIR STUDIES	13 Jul FY93	24 Dec FY94	5.4
FACILITIES	14 Oct FY93	16 Jun FY95	31.5
Design/ALT	14 Oct FY93	31 May FY94	19
Construction	08 Aug FY94	16 Jun FY95	10.2
EQUIPMENT	03 Oct FY96	01 Apr FY96	5.9
PERSONNEL	01 Mar FY94	27 Sep FY95	18.7
TRAINING	01 Mar FY95	27 Sep FY95	6.9
OJT	01 Mar FY95	27 Sep FY95	6.9
Formal	01 Mar FY95	30 Jun FY95	4
TECH DATA	02 Jan FY95	29 Jan FY96	12.8
SUPPLY	28 Sep FY95	30 Apr FY96	7
FAT	01 May FY96	30 May FY96	1



Filename: MAVERICK

POC: SANDRA JACKSON DSN: 570-9564

Baseline | Actual | Milestone

NOTE: UNDER LARGE MEZZANINE BLDG 370.

UTILIZING BCA/MILCON FUNDING.

HAWK (CONTRACT)

CURRENT SOR: RAYTHEON

08 Mar FY94

Task Name	Start Date	End Date	1993 Q4	1994 Q1	1994 Q2	1994 Q3	1994 Q4	1995 Q1	1995 Q2	1995 Q3	1995 Q4	1996 Q1	1996 Q2	1996 Q3	1996 Q4	1997 Q1	1997 Q2	1997 Q3	1997 Q4	1998 Q1	1998 Q2	1998 Q3	1998 Q4	1999 Q1
ENVIR STUDIES	13 Jul FY93	24 Dec FY94	5.4																					
FACILITIES	01 Jul FY93	01 Jul FY93	▲ 0																					
Design/ALT	01 Jul FY93	01 Jul FY93	▲ 0																					
Construction	01 Jul FY93	01 Jul FY93	▲ 0																					
EQUIPMENT	03 Oct FY95	01 Jul FY96										20.7												
PERSONNEL	02 Oct FY96	01 Jan FY96										3												
TRAINING	01 Jan FY96	01 Jul FY96											6											
Formal	01 Jan FY96	01 Jul FY96											6											
TECH DATA	02 Oct FY96	01 Jul FY96										8.9												
SUPPLY	02 Oct FY96	01 Jul FY96										8.9												
FAT	01 Jul FY96	30 Sep FY96													3									

Filename: HAWKCTR

POC: BILL McNEW DSN: 570-9798

Baseline

Actual

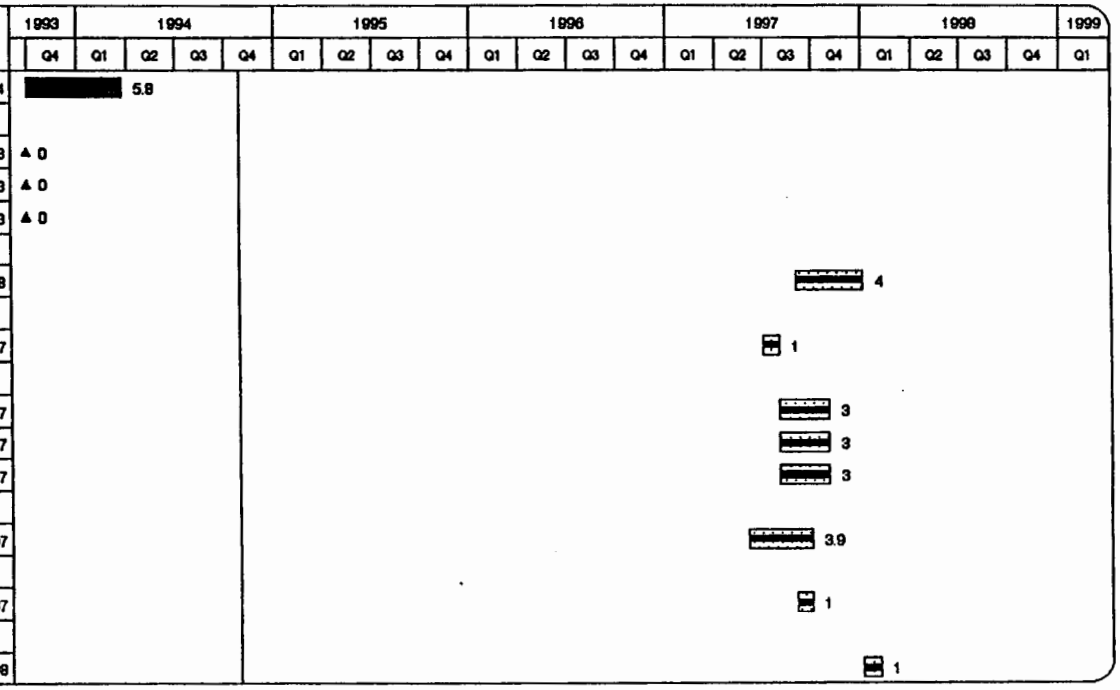
Milestone

HIGH SPEED ANTI-RADIATION MISSILE - HARM (CS)*

CURRENT SOR: TEXAS INSTRUMENTS, INC.

29 Jul FY94

Task Name	Start Date	End Date
ENVIR STUDIES	01 Jul FY93	24 Dec FY94
FACILITIES	01 Jul FY93	01 Jul FY93
Design/ALT	01 Jul FY93	01 Jul FY93
Construction	01 Jul FY93	01 Jul FY93
EQUIPMENT	02 Jun FY97	01 Oct FY98
PERSONNEL	01 Apr FY97	30 Apr FY97
TRAINING	01 May FY97	31 Jul FY97
OJT	01 May FY97	31 Jul FY97
Formal	01 May FY97	31 Jul FY97
TECH DATA	03 Mar FY97	30 Jun FY97
SUPPLY	02 Jun FY97	30 Jun FY97
FAT	01 Oct FY98	30 Oct FY98



Filename: HARMCS

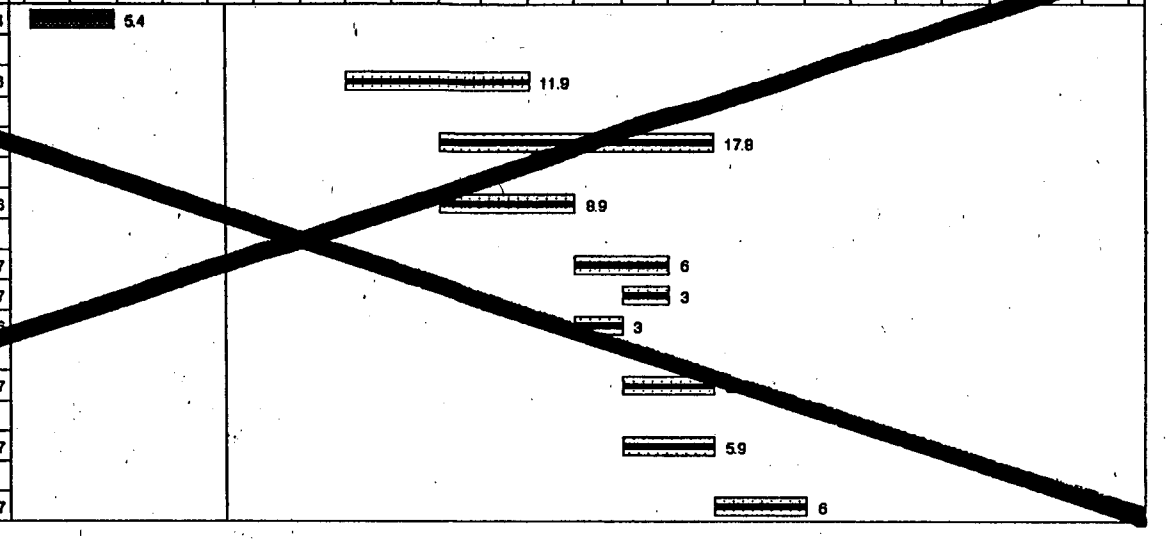
POC: CARL ARGENBRIGHT DSN: 570-9798

Baseline | Actual | Milestone

* CONTROL SECTION

AN/TSQ-73
CURRENT SOR: TOAD
03 Aug FY94

	Start Date	End Date
ENVIR STUDIES	13 Jul FY93	24 Dec FY94
FACILITIES	03 Apr [illegible]	01 Apr FY96
EQUIPMENT	02 Oct FY96	31 Mar [illegible]
PERSONNEL	02 Oct FY96	28 Jun FY96
TRAINING	01 Jul FY96	31 Dec FY97
OJT	01 Oct FY97	31 Dec FY97
Formal	01 Jul FY96	30 Sep FY9[illegible]
TECH DATA	01 Oct [illegible]	31 Mar FY97
SUPPLY	01 Oct FY97	31 Mar FY97
[illegible]	01 Apr FY97	30 Sep FY97



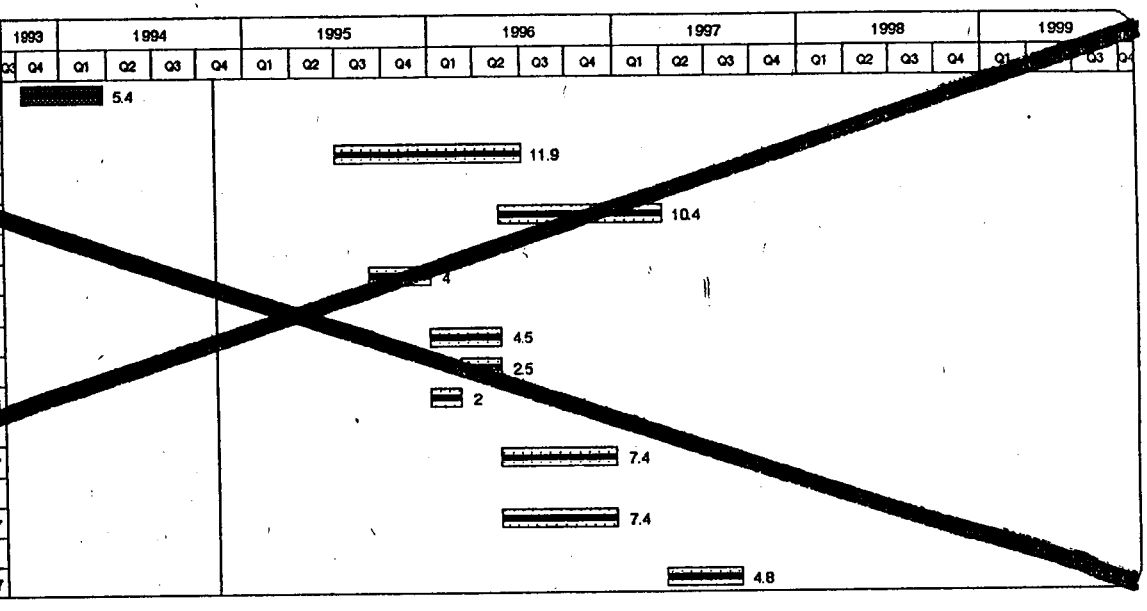
Filename: TSQ-73
POC: BILL McNEW DSN: 570-9798

Baseline | Actual | Milestone

Note: AN/TSQ-73 is scheduled to retire at TOAD NLT 4Q FY98.

CHAPARRAL
CURRENT SOR: RRAD
03 Aug FY94

	Start Date	End Date
ENVIR STUDIES	13 Jul FY93	24 Dec FY94
FACILITIES	03 Apr [illegible]	01 Apr FY96
EQUIPMENT	16 Feb FY96	01 Jan [illegible]
PERSONNEL	02 Jun FY95	03 Oct FY96
TRAINING	02 Oct FY96	16 Feb FY96
OJT	01 Dec FY96	16 Feb FY96
Formal	02 Oct FY96	30 Nov FY96
TECH DATA	16 Feb [illegible]	01 Oct FY97
SUPPLY	16 Feb FY96	01 Oct FY97
[illegible]	06 Jan FY97	02 Jun FY97



Filename: CHAPARRL
POC: DAVE LEONARD DSN: 570-9564

Baseline | Actual | Milestone

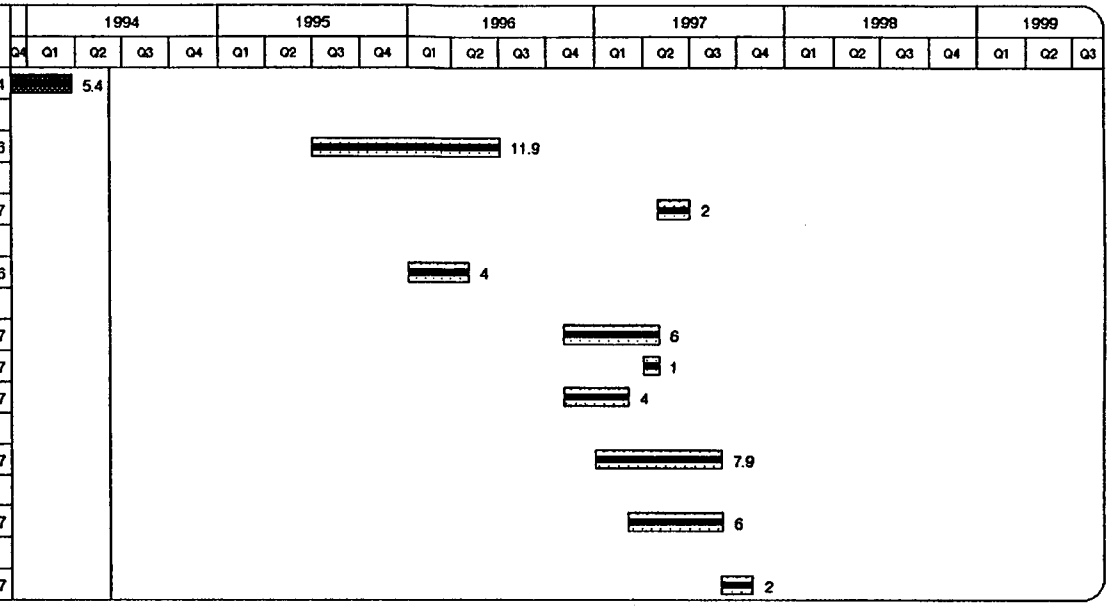
Note: Chaparral will retire at RRAD NLT FY96.

LCSS

CURRENT SOR: ANAD

08 Mar FY94

Task Name	Start Date	End Date	Duration
ENVIR STUDIES	13 Jul FY93	24 Dec FY94	5.4
FACILITIES	03 Apr FY95	01 Apr FY96	11.9
EQUIPMENT	30 Jan FY97	31 Mar FY97	2
PERSONNEL	02 Oct FY96	31 Jan FY96	4
TRAINING	01 Aug FY96	30 Jan FY97	6
OJT	01 Jan FY97	30 Jan FY97	1
Formal	01 Aug FY96	02 Dec FY97	4
TECH DATA	01 Oct FY97	30 May FY97	7.9
SUPPLY	02 Dec FY97	02 Jun FY97	6
FAT	02 Jun FY97	30 Jul FY97	2



Filename: LCSS

POC: ROD GIPE DSN: 570-9846

NOTE: TRANSITION WILL BE BASED ON SYSTEM LIFE.

Baseline

Actual

Milestone

SHILLELAGH

CURRENT SOR: ANAD

08 Mar FY94

Task Name	Start Date	End Date	Duration
ENVIR STUDIES	13 Jul FY93	24 Dec FY94	5.4
FACILITIES	03 Apr FY95	01 Apr FY96	11.9
EQUIPMENT	30 Jan FY97	31 Mar FY97	2
PERSONNEL	02 Oct FY96	31 Jan FY96	4
TRAINING	01 Jan FY97	30 Jan FY97	1
OJT	01 Jan FY97	30 Jan FY97	1
TECH DATA	01 Oct FY97	30 May FY97	7.9
SUPPLY	02 Dec FY97	02 Jun FY97	6
FAT	02 Jun FY97	30 Jul FY97	2

Filename: SHILL

POC: ROD GIPE DSN: 570-9846

NOTE: TRANSITION WILL BE BASED ON SYSTEM LIFE.

Baseline

Actual

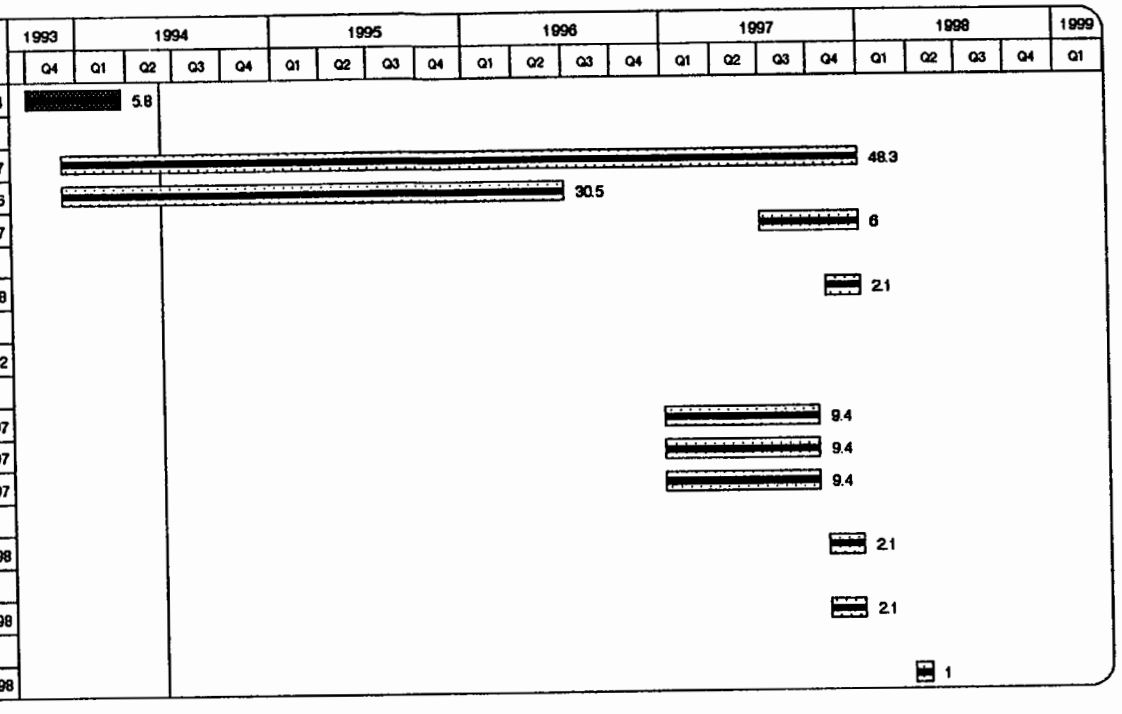
Milestone

AMRAAM-HUGHES AWARD

CURRENT SOR: HUGHES

08 Mar FY94

Task Name	Start Date	End Date
ENVIR STUDIES	01 Jul FY93	24 Dec FY94
FACILITIES	03 Sep FY93	30 Sep FY97
DesignALT	03 Sep FY93	01 Apr FY96
Construction	31 Mar FY97	30 Sep FY97
EQUIPMENT	30 Jul FY97	01 Oct FY98
PERSONNEL	01 May FY92	30 Sep FY92
TRAINING	01 Oct FY97	15 Jul FY97
OJT	01 Oct FY97	15 Jul FY97
Formal	01 Oct FY97	15 Jul FY97
TECH DATA	30 Jul FY97	01 Oct FY98
SUPPLY	30 Jul FY97	01 Oct FY98
FAT	01 Jan FY98	30 Jan FY98



Filename: AMRAAMH

POC: BOB WOOD DSN: 570-9585

Baseline

Actual

Milestone

HIGH SPEED ANTI-RADIATION MISSILE - HARM (GS)*

CURRENT SOR: TEXAS INSTRUMENTS, INC.

09 Mar FY94

Task Name	Start Date	End Date	1993 Q4	1994 Q1	1994 Q2	1994 Q3	1994 Q4	1995 Q1	1995 Q2	1995 Q3	1995 Q4	1996 Q1	1996 Q2	1996 Q3	1996 Q4	1997 Q1	1997 Q2	1997 Q3	1997 Q4	1998 Q1	1998 Q2	1998 Q3	1998 Q4	1999 Q1
ENVIR STUDIES	01 Jul FY93	24 Dec FY94	5.8																					
FACILITIES	01 Jul FY93	30 Apr FY97																45.5						
Design/ALT	01 Jul FY93	01 Jul FY93	▲ 0																					
Construction	01 Sep FY95	30 Apr FY97														19.7								
EQUIPMENT	01 Jan FY97	30 Apr FY98																	15.8					
PERSONNEL	30 Apr FY96	31 May FY96												1.1										
TRAINING	02 Feb FY98	30 Mar FY98																			1.9			
OJT	02 Feb FY98	30 Mar FY98																			1.9			
TECH DATA	01 Feb FY96	31 May FY96											4											
SUPPLY	01 Oct FY94	01 Nov FY94		1																				
FAT	01 Apr FY98	30 Apr FY98																				1		

Filename: HARMGS

POC: CARL ARGENBRIGHT DSN: 570-9798

Baseline | Actual | Milestone

* GUIDANCE SECTION

STINGER (CONTRACT)

CURRENT SOR: HUGHES

28 Apr FY94

Task Name	Start Date	End Date	1993 Q4	1994 Q1	1994 Q2	1994 Q3	1994 Q4	1995 Q1	1995 Q2	1995 Q3	1995 Q4	1996 Q1	1996 Q2	1996 Q3	1996 Q4	1997 Q1	1997 Q2	1997 Q3	1997 Q4	1998 Q1	1998 Q2	1998 Q3	1998 Q4	1999 Q1
ENVIR STUDIES	13 Jul FY93	24 Dec FY94		5.4																				
FACILITIES	01 Oct FY99	01 Oct FY99																						0
Design/ALT	01 Oct FY99	01 Oct FY99																						0
Construction	01 Oct FY99	01 Oct FY99																						0
EQUIPMENT	01 Oct FY99	01 Oct FY99																						0
PERSONNEL	01 Oct FY99	01 Oct FY99																						0
TRAINING	01 Oct FY99	01 Oct FY99																						0
OJT	01 Oct FY99	01 Oct FY99																						0
Formal	01 Oct FY99	01 Oct FY99																						0
TECH DATA	01 Oct FY99	01 Oct FY99																						0
SUPPLY	01 Oct FY99	01 Oct FY99																						0
FAT	01 Oct FY99	01 Oct FY99																						0

Filename: STINGERC

POC:

NOTE: DATE SHOWN (01 OCT FY99) IS USED UNTIL SCHEDULE IS DETERMINED.

SCHEDULE IS PENDING.

Baseline | Actual | Milestone

HELLFIRE (CONTRACT)

CURRENT SOR: ROCKWELL

28 Apr FY94

Task Name	Start Date	End Date	1993 Q4	1994 Q1	1994 Q2	1994 Q3	1994 Q4	1995 Q1	1995 Q2	1995 Q3	1995 Q4	1996 Q1	1996 Q2	1996 Q3	1996 Q4	1997 Q1	1997 Q2	1997 Q3	1997 Q4	1998 Q1	1998 Q2	1998 Q3	1998 Q4	1999 Q1
ENVIR STUDIES	13 Jul FY93	24 Dec FY94			5.4																			
FACILITIES	01 Oct FY99	01 Oct FY99																						0
Design/ALT	01 Oct FY99	01 Oct FY99																						0
Construction	01 Oct FY99	01 Oct FY99																						0
EQUIPMENT	01 Oct FY99	01 Oct FY99																						0
PERSONNEL	01 Oct FY99	01 Oct FY99																						0
TRAINING	01 Oct FY99	01 Oct FY99																						0
OJT	01 Oct FY99	01 Oct FY99																						0
Formal	01 Oct FY99	01 Oct FY99																						0
TECH DATA	01 Oct FY99	01 Oct FY99																						0
SUPPLY	01 Oct FY99	01 Oct FY99																						0
FAT	01 Oct FY99	01 Oct FY99																						0

Filename: HELLFCTR

POC:

NOTE: DATE SHOWN (01 OCT FY99) IS USED UNTIL SCHEDULE IS DETERMINED.

SCHEDULE IS PENDING.

Baseline | Actual | Milestone

STANDARD (CTR)

CURRENT SOR: RAYTHEON/GD

26 Apr FY94

Task Name	Start Date	End Date	1993 Q4	1994 Q1	1994 Q2	1994 Q3	1994 Q4	1995 Q1	1995 Q2	1995 Q3	1995 Q4	1996 Q1	1996 Q2	1996 Q3	1996 Q4	1997 Q1	1997 Q2	1997 Q3	1997 Q4	1998 Q1	1998 Q2	1998 Q3	1998 Q4	1999 Q1
ENVIR STUDIES	13 Jul FY93	24 Dec FY94	5.4																					
FACILITIES	01 Oct FY99	01 Oct FY99																						0
Design/ALT	01 Oct FY99	01 Oct FY99																						0
Construction	01 Oct FY99	01 Oct FY99																						0
EQUIPMENT	01 Oct FY99	01 Oct FY99																						0
PERSONNEL	01 Oct FY99	01 Oct FY99																						0
TRAINING	01 Oct FY99	01 Oct FY99																						0
OJT	01 Oct FY99	01 Oct FY99																						0
Formal	01 Oct FY99	01 Oct FY99																						0
TECH DATA	01 Oct FY99	01 Oct FY99																						0
SUPPLY	01 Oct FY99	01 Oct FY99																						0
FAT	01 Oct FY99	01 Oct FY99																						0

Filename: STANDCTR

POC: SANDRA K. JACKSON DSN: 570-9564

NOTE: DATE SHOWN (01 OCT FY99) IS USED UNTIL SCHEDULE IS DETERMINED.

SCHEDULE IS PENDING.

Baseline

Actual

Milestone

TOW BFVS (CTR)

CURRENT SOR: HUGHES

26 Apr FY94

Task Name	Start Date	End Date	1993 Q4	1994 Q1	1994 Q2	1994 Q3	1994 Q4	1995 Q1	1995 Q2	1995 Q3	1995 Q4	1996 Q1	1996 Q2	1996 Q3	1996 Q4	1997 Q1	1997 Q2	1997 Q3	1997 Q4	1998 Q1	1998 Q2	1998 Q3	1998 Q4	1999 Q1
ENVIR STUDIES	13 Jul FY93	24 Dec FY94			5.4																			
FACILITIES	01 Oct FY99	01 Oct FY99																						0
Design/ALT	01 Oct FY99	01 Oct FY99																						0
Construction	01 Oct FY99	01 Oct FY99																						0
EQUIPMENT	01 Oct FY99	01 Oct FY99																						0
PERSONNEL	01 Oct FY99	01 Oct FY99																						0
TRAINING	01 Oct FY99	01 Oct FY99																						0
OJT	01 Oct FY99	01 Oct FY99																						0
Formal	01 Oct FY99	01 Oct FY99																						0
TECH DATA	01 Oct FY99	01 Oct FY99																						0
SUPPLY	01 Oct FY99	01 Oct FY99																						0
FAT	01 Oct FY99	01 Oct FY99																						0

Filename: TOWBFCTR

POC: RICHARD NOLL DSN: 570-9672

NOTE: DATE SHOWN (01 OCT FY99) IS USED UNTIL SCHEDULE IS DETERMINED.

SCHEDULE IS PENDING.

Baseline | Actual | Milestone

SIDEARM (CTR)

CURRENT SOR: MOTOROLA

28 Apr FY94

Task Name	Start Date	End Date	1993 Q4	1994 Q1	1994 Q2	1994 Q3	1994 Q4	1995 Q1	1995 Q2	1995 Q3	1995 Q4	1996 Q1	1996 Q2	1996 Q3	1996 Q4	1997 Q1	1997 Q2	1997 Q3	1997 Q4	1998 Q1	1998 Q2	1998 Q3	1998 Q4	1999 Q1
ENVIR STUDIES	13 Jul FY93	24 Dec FY94	5.4																					
FACILITIES	01 Oct FY99	01 Oct FY99																						0
Design/ALT	01 Oct FY99	01 Oct FY99																						0
Construction	01 Oct FY99	01 Oct FY99																						0
EQUIPMENT	01 Oct FY99	01 Oct FY99																						0
PERSONNEL	01 Oct FY99	01 Oct FY99																						0
TRAINING	01 Oct FY99	01 Oct FY99																						0
OJT	01 Oct FY99	01 Oct FY99																						0
Formal	01 Oct FY99	01 Oct FY99																						0
TECH DATA	01 Oct FY99	01 Oct FY99																						0
SUPPLY	01 Oct FY99	01 Oct FY99																						0
FAT	01 Oct FY99	01 Oct FY99																						0

Filename: SIDEARM

POC:

NOTE: DATE SHOWN (01 OCT FY99) IS USED UNTIL SCHEDULE IS DETERMINED.

SCHEDULE TO BE DETERMINED.

Baseline

Actual

Milestone

WALLEYE

CURRENT SOR: NAWC INDIANAPOLIS

28 Apr FY94

Task Name	Start Date	End Date	1993 Q4	1994 Q1	1994 Q2	1994 Q3	1994 Q4	1995 Q1	1995 Q2	1995 Q3	1995 Q4	1996 Q1	1996 Q2	1996 Q3	1996 Q4	1997 Q1	1997 Q2	1997 Q3	1997 Q4	1998 Q1	1998 Q2	1998 Q3	1998 Q4	1999 Q1
ENVIR STUDIES	13 Jul FY93	24 Dec FY94		5.4																				
FACILITIES	01 Oct FY99	01 Oct FY99																						0
Design/ALT	01 Oct FY99	01 Oct FY99																						0
Construction	01 Oct FY99	01 Oct FY99																						0
EQUIPMENT	01 Oct FY99	01 Oct FY99																						0
PERSONNEL	01 Oct FY99	01 Oct FY99																						0
TRAINING	01 Oct FY99	01 Oct FY99																						0
OJT	01 Oct FY99	01 Oct FY99																						0
Formal	01 Oct FY99	01 Oct FY99																						0
TECH DATA	01 Oct FY99	01 Oct FY99																						0
SUPPLY	01 Oct FY99	01 Oct FY99																						0
FAT	01 Oct FY99	01 Oct FY99																						0

Filename: WALLEYE

POC:

NOTE: DATE SHOWN (01 OCT FY99) IS USED UNTIL SCHEDULE IS DETERMINED.

SCHEDULE TO BE DETERMINED.

Baseline

Actual

Milestone

HARPOON (CTR))

CURRENT SOR: MDAC

26 Apr FY94

Task Name	Start Date	End Date	1993 Q4	1994 Q1	1994 Q2	1994 Q3	1994 Q4	1995 Q1	1995 Q2	1995 Q3	1995 Q4	1996 Q1	1996 Q2	1996 Q3	1996 Q4	1997 Q1	1997 Q2	1997 Q3	1997 Q4	1998 Q1	1998 Q2	1998 Q3	1998 Q4	1999 Q1
ENVIR STUDIES	13 Jul FY93	24 Dec FY94		5.4																				
FACILITIES	01 Oct FY99	01 Oct FY99																						0
DesignVALT	01 Oct FY99	01 Oct FY99																						0
Construction	01 Oct FY99	01 Oct FY99																						0
EQUIPMENT	01 Oct FY99	01 Oct FY99																						0
PERSONNEL	01 Oct FY99	01 Oct FY99																						0
TRAINING	01 Oct FY99	01 Oct FY99																						0
OJT	01 Oct FY99	01 Oct FY99																						0
Formal	01 Oct FY99	01 Oct FY99																						0
TECH DATA	01 Oct FY99	01 Oct FY99																						0
SUPPLY	01 Oct FY99	01 Oct FY99																						0
FAT	01 Oct FY99	01 Oct FY99																						0

Filename: HARPOCTR

POC:

NOTE: DATE SHOWN (01 OCT FY99) IS USED UNTIL SCHEDULE IS DETERMINED.

SCHEDULE IS PENDING.

Baseline

Actual

Milestone

(FROZEN FOR I-PLAN) As of 5 MAY 94

PLANNED TRANSITION WORKLOAD
DIRECT LABOR HOURS (000)

	FY 94	FY 95	FY 96	FY 97	FY 98	FY 99
ARMY - Organic						
SHILLELAGH	0.0	0.0	0.0	1.8	7.0	0.0
LCSS	0.0	0.0	0.0	3.9	8.2	5.2
AN/TSQ-73	0.0	0.0	0.0	2.5	10.6	10.1
CHAPARRAL	0.0	0.0	0.0	9.6	19.4	17.4
TOW 2	0.0	16.2	63.4	63.6	64.1	64.7
DRAGON	0.0	26.4	25.5	25.3	24.9	24.8
TOW BFVS	0.0	18.2	16.6	19.1	25.0	25.1
TOW COBRA	0.0	24.5	45.0	45.1	45.2	45.2
ATACMS	3.0	14.3	21.8	21.0	22.8	19.8
HELLFIRE	3.5	14.0	13.9	13.9	14.3	14.8
MLRS	32.3	94.3	100.1	108.1	113.6	113.6
AVENGER **	46.9	49.1	48.2	29.5	29.5	29.5
TOTAL ARMY ORGANIC	85.7	257.0	334.5	343.4	384.6	370.2
AF/NAVY/USMC - Organic						
SPARROW *	5.6	35.1	40.0	34.8	40.1	33.6
PHOENIX *	0.0	19.0	22.1	19.0	19.2	13.3
SIDEWINDER *	0.0	16.2	139.9	146.4	129.3	116.8
MAVERICK	0.0	0.0	11.1	46.5	43.9	46.3
STANDARD***	0.0	0.0	13.4	14.5	14.3	16.8
HAWK (USMC)	0.0	17.3	126.4	118.3	89.7	93.3
TOTAL OTHER ORGANIC	5.6	87.6	352.9	379.5	336.5	320.1
AF/NAVY/USMC - Contract						
AMRAAM	0.0	0.0	0.0	0.0	30.3	33.5
HARM *	1.0	1.0	1.0	1.0	40.9	46.6
TOTAL OTHER CONTRACT	1.0	1.0	1.0	1.0	71.2	80.1
ARMY - Contract						
HELLFIRE	0.0	0.0	0.0	0.0	0.0	0.0
STINGER	0.0	0.0	0.0	0.0	0.0	0.0
HAWK	0.0	0.0	2.0	1.2	1.8	1.9
PATRIOT	0.0	6.1	7.4	6.4	7.5	7.0
MLRS	0.0	6.0	6.5	6.7	6.8	6.8
ATAS / AVENGER	0.0	0.0	0.0	27.2	27.2	27.2
ATAS (ARGON BOTTLES)**	1.8	4.4	4.8	3.9	3.6	3.6
TOTAL ARMY CONTRACT	1.8	16.5	20.7	45.4	46.9	46.5
TOTAL WORKLOAD	94.1	362.1	709.1	769.3	839.4	816.9

* INCLUDES ENGINEERING SUPPORT WORKLOAD
** ORGANIC CAPABILITY ACHIEVED AT LEAD
*** New information from the Navy since the staffing of the I-Plan, indicates that this workload will be zeroed by the end of FY95.

APPENDIX D

DEPARTMENT OF THE ARMY
HEADQUARTERS, U. S. ARMY DEPOT SYSTEM COMMAND
CHAMBERSBURG, PENNSYLVANIA 17201-4170

REPLY TO
ATTENTION OF

AMSDS-EN-I (710)

MEMORANDUM FOR SEE DISTRIBUTION

Subject: Lateral Transfer of Property

1. References:

a. Memorandum, HQDESCOM, AMSDS-EN-EM, 17 Jul 91, subject as above.

b. DA Pamphlet 710-2-1, 20 Sep 89, Section III, paragraph 3-14, Transfer Approval and paragraph 3-15, Transfer Procedures.

2. This memorandum supersedes reference 1a.

3. Lateral transfer approval authority for transfer of property between U.S. Army Depot System Command (DESCOM) depots is the responsibility of the Commanding General, Headquarters, DESCOM. Signature authority for this action has been delegated to the DESCOM Equipment Manager. In accordance with the foregoing, all DA Forms 3161, Request for Issue or Turn-In, prepared by the requester will contain the following signature block: Approved By: Bernie Mills, Equipment Manager, HQDESCOM, Chambersburg, PA 17201-4170. This information should be typed in block 12 after the last line item entry prior to forwarding DA Forms 3161 to this headquarters.

4. Transmittal memorandums accompanying DA Forms 3161 should be routed through this office for transfer of property outside DESCOM, i.e., from a depot to another U.S. Army Materiel Command (AMC) installation or to another Department of Defense activity. These transfers require major Army command approval and must be prepared in the same manner as paragraph 3 above with the following signature block: Approved By: Larry W. Johnsen, Chief, Equipment Management Division, USAMC I&SA, Rock Island, IL 61299-7190.

5. Point of contact for this action is Nancy Whitfield, AMSDS-EN-I, DSN 570-9956.

FOR THE COMMANDER:

GARY D. FORD
Chief, Industrial
Engineering Division

DEPARTMENT OF THE ARMY
SACRAMENTO ARMY DEPOT
SACRAMENTO, CA 95813

SDSSA-EL-2 (710)

MEMORANDUM FOR Commander, U.S. Army Depot System Command, ATTN: AMSDS-EN-I, Chambersburg, PA 17201-4170

SUBJECT: Lateral Transfer of U.S. Government Property

1. Enclosed is DA Form 3161 laterally transferring property from UIC WOMDAA, Sacramento Army Depot, to UIC W016AA, Letterkenny Army Depot. The equipment being transferred is excess to the needs of the losing depot as a result of SAAD workload transfer and Base Realignment and Closure implementation.

2. Point of contact for this installation is the undersigned, SDSSA, DSN 839-2386.

FOR THE COMMANDER:

Encl
as

CLAIRE SCHANCE
Property Book Officer

LEAD DMPE REQUIREMENTS (TACTICAL MISSILE)

AN/TSQ-73	SUPPORT EQUIPMENT (PWR SUPPLY TESTER, DIT-MCO, FACT-PC)	FY96	$1,926,000
CHAPARRAL	CLEAN ROOM	FY96	$84,000
DRAGON	100,000 CLASS CLEAN ROOM	FY94	$84,000
HAWK	APPLICATION PROGRAM SETS	FY95	$103,000
	IFTE CEE UPGRADE	FY95	$300,000
LCSS	CLEAN ROOM	FY96	$84,000
MAVERICK	10,000 CLASS (LASER) CLEAN ROOM	FY95	$208,000
MLRS	IFTE TPS (2)	FY95	$1,338,000
SIDEWINDER	*NITROGEN SUPPLY STATION RENTAL	FY94	$ 98,000
	*NITROGEN DISTRIBUTION SYSTEM	FY94	$249,400
	VIBRATION TEST SYSTEM	FY94	$145,000
	*NITROGEN SUPPLY SYSTEM	FY95	$500,00
SPARROW	HYDRAULIC PUMPING STATION	FY94	$ 67,500
	A/C SYSTEM (CONSOLE/HVAC)	FY94	$ 90,000
	SHIELDED ROOM	FY94	$47,500
TOW	100,000 CLASS CLEAN ROOMS (2)	FY94	$168,000
TOW COBRA	MATE MODIFICATION	FY94	$160,700
ALL SYSTEMS	TRAVELLING GANTRY CRANE	FY94	$33,500
	100,000 CLASS CLEAN ROOM (HYDRAULICS), Bldg 350	FY95	$400,000
		TOTAL	$6,086,600

*Shared with Maverick

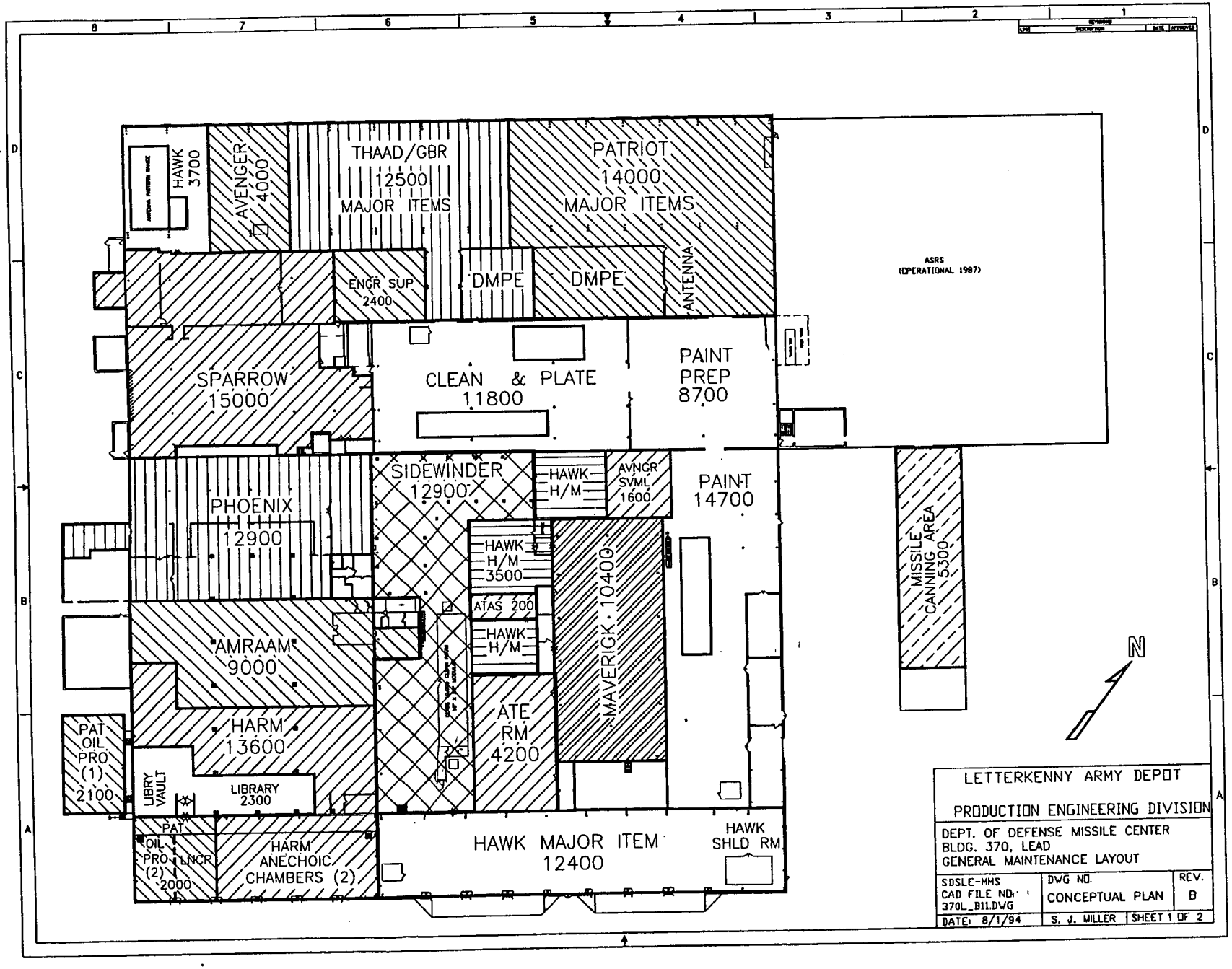
3/14/94

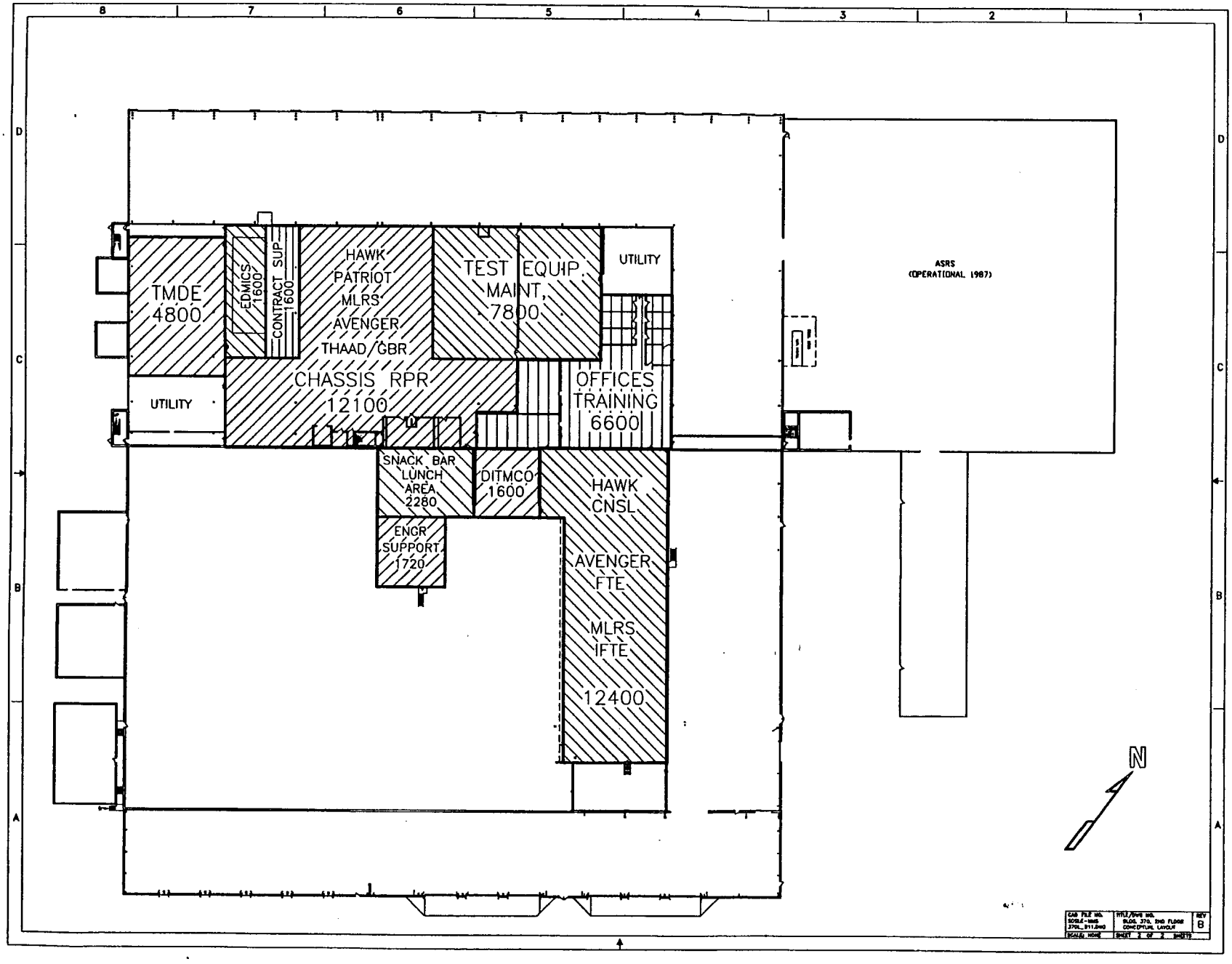
NOTE: All costs are estimated

LKYDMPE

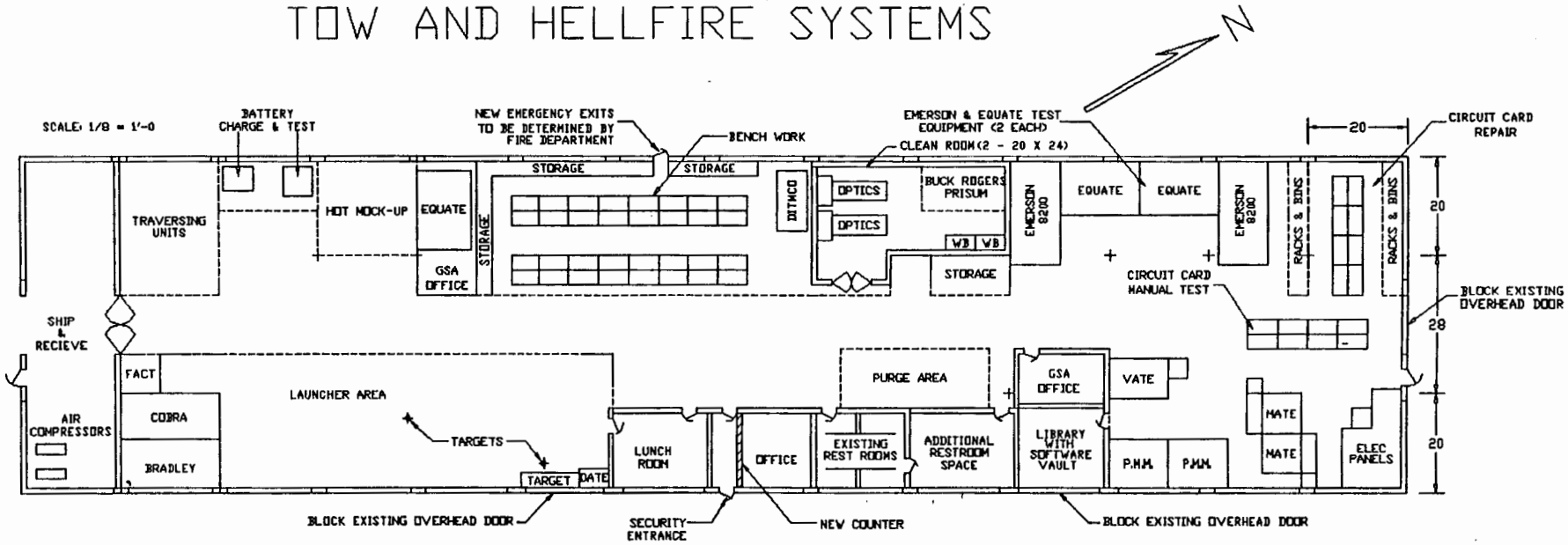
CHART XX OF XX

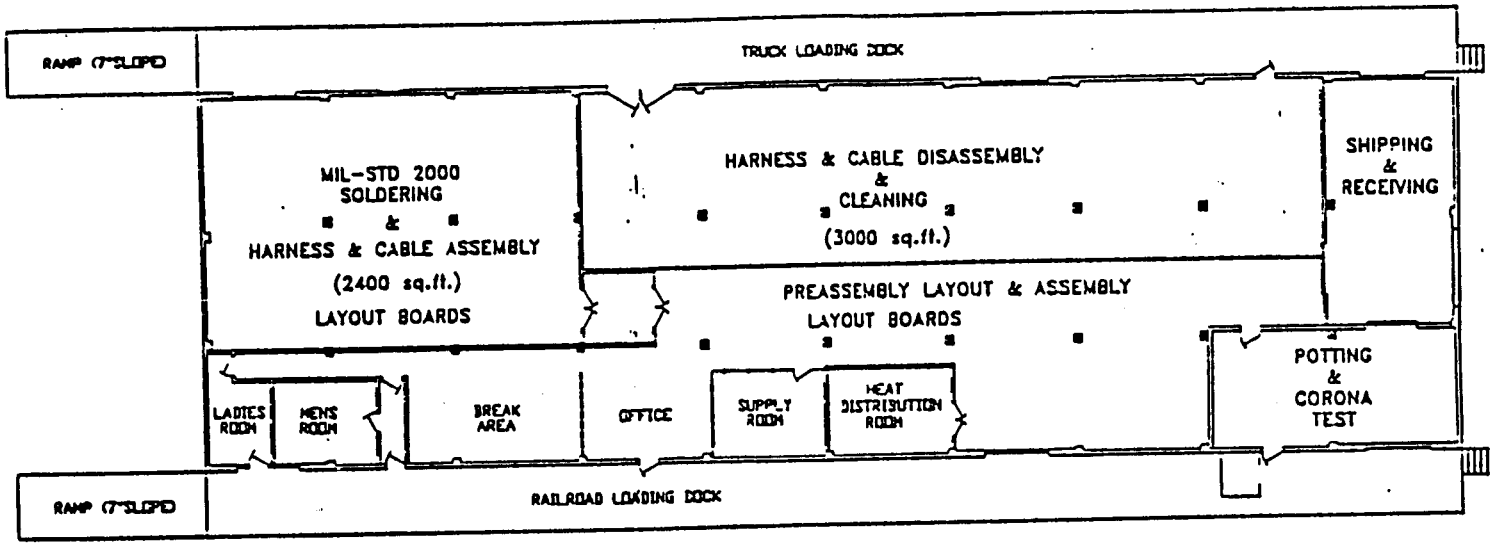
APPENDIX E


HAWK 3700
AVENGER 4000
THAAD/GBR 12500 MAJOR ITEMS
PATRIOT 14000 MAJOR ITEMS
ENGR SUP 2400
DMPE
DMPE
ANTENNA
ASRS (OPERATIONAL 1987)
SPARROW 15000
CLEAN & PLATE 11800
PAINT PREP 8700
SIDEWINDER 12900
HAWK H/M
AVNGR SVML 1600
PAINT 14700
PHOENIX 12900
HAWK H/M 3500
ATAS 200
HAWK H/M
MAVERICK 10400
MISSILE CANNING AREA 5300
AMRAAM 9000
HARM 13600
ATE RM 4200
PAT OIL PRO (1) 2100
LIBRY VAULT
LIBRARY 2300
PAT OIL PRO (2) 2000
LNCR
HARM ANECHOIC CHAMBERS (2)
HAWK MAJOR ITEM 12400
HAWK SHLD RM
N
LETTERKENNY ARMY DEPOT
PRODUCTION ENGINEERING DIVISION
DEPT. OF DEFENSE MISSILE CENTER
BLDG. 370, LEAD
GENERAL MAINTENANCE LAYOUT
SDSLE-MMS
CAD FILE NO.
370L_B11.DWG
DWG NO.
CONCEPTUAL PLAN
REV.
B
DATE: 8/1/94
S. J. MILLER
SHEET 1 OF 2


TMDE
4800
EDMICS
1600
CONTRACT SUP
1600
HAWK
PATRIOT
MLRS
AVENGER
THAAD/GBR
CHASSIS RPR
12100
TEST EQUIP.
MAINT.
7800
UTILITY
UTILITY
OFFICES
TRAINING
6600
ASRS
(OPERATIONAL 1987)
SNACK BAR
LUNCH
AREA
2280
DITMCO
1600
ENGR
SUPPORT
1720
HAWK
CNSL.
AVENGER
FTE
MLRS
IFTE
12400
N
REV
B

BUILDING 426
TOW AND HELLFIRE SYSTEMS



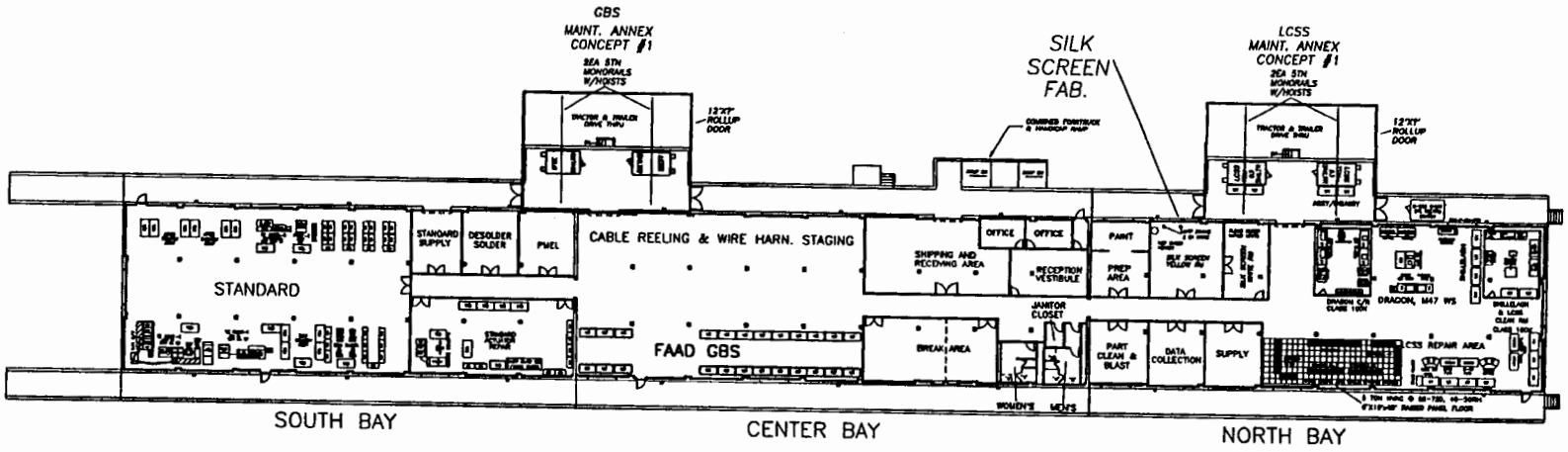


HARNESS & CABLE SHOP

FACILITY IMPROVEMENTS

- IMPROVE LIGHTING THROUGHOUT
- DROP CEILING IN SOLDERING ROOM
- TILE FLOOR IN SOLDERING ROOM
- PATCH FLOOR AFTER ARTILLERY EQUIPMENT REMOVED

DATE: 27 JUL 93	LETTERKENNY ARMY DEPOT MAINTENANCE DIRECTORATE PRODUCTION ENGINEERING DIVISION		
DRAWN BY			
APP'D ENG'R-ENG'R TECH	BUILDING 12 PROPOSED FLOOR PLAN FOR MISSILE WORKLOAD		
APP'D CH.-CAD/CAM SEC.			
APP'D CH-PROD. ENG'R DIV.	CODE IDENT NO. SDSLE-MMDC CAD/CAM, B00033	SIZE *	NUMBER 6124
APP'D.SAFETY DIRECTOR	SCALE:		SHEET 1 OF 1



STANDARD

CABLE REELING
FAAD GBS REPAIR

SHILLELAGH,
LCSS,
& M47 DRAGON

REV	DATE	DESCRIPTION	BY

U.S. ARMY ENGINEER DISTRICT, BALTIMORE
CORPS OF ENGINEERS
BALTIMORE, MARYLAND

LETTERKENNY ARMY DEPOT — CHAMBERSBURG, PA.

DEPARTMENT OF DEFENSE
MISSILE MAINTENANCE CENTER

SHEET

GSGSB — DRAWING NUMBER X-000-00-00 — PLATE

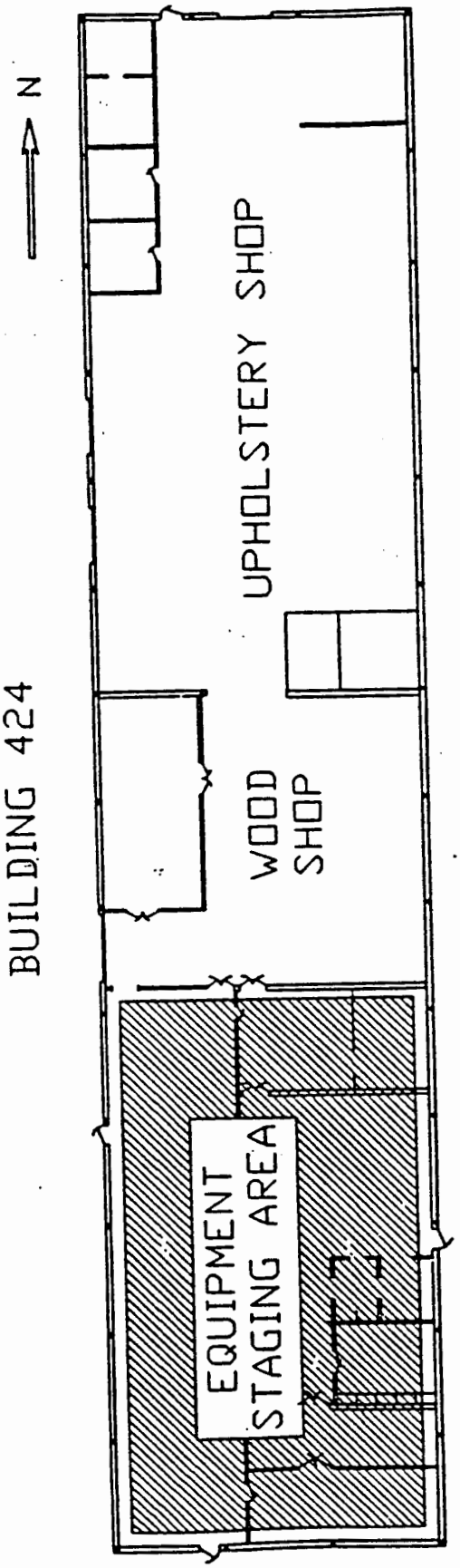
SCALE — DATE — SHEET

UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN INCHES

LETTERKENNY ARMY DEPOT
MAINTENANCE DIRECTORATE
PRODUCTION ENGINEERING DIVISION

ARCHITECTURAL CONCEPT
BLDG. 11 FLOOR PLAN

SIZE A — NUMBER


N
BUILDING 424
UPHOLSTERY SHOP
WOOD SHOP
EQUIPMENT STAGING AREA

Letterkenny Army Depot
Pennsylvania

ALT, CONV
DOD Missile Center

212 10 39697 4,500

PRIMARY FACILITY				3,837
BLDG 370	SF	88,100	32.93	(2,901)
BLDG 12	SF	13,160	38.14	(502)
BLDG 426	SF	18,928	16.21	(307)
Security Fence w/ Lighting	LF	3,250	30.20	(98)
Sentry Shelter/Gate	EA	1	16,365	(16)
Total from Continuation page				(13)
SUPPORTING FACILITIES				30
Electric Service	LS	--	--	(12)
Water, Sewer, Gas	LS	--	--	(2)
Paving, Walks, Curbs And Gutters	LS	--	--	(3)
Site Imp(5) Demo( )	LS	--	--	(5)
Information Systems	LS	--	--	(8)

ESTIMATED CONTRACT COST	3,867
CONTINGENCY PERCENT (10.0%)	387
SUBTOTAL	4,254
SUPERVISION, INSPECTION & OVERHEAD (6.00%)	255
TOTAL REQUEST	4,509
TOTAL REQUEST (ROUNDED)	4,500
INSTALLED EQUIPMENT-OTHER APPROPRIATIONS	(5,037)

Alter and renovate depot maintenance and warehouse facilities to provide specialized depot missile maintenance facilities. Project includes mezzanine construction in high bay areas, freight elevators, security fencing and lighting, sentry shelter with gate, and environmental control systems. Upgrade electrical and lighting systems, and bathrooms. Install an intrusion detection system (IDS). Supporting facilities include utilities, electric service, fire protection and alarm systems, pavement repair, information systems, and site improvements. Access for the handicapped will be provided. Heating will be provided from existing central oil-fired steam plant and one building with a self-contained oil-fired unit. Air conditioning: 357 tons.

11. REQUIREMENT: 299,858 SF ADEQUATE: 168,598 SF SUBSTANDARD: 131,260 SF
PROJECT:

Alter and renovate depot maintenance and warehouse facilities to accommodate expanding depot missile maintenance functions. (Current Mission)

Letterkenny Army Depot
Pennsylvania

ALT, CONV
DOD Missile Center

39697

9. COST ESTIMATES (CONTINUED)

Item	U/M	QTY	Unit COST	Cost ($000)
PRIMARY FACILITY (CONTINUED)				13
IDS Installation	LS	--	--	(2)
Building Information Systems	LS	--	--	(11)

REQUIREMENT:
This project is required to provide maintenance facilities with adequate specialized spaces, support features, environmental controls, and safety and security features for depot level maintenance and testing of multi-service tactical missile systems, components, and support equipment. This project supports the plan to consolidate joint services tactical missile maintenance at Letterkenny Army Depot, as recommended by the Base Realignment and Closure (BRAC) initiative.

CURRENT SITUATION:
Maintenance of tactical missiles, missile systems and support equipment is currently spread across several Army Depots, as well as multiple Air Force, Navy, and Marine Corps installations, and contractor activities. The BRAC initiative recommended that Letterkenny Army Depot should become the Center for interservicing Department of Defense (DOD) tactical missiles. Facilities currently available at this location will require alterations, rearrangement, and modification to provide the specialized spaces and support features essential to specific missile systems and components, and to meet existing environmental, Occupational Safety and Health, Association (OSHA) requirements.

IMPACT IF NOT PROVIDED:
If this project is not provided, Letterkenny Army Depot cannot satisfy the BRAC requirements to interservice tactical missile maintenance at one location. Duplications of functions and facilities at several Army, Navy, Air Force and Marine Corps installations, and at contractor activities will continue to exist. Manpower and dollar savings projected under the consolidation of missile maintenance functions will not be realized.

ADDITIONAL:
This project has been coordinated with the installation physical security plan, and all required physical security and/or combatting terrorism (CBT/T) measures are included. This project complies with the scope and design criteria of DOD 4270.1-M, "Construction Criteria," that were in effect 1 January 1987, as implemented by the Army's Architectural and Engineering Instructions (AEI), "Design Criteria," dated 9 December 1991, with the 8 July

94 13 OCT 1993
ARMY 16 MAR 1992

Letterkenny Army Depot
Pennsylvania

ALT, CONV
DOD Missile Center 39697

ADDITIONAL: (Continued)
1992 and all subsequent revisions included in the Design Criteria Information System (DCIS).

/S/ Joseph W. Arbuckle
colonel
Commanding

ESTIMATED CONSTRUCTION START:	SEP 1994	INDEX: 1908
ESTIMATED MIDPOINT OF CONSTRUCTION:	MAR 1995	INDEX: 1927
ESTIMATED CONSTRUCTION COMPLETION:	OCT 1995	INDEX: 1956

95 02 NOV 1993
ARMY 12 OCT 1993

Letterkenny Army Depot ALT, CONV
Pennsylvania DOD Missile Center

212 10 43459 1,650

PRIMARY FACILITY				1,399
Building Renovation	SF	30,000	46.60	(1,398)
Building Information Systems	LS	--	--	(1)

SUPPORTING FACILITIES				34
Electric Service	LS	--	--	(15)
Water, Sewer, Gas	LS	--	--	(10)
Site Imp(5) Demo( )	LS	--	--	(5)
Information Systems	LS	--	--	(4)

ESTIMATED CONTRACT COST	1,433
CONTINGENCY PERCENT (10.0%)	143
SUBTOTAL	1,576
SUPERVISION, INSPECTION & OVERHEAD (6.00%)	95
TOTAL REQUEST	1,671
TOTAL REQUEST (ROUNDED)	1,650
INSTALLED EQUIPMENT-OTHER APPROPRIATIONS	(238)

Alter and renovate depot warehouse facilty to provide a specialized depot missile maintenance facility. Project includes complete interior renovation to convert warehouse facility to a guided missile maintenance facilty. Renovation includes insulation and drywall; suspended ceilings; electrial and lighting; heating, ventilation, and air conditioning (HVAC); information systems; and restrooms. Supporting facilities include utilities, fire protection and alarm systems, systems and site improvements. Access for the handicapped will be provided. Heating will be provided by an existing steam boiler plant. Air conditioning: 100 tons.

---

11. REQUIREMENT: 318,786 SF ADEQUATE: 168,598 SF SUBSTANDARD: 150,188 SF
PROJECT:

Alter and renovate warehouse facilities to accommodate expanding depot missile maintenance functions. (Current Mission)

95

ARMY

02 NOV 1993
12 OCT 1993

Letterkenny Army Depot
Pennsylvania

ALT, CONV
DOD Missile Center 43459

REQUIREMENT:
This project is required to provide maintenance facilities with adequate specialized spaces, support features, environmental controls, and safety and security features for depot level maintenance and testing of multi-service tactical missile systems, components, and support equipment. This project supports the plan to consolidate joint services tactical missile maintenance at Letterkenny Army Depot, as recommended by the Base Realignment and Closure (BRAC) initiative.

CURRENT SITUATION:
Maintenance of tactical missiles, missile systems and support equipment is currently spread across several Army Depots, as well as multiple Air Force, Navy, and Marine Corps installations, and contractor activities. The BRAC initiative recommended that Letterkenny Army Depot should become the center for interservicing Department of Defense (DOD) tactical missiles. Facilities currently available at this location will require alterations, rearrangement, and modification to provide the specialized spaces and support features essential to specific missile systems and components, and to meet existing environmental, Occupational Safety and Health, Association (OSHA) requirements.

IMPACT IF NOT PROVIDED:
If this project is not provided, Letterkenny Army Depot will not have adequate space to house the missile systems currently planned. Duplications of functions and facilities at several Army, Navy, Air Force and Marine Corps installations, and at contractor activities will continue to exist. Manpower and dollar savings projected under the consolidation of missile maintenance functions will not be realized.

ADDITIONAL:
This project has been coordinated with the installation physical security plan, and all required physical security and/or combatting terrorism (CBT/T) measures are included. This project complies with the scope and design criteria of DOD 4270.1-M, "Construction Criteria," that were in effect 1 January 1987, as implemented by the Army's Architectural and Engineering Instructions (AEI), "Design Criteria," dated 9 December 1991, with the 8 July 1992 and all subsequent revisions included in the Design Criteria Information System (DCIS).

/S/ JOSEPH W. ARBUCKLE
COLONEL
COMMANDING

95 02 NOV 1993

ARMY 12 OCT 1993

Letterkenny Army Depot
Pennsylvania

ALT, CONV
DOD Missile Center 43459

ESTIMATED CONSTRUCTION START:	SEP 1995	INDEX: 1952
ESTIMATED MIDPOINT OF CONSTRUCTION:	MAR 1996	INDEX: 1971
ESTIMATED CONSTRUCTION COMPLETION:	OCT 1996	INDEX: 1999

DATE 12 OCT 1993 FY 95 PROGRAM
PROJECT NUMBER: 43459
PROJECT TITLE: DOD Missile Center
INSTALLATION: Letterkenny Army Depot
LOCATION: Pennsylvania

QUANTITATIVE DATA

(U/M SF)

A.	TOTAL REQUIREMENT	318,786	
B.	EXISTING SUBSTANDARD	150,188	
C.	EXISTING ADEQUATE	168,598	
D.	FUNDED, NOT INVENTORY	120,188	
E.	ADEQUATE ASSETS	288,786	
		AUTHORIZED	FUNDED
F.	UNFUNDED PRIOR AUTHORIZATION		
G.	INCLUDED IN FY PROGRAM		
H.	DEFICIENCY (A-E-F-G)	30,000	30,000

REMARKS:

This form covers only that portion of the project associated with the renovation of bldg 11.

RELATED PROJECTS:

Form 39697 - DOD MISSILE CENTER - LEAD, reflects all construction required for housing incoming missile systems other than that required for bldg 11.

DATE 12 OCT 1993 FY 95 PROGRAM
PROJECT NUMBER: 43459
PROJECT TITLE: DOD Missile Center
INSTALLATION: Letterkenny Army Depot
LOCATION: Pennsylvania

SECTION 6 - PLANNING AND DESIGN DATA (ESTIMATE)

1. STATUS
   A. DESIGN START DATE.....
   B. PERCENT COMPLETE AS OF 15 SEP 93 (DSGN YR).. 35.00
   C. PERCENT COMPLETE AS OF 01 JAN 94 (BDGT YR).. 35.00
   D. PERCENT COMPLETE AS OF 01 OCT 94 (PROG YR).. 100.00
   E. CONCEPT COMPLETE DATE.....
   F. DESIGN COMPLETE-DATE.....

2. BASIS
   A. STANDARD OR DEFINITIVE DESIGN (YES/NO) N
   B. WHERE DESIGN WAS MOST RECENTLY USED:

3. COST (TOTAL $000)
   A. PRODUCTION OF PLANS AND SPECS.....
   B. ALL OTHER DESIGN COST..... .....
   C. TOTAL DESIGN COST (C) = (A)+(B) OR (D)+(E)..
   D. CONTRACT.....
   E. IN HOUSE.....

4. CONSTRUCTION START DATE (PLANNED).....

***** MAIL FROM LANCE POSTED ON 08/20/93 AT 09:34 EDT *****

M E M O

--¦ MAIL #: LANCE-474 DATE: 08/20/93 TIME: 09:09 EDT
--¦ TO: ADOLPH
--¦ CC: CLAUDE
--¦ FROM: LANCE
--¦ PRIORITY: **** EXPEDITE ****
--¦ SUBJECT: FN 39697 - DOD MISSILE CENTER (LEAD) - DD1391 FRONT PAGE

1. REFERENCE PAXMAIL # LANCE-470. ATTN: DON SLAUSON

2. THIS PAXMAIL IS A CONFIRMATION OF LETTERKENNY'S DD1391 COST ESTIMATE. PLEASE REVISE FORM 39697 TO REFLECT THE FOLLOWING COSTS:

BLOCK 2A1 - PRIMARY FACILITIES	4,977
BLDG 370	(2,837)
BLDG 11	(1,338)
BLDG 12	(491)
BLDG 426	(300)
BLOCK 2A2 - INFO SYS PRIMARY FACILITIES	(11)
BLOCK 2B - SUPPORTING FACILITIES	41
BLOCK 2B1- ELECTRIC SERVICE	(12)
BLOCK 2B2- WATER SEWER, GAS	(10)
BLOCK 2B4- PAVING, WALKS, ETC.	(3)
BLOCK 2B6- SITE IMPROVEMENT	(8)
BLOCK 2B7- INFO SYS SUPPORTING FACILITIES	(8)
ESTIMATED CONTRACT COST	5,018
BLOCK 2C- CONTINGENCY PERCENT (5%)	251
SUBTOTAL	5,269
BLOCK 2D- SUPERVISION, INSPECTION & OVERHEAD (6%)	316
TOTAL REQUEST	5,585
TOTAL REQUEST (ROUNDED)	5,600

3. POC THIS OFFICE IS JOE REPASI OR TIM MATTHEWS, DSN 570-9696.

* * * End of Memo * * *

* * * Mail filed as R082093A LANCE * * *

MISSILE FACILITES

MINOR CONSTRUCTION (AS OF 3 MAY 94)

BUILDING	REQUIREMENT	COST	CONTRACT AWARD	EST COMPLETE	SYSTEM
3810	ALTERATIONS	$.170M	COMPLETE	COMPLETE	ATACMS
370	VAULT EXPANSION	$.040M	COMPLETE	COMPLETE	ALL SYSTEMS
370	HYDRAULICS ENCL	$.035M	COMPLETE	18 MAY 94	SPARROW
370	ALTERATIONS	$.060M	COMPLETE	27MAY 94	PHOENIX

TOTAL COST $.305M

MISSILE FACILITIES MILCON (AS OF 19 SEP 94)

BUILDING	REQUIREMENT	COST	CONTRACT AWARD	EST COMPL	SYSTEM
370	SM MEZZANINE	$1.021M	8 JUN 94	13 FEB 95 (w/o A/C)	SIDEWINDER (NAVY & USAF)
370	LOW BAY (POWER, AC)		8 JUN 94	25 NOV 94 20 JAN 95* (w/o A/C)	SPARROW, HAWK, PATRIOT
370	LG MEZZANINE	$1.933M	19 AUG 94	29 JUN 95	STANDARD, MAVERICK DRAGON, HAWK, PATRIOT
370	HVAC, LIGHTS, POWER		19 AUG 94	29 JUN 95	ALL SYSTEMS

* COE TIMELINE ESTIMATE FOR CONSTRUCTION CONTRACT MODIFICATION (>$100K) EQUIPMENT PROCUREMENT, AND ROOF TOP INSTALLATION. ORIGINALLY PART OF GFE PACKAGE ASSUMED BY LEAD.

125E

CHART

MISSILE FACILITIES MILCON (CONT)

(AS OF 19 SEP 94)

BUILDING	REQUIREMENT	COST	CONTRACT AWARD	EST COMPL	SYSTEM
12	A/C WORK AREA ADDED GFE $ PREVIOUSLY RECEIVED	$2.037M	26 AUG 94	3 JUN 95	WIRE HARNESS
426	ALTERATIONS PRODUCTION AREA OFFICE AREA		26 AUG 94	3 FEB 95 4 APR 95	TOW (2,BFVS,COBRA) HELLFIRE
11	ENVIRONMENT/ POWER UPGRADE	$1.65M	2 AUG 95 *	27 MAY 96 *	DRAGON SHILLELAGH LCSS EMERGING SYSTEMS

CONCEPT DESIGN COMPLETION 29 DEC 94

MILCON

FY94: SUM OF PROJECT COSTS SHOWN INCLUDE CONTINGENCY, ETC=$4.991M

FY95: SUM OF PROJECT COSTS INCLUDE CONTINGENCY, ETC. =$1.65 M

TOTAL=$6.641M

* BALTO COE ESTIMATE, BLDG 11 COMPL NEEDED BY 30 APR 96. SCOPE CHANGE INITIATED BY LEAD ON 16 SEP 94.

125F

APPENDIX F

ECONOMIC SECURITY

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

03 MAY 1994

MEMORANDUM FOR ASSISTANT SECRETARY OF THE ARMY (INSTALLATIONS, LOGISTICS AND ENVIRONMENT)
ASSISTANT SECRETARY OF THE NAVY (INSTALLATIONS AND ENVIRONMENT)
ASSISTANT SECRETARY OF THE AIR FORCE (MANPOWER, RESERVE AFFAIRS, INSTALLATIONS AND ENVIRONMENT)

SUBJECT: Tactical Missile Maintenance Consolidation Funding

The 1993 Defense Base Closure and Realignment Commission has made a binding recommendation that Letterkenny Army Depot (LEAD) remain open and that tactical missile maintenance be consolidated at the depot as originally planned by the DoD in the *Tactical Missile Maintenance Consolidation Plan for Letterkenny Army Depot*, January 31, 1992 (revised April 30, 1992). The recommendation also added the tactical missile maintenance workload being accomplished by the Marine Corps Logistics Base, Barstow, California, to the plan.

Military Departments will program and fund the resources required to implement the tactical missile maintenance consolidation to LEAD as delineated in the consolidation plan. Section 4 of the plan established a funding strategy and responsibilities which were developed as guidelines by a joint working group on which each Military Department was represented.

Any interim contractor support costs should be considered as being associated with the downtime due to transition to LEAD and will be funded by the Military Department which is the current source of repair. The Army is working to accelerate the implementation which should reduce maintenance downtime and lessen the impact of the transition.

Robert E. Bayer
Deputy Assistant Secretary of Defense
for Economic Reinvestment and
Base Realignment and Closure

APPENDIX G

ACRONYMS

AEI	ARCHITECTURAL AND ENGINEERING INSTRUCTIONS
AMC	ARMY MATERIEL COMMAND
ANAD	ANNISTON ARMY DEPOT
ARIL	AUTOMATIC RETURN ITEM LIST
ASIP	ARMY STATIONING AND INSTALLATION PLAN
ASRS	AUTOMATIC STORAGE AND RETRIEVAL SYSTEM
ATE	AUTOMATIC TEST EQUIPMENT
AUR	ALL UP ROUND
BCA	BASE CLOSURE ACCOUNT
BRAC	BASE REALIGNMENT AND CLOSURE
CBS-X	CONTINUING BALANCE SYSTEM - EXPANDED
CCA	CENTRAL COLLECTION AGENCY
DA	DEPARTMENT OF THE ARMY
DBOF	DEFENSE BUSINESS OPERATING FUND
DCS	DEPUTY CHIEF OF STAFF
DCSEN	DEPUTY CHIEF OF STAFF FOR ENGINEERING
DGSC	DEFENSE GENERAL SUPPLY CENTER
DLA	DEFENSE LOGISTICS AGENCY
DLH	DIRECT LABOR HOURS
DMISA	DEPOT MAINTENANCE INTERSERVICE SUPPORT AGREEMENT
DMRD	DEFENSE MANAGEMENT REPORT DECISION
DMWR	DEPOT MAINTENANCE WORK REQUIREMENT
DOD	DEPARTMENT OF DEFENSE
DUSD-L	DEPUTY UNDER SECRETARY OF DEFENSE-LOGISTICS
EA	ENVIRONMENTAL ASSESSMENT
EPROM	ERASEABLE, PROGRAMMABLE READ ONLY MEMORY
ES	END STRENGTH
ESD	ELECTRONIC SYSTEMS DIVISION
FAT	FIRST ARTICLE TEST
FEP	FACILITY ENGINEERING PROJECT
FMS	FOREIGN MILITARY SALES
FY	FISCAL YEAR
GAO	GENERAL ACCOUNTING OFFICE
GOGO	GOVERNMENT OWNED - GOVERNMENT OPERATED
HQDESCOM	HEADQUARTERS DEPOT SYSTEM COMMAND
ICP	INVENTORY CONTROL POINT
ICS	INTERIM CONTRACTOR SUPPORT
IEMS	INSTALLATION EQUIPMENT MANAGEMENT SYSTEM
IFTE	INTEGRATED FAMILY OF TEST EQUIPMENT
ILS	INTEGRATED LOGISTIC SUPPORT
IMA	INFORMATION MISSION AREA
IRT	INITIAL RECONDITIONING TEST

LEAD	LETTERKENNY ARMY DEPOT
MCA	MILITARY CONSTRUCTION ARMY
MDEP	MANAGEMENT DECISION PACKAGE
MICOM	U.S. ARMY MISSILE COMMAND
MILCON	MILITARY CONSTRUCTION
MIPR	MILITARY INTERDEPARTMENTAL PURCHASE REQUEST
MISO	MAINTENANCE INTERSERVICE SUPPORT OFFICER
MSC	MAJOR SUBORDINATE COMMAND
MTMC	MILITARY TRAFFIC MANAGEMENT COMMAND
MTOE	MODIFIED TABLE OF ORGANIZATION AND EQUIPMENT
NEPA	NATIONAL ENVIRONMENTAL POLICY ACT
OJT	ON-THE-JOB-TRAINING
O&M	OPERATION AND MAINTENANCE
OMMCS	ORDNANCE MISSILE AND MUNITIONS CENTER AND SCHOOL
OPM	OFFICE OF PERSONNEL MANAGEMENT
OPS-29	OPERATION PLAN SUMMARY - 29
OSHA	OCCUPATIONAL SAFETY AND HEALTH ASSOCIATION
PCS	PERMANENT CHANGE OF STATION
PEO	PROGRAM EXECUTIVE OFFICER
PM	PROGRAM/PROJECT/PRODUCT MANAGER
POC	POINT OF CONTACT
PPP	PRIORITY PLACEMENT PROGRAM
PRON	PROCUREMENT REQUEST ORDER NUMBER
ROM	ROUGH ORDER OF MAGNITUDE
RRAD	RED RIVER ARMY DEPOT
SADA	SACRAMENTO DEPOT ACTIVITY
SIMA-E	SYSTEMS INTEGRATION MANAGEMENT ACTIVITY - EAST
SOR	SOURCE OF REPAIR
SRU	SHOP REPLACEABLE UNIT
TBD	TO BE DETERMINED
TDA	TABLE OF DISTRIBUTION AND ALLOWANCES
TDP	TECHNICAL DATA PACKAGE
TDY	TEMPORARY DUTY
TMDE	TEST, MEASUREMENT, AND DIAGNOSTIC EQUIPMENT
TOAD	TOBYHANNA ARMY DEPOT
TOF	TRANSFER OF FUNCTION
TPS	TEST PROGRAM SET
VATE	VERSATILE AUTOMATIC TEST EQUIPMENT
VRA	VETERANS REEMPLOYMENT ACT

APPENDIX H

SIGNATURE PAGE

Signatures on this page indicate concurrence and support for this plan.

FRANK F. HENDERSON
Major General, USA
Chairman, JPCG-DM
Headquarters, US Army
Materiel Command

JAMES L. TAYLOR
Rear Admiral, USN
Office of the Deputy Chief of
Naval Operations (Logistics)

THOMAS J. POREER
Rear Admiral, USN
Naval Sea Systems Command

RONDAL H. SMITH
Major General (Sel), USAF
Headquarters, Air Force
Material Command

JOSEPH STEWART
Major General, USMC
Marine Corps Logistics Bases

Approved By: _____
JAMES R. KLUGH
Deputy Under Secretary
of Defense (Logistics)