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OFFICE OF SENATOR DANIEL PATRICK MOYNIHAN
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ATTENTION: TONY / SEAD

FROM: James B. Kane /BUFFALO OFFICE

of Pages to Follow: _____ DATE: 4/4 195 TIME: _____ : AM (PM)

Comments: The documents we spoke
of this morning.

-Karen M. Lyons

Circle One:

URGENT

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04/04/95 12:03 7032748011

AMC DCS AMMO

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REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
HEADQUARTERS, U.S. ARMY MATERIEL COMMAND
8001 EISENHOWER AVENUE, ALEXANDRIA, VA 22333 - 1001

April 4, 1995



Mr. James Kane
Regional Director
Office of Senator Moynihan
28 Church Street
Room 203
Buffalo, New York 14202

Dear Mr. Kane:

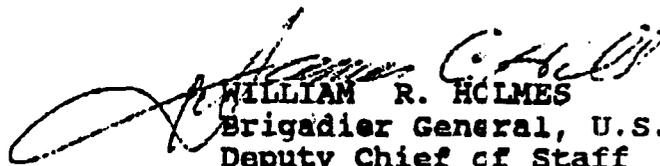
This responds to your request for information concerning the Depot Tiering Concept and a copy of the study.

I am enclosing a copy of the Integrated Ammunition Stockpile Management Plan. This plan provides a methodology for restructuring our wholesale ammunition storage base to achieve a smaller, safer stockpile on fewer installations using less personnel resources. It also contains a comprehensive discussion of the Tier Depot Concept. In addition to the plan, I have included the Depot Tiering Analysis. This should provide greater insight to our implementation of the concept.

I must point out that portions of the plan, concerning outyear budget planning data, have been deleted. This is in compliance with Office of Management and Budget, and Office of the Secretary of Defense Budget Guidance which precludes release of such data beyond those years contained in the President's Budget.

I trust these documents will assist in your understanding of our stockpile management initiatives to support power projection of our Army.

Sincerely,


WILLIAM R. HOLMES
Brigadier General, U.S. Army
Deputy Chief of Staff
for Ammunition

04/04/95 13:34 ☎

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Fax Transmission

No. of pages incl. this one: *16*

To: Ms. Karen Lyons

Fax number: 716-855-2545 Voice: 716-846-4097

cc:

From: William P. Gilhooly Jr.

Date: Tuesday, April 4, 1995

If you do not receive all pages, please contact:

Army Materiel Command
5001 Eisenhower Avenue
Alexandria, VA 22333-0001
703-274-5469/703-274-8011

Subject: *Depot Tier Study*

Special Instructions:

As discussed, our Stockpile Management Plan and Depot Tier Study. Other copy coming Fed Express.

04/04/95 13:35



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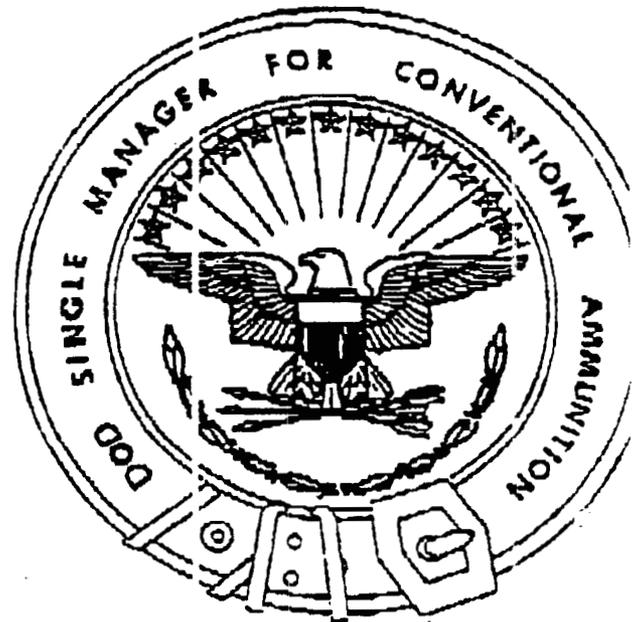
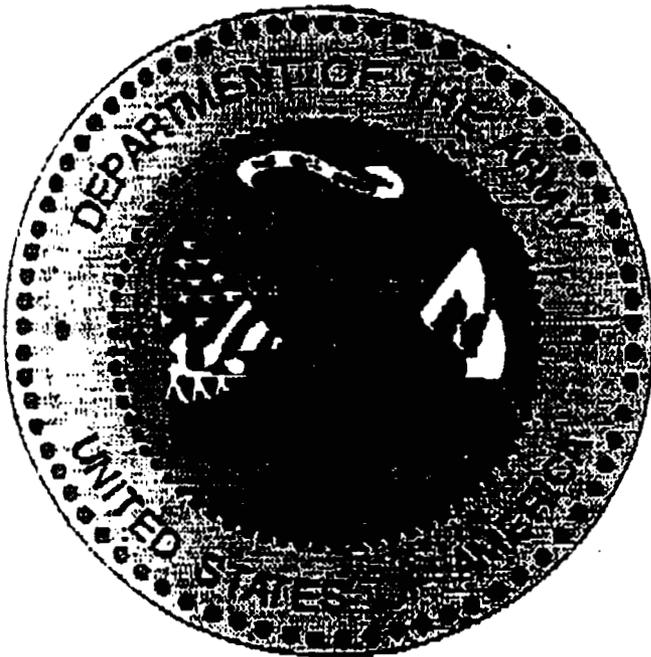
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INTEGRATED AMMUNITION STOCKPILE MANAGEMENT PLAN



MAY 1994

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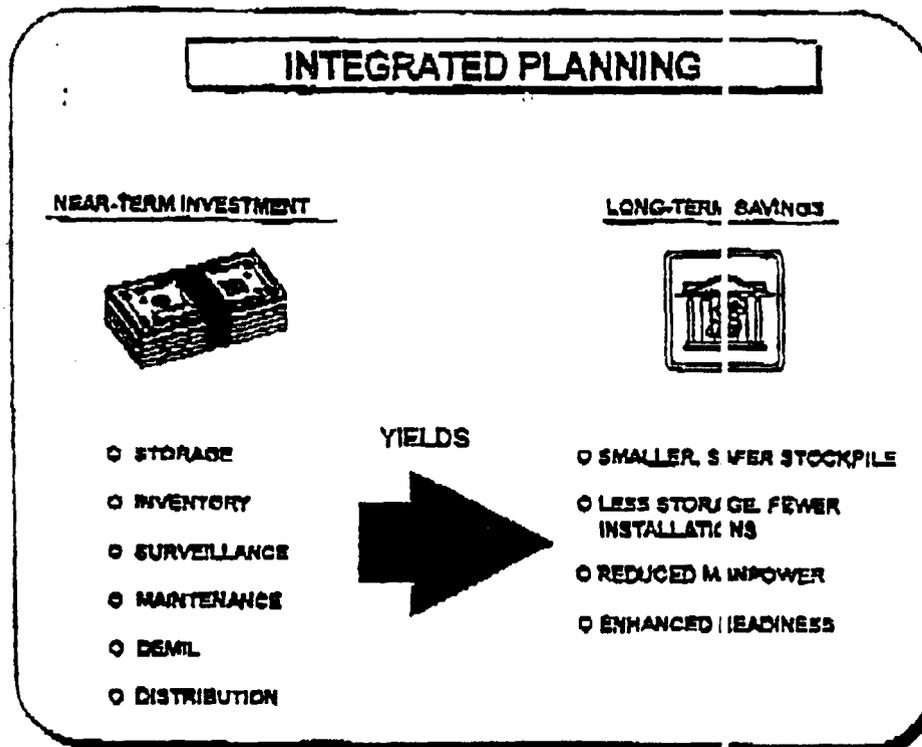
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I. PURPOSE

a. This document presents an Integrated Ammunition Stockpile Management Plan that outlines near term investments for achieving long term efficiencies. The plan provides a methodology for restructuring the current wholesale ammunition storage base. The plan also addresses changes in stockpile management methodologies for distribution, storage, inventory, surveillance, maintenance, and demilitarization.



b. The changing worldwide geopolitical environment, reduced military force structure, decreased ammunition Operation and Maintenance Army (OMA) funding, and revised military strategies focusing on a CONUS based power projected Army has necessitated an evaluation outlining how we intend to conduct daily ammunition stockpile management operations. Unlike pre-1991 war reserve requirements that were based on a global, protracted war in three theaters, current requirements support two Major Regional Contingency (MRC) scenarios and require a stronger emphasis on support from our CONUS wholesale ammunition storage base. Consequently, streamlining of the storage base into an efficient and effective operation has become imperative to maintain optimum readiness.

II. OBJECTIVES

To develop a storage base and ammunition policies resulting in a smaller, safer stockpile on fewer installations using less manpower. This plan will provide a common reference and vision for both near and far term as we reduce our stockpile. It will provide the foundation for future programming and budgeting based on realistic financial resources.

III. SCOPE

a. In consonance with the Army mission of the Single Manager for Conventional Ammunition (SMCA), this plan addresses the stockpile of wholesale ammunition for all of the Services. The tier storage base was developed encompassing the following primary wholesale stockpile storage installations:

Crane AAA	Red River AD
Hawthorne AAP	Savanna ADA
McAlester AAP	Seneca ADA
Anniston AD	Sierra AD
Blue Grass AD	Toele AD
Letterkenny AD	

b. The realignment of each installation is focused solely on the ammunition related functional mission at each installation. This includes work being performed on SMCA items, U.S. Army Missile Command (MICOM) items, and Service unique items.

IV. BACKGROUND

a. Chief of Staff - Army tasking

(1) The requirement to formulate an Integrated Ammunition Management Plan was outlined in a 19 Oct 93 memorandum from the Chief of Staff of the Army (CSA), General Gordon R. Sullivan. His letter stated that the Army will produce a plan containing a common reference and vision for both the near and far term with an ultimate objective of achieving a smaller, safer ammunition stockpile with fewer installations using less manpower. To accomplish this ambitious goal, near term investments in rewarehousing, redistribution, disposal and modernization of the stockpile, will be identified to achieve long term efficiencies. Since availability of additional resources cannot be assumed, the CSA directed that the Army take steps for more efficient use of the resources that are programmed and budgeted in the near term and out years. An important step in ensuring efficient use of resources would be to

construct a plan that contained a solid foundation for future programming and budgeting projections. As a springboard for the development of the plan, the CSA tasked the Deputy Chief of Staff for Operations (DCSOPS) to undertake and outline an Ammunition Functional Area Assessment (FAA) to the Vice Chief of Staff Army (VCSA) which would identify measures to be taken in refocusing stockpile management philosophies.

(2) The CSA tasking occurred as a result of several briefings and studies outlining the difficulties associated with the current wholesale ammunition stockpile. In March 1993, the Deputy Chief of Staff for Logistics (DCSLOG) received a briefing on Operation and Maintenance, Army (OMA) funding shortfalls and the impact on the stockpile. In May 1993, the Joint Ordnance Commanders Group (JOCG) initiated the Wholesale Ammunition Stockpile Program (WASP) review and assessment based on the possible degradation in stockpile safety, readiness, and quality resulting from the reduced level at which essential stockpile readiness functions were being funded. In July 1993, the CSA was briefed by the Army Materiel Command (AMC) Deputy Chief of Staff for Ammunition (DCS AMMO) who outlined the growing stockpile concerns associated with funding shortfalls. The WASP Study was accomplished between June and September of 1993. The study, representing the efforts of 43 major participants from all military services, provided a detailed analysis of the impacts of not performing critical functions at an appropriate funding level. Of primary concern was the lack of funding being applied to the essential stockpile readiness functions of inventory accountability, surveillance, maintenance, and rewarehousing.

(3) In October 1993, a second briefing by the DCS AMMO to the CSA outlined the results and findings from the WASP study. The direction from the CSA to accomplish a functional area assessment and develop an Integrated Ammunition Stockpile Management Plan resulted.

b. CHANGES IN THE STOCKPILE

(1) Over the past few years, the wholesale ammunition storage infrastructure and the stockpile have undergone significant changes. This rapid change has been a major contributing factor to the current stockpile deficiencies as identified in the WASP study.

(2) A number of key events have occurred to reshape the size and structure of both the wholesale storage base and the ammunition stockpile.

a) The 1988 Base Realignment and Closure (BRAC) commission recommended the cessation of conventional ammunition operations at four depot activities: Fort Wingate, Navajo, Pueblo, and Umatilla. That decision reduced the CONUS wholesale storage base by six million gross square feet and required the absorption of 92.165 short tons, the equivalent of 830,000 square feet, into the remaining wholesale storage base.

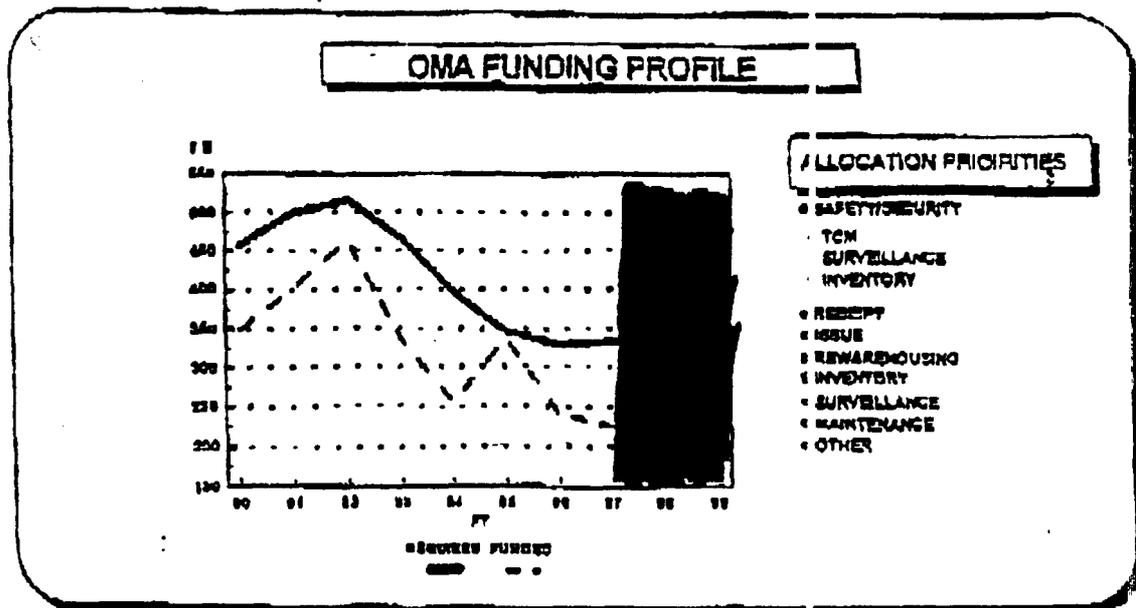
b) During Operation Desert Shield/Desert Storm, nearly 500,000 short tons were shipped from the CONUS storage base. Simultaneously, stocks aboard afloat prepositioned ships were downloaded, Europe based stocks were shipped to SouthWest Asia (SWA), and basic load and uploaded systems were arriving in theater. Nearly all stocks remaining after the Gulf War, regardless of origin, were retrograded to the CONUS storage base. The impact of this additional storage requirement on the already strained storage base and storage base operations was soon amplified significantly as stocks were received back into the wholesale system and were no longer configured in predominately large lots; a configuration which optimizes storage space, lends itself to economical surveillance and inventory, and requires little or no rewarehousing.

c) In FY 92-FY93 all services began a total realignment and right-sizing. The Department of Army announced a roll back of troops and munitions from Europe, an ammunition movement which by end state would place more than one half million short tons back into the CONUS storage base. To compound the problem, the Navy and Air Force also have roll back programs containing significant ton nages that have yet to be identified.

(3) Ultimately, significant force and funding reductions have reduced the capability of the storage installations to perform many basic storage functions to include rewarehousing, inventory, surveillance, and even the capability to efficiently and effectively receive and issue stock.

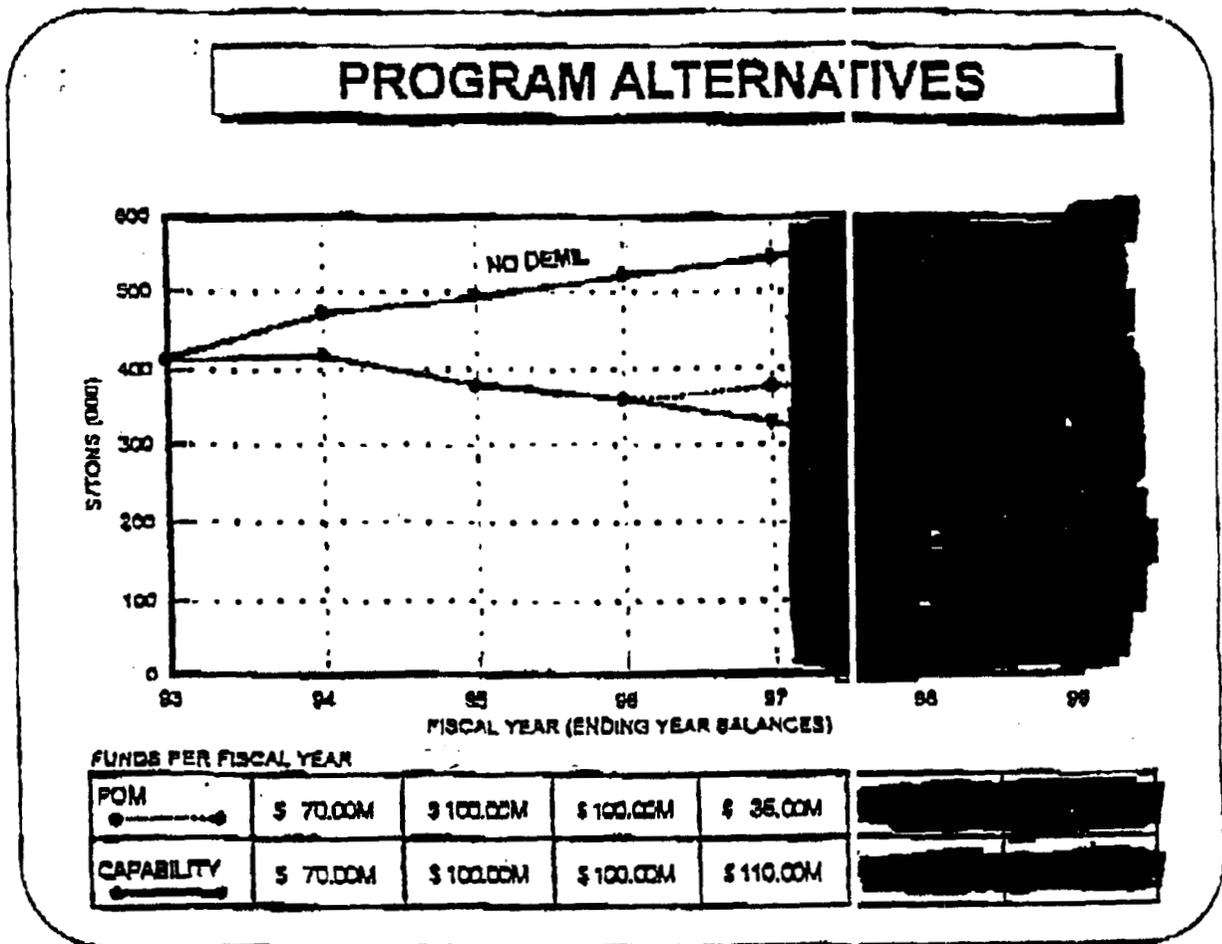
c. FUNDING

(1) In recent years, OMA funding has been sporadic and on the decline. Although funding levels for FY95 and FY99 are favorable, FY'96/97/98 are significantly under funded. As programmed, planned funding levels result in an overall inability to meet the receipt/issue requirements for a full FY.



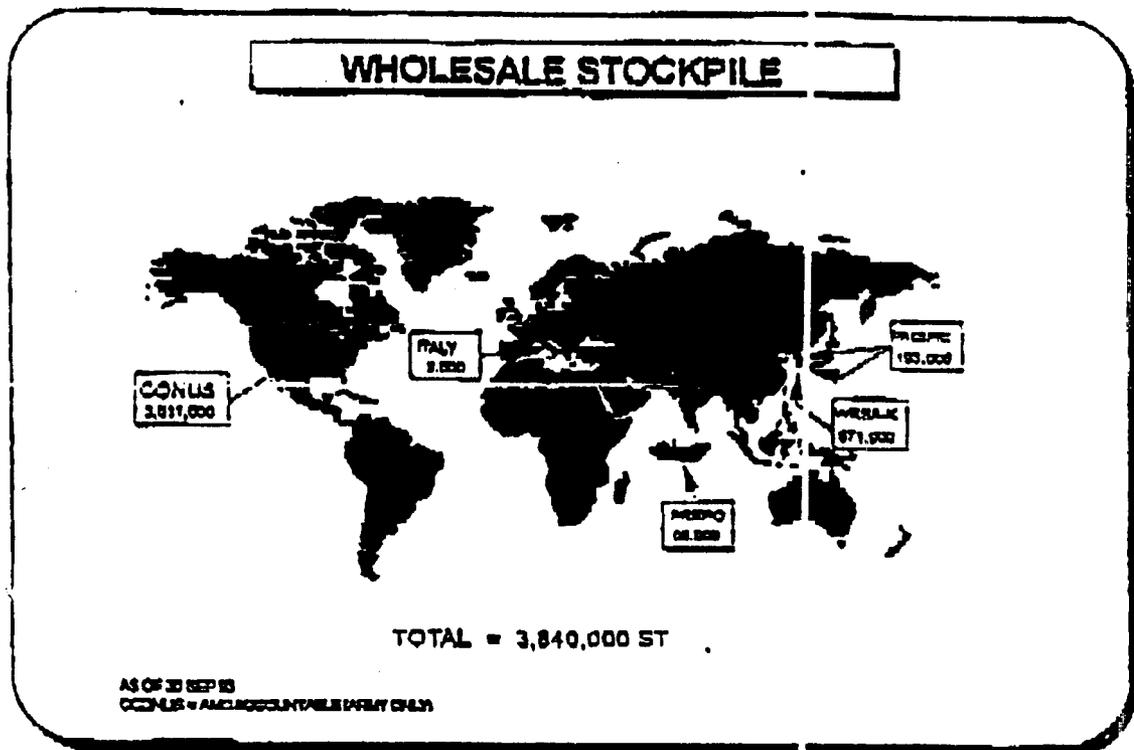


(2) Another major element of stockpile management is demilitarization. With the growing demilitarization stockpile, currently at 413,000 short tons, funding to accomplish demilitarization programs has become critical. With the augmentation of contractor support to the government base capacities, funding levels increase to levels whereby the actual backlog will start to decline in FY95. Without any funding, the backlog would continue to grow significantly. Demilitarization is currently funded to full capacity in FYs 94/95/96 by Procurement Appropriation [REDACTED]

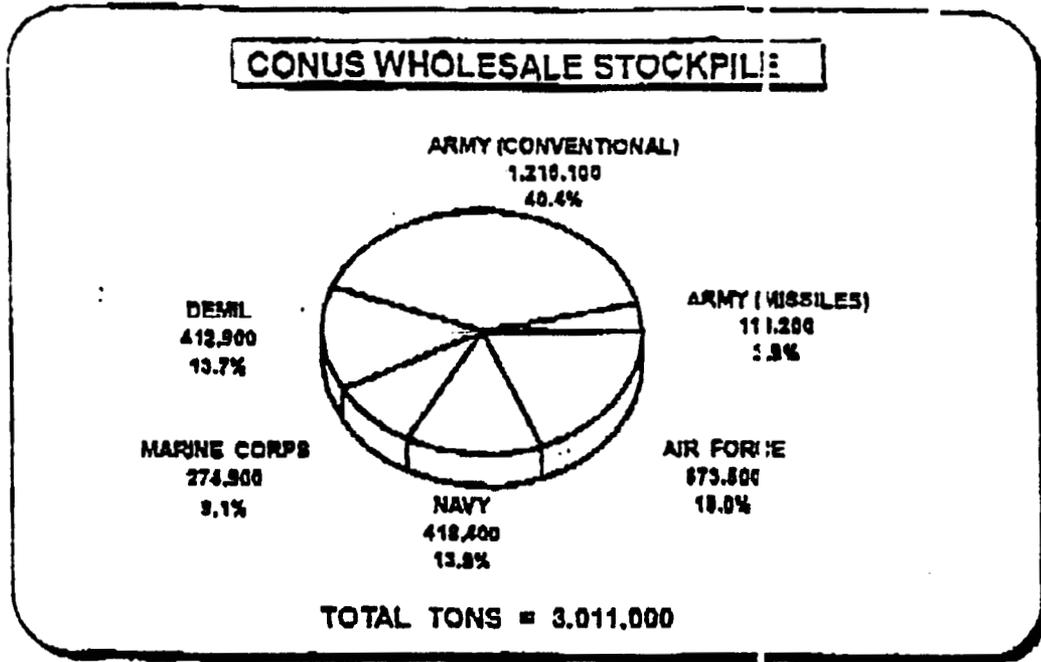


V. STOCKPILE ASSESSMENT

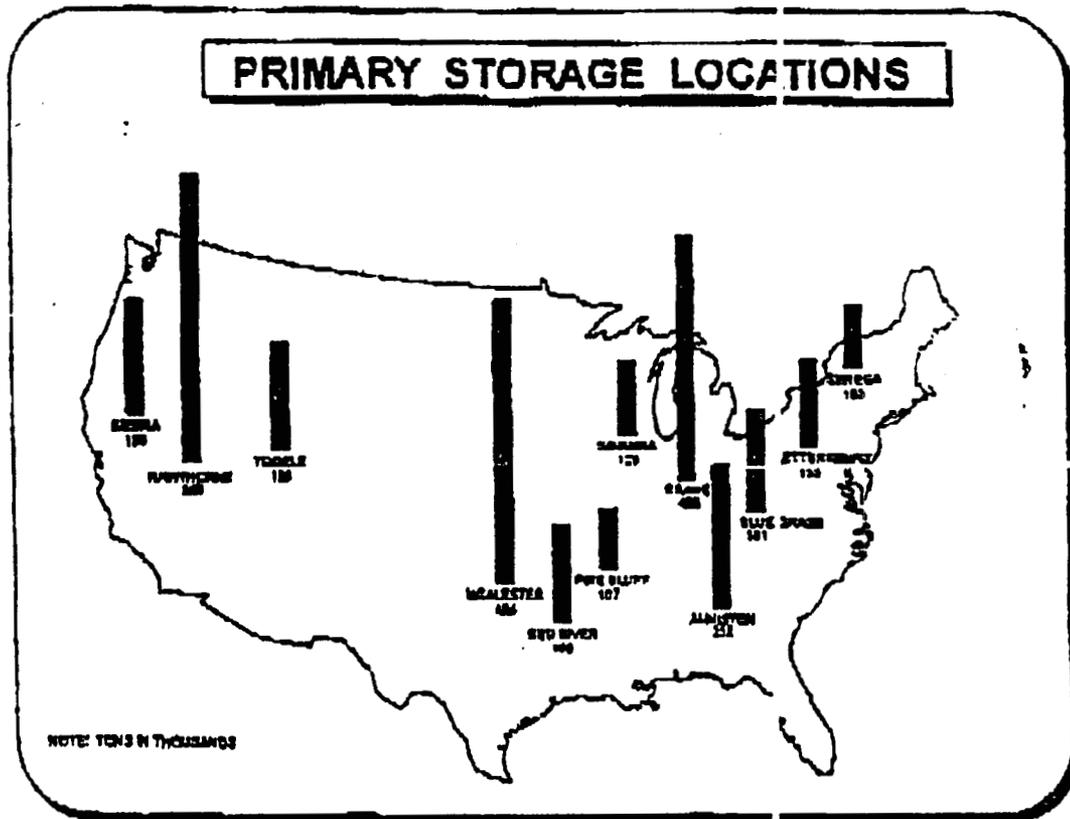
a. As the Single Manager for Conventional Ammunition (SMCA), the Army has oversight of wholesale assets of all services, as well as Army Reserve (AR) and Operational Projects stored in forward deployed theaters and aboard Army Prepositioned Afloat vessels. The overall stockpile for which SMCA maintains accountability totals approximately 3,840,000 short tons. A total of 3,011,000 short tons resides in the CONUS wholesale storage base.



b. The CONUS wholesale stockpile is further broken down into individual account owners. The base is responsible for the storage of Army (conventional and missile), Navy, Marine Corps, Air Force, and demilitarization account stocks. The Army accounts for approximately 44 percent (40 percent conventional, 4 percent missiles) of the total base. An additional 14 percent, or 413,000 short tons of the 3,011,000 short tons resides in the demilitarization account. Significantly, 42 percent of the CONUS wholesale stockpile belongs to the other services.



c. The ammunition wholesale stockpile is primarily configured within several CONUS base installations as depicted in this chart:



d. Essential to the Integrated Ammunition Stockpile Management Plan is the separation and segregation of the current stockpile into two distinct subsets, based on the requirements for which the stocks are designated. Currently, the stockpile is intermingled with many types of diverse stocks for varying requirements. In order to classify the stockpile into distinct and separate requirements or purposes, the following terms must be defined:

(1) **Required Stocks:** That portion of the stockpile that has an identifiable requirement. This includes all stocks in storage that have a requirement for:

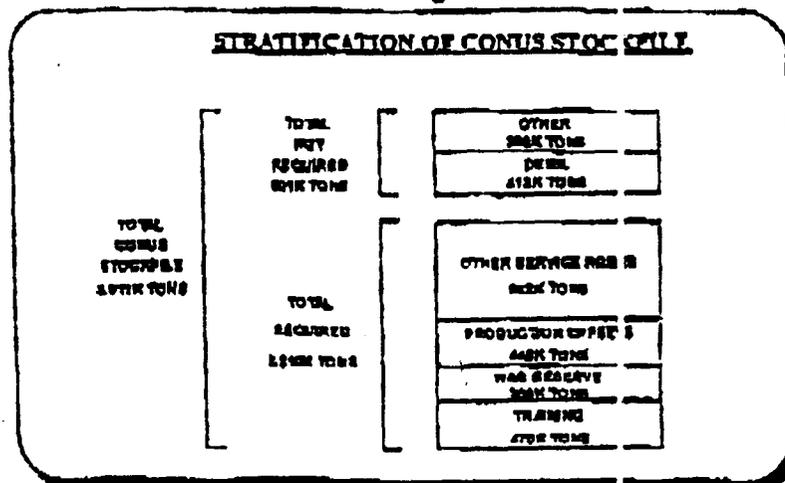
a) **War reserve:** Stocks required from CONUS base to meet service requirements for the two MRCs.

b) **Training:** Peacetime utilization stocks.

c) **Production Offset:** Those stocks that are over and above established requirement levels but are retained under the provisions of the Office of Secretary of Defense (OSD) stockpile retention policy. Examples include economic retention stocks to support training beyond the Program Objective Memorandum (POM) years and contingency retention stocks wherein stocks of older items are held to meet the shortfalls of newer, technologically advanced improved items. Stocks in this category are normally long lead time production items, that, in the event of a consumption of war reserve stocks during wartime, they could readily be transitioned for war reserve replenishment as directed in Department of Defense (DOD) planning guidance.

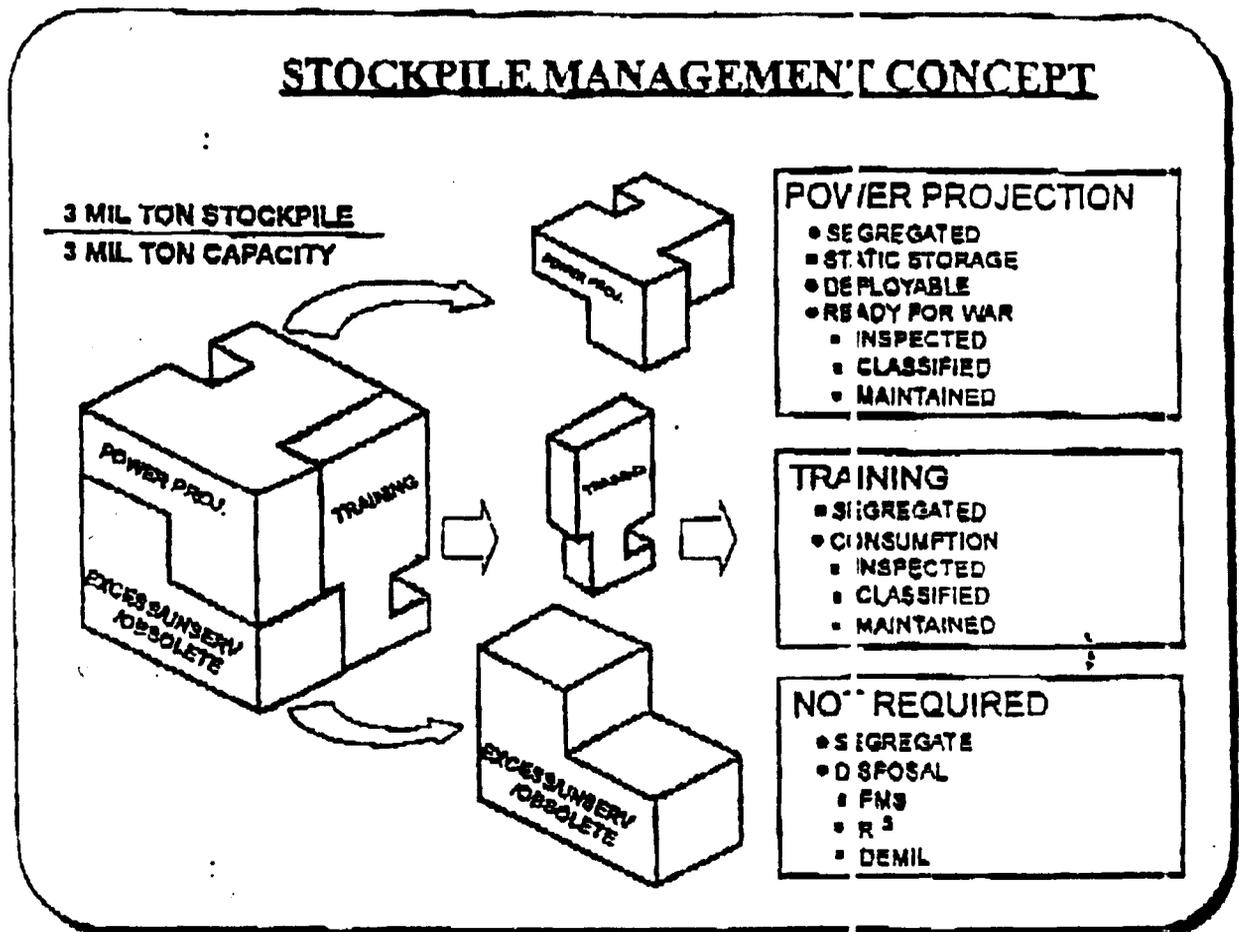
(2) **Non-required Stocks:** That portion of the stockpile that has no identifiable requirements. Included in this segment are stocks located within the demilitarization account and excess stocks awaiting final disposition.

e. The identification of the current CONUS stockpile of 3,011,000 short tons into required and non-required stocks indicates that approximately 2,210,000 short tons are to be considered as required and the remaining 801,000 short tons to be non-required.

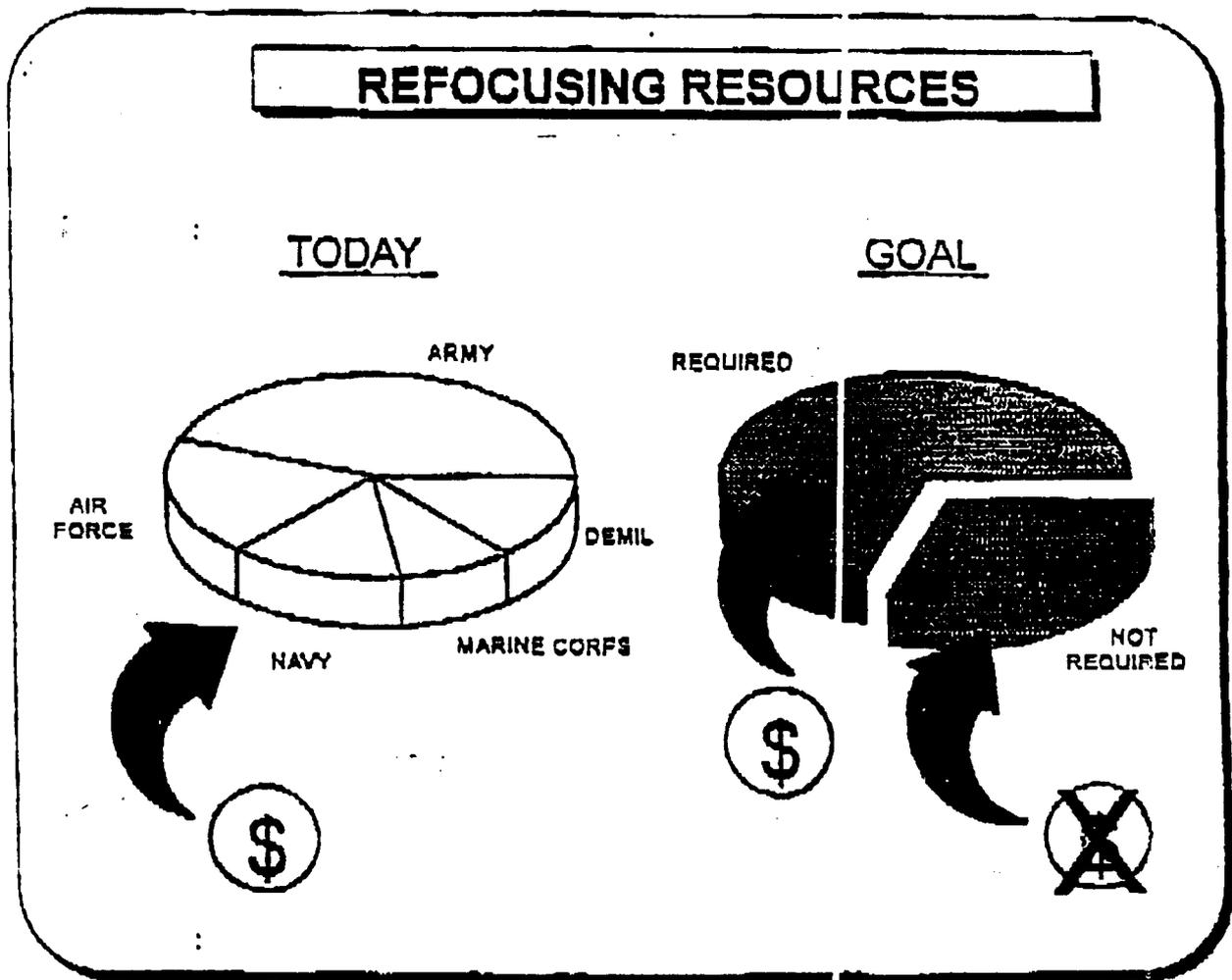


VI. SEGREGATING AND SEPARATING THE STOCKPILE

a. The basis for successful implementation of this plan involves the separation and segregation of required power projection and training stocks from non-required excess, obsolete, and unrepairable stocks. Much of the segregation will be through redistribution, rewarehousing, aggressive demil programs, and intensive distribution forecasting. Segregating the stockpile in this fashion will increase installation efficiencies in supporting power projection principles. Stocks required to support power projection and training will be set aside and not co-mingled with other assets.



b. Under the current system, available funding and resources are allocated against the total stockpile, regardless of how the stocks are classified. By separating the required and non-required stocks significant reductions in resource requirements can be realized. Scarce resources will concentrate almost exclusively on that portion of the stockpile that has valid training and war reserve requirements. The remainder of the stockpile, the non-required stocks, will receive minimal resource allocations for safety and security considerations until disposition can be made. In each of the assessment areas outlined in this plan, this segregated operational philosophy is applied. The segregated operational philosophy also forms the basis for revised management of the stockpile.



VII. TIER DEPOT CONCEPT

a. OVERVIEW

(1) The "Tier Depot Concept" was developed to support the CSA objectives of reducing the current CONUS base storage infrastructure, decreasing manpower requirements, increasing efficiencies and managing a smaller, safer stockpile. This concept acknowledges five basic categories of ammunition subject to three levels of activity.

a) Required war reserve Stocks needed for immediate use to support contingency operations, normally < C+30: Level of activity is minimal during peacetime, but intensive during the first 30 days of a conflict.

b) Required war reserve stocks not immediately needed during contingency operations, normally > C+30: Level of activity is minimal during peacetime, but intensive beyond the first 30 days of a conflict.

c) Required Training Stocks for peacetime utilization: Level of activity is steady during peacetime.

d) Required production offset stock storage: Level of activity is considered minimal with a static stock storage configuration primarily inventory, surveillance, maintenance and moderate receipt/issue workload.

e) Non-required Stocks awaiting demilitarization or other disposition (such as sale of stocks): Level of activity includes primarily demilitarization operations.

(2) The Tier Depot Concept reduces the number of active storage sites and creates efficiencies by realigning the required and non-required stockpile into an appropriate tier activity level. Three levels, or tiers, of installations are used for identifying the level of activity an installation performs. They are:

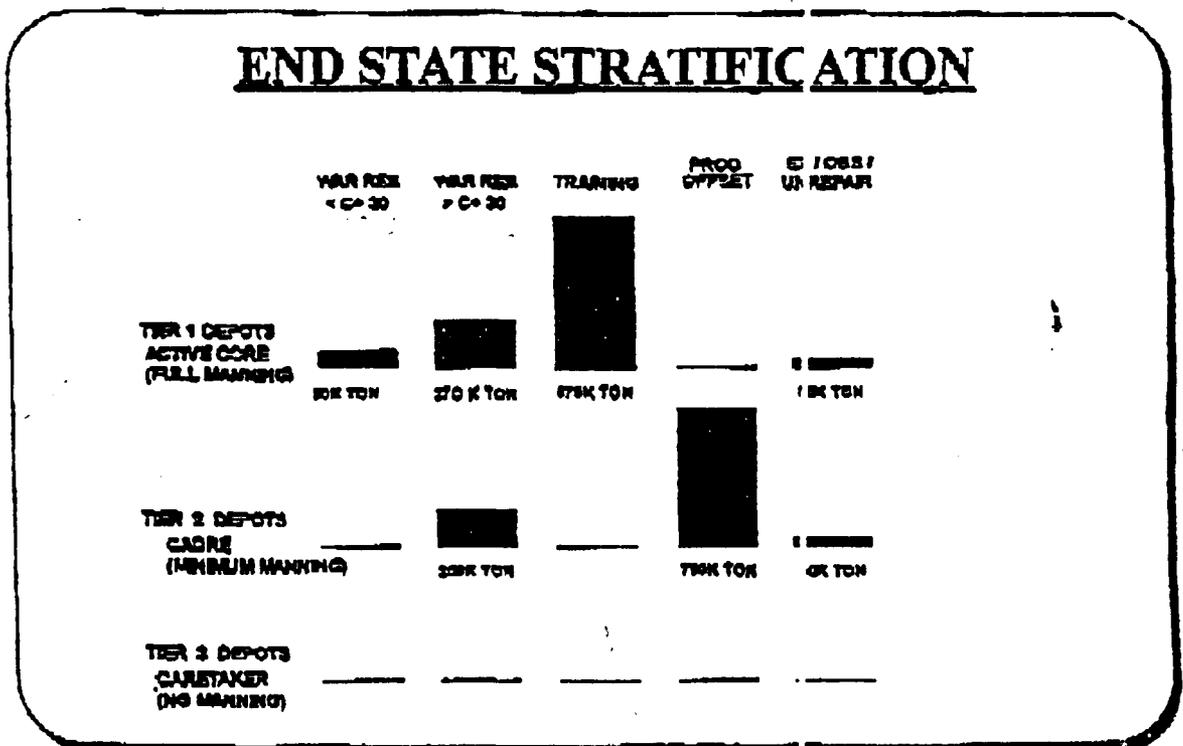
a) Tier I - Active Core Depots; Installations designated as Tier I will support a normal/full-up daily activity level with a stockage configuration of primarily required stocks and minimal non-required stocks requiring demilitarization. Normal activity includes daily receipts/issues of training stocks, storage of war reserve stocks required in contingency operations < C+30, and additional war reserve stocks > C+30 to augment lower level tier installation power projection capabilities. Installations at this activity level will retain the need for requisite levels of storage support, surveillance, inventory, maintenance and demilitarization.

b) Tier II - Cadre Depots; Installations designated as Tier II will normally be utilized to perform static storage of follow-on war reserve requirements > C+30, and, at the end-state objective, store production offset stocks and limited non-required

demilitarization stocks. Daily activity will be minimal for receipts/issues, while workload will be primarily focused on maintenance, surveillance, inventory and demilitarization operations. Tier II installations will have minimal staffing to accomplish assigned workload and will not achieve full staffing levels of Tier I activities until contingency operations require the Tier II installations to begin supporting power projection shipping initiatives of the war reserve assets.

c) **Tier III - Caretaker Depots;** Installations designated as Tier III will be minimally staffed and will contain static non-required stocks in static storage until disposition can be made. The end state objective for activities at this level is to inactivate the ammunition support mission and completely drawdown stockage levels to zero balances.

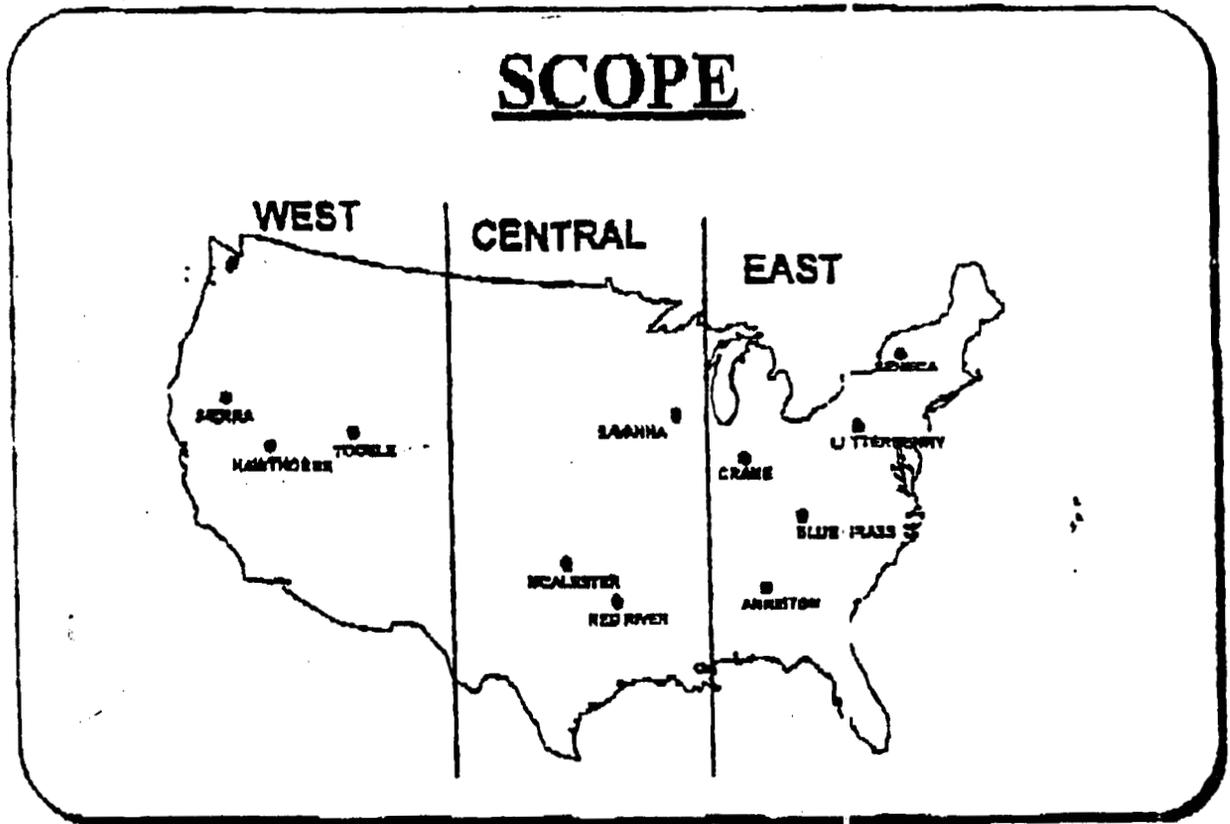
(3) Balances within each tier at the end state objective indicates that, given today's requirements and wholesale postures, approximately 90,000 war reserve short tons would be stratified against Tier I installations to support the first 30 days of a two MRC contingency. War reserve assets required beyond the first 30 days of a two MRC sustainment equate to 470,000 short tons, with the majority, 270,000 short tons, positioned in Tier I installations and the balance in Tier II. Current training unique and training standard items will place approximately 870,000 short tons (470,000 Army, 400,000 other services) in Tier I installations. Some production offset stocks (780,000 short tons) located at Tier II installations, at end state, may transition into the demilitarization account. The end state objective for demilitarization stocks is to reduce the backlog level to 100,000 short tons and be equally distributed among Tier I and II installations.



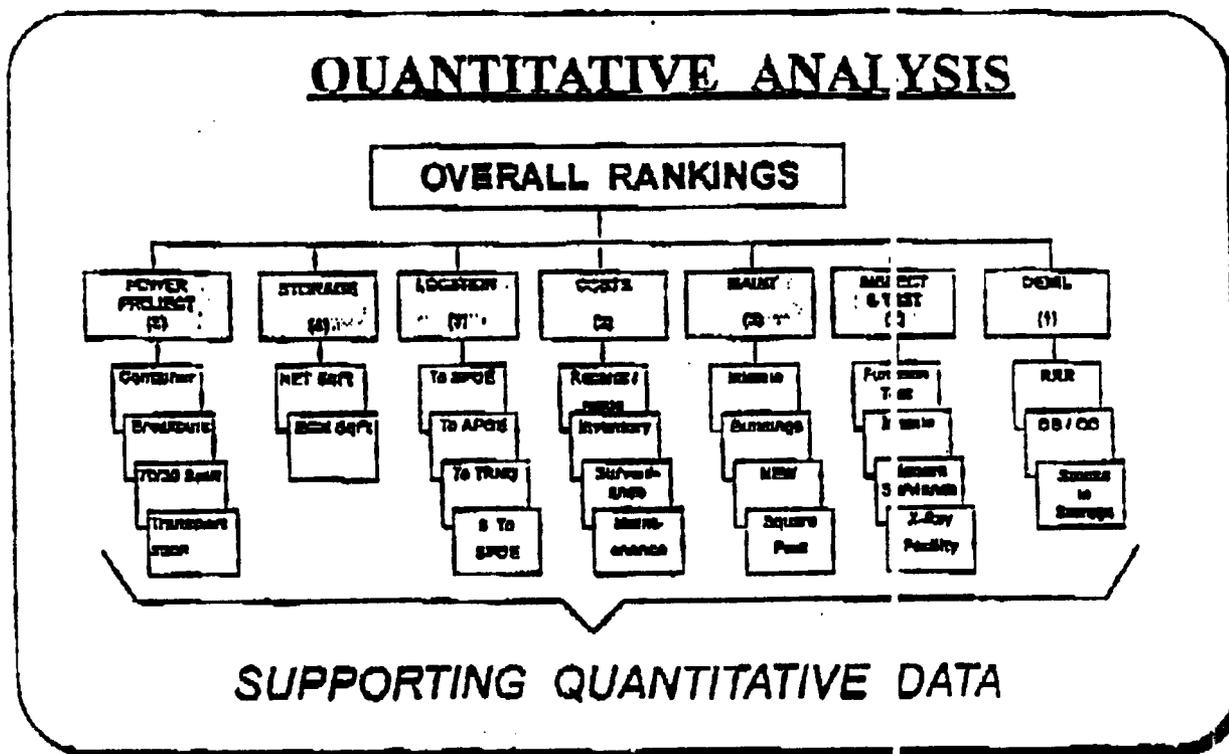
b. TIER DEPOT ANALYSIS

(1) The Tier Depot Concept, in its end state alignment, must support two primary objectives: the power projection requirements of the two MRCs as outlined in Defense Planning Guidance (DPG) and provision of sufficient storage space for assigned tier stockage configurations. Current asset distribution is mal-aligned placing shipping directives on some installations during a contingency operation that exceed their organic capabilities to outload, while in other installations, based on stockage configurations, only a small percentage of their capabilities are utilized. The end state asset distribution of the Tier Depot Concept will maximize the outloading capabilities at Tier I and II installations.

(2) The Tier Depot Concept allows the stockpile to be distributed within geographically oriented regions with a minimum of one Tier I and one Tier II installation configured within each region. Regional distribution fully supports area training requirements and provides an active installation within the proximity of the two sea ports of embarkation for supporting MRC power projection requirements.



(3) A Tier Depot Analysis was performed February through March 1994 in an effort to identify and assign appropriate tier levels for each of the eleven primary wholesale storage installations. The analysis was conducted using both quantitative and qualitative considerations to achieve a final overall installation ranking. The quantitative data was derived from major criteria considered critical in the management and operations of the ammunition stockpile. The major criteria were then further divided into contributing sub-factors. Each sub-factor and major criteria were assigned a weight identifying the importance of the factors and criteria in relation to each other. As portrayed in this chart, power projection capability was considered the most important of all criteria, followed by storage, cost, etc....



(4) The scoring system for each criteria utilized an 11 point scale, giving the highest score, 11, to the installation determined to possess the greatest capability, lowest cost, or best physical location. Each of the other installations were awarded a percentage of the 11 point maximum depending on the difference between the installation's capability, cost, or location, and that of the installation receiving the maximum score.

(5) Development of an 11 point scale was predicated upon the inability to measure some individual factors with hard data numbers. Those factors, such as "yes/no" questions (does an installation have the capability to perform function tests?), were assigned a score from 1 to 11, giving 11 points to the installations with the

maximum subjective score. Subsequent scores for the remainder of the installations ranged from 10 to 1 as applicable. All scores, utilizing both hard data and subjective data were normalized on the 11 point scale.

(6) The final quantitative analysis provided an overall order ranking of installations. Qualitative considerations were then applied to achieve overall final rankings and tier assignment conclusions. Qualitative considerations included multi-mission installations, customer preferences and toxic chemical missions. To assure that the tier assignment conclusions could support and store both the power projection requirements of two MRCs and peacetime training requirements, a comparison of requirements to capabilities was conducted. Assuming an end state stockpile distribution that maximized capabilities, installations identified as Tier I and II would support all power projection requirements during contingency operations. An additional Tier I and II installation is required in the east region to support training and power projection requirements of MRC east.

(7) The Tier Depot Analysis resulted in the following realignment of the CONUS wholesale storage infrastructure:

a) West Region;

Tooele Army Depot - Tier I
Hawthorne Army Ammunition Plant - Tier I
Sierra Army Depot - Tier III

b) Central Region;

McAlester Army Ammunition Plant - Tier I
Red River Army Depot - Tier II
Savanna Army Depot Activity - Tier III

c) East Region;

Crane Army Ammunition Activity - Tier I
Blue Grass Army Depot - Tier I
Letterkenny Army Depot - Tier II
Anniston Army Depot - Tier II
Seneca Army Depot Activity - Tier III

c. TIER IMPLEMENTATION

(1) A complete, detailed implementation/redistribution plan has not been developed. Prior to the development of the redistribution plan the end state stockage configuration must be identified that: assures maximum utilization of outloading capabilities; supports a geographical orientation of stocks to support MRC

requirements; and supports a regional orientation of training stocks. Redistribution of the stockpile will be accomplished tier by tier, DODIC by DODIC, FY by FY. Milestone for completion of the current state/end-state stratification and the year-by-year redistribution plan is 30 Sep 1994. Assuming resources are made available to support stock redistribution, end state asset stratification is estimated to take approximately six years. The implementation/redistribution plan will concentrate efforts as follows:

(2) **Issues:** Issues of training ammunition will be accomplished through prioritization from Tier II/III installations. War reserve stocks requisitioned for storage in forward theaters and PREPO ship locations will be priority issued from Tier III installations.

(3) **Receipts:** All training ammunition will be receipted into Tier I installations. War reserve receipts into Tier I/II installations (stockage configuration at end state when developed) will provide breakout based on storage and outloading capabilities. Field return receipts of non-required stocks will be receipted into installations where stocks will likely be demilitarized. Receipts of production offset stocks will be positioned in Tier II installations.

(4) **Demilitarization:** Initial Demilitarization efforts will concentrate on Tier I installations for space generation. Follow-on efforts will be Tier II/III.

(5) **Rewarehousing:** Priorities will be targeted at Tier I/II installations for segregation/separation of required/non-required stocks and to increase storage space utilization efficiencies. No further intra-installation rewarehousing efforts will take place at Tier III installations.

(6) **Inter-installation Movements:** Movements between depots will be required to position remaining stocks located in an incorrect tier or installation within a tier, and for maximization of outloading and geographical positioning of stocks to support MRC requirements. Inter-installation movement of training stocks will be minimal. The majority of training stocks will be moved in support of training requirements.

(7) **Army Strategic Mobility Plan (ASMP) projects:** The ASMP projects will be realigned to concentrate efforts on Tier I/II installations. Some ASMP projects slated for Tier III installations could still be funded if the project is considered critical through end state projection.

(8) **Prior to the final development of the implementation/redistribution plan,** issues and receipts of training stocks can begin to be implemented within current FY.

(9) **The Functional Area Assessment (FAA) portion of this plan provides** additional implementation strategies for each of the stockpile management functions of distribution, storage, inventory, surveillance, maintenance and demilitarization.

a) INITIATIVES - Redistribution of Stocks.

1 The tier concept requires munition stocks to be positioned at installations capable of supporting war reserve (Tier I/II) and training requirements (Tier I). Stocks will be redistributed IAW Commander in Chief (CINC) developed munitions movement requirements in such a manner that provides war reserve geographical regional support to shipping ports of embarkation. Multi-use/multi-scenario items will be appropriately positioned at installations that can support either conflict, MRC East or West.

2 The stock distribution plan would consist of several initiatives that would allow this Command to reposition stocks through daily transactions. These initiatives consist of participating in Seallift Emergency Deployment Readiness Exercises and other exercises requiring munitions movement. Projects have also been submitted to the ASMP for funding redistribution of stocks into the appropriate tier installations for optimizing Tier I and II outloading capabilities. It is estimated that approximately 50,000 Short Tons per year, FY98-99, will require redistribution to support outloading optimization. The cost for this redistribution is being programmed at \$21.4 million per year. Additional redistribution during these same years will be required for movement of stocks into correct tier locations.

3 To enhance our ability to meet early deploying unit AEL requirements, depot/combat unit partnership arrangements may be established. Deployment requirements for specific early deploying units will be identified by depot, and detailed quick load-out plans will be established.

4 Other efforts such as Europe and Pacific Retrograde and CONUS training requirements will be utilized to maximize redistribution of stocks in support of the Tiering distribution plan. The efforts identified are being utilized whenever economically feasible in an effort to reduce the overall effects on the OMA budget.

b) INITIATIVES - Army Strategic Mobilization Program (ASMP) Initiatives.

1 The AMCCOM is currently identifying and submitting projects into the ASMP for funding. These projects will be implemented to enhance the container output capabilities of the CONUS base as well as ensuring the current structure remains fluid in supporting Power Projection. They also identify projects for railroad upgrade/repair, magazine modifications, and road repairs.

2 The ASMP program prioritization will be influenced by the tiering plan of action. Continued monitoring of the installation ASMP project submissions and coordination with HQ AMC personnel will ensure that the tiering concept is fully supported for available funding. Concentration of efforts will be on Tier I and II installations.

ASMP PROJECTS FY93-99		
PROJECT	FUNDED (\$M)	UNFUNDED (\$M)
• Railroad Upgrades/Repairs	[REDACTED]	[REDACTED]
• Road Repairs	[REDACTED]	[REDACTED]
• CADS Facilities	[REDACTED]	[REDACTED]
• Magazine Modifications	[REDACTED]	[REDACTED]
• Rapid Deployment Facilities	[REDACTED]	[REDACTED]
• Security System Upgrades	[REDACTED]	[REDACTED]
TOTAL	[REDACTED]	[REDACTED]

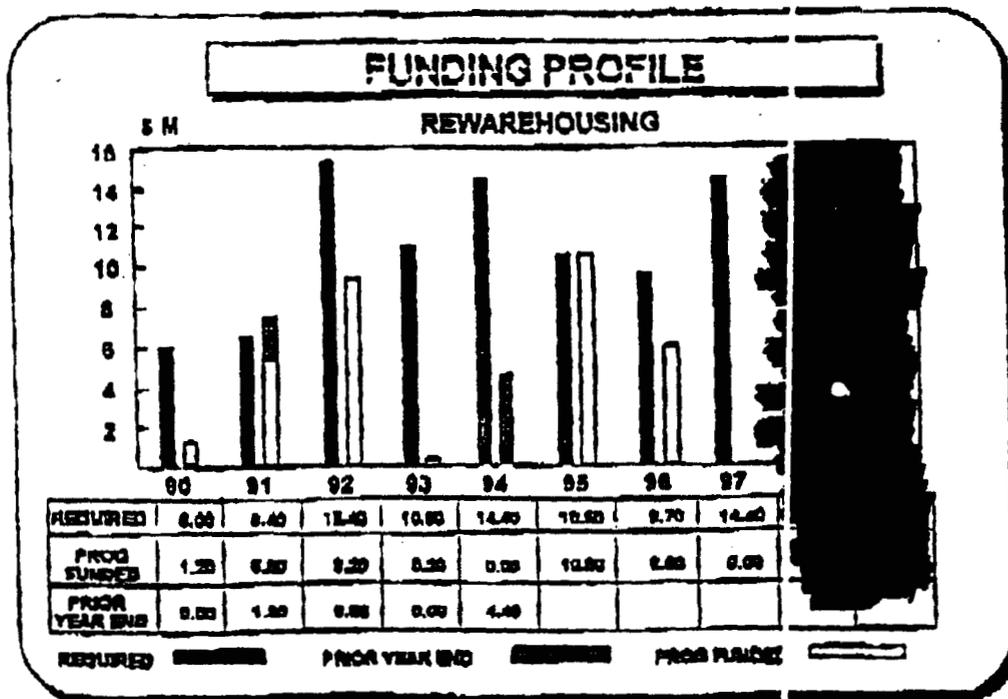
c) INITIATIVES - Preconfigured containers.

1 One of the key ASMP projects, in support of early deploying units, is a test of the possibility of prepositioning munitions in containers at the CONUS installations. These containers would be utilized to augment the installation workforce in meeting early deploying unit movement requirements of ABL. This project is currently under submission to HQ AMC and will be prioritized for immediate implementation to ensure test results are available ASAP.

2 This concept could have an application at Tier II installations whereby reduced manpower at the Cadre level would prevent significant tonnage issues during the early days of deployment, but allow for quick outload of preconfigured containers.

b. STORAGE

(1) Rerehousing is the primary means of increasing efficiencies of space utilization and overall storage space capabilities. Funding for rerehousing has been historically sporadic. As projected in the POM, sporadic funding patterns will continue with no funding for rerehousing programmed in FYs 97

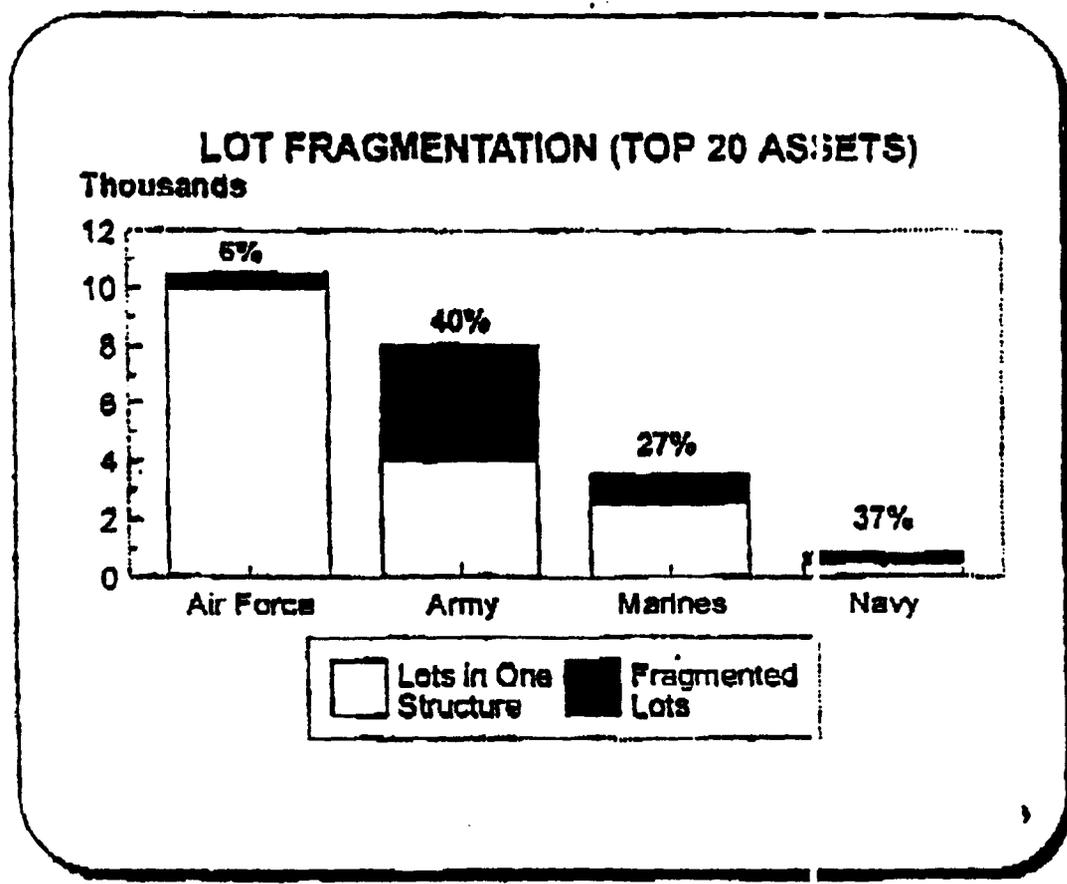


(2) The rerehousing chapter of the WASP study concentrated on three storage concerns: safety, security, and space utilization within an installation. The follow on FAA emphasized the overall distribution of the ammunition stockpile between installations for alignment into a tiering structure. Tiering of the wholesale ammunition storage base will require intra-depot rerehousing and redistribution of assets between installations. This portion of the assessment addresses intra-depot rerehousing for consolidation of assets at the Tier I and II installations. The initial classification of assets as required or non-required is needed, and once accomplished, rerehousing for segregation, separation, and consolidation of like lots can begin.

(3) The focus of intra-depot rerehousing will be the separation of required from non-required assets at the tier I and II installations. Maximum utilization of storage space without hindering deployment or normal storage operations is the primary goal. The storage structures at the tier III installations are to be fully utilized with non-required stocks commensurate with safety/security limitations. The ultimate goal is to have assets safely, securely, and efficiently stored based on their tier level requirements.

At the end state objective, tier III installations will no longer have an ammunition mission as all stocks will be stored in higher tier level echelons.

(4) Positioning of war reserve, training and production offset stocks at tier I and II installations is the long range objective (production offset stock will be stored only in tier II installations at end state objective). Lots with the same condition code should be, ideally, located in no more than one storage structure. The WASP study identified approximately fifteen percent (15%) of the stockpile as being fragmented (stored in two or more storage structures). Further analysis indicated the degree of fragmentation varied by service for their "Top twenty Assets" ranging from a low of 6 to a high of 40 percent.



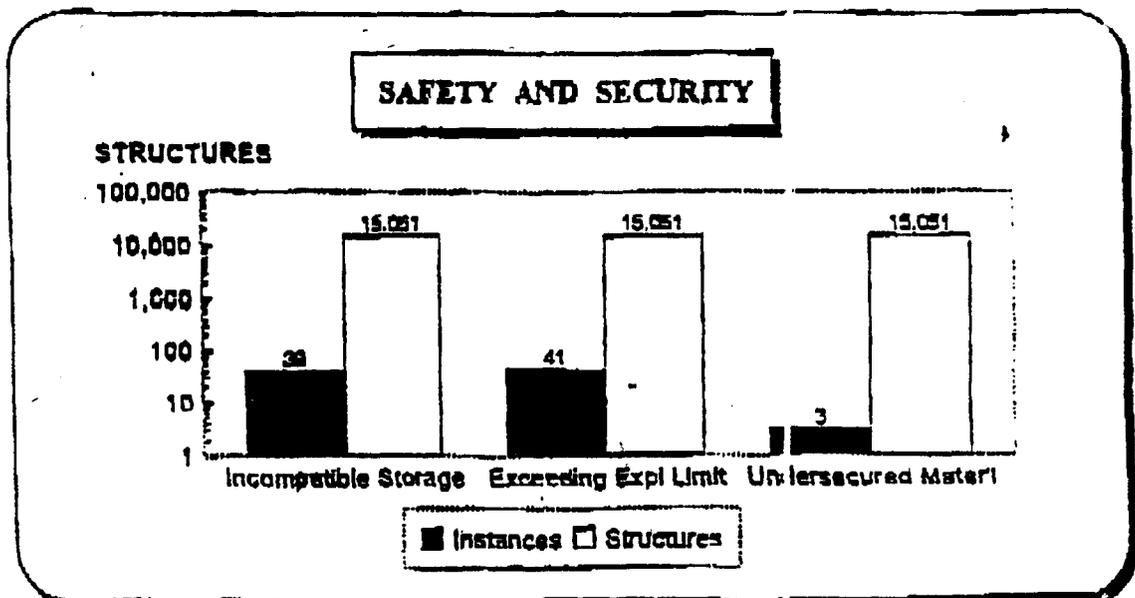
(5) The top twenty assets consisted of 132 NSNs identified by the services as their top managed assets to be assessed during the WASP study. A listing identifying the required stocks and requirements were not available for developing the lot consolidation estimates. In order to prepare a cost estimate, the overall WASP fragmented lot percentage and the FY96 projected stockpile tonnage had to be used. The projected tonnage for each installation was provided by AMCCOM automated projection models. This could be a one time cost if receipts were consolidated by lot/condition code at the tier I and II installations. The only recurring cost would be a base operating cost to correct safety and security deficiencies and for rewarehousing

incidental to receipts/issues. The rewarehousing costing rate of \$50.00 per short ton was provided by the AMCCOM ammunition product line. The projected one time cost, spread over a three year time period, of rewarehousing all required stocks is reflected below:

SEGREGATION OF REQUIRED STOCKS				
	Short Tons	15 % of ST	Cost Rate	TOTAL
FY 96	2,153,000	107,650	\$50.00	\$5,382,500
FY 97		107,350	\$50.00	\$5,382,500

(6) An analogy was drawn between the Service's top twenty assets and the required stocks as a basis to verify the rewarehousing costs. The VISTA database (detailed storage visibility) was used since it contains segments of the Standard Depot System (SDS) lot and magazine files. The Service's top twenty assets were identified for each installation as well as the specific storage structures containing each lot. The lots were consolidated by condition code. The assets in each location were classified as required (top twenty assets) or non-required. The weight of each classification was calculated within the structure to determine if the required or non-required stocks would be more economically relocated. The overall costs for the top twenty assets were significantly lower than the projected rewarehousing cost estimate. The lower cost is due to the greater quantity of required stocks in comparison to using the top twenty assets. The results provided a "ball park" assurance for using the WASP fragmented lot percentages.

(7) A base level of funding will be required to rewarehouse improperly stored assets violating safety and security requirements.



(8) The low level of deficiencies identified during the WASP study reflected the installations efforts to immediately correct such violations. The WASP study discovered that if funding is not available to correct these deficiencies, the costs will be absorbed as a receipt/issue function. The premise used to develop base cost is a historical average of rewarehousing costs applied to a percentage of tonnage on hand at an installation. The base level costs should, over time, decline due to a reduced level of activity at the various tier installations. The base level funding, tier III installations not included, is as follows:

BASE LEVEL REWAREHOUSING				
	Short Tons	2% of ST.	\$ per ST	TOTAL \$
FY 96	2,153,000	43,060	\$50.00	\$2,153,000
FY 97	2,077,000	41,540	\$50.00	\$2,077,000

(9) The total cost associated with consolidation of required assets and maintaining a base rewarehousing level at the tier I and II installations (consolidation cost is a one time cost spread over three years) is as follows:

CONSOLIDATION AND BASE LEVEL REWAREHOUSING COSTS			
	Consolidation	Base Level	TOTAL \$
FY 96	\$5,382,500	\$2,153,000	\$7,535,500
FY 97	\$5,382,500	\$2,077,000	\$7,459,500

(10) The projected wholesale stockpile occupancy, levels without rewarehousing, is bleak. The WASP study has projected reaching a 100% occupancy level during FY95. Outside storage of field service and demilitarization assets is currently being utilized as an alternate storage method at many installations.

(11) Initiatives can be taken to generate the needed storage space prior to FY96. Several initiatives, some of which were in the WASP study, include aggressive demilitarization programs, rewarehousing of low hazard and inert stocks to maximize explosive storage space utilization, consolidation of less than one half pallet of B5A (demil) materiel into box pallets, proliferation of storage racks and utilization of cargo pallets for light pallets of field service stocks. Below are proposed milestones for some of these initiatives:

a) FY94: Less than 1/2 pallet of B5A assets:

- 1 Develop LOI and drawings for the procedure.
- 2 Develop bid packages for the installations identifying the potential B5A assets to be palletized.
- 3 Fund installations according to tiering priority.

b) FY94: Use of storage racks:

- 1 Develop bid packages for the installations identifying potential assets for storage racks.
- 2 Fund installations for purchase of storage racks and rewarehousing of assets.

c) FY95: Less than 1/2 pallet of field service assets:

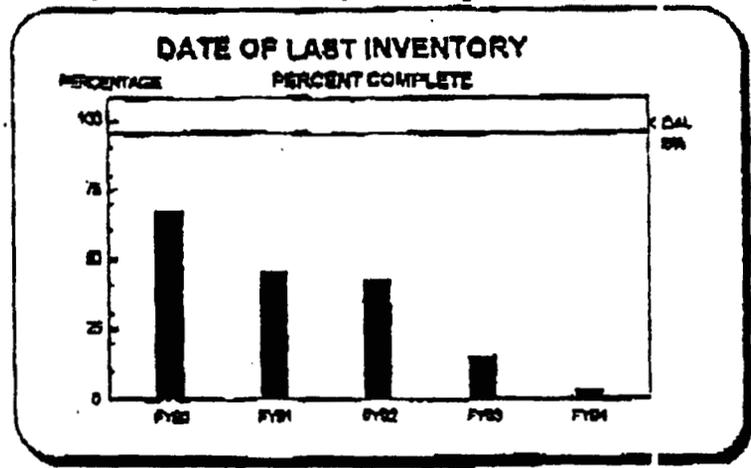
- 1 Coordinate procedure within the IOC to include safety, surveillance, packaging, and functional areas.
- 2 Develop drawings for the procedures.
- 3 Develop bid packages for the installations identifying potential field service assets.
- 4 Fund installations for the purchase of cargo pallets and rewarehousing of field service assets.

(12) Implementation of the above recommendations would improve storage space efficiency. However, an aggressive demilitarization program funded to full capability through FY99 will generate permanent storage space and eliminate from the stockpile a big contributor to inefficient use of storage space.

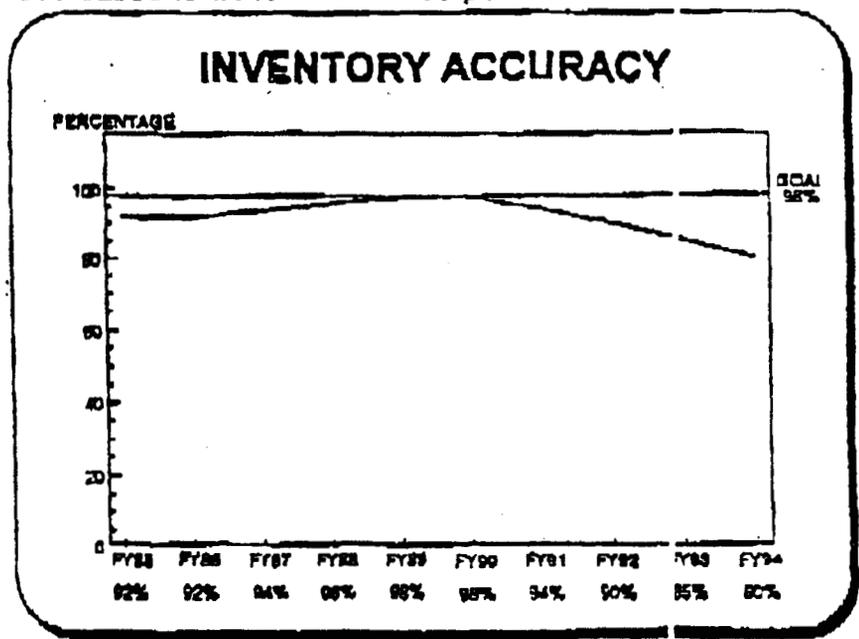
c. INVENTORY

(1) The inventory program is the basis provided to meet the Army's obligation to Public Laws requiring fiscal accountability. This is normally accomplished by performing an annual inventory of all stocks and a subsequent reconciliation to the accountable records.

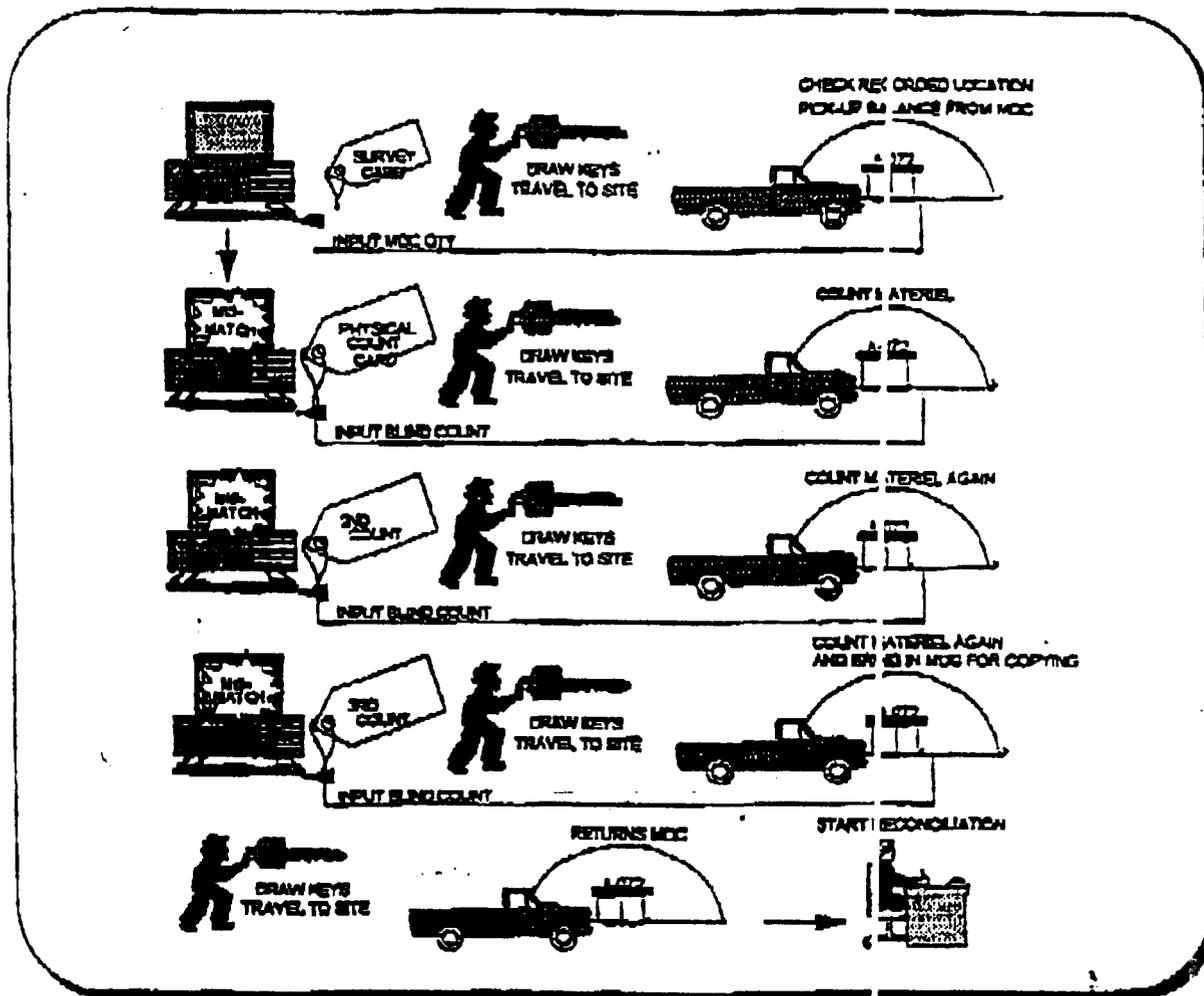
(2) Prior to FY90, annual inventories occurred at all installations. At the completion of the FY89 inventory, accuracy was documented at 98.5 percent. Beginning in FY90 and continuing through the current Fiscal Year, funding has been inadequate and each year less inventory is being accomplished.



(3) In late FY93, the JOCG commissioned the WASP study to measure the health of the stockpile as the result of several years of underfunding in the functions that provide care for stocks in storage. The inventory team determined that accuracy of the inventory had decreased to a maximum of 85 percent.

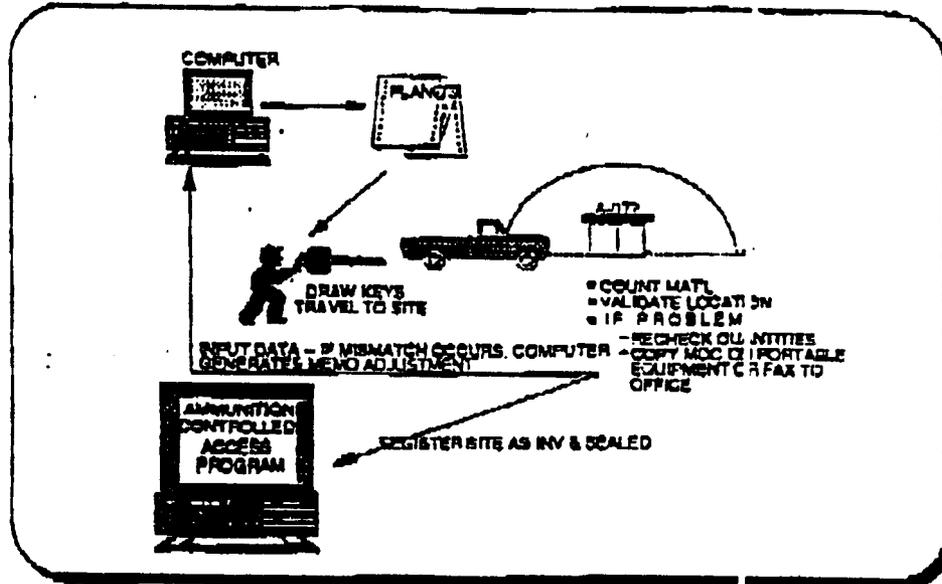


(4) Additional findings concluded that significant inventory resources were required to support the current structured inventory program. The greatest extent of this cost centered around the methodology of conducting the inventory and required reconciliations at the National Stock Number (NSN) level. This system requires numerous visits to a single structure throughout the inventory cycle by requiring the inventory verification process of a multitude of NSNs.



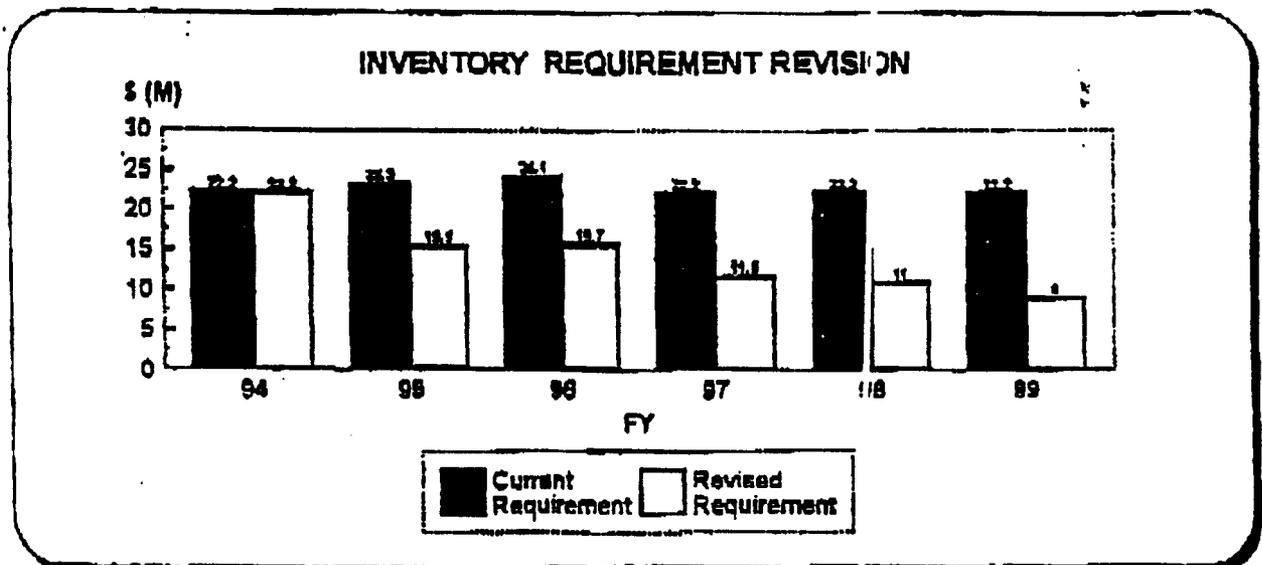
(5) Ammunition stocks in storage are recorded by grid location within a storage structure. The WASP study recommended a revised and rewritten inventory program that encompassed a grid based inventory system that would achieve increased efficiencies and effectiveness resulting in lower operating costs. Memo adjustments would be prepared for each discrepancy as it was identified in lieu of at the end of the process. Once the system identifies that all recorded grid locations for a given NSN have occurred, a flasher report would be produced and a subsequent computer reconciliation occurs for any memo adjustments made throughout the inventory. Only those reconciliations that are not correctable will require additional manual research

and reconciliation. An analysis of this approach indicated that by deleting the requirement to enter the same structure on a number of occasions and accepting the stock posture as is, an appreciable manpower and resource reduction would occur.



(6) Modifications in the inventory program are also reflected in the development of a controlled access program. Once a particular structure has had a complete inventory accomplished, adjustments made, and file maintenance performed, it is identified as a sealed structure requiring no future inventories unless keys have been drawn for activity that would result in movement of stocks. This program involves storing non Category I and II materiel. An annual sample of sites are conducted for validation and verification of the sealing of static storage site process.

(7) These revisions and modifications to the existing inventory program will result in immediate reductions in inventory funding requirements and allow for a more efficient and effective operation.



(8) Milestones have been established for program modification and execution as follows:

a) FY94

- 1 Identify modification requirements.
- 2 Establish the controlled access program.
- 3 Prototype modified system.
- 4 Prototype revised grid based and controlled access programs.

b) FY95

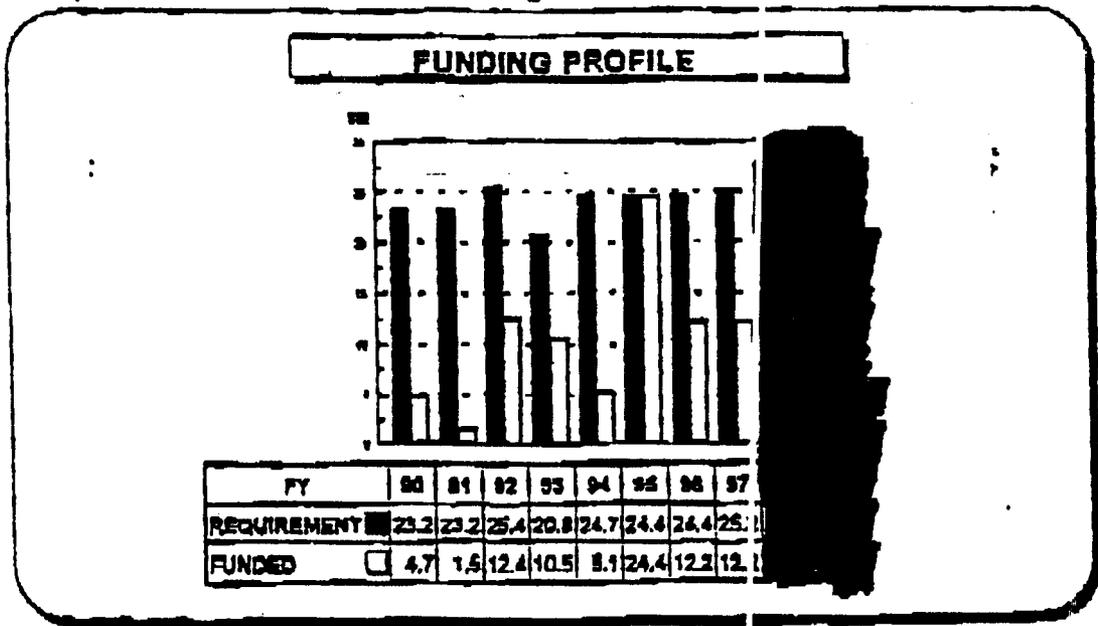
- 1 Execute grid based program at all Standard Depot System (SDS) storage installations.
- 2 Assistance to installations as required.
- 3 Revalidate the LOGMARS program and integrate if applicable.
- 4 Develop an automated key room program.

d. SURVEILLANCE

(1) The Ammunition Stockpile Surveillance Program is comprised of several major programs. The purpose of these programs is to assure that the condition, performance capabilities, and safety margins of ammunition are known throughout their life cycle. This is accomplished through periodic sampling, inspection, and testing of stocks. Test/inspection results are used to make appropriate stockpile decisions such as identifying items for maintenance and demilitarization, and withdrawing or restricting items considered to be of marginal serviceability. In addition, surveillance supports several key safety and logistical requirements: inspection of storage structures and safety of ammunition stored therein; transportation conveyances; and inspection of maintenance and demilitarization facilities and operations.

(2) Programs devoted exclusively to safety have been and are projected to be fully funded. However, two key programs, Large Caliber Testing and Periodic Inspection, devoted primarily to determining the serviceability of the stockpile are significantly behind schedule. The Large Caliber Test Program currently has 42 percent of items beyond its test interval. Twenty percent of the lots in the wholesale stockpile are beyond their periodic inspection interval. There has been a significant historical inspection failure or reclassification rate for items/lots included in these programs. For periodic inspection, the reclassification rate has been 7 percent and for large caliber testing, the rate has been 17 percent. Continued tolerance and growth of this backlog runs the risk of eroding our confidence in the true condition of the stockpile. It also prevents the identification of unserviceable stocks for appropriate corrective action; i.e., perform maintenance, suspend or restrict ammunition lots.

(3) Relative to this background, several issues have emerged. The Army is now faced with such a diminished ammunition surveillance program that knowledge of stockpile readiness is critically reduced. Moreover, projected funding does little or nothing to improve on this shortfall in the long term.



(4) In reality, the unbalanced nature of funding through FY 99 will only further diminish the skill base necessary to complete even the most critical surveillance functions. Accordingly, the ammunition surveillance community, working in tandem with other logisticians, has tried to address these problems through several progressive initiatives.

(5) What follows is a discussion of some key actions in progress or proposed to effectively meet the challenge of the above issues. Caution must be exercised when considering cost savings or avoidance's discussed below. Any savings realized through these initiatives are only valid against a backdrop of full surveillance inspection/test compliance. For example, in recent years the number of periodic inspections completed have fallen to nearly zero. There is obviously no cost avoidance against a base of zero. Funding at the requirement level must serve as the baseline to determine the value of the process.

a) Balanced program:

[REDACTED]

This erratic funding profile raises serious concerns about the Army's ability to retain the highly trained specialists necessary to perform the surveillance test and inspection function. T

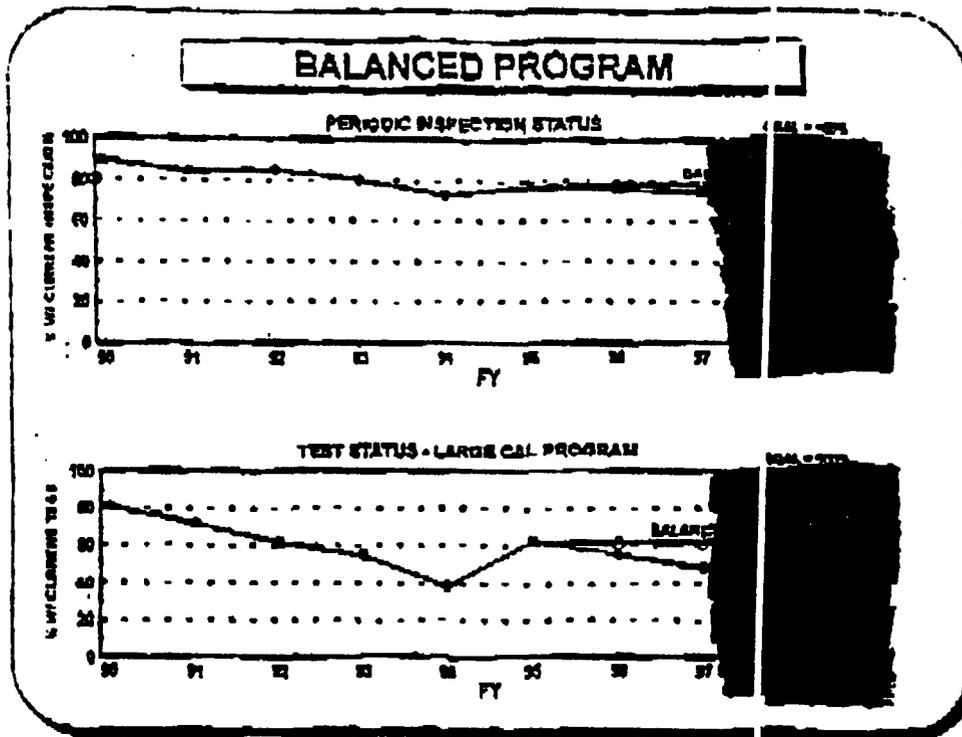
[REDACTED]

A funding profile which is balanced over the FY 96-99 (approximately \$14M per year) would assure the continuing availability of trained and skilled personnel for this function.

Any possibility of closing this gap should be pursued. To this end, the balanced funding approach will significantly improve the readiness posture of the Army.

[REDACTED]

In summary, a balanced funding program through FY 96-99 assures availability of trained personnel to perform necessary work and actually results in an appreciably reduced backlog while spending the exact same amount of funds.



b) Prioritize Inspection of Required Stocks:

It is therefore important to the readiness of the Army that inspection and test dollars be wisely invested. To achieve this goal, the ammunition surveillance community has joined with our supply manager counterparts to embrace the concept of dividing the wholesale stockpile into two separate pieces; required and non-required. Given that required stocks satisfy both current power projection and training requirements, inspection and test of these assets will be of the greatest importance. It is envisioned that these lots will receive periodic inspection IAW SB 742-1, be represented in testing programs as described in A11 702-6, and be stored IAW standard storage drawings. Of course, all safety related inspections, to include magazine inspection of storage structures, will be assured for required stocks. Conversely, non-required stocks, those assets currently in excess of both power projection and training requirements, may be deemed suitable for a lesser degree of scrutiny. Barring unforeseen circumstances, it is envisioned that inspection requirements can be reduced to at least a Safety in Storage (SIS) inspection. For items deemed suitable due to their durability in storage, further inspection reductions or possible elimination is possible. Examples may be small arms ammunition, inert components, HE projectiles, etc. Block storage may be deemed appropriate, but such considerations will hinge on completion of associated rewarehousing and reconfiguration to separate required and non-required stocks. These stocks cannot however be abandoned. Accordingly, all safety related inspections, to include magazine inspection of storage structures and their contents, must also be assured for non-required stocks. In terms of cost analysis, given completion of associated

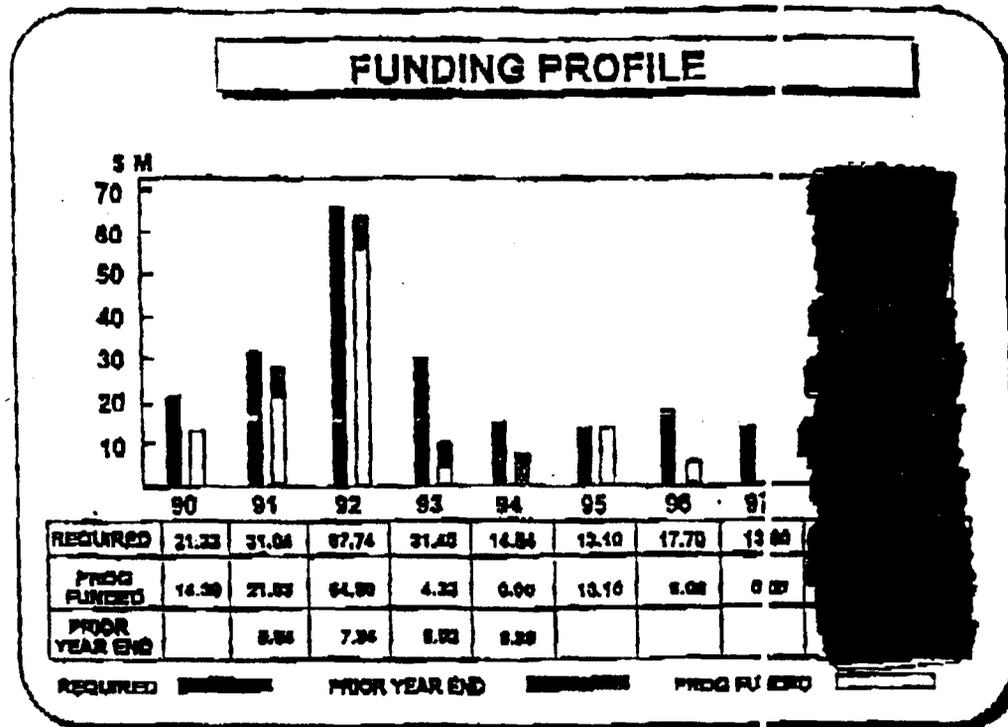
rewarehousing and reconfiguration, conversion to an required versus non-required approach for the wholesale stockpile can result in cost avoidance for ammunition surveillance functions. Depending on stockpile breakouts, most notably with "production offset" stocks, a savings of \$500-2000K per year is projected as early as FY 97.

c) Lot Clustering: Ammunition lot clustering is a procedure to administratively combine homogeneous ammunition lots into groups for the purpose of periodic inspection. Each installation establishes its own clusters IAW with a Letter of Instruction (LOI) jointly developed by DESCOM and AMCCOM and approved by HQ. AMC. Through statistical modeling it has been demonstrated that inspection of one lot in the cluster would apply to all other lots in the cluster, reducing the number of inspections and saving resources without sacrificing quality or safety. The LOI contains specific instructions such as: all lots must be of the same model/series; same manufacture; same lot interfix; similar method of pack; same condition code, and have similar histories. It is estimated that a potential 10-15 percent reduction in inspection requirements can be realized through lot clustering. On the basis of a population of serviceable, unserviceable (minor maintenance), and suspended (emergency combat only) of approximately 185,500 lots, institution of this process represents a potential cost avoidance of \$500-725K per year.

d) Modification of Inspection Intervals: Prior to 1988, periodic inspection of ammunition lots in storage were being conducted at conservatively established intervals of 2 to 5 years depending on the type of munition and expected rate of deterioration. The local chief of surveillance had authority to increase the interval between inspections by up to 2 years if local conditions (such as climate, storage conditions, and previous inspections) so justified. In 1988 an in-depth study of these intervals was initiated at AMCCOM. Goal was to increase intervals between inspections whenever possible without decreasing confidence in knowledge of stockpile serviceability. It was soon established that some intervals could be extended based on findings of the study. Study involved close scrutiny of installation surveillance inspection records to determine the onset of significant deterioration. Taking one item, or family of items, at a time, inspection records were solicited from installations worldwide, carefully compiled and evaluated and a new and statistically sound interval assigned. Thus far, 18 items have been evaluated and intervals extended. The previous (pre 1988) range of lot inspection intervals has been expanded from 2-5 years to the present range of 2-10 years. Authority and guidance to incorporate these new intervals for selected items was most recently detailed to the ammunition community in an AMCCOM Ammunition Information Notice (AIN) 58-93, dated April 1993. The interval study is a continuous process and future cost avoidance associated with this effort could be significant. For example, scrutiny of the 81MM HE, M374 series jungle packed mortar cartridge results in a potential overall cost avoidance of \$7800.00 per year due to a shift from a four to a six year inspection interval. This example assumes a balanced workload distribution and a CONUS stockpile of 222 lot segments.

e. MAINTENANCE

(1) In FY94 the ammunition major maintenance program was zero funded. Obligations of approximately \$7.0M from FY93 year end funding were used to support FY 94 requirements. An additional \$4.0M in high priority requirements remain unfunded and will impact ability to support training and readiness requirements. Overall \$7.5M in priority programs remain unfunded and the preventive maintenance program remains totally unfunded.



(2) The 10 year funding profile chart indicates several trends: (1) in past years, except FY92, where \$47M in SWA dollars were provided, the maintenance program has been funded significantly less than required; (2) since FY91, year end funding has become an increasingly larger portion of the program; (3) outyear funding will not meet our requirements.

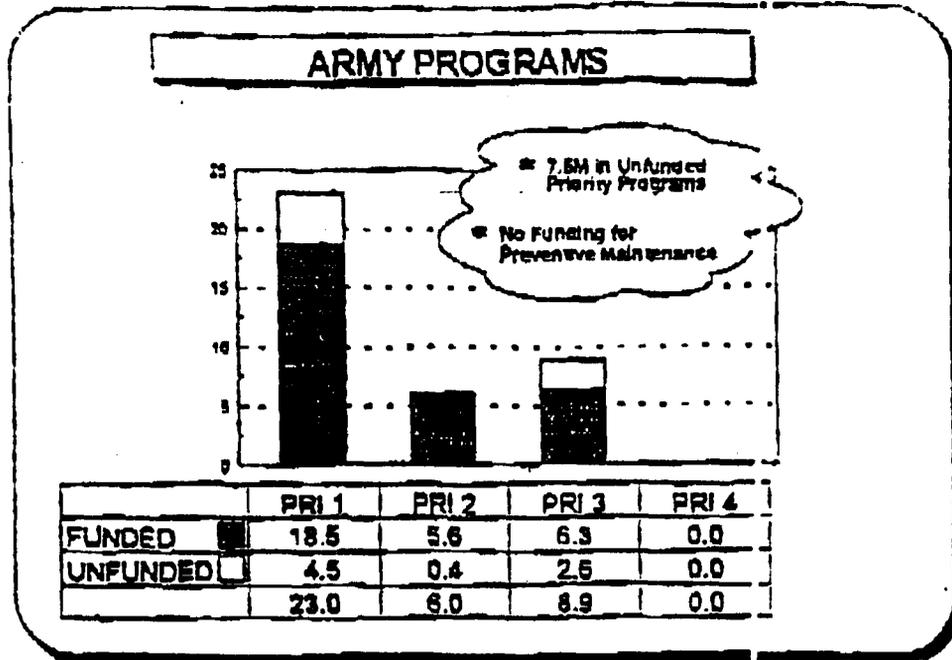
(3) The continual use of year end funds to support maintenance limits management flexibility and does not allow the projection of workloading data to our installations. If funding levels projected for FY 96-98 remain unchanged, there will be a definite impact on training and/or readiness. Additionally, at these funding levels it will be extremely difficult to maintain a maintenance workforce at our facilities, thus resulting in a loss of expertise and capability.

(4) Internally, the AMCCOM National Maintenance Point (NMP) has reorganized the management team structure to improve maintenance planning efforts through development of a prioritized system. The system reflects the required/non-required

concept for maintaining only the training and war reserve stockpile. Only those stocks needed to support immediate training or critical war reserve shortfalls are submitted for renovation funding. Quarterly reviews are conducted on all priority programs, both funded and unfunded, to ensure limited resources are focused on the most urgent needs. If a priority one item remains unfunded, it results in a critical war reserve shortfall or severely impacts training within one year.

(5) Priorities are determined by applying on-hand assets to war reserve and training requirements. Maintenance priority one, for example, are those stocks satisfying less than 25% of the war reserve requirement, or meeting less than one year's training requirements.

ESTABLISHING PRIORITIES			
CONDITIONS			
PRIORITY	WAR RESERVE		TRAINING
1	< 25%	OR	< 1 Year
2	25-49%	OR	< 2 Years
3	50-74%	OR	< 3 Years
4	75-99%	OR	< 4 Years



(6) Current and projected funding levels continue to maintain limited readiness at the expense of mortgaging the stockpile. Lack of preventive maintenance will continue to deteriorate the stockpile and eventually cause these assets to become high priority programs requiring significantly more funding than is currently needed.

(7) Funding of ammunition renovation provides a cost avoidance of approximately 70%-80% of new production cost. It also avoids the cost of demilitarization, and helps support overhead at our installations while maintaining a valuable capability.

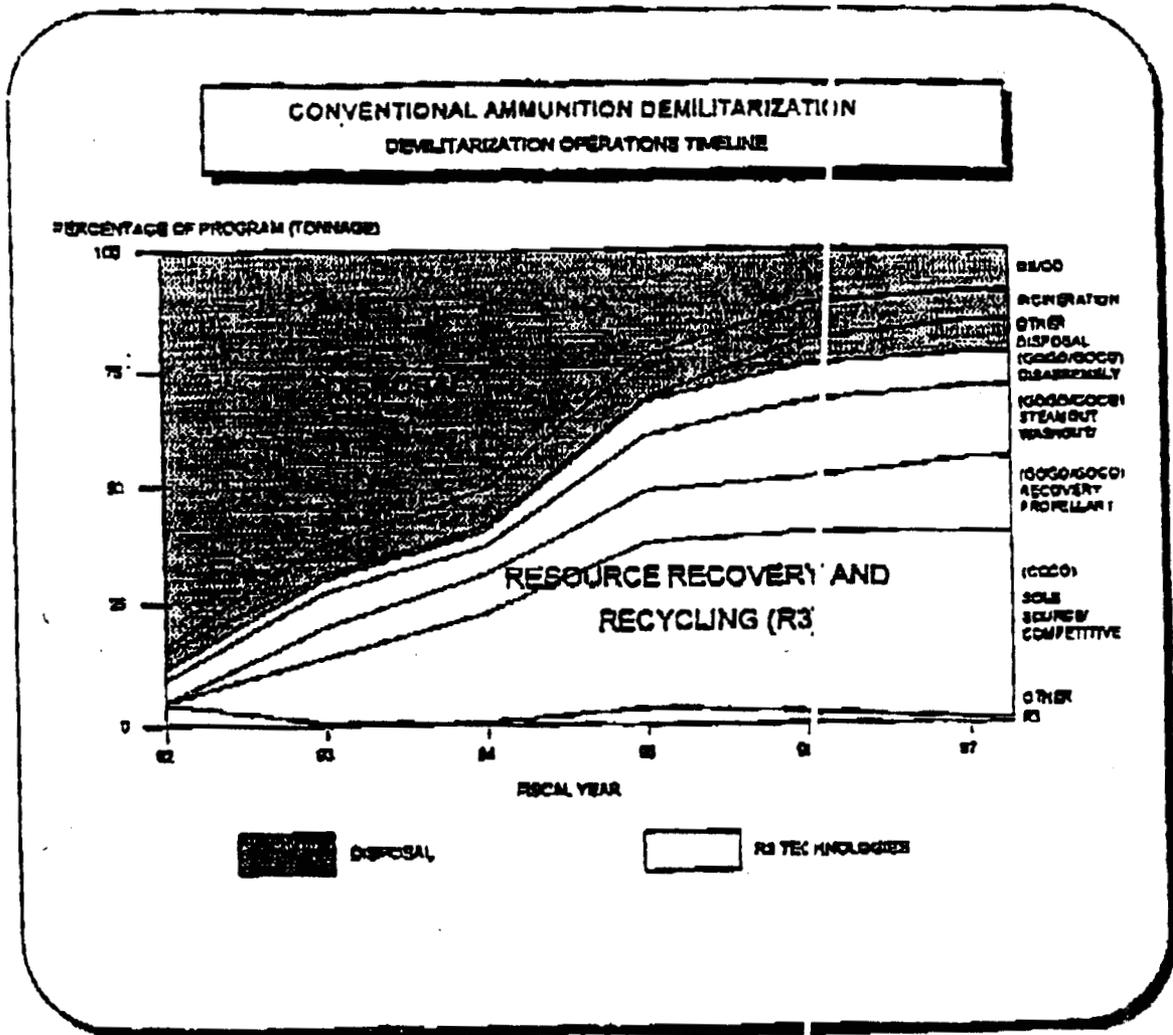
(8) Another concern involves the downsizing of the ammunition industrial base and reduced maintenance funding. There will eventually be a significant loss of expertise and capability to perform a major item maintenance mission. Accordingly, if future funding increases, the ability to provide timely response for renovation of large portions of the stockpile will be limited. Future spikes in funding will not provide an immediate solution to aid a deteriorating stockpile. Efforts to offset a possible reduction in maintenance capability have centered around a refocus of the Ammunition Peculiar Equipment (APE) program to improve depot support and provide new technologies.

f. DEMILITARIZATION

(1) The conventional ammunition demilitarization program continues to be a major element of the Single Manager for Conventional Ammunition (SMCA) mission. Stockpiles of excess, unserviceable, and/or obsolete munitions are continuing to grow as a result of a myriad of factors, to include global changes in the military community and national environmental issues that are threatening to restrict operations. The Army, as the SMCA, has pursued a number of initiatives and has conducted studies to determine the best strategy to minimize the stockpile while considering environmental and economical factors. Because of this increased emphasis, a demilitarization master plan was developed to serve as a tool in assisting the effective and efficient management of the overall demilitarization program. This plan has been assessed and found to be compatible with the tier depot plan approach. In accordance with the 1982 and 1986 Blue Ribbon Panels (BRP) on Ammunition Demilitarization, a 40,000 short ton stockpile is considered a manageable demilitarization inventory. These parameters, however were based on an inventory level of 150,000 to 200,000 short tons and a standard annual generation rate of 20,000 short tons. The demilitarization climate has changed considerably since the last BRP, and although the ultimate goals may be similar, the factors effecting today's program are significantly distinctive from any other program. Today's inventory level is over 413,000 short tons and has growth potential; annual generations are at an all time high and are likely to continue along that trend. The magnitude of a stockpile backlog of approximately 413,000 short tons can best be visualized using logistical frames of reference. This size of inventory could fill almost 6,883 rail cars, equating to a train that would stretch for 65 miles; or it would require over 20,000 truck trailers to transport, producing a 1,428 mile convoy. In logistics terms, storing the inventory in standard igloos would completely fill Blue Grass, Letterkenny, and Red River Army Depots (2753 igloos) with about 250 igloos remaining. For this reason, demilitarization operations at the installation level have taken on a much more urgent commitment priority in order to meet annual program goals. The loss of authority to hire additional temporary employees will undoubtedly impact the ability to perform demilitarization operations at the Government-owned, Government-operated facilities in a timely and efficient manner. Augmentation of contractor support will alleviate some of these shortfalls by increasing overall capabilities.

(2) Environmental considerations are continuing to be critical components to accomplishing the demilitarization program. The Conventional Ammunition Demilitarization Master Plan presents the SMCA's methodology for migrating from a disposal focus to one of Resource, Recovery and Recycling (R3). The plan is not budget driven, but rather each program element has been evaluated individually to determine funding requirements. The master plan is constrained only by present and projected capabilities. This chart illustrates the trend of the fully funded SMCA demilitarization program for the time period from fiscal year 1992 through 1997. Disposal procedures accounted for 88 percent of the total program in FY 92, a stark contrast to the projected 22 percent in FY 97. Further, one third of those disposal programs planned, offer new environmentally sound procedures that will be brought on

line through on-going research and development efforts, and support the SMCA's pledge to decrease reliance on open burning/open detonation (OB/OD) operations.



(3) Increasing the focus on cost effective resource recovery and recycling (R3) efforts is a goal of the SMCA. Development of new technologies, increased emphasis on contractor and industry support, and establishment of new and improved facilities are some of the means by which the SMCA's goal can be attained. Heavy reliance on OB/OD in the future is not only a negative from a R3 point of view, but is strategically unsound given the increasingly restrictive environmental regulations. This chart graphically depicts major federal environmental legislation and its explosive expansion over the last 20 years.

(5) END STATE DEMILITARIZATION OBJECTIVES

a) The first objective for demilitarization is the reduction in the growing backlog allowing for critical storage space within the Tier I and II installations. Reducing the backlog to a level whereby annual generations are equal to annual accomplishments will allow for a 100 percent stable stockpile. Utilizing both government and industrial/contractor support and assuming that funding through the POM can be provided to a level that meets capabilities, the goal is to obtain a 100,000 short ton backlog by FY04.

**TEN YEAR FUNDING SCENARIO
(DEMIL)**

	FY94	FY95	FY96	FY97	
COST PER S/TON	1400	1700	2200	1800	
REQUIRED (SM)	70	100	100	110	
BEGIN BALANCE	412858	422858	389035	368580	
GEN	60000	25000	25000	25000	
ACCOMP	50000	58223	45455	61111	
ENDING BALANCE	422858	389035	368580	332489	

b) The second program objective is to reduce our reliance on OB/OD methods while gradually increasing reliance on Resource, Recovery and Recycling effort to a 75 percent level by FY97.

c) In order to achieve the above end state objectives, the SMCA has established a strategic plan that involves a short term and long term plan of action.

1 Short Term:

a) Our short term emphasis is on maximizing OB/OD opportunities and to clear storage space at Tier I and II installations through innovative ideas and approaches. We are aggressively funding OB/OD projects at all Tier levels when economically feasible and environmentally acceptable. We are fully utilizing our large capacity OB/OD locations to include shipping assets from tier I locations with minimal OB/OD capability.

b One of the innovative ways that we are expanding the capacity of the demilitarization base short term is in the area of contracting for conventional ammunition demilitarization. During FY 93 and FY 94, contracts with 100 percent options which may be exercised in FY 95/96 have been/are being let. Additional contracts are being planned for award in FY 95. These contracts plus the options from previous year contracts will total \$30-40M. The final value of the contracts to be awarded depends upon cost effectiveness weighed against organic government capability to perform demilitarization.

c We are investing heavily in Tier I and Tier II Installations in Ammunition Peculiar Equipment (APE) and plant facilitization. A good example of strategic APE placement is that which is being employed in distributing APE 1236 furnaces. Our plans revolve around regionally locating these facilities at Tier I and II installations where the generations and support staff will continue to exist to operate such equipment. Regional dispersion minimizes EPA regional policy impacts on the furnaces while reducing the shipments of hazardous materials. We are also helping to facilitize and workload Tier I and Tier II facilities. Such is the case at Hawthorne Army Ammunition Plant's (HWAAP) Western Area Demilitarization Facility (WADF). We are also planning location of autoclave equipment at certain Tier I and II facilities. Short term we are also utilizing existing wash out and steam out and white phosphorous facilities when economically feasible.

d In addition to utilizing demilitarization, we are actively pursuing propellant and explosive sales. These sales will help to reduce the demilitarization inventory while generating additional funding for future demilitarization efforts.

2 Long Term:

Our long term goal is to establish demilitarization centers of excellence at Tier I and Tier II Installations focused on R3. Site selection for transitioning Research and Development (R&D) initiatives will be carefully selected to assure maximum utility. Current R&D projects include such efforts as Super Critical Water Oxidation, Carbon Dioxide Blast Vacuum Demilitarization, Cryofracture Technology and Cryogenic Washout to name a few. At the end state, demilitarization operations will be conducted either commercially or in house depending upon economic factors, with a certain minimum government capability being maintained as insurance for uneconomical or one-time projects. We will also maintain unique government capability such as the Western Area Demilitarization Facility at HWAAP and the White Phosphorus plant at Crane Army Ammunition Activity (CAAA).

IX. SUMMARY

e) This plan documents actions requiring near term investments for achieving long term efficiencies and savings through a smaller, safer stockpile using a reduced level of manpower. It provides a methodology for restructuring the wholesale storage base into fewer installations while identifying initiatives required to maintain critical power projection capabilities. Additionally, it outlines the limitations in today's environment and identifies the necessary restructuring of ammunition management operations within each functional area.

b) Near term investments are required to achieve long term benefits. Investments to stockpile improvements are made through the OMA appropriation for supply, maintenance, and transportation functions, and FAA for demilitarization functions. The OMA funding is apportioned based on priorities, therefore, lower priority functions can be supported only after higher priority functions are satisfied. Success of this Integrated Management Plan is possible only if the total minimum requirement level is fully funded. Lower funding levels would mean that investments in such areas as inventory, surveillance, rewarehousing, redistribution and maintenance will not be made. Full funding for receipts and issues are required to maintain peacetime capabilities and ultimately lower the overall cost of redistribution by allowing the issue of training stocks from Tier II/III installations. Investments and balancing funding of maintenance and surveillance of required, high priority stocks, are required to maintain readiness and preclude the declining critical skill base. The revised inventory program requires no additional investment over the current requirement, but must be fully funded at the lower requirement level to assure success. The program as outlined in this plan will actually require fewer resources than are being programmed in the POM.

[REDACTED]

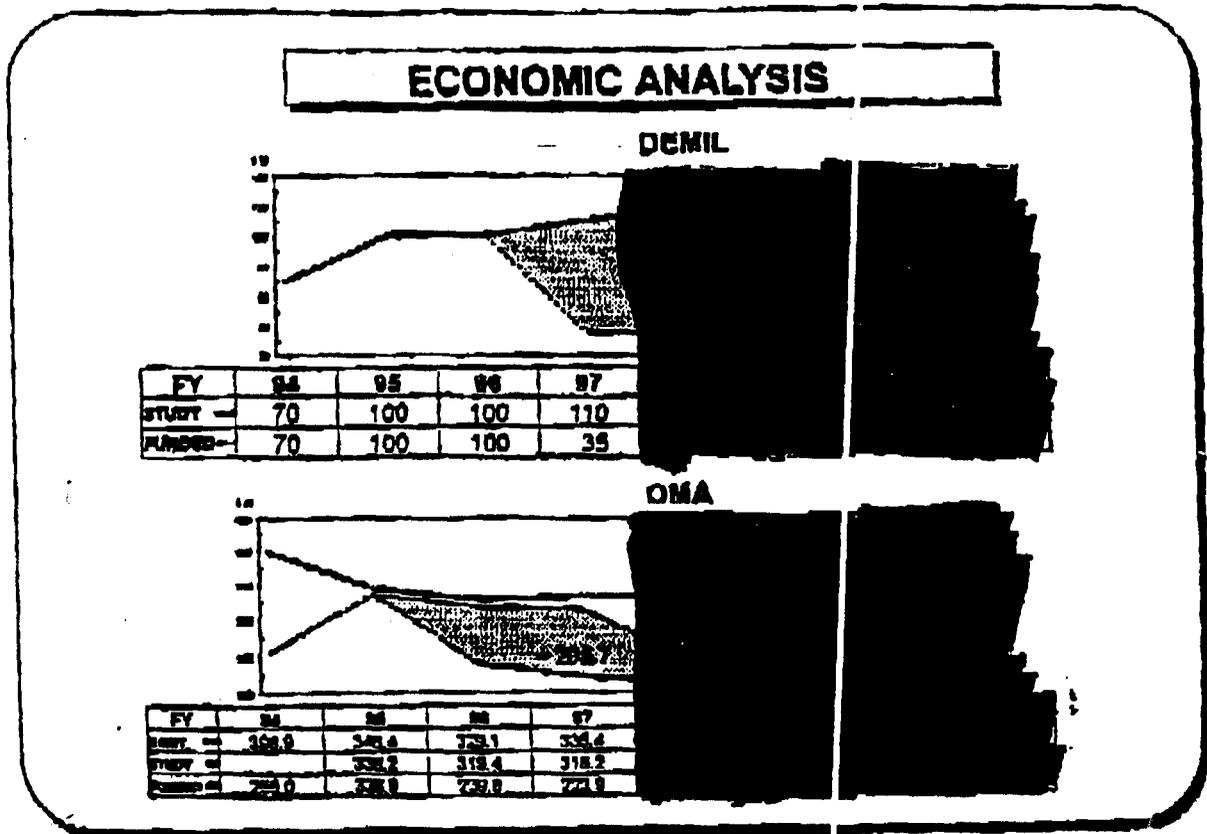
[REDACTED] This figure includes all OMA requirements, however, does not include redistribution to maximize outloading capabilities. That program has submitted funding requirements through the A&MP.

[REDACTED]

c) This plan has also outlined the initiatives required to reduce the backlog of the demilitarization stockpile to a manageable 100,000 short tons within a ten year time frame. An aggressive program is required to provide storage space for realignment into a tier infrastructure and allow the operational functional area to perform efficiently and effectively. A program that provides the necessary funding to match capabilities is initially required through FY99. The demilitarization program will then be gradually

reduced to an ultimate goal whereby annual generations equate to annual accomplishments.

d) The economic analysis shown in the following charts is based on rates and workload forecasts available at the time of the tier depot simulation. Changes in the actual rates and workloads will effect actual results. Detailed execution planning beyond the simulation level will be used to update the expected investments and savings, and will be reflected in future editions of this plan.



04/04/95 14:28



DPM-DC
AMC DCS AMMO

030

04/04/95 11:40 7032748011

ASSESSMENT SUMMARY

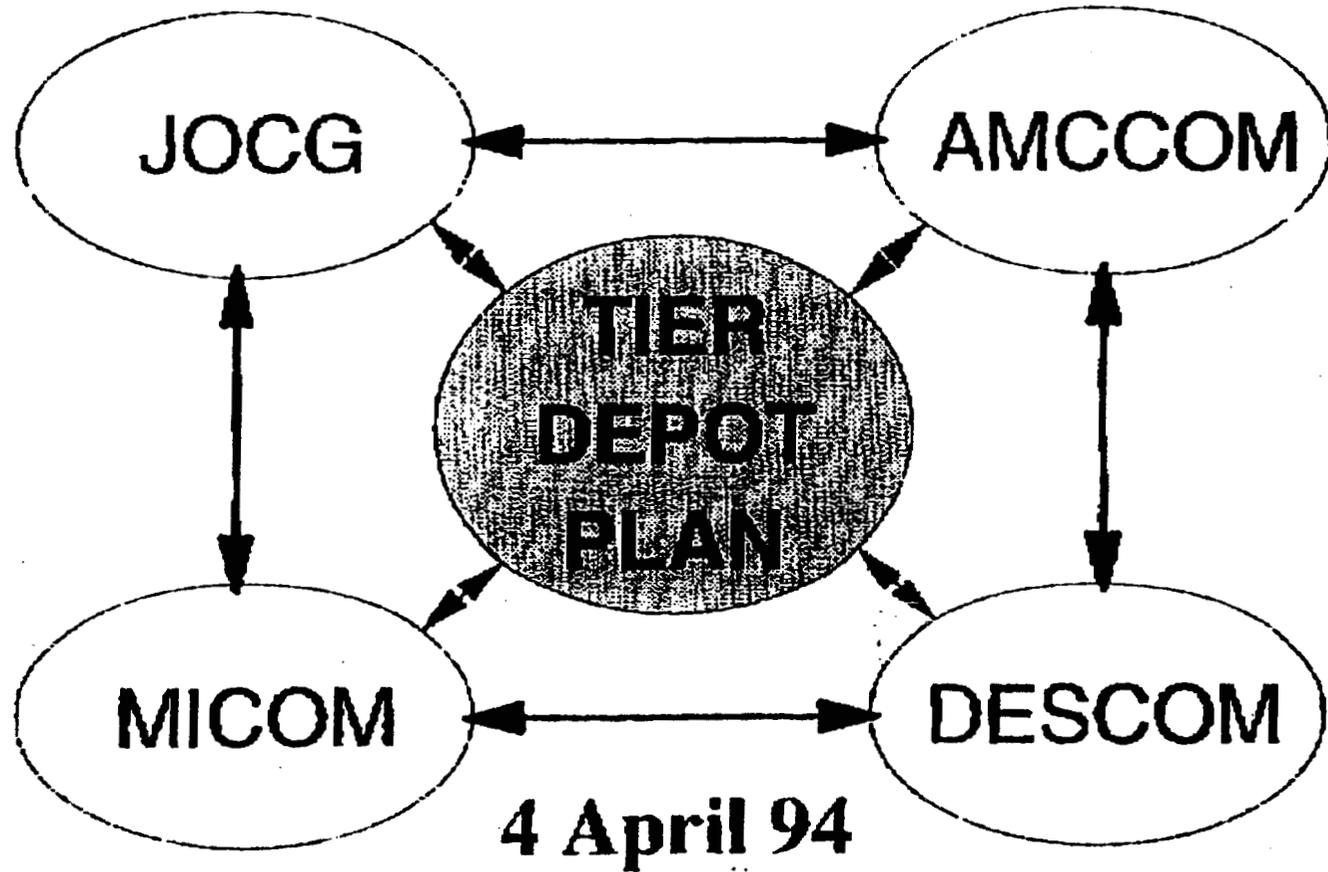
PROGRAM	STATUS	CURRENT RGMT FY96-99	REVISED RGMT FY96-99	FUNDED FY96-99	AJIBER FX	GREEN FX
OMA:						

DEML:

DOLLARS IN M

* Operate

TIER DEPOT ANALYSIS



INTEGRATED AMMUNITION STOCKPILE MANAGEMENT PLAN

COL Scott Hull, HQ A
Mr. Ron Herter, HQ, D

DPM-DC
AMC DCS AMRU

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04/04/95 11:42

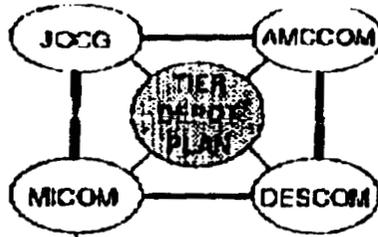
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AMC DCS AMMO

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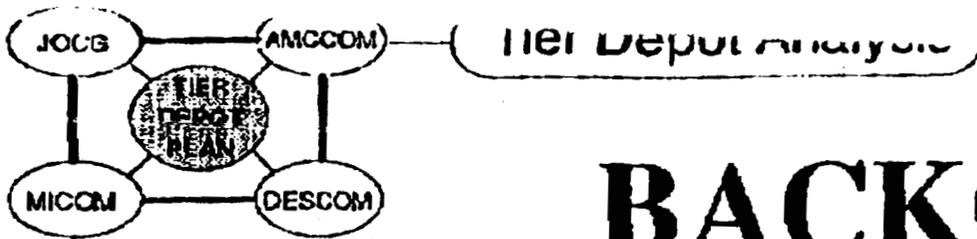
0033



Tier Depot Analysis

OUTLINE

- Background
- Scope / Objectives
- Quantitative Analysis
- Qualitative Considerations
- Service / Installation Comments
- Conclusion
- Recommendation



BACKGROUND

- **OCT 93**
 - Study Assessment Ranking
- **NOV 93**
 - Simulation Conducted (All Services, MICOM, DESCOM)
- **17-18 FEB 94**
 - Joint Service Working Group (All Services, MICOM, DESCOM)
 - Developed Criteria and Identified Weights
 - Performed Preliminary Analysis
- **21 FEB - 4 APR 94**
 - Developed Detailed Analysis

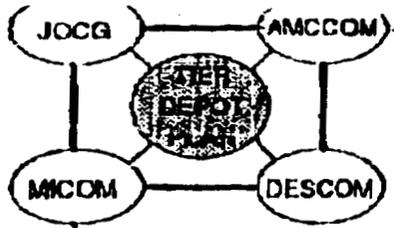
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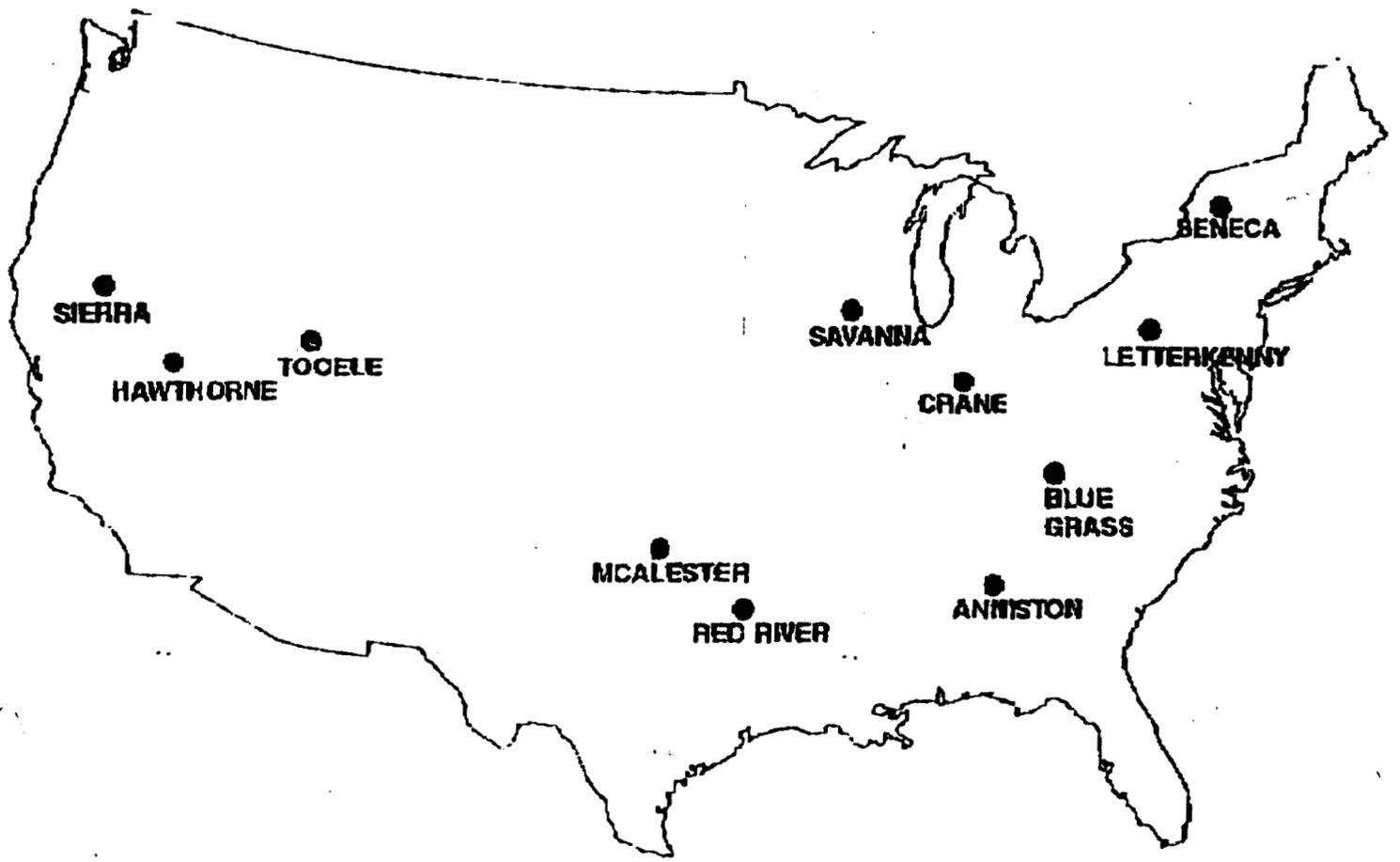
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AMC DCS AMMO

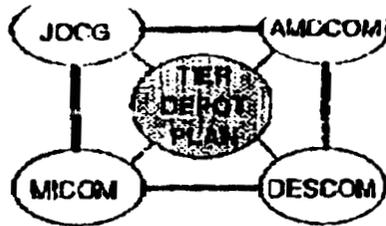
035



Tier Depot Analysis

SCOPE



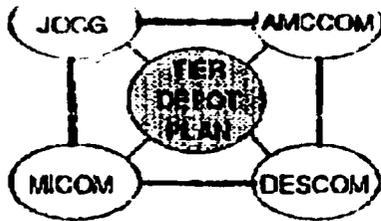


OBJECTIVES

- To Support and Store Training and Power Projection Requirements for Two MRC's as Directed in DOD Planning Guidance
- To distribute Stockpile Within Geographically Oriented Regions
 - EAST
 - CENTRAL
 - WEST
- To Assure End State Asset Distribution Maximizes Outloading Capabilities
- To Develop Storage Base Infrastructure That Supports t Depot Tiering Concept

037

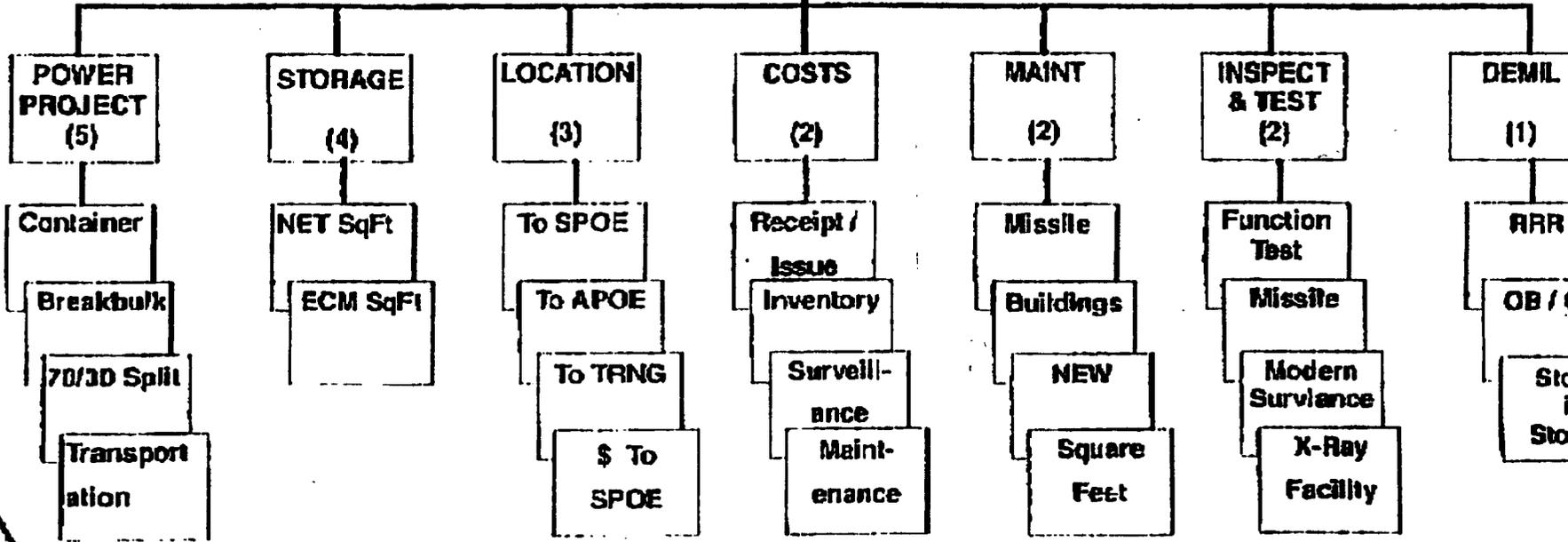
007



1111 Depot Analysis

ANALYTICAL APPROACH

OVERALL RANKINGS



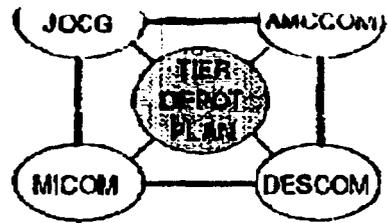
SUPPORTING QUANTITATIVE DATA

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AMC DCS AMMO

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DPM-DC
AMC DCS AMMO
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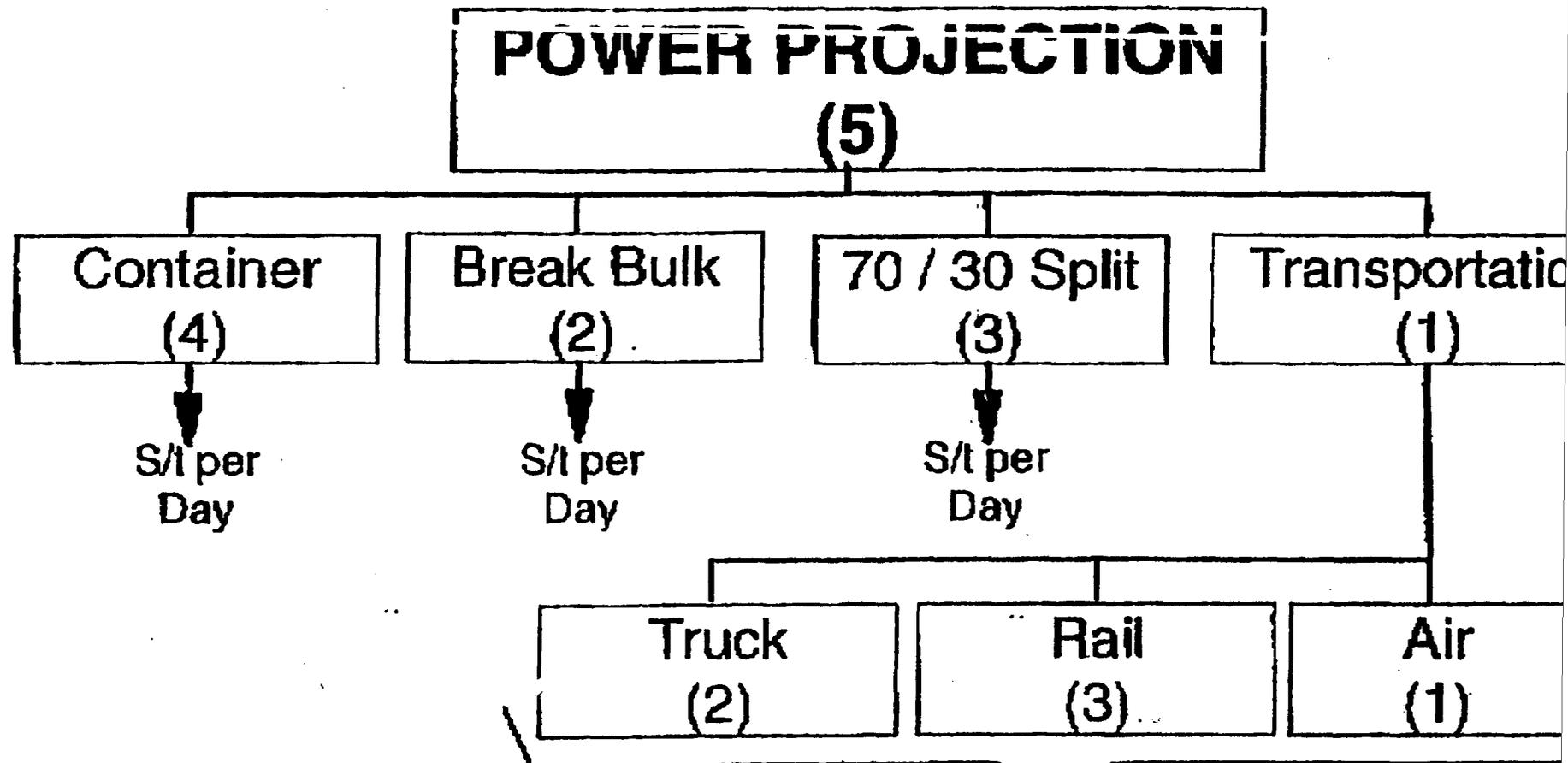


1161 Depot Analysis

ANALYTICAL APPROACH

• POWER PROJECTION

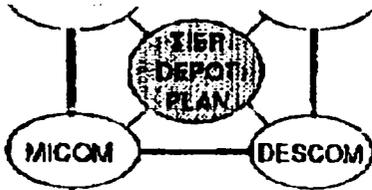
• Capability of Installation to Load and Ship Material During a Contingency



Assessments:

- Good
- Fair
- Poor

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009



POWER PROJECTION CAPABILITY

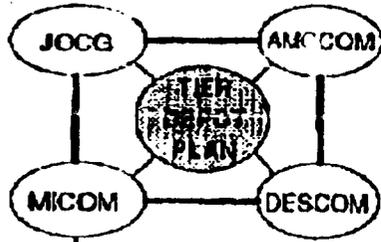
	Container Score	Weight	Brk Bulk Score	Weight	70/30 Spkr Score	Weight	Transport Score	Weight	Total Score	Adjusted Score
		4.0		2.0		3.0		1		
ANAD	2.9	11.6	0.8	1.6	2.4	7.2	9	9	29.4	3.3
BGAD	5.9	23.6	3.7	7.4	6.5	19.5	11	11	61.5	6.8
CAAA	2.2	8.8	11.0	22.0	9.8	29.4	11	11	71.2	7.9
HWAAP	2.6	10.4	1.2	2.4	2.6	7.8	5	5	25.6	2.9
LEAD	1.5	6.0	3.4	6.8	3.5	10.5	7	7	30.3	3.4
MCAAP	11.0	44.0	5.4	10.8	11.0	33.0	11	11	98.8	11.0
RRAD	2.1	8.4	2.8	5.6	3.4	10.2	8	8	32.2	3.6
SEDA	0.9	3.6	1.0	2.0	1.0	3.0	6	6	12.2	1.4
SIAD	3.2	12.8	1.9	3.8	9.5	10.5	10	10	37.1	4.1
SVDA	5.6	22.4	1.7	3.4	4.8	14.4	8	8	48.2	5.4
TEAD	3.3	13.2	8.4	16.8	8.5	25.5	10	10	65.5	7.3

DPM-DC
AMC DCS ANMO

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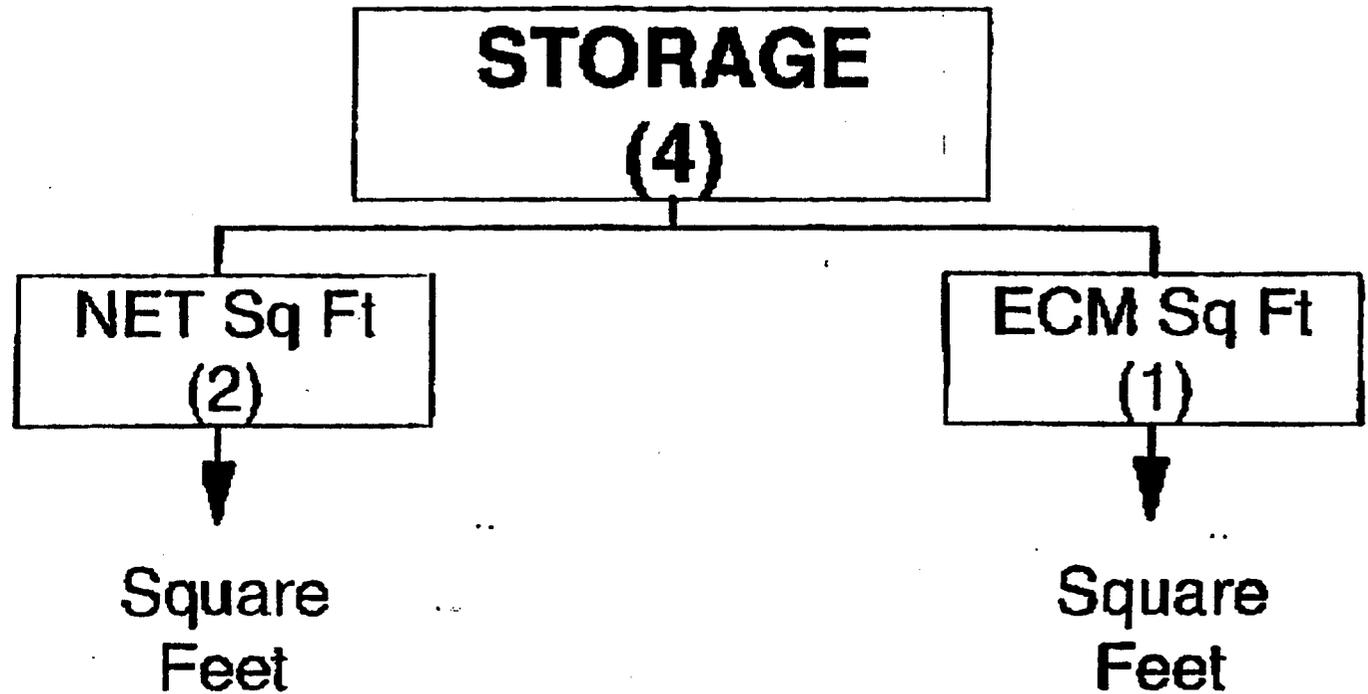


Tier Depot Analysis

ANALYTICAL APPROACH

STORAGE

► The Installations Capability to Store Class V Materiel



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AMC DCS AMMO

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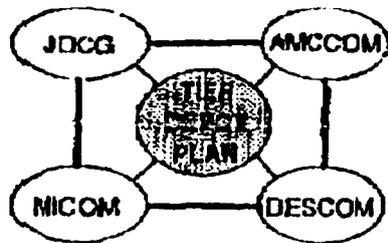
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Tier Depot Analysis

STORAGE CAPABILITIES

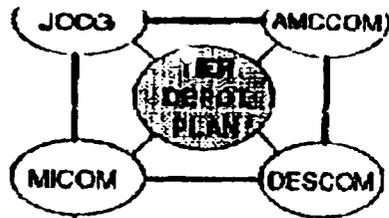
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AMC-DCS AMMO

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	NET SqFt Score	Weight	ECM SqFt Score	Weight	Total Score	Adjusted Score
		2.0		1.0		
ANAD	3.3	6.6	4.0	4.0	10.6	3.8
BGAD	3.1	6.2	3.4	3.4	9.8	3.4
CAAA	8.8	17.6	8.9	8.9	26.5	9.4
HWAAP	11.8	22.0	8.7	8.7	30.7	10.9
LEAD	3.0	6.0	3.6	3.6	9.6	3.4
MCAAP	10.0	20.0	11.0	11.0	31.0	11.0
RRAD	2.4	4.8	2.7	2.7	7.5	2.7
SEDA	2.0	4.0	1.9	1.9	5.9	2.1
SIAD	3.5	7.0	3.0	3.0	10.0	3.5
SVDA	3.4	6.8	1.4	1.4	8.2	2.9
TEAD	3.4	6.8	3.4	3.4	10.2	3.6

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012



1st Depot Analysis

ANALYTICAL APPROACH

• LOCATION

- ▶ Installations Geographic Orientation to Support Movement Requirements

LOCATION
(3)

To SPOE
(4)

Rail
Transit
Days

To APOE
(3)

Actual
Mileage

To Training
(2)

Avg.
Mileage to
Major Sites

\$\$ to SPOE
(1)

\$-Cntr/BB
(rail/motor)

DPM-DC

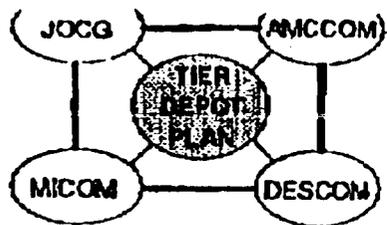
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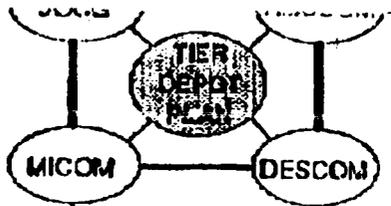


Tier Depot Analysis

LOCATION

	To SPOE Score	Weight	To APOE Score	Weight	To Trng Score	Weight	Cost to SPOE Score	Weight	Total Score	Adjusted Score
		4.0		2.0		3.0		1.0		
ANAD	5.5	22.0	5.2	10.4	11.0	33.0	7.7	7.7	73.1	8.0
BGAD	4.4	17.6	3.6	7.2	8.4	25.2	8.4	8.4	58.4	6.4
CAAA	3.1	12.4	2.8	5.6	8.4	25.2	7.0	7.0	50.2	5.5
HWAAP	7.3	29.2	6.6	13.2	8.7	26.1	9.2	9.2	77.7	8.5
LEAD	4.4	17.6	11.0	22.0	8.6	25.8	8.4	8.4	73.8	8.1
MCAAP	3.1	12.4	1.9	3.8	9.8	29.4	4.4	4.4	60.0	5.5
FRAD	2.2	8.8	2.1	4.2	8.6	25.5	4.9	4.9	43.4	4.7
SEDA	3.7	14.8	8.5	17.0	7.2	21.6	7.2	7.2	60.6	6.6
SIAD	11.0	44.0	8.5	17.0	9.6	28.8	11.0	11.0	100.8	11.0
SVDA	3.1	12.4	2.1	4.2	6.7	20.1	4.9	4.9	41.8	4.5
TEAD	5.5	22.0	2.9	5.8	8.4	25.2	6.6	6.6	58.6	6.5

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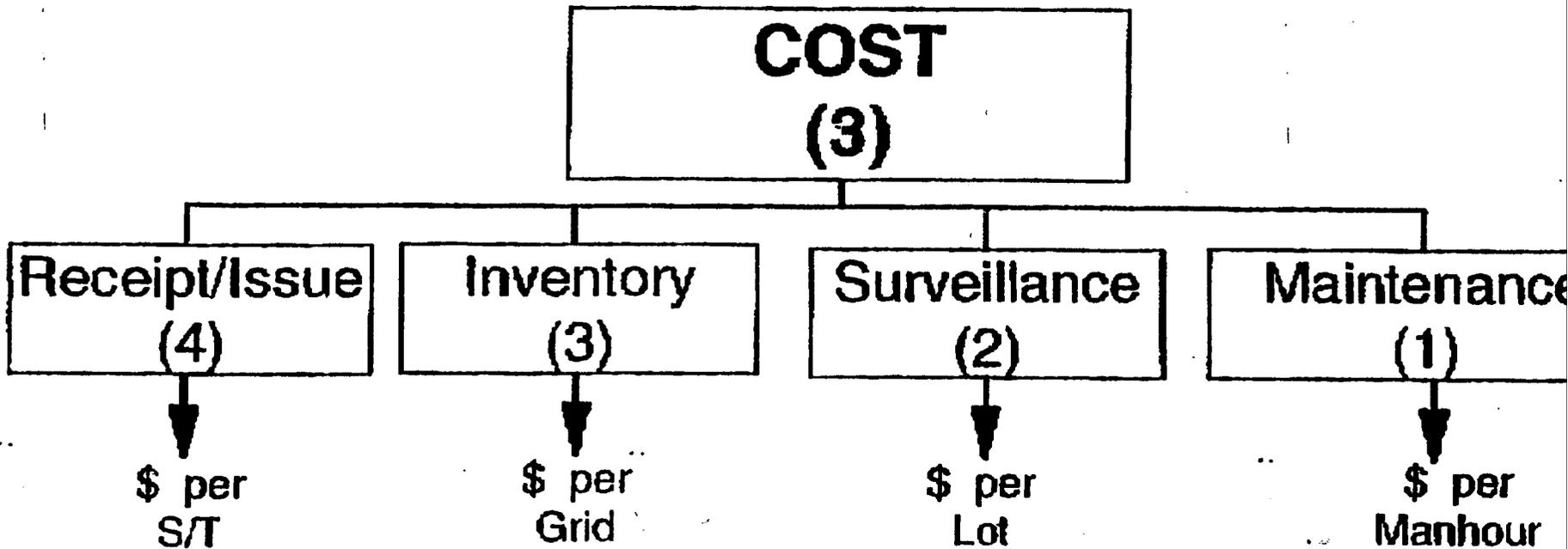


Cost Department

ANALYTICAL APPROACH

- **COST**

- Installations Cost to Perform Ammunition Operations



DPM-DC
ANC DCS AMMO

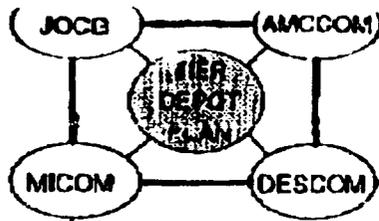
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Hier Depot Analysis

COSTS

DPM-DC

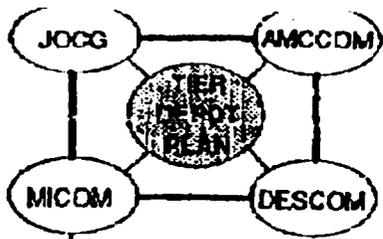
ANC DCS AMMO

04/04/95 14:37

04/04/95 11:47 07092748011

	Hec/Ins Score	Weight	HW/LS/RS Score	Weight	SW/PL/MS Score	Weight	SC/LS/PL Score	Weight	Total Score	Adjusted Score
		4.0		3.0		2.0		1.0		
ANAD	3.0	12.0	4.6	13.6	4.4	8.8	8.2	8.2	42.8	6.5
BGAD	6.9	23.6	1.9	3.9	5.2	10.4	6.3	6.3	44.2	5.7
CAAA	11.0	44.0	6.2	18.6	7.1	14.2	9.1	9.1	85.9	11.0
HWAAP	4.9	19.6	1.7	5.1	11.0	22.0	7.2	7.2	53.9	6.9
LEAD	6.6	22.4	4.0	12.0	3.6	7.2	11.0	11.0	52.6	6.7
MCAAP	6.8	27.2	2.4	7.2	10.9	21.8	7.6	7.6	63.8	8.2
RRAD	6.5	22.0	11.0	33.0	3.2	6.4	7.6	7.6	68.0	8.8
SEDA	5.0	20.0	0.7	2.1	2.0	4.0	4.2	4.2	30.3	3.9
SIAD	5.2	20.8	1.2	3.6	4.1	8.2	6.3	6.3	38.9	5.0
SVDA	6.5	26.0	0.6	1.8	3.0	6.0	4.6	4.6	38.4	4.9
TEAD	6.0	24.0	2.4	7.2	5.8	11.6	6.7	6.7	49.5	6.3

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016



Tier Depot Analysis

ANALYTICAL APPROACH

• MAINTENANCE

- Installations Capabilities for Performing Major Ammunition Maintenance

MAINTENANCE
(2)

Missiles
(4)

Multi-Use Bld
(3)

NEW Limits
(2)

Sq Ft Availab
(1)

Facilities
?

Number

Pounds

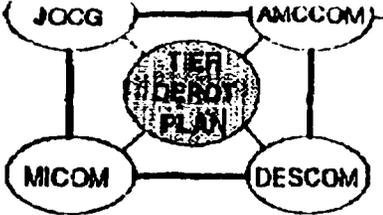
All Maint
Buildings

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AMC DCS AMMO

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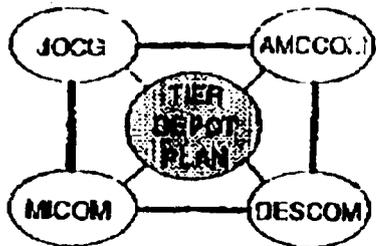


Tier Depot Analysis

MAINTENANCE

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AMC DCS AMMO
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	Missile Score	Weight	Munitions Score	Weight	Targeting Score	Weight	Total Dept	Dept Wgt	Total Score	Articulated Score
		4		3.0		2.0		1.0		
ANAD	11	44	5.5	16.5	0.4	0.8	5.5	5.5	66.8	11.0
BGAD			4.1	12.3	1.1	2.2	6.7	6.7	21.2	3.5
CAAA			11.0	33.0	0.8	1.6	10.2	10.2	44.8	7.4
HWAAP			5.5	16.5	4.4	8.8	8.5	8.5	33.8	5.6
LEAD	11	44	1.4	4.2	0.2	0.4	1.9	1.9	50.5	8.3
MCAAP			8.9	24.9	11.0	22.0	11.0	11.0	57.9	8.5
RRAD	11	44	4.1	12.3	0.6	1.2	3.9	3.9	61.4	10.1
SEDA			1.4	4.2	0.5	1.0	1.8	1.8	7.0	1.2
SIAD			2.8	8.4	0.3	0.6	1.5	1.5	10.5	1.7
SVDA			2.8	8.4	2.2	4.4	6.9	6.9	21.7	3.6
TEAD			6.9	20.7	1.2	2.4	5.9	5.9	29.0	4.8



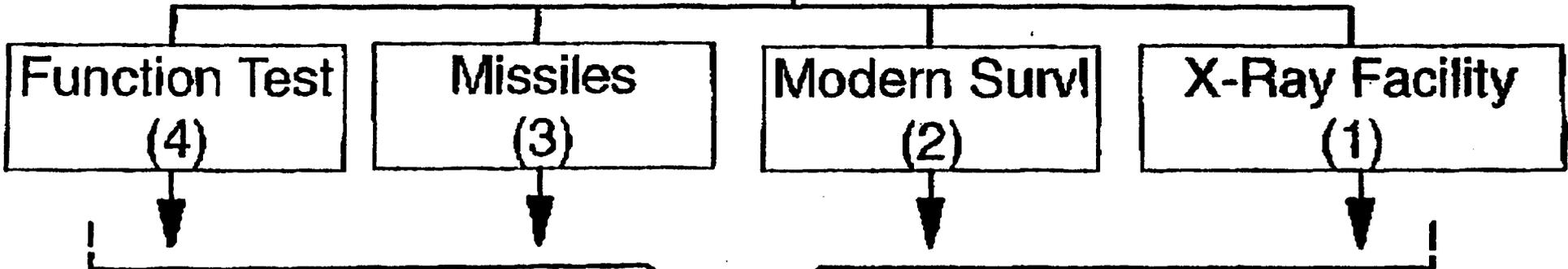
Tier Depot Analysis

ANALYTICAL APPROACH

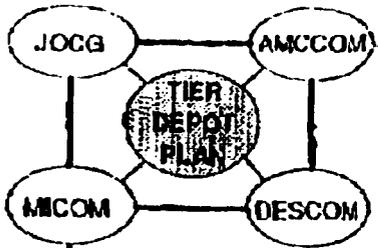
- **INSPECTION / TEST**

- ▶ Installations Capabilities Support Major Surveillance Missions

INSPECTION / TEST
(2)



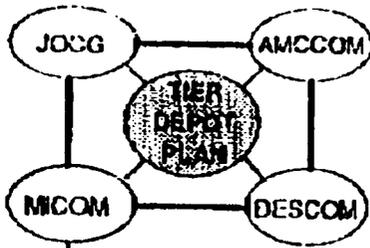
Existing
Capabilities



Tier Depot Analysis

INSPECTION / TEST

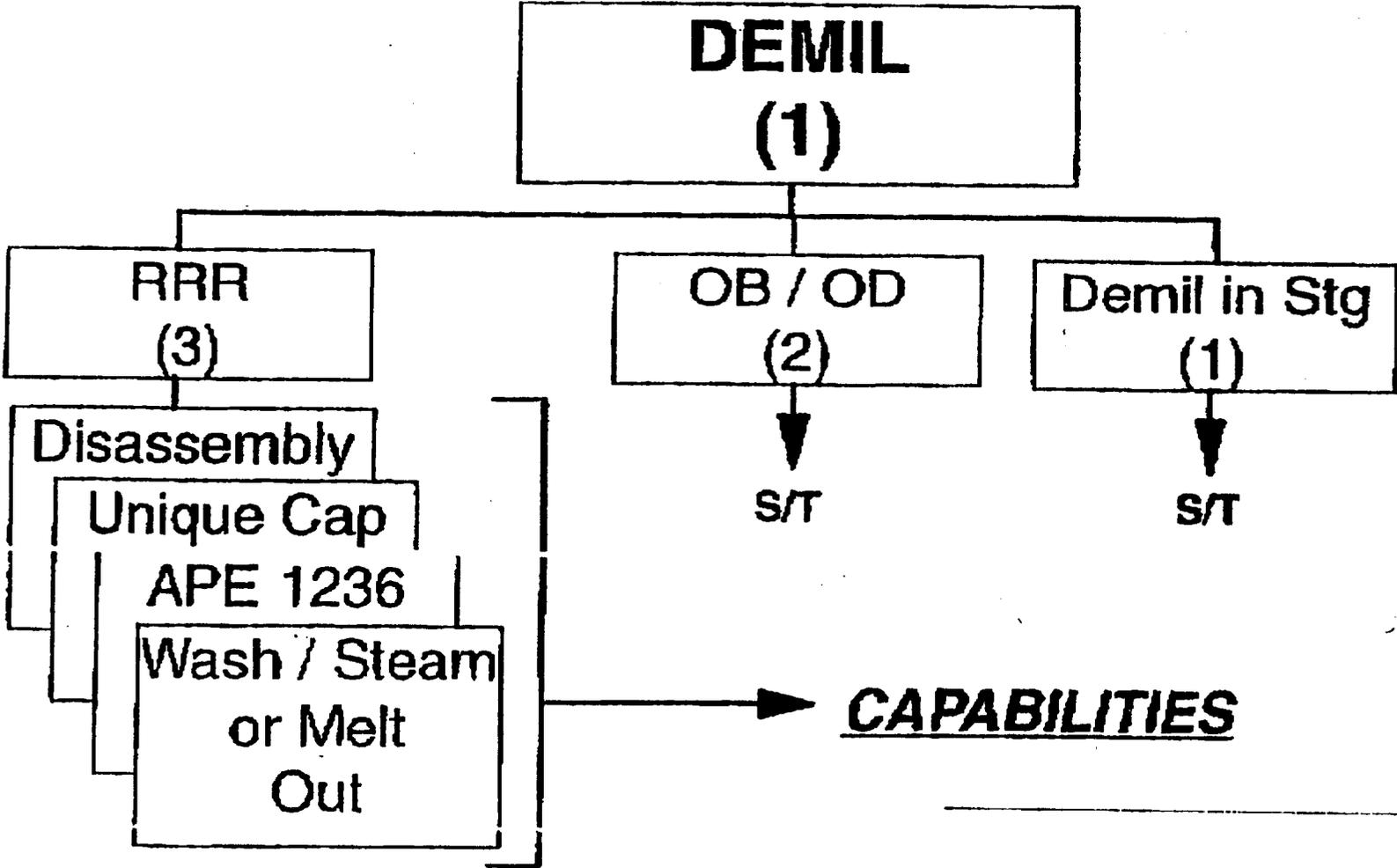
	Funcn Test Score	Weight	Missiles Score	Weight	Modn Surv Score	Weight	X-Ray Cap Score	Weight	Total Score	Adjusted Score
		4		3		2		1		
ANAD			1	3					3	9
BGAD										6
CAAA	1	4			1	2			6	11
HWAAP	1	4			1	2			6	11
LEAD			1	3	1	2	1	1	6	11
MCAAP					1	2			2	8
RRAD			1	3					3	9
SEDA										6
SIAD										6
SVDA	1	4							4	10
TEAD							1	1	1	7

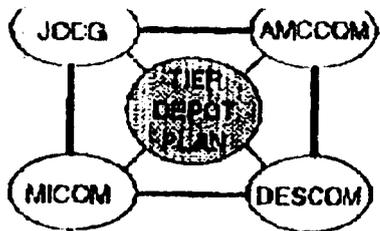


ANALYTICAL APPROACH

• DEMIL

▶ The Installations Capability to Support Demil Operations

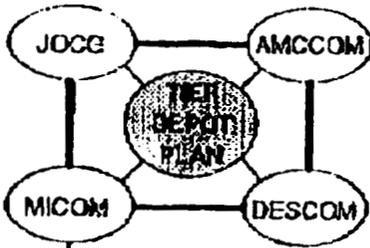




Tier Depot Analysis

DEMIL

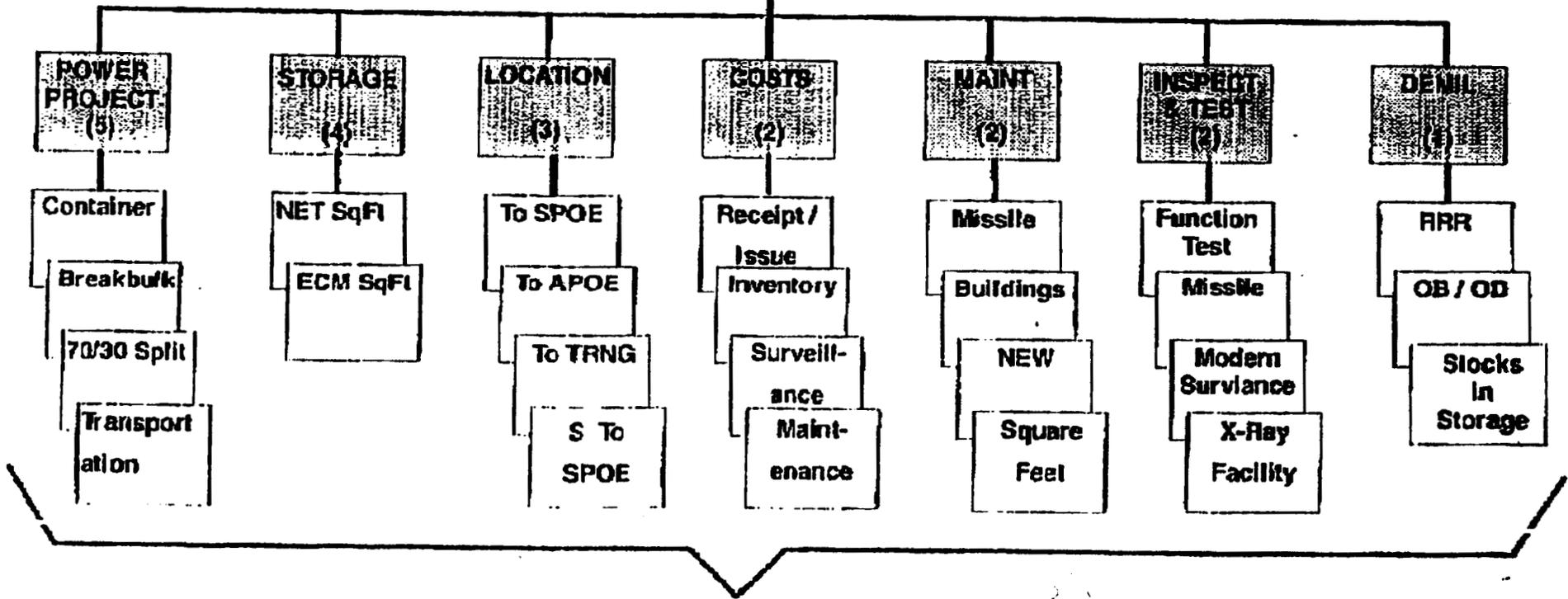
	RRR Cap Score	Weight	OBOD Cap Score	Weight	ST In Sig Score	Weight	Total Score	Adjusted Score
		3		2.0		1.0		
ANAD	7	21	0.9	1.8	2.7	2.7	25.5	6.1
BGAD	9	27	0.2	0.4	1.9	1.9	29.9	7.0
CAAA	10	30	1.1	2.2	3.3	3.3	35.5	8.5
HWAAP	11	33	0.9	1.8	11.0	11.0	45.8	11.0
LEAD	6	18	1.8	3.6	3.2	3.2	24.8	6.0
MCAAP	9	27	1.8	3.6	9.6	9.6	40.2	9.7
RRAD	8	24	0.6	1.2	0.8	0.8	28.0	6.2
SEDA	7	21	0.4	0.8	0.7	0.7	22.5	5.4
SIAD	7	21	11.0	22.0	1.7	1.7	44.7	10.7
SVDA	6	18	1.0	2.0	0.8	0.8	20.8	5.0
TEAD	8	24	4.6	9.2	0.9	0.9	34.1	8.2



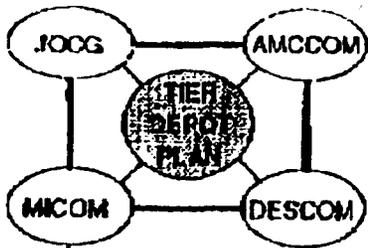
Tier Depot Analysis

QUANTITATIVE ANALYSIS

OVERALL RANKINGS



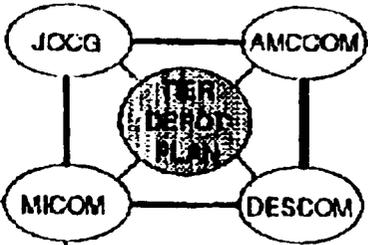
SUPPORTING QUANTITATIVE DATA



Tier Depot Analysis

SUMMARY

	POWER PROJ WEIGHTED		STORAGE CAPABL WEIGHTED		LOCAT ION WEIGHTED		COSTS WEIGHTED		MAINT NANCE WEIGHTED		INSP & TEST WEIGHTED		DEML CAPABL WEIGHTED		TOTAL WEIGHTED	R A N K
		5.0		4.0		3.0		2.0		2.0		3		1.0		
ANAD	3.3	15.5	3.8	15.2	6.0	24.0	5.5	11.0	11.0	22.0	9	18	6.1	6.1	112.8	6
BOAD	5.0	34.0	3.4	13.6	6.4	19.2	5.7	11.4	3.5	7.0	6	12	7.0	7.0	104.2	8
CAAA	7.9	39.5	9.1	37.6	5.5	16.5	11.0	22.0	7.1	14.8	11	22	8.5	8.5	180.9	2
HWAAP	2.9	14.5	10.9	43.6	8.5	25.5	6.9	13.8	5.5	11.2	11	22	11.0	11.0	111.5	3
LEAD	3.4	17.0	3.4	13.6	8.1	24.3	6.7	13.4	8.3	16.6	11	22	6.0	6.0	91.9	6
MCAAP	11.0	55.0	11.0	44.0	5.5	16.5	9.2	18.4	9.5	19.0	8	16	9.7	9.7	176.6	1
RRAD	3.6	18.0	2.7	10.8	4.7	14.1	8.8	17.6	10.1	20.2	9	18	6.2	6.2	104.9	7
SEDA	1.4	7.0	2.1	8.4	6.5	19.5	3.9	7.8	1.2	2.4	8	12	5.4	5.4	62.8	11
SMD	4.1	20.5	3.5	14.0	11.0	33.0	9.0	18.0	1.7	3.4	6	12	10.7	10.7	103.5	9
SVDA	5.4	27.0	2.9	11.6	4.5	13.5	4.9	9.8	3.8	7.2	10	20	5.0	5.0	84.1	10
TEAD	7.3	36.5	3.5	14.4	6.5	19.5	8.3	12.6	4.8	9.6	7	14	8.2	8.2	114.8	4



Tier Depot Analysis

QUANTITATIVE RANK SUMMARY

WEST

HWAAP - 3

TEAD - 4

SIAD - 9

CENTRAL

MCAAP - 1

RRAD - 7

SVDA - 10

EAST

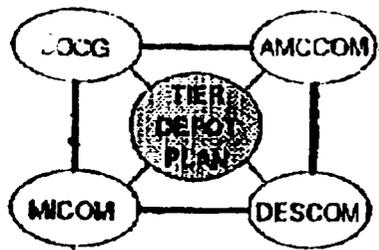
CAAA - 2

LEAD - 5

ANAD - 6

BGAD - 8

SEDA - 11



Tier Depot Analysis

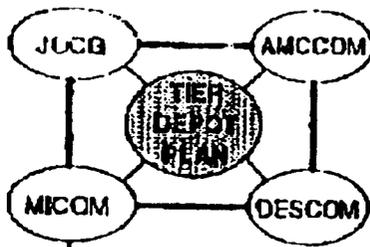
QUALITATIVE - EAST

CAAA

- Supports USMC / Navy Training
- Good Rail Access to Earth Covered Sites
- Active Production
- Tenant on Navy Installation
- Naval Warfare Support Center
- White Phosphorous Demil

ANAD

- TCM Mission
- Hub of Eastern Region Training Support
- Large Hard Iron Mission
- Tactical Missile System Mission Depot (Class V)
- Air Drop Pallets for XVIII ABN & 75th Rangers
- Contractor Presence - North American Rockwell (Hellfire)
- DLA Presence



Tier Depot Analysis

QUALITATIVE - EAST

LEAD

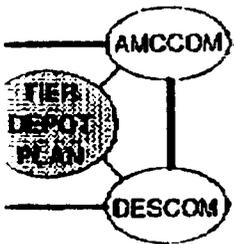
- Primary Mission - Tactical Missile Systems Maintenance Area (Non-Class V)
- DLA Presence
- Contractor Presence - FMC (Paladin), Raytheon (Phoenix and AMRAMM)

BGAD

- TCM Mission
- Contractors - Raytheon (Stinger)
- Chemical Defense Equipment Supply & Maintenance
- Potential ABL Partnership with 101st ABN

SEDA

- Radiation Decontamination Team
- Depot Activity



Tier Depot Analysis

QUALITATIVE - CENTRAL

CAAP

- Hub of Central and Southwest Regional Training Support
- Active Production

RAD

- Large Hard Iron Mission
- Tactical Missile Mission Depot
- DLA Presence
- Contractor - Raytheon
- Potential ABL Partnerships w/ 1st CAV & 3rd ACR

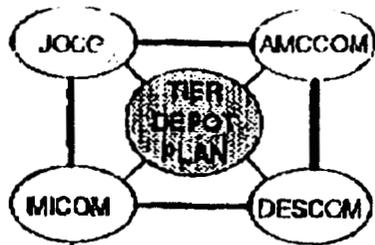
VDA

- APE Fabrication
- CTX for Depleted Uranium
- Depot Activity

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Tier Depot Analysis

QUALITATIVE - WEST

TEAD

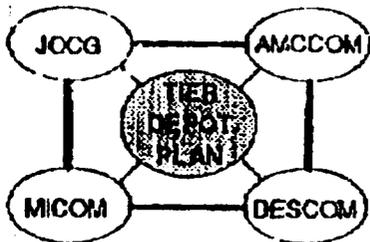
- USAF Desire to Spt Critical Airlift Mission Out of Hill AFB
- TCM Mission
- 25th & 7th ID Airdrop
- Maintenance Mission - BRAC 93
- APE Fabrication /Design / Procurement

HWAAP

- Lay Away Production
- Contractor Operated
- Western Area Demil Facility (WADF)

SIAD

- CTX for Operational Projects
- Primary Site for OB/OD Demil



Tier Depot Analysis

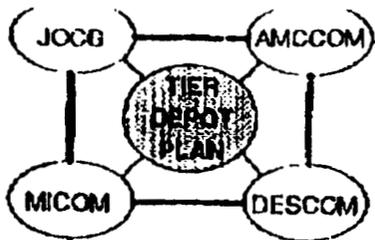
CUSTOMER COMMENTS

U.S. Air Force:

- Should be Joint Service
- Creates Bottlenecks in Early Days of War
- Destroys Current Stg & Shipping Partnerships (TEAD / Hill AFB)
- Require More Funds than Available
- Combat Readiness Should be Primary Focus
- Solution Should be Adopted by JOCG
- Criteria Should be Derived by Each Services Highest Priorities

Response:

- Joint Meeting
- JOCG Briefings
- Dist Plan / ASMP Initiatives Maximizes Capabilities
- Could Require Revised Partnerships
- Funding is Prime Consideration
- Power Projection is Top Priority
- JOCG Buy-In is a Necessity
- Priorities Derived Through Joint Decision



Tier Depot Analysis

CUSTOMER COMMENTS

MICOM:

- Retention of RRAD as Primary Stg/Maint Site for Patriot & Hawk
- Retention of LEAD as Primary Stg Site for Army ATACMs
- Redistribution of MLRS Pods

USMC:

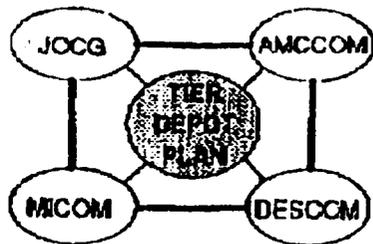
- Desire to Review & Comment on Analysis Prior to Consideration for Implementation
- Retain CAAA for Trng

NAVY:

- Retain CAAA for Trng

Response:

- Concur with Retaining Tactical Missile Maint Mission
- Concur
- End State Objective May Require Selective Redistribution
- Concur
- Concur
- Concur



Tier Depot Analysis

INSTALLATION COMMENTS

BGAD:

- Consider Impact of \$2.1M MCA Project to Improve Shipping Facility
- ABL Partnerships

LEAD:

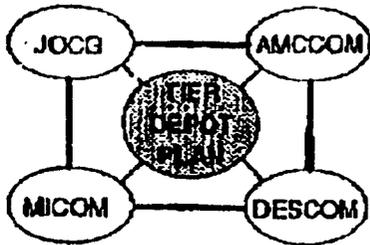
- Cost & Responsiveness Not Considered
- Maintain Tactical Missile Mission

SVDA:

- Effect on Designation as DU CTX
- Will Demil Continue?
- MLRS Pods in WR Equation?

Response:

- No Impact on Final Ranking as BGAD was Already 2nd in Power Projection
- Look at Feasibility
- Cost Criteria Added
- Responsiveness Considered in all Criteria
- Concur
- No Effect Envisioned
- No Immediate Effect on Demil
- Applicable Stocks will be Stored at Tier I/II



Tier Depot Analysis

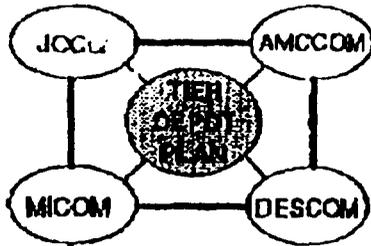
INSTALLATION COMMENTS

TEAD:

- Tier Plan Inadequate to Solve Problems
- Immediate Reduction in Workload Biases P1ng
- Important Criteria Not Used:
 - Desert Storm Performance
 - Cost Data
 - Demil Capability
- Cost Implication for Tier II/III
- DESCOM / Depot Personnel Not Included

Response:

- Tier Study Combined with FAA Recommendations Increases all Efficiencies
- No Immediate Reductions in Workload Envisioned
- All Installations Performed Superior
 - Cost Data Analyzed in Study
 - Demil Capability Criteria Added
- Concept Reduces Overall Operational Cost
- DESCOM Personnel Represented Depots



Tier Depot Analysis

CONCLUSION - EAST

• CAAA

- Quantitative: 2
- Qualitative
 - Supports USMC & USN Trng
 - Active Production
 - WP Demil Capability

▸ CONCLUSION

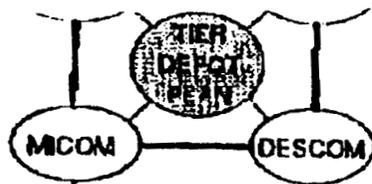
- Best Suited for Active Status
- Supports USMC & USN Concerns
- Good Power Proj Capability

• LEAD

- Quantitative: 5
- Qualitative
 - Multi Mission

▸ CONCLUSION

- Best Suited for Cadre status
- Retain Tactical Missile Maintenance Mission



CONCLUSION - EAST

• ANAD

- ▶ Quantitative: 6
- ▶ Qualitative
 - Multi Mission
 - Hub for Eastern Region Training
 - Air Drop for XVIII ABN & 75th Rangers
 - Computing Outload with DLA
 - TCM Mission

▶ CONCLUSION

- Best Suited for Active Status
- Retain Tactical Missile Maintenance Mission
- Develop Partnerships
- Strong Qualitative Consideration
- Reported Outloading Capability Poor

• BGAD

- ▶ Quantitative: 8
- ▶ Qualitative
 - TCM Mission
 - No Multi Mission

▶ CONCLUSION

- Best Suited for Cadre Status
- Outstanding Power Projection Capabilities
- Required Retention to Meet MRC Outloading Requirements

CONCLUSION - EAST

MICOM

DESCOM

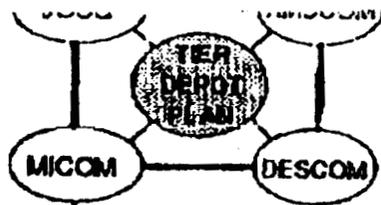
• SEDA

- ▶ Quantitative: 11
- ▶ Qualitative
 - Radiation Decon Team
 - Depot Activity

▶ CONCLUSION

- Best Suited for Caretaker Status
- Low Overall Capabilities

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TER Depot Analysis

CONCLUSION - CENTRAL

• MCAAP

- Quantitative: 1
- Qualitative
 - Hub for Central / SW Region Training Support
 - Active Production

▸ CONCLUSION

- Best Suited for Active status
- Best Overall capabilities

• RRAD

- Quantitative: 9
- Qualitative
 - Large Multi Mission
 - ABL Partner 1st CAV / 3rd ACR

▸ CONCLUSION

- Best Suited for Cadre Status
- Must Retain Missile Maint Missions
- Strong Qualitative Consideration
- Poor Overall Capability

• SVDA

- Quantitative: 10
- Qualitative
 - APE Mission
 - DU Center for Excellence

▸ CONCLUSION

- Best Suited for Caretaker Status
- Poor Overall Capabilities

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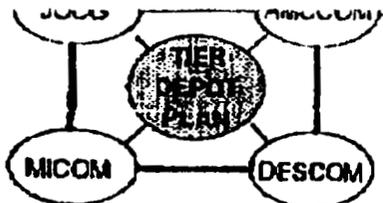
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CONCLUSION - WEST

• HWAAP

- ▶ Quantitative: 3
- ▶ Qualitative
 - Lay Away Production
 - Western Area Demil Facility
 - Contractor Operated

▶ CONCLUSION

- Best Suited for Cadre Status
- Good Overall Capabilities
- Excellent Storage Capabilities for Non-Applicable Stocks

• TEAD

- ▶ Quantitative: 4
- ▶ Qualitative
 - TCM Mission
 - Critical AF Requirement
 - 25th ID/7th LID Airdrop
 - APE Mission

▶ CONCLUSION

- Best Suited for Active Status
- Good Overall Capabilities

• SIAD

- ▶ Quantitative: 9
- ▶ Qualitative
 - Large Op Project Mission

▶ CONCLUSION

- Best Suited for Caretaker Status
- Poor Overall Capabilities

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AMC DCS AMMO

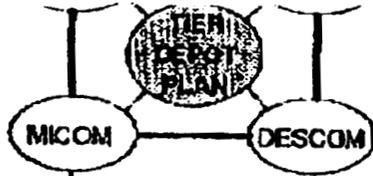
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TIER ASSIGNMENT RECOMMENDATION

WEST

TEAD - I

HWAAP - II

SIAD - III

CENTRAL

MCAAP - I

RRAD - II

SVDA - III

EAST

CAAA - I

ANAD - I

LEAD - II

BGAD - II

SEDA - III

TIER III CONSIDERATIONS:

- SEDA: Decon Mission
- SIAD: Op Project Mission
- SVDA: APE and DU Missions

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MICOM



DESCOM

RECOMMENDATION

- **To Approve the Tier Assignment Recommendation as Presented**

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QUANTITATIVE DATA FOR TIER DEPOT ANALYSIS

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POWER PROJECTION

OUTLOADING CAPABILITY

FACTORS

DEPOT	CNTR/SCR	BB/SCR	70-30/SCR
WEIGHT:	4	2	3
ANAD	1040/2.9	800/1.8	968/2.4
BGAD	2080/5.9	3760/3.7	2584/6.5
CAAA	780/2.2	11300/11.0	3936/9.8
HWAAP	923/2.6	1280/1.2	1030/2.6
LEAD	520/1.5	3480/3.4	1408/3.5
MCAAP	3900/11.0	5560/5.4	4398/11.0
RRAD	728/2.1	2840/2.8	1362/3.4
SEDA	104/3	1060/1.0	391/1.0
SIAD	1144/3.2	2000/1.9	1401/3.5
SVDA	1989/5.6	1700/1.7	1902/4.8
TEAD	1170/3.3	8600/8.4	3399/8.5

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

STORAGE CAPABILITY

FACTORS

DEPOT	NET SQ FT/SCR	ECM SQ FT/SCR
WEIGHT: 2		
ANAD	1831200/3.3	1623258/4.0
BGAD	1745600/3.1	1374304/3.4
CAAA	4891200/8.8	3585484/8.9
HWAAP	8136800/11.0	3518186/8.7
LEAD	1693600/3.0	1459635/3.6
MCAAP	5593600/10.0	4430063/11.0
RRAD	1351200/2.4	1073715/2.7
SEDA	1119200/2.0	783846/1.9
SIAD	1929600/3.5	1196800/3.0
SVDA	1892800/3.4	554803/1.4
TEAD	1895200/3.4	1361600/3.4

LOCATION**FACTORS**

DEPOT	TO SPOE/SCR	TO APOE/SCR	TO TRNG/SCR	S TO SPOE
	WEIGHT: 4	2	3	1
ANAD	4/5.5	383/5.2	459/11.0	240/7.7
BGAD	5/5.4	551/3.6	603/8.4	221/8.4
CAAA	7/3.1	700/2.8	602/8.4	267/7.0
HWAAP	3/7.3	300/6.8	582/8.7	203/9.2
LEAD	5/4.4	180/11.0	587/8.6	221/8.4
MCAAP	7/3.1	1057/1.9	515/9.8	427/4.4
RRAD	10/2.2	926/2.1	595/8.5	376/4.9
SEDA	6/3.7	233/8.5	705/7.2	258/7.2
SIAD	2/11	233/8.5	527/9.6	169/11.0
SVDA	7/3.1	935/2.1	756/6.7	379/4.9
TEAD	4/5.5	687/2.9	603/8.4	280/6.6

DATA IS # OF RAIL TRANSIT DAYS TO CLOSEST SPOE AND ACTUAL MILEAGE TO CLOSEST APOE. FOR SPOE, MILEAGE DOES NOT NECESSARILY MEAN THE BEST. RAIL MEASURED DUE TO # TONS MOVED. THE COST TO SPOE IS THE COST TO THE CLOSEST SURFACE PORT. IT IS ADDITIVE OF BOTH CONTAINER AND BB (MOTOR AND RAIL).

WEIGHTS ASSIGNED: LARGEST TONNAGE OUT OF SPOE, THUS HIGHEST RANKING TRNG IS AVG MILES TO MAJOR TRNG SITES W/ 1000 MILES. (1/1 50MI = SAME)

COSTS**FACTORS**

DEPOT	R/I/SCR	INV/SCR	SURV/SCR	MAINT/SCR
	WEIGHT: 4	3	2	1
ANAD	248.66/3.0	14.45/4.6	359.85/4.4	45.55/8.2
BGAD	125.08/5.9	50.17/1.3	304.55/5.2	59.01/6.3
CAAA	66.86/11.0	10.69/8.2	224.69/7.1	40.93/9.1
HWAAP	148.71/4.9	38.33/1.7	144.87/11.0	51.97/7.2
LEAD	130.83/5.6	16.44/4.0	438.20/3.6	33.86/11.0
MCAAP	107.49/6.8	27.22/2.4	146.34/10.9	48.78/7.6
RRAD	134.22/5.5	6.00/11.0	505.24/3.2	49.22/7.6
SEDA	145.73/5.0	90.55/7	794.97/2.0	88.33/4.2
SIAD	142.21/5.2	57.11/1.2	386.05/4.1	59.39/6.3
SVDA	112.34/6.5	101.57/6	535.92/3.0	81.20/4.6
TEAD	122.36/6.0	27.24/2.4	275.56/5.8	55.21/6.7

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

DEMIL COSTS EXCLUDED DUE TO FUNDING FROM PAA.

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

MAINTENANCE

FACTORS

DEPOT	MISSILE/SCR	MULTUSE Bldg /SCR	NEW Lim/SCR	SQ FT Avr/SCR
WEIGHT:	4	3	2	1
ANAD	Y/11	4/5.5	44000/.4	661195/5.5
BGAD	N/0	3/4.1	128000/1.1	801102/6.7
CAAA	N/0	8/11.0	97700/.8	1211360/10.2
HWAAP	N/0	4/5.5	515000/4.4	1011537/8.5
LEAD	Y/11:	1/1.4	20000/.2	231173/1.9
MCAAP	N/0	6/8.3	1300000/11.0	1311606/11.0
RRAD	Y/11	3/4.1	65000/.6	471103/3.9
SEDA	N/0	1/1.4	60000/.5	211100/1.8
SIAD	N/0	2/2.8	37000/.3	171132/1.5
SVDA	N/0	2/2.8	255000/2.2	1011920/8.9
TEAD	N/0	5/6.9	139000/1.2	711103/5.9

MISSILE FACTOR: YES OR NO FOR MISSILE MAINTENANCE CAPABILITY.

DEPOTS WITH THIS CAPABILITY RECEIVE A SCORE OF 11 BASED UPON ITS IMPORTANCE AS DISCUSSED DURING 17-18 FEB MEETING.

MISSILE MAINTENANCE FACILITIES ARE CONSIDERED AS HIGH DOLLAR INVESTMENTS AND ARE UNIQUE TO MISSILE SYSTEM REQUIREMENTS. NOT EASILY INTER-CHANGEABLE.

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INSPECTION/TEST

FACTOR

DEPOT	FUNCTION	MISSILE	MOD SURV	X-RAY	TOTAL	SCR
WEIGHT:	4	3	2	1		
ANAD	0	1	0	0	3	8
BGAD	0	0	0	0	0	6
CAAA	1	0	1	1	7	11
HWAAP	1	0	1	1	7	11
LEAD	0	1	1	1	6	10
MGAAP	0	0	1	1	3	8
RRAD	0	1	0	1	4	8
SEDA	0	0	0	0	0	6
SIAD	0	0	0	0	0	6
SVDA	1	0	0	0	4	9
TEAD	0	0	0	1	1	7

RANKING: 1 = HAS CAPABILITY
 0 = HAS NO CAPABILITY

DEMIL**FACTORS**

DEPOT	RRR/SCR	OB-OD/SCR	DEMIL STORAGE/SCR
WEIGHT:	3	2	1
ANAD	10/7	1600/9	21973/2.7
BGAD	17/9	300/.2	11944/1.9
CAAA	18/10	2000/1.1	30972/3.3
HWAAP	20/11	1600/9	102154/11.0
LEAD	6/6	3200/1.8	21753/3.2
MCAAP	17/9	3300/1.8	81930/9.6
RRAD	12/8	1000/.6	7486/.8
SEDA	10/7	2100/.4	6877/.7
SIAD	10/7	20000/11.0	11475/1.7
SVDA	6/6	1800/1.0	7163/.8
TEAD	12/8	8400/4.6	8756/.9

RESOURCE RECOVERY AND RECYCLING CAPABILITY INCLUDES:

DISASSEMBLY, UNIQUE DEMIL CAP, WASHOUT/STEAMOUT/MELTOUT CAP, APE 1236
OPEN BURN/OPEN DET CAPABILITY INCLUDES;

DEMIL ST IN STORAGE BY LOCATION

- TAKING OB/OD AND DEMIL IN STG OUT DOES NOT AFFECT FINAL RANKING ORDER.

Document Separator

**FORT McCLELLAN PRESENTATION
TO
THE DEFENSE BASE CLOSURE AND REALIGNMENT COMMISSION
REGIONAL HEARING AT BIRMINGHAM, ALABAMA
APRIL 4, 1995**

STATEWIDE PRESENTATION:

- Governor Fob James
- Senator Howell Heflin
- Senator Richard Shelby

FORT McCLELLAN COMMUNITY PRESENTATION:

- Executive Summary of Community Presentation
by Rep. Glen Browder
- Opening Remarks of Mr. Gerald Powell, Chairman, Military Affairs
Committee, Calhoun County Chamber of Commerce

MILITARY VALUE PRESENTATION:

- A. Introduction To Military Value Discussion - Major General Gerald Watson, U.S. Army (Ret.), Former Commandant of Chemical School, Deputy Army Inspector General, Commanding General of Fort McClellan, and Former Director of the Defense Nuclear Agency.
- Why We Are Here
- B. The Disruption of the Military Police School - Major General Charles Hines, U.S. Army (Ret.), Former Commandant of the Military Police Corps & Commanding General of Fort McClellan, now President of Prairie View A&M University, Texas.
- Military Police Operational Tempo
 - Lack of Advocacy for Military Police Corps
- C. Weapons of Mass Destruction; The Nuclear, Biological, and Chemical Threat - Colonel John Mojecki, U.S. Army (Ret.), Former Director, NBC Defense, Headquarters, Training and Doctrine Command.
- Army Focus - 94 - Force XXI
 - Proliferation

**FORT McCLELLAN PRESENTATION
TO
THE DEFENSE BASE CLOSURE AND REALIGNMENT COMMISSION
REGIONAL HEARING AT BIRMINGHAM, ALABAMA
APRIL 4, 1995**

(continued)

- D. Live Chemical Agent Training and the Disruption to the Army Chemical School - Colonel Walton Phillips, U.S. Army (Ret.), Former Chief of Forces Command Nuclear & Chemical Directorate and Deputy Commander of Army Chemical School during the movement of the School from Maryland to Fort McClellan.
- BRAC 1991, 1993, 1995
 - Necessity for Live Agent Training
 - Impact of Movement of Army Chemical School on Civilian Personnel
 - Unique facilities at the Army Chemical School
- E. Impact of BRAC 1995 on the Chemical School Mission - Major General Gerald Watson, U.S. Army (Ret.)
- NBC Defense Degraded
 - Biological Defense Program Fractionalized
 - Joint NBC Programs Downscoped
 - Degraded World Leadership of US Army and USA
 - CWC Treaty Inspection and Validation
 - Chemical Demilitarization Program Delayed
 - Smoke and Obscurants Training Significantly Curtailed
 - Mobilization
- F. Environmental Issues - Brigadier General Peter Hidalgo, U.S. Army (Ret.), Former Commander, Chemical Research & Development Command and Army Project Manager for Chemical Weapons Disposal.
- Permits Needed
 - Permitting Problem Areas
 - Residual Value
 - Return on Investment
- G. Military Value Summary - Major General Gerald Watson, U.S. Army (Ret.)
- NBC Defense Significantly Degraded
 - Department of Defense Deviated Substantially from the Military Value Criteria
 - The Closure of Fort McClellan Would Pose an Unacceptable Risk to the Nation's Security

**FORT McCLELLAN PRESENTATION
TO
THE DEFENSE BASE CLOSURE AND REALIGNMENT COMMISSION
REGIONAL HEARING AT BIRMINGHAM, ALABAMA
APRIL 4, 1995**

(continued)

ECONOMIC IMPACT PRESENTATION:

- Economic Impact of the Closure of Fort McClellan on the Local Community - Mr. James T. Dunn, Chairman, Calhoun County Commission.
 - Largest Single Impact of BRAC 1995
 - Total Unemployment Greater Than 24%

Document Separator

UNITED STATES SENATE

Washington, D.C. 20510

104th CONGRESS

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* Senate—224-3121

* House—225-3121

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* 0 for Capitol Operator Assistance

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Senator		Suite	Phone	Senator		Suite	Phone
Vice President				HOLLINGS, Ernest F.	(D-SC)	SR-125	4-6121
GORE, Al			4-2424	HUTCHISON, Kay Bailey	(R-TX)	SH-703	4-5922
ABRAHAM, Spencer	(R-MI)	SD-B34-4	4-4822	INHOFE, James M.	(R-OK)	SR-453	4-4721
AKAKA, Daniel K.	(D-HI)	SH-720	4-6361	INOUE, Daniel K.	(D-HI)	SH-722	4-3934
ASHCROFT, John	(R-MO)	SH-705	4-6154	JEFFORDS, James M.	(R-VT)	SH-513	4-5141
BAUCUS, Max	(D-MT)	SH-511	4-2651	JOHNSTON, J. Bennett	(D-LA)	SH-136	4-5824
BENNETT, Robert F.	(R-UT)	SD-241	4-5444	KASSEBAUM, Nancy Landon	(R-KS)	SR-302	4-4774
BIDEN, Jr., Joseph R.	(D-DE)	SR-221	4-5042	KEMPTHORNE, Dirk	(R-ID)	SD-367	4-6142
BINGAMAN, Jeff	(D-NM)	SH-40703	4-5521	KENNEDY, Edward M.	(D-MA)	SR-315	4-4543
BOND, Christopher S.	(R-MO)	SR-293	4-5721	KERREY, J. Robert	(D-NE)	SH-303	4-6551
BOXER, Barbara	(D-CA)	SH-112	4-3553	KERRY, John F.	(D-MA)	SR-421	4-2742
BRADLEY, Bill	(D-NJ)	SH-731	4-3224	KOHL, Herb	(D-WI)	SH-330	4-5653
BREAUX, John B.	(D-LA)	SH-516	4-4623	KYL, Jon	(R-AZ)	SR-363	4-4521
BROWN, Hank	(R-CO)	SH-716	4-5941	LAUTENBERG, Frank R.	(D-NJ)	SH-506	4-4744
BRYAN, Richard H.	(D-NV)	SR-364	4-6244	LEAHY, Patrick J.	(D-VT)	SR-433	4-4242
BUMPERS, Dale	(D-AR)	SD-229	4-4843	LEVIN, Carl	(D-MI)	SR-459	4-6221
BURNS, Conrad	(R-MT)	SD-183	4-2644	LIEBERMAN, Joseph I.	(D-CT)	SH-316	4-4041
BYRD, Robert C.	(D-WV)	SH-311	4-3954	LOTT, Trent	(R-MS)	SR-487	4-6253
CAMPBELL, Ben Nighthorse	(D-CO)	SR-380	4-5852	LUGAR, Richard G.	(R-IN)	SH-306	4-4814
CHAFEE, John H.	(R-RI)	SD-567	4-2921	MACK, Connie	(R-FL)	SH-517	4-5274
COATS, Dan	(R-IN)	SR-404	4-5623	MCCAIN, John	(R-AZ)	SR-111	4-2235
COCHRAN, Thad	(R-MS)	SR-326	4-5054	MCCONNELL, Mitch	(R-KY)	SR-120	4-2541
COHEN, William S.	(R-ME)	SH-322	4-2523	MIKULSKI, Barbara A.	(D-MD)	SH-709	4-4654
CONRAD, Kent	(D-ND)	SH-724	4-2043	MOSELEY-BRAUN, Carol	(D-IL)	SH-320	4-2854
COVERDELL, Paul	(R-GA)	SR-200	4-3643	MOYNIHAN, Daniel Patrick	(D-NY)	SR-464	4-4451
CRAIG, Larry E.	(R-ID)	SH-313	4-2752	MURKOWSKI, Frank H.	(R-AK)	SH-706	4-6665
D'AMATO, Alfonse M.	(R-NY)	SH-520	4-6542	MURRAY, Patty	(D-WA)	SH-302	4-2621
DASCHLE, Thomas A.	(D-SD)	SH-317	4-2321	NICKLES, Don	(R-OK)	SH-133	4-5754
DEWINE, Mike	(R-OH)	SR-140	4-2315	NUNN, Sam	(D-GA)	SD-303	4-3521
DODD, Christopher J.	(D-CT)	SR-444	4-2823	PACKWOOD, Bob	(R-OR)	SR-259	4-5244
DOLE, Robert	(R-KS)	SH-141	4-6521	PELL, Claiborne	(D-RJ)	SR-335	4-4642
DOMENICI, Pete V.	(R-NM)	SD-427	4-6621	PRESSLER, Larry	(R-SD)	SR-283	4-5842
DORGAN, Byron L.	(D-ND)	SH-713	4-2551	PRYOR, David	(D-AR)	SR-267	4-2353
EXON, J. James	(D-NE)	SH-528	4-4224	REID, Harry	(D-NV)	SH-324	4-3542
FAIRCLOTH, Lauch	(R-NC)	SH-702	4-3154	ROBB, Charles S.	(D-VA)	SR-493	4-4024
FEINGOLD, Russell D.	(D-WI)	SH-502	4-5323	ROCKEFELLER IV, John D.	(D-WV)	SH-109	4-6472
FEINSTEIN, Dianne	(D-CA)	SH-331	4-3841	ROTH, Jr., William V.	(R-DE)	SH-104	4-2441
FORD, Wendell H.	(D-KY)	SR-173A	4-4343	SANTORUM, Rick	(R-PA)	SD-B34-2	4-6324
FRUST, Bill	(R-TN)	SH-825	4-3344	SARBANES, Paul S.	(D-MD)	SH-309	4-4524
GLENN, John	(D-OH)	SH-503	4-3353	SHELBY, Richard C.	(R-AL)	SH-509	4-5744
GORTON, Slade	(R-WA)	SH-730	4-3441	SIMON, Paul	(D-IL)	SD-462	4-2152
GRAHAM, Bob	(D-FL)	SH-524	4-3041	SIMPSON, Alan K.	(R-WY)	SD-261	4-3424
GRAMM, Phil	(R-TX)	SR-370	4-2934	SMITH, Bob	(R-NH)	SD-332	4-2841
GRAMS, Rod	(R-MN)	SD-B34-3	4-3244	SNOWE, Olympia J.	(R-ME)	SR-176	4-5344
GRASSLEY, Charles E.	(R-IA)	SH-135	4-3744	SPECTER, Arlen	(R-PA)	SH-530	4-4254
GREGG, Judd	(R-NH)	SR-393	4-3324	STEVENS, Ted	(R-AK)	SH-522	4-3004
HARKIN, Tom	(D-IA)	SH-531	4-3254	THOMAS, Craig	(R-WY)	SD-B34-1	4-6441
HATCH, Orrin G.	(R-UT)	SR-135	4-5251	THOMPSON, Fred	(R-TN)	SD-506	4-4944
HATFIELD, Mark O.	(R-OR)	SH-711	4-3753	THURMOND, Strom	(R-SC)	SR-217	4-5972
HEFLIN, Howell	(D-AL)	SH-728	4-4124	WARNER, John W.	(R-VA)	SR-225	4-2023
HELMS, Jesse	(R-NC)	SD-403	4-6342	WELLSTONE, Paul	(D-MN)	SH-717	4-5641

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BRAC
CLOSURE OF SAVANNA ARMY DEPOT ACTIVITY
AND
RELOCATION OF USADACS

A CRITICAL VIEW

Good Morning - -

I am Al Ehringer. I retired as the Director of the US Army Defense Ammunition Center and School (USADACS) and I previously served as the Civilian Executive of the Savanna Army Depot.

Now I am Co-Chairman of a group consisting mainly of retired Ammunition Careerists who have extensive experience in the DOD ammunition program. We have examined some of the data and information that has been offered to support the closure of Savanna Army Depot Activity and the relocation of USADACS.

SOURCES OF INFORMATION FOR RECLAMA

Referenced in our report.

BRIEFING

Time constraints preclude enumeration of detailed dollar requirements and ammunition tonnages; however, key information is included in the backup data which will be furnished to the Commission. We highly commend the professionalism of the Industrial Operations Command study entitled "Wholesale Ammunition Stockpile Program (WASP)" dated October, 1993. Before focussing on the proposed closure of Savanna Army Depot Activity and the relocation of the US Army Defense Ammunition Center and School, several all important factors must be presented to the Commission.

1. There is no excess ammunition storage space in the Continental United States at the eleven ammunition storage facilities:

Crane AAA	Red River AD
Hawthorne AAP	Savanna ADA *
McAlester AAP	Seneca ADA *
Anniston AD	Sierra AD *
Blue Grass AD	Tooele AD
Letterkenny AD	

** Proposed for Closure*

This lack of storage space was forecasted in the 1993 WASP Study.

2. To alleviate this lack of magazine storage space for ammunition, the Army has established an accelerated Demilitarization Plan (Demilitarization - the rendering of military ordnance incapable of its intended use.) The demil program for FY95 is \$110 million. In subsequent years, the projected funding is reduced to \$35 million in FY03 and the demil account will grow from 400 thousand tons to 713 thousand tons. The demilitarization program is significantly under funded.
3. The May 1994 Army Plan documents that magazine space must be realigned to accommodate operational requirements under the proposed depot tiering structure. The study on tiering states that 2.1 million tons of ammunition out of 3.1 million tons now in depot storage must be moved to accomplish realignment. We have determined that the cost would be approximately \$185 million for tiering the depots. The Army plan estimated \$22.4 million.

Continental U.S. ammunition storage space has been adversely impacted by the retrograde of ammunition from Europe, SW Asia and the reduced Army force structure. What has not been identified is additional Army ammunition to be returned from overseas, ammunition from Air Force and Navy.

Approximately 450 thousand tons of ammunition are in magazine storage at Savanna, Seneca and Sierra. Closure of these depots will further impact on lack of ammunition storage space.

Savanna Army Depot has magazine storage capacity for 165,000 tons of ammunition at a time when a lack of storage space for ammunition exists in the continental United States - (Ref: "Wholesale Ammunition Stockpile Program") (WASP).

4. Specialized demil facilities at Savanna Army Depot Activity

- An Explosive Waste Incinerator (EWI) with associated equipment to meet all State and Federal Government environmental laws is available at Savanna ADA. Due to regulatory constrictions and limited operational dollars, only 3 EWI's will be licensed and funded within the Army. Workloading Savanna's EWI would aid in reducing the demil inventory and would reduce overhead costs for the depot.
- Depleted Uranium (DU) capability at Savanna ADA is a one of a kind facility which has received operational licensing from the Nuclear Regulatory Commission. This equipment, unique to DU, has been certified to safely dispose of this sensitive material. Duplication at another installation would require extensive dollar outlay and testing. At least 6,700 short tons are currently available for demil.
- Open burning and open detonation facilities were designed specifically to accommodate student training. Closed circuit television, classroom, storage bunkers and a student change house are in place. This facility is available for joint usage.

5. Storage Magazines and Structures.

- Facilities for explosive storage are in compliance with DOD Explosive Safety Standards and have been maintained in an excellent structural condition.
- The variety of magazines and support facilities (e.g. loading docks, road and rail networks) readily accommodate storage of the assortment of munitions. The ability to store all of the types of items in the stockpile without modification or safety waiver contributes to the readiness posture and to timely response to contingency requirements. The engineered design of the depot is the major

contributing factor to Savanna's outstanding logistical performance demonstrated during periods of national emergency.

- Closure costs do not address movement of "Demil" stocks needed to effect closure. Movement costs are approximately \$350 per ton which will increase Savanna's closing costs by at least \$2 million.

6. **US Army Defense Ammunition Center and School**

-USADACS facilities are in excellent physical condition and have been modernized with state-of-the art equipment. Duplication of these facilities will require at least \$50 million.

- Permanent, air conditioned, modernized classrooms with state-of-the-art classroom equipment and a campus atmosphere; administrative/engineering space; air-conditioned, permanent-type buildings with modern offices; conference rooms and modern lights; Transportability/Pilot Model facility - new \$4.5 million facility adjacent to engineering design offices and existing rail track; Demolition Range - with classrooms, remote television and storage structure; communication network fiber optics and satellite hook-up.
- On-site review of facilities at McAlester offered for USADACS has determined that new construction and extensive renovations would be required.

-Facilities at SVADA provide a capability for hands-on training with live ammunition that would be not only very expensive to duplicate at another installation but could also have difficult environmental obstacles to overcome.

-USADACS is a very synergistic organization. In addition to its training mission, professional and technical personnel of USADACS are trained and available to respond to emergency and contingency requirements world wide as in Haiti, Grenada, Panama and Southwest Asia. Transfer of USADACS to McAlester would result in a significant loss of highly trained personnel, many with very unique skills. Any loss or degradation in the ability to perform services by these "Civilian Soldiers" will adversely impact operational responsiveness throughout DOD. Replacement personnel will require 4 to 5 years to reach the level of expertise now available.

7. **POTENTIAL COSTS/SAVINGS**

- Maintaining the status quo requires no investment.
- The cost of moving USADACS will be at least \$57 million.

- The cost of replacing the depot's available storage capability is \$325 million, (Ref: Depot Brochure).
- Replacement of the unique facilities for Demil of depleted uranium and the Explosive Waste Incinerator will cost in excess of \$20 million.
- Total costs avoidance by maintaining the status quo exceeds \$400 million.

8. ENVIRONMENTAL CONSIDERATIONS

- Clean-up requirements have been identified and funding programs have been established for environmental application at Savanna Army Depot Activity. Total scope identified to date is \$310 million and is proposed to be accomplished by 2031.
- Transfer of the installation to private use should not be made until clean-up is accomplished. Clean-up operations can be concurrent with depot operations. Retention of the depot will permit logistical and administrative support for clean-up operations.

CONCLUSIONS/RECOMMENDATIONS

An examination of these facts as we have outlined leads to the following conclusions and recommendations:

- In FY95, all ammunition storage space in the United States is filled, inclusive of the depots proposed for closure. **There is no excess storage magazine space.**
- Demil stocks continue to grow faster than demilitarization is accomplished. This has been caused by inadequate funding and failure to fully use facilities available throughout the system.
- Retention of USADACS at Savanna will save \$57 million.
- The Army has substantially underestimated the cost of moving ammunition from Savanna and the relocation of USADACS to McAlester.
- The tiering concept of ammunition depots should be abolished. This concept is flawed because costs are underestimated and resources for support of readiness and total force requirements will be wasted.

- Conversion of SVADA from a government owned/government operated (GOGO) facility to a government owned/contractor operated (GOCO) facility is a viable option.
- **The decision to close Savanna Army Depot Activity and relocate USADACS should be reversed.**

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B
BV-M

U.S. ARMY DEFENSE AMMUNITION CENTER AND SCHOOL



OVERVIEW BRIEFING

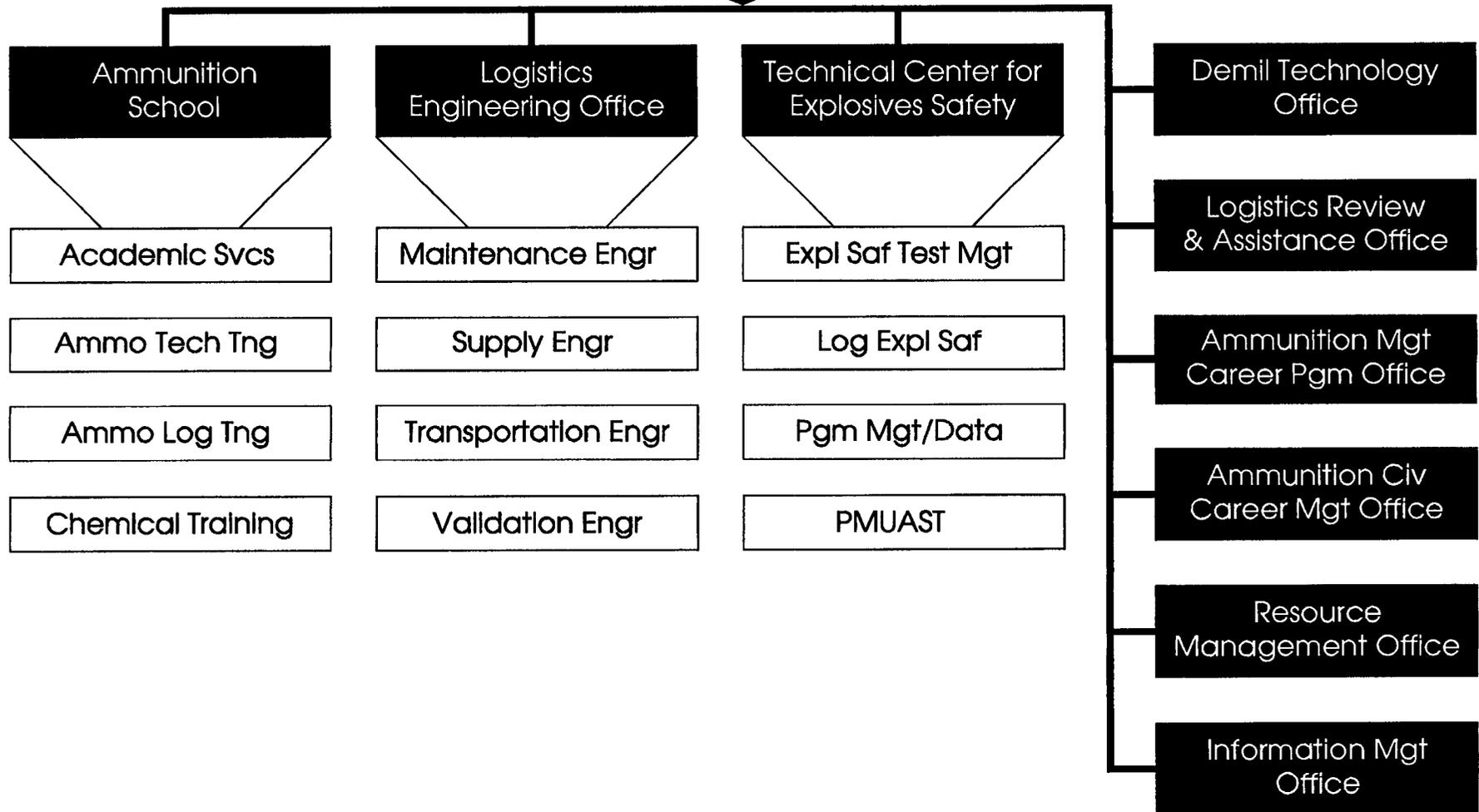
PRIMARY MISSIONS



Training
Log Engineering
Explosives Safety
Demil Technology
Technical Assistance
Career Management

ORGANIZATIONAL STRUCTURE

Office of the Director





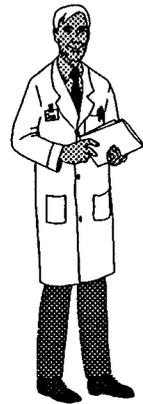
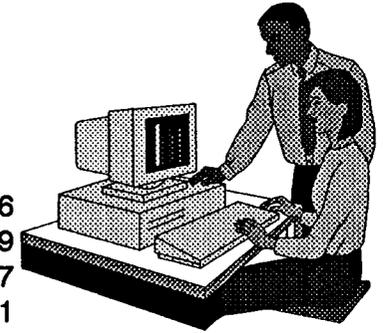
AMMUNITION SURVEILLANCE
 QASAS - 64
 TOTAL 64

LOGISTICS

TRANSPORTATION - 6
 PRODUCTION - 1
 MAINTENANCE - 4
 SUPPLY/DIST - 2
 MANAGEMENT - 22
 TOTAL 35

LOGISTICS ENGINEERING

GEN ENGINEER - 6
 IND ENGINEER - 9
 MECH ENGINEER - 7
 CHEMICAL ENGINEER - 1
 CIVIL ENGINEER - 4
 ENGINEERING TECH - 8
 DRAFTSMAN - 4
 TOTAL 39



PROGRAM MANAGEMENT

PROGRAM MANAGER - 5
 PROGRAM ANALYST - 3
 BUDGET ANALYST - 2
 PROGRAM ASSISTANT - 9
 COMPUTER ASSISTANT - 7
 TOTAL 26

USADACS AMMUNITION SKILL BASE
 (AUTH - 230)

SAFETY

SAFETY ENGINEER - 5
 OCCUPATIONAL SAFETY & HEALTH SPEC - 4
 SAFETY SPEC - 2
 TOTAL 11



SPECIALIZED

PHYSICAL SCIENTIST - 1
 CHEMIST - 1
 ENVIRONMENTAL SPEC - 1
 EDUCATIONAL SPEC - 3
 PAO - 1
 LIBRARIAN - 3
 CATALOGER/LIB TECH - 1
 TECH WRITER ORD - 4
 TOOLMAKER - 6
 MOTOR VEHICLE OPERATOR - 1
 MACHINIST - 3
 ILLUSTRATOR - 1
 TOTAL 26

INFORMATION MANAGEMENT

VIDEO PRODUCTION SPEC - 2
 PHOTOGRAPHER - 1
 AUTOMATION/COMM SPEC - 4
 TOTAL 7

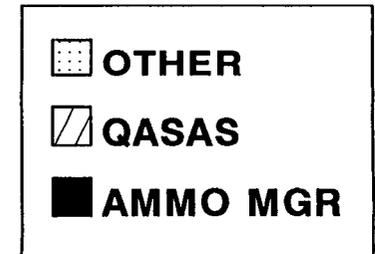
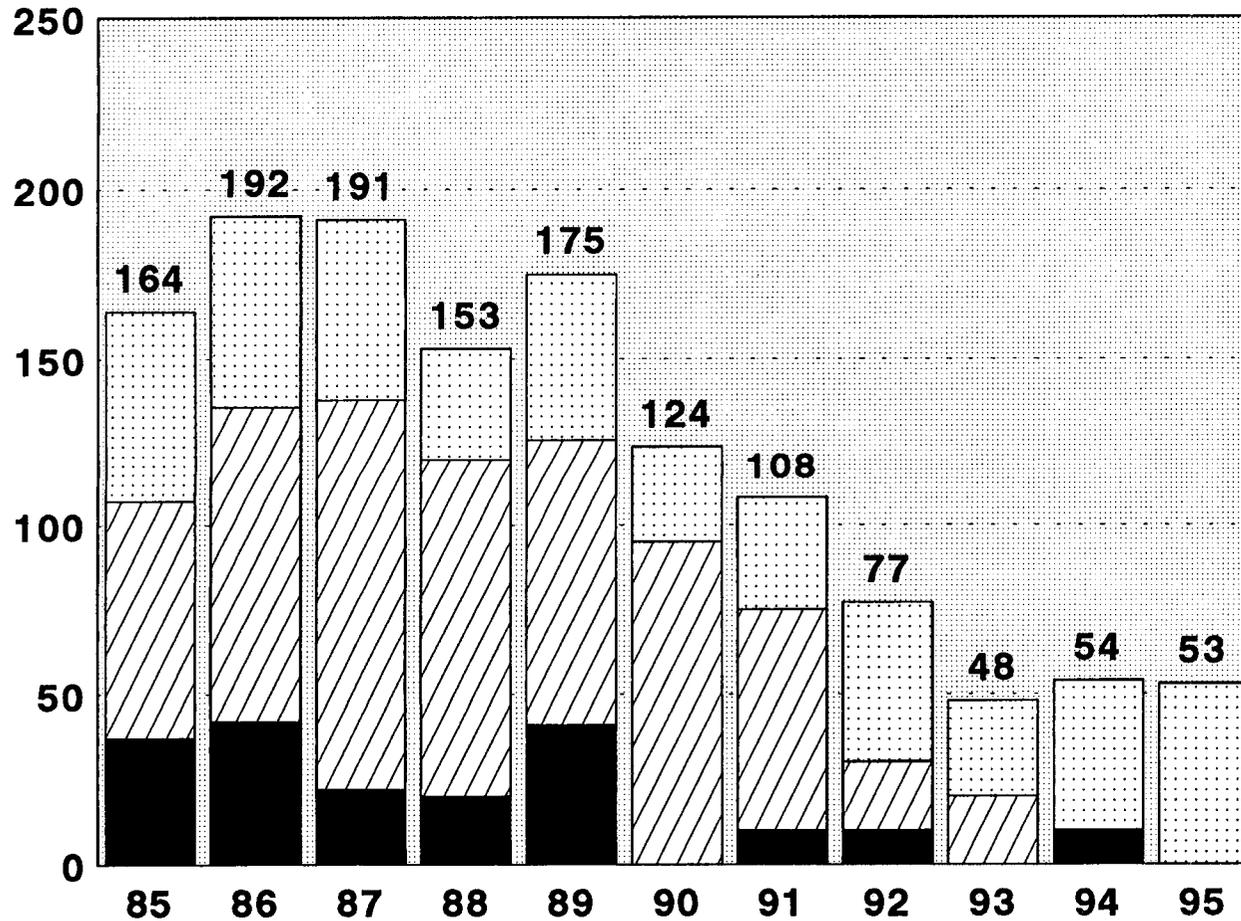
CUSTOMERS

ADMINISTRATIVE

ADMIN OFFICER - 3
 SECRETARY/CLERICAL - 15
 MISC ADMIN - 4
 TOTAL 22



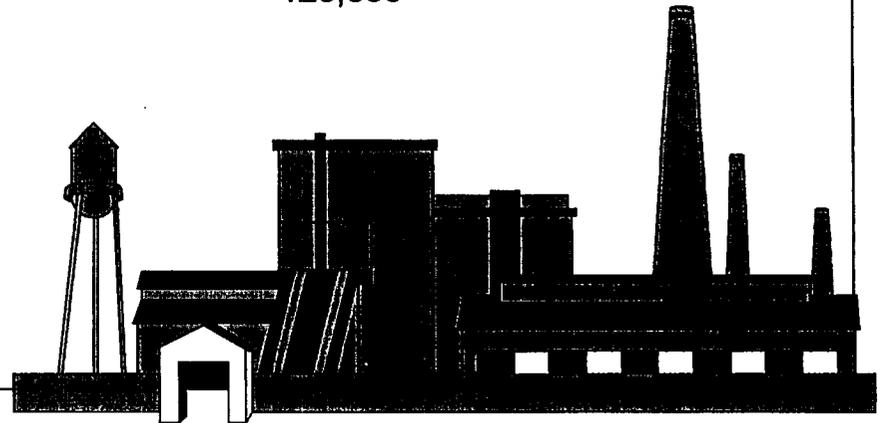
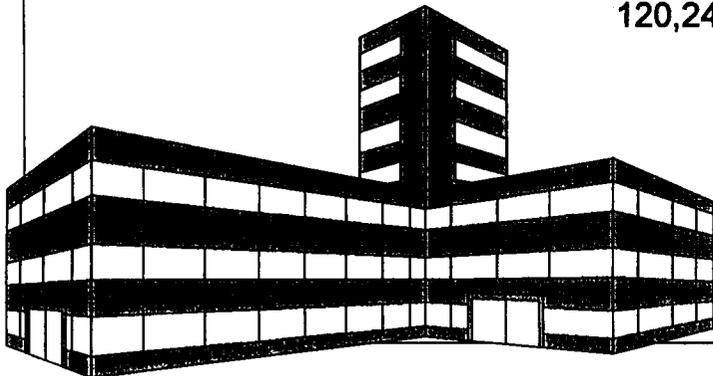
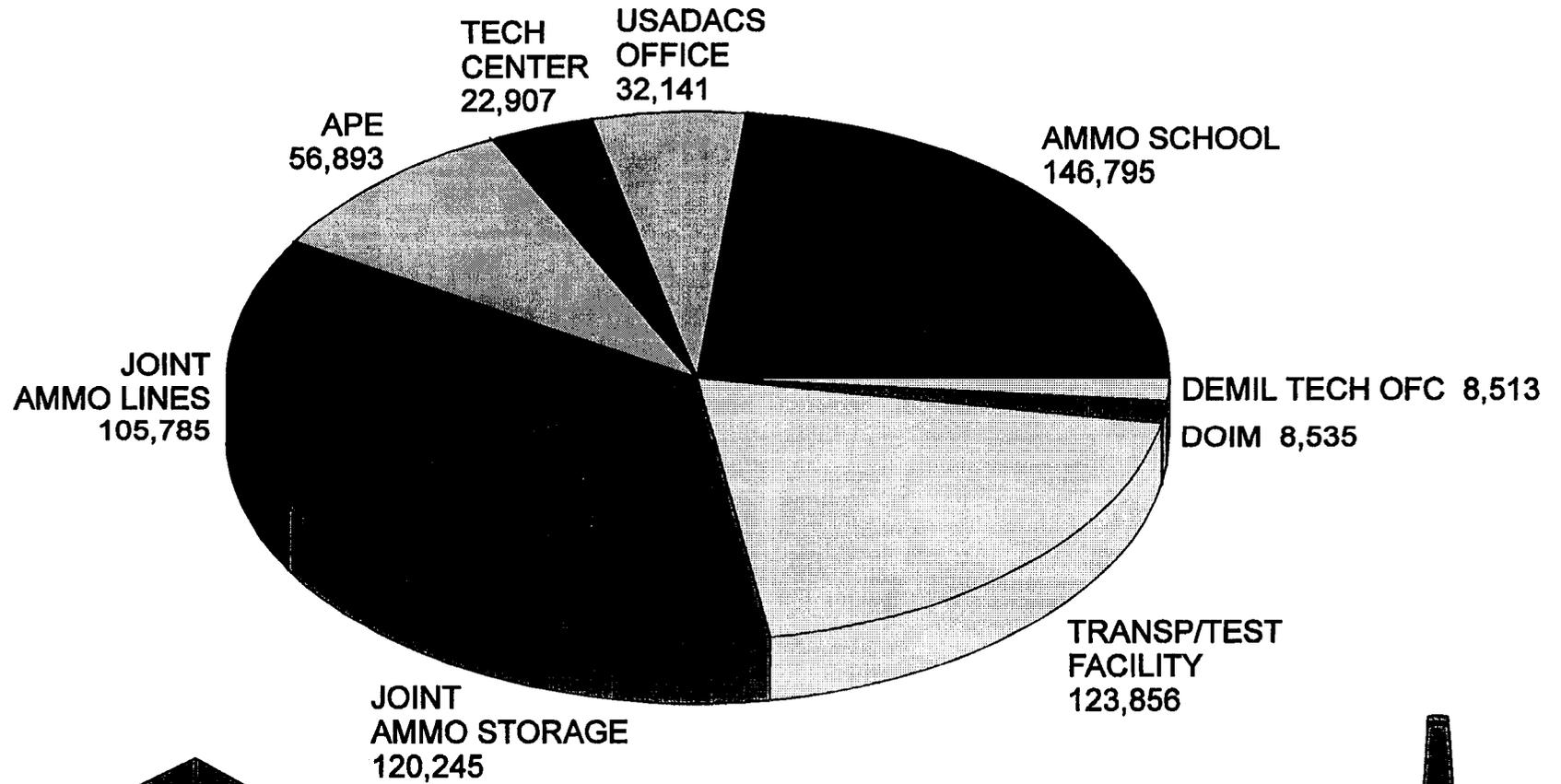
AMMUNITION SCHOOL RESIDENT SCHOOL SUMMARY



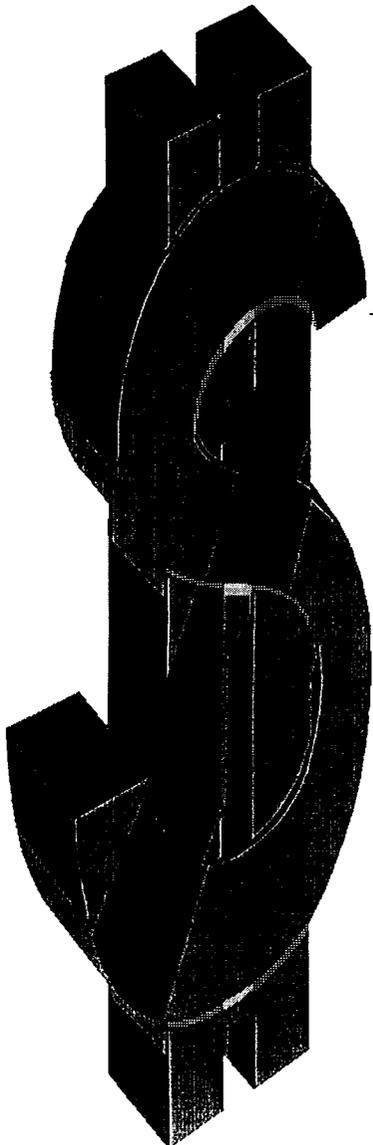
OTHER	57	56	53	33	49	29	33	47	28	44	53
QASAS	70	94	116	100	85	95	65	20	20	0	0
AMMO MGR	37	42	22	20	41	0	10	10	0	10	0

FACILITY UTILIZATION

SOLE = 399,640
JOINT = 226,030
TOTAL SQ FT = 625,670



FY 95 RESOURCE POSTURE



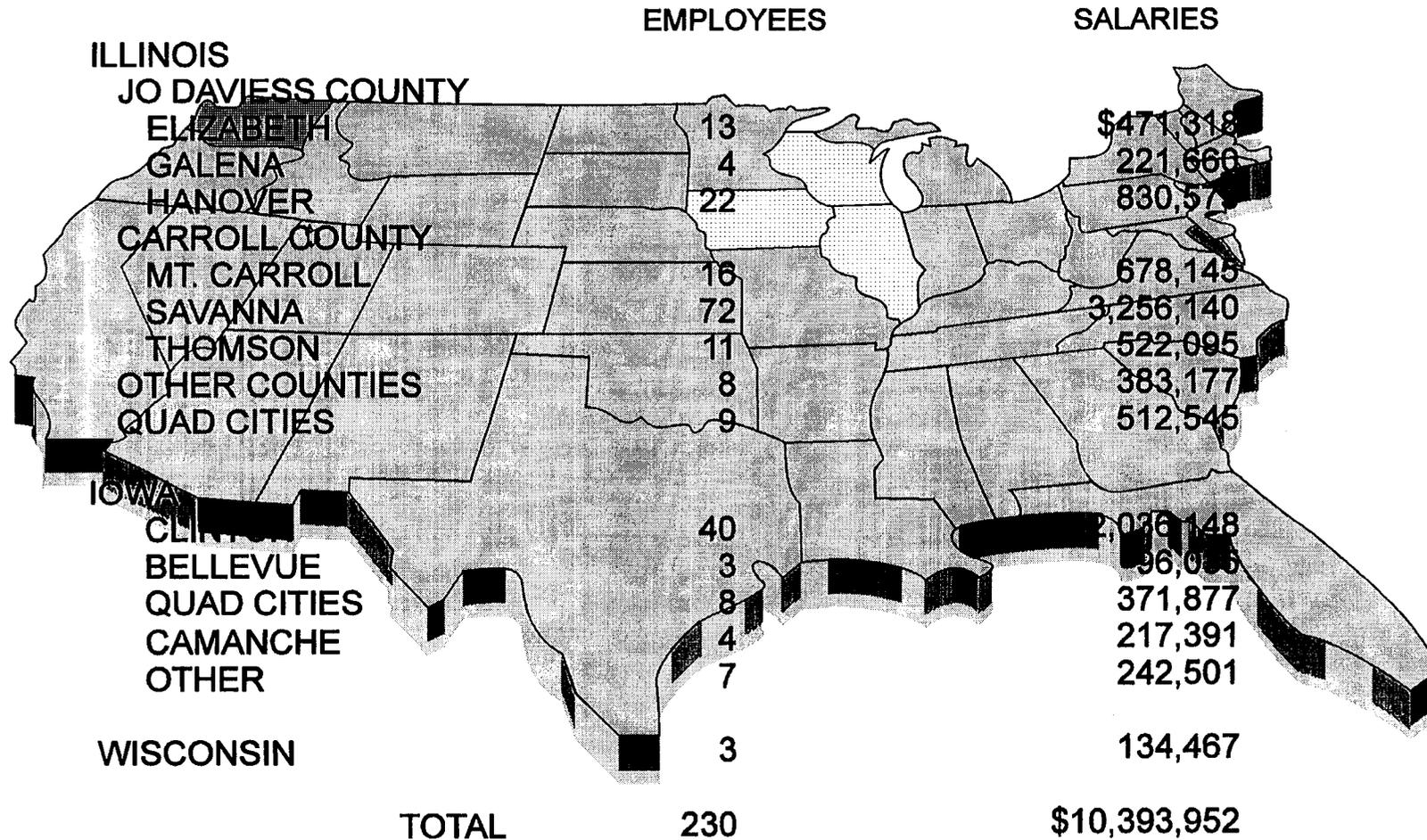
AMS CODE	PROGRAM	DIRECT OMA	DIR RDT&E	REIMB
63001.5444	PMUAST	0.0	871.5	0.0
664704	JSLRMD	0.0	10,906.0	0.0
BA3	TRAINING	4,025.0	0.0	1,338.0
BA4	AMMO PROD LINE	7,864.2	0.0	6,568.5
				<hr/>
				\$7,906.5
TOTAL PROGRAM		\$11,889.2	\$11,777.5	

GRAND TOTAL \$31,573.2

(IN THOUSANDS)

COMMUNITY INTERFACE-STAFF*

SALARY AND GEOGRAPHIC DISTRIBUTION

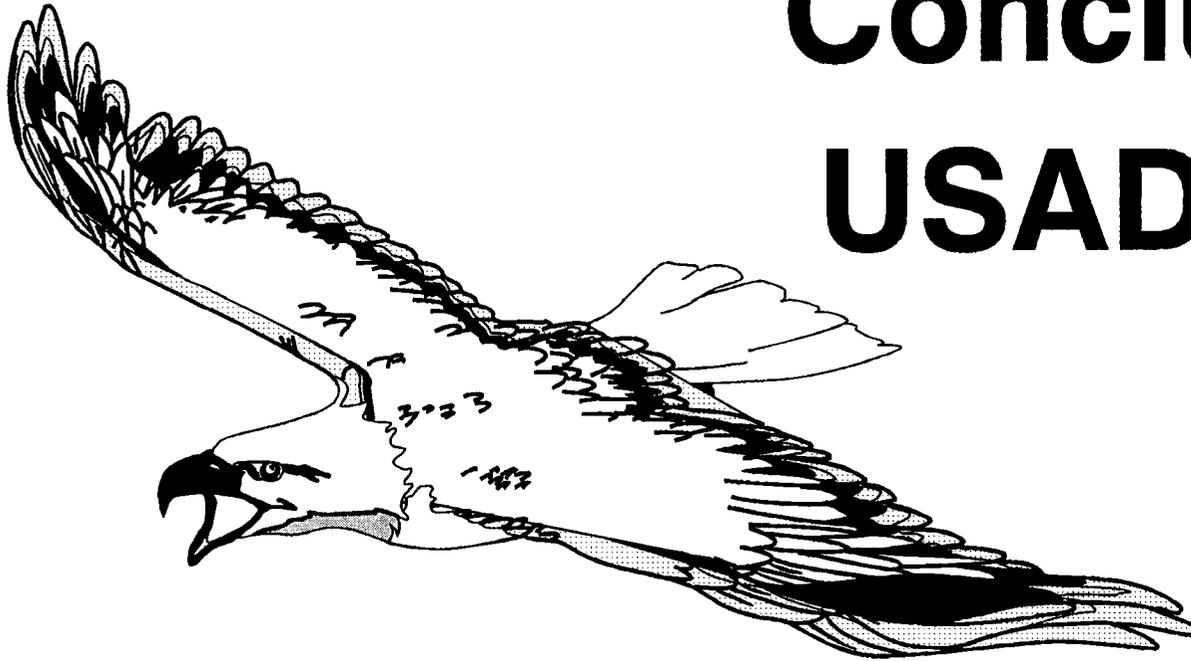


AVERAGE SALARY - STAFF = \$45,191

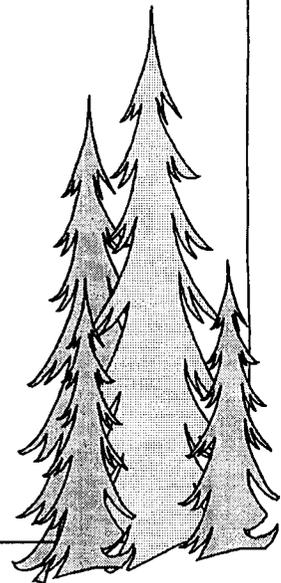
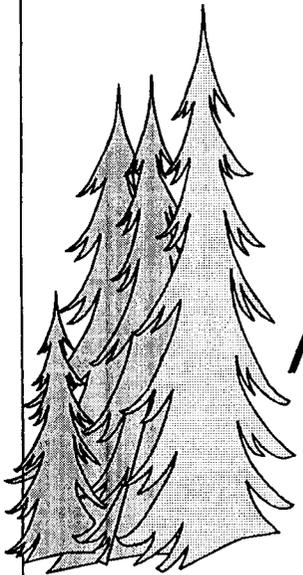
*INCLUDES: WAE'S/TEMPS
NOT STAY-IN-SCHOOLS
OR SUMMER HIRES

AS OF 2D QTR FY 95

Conclusion USADACS



Uniquely able to support the
Ammunition Community Worldwide



USADACS RELOCATION PLAN

NEW CONSTRUCTION AND RENOVATION REQUIREMENTS

AMMO SCHOOL TO BLDGS 2, 4

FUNCTION	BLDG	KSF	COST/ SF	COST MILLIONS
NEW CONSTRUCTION				
ADMIN		48	135.00	6.5
TTF		50	100.00	5.2
AIB		15	115.00	1.7
NEW STORAGE		35	25.00	0.9
CONTINGENCIES (5%)				0.8
SIOH (6%)				1.0
				SUBTOTAL
				16.1
RENOVATION				
GIB	2,4	50	75.00	3.5
EXISTING STORAGE		50		0.1
SUPPORTIVE FACILITIES (AMMO)				.5
CONTINGENCIES (5%)				0.3
SIOH (6%)				0.3
				SUBTOTAL
				4.6
		-----	-----	-----
TOTAL	2,4	248		20.7
USADACS MODEL				

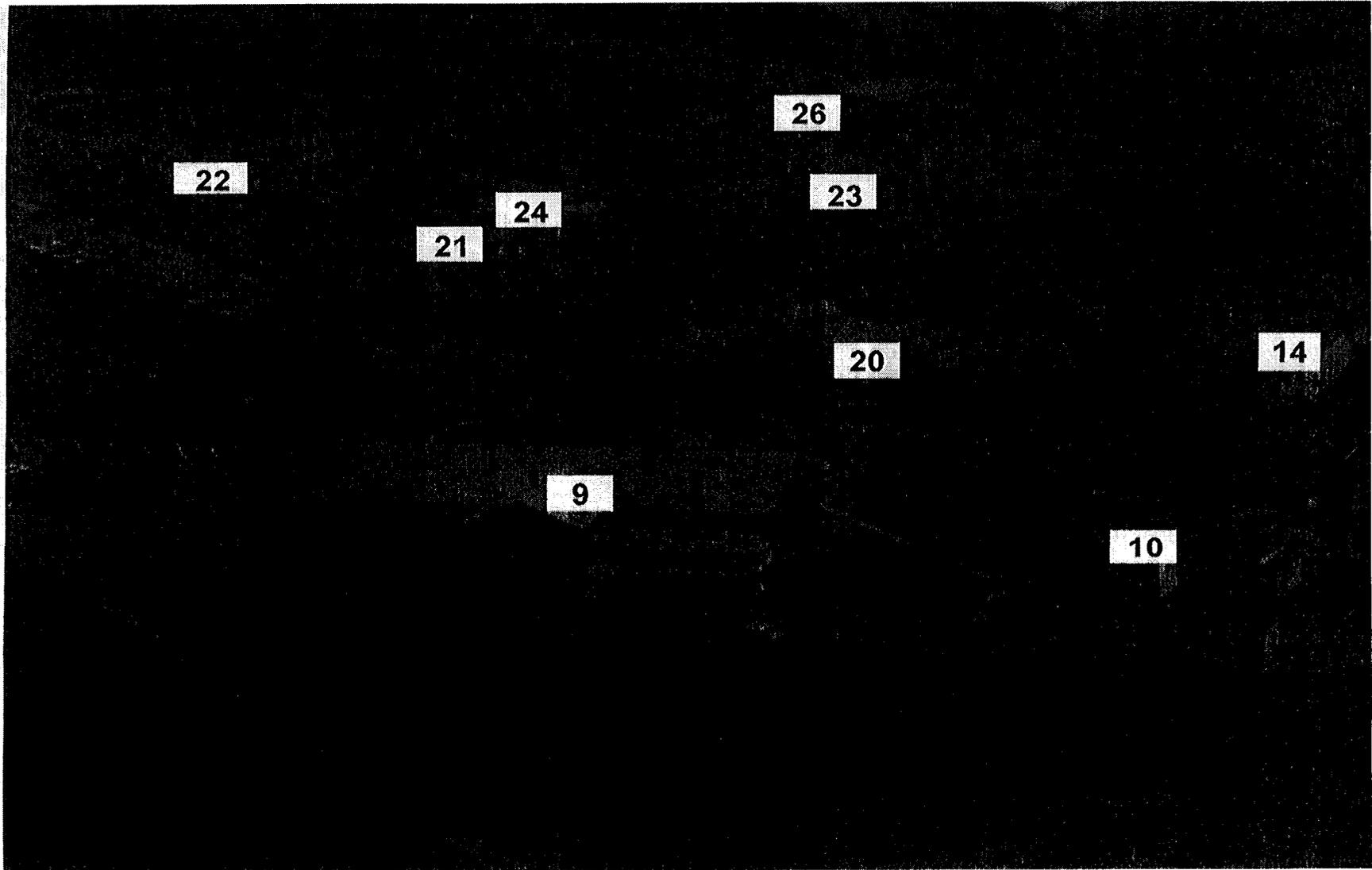
AMMO SCHOOL SUMMARY

<u>TABS CODE</u>	<u>BLDG NO</u>	<u>OFFICE</u>	<u>DESCRIPTION</u>	<u>EXIST SF</u>	<u>TABS SF</u>	<u>MCAAP PROP BLDG</u>
ADMIN	9	AS	AMMO SCHOOL ADMIN BLDG	25,137	9,600	
	255	AS	STUDENT REGISTRATION CNTR	2,787	1,000	
GIB	14	AS	COMPUTER LAB / CLASSROOM	9,270		BLDG 2 REN
	21	AS	AMMO TECHNICAL TRAINING	14,795		BLDG 4 REN
	22	AS	AMMO LOGISTICS TRAINING	14,387	20,000	
	23	AS	AMMO TECHNICAL TRAINING	14,387		
	56	AS	EOC TRAINING CLASSROOMS	5,024		
AIB	10	AS	CHEMICAL SHOWER / CHANGE FACILITY	3,608	1,500	
	26	AS	PRACTICAL EXERCISE FACILITY	20,560	15,000	15,000 NEW
STORAGE	413	AS	TRAINING AID STORAGE	12,882	9,000	9,000 NEW
TOTALS				122,837	56,100	56,100

85,787

57,863

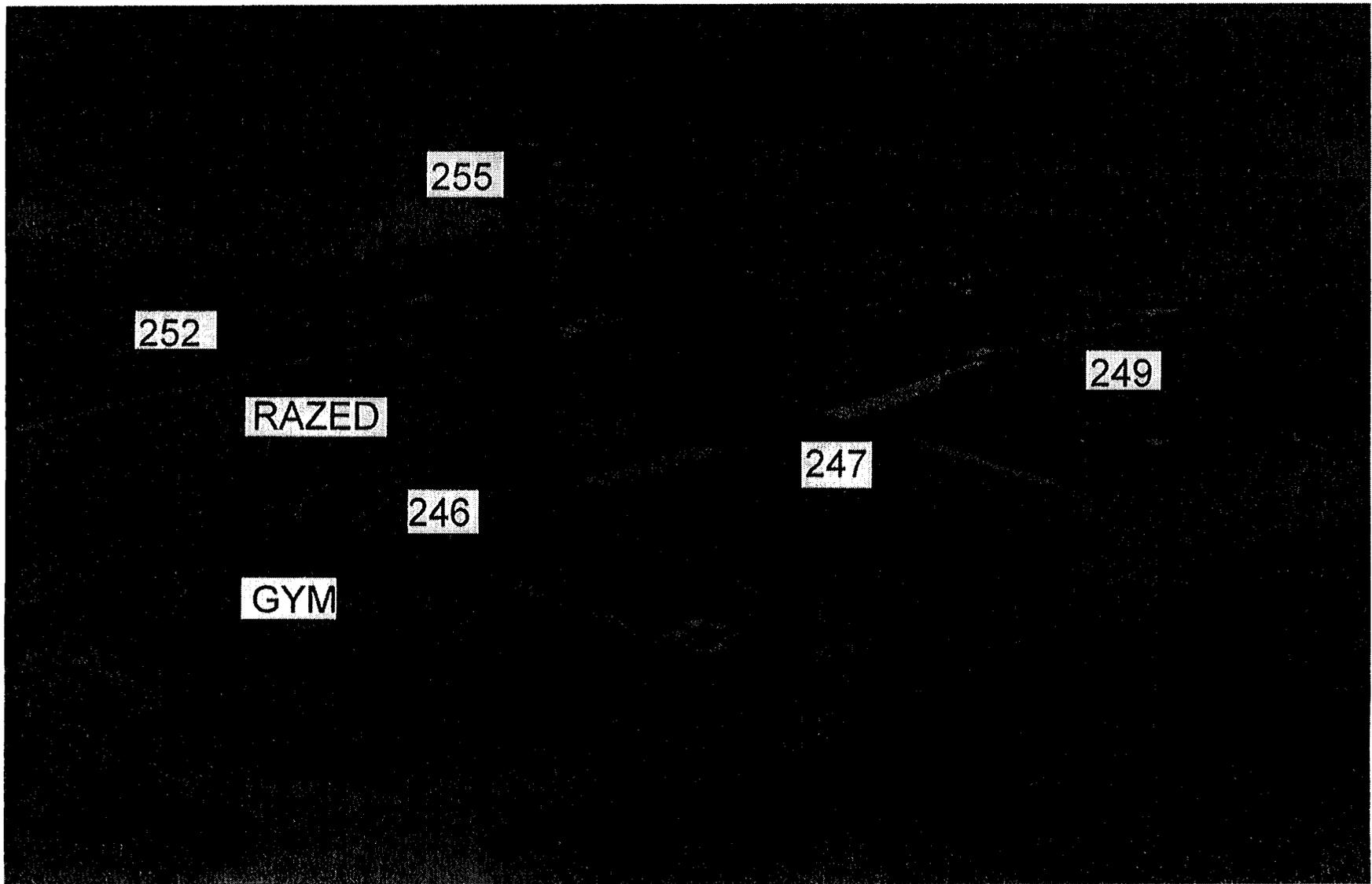
32,100



SCHOOL COMPLEX

USATCES COMPLEX

<u>TABS CODE</u>	<u>BLDG NO</u>	<u>OFFICE</u>	<u>DESCRIPTION</u>	<u>EXIST SF</u>	<u>TABS SF</u>	<u>McAAP PROP SF</u>	
ADMIN	234	ES	LIBRARY ANNEX	3,667	22,112		
	246	ES	ADMIN (TECH LIBRARY)	2,600			
	247	ES	ADMIN (CONF RM)	3,663		10,500	NEW
	249	ES	TCES ADMIN BLDG	9,267			
	252	ES	TCES ADMIN BLDG	2,915			
TOTALS				22,112	10,500	10,500	



USATCES COMPLEX

TRANSPORTABILITY TEST FACILITY / APE

<u>TABS CODE</u>	<u>BLDG NO</u>	<u>OFFICE</u>	<u>DESCRIPTION</u>	<u>EXIST SF</u>	<u>TABS SF</u>	<u>MCAAP</u>
R D T & E	140	DE	TRANSPORTABILITY TEST FACILITY / APE PMS	43,200	40,000	NEW
			SVADA APE PROD SHOP		20,000	?
	133	DE	TRANSPORTABILITY VALIDATION AREA	NA	REBUILD	NEW
STORAGE	141	DE	STORAGE APE STEEL STOCK	3,400		
	145	DE	TACTICAL VEHICLE STORAGE	7,680	7,000	36,000 NEW
	146	DE	CONTAINER STORAGE	7,680	7,000	
	147	DE	LARGE INERT MATERIAL STORAGE	9,600	7,000	
	413	DE	APE PROTOTYPE STORAGE AREA	25,766	15,000	
	418	DE	WAREHOUSE FOR INERT AMMO	38,648	50,000 REN	50,000 REN
	409	DE	TACTICAL VEHICLE WAREHOUSE	38,648		
			TOTALS	174,622	146,000	146,000

USADACS HEADQUARTERS COMPLEX

<u>TABS CODE</u>	<u>BLDG NO</u>	<u>OFFICE</u>	<u>DESCRIPTION</u>	<u>EXIST SF</u>	<u>TABS SF</u>	<u>MCAAP PROP BLDG</u>	
ADMIN	132	DO	CONFERENCE FACILITY	1,946	34,087	17,800	NEW
	134	DO/DE/AV/AO/ AX/RM	ADMIN OFFICE SPACE	32,141			
	10	TD	DEMIL TECH ADMIN	3,608		3,200	NEW
	24	IM	AUDIOVISUAL LAB	2,415	7,439	2,000	NEW
	54	IM	ADMIN BLDG	5,024			
	109	IM	COMMUNICATIONS SUPPORT FACILITY	1,096			
	134	DPS	DEFENSE PRINTING SERVICE	1,658			
TOTALS				47,888		23,000	23,000

OTHER EXPLOSIVE SITED FACILITIES

<u>TABS CODE</u>	<u>BLDG NO</u>	<u>OFFICE</u>	<u>DESCRIPTION</u>	<u>EXIST SF</u>	<u>TABS SF</u>	<u>PROP SF</u>
RDT & E	626*	DE	PROPELANT VACCUM BLDG	327		MOD 221
	628*	DE	APE EXPLOSIVE TEST FACILITY	2,400	2,400	MOD 221
	504	AS	RAIL/TRUCK/CNTR INSPECTION FACILITY	25,766	15,000	MOD 221
	507*	DE	X-RAY FACILITY	3,175	3,000	RENOVATE
			UNIVERSAL FUNCTION TEST RANGE		4,000	NEW MCA
	2117	AS	DEMO RANGE SHELTER	2,000	2,000	EXISTS
			EWI / CWP		4,000	EXIST MCA
	501*	TD	CHEMISTY LAB (SCIENTIFIC ADVISOR)	4,905	2,000	UNDER CONSTR
			TOTALS	38,573	32,400	32,400
				=====	=====	=====
				406,032	268,000	268,000



DEMOLITION GROUNDS



**EXPLOSIVE OPERATION BLDG
FOR MIL STD 398 TESTING**



LAB AREA

CRITICAL BRAC RELATED DATES

13 March

MCAAP Visit of USADACS

23-24 March
30-31 March
31 March

USADACS visit to MCAAP
Visit to SVADA/USADACS by ISC BRAC team
Page 1 of 1391s prepared by USADACS due to MCAAP

3 April
5 April
10 April
10 April

AMC BRAC/EH, DA MILCOM, AAA visit to USADACS
MCAAP visit by AMC, DA, AAA (WRF to attend)
Congressman Manzullo (Jo Davless County)
BRAC Team Analyst (Mr. Gertler) visit to SVADA/USADACS
(prior to Commission)

11 April
12 April

BRAC Commissioner (Mr. Kling) visit to SVADA/USADACS
BRAC Chicago Regional Hearing

8-9
May

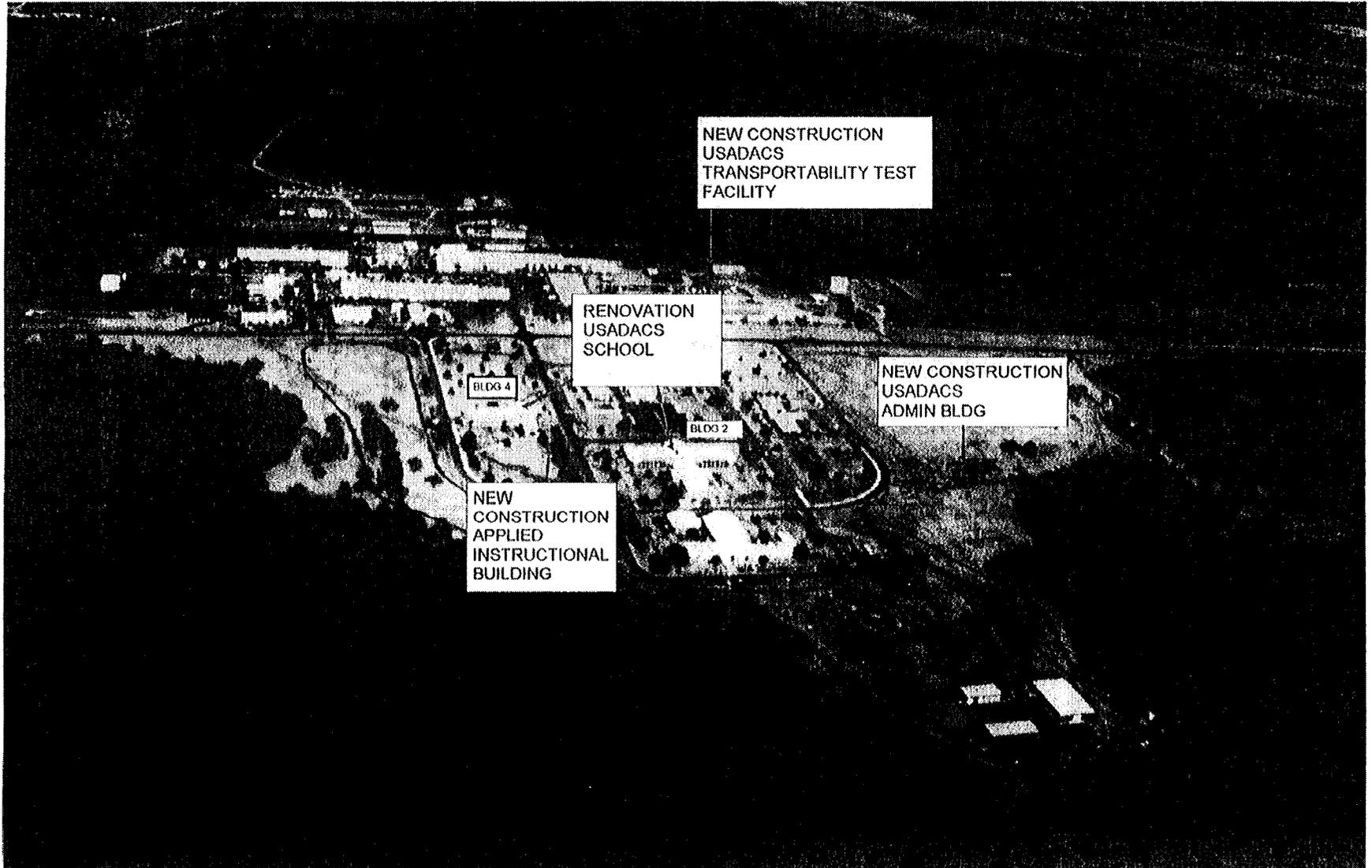
Implementation Plan IPR at HQ IOC

1 June
15 June
26 June

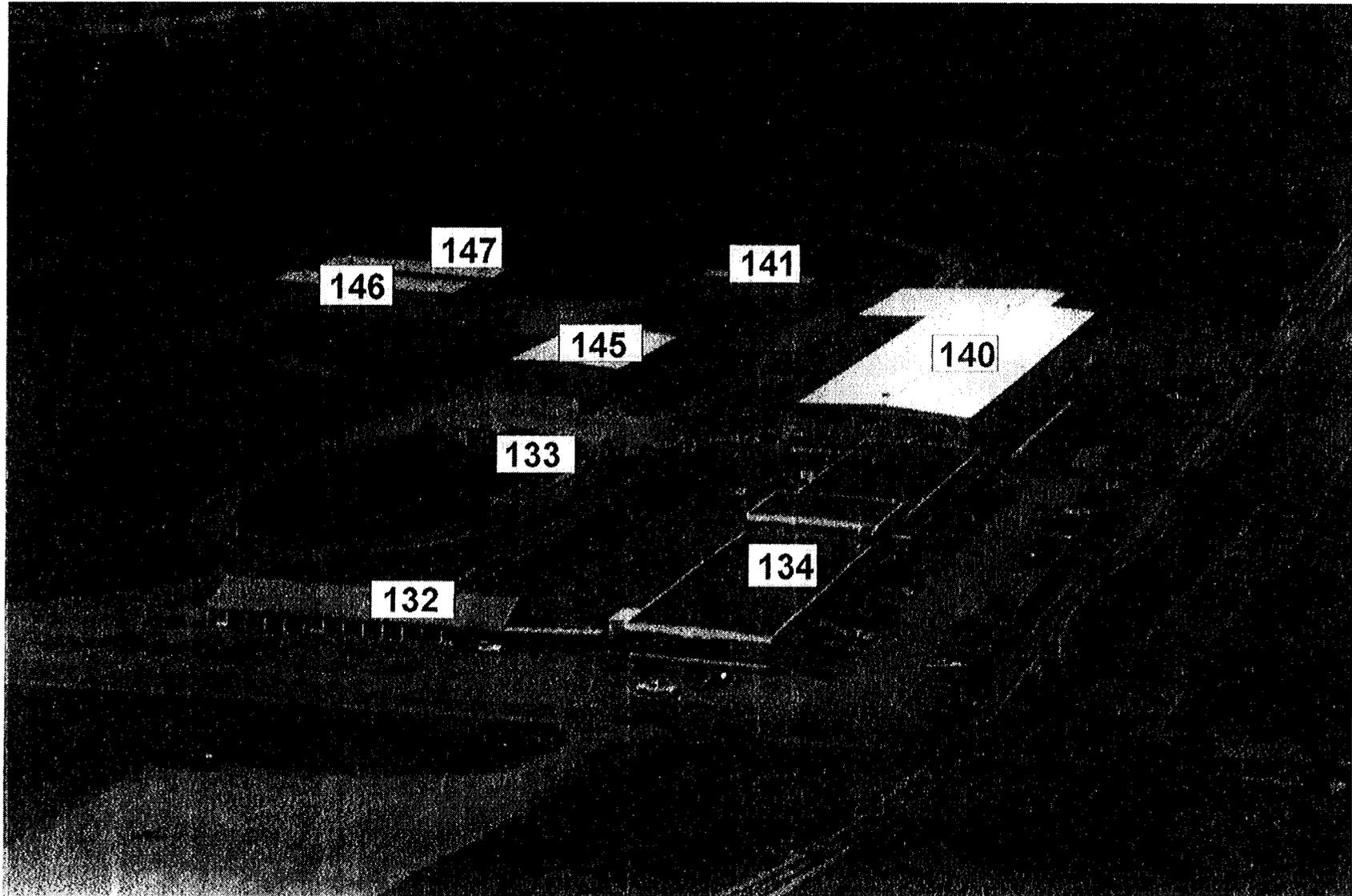
1st Rough Draft Implementation Plan to AMSMC-AE
Implementation Plan IPR at HQ IOC
Final Implementation Plan to AMSMC-AE

15 July
24 July ??
26-28 July

Final Implementation Plan due to HQ AMC
Final Implementation Plan due to HQDA
DA BRAC IPR (Washington, DC, specific location TBD)

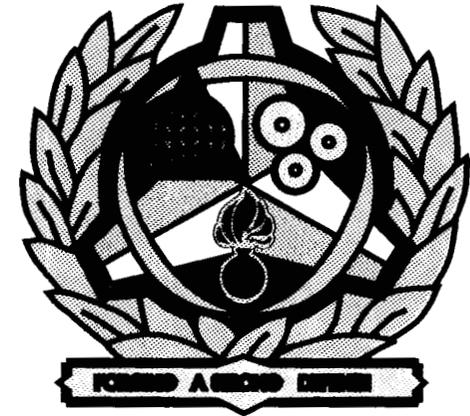


BRAC (MCA) REQUIREMENTS AT MCALESTER



USADACS HQ Complex

Document Separator



BRAC 95

SAVANNA ARMY DEPOT ACTIVITY BRIEFING FOR MR. S. LEE KLING APRIL 11, 1995

**MAJOR JAMES E. SISK
COMMANDER, SVADA**

TOTAL COMMUNITY IMPACT SVADA and USADACS (Combined)

ILLINOIS	EMPLOYEES	SALARY
SAVANNA	158	\$5,845,600
HANOVER	45	1,626,900
MT. CARROLL	28	1,034,400
ELIZABETH	25	846,000
THOMSON	18	746,500
GALENA	16	630,100
FULTON	7	282,800
CHADWICK	5	167,900
STOCKTON	4	160,400
IL QUAD CITIES	10	585,500
OTHER CARROLL COUNTY	2	91,500
OTHER JO DAVIESS COUNTY	2	64,800
OTHER ILLINOIS	6	222,400
TOTAL	326	\$12,304,800
IOWA		
CLINTON	47	\$2,147,800
SABULA	9	324,800
BELLEVUE	9	314,700
CAMANCHE	5	240,500
IA QUAD CITIES	8	371,900
OTHER CLINTON COUNTY	5	142,400
OTHER JACKSON COUNTY	4	146,200
OTHER IOWA	2	75,200
TOTAL IOWA	89	\$3,763,500
WISCONSIN	6	\$220,500
TOTAL	421	\$16,288,800

ASSESSING MILITARY VALUE

INTEGRATED AMMUNITION STOCKPILE MANAGEMENT PLAN (TIERING CONCEPT)

GOAL:

Streamline ammunition storage base
with
maximum economy and efficiency of
operations



**REDUCED
DOLLARS**

END STATE:

Segregation of excess stocks from
training
and war reserve on order to maximize
outloading capabilities for power

**2 MRC
SCENARIO**

**11 AMMO STORAGE BASES ANALYZED/COMPARED USING 7 (WEIGHTED) CRITERIA
11-POINT SCALE USED TO RANK ORDER EACH BASE AGAINST WEIGHTED CRITERIA
RESULTS: 4 Tier I / 4 Tier II / 3 Tier III**

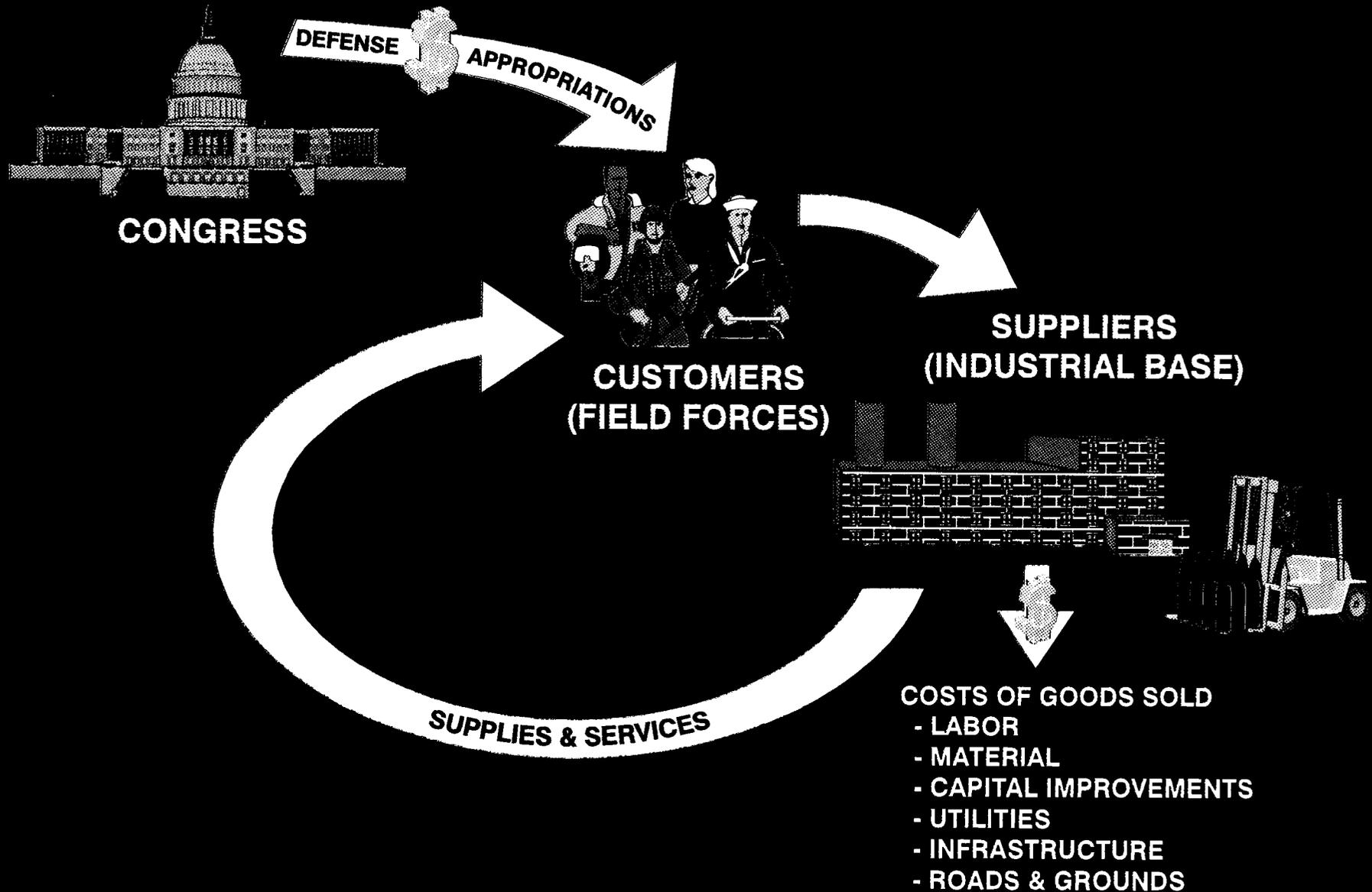
SAVANNA ARMY DEPOT ACTIVITY

TABS MODEL

TIERING MODEL

**CONTAINER / BREAKBULK OUTLOADING CAPACITY
DISTANCE TO STRATEGIC LIFT PORTS OF DEBARKATION
COST TO MODERNIZE FACILITIES THAT MOVE AWAY FROM OLD METHODS OF
DISPOSAL
COST AND POTENTIAL TO MEET ENVIRONMENTAL LAWS**

DEFENSE BUSINESS OPERATING FUND



HOW WE WORK

OPERATING COSTS

- OFFSETS**
- TENANT REIMBURSEMENT
 - MOBILIZATION SUBSIDY
 - OTHER DIRECT FUNDS

DIVIDED BY

DIRECT LABOR

WORKLOAD DRIVEN

EXAMPLE NO. 1

$\frac{\$8.6 \text{ million}}{60 \times 1749} = \81.95

(nominal state)

EXAMPLE NO. 2

$\frac{\$6.6 \text{ million}}{60 \times 1749} = \62.89

25% decrease in operating costs

EXAMPLE NO. 3

$\frac{\$6.6 \text{ million}}{49 \times 1749} = \77.01

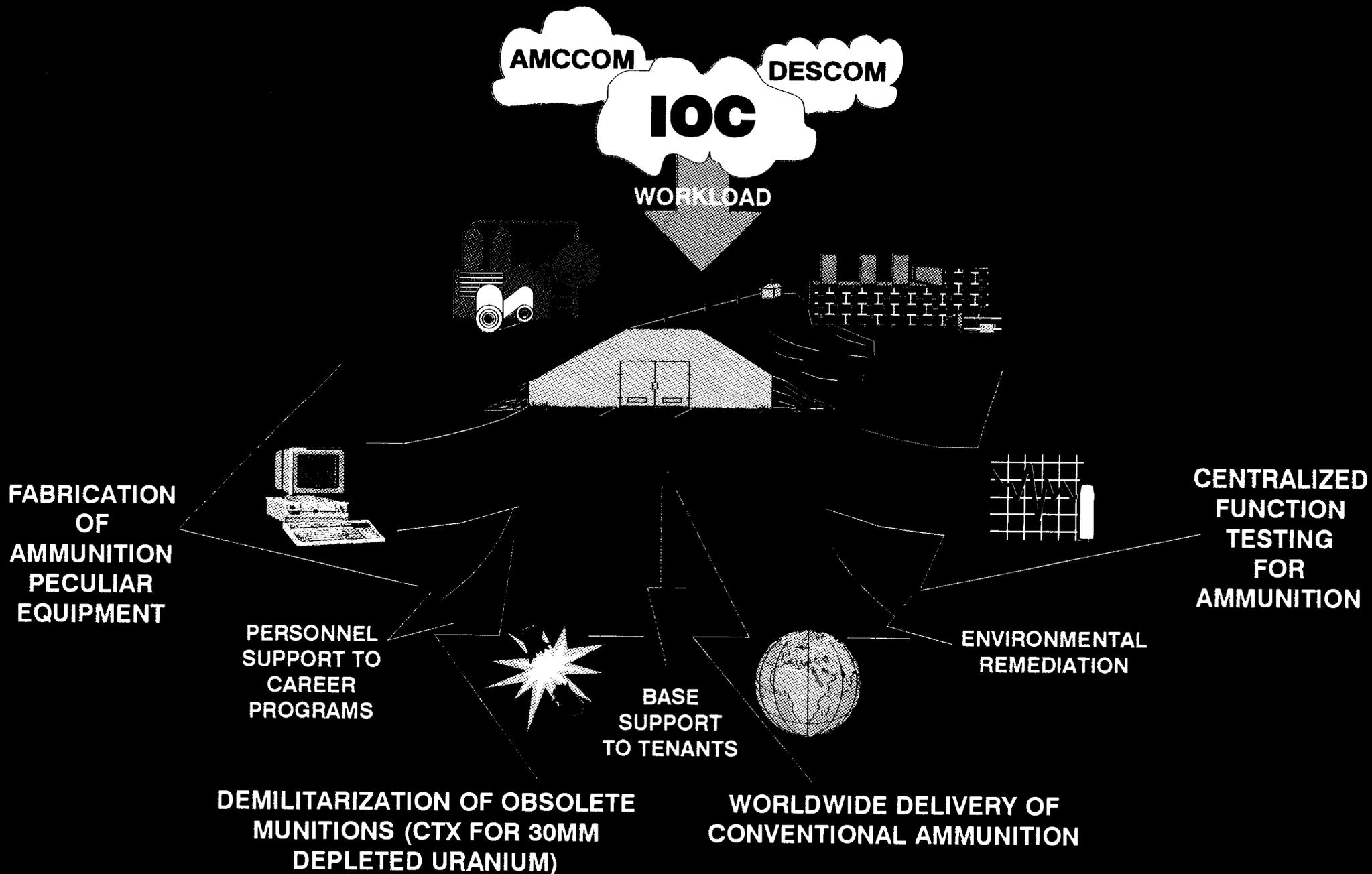
18% decrease in available labor

EXAMPLE NO. 4

$\frac{\$6.6 \text{ million}}{80 \times 1749} = \47.17

25% increase in workload

SAVANNA ARMY DEPOT ACTIVITY (CONTRIBUTIONS TO AMERICA'S ARMY)



Document Separator

INFORMATION PAPER

1. Purpose. To provide supplemental information to the Base Realignment and Closure Commission on specific aspects of current Savanna Army Depot Activity operations.

2. Ammunition Inventory (Stratification)

On-hand stockage (total)	=	120,700 tons	(100%)
training support assets	=	42,100 tons	(35%)
war reserve/training support assets	=	36,600 tons	(30%)
war reserve to move to Tier I depots	=	22,800 tons	(19%)
assets to be demilitarized	=	9,400 tons	(8%)
other ammo assets	=	9,800 tons	(8%)

3. Workload

a. Man-hour standard (1,902 hours per ton). This demonstrates how long (on average) it takes to do all activities associated with receiving/issuing one ton of conventional ammunition. Savanna's standard is the second lowest in the Army's Industrial Operations Command.

b. Fiscal Year 95, 30MM container renovation project = 7 manyears/\$1.5 million.

c. Fiscal Year 95, Ammunition Peculiar Equipment projects = 6.9 manyears/\$1.52 million.

d. Fiscal Year 95, Centralized Function Testing projects = 1 manyear/\$217,226.

e. Total Fiscal Year 95 mission = 62 direct labor manyears/\$11 million.

4. Wartime Support (with present personnel)

a. Maximum capability during mobilization is 1,700 tons in a 24-hour period.

b. Maximum capability for covered ammunition storage is 234,000 tons.

c. Maximum loading capability per 24 hour period

(1) truck 61

(2) rail 8

(this assumes working both modes concurrently)

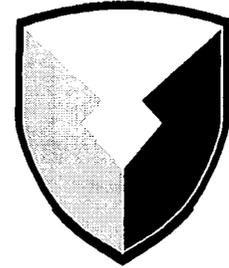
SDSLE-VC

4 Apr 95

MAJ Sisk



SAVANNA ARMY DEPOT ACTIVITY SAVANNA, ILLINOIS 61074-9636 ELECTRONIC MAIL AND DATAFAX NUMBERS



<u>E-Mail</u>	<u>Datafax</u>
COMMANDER jsisk@letterkenn-emhl.army.mil	8295
EEO Coordinator sdikeman@letterkenn-emhl.army.mil	8753
Safety Officer bcottral@letterkenn-emhl.army.mil	6025

<u>E-Mail</u>	<u>Datafax</u>
Installation Support Division adahman@letterkenn-emhl.army.mil	6025
Fire Prev & Prot Branch bmix@letterkenn-emhl.army.mil	6120
Security Branch jpmoore@letterkenn-emhl.army.mil	6120
Public Works Branch jstewart@letterkenn-emhl.army.mil	6068

<u>E-Mail</u>	<u>Datafax</u>
Civilian Personnel Division rparadis@letterkenn-emhl.army.mil	8753
Mgmt Employee Relations sdikeman@letterkenn-emhl.army.mil	8753
Position Mgmt & Class rparadis@letterkenn-emhl.army.mil	8753
Recruit & Placement vchrste@letterkenn-emhl.army.mil	8753
Tech Services/Trng & Dev jide@letterkenn-emhl.army.mil	8753

<u>E-Mail</u>	<u>Datafax</u>
Mission Division wrobinso@letterkenn-emhl.army.mil	6025
APE Fabrication Branch msheehy@letterkenn-emhl.army.mil	6068
Operations Branch bbarnhar@letterkenn-emhl.army.mil	6069
Storage & Instl Supply Branch tritchie@letterkenn-emhl.army.mil	6025

<u>E-Mail</u>	<u>Datafax</u>
Coordinators & Project Officers Budget Officer mjackson@letterkenn-emhl.army.mil	6025
Environment Coordinator jclarke@letterkenn-emhl.army.mil	6025
Equipment Manager bkilpatr@letterkenn-emhl.army.mil	6025
Mobilization Coordinator dhutten@letterkenn-emhl.army.mil	6025
Property Book Officer mhuttenl@letterkenn-emhl.army.mil	6025
Public Affairs Officer jkean@letterkenn-emhl.army.mil	8295
Radiological Protection Officer wscott@letterkenn-emhl.army.mil	6025
Supply Officer mhanson@letterkenn-emhl.army.mil	6024
Transportation Officer ksproule@letterkenn-emhl.army.mil	6017

<u>E-Mail</u>	<u>Datafax</u>
Quality Assurance Division ptorkels@letterkenn-emhl.army.mil	6025
Admin & Planning Branch ptorkels@letterkenn-emhl.army.mil	6025
Stockpile Reliability Branch tbusan@letterkenn-emhl.army.mil	6025

TELEPHONE
COMMERCIAL (815) 273-XXXX
DSN 585-XXXX

DATE: 27 September 1994
PREPARED BY: SMCAC-ESM
Supersedes chart dated: 22 June 1993

THIS IS NOT AN OFFICIAL ORGANIZATIONAL CHART



SAVANNA ARMY DEPOT ACTIVITY

SAVANNA, ILLINOIS 61074-9636

STAFF DIRECTORY



COMMANDER	Tel	Bldg	Symbol
MAJ James E. Sisk	8700	1	SDSLE-VC
SECRETARY/PAO			
Ms. Jean Kean	8701	1	SDSLE-VC
EEO COORDINATOR			
Ms. S.E. Dikeman	8857	1	SDSLE-VP
SAFETY OFFICER			
Ms. B.L. Cottral	8838	1	SDSLE-VSAF

QUALITY ASSURANCE DIVISION	Tel	Bldg	Symbol
CHIEF: Mr. P.R. Torkelson	8624	1	SDSLE-VS
ADMIN & PLANNING BRANCH			
CHIEF: Mr. P.R. Torkelson	8624	1	SDSLE-VSP
STOCKPILE RELIABILITY BRANCH			
CHIEF: Mr. T.V. Bussan	8456	716	SDSLE-VSR
RADIOLOGICAL PROTECTION			
RPO: Mr. W.S. Scott	8469	716	SDSLE-VSR

MISSION DIVISION	Tel	Bldg	Symbol
ACT CHIEF: Mr. W.J. Robinson	8631	1	SDSLE-VM
APE FABRICATION BRANCH			
CHIEF: Mr. M. Sheehy	8813	117	SDSLE-VMF
OPERATIONS BRANCH			
ACT CHIEF: Mr. B.J. Barnhart	8650	807	SDSLE-VMO
STORAGE & INSTL SUPPLY BRANCH			
CHIEF: Mr. T.A. Ritchie	8638	1	SDSLE-VMI

INSTALLATION SUPPORT DIV	Tel	Bldg	Symbol
CHIEF: Mr. A.J. Dahlman	8311	1	SDSLE-VA
FIRE PREV & PROT			
CHIEF: Mr. B.G. Mix	8431	100	SDSLE-VAF
SECURITY BRANCH			
CHIEF: Mr. J.P. Moore	8832	132	SDSLE-VAM
PUBLIC WORKS BRANCH			
CHIEF: Mr. J.D. Stewart	8521	121	SDSLE-VAE

CIVILIAN PERSONNEL DIVISION	Tel	Bldg	Symbol
CHIEF: Mr. R.A. Paradis	8851	1	SDSLE-VP
MGMT EMPLOYEE RELATIONS			
Ms. S.E. Dikeman	8857	1	SDSLE-VP
POSITION MGMT & CLASS			
Mr. R.A. Paradis	8851	1	SDSLE-VP
RECRUITMENT & PLACEMENT			
Mr. V. Christensen	8855	1	SDSLE-VP
TECH SERVICES/TNG & DEV			
Ms. J.L. Ide	8858	1	SDSLE-VP

ACCOUNTABLE PROP OFFICE	Tel	Bldg	Symbol
Ms. M.J. Hanson	8341	127	SDSLE-VMS
BUDGET OFFICER			
Ms. M.K. Jackson	8654	1	SDSLE-VAB
ENVIRONMENT COORD			
Mr. J.E. Clarke	8827	1	SDSLE-VA
EQUIPMENT MGR			
Ms. B.A. Kilpatrick	8451	121	SDSLE-VA
MOBILIZATION COORDINATOR			
Ms. D.A. Hutten	8703	1	SDSLE-VA
PROPERTY BOOK OFFICER			
Ms. M.A. Huttenlocker	8344	121	SDSLE-VA
TRANSPORTATION OFFICER			
Ms. K.A. Sproule	8722	1	SDSLE-VMT

COLLOCATED ACTIVITIES

- DEFENSE AMMO CNTR & SCHL
(SMCAC-DO) (BLDG 134)
- DIRECTOR: Mr. J.L. Byrd, Jr.
8901
- OCCUP HEALTH NURSING OFFICE
(HXSP-FS-SAV) (BLDG 29)
- HEAD NURSE: Ms. J.L. Deacon
8216
- DEF REUTILIZATION & MKTG OFFICE
(BLDG 423)
- Mr. W. Lawson
8330
- DEFENSE PRINTING SERVICE
(DPSDO-RF-SAV) (BLDG 134)
- Ms. K. Hoffman
8820
- 300TH QM SUPPLY CO (USAR)
- UNIT ADMIN: Ms. B. Homan
8550

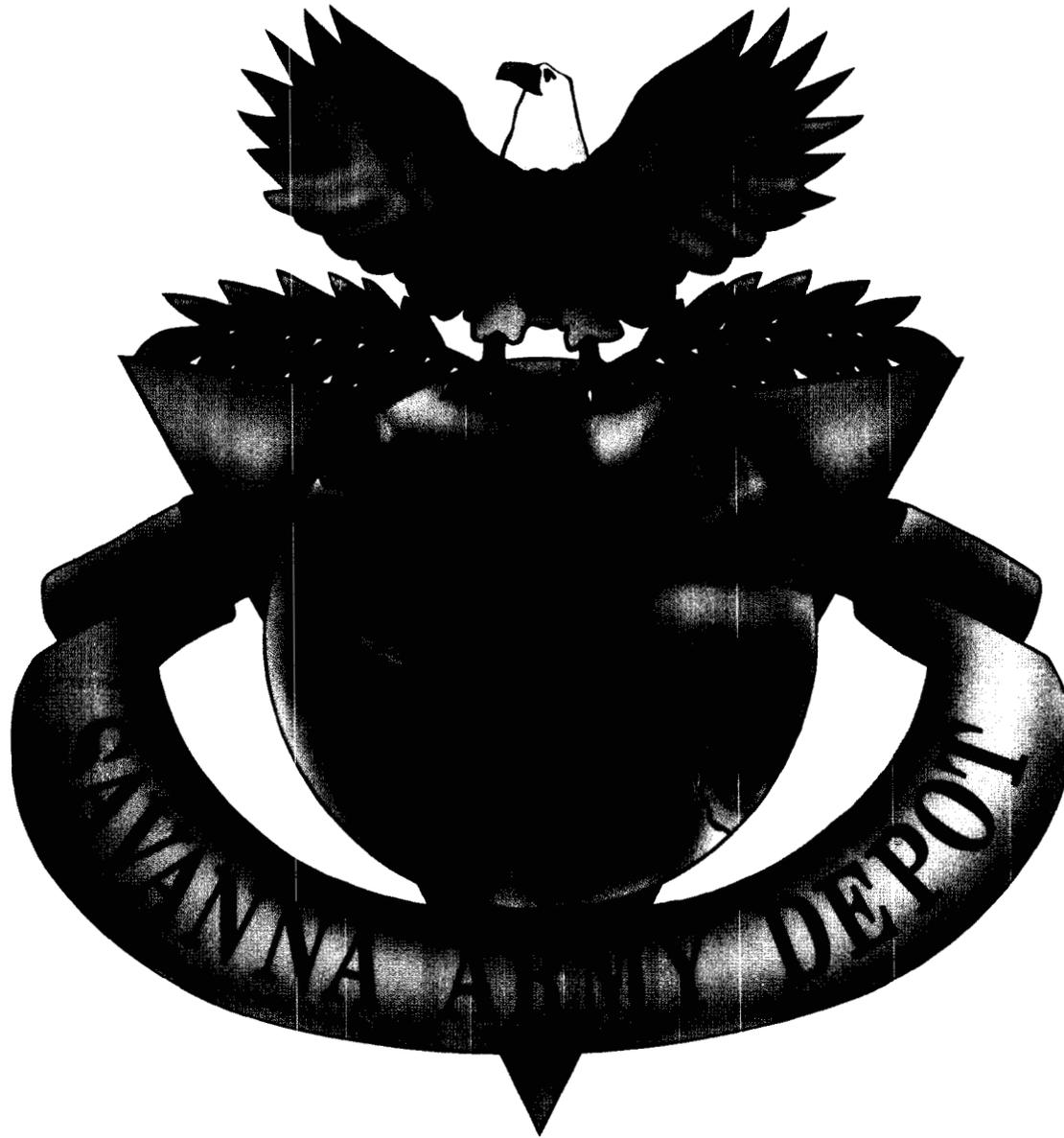
TELEPHONE

COMMERCIAL (815) 273-XXXX
DSN 585-XXXX
OPERATOR ASST 585-8000
FAX: SECURE 585-6006
FAX: UNSECURE 585-6025

AFTER DUTY HOURS CALL
(815) 273-8881/8833/8831

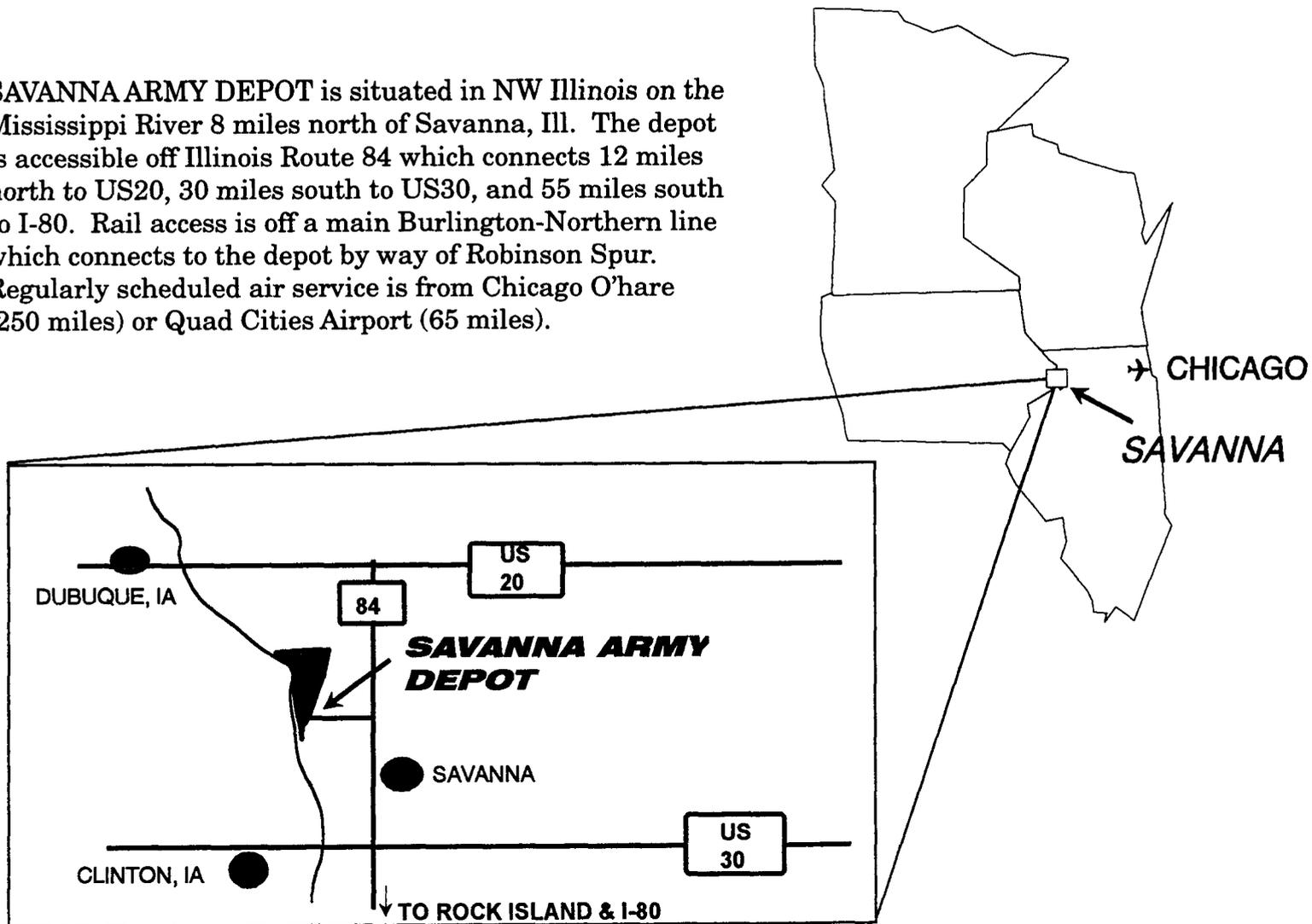
DATE: 27 September 1994
PREPARED BY: SMCAC-ESM
Supersedes chart dated: 22 June 1993

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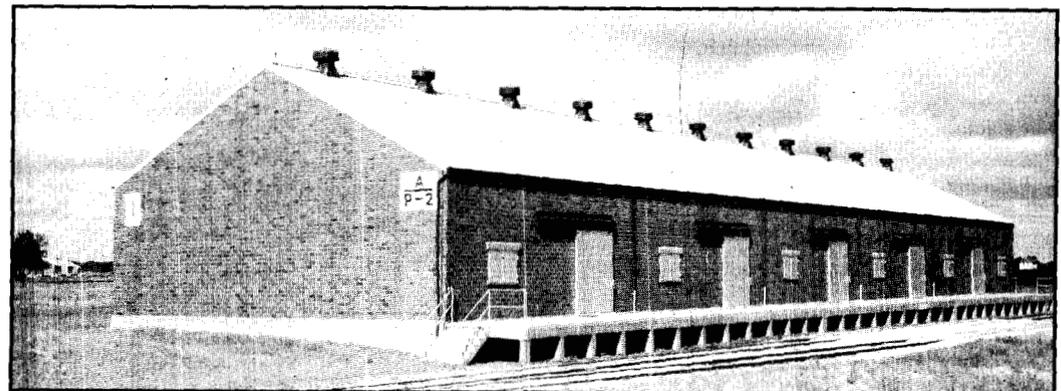
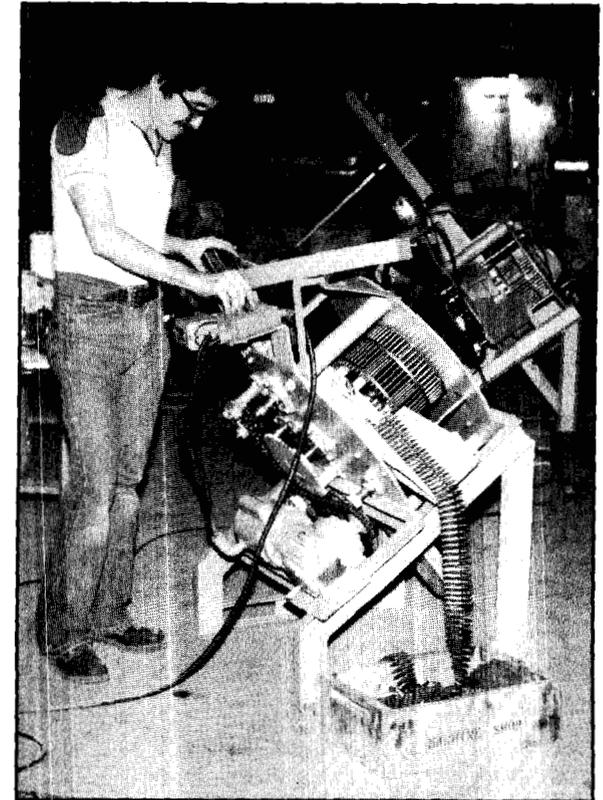
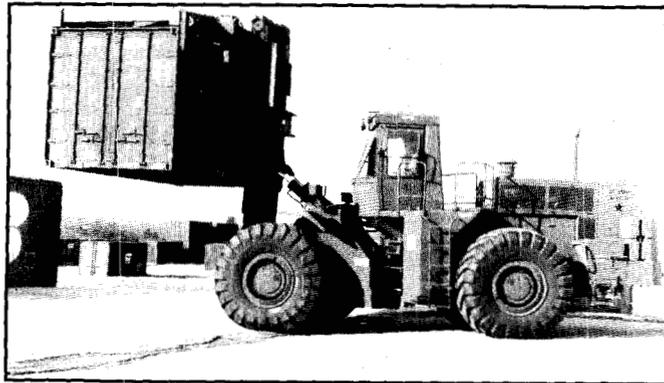
SAVANNA ARMY DEPOT ACTIVITY

SAVANNA ARMY DEPOT is situated in NW Illinois on the Mississippi River 8 miles north of Savanna, Ill. The depot is accessible off Illinois Route 84 which connects 12 miles north to US20, 30 miles south to US30, and 55 miles south to I-80. Rail access is off a main Burlington-Northern line which connects to the depot by way of Robinson Spur. Regularly scheduled air service is from Chicago O'hare (250 miles) or Quad Cities Airport (65 miles).

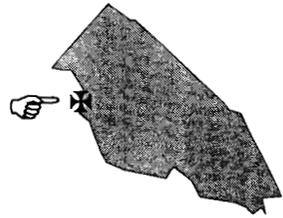


HIGHLIGHTS

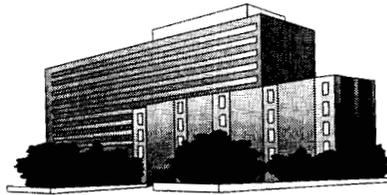
- Wide variety of general and special purpose storage facilities. Some warehouses have been modernized with automatic sprinkler systems.
- Extensive rail and motor transport access to storage locations.
- Containerization capabilities including rough terrain handling, stuffing/unstuffing, rail and truck loading and classification management.
- EPA permitted open area ammunition demilitarization.
- AMCCOM designated center of technical excellence for 30MM and smaller depleted uranium demilitarization. NRC licensed storage and production facilities.
- Spacious maneuver, bivouac, and training areas for reserve unit training. Modern small arms firing range, dining facility, and gymnasium available.
- Modern ammunition peculiar equipment (APE) fabrication shop with CNC, CAD/CAM, and metal working facility.
- New function test range for quality assurance programs of a wide variety of munitions.
- Complete munitions container renovation experience with fully trained workforce and production lines.



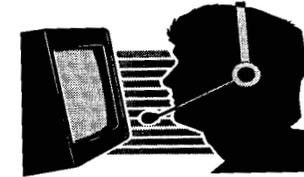
SAVANNA ARMY DEPOT CHARACTERISTICS



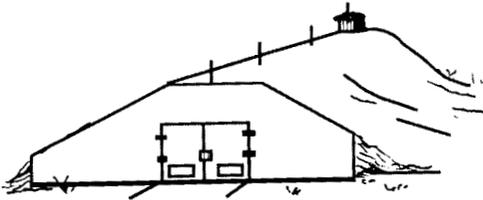
TOTAL AREA
13,062 ACRES



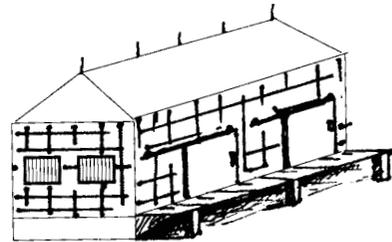
BUILDINGS
923



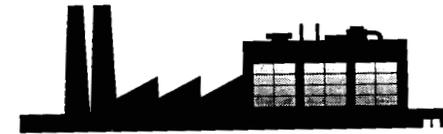
OFFICE SPACE
132,860 SQ FEET



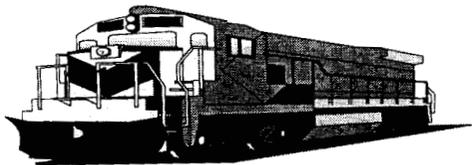
IGLOOS
437



**ABOVE GROUND
MAGAZINES**
156



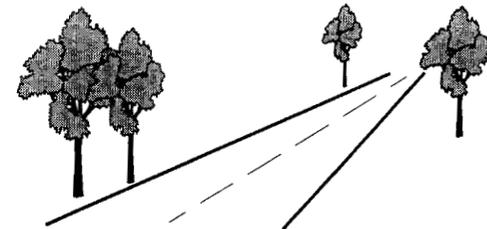
**GENERAL SUPPLY
WAREHOUSES**
28



RAILROAD TRACK
68 MILES



REPLACEMENT COST
\$325,129,607.00



ROADS
138 MILES

GENERAL INFORMATION

BUSINESS HOURS

Normal business hours of the installation are from 0700 to 1630, Monday through Friday, except closed alternate Fridays.

TELEPHONE NUMBERS

The telephone number for Operator Assistance is (815) 273-8000. During non-duty hours, the number is (815) 273-8881. The DSN number is 585-8000.

SECURITY

The installation is a "controlled access" installation rather than an "open" military installation to which the public has free access. Civilian security guards patrol the installation around the clock, seven days a week.

VISITOR ASSISTANCE

Lodging accommodations for official visitors are not available on the installation. Accommodations can be arranged with nearby communities upon request.

TAXI SERVICE - FOOD SERVICE

Taxi service is not available. A post restaurant is located on the installation and vending machines are located in many convenient areas throughout the installation.

HEALTH NURSING OFFICE

The Occupational Health Nursing Office provides emergency first aid and medical treatment, executes the industrial health program for civilian employees, and gives limited medical support to active military personnel and dependents on post.

SAFETY PROGRAM

The SVADA Safety and Occupational Health Program objective is to provide a safe and healthful working environment to all employees and visitors. Our mission is to produce a quality product on time without causing either injury to employees or property damage. Risking our people or resources through preventable accidents will never be an acceptable cost of doing business.

INSTALLATION RECREATIONAL FACILITIES

Recreational facilities activities are available for use by installation employees, residents and guests including a gymnasium with physical fitness center, outdoor tennis and basketball courts, outdoor swimming pool, campgrounds, fishing and hunting.

MAIL SERVICE

The mailing address of the installation is - Savanna Army Depot Activity, Savanna, IL 61074-9636. Mail service is provided by the installation for official mail, and personal mail of assigned military personnel and official visitors.

EMERGENCY MEDICAL SERVICE

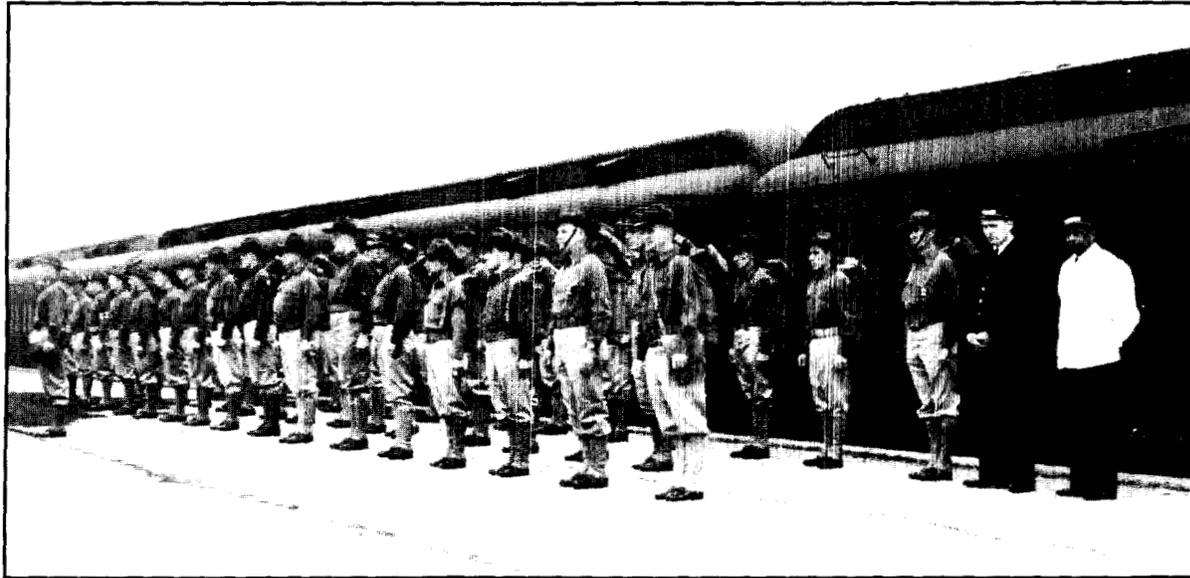
The installation is provided 24 hr/day, 7 day/week emergency medical and ambulance service by the installation fire department. Installation emergency number is 911. Additional back-up support is provided by the Savanna Ambulance Association, Savanna, IL.

HISTORY OF SAVANNA ARMY DEPOT ACTIVITY

The history of Savanna Army Depot Activity begins with the "Sundry Civil Act" of 12 June 1917, in which the United States Congress authorized an appropriation of \$1,500,000 for "Increasing the Facilities for the Proof and Test of Field Artillery and Ammunition

including the purchase of lands and the development thereof." Under this authorization, instructions were received at Rock Island Arsenal, from the Chief of Ordnance, on 23 June 1917, directing the Commanding Officer of Rock Island Arsenal to purchase certain lands and to make the necessary improvements.

The Commanding Officer of Rock Island Arsenal, Colonel George W. Burr, under this authorization, entered into a written contract, dated 23 July 1917, with H. E. Curtis of Rock Island, Illinois, and others, wherein Mr. Curtis agreed to secure options of purchase on lands selected by the Commanding Officer, Rock Island Arsenal. The lands selected were situated in Jo Daviess and Carroll Counties located approximately eight miles north of Savanna, Illinois on the main line of the CB&Q Railroad. The lands previously used for farming were referred to locally as

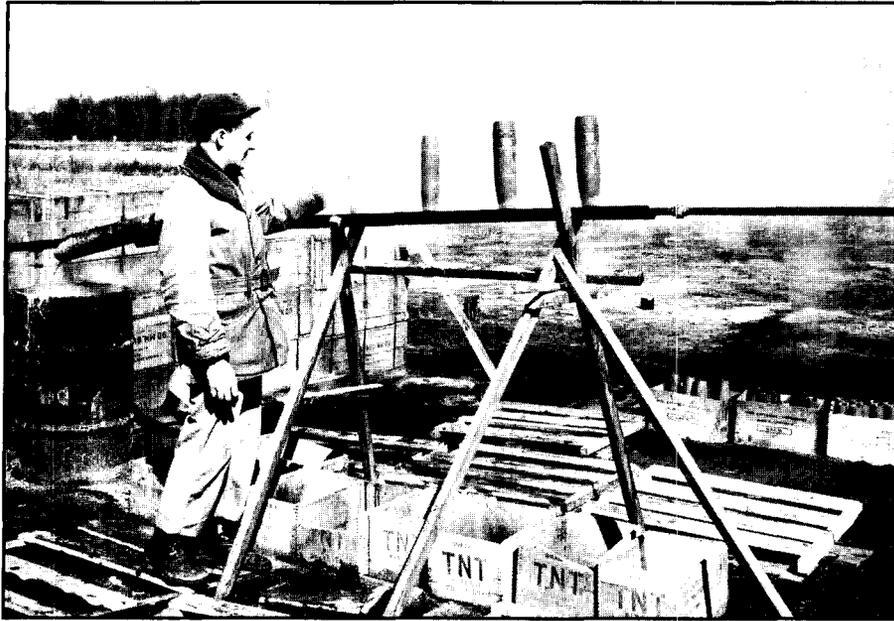


"Sand Prairie," laid between the CB&Q railroad tracts and the Mississippi River, with the southern boundary being the Apple River and running northward approximately thirteen miles, varying in width from one to four miles, and comprising 13,172 acres. The ap-

proved purchase price was \$67.00 per acre. These lands were to be deeded to Mr. Curtis and, by him, deeded to the Government.

Construction began in April 1918 and Savanna Proving Ground officially opened on 26 December 1918, with Lieutenant Colonel Charles R. Baxter as the first Commanding Officer, although proof firing of 75MM field guns and 155MM howitzers had already begun in September of that year.

As World War I drew to a close, however, the need for proof firing diminished and facilities were required to store artillery vehicles, trucks, and tanks used during the War or that were ready for shipment from the United States but no longer needed overseas. In March 1919, the Chief of the Army's Construction Division, Brigadier General R. C. Marshall, authorized the construction of forty artillery stor-



age warehouses at Savanna to help meet this demand. Completed in 1920, each warehouse had a heavy timber frame with walls and roof of corrugated metal siding. Fifteen of these buildings remain and are still in use today. Other construction, during this period, included expansion of utilities and roads. The first expansion was barely completed when a building program of much larger proportions was undertaken. All of the work was authorized under the appropriation "Ordnance Storage Facilities, 1920-1921" and was performed for the Ordnance Department by the Construction Service of the Quartermaster Corps under five different contracts. Construction consisted of barracks for enlisted men and quarters for commissioned and non-commissioned officers. Work began in 1920 and was completed in 1921. Three barracks with dining facilities were provided for enlisted men, each capable of housing 100 persons. Work on 47 standard magazines, and 30 high explosive magazines was started in 1920. A combination field office and storehouse was built, the building being the same size

as a standard magazine. Additional railroad facilities were provided which extended from the lower post to the ammunition area. The entire ammunition area was enclosed with a nonclimbable fence over six miles long. A sodium nitrate storage pit was completed in 1920.

One of the few Ordnance Ammunition Companies in existence at the time, the 52d, was assigned to Savanna late in 1920 and remained until the outbreak of World War II.

The official designation of "Savanna Ordnance Depot" was approved in March 1921, when the depot became independent of Rock Island Arsenal. During the next nine years, construction and renovations were minor; then in 1931, a shell loading facility was required by the worldwide demand for munitions. During 1932-1938, this operation consisted of loading and servicing 155MM shells and 300 pound bombs.

The manufacturing and storage facilities at Savanna were greatly expanded during WW II. The War Department authorized construction of 407 igloos, 26 smokeless powder magazines, 55 standard ammunition magazines, a clipping linking and belting plant, a Group I shell loading plant, 14 warehouses, and a generating plant. All of these were completed during 1938-1942, with the Group I plant being the only of its kind operated by the United States. The plant was used to load special bombs for General James Doolittle which were used in his historic Tokyo raid.

Thirty-seven buildings of temporary construction were erected in 1941 as part of a Unit Training Center. With quarters for 945 enlisted men and 40 officers, the complex included fifteen temporary barracks, five mess halls, six recreation buildings, officers' quarters, a post exchange, guard house, two storehouses, and an administration building. Most of these buildings are still standing and are presently used by the Reserves and National Guard.

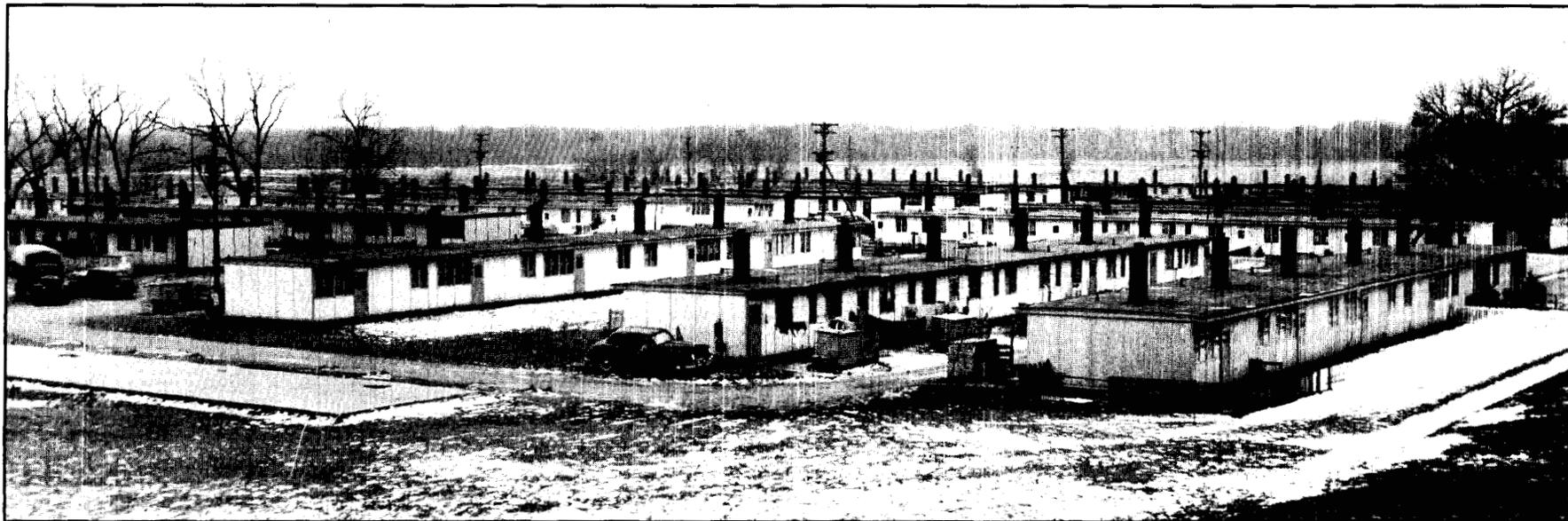
Concurrent with this expansion of facilities, the number of depot employees mushroomed from 143 in 1939 to 7,195 in 1942. To help meet the severe housing shortage, the Federal Works Administration built a 200-family housing project "Craig Manor," in Hanover, Illinois, seven miles north of the depot. This 1941 project was followed in 1943 by two more housing projects: the village of Blackhawk, built by the Federal Public Housing Authority just one-half mile east of the depot's main entrance, and some civilian war housing just inside the same entrance. The village of Blackhawk was turned over to the depot in 1948 and subsequently sold to the City of Savanna in 1976 (most of the housing is now demolished). The civilian war housing included twelve dormitory buildings, six of which survive; three recreation buildings, of which two survive; and a mess hall, which has been demolished.

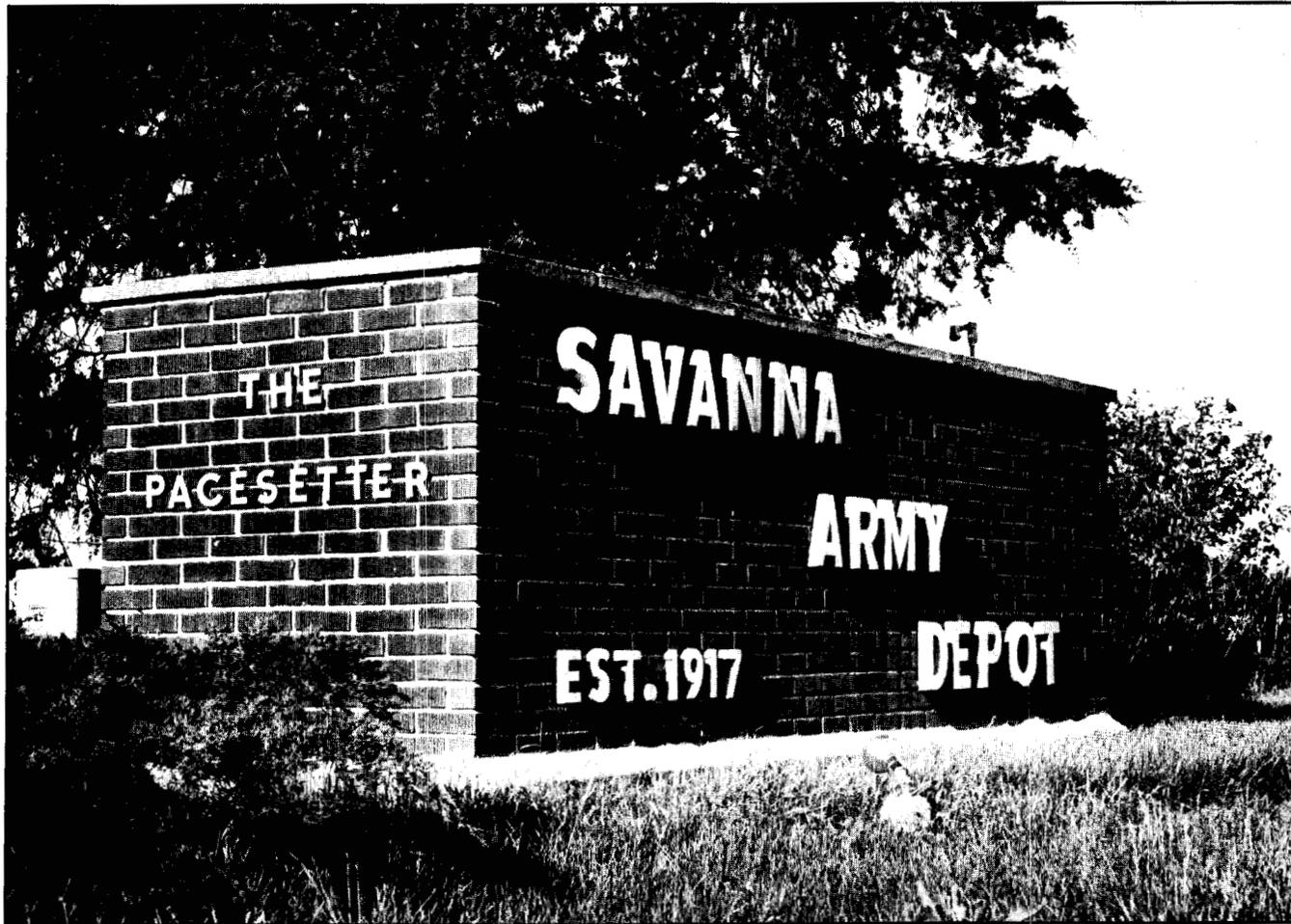
Activity at the depot decreased somewhat at the close of World War II, but rose again during the Korean War. The depot work force once again significantly increased in keeping with the increased wartime mission and responsibilities for the depot.

A significant event in depot history was the activation of the Ordnance Ammunition, Surveillance, and Maintenance School in 1950. It was redesignated in 1966 as the Army Materiel Command Ammunition School. It provides technical, operational and administrative training in all fields of ammunition for civilian and military students from the United States and foreign countries.

In 1962, the official designation changed from Savanna Ordnance Depot to Savanna Army Depot. A Special Weapons mission was assigned in 1961 and continued through 1975. In 1971, the DARCOM Ammunition Center was established as a collocated activity at Savanna and in 1979, the Center was redesignated as the U.S. Army Defense Ammunition Center and School in recognition of its control role in implementation of the Army's new mission to manage conventional ammunition for all of DOD.

On 1 July 1976, the depot was placed under the command and control of Letterkenny Army Depot in Chambersburg, Pennsylvania. At that time, it was renamed as Savanna Army Depot Activity.





The depot's current mission is the receipt, storage, issue and demilitarization of conventional ammunition, and general supplies. In addition, it has the mission of manufacturing, procuring and maintaining ammunition peculiar equipment and repair parts for worldwide DOD support. The

depot provides host support to the U.S. Army Defense Ammunition Center and School, the U.S. Army Technical Center for Explosives Safety, an Occupational Health Nursing Office, the Defense Reutilization and Marketing Office and the 300th Supply Company.

DEPOT ORGANIZATION

COMMANDER
AND SPECIAL STAFF

INSTALLATION SUPPORT
DIVISION

QUALITY ASSURANCE
DIVISION

MISSION
DIVISION

CIVILIAN PERSONNEL
OFFICE

SECURITY
FIRE PROTECTION
GARAGE
PUBLIC WORKS
ENVIRONMENT
RESOURCE MANAGEMENT
PBO

RELIABILITY
INSPECTION
RAD PROTECTION

APE PRODUCTION
AMMUNITION OPS
INVENTORY
SUPPLY & SERVICES

RECRUITMENT
POSITION MGMT
MER
TECH SERVICES
TRAINING

TENANTS

USADACS &
USATCES

300TH QM
(USAR)

OCCUPATIONAL
HEALTH NURSE

DRMO

STAFF

SAFETY AND OCCUPATIONAL HEALTH OFFICE

The Savannah Army Depot Activity Safety Office is located in Building 1. The Safety Office provides a "one-stop" office offering risk management services to the commander, managers, supervisors, soldiers and employees. The goal is to protect the U.S. Army, enhance mission effectiveness and reduce costs by assisting in -

- reducing injuries and illnesses.
- enhancing training realism and effectiveness.
- protecting mission continuity.
- reducing property damage.
- insuring compliance with statutes.
- reducing U.S. Army and leader liability.
- protecting the environment.

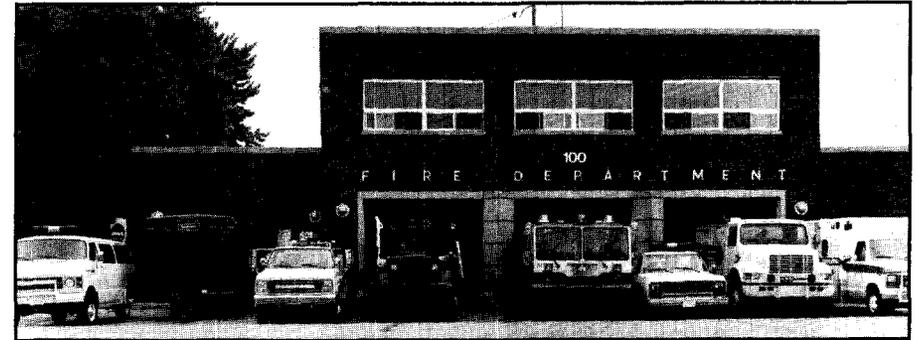
The U.S. Army Defense Ammunition Center and School (USADACS) Safety Office, located in Building 21, Room 206, provides the same services for USADACS.

EQUAL EMPLOYMENT OPPORTUNITY OFFICE

Equal employment opportunity support is provided by Rock Island Arsenal. An employee from the Civilian Personnel Division is the EEO coordinator. Currently, we have three EEO counselors and a Handicap Program Manager.

Our objective is to have a work force which is representative of every element of our society.

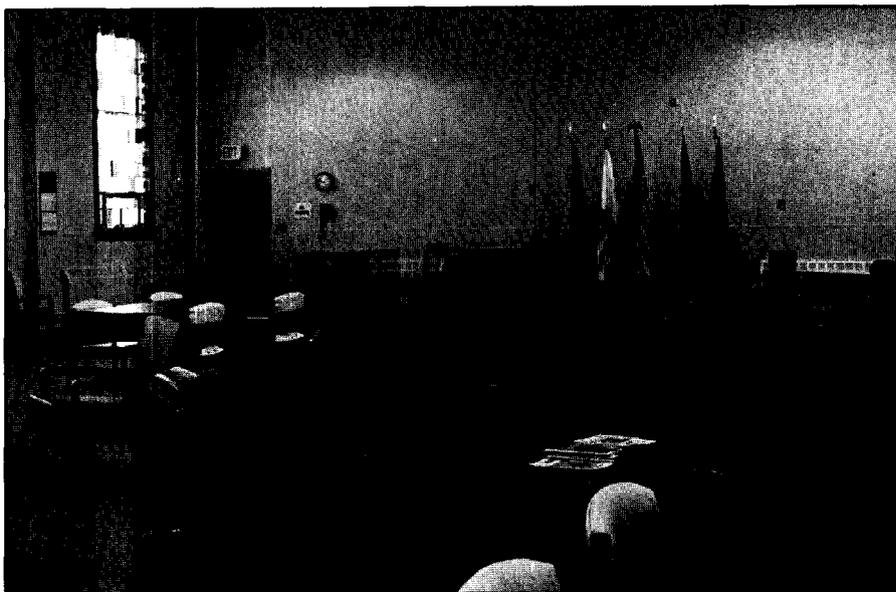
INSTALLATION SUPPORT DIVISION



This division provides administrative, engineering and logistical support to the depot and collocated activities. It provides for environmental and energy management; manpower management; mobilization and emergency planning; resource management; centralized production, planning and control functions; family housing management; operation, maintenance, and repair of real property; depot rail service; maintenance and repair of vehicles and equipment; management of installation property and equipment; physical security; and fire prevention and protection. This division coordinates all reserve and national guard training on the installation.

The **ENVIRONMENTAL OFFICE** is committed to implementing and maintaining the Army environmental strategy by ensuring that the numerous missions of the depot and collocated activities comply with all applicable federal, state, and local laws. Included are such programs as hazardous waste management, the Federal Facilities Compliance Act, air quality, spill response, the National Environmental Policy Act, and the Groundwater Monitoring Program. The office is also responsible for the Installation Restoration Program involving such current projects as the depot wide remedial investigation/feasibility study to determine which potentially contaminated sites require clean up; the washout lagoon incineration project; the fire training area incineration project; and the soil remediation project of the old burning grounds, and the CF/CL plants.

The **PROGRAM MANAGEMENT OFFICE** is responsible for the overall management of the financial resources of the depot. The office reviews, accepts, and distributes funding documents and monitors individual programs for expenses incurred, production reported, and revenue generated. Also, they are the central control point between the



activity and higher headquarters for payroll; labor and production reporting; travel orders; travel vouchers; PCS moves; and review and analysis input.

The **SECURITY BRANCH** protects property and personnel at Savanna Army Depot Activity from theft, sabotage, and other destruction. Security programs are provided for personnel, automated data processing, vehicle registration, visitor control, and key control. The branch maintains liaison with federal, state, county, and city law enforcement and intelligence agencies to ensure proper security measures on and around the installation. Security personnel control installation traffic flow and enforce vehicle safety programs. Various emergency plans are administered and personnel are ready to assist in any emergency situation.

The **PUBLIC WORKS BRANCH** personnel provide for the construction, maintenance, repair, and operation of the real property facilities and utilities systems, performs maintenance on commercial and military vehicles and equipment



and administers the Natural Resources Management Program.

Projects are accomplished by in-house personnel or by contract. In-house efforts involve processing work requests, estimating manpower and material requirements, ordering materials, and scheduling work. Work progress is carefully monitored for each job to ensure the work is accomplished within budgetary and engineering performance standard guidelines. Contract efforts involve engineering design, preparation of drawings and specifications, and inspection of the work to ensure it meets contractual requirements. In the area of natural resources, plans are implemented for land management, fish and wildlife management, timber management, and landscape management.

The **FACILITIES SECTION** is responsible for maintenance and repair of real property facilities and the upkeep of grounds, roads, and railroads. They provide snow and ice removal, mowing, herbiciding, insect and rodent control, refuse collection and depot rail services, and they maintain the depot lock system. This section is also responsible for the operation and maintenance of all utility systems, including electrical distribution, heating, air conditioning, electrical generating, air compressor, water, sewer and plumbing systems.

The **EQUIPMENT MAINTENANCE SECTION** performs preventive maintenance and repairs on all administrative use vehicles, material handling equipment, special purpose and engineer equipment, rail equipment, and watercraft. Detailed operational and maintenance data is provided to the Installation Equipment Management System and the Army Oil Analysis Program. Battery service and emergency repair service are also provided by this section.

A civilian **FIRE PREVENTION AND PROTECTION BRANCH** provides services 24 hours a day, 7 days a week. To supplement the regular firemen, additional employees

are trained as auxiliary firefighters. Firefighter personnel are also certified as emergency medical technicians. This branch is responsible for inspecting and maintaining fire detection and suppression systems, testing fire hydrants, conducting fire inspections throughout the depot, inspecting and repairing fire extinguishers in all occupied buildings and vehicles, testing fire equipment at scheduled intervals, inspecting and issuing heat producing device permits, operating the weigh scale, inspecting contract construction sites, giving fire prevention orientations to new employees and housing tenants, maintaining a continuous training program for firefighters, and providing CPR and first aid training for depot personnel. Firefighting equipment includes one 1000-gallon per minute pumper, one 750-gallon per minute pumper, one 250-gallon per minute mini pumper/heavy rescue truck, one 1200-gallon tanker, one rescue boat, an ambulance and a HAZMAT response trailer. Savanna Army Depot Activity is party to a mutual aid agreement with the departments of eighteen surrounding communities. The agreement provides the depot with backup assistance and SVADA provides reciprocal services to the communities.



QUALITY ASSURANCE DIVISION

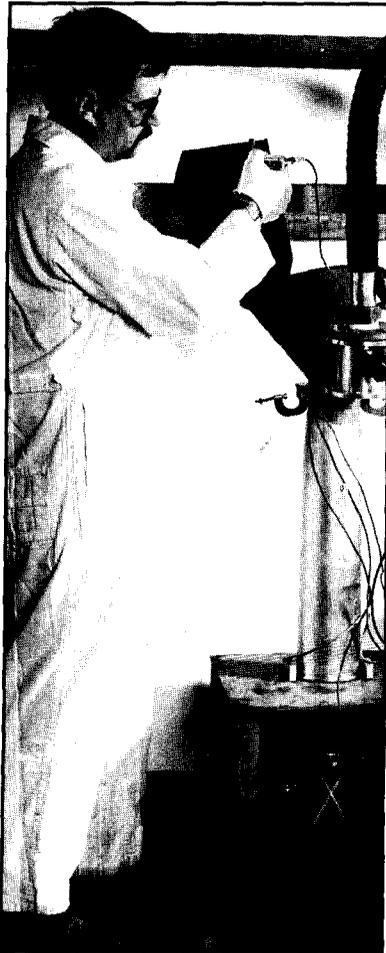
The Quality Assurance Division plans, develops, directs, promotes and controls the depot quality assurance program consistent with the depot-assigned ammunition, supply, and ammunition peculiar equipment missions. It is responsible for management of the depot personnel certification program, customer complaint program, TMDE support coordination, and provides technical assistance to activity mission organizations and collocated activities. The division conducts ammunition function testing and special tests for the U.S. Army Armament, Munitions and Chemical Command and the Marine Corps.

The **ADMINISTRATIVE AND PLANNING BRANCH** maintains technical libraries including manuals, specifications, regulations, test procedures, and other publications related to conventional munitions, general supplies, and ammunition peculiar equipment. Performs scheduled/unscheduled inspections on Class II, III, VII, and IX material which includes general supply items, preservation and packaging material, ammunition peculiar equipment (APE), APE kits, and spare parts. Maintains records of observations, inspections, investigations and tests, and any pertinent information pertaining to lot history of items in storage on record cards, log books, suspense files, data cards, and other records. Provides data input to the ammunition Standard Depot System. Directs and conducts investigations of customer complaints received by the depot. Prepares budget and maintains test program control records and production reports for the division.

The **STOCKPILE RELIABILITY BRANCH** provides ammunition and explosive quality assurance for all conventional ammunition, guided missile and large rockets,

ammunition components, bulk explosives, and packing material. This includes evaluation inspections, stockpile reliability testing, and technical assistance to other organizations and collocated activities. Inspections conducted determine the serviceability and rate of deterioration of material, and the maintenance of renovation required to return unserviceable-repairable stocks to an issuable condition and establish acceptable quality levels during maintenance or renovation. Storage magazines are periodically checked to assure material is stored properly in accordance with approved drawings and safety regulations. Shipping and receiving operations are monitored for explosives safety, proper blocking and bracing, shipment compatibility, and carrier vehicles inspected for compliance with shipping regulations. In 1981, Savanna and Pueblo Depot Activities were selected as the two CONUS test depots, with each installation to function test one-third of all lots selected each year for the Centralized Control Function Test Program. Since that date, Savanna has added the deterioration check test mission for artillery primers, function testing of Marine Corps Prepositioned Forces Stock, and received the equipment for testing mortar ignition cartridges/ignition cartridge R&D testing was completed here with the new test mission scheduled for Savanna pending test procedure approval and funding. In 1992, Savanna assumed responsibility for all the CONUS testing in support of the Centralized Control Function Test Program. The branch also supports the U.S. Army Defense Ammunition Center and School with conducted tours for intern classes and provides test facilities, procedures, and technicians for explosive testing of new and modified prototype ammunition peculiar equipment.

MISSION DIVISION



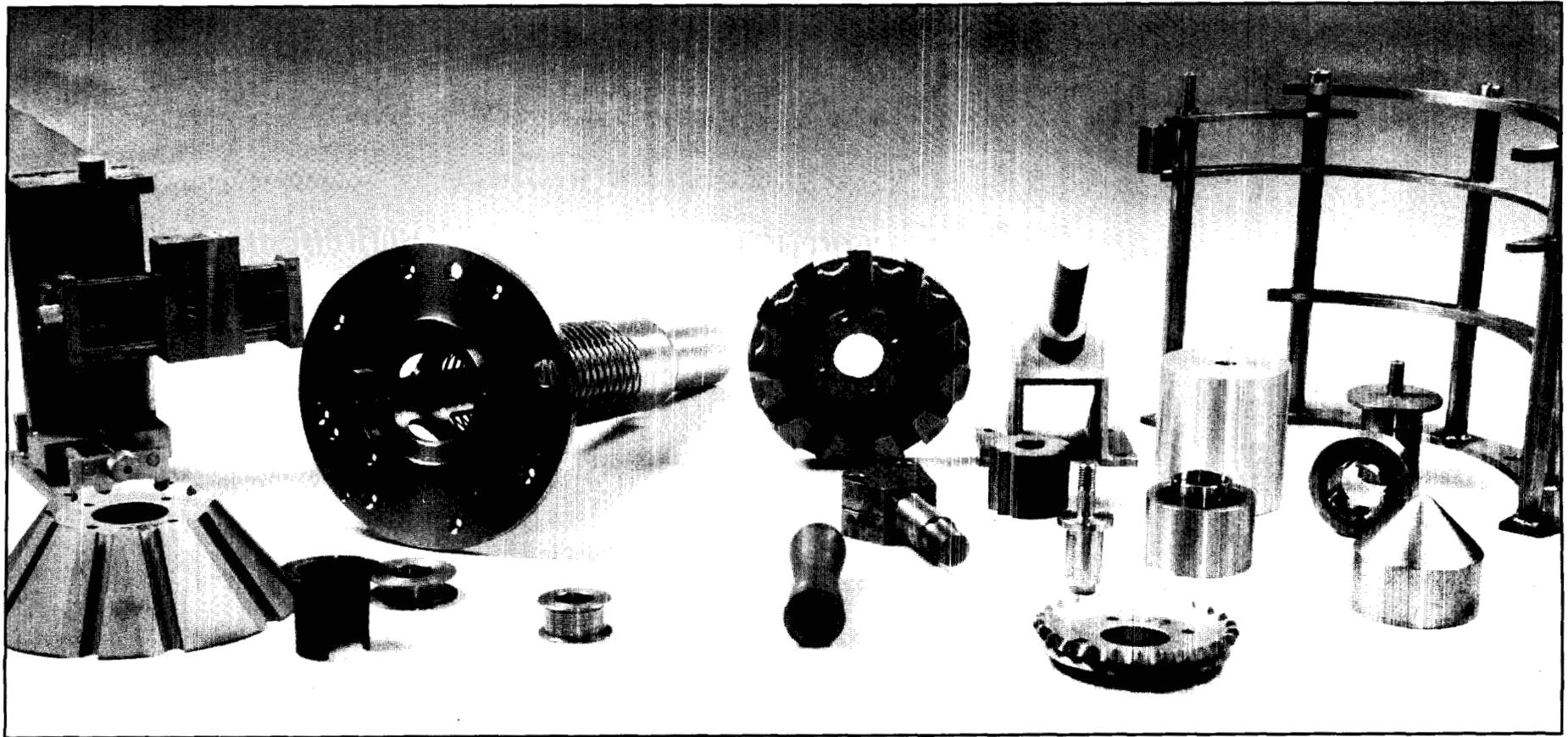
demilitarization of conventional ammunition and missile items for the Army, other services for foreign military sales (FMS) as the Department of Defense single manager for conventional ammunition (SMCA). The division operates the material release order (MRO) processing, transportation support, and general supply requisitioning, receipt and issue for the entire depot. This includes receiving, storing,

Mission Division has responsibility for all depot munitions, transportation management, direct supply support and storage & inventory services for the depot. It is responsible for ammunition peculiar equipment (APE) fabrication, rebuild, storage, and shipment; and the receipt, shipment, storage, maintenance, and

and shipping strategic and critical materials for the defense logistics agency (DLA) and other supplies as assigned. The division also provides support to the U.S. Army Defense Ammunition Center and School (USADACS) for testing the loading and blocking/bracing of ammunition items shipped by all modes.

The **TRANSPORTATION OFFICE** is responsible for processing shipments of ammunition, ammunition peculiar equipment, and general supplies. Information is compiled for freight planning necessary to move shipments. Domestic and export routing and releases are obtained. This includes initiating reports for shortages/overages, and damages on inbound shipments and maintaining records for Government material purchased through General Services Administration. Requisitions are reviewed for lowest cost mode. All government bills of lading are prepared. Also, provides counseling for shipment of household goods, and travel for installation activities and authorized personnel on depot.

The **OPERATIONS BRANCH** ships, receives, stores, and performs maintenance and demilitarization operations on conventional and missile ammunition items. Ammunition items are stored in 437 each igloos (covered magazines) and 156 above-ground standard magazines. All storage structures and maintenance buildings are served by road and a large percentage by rail. The demilitarization and/or disposal of ammunition, which is obsolete or unsafe, is performed in various special facilities by this branch. These include an area for demolition of explosive items, and a contaminated waste processor (CWP) which meets environmental standards. The Operations Branch is the depot organization which also receives, stores, and issues both general supplies and ammunition peculiar equipment. It



provides the crews to support the U.S. Army Defense Ammunition Center and School's (USADACS's) many transportability and explosive tests.

The **AMMUNITION PECULIAR EQUIPMENT FABRICATION BRANCH (APE)** makes unique, low density equipment items specifically designed, fabricated, tested, procured, and adopted for use in the ammunition depot operations on conventional and chemical ammunition. These depot operations involve maintenance, demilitarization, preservation/packaging, and surveillance functions on the ammunition item. The APE is not stocked nor is it available from commercial sources. The equipment is differ-

ent from production line plant equipment in that it disassembles ammunition items into components, usually for the removal of a hazardous component. APE is also designed to perform cleaning and preservation functions on ammunition subjected to deterioration effects (rust, corrosion, weathering, etc.) during its storage life. The APE supporting surveillance is keyed to stockpile sampling and function tests of the items to assure its readiness for combat or training. Demilitarization APE is similar somewhat to maintenance APE, but must go further in disassembly to destroy hazardous components and reclaim salvageable parts or metals. The APE is designed, developed and fielded to support

to support ammunition field service stocks that are currently on hand in the Inventory Control Point and is used to restore these stocks to an issuable/serviceable condition. APE produced at SVADA is designed by the U.S. Army Defense Ammunition Center and School (USADACS), a collocated activity. SVADA has the distinction of operating the only Army in-house facility which is entirely dedicated to the production of APE. This facility has modernized itself with numerical control (NC) computer numerically controlled (CNC) machine tools, to fully utilize the NC and CNC equipment, a computer aided manufacturing (CAM) system is being used for programming parts manufactured on the NC and CNC machine tools. APE Fabrication Branch at Savanna performs four major functions: (1) rebuilding a field returned APE, (2) in-house fabrication, assembly, and testing of APE, (3) manufacture or procurement of APE repair parts, and (4) coordinator for the procurement of commercially available equipment which will be modified to become APE equipment.



The **STORAGE AND INSTALLATION SUPPLY BRANCH** provides a variety of services in support of the depot's mission through four separate functional areas. These four functional areas are storage, inventory, and general supply warehouse. The Storage Management Section is responsible for receipt processing of all ammunition and ammunition peculiar equipment (APE), material release order (MRO) processing for all shipments of ammunition, APE, general supplies, storage planning of ammunition, storage space reporting, and radiation testing and tracking system in support of the storage mission of chemical agent alarms and monitors. The Inventory Management Section is responsible for planning, scheduling, conducting physical inventories, locations surveys, audit matches, and input and verification of all ammunition transfer records. The Installation Supply Section is responsible to obtain the needed supplies and services required by the depot, either by utilizing the Government supply system or by providing purchase requests to the buyers. They also maintain the depot stock program, turn-in program, and manages the imprest fund. The General Supply Warehouse Section is responsible for receipt and storage of both depot stock (retail stock) and general supply mission stock (wholesale), issuing depot stock to customers, and packaging and preparing general supply mission stock items for shipment.

CIVILIAN PERSONNEL DIVISION

The Civilian Personnel Officer (CPO) reports to the Commander and provides advice and assistance to Division and Branch Chiefs on operational matters pertaining to the Civilian Personnel Management Program. The CPO represents the Commander in contacts with the U.S. Office of Personnel Management and higher echelons on matters relating to the Civilian Personnel Program. The division maintains liaison with public and private organizations and other organizations and other agencies on matters concerning the Civilian Personnel Management Program.

The overall responsibility of **RECRUITMENT AND PLACEMENT** is to provide the quality and quantity of personnel required to perform the various missions of the depot and serviced organizations while assuring full compliance with merit principles and equality of opportunity. CPO specialists provide assistance to managers in meeting recruitment needs. They advise employees regarding opportunities for advancement, development, and relocation and provide guidance for all applicants regarding Federal employment and job opportunities within Army or other Federal activities. They administer all in-service placement, including mandatory actions under OPM, DOD, DA, and command programs, promotions, reassignments, details, reduction-in-force and outplacement.

A **MANAGEMENT AND EMPLOYEE LABOR RELATIONS** specialist assists management in its day-to-day relations with employees and organizations of employees to help provide a positive work atmosphere leading to optimum productivity and employee satisfaction. The specialist provides counseling to managers and employees on complaints or inquiries and provides advice on personnel policy, administrative regulations, employee rights and services, employee grievances and disciplinary matters. MER per-

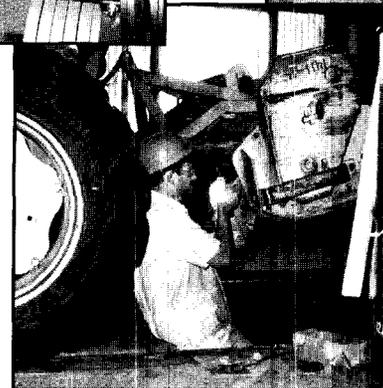
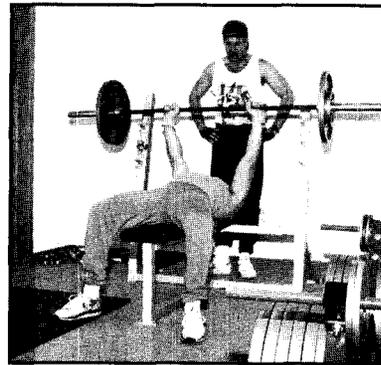
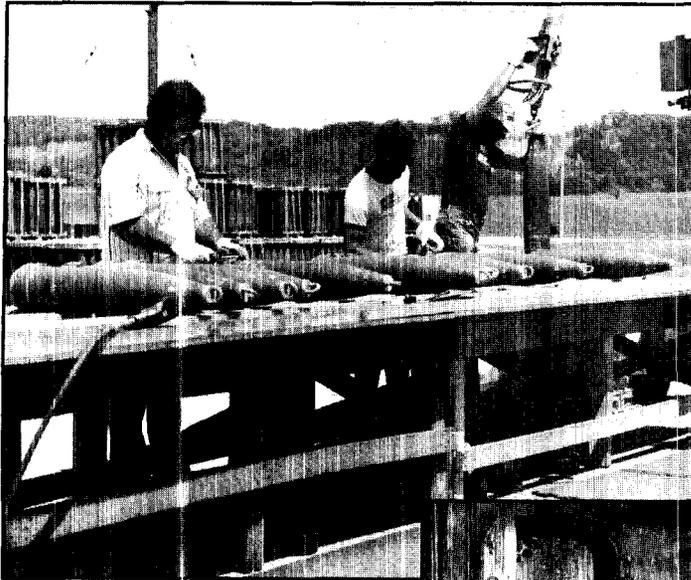
sonnel administer the Total Army Performance Evaluation System (TAPES) and the incentive awards program. This specialist also develops and recommends plans, policies, and procedures for local administration of the DA Labor Relations Program, and assures communication of DA and local policies and procedures to management and staff. They provide the principal point of contact on labor-management relations matters of overall concern to the established bargaining unit. They ensure that management's responsibility to consult with the formally and exclusively recognized union is carried out in a meaningful manner consistent with labor-management partnership goals and objectives. Savanna Army Depot Activity has an active Labor-Management Partnership program that fully supports the National Performance Review initiatives.

A **TRAINING AND DEVELOPMENTAL SERVICES** specialist is responsible for program management of training and development activities in support of mission accomplishment. This assures utilization of effective practices for the acquisition of knowledge and the development of skills and abilities among civilian employees. A specialist provides technical advice and assistance to all employees concerning determination of training needs, and sources of needed training. They also provide overall expert knowledge of regulatory requirements that affect civilian personnel administration. A Technical specialist processes personnel actions assuring the proper completion of records, forms and documents. In addition, the specialist establishes and maintains Official Personnel Folders and related personnel files. They are also responsible for the administration of employee benefit programs such as health and life insurance, worker's compensation and retirement.

The **PERSONNEL SYSTEMS MANAGER (PSM)** is responsible for the Army Civilian Personnel System (ACPERS) and provides advice and guidance to the Civilian Personnel Officer, functional chiefs, specialists, and clerical staff in operation and maintenance of ACPERS and of capabilities available within ACPERS to assist in day-to-day decisions. The PSM ensures database integrity and builds and maintains ACPERS local and unique tables. The PSM coordinates with CPO staff to identify and correct invalid data and provides advice on the use of data for compiling personnel and statistical reports and preparing personnel action documents. They interpret ACPERS requirements and changes as they impact civilian personnel administration policies and procedures. They also implement ACPERS requirements for building and maintaining database files and installs and/or updates system software/new system releases.

The **POSITION MANAGEMENT AND CLASSIFICATION** function is to establish and maintain a position structure that achieves the optimum balance between economy, efficiency, skills' utilization and employee development. This function provides advice and assistance to management to assure that positions are classified accurately within the framework of established position and pay management regulations, standards, principles and practices in order to provide pay commensurate with knowledge and skill requirements. A Position Management and Classification specialist also has the lead role for planning and conducting the Federal Wage Survey for the Dubuque, Iowa Wage Area.

The Civilian Personnel Office provides worldwide support to the Quality Assurance Specialist (Ammunition) (QASAS) and Ammunition Manager Career Program Proponents. This involves Providing advice and assistance relating to all functional areas of the Civilian Personnel Management Program.



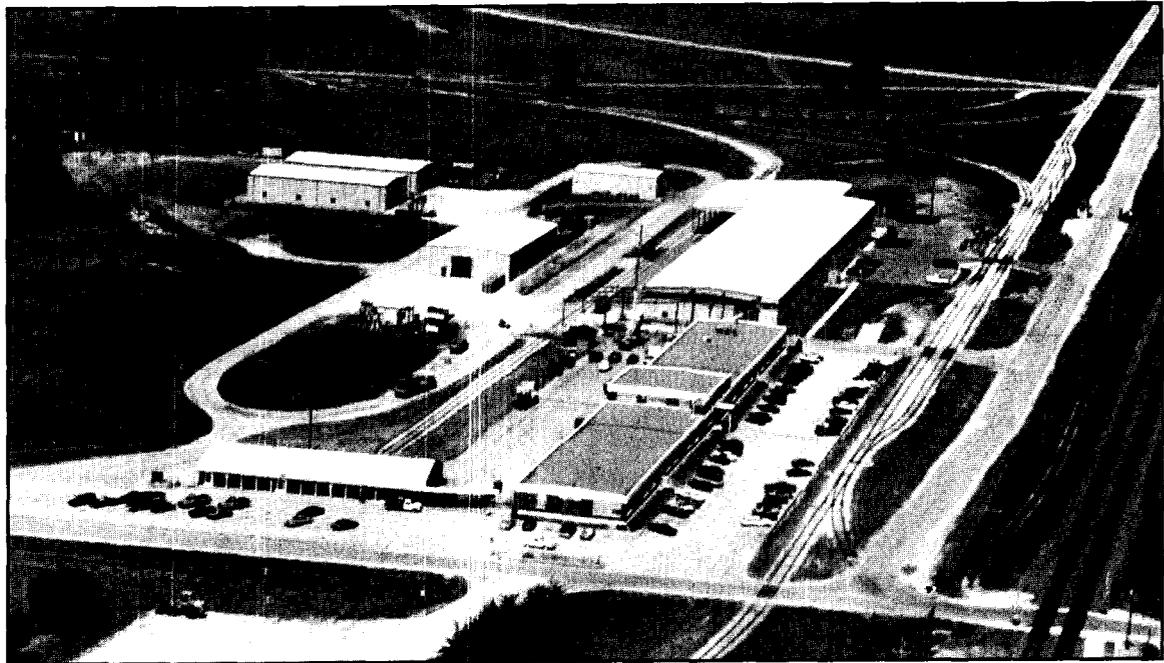
COLLOCATED ACTIVITIES

U.S. ARMY DEFENSE AMMUNITION CENTER AND SCHOOL

In July 1971, the DARCOM Ammunition Center was established as a collocated activity at Savanna. Just over seven years later on January 17, 1979, the Center was redesignated as the U.S. Army Defense Ammunition Center and School (USADACS) to recognize its central role in the implementation of the Army's new mission to manage conventional ammunition for all of the Department of Defense (DoD).

For over 23 years, USADACS has delivered a broad range of services to military and civilian personnel engaged in the business of ammunition logistics.

Using a mix of resident and on-site instruction provided by ammunition experts, the USADACS Ammunition School trains about 5,000 DOD military, civilian, and allied students every year in logistics, explosives safety, and the entire gamut of Army and Joint Service ammunition items. Students also include all Department of the Army (DA) Ammunition Management (AM) and Quality Assurance Specialist (Ammunition Surveillance) (QASAS) interns.



USADACS's headquarters building (above right/center) houses the Director's Office, the Logistics Engineering Office, the Logistics Review and Assistance Office, two Department of the Army Ammunition Career Program offices, and its Resource Management Office. The new Transportability Test Facility (upper right) houses some of

USADACS' engineering test facilities, particularly for Ammunition Peculiar Equipment prototype design. The circular track to the rear of USADACS headquarters building allows engineers to conduct many transportation tests, including a shipboard simulator, for many Government agencies.

Logistics engineers at USADACS provide procedures worldwide to assure safe handling, transportation, and storage of ammunition and explosives. They design, prototype, and field Ammunition Peculiar Equipment, validate procedures and equipment, and provide instrumentation support on-site.

The DA Technical Center for Explosives Safety at USADACS provides explosives and chemical agent safety technical information and assistance to support HQDA, MACOMS, and the safety community Army-wide. The Tech Center manages the Joint United States and Republic of Korea research and development project to design and test new underground ammunition storage technologies.

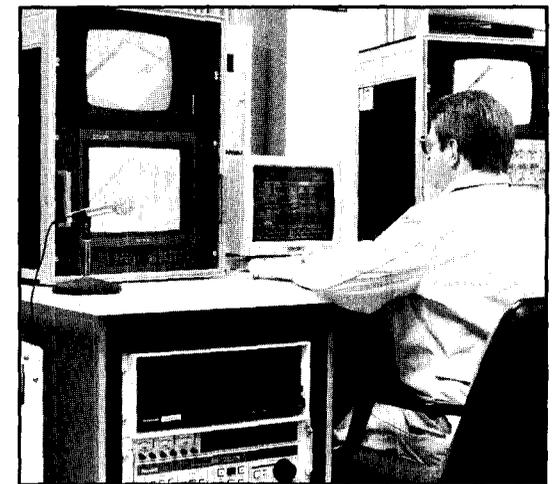
Through the Demil Technology Office, USADACS manages demilitarization research and development initiatives for the Army's conventional ammunition and Joint Service large rocket motors. Working with the Department of Energy and the Services USADACS focuses on resource recovery, recycling and developing environmentally acceptable alternatives to open burning, open detonation, and incineration of unwanted ammunition and explosives.

USADACS provides technical assistance to DOD commanders worldwide in solving problems in ammunition operations. This proactive program has the ultimate goal of problem prevention by identifying root causes of significant problems and developing solutions for system-wide application.



Buildings 247-249 (foreground) house the majority of the U.S. Army Technical Center for Explosives Safety personnel, including the Army's Technical Library for Explosives Safety. Also, the newly remodeled Visitor's Center (upper center) serves as the USADACS Ammunition School's student and visitor processing area.

Transportable real-time X-ray system in Bldg 507 offers USADACS personnel the unique ability to provide on- and off-post radiographic inspection of ammunition all around the world.



The QASAS and Ammunition Management career programs are both managed for the Army by ammunition experts at USADACS. These programs ensure a continuing source of trained, experienced civilian personnel.

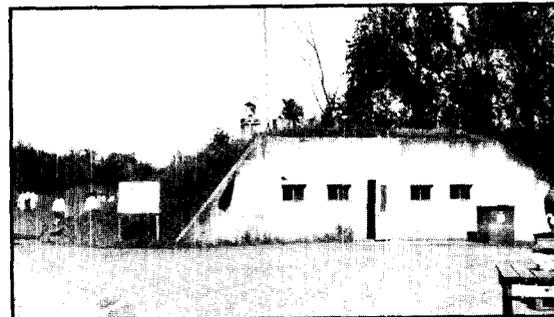
Overall, USADACS with its small, synergistic work force has and will continue to serve the Army well.



Hands-on training for depot demil personnel taking certification course at USADACS.



USADACS Ammunition School campus - Buildings 14 and 15 (right middle) have been remodeled and serve as computer and demilitarization classrooms. Buildings 21, 22, and 23 (center middle) contain classrooms for Navy explosives safety training, Army/Navy/Marine Corps ammunition certification, and many other courses which involve hands-on training on the installation's demolition range. Building 26 (upper center), also called the "Tin Shed," stores and displays the school's inert ammunition training items. Building 10 (lower right) houses the Demil Technology Office, which opened in February 1993.



Looking down range past the personnel shelter (upper right) that allows students and instructors to safely monitor actual demolition shots using remote video equipment.

INFORMATION MANAGEMENT OFFICE

The primary mission of the Information Management Office is to direct, control, and coordinate information management functions throughout the installation. Information management areas of responsibility include: office automa-

tion, automated data processing at the TIER II level, telecommunications, teleproduction, video documentation, still photography, audiovisual support, records management, and publication support.



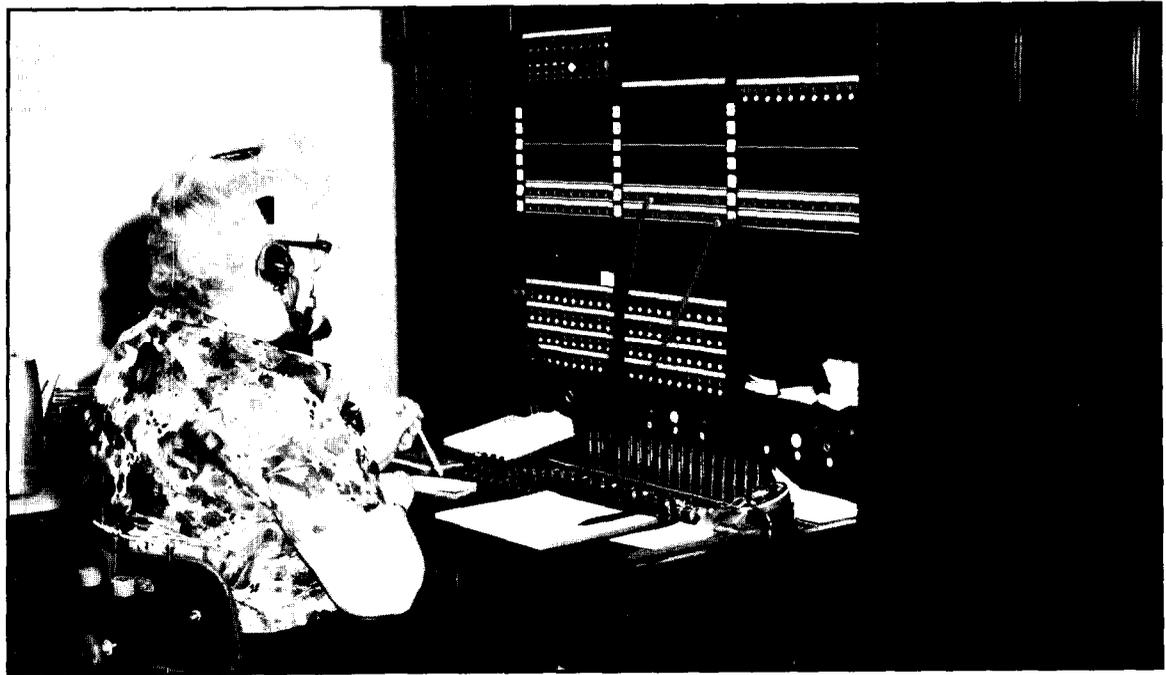
VISUAL

INFORMATION

The Visual Information Facility Mobile Production Van provides a self-contained video production/documentation capability throughout this installation and at remote locations. It features an onboard portable generator, a 1/2-inch video editing system, a graphic generator, multiple camera capability, and video/audio mixing systems.

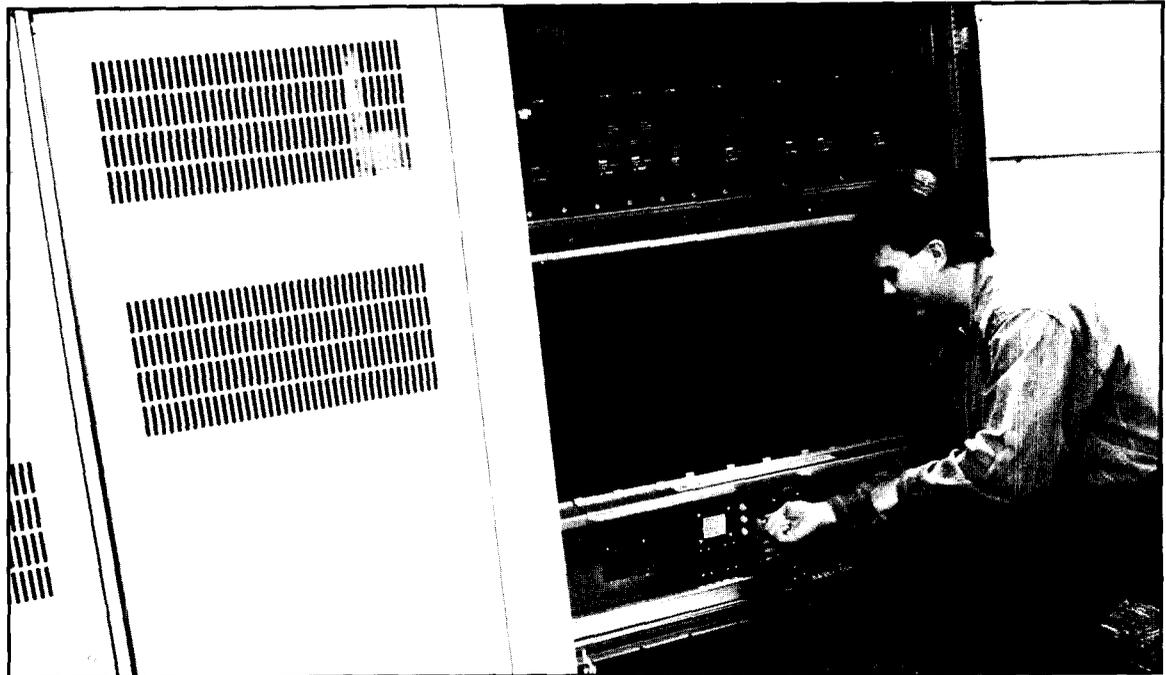
AUTOMATION - SVADA

The Sperry 5000/80 minicomputer, installed in 1989, is operated by the Information Management Office for the Savanna Army Depot Activity. The Sperry interfaces with the Letterkenny Army Depot (LEAD) Defense Mega Center computer to support standard applications such as the Automated Time and Attendance Production System and Standard Depot System, as well as, provide a general purpose data interface to the LEAD Local Area Network (LAN).



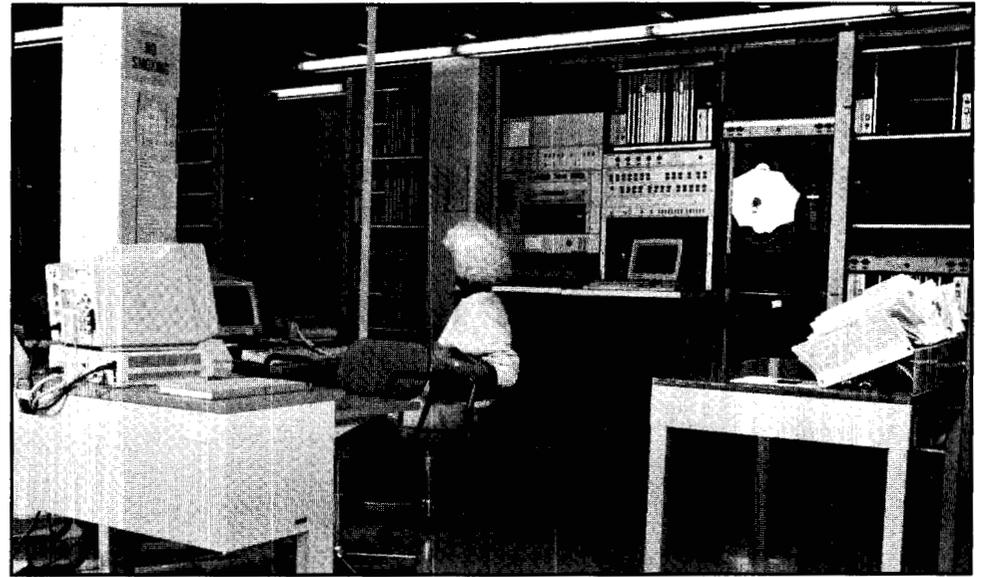
AUTOMATION - USADACS

The Information Management Office provides for the operation and maintenance of all USADACS TIER II computer and associated LAN systems. Current ADP systems include: a Digital Equipment Corporation (DEC) VAX 8820 super minicomputer, a DEC system 5100 Reduced Instruction Set Computer (RISC) super minicomputer, and an IBM Corporation RS/6000 RISC minicomputer. LAN functions will be provided by a Fiber Distributed Data Interface 100 Megabit Per Second token ring between all major administrative buildings occupied by USADACS personnel. This LAN is expected to be fully operational by 31 March 1995.



ELECTRONIC SWITCH

The automated Electronic Switching System (ESS) was installed in February 1988. This switching system is presently configured for 1050 voice grade telephone lines as well as 300 data switching circuits. This system has the capability to be expanded to more than 50,000 voice grade telephone and data circuits with the installation of additional line and trunk peripheral hardware. Service is provided for the Defense Switched Network (DSN), Federal Telephone System (FTS2000), and local commercial communications. All telephone installation and maintenance is provided by the Information Management personnel.



TELECOMMUNICATIONS

The Telecommunications Center (TCC) is equipped with a Desktop Integration to AUTODIN Host (DINAH) system to provide world wide message transmission and reception services via the Automated Digital Network (AUTODIN) that was installed in November 1992. Common User Secure Datafax services are also provided via the TCC.

OCCUPATIONAL HEALTH NURSING OFFICE

The Occupational Health Nursing Office is staffed by an occupational health Nurse, Medical Clerk, and a part-time Occupational Medicine Physician.

The staff at the Occupational Health Nursing office is dedicated to meeting the health needs and concerns of the civilian and military employees. Our focus is on recognizing and preventing work related disease and injuries. We recognize the health rights of employees, including the right to a safe and healthy workplace.

DEFENSE REUTILIZATION & MARKETING OFFICE

The Defense Reutilization and Marketing Office (DRMO) is responsible for the disposal of surplus property generated by the military services, primarily through reutilization, transfer, donation, and sales. The DRMO is also responsible for a Precious Metals Recovery Program, the disposal of hazardous property, and supports military communities with a Resource Recovery and Recycling program. Other responsibilities include processing federal property donations to states and to friendly foreign countries.

The DRMO property inventory ranges from air conditioners to automobiles, beds to bombers, tents to typewriters and umbrellas to zinc. This information, including quantity, condition and location of property, is computerized and is provided weekly to supply and procurement activities of the military services and the General Services Administration.

Some of DRMO customers are - U.S. military organizations, Department of Defense activities, eligible foreign gov-

ernments, authorized civilian federal agencies, authorized non-federal agencies such as state and local governments, Boy Scouts, educational institutes, and qualified civilian buyers.

The DRMO's methods of disposal are - redistribution within DoD, sale or transfer to eligible foreign governments, transfer to civilian departments and agencies of the federal government, donations to authorized non-federal agencies such as state and local governments, sale to the general public through local sales, nationally advertised sealed bid sales, spot bid sales and auctions, and through retail sales. The ultimate disposal is through service contracts.

The Defense Reutilization and Marketing Office services all departments of Savanna Army Depot Activity using the above procedures in the disposal of surplus property on the depot.

300TH SUPPLY COMPANY (USAR)

The 300th Supply Company falls under the 213th S&S Battalion, Wausau, Wisconsin, belonging to the 86th ARCOM, Forest Park, Illinois.

The mission of the 300th Supply Company is to receive, store, process and perform in-storage maintenance (not to exceed organization maintenance), and issue all types of self-propelled, towed, wheeled, and tracked equipment

(Class VII) to division and non-divisional support units. All combat vehicles are combat loaded, as required, prior to issue. The mission of the unit also includes the receipt, storage, and issue of bridging equipment and fortification and construction materials.

NOTE: As of the time of this printing, both the company and ARCOM are undergoing reorganization and reflagging.

ENVIRONMENTAL STATEMENT

The environmental compliance and restoration programs at SVADA are given a very high priority. Depot operations are continually reviewed to ensure that environmental considerations are part of project planning, that the environment is appropriately protected while executing the depot mission and that all local, state and federal environmental laws are complied with. The depot also has an ongoing environmental restoration program. The Army has identified several sites on depot where past practices have left contamination. These sites are investigated and, if appropriate, remediated. Millions of dollars have already been or will be used to keep the installation environmentally sound.

With the Mississippi River as its western boundary, SVADA is naturally rich in wildlife and natural resources. Various native ecosystems are managed within the installation's 6,174 acres of wetlands, 4,273 acres of bottom land

forest, 1,308 acres of upland forest and 3,000 acres of sand prairie. The depot program also includes hunting, fishing, wildlife tours and management of plants and animals on the state and federal threatened or endangered species list. The depot coordinates all of its efforts with the Illinois Department of Conservation, U.S. Fish and Wildlife Service and the U.S. Army Corps of Engineers.

The employees of Savanna Army Depot remain committed to a clean, safe, and healthy environment which promotes balance between the mission and installation natural resources.

POINTS OF CONTACT

OFFICE OF THE COMMANDER

DSN 585-8700
COMM (815) 273-8700
FAX (815) 273-6025

BASOPS & RESERVE AFFAIRS

DSN 585-8311
COMM (815) 273-8311
SECURE FAX (815) 273-6006

QUALITY CONTROL & FUNCTION TESTING

DSN 585-8624

AMMUNITION MISSION

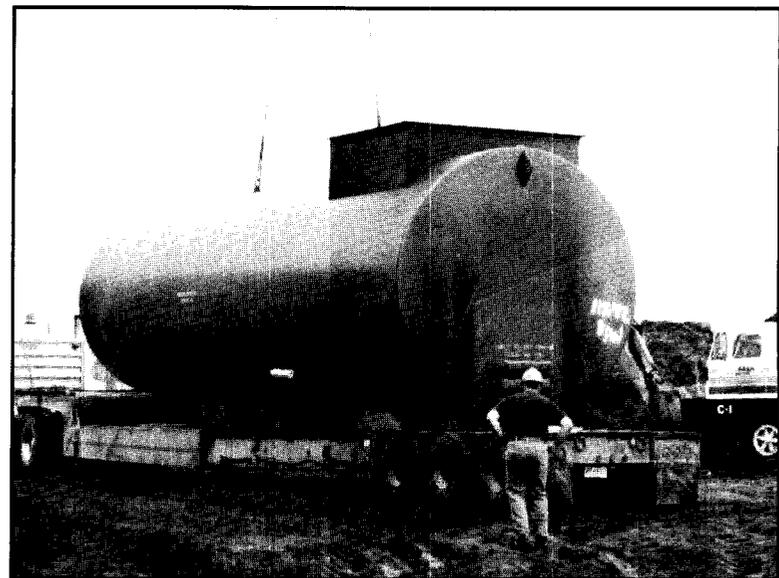
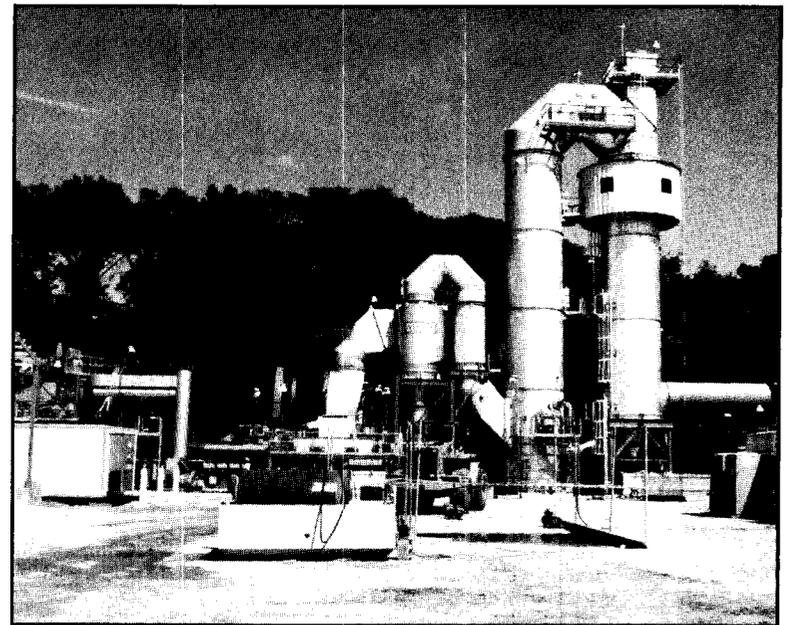
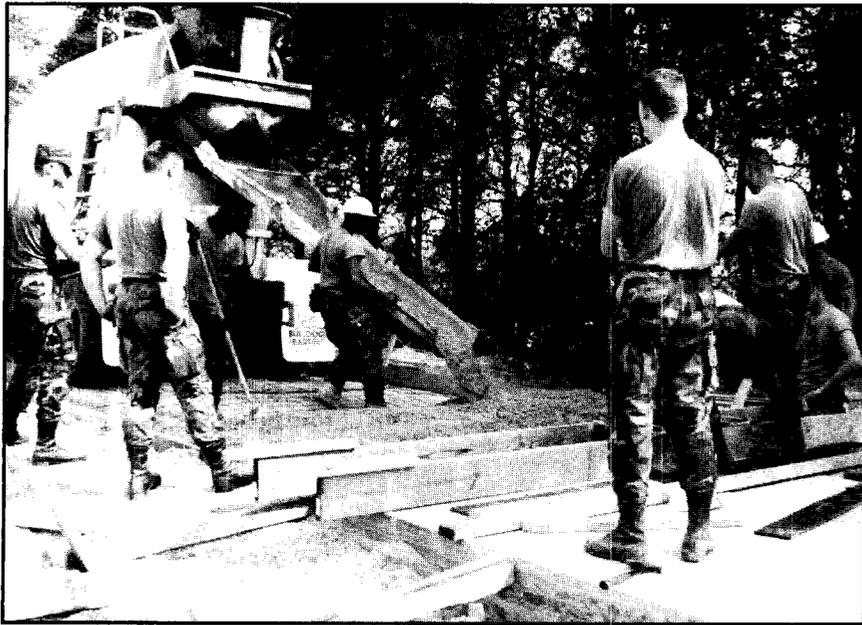
PLANNING: DSN 585-8631
OPERATIONS: DSN 585-8650
APE SHOP: DSN 585-8513

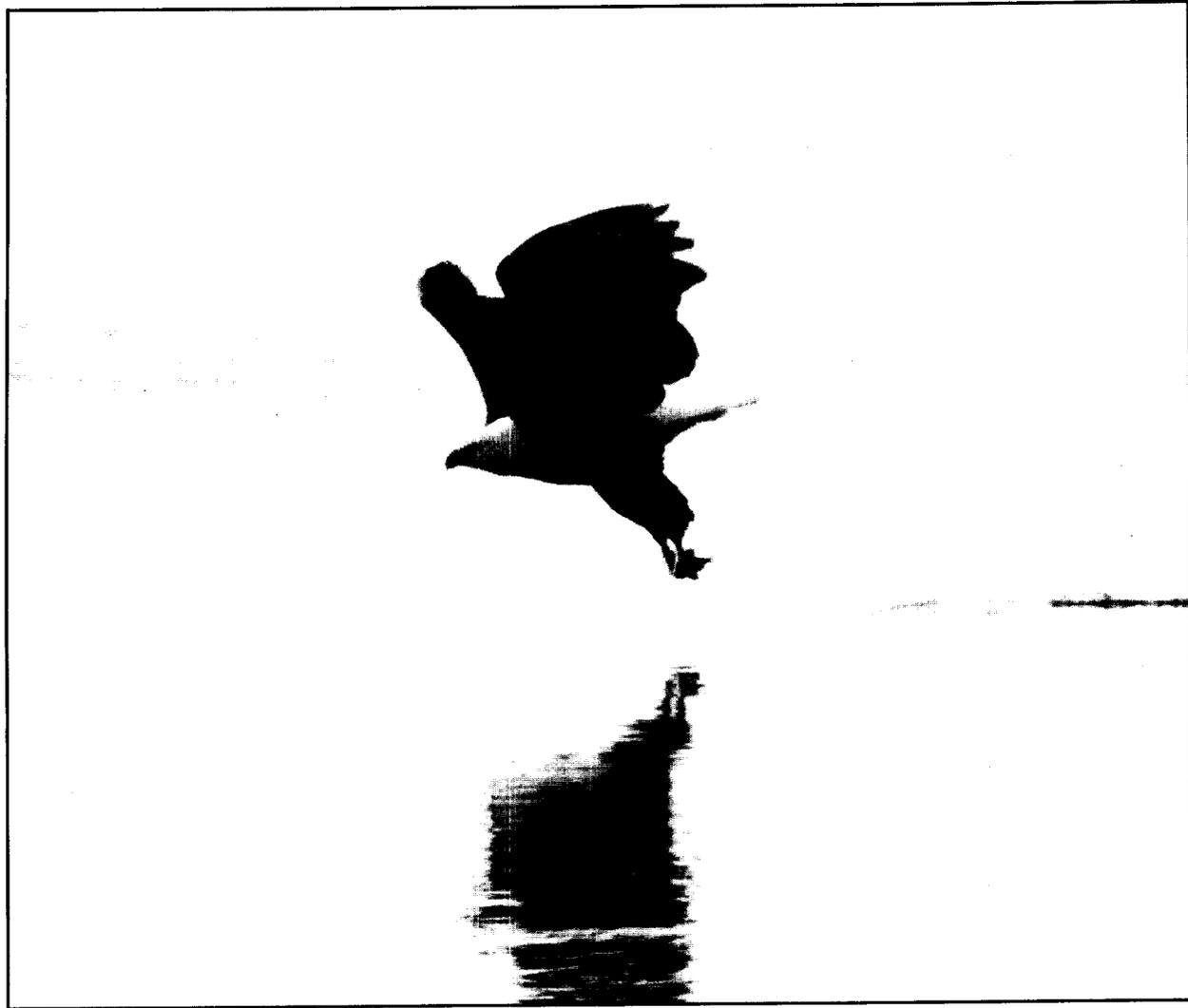
ENVIRONMENTAL

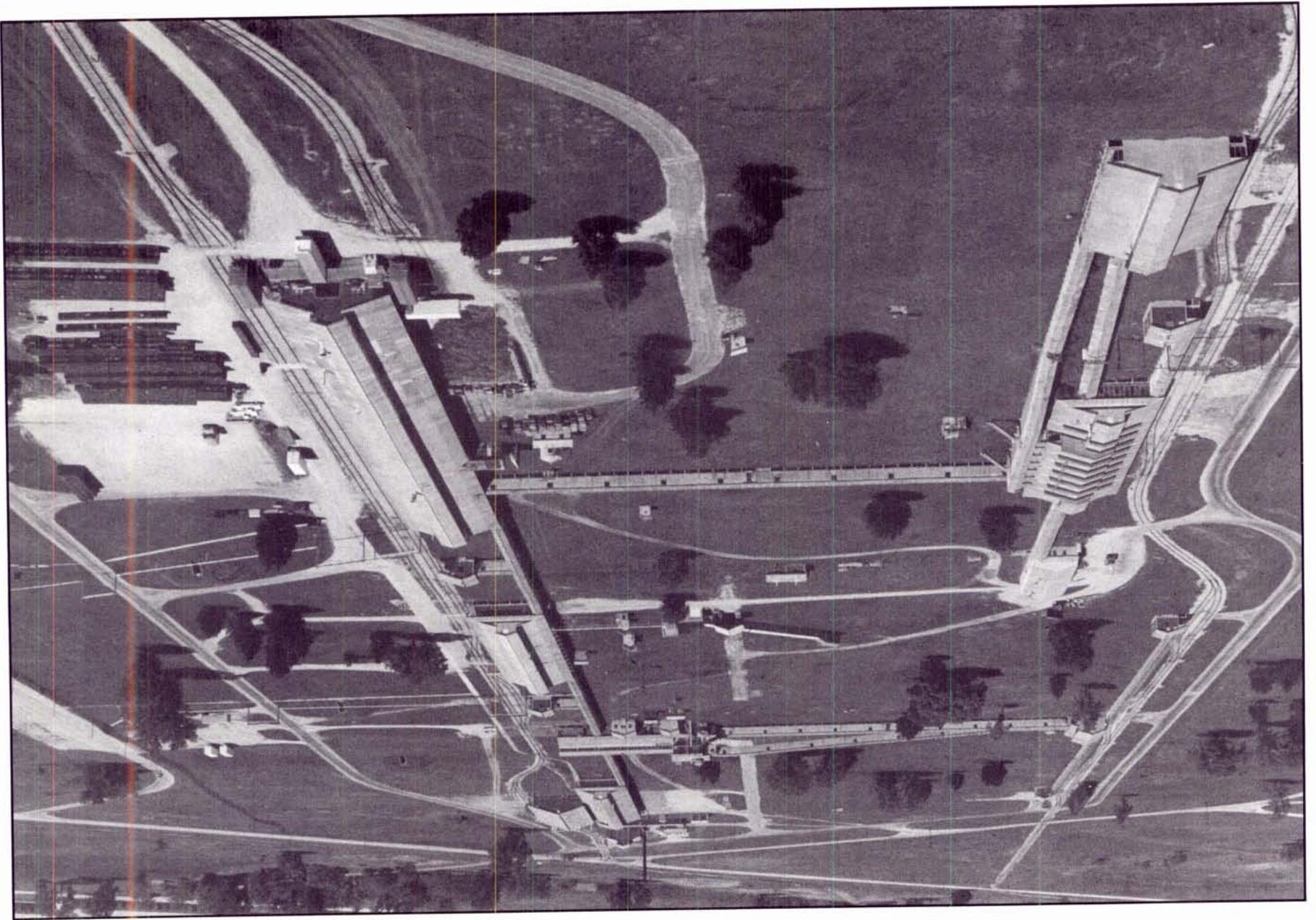
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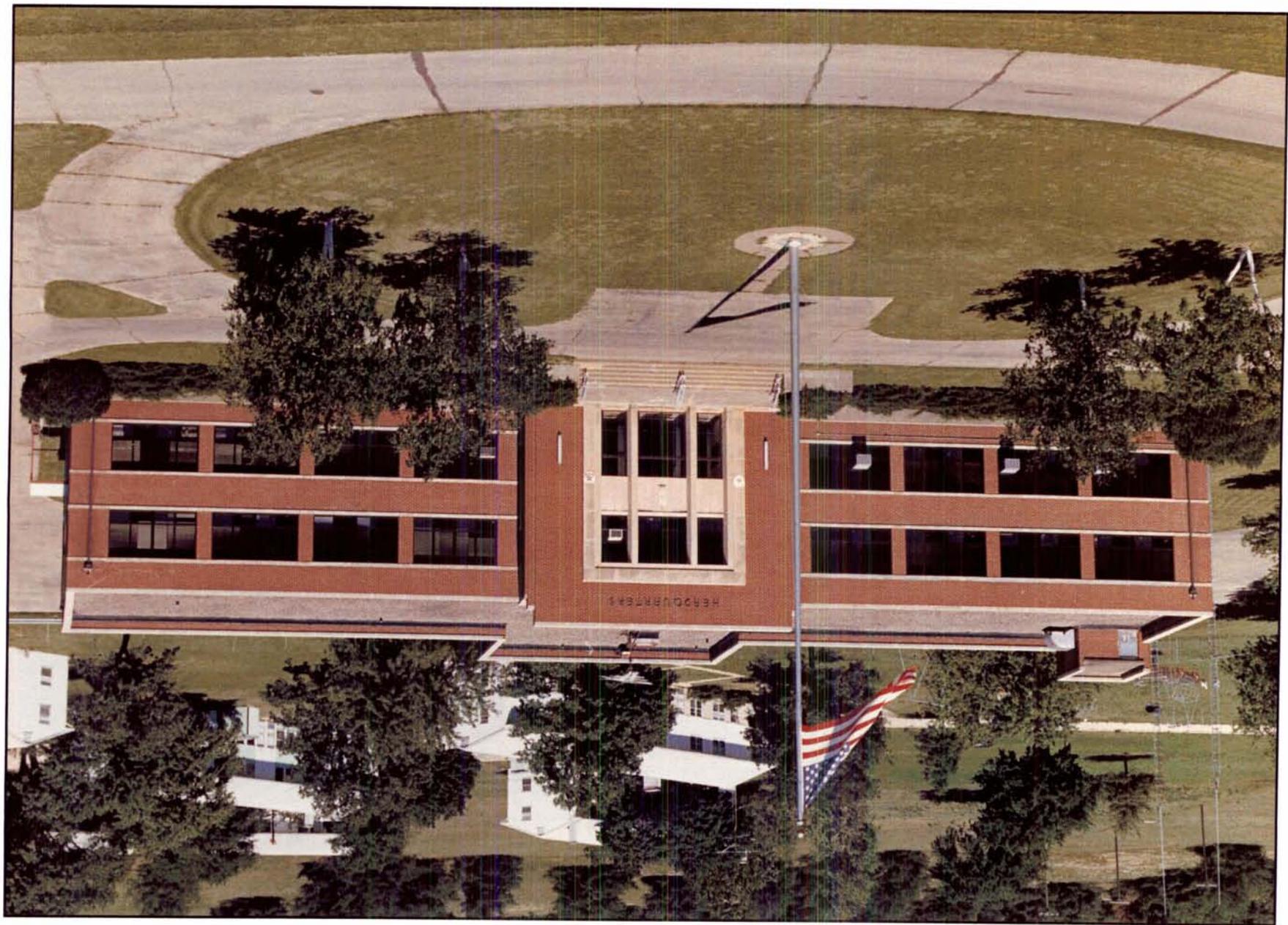
DU MUNITIONS OFFICE

DSN 585-8469









CONTACT INFORMATION:

Office of the Director

DSN 585-8919
Commercial (815) 273-8919

Logistics Explosives Safety Division

DSN 585-8801
Commercial (815) 273-8801

Explosives Safety Test Management Division

DSN 585-8756
Commercial (815) 273-8756
Datafax DSN 585-8503
Datafax Commercial (815) 273-8503

Program Management and Data Division

DSN 585-8745
Commercial (815) 273-8745

Explosives Safety Technical Library

DSN 585-8771
Commercial (815) 273-8771
Datafax - DSN 585-8705
Datafax - Commercial (815) 273-8705

Hotline

DSN 585-6030
Commercial (815) 273-6030

MAILING ADDRESS:

U.S. Army Technical Center for Explosives Safety
ATTN: SMCAC-ES
Savanna, IL 61074-9639

Datafax - DSN 585-8769
Datafax - Commercial (815) 273-8769

ELECTRONIC MAIL -

smcaces@savanna-emh1.army.mil

U.S. Army
Technical Center
For
Explosives Safety



SAVANNA, ILLINOIS

DEPARTMENT OF THE ARMY
U.S. TECHNICAL CENTER FOR
EXPLOSIVES SAFETY
SAVANNA, ILLINOIS 61074-9639
SMCAC-ES
25

WHAT IS USATCES?

The United States Army Technical Center for Explosives Safety (USATCES) is the formal center of explosives/chemical agent safety expertise where specific technical information and support is obtained. It serves as the focal point for explosives/chemical agent safety matters and provides direct support to HQDA, the major Army commands (MACOMs) and the ammunition community Army-wide. USATCES is dedicated to reducing ammunition/explosives accidents and chemical agent incidents in every phase of the ammunition life cycle from production to use or, if necessary, demilitarization and disposal. Our goal is to provide the best possible assistance and guidance to enable Army organizations to control the inherent risks of ammunition and explosives -- avoiding the loss of mission readiness through personnel injuries and property damage.

HISTORY OF USATCES

USATCES was established through a Director of Army Staff (DAS) approved Army Explosives Safety program concept in February 1988. It is the operational element, which includes an Executive Director for Explosives Safety (EDES) and a Department of Army Explosives Safety Council (DAESC). The Chemical Agent Safety mission was added in April 1992 and the Army Hazard Classification mission was added in October 1992.

USATCES occupies a 3-building complex complete with Technical Library and Conference Center. It has a highly-trained staff from all around the world who are dedicated to improving explosives/chemical safety DOD-wide.

There are many professional disciplines represented including Safety and Chemical Engineers along with specialists in Logistics Management, Safety and Occupational Health, Production Management, Storage, and Ammunition Quality Assurance, all to provide

explosives/chemical agent safety technical expertise for every phase of the ammunition life cycle, from conception to demilitarization.

The USATCES provides a Department of the Army Information Management System as a central source of explosives/chemical agent and ammunition information. USATCES' capabilities continue to expand to meet the Army's need to resolve many hard to fix explosives safety issues.

MISSION RELATED RESPONSIBILITIES OF USATCES

- Support HQDA, MACOM Commanders, and the ammunition community Army-wide with explosives/chemical agent information and technical assistance.
- Develop and maintain Army explosives/chemical agent safety standards.
- Provide Army approval authority for the Department of Defense Explosives Safety Board (DDESB) site and general construction plans.
- Track and process DDESB explosives/chemical agent safety reports/surveys.
- Track explosives/chemical agent waiver/exemptions and certification requests.
- Identify and support Army explosives/chemical agent safety training needs.
- Provide technical support to promote research, development, and application for explosives safety technology.
- Establish an explosives/chemical agent safety technical information management system.
- Maintain an automated Technical Library for the Army.
- Provide accident/malfunction investigation assistance.
- Support conduct of DA safety program assistance visits.
- Provide technical information required to support issues before the DAESC.
- Provide technical support to DA staff for budgetary planning.
- Analyze explosives accident and chemical agent incident data and follow up on remedial actions.
- Perform initial/periodic safety certification of explosives manufacturing and LAP processes.
- Perform Army hazard classification, both interim hazard and final hazard classifications.
- Maintain the Joint Hazard Classification System (JHCS) data base for the DDESB.
- Provide explosives/chemical agent safety technical support to DA Defense Environmental Restoration Program (DERP).

USATCES HOTLINE

A 24-hour HOTLINE has been established to better serve the needs of the explosives/chemical agent/ammunition community.

Callers are invited to submit any problems, comments, and suggestions to USATCES, DSN 585-6030 or commercial (815) 273-6030.

SAVANNA ARMY DEPOT ACTIVITY

“U.S. Army’s Oldest Depot” Celebrates

75 Years of Excellence

September 10-12, 1993



Savanna, Illinois

Building 1 is the Savanna Army Depot Activity Headquarters. The Commander's Office, the Personnel Office, the Mission Office, and the Installation Support Office serve the 197 depot employees.



This brochure was produced by the U.S. Army Defense Ammunition Center and School. All photos are the property of the U.S. Army.

**Linda K. Theis - Writer/Editor
Sally P. Stewart - Computer Graphics Illustrator**

Printed by Defense Printing Service - Savanna

Robert L. Bastian - Printer



MISSIONS AND FUNCTIONS

Since 1971, USADACS has delivered a broad range of services to military and civilian personnel engaged in the business of ammunition logistics.

Using a mix of resident and on-site instruction provided by ammunition experts, the USADACS Ammunition School trains about 5,000 DOD military, civilian, and allied students per year in logistics, explosives safety, and the entire gamut of Army and Joint Service ammo items. Students include all DA Ammo Management and Quality Assurance Specialist (Ammunition Surveillance) (QASAS) interns. The School also provides training for the DA Chemical Stockpile Emergency Preparedness Program in coordination with FEMA.

Logistics engineers at USADACS provide procedures worldwide to assure safe handling, transportation, and storage of ammo and explosives. They design, prototype, and field Ammunition Peculiar Equipment, validate procedures and equipment, and provide instrumentation support on-site.

The DA Technical Center for Explosives Safety at USADACS provides explosives and chemical agent safety technical information and assistance to support HQDA, MACOMS, and the safety community Army-wide. The Tech Center manages the Joint U.S. and Republic of Korea R&D project to design and test new underground ammo storage technologies.

Through the Demil Technology Office, USADACS manages demil R&D initiatives for DA conventional ammunition and Joint Service large rocket motors. Working with DOE and the Services, USADACS focuses on resource recovery, recycling and developing environmentally acceptable alternatives to open burning, open detonation, and incineration of unwanted ammunition and explosives.

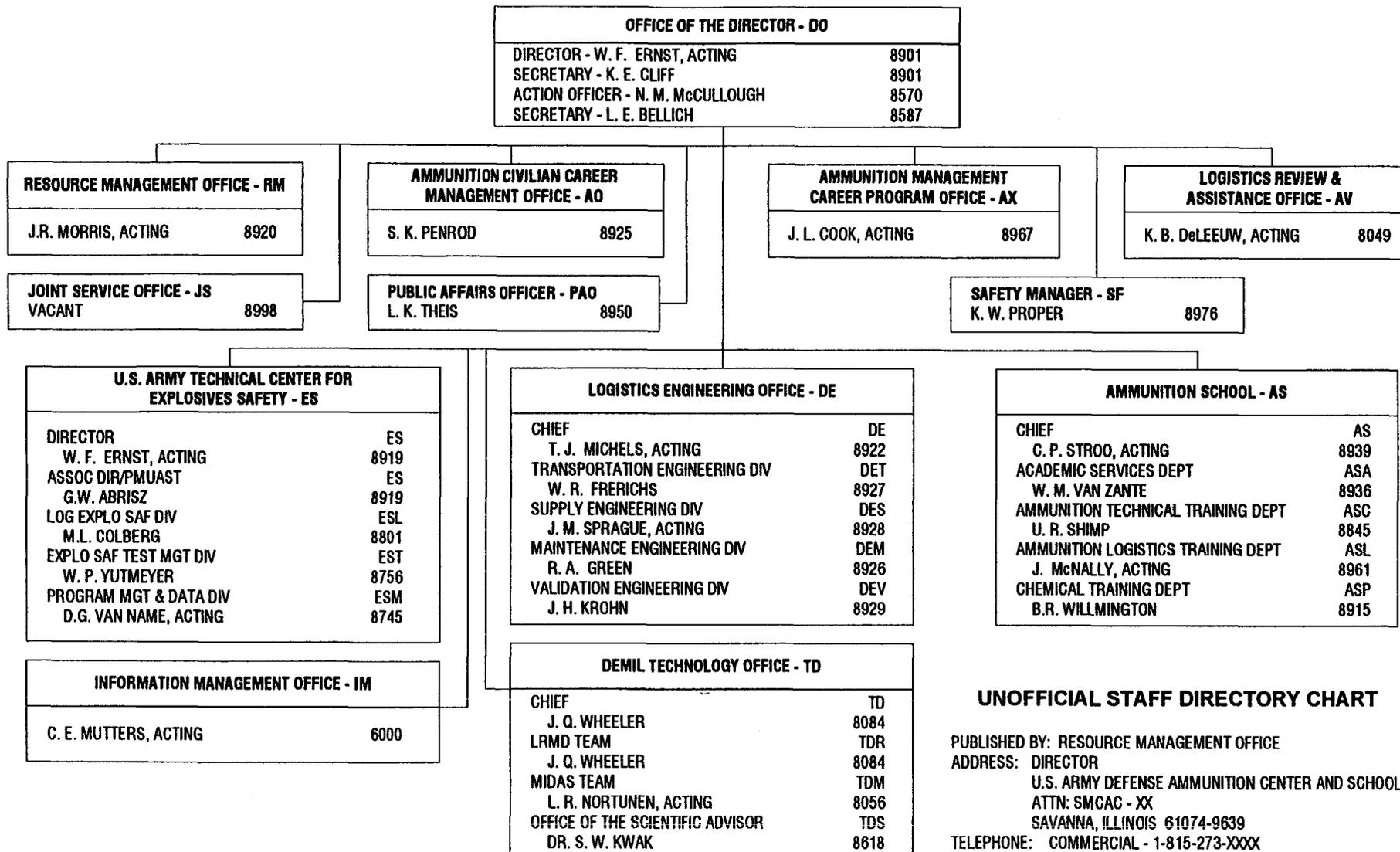
USADACS provides tech assistance to DOD commanders worldwide in solving problems in ammo operations. This proactive program has the ultimate goal of problem prevention by identifying root causes of significant problems and developing solutions for system-wide application.

The Quality Assurance Specialist (Ammunition Surveillance) (QASAS) and Ammunition Management Career Programs are both managed for the Department of the Army by ammo experts at USADACS. They ensure a continuing source of trained, experienced civilian personnel.

Overall, USADACS serves the Army well. Examples include design of the "Steel Box" for retrograde of chemical munitions from Germany and on-site service with the military in Operations Just Cause, Desert Storm/Desert Shield, and Restore Hope.

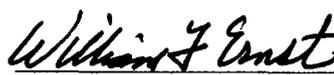
U.S. ARMY ARMAMENT, MUNITIONS AND CHEMICAL COMMAND

U.S. ARMY DEFENSE AMMUNITION CENTER AND SCHOOL



UNOFFICIAL STAFF DIRECTORY CHART

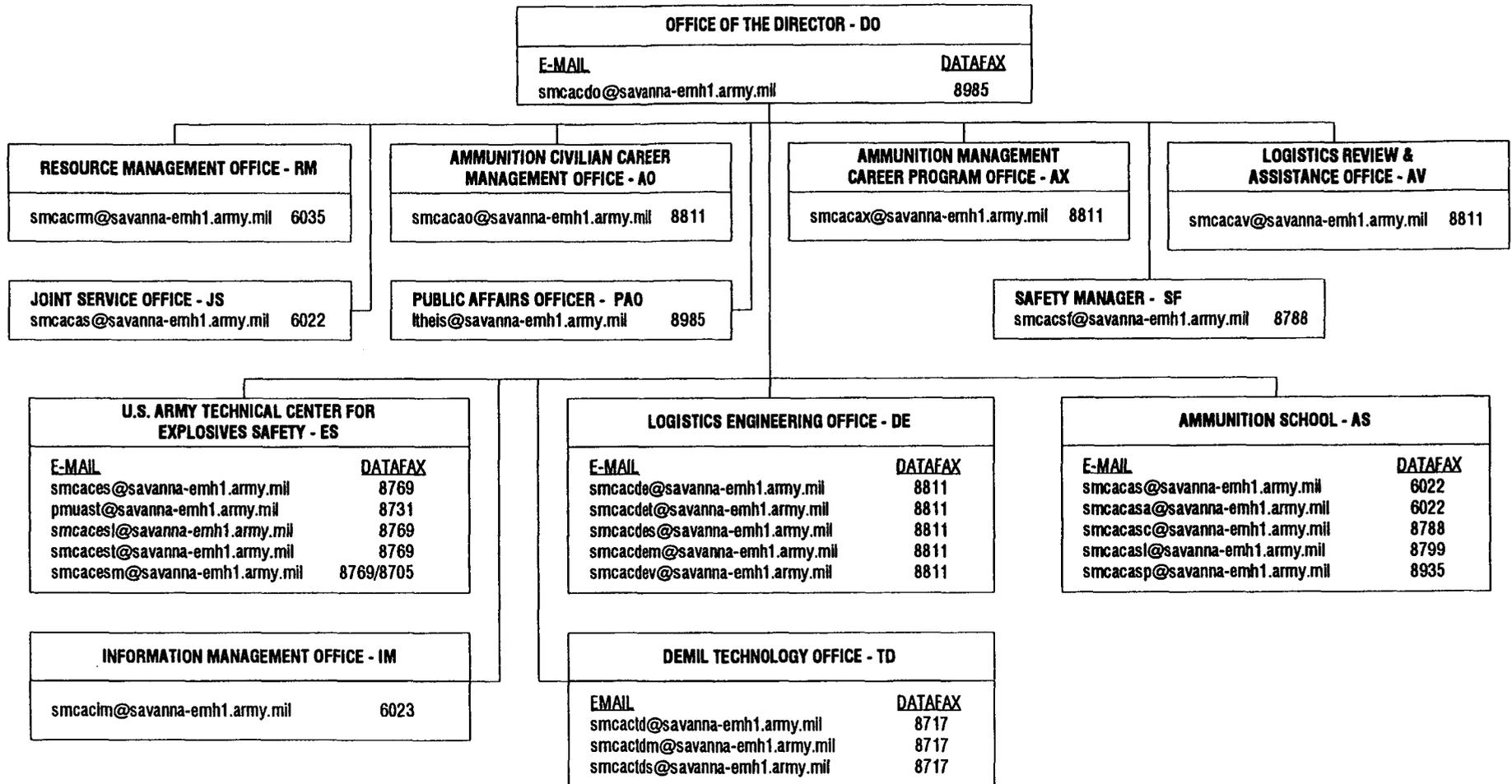
PUBLISHED BY: RESOURCE MANAGEMENT OFFICE
 ADDRESS: DIRECTOR
 U.S. ARMY DEFENSE AMMUNITION CENTER AND SCHOOL
 ATTN: SMCAC - XX
 SAVANNA, ILLINOIS 61074-9639
 TELEPHONE: COMMERCIAL - 1-815-273-XXXX
 DSN - 585-XXXX
 INFORMATION - 585-1110
 DATAFAX NOS. & E-MAIL ADDRESSES ON REVERSE

APPROVAL: 
 WILLIAM F. ERNST
 ACTING DIRECTOR

SAVANNA ARMY DEPOT ACTIVITY HOST SUPPORT			
CIV. PERSONNEL	SDSLE-VP	TRANSPORTATION	SDSLE-VMT
R. A. PARADIS	8851	K. T. SPROULE	8722
SERVICES BRANCH	SDSLE-VAE	SECURITY	SDSLE-VAM
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SAFETY	SDSLE-VSAF	FIRE PROTECTION	SDSLE-VAF
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EEO COORDINATOR	SDSLE-VP	OCC HEALTH NURSING OFC	HSXP-SAV
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U.S. ARMY ARMAMENT, MUNITIONS AND CHEMICAL COMMAND U.S. ARMY DEFENSE AMMUNITION CENTER AND SCHOOL

ELECTRONIC MAIL AND DATAFAX NUMBERS

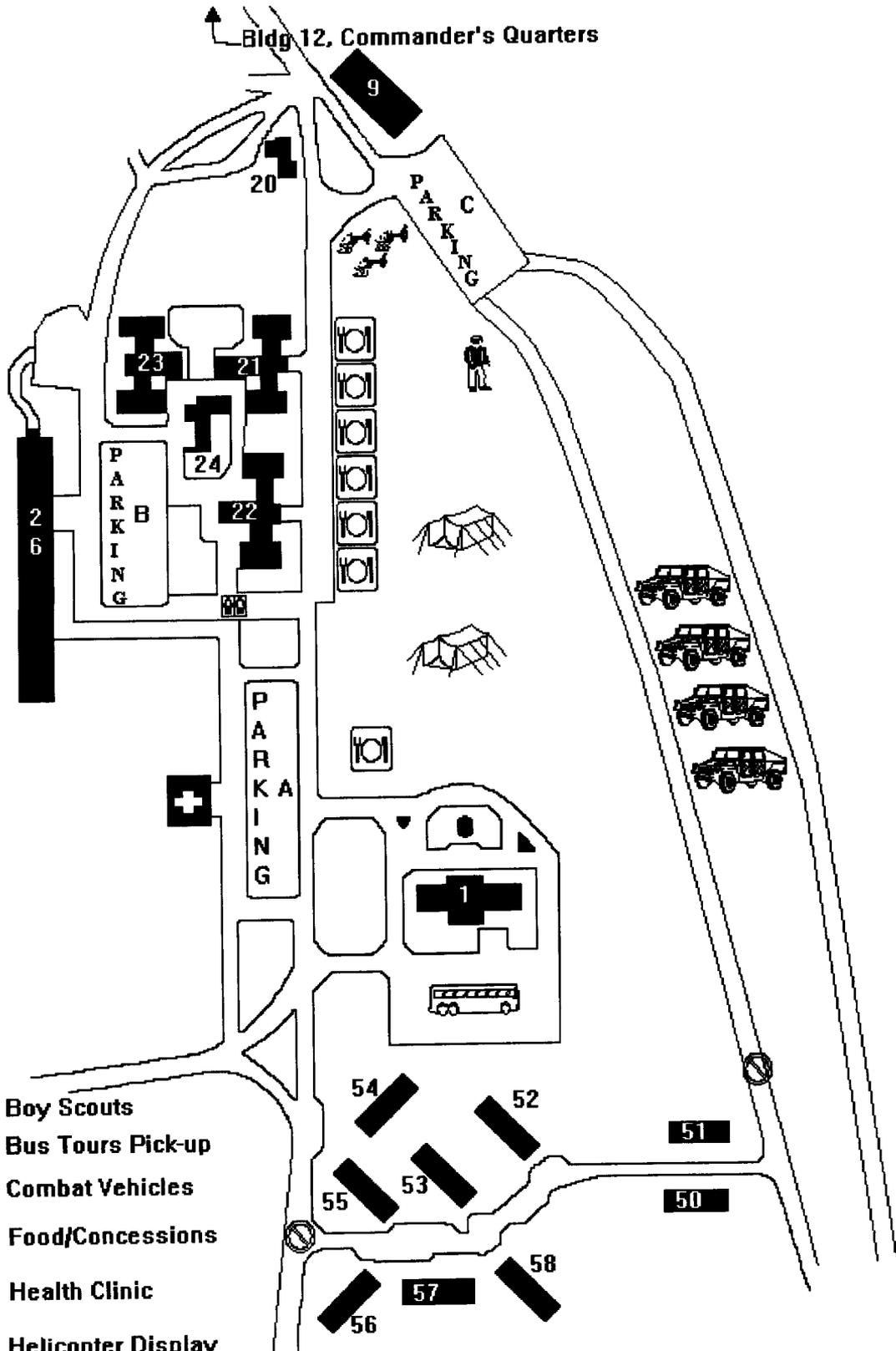


TELEPHONE: DSN - 585-XXXX
COMMERCIAL - 1-(815)-273-XXXX

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SAFETY	SDSLE-VSAF	FIRE PROTECTION	SDSLE-VAF
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EEO	SDSLE-VP	OCC HEALTH NURSING OFC	HSXP-SAV
sdslevp@letterkenn-emh1.army.mil	8753	NA	8215

CALENDAR OF EVENTS

- Friday, 10 September
7:00 p.m. Banquet
 Sportsman's Paradise
- Saturday, 11 September
10:00 a.m. Parade
 Downtown Savanna
 Savannah VFW Color Guard
 Carroll County Sheriff's Mounted Patrol
 300th Supply Marching Unit
 Military Tactical Vehicles
 Depot Fire Department
 Savannah High School Marching Band
 Savannah Fire Department
- 1:30 - 5:00 p.m. Installation Open House
 Savannah Army Depot
 Bus Tour (approximately 1 hour)
 Ammunition Above Ground Storage Magazine
 Ammunition Storage Igloos
 USADACS Transportability Test Facility
 Many Buildings Also Open to the Public
 Military Displays
 Army Helicopters - UH1 (Huey), AH1 (Cobra),
 OH58 (Kiowa)
 Armored and Wheeled Military Vehicles
 Food Booths (Soft Drinks available at all booths)
 Depot Volunteers - Roast Pork Sandwich Plates
 Savannah Sports Boosters - Ribettes
 Music Sports Boosters - Tacos and Nachos
 Wives Club - Potato Bar with Toppings
 Post Restaurant - Desserts
 Activities Especially for Kids
 Face Painting
 Balloons
- 4:00 - 8:00 p.m.
5:00 p.m. Evening Band
 Retreat Ceremony
- Sunday, 12 September
12:00 pm Golf Tournament
 Storybrook Golf Course
 Hanover, IL

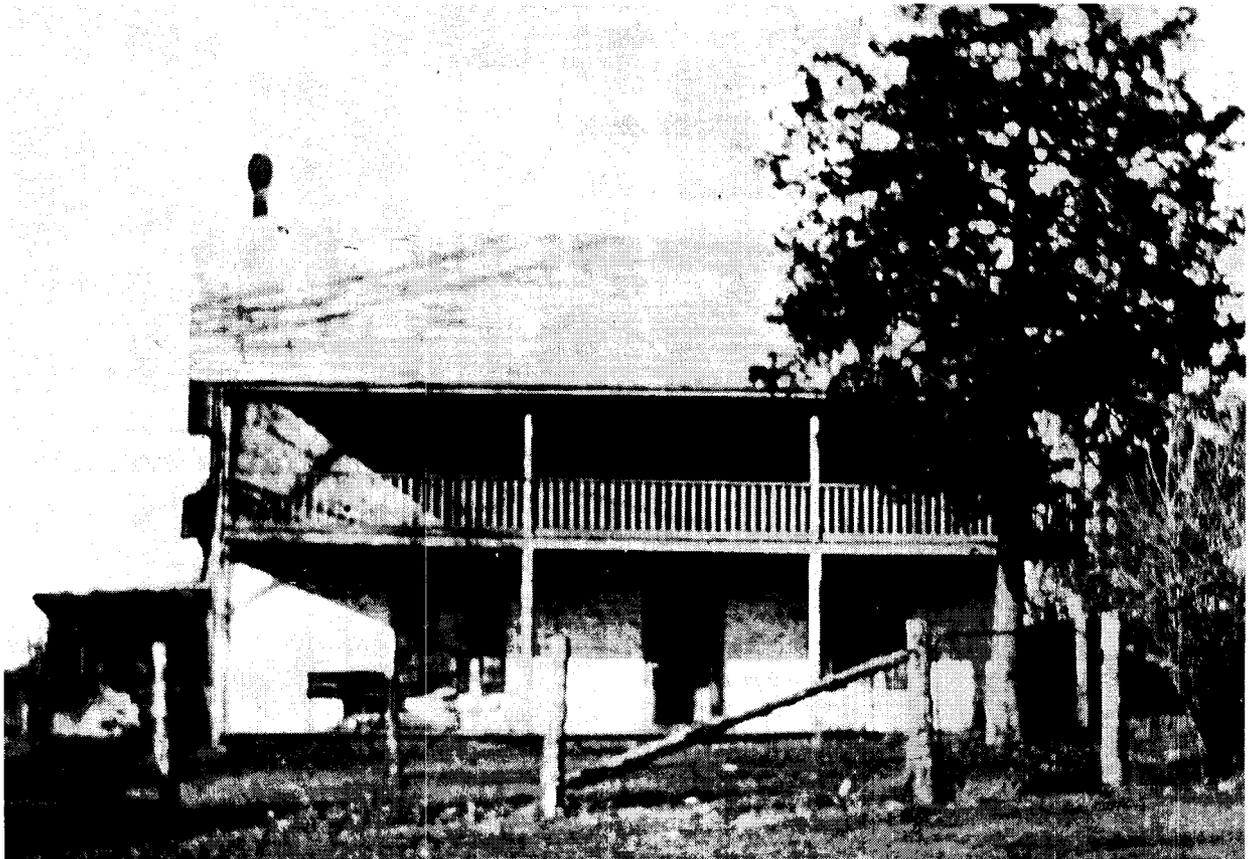


-  Boy Scouts
-  Bus Tours Pick-up
-  Combat Vehicles
-  Food/Concessions
-  Health Clinic
-  Helicopter Display
-  Off Limits-Housing Area
-  Restrooms

HISTORY OF SAVANNA ARMY DEPOT ACTIVITY

The Savanna Army Depot began with the "Sundry Civil Act" of June 12, 1917 when the United States Congress authorized an appropriation of \$1,500,000 for increasing the "Facilities for the Proof and Test of Field Artillery and Ammunition" including the purchase of lands and the development thereof. Under this authorization, the Commanding Officer of the Rock Island Arsenal purchased certain lands and made necessary improvements.

Colonel George W. Burr, Rock Island Arsenal Commanding Officer, on July 23, 1917 contracted with H.E. Curtis of Rock Island, Illinois, to purchase lands on the main line of the CB&Q Railroad approximately eight miles north of Savanna, Illinois. These farm lands located in Jo Daviess and Carroll counties were called the "Sand Prairie." This prairie lay between the CB&Q railroad tracks and the Mississippi River, with the Apple River as its southern boundary and Blanding Landing as its northern boundary and runs approximately thirteen miles south to north, varying in width from one to four miles covering over 13,000 acres.



The "Old Stone House" is one of the original farm houses from the lands purchased in 1917.



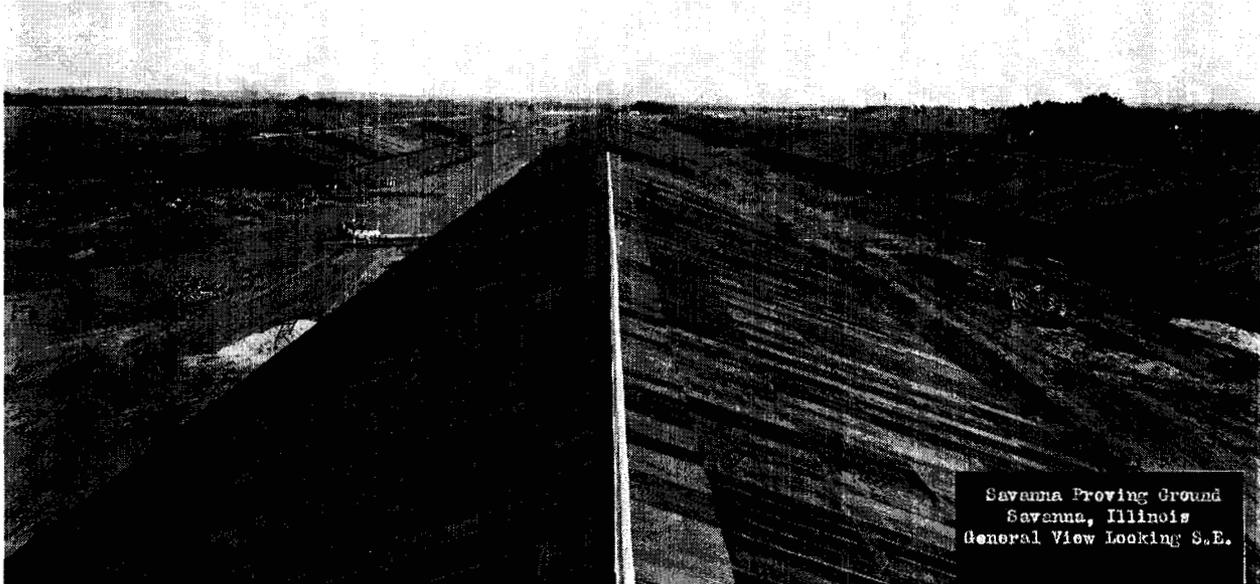
Excavating footings for another warehouse - August 29, 1919.



Plastering fire walls in one of the warehouses.

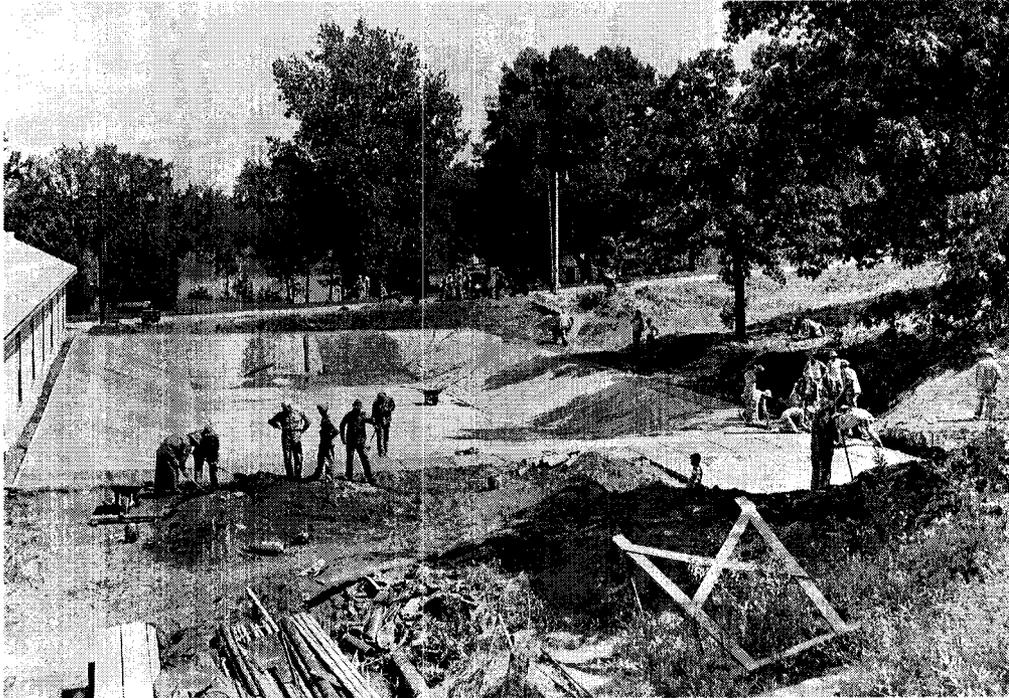
Construction began in April 1918. The Savanna Proving Ground officially opened on December 26, 1918 with Lieutenant Colonel Charles R. Baxter as the first Commanding Officer, even though the first proof firing of 75mm and 155mm howitzers had begun in September 1918.

As World War I drew to a close the need for proof firing diminished. The facilities were then needed to store artillery vehicles, trucks, and tanks from the war. In March 1919, the Chief of the Army's Construction Division, Brigadier General R. C. Marshall, authorized the construction of forty artillery storage warehouses at Savanna to



Artillery storage warehouses under construction - September 5, 1919.

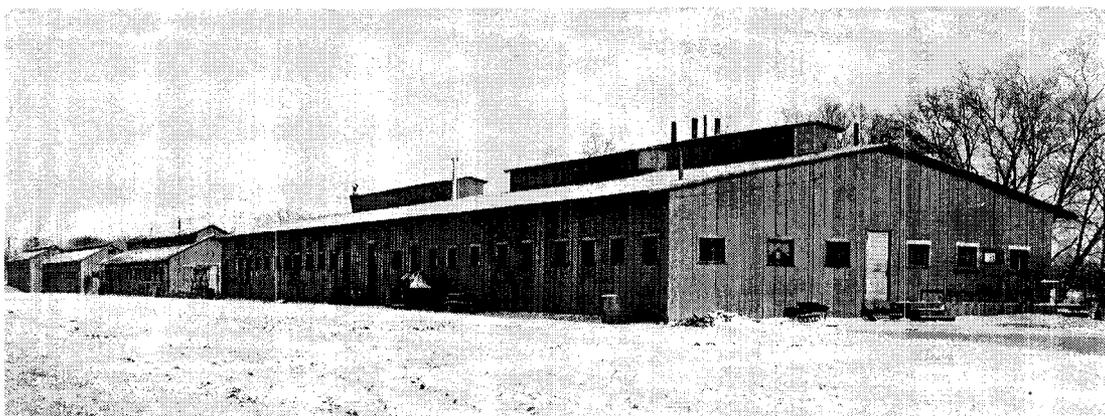
help meet this demand. Completed in 1920, each warehouse had a heavy timber frame with walls and roof of corrugated metal siding. Fifteen of these buildings remain and are still in use today. Other construction, during this period, included expansion of utilities and roads.



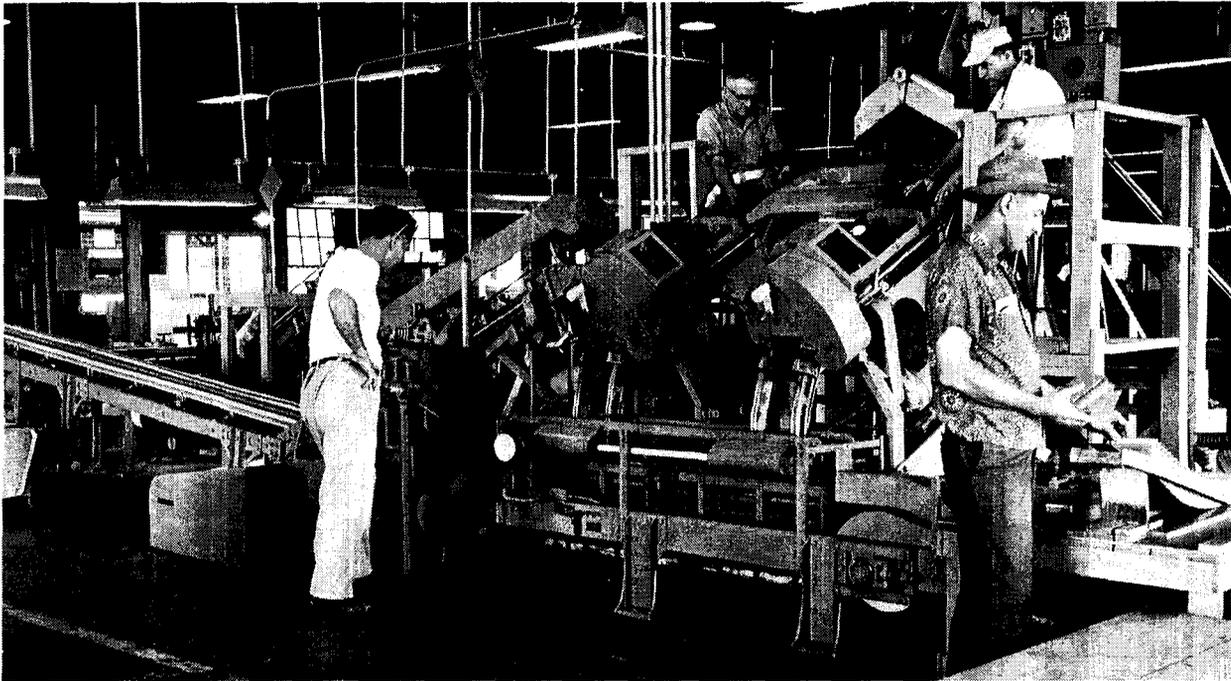
(left) A truck wash was built in 1942 toward the end of the great expansion. Today, the installation has turned it into a swimming pool for employees and their families.

The first expansion was barely completed when a building program of much larger proportions was undertaken. All of this work was authorized under the "Ordnance Storage Facilities, 1920-1921" appropriation and was done by the Construction Service of the Quartermaster Corps under five different contracts. Construction of barracks for enlisted men and quarters for commissioned and noncommissioned officers began in 1920 and was completed in 1921. A total of three barracks that could house 100 people each along with dining facilities were provided for enlisted men.

Barracks and mess hall were completed in 1921.



Work on 47 standard magazines and 30 high explosive magazines was started in 1920. A combination field office and storehouse was also built the same size as a standard magazine. Additional railroad facilities were provided, which extended from the lower post to the ammunition area. The entire ammunition area was enclosed with a nonclimbable fence over six miles long. A sodium nitrate storage pit was completed in 1920.



Workers man a maintenance line.

One of the few Ordnance Ammunition Companies in existence at the time, the 52nd, was assigned to Savanna late in 1920 and remained until the outbreak of World War II.

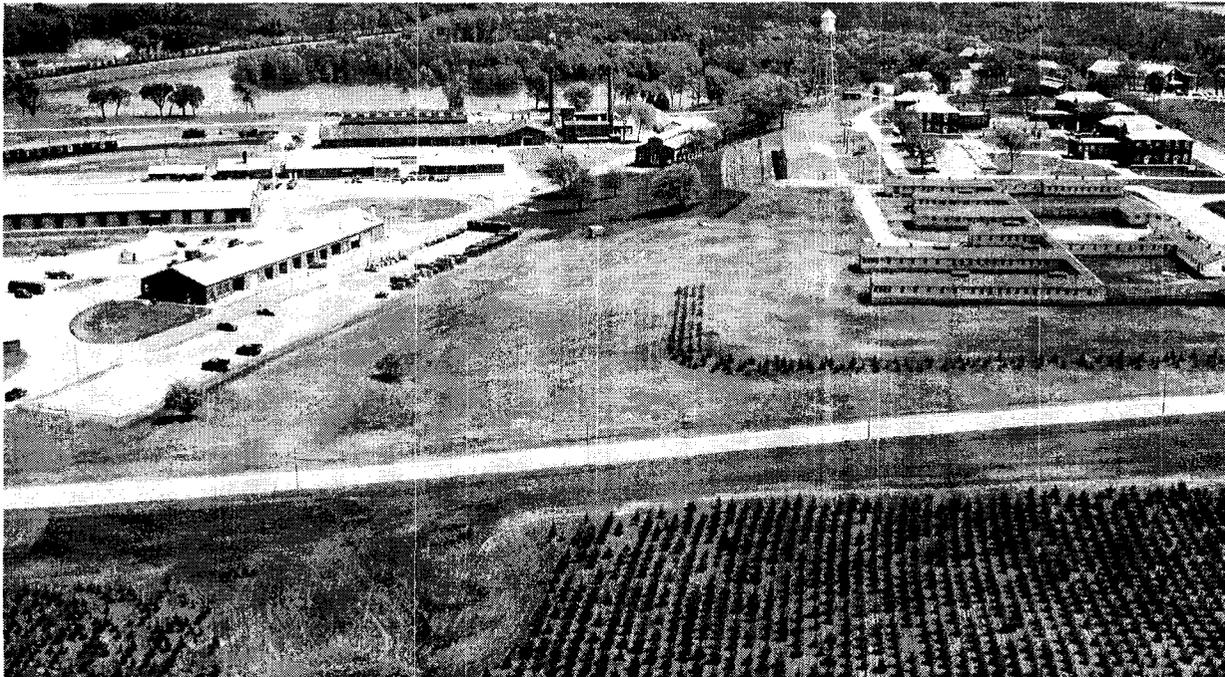
The official designation of "Savanna Ordnance Depot" was approved in March 1921, when the depot became independent of Rock Island Arsenal. During the next nine years, construction and renovations were minor. Then, in 1931 a shell loading facility was required by the worldwide demand for munitions. During 1932-1938, this operation consisted of loading and servicing 155mm shells and 300 pound bombs.

The manufacturing and storage facilities at Savanna were greatly expanded during WW II. The War Department authorized construction of 407 igloos; 26 smokeless powder magazines; 55 standard ammunition magazines; a clipping, linking, and belting plant; a Group I shell loading plant; 14 warehouses; and a generating plant. All of these were completed during 1938-1942, with the Group I plant being the only one of its kind operated by the United States.

This plant was used to load special bombs for General James Doolittle which were used in his historic Tokyo raid.

Thirty-seven buildings of temporary construction were erected in 1941 as part of a Unit Training Center. With quarters for 945 enlisted men and 40 officers, the complex included 15 temporary barracks, five mess halls, six recreation buildings, officers' quarters, a post exchange, a guard house, two storehouses, and an administration building. Most of these buildings are still standing and are presently used by the Army Reserves and National Guard.

Concurrent with this expansion of facilities, the number of depot employees mushroomed from 143 in 1939 to 7,195 in 1942. To help meet the severe housing shortage, the Federal Works Administration built a 200-family housing project, "Craig Manor", in Hanover, Illinois, which is seven miles north of the depot. This 1941 project was followed by two more housing projects in 1943: the village of Blackhawk, built by the Federal Public Housing Authority located 1/2-mile east of the depot's main gate, and some civilian war housing built just inside the same gate. The village of Blackhawk was turned over to the depot in 1948 and subsequently sold to the City of Savanna in 1976 (most of the housing is now demolished). The civilian war housing included 12 dormitory buildings (six now remain); three recreation buildings (two now remain); and a mess hall (which has been demolished).



Lower post photo from 1962 shows the forestation effort that we reap the benefits of today. Many of the buildings in this photo no longer exist, yet new construction has sometimes resulted in new buildings in their place.

The outbreaks of World War II and the Korean conflict resulted in an increase in personnel with the additional construction of bomb and projectile loading plants. Activity at the depot decreased somewhat at the close of World War II but rose again during the Korean War. The depot work force once again significantly rose to keep up with the increased wartime mission and responsibilities. With the War Department's decision to make this depot one of the largest single establishments in the country for the storage of ammunition, the construction of additional storage facilities was completed. A Special Weapons mission was assigned in 1961 and continued through 1975.

A significant event in depot history was the activation of the Ordnance Ammunition, Surveillance, and Maintenance School in 1950. It was redesignated the Army Materiel Command Ammunition School in 1966. It provided technical, operational, and administrative training in all fields of ammunition for civilian and military students from the United States and foreign countries.

In 1962, the official designation changed from Savanna Ordnance Depot to Savanna Army Depot. On June 30, 1976, as a result of Project CONCISE, the depot assumed an Activity status. On July 1, 1976 the depot was placed under the command and control of Letterkenny Army Depot in Chambersburg, Pennsylvania. At that time, it was renamed Savanna Army Depot Activity.

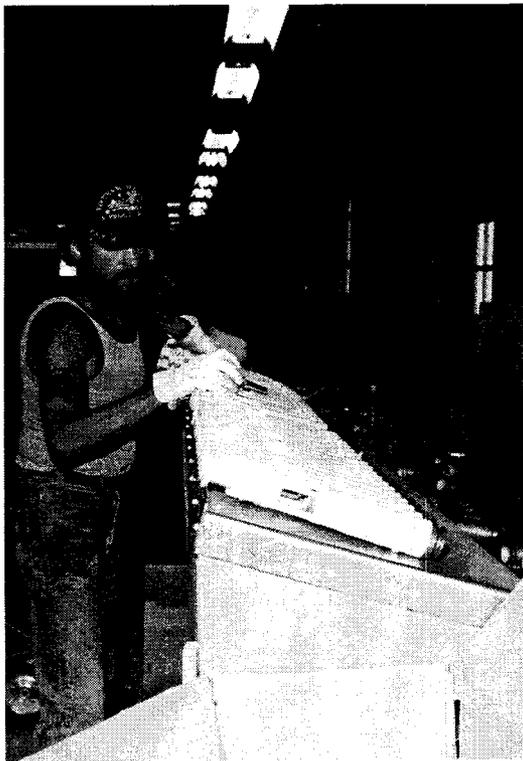


Lieutenant Colonel Charles R. Baxter
1st Commander

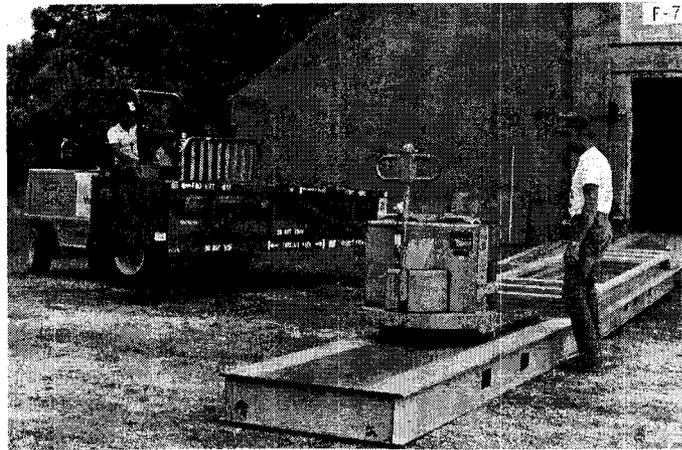


Major Richard R. Thibodeau
35th Commander

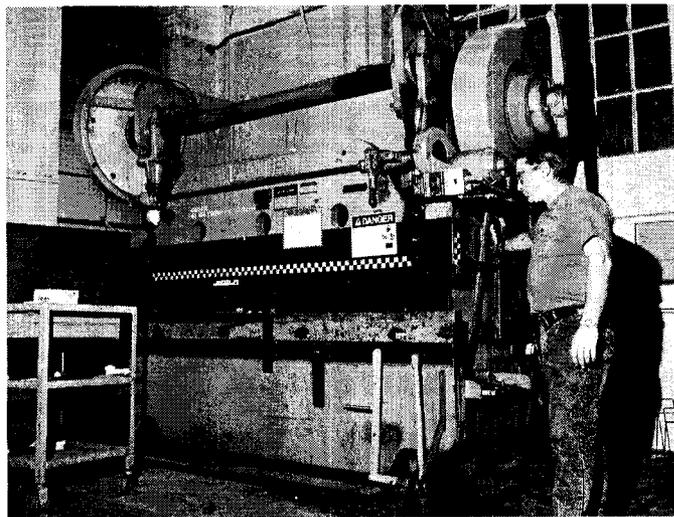
The depot's current mission is the receipt, storage, issue, and demilitarization of conventional ammunition, general supplies, and strategic war materials. In addition, the mission includes manufacturing, procuring, and maintaining ammunition peculiar equipment and repair parts for worldwide Department of Defense support and performing the centralized function test program. The depot provides host support to the U.S. Army Defense Ammunition Center and School, the Occupational Health Nursing Office, Defense Printing Service Detachment Office Reproduction Facility, a Defense Reutilization and Marketing Office, and the 300th Supply Company, an Army Reserve Unit.



30 mm Container Renovation

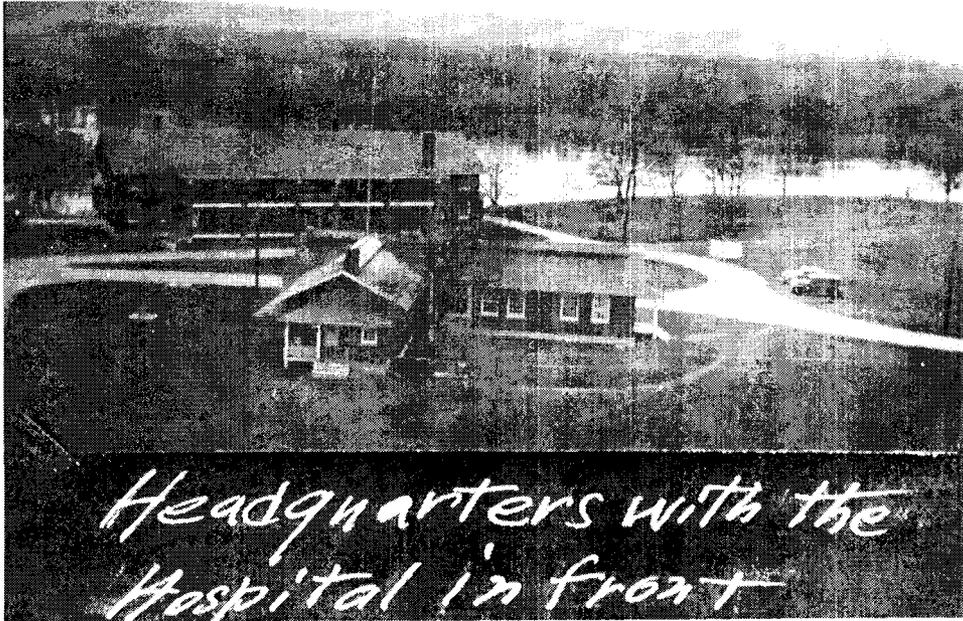


Multiple Launch Rocket System Receipt and Storage.



Ammunition Peculiar Equipment Fabrication

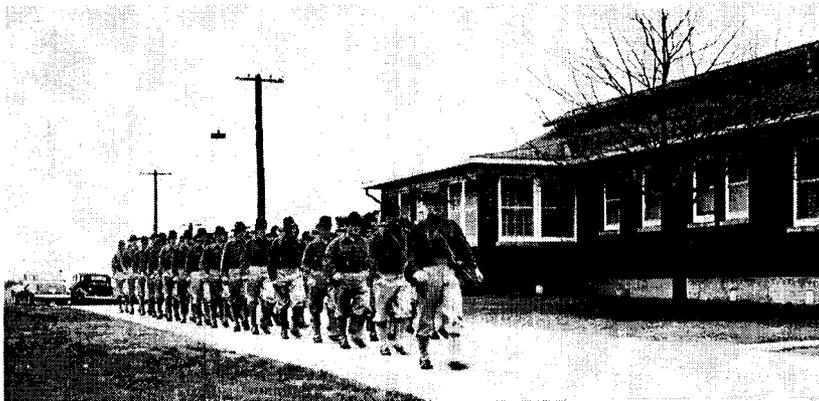
MORE INTERESTING PIECES OF HISTORY



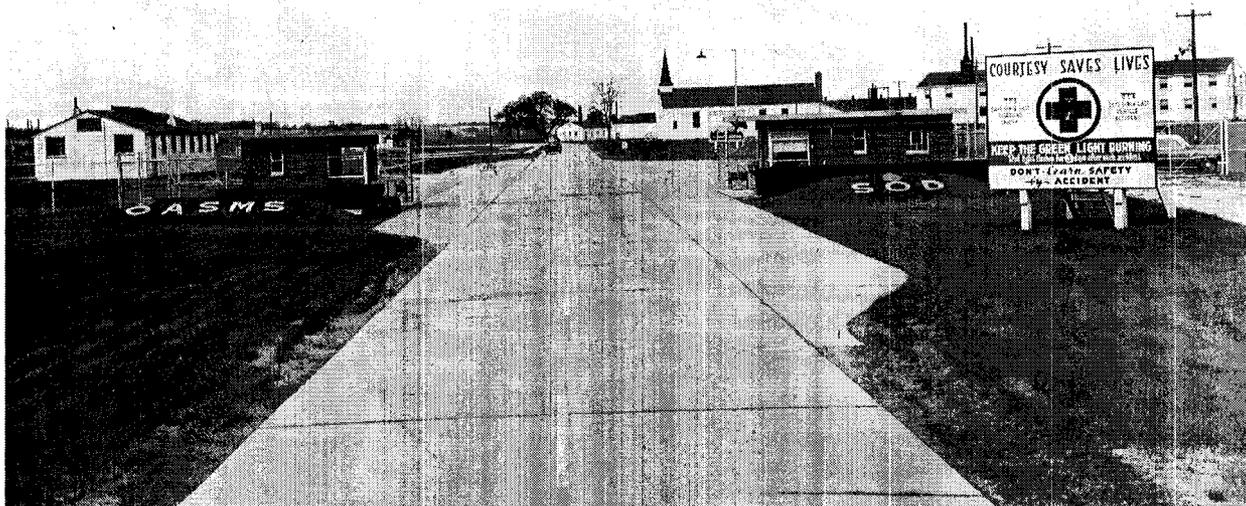
(Left) The original Depot headquarters on the Mississippi River is now building 9, where you will find USADACS' Ammunition School. The Chief of the School and the Registrar's offices are in this building.



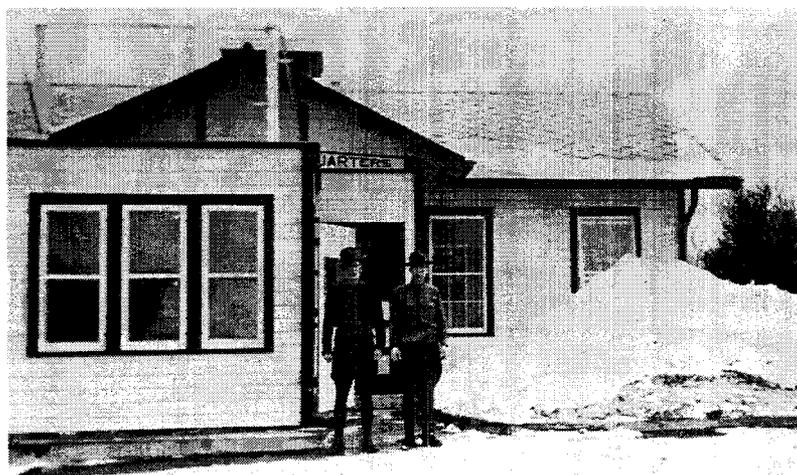
(Above) Depot children stand in front of the hospital that today houses the post restaurant and community center.



(Left) Troops march by the hospital with full pack for field exercise in 1939.

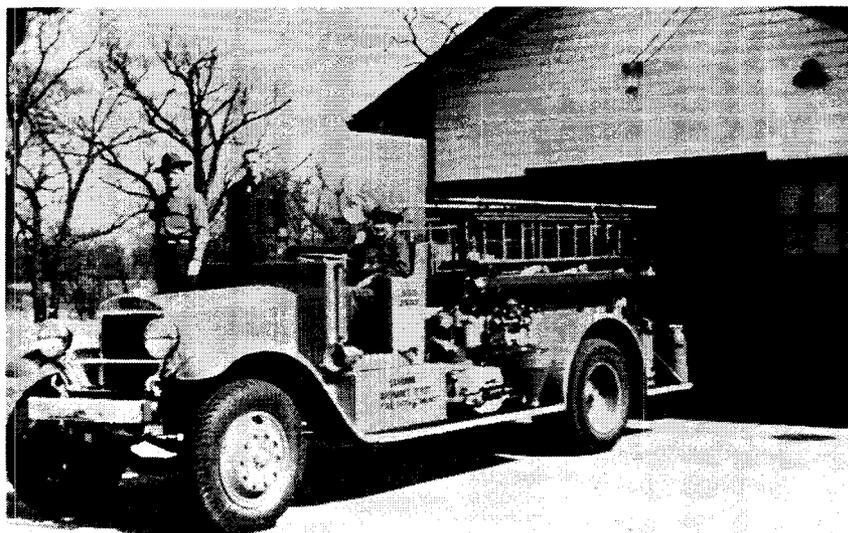


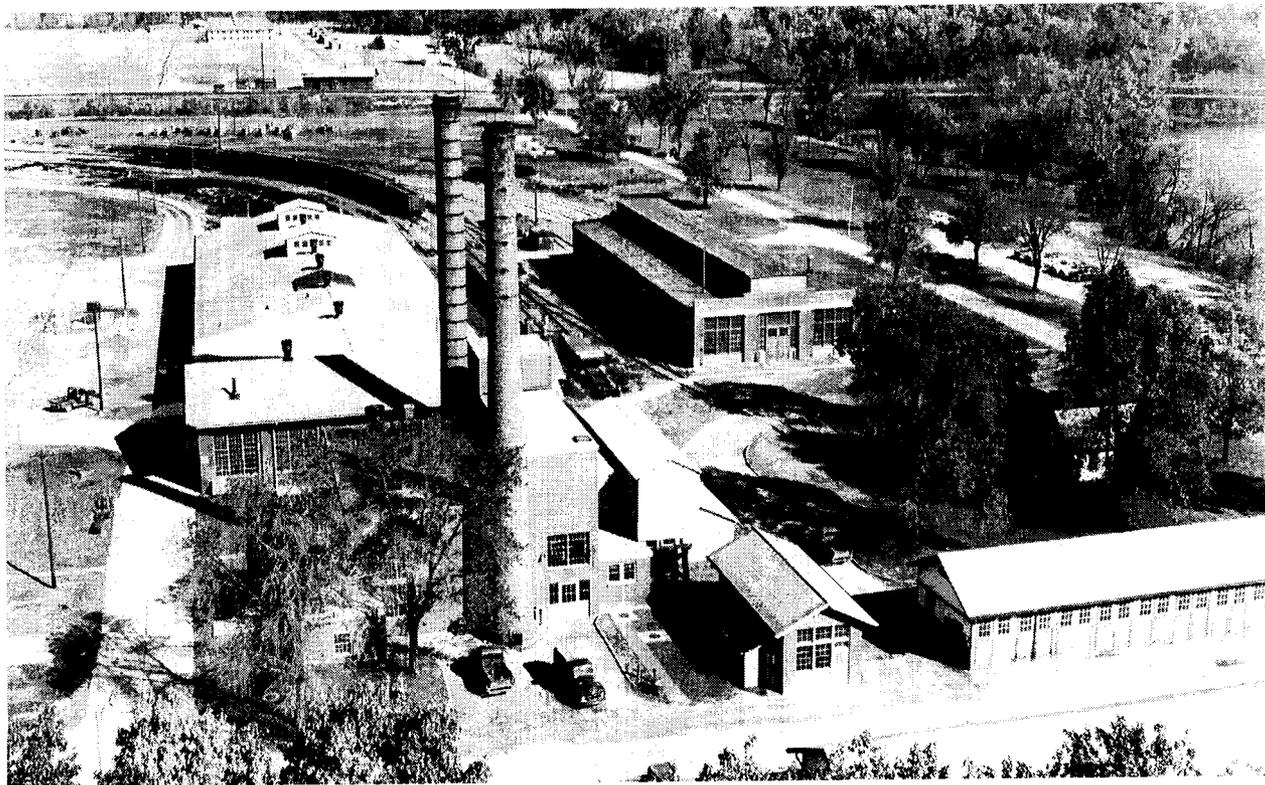
The entrance to the Savanna Ordnance Depot in 1958. The "OASMS" letters (on the left) stand for the Ordnance Ammunition, Surveillance, and Maintenance School activated in 1950.



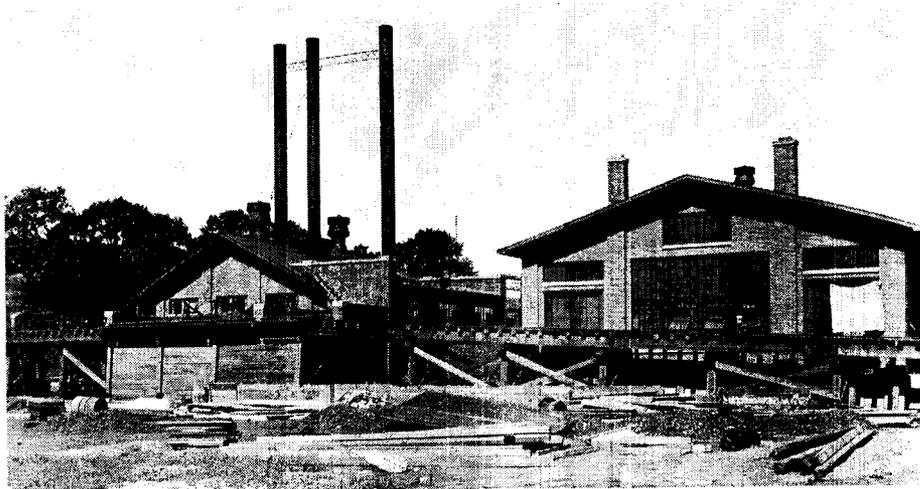
(Left) Private First Class Health and Corporal Guy stand in front of the Guard and Fire Departments' Headquarters building - 1920's.

(Right) Savanna Ordnance Depot's Fire Station with one of its trucks parked in front - 1920's.





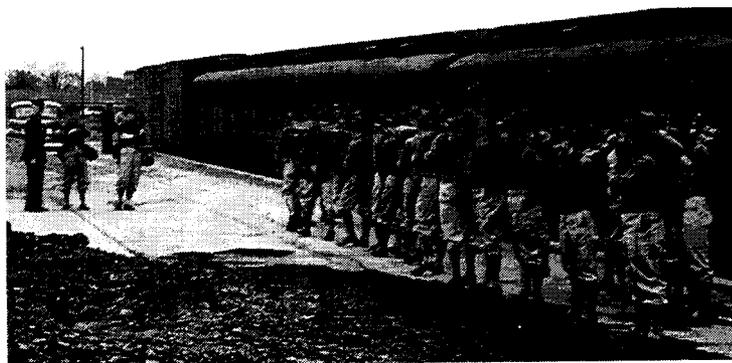
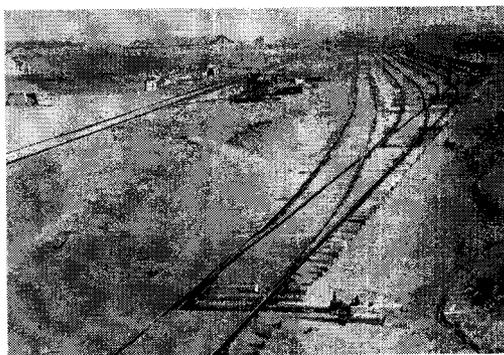
Heating Plant, Machine Shop, and Round House - 1954.



(Left) Steam heating plant and railroad coal trestle addition.

(Lower left) Northwest along classification yard constructed with railroad contract - 1920's. Tracks are partially covered by drifting sand.

(Below) Soldiers arrive at the depot on a train.



U.S. ARMY DEFENSE AMMUNITION CENTER AND SCHOOL *"Depot's Largest Renter"*

1971 --- The DARCOM Ammunition Center was established as a collocated activity at Savanna.

July 1971 --- The U.S. Army Materiel Command Ammunition Center was established as a tenant activity on the Savanna Army Depot, Savanna, Illinois.

July 1979 --- The U.S. Army Materiel Command Ammunition Center was renamed the U.S. Army Defense Ammunition Center and School. This name change recognized the vital role the organization plays in the implementation of the Army's mission to manage conventional ammunition for the entire Department of Defense. USADACS reports to the Commanding General of the U.S. Army Armament, Munitions and Chemical Command at Rock Island, Illinois.



One of the Ammunition School's buildings (at left) is the former 52nd Ordnance Company's Barracks. The 52nd was stationed at the depot from the 1920's until the start of World War II.

October 1987 --- The U.S. Army Technical Center for Explosives Safety was established at USADACS to have one location for assistance and technical services to support and enhance the Army Explosives Safety Program.

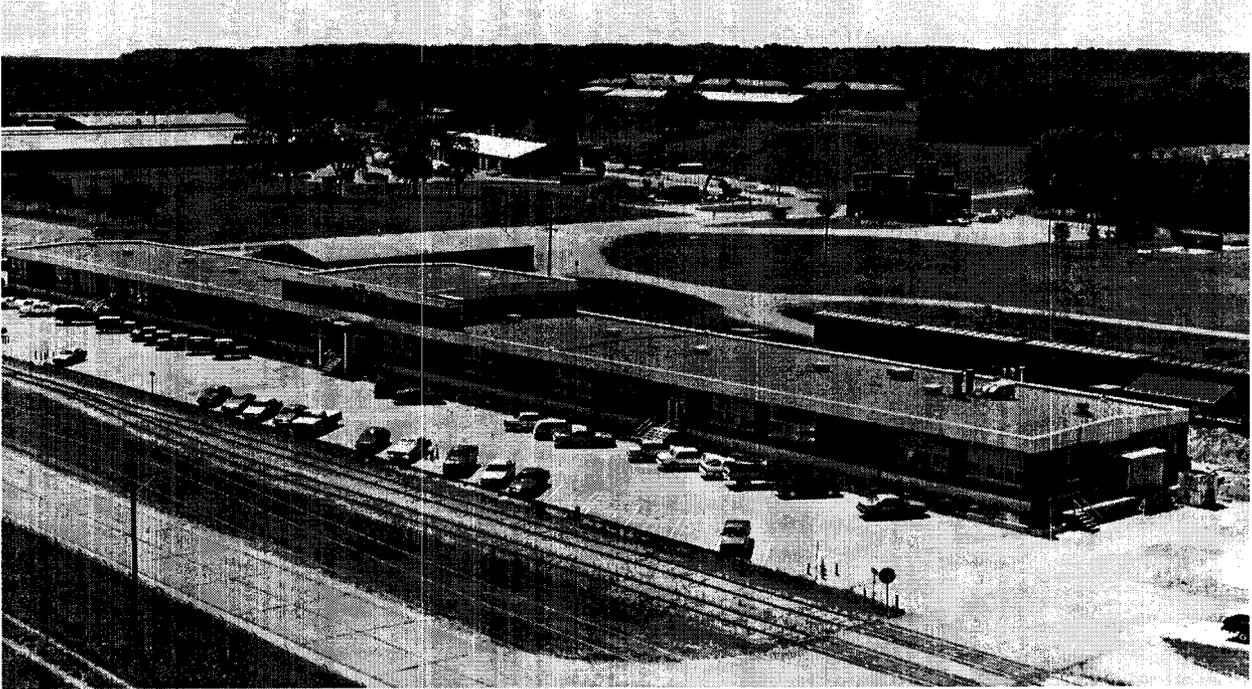
February 1993 --- The Demil Technology Office was set up at USADACS to manage the Joint Service Large Rocket Motor Demilitarization Technology Research and Development Program, the support and transition of the technology into prototype/pilot plant demonstration and validation, establish a master plan for the JSLRMD Program, conduct conventional ammunition research and development, execute the Munitions Inventory Disposition Action System Program, and manage/support other special DOD/Defense Nuclear Agency directed projects.

The USADACS has many missions. They include providing consultants, technical assistance, logistics support, engineering, training, and career management for the Quality Assurance Specialist (Ammunition Surveillance) and the Ammunition Management career programs to all DoD and other government agencies; providing other specialized ammunition services to support Single Manager for Conventional Ammunition, DA, Army Materiel Command and AMC project/product/program managers, functional managers, commodity commands, logistics assistance offices, depots, plants, and arsenals associated with worldwide ammunition logistics; managing an Ammunition School and the USATCES, developing ammunition peculiar equipment items and systems; providing technical expertise in explosives safety; serving as the Program Manager for Underground Ammunition Storage Technologies; executing both the DA and the AMC ammunition review and assistance programs.

Director of USADACS since 1979, Mr. John L. Byrd, Jr. (right) has seen the organization more than double in size and broaden its customer base to serve all the armed services and other United States government organizations along with many foreign government agencies.



MORE USADACS BUILDINGS



Building 134 is the U.S. Army Defense Ammunition Center and School Headquarters. Currently, it houses the Director's Office, the Logistics Engineering Office, the Logistics Review and Assistance Office, and two Department of the Army ammunition career program offices. All of the USADACS 230 employees money requirements are handled by the Resource Management Office here, also.

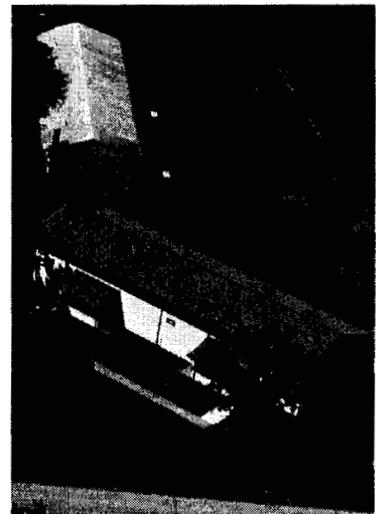
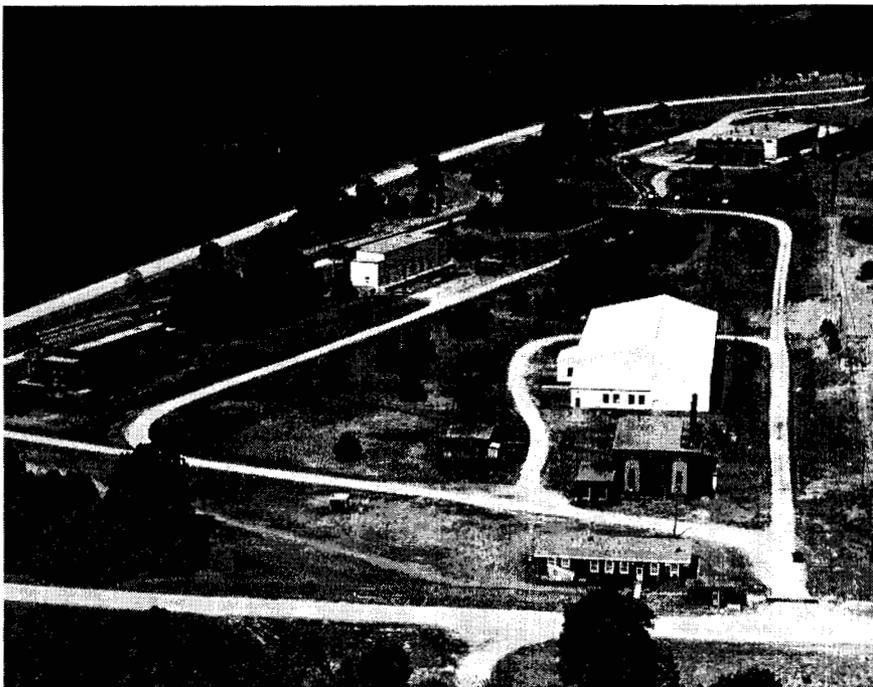


Buildings 247-249 (foreground) house the majority of the U.S. Army Technical Center for Explosives Safety personnel. Also, the remodeled Visitors Center (upper center) serves as the USADACS Ammunition School's student and visitor processing area.

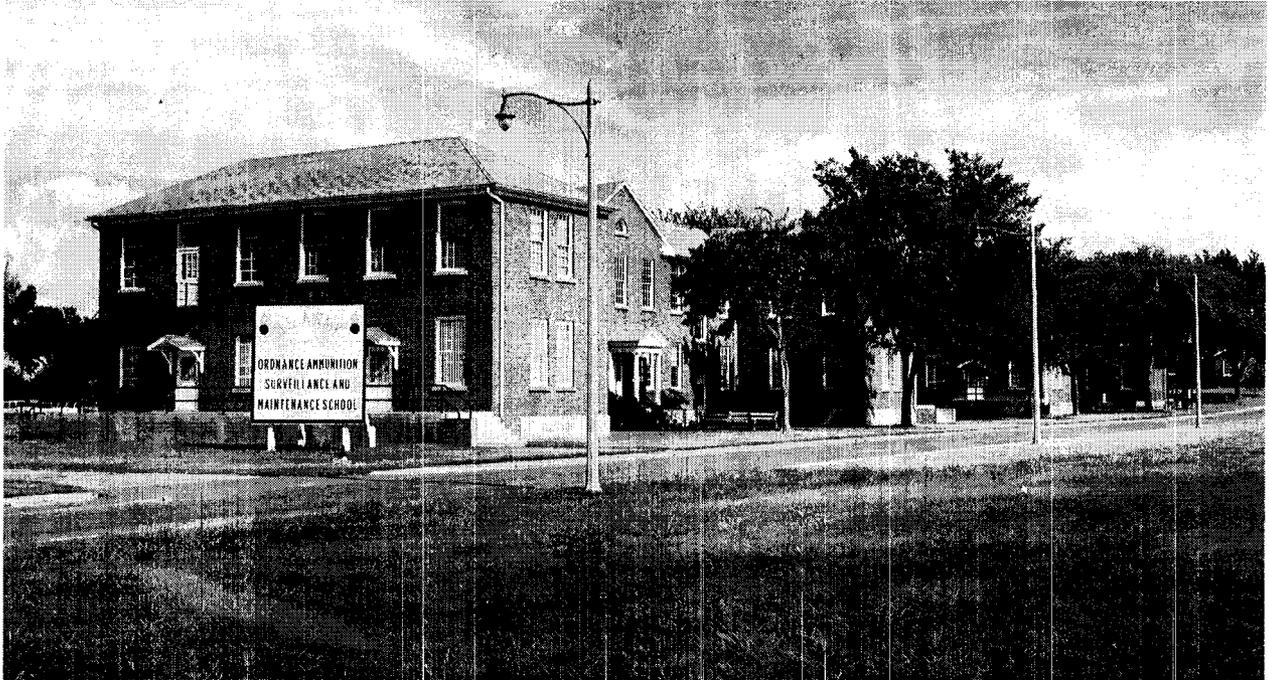
(Below) USADACS Ammunition School campus - Buildings 14 and 15 (right middle) have been remodeled and serve as computer classrooms. Building 26 (upper center), also called the "Tin Shed," has inert ammunition training items.



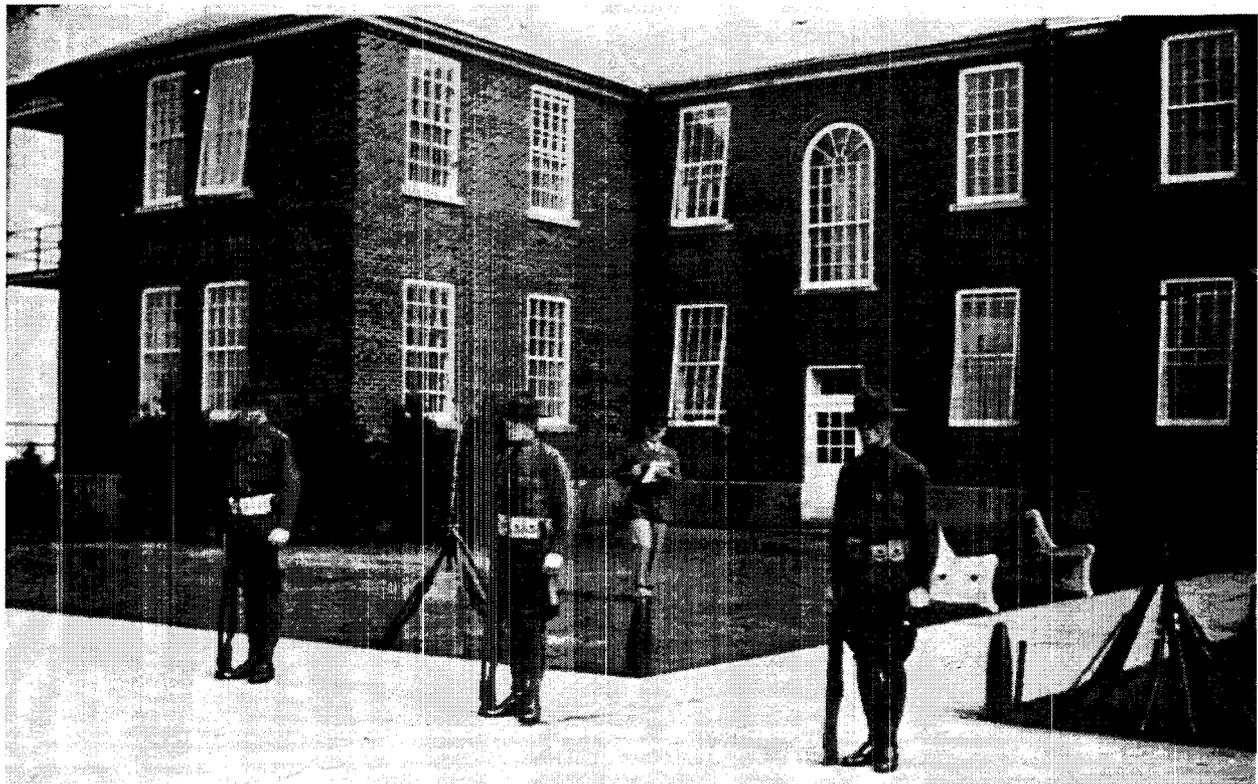
(Below) Building 507 is the Ammunition Peculiar Equipment laboratory (upper center). This building, one of two former TNT manufacturing facilities, now serves as a high tech x-ray facility. Building to left of lab is what this lab used to look like.



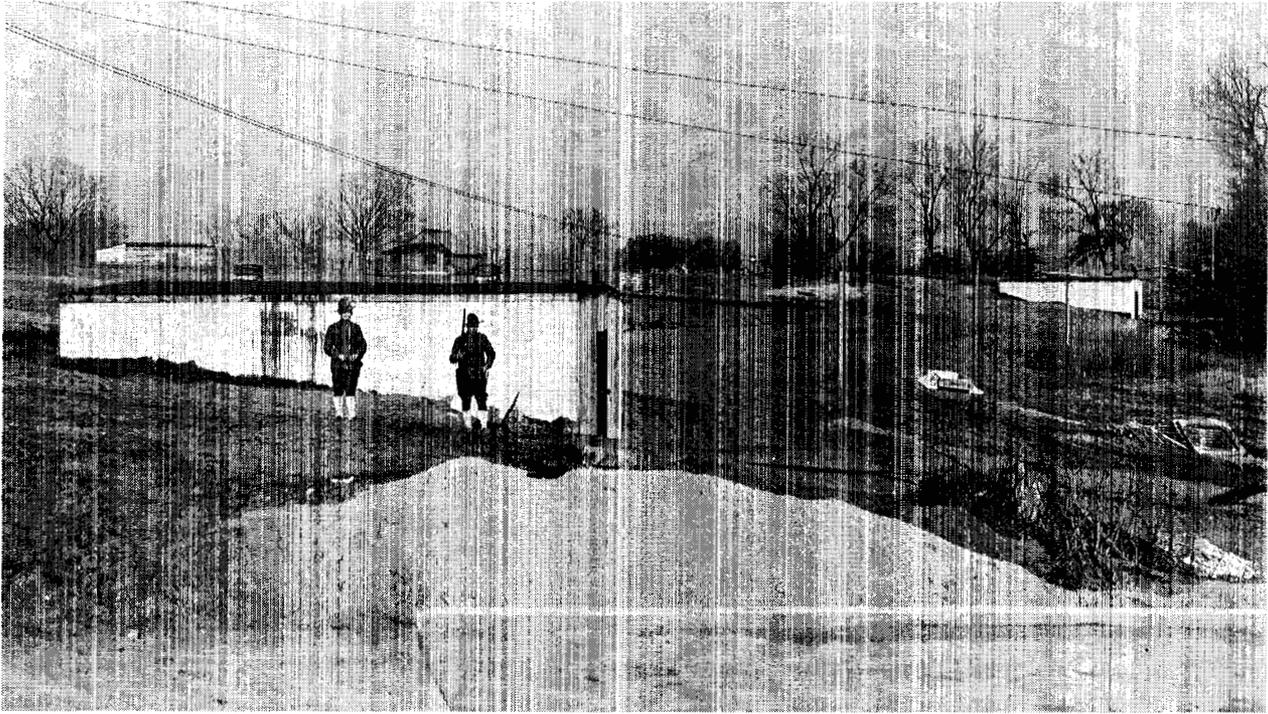
(Above) Building 56 has been converted into a modern Emergency Operations Center for the Chemical Stockpile Emergency Preparedness Program. The program is comanaged by the Army and the Federal Emergency Management Agency.



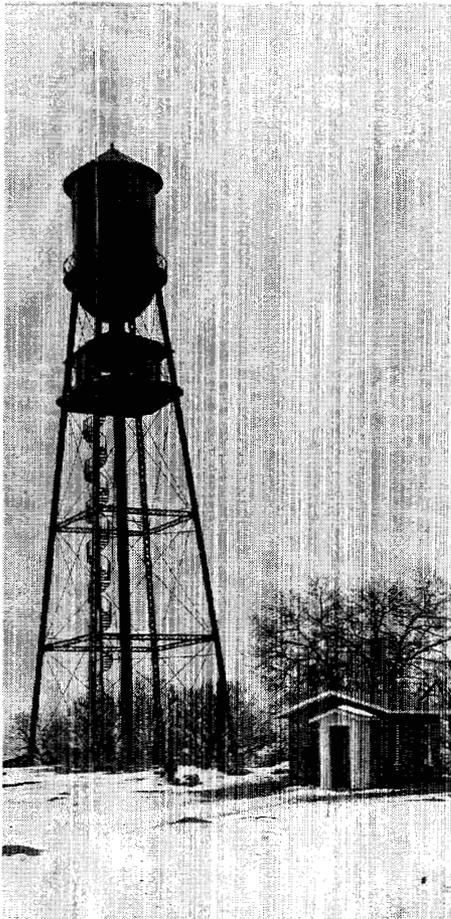
The Ordnance Ammunition, Surveillance, and Maintenance School, activated in 1950, became the Army Materiel Command Ammunition School in 1966. In 1971, the School left the Depot's command, which is headquartered in Chambersburg, Pennsylvania, and became part of the U.S. Army Defense Ammunition Center and School which is part of the U.S. Army Armament, Munitions and Chemical Command headquartered in Rock Island, Illinois.



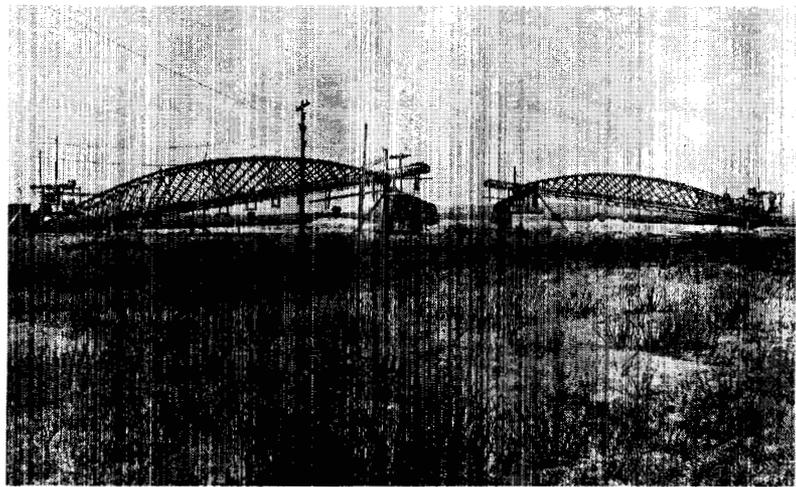
Best drilled soldier competition in front of the 52d Ordnance Headquarters. This building is now part of the USADACS' Ammunition School complex (Building 22).



World War I Era soldiers on duty by one of two concrete powder magazines. These two structures still exist. Also visible in the background is a temporary wooden powder magazine and a cow stable.



(Left) Steel water tank with observation tower and a Boulenger Instrument building (right foreground).



Movable conveyors used to fill nitrate storage pit in 1920's.

Document Separator

INDUSTRIAL OPERATIONS COMMAND

MISSION

Provide the Military Forces Timely and Quality Ammunition, Depot Maintenance, Manufacturing, and Logistics Support

VISION

Be the Recognized Leader in Providing Mission Support to the Military Forces and Secure America's Defense Industrial Base for the 21st Century

VALUES

 **H**ONESTY

 **S**UPPORT

 **E**THICS

 **T**RUST

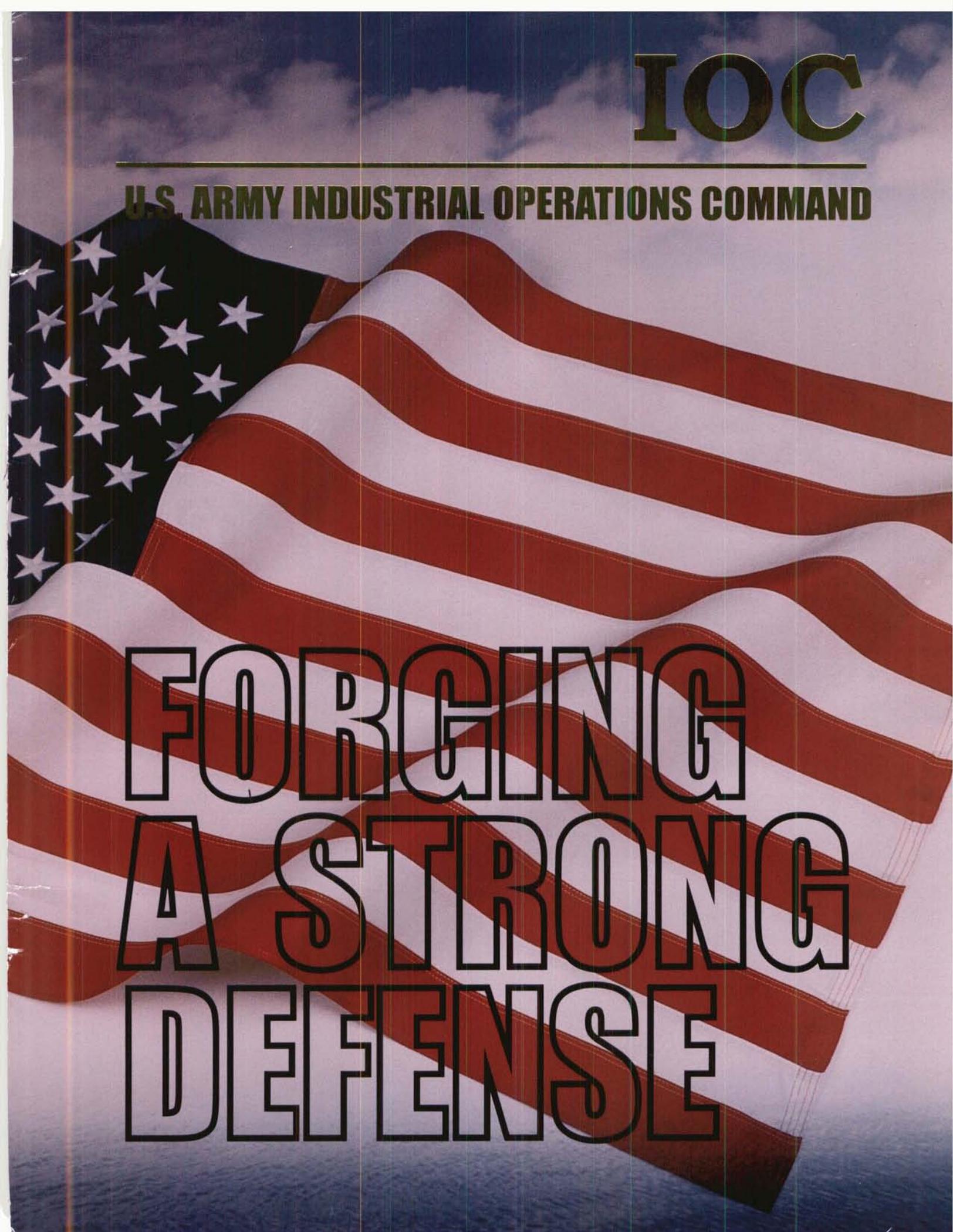


 **A**CCOUNTABILITY

 **R**ESPECT

PHILOSOPHY STATEMENT

Respect and Recognize Individuals
Enable and Empower Employees
Promote Labor/Management Cooperation
Ensure Environmental and Fiscal Stewardship
Promote A Diverse Work Force and Equal Opportunity
Advocate Quality Improvement
Focus on the Customer

The background of the entire page is a photograph of the United States flag waving in the wind. The stars and stripes are clearly visible, and the flag appears to be moving from left to right. The sky is a pale blue with some light clouds.

IOC

U.S. ARMY INDUSTRIAL OPERATIONS COMMAND

**FORGING
A STRONG
DEFENSE**

MESSAGE FROM THE GENERAL

IOC consists of...

- 16 Depots and Activities
- 3 Arsenals
- 21 Ammunition Plants
- and various other elements

IOC employs...

- 24,000 Department of Defense civilians
- 300 Military
- 13,000 Contractor's employees

IOC manages...

- An annual budget of \$3.6 billion
- \$80 billion total assets
- Annual payroll of \$1.1 billion (DA civilians)

IOC possesses...

- 37,000 buildings
- 166 million sq. feet of floor space
- 4,135 miles of roadways
- 2,216 miles of railroad track

IOC has earned...

- World Class Manufacturing Award
- DoD Quality Award
- Community Excellence Award

Welcome to the IOC,

With the establishment of the Industrial Operations Command, the Armament, Munitions and Chemical Command and the Depot System Command have teamed to become an integral part of the Army's strategic focus for logistics support.

Our employees are the reason we remain the leader in the defense industry. Their innovation, dedication, and hard work are the driving forces that allow us to continually improve how we do business. We are very proud of their achievements. Our organization is a partnership of our people, our customers, and our suppliers.

The IOC provides streamlined management of Army industrial operations and a master strategy for the integration of the organic industrial base through initiatives such as sector management, flexible computer integrated manufacturing and integrated sustainment maintenance. And through our management of the war reserve stockpile, the IOC helps the Army meet its warfighting requirements.

This brochure represents the diverse capabilities and superb facilities of our command. By carefully balancing public and private resources, we will ensure that an adequate, flexible, and responsive industrial base is always available for power projection contingencies.

The Industrial Operations Command is a great organization -- an organization where customer satisfaction is taken seriously; an organization where people truly make the difference.



Sincerely,

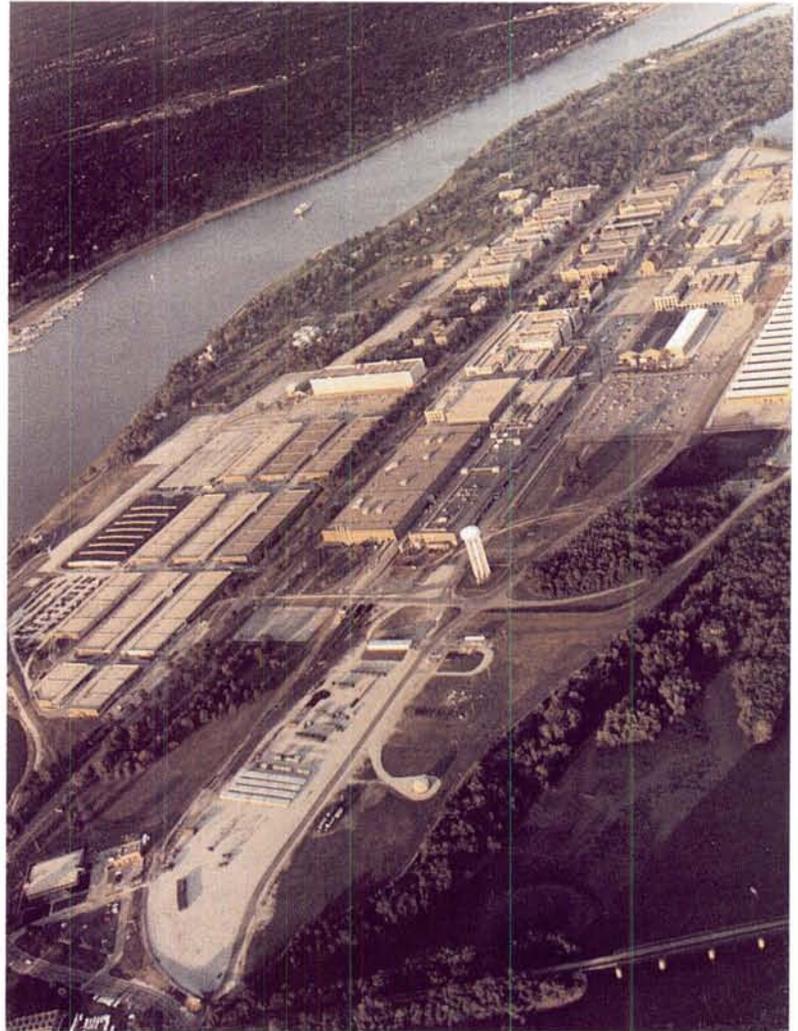
Dennis L. Benchoff
Dennis L. Benchoff
Major General, U.S. Army
Commanding

INTRODUCTION

This is the Industrial Operations Command (IOC). The IOC is a worldwide organization with installations and activities located in 25 states and overseas. IOC is a major subordinate command of the U.S. Army Materiel Command, headquartered in Alexandria, Virginia. The IOC's viable industrial infrastructure is second to none in producing quality munitions and large caliber weapons, and in providing a full range of maintenance services for modern weapons. The IOC manufactures, delivers, and supports materiel throughout the world for America's service members.

The IOC Mission

The IOC, headquartered at Rock Island Arsenal, Rock Island, Illinois, is a flexible, responsive, and highly capable organization. The IOC, through its expertise in the areas of maintenance, logistics, and manufacturing, and as a production base, performs a vital defense role. The IOC maintains, repairs, and rebuilds today's sophisticated weapon systems and munitions. The command produces tomorrow's high technology systems. In addition, the IOC fabricates hard-to-procure items and manages the life cycle of conventional ammunition. The IOC maintains the Army's war reserve and operational project stocks required for power projection. The IOC stands as the logistics bridge that links peacetime readiness to wartime sustainment/reconstitution.



IOC is headquartered on Arsenal Island

Overview of IOC Capabilities

The IOC provides the highest quality and most advanced weaponry that American ingenuity and technology can produce. Ensuring our troops the best materiel and services, the IOC performs total life cycle support worldwide. The IOC's facilities and highly skilled and mobile workforce can

quickly and cost-effectively produce and test new weapon and ammunition products, ship materiel, sustain equipment, support materiel deployed worldwide, and demilitarize products. The IOC continually evaluates and improves its capabilities to serve customer needs.

LOGISTICS SUPPORT

War Reserve and Operational Project Stock

The IOC maintains the Army's war reserve and operational project stocks required for power projection. Depots provide maintenance and storage for Army weapon systems and platforms and provide ammunition for all services. The IOC's long-term mission provides a logistics springboard for power projection. The IOC maintains pre-positioned heavy combat equipment, supplies, and ammunition in Army war reserve storage throughout the world. These pre-positioned stocks on land and afloat greatly reduce the time required to deploy forces in an emergency.

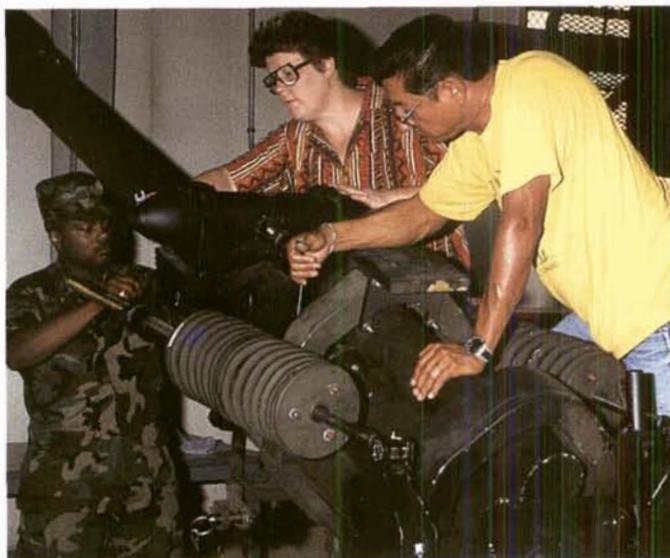
Depot Level Maintenance

The IOC's highly skilled workforce of certified mechanics, laboratory technicians, and engineers provides the expertise to successfully perform depot level maintenance. The command has Centers of Technical Excellence for communication, electronics and ground-based satellite systems, heavy and light tracked vehicles, helicopters and navigational components, and all DoD tactical missiles. Logistics support elements can set up depots to support fielded troops in theaters. These elements have partnering arrangements with contractors to provide the maximum service to troops throughout the world. IOC's skilled staff will keep the high technology systems operating.

IOC is sensitive to customer needs and will continue efforts to improve our response to the customer.

Training

Peacetime training of the military units is supported with IOC-furnished equipment, material, skilled people, and facilities. Hands-on training at many IOC facilities for Military Reserves, National Guard, active duty, and friendly foreign military personnel is provided to keep a combat-ready military force capable of decisive victory.

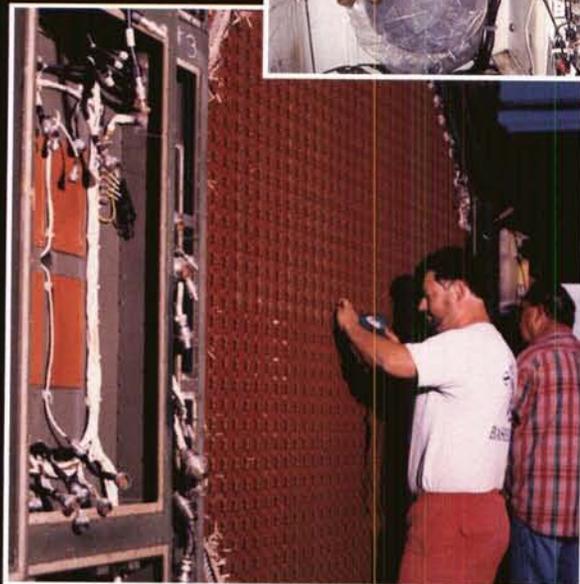
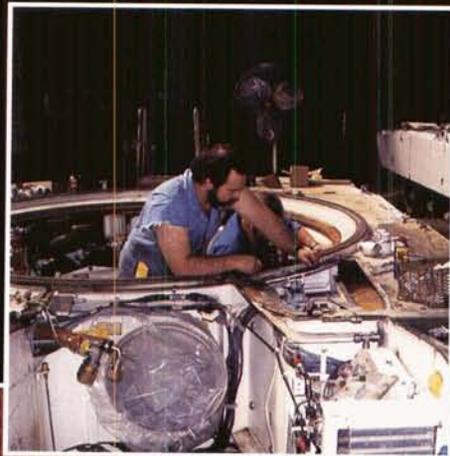


M119 Howitzer



Storage igloo

FACING PAGE: Depot level maintenance performed by highly skilled personnel. UPPER RIGHT: Blackhawk Helicopter CENTER: M1A1 Tank LOWER LEFT: Patriot radar antenna



" The IOC's long-term mission provides a logistics springboard for power projection. "

IOC INITIATIVES

The IOC initiatives are fully dedicated to cost effective readiness

Customer satisfaction forged in a cost conscious environment yields programs from Excellence in Acquisition to Value Engineering. Efforts like these save millions of dollars annually. A few of these initiatives are:

Acquisition

Several initiatives to simplify the acquisition process for both government and industry have been implemented. Unnecessary data requirements from the government-owned/contractor-operated contracts are being removed. Best value teams are streamlining solicitation requirements. Contractors can review solicitations on an electronic bulletin board and determine which ones to request.

Team Building

The IOC stresses customer service in its operations. To enforce this effort, the IOC trains its workforce using the Army HEARTS (Honesty - Ethics - Accountability - Respect - Trust - Support) training program. HEARTS builds those values by presenting participants with a series of physical and mental challenges. HEARTS groups emerge as a team in which all members have confidence in each other and know how to work together to reach a common goal. The training program was created by, and is licensed to, the Saturn Corporation, an American automaker known for its emphasis on quality, customer service, and teamwork.

Quality

Quality initiatives are at the core of the IOC's mission. The IOC takes great pride in supplying goods and services which fully meet or exceed customers' expectations. The customer-oriented business method doesn't rest solely with the end user, but is an IOC business practice. The IOC internally practices quality management and also extends TQM to its contractors in the form of partnering. Partnering between the government and contractors leads to better communication, trust, and higher quality in all facets of this relationship. A Contractor Performance Certification Program (CP²) for quality improvement is offered by the government. This rigorous certification process is well worth the contractor's effort. Contractors benefit by reduced

government oversight and reporting, while the government benefits by obtaining quality products at a reduced cost.

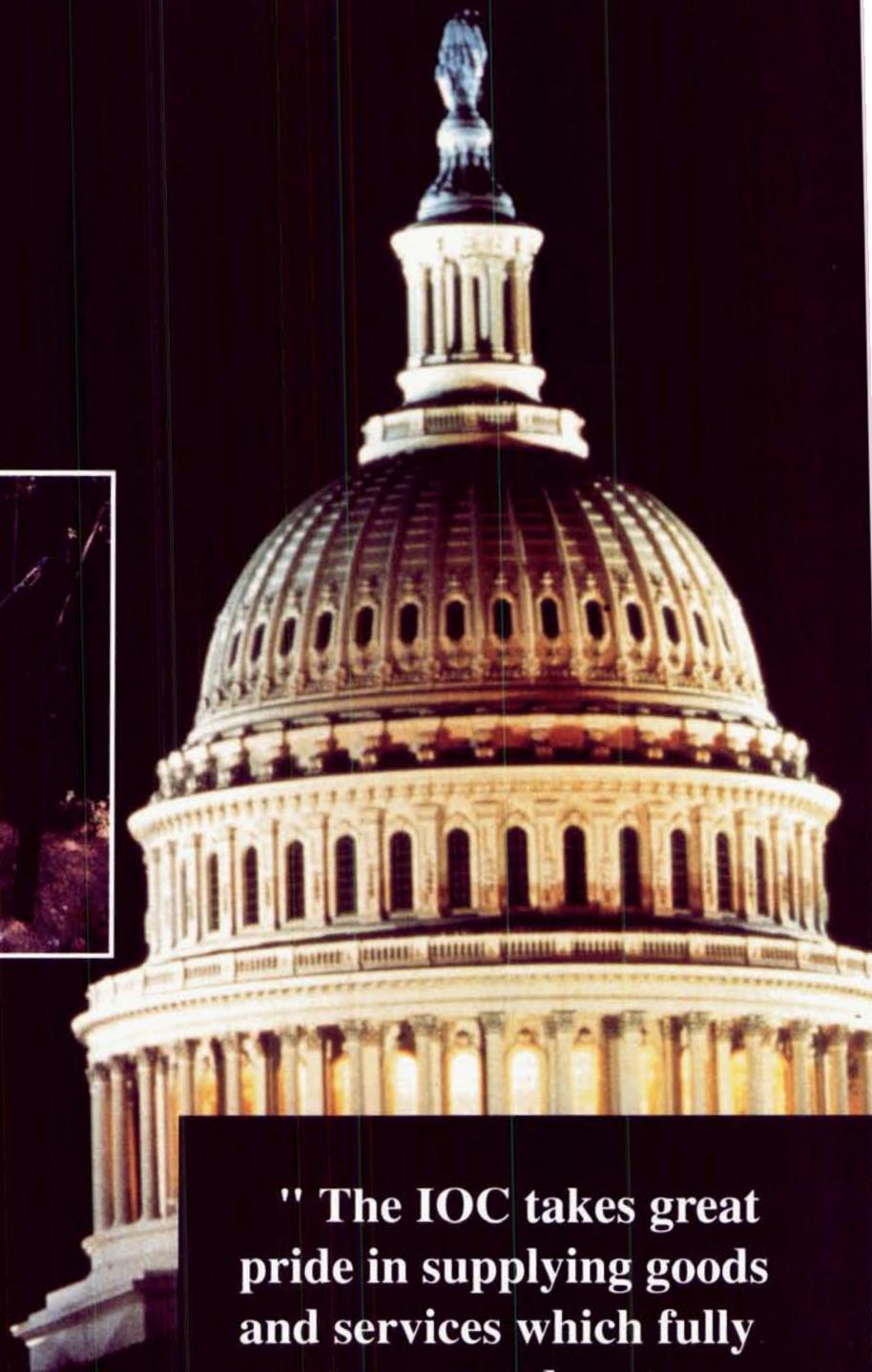
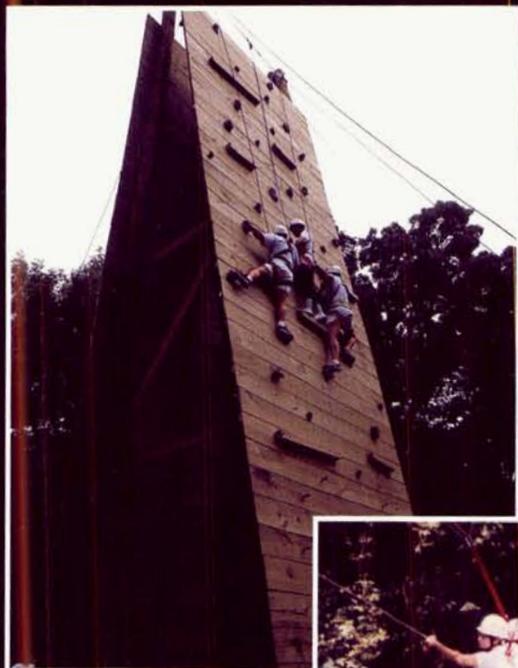
Responsive Replenishment of Parts

The IOC is deeply involved in a defense initiative to integrate equipment, software, communication, human resources, and business practices to rapidly manufacture, repair, and deliver items on demand with continuous improvements in the processes. The goal is to supply parts on demand with high reliability and quality at competitive prices. IOC has two Army sites, one electronic and one mechanical, for the initial implementation.



Paladin partnership with United Defence represents a quality relationship

FACING PAGE: Rigorous training emphasizes teamwork
UPPER LEFT: HEARTS wall ***CENTER:*** HEARTS High-Y



" The IOC takes great pride in supplying goods and services which fully meet or exceed customers' expectations. "

" The IOC is a model of environmental stewardship and leadership..."

Facility Utilization Incentives

IOC offers incentives for commercial as well as government use of the underutilized capacity at government-owned/contractor-operated Army Ammunition Plants. The initiative, enacted by Congress, allows contractors to acquire use of government facilities for non-military manufacturing, rework, and storage. The opportunities for contractors are appealing because of the various incentives and minimal bureaucracy. The initiative benefits all parties: contractors may be eligible for incentives for marketing, excess equipment sales, loan guarantees, and employment; use of land, buildings, and equipment; access, in some cases, to existing environmental permits and waste treatment facilities; and favorable market rates for utility services. The community benefits from jobs retained or created, revenue generated, and industrial development. The Army benefits by maintaining readiness and critical skills and by reducing maintenance and product costs.

Reshaping the Industrial Base

The IOC has a dynamic strategy entitled Ammunition Facility Strategy for the 21st Century (AMMO-FAST-21) to reshape the ammunition industrial base to a smaller size, while establishing more flexibility and maintaining the capability to meet today's peacetime ammunition requirements and tomorrow's technologically improved ammunition needs. This strategy is achieved through a mixture of government and commercial capabilities and facilities. To structure the govern-



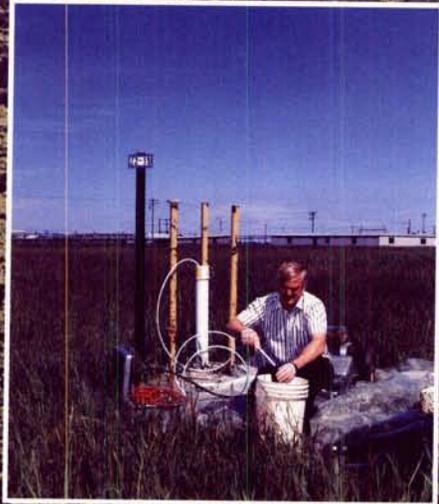
Army seeks commercial enterprises

ment-owned base, similar critical ammunition items are grouped into commodity families based upon manufacturing technologies. The corresponding groupings are called Group Technology Centers. Specified Mission Facilities will have a production and at least one other mission, such as supply depot operation. Critical skills and capability are maintained primarily with traditional workload. Development of acquisition strategies in support of commercial producers is integral to the command policy and strategy. It is IOC policy to accomplish this by competitive means, using best value contracting methods, as appropriate, and other measures which will ensure the survival of a viable commercial industrial base. Partnering between government and contractors assures that all readiness needs are satisfied.

Environmental Stewardship

The IOC is committed to protecting the environment. The IOC is a national leader in environmental and natural resource stewardship while maintaining timely production of materiel for the service member in the field. The IOC faces the largest restructuring of funds, facilities, equipment, personnel, and operations in recent history. As the force is restructured, the base structure will decline, putting more pressure on the land, air, and water necessary to support our mission of supplying and maintaining a ready force. The IOC assumes the stewardship of these resources and is correcting past violations of its environmental trust. The IOC's environmental strategy has four pillars: Compliance, Restoration, Prevention, and Conservation. The IOC works closely with federal agencies, states, industry, and the public to achieve environmental compliance. Restoration of previously contaminated sites is underway to reclaim these sites as quickly as possible to protect human health and the environment. Pollution prevention has already started with the breaking of the "throw away" attitude. Recycling is being used to conserve resources. In some cases, 100 percent of the material being used in the IOC manufacturing processes is recyclable. The IOC is a model of environmental stewardship and leadership for others to follow.

FACING PAGE: Environmental responsibility BOTTOM CENTER: Ground water testing BOTTOM RIGHT: Environmentally sound treatment of waste materials--incinerator complex



FACILITIES CAPABILITY

THE IOC CAN MEET THE CUSTOMERS' NEEDS, LARGE OR SMALL

IOC facilities support customers worldwide. The versatility extends from controlled, low-volume specialty lines to mass production. The IOC can accommodate renovation, overhauls, upgrades, and repairs on nearly all of the ground equipment for the Army and Marine Corps, on helicopters for all services, and on a variety of other equipment and materiel ranging from radar to missiles. The facilities are flexible and cost-effective. Always, manufacturing and remanufacturing processes are executed with exacting quality. IOC operates some of the most modern, technologically advanced manufacturing and remanufacturing facilities in the world. Through concurrent engineering and integrated logistics support, the command retains a role in research and development and

fielding of new weapon systems and ammunition. Facilities consist of depots, arsenals, ammunition plants, and activities. The range of IOC's capabilities can meet the needs of nearly any manufacturing or remanufacturing project, large or small. Significant capabilities include:

Casting — IOC facilities can melt ferrous, non-ferrous, and alloy metals by induction furnaces and then cast into single components weighing up to 12,000 pounds. IOC can also deliver precision investment castings to tolerances within .005 inch per inch.

Forging — Forging is performed by both closed and open die forging with air drop hammers. In addition, rotary forging of solid or hollow pieces up to 22 inches in diameter and 32 feet in length is successfully accomplished.

Machining — Conventional and numerically controlled precision milling, grinding, profiling, turning, boring, and cutting are performed. IOC facilities can handle single component pieces weighing up to 60,000 pounds. Facilities can machine explosives to exacting specifications. IOC facilities also house metal pressing, punching, forming, shearing, and crimping equipment. Other computer numerically-controlled equipment includes Electric Discharge Machining, laser/plasma cutting, and simultaneous multi-head drilling.

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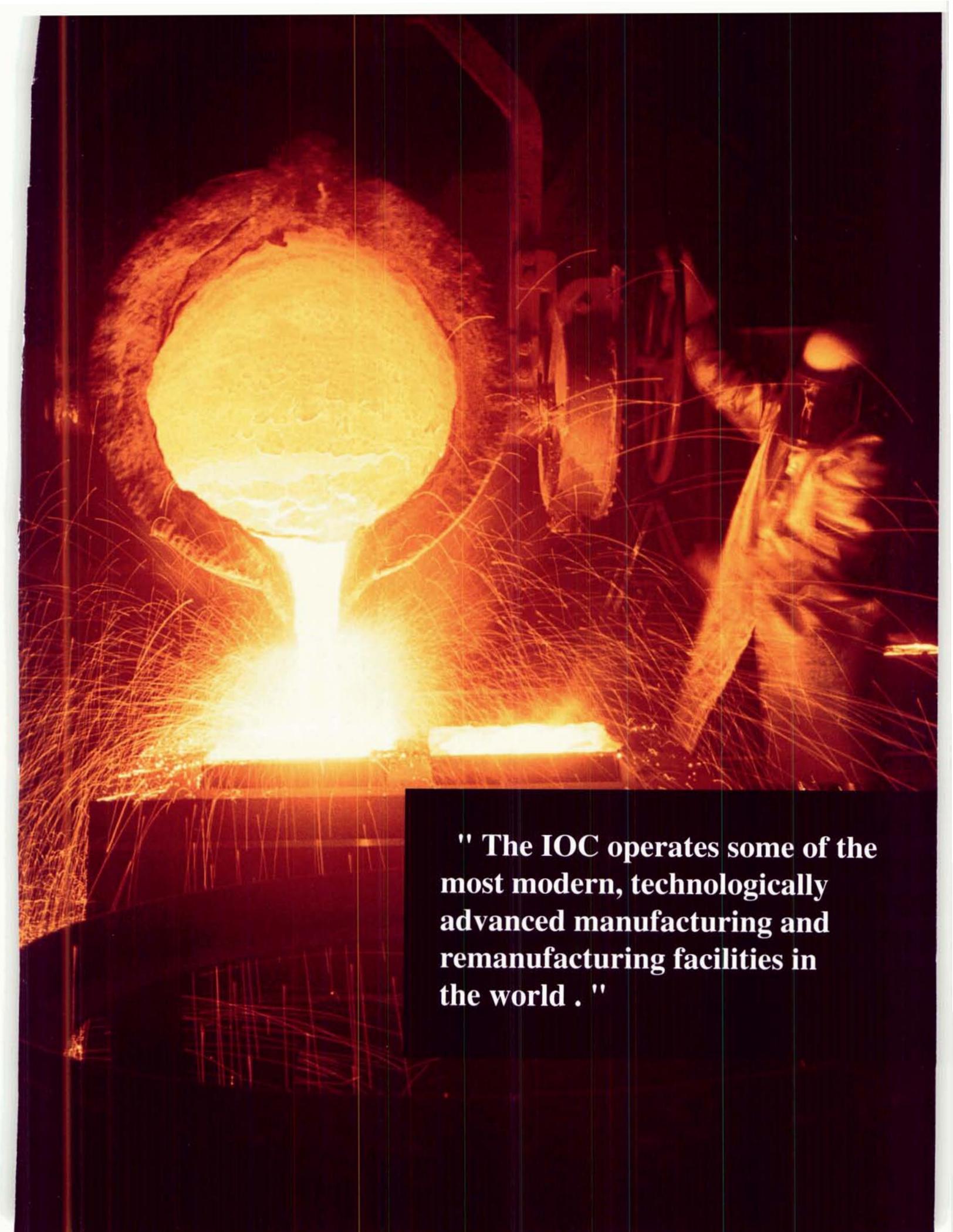
Foundry pour from an induction furnace.



Laser cutting turbine vane



Low pressure steam forge

A large industrial furnace is shown pouring molten metal. The metal is bright yellow-orange and is being poured from a large, circular opening. A thick stream of molten metal is falling into a container below, creating a large splash of bright orange sparks that fly outwards. The background is dark, and the overall scene is illuminated by the intense heat of the molten metal.

" The IOC operates some of the most modern, technologically advanced manufacturing and remanufacturing facilities in the world . "

" The IOC facilities have automated systems which provide secure indoor storage ... "

Finishing — IOC finishes products with a full range of heat treatment, plating, anodizing, and coating facilities and equipment capable of chemical agent-resistant coat painting and chemically or electrically applying chrome, nickel, cadmium, and copper.

Fabrication — IOC's fabrication capabilities include riveting, certified precision soldering, and welding of ferrous, non-ferrous, and exotic metals such as titanium. Welding processes also incorporate robotics. Integrated circuits can be hot air flow soldered on a multilayer, printed circuit board. Other related capabilities include fabrication of plastics, rubber, textiles, and leather goods.

Plastic Injection/Rubber Molding — IOC facilities have a full range of hot/cold processes that can produce up to a 75-ton and 18-inch by 24-inch work piece. Their rubber injection molding machine is capable of forming dies from 14 liters to 630 tons.

Automated Storage and Retrieval Systems — The IOC facilities have automated systems which provide secure indoor storage locations for parts and provide the ability to track parts in inventory and to efficiently deliver items to manufacturing/remanufacturing areas.

Rubber Recovery — IOC operates an environmentally safe rubber product facility. The facility removes old rubber to recondition road wheels and tracks of tracked vehicles.

*FACING PAGE: Storage igloo
UPPER LEFT: Inert bombs
UPPER RIGHT: Cannon tubes*



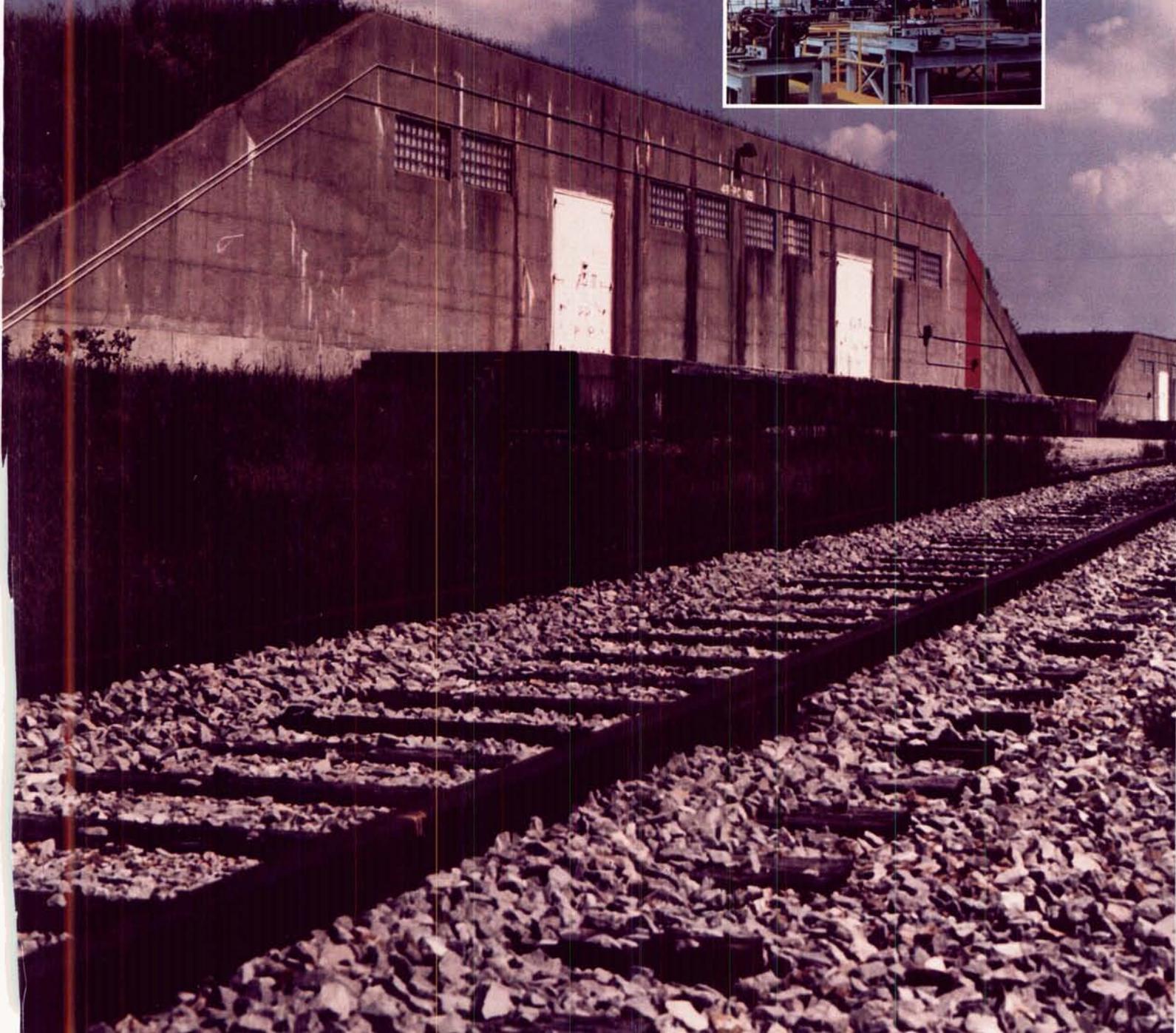
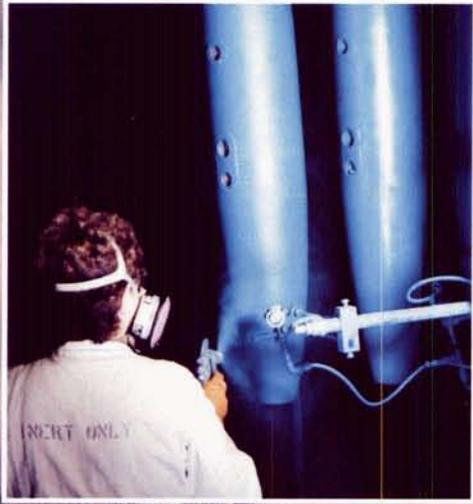
Spray painting stencils



Bradley welding repair



Tire rebuilding



" Facilities and equipment meet or exceed rigorous safety requirements."

Ammunition Load, Assemble, and Pack (LAP) —

The IOC has the LAP capability that loads items as small as 112 grains to 4500 lb bombs and 40,000 lb shock charges. The IOC assembles items as simple as blank rifle cartridges and as complex as smart ammunition. The manufacturing and integration processes are routinely performed on common and specialized materials with quality always instilled in the product. Packaging expertise enables long term storage with high dependability. The IOC facilities are capable of producing everything from research and development lots to mass production quantities.

Insensitive Munitions — The IOC is a major producer of insensitive explosives and has extensive load, assembly, and packaging capability with insensitive munitions such as Plastic Bonded Explosive (PBX) for warheads, projectiles, and bombs.

Cast/Cure — IOC can cast/cure explosives. IOC facilities have high shear mixers ranging from 5 to 600 gallon capacity, explosive presses ranging from 6 to 800 ton, a vacuum dispensing system, and explosive cure magazines.

Pressing — IOC can undertake projects requiring up to 800-ton pressing for explosive billet forming and pressing.

Melt/Pour — IOC melts and pours explosives, including Tetryl, HTA-3, RDX, Composition B-4, Composition B, Baritol, Cyclotol, Octol, Tritinol, and H6. The automated melt-loading process can handle more than 34,000 pounds of explosive material in a single 10-hour shift. Facilities and equipment meet or exceed rigorous safety requirements.

Explosive/Propellants —

The IOC capabilities include the largest production facility of bulk explosives in the free world. The IOC provides explosives to all DoD services. The IOC also provides propellant for tank, artillery, small arms ammunition, and rocket motors.



Mine assembly



155mm projectiles

FACING PAGE: Smoke munitions UPPER LEFT: Hellfire warhead pressing UPPER RIGHT: Control-room for small caliber ammunition LOWER RIGHT: 5/54 projectiles



" ... renovate, rebuild, rehabilitate, and maintain high technology systems."

Topographic Equipment and Military Locomotives —

The IOC has the only DoD facility to repair and overhaul topographic equipment. The IOC also manages the facility to repair military locomotives.

Whirl Tower — The IOC main rotor blade test facility can aerodynamically balance composite blades for the UH-60A Blackhawk and the CH-47 Chinook helicopters.

Tank and Armored Assault Vehicle Testing —

IOC has high-speed test tracks to test tanks and armored assault vehicles in varied applications such as fording, swimming, and navigating longitudinal and traverse slopes.

Renovation, Rebuild, Rehabilitation, and Maintenance —

IOC facilities renovate, rebuild, rehabilitate, and maintain high technology systems. These include the M1 Abrams tank and other heavy combat vehicles and their components, the Bradley Fighting Vehicle and other light and medium tracked vehicles and weapon systems, DoD tactical missile systems including 7M Sparrow and ATACMS, the AH-64 Apache and other helicopters and components, and communications and electronics systems including Defense Satellite Communications Systems. The IOC also performs modifications and upgrades of systems, such as the upgrade of M109 howitzers to Paladins.

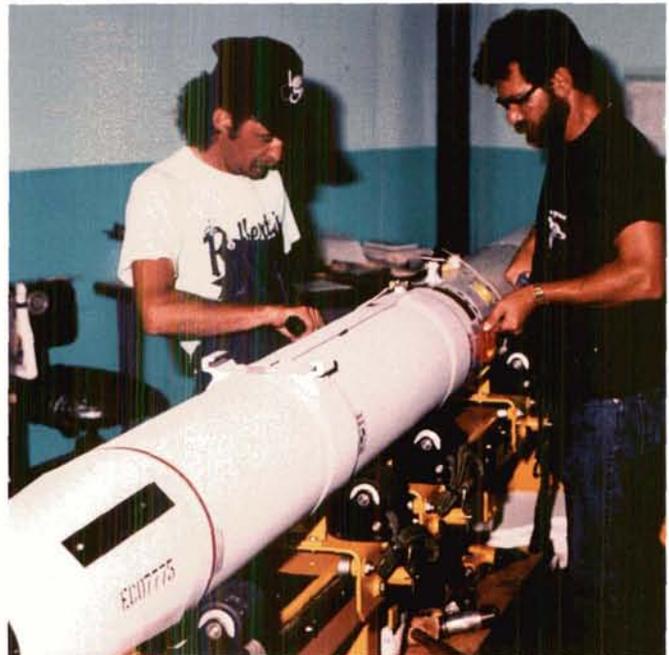
Environmentally Controlled Clean Rooms —

Clean rooms repair, overhaul, and calibrate aircraft instruments, fire control, and communications equipment. They contain precise instrumentation capable of measurements in millionths of an inch. Clean rooms range from Class 10,000 to 100,000. The IOC also has Electro Static Discharge (ESD) work stations which prevent damage to sensitive electronic components.

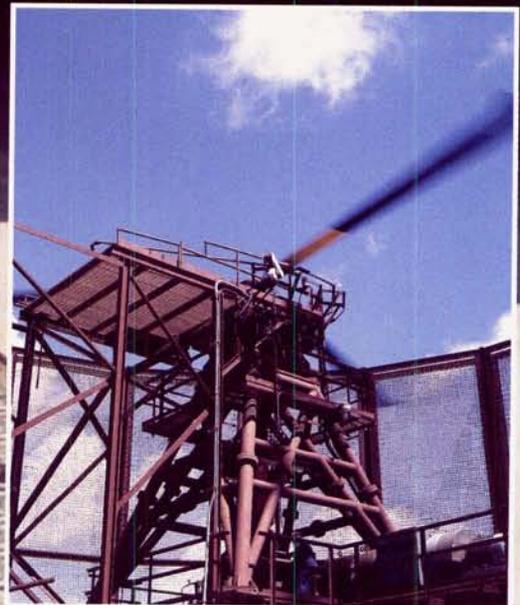
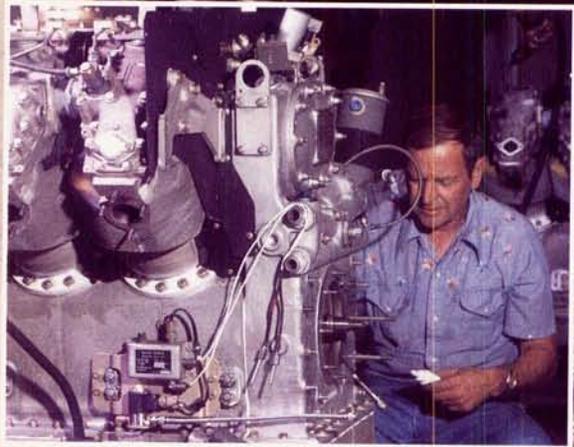
*FACING PAGE: Tank on test track
LOWER LEFT: Engine rebuild
LOWER RIGHT: Whirl tower rotor
blade test*



U.S. Army locomotive



Sparrow missile



" The IOC has the only DoD test facilities to repair and test microwave communications equipment."

Research and Development (R&D) —

The IOC provides support in the development of new products. To incorporate the latest technology into the design of products, IOC employs the best and brightest engineers, scientists, and technicians who utilize state-of-the-art computer hardware and software. IOC depots, arsenals, and ammunition plants have on-site laboratory and testing facilities. Having developers and designers work closely with manufacturers creates a synergy that results in innovative, workable solutions.

Demilitarization/Disposal —

The IOC operates demil, disposal, and recycling facilities that are state-of-the-art. The disposal systems are safe and environmentally sound. More and more emphasis is placed on resource recovery and recycling rather than on

open burning, detonation, or throw-away. The facilities can demil missiles, ammunition, propellants, explosives, and pyrotechnics. Processes used include incineration, neutralization, solvent recovery, wash out/steam out, flash burn, open burn, deactivation furnace, and underground detonation. Literally tons of ammunition are safely and efficiently demilitarized each year.

Environmental Stress

Screening — IOC has the largest such testing facility in the Department of Defense. The facility consists of 12 temperature chambers and five vibration tables. Each chamber has a 48 cubic foot capacity and can undergo temperature changes of up to 20 °C (Centigrade) per minute, within the range of -73 to 173 °C. The vibration tables are capable of 6000 force pounds for a bandwidth of 20 to 2000hz.

Testing — IOC facilities can perform destructive and nondestructive chemical and physical tests. Facilities have X-ray, magnetic particle, liquid penetrant, ultrasonic, and eddy current equipment. X-ray capabilities include penetration to 15 inches in steel and real-time imaging. IOC possesses the world's largest facility dedicated solely to nondestructive testing. The facility can efficiently radiographically inspect components and finished ammunition ranging in size from small fuzes to 8-inch projectiles and Patriot missile warheads.

Ground Radio Testing —

IOC has the only DoD test facilities to repair and test microwave communications equipment. Literally tons of ammunition are safely and efficiently demilitarized each year.



Loading tray for flashing furnace

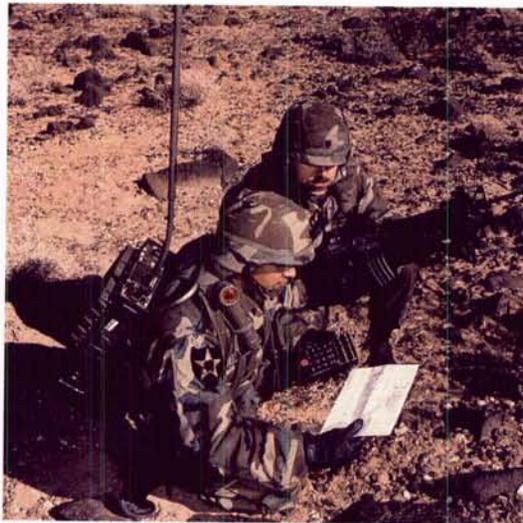


Research and development

FACING PAGE: Maintaining world-wide communications

IOC facilities support the following products:

- Aircraft Bombs
- Armored Recovery, Construction and Bridging Equipment
- Artillery Systems
- Chemical Defensive Equipment
- Communications and Electronics Systems
- Electro-Optics/Night Vision
- FASCAM, Artillery-ICM Ammunition
- 40mm Grenades, Tank Ammo, Fuzes, Mortars
- Helicopter and Associated Aeronautical Equipment
- Inland Petroleum Distribution Systems and Water Support Systems
- Light Armored Vehicles
- Navy Gun Ammunition
- RDX/HMX Explosives, Propellants (Solventless, Solvent, Single/Double Base)
- Satellite Communication Systems
- Small Arms
- Small Caliber Ammunition
- Smoke, Pyrotechnics
- Tactical Missile Systems/Warheads
- Tanks/Gun Tubes
- Test Program Sets
- Vehicle and Generator Engines



WORLDWIDE TROOP SUPPORT

Prepared to support troops, whatever the mission

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

Conflict Planning Strategy

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

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

Other Military Contingencies

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

Peacetime

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



Shipping materiel for quick response

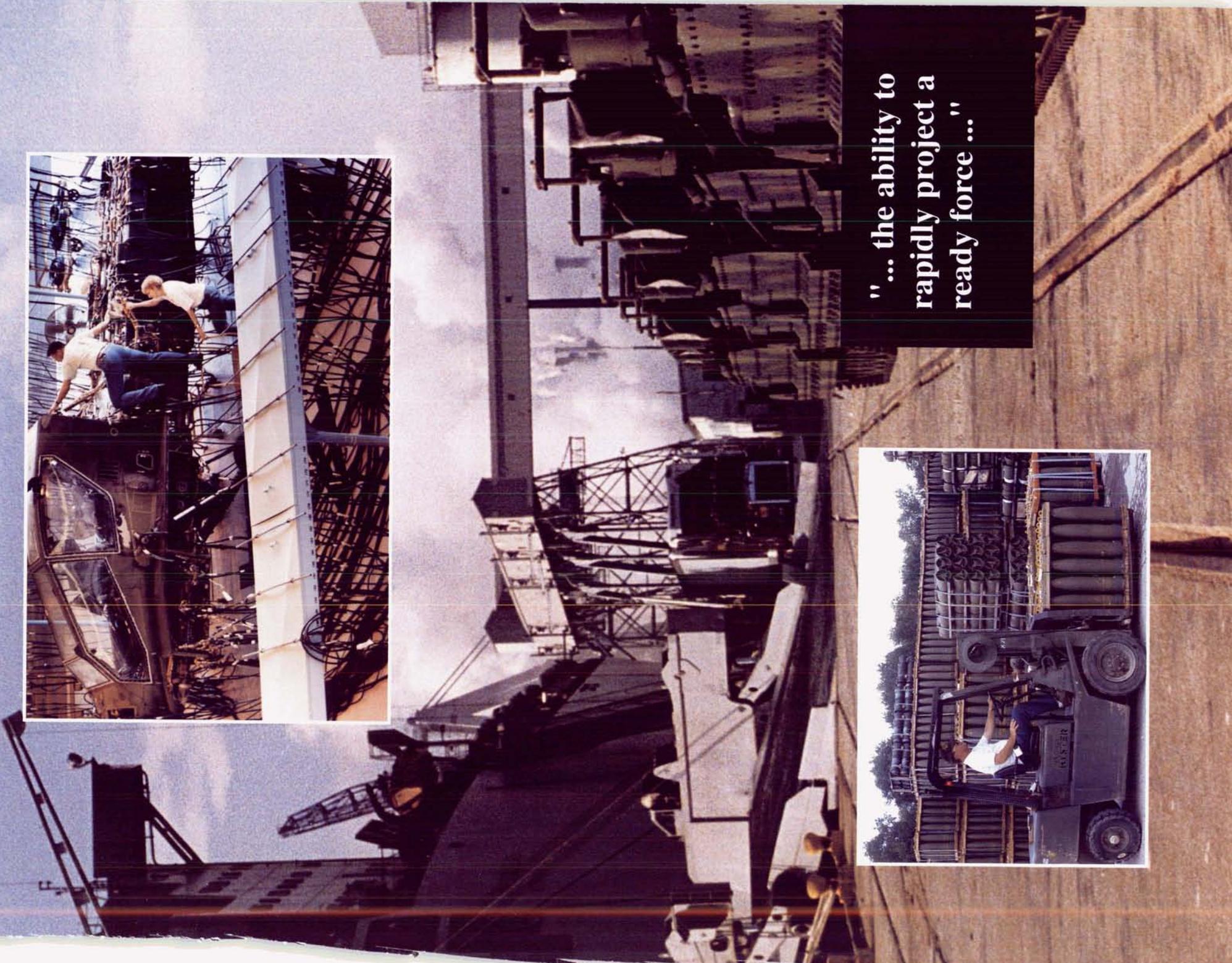


Bradley maintenance

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



**" ... the ability to
rapidly project a
ready force ... "**



SPECIAL DEFENSE MISSIONS

Single Manager for Conventional Ammunition (SMCA)

The IOC is the Department of Defense's SMCA. IOC manages conventional ammunition and related items from cradle to grave for all of the services. The command works closely with research and development agencies to assure that what is being developed will be compatible with items already in the inventory and supportable within the present system. A national inventory control point manages the Army's worldwide stockpile of conventional ammunition as well as the wholesale inventory for all services. The stockpile is stored at depots and other facilities in safe and secure magazines and igloos. The national maintenance point manages demilitarization programs and oversees efforts to upgrade ammunition already in the inventory. When ammunition deteriorates or becomes obsolete or excess, it is disposed of under the management of the

national maintenance point. The Conventional Ammunition Demilitarization Contracting Team within SMCA serves as a one-stop center for execution of the demilitarization program. Supplying (or shipping) ammunition from production and storage sites to the troop front lines is another part of SMCA's mission.

U.S. Army Defense Ammunition Center and School (USADACS)

Under the auspices of the IOC, USADACS manages six major mission areas --- technical training, logistics engineering, explosives safety, demilitarization technology, technical reviews and assistance, and career program management for civilian and military personnel involved in the business of ammunition logistics. The USADACS' Ammunition School trains Department of Defense military and civilian, and allied, students in logistics, explosives safety, and the entire gamut of Army and Joint Services ammunition items.

USADACS logistics engineers design, prototype, and field Ammunition Peculiar Equipment, validate procedures and equipment, and provide instrumentation support on-site. The Department of the Army Technical Center for Explosives Safety at USADACS provides explosives and chemical agent safety technical information and assistance to support DA headquarters, major commands, and the safety community Army-wide. Through its Demil Technology Office, USADACS manages demilitarization research and development initiatives for DA conventional ammunition and Joint Services large rocket motors. Working with Department of Energy and the Services, USADACS focuses on resource recovery, recycling and developing environmentally-acceptable alternatives. The Quality Assurance Specialist (Ammunition Surveillance) and Ammunition Management Career Programs are both managed for DA by ammunition experts at USADACS.



Demil of bombs using steam-out procedure



Students learn demilitarization operations on the USADACS demolition range

FACING PAGE: Propellant

IOC CAPABILITY STATISTICS

The IOC...

- produces gun mounts, assembles howitzers, prepares tool kits, and develops prototypes for advanced engineering models.

- supports power projection by the three largest Operational Project Stocks in the Army: the Island Petroleum Distribution System, the Water Support System, and the Force Provider.

- produces tank and artillery cannons, guided munitions, and Naval drive shafting.

- is capable of producing pyrotechnics and smoke munitions; including colored smoke, irritants, incendiaries, red phosphorus, white phosphorus, and HC.

- has the capability to both produce fuzes, primers, delay plungers, delay elements, boosters, CBU dispensers, and demolition kits and to rework/renovate various items.

- has a 6 million electron volt X-ray facility.

- provides full service life cycle support for over 500 DoD C-E systems ranging from hand-held radios to advanced satellite communications systems.

- has the capability to produce such diverse items as detonators weighing 20 grams to 40,000 pound cast shock charges.

- has the prime Load, Assemble and Pack (LAP) plant for 120mm tank ammunition, warheads, demolition charges, and high explosive artillery.

- has a unique incinerator complex with the capability to effectively incinerate and dispose of defective chemicals, metals, explosive materials, wood, cardboard, and out-dated medical supplies.

- has the premier Western Area Demilitarization Facility using environmentally sound procedures.

- manufactures over seventy formulations of RDX and HMX-based explosives, TATB and non-explosive products such as composition D-2.

- is involved in adopting new ways to do business. Examples include Paladin Enterprise, Labor-Management Partnership, and QUADTEC.

- provides interservice helicopter repair and overhaul services to a broad customer range including Navy, Marines, Air Force, Reserve Units, foreign governments, and State and Federal Government agencies.

- has the Army's only roadwheel and track shoe rebuild and manufacturing facility, which has overhauled more than 2,000,000 track shoes and 500,000 roadwheels, with a savings of more than \$96,000,000.

- is the sole source supplier of M77 Grenades for the Multiple Launch Rocket System (MLRS) Program.

For facility and capability information contact the:

**Business
Development Team**
1-800-IOC MAKE
(1-800 462-6253)
309 782-3681
DSN 793-3681

**Headquarters
Industrial Operations Command**

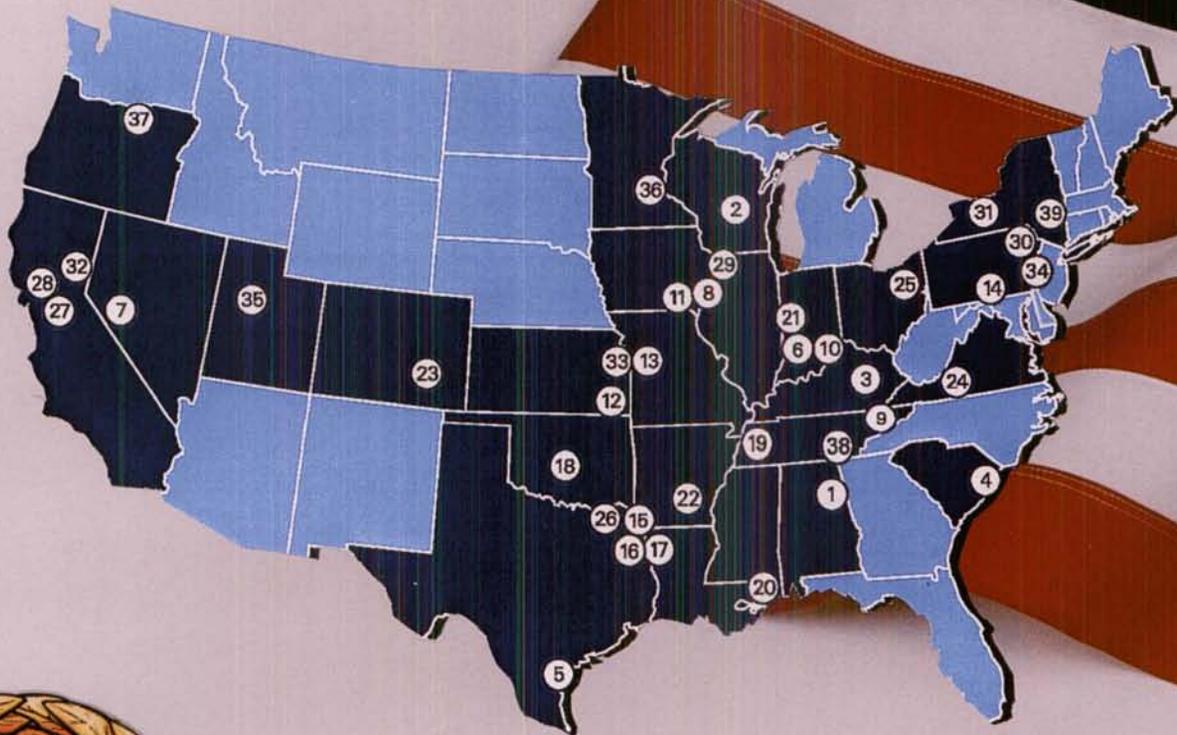
Rock Island, IL 61299-6000

For general information contact:

External Affairs
309 782-5421
DSN 793-5421

- | | |
|-----------------------------------------------------------|------------------------------------|
| 1. Anniston Army Depot | 23. Pueblo Army Depot Activity |
| 2. Badger AAP | 24. Radford AAP |
| 3. Blue Grass Army Depot | 25. Ravenna AAP |
| 4. Charleston/U.S. Army Strategic Mobility Logistics Base | 26. Red River Army Depot |
| 5. Corpus Christi Army Depot | 27. Riverbank AAP |
| 6. Crane AAA | 8. Rock Island Arsenal |
| 7. Hawthorne Army Depot | 28. Sacramento Army Depot Activity |
| 8. HQ IOC | 29. Savanna/USADACS |
| 9. Holston AAP | 30. Scranton AAP |
| 10. Indiana AAP | 31. Seneca Army Depot Activity |
| 11. Iowa AAP | 32. Sierra Army Depot |
| 12. Kansas AAP | 33. Sunflower AAP |
| 13. Lake City AAP | 34. Tobyhanna Army Depot |
| 14. Letterkenny Army Depot | 35. Tooele Army Depot |
| 15. Lone Star AAP | 36. Twin Cities AAP |
| 16. Longhorn AAP | 37. Umatilla Army Depot Activity |
| 17. Louisiana AAP | 38. Volunteer AAP |
| 18. McAlester AAP | 39. Watervliet Arsenal |
| 19. Milan AAP | |
| 20. Mississippi AAP | |
| 21. Newport AAP | |
| 22. Pine Bluff Arsenal | |

Support Activity
Far East, Korea
 Army Depot Activities
Pisa, Italy
Hythe, England



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BV-11 B

Date: 31 MAR 95



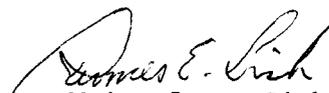
FROM THE COMMANDER

TO: Mr Gertler

Enclosed are several informational packets that I hope will give you some background material for your upcoming visit.

We look forward to meeting you on April 10th.

Sincerely,


Major James Sisk

"THE PACESETTER"

SAVANNAH ARMY DEPOT ACTIVITY

SDSLE-V Form 539
12 Sep 89



SAVANNA ARMY DEPOT ACTIVITY

SAVANNA, ILLINOIS 61074-9636

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DSN 585-XXXX

DATE: 27 September 1994
PREPARED BY: SMCAC-ESM
Supersedes chart dated: 22 June 1993

THIS IS NOT AN OFFICIAL ORGANIZATIONAL CHART

This document is a map that is too large
to be scanned in for electronic view.
Regarding Savanna Army Depot

Document Separator



SAVANNA ARMY DEPOT REALIGNMENT TASK FORCE

EXECUTIVE SUMMARY

Savanna Army Depot is one of the nation's most economical locations to provide support to DOD in the form of: ammunition storage, transportation, demilitarization and fabrication of ammunition - unique equipment, function/reliability testing and renovation of ammunition and containers as well as landlord to the United States Army Defense Ammunition Center and School (USDACS) -- today and in the future.

As the US Army seeks to consolidate its depots to eliminate excess capacity, it has determined that it can adequately function with fewer Ammunition Depots. Using a process that supposed to be fair and dispassionate the US Army decided it to be economically advantageous to close the Savanna Army Depot and relocate USDACS.

Although we agree with the principal to eliminate excess capacity, we do not agree that there is excess capacity for ammunition storage. **This closure and relocation does not provide the best economic savings to the US taxpayer in the short term or in the long term for the following reasons:**

Lack of Ammunition Storage Space

Relocation Cost & Construction

Under Funded Demilitarization Initiative

Demilitarization that could be work loaded to Savanna

Human Safety Factors

Land Re-use Probabilities

Closure and realignment is not the right move for the US Army and these actions could cost taxpayers more than \$400 million dollars.

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Executive Summary

Our Analysis:

Military Value
Return on Investment
Impacts

Conclusions / Recommendations

Appendix:

Wholesale Ammunition Stockpile Program (WASP Report)
Integrated Stockpile Management Plan
Conventional Ammunition Demilitarization Chart
Savanna Depot Brochure Information
Northern Illinois University - Center for Governmental Studies Report
Global Environmental Solutions - Letter

- * Savanna Army Depot Activity and USADACS Mobilization Plan
(Report must be obtained from SADA Command not included)

MILITARY VALUE

1. IMPACTS ON OPERATIONAL READINESS AND MISSION REQUIREMENTS

A. Savannah Army Depot has storage capacity for 165,000 tons of ammunition at a time when a lack of storage space for ammunition exists in the continental United States.

(Ref.: "Wholesale Ammunition Stockpile Program") (WASP) (AMCCOM proponent).

- It has been documented that magazine space must be realigned to accommodate operational requirements under the depot tiering structure. Over 2.1 million tons of ammunition out of 3.1 million tons now in depot storage must be moved to accomplish alignment. For the system, this amounts to approximately \$185 million for tiering of the depots, as opposed to \$22.4 million used in the closure study.
- What has not been identified is the potential impact of Army ammunition returned from overseas, ammunition from other services, and other active Army units. Any of these assets returned into the ammunition depot system will adversely affect the system that is already at storage capacity limits.
- Storage magazine space has been adversely impacted DOD-wide by the retrograde of ammunition from Europe, from Southwest Asia, and from the reduced Army force structure. These actions have taken place at a time when magazine space is in short supply and when the DOD system cannot afford further loss of capacity.

Above considerations were addressed by several recent studies, such as the report titled "Wholesale Ammunition Stockpile Program" and the "Integrated Stockpile Management Plan" (IOC proponent).

- Closure of Savannah Army Depot will eliminate needed storage space. Storage facilities for ammunition are not available outside of the depot systems due to safety aspects associated with munitions.

B. Impact of "Demilitarization" and "Excess" stocks on mission performance and operational readiness.
(Demilitarization (demil) is the rendering of military ordnance incapable of its intended use.)

- These assets occupy storage space essential for operational stocks. Approximately 5,000 magazine equivalents are required system-wide for this material.
- The Demil program as presently funded is at \$110 million. Projecting the funding for and the accomplishment of the Demil program through the year 2003 shows a growth to 712.8 thousand short tons. **(See chart, "Conventional Ammunition Demilitarization" at Appendix.)**
- Closure costs do not address movement of "Demil" stocks needed to effect closure. Movement costs are approximately \$350 per ton which will increase Savanna's closing costs by at least \$2 million.

2. FACILITIES AVAILABILITY

A. Availability and condition of USADACS facilities.

- Duplication of the USADACS facilities will require at least \$50 million. These facilities include: Permanent, air conditioned, modernized classrooms with state-of-the-art classroom equipment and a campus like atmosphere; Administrative/Engineering Space - air-conditioned, permanent-type buildings with modern offices, conference rooms and modern light; Transportability/Pilot Model Facility - new \$4.5M facility adjacent to engineering design offices and existing rail track; Demolition Range - with classrooms, remote TV and storage structure; Communication network fiber optics and satellite hook-up.
- On-site review of facilities at McAlester offered for USADACS has determined that new construction and extensive renovations would be required. An additional unknown cost would be required for rail service to the USADACS facility.

B. Specialized demil facilities.

- An Explosive Waste Incinerator (EWI) with associated equipment to meet all State and Federal government environmental laws is available at Savanna ADA. Due to regulatory constrictions and limited operational dollars, only 3 EWI's will be licensed and funded within the army. Work loading Savanna's EWI would aid in reducing the demil inventory and would reduce overhead costs for the depot.
- Depleted Uranium (DU) capability at Savanna ADA is a one of a kind facility which has received operational licensing from the Nuclear Regulatory Commission. This equipment unique to DU has been certified to safely dispose of this sensitive material. Duplication at another installation would require extensive dollar outlay and testing. At least 6,700 short tons are currently available for demil.
- Open burning and open detonation facilities were designed specifically to accommodate student training. Closed Circuit TV, classroom, storage bunkers, and a student change house are in place.

C. Storage Magazines and Structures.

- Facilities for explosive storage are in compliance with DOD Explosive Safety Standards and have been maintained in an excellent structural condition.
- The variety of magazines and support facilities (e.g.. loading docks, road and rail networks) readily accommodate storage of the assortment of munitions. The ability to store all of the types of items in the stockpile without modification or safety waiver contribute to the readiness posture and to timely response to contingency requirements. The engineered design of the depot is the major contributing factor to Savanna's outstanding logistical performance demonstrated during periods of national emergency.

3. **SUPPORT CONTINGENCY, MOBILIZATION AND FUTURE REQUIREMENTS**

- A. The ability to support expanding logistical requirements for mobilization, contingency, and force requirements is excellent.
(Ref.: Savanna Army Depot Activity and USADACS Mobilization Plans).
- B. Professional and technical personnel of USADACS are trained and available to respond to emergency and contingency requirements world wide as in Haiti, Grenada and Southwest Asia. Any loss or degradation in the ability to perform services by these "Citizen Soldiers" will adversely impact operational responsiveness throughout DOD. This could be the case until full replacement of personnel and facilities is achieved.

4. **COST AND MANPOWER IMPLICATIONS**

- A. Maintaining the status quo for USADACS will result in a cost avoidance of at least \$57 million. This includes costs of personnel actions, relocation's, and facilitation.
- B. The impact on DOD readiness will be significant through loss of professional and technical expertise that is unique to USADACS because of failure to transfer to McAlester. Replacement personnel will require 4 to 5 years to reach the level of expertise now available.

RETURN ON INVESTMENT

5. POTENTIAL COSTS / SAVINGS

- A. Maintaining the status quo requires no investment.
- B. The cost of moving USADACS will be at least \$57 million.
- C. The cost of replacing the depot's available storage capability is \$325 million, **(ref.: Depot Brochure)**.
- D. Replacement of the unique facilities for Demil of depleted uranium and the Explosive Waste Incinerator will cost in excess of \$20 million.
- E. Total costs avoidance by maintaining the status quo exceeds \$400 million.

IMPACTS

6. THE ECONOMIC IMPACT ON COMMUNITIES

There is no-doubt the closing of SADA and the relocation of USDACS will have a profound negative impact on the Carroll & Jo Daviess counties. Unlike many military facilities, the Savanna Army Depot is located in a secluded rural area with little diversity and a failing primary economic sector - agriculture. Naturally, closure of a military installation in this setting is going to have a greater impact than a similar closure in an urban area,

The Realignment Task Force commissioned the Northern Illinois University', Center of Government Studies to Determine the actual economic impacts of SADA closure and USDACS relocation on Carroll & Jo Daviess counties. The Center completed its analysis using an input/output model. The model is unique in-that coefficients are based upon actual county patterns. The study unequivocally concluded the two counties will experience significant and permanent reduction in employment, personal income, retail activity, tax revenues and employment in other industries as a result of SADA closure and USADACS relocation. Specifically:

JOBS:

- Jobs will decline by 624 in the two counties area - 400 jobs at the Base and 224 spin-off jobs.
- Of the 244 indirect jobs lost, 100 will be in retail and 73 in other service industries.
- The unemployment rate will increase as much as 2.8 percent, making unemployment 10.6% - one of the highest unemployment areas in Illinois.

WAGES:

- Wages paid will be reduced by \$16.8 million
- An additional \$3.46 million will be lost in secondary wages.
- Wages paid by retailers will decrease by almost \$1.5 & \$1.2 million for the service industry.

ECONOMIC ACTIVITY:

- Loss economic activity (sales) \$35,535,000 - \$27.1 will be directly related to the Depot closing and the move of USDACS. The other \$8.4 million will be reduced output (sales) by other businesses.
- Retail sales will decrease by over \$2,045,000 - well over 1 percent of the total retail sales in the two counties.
- Output of wholesale and public utility companies in the two counties will decrease by almost \$1,650,000.
- There will be an indirect loss of activity in the service sector of almost \$2,000,000.

OTHER ECONOMIC IMPACTS:

- Local tax revenues will drop ^{933,000} \$399,000 - mainly property and sales taxes
- Illinois will lose over \$2.2 million in tax revenues - sales & income
For every \$1 million decrease in Depot expenditures, 23 jobs will be eliminated and local taxes will decrease by over \$34,000.

The Realignment Task Force also examined and analyzed several impacts on its own. There are a total of 158 students in 4 school districts that have parents who are employed at SADA or USADACS (**Ref. County Regional Superintendent Report**). While the federal impact aid received by these school districts is small, the possibility of losing over 7% of their students is crippling. This combined with sharp declines in local property tax as a result of declining housing values due to the flood of Depot employee houses for sale, will be more than most of the school districts can handle. Several will be forced to close or consolidate.

We believe the cost of relocating USADACS has been under estimated in many areas - especially personnel relocation cost. It is anticipated that 80% of USDACS employee will choose to continue their employment. These individuals are compensated well above the local average per hour wage of \$7.53. Thus, they tend to reside in homes well above the area average of \$43,650 (**US Census Report 1995**). We project the US Taxpayer could be paying out an additional \$14 million (184 homes x \$80,000 = \$14.7 mil). just to purchase USADACS employees houses.

ENVIRONMENT CONSIDERATIONS

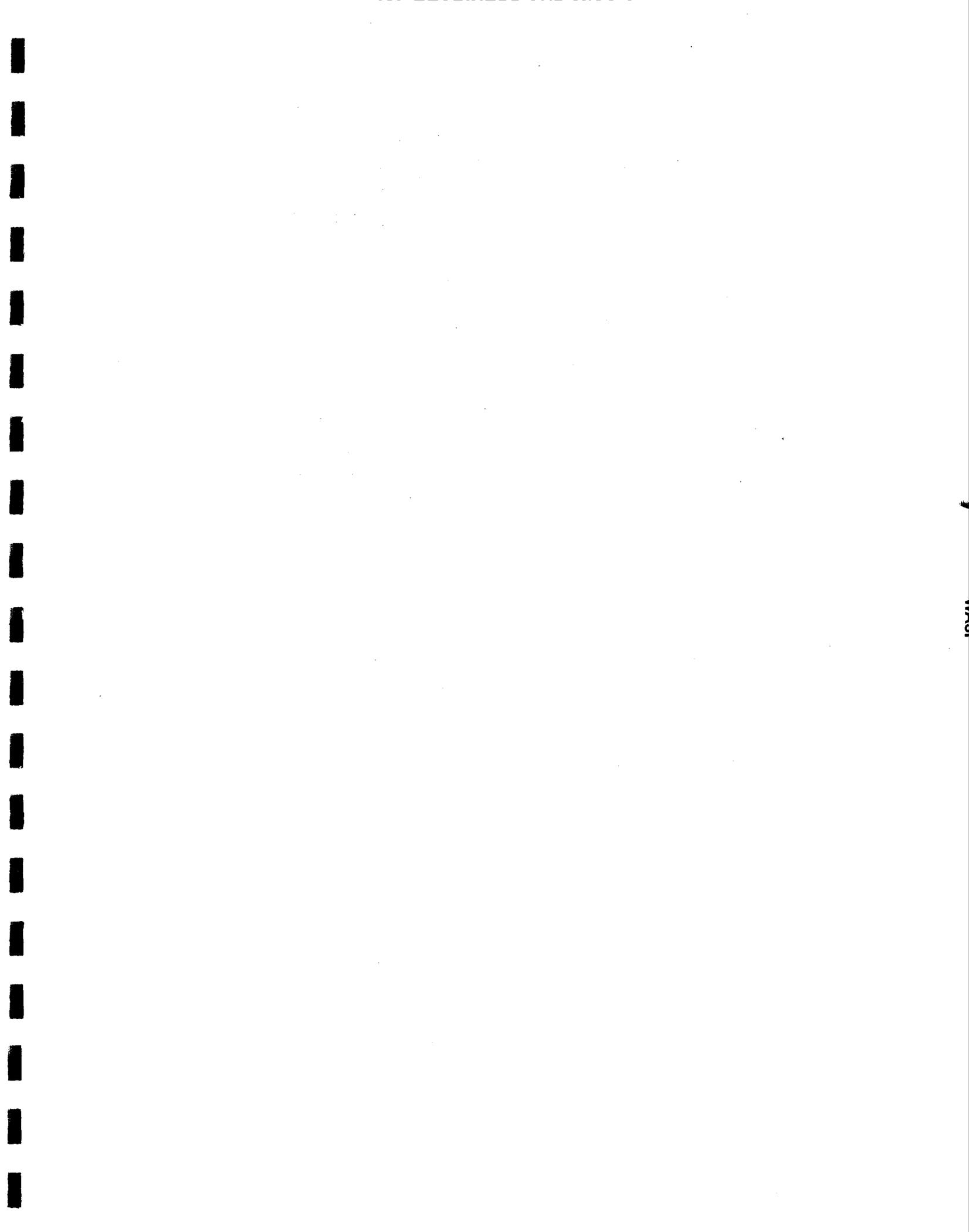
- A. Clean-up requirements have been identified and funding programs have been established for environmental application at Savanna Army Depot Activity. The original estimate was \$260 million and the clean up would take ten years. That estimate has already been re-evaluated and the total scope identified to date is \$310 million and proposed to be accomplished by 2031.
- B. Transfer of the installation to private use should not be made until clean-up is accomplished. Clean-up operations can be concurrent with depot operations. Retention of the depot will permit logistical and administrative support for clean-up operations.
- C. There is more at stake here than just environmental concerns, human safety is a bigger factor this sandy soil could still have unexplored projectiles that would not be discovered for years.

CONCLUSIONS / RECOMENDATIONS

An examination of the facts as we have outlined must lead to the following conclusions and recommendations.

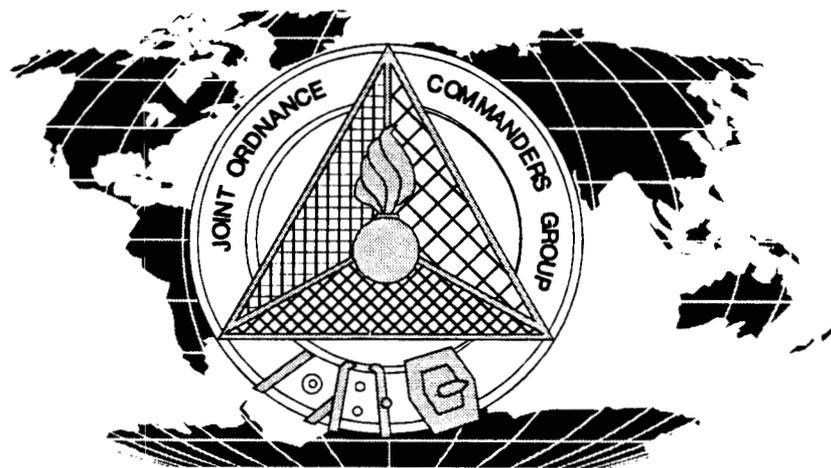
- In FY95, all ammunition storage space in the United States is filled, inclusive of the depots proposed for closure. There is no excess storage magazine space.
- Demil stocks continue to grow faster than demilitarization is accomplished. This has been caused by inadequate funding and failure to fully use facilities available throughout the system.
- Retention of USADACS at Savanna will save \$57 million.
- The Army has substantially underestimated the cost of moving ammunition from Savanna and the relocation of USADACS to McAlester.
- The tiering concept of ammunition depots should be abolished. This concept is flawed because costs are underestimated and resources for support of readiness and total force requirements will be wasted.
- The decision to close Savanna Army Depot Activity and relocate USADACS should be reversed.
- Alternative solution to reducing Savanna Depot operating cost would be the consideration the consideration for a depot mission change to allow demilitarization and solicit a contractor/operator, (GOCO). Proposal would perpetuate the availability of needed storage space and would aid in reducing the demil inventory. **(Ref. Letter Global Environmental Solutions)**

NOTE: Three companies have indicated interest in operating the Savanna Depot. However, if the Depot is closed it will take a minimum of 10 years to even begin to look at the site and these firms will not have the need 10 years from now.



WHOLESALE AMMUNITION STOCKPILE PROGRAM (WASP)

REVIEW AND ASSESSMENT



VOLUME I **EXECUTIVE SUMMARY**

PREPARED BY
WASP REVIEW AND ASSESSMENT TEAM
OCTOBER 1993

DISTRIBUTION STATEMENT F: Further dissemination only as directed by the Commander, U.S. Army Armament, Munitions and Chemical Command, Joint Activities Office, AMSMC-JS, Rock Island, IL 61299-6000, or higher DOD authority, as determined 30 October 1993.

FOR OFFICIAL USE ONLY

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REPORT
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EXECUTIVE SUMMARY

1. **Background.** The Wholesale Ammunition Stockpile Program (WASP) Review and Assessment was initiated at a 20 May 1993 Joint Ordnance Commanders Group (JOCG) Meeting in response to briefings and discussions addressing the FY 93 Operation and Maintenance, Army (OMA) funding dilemma. The Membership's primary concerns centered on the lack of funding being applied in the essential stockpile readiness functions of inventory accountability, surveillance, maintenance, and rewarehousing.

2. **Objectives.** At that meeting, the Chairman, JOCG directed Mr. John L. Byrd, Jr., Director, U.S. Army Defense Ammunition Center and School (USADACS) to form a Joint Service Team to evaluate the impacts on ammunition readiness, explosives safety, and quality of not performing the essential stockpile readiness functions. On 15 June 1993, the JOCG followed through with a formal tasking directing Mr. Byrd to review the condition of the stockpile within the Single Manager for Conventional Ammunition (SMCA) storage base and provide the results of that review to the JOCG and Joint Logistics Commanders (JLC) in the late September- early October 1993 timeframe.

3. **Methodology.** To accomplish a review within the specified time, Mr. Byrd was required to quickly establish a Plan of Action and implementing milestones. Fundamental decisions were made as follows:

a. **Timeline.** The effort was divided into four phases with the results to be briefed to the JLC in October 1993. Those phases included Phase I (14-25 June 1993) Team Direction and Organization; Phase II (28 June - 30 July 1993) Data Collection and Analysis; Phase III (2-27 August 1993) On-Site Assessments; and Phase IV (30 August - 4 October 1993) Presentation and Staffing of Briefings and Reports.

b. **Team Composition.** To accomplish a credible assessment of both SMCA and service-unique Wholesale Stockpile items as directed, the WASP functional teams were assembled using Joint Service civilian and military personnel. Of the 43 major participants, 30 were U.S. Army (USA), 5 U.S. Marine Corps (USMC), 4 U.S. Air Force (USAF), and 4 U.S. Navy (USN). To further assure Joint Service issues were given appropriate consideration, the WASP Team called upon an AD HOC advisory group composed of Chairman, Department of Defense Explosives Safety Board (DDESB); the Executive Director, JOCG; a representative from the JOCG Executive Committee, and Chairpersons from four JOCG Subgroups. The

WASP Team provided the AD HOC Group with briefings and received feedback on three occasions.

c. **Data collection.** At initial planning meetings, the WASP Team decided, based upon time, that the overall analysis of stockpile would have to be limited to those installations with depot-type operations that maintained their custodial records on the automated Standard Depot System (SDS). Using these criteria, the Team was still able to address 93% of the total SMCA wholesale stockpile stored at the following 11 installations: Anniston Army Depot, Alabama; Blue Grass Army Depot, Kentucky; Crane Army Ammunition Activity, Indiana; Hawthorne Army Ammunition Plant, Nevada; Letterkenny Army Depot, Pennsylvania; McAlester Army Ammunition Plant, Oklahoma; Red River Army Depot, Texas; Savanna Army Depot Activity, Illinois; Seneca Army Depot Activity, New York; Sierra Army Depot, California; and Tooele Army Depot, Utah. Although only 11 installations' data were analyzed in detail, the WASP Functional Teams did solicit survey data and a Commander's Assessment from all U.S. Army Materiel Command (AMC) installations with a wholesale ammunition mission.

d. **On-Site Visits.** The WASP Team determined that only three installations could be effectively visited within the available timeframes. Those installations were Anniston Army Depot, Alabama; Sierra Army Depot, California; and Hawthorne Army Ammunition Plant, Nevada. These installations were chosen based upon a variety of factors, some of which included: number of service TOP 20 Items and service-unique items, amount of Southwest Asia (SWA)/European Retrograde returns, amount of unserviceable materiel in storage, increases in lots and tons in storage (Jun 90 - Present), inspection backlogs, fragmented lots in storage, inert materiel in explosive storage, dates of last inventory over two years old, etc. The WASP Team elected to omit direct reference to any individual installation in the functional assessments. Installations are referred to in the body of the report by a non-significant, single alpha character to assist the reader in identifying patterns across individual functional areas.

e. **Item Focus.** Although each of the functional teams was directed to address the issues of readiness, quality, and safety throughout their data collection and on-site efforts, all agreed that a major focus on the items considered most important by the services was needed. To that end, the WASP Team requested that each service provide the TOP 20 items that, in their assessment, needed to be looked at from a safety/readiness standpoint. When the final TOP 20 list was compiled, based upon individual services desires to have each National Stock Number (NSN) of key systems all considered, the total number of TOP 20 items grew to 132 ammunition Department of Defense identification code (DODIC) items.

4. Findings.

a. General.

(1) **Conflict Driven Stockpile Cycle.** As soon as the WASP Team began correlating recent workload and resource levels, it became clear that several diverging trends impacting the stockpile had been operative since the onset of Operation Desert Shield/Storm (ODS). As *Figure 1 (below)* notionally depicts, storage base activity rose dramatically when the conflict

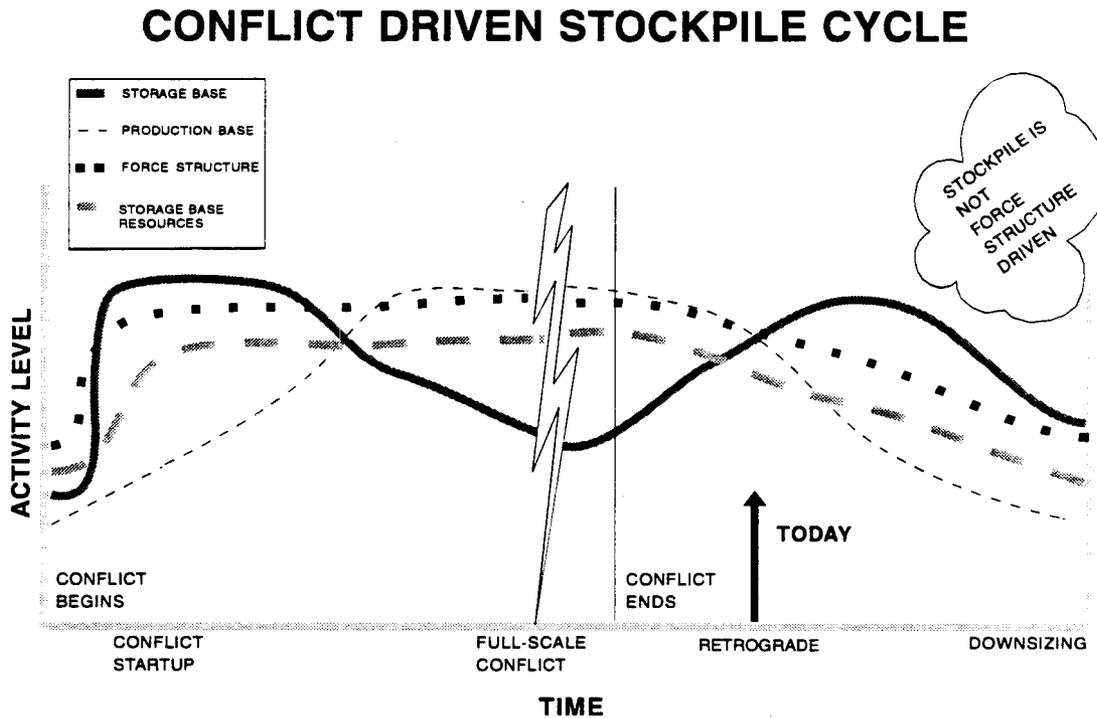


Figure 1

began. That activity fell off after installations satisfied the services' needs for the full scale conflict. Soon after the conflict ended, however, the level of stockpile activity rose to near its highest conflict levels. Those phenomena occurred because SWA retrograde was received, European retrograde continued, Base Realignment and Closure (BRAC) redistribution actions occurred, and receipts from production had not totally stopped.

It is important to note that although storage base activity is still at a very high level, the resources for the storage base, the production base activity, and the force structure have fallen off significantly. Clearly the level of stockpile activity is not force structure driven.

(2) **Ammunition Workload Trends.** To put the relationship between the stockpile level and the current workload into historical or broader perspective, the WASP Team obtained actual data from FY 89-93 and forecast data through FY 96. As *Figure 2 (below)* shows, the tonnages in storage are rising dramatically as the transition to a CONUS-based Army occurs.

It is significant that receipt and issue workload continues to be higher than Pre-ODS levels into at least FY 96. There is also a fundamental difference in the mix of receipts and issues from Pre-ODS to Post-ODS.

By going back further and reviewing FY 85-89, the WASP Team found that receipts and issues were nearly equal. After the conflict, receipts have and are projected to nearly double issues through FY 96.

AMMUNITION WORKLOAD TRENDS

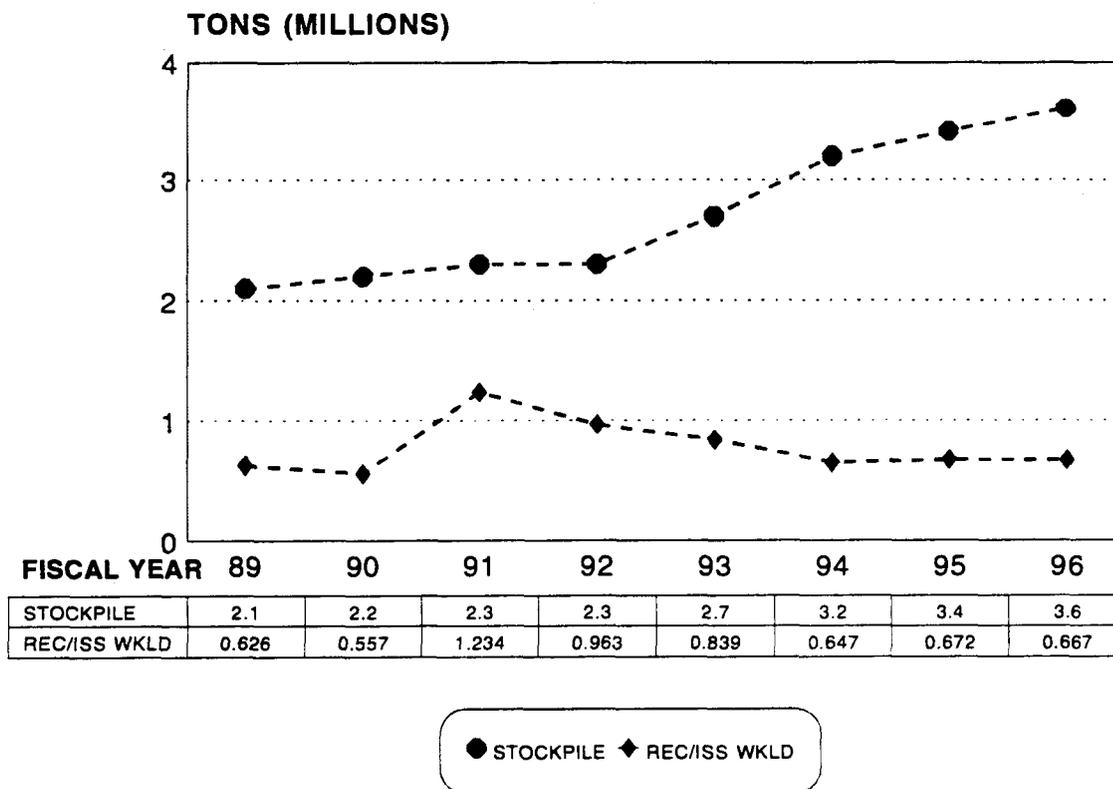


Figure 2

(3) **AMMUNITION RESOURCE TRENDS.** Although somewhat complicated, *Figure 3 (on the next page)* clearly indicates the dilemma facing the SMCA wholesale base. As the top line depicting tons shows, the continental United States (CONUS) wholesale stockpile will grow to some 3.6 million tons by FY 96. At the same time, the next two lines illustrating

AMMUNITION RESOURCE TRENDS

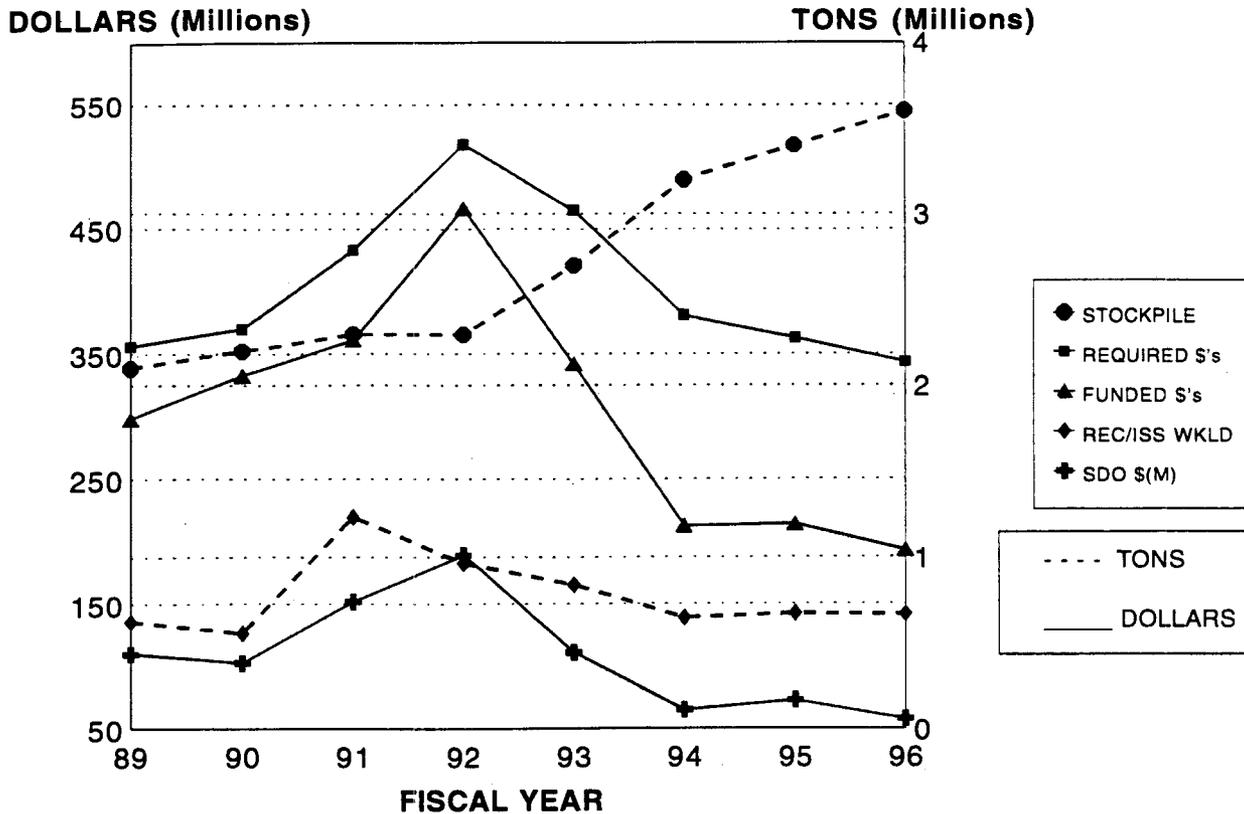


Figure 3

the required and funded programs show dramatic decline. Simply put, the wholesale stockpile doubles between FY 89-96, but the funded programs are almost cut in half. Similarly, the receipt and issue portions of the supply depot operations workload increase slightly during FY 94-96, but the tons handled remain near the FY 89 level. Actual funding falls below FY 89 level - - especially in FY 96.

b. Inventory Accountability.

(1) **SMCA Wholesale Base.** As previously noted, the functional teams began actual work with an agreement to focus efforts primarily on those 11 wholesale installations that operate on the SDS. Those installations contain the bulk of the wholesale SMCA and service-unique assets as well as most of the TOP 20 items upon which the services requested we focus. The statistics describing the SMCA storage base themselves are impressive. Of particular interest and concern to the WASP Team was the degree to which this storage base has been

SMCA WHOLESALE STORAGE BASE

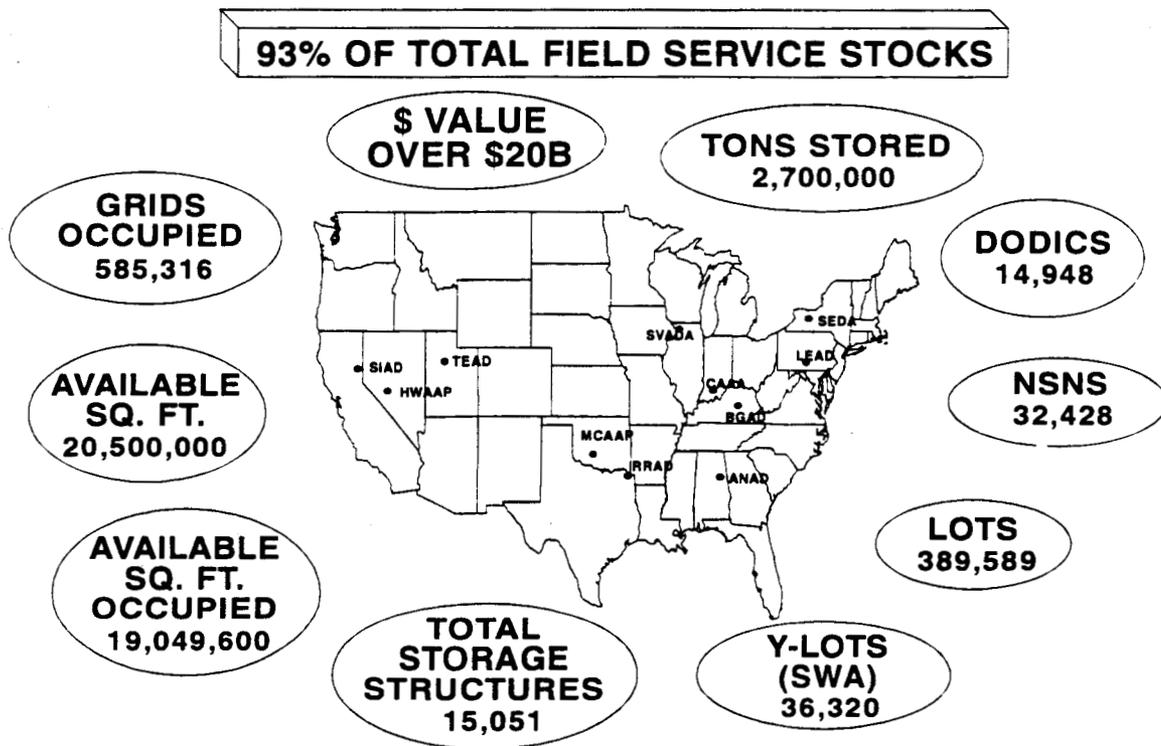


Figure 4

churned by the SWA shipment and retrograde and the European retrograde. As the "Y" lot number in the lower right hand corner of *Figure 4* (above) shows, today's storage base now includes almost 10% of items that were subjected to the rough handling and climatic extremes of SWA. Additionally, these Y-lots primarily consist of those items needed to "Go-To-War."

(2) **Stratification.** Of the 2.7 million tons in the storage base, shown on *Figure 5* (right), approximately 24% are composed of items that are required to be shipped early on in the stages of any conflict or are items the services identified as safety concerns. A significant portion of that 24% consists of stocks that have experienced several handlings in returning from SWA or Europe, are currently stored in less than optimum configurations; i.e., lots

STRATIFICATION			
2.7 MILLION TONS	*TOP 20* OPLAN 1+5 GO-TO-WAR TRAINING	650,000	24%
	WAR RESERVE	1,700,000	63%
	EXCESS		
	DEMIL	350,000	13%

Figure 5

fragmented or block stored, have only been subjected to minimal receipt damage in transit inspections, and have not been inventoried since they returned. A limited number of these stocks have been subjected to specific test programs by U.S. Army Armament Research, Development and Engineering Center (ARDEC), Predictive Technology Branch, and USMC elements at Fallbrook, California. The 13% of items identified for demilitarization are items that are no longer required for readiness, yet must be safely maintained. The 63% in the middle will tend to gravitate to the top or bottom, dependent upon fluctuations in DOD mobilization requirements.

(3) **Physical Survey Completion Rates.** The WASP Team found that decreased supply depot operations funding had effects in inventory accountability as early as FY 90 when inventory programs ceased to be fully funded. As the decline in performance of physical location surveys continued, installations and the inventory control points developed gaps in data needed to research and reconcile discrepancies. The present funding level resulted in the decision to only accomplish physical location survey on Categories I and II security items.

PHYSICAL SURVEY COMPLETION RATES

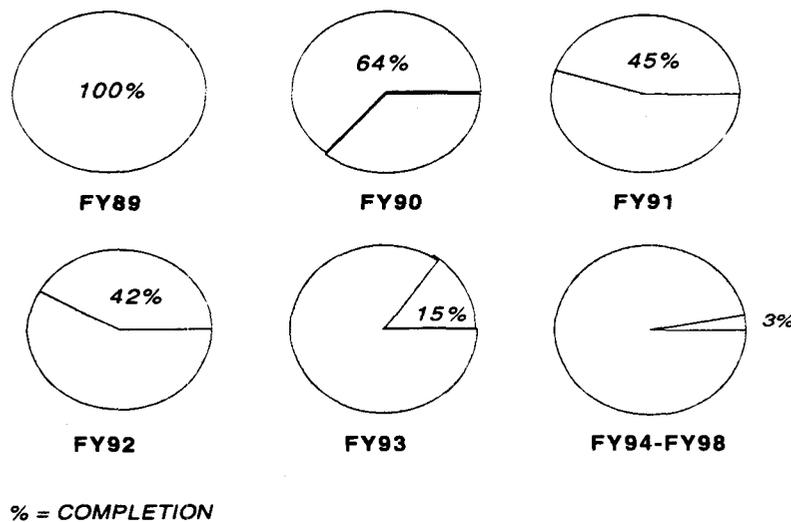


Figure 6

By FY 94, as shown in *Figure 6 (above)*, the physical location survey program will only address the same 3% of the stockpile NSNs each year. Reduction of the survey program to the projected level will result in an inability to audit discrepant records and a loss to the installation commander of a set of "Smart Eyes" in each magazine each year.

(4) **On-Site Analysis.** The final phase of the Inventory Accountability Team's analysis was the on-site visit. After checking over 6,000 total lot locations at the three on-site installations, the Team concluded that the quantity mismatch rate between record and location

ON-SITE ANALYSIS

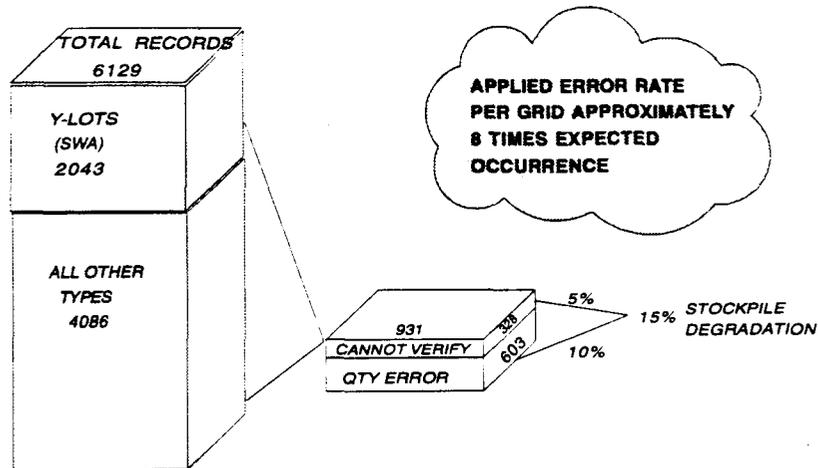


Figure 7

was approximately 10%. In addition, 5% of the time, the count could not be verified due to the way in which materiel was stored. When compared against the historical 98% accuracy goal, the Team observed an error rate per grid location that was approximately 8 times the expected rate as noted in *Figure 7 (above)*. The Inventory Accountability Team expects the error rate to increase due to massive turnover of the stockpile. Each move of munitions, without benefit of inventory, increases chances of record errors and the possibility of undetected theft.

(5) Composite

Materiel Release Order (MRO)

Denials. One of the traditional indicators of declining inventory accuracy is MRO denials. As *Figure 8 (right)* depicts, the MRO denial rate has doubled since its lowest levels in FY 90. The drop in denials in FY 90 was the result of resorting to manual lot selection to meet critical ODS requirements. Whereas other

COMPOSITE DENIALS

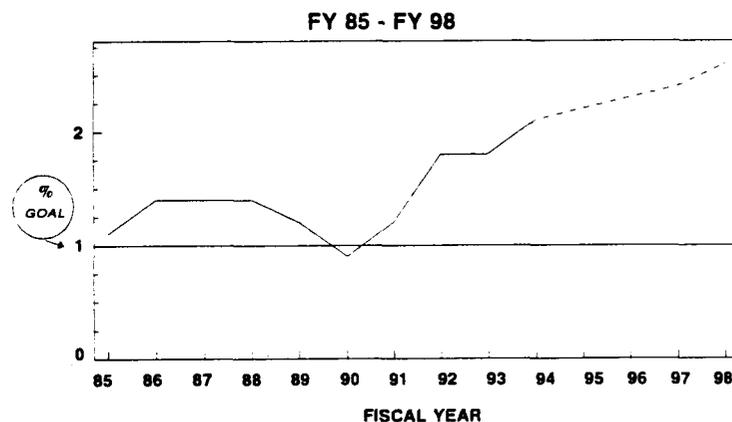


Figure 8

factors such as materiel condition, also cause the decision to deny a shipment, the accuracy and agreement of the accountable National Inventory Control Point (NICP) records and the custodial installation records are key to meeting shipping orders. Without an adequately-funded physical location survey program, the accuracy of the inventory records will decrease and the denial rate will increase. Despite the best efforts of NICP managers to redirect shipments and substitute materiel, and installation personnel to locate items, increased denial rates mean less readiness.

(6) **Auditable Records Available for Reconciliation.** Each year the auditability of the inventory will decrease if the inventory survey program is not accomplished. In FY 91, 100% of all NSNs had been inventoried within the last 2 years. In order to complete a reconciliation, the NICP requires not more than 2 years history be used to find conclusion to a mismatch. Now the percent of ammunition NSNs with a 2-year history availability has begun to decline due to lack of survey program data. As the Pac-Man like void on *Figure 9 (below)* shows, the auditability of NSNs in the stockpile drops to 22% in FY 95 and 3% thereafter.

AUDITABLE RECORDS AVAILABLE FOR RECONCILIATION

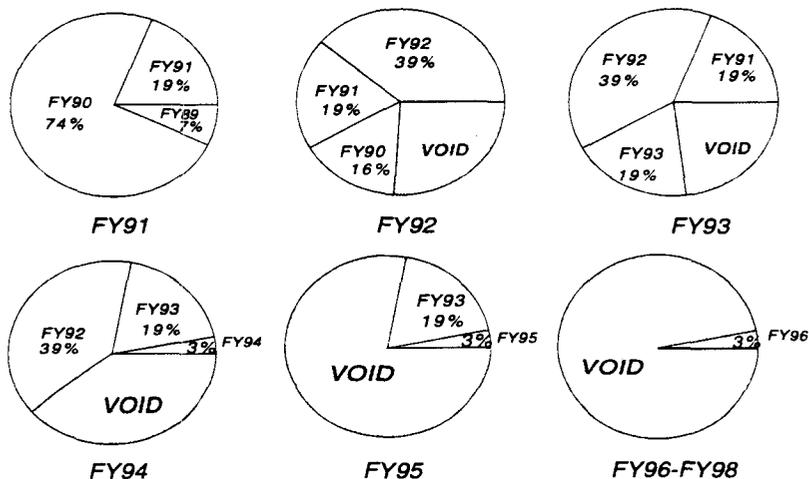


Figure 9

(7) **Lot Substitutions.** Although the WASP Team did use the traditional ways of assessing inventory accuracy previously described, they identified another metric which is a quicker means of getting at a problem area and predicting decreased readiness and increasing cost. The Inventory Accountability Team analyzed total MROs for FY 93 to determine how many times the ammunition lots selected by the SDS computer had to be substituted. As *Figure 10 (on the next page)* shows in FY 93 over half the computer selected lots were not able

LOT SUBSTITUTION REQUIRED

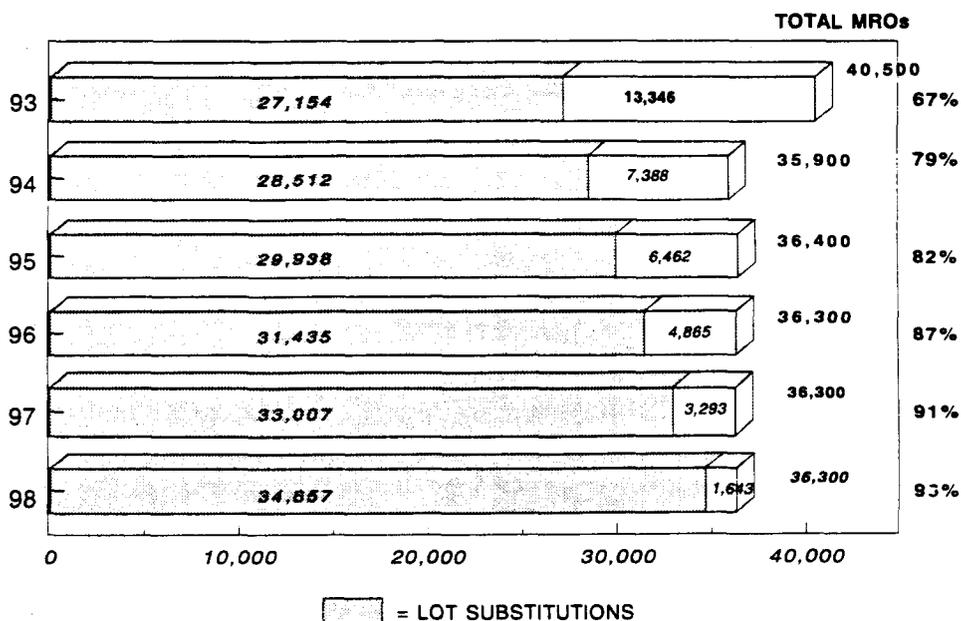


Figure 10

to be issued by the installation. The substitutions were for various reasons including: materiel not in location, materiel reclassified and not shippable, inspection overdue, buried in storage, required repack, etc. Once the installation determines the computer selected lot cannot be shipped, a manual processing intervention is involved resulting in delays, increased man-hour costs per ton, etc. The Inventory Accountability Team predicted 5% per year increase in lot substitutions due to degradation in inventory data alone. The rate of substitution will probably increase even faster if inspection and test funding is not increased.

c. **Surveillance.** Whereas the WASP Inventory Accountability Team assessed the aspect of not performing key functions on balance data and day-to-day operations, the Wasp Surveillance Team focused upon the condition and safety of materiel as reported through key programs. It is important to recognize that ammunition has unique characteristics as described in *Figure 11 (right)* that make a

SURVEILLANCE AMMUNITION CHARACTERISTICS

- ONE-SHOT DEVICES/HIGHLY DESTRUCTIVE
- NO COMMERCIAL COUNTERPART
- HIGH RELIABILITY
 - PERFORMANCE
 - SAFETY
- LONG-TERM STORAGE
- VARIABLE DETERIORATION RATE
- MINIMUM FIELD TESTING AND INSPECTIONS
- EXPENSIVE

Figure 11

healthy surveillance program essential.

(1) **Purpose and Function.** The fact that the ammunition commodity is so unique has caused special emphasis to be placed in key program areas. The ammunition stockpile surveillance program is comprised of several major programs. The purpose of these programs is to assure that the condition, performance capabilities, and safety margins of ammunition are known throughout their life cycle. This is accomplished through periodic sampling, inspection, and testing of stocks. Test/inspection results are used to make appropriate stockpile decisions such as identifying items for maintenance and demilitarization, and withdrawing or restricting items considered to be of marginal serviceability.

AMMUNITION STOCKPILE RELIABILITY PROGRAM

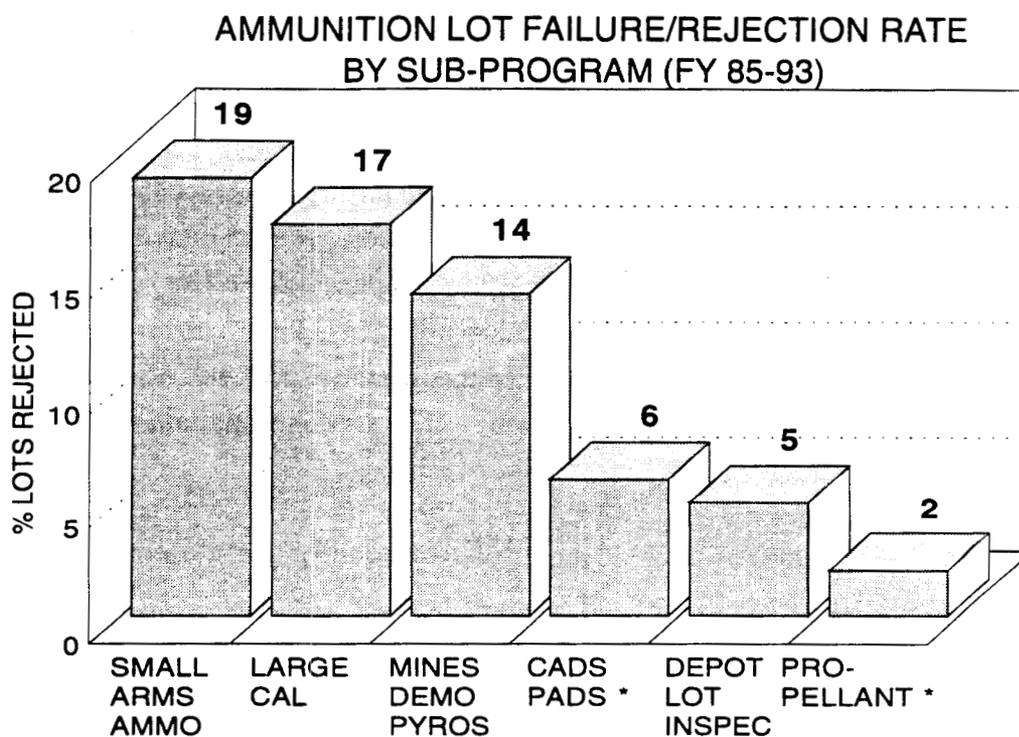


Figure 12

(2) **Ammunition Lot Failure/Rejection Rate.** The ammunition stockpile reliability program, comprised of several sub-programs, has historically identified serviceability and reliability problems as shown in the rejection rates as depicted on *Figure 12 (above)*. Rejections and failures are usually a function of deterioration over time and/or exposure to harsh

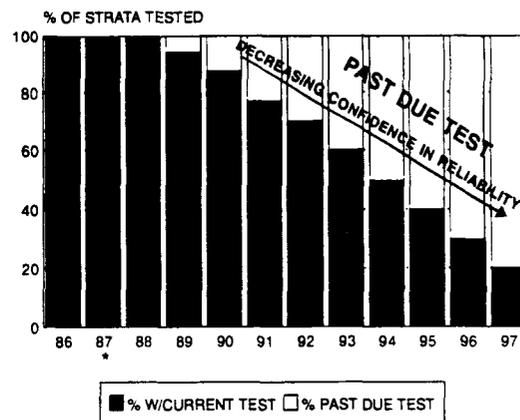
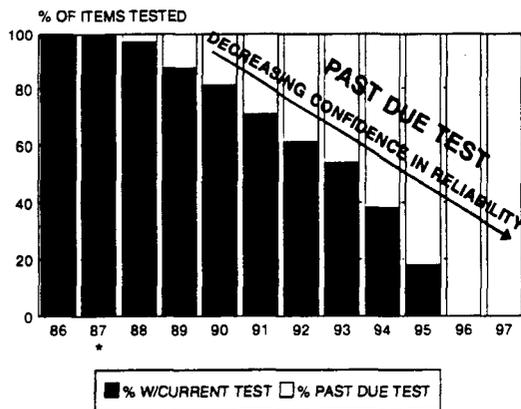
environments. The purpose of these programs is to assure that the condition, performance capabilities, and safety margins of ammunition are known throughout their life cycle.

(3) **Ammunition Test Programs.** The current posture of the stockpile with respect to confidence in our knowledge of stockpile condition and safety is fairly healthy. As shown in *Figure 13 (below)*, due to declining availability of funds to support testing, there is a growing backlog of untested large and small caliber ammunition items.

AMMUNITION TEST PROGRAMS PROJECTED BACKLOG GROWTH AND IMPACTS

** LARGE CALIBER TEST PROGRAM
GROWTH OF ITEMS OVERDUE TEST

** SMALL ARMS TEST PROGRAM
GROWTH OF STRATA OVERDUE TEST



* 90 - 95% CONFIDENCE LEVEL
** AVERAGE TEST INTERVAL IS 5 YEARS

Figure 13

Future funding projections for these items are at their lowest in memory, and by FY 96 and FY 97 for large and small caliber items, respectively, confidence in the knowledge of reliability of nearly all these items will have severely eroded.

(4) **Ammunition Lot Inspection Program.** A similar, but less dramatic, fate is projected for the depot surveillance lot inspection program as *Figure 14 (on the next page)* clearly indicates. At projected funding levels, it is estimated that only 55% of currently serviceable ammunition lots will have been inspected as required. There is currently a backlog

of 51,000 lots of uninspected ammunition and this backlog will grow unabated in the years ahead if left unfunded.

AMMUNITION LOT INSPECTION PROGRAM PROJECTED BACKLOG GROWTH AND IMPACT

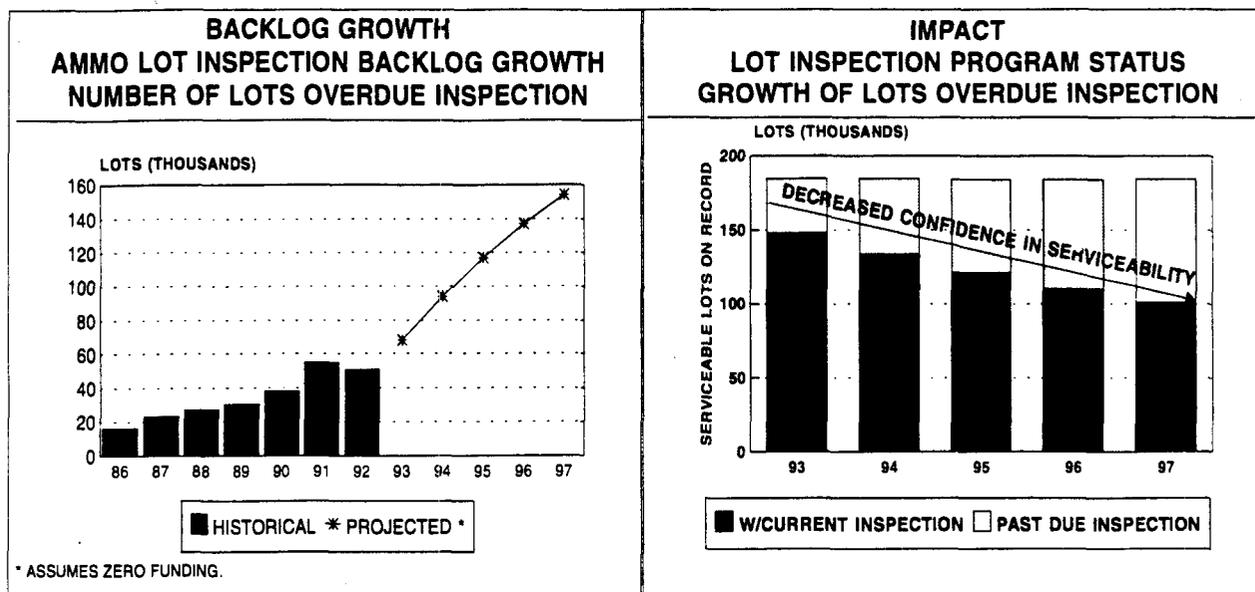


Figure 14

d. **Maintenance.**

(1) **Major Maintenance.** For their part, the ability of the previously-described SMCA surveillance program to provide accurate stockpile condition code data is critical to the proper planning and execution of SMCA maintenance. The services provide funds to the Army to accomplish directed SMCA major maintenance (reimbursable).

While it appears in *Figure 15 (on the next page)* that funding of major maintenance by the services has remained relatively stable, some of the services have been more successful than others in obtaining funding. Even if funding for major maintenance remains stable, losses of personnel available to perform maintenance could negatively impact future deliveries from maintenance.

SMCA MAJOR MAINTENANCE ACCOMPLISHMENTS

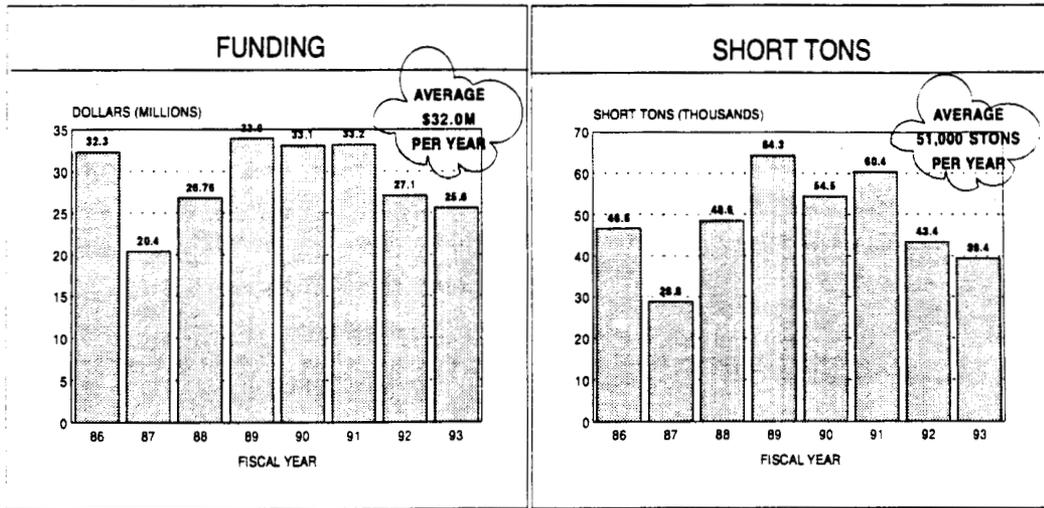


Figure 15

(2) **Minor Maintenance.** As noted on Figure 16 (below), funding of the SMCA's minor/non-reimbursable maintenance has been reduced to the point that only year-end funds are now applied against this SMCA responsibility. Prior to FY 93, installations were provided with bulk funding for minor maintenance projects. In FY 93, no specific minor maintenance funds were programmed for the installations even with increased requirements resulting from SWA and European retrograde.

SMCA MINOR MAINTENANCE HISTORICAL ACCOMPLISHMENTS

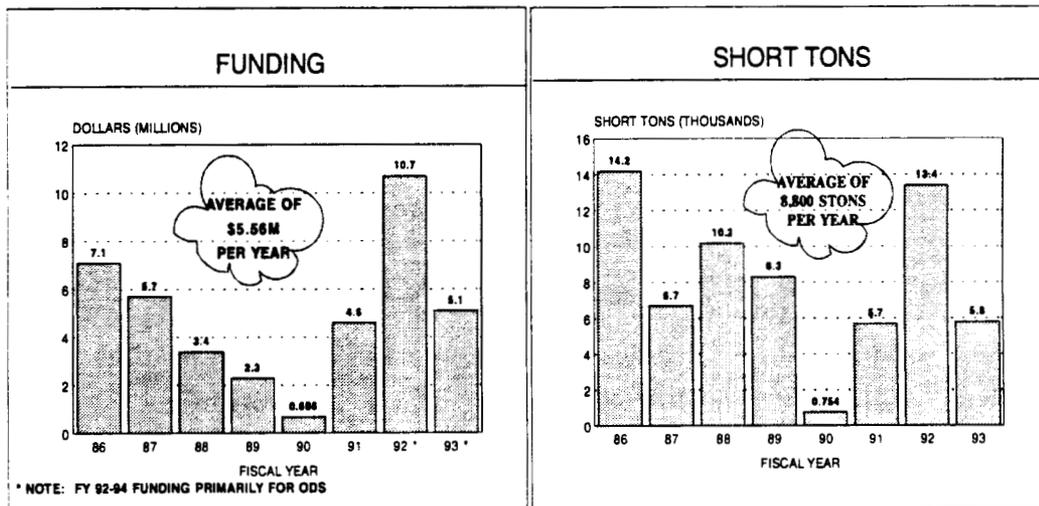


Figure 16

(3) **Maintenance Assessment of TOP 20 Items.** Like the other WASP Teams, the Maintenance Team paid special attention to TOP 20 items that were identified by the services as critical. As shown on *Figure 17 (below)*, 36% of those total assets by short ton (STON) were determined to be non-issuable. The estimated upgrade cost of those identified as unserviceable is \$140 million based upon an average \$800 per STON figure. Accurate surveillance data would be required to assess defects to bring serviceability to the required level of readiness once the actual requirement by item was stated. Estimated new procurement value of the unserviceable identified is approximately \$1.2 billion.

MAINTENANCE ASSESSMENT OF SERVICE TOP 20 ITEMS
(By Issuable Status)

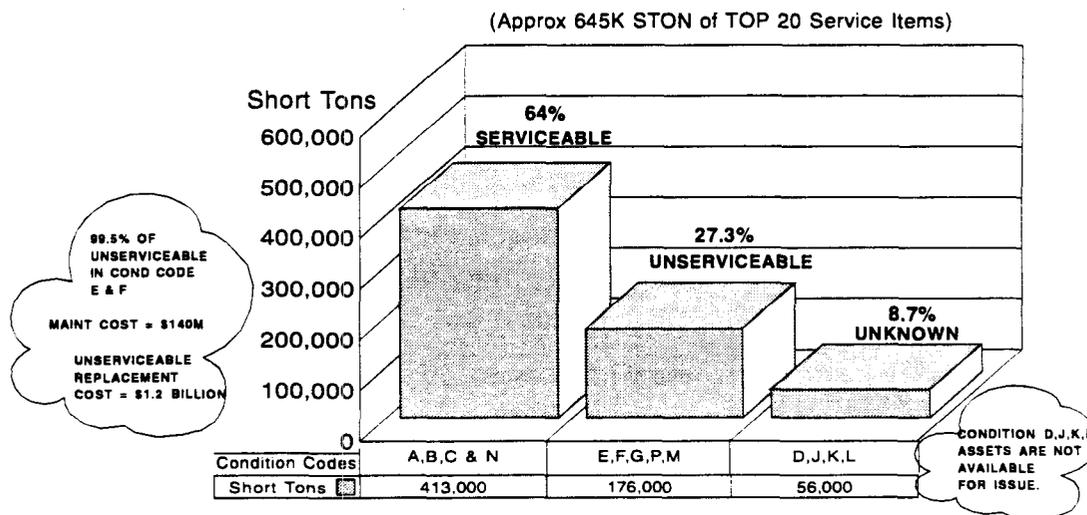


Figure 17

e. **Rewarehousing.** The Rewarehousing Team began its analysis with a broad look at the storage base. Faced with a nearly full wholesale base, no funding for rewarehousing, and unprecedented receipts, the Rewarehousing Team first determined the existing conditions and then identified initiatives to generate space.

(1) **Continued Conditions W/O Rewarehousing.** *Figure 18 (on the next page)* depicts the present condition of the wholesale ammunition stockpile in storage which can be corrected by rewarehousing. The installations attributed their present conditions to two factors. First, the volume of the SWA and European returns. Second, the lack of paperwork for the SWA returns. The installations were forced to unload, segregate by lot, and store the ammunition without knowing if additional quantities of the same lots were going to be received.

CONTINUED CONDITIONS W/O REWAREHOUSING

CONCERNS	NUMBER OF INSTANCES
A. STRUCTURES WITH INCOMPATIBLE MATERIEL	100*
B. STRUCTURES EXCEEDING EXPLOSIVE LIMITS	41
C. MATERIEL IN INADEQUATE SECURED STRUCTURES	3
D. MATERIEL IN OVER-SECURED STRUCTURES	4754
E. LOW QDC MATERIEL IN PREMIUM EXPLOSIVE SPACE	4,738,096 SQ. FT.
F. INERT MATERIEL IN EXPLOSIVE STORAGE SPACE	3,510,082 SQ. FT.
G. TOTAL FRAGMENTED AMMUNITION LOTS IN STORAGE	31725
H. TOP 20 FRAGMENTED LOTS IN STORAGE	4579

* CATALOG DATA ERRORS ACCOUNTED FOR 57.
CONTINGENCY STOCK ACCOUNTED FOR 4

Figure 18

(2) **Lot Fragmentation (TOP 20 Assets).** There are over 4,000 lots of the TOP 20 DODICs scattered or fragmented in storage. *Figure 19 (below)* gives the percentages of fragmented lots for each service for their TOP 20 DODICs. The impact of fragmented lots on readiness is delayed response time and increased shipping costs, resulting from the warehouseman having to go to multiple locations for a single shipment. Fragmented lots on the average increase an installation's shipping standard by 1.0 man-hour per STON.

LOT FRAGMENTATION (TOP 20 ASSETS)

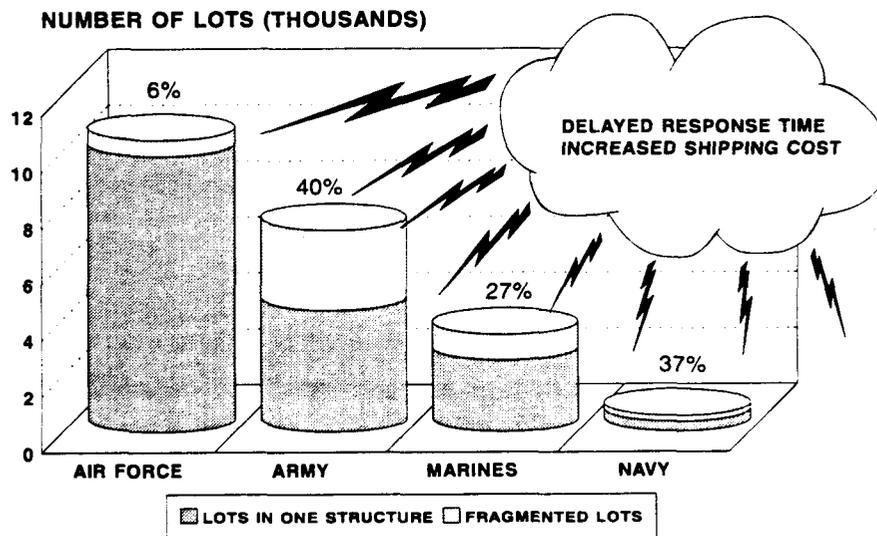


Figure 19

(3) **Outside Storage By "1995"**. Lot fragmentation is an inefficient use of storage space to be avoided whenever possible. As *Figure 20 (below)* indicates, efficient use of storage space is rapidly becoming a must. *Figure 20* also depicts the FY 93 occupancy level and the projections for the outyears if no rewarehousing or space-gaining initiatives are funded. The installations that comprise this chart are the eleven primary U.S. Army Armament, Munitions and Chemical Command (AMCCOM) and U.S. Army Depot System Command (DESCOM) storage depots. A disparity in occupancy levels exists between installations ranging from 66 - 91 %. An installation is considered full when occupancy reaches 90 % of the net storage space available. Receipts are expected to double issues for FY 94 through FY 98. As the FY 95 bar shows, unless rewarehousing dollars are applied, receipts will routinely be going "Outside by 95."

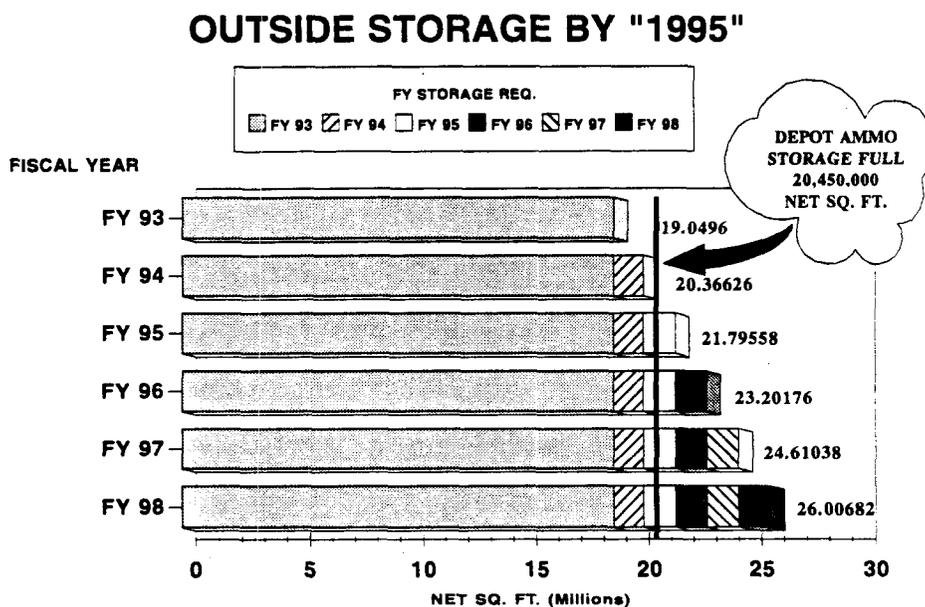


Figure 20

5. Conclusions.

a. **Inventory Accountability.** During the on-site visits, efforts were made to validate the conclusions reached during the data collection phase of the study. *Figure 21 (on the next page)* shows the current posture of the inventory as it was found throughout the data collection and during the on-site visits. Today's accuracy is 13% below the DA established goal and will continue to drop. Data indicate that accountability degradation will worsen over time if funding levels continue at their current rate. By FY 96, it will be difficult to know what we have, where it is located, and what condition it is in. The inventory program as currently arranged is complex

and expensive. It will be extremely difficult to provide future funding to conduct inventory as we have in the past. A real need exists to perform a valid, total, annual inventory. If unable to do so, public law needs to be changed. An organized approach to a simple program for accomplishment of these needs is required. A streamlined, commercial retail-type inventory could satisfy accountability requirements and reduce the current cost requirements.

INVENTORY ACCOUNTABILITY

■ CURRENT POSTURE

- ✓ 85% RECORD ACCURACY TO PHYSICAL COUNT
- ✓ LOCATION SURVEY COMPLETION 15%
- ✓ 77% OF RECORDS CAN BE AUDITED
- ✓ 33% OF MROs PROCESSED WITHOUT LOT SUBSTITUTION
- ✓ INVENTORY CATALOG DATA 90% ACCURATE

■ FUTURE TRENDS BY FY 96 WITH CURRENT FUNDING LEVELS

- ✓ 75% RECORD ACCURACY TO PHYSICAL COUNT
- ✓ SURVEY COMPLETION WILL BE 3% (CAT I & II ONLY)
- ✓ RECORDS CONFIDENCE WILL EXIST FOR ONLY SURVEYED ITEMS
- ✓ LOT SUBSTITUTIONS WILL NEARLY EQUAL MROs PROCESSED
- ✓ INVENTORY CATALOG DATA ACCURACY WILL BE APPROXIMATELY 82%

Figure 21

b. **Surveillance.** As indicated in *Figure 22 (below)*, essential must-fund safety programs and the relatively inexpensive test program for mines, pyrotechnics, and demolition items (\$200K) are funded to requirement at this time.

The significant failure rate (2-19 %) encountered during the last several years for all of these programs warrants serious

concerns over possible program abandonment. In order to avoid losing confidence and knowledge of stockpile reliability and serviceability, (1) action should be taken to prevent further backlog growth of untested/uninspected items and (2) assure that the serviceability and reliability

SURVEILLANCE

MAJOR PROGRAM*	CURRENT POSTURE	FUTURE TRENDS
✓ LARGE CAL TEST	58% TESTED	0% TESTED BY FY 96
✓ SMALL CAL TEST	60% TESTED	20% TESTED BY FY 97
✓ DEPOT SURV LOT INSPECTION	80% INSPECTED	55% INSP BY FY 97
✓ SAFETY TESTING (CADS/PADS & PROPELLANT)	100% FUNDED	100% FUNDED
✓ MINES, PYROS, DEMO TESTING	100% FUNDED	100% FUNDED

* BASED ON HISTORICAL DATA, THERE IS A 2-19% FAILURE RATE FOR LOTS TESTED IN THE STOCKPILE SURVEILLANCE SAMPLING PROGRAMS

Figure 22

of our top warfighter items are always known with a high degree of confidence.

c. **Maintenance.** Based on the specific assessments, the maintenance team concluded that AMCCOM and DESCOM installations at present have sufficient facilities, resources, and manpower to support joint service maintenance requirements. The accomplishment of major maintenance is dependent on each service's funds being provided to SMCA.

Requirements by the services drive accomplishment. Any backlogs are justified to the service by the installation. Workload is based on Integrated Conventional Ammunition Plan (ICAMP) projections which provide stable planning and execution of projects. Non-reimbursable minor maintenance in recent years has been funded at year-end by whatever excess funds were available. On the average, 51% of the annual high priority requirement by all services is funded. Loss of funding for maintenance, Voluntary Early Retirement Authority (VERA)/Voluntary Separation Incentive Pay (VSIP), reorganizations, and Reductions in Force (RIFs) result in loss of skilled and experienced maintenance personnel capable of quality workmanship.

MAINTENANCE

■ CURRENT POSTURE

- ✓ EXISTING CAPACITY AND CAPABILITY CAN SUPPORT MINIMUM REQUIREMENTS
- ✓ MAJOR MAINTENANCE PROGRAM SUPPORT IS STABLE AND SATISFACTORY
- ✓ NON-REIMBURSIBLE MINOR MAINTENANCE FUNDED WITH YEAR-END DOLLARS WITH ACCOMPLISHMENT OF 51% OF ALL SERVICES HIGH PRIORITY

■ FUTURE TRENDS

- ✓ MANPOWER/SKILL LOSSES WILL DEGRADE CAPABILITY TO SUPPORT REQUIREMENTS
- ✓ PLANNED MAINTENANCE (MAJ & MIN) FUNDING LEVELS WILL ACCOMPLISH 30% OF FY 94 AND 26% OF OUTYEAR REQUIREMENTS

Figure 23

As noted in *Figure 23 (above)*, planned levels of funding for services' major and SMCA minor maintenance will accomplish only 30 % of FY 94 and 26 % of the service's outyear high priority maintenance requirements. Use by the activities of a listing of the services "must do" items will assure that those items will receive appropriate prioritization for inspection and maintenance. Funding of the minimum recommended levels of maintenance ensures that the services priority warfighting items are maintained in a ready-to-use condition.

d. **Rewarehousing.** *Figure 24 (on the next page)* depicts the current storage posture of the stockpile in regards to occupancy level and the utilization of space. The future occupancy levels

REWAREHOUSING

■ CURRENT POSTURE

- ✓ 93% OF AVAILABLE SPACE IS OCCUPIED
- ✓ 75% OF OCCUPIED SPACE IS OPTIMIZED
- ✓ 79% OF "TOP 20" LOTS ARE CONSOLIDATED
- ✓ 97% OF STOCKPILE IS UNDER COVERED STORAGE

■ FUTURE TRENDS

- ✓ 100% OCCUPANCY OF COVERED STORAGE SPACE DURING FY 95
- ✓ 21% OF STOCKPILE IN OPEN STORAGE IN FY 98

Figure 24

are based on no funding for rewarehousing or space-gaining initiatives. The amount of ammunition assets that will be stored outside in the future is driving the need to more effectively utilize current storage space. A potential source of ammunition storage exists at various installations. The installations have existing structures which can be upgraded for ammunition storage. Optimization of vertical storage space can be enhanced by the use of storage aids/tools to fully utilize the capacity of structures.

e. **Explosives Safety.** Generally, explosives safety has not declined significantly despite reduced resources. This is attributable to the design of most items having considered probable unfavorable storage, handling, and use conditions. Additionally, there is a long-standing ammunition community commitment to employee training regarding the inherent hazards of ammunition operations. As emphasized in *Figure 25 (below)*, personnel turnover driven by reshaping will increase the level of risk in the future due to the loss of expertise. If materiel is moved to outside storage, initial risk will increase as will the level of damage should a mishap occur. Without adequate funding in future test and inspection programs, the end user will be presented with

EXPLOSIVES SAFETY

■ CURRENT POSTURE

- ✓ SUCCESSFUL EXPLOSIVES SAFETY PROGRAM-LOW ACCIDENT RATE
- ✓ STOCKPILE (AMMUNITION ITEMS) SAFE FOR STORAGE
- ✓ TRAINING PLANS IN PLACE AND ARE EFFECTIVE

■ FUTURE TRENDS

- ✓ VERA/VSIP, REALIGNMENT AND REORGANIZATION = PERSONNEL TURMOIL
- ✓ INCREASING RISK (PERSONNEL SAFETY) WITH LOSS OF EXPERTISE
- ✓ INCREASING RISK (EXPLOSIVES SAFETY) WITH OUTSIDE STORAGE
- ✓ INCREASING RISK IF STOCKPILE RELIABILITY PROGRAM REMAINS UNFUNDED
 - TO USER
 - IN STORAGE

Figure 25

materiel for which the confidence level in basic reliability is unknown or surely declining. To assure continued safe operations throughout the ammunition life cycle, the baseline stockpile readiness functions should be funded, and a continued emphasis on ammunition training should be maintained.

READINESS

■ CURRENT POSTURE

- ✓ RESOURCES FOCUSED ON SHIPPING/RECEIVING
- ✓ MINIMAL INVENTORY/REWAREHOUSING DONE
- ✓ MEETING QUALITY/SAFETY REQUIREMENTS
- ✓ RELYING ON SKELETON/TEMPORARY WORKFORCE
- ✓ SUSTAINABILITY CAPACITY SHOWING SIGNS OF DEGRADATION

■ FUTURE TRENDS

- ✓ WITH PROJECTED RESOURCES - READINESS WILL DECLINE
- ✓ SUPPORT TO CUSTOMERS WILL SUFFER AND BECOME MORE EXPENSIVE
- ✓ INTEGRITY/ACCURACY OF MANAGEMENT DATA WILL DETERIORATE

Figure 26

f. **Readiness.** As *Figure 26 (above)* describes, based on limited resources, most efforts are focused on meeting shipping and receiving requirements. Some inventory is being accomplished on Categories I and II security items.

Rewarehousing is generally being done only to facilitate receipt and shipment actions. The materials to be provided to the customer are generally of acceptable quality and day-to-day operations are conducted safely. Individual installations are beginning to be "One Deep" in key jobs and some installations are relying heavily on temporary employees to do routine work.

The previous posture is eroding and symptoms of degradation are visible in key management indicators: e.g., denials, lot substitutions, etc. Despite having a dedicated workforce with a long history of responsive support, the ammunition organizations will become increasingly unable to provide responsive, efficient support to customers as resources decline. Once again, funding a baseline level for stockpile readiness functions will preclude loss of existing support capability.

g. **Summary.** All functional, safety, and readiness conclusions from previous pages are summarized at *Figure 27 (on the next page)*. It reflects our current posture and depicts future trends based on the current projected funding level. Our current posture reflects an inventory accountability program that is beginning to slip, a decreasing level of confidence in the reliability of the stockpile, a maintenance capacity/capability that is adequate to meet projected

requirements, a stockpile being stored safely, but a sustainability that is showing signs of deterioration. In the future, we anticipate our inventory accountability problems to continue to mount, stockpile reliability confidence level will continue to decline, maintenance capability will decline, and the volume of "Go-To-War" assets requiring maintenance will continue to increase.

Our available storage space will be full, we will be forced to store an increasingly large portion of the stockpile outside, personnel and facilities will be at greater and greater levels of risk from a degrading stockpile, and our "Go-To-War" readiness posture will become more and more suspect.

The body of the WASP Report includes plans of action to resolve our major concerns with the way the program is headed. These plans include: revamping our current inventory program to provide an appropriate level of accountability, performing testing and inspection on our warfighters to gain an acceptable level of confidence in their reliability, performing maintenance on the service-designated high priority assets to keep them in a "Go-To-War" status, promoting the use of storage aids and providing management tools that will enable the storage base to be used more efficiently, and finally, providing the needed funding and personnel resources to support the services in their need for power projection.

SUMMARY

■ CURRENT POSTURE

- ✓ INVENTORY ACCOUNTABILITY SLIPPING
- ✓ STOCKPILE CONFIDENCE LEVEL SLIPPING
- ✓ ADEQUATE MAINTENANCE CAPACITY/CAPABILITY
- ✓ MAJORITY OF STOCKPILE OPTIMALLY STORED IN COVERED SPACE
- ✓ STOCKPILE SAFETY STORED
- ✓ SUSTAINABILITY ON THE DECLINE

■ FUTURE TRENDS

- ✓ INVENTORY PROBLEMS CONTINUE TO MOUNT
- ✓ STOCKPILE CONFIDENCE LEVEL CONTINUES TO DECLINE
- ✓ MAINTENANCE CAPABILITY DECLINES/REQUIREMENTS INCREASE
- ✓ COVERED SPACE FULL/GROWING LEVELS OF ASSETS STORED OUTSIDE
- ✓ PERSONNEL/FACILITY RISK FACTORS INCREASING
- ✓ READINESS WILL CONTINUE TO DECLINE

Figure 27

MAJOR RECOMMENDATIONS

- **INVENTORY ACCOUNTABILITY**
 - ✓ ORGANIZE PLAN FOR RESTRUCTURING INVENTORY
- **SURVEILLANCE**
 - ✓ FOCUS PROGRAM ON READINESS OF DEFINED WARFIGHTER ITEMS
- **MAINTENANCE**
 - ✓ DEVELOP STRATEGIC MAINTENANCE PLAN IDENTIFYING WARFIGHTER MAINTENANCE REQUIREMENTS
- **REWAREHOUSING**
 - ✓ INSTITUTE STORAGE SPACE MANAGEMENT UTILIZATION PROGRAM USING MODERN TECHNOLOGY
- **GENERAL**
 - ✓ PROMOTE NEW WAYS OF DOING BUSINESS; RED TEAM, MIDAS, VISTA, ETC.
 - ✓ SUPPORT INITIATIVES TO REDUCE STOCKPILE; E.G., TRAINING, DEMIL, FMS, STOCKPILE CONVERSION

Figure 28

6. Recommendations.

a. **Major Recommendations.** As a result of the individual and collective assessments, the WASP Team has a series of major recommendations as illustrated on *Figure 28 (above)*. In the area of Inventory Accountability, the confidence in accountable records is in danger of dropping to an unacceptable level. With funding trends as they are, the reality of continuing the present program is fading, yet accountability is a requirement. A more simplistic, economical approach is available and should be supported.

In addition to accomplishing all essential safety functions, the Surveillance Program should be managed and structured to assure that the condition of essential "Go-To-War" stocks is constantly known with a high degree of confidence. Any funds authorized in addition to the safety programs should be devoted to a prioritized listing of warfighters.

In the area of Maintenance, a strategic plan will assure that minimum, but sufficient, resources are allocated to maintain the services highest priority items. To optimize the use of increasingly scarce storage space, ammunition organizations should implement a PC-driven data base system which can be easily maintained/used at the various installation levels to quickly access the stockpile in storage on a day-to-day basis. This initiative will improve the current storage management methodology to more accurately reflect storage space utilization as it applies to the

current stockpile; e.g., density factors, net-to-gross ratios, installation storage capabilities, etc.

At the most general level, decision makers should commit to promoting new ways of doing business whether they challenge current methods such as the Red Team did, offer a new way of looking at the demil inventory like the Munitions Items Disposition Action System (MIDAS) does, or place total SDS ammunition installations balance, location, condition code, and grid data on a single floppy disk such as the USADACS Visibility Information Storage Tool for Ammunition (VISTA) does.

b. **FY 94-97 Dollars Required, Recommended, and Funded.** The current Budget and Program Resources Review (BPRR) requirement and how it compares to the WASP required and recommended funding level is shown on *Figure 29 (below)*. It also displays the level of funding available for each function as we know it today within the total ammunition program.

FY 94-97 DOLLARS REQUIRED, RECOMMENDED, AND FUNDED

FUNCTION	FY 94				FY 95			
	BPRR	WASP REQ'D	WASP RECOMM	FUNDED	BPRR	WASP REQ'D	WASP RECOMM	FUNDED
INVENTORY ACCOUNTABILITY	22.2	26.5	15.5	2.2	22.2	26.5	15.0	?
SURVEILLANCE	24.7	27.9	19.3	5.1	24.4	26.7	18.2	5.0
MAINTENANCE	24.0	44.3	33.7	10.2	19.7	32.3	42.9	6.7
REWAREHOUSING	14.4	20.9	6.0	0	TBD	21.9	9.5	TBD
FUNCTION	FY 96				FY 97			
	BPRR	WASP REQ'D	WASP RECOMM	FUNDED	BPRR	WASP REQ'D	WASP RECOMM	FUNDED
INVENTORY ACCOUNTABILITY	22.2	23.0	12.0	?	22.2	23.0	12.0	?
SURVEILLANCE	24.2	25.5	17.0	4.9	25.2	24.2	15.8	4.8
MAINTENANCE	29.2	44.7	44.7	15.5	28.6	51.7	51.7	14.5
REWAREHOUSING	TBD	12.3	6.6	TBD	TBD	13.9	8.3	TBD

Figure 29

The BPRR requirement is, in some cases, a constrained requirement that is developed based on current BPRR guidance, and is generally reflective of an "executable requirement" based on

projected staffing levels, and historical levels of effort.

The WASP required level would provide for accomplishment of functions currently required in regulatory guidance, for public law, and assure a serviceable stockage objective of "Go-To-War" assets. The WASP recommended level is the minimum essential funding level required to maintain the "Go-To-War" stockpile of high priority assets as designated by each service, and provide for essential support for the remainder of the stockpile to assure a minimum level of safety, effectiveness, and efficiency. The funded level reflects the level of funding that will be applied against each function within the current ammunition program funding available.

c. **Requested Actions.** The WASP Team requests that the actions identified on *Figure 30 (below)* be taken by the JOCG. Regardless of the resource level applied, there is an urgent need to identify a DOD-prioritized list of ammunition items that will allow prudent resource application to the materiel that is needed to defend the nation. Additionally, the WASP Team believes the JOCG should support a level of effort that will assure the installations maintaining the stockpile are resourced to perform basic stockpile management functions.

REQUEST THAT JOCG:

1. ACCEPT GENERAL VALIDITY OF WASP ASSESSMENTS.
2. SUPPORT A SINGLE, PRIORITIZED DOD ITEMS LIST TO FOCUS SMCA/SERVICE RESOURCE APPLICATION.
3. SUPPORT A "MUST-FUND" LEVEL REQUIRED TO OPEN INSTALLATION DOORS AND PERFORM BASIC STOCKPILE MANAGEMENT FUNCTIONS.

Figure 30

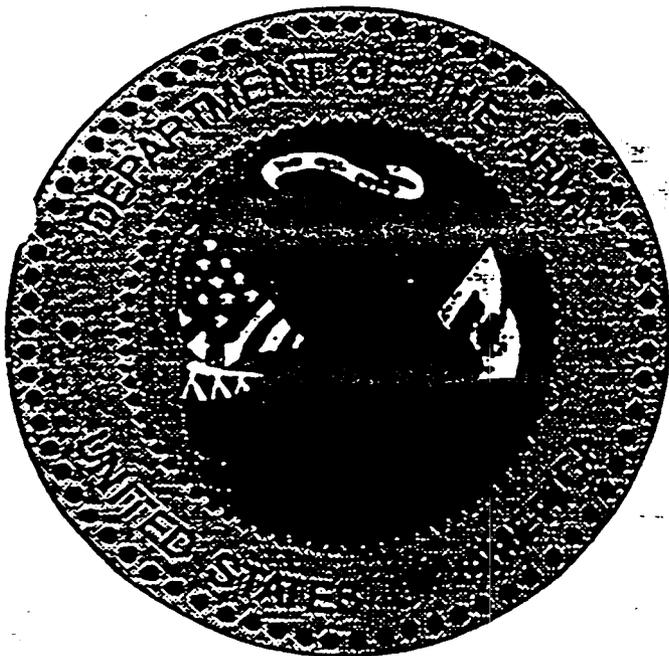
The complete results of the WASP Review and Assessment are provided in the following Chapters and Appendices as an aid to key decision makers in their ongoing efforts to effectively apply limited resources to essential SMCA wholesale stockpile readiness functions.

FOR OFFICIAL USE ONLY





INTEGRATED AMMUNITION STOCKPILE MANAGEMENT PLAN



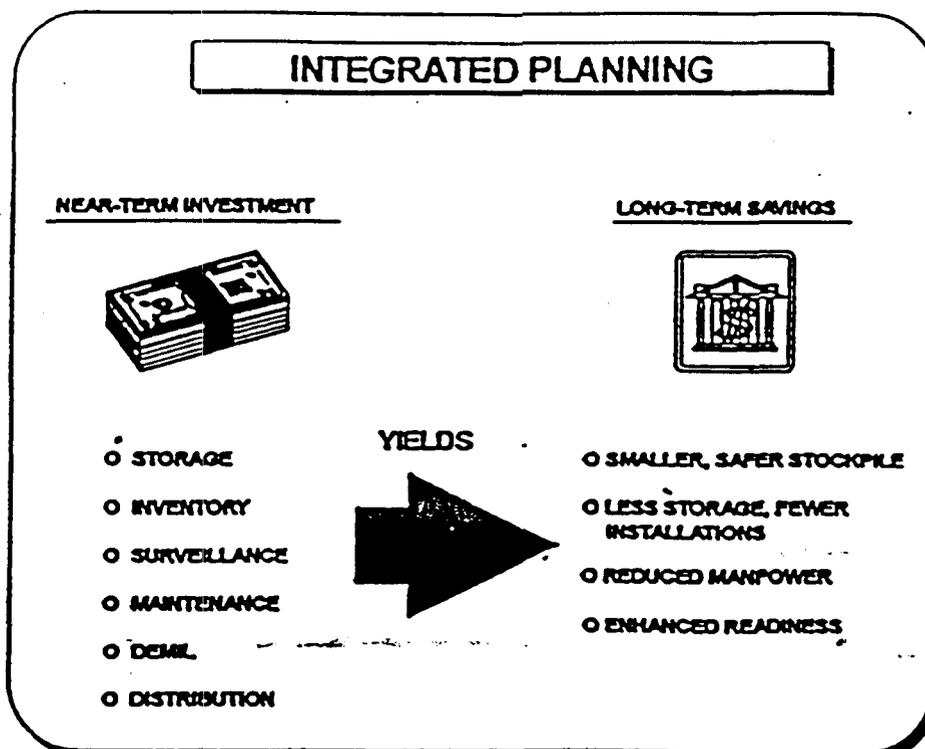
MAY 1994

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I. PURPOSE

a. This document presents an Integrated Ammunition Stockpile Management Plan that outlines near term investments for achieving long term efficiencies. The plan provides a methodology for restructuring the current wholesale ammunition storage base. The plan also addresses changes in stockpile management methodologies for distribution, storage, inventory, surveillance, maintenance, and demilitarization.



b. The changing worldwide geopolitical environment, reduced military force, structure, decreased ammunition Operation and Maintenance, Army (OMA) funding, and revised military strategies focusing on a CONUS based power projected Army has necessitated an evaluation outlining how we intend to conduct daily ammunition stockpile management operations. Unlike pre-1991 war reserve requirements that were based on a global, protracted war in three theaters, current requirements support two Major Regional Contingency (MRC) scenarios and require a stronger emphasis on support from our CONUS wholesale ammunition storage base. Consequently, streamlining of the storage base into an efficient and effective operation has become imperative to maintain optimum readiness.

II. OBJECTIVES

To develop a storage base and ammunition policies resulting in a smaller, safer stockpile on fewer installations using less manpower. This plan will provide a common reference and vision for both near and far term as we reduce our stockpile. It will provide the foundation for future programming and budgeting based on realistic financial resources.

III. SCOPE

a. In consonance with the Army mission of the Single Manager for Conventional Ammunition (SMCA), this plan addresses the stockpile of wholesale ammunition for all of the Services. The tier storage base was developed encompassing the following primary wholesale stockpile storage installations:

Crane AAA	Red River AD
Hawthorne AAP	Savanna ADA
McAlester AAP	Seneca ADA
Anniston AD	Sierra AD
Blue Grass AD	Tooele AD
Letterkenny AD	

b. The realignment of each installation is focused solely on the ammunition related functional mission at each installation. This includes work being performed on SMCA items, U.S. Army Missile Command (MICOM) items, and Service unique items.

IV. BACKGROUND

a. Chief of Staff - Army tasking

(1) The requirement to formulate an Integrated Ammunition Management Plan was outlined in a 19 Oct 93 memorandum from the Chief of Staff of the Army (CSA), General Gordon R. Sullivan. His letter stated that the Army will produce a plan containing a common reference and vision for both the near and far term with an ultimate objective of achieving a smaller, safer ammunition stockpile with fewer installations using less manpower. To accomplish this ambitious goal, near term investments in rewarehousing, redistribution, disposal and modernization of the stockpile, will be identified to achieve long term efficiencies. Since availability of additional resources cannot be assumed, the CSA directed that the Army take steps for more efficient use of the resources that are programmed and budgeted in the near term and out years. An important step in ensuring efficient use of resources would be to

construct a plan that contained a solid foundation for future programming and budgeting projections. As a springboard for the development of the plan, the CSA tasked the Deputy Chief of Staff for Operations (DCSOPS) to undertake and outline an Ammunition Functional Area Assessment (FAA) to the Vice Chief of Staff Army (VCSA) which would identify measures to be taken in refocusing stockpile management philosophies.

(2) The CSA tasking occurred as a result of several briefings and studies outlining the difficulties associated with the current wholesale ammunition stockpile. In March 1993, the Deputy Chief of Staff for Logistics (DCSLOG) received a briefing on Operation and Maintenance, Army (OMA) funding shortfalls and the impact on the stockpile. In May 1993, the Joint Ordnance Commanders Group (JOCG) initiated the Wholesale Ammunition Stockpile Program (WASP) review and assessment based on the possible degradation in stockpile safety, readiness, and quality resulting from the reduced level at which essential stockpile readiness functions were being funded. In July 1993, the CSA was briefed by the Army Materiel Command (AMC) Deputy Chief of Staff for Ammunition (DCS AMMO) who outlined the growing stockpile concerns associated with funding shortfalls. The WASP Study was accomplished between June and September of 1993. The study, representing the efforts of 43 major participants from all military services, provided a detailed analysis of the impacts of not performing critical functions at an appropriate funding level. Of primary concern was the lack of funding being applied to the essential stockpile readiness functions of inventory accountability, surveillance, maintenance, and rewarehousing.

(3) In October 1993, a second briefing by the DCS AMMO to the CSA outlined the results and findings from the WASP study. The direction from the CSA to accomplish a functional area assessment and develop an Integrated Ammunition Stockpile Management Plan resulted.

b. CHANGES IN THE STOCKPILE

(1) Over the past few years, the wholesale ammunition storage infrastructure and the stockpile have undergone significant changes. This rapid change has been a major contributing factor to the current stockpile deficiencies as identified in the WASP study.

(2) A number of key events have occurred to reshape the size and structure of both the wholesale storage base and the ammunition stockpile.

a) The 1988 Base Realignment and Closure (BRAC) commission recommended the cessation of conventional ammunition operations at four depot activities: Fort Wingate, Navajo, Pueblo, and Umatilla. That decision reduced the CONUS wholesale storage base by six million gross square feet and required the absorption of 92,165 short tons, the equivalent of 830,000 square feet, into the remaining wholesale storage base.

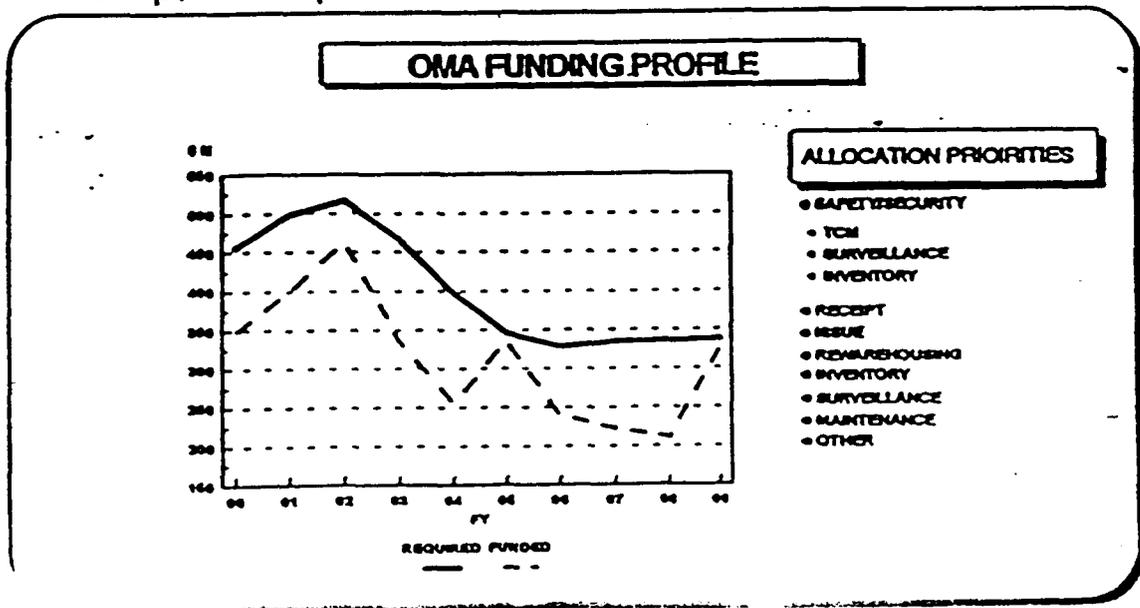
b) During Operation Desert Shield/Desert Storm, nearly 500,000 short tons were shipped from the CONUS storage base. Simultaneously, stocks aboard afloat prepositioned ships were downloaded, Europe based stocks were shipped to SouthWest Asia (SWA), and basic load and uploated systems were arriving in theater. Nearly all stocks remaining after the Gulf War, regardless of origin, were retrograded to the CONUS storage base. The impact of this additional storage requirement on the already strained storage base and storage base operations was soon amplified significantly as stocks were received back into the wholesale system and were no longer configured in predominately large lots; a configuration which optimizes storage space, lends itself to economical surveillance and inventory, and requires little or no rewarehousing.

c) In FY 92-FY93 all services began a total realignment and right-sizing. The Department of Army announced a roll back of troops and munitions from Europe, an ammunition movement which by end state would place more than one half million short tons back into the CONUS storage base. To compound the problem, the Navy and Air Force also have roll back programs containing significant tonnages that have yet to be identified.

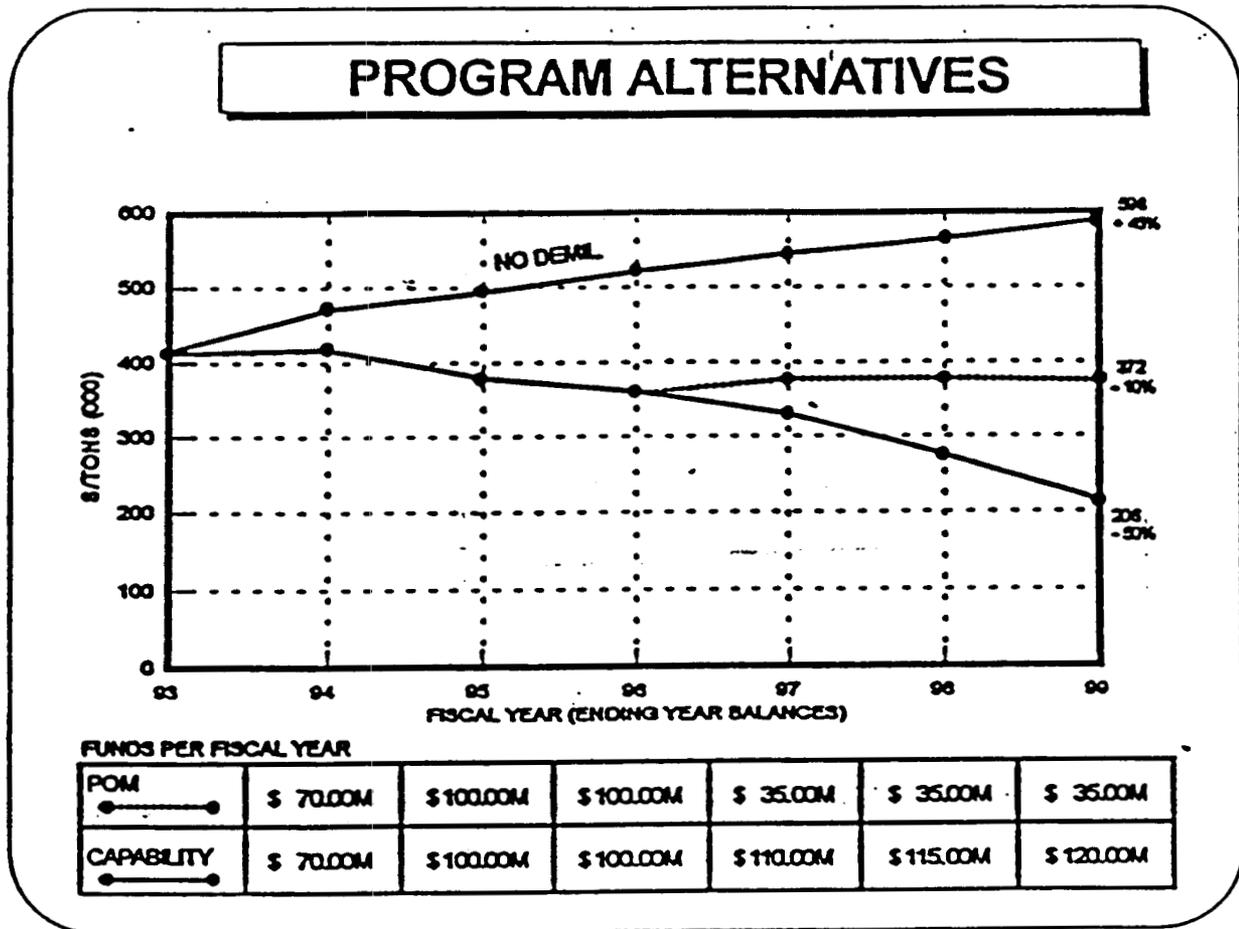
(3) Ultimately, significant force and funding reductions have reduced the capability of the storage installations to perform many basic storage functions to include rewarehousing, inventory, surveillance, and even the capability to efficiently and effectively receive and issue stock.

c. FUNDING

(1) In recent years, OMA funding has been sporadic and on the decline. Although funding levels for FY95 and FY99 are favorable, FY96/97/98 are significantly under funded. As programmed, planned funding levels result in an overall inability to meet the receipt/issue requirements for a full FY.

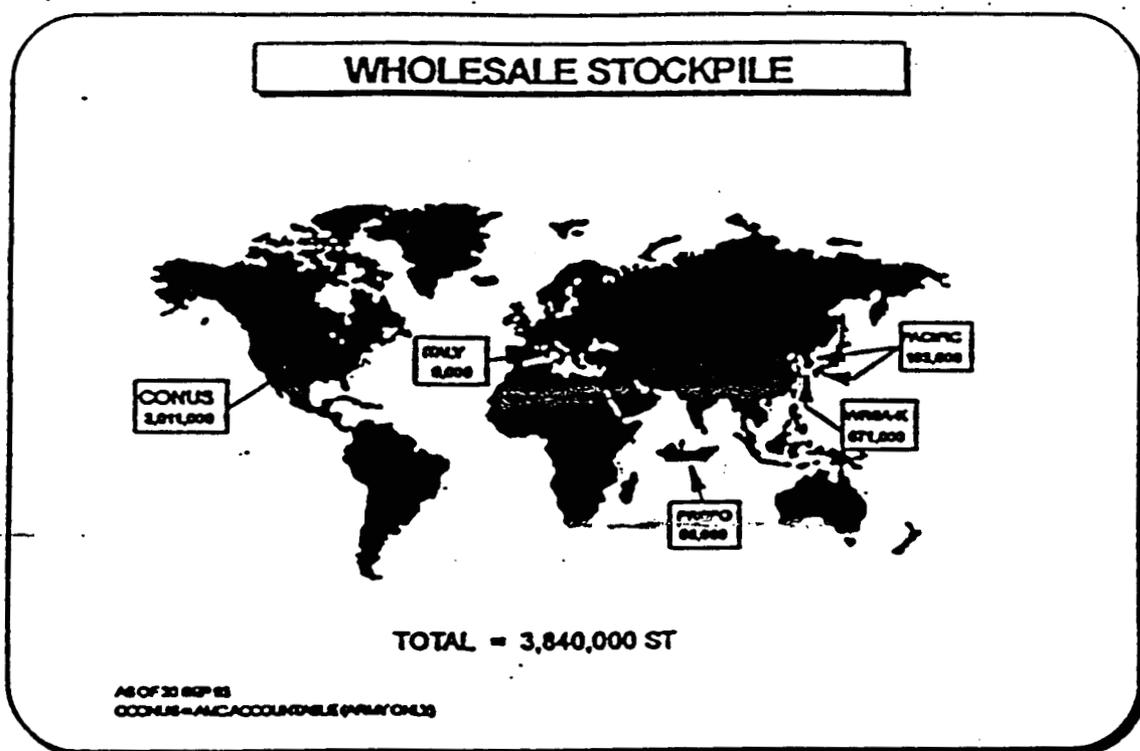


(2) Another major element of stockpile management is demilitarization. With the growing demilitarization stockpile, currently at 413,000 short tons, funding to accomplish demilitarization programs has become critical. With the augmentation of contractor support to the government base capacities, funding levels increase to levels whereby the actual backlog will start to decline in FY95. Without any funding, the backlog would continue to grow significantly. Demilitarization is currently funded to full capacity in FYs 94/95/96 by Procurement Appropriation - Army (PAA) Funds but are funded at less than one-third of capability in FYs 97/98/99.



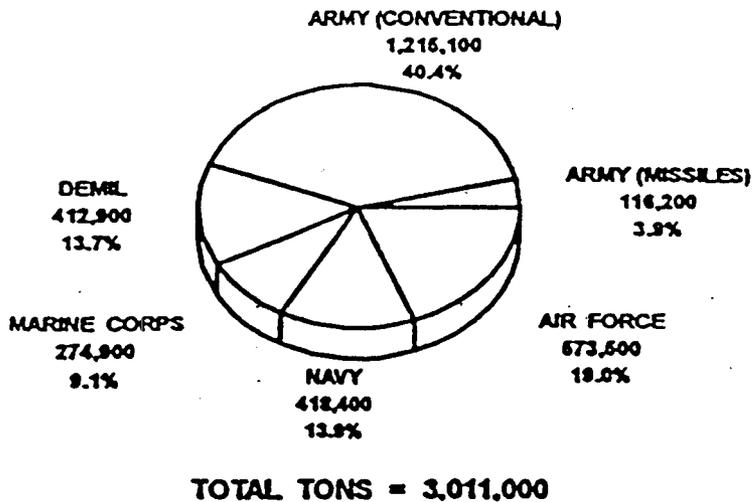
V. STOCKPILE ASSESSMENT

a. As the Single Manager for Conventional Ammunition (SMCA), the Army has oversight of wholesale assets of all services, as well as Army Reserve (AR) and Operational Projects stored in forward deployed theaters and aboard Army Prepositioned Afloat vessels. The overall stockpile for which SMCA maintains accountability totals approximately 3,840,000 short tons. A total of 3,011,000 short tons resides in the CONUS wholesale storage base.



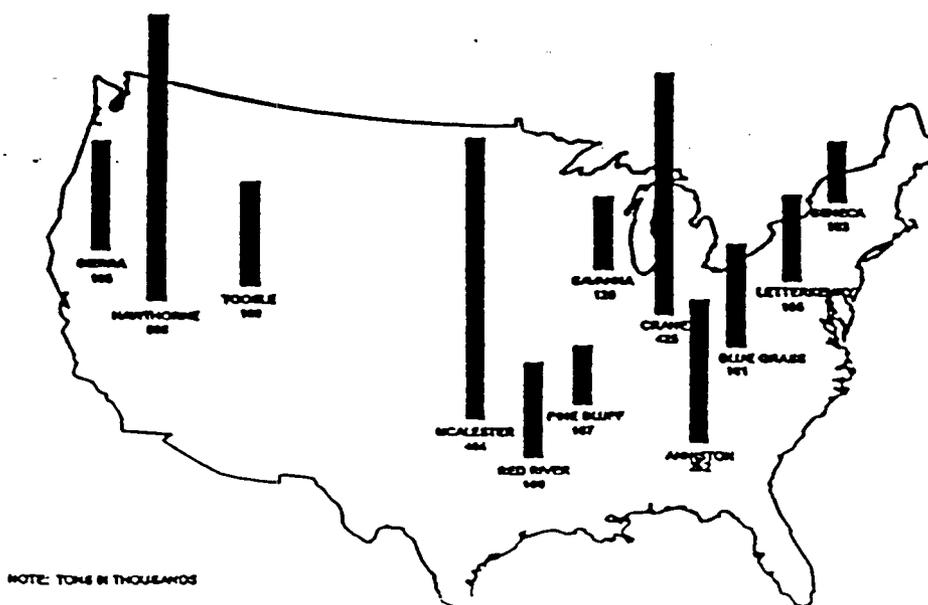
b. The CONUS wholesale stockpile is further broken down into individual account owners. The base is responsible for the storage of Army (conventional and missile), Navy, Marine Corps, Air Force, and demilitarization account stocks. The Army accounts for approximately 44 percent (40 percent conventional, 4 percent missiles) of the total base. An additional 14 percent, or 413,000 short tons of the 3,011,000 short tons resides in the demilitarization account. Significantly, 42 percent of the CONUS wholesale stockpile belongs to the other services.

CONUS WHOLESALE STOCKPILE



c. The ammunition wholesale stockpile is primarily configured within several CONUS base installations as depicted in this chart:

PRIMARY STORAGE LOCATIONS



d. Essential to the Integrated Ammunition Stockpile Management Plan is the separation and segregation of the current stockpile into two distinct subsets, based on the requirements for which the stocks are designated. Currently, the stockpile is intermingled with many types of diverse stocks for varying requirements. In order to classify the stockpile into distinct and separate requirements, or purposes, the following terms must be defined:

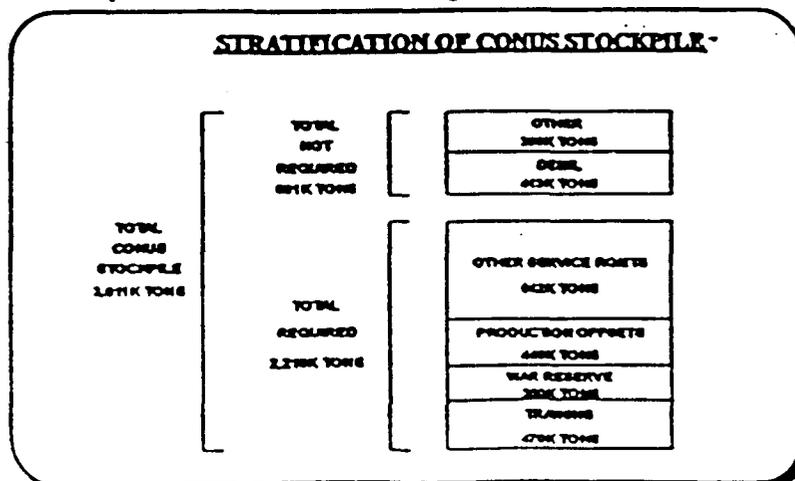
(1) **Required Stocks:** That portion of the stockpile that has an identifiable requirement. This includes all stocks in storage that have a requirement for:

- a) **War reserve:** Stocks required from CONUS base to meet service requirements for the two MRCs.
- b) **Training:** Peacetime utilization stocks.

c) **Production Offset:** Those stocks that are over and above established requirement levels but are retained under the provisions of the Office of Secretary of Defense (OSD) stockpile retention policy. Examples include economic retention stocks to support training beyond the Program Objective Memorandum (POM) years and contingency retention stocks wherein stocks of older items are held to meet the shortfalls of newer, technologically advanced improved items. Stocks in this category are normally long lead time production items, that, in the event of a consumption of war reserve stocks during wartime, they could readily be transitioned for war reserve replenishment as directed in Department of Defense (DOD) planning guidance.

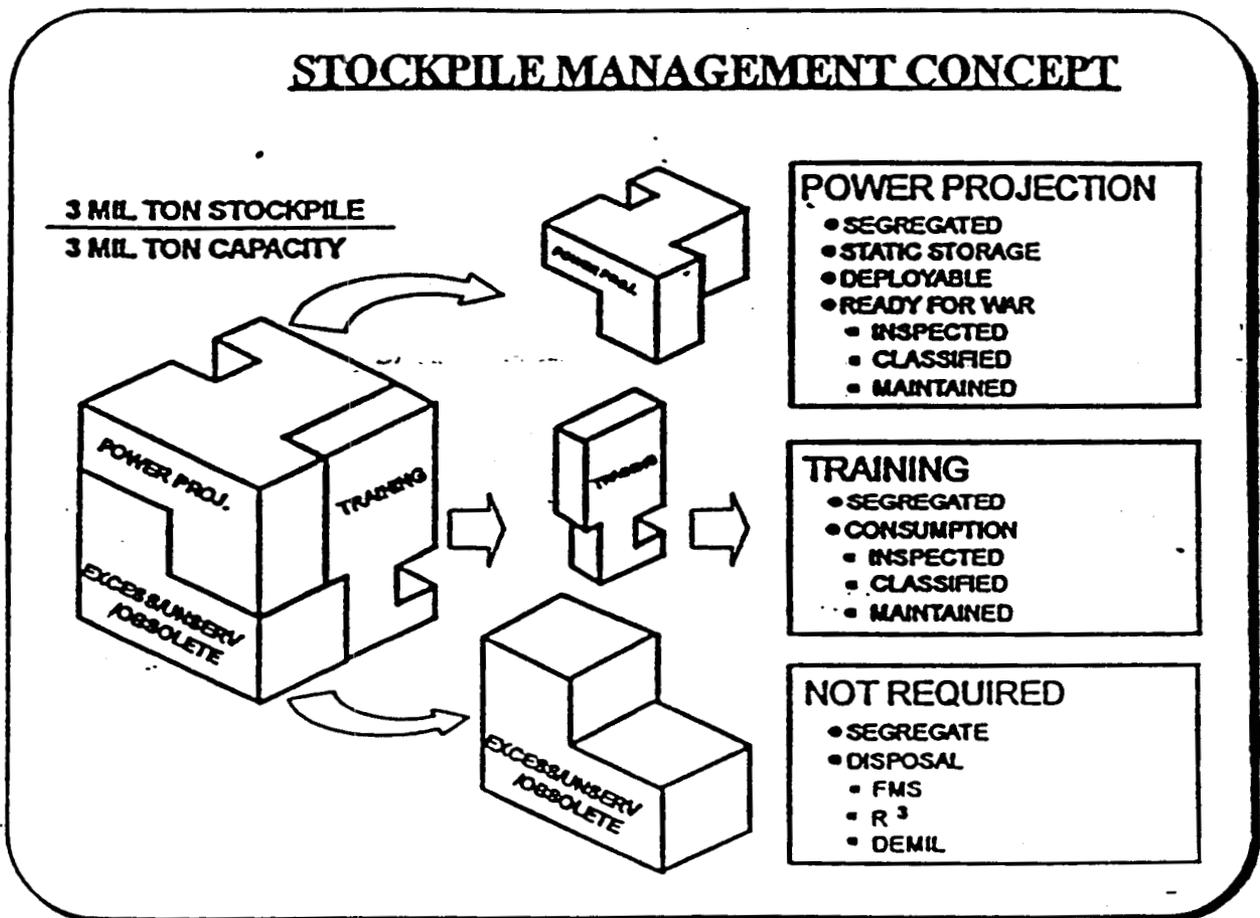
(2) **Non-required Stocks:** That portion of the stockpile that has no identifiable requirements. Included in this segment are stocks located within the demilitarization account and excess stocks awaiting final disposition.

e. The identification of the current CONUS stockpile of 3,011,000 short tons into required and non-required stocks indicates that approximately 2,210,000 short tons are to be considered as required and the remaining 801,000 short tons to be non-required.

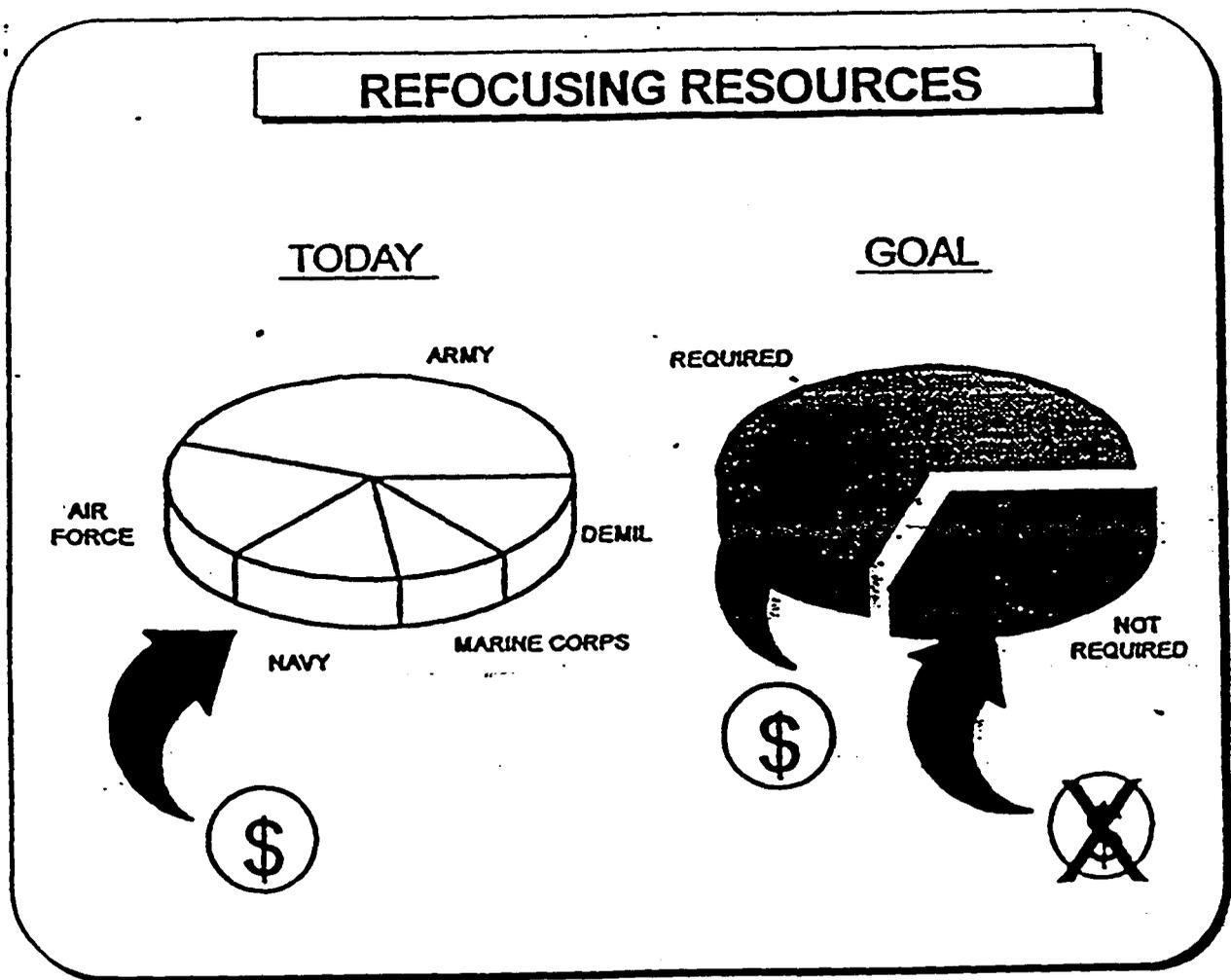


VI. SEGREGATING AND SEPARATING THE STOCKPILE

a. The basis for successful implementation of this plan involves the separation and segregation of required power projection and training stocks from non-required excess, obsolete, and unrepairable stocks. Much of the segregation will be through redistribution, rewarehousing, aggressive demil programs, and intensive distribution forecasting. Segregating the stockpile in this fashion will increase installation efficiencies in supporting power projection principles. Stocks required to support power projection and training will be set aside and not co-mingled with other assets.



b. Under the current system, available funding and resources are allocated against the total stockpile, regardless of how the stocks are classified. By separating the required and non-required stocks significant reductions in resource requirements can be realized. Scarce resources will concentrate almost exclusively on that portion of the stockpile that has valid training and war reserve requirements. The remainder of the stockpile, the non-required stocks, will receive minimal resource allocations for safety and security considerations until disposition can be made. In each of the assessment areas outlined in this plan, this segregated operational philosophy is applied. The segregated operational philosophy also forms the basis for revised management of the stockpile.



VII. TIER DEPOT CONCEPT

a. OVERVIEW

(1) The "Tier Depot Concept" was developed to support the CSA objectives of reducing the current CONUS base storage infrastructure, decreasing manpower requirements, increasing efficiencies and managing a smaller, safer stockpile. This concept acknowledges five basic categories of ammunition subject to three levels of activity.

a) Required war reserve Stocks needed for immediate use to support contingency operations, normally < C+30: Level of activity is minimal during peacetime, but intensive during the first 30 days of a conflict.

b) Required war reserve stocks not immediately needed during contingency operations, normally > C+30: Level of activity is minimal during peacetime, but intensive beyond the first 30 days of a conflict.

c) Required Training Stocks for peacetime utilization: Level of activity is steady during peacetime.

d) Required production offset stock storage: Level of activity is considered minimal with a static stock storage configuration primarily inventory, surveillance, maintenance and moderate receipt/issue workload.

e) Non-required Stocks awaiting demilitarization or other disposition (such as sale of stocks): Level of activity includes primarily demilitarization operations.

(2) The Tier Depot Concept reduces the number of active storage sites and creates efficiencies by realigning the required and non-required stockpile into an appropriate tier activity level. Three levels, or tiers, of installations are used for identifying the level of activity an installation performs. They are:

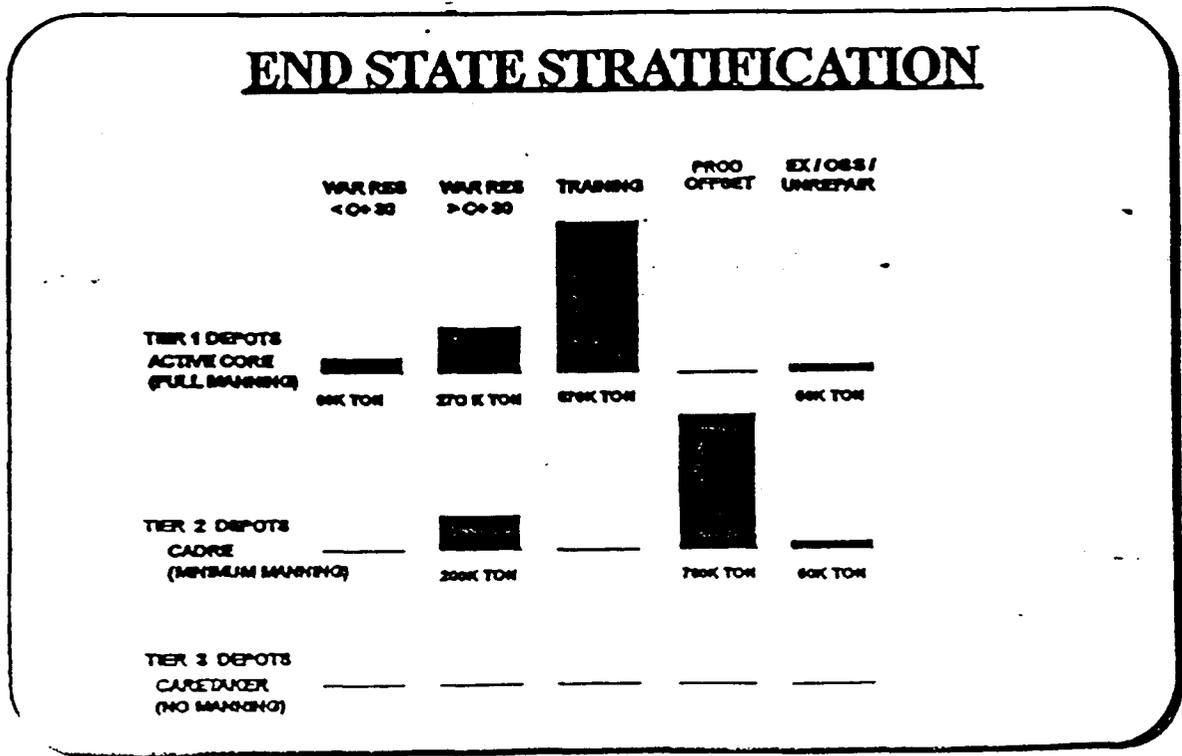
a) **Tier I - Active Core Depots;** Installations designated as Tier I will support a normal/full-up daily activity level with a stockage configuration of primarily required stocks and minimal non-required stocks requiring demilitarization. Normal activity includes daily receipts/issues of training stocks, storage of war reserve stocks required in contingency operations < C+30, and additional war reserve stocks > C+30 to augment lower level tier installation power projection capabilities. Installations at this activity level will retain the need for requisite levels of storage support, surveillance, inventory, maintenance and demilitarization.

b) **Tier II - Cadre Depots;** Installations designated as Tier II will normally be required to store war reserve stocks > C+30, and, at the end-state objective, store production offset stocks and limited non-required

demilitarization stocks. Daily activity will be minimal for receipts/issues, while workload will be primarily focused on maintenance, surveillance, inventory and demilitarization operations. Tier II installations will have minimal staffing to accomplish assigned workload and will not achieve full staffing levels of Tier I activities until contingency operations require the Tier II installations to begin supporting power projection shipping initiatives of the war reserve assets.

c) **Tier III - Caretaker Depots;** Installations designated as Tier III will be minimally staffed and will contain static non-required stocks in static storage until disposition can be made. The end state objective for activities at this level is to inactivate the ammunition support mission and completely drawdown stockage levels to zero balances.

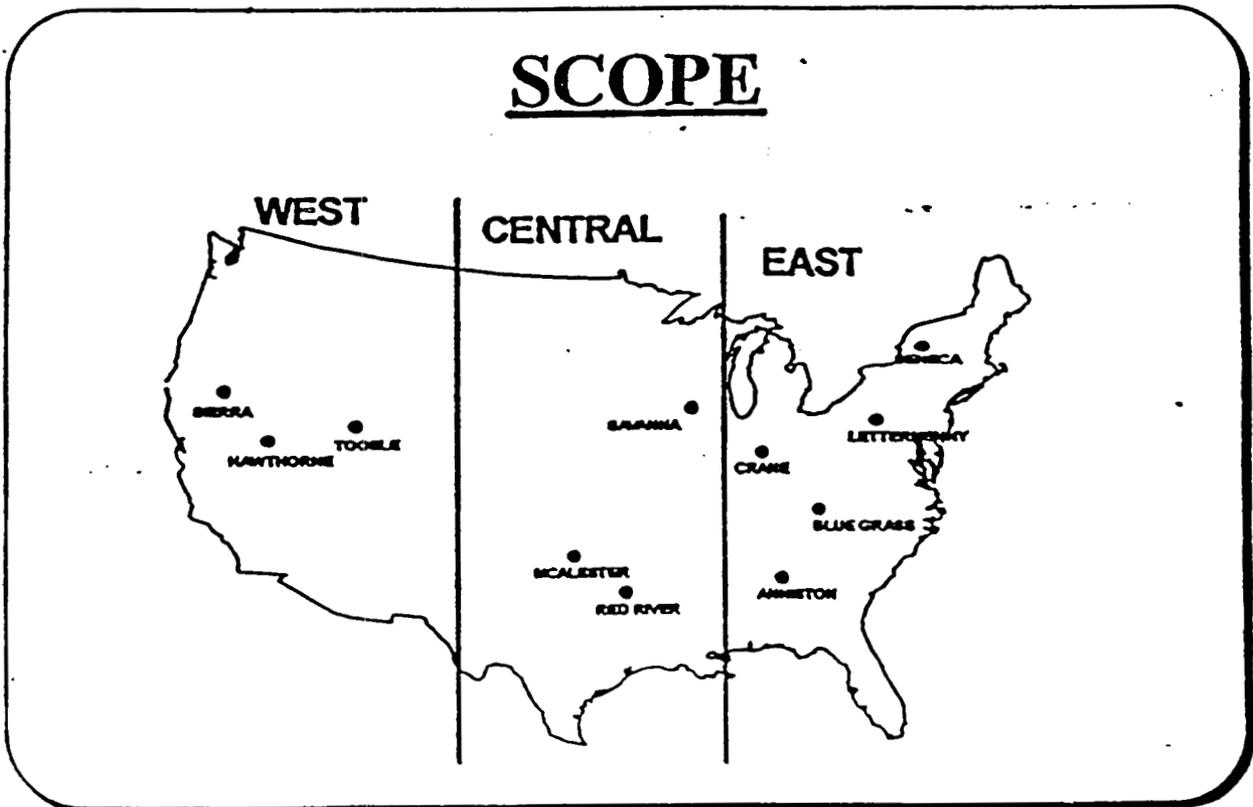
(3) Balances within each tier at the end state objective indicates that, given today's requirements and wholesale postures, approximately 90,000 war reserve short tons would be stratified against Tier I installations to support the first 30 days of a two MRC contingency. War reserve assets required beyond the first 30 days of a two MRC sustainment equate to 470,000 short tons, with the majority, 270,000 short tons, positioned in Tier I installations and the balance in Tier II. Current training unique and training standard items will place approximately 870,000 short tons (470,000 Army, 400,000 other services) in Tier I installations. Some production offset stocks (780,000 short tons) located at Tier II installations, at end state, may transition into the demilitarization account. The end state objective for demilitarization stocks is to reduce the backlog level to 100,000 short tons and be equally distributed among Tier I and II installations.



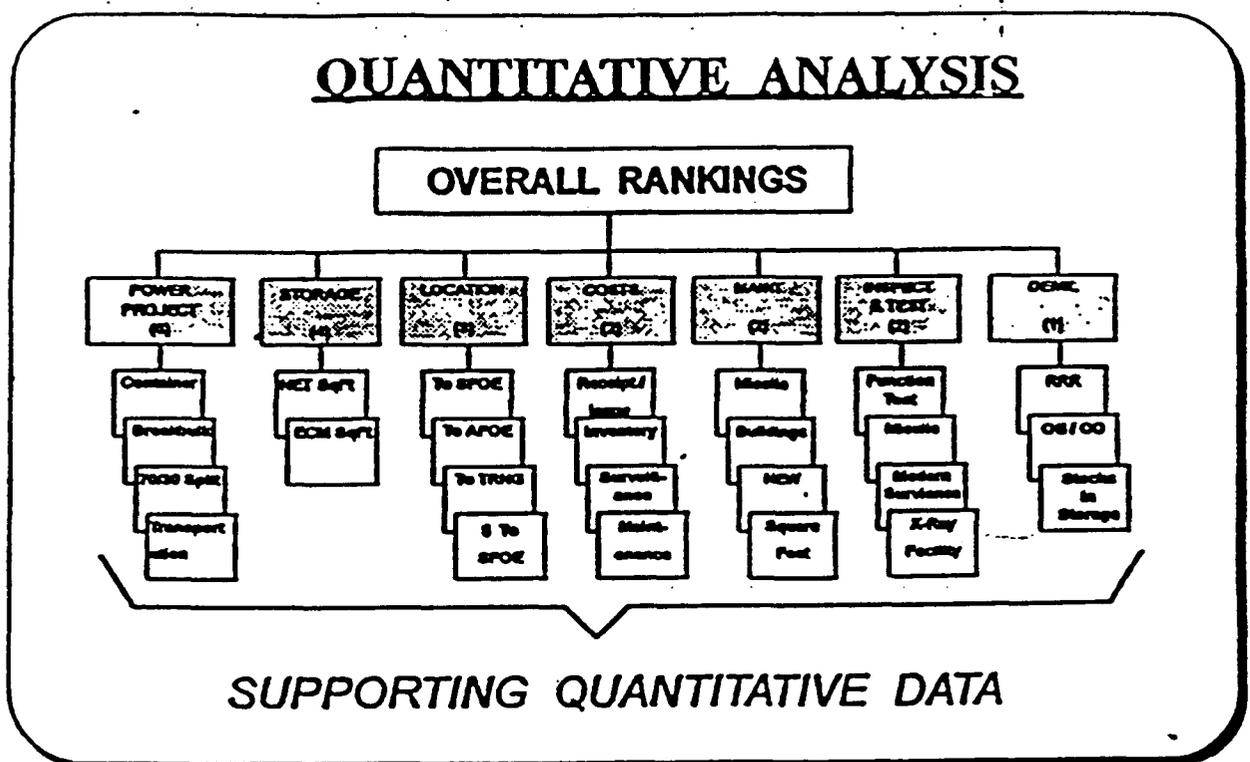
b. TIER DEPOT ANALYSIS

(1) The Tier Depot Concept, in its end state alignment, must support two primary objectives, the power projection requirements of the two MRCs as outlined in Defense Planning Guidance (DPG) and provision of sufficient storage space for assigned tier stockage configurations. Current asset distribution is mal-aligned placing shipping directives on some installation during a contingency operation that exceed their organic capabilities to outload, while in other installations, based on stockage configurations, only a small percentage of their capabilities are utilized. The end state asset distribution of the Tier Depot Concept will maximize the outloading capabilities at Tier I and II installations.

(2) The Tier Depot Concept allows the stockpile to be distributed within geographically oriented regions with a minimum of one Tier I and one Tier II installation configured within each region. Regional distribution fully supports area training requirements and provides an active installation within the proximity of the two sea ports of embarkation for supporting MRC power projection requirements.



(3) A Tier Depot Analysis was performed February through March 1994 in an effort to identify and assign appropriate tier levels for each of the eleven primary wholesale storage installations. The analysis was conducted using both quantitative and qualitative considerations to achieve a final overall installation ranking. The quantitative data was derived from major criteria considered critical in the management and operations of the ammunition stockpile. The major criteria were then further divided into contributing sub-factors. Each sub-factor and major criteria were assigned a weight identifying the importance of the factors and criteria in relation to each other. As portrayed in this chart, power projection capability was considered the most important of all criteria, followed by storage, cost, etc....



(4) The scoring system for each criteria utilized an 11 point scale, giving the highest score, 11, to the installation determined to possess the greatest capability, lowest cost, or best physical location. Each of the other installations were awarded a percentage of the 11 point maximum depending on the difference between the installation's capability, cost, or location, and that of the installation receiving the maximum score.

(5) Development of an 11 point scale was predicated upon the inability to measure some individual factors with hard data numbers. Those factors, such as "yes/no" questions (does an installation have the capability to perform function tests?), were assigned a score from 1 to 11, giving 11 points to the installations with the

maximum subjective score. Subsequent scores for the remainder of the installations ranged from 10 to 1 as applicable. All scores, utilizing both hard data and subjective data were normalized on the 11 point scale.

(6) The final quantitative analysis provided an overall order ranking of installations. Qualitative considerations were then applied to achieve overall final rankings and tier assignment conclusions. Qualitative considerations included multi-mission installations, customer preferences and toxic chemical missions. To assure that the tier assignment conclusions could support and store both the power projection requirements of two MRCs and peacetime training requirements, a comparison of requirements to capabilities was conducted. Assuming an end state stockpile distribution that maximized capabilities, installations identified as Tier I and II would support all power projection requirements during contingency operations. An additional Tier I and II installation is required in the east region to support training and power projection requirements of MRC east.

(7) The Tier Depot Analysis resulted in the following realignment of the CONUS wholesale storage infrastructure:

a) West Region;

Tooele Army Depot - Tier I
Hawthorne Army Ammunition Plant - Tier II
Sierra Army Depot - Tier III

b) Central Region;

Mcalester Army Ammunition Plant - Tier I
Red River Army Depot - Tier II
Savanna Army Depot Activity - Tier III

c) East Region;

Crane Army Ammunition Activity - Tier I
Blue Grass Army Depot - Tier I
Letterkenny Army Depot - Tier II
Anniston Army Depot - Tier II
Seneca Army Depot Activity - Tier III

c. TIER IMPLEMENTATION

(1) A complete, detailed implementation/redistribution plan has not been developed. Prior to the development of the redistribution plan the end state stockage configuration must be identified that: assures maximum utilization of outloading support MRC

requirements; and supports a regional orientation of training stocks. Redistribution of the stockpile will be accomplished tier by tier, DODIC by DODIC, FY by FY. Milestone for completion of the current state/end-state stratification and the year-by-year redistribution plan is 30 Sep 1994. Assuming resources are made available to support stock redistribution, end state asset stratification is estimated to take approximately six years. The implementation/redistribution plan will concentrate efforts as follows:

(2) Issues: Issues of training ammunition will be accomplished through prioritization from Tier II/III installations. War reserve stocks requisitioned for storage in forward theaters and PREPO ship locations will be priority issued from Tier III installations.

(3) Receipts: All training ammunition will be receipted into Tier I installations. War reserve receipts into Tier I/II installations (stockage configuration at end state when developed) will provide breakout based on storage and outloading capabilities. Field return receipts of non-required stocks will be receipted into installations where stocks will likely be demilitarized. Receipts of production offset stocks will be positioned in Tier II installations.

(4) Demilitarization: Initial Demilitarization efforts will concentrate on Tier I installations for space generation. Follow-on efforts will be Tier II/III.

(5) Rewarehousing: Priorities will be targeted at Tier I/II installations for segregation/separation of required/non-required stocks and to increase storage space utilization efficiencies. No further intra-installation rewarehousing efforts will take place at Tier III installations.

(6) Inter-installation Movements: Movements between depots will be required to position remaining stocks located in an incorrect tier or installation within a tier, and for maximization of outloading and geographical positioning of stocks to support MRC requirements. Inter-installation movement of training stocks will be minimal. The majority of training stocks will be moved in support of training requirements.

(7) Army Strategic Mobility Plan (ASMP) projects: The ASMP projects will be realigned to concentrate efforts on Tier I/II installations. Some ASMP projects slated for Tier III installations could still be funded if the project is considered critical through end state projection.

(8) Prior to the final development of the implementation/redistribution plan, issues and receipts of training stocks can begin to be implemented within current FY.

(9) The Functional Area Assessment (FAA) portion of this plan provides additional implementation strategies for each of the stockpile management functions of distribution, storage, inventory, surveillance, maintenance and demilitarization.

VIII. FUNCTIONAL AREA ASSESSMENTS

a. DISTRIBUTION

(1) The ability to support the CONUS based power projection requirements of two near simultaneous MRCs remains as the most critical element in establishing an efficient and effective realigned tier installation infrastructure. Necessary actions are being identified and taken for optimizing outloading capabilities and overcoming issues that limit our current capabilities.

a) LIMITING FACTORS - Mal-distribution of assets.

1 Current stockage profiles at the CONUS installations are not configured or aligned IAW Operational Plans conducted for the two MRC scenarios. This requires cross country shipments of some stocks within short timeframe windows for onward movement. Additionally, assets are not distributed amongst the wholesale storage base adequately to assure maximum utilization of the installation's infrastructure.

2 ~~Current asset distribution is mal-aligned placing shipping directives on some installation during a contingency operation that exceed their organic capabilities to outload, while in other installations, based on stockage configurations, only a small percentage of their capabilities are utilized.~~

b) LIMITING FACTORS - Outdated facilities.

The current state of the CONUS distribution base is biased towards the distribution of munitions utilizing breakbulk methodologies. The Army goal is to process future movement requirements through the utilization of the Containerized Ammunition Distribution System (CADS). Containerized movements significantly improve port handling capabilities.

c) LIMITING FACTORS - Unable to fully support early movement requirements of Ammunition Basic Load (ABL).

Current distribution of assets prevents the CONUS base from providing full support of the Services Power Projection initiatives. Certain early deploying units will not be capable of deploying with total munitions support in the projected quick turn-around timeframes. Wholesale assets are not identified and reserve specifically for ABL movements and the probability exists that movements may be required from installations that are unable to support requirements due to their physical proximity to early deploying units.

(2) Several initiatives to overcome these limitations have been identified and submitted for funding approval.

a) INITIATIVES - Redistribution of Stocks.

1 The tier concept requires munition stocks to be positioned at installations capable of supporting war reserve (Tier VII) and training requirements (Tier I). Stocks will be redistributed IAW Commander in Chief (CINC) developed munitions movement requirements in such a manner that provides war reserve geographical regional support to shipping ports of embarkation. Multi-use/multi-scenario items will be appropriately positioned at installations that can support either conflict, MRC East or West.

2 The stock distribution plan would consist of several initiatives that would allow this Command to reposition stocks through daily transactions. These initiatives consist of participating in Sealift Emergency Deployment Readiness Exercises and other exercises requiring munitions movement. Projects have also been submitted to the ASMP for funding redistribution of stocks into the appropriate tier installations for optimizing Tier I and II outloading capabilities. It is estimated that approximately 50,000 Short Tons per year, FY96-99, will require redistribution to support outloading optimization. The cost for this redistribution is being programmed at \$21.4 million per year. Additional redistribution during these same years will be required for movement of stocks into correct tier locations.

3 To enhance our ability to meet early deploying unit ABL requirements, depot/combat unit partnership arrangements may be established. Deployment requirements for specific early deploying units will be identified by depot, and detailed quick load-out plans will be established.

4 Other efforts such as Europe and Pacific Retrograde and CONUS training requirements will be utilized to maximize redistribution of stocks in support of the Tiering distribution plan. The efforts identified are being utilized whenever economically feasible in an effort to reduce the overall effects on the OMA budget.

b) INITIATIVES - Army Strategic Mobilization Program (ASMP) Initiatives.

1 The AMCCOM is currently identifying and submitting projects into the ASMP for funding. These projects will be implemented to enhance the container output capabilities of the CONUS base as well as ensuring the current structure remains fluid in supporting Power Projection. They also identify projects for railroad upgrade/repair, magazine modifications, and road repairs.

2 The ASMP program prioritization will be influenced by the tiering plan of action. Continued monitoring of the installation ASMP project submissions and coordination with HQ AMC personnel will ensure that the tiering concept is fully supported for available funding. Concentration of efforts will be on Tier I and II installations.

ASMP PROJECTS FY93-99

PROJECT	FUNDED (\$M)	UNFUNDED (\$M)
• Railroad Upgrades/Repairs	\$ 38.3	\$ 38.0
• Road Repairs	0.0	2.1
• CADS Facilities	21.3	0.0
• Magazine Modifications	2.9	13.1
• Rapid Deployment Facilities	0.0	2.3
• Security System Upgrades	0.0	0.5
TOTAL	\$ 62.5	\$ 56.0

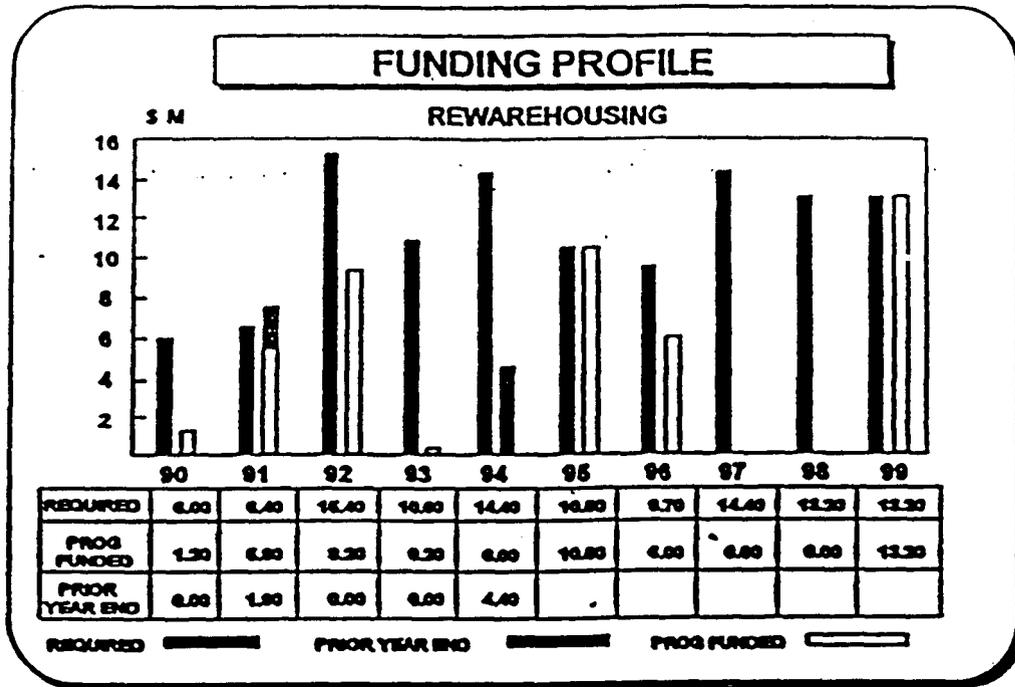
c) INITIATIVES - Preconfigured containers.

1 One of the key ASMP projects, in support of early deploying units, is a test of the possibility of prepositioning munitions in containers at the CONUS installations. These containers would be utilized to augment the installation workforce in meeting early deploying unit movement requirements of ABL. This project is currently under submission to HQ AMC and will be prioritized for immediate implementation to ensure test results are available ASAP.

2 This concept could have an application at Tier II installations whereby reduced manpower at the Cadre level would prevent significant tonnage issues during the early days of deployment, but allow for quick outload of preconfigured containers.

b. STORAGE

(1) Reworkhousing is the primary means of increasing efficiencies of space utilization and overall storage space capabilities. Funding for reworkhousing has been historically sporadic. As projected in the POM, sporadic funding patterns will continue with no funding for reworkhousing programmed in FYs 97 and 98.

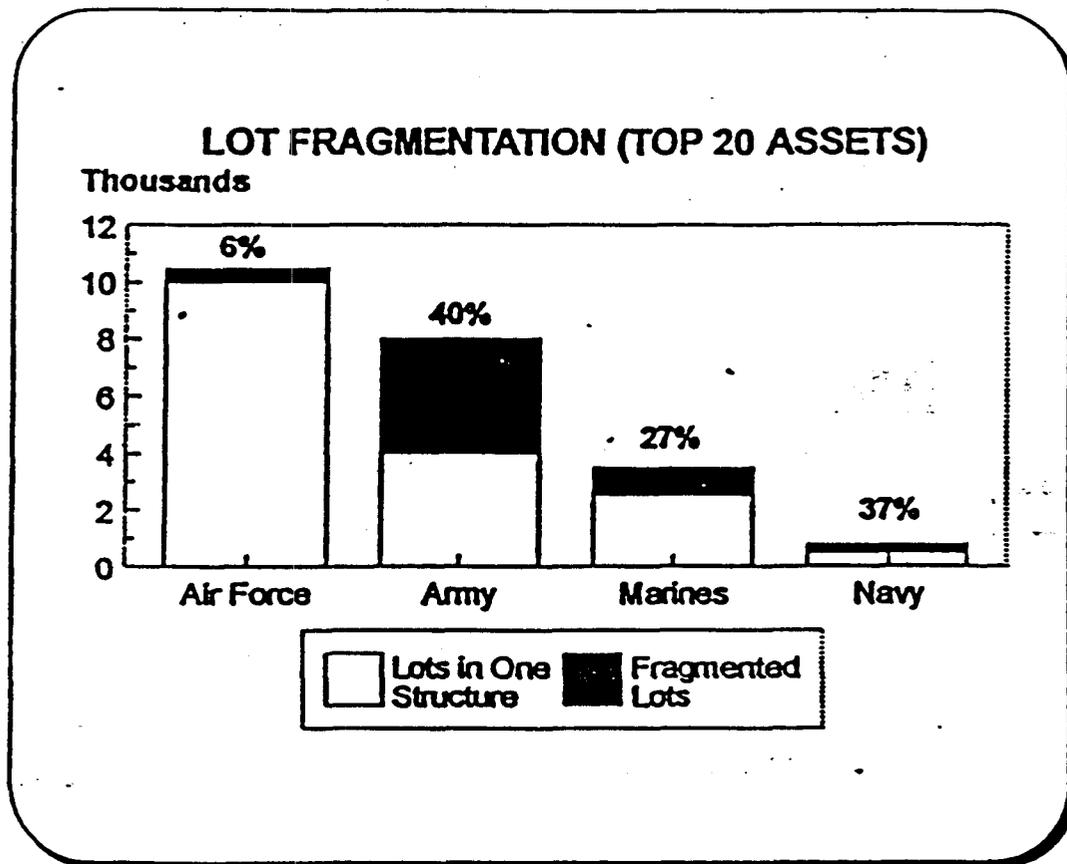


(2) The reworkhousing chapter of the WASP study concentrated on three storage concerns: safety, security, and space utilization within an installation. The follow on FAA emphasized the overall distribution of the ammunition stockpile between installations for alignment into a tiering structure. Tiering of the wholesale ammunition storage base will require intra-depot reworkhousing and redistribution of assets between installations. This portion of the assessment addresses intra-depot reworkhousing for consolidation of assets at the Tier I and II installations. The initial classification of assets as required or non-required is needed, and once accomplished, reworkhousing for segregation, separation, and consolidation of like lots can begin.

(3) The focus of intra-depot reworkhousing will be the separation of required from non-required assets at the tier I and II installations. Maximum utilization of storage space without hindering deployment or normal storage operations is the primary goal. The storage structures at the tier III installations are to be fully utilized with non-required stocks commensurate with safety/security limitations. The ultimate goal is to have assets safely, securely, and efficiently stored based on their tier level requirements.

At the end state objective, tier III installations will no longer have an ammunition mission as all stocks will be stored in higher tier level echelons.

(4) Positioning of war reserve, training and production offset stocks at tier I and II installations is the long range objective (production offset stock will be stored only in tier II installations at end state objective). Lots with the same condition code should be, ideally, located in no more than one storage structure. The WASP study identified approximately fifteen percent (15%) of the stockpile as being fragmented (stored in two or more storage structures). Further analysis indicated the degree of fragmentation varied by service for their "Top Twenty Assets" ranging from a low of 6 to a high of 40 percent.



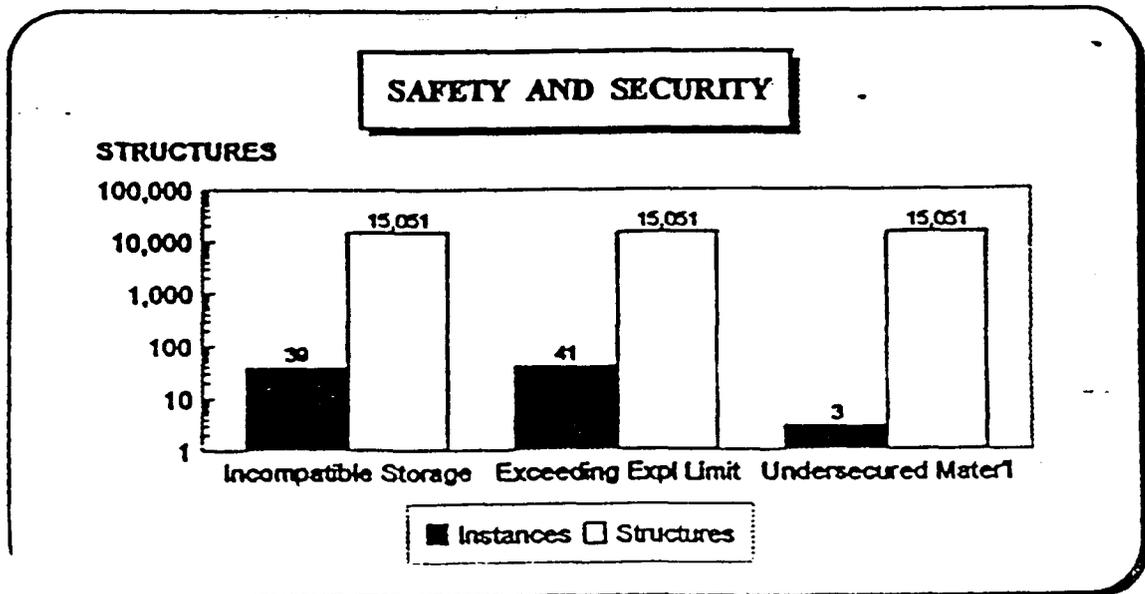
(5) The top twenty assets consisted of 132 NSNs identified by the services as their top managed assets to be assessed during the WASP study. A listing identifying the required stocks and requirements were not available for developing the lot consolidation estimates. In order to prepare a cost estimate, the overall WASP fragmented lot percentage and the FY96 projected stockpile tonnage had to be used. The projected tonnage for each installation was provided by AMCCOM automated projection models. This could be a one time cost if receipts were consolidated by lot/condition code at the tier I and II installations. The only recurring cost would be a cost for rewarehousing

incidental to receipts/issues. The rewarehousing costing rate of \$50.00 per short ton was provided by the AMCCOM ammunition product line. The projected one time cost, spread over a three year time period, of rewarehousing all required stocks is reflected below:

SEGREGATION OF REQUIRED STOCKS				
	Short Tons	15 % of ST	Cost Rate	TOTAL
FY 96	2,153,000	107,650	\$50.00	\$5,382,500
FY 97		107,350	\$50.00	\$5,382,500
FY 98		107,350	\$50.00	\$5,382,500

(6) An analogy was drawn between the Service's top twenty assets and the required stocks as a basis to verify the rewarehousing costs. The VISTA database (detailed storage visibility) was used since it contains segments of the Standard Depot System (SDS) lot and magazine files. The Service's top twenty assets were identified for each installation as well as the specific storage structures containing each lot. The lots were consolidated by condition code. The assets in each location were classified as required (top twenty assets) or non-required. The weight of each classification was calculated within the structure to determine if the required or non-required stocks would be more economically relocated. The overall costs for the top twenty assets were significantly lower than the projected rewarehousing cost estimate. The lower cost is due to the greater quantity of required stocks in comparison to using the top twenty assets. The results provided a "ball park" assurance for using the WASP fragmented lot percentages.

(7) A base level of funding will be required to rewarehouse improperly stored assets violating safety and security requirements.



(8) The low level of deficiencies identified during the WASP study reflected the installations efforts to immediately correct such violations. The WASP study discovered that if funding is not available to correct these deficiencies, the costs will be absorbed as a receipt/issue function. The premise used to develop base cost is a historical average of rewarehousing costs applied to a percentage of tonnage on hand at an installation. The base level costs should, over time, decline due to a reduced level of activity at the various tier installations. The base level funding, tier III installations not included, is as follows:

BASE LEVEL REWAREHOUSING				
	Short Tons	2% of ST	\$ per ST	TOTAL \$
FY 96	2,153,000	43,060	\$50.00	\$2,153,000
FY 97	2,077,000	41,540	\$50.00	\$2,077,000
FY 98	1,965,000	39,300	\$50.00	\$1,965,000

(9) The total cost associated with consolidation of required assets and maintaining a base rewarehousing level at the tier I and II installations (consolidation cost is a one time cost spread over three years) is as follows:

CONSOLIDATION AND BASE LEVEL REWAREHOUSING COSTS			
	Consolidation	Base Level	TOTAL \$
FY 96	\$5,382,500	\$2,153,000	\$7,535,500
FY 97	\$5,382,500	\$2,077,000	\$7,459,500
FY 98	\$5,382,500	1,965,000	\$7,347,500

(10) The projected wholesale stockpile occupancy, levels without rewarehousing, is bleak. The WASP study has projected reaching a 100% occupancy level during FY95. Outside storage of field service and demilitarization assets is currently being utilized as an alternate storage method at many installations.

(11) Initiatives can be taken to generate the needed storage space prior to FY96. Several initiatives, some of which were in the WASP study, include aggressive demilitarization programs, rewarehousing of low hazard and inert stocks to maximize explosive storage space utilization, consolidation of less than one half pallet of B5A (demil) materiel into box pallets, proliferation of storage racks and utilization of cargo pallets for light pallets of field service stocks. Below are proposed milestones for some

a) FY94; Less than 1/2 pallet of B5A assets:

- 1 Develop LOI and drawings for the procedure.
- 2 Develop bid packages for the installations identifying the potential B5A assets to be palletized.
- 3 Fund installations according to tiering priority.

b) FY94; Use of storage racks:

- 1 Develop bid packages for the installations identifying potential assets for storage racks.
- 2 Fund installations for purchase of storage racks and rewarehousing of assets.

c) FY95; Less than 1/2 pallet of field service assets:

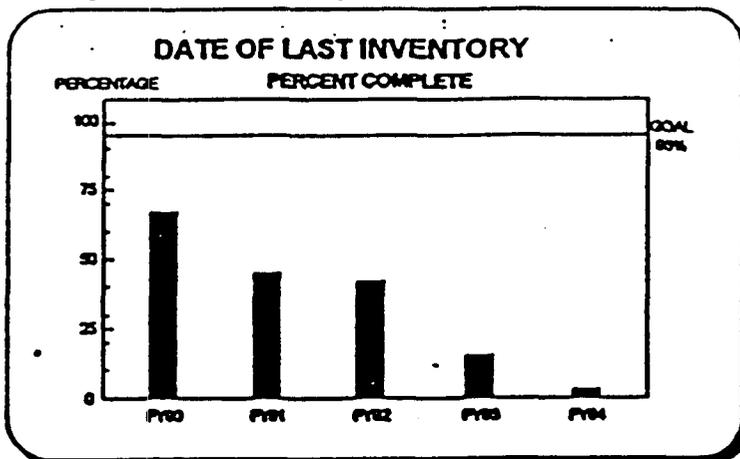
- 1 Coordinate procedure within the IOC to include safety, surveillance, packaging, and functional areas.
- 2 Develop drawings for the procedures.
- 3 Develop bid packages for the installations identifying potential field service assets.
- 4 Fund installations for the purchase of cargo pallets and rewarehousing of field service assets.

(12) Implementation of the above recommendations would improve storage space efficiency. However, an aggressive demilitarization program funded to full capability through FY99 will generate permanent storage space and eliminate from the stockpile a big contributor to inefficient use of storage space.

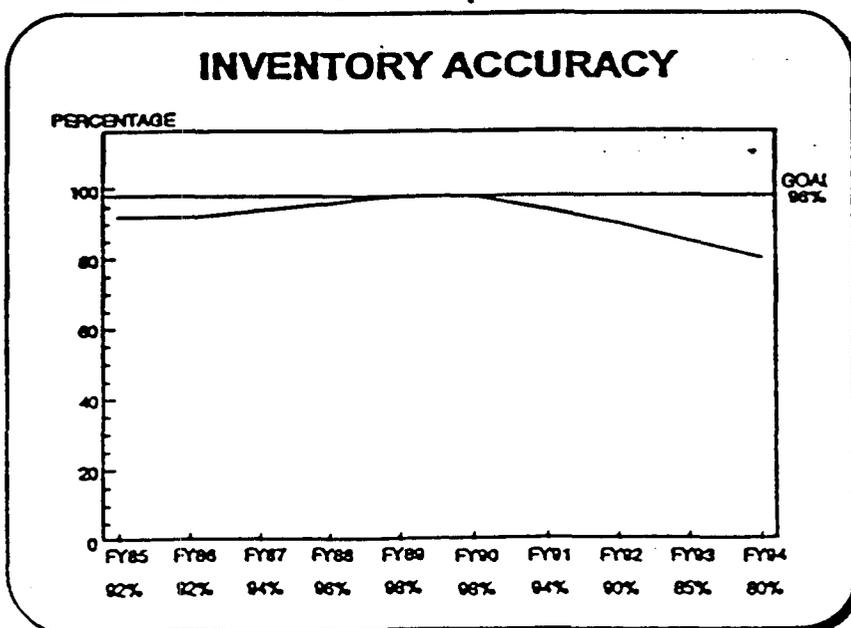
c. INVENTORY

(1) The inventory program is the basis provided to meet the Army's obligation to Public Laws requiring fiscal accountability. This is normally accomplished by performing an annual inventory of all stocks and a subsequent reconciliation to the accountable records.

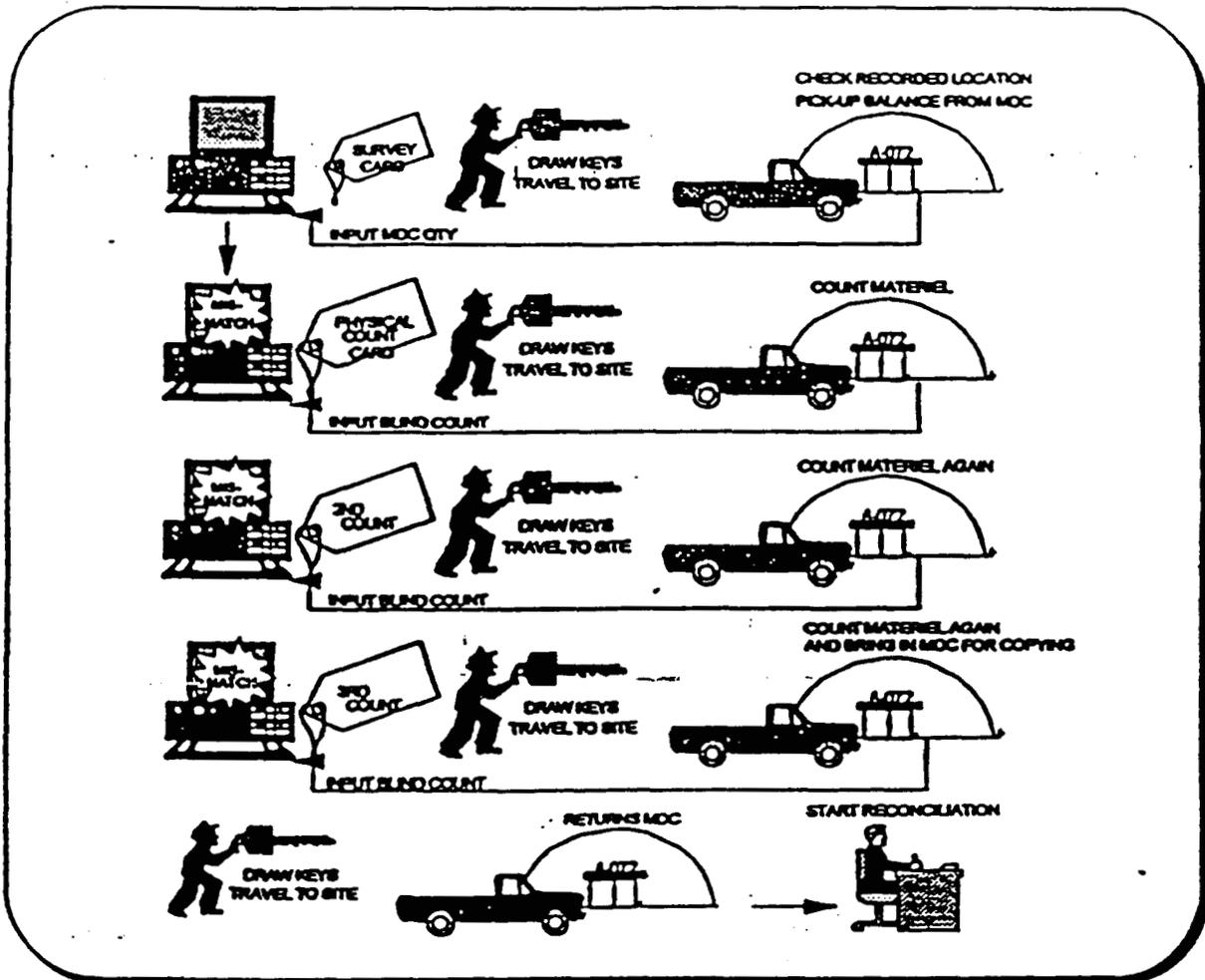
(2) Prior to FY90, annual inventories occurred at all installations. At the completion of the FY89 inventory, accuracy was documented at 98.5 percent. Beginning in FY90 and continuing through the current Fiscal Year, funding has been inadequate and each year less inventory is being accomplished.



(3) In late FY93, the JOCG commissioned the WASP study to measure the health of the stockpile as the result of several years of underfunding in the functions that provide care for stocks in storage. The inventory team determined that accuracy of the inventory had decreased to a maximum of 85 percent.

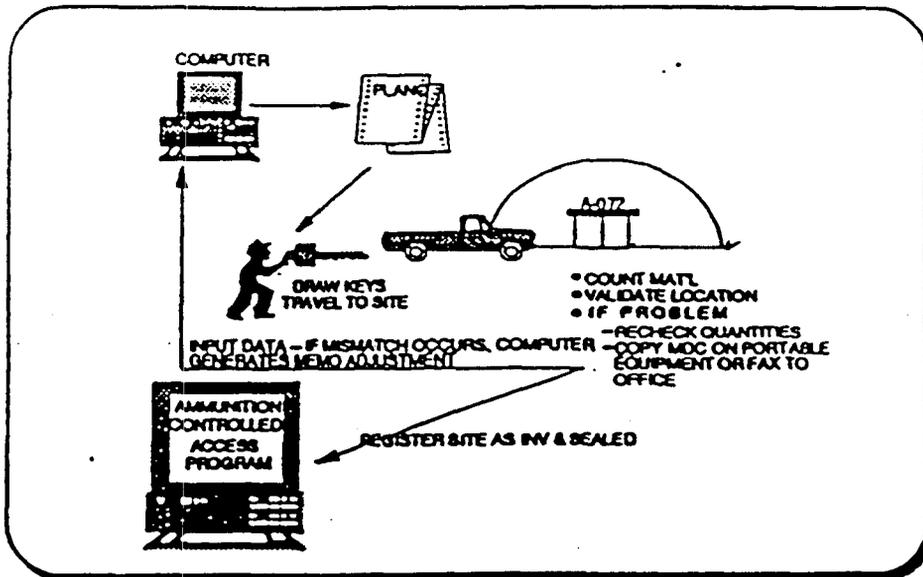


(4) Additional findings concluded that significant inventory resources were required to support the current structured inventory program. The greatest extent of this cost centered around the methodology of conducting the inventory and required reconciliations at the National Stock Number (NSN) level. This system requires numerous visits to a single structure throughout the inventory cycle by requiring the inventory verification process of a multitude of NSNs.



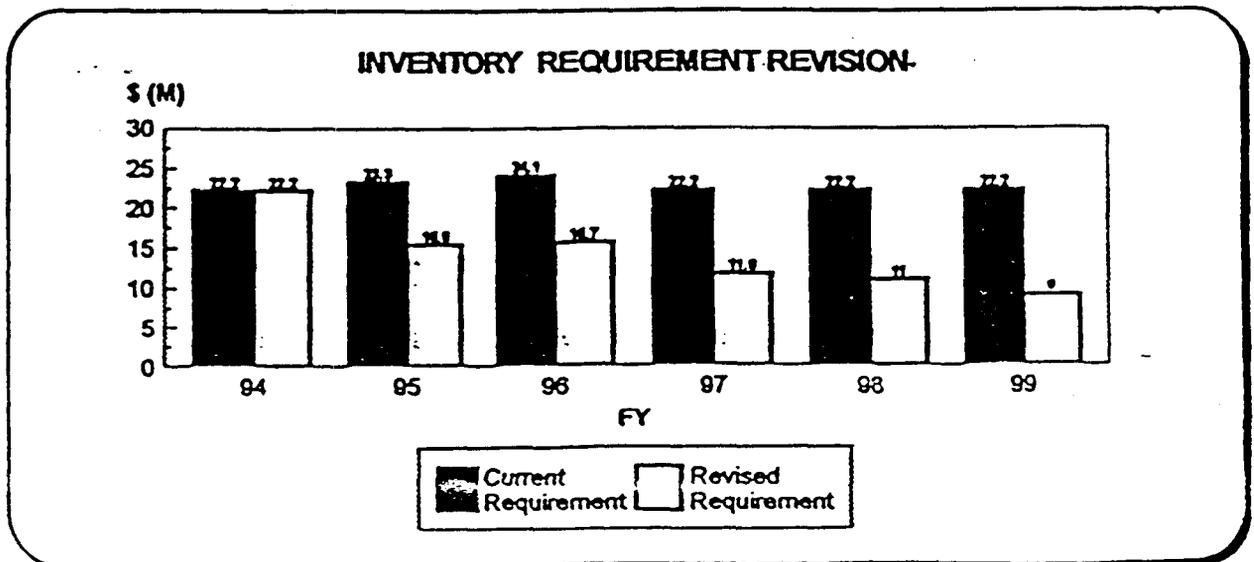
(5) Ammunition stocks in storage are recorded by grid location within a storage structure. The WASP study recommended a revised and rewritten inventory program that encompassed a grid based inventory system that would achieve increased efficiencies and effectiveness resulting in lower operating costs. Memo adjustments would be prepared for each discrepancy as it was identified in lieu of at the end of the process. Once the system identifies that all recorded grid locations for a given NSN have occurred, a flasher report would be produced and a subsequent computer reconciliation occurs for any memo adjustments made throughout the inventory. Only those reconciliations that are not correctable will require additional manual research

and reconciliation. An analysis of this approach indicated that by deleting the requirement to enter the same structure on a number of occasions and accepting the stock posture as is, an appreciable manpower and resource reduction would occur.



(6) Modifications in the inventory program are also reflected in the development of a controlled access program. Once a particular structure has had a complete inventory accomplished, adjustments made, and file maintenance performed, it is identified as a sealed structure requiring no future inventories unless keys have been drawn for activity that would result in movement of stocks. This program involves storing non Category I and II materiel. An annual sample of sites are conducted for validation and verification of the sealing of static storage site process.

(7) These revisions and modifications to the existing inventory program will result in immediate reductions in inventory funding requirements and allow for a more efficient and effective operation.



(8) Milestones have been established for program modification and execution as follows:

a) FY94

- 1 Identify modification requirements.
- 2 Establish the controlled access program.
- 3 Prototype modified system.
- 4 Prototype revised grid based and controlled access programs.

b) FY95

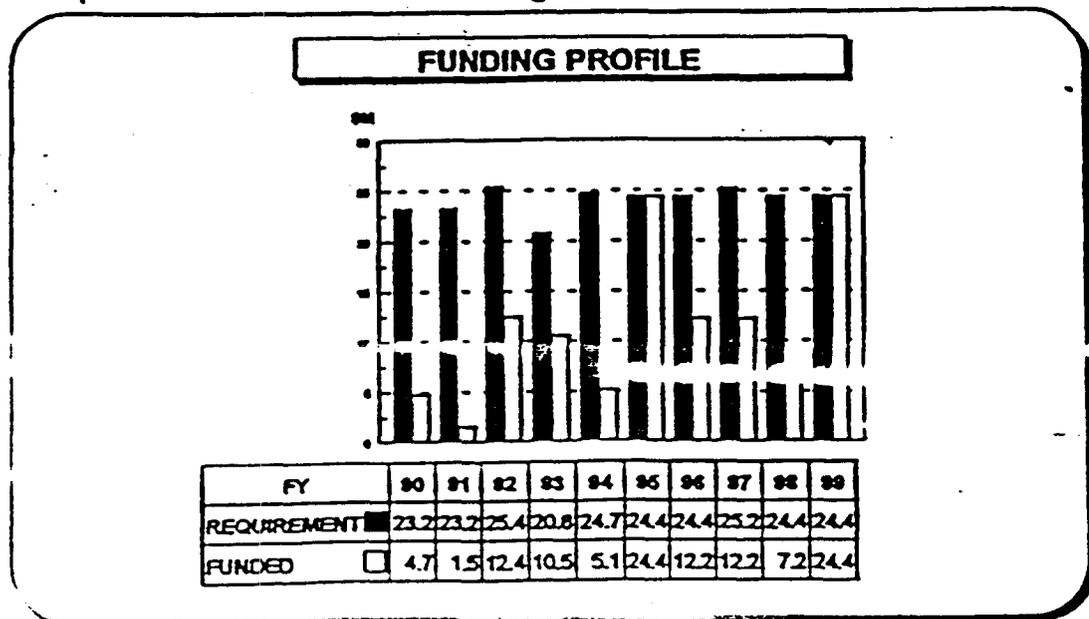
- 1 Execute grid based program at all Standard Depot System (SDS) storage installations.
- 2 Assistance to installations as required.
- 3 Revalidate the LOGMARS program and integrate if applicable.
- 4 Develop an automated key room program.

d. SURVEILLANCE

(1) The Ammunition Stockpile Surveillance Program is comprised of several major programs. The purpose of these programs is to assure that the condition, performance capabilities, and safety margins of ammunition are known throughout their life cycle. This is accomplished through periodic sampling, inspection, and testing of stocks. Test/inspection results are used to make appropriate stockpile decisions such as identifying items for maintenance and demilitarization, and withdrawing or restricting items considered to be of marginal serviceability. In addition, surveillance supports several key safety and logistical requirements: inspection of storage structures and safety of ammunition stored therein; transportation conveyances; and inspection of maintenance and demilitarization facilities and operations.

(2) Programs devoted exclusively to safety have been and are projected to be fully funded. However, two key programs, Large Caliber Testing and Periodic Inspection, devoted primarily to determining the serviceability of the stockpile are significantly behind schedule. The Large Caliber Test Program currently has 42 percent of items beyond its test interval. Twenty percent of the lots in the wholesale stockpile are beyond their periodic inspection interval. There has been a significant historical inspection failure or reclassification rate for items/lots included in these programs. For periodic inspection, the reclassification rate has been 7 percent and for large caliber testing, the rate has been 17 percent. Continued tolerance and growth of this backlog runs the risk of eroding our confidence in the true condition of the stockpile. It also prevents the identification of unserviceable stocks for appropriate corrective action; i.e., perform maintenance, suspend or restrict ammunition lots.

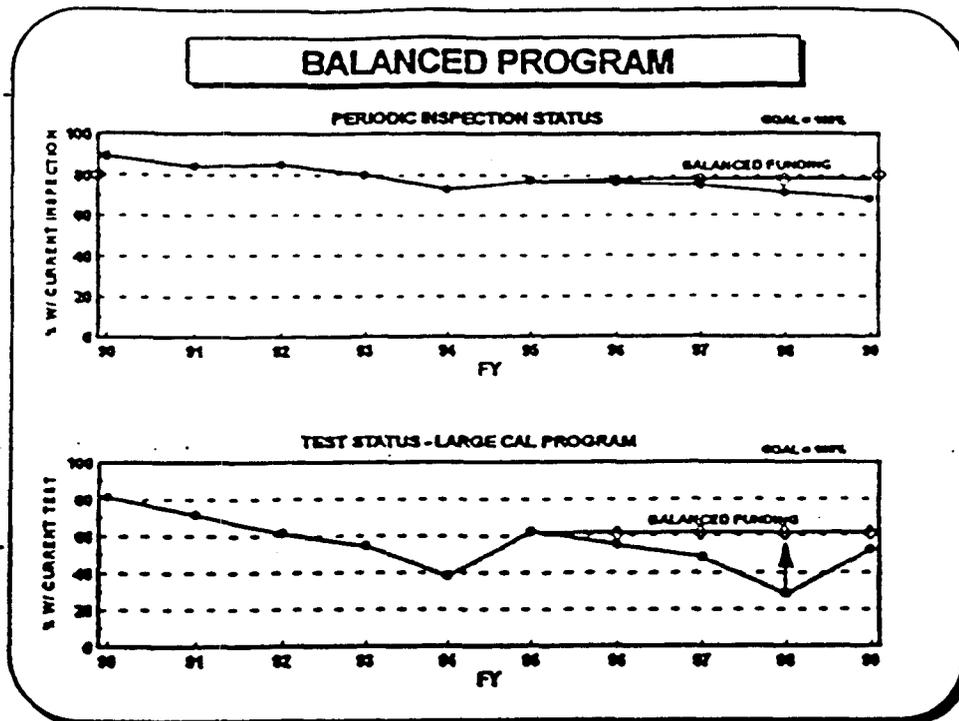
(3) Relative to this background, several issues have emerged. The Army is now faced with such a diminished ammunition surveillance program that knowledge of stockpile readiness is critically reduced. Moreover, projected funding does little or nothing to improve on this shortfall in the long term.



(4) In reality, the unbalanced nature of funding through FY 99 will only further diminish the skill base necessary to complete even the most critical surveillance functions. Accordingly, the ammunition surveillance community, working in tandem with other logisticians, has tried to address these problems through several progressive initiatives.

(5) What follows is a discussion of some key actions in progress or proposed to effectively meet the challenge of the above issues. Caution must be exercised when considering cost savings or avoidance's discussed below. Any savings realized through these initiatives are only valid against a backdrop of full surveillance inspection/test compliance. For example, in recent years the number of periodic inspections completed have fallen to nearly zero. There is obviously no cost avoidance against a base of zero. Funding at the requirement level must serve as the baseline to determine the value of the process.

a) **Balanced program:** The funding profile through FY 99 for Ammunition Surveillance represents a significant improvement over forecasts as recently as 1 year ago. The \$80.4M now forecast for the Ammunition Surveillance Program through FY 99 is however, distributed unevenly with peaks in the first and last years of the period. This erratic funding profile raises serious concerns about the Army's ability to retain the highly trained specialists necessary to perform the surveillance test and inspection function. The funding profile suggests that a Reduction in Force (RIF) would be necessary in late FY 97 to accommodate the low level of funding currently projected for FY 98. Subsequently, in FY 99 a 300%+ increase in surveillance funding would find the Army in a position where dollars are available but trained personnel to accomplish the work are not. A funding profile which is balanced over the FY 96-99 (approximately \$14M per year) would assure the continuing availability of trained and skilled personnel for this function. Even a \$80.4M program through FY 99 will continue to result in significant shortfalls in uninspected and untested ammunition. Any possibility of closing this gap should be pursued. To this end, the balanced funding approach will significantly improve the readiness posture of the Army. Calculations show that the inspection backlog could be reduced by 8% at the end FY 99 with a balanced funding approach. For large caliber testing, there is a 5-30% reduction in testing backlog through FY 99. FY 98 represents a worst case of 70% backlogged items with the current planned unbalanced funding scenario. In summary, a balanced funding program through FY 96-99 assures availability of trained personnel to perform necessary work and actually results in an appreciably reduced backlog while spending the exact same amount of funds.



b) **Prioritize Inspection of Required Stocks:** Assuming no increase in funding beyond the \$80.4M through FY 99, a backlog will persist whether or not a balanced program is approved. It is therefore important to the readiness of the Army that inspection and test dollars be wisely invested. To achieve this goal, the ammunition surveillance community has joined with our supply manager counterparts to embrace the concept of dividing the wholesale stockpile into two separate pieces; required and non-required. Given that required stocks satisfy both current power projection and training requirements, inspection and test of these assets will be of the greatest importance. It is envisioned that these lots will receive periodic inspection IAW SB 742-1, be represented in testing programs as described in AR 702-6, and be stored IAW standard storage drawings. Of course, all safety related inspections, to include magazine inspection of storage structures, will be assured for required stocks. Conversely, non-required stocks, those assets currently in excess of both power projection and training requirements, may be deemed suitable for a lesser degree of scrutiny. Barring unforeseen circumstances, it is envisioned that inspection requirements can be reduced to at least a Safety in Storage (SIS) inspection. For items deemed suitable due to their durability in storage, further inspection reductions or possible elimination is possible. Examples may be small arms ammunition, inert components, HE projectiles, etc. Block storage may be deemed appropriate, but such considerations will hinge on completion of associated rewarehousing and reconfiguration to separate required and non-required stocks. These stocks cannot however be abandoned. Accordingly, all safety related inspections, to include magazine inspection of storage structures and their contents, must also be assured for

in terms of cost analysis, given completion of associated

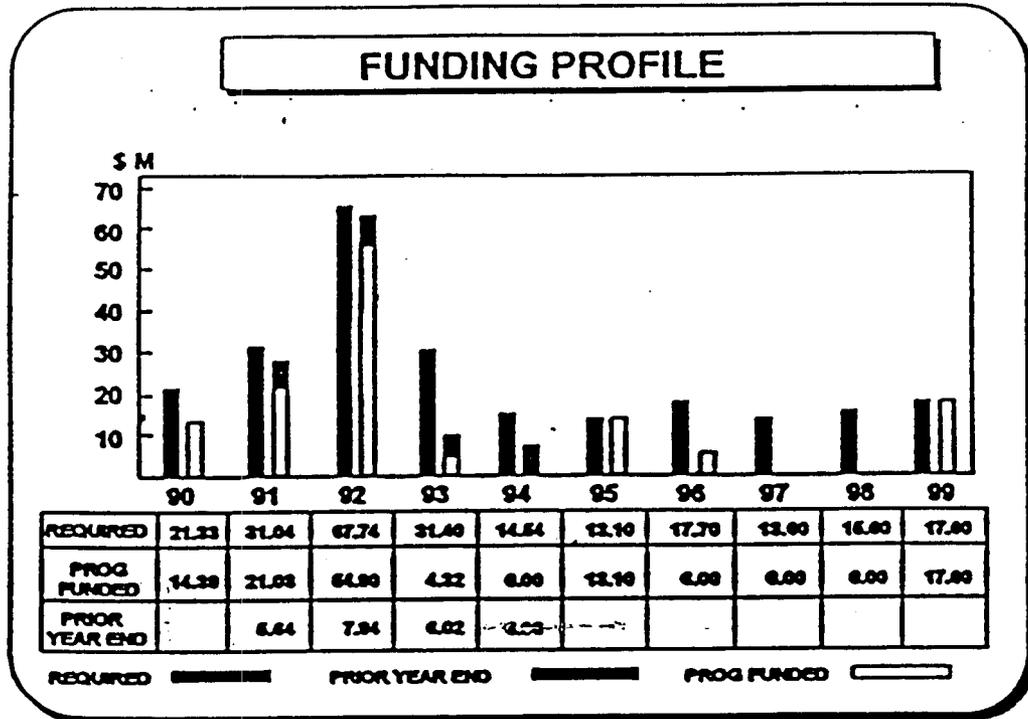
rewarehousing and reconfiguration, conversion to an required versus non-required approach for the wholesale stockpile can result in cost avoidance for ammunition surveillance functions. Depending on stockpile breakouts, most notably with "production offset" stocks, a savings of \$500-2000K per year is projected as early as FY 97.

c) Lot Clustering: Ammunition lot clustering is a procedure to administratively combine homogeneous ammunition lots into groups for the purpose of periodic inspection. Each installation establishes its own clusters IAW with a Letter of Instruction (LOI) jointly developed by DESCOM and AMCCOM and approved by HQ, AMC. Through statistical modeling it has been demonstrated that inspection of one lot in the cluster would apply to all other lots in the cluster, reducing the number of inspections and saving resources without sacrificing quality or safety. The LOI contains specific instructions such as: all lots must be of the same model/series; same manufacture; same lot interfix; similar method of pack; same condition code, and have similar histories. It is estimated that a potential 10-15 percent reduction in inspection requirements can be realized through lot clustering. On the basis of a population of serviceable, unserviceable (minor maintenance), and suspended (emergency combat only) of approximately 185,500 lots, institution of this process represents a potential cost avoidance of \$500-725K per year.

d) Modification of Inspection Intervals: Prior to 1988, periodic inspection of ammunition lots in storage were being conducted at conservatively established intervals of 2 to 5 years depending on the type of munition and expected rate of deterioration. The local chief of surveillance had authority to increase the interval between inspections by up to 2 years if local conditions (such as climate, storage conditions, and previous inspections) ~~so justified.~~ In 1988 an in-depth study of these intervals was initiated at AMCCOM. Goal was to increase intervals between inspections whenever possible without decreasing confidence in knowledge of stockpile serviceability. It was soon established that some intervals could be extended based on findings of the study. Study involved close scrutiny of installation surveillance inspection records to determine the onset of significant deterioration. Taking one item, or family of items, at a time, inspection records were solicited from installations worldwide, carefully compiled and evaluated and a new and statistically sound interval assigned. Thus far, 18 items have been evaluated and intervals extended. The previous (pre 1988) range of lot inspection intervals has been expanded from 2-5 years to the present range of 2-10 years. Authority and guidance to incorporate these new intervals for selected items was most recently detailed to the ammunition community in an AMCCOM Ammunition Information Notice (AIN) 58-93, dated April 1993. The interval study is a continuous process and future cost avoidance associated with this effort could be significant. For example, scrutiny of the 81MM HE, M374 series jungle packed mortar cartridge results in a potential overall cost avoidance of \$7800.00 per year due to a shift from a four to a six year inspection interval. This example assumes a balanced workload distribution and a CONUS stockpile of 222 lot segments.

e. MAINTENANCE

(1) In FY94 the ammunition major maintenance program was zero funded. Obligations of approximately \$7.0M from FY93 year end funding were used to support FY 94 requirements. An additional \$4.0M in high priority requirements remain unfunded and will impact ability to support training and readiness requirements. Overall \$7.5M in priority programs remain unfunded and the preventive maintenance program remains totally unfunded.



(2) The 10 year funding profile chart indicates several trends; (1) in post years, except FY92, where \$47M in SWA dollars were provided, the maintenance program has been funded significantly less than required; (2) since FY91, year end funding has become an increasingly larger portion of the program; (3) outyear funding will not meet our requirements.

(3) The continual use of year end funds to support maintenance limits management flexibility and does not allow the projection of workload data to our installations. If funding levels projected for FY 96-98 remain unchanged, there will be a definite impact on training and/or readiness. Additionally, at these funding levels it will be extremely difficult to maintain a maintenance workforce at our facilities, thus - resulting in a loss of expertise and capability.

(4) Internally, the AMCCOM National Maintenance Point (NMP) has reorganized the management team structure to improve maintenance planning efforts through development of a program...

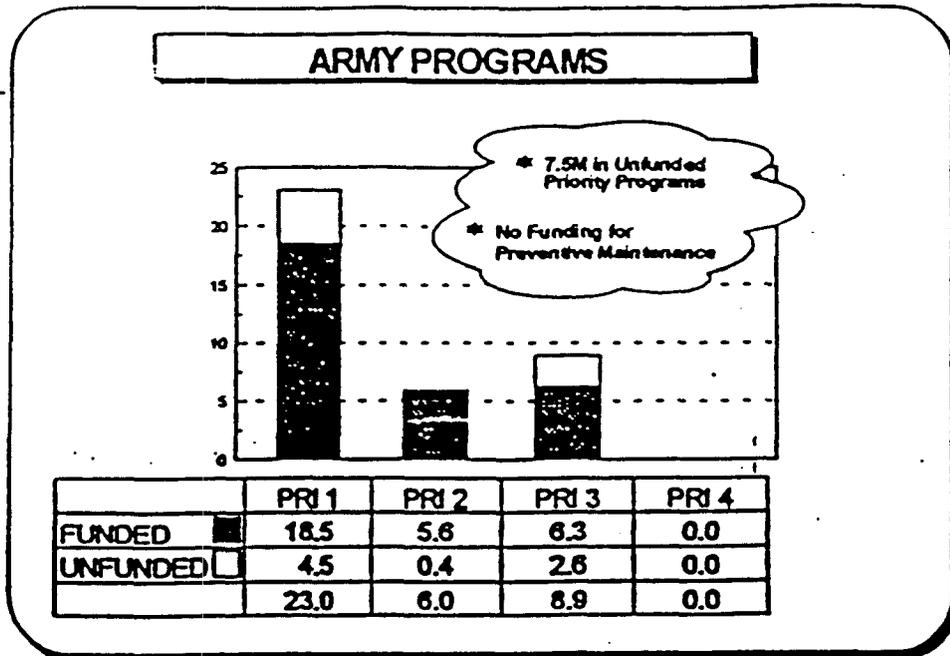
concept for maintaining only the training and war reserve stockpile. Only those stocks needed to support immediate training or critical war reserve shortfalls are submitted for renovation funding. Quarterly reviews are conducted on all priority programs, both funded and unfunded, to ensure limited resources are focused on the most urgent needs. If a priority one item remains unfunded, it results in a critical war reserve shortfall or severely impacts training within one year.

(5) Priorities are determined by applying on-hand assets to war reserve and training requirements. Maintenance priority one, for example, are those stocks satisfying less than 25% of the war reserve requirement, or meeting less than one year's training requirements.

ESTABLISHING PRIORITIES

CONDITIONS

PRIORITY	WAR RESERVE		TRAINING
1	< 25%	OR	< 1 Year
2	25-49%	OR	< 2 Years
3	50-74%	OR	< 3 Years
4	75-99%	OR	< 4 Years



(6) Current and projected funding levels continue to maintain limited readiness at the expense of mortgaging the stockpile. Lack of preventive maintenance will continue to deteriorate the stockpile and eventually cause these assets to become high priority programs requiring significantly more funding than is currently needed.

(7) Funding of ammunition renovation provides a cost avoidance of approximately 70%-80% of new production cost. It also avoids the cost of demilitarization, and helps support overhead at our installations while maintaining a valuable capability.

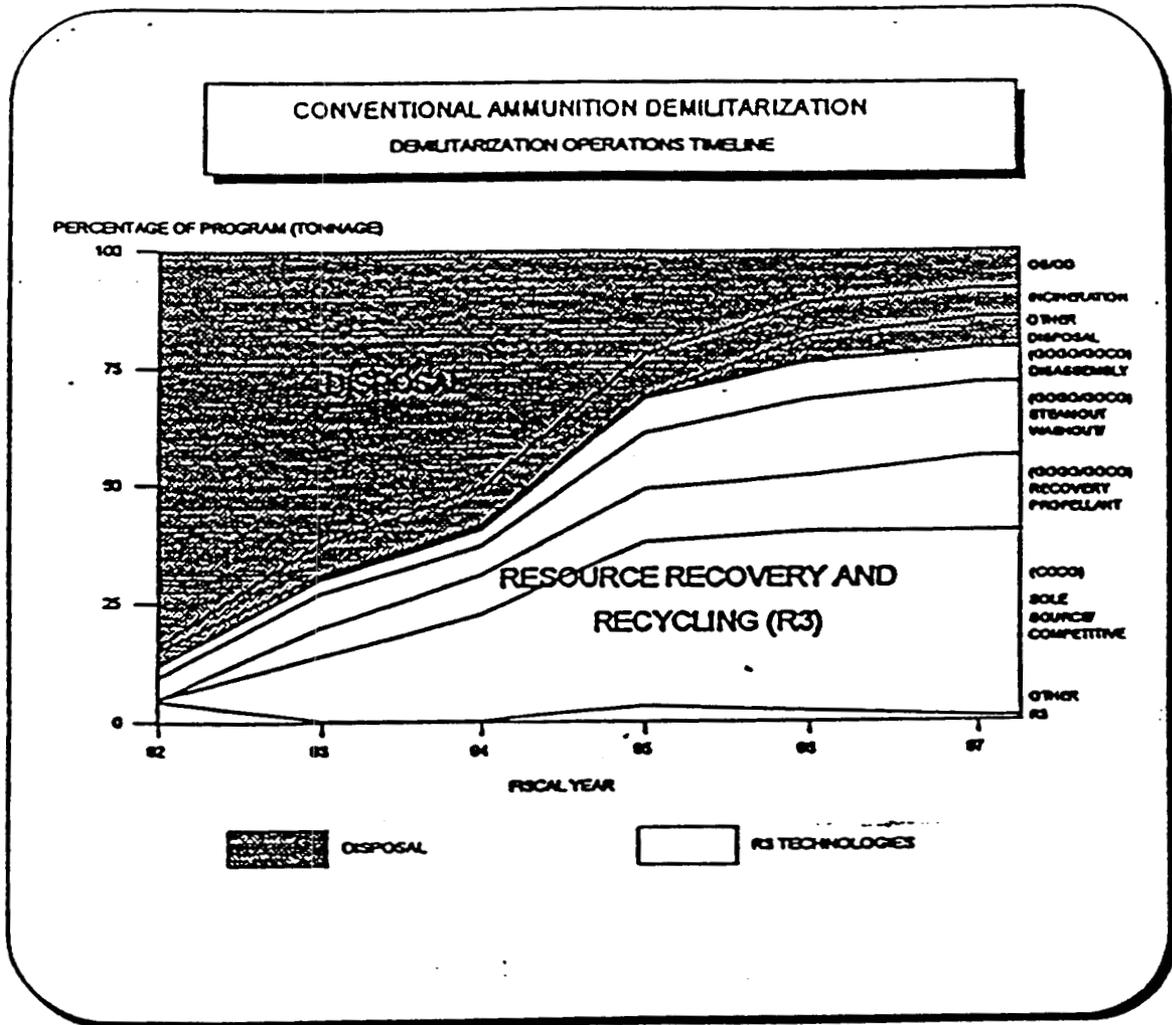
(8) Another concern involves the downsizing of the ammunition industrial base and reduced maintenance funding. There will eventually be a significant loss of expertise and capability to perform a major item maintenance mission. Accordingly, if future funding increases, the ability to provide timely response for renovation of large portions of the stockpile will be limited. Future spikes in funding will not provide an immediate solution to aid a deteriorating stockpile. Efforts to offset a possible reduction in maintenance capability have centered around a refocus of the Ammunition Peculiar Equipment (APE) program to improve depot support and provide new technologies.

f. DEMILITARIZATION

(1) The conventional ammunition demilitarization program continues to be a major element of the Single Manager for Conventional Ammunition (SMCA) mission. Stockpiles of excess, unserviceable, and/or obsolete munitions are continuing to grow as a result of a myriad of factors, to include global changes in the military community and national environmental issues that are threatening to restrict operations. The Army, as the SMCA, has pursued a number of initiatives and has conducted studies to determine the best strategy to minimize the stockpile while considering environmental and economical factors. Because of this increased emphasis, a demilitarization master plan was developed to serve as a tool in assisting the effective and efficient management of the overall demilitarization program. This plan has been assessed and found to be compatible with the tier depot plan approach. In accordance with the 1982 and 1986 Blue Ribbon Panels (BRP) on Ammunition Demilitarization, a 40,000 short ton stockpile is considered a manageable demilitarization inventory. These parameters, however were based on an inventory level of 150,000 to 200,000 short tons and a standard annual generation rate of 20,000 short tons. The demilitarization climate has changed considerably since the last BRP, and although the ultimate goals may be similar, the factors effecting today's program are significantly distinctive from any other program. Today's inventory level is over 413,000 short tons and has growth potential; annual generations are at an all time high and are likely to continue along that trend. The magnitude of a stockpile backlog of approximately 413,000 short tons can best be visualized using logistical frames of reference. This size of inventory could fill almost 6,883 rail cars, equating to a train that would stretch for 65 miles; or it would require over 20,000 truck trailers to transport, producing a 1,428 mile convoy. In logistics terms, storing the inventory in standard igloos would completely fill Blue Grass, Letterkenny, and Red River Army Depots (2753 igloos) with about 250 igloos remaining. For this reason, demilitarization operations at the installation level have taken on a much more urgent commitment priority in order to meet annual program goals. The loss of authority to hire additional temporary employees will undoubtedly impact the ability to perform demilitarization operations at the Government-owned, Government-operated facilities in a timely and efficient manner. Augmentation of contractor support will alleviate some of these shortfalls by increasing overall capabilities.

(2) Environmental considerations are continuing to be critical components to accomplishing the demilitarization program. The Conventional Ammunition Demilitarization Master Plan presents the SMCA's methodology for migrating from a disposal focus to one of Resource, Recovery and Recycling (R3). The plan is not budget driven, but rather each program element has been evaluated individually to determine funding requirements. The master plan is constrained only by present and projected capabilities. This chart illustrates the trend of the fully funded SMCA demilitarization program for the time period from fiscal year 1992 through 1997. Disposal procedures accounted for 88 percent of the total program in FY 92, a stark contrast to the projected 22 percent in FY 97. Further, one third of those disposal programs planned, are new environmentally sound procedures that will be brought on

line through on-going research and development efforts, and support the SMCA's pledge to decrease reliance on open burning/open detonation (OB/OD) operations.



(3) Increasing the focus on cost effective resource recovery and recycling (R3) efforts is a goal of the SMCA. Development of new technologies, increased emphasis on contractor and industry support, and establishment of new and improved facilities are some of the means by which the SMCA's goal can be attained. Heavy reliance on OB/OD in the future is not only a negative from a R3 point of view, but is strategically unsound given the increasingly restrictive environmental regulations. This chart graphically depicts major federal environmental legislation and its explosive expansion over the last 20 years.

(5) END STATE DEMILITARIZATION OBJECTIVES

a) The first objective for demilitarization is the reduction in the growing backlog allowing for critical storage space within the Tier I and II installations. Reducing the backlog to a level whereby annual generations are equal to annual accomplishments will allow for a 100 percent stable stockpile. Utilizing both government and industrial/contractor support and assuming that funding through the POM can be provided to a level that meets capabilities, the goal is to obtain a 100,000 short ton backlog by FY04.

	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04
COST PER S/TON	1400	1700	2200	1800	1500	1200	1200	1200	1200	1200	1200
REQUIRED (\$M)	70	100	100	110	115	120	80	80	40	40	40
BEGIN BALANCE	12858	42858	39035	36858	33249	28002	20502	164135	122468	114135	105802
GEN	60000	25000	25000	25000	25000	25000	25000	25000	25000	25000	25000
ACCOMP	50000	58823	45455	61111	78667	100000	66667	66667	33333	33333	33333
ENDING BALANCE	42858	39035	36858	33249	28002	20502	164135	122468	114135	105802	87499

b) The second program objective is to reduce our reliance on OB/OD methods while gradually increasing reliance on Resource, Recovery and Recycling effort to a 75 percent level by FY97.

c) In order to achieve the above end state objectives, the SMCA has established a strategic plan that involves a short term and long term plan of action.

1 Short Term:

a) Our short term emphasis is on maximizing OB/OD opportunities and to clear storage space at Tier I and II installations through innovative ideas and approaches. We are aggressively funding OB/OD projects at all Tier levels when economically feasible and environmentally acceptable. We are fully utilizing our large capacity OB/OD locations to include shipping assets from tier I locations with minimal OB/OD capability.

b One of the innovative ways that we are expanding the capacity of the demilitarization base short term is in the area of contracting for conventional ammunition demilitarization. During FY 93 and FY 94, contracts with 100 percent options which may be exercised in FY 95/96 have been/are being let. Additional contracts are being planned for award in FY 95. These contracts plus the options from previous year contracts will total \$30-40M. The final value of the contracts to be awarded depends upon cost effectiveness weighed against organic government capability to perform demilitarization.

c We are investing heavily in Tier I and Tier II installations in Ammunition Peculiar Equipment (APE) and plant facilitization. A good example of strategic APE placement is that which is being employed in distributing APE 1236 furnaces. Our plans revolve around regionally locating these facilities at Tier I and II installations where the generations and support staff will continue to exist to operate such equipment. Regional dispersion minimizes EPA regional policy impacts on the furnaces while reducing the shipments of hazardous materials. We are also helping to facilitize and workload Tier I and Tier II facilities. Such is the case at Hawthorne Army Ammunition Plant's (HWAAP) Western Area Demilitarization Facility (WADF). We are also planning location of autoclave equipment at certain Tier I and II facilities. Short term we are also utilizing existing wash out and steam out and white phosphorous facilities when economically feasible.

d In addition to utilizing demilitarization, we are actively pursuing propellant and explosive sales. These sales will help to reduce the demilitarization inventory while generating additional funding for future demilitarization efforts.

~~2 Long Term:~~

Our long term goal is to establish demilitarization centers of excellence at Tier I and Tier II installations focused on R3. Site selection for transitioning Research and Development (R&D) initiatives will be carefully selected to assure maximum utility. Current R&D projects include such efforts as Super Critical Water Oxidation, Carbon Dioxide Blast Vacuum Demilitarization, Cryofracture Technology and Cryogenic Washout to name a few. At the end state, demilitarization operations will be conducted either commercially or in house depending upon economic factors, with a certain minimum government capability being maintained as insurance for uneconomical or one-time projects. We will also maintain unique government capability such as the Western Area Demilitarization Facility at HWAAP and the White Phosphorus plant at Crane Army Ammunition Activity (CAAA).

IX. SUMMARY

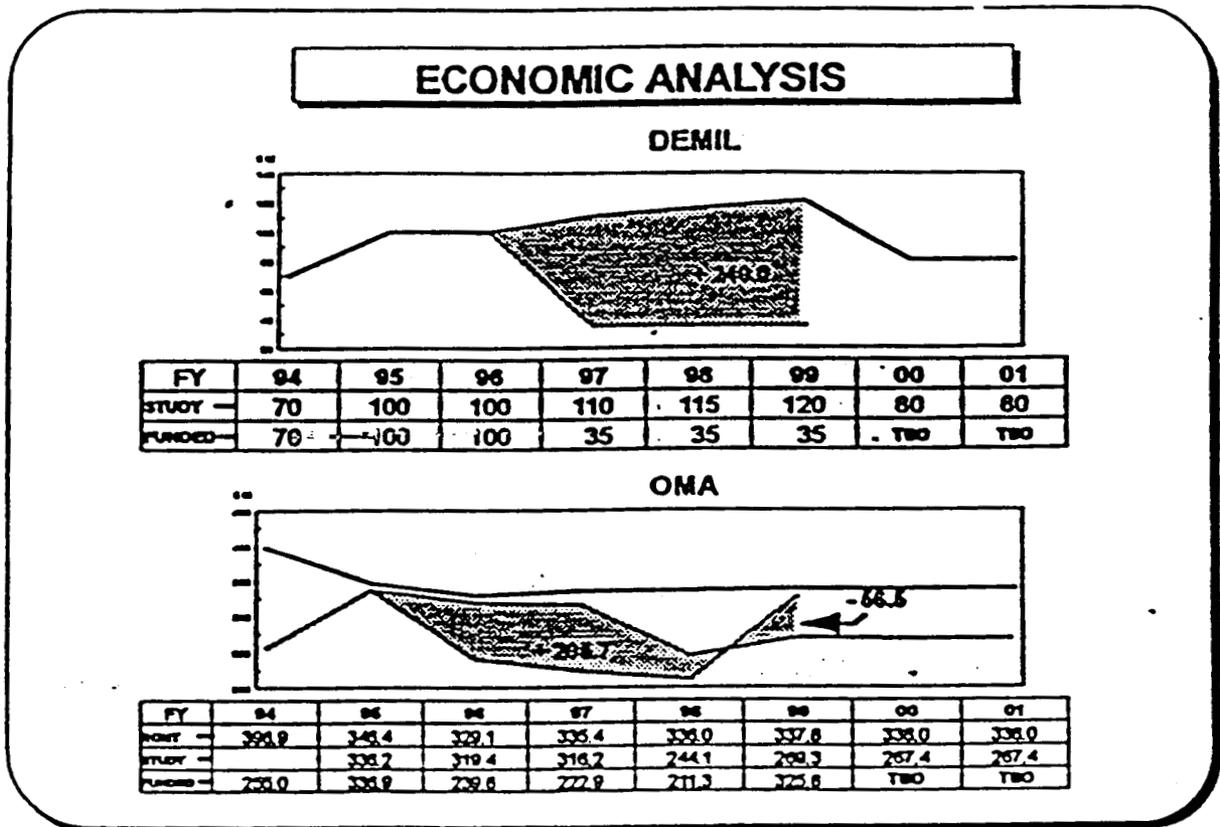
a) This plan documents actions requiring near term investments for achieving long term efficiencies and savings through a smaller, safer stockpile using a reduced level of manpower. It provides a methodology for restructuring the wholesale storage base into fewer installations while, identifying initiatives required to maintain critical power projection capabilities. Additionally, it outlines the limitations in today's environment and identifies the necessary restructuring of ammunition management operations within each functional area.

b) Near term investments are required to achieve long term benefits. Investments to stockpile improvements are made through the OMA appropriation for supply, maintenance, and transportation functions, and PAA for demilitarization functions. The OMA funding is apportioned based on priorities, therefore, lower priority functions can be supported only after higher priority functions are satisfied. Success of this Integrated Management Plan is possible only if the total minimum requirement level is fully funded. Lower funding levels would mean that investments in such areas as inventory, surveillance, rewarehousing, redistribution and maintenance will not be made. Full funding for receipts and issues are required to maintain peacetime capabilities and ultimately lower the overall cost of redistribution by allowing the issue of training stocks from Tier II/III Installations. Investments and balancing funding of maintenance and surveillance of required, high priority stocks, are required to maintain readiness and preclude the declining critical skill base. The revised inventory program ~~requires no additional investment over the current requirement, but must be fully-funded~~ at the lower requirement level to assure success. The program as outlined in this plan will actually require fewer resources than are being programmed in the POM. On the basis of results in a recent study simulation, a revised ammunition operational management program utilizing the tier realignment structure requires a total of approximately \$206.0 million of additional OMA program funding in FY96-98 (less than the currently programmed requirement). This figure includes all OMA requirements, however, does not include redistribution to maximize outloading capabilities. That program has submitted funding requirements through the ASMP. An investment in these fiscal years will provide the basis for long term efficiencies and results in a \$56.5 million reduction to the anticipated funding level in FY99. This equates to a \$70 million per year cost avoidance in FY99 and beyond.

c) This plan has also outlined the initiatives required to reduce the backlog of the demilitarization stockpile to a manageable 100,000 short tons within a ten year time frame. An aggressive program is required to provide storage space for realignment into a tier infrastructure and allow the operational functional area to perform efficiently and effectively. A program that provides the necessary funding to match capabilities is initially required through FY99. The demilitarization program will then be gradually

reduced to an ultimate goal whereby annual generations equate to annual accomplishments.

d) The economic analysis shown in the following charts is based on rates and workload forecasts available at the time of the tier depot simulation. Changes in the actual rates and workloads will effect actual results. Detailed execution planning beyond the simulation level will be used to update the expected investments and savings, and will be reflected in future editions of this plan.



ASSESSMENT SUMMARY

PROGRAM	STATUS	CURRENT RQMT FY96-99	REVISED RQMT FY96-99	FUNDED FY96-99	AMBER FX	GREEN FX
OMA:						
RECLASS/SDT	RED	\$ 319.5	\$ 360.9	\$ 272.6	\$ 27.0	\$ 88.3
REWHISNG	AMBER	50.5	24.2	19.2	N/A	5.0
INVENTORY	AMBER	90.7	47.5	49.3	N/A	-1.8
SURVEIL	RED	98.4	72.8	56.0	0.0	16.8
MAINT	AMBER	64.5	64.5	23.6	N/A	40.9
	TOTAL:	\$ 623.8	\$ 669.9	\$ 420.7	\$ 27.0	\$ 149.2
DEML:						
	AMBER	\$ 445.0	\$ 445.0	\$ 205.0	\$ N/A	\$ 240.0

DOLLARS IN MILLIONS

* Operational Elements Only. Not Total OMA Program



**QUANTITATIVE DATA
FOR TIER DEPOT ANALYSIS**

POWER PROJECTION

OUTLOADING CAPABILITY

FACTORS

DEPOT	CNTR/SCR	BB/SCR	70-30/SCR
	WEIGHT: 4	2	3
ANAD	1040/2.9	800/8	968/2.4
BGAD	2080/5.9	3760/3.7	2584/6.5
CAAA	780/2.2	11300/11.0	3936/9.8
HWAAP	923/2.6	1280/1.2	1030/2.6
LEAD	520/1.5	3480/3.4	1408/3.5
MCAAP	3900/11.0	5560/5.4	4398/11.0
RRAD	728/2.1	2840/2.8	1362/3.4
SEDA	104/3	1060/1.0	391/1.0
SIAD	1144/3.2	2000/1.9	1401/3.5
SVDA	1989/5.6	1700/1.7	1902/4.8
TEAD	1170/3.3	8600/8.4	3399/8.5

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

POWER PROJECTION

TRANSPORTATION FACTORS

DEPOT	TRUCK/WT	RAIL/WT	AIR/WT	TOTAL	SCR
WEIGHT	2	3	1		
ANAD	2/4	1/3	0	7	9
BGAD	2/4	2/6	0	10	11
CAAA	2/4	2/6	0	10	11
HWAAP	0	0	0	0	5
LEAD	1/2	0	0	2	7
MCAAP	2/4	2/6	0	10	11
RRAD	1/2	1/3	0	5	8
SEDA	0	0	1/1	1	6
SIAD	2/4	1/3	1/1	8	10
SVDA	1/2	1/3	0	5	8
TEAD	1/2	2/6	0	8	10

FACTORS BASED ON THE INSTALLATIONS CAPABILITY TO MOVE MUNITIONS
OUT OF THE GATE BY TRUCK, RAIL, OR AIR.

RANKINGS ARE BASED ON DEPOT ASSESSMENT FOR EACH FACTOR AS FOLLOWS:

GOOD -- 2 POINTS

FAIR -- 1 POINTS

POOR -- 0 POINTS

STORAGE CAPABILITY

FACTORS

DEPOT	NET SQ FT/SCR	ECM SQ FT/SCR
	WEIGHT: 2	1
ANAD	1831200/3.3	1623258/4.0
BGAD	1745600/3.1	1374304/3.4
CAAA	4891200/8.8	3585484/8.9
HWAAP	6136800/11.0	3518186/8.7
LEAD	1693600/3.0	1459635/3.6
MCAAP	5593600/10.0	4430063/11.0
RRAD	1351200/2.4	1073715/2.7
SEDA	1119200/2.0	783846/1.9
SIAD	1929600/3.5	1196800/3.0
SVDA	1892800/3.4	554803/1.4
TEAD	1895200/3.4	1361600/3.4

LOCATION

FACTORS

DEPOT	TO SPOE/SCR	TO APOE/SCR	TO TRNG/SCR	\$ TO SPOE
	WEIGHT: 4	2	3	
ANAD	4/5.5	383/5.2	459/11.0	242/7.7
BGAD	5/5.4	551/3.6	600/8.4	671/8.1
CAAA	7/3.1	700/2.8	602/8.4	267/7.0
<u>HWAAP</u>	3/7.3	300/6.6	582/8.7	203/6.2
LEAD	5/4.4	180/11.0	587/8.6	221/6.4
<u>MCAAP</u>	7/3.1	1057/1.9	515/9.8	427/4.4
RRAD	10/2.2	926/2.1	595/8.5	376/4.9
SEDA	6/3.7	233/8.5	705/7.2	258/7.2
SIAD	2/11	233/8.5	527/9.6	169/11.0
SVDA	7/3.1	935/2.1	756/6.7	379/4.9
TEAD	4/5.5	687/2.9	603/8.4	280/6.6

DATA IS # OF RAIL TRANSIT DAYS TO CLOSEST SPOE AND ACTUAL MILEAGE TO CLOSEST APOE. FOR SPOE, MILEAGE DOES NOT NECESSARILY MEAN THE BEST. RAIL MEASURED DUE TO # TONS MOVED. THE COST TO SPOE IS THE COST TO THE CLOSEST SURFACE PORT. IT IS ADDITIVE OF BOTH CONTAINER AND BB (MOTOR AND RAIL). WEIGHTS ASSIGNED: LARGEST TONNAGE OUT OF SPOE, THUS HIGHEST RANKING TRNG IS AVG MILES TO MAJOR TRNG SITES W/I 1000 MILES. (W/I 50MI = SAME)

COSTS

FACTORS

DEPOT	R//SCR	INV/SCR	SURV/SCR	MAINT/SCR
	WEIGHT: 4	3	2	1
ANAD	248.66/3.0	14.45/4.6	359.85/4.4	45.55/8.2
BGAD	125.05/5.9	50.17/1.3	504.55/5.2	55.01/6.5
CAAA	66.86/11.0	10.69/6.2	224.69/7.1	40.93/9.1
HWAAP	148.71/4.9	38.33/1.7	144.87/11.0	51.97/7.2
LEAD	130.83/5.6	16.44/4.0	438.20/3.6	33.86/11.0
MCAAP	107.49/6.8	27.22/2.4	146.34/10.9	48.78/7.6
RRAD	134.22/5.5	6.00/11.0	505.24/3.2	49.22/7.6
SEDA	145.75/5.0	90.55/7	794.97/2.0	88.33/4.2
SIAD	142.21/5.2	57.11/1.2	386.05/4.1	59.39/6.3
SVDA	112.34/6.5	101.57/6	535.92/3.0	81.20/4.6
TEAD	122.36/6.0	27.24/2.4	275.56/5.8	55.21/6.7

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

DEMIL COSTS EXCLUDED DUE TO FUNDING FROM PAA.

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

MAINTENANCE

MINOR

FACTORS

DEPOT	MISSILE/SCR WEIGHT: 4	MULTUSE Bldg /SCR 3	NEW Limit/SCR 2	SQ FT Avail/SCR 1
ANAD	Y/11	4/5.5	44000/4	66895/5.5
BGAD	N/0	3/4.1	128000/1.1	80602/6.7
CAAA	N/0	8/11.0	97700/8	122360/10.2
HWAAP	N/0	4/5.5	515000/4.4	102537/8.5
LEAD	(Y/11)	1/1.4	20000/2	23073/1.9
MCAAP	N/0	6/8.3	1300000/11.0	132606/11.0
RRAD	(Y/11)	3/4.1	65000/6	47203/3.9
SEDA	N/0	1/1.4	60000/5	21200/1.8
SIAD	N/0	2/2.8	37000/3	17832/1.5
SVDA	N/0	2/2.8	255000/2.2	106920/8.9
TEAD	N/0	5/6.9	139000/1.2	71203/5.9

ALPS

MISSILE FACTOR: YES OR NO FOR MISSILE MAINTENANCE CAPABILITY.
DEPOTS WITH THIS CAPABILITY RECEIVE A SCORE OF 11 BASED UPON ITS
IMPORTANCE AS DISCUSSED DURING 17-18 FEB MEETING.

MISSILE MAINTENANCE FACILITIES ARE CONSIDERED AS HIGH DOLLAR INVESTMENTS
AND ARE UNIQUE TO MISSILE SYSTEM REQUIREMENTS. NOT EASILY INTER-CHANGEABLE.

INSPECTION/TEST

FACTOR

DEPOT	FUNCTION	MISSILE	MOD SURV	X-RAY	TOTAL	SCR
WEIGHT:	4	3	2	1		
ANAD	0	1	0	0	3	8
BCAD	0	0	0	0	0	0
CAAA	1	0	1	1	7	11
HWAAP	1	0	1	1	7	11
LEAD	0	1	1	1	6	10
MCAAP	0	0	1	1	3	8
RRAD	0	1	0	1	4	9
SEDA	0	0	0	0	0	6
SIAD	0	0	0	0	0	6
SVDA	1	0	0	0	4	9
TEAD	0	0	0	1	1	7

RANKING: 1 = HAS CAPABILITY
0 = HAS NO CAPABILITY

DEMIL

FACTORS

DEPOT	RRR/SCR	OB-OD/SCR	DEMIL STORAGE/SCR
	WEIGHT: 3	2	1
ANAD	10/7	1600/0	24073/2.7
BGAD	17/9	300/2	17944/1.9
CAAA	18/10	2000/1.1	30972/3.3
HWAAP	20/11	1600/9	102154/11.0
LEAD	6/6	3200/1.8	29753/3.2
MCAAP	17/9	3300/1.8	88930/9.6
RRAD	12/8	1000/6	7486/8
SEDA	10/7	2100/4	6877/7
SIAD	10/7	20000/11.0	15475/1.7
SVDA	6/6	1800/1.0	7163/8
TEAD	12/8	8400/4.6	8756/9 --

RESOURCE RECOVERY AND RECYCLING CAPABILITY INCLUDES:

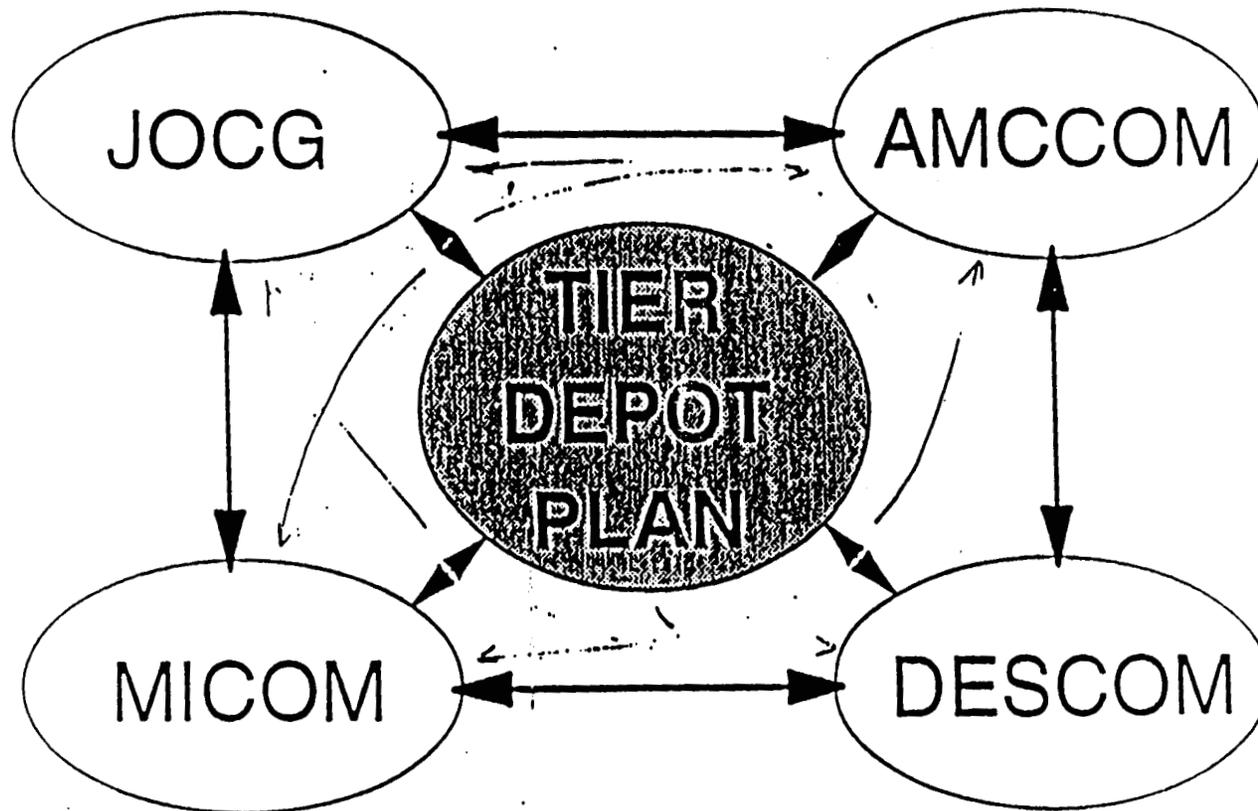
DISASSEMBLY, UNIQUE DEMIL CAP, WASHOUT/STEAMOUT/MELTOUT CAP, APE 1236

OPEN BURN/OPEN DET CAPABILITY INCLUDES;

DEMIL ST IN STORAGE BY LOCATION

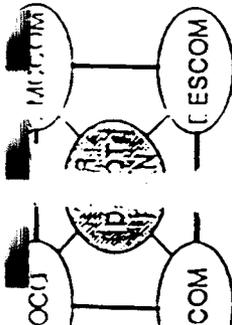
- TAKING OB/OD AND DEMIL IN STG OUT DOES NOT AFFECT FINAL RANKING ORDER.

INTEGRATED AMMUNITION STOCKPILE MANAGEMENT PLANNING



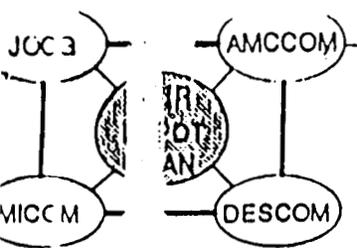
4 April 94

COL Scott Hull, HQ AMCCOM
Mr, Ron Herter, HQ, DESCOM



PRE FAA ACTIVITY

- OMA Shortfall Briefing to DCSLOG Mar 93
- JOCG Initiates WASP Study May 93
- 1st BG Holmes Briefing to CSA Jul 93
- WASP Study Complete Sep 93
- 2nd BG Holmes Briefing to CSA Oct 93
- FAA Tasking Letter Nov 93
- Integrated Management Plan Simulation Nov - Dec 93
- FAA Briefed to VCSA 2 Feb 94



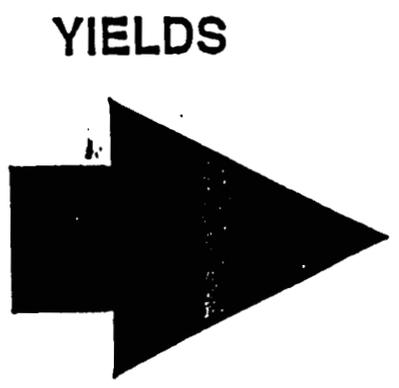
Integrated Planning

INTEGRATED PLAN CONCEPT

NEAR-TERM INVESTMENT



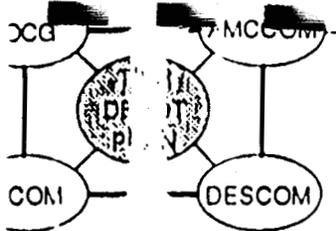
- DISPOSAL
- REWAREHOUSING
- REDISTRIBUTION
- MODERNIZATION



LONG-TERM SAVINGS

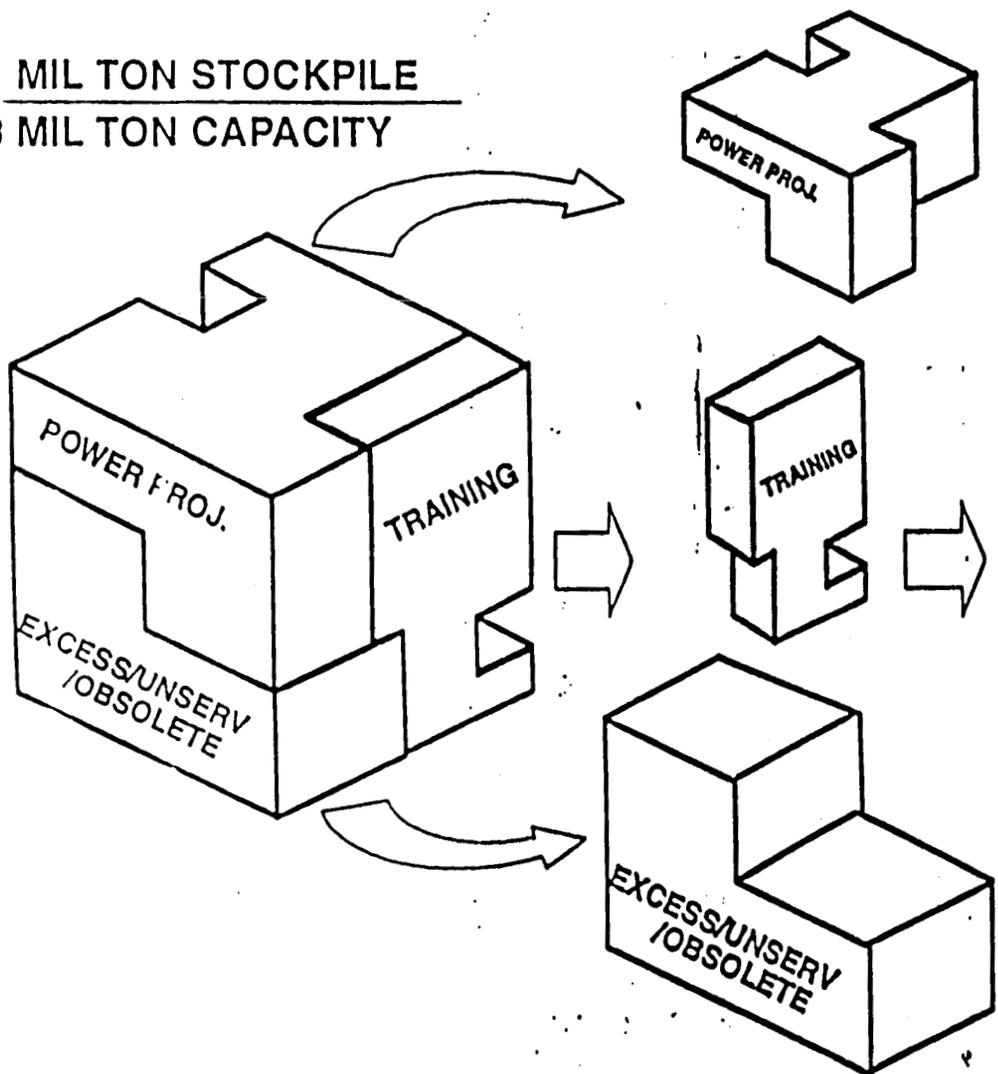


- SMALLER, SAFER STOCKPILE
- LESS STORAGE, FEWER INSTALLATIONS
- REDUCED MANPOWER
- ENHANCED READINESS



STOCKPILE MANAGEMENT CONCEPT

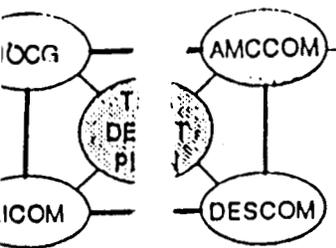
MIL TON STOCKPILE
3 MIL TON CAPACITY



- POWER PROJECTION**
- SEGREGATED
 - STATIC STORAGE
 - DEPLOYABLE
 - READY FOR WAR
 - INSPECTED
 - CLASSIFIED
 - MAINTAINED

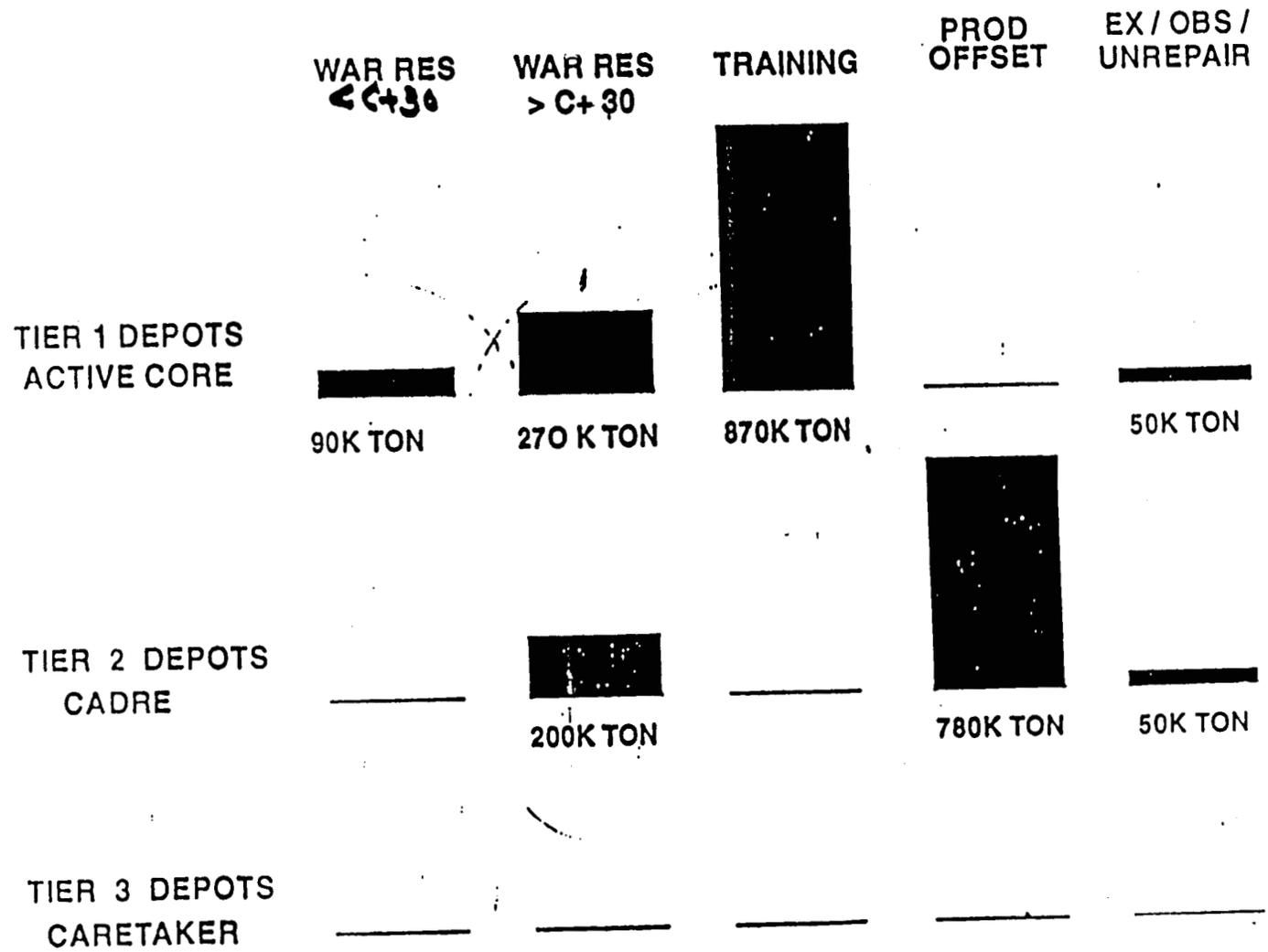
- TRAINING**
- SEGREGATED
 - CONSUMPTION
 - INSPECTED
 - CLASSIFIED
 - MAINTAINED

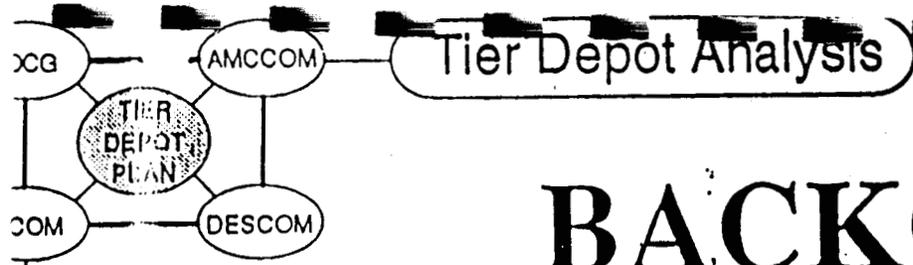
- NON APPLICABLE**
- SEGREGATE
 - DISPOSAL
 - FMS
 - R³
 - DEMIL



Integrated Planning

END STATE STRATIFICATION



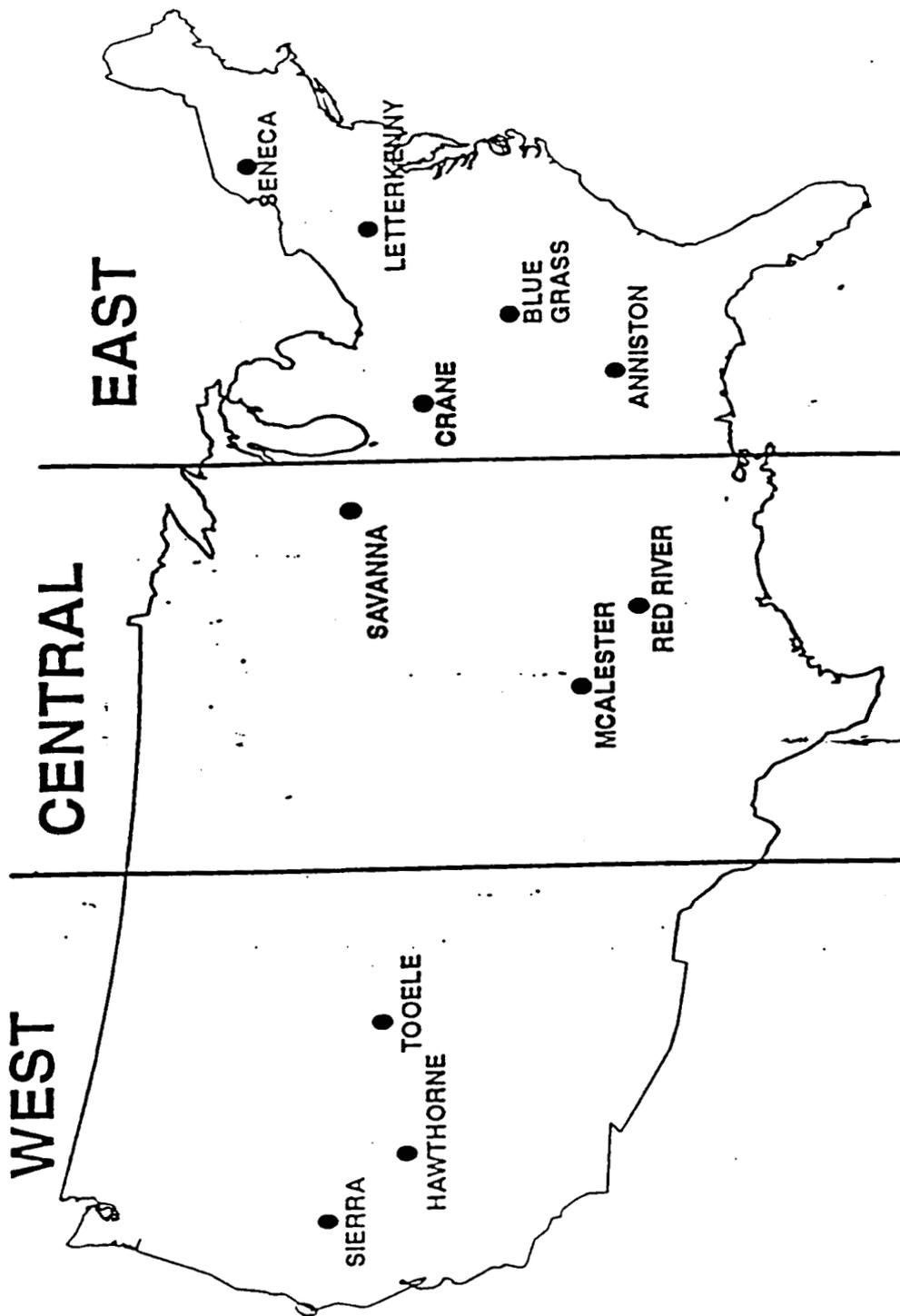


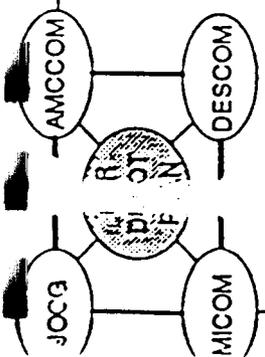
BACKGROUND

- **OCT 93**
 - Study Assessment Ranking
- **NOV 93**
 - Simulation Conducted (All Services, MICOM, DESCOM)
- **17-18 FEB 94**
 - Joint Service Working Group (All Services, MICOM, DESCOM)
 - Developed Criteria and Identified Weights
 - Performed Preliminary Analysis
- **31 MAR 94**
 - Joint Service review
 - OSD / AMC / MICOM
- **21 FEB - 4 APR 94**
 - Developed Detailed Analysis

Tier Depot Analysis

SCOPE

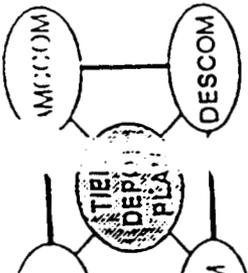




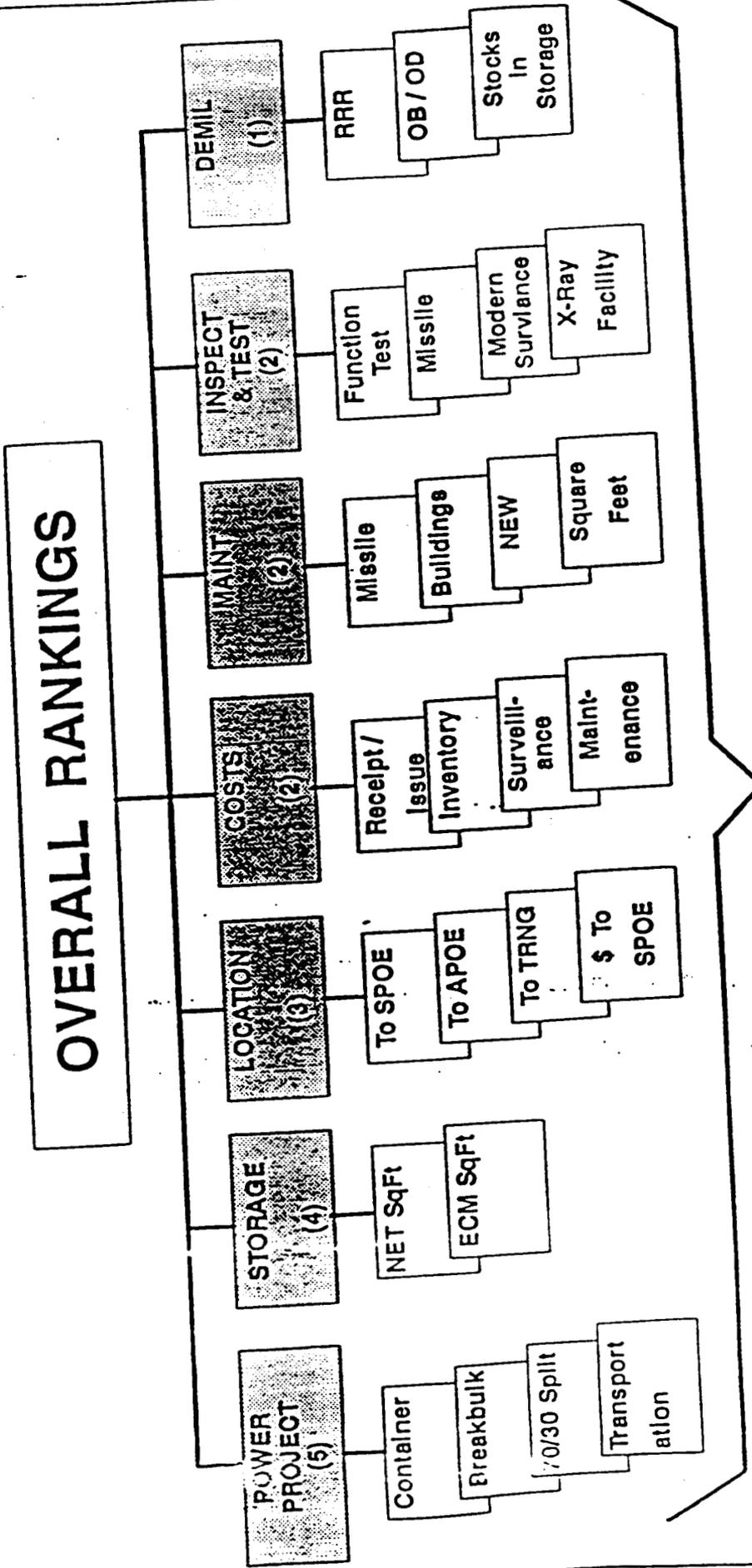
OBJECTIVES

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

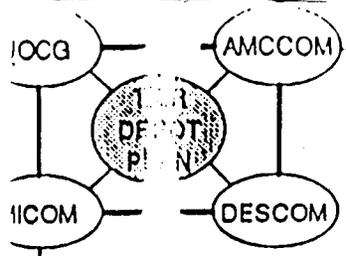
Tier Depot Analysis



ANALYTICAL APPROACH



SUPPORTING QUANTITATIVE DATA



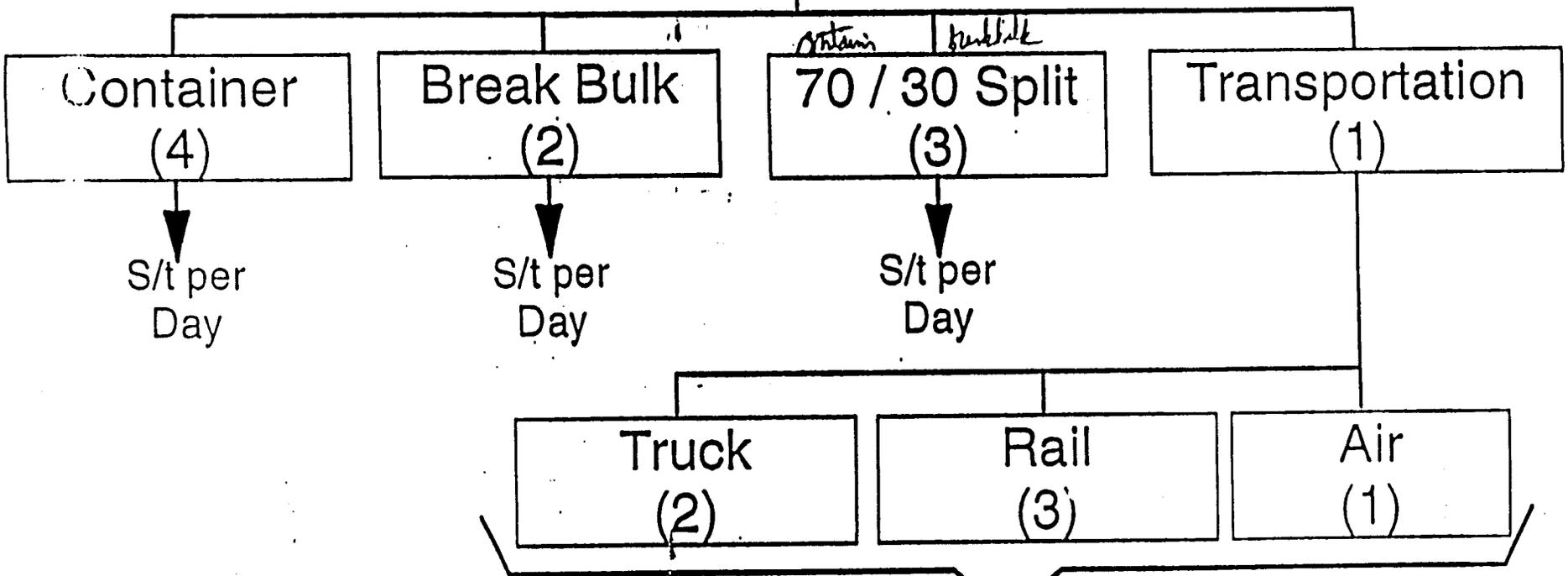
Tier Depot Analysis

ANALYTICAL APPROACH

POWER PROJECTION

► Capability of Installation to Load and Ship Material During a Contingency

POWER PROJECTION (5)

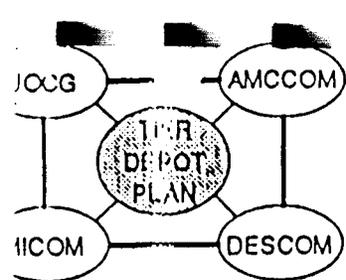


Assessments:

- Good
- Fair
- Poor

POWER PROJECTION CAPABILITIES

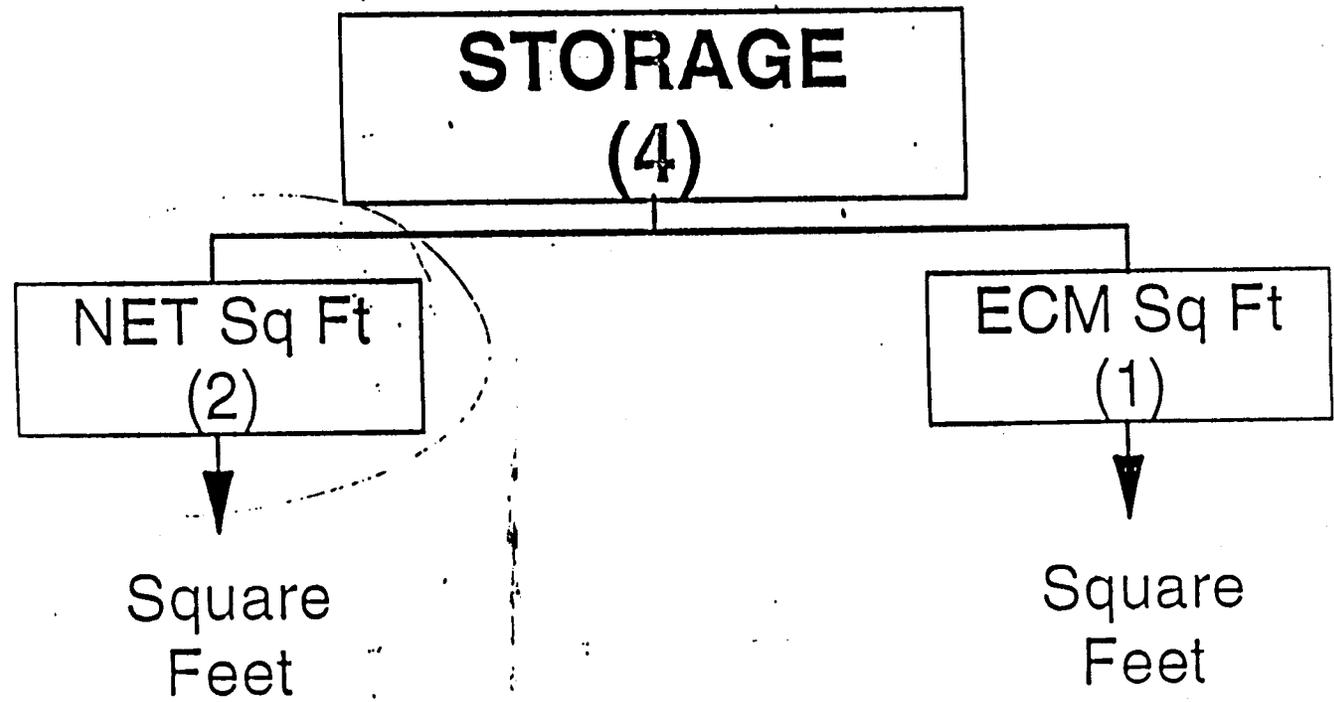
	Container Score	Weight	Brk. Bulk Score	Weight	70/30 Spill Score	Weight	Transport Score	Weight	Total Score	Adjusted Score
		4.0		2.0		3.0		1		
ANAD	2.8	11.6	0.8	1.6	2.4	7.2	9	9	29.4	3.3
BGAD	5.9	23.6	3.7	7.4	6.5	19.5	11	11	61.5	6.8
CAAA	2.2	8.8	11.0	22.0	9.8	29.4	11	11	71.2	7.9
HWAAP	2.6	10.4	1.2	2.4	2.6	7.8	5	5	25.6	2.9
LEAD	1.5	6.0	3.4	6.8	3.5	10.5	7	7	30.3	3.4
MCAAP	11.0	44.0	5.4	10.8	11.0	33.0	11	11	98.8	11.0
RRAD	2.1	8.4	2.8	5.6	3.4	10.2	8	8	32.2	3.6
SEDA	0.3	1.2	1.0	2.0	1.0	3.0	6	6	12.2	1.4
SIAD	3.2	12.8	1.9	3.8	3.5	10.5	10	10	37.1	4.1
SVDA	5.6	22.4	1.7	3.4	4.8	14.4	8	8	48.2	5.4
TEAD	3.3	13.2	8.4	16.8	8.6	25.6	10	10	65.5	7.3



ANALYTICAL APPROACH

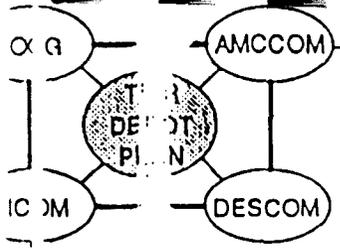
• STORAGE

▶ The Installations Capability to Store Class V Materiel



STORAGE CAPABILITIES

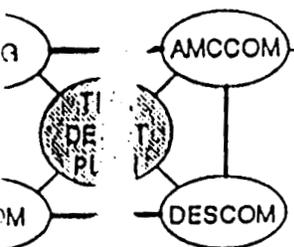
	NET SqFt Score	Weight	ECM SqFt Score	Weight	Total Score	Adjusted Score
		2.0		1.0		
ANAD	3.3	6.6	4.0	4.0	10.6	3.8
BGAD	3.1	6.2	3.4	3.4	9.6	3.4
CAAA	8.8	17.6	8.9	8.9	26.5	9.4
HWAAP	11.0	22.0	8.7	8.7	30.7	10.9
LEAD	3.0	6.0	3.6	3.6	9.6	3.4
MCAAP	10.0	20.0	11.0	11.0	31.0	11.0
RRAD	2.4	4.8	2.7	2.7	7.5	2.7
SEDA	2.0	4.0	1.9	1.9	6.9	2.1
SIAD	3.5	7.0	3.0	3.0	10.0	3.5
SVDA	3.4	6.8	1.4	1.4	8.2	2.9
TEAD	3.4	6.8	3.4	3.4	10.2	3.6



Tier Depot Analysis

LOCATION

	To SPOE Score	Weight	To APOE Score	Weight	To Tmg Score	Weight	Cost to SPOE Score	Weight	Total Score	Adjusted Score
		4.0		2.0		3.0		1.0		
ANAD	5.5	22.0	5.2	10.4	11.0	33.0	7.7	7.7	73.1	8.0
BGAD	4.4	17.6	3.8	7.2	8.4	25.2	8.4	8.4	58.4	6.4
CAAA	3.1	12.4	2.8	8.8	8.4	25.2	7.0	7.0	50.2	5.5
HWAAP	7.3	29.2	6.6	13.2	8.7	26.1	9.2	9.2	77.7	8.5
LEAD	4.4	17.6	11.0	22.0	8.8	26.4	8.4	8.4	73.8	8.1
MCAAP	3.1	12.4	1.9	3.8	9.8	29.4	4.4	4.4	50.0	5.5
RRAD	2.2	8.8	2.1	4.2	8.5	25.5	4.9	4.9	43.4	4.7
SEDA	3.7	14.8	8.5	17.0	7.2	21.6	7.2	7.2	60.6	6.6
SIAD	11.0	44.0	8.5	17.0	9.8	29.4	11.0	11.0	100.8	11.0
SVDA	3.1	12.4	2.1	4.2	6.7	20.1	4.9	4.9	41.8	4.5
TEAD	6.6	22.0	2.0	8.0	0.4	12.2	0.0	0.0	50.0	6.0

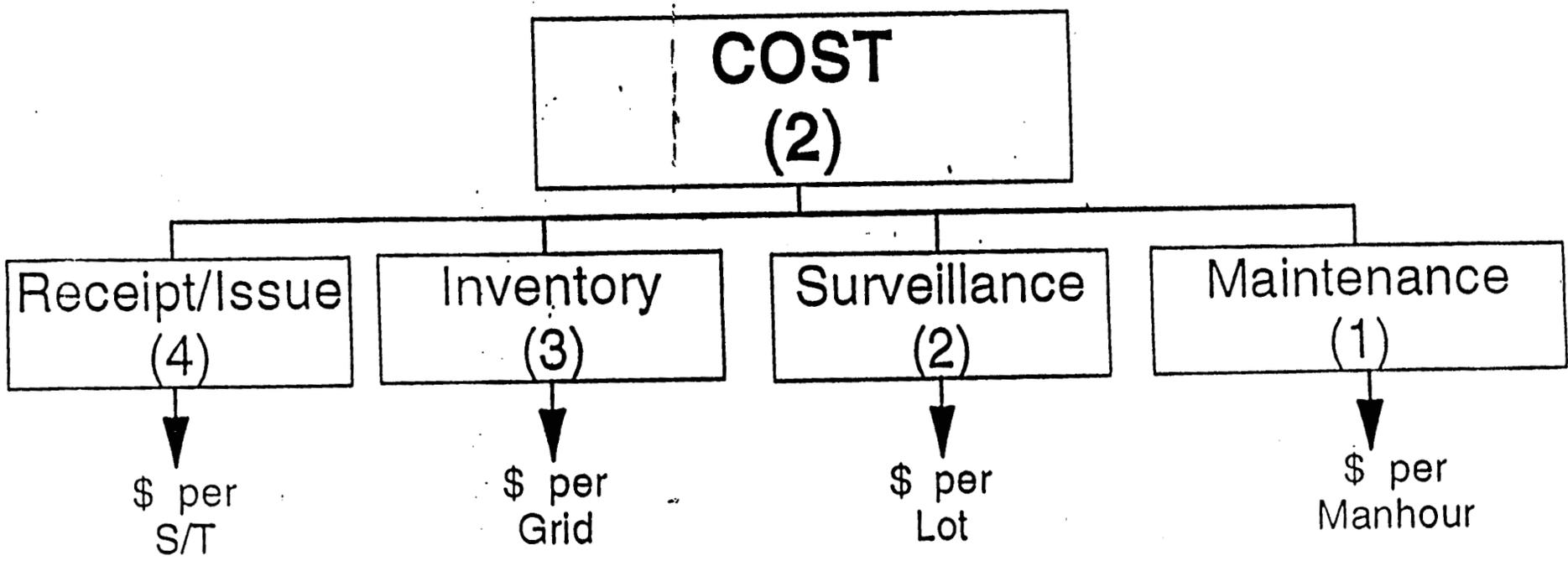


Tier Depot Analysis

ANALYTICAL APPROACH

COST

► Installations Cost to Perform Ammunition Operations



Tier Depot Analysis

COSTS

	Rec/Iss Score	Weight	Inv/Grfd Score	Weight	Surv/Lot Score	Weight	Maint Fix Score	Weight	Total Score	Adjusted Score
		4.0		3.0		2.0				
AN/D	3.0	12.0	4.6	13.8	4.4	8.8	8.2	11.2	42.8	5.5
BGAD	5.9	23.6	1.3	3.9	5.2	10.4	6.3	6.3	44.2	5.7
CAAA	11.0	44.0	6.2	18.6	7.1	14.2	9.1	11.1	85.9	11.0
IWAAP	4.9	19.6	1.7	5.1	11.0	22.0	7.2	7.2	53.9	6.9
LEAD	5.6	22.4	4.0	12.0	3.6	7.2	11.0	11.0	52.6	6.7
MCAAP	6.8	27.2	2.4	7.2	10.9	21.8	7.6	7.6	61.8	8.2
RRAD	5.5	22.0	11.0	33.0	3.2	6.4	7.6	7.6	61.0	8.8
SEDA	5.0	20.0	0.7	2.1	2.0	4.0	4.2	1.2	30.3	3.9
SIAD	5.2	20.8	1.2	3.6	4.1	8.2	6.3	6.3	38.9	5.0
SVIDA	6.5	26.0	0.6	1.8	3.0	6.0	4.6	1.6	38.4	4.9
TOTAL	6.0	24.0	2.4	7.2	5.8	11.6	6.7	6.7	49.5	6.3

ANALYTICAL APPROACH

• MAINTENANCE

- ▶ Installations Capabilities for Performing Major Ammunition Maintenance



Missiles
(4)

Capability

↑ just a bunch

Multi-Use Bld
(3)

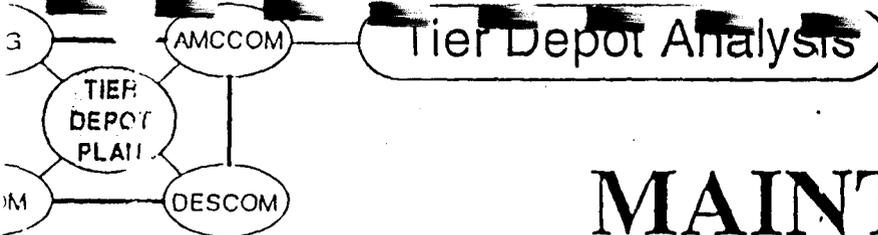
Number

NEW Limits
(2)

Pounds

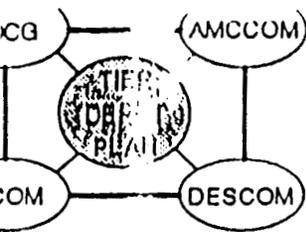
Sq Ft Available
(1)

All Maint Buildings



MAINTENANCE

	Missile Score	Weight	MultUseBld Score	Weight	Total NEW Score	Weight	Total SqFt	SqFt Wt	Total Score	Adjusted Score
		4		3.0		2.0		1.0		
ANAD	11	44	5.5	16.5	0.4	0.8	5.5	5.5	66.8	11.0
BGAD			4.1	12.3	1.1	2.2	6.7	6.7	21.2	3.5
CAAA			11.0	33.0	0.8	1.6	10.2	10.2	44.8	7.4
IIWAAP			5.5	16.5	4.4	8.8	8.5	8.5	33.8	5.6
LEAD	11	44	1.4	4.2	0.2	0.4	1.9	1.9	50.5	8.3
MCAAP			8.3	24.9	11.0	22.0	11.0	11.0	57.9	9.5
RRAD	11	44	4.1	12.3	0.6	1.2	3.9	3.9	61.4	10.1
SEDA			1.4	4.2	0.5	1.0	1.8	1.8	7.0	1.2
SIAD			2.8	8.4	0.3	0.6	1.5	1.5	10.5	1.7
SVDA			2.8	8.4	2.2	4.4	8.9	8.9	21.7	3.6
TEAD			6.9	20.7	1.2	2.4	5.9	5.9	29.0	4.8

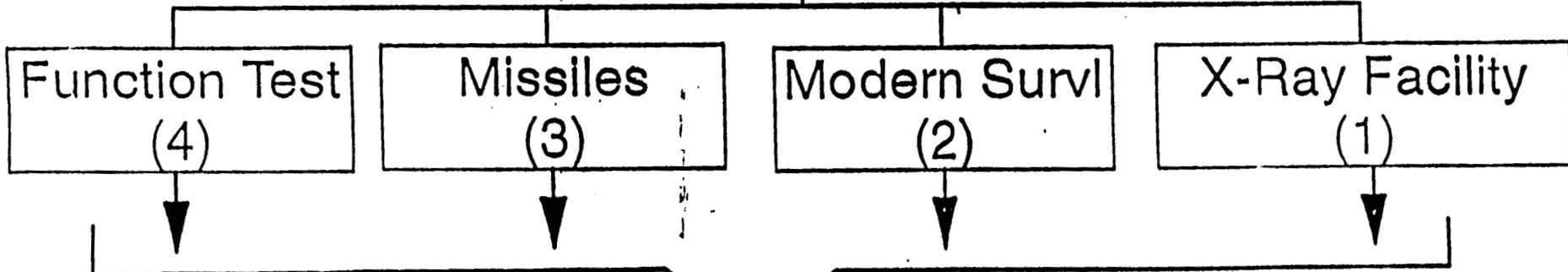


Tier Depot Analysis

ANALYTICAL APPROACH

- INSPECTION / TEST
 - ▶ Installations Capabilities Support Major Surveillance Missions

INSPECTION / TEST
(2)

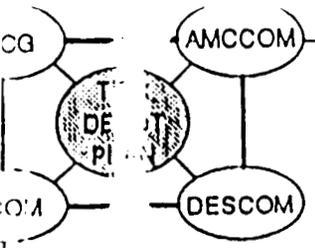


Existing Capabilities

Tier Depot Analysis

INSPECTION / TEST

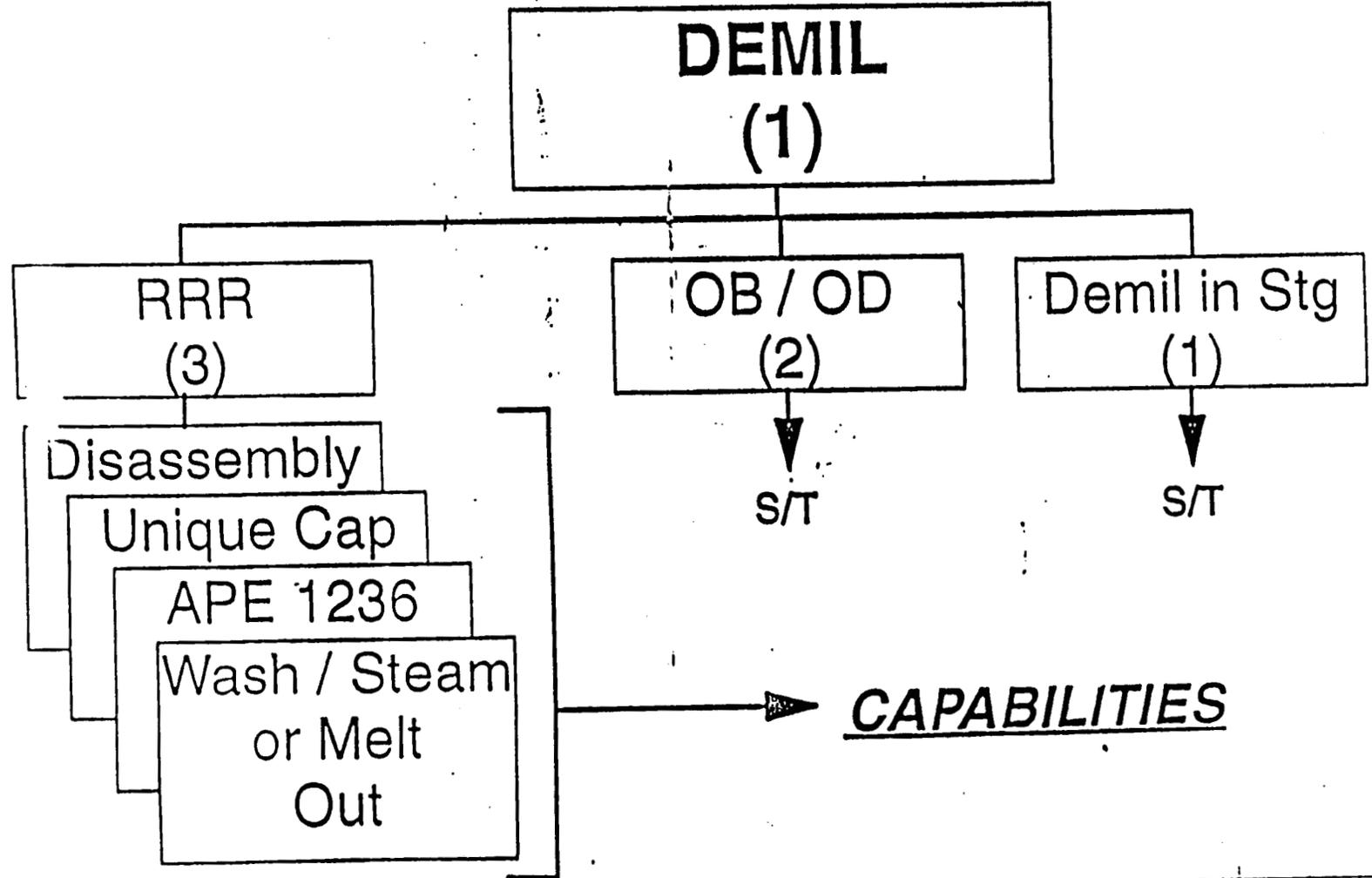
	Func Test Score	Weight	Missiles Score	Weight	Modn Surv Score	Weight	X-Ray Cap Score	Weight	Total Score	Adjusted Score
NAD		4	1	3		2		1	3	8
GAD										6
AAA	1	4			1	2	1	1	7	11
IWAAP	1	4			1	2	1	1	7	11
EAD			1	3	1	2	1	1	6	10
ACAAP					1	2	1	1	3	8
RRAD			1	3			1	1	4	9
SEDA										6
SIAD										6
SVDA	1	4							4	9
TFAD							1	1	1	7



ANALYTICAL APPROACH

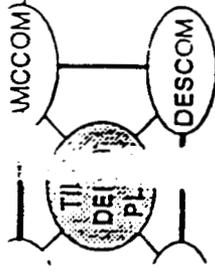
DEMIL

- ▶ The Installations Capability to Support Demil Operations

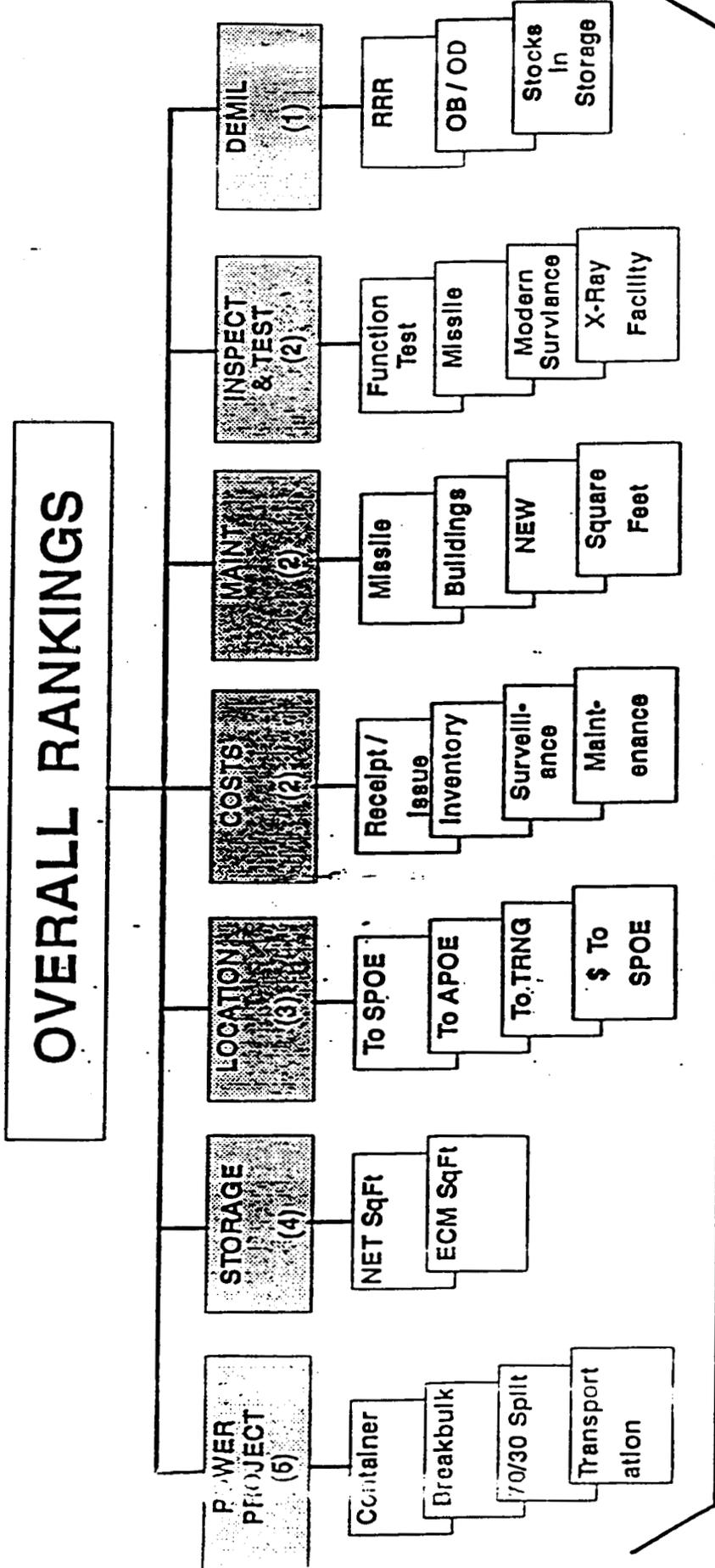


DEMIL

	RRR Cap Score	Weight	OBOD Cap Score	Weight	ST In Stg Score	Weight	Total Score	Adjusted Score
		3		2.0		1.0		
ANAD	7	21	0.9	1.8	2.7	2.7	25.5	6.1
BGAD	9	27	0.2	0.4	1.9	1.9	29.3	7.0
CAAA	10	30	1.1	2.2	3.3	3.3	35.5	8.5
HWAAP	11	33	0.9	1.8	11.0	11.0	45.8	11.0
LEAD	6	18	1.8	3.6	3.2	3.2	24.8	6.0
MCAAP	9	27	1.8	3.6	9.6	9.6	40.2	9.7
RRAD	8	24	0.6	1.2	0.8	0.8	26.0	6.2
SEDA	7	21	0.4	0.8	0.7	0.7	22.5	5.4
SIAD	7	21	11.0	22.0	1.7	1.7	44.7	10.7
SVDA	6	18	1.0	2.0	0.8	0.8	20.8	5.0
TEAD	8	24	4.6	9.2	0.9	0.9	34.1	8.2

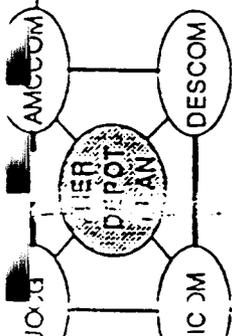


QUANTITATIVE ANALYSIS

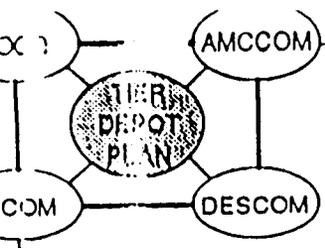


SUPPORTING QUANTITATIVE DATA

SUMMARY



	POWER PROJ WEIGHTED	STORAGE CABABL WEIGHTED	LOCAT ION WEIGHTED	COSTS WEIGHTED	MAINTENANCE WEIGHTED	INSP & TEST WEIGHTED	DEMIL CAPABL WEIGHTED	TOTAL WEIGHTED	RANK
	6.0	4.0	3.0	2.0	2.0	2	1.0		
ANAD	3.3	16.5	8.0	8.5	11.0	8	6.1	110.8	6
DOAD	6.6	34.0	6.4	6.7	3.8	6	7.0	104.2	8
CAAA	7.9	39.6	8.5	11.0	7.4	11	8.5	160.9	2
I/WAAP	2.9	14.5	8.5	8.3	6.6	11	11.0	141.6	3
LEAD	3.4	17.0	8.1	6.7	8.3	10	6.0	110.9	5
M/CAAP	11.0	65.0	6.5	8.2	9.5	8	9.7	176.6	1
RRAD	3.6	18.0	4.7	8.8	10.1	9	6.2	104.9	7
SEDA	1.4	7.0	6.5	3.9	1.2	6	5.4	62.8	11
SIAD	4.1	20.5	11.0	8.0	1.7	6	10.7	103.6	9
SVDA	5.4	27.0	4.5	4.9	3.6	9	6.0	92.1	10
TEAD	7.3	36.5	6.5	6.5	4.8	7	8.2	114.8	4



REGIONAL SUMMARY

WEST

HWAAP - 3

TEAD - 4

SIAD - 9

CENTRAL

MCAAP - 1

RRAD - 7

SVDA - 10

EAST

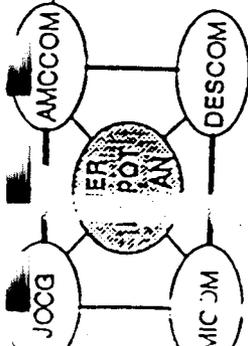
CAAA - 2

LEAD - 5

ANAD - 6

BGAD - 3

SEDA - 11



Tier Depot Analysis

QUALITATIVE - EAST

CIAA

- Supports USMC / Navy Training ←
- Good Rail Access to Earth Covered Sites ←
- Active Production
- Tenant on Navy Installation
- Naval Warfare Support Center
- White Phosphorous Demil

AJAD

- TCM Mission
- Hub of Eastern Region Training Support
- Large Hard Iron Mission
- Tactical Missile System Mission Depot (Class V)
- Air Drop Pallets for XVIII ABN & 75th Rangers ^{MSA} ←
- Contractor Presence - North American Rockwell (Hellfire)
- DLA Presence

QUALITATIVE - EAST

L:AD

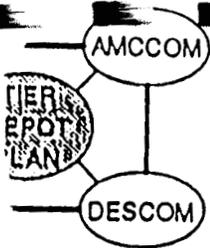
- Primary Mission - Tactical Missile Systems Maintenance Area (Non-Class V)
- DLA Presence
- Contractor Presence - FMC (Paladin), Raytheon (Phoenix and AMRAAM)

BGAD

- TCM Mission ✓
- Contractors - Raytheon (Stinger Production)
- Chemical Defense Equipment Supply & Maintenance
- Potential ABL Partnership with 101st ABN

SEDA

- Radiation Decontamination Team ✓
- Depot Activity ✓



Tier Depot Analysis

QUALITATIVE - CENTRAL

AAAP

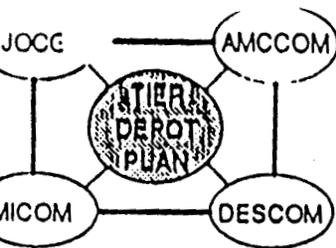
- Hub of Central and Southwest Regional Training Support
- Active Production

AD

- Large Hard Iron Mission
- Tactical Missile Mission Depot
- DLA Presence
- Contractor - Raytheon
- Potential ABL Partnerships w/ 1st CAV & 3rd ACR

DA

- APE Fabrication
- CTX for Depleted Uranium Demil
- Depot Activity



Tier Depot Analysis

QUALITATIVE - WEST

TEAD

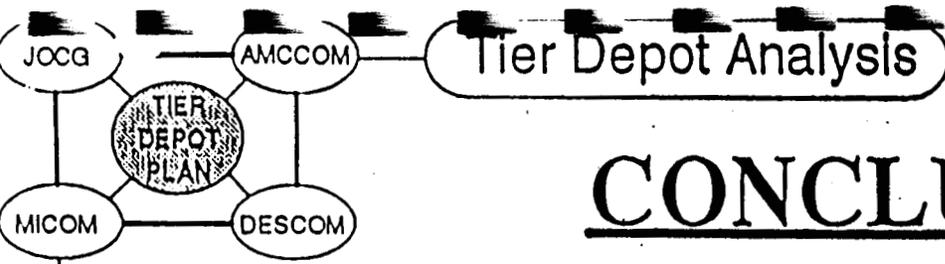
- USAF Desire to Spt Critical Airlift Mission Out of Hill AFB
- TCM Mission
- 25th & 7th ID Airdrop
- Maintenance Mission - BRAC 93
- APE Fabrication / Design / Procurement

HWAAP

- Contractor Operated - D&Z -
- Western Area Demil Facility (WADF) -
- Mortar Test Range ✓
- Keyport Detachment for Mine Warfare (Navy)

SIAD

- CTX for Operational Projects
- Primary Site for OB/OD Demil



CONCLUSION - EAST

- **CAAA**

- ▶ Quantitative: 2
- ▶ Qualitative
 - Supports USMC & USN Trng
 - Active Production
 - WP Demil Capability

- ▶ **CONCLUSION**

- **Best Suited for Active Status**
- Supports USMC & USN Concerns
- Good Power Proj Capability

Tier Depot Analysis

CONCLUSION - EAST

• LEAD

- ▶ Quantitative: 5
- ▶ Qualitative
 - Multi Mission

▶ CONCLUSION

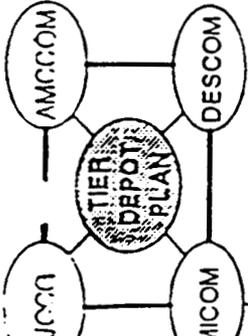
- Best Suited for Cadre status
- Retain Tactical Missile Maintenance Mission

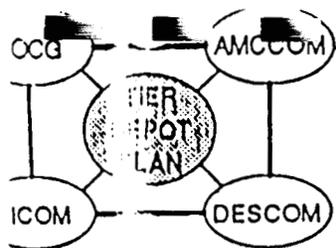
• ANAD

- ▶ Quantitative: 6
- ▶ Qualitative
 - Multi Mission
 - Hub for Eastern Region Training ✓
 - Air Drop for XVIII ABN & 75th Rangers ✓
 - Computing Outload with DLA ✓
 - TCM Mission ✓

▶ CONCLUSION

- Best Suited for Active Status
- Retain Tactical Missile Maintenance Mission
- Develop Partnerships
- Strong Qualitative Considerations





CONCLUSION - EAST

• **BGAD**

- ▶ Quantitative: 8
- ▶ Qualitative
 - TCM Mission
 - No Multi Mission

▶ **CONCLUSION**

- Best Suited for Cadre Status
- Outstanding Power Projection Capabilities
- Required Retention to Meet MRC Outloading Requirements

• **SEDA**

- ▶ Quantitative: 11
- ▶ Qualitative
 - Radiation Decon Team
 - Depot Activity

▶ **CONCLUSION**

- Best Suited for Caretaker Status
- Low Overall Capabilities



CONCLUSION - CENTRAL

• MCAAP

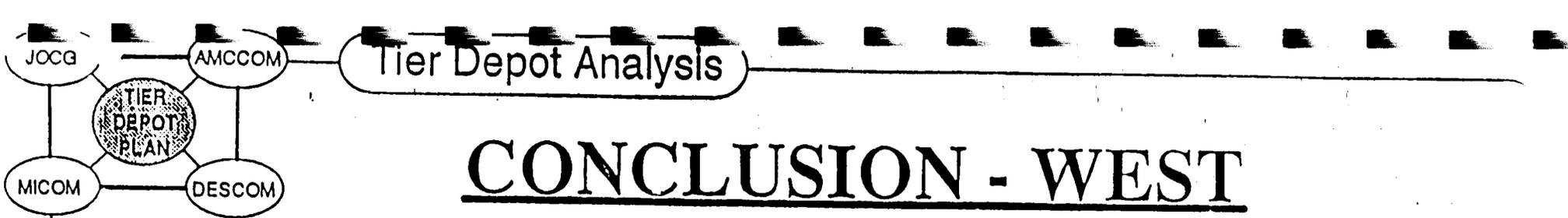
- ▶ Quantitative: 1
- ▶ Qualitative
 - Hub for Central / SW Region Training Support
 - Active Production
- ▶ CONCLUSION
 - Best Suited for Active status
 - Best Overall capabilities

• RRAD

- ▶ Quantitative: 7
- ▶ Qualitative
 - Large Multi Mission
 - ABL Partner 1st CAV / 3rd ACR
- ▶ CONCLUSION
 - Best Suited for Cadre Status
 - Must Retain Missile Maint Mission
 - Strong Qualitative Considerations
 - Low Overall Capability

• SVDA

- ▶ Quantitative: 10
- ▶ Qualitative
 - APE Mission
 - CTX for DU Demil
- ▶ CONCLUSION
 - Best Suited for Caretaker Status
 - Low Overall Capabilities



CONCLUSION - WEST

• HWAAP

- ▶ Quantitative: 3
- ▶ Qualitative
 - Western Area Demil Facility
 - Contractor Operated:
 - USMC Preference for Tier I

▶ CONCLUSION

- Best Suited for Cadre Status
- Very Low Power Proj Capabilities
- Excellent Storage Capabilities for Non-Applicable Stocks

• TEAD

- ▶ Quantitative: 4
- ▶ Qualitative
 - TCM Mission
 - Critical AF Requirement
 - 25th ID/7th LID Airdrop
 - APE Mission

▶ CONCLUSION

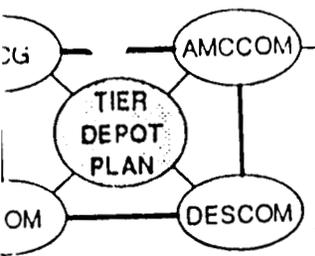
- Best Suited for Active Status
- Good Overall Capabilities

• SIAD

- ▶ Quantitative: 9
- ▶ Qualitative
 - Large Op Project Mission

▶ CONCLUSION

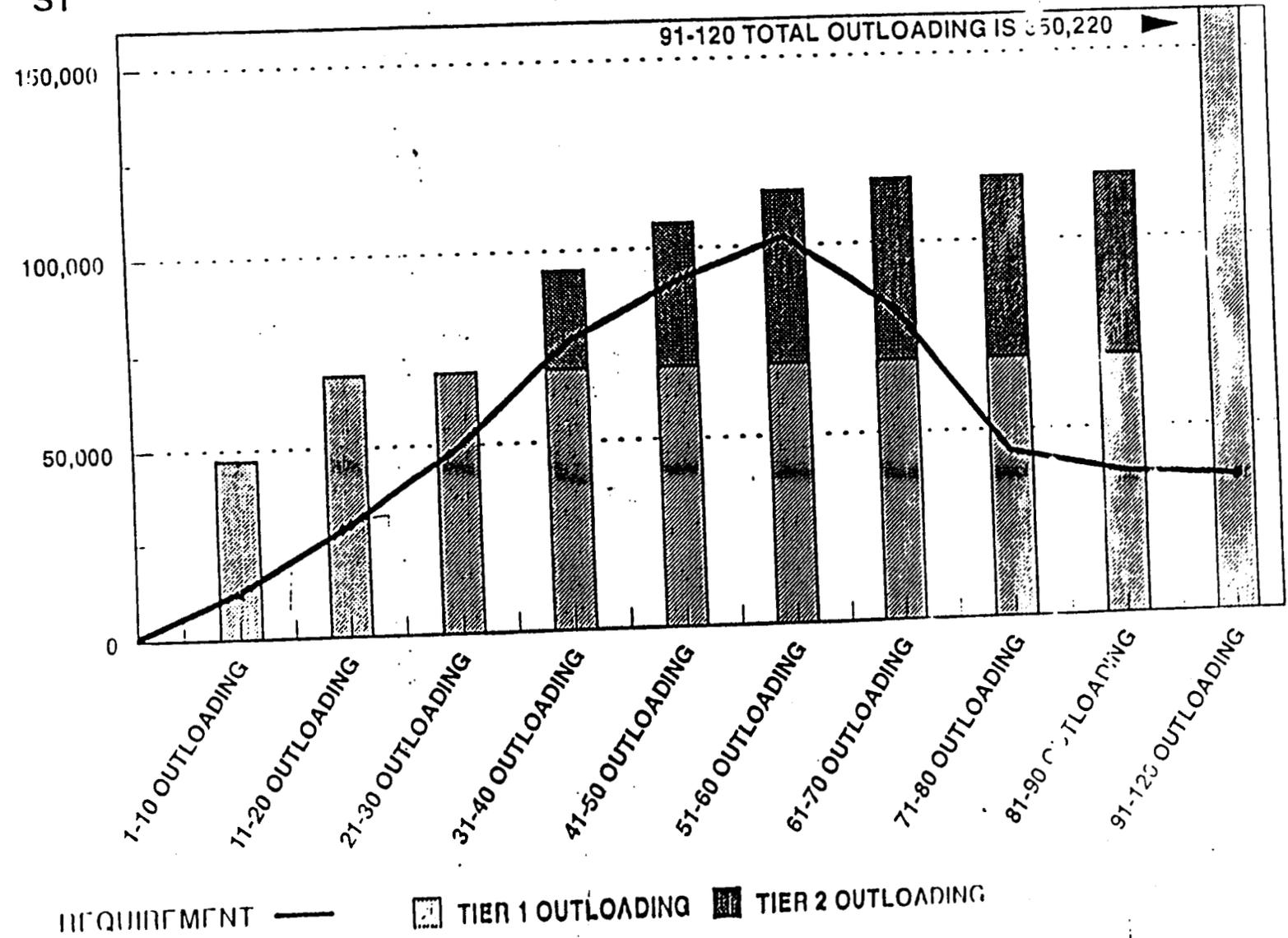
- Best Suited for Caretaker Status
- Low Overall Capabilities



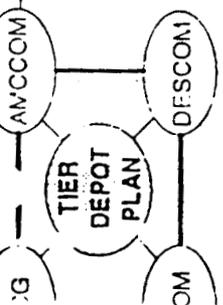
Tier Depot Analysis

SUPPORTING TWO MRCs

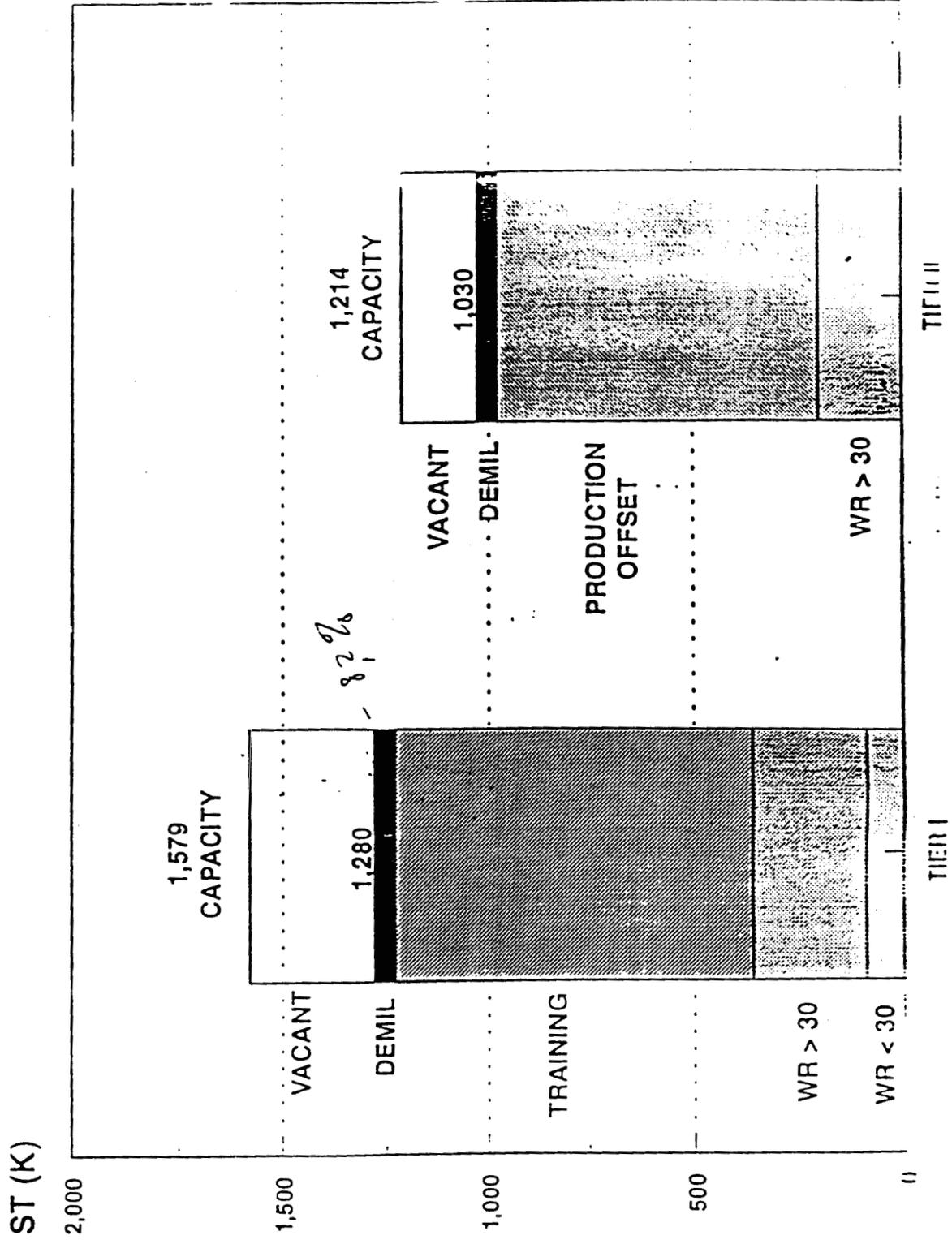
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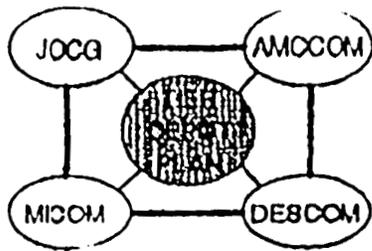


STORAGE REQUIREMENTS



TIER II

TIER I



Tier Depot Analysis

TIER ASSIGNMENT RECOMMENDATION

WEST

TEAD - I

HWAAP - II

SIAD - III

CENTRAL

MCAAP - I

RRAD - II

SVDA - III

EAST

CAAA - I

ANAD - II

LEAD - II

BGAD - II

SEDA - III

TIER III CONSIDERATIONS:

- SEDA: Decon Mission
- SIAD: Op Project Mission
- SVDA: APE and DU Missions

**PLUS: Effects on
Tenant Activities**



TIER ASSIGNMENTS

	WEST	CENTRAL	EAST
TIER 1	TEAD	MCAAP	CAAP BGAD
TIER 2	HWAAP	RRAD	LEAD ANAD
TIER 3	SIAD	SVDA	SEAD

"Focus and Flexibility"

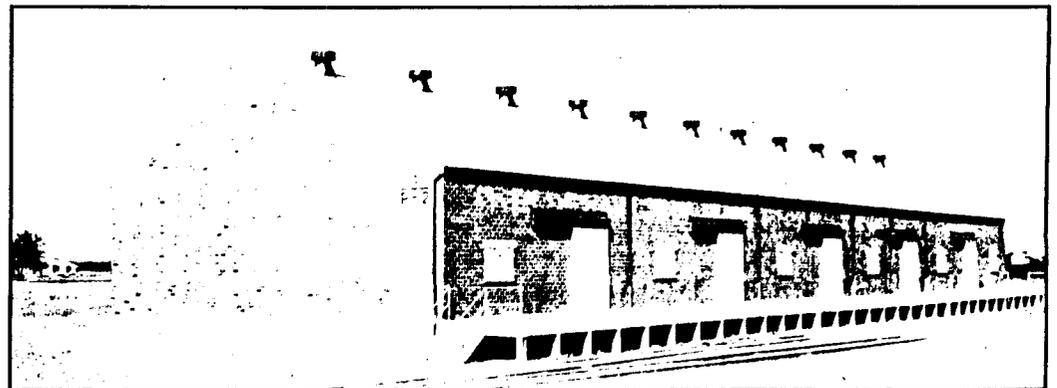
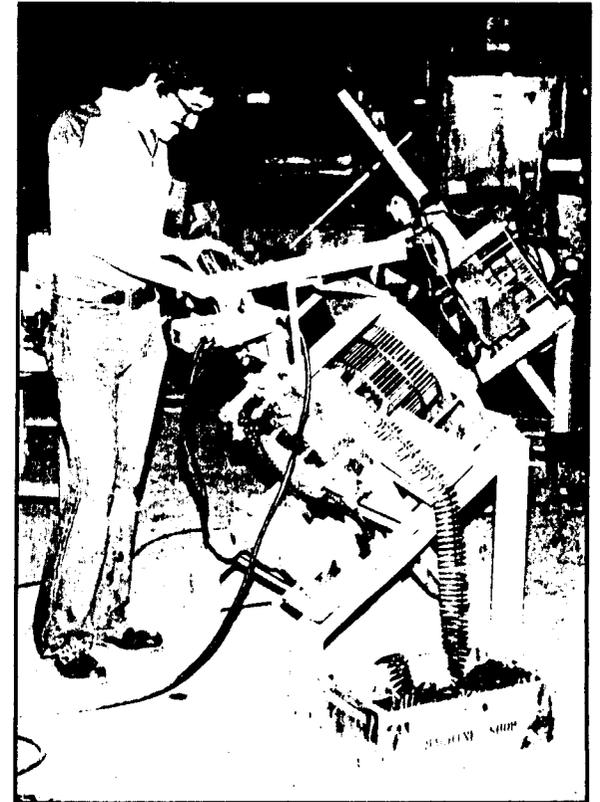
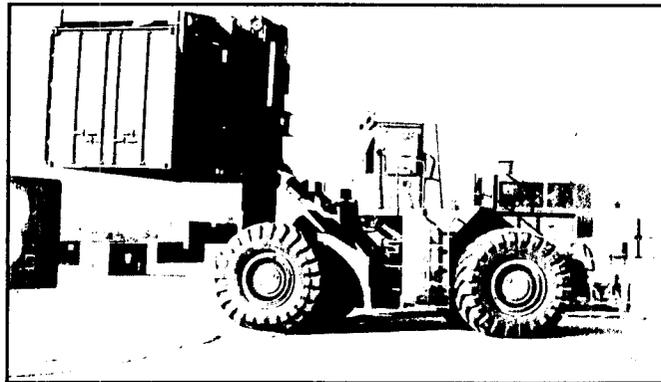




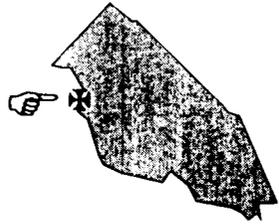


HIGHLIGHTS

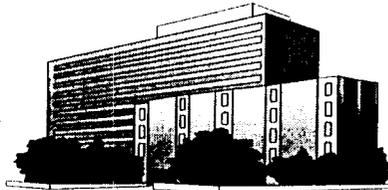
- Wide variety of general and special purpose storage facilities. Some warehouses have been modernized with automatic sprinkler systems.
- Extensive rail and motor transport access to storage locations.
- Containerization capabilities including rough terrain handling, stuffing/unstuffing, rail and truck loading and classification management.
- EPA permitted open area ammunition demilitarization.
- AMCCOM designated center of technical excellence for 30MM and smaller depleted uranium demilitarization. NRC licensed storage and production facilities.
- Spacious maneuver, bivouac, and training areas for reserve unit training. Modern small arms firing range, dining facility, and gymnasium available.
- Modern ammunition peculiar equipment (APE) fabrication shop with CNC, CAD/CAM, and metal working facility.
- New function test range for quality assurance programs of a wide variety of munitions.
- Complete munitions container renovation experience with fully trained workforce and production lines.



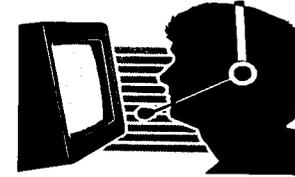
SAVANNA ARMY DEPOT CHARACTERISTICS



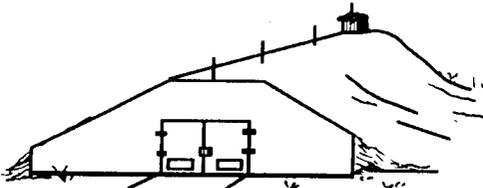
TOTAL AREA
13,062 ACRES



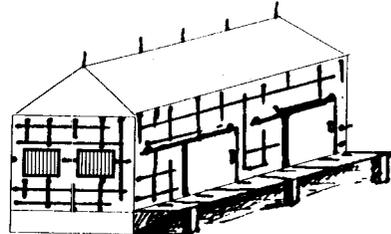
BUILDINGS
923



OFFICE SPACE
132,860 SQ FEET



IGLOOS
437



**ABOVE GROUND
MAGAZINES**
156



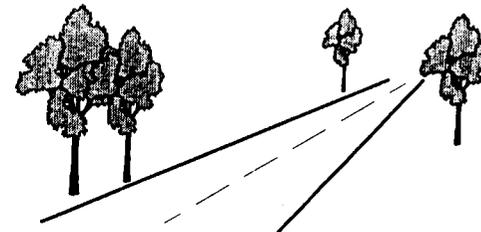
**GENERAL SUPPLY
WAREHOUSES**
28



RAILROAD TRACK
68 MILES



REPLACEMENT COST
\$325,129,607.00



ROADS
138 MILES

STAFF

SAFETY AND OCCUPATIONAL HEALTH OFFICE

The Savanna Army Depot Activity Safety Office is located in Building 1. The Safety Office provides a "one-stop" office offering risk management services to the commander, managers, supervisors, soldiers and employees. The goal is to protect the U.S. Army, enhance mission effectiveness and reduce costs by assisting in -

- reducing injuries and illnesses.
- enhancing training realism and effectiveness.
- protecting mission continuity.
- reducing property damage.
- insuring compliance with statutes.
- reducing U.S. Army and leader liability.
- protecting the environment.

The U.S. Army Defense Ammunition Center and School (USADACS) Safety Office, located in Building 21, Room 206, provides the same services for USADACS.

EQUAL EMPLOYMENT OPPORTUNITY OFFICE

Equal employment opportunity support is provided by Rock Island Arsenal. An employee from the Civilian Personnel Division is the EEO coordinator. Currently, we have three EEO counselors and a Handicap Program Manager.

Our objective is to have a work force which is representative of every element of our society.

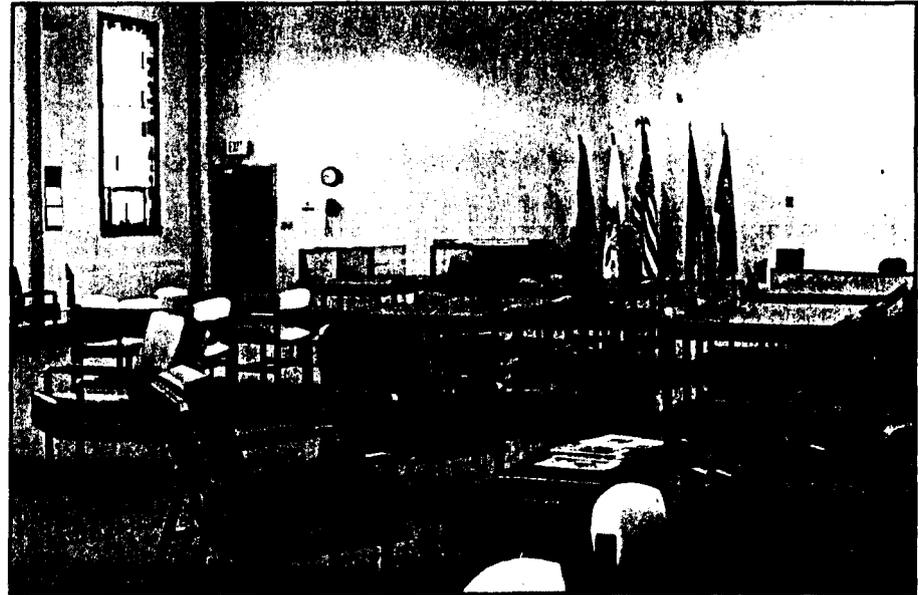
INSTALLATION SUPPORT DIVISION



This division provides administrative, engineering and logistical support to the depot and collocated activities. It provides for environmental and energy management; manpower management; mobilization and emergency planning; resource management; centralized production, planning and control functions; family housing management; operation, maintenance, and repair of real property; depot rail service; maintenance and repair of vehicles and equipment; management of installation property and equipment; physical security; and fire prevention and protection. This division coordinates all reserve and national guard training on the installation.

The **ENVIRONMENTAL OFFICE** is committed to implementing and maintaining the Army environmental strategy by ensuring that the numerous missions of the depot and collocated activities comply with all applicable federal, state, and local laws. Included are such programs as hazardous waste management, the Federal Facilities Compliance Act, air quality, spill response, the National Environmental Policy Act, and the Groundwater Monitoring Program. The office is also responsible for the Installation Restoration Program involving such current projects as the depot wide remedial investigation/feasibility study to determine which potentially contaminated sites require clean up; the washout lagoon incineration project; the fire training area incineration project; and the soil remediation project of the old burning grounds, and the CF/CL plants.

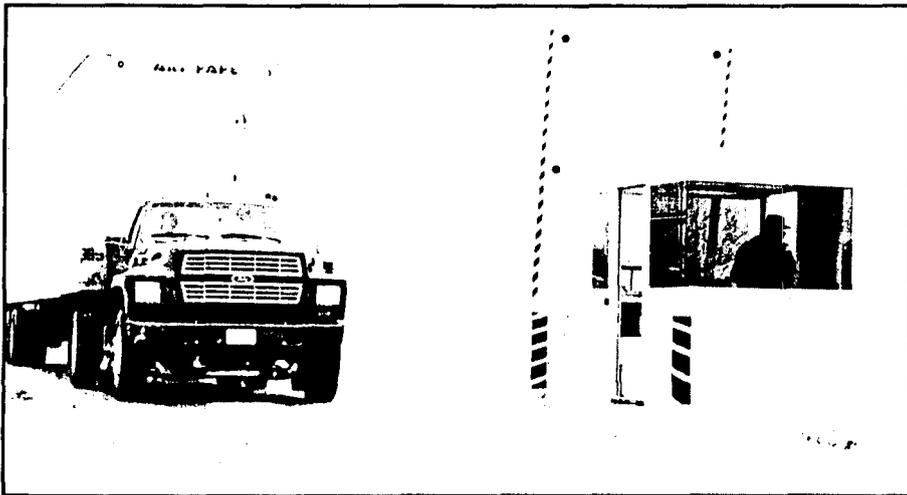
The **PROGRAM MANAGEMENT OFFICE** is responsible for the overall management of the financial resources of the depot. The office reviews, accepts, and distributes funding documents and monitors individual programs for expenses incurred, production reported, and revenue generated. Also, they are the central control point between the



activity and higher headquarters for payroll; labor and production reporting; travel orders; travel vouchers; PCS moves; and review and analysis input.

The **SECURITY BRANCH** protects property and personnel at Savanna Army Depot Activity from theft, sabotage, and other destruction. Security programs are provided for personnel, automated data processing, vehicle registration, visitor control, and key control. The branch maintains liaison with federal, state, county, and city law enforcement and intelligence agencies to ensure proper security measures on and around the installation. Security personnel control installation traffic flow and enforce vehicle safety programs. Various emergency plans are administered and personnel are ready to assist in any emergency situation.

The **PUBLIC WORKS BRANCH** personnel provide for the construction, maintenance, repair, and operation of the real property facilities and utilities systems, performs maintenance on commercial and military vehicles and equipment



and administers the Natural Resources Management Program.

Projects are accomplished by in-house personnel or by contract. In-house efforts involve processing work requests, estimating manpower and material requirements, ordering materials, and scheduling work. Work progress is carefully monitored for each job to ensure the work is accomplished within budgetary and engineering performance standard guidelines. Contract efforts involve engineering design, preparation of drawings and specifications, and inspection of the work to ensure it meets contractual requirements. In the area of natural resources, plans are implemented for land management, fish and wildlife management, timber management, and landscape management.

The **FACILITIES SECTION** is responsible for maintenance and repair of real property facilities and the upkeep of grounds, roads, and railroads. They provide snow and ice removal, mowing, herbiciding, insect and rodent control, refuse collection and depot rail services, and they maintain the depot lock system. This section is also responsible for the operation and maintenance of all utility systems, including electrical distribution, heating, air conditioning, electrical generating, air compressor, water, sewer and plumbing systems.

The **EQUIPMENT MAINTENANCE SECTION** performs preventive maintenance and repairs on all administrative use vehicles, material handling equipment, special purpose and engineer equipment, rail equipment, and watercraft. Detailed operational and maintenance data is provided to the Installation Equipment Management System and the Army Oil Analysis Program. Battery service and emergency repair service are also provided by this section.

A civilian **FIRE PREVENTION AND PROTECTION BRANCH** provides services 24 hours a day, 7 days a week. To supplement the regular firemen, additional employees

are trained as auxiliary firefighters. Firefighter personnel are also certified as emergency medical technicians. This branch is responsible for inspecting and maintaining fire detection and suppression systems, testing fire hydrants, conducting fire inspections throughout the depot, inspecting and repairing fire extinguishers in all occupied buildings and vehicles, testing fire equipment at scheduled intervals, inspecting and issuing heat producing device permits, operating the weigh scale, inspecting contract construction sites, giving fire prevention orientations to new employees and housing tenants, maintaining a continuous training program for firefighters, and providing CPR and first aid training for depot personnel. Firefighting equipment includes one 1000-gallon per minute pumper, one 750-gallon per minute pumper, one 250-gallon per minute mini pumper/heavy rescue truck, one 1200-gallon tanker, one rescue boat, an ambulance and a HAZMAT response trailer. Savanna Army Depot Activity is party to a mutual aid agreement with the departments of eighteen surrounding communities. The agreement provides the depot with backup assistance and SVADA provides reciprocal services to the communities.



QUALITY ASSURANCE DIVISION

The Quality Assurance Division plans, develops, directs, promotes and controls the depot quality assurance program consistent with the depot-assigned ammunition, supply, and ammunition peculiar equipment missions. It is responsible for management of the depot personnel certification program, customer complaint program, TMDE support coordination, and provides technical assistance to activity mission organizations and collocated activities. The division conducts ammunition function testing and special tests for the U.S. Army Armament, Munitions and Chemical Command and the Marine Corps.

The **ADMINISTRATIVE AND PLANNING BRANCH** maintains technical libraries including manuals, specifications, regulations, test procedures, and other publications related to conventional munitions, general supplies, and ammunition peculiar equipment. Performs scheduled/unscheduled inspections on Class II, III, VII, and IX material which includes general supply items, preservation and packaging material, ammunition peculiar equipment (APE), APE kits, and spare parts. Maintains records of observations, inspections, investigations and tests, and any pertinent information pertaining to lot history of items in storage on record cards, log books, suspense files, data cards, and other records. Provides data input to the ammunition Standard Depot System. Directs and conducts investigations of customer complaints received by the depot. Prepares budget and maintains test program control records and production reports for the division.

The **STOCKPILE RELIABILITY BRANCH** provides ammunition and explosive quality assurance for all conventional ammunition, guided missile and large rockets,

ammunition components, bulk explosives, and packing material. This includes evaluation inspections, stockpile reliability testing, and technical assistance to other organizations and collocated activities. Inspections conducted determine the serviceability and rate of deterioration of material, and the maintenance of renovation required to return unserviceable-repairable stocks to an issuable condition and establish acceptable quality levels during maintenance or renovation. Storage magazines are periodically checked to assure material is stored properly in accordance with approved drawings and safety regulations. Shipping and receiving operations are monitored for explosives safety, proper blocking and bracing, shipment compatibility, and carrier vehicles inspected for compliance with shipping regulations. In 1981, Savanna and Pueblo Depot Activities were selected as the two CONUS test depots, with each installation to function test one-third of all lots selected each year for the Centralized Control Function Test Program. Since that date, Savanna has added the deterioration check test mission for artillery primers, function testing of Marine Corps Prepositioned Forces Stock, and received the equipment for testing mortar ignition cartridges/ignition cartridge R&D testing was completed here with the new test mission scheduled for Savanna pending test procedure approval and funding. In 1992, Savanna assumed responsibility for all the CONUS testing in support of the Centralized Control Function Test Program. The branch also supports the U.S. Army Defense Ammunition Center and School with conducted tours for intern classes and provides test facilities, procedures, and technicians for explosive testing of new and modified prototype ammunition peculiar equipment.

MISSION DIVISION



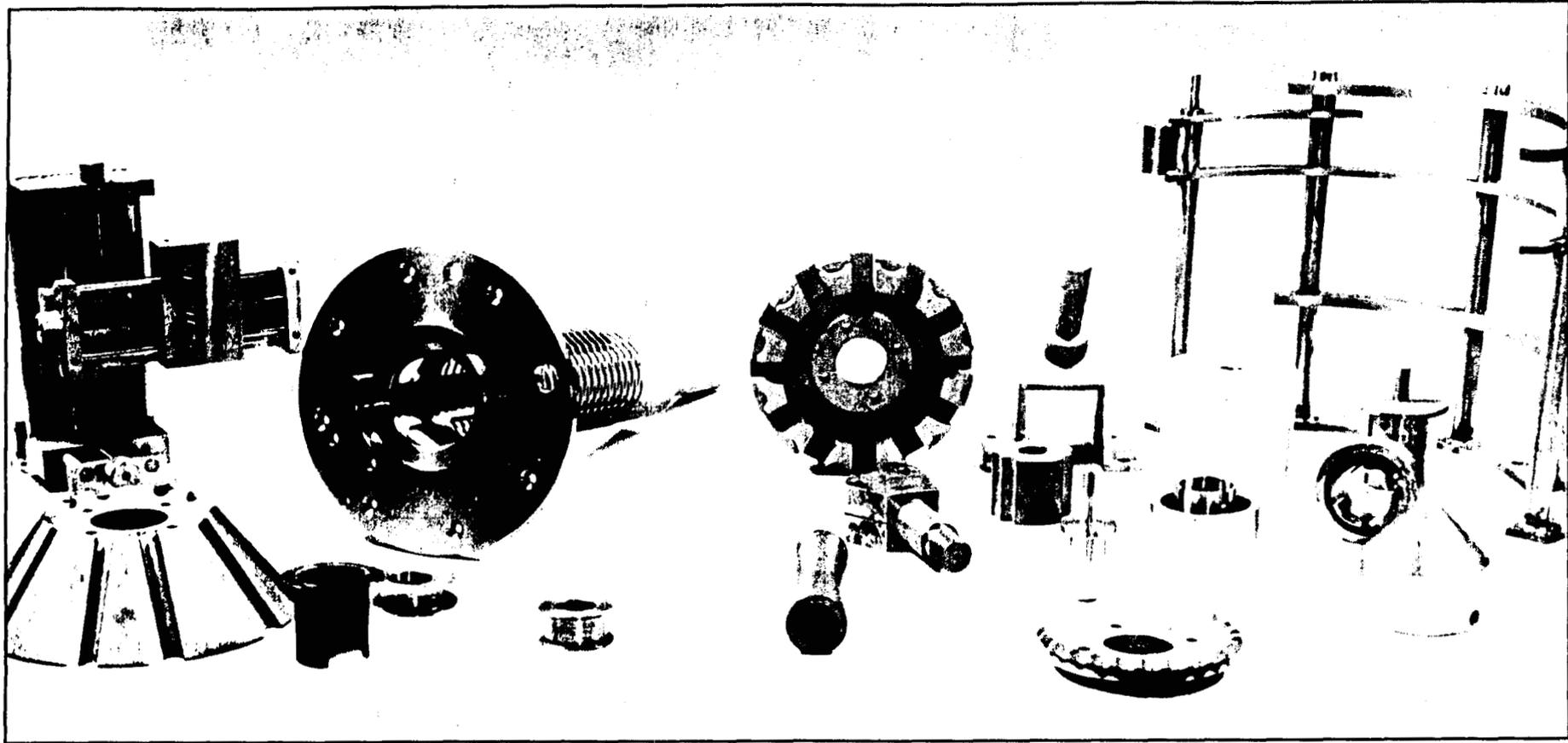
Mission Division has responsibility for all depot munitions, transportation management, direct supply support and storage & inventory services for the depot. It is responsible for ammunition peculiar equipment (APE) fabrication, rebuild, storage, and shipment; and the receipt, shipment, storage, maintenance, and

demilitarization of conventional ammunition and missile items for the Army, other services for foreign military sales (FMS) as the Department of Defense single manager for conventional ammunition (SMCA). The division operates the material release order (MRO) processing, transportation support, and general supply requisitioning, receipt and issue for the entire depot. This includes receiving, storing,

and shipping strategic and critical materials for the defense logistics agency (DLA) and other supplies as assigned. The division also provides support to the U.S. Army Defense Ammunition Center and School (USADACS) for testing the loading and blocking/bracing of ammunition items shipped by all modes.

The **TRANSPORTATION OFFICE** is responsible for processing shipments of ammunition, ammunition peculiar equipment, and general supplies. Information is compiled for freight planning necessary to move shipments. Domestic and export routing and releases are obtained. This includes initiating reports for shortages/overages, and damages on inbound shipments and maintaining records for Government material purchased through General Services Administration. Requisitions are reviewed for lowest cost mode. All government bills of lading are prepared. Also, provides counseling for shipment of household goods, and travel for installation activities and authorized personnel on depot.

The **OPERATIONS BRANCH** ships, receives, stores, and performs maintenance and demilitarization operations on conventional and missile ammunition items. Ammunition items are stored in 437 each igloos (covered magazines) and 156 above-ground standard magazines. All storage structures and maintenance buildings are served by road and a large percentage by rail. The demilitarization and/or disposal of ammunition, which is obsolete or unsafe, is performed in various special facilities by this branch. These include an area for demolition of explosive items, and a contaminated waste processor (CWP) which meets environmental standards. The Operations Branch is the depot organization which also receives, stores, and issues both general supplies and ammunition peculiar equipment. It

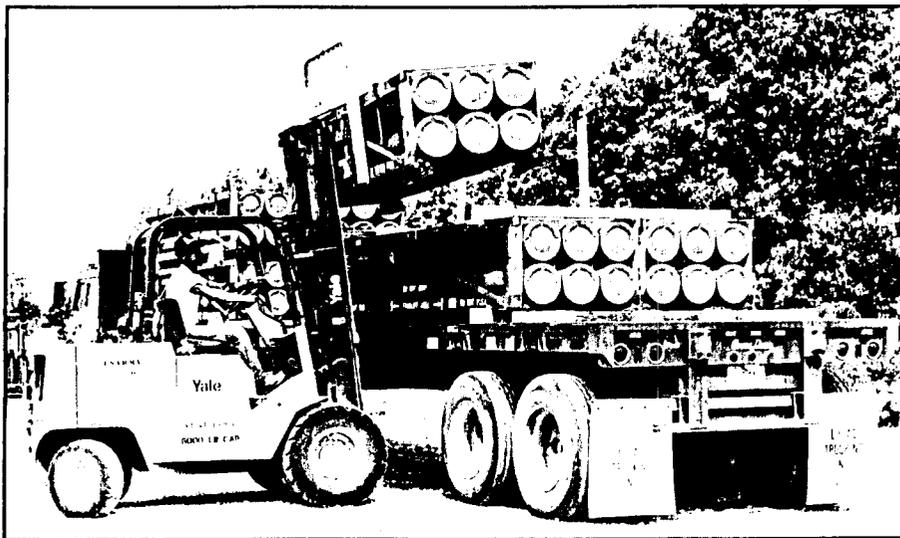


provides the crews to support the U.S. Army Defense Ammunition Center and School's (USADACS's) many transportability and explosive tests.

The **AMMUNITION PECULIAR EQUIPMENT FABRICATION BRANCH (APE)** makes unique, low density equipment items specifically designed, fabricated, tested, procured, and adopted for use in the ammunition depot operations on conventional and chemical ammunition. These depot operations involve maintenance, demilitarization, preservation/packaging, and surveillance functions on the ammunition item. The APE is not stocked nor is it available from commercial sources. The equipment is differ-

ent from production line plant equipment in that it disassembles ammunition items into components, usually for the removal of a hazardous component. APE is also designed to perform cleaning and preservation functions on ammunition subjected to deterioration effects (rust, corrosion, weathering, etc.) during its storage life. The APE supporting surveillance is keyed to stockpile sampling and function tests of the items to assure its readiness for combat or training. Demilitarization APE is similar somewhat to maintenance APE, but must go further in disassembly to destroy hazardous components and reclaim salvageable parts or metals. The APE is designed, developed and fielded to support

to support ammunition field service stocks that are currently on hand in the Inventory Control Point and is used to restore these stocks to an issuable/serviceable condition. APE produced at SVADA is designed by the U.S. Army Defense Ammunition Center and School (USADACS), a collocated activity. SVADA has the distinction of operating the only Army in-house facility which is entirely dedicated to the production of APE. This facility has modernized itself with numerical control (NC) computer numerically controlled (CNC) machine tools, to fully utilize the NC and CNC equipment, a computer aided manufacturing (CAM) system is being used for programming parts manufactured on the NC and CNC machine tools. APE Fabrication Branch at Savanna performs four major functions: (1) rebuilding a field returned APE, (2) in-house fabrication, assembly, and testing of APE, (3) manufacture or procurement of APE repair parts, and (4) coordinator for the procurement of commercially available equipment which will be modified to become APE equipment.



The **STORAGE AND INSTALLATION SUPPLY BRANCH** provides a variety of services in support of the depot's mission through four separate functional areas. These four functional areas are storage, inventory, and general supply warehouse. The Storage Management Section is responsible for receipt processing of all ammunition and ammunition peculiar equipment (APE), material release order (MRO) processing for all shipments of ammunition, APE, general supplies, storage planning of ammunition, storage space reporting, and radiation testing and tracking system in support of the storage mission of chemical agent alarms and monitors. The Inventory Management Section is responsible for planning, scheduling, conducting physical inventories, locations surveys, audit matches, and input and verification of all ammunition transfer records. The Installation Supply Section is responsible to obtain the needed supplies and services required by the depot, either by utilizing the Government supply system or by providing purchase requests to the buyers. They also maintain the depot stock program, turn-in program, and manages the imprest fund. The General Supply Warehouse Section is responsible for receipt and storage of both depot stock (retail stock) and general supply mission stock (wholesale), issuing depot stock to customers, and packaging and preparing general supply mission stock items for shipment.

CIVILIAN PERSONNEL DIVISION

The Civilian Personnel Officer (CPO) reports to the Commander and provides advice and assistance to Division and Branch Chiefs on operational matters pertaining to the Civilian Personnel Management Program. The CPO represents the Commander in contacts with the U.S. Office of Personnel Management and higher echelons on matters relating to the Civilian Personnel Program. The division maintains liaison with public and private organizations and other organizations and other agencies on matters concerning the Civilian Personnel Management Program.

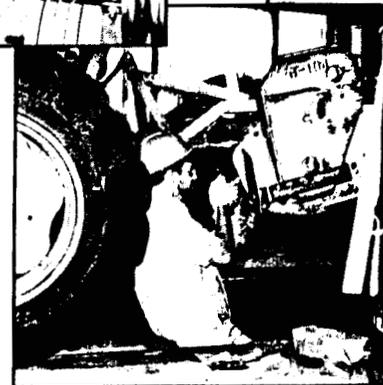
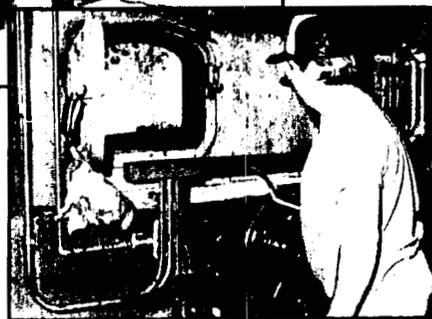
The overall responsibility of **RECRUITMENT AND PLACEMENT** is to provide the quality and quantity of personnel required to perform the various missions of the depot and serviced organizations while assuring full compliance with merit principles and equality of opportunity. CPO specialists provide assistance to managers in meeting recruitment needs. They advise employees regarding opportunities for advancement, development, and relocation and provide guidance for all applicants regarding Federal employment and job opportunities within Army or other Federal activities. They administer all in-service placement, including mandatory actions under OPM, DOD, DA, and command programs, promotions, reassignments, details, reduction-in-force and outplacement.

A **MANAGEMENT AND EMPLOYEE LABOR RELATIONS** specialist assists management in its day-to-day relations with employees and organizations of employees to help provide a positive work atmosphere leading to optimum productivity and employee satisfaction. The specialist provides counseling to managers and employees on complaints or inquiries and provides advice on personnel policy, administrative regulations, employee rights and services, employee grievances and disciplinary matters. MER per-

sonnel administer the Total Army Performance Evaluation System (TAPES) and the incentive awards program. This specialist also develops and recommends plans, policies, and procedures for local administration of the DA Labor Relations Program, and assures communication of DA and local policies and procedures to management and staff. They provide the principal point of contact on labor-management relations matters of overall concern to the established bargaining unit. They ensure that management's responsibility to consult with the formally and exclusively recognized union is carried out in a meaningful manner consistent with labor-management partnership goals and objectives. Savanna Army Depot Activity has an active Labor-Management Partnership program that fully supports the National Performance Review initiatives.

A **TRAINING AND DEVELOPMENTAL SERVICES** specialist is responsible for program management of training and development activities in support of mission accomplishment. This assures utilization of effective practices for the acquisition of knowledge and the development of skills and abilities among civilian employees. A specialist provides technical advice and assistance to all employees concerning determination of training needs, and sources of needed training. They also provide overall expert knowledge of regulatory requirements that affect civilian personnel administration. A Technical specialist processes personnel actions assuring the proper completion of records, forms and documents. In addition, the specialist establishes and maintains Official Personnel Folders and related personnel files. They are also responsible for the administration of employee benefit programs such as health and life insurance, worker's compensation and retirement.

The **PERSONNEL SYSTEMS MANAGER (PSM)** is responsible for the Army Civilian Personnel System (ACPERS) and provides advice and guidance to the Civilian Personnel Officer, functional chiefs, specialists, and clerical staff in operation and maintenance of ACPERS and of capabilities available within ACPERS to assist in day-to-day decisions. The PSM ensures database integrity and builds and maintains ACPERS local and unique tables. The PSM coordinates with CPO staff to identify and correct invalid data and provides advice on the use of data for compiling personnel and statistical reports and preparing personnel action documents. They interpret ACPERS requirements and changes as they impact civilian personnel administration policies and procedures. They also implement ACPERS requirements for building and maintaining database files and installs and/or updates system software/new system releases.



The **POSITION MANAGEMENT AND CLASSIFICATION** function is to establish and maintain a position structure that achieves the optimum balance between economy, efficiency, skills' utilization and employee development. This function provides advice and assistance to management to assure that positions are classified accurately within the framework of established position and pay management regulations, standards, principles and practices in order to provide pay commensurate with knowledge and skill requirements. A Position Management and Classification specialist also has the lead role for planning and conducting the Federal Wage Survey for the Dubuque, Iowa Wage Area.

The Civilian Personnel Office provides worldwide support to the Quality Assurance Specialist (Ammunition) (QASAS) and Ammunition Manager Career Program Proponents. This involves Providing advice and assistance relating to all functional areas of the Civilian Personnel Management Program.

COLLOCATED ACTIVITIES

U.S. ARMY DEFENSE AMMUNITION CENTER AND SCHOOL

In July 1971, the DARCOM Ammunition Center was established as a collocated activity at Savanna. Just over seven years later on January 17, 1979, the Center was redesignated as the U.S. Army Defense Ammunition Center and School (USADACS) to recognize its central role in the implementation of the Army's new mission to manage conventional ammunition for all of the Department of Defense (DoD).

For over 23 years, USADACS has delivered a broad range of services to military and civilian personnel engaged in the business of ammunition logistics.

Using a mix of resident and on-site instruction provided by ammunition experts, the USADACS Ammunition School trains about 5,000 DOD military, civilian, and allied students every year in logistics, explosives safety, and the entire gamut of Army and Joint Service ammunition items. Students also include all Department of the Army (DA) Ammunition Management (AM) and Quality Assurance Specialist (Ammunition Surveillance) (QASAS) interns.



USADACS's headquarters building (above right/center) houses the Director's Office, the Logistics Engineering Office, the Logistics Review and Assistance Office, two Department of the Army Ammunition Career Program offices, and its Resource Management Office. The new Transportability Test Facility (upper right) houses some of

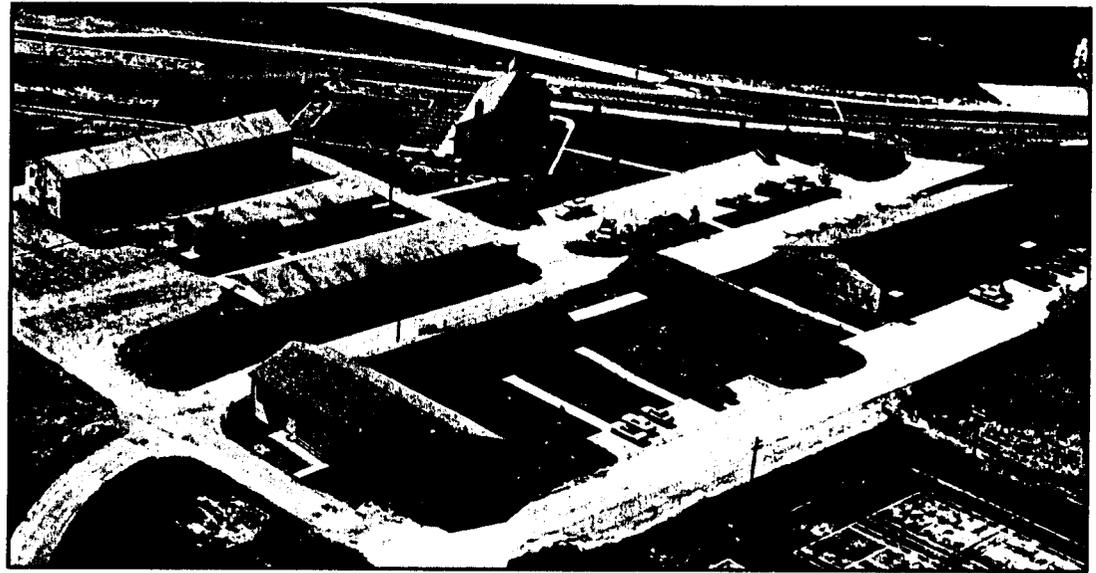
USADACS' engineering test facilities, particularly for Ammunition Peculiar Equipment prototype design. The circular track to the rear of USADACS headquarters building allows engineers to conduct many transportation tests, including a shipboard simulator, for many Government agencies.

Logistics engineers at USADACS provide procedures worldwide to assure safe handling, transportation, and storage of ammunition and explosives. They design, prototype, and field Ammunition Peculiar Equipment, validate procedures and equipment, and provide instrumentation support on-site.

The DA Technical Center for Explosives Safety at USADACS provides explosives and chemical agent safety technical information and assistance to support HQDA, MACOMS, and the safety community Army-wide. The Tech Center manages the Joint United States and Republic of Korea research and development project to design and test new underground ammunition storage technologies.

Through the Demil Technology Office, USADACS manages demilitarization research and development initiatives for the Army's conventional ammunition and Joint Service large rocket motors. Working with the Department of Energy and the Services USADACS focuses on resource recovery, recycling and developing environmentally acceptable alternatives to open burning, open detonation, and incineration of unwanted ammunition and explosives.

USADACS provides technical assistance to DOD commanders worldwide in solving problems in ammunition operations. This proactive program has the ultimate goal of problem prevention by identifying root causes of significant problems and developing solutions for system-wide application.



Buildings 247-249 (foreground) house the majority of the U.S. Army Technical Center for Explosives Safety personnel, including the Army's Technical Library for Explosives Safety. Also, the newly remodeled Visitor's Center (upper center) serves as the USADACS Ammunition School's student and visitor processing area.

Transportable real-time X-ray system in Bldg 507 offers USADACS personnel the unique ability to provide on- and off-post radiographic inspection of ammunition all around the world.

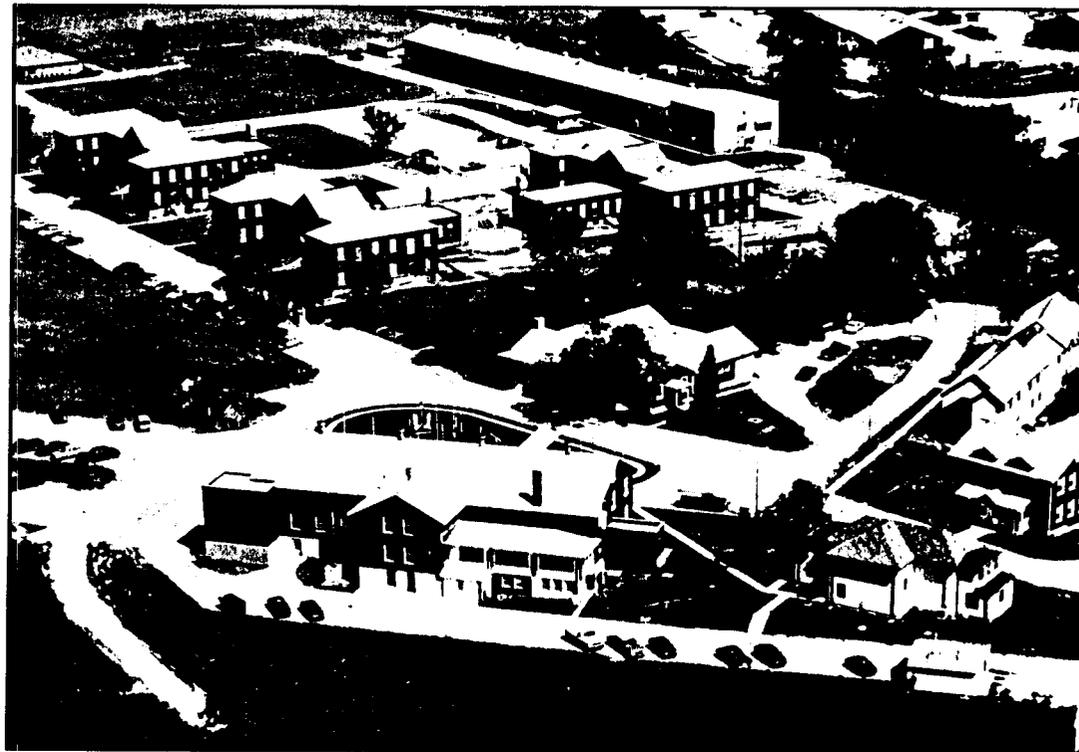


The QASAS and Ammunition Management career programs are both managed for the Army by ammunition experts at USADACS. These programs ensure a continuing source of trained, experienced civilian personnel.

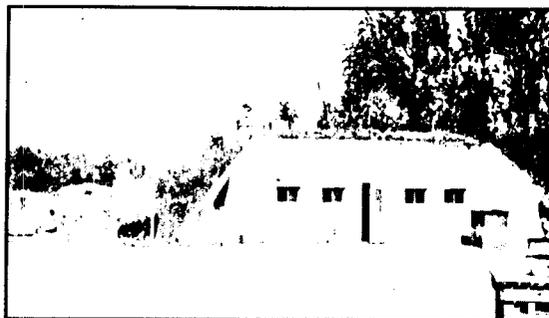
Overall, USADACS with its small, synergistic work force has and will continue to serve the Army well.



Hands-on training for depot demil personnel taking certification course at USADACS.



USADACS Ammunition School campus - Buildings 14 and 15 (right middle) have been remodeled and serve as computer and demilitarization classrooms. Buildings 21, 22, and 23 (center middle) contain classrooms for Navy explosives safety training, Army/Navy/Marine Corps ammunition certification, and many other courses which involve hands-on training on the installation's demolition range. Building 26 (upper center), also called the "Tin Shed," stores and displays the school's inert ammunition training items. Building 10 (lower right) houses the Demil Technology Office, which opened in February 1993.



Looking down range past the personnel shelter (upper right) that allows students and instructors to safely monitor actual demolition shots using remote video equipment.

INFORMATION MANAGEMENT OFFICE

The primary mission of the Information Management Office is to direct, control, and coordinate information management functions throughout the installation. Information management areas of responsibility include: office automa-

tion, automated data processing at the TIER II level, telecommunications, teleproduction, video documentation, still photography, audiovisual support, records management, and publication support.

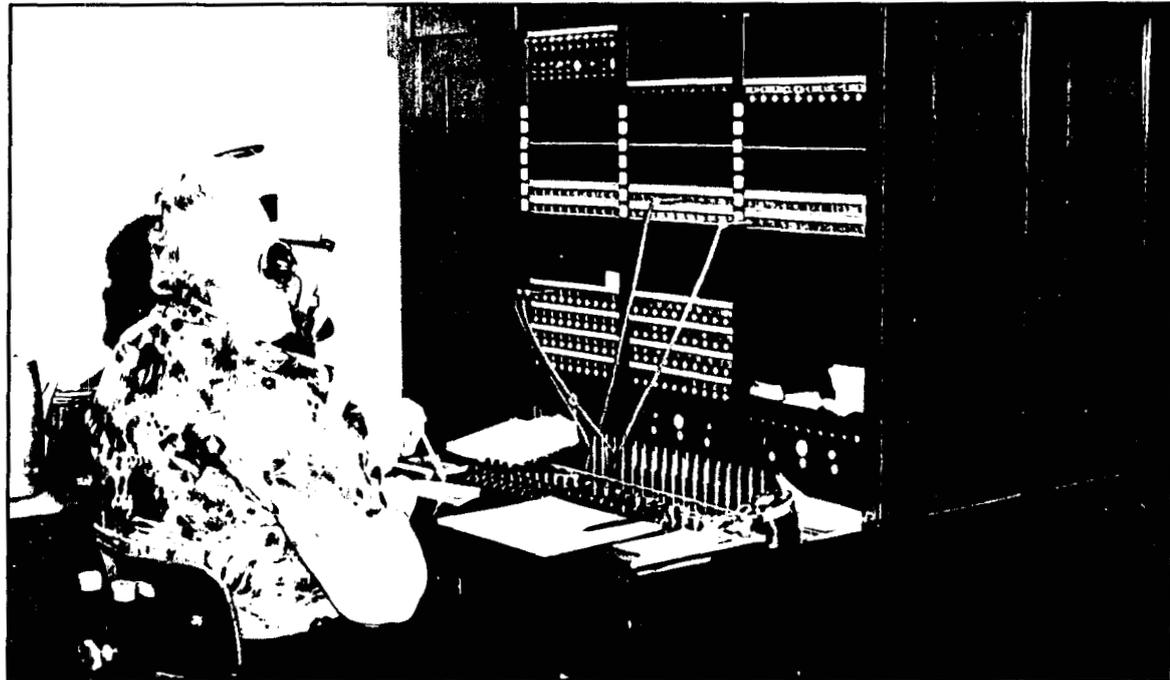


VISUAL INFORMATION

The Visual Information Facility Mobile Production Van provides a self-contained video production/documentation capability throughout this installation and at remote locations. It features an onboard portable generator, a 1/2-inch video editing system, a graphic generator, multiple camera capability, and video/audio mixing systems.

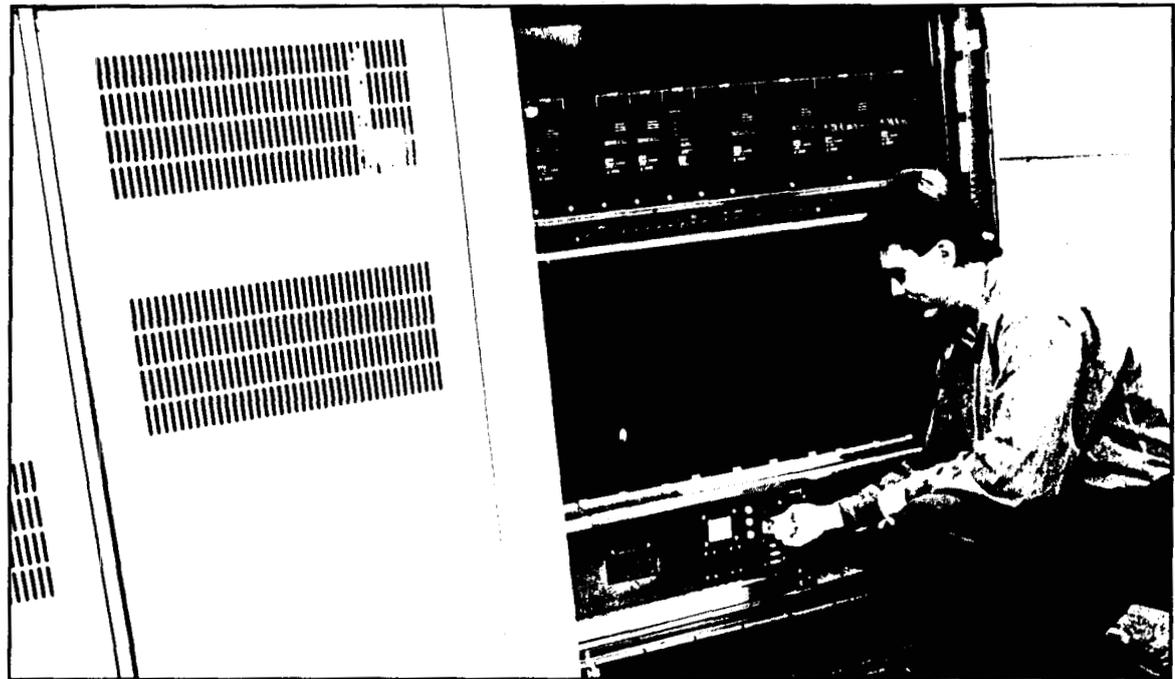
AUTOMATION - SVADA

The Sperry 5000/80 minicomputer, installed in 1989, is operated by the Information Management Office for the Savannah Army Depot Activity. The Sperry interfaces with the Letterkenny Army Depot (LEAD) Defense Mega Center computer to support standard applications such as the Automated Time and Attendance Production System and Standard Depot System, as well as, provide a general purpose data interface to the LEAD Local Area Network (LAN).



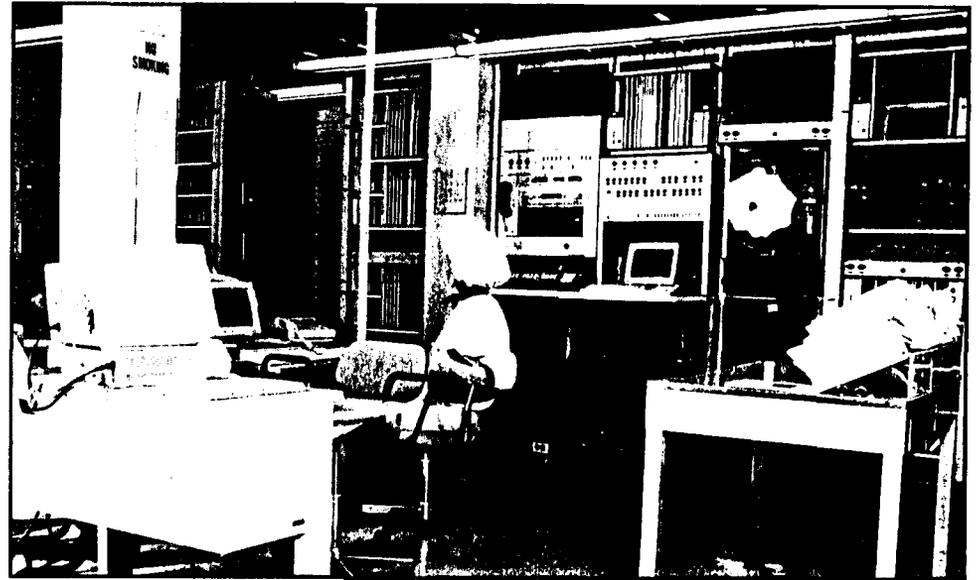
AUTOMATION - USADACS

The Information Management Office provides for the operation and maintenance of all USADACS TIER II computer and associated LAN systems. Current ADP systems include: a Digital Equipment Corporation (DEC) VAX 8820 super minicomputer, a DEC system 5100 Reduced Instruction Set Computer (RISC) super minicomputer, and an IBM Corporation RS/6000 RISC minicomputer. LAN functions will be provided by a Fiber Distributed Data Interface 100 Megabit Per Second token ring between all major administrative buildings occupied by USADACS personnel. This LAN is expected to be fully operational by 31 March 1995.



ELECTRONIC SWITCH

The automated Electronic Switching System (ESS) was installed in February 1988. This switching system is presently configured for 1050 voice grade telephone lines as well as 300 data switching circuits. This system has the capability to be expanded to more than 50,000 voice grade telephone and data circuits with the installation of additional line and trunk peripheral hardware. Service is provided for the Defense Switched Network (DSN), Federal Telephone System (FTS2000), and local commercial communications. All telephone installation and maintenance is provided by the Information Management personnel.



TELECOMMUNICATIONS

The Telecommunications Center (TCC) is equipped with a Desktop Integration to AUTODIN Host (DINAH) system to provide world wide message transmission and reception services via the Automated Digital Network (AUTODIN) that was installed in November 1992. Common User Secure Datafax services are also provided via the TCC.

LOCAL IMPACT OF CLOSING THE UNITED STATE ARMY

AMMUNITION

DEPOT AT SAVANNA AND RELOCATION OF THE UNITED STATES

ARMY DEFENSE AMMUNITION CENTER AND SCHOOL

The Center for Governmental Studies at Northern Illinois (Center) completed an analysis of the economic impact of closing of the Army Ammunition Center and School. The combined activity would reduce the civilian employment at the base approximately 400 persons.

The analysis was completed using an input/output model developed for the Center by Regional Science Research Corporation. The model is unique in that the I/O coefficients are based on county specific patterns. In completing the analysis, the impact on Carroll and JoDaviess Counties was investigated. Both counties were used because of the location of the Savanna facility in Carroll County near the JoDaviess County line and the fact that many of the employees of the facility live in JoDaviess County. No attempt was made to identify the impacts of the relocation on communities in Iowa, located directly across the Mississippi River from the Savanna facility, although even though there will be economic impacts.

To complete the analysis, it is assumed that the USADACS activity is similar to a service industry which provides engineering consulting services and high level vocational training. Thus the direct impact of the relocation will be captured in the service component of the model. The indirect impacts of the relocation are the secondary effects of the area. For example with the relocation and loss in employment of 200, the two counties will experience reduced income and reduced retail activity. this will lead to reductions in employment in retail and other industries.

In analyzing the impacts of the Depot closing, it is assumed that the Army Ammunition Depot activity is similar to a manufacturer of heavy ammunition, thus the direct impact of the closing will be captured in the manufacturing component of the model. The indirect impacts of the relocation are the secondary effects on the area. For example with the relocation and loss in employment of 200, the two counties will experience reduced income and reduced retail activity. This will lead to reductions in retail and other industries.

The impacts summarized below should be viewed as annual impacts based on no other economic disturbances in the two counties. That is, employment levels and retail trade, for example, will be permanently lowered as a result of reduced activity at the Depot.

SUMMARY OF EMPLOYMENT IMPACTS

- Jobs will decline by 624 in the two counties as a result of reduced activity at the Depot and USADACS. In addition to the 400 jobs at the Base an additional 24 jobs will be lost in the two counties.
- Of the 244 indirect jobs lost, 100 will be in retail and 73 in other service industries.
- The changes at the Depot will have limited impact on employment in the wholesale or the financial services industries.
- As a result of the relocation the unemployment rate in the two counties could increase as much as 2.8 percent, making it one of the highest unemployment areas in Illinois.

SUMMARY OF OUTPUT IMPACTS

- The elimination of activity at the Base will decrease total output (sales) in Carroll and JoDaviess Counties by \$35,535,000. Of the total decrease in economic activity, \$27,121,000 will be directly related to the Depot closing and move of USDACS. The other \$8.4 million will be reduced output (sales) by other businesses.
- Retail sales in the two counties will decrease by over \$2,045,000 as a result of the proposed changes. This represents over one percent of the total retail sales in the two counties.
- Output of wholesale and public utility companies in the two counties will decrease by almost \$1,650,000.
- There will be an indirect loss of activity in the service sector of almost \$2,000,000.

SUMMARY OF WAGE IMPACTS

- The decline in Base activity will directly reduce wages paid to residents of the two counties by almost \$16,800,000 million.
- In addition to the decrease in wages resulting from the Base closing, \$3,460,000 in wages will be lost from secondary impacts.

March 24, 1995

Impact on Local School Districts
of

Closing of Savanna Army Depot

G r a d e Level	Savanna Students with parents at Depot by Grade	1994-1995 Total Savanna Students	Mt. Carroll Students with parents at Depot by Grade	1994-1995 Total Mt. Carroll Students	River Ridge Students with parents at Depot by Grade	1994-1995 Total River Ridge Students	Thomson Students with parents at Depot by Grade	1994-1995 Total Thomson Students	Total Students with parents at Depot by Grade	1994-1995 Total Local Students by Grade
Kdg	5	52		42	4	45		24	9	163
1st	3	84	1	43	2	50		25	6	202
2nd	8	67	2	28	2	44		26	12	165
3rd	4	62	4	45	3	41		26	11	174
4th	6	65	3	41	3	30		23	12	159
5th	1	61	3	40	1	45		34	5	180
6th	4	76		36	1	43	1	17	6	172
7th	9	62	3	40	3	48	1	43	16	193
8th	8	67	6	49	7	37		25	21	178
9th	4	73	1	47	5	60	1	25	11	205
10th	10	59	4	57	5	36		24	19	176
11th	3	53	2	42	4	38		21	9	154
12th	11	61	3	37	7	44		32	21	174
Total	76	842	32	547	47	561	3	345	158	2,295

**Global
Environmental
Solutions**
An Alliant Techsystems Company

Global Environmental Solutions, Inc.
600 Second Street NE
PO Box 5629
Hopkins, MN 55343-0491

7 April 1995

Mr. Peter Ramirez
Department of Economic Development
State of Illinois

FAX # 312-814-2807

Dear Mr. Ramirez:

Background Information

Global Environmental Solutions, a wholly owned subsidiary of Alliant Techsystems, is currently searching for alternate sites where we can establish a long term, ongoing demilitarization activity in support of the Department of Defense, and most specifically, to provide a base from which we can participate in ongoing programs with the demilitarization organization at Rock Island.

We also desire a site which allows us to do work for the other services in DoD and commercial ordnance reclamation as well. The commercial ordnance reclamation is almost always associated with a defense site clean-up, but the ammunition is no longer owned by the United States Government and may be from firing ranges or elsewhere, and is not necessarily in pristine condition.

Characteristics of Demil Site

We are looking for the following major characteristics for an alternative site. They are:

1. A site which can be permitted under RCRA to provide for the import of third party waste; generally, waste codes D001, D003 and a few other selected waste codes for reactive energetic materials.
2. A site that can provide information security to at least a secret level.
3. A site that has sufficient land area and storage capacity to meet both DoD and BATF requirements on quantity, distance and storage characteristics, as well as quantity distance for production operations.
4. A site which has, or can have, an RCRA B permit with subpart X for alternative thermal treatments to include open burning and open detonation if required, for small quantities and/or safety reasons, and a site where alternative treatments can be easily permitted.
5. A site which provides a reasonable pool of trained ordnance handling employees.
6. A site which provides reasonable road, rail and air connections with proper industrial grade utility service.

Additional Site Characteristics

Sites to be considered must have low overhead rates and reasonable lease/use costs as the demil business is highly competitive and is generally awarded to the low bidder. The best way to achieve this is a site which has active, ongoing business base of another characteristic which will help absorb the overhead costs of physical plant security, utilities and general maintenance.

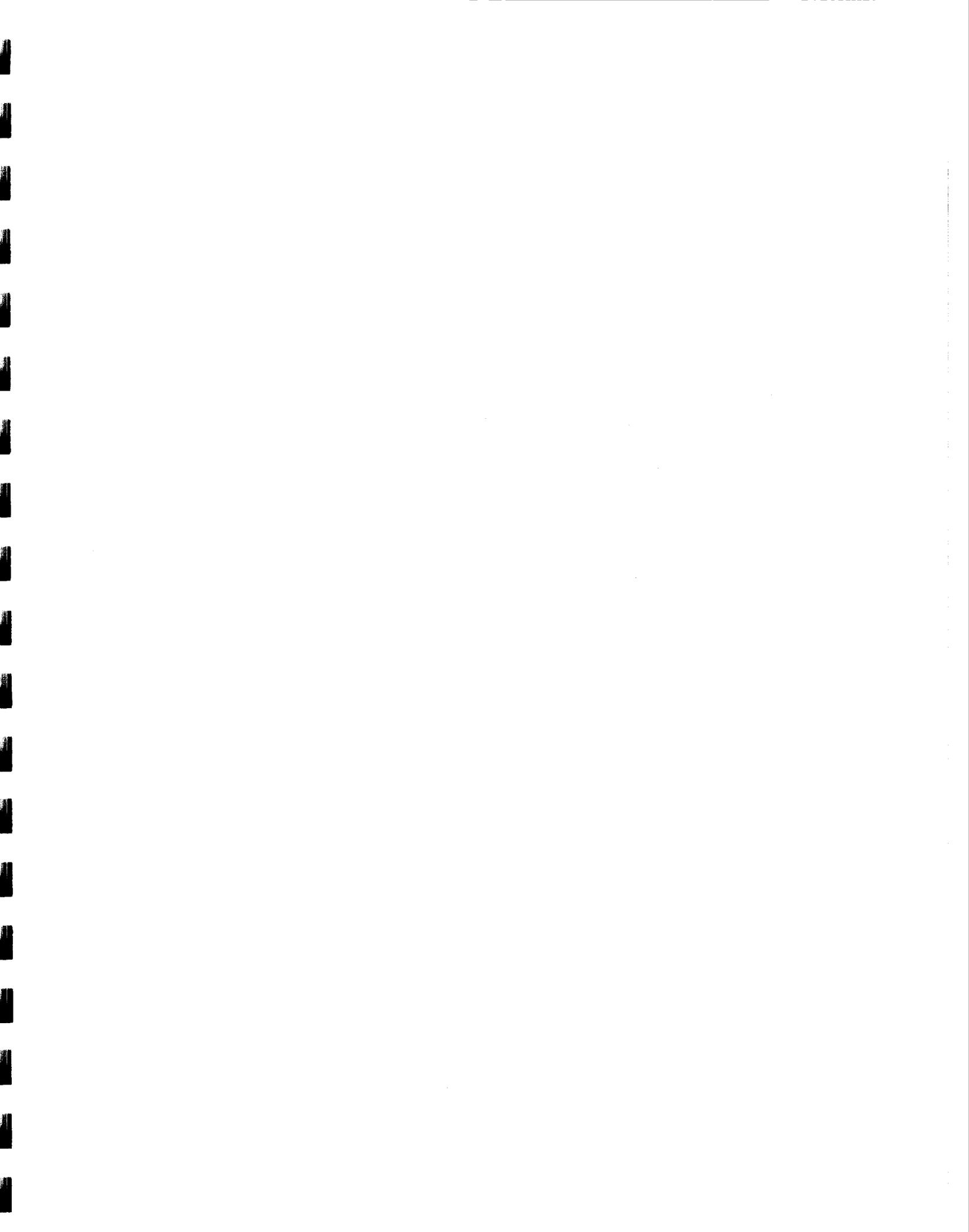
Given the above characteristics, Savannah Army Depot, Savannah, Illinois, appears to be a site which does or can meet the above summary characteristics I have outlined and as such, is of interest to Global Environmental Solutions for consideration as a possible demilitarization tenant on that site.

Global Environmental Solutions would be happy to participate in the study further to see if Savannah Army Depot could fulfill our needs as an active demil site.

Sincerely,

M. M. Garrison, P.E.
Director, U. S. Programs
Ordnance Reclamation and Demilitarization

MMG:db



Document Separator

INDUSTRIAL OPERATIONS COMMAND

MISSION

Provide the Military Forces Timely and Quality Ammunition, Depot Maintenance, Manufacturing, and Logistics Support

VISION

Be the Recognized Leader in Providing Mission Support to the Military Forces and Secure America's Defense Industrial Base for the 21st Century

VALUES

 **H**ONESTY

 **S**UPPORT

 **E**THICS

 **T**RUST



 **A**CCOUNTABILITY

 **R**ESPECT

PHILOSOPHY STATEMENT

Respect and Recognize Individuals
Enable and Empower Employees
Promote Labor/Management Cooperation
Ensure Environmental and Fiscal Stewardship
Promote A Diverse Work Force and Equal Opportunity
Advocate Quality Improvement
Focus on the Customer

HEADQUARTERS, U.S. ARMY INDUSTRIAL OPERATIONS COMMAND

IOC, headquartered at Rock Island, Ill., is a worldwide organization with installations and activities in 25 states and overseas.

IOC commands Army depots, depot activities, arsenals, ammunition plants and other Army industrial activities. IOC performs ammunition procurement, installation and environmental management, and provides centralized management and decentralized execution of ammunition and weapons system production, maintenance and storage.

IOC FACTS & FIGURES

IOC consists of...

16 Depots & Activities
21 Ammunition Plants
3 Arsenals
& Various Other Elements

IOC has...

37,200 buildings
166 million square feet of floor space
4,135 miles of paved roadways
2,215 miles of railroad tracks
\$3.6 billion annual budget (FY 95)

IOC employs...

24,000 Department of Defense civilians
300 Military
13,000 Contractor employees
Annual payroll: \$1.1 billion (DA Civilians)

IOC extends worldwide...

42 locations
25 states
3 foreign countries

PHILOSOPHY STATEMENT

Respect and recognize individuals

- *Acknowledge personal values*
- *Appreciate individual and group performance*

Enable and empower people

- *Provide training and educational opportunities*
- *Entrust peers and subordinates with authority to act*
- *Insist upon total personal and corporate integrity*

Promote labor/management cooperation

- *Foster partnering and teamwork through continuous communication*
- *Promote understanding to reach agreement to achieve labor and management goals*
- *Ensure a safe and supportive work environment*

Promote a diverse workforce and equal opportunity

Ensure environmental and fiscal stewardship

- *Ceaselessly commit to the principles of responsible behavior to our natural, human, and monetary resources*

Advocate quality improvement

- *Achieve continuous process improvement and cultural change through dedication, involvement, and innovation*

Focus on the customer

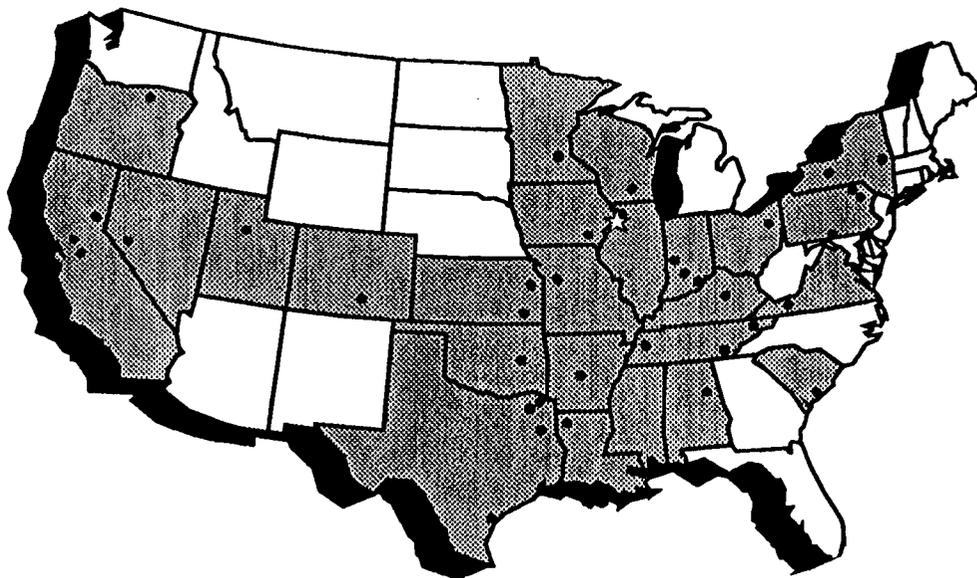
- * Understand and support our customers' vision and values*
- *Satisfy or exceed our customers' needs*

VALUES

- * Honesty*
- * Ethics*
- * Accountability*
- * Respect*
- * Trust*
- * Support*

U.S. ARMY INDUSTRIAL OPERATIONS COMMAND





PRIMARY IOC ELEMENTS

HEADQUARTERS: Rock Island, IL

ARSENALS:

Pine Bluff, AR
 Rock Island, IL
 Watervliet, NY

DEPOTS/DEPOT ACTIVITIES:

DEPOTS

Anniston, AL
 Blue Grass, KY
 Corpus Christi, TX
 Hawthorne, NV
 Letterkenny, PA
 Red River, TX
 Sierra, CA
 Tobyhanna, PA
 Tooele, UT

DEPOT ACTIVITIES

Hythe, England
 Leghorn, Italy
 Pueblo, CO
 Sacramento, CA
 Savanna, IL
 Seneca, NY
 Umatilla, OR

AMMUNITION PLANTS:

Badger, WI	McAlester, OK
Crane, IN	Milan, TN
Holston, TN	Mississippi, MS
Indiana, IN	Newport, IN
Iowa, IA	Radford, VA
Kansas, KS	Ravenna, OH
Lake City, MO	Riverbank, CA
Lone Star, TX	Scranton, PA
Longhorn, TX	Sunflower, KS
Louisiana, LA	Twin Cities, MN
	Volunteer, TN

OTHER:

Strategic Mobility Logistics Base, SC
 Defense Ammunition Center/School, IL
 Support Activity - Far East, Korea

During mobilization:

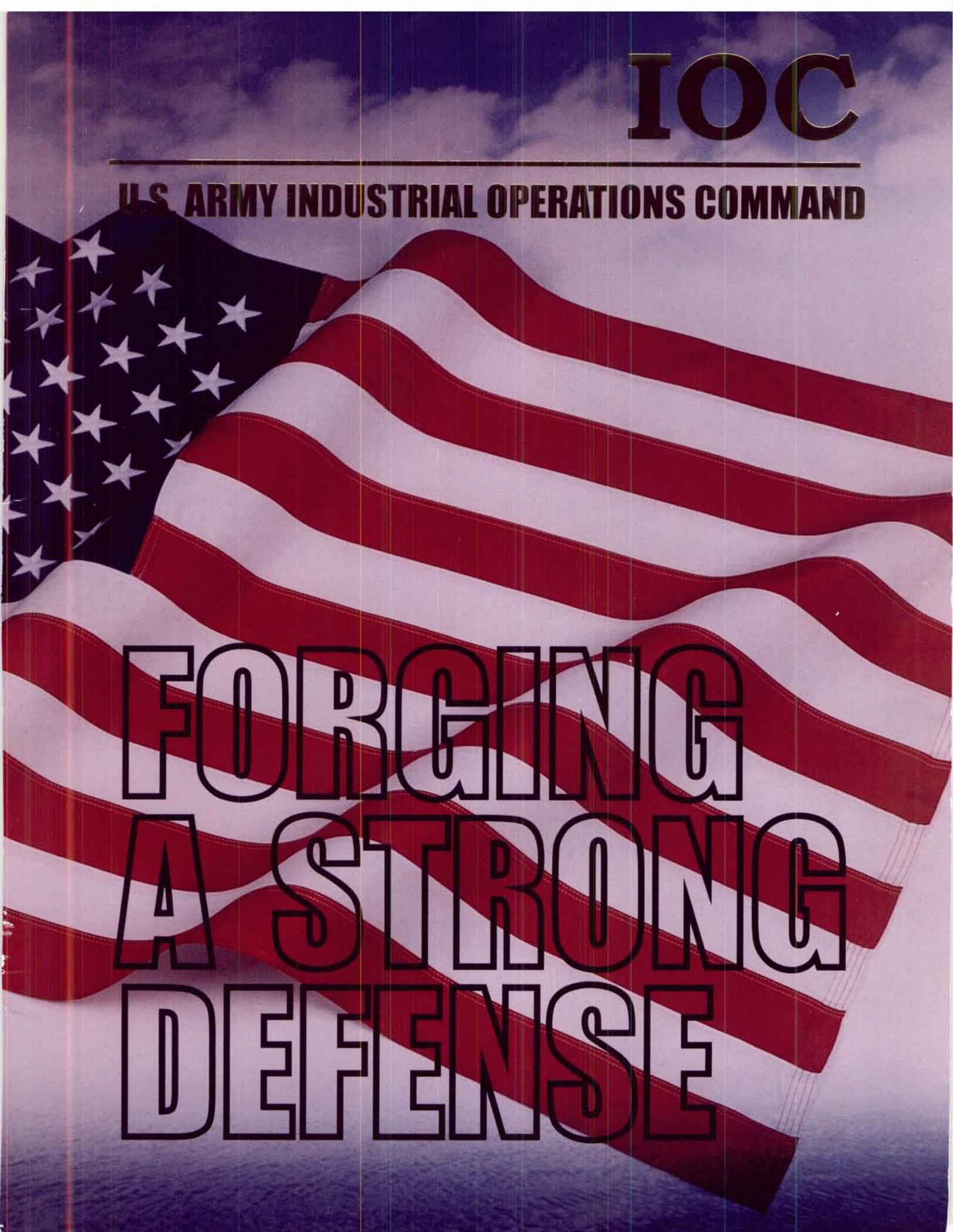
Mobilization AVCRAD Control Element (MACE), Havre de Grace, MD
 Aviation Classification Repair Activity Depots (AVCRAD), Groton, CT; Gulfport, MS; Springfield, MO; Fresno, CA

MISSION

Provide the military forces timely and quality ammunition, depot maintenance, manufacturing, and logistics support.

VISION

Be the recognized leader in providing mission support to the military forces and secure America's defense industrial base for the 21st century.



IOC

U.S. ARMY INDUSTRIAL OPERATIONS COMMAND

**FORGING
A STRONG
DEFENSE**

MESSAGE FROM THE GENERAL

IOC consists of...

- 16 Depots and Activities
- 3 Arsenals
- 21 Ammunition Plants
- and various other elements

IOC employs...

- 24,000 Department of Defense civilians
- 300 Military
- 13,000 Contractor's employees

IOC manages...

- An annual budget of \$3.6 billion
- \$80 billion total assets
- Annual payroll of \$1.1 billion (DA civilians)

IOC possesses...

- 37,000 buildings
- 166 million sq. feet of floor space
- 4,135 miles of roadways
- 2,216 miles of railroad track

IOC has earned...

- World Class Manufacturing Award
- DoD Quality Award
- Community Excellence Award

Welcome to the IOC,

With the establishment of the Industrial Operations Command, the Armament, Munitions and Chemical Command and the Depot System Command have teamed to become an integral part of the Army's strategic focus for logistics support.

Our employees are the reason we remain the leader in the defense industry. Their innovation, dedication, and hard work are the driving forces that allow us to continually improve how we do business. We are very proud of their achievements. Our organization is a partnership of our people, our customers, and our suppliers.

The IOC provides streamlined management of Army industrial operations and a master strategy for the integration of the organic industrial base through initiatives such as sector management, flexible computer integrated manufacturing and integrated sustainment maintenance. And through our management of the war reserve stockpile, the IOC helps the Army meet its warfighting requirements.

This brochure represents the diverse capabilities and superb facilities of our command. By carefully balancing public and private resources, we will ensure that an adequate, flexible, and responsive industrial base is always available for power projection contingencies.

The Industrial Operations Command is a great organization -- an organization where customer satisfaction is taken seriously; an organization where people truly make the difference.



Sincerely,

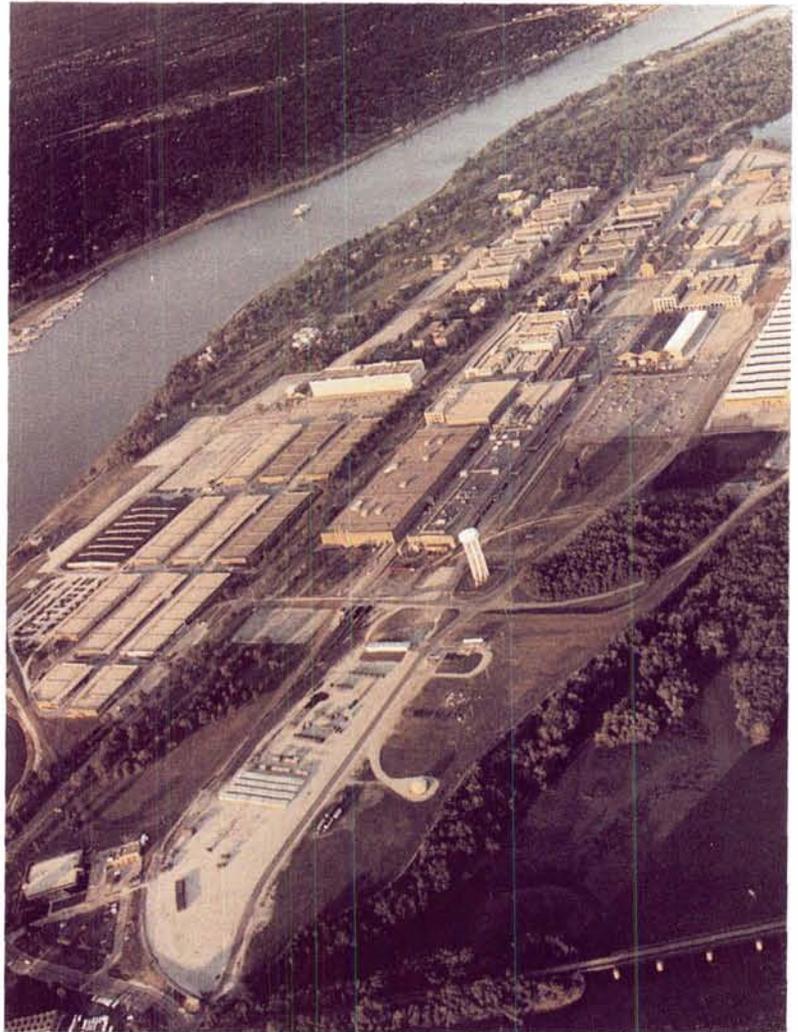
Dennis L. Benchoff
Dennis L. Benchoff
Major General, U.S. Army
Commanding

INTRODUCTION

This is the Industrial Operations Command (IOC). The IOC is a worldwide organization with installations and activities located in 25 states and overseas. IOC is a major subordinate command of the U.S. Army Materiel Command, headquartered in Alexandria, Virginia. The IOC's viable industrial infrastructure is second to none in producing quality munitions and large caliber weapons, and in providing a full range of maintenance services for modern weapons. The IOC manufactures, delivers, and supports materiel throughout the world for America's service members.

The IOC Mission

The IOC, headquartered at Rock Island Arsenal, Rock Island, Illinois, is a flexible, responsive, and highly capable organization. The IOC, through its expertise in the areas of maintenance, logistics, and manufacturing, and as a production base, performs a vital defense role. The IOC maintains, repairs, and rebuilds today's sophisticated weapon systems and munitions. The command produces tomorrow's high technology systems. In addition, the IOC fabricates hard-to-procure items and manages the life cycle of conventional ammunition. The IOC maintains the Army's war reserve and operational project stocks required for power projection. The IOC stands as the logistics bridge that links peacetime readiness to wartime sustainment/reconstitution.



IOC is headquartered on Arsenal Island

Overview of IOC Capabilities

The IOC provides the highest quality and most advanced weaponry that American ingenuity and technology can produce. Ensuring our troops the best materiel and services, the IOC performs total life cycle support worldwide. The IOC's facilities and highly skilled and mobile workforce can

quickly and cost-effectively produce and test new weapon and ammunition products, ship materiel, sustain equipment, support materiel deployed worldwide, and demilitarize products. The IOC continually evaluates and improves its capabilities to serve customer needs.

LOGISTICS SUPPORT

War Reserve and Operational Project Stock

The IOC maintains the Army's war reserve and operational project stocks required for power projection. Depots provide maintenance and storage for Army weapon systems and platforms and provide ammunition for all services. The IOC's long-term mission provides a logistics springboard for power projection. The IOC maintains pre-positioned heavy combat equipment, supplies, and ammunition in Army war reserve storage throughout the world. These pre-positioned stocks on land and afloat greatly reduce the time required to deploy forces in an emergency.

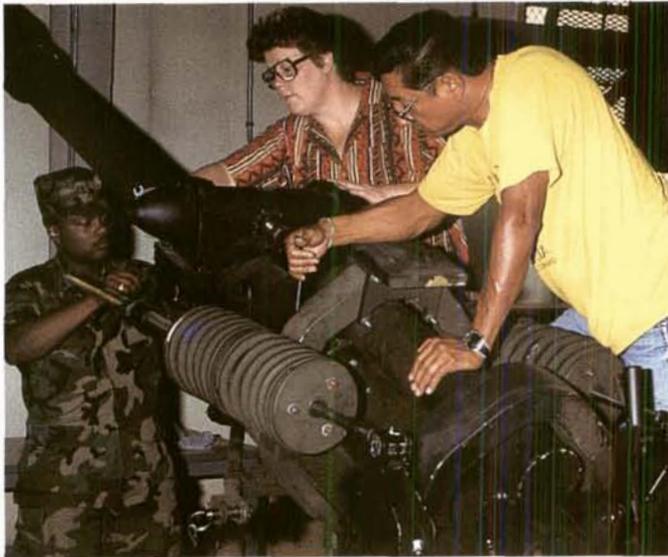
Depot Level Maintenance

The IOC's highly skilled workforce of certified mechanics, laboratory technicians, and engineers provides the expertise to successfully perform depot level maintenance. The command has Centers of Technical Excellence for communication, electronics and ground-based satellite systems, heavy and light tracked vehicles, helicopters and navigational components, and all DoD tactical missiles. Logistics support elements can set up depots to support fielded troops in theaters. These elements have partnering arrangements with contractors to provide the maximum service to troops throughout the world. IOC's skilled staff will keep the high technology systems operating.

IOC is sensitive to customer needs and will continue efforts to improve our response to the customer.

Training

Peacetime training of the military units is supported with IOC-furnished equipment, material, skilled people, and facilities. Hands-on training at many IOC facilities for Military Reserves, National Guard, active duty, and friendly foreign military personnel is provided to keep a combat-ready military force capable of decisive victory.

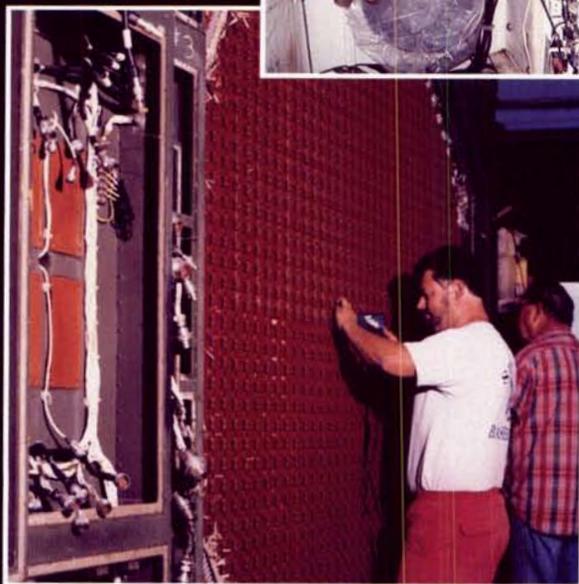
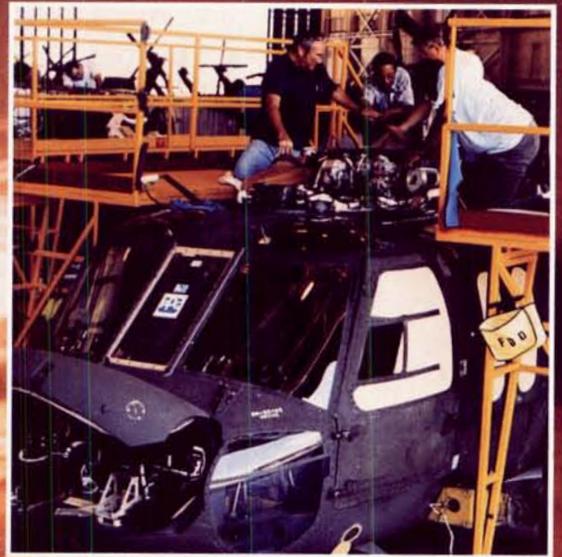


M119 Howitzer



Storage igloo

FACING PAGE: Depot level maintenance performed by highly skilled personnel. **UPPER RIGHT:** Blackhawk Helicopter **CENTER:** MIAI Tank **LOWER LEFT:** Patriot radar antenna



" The IOC's long-term mission provides a logistics springboard for power projection. "

IOC INITIATIVES

The IOC initiatives are fully dedicated to cost effective readiness

Customer satisfaction forged in a cost conscious environment yields programs from Excellence in Acquisition to Value Engineering. Efforts like these save millions of dollars annually. A few of these initiatives are:

Acquisition

Several initiatives to simplify the acquisition process for both government and industry have been implemented. Unnecessary data requirements from the government-owned/contractor-operated contracts are being removed. Best value teams are streamlining solicitation requirements. Contractors can review solicitations on an electronic bulletin board and determine which ones to request.

Team Building

The IOC stresses customer service in its operations. To enforce this effort, the IOC trains its workforce using the Army HEARTS (Honesty - Ethics - Accountability - Respect - Trust - Support) training program. HEARTS builds those values by presenting participants with a series of physical and mental challenges. HEARTS groups emerge as a team in which all members have confidence in each other and know how to work together to reach a common goal. The training program was created by, and is licensed to, the Saturn Corporation, an American automaker known for its emphasis on quality, customer service, and teamwork.

Quality

Quality initiatives are at the core of the IOC's mission. The IOC takes great pride in supplying goods and services which fully meet or exceed customers' expectations. The customer-oriented business method doesn't rest solely with the end user, but is an IOC business practice. The IOC internally practices quality management and also extends TQM to its contractors in the form of partnering. Partnering between the government and contractors leads to better communication, trust, and higher quality in all facets of this relationship. A Contractor Performance Certification Program (CP²) for quality improvement is offered by the government. This rigorous certification process is well worth the contractor's effort. Contractors benefit by reduced

government oversight and reporting, while the government benefits by obtaining quality products at a reduced cost.

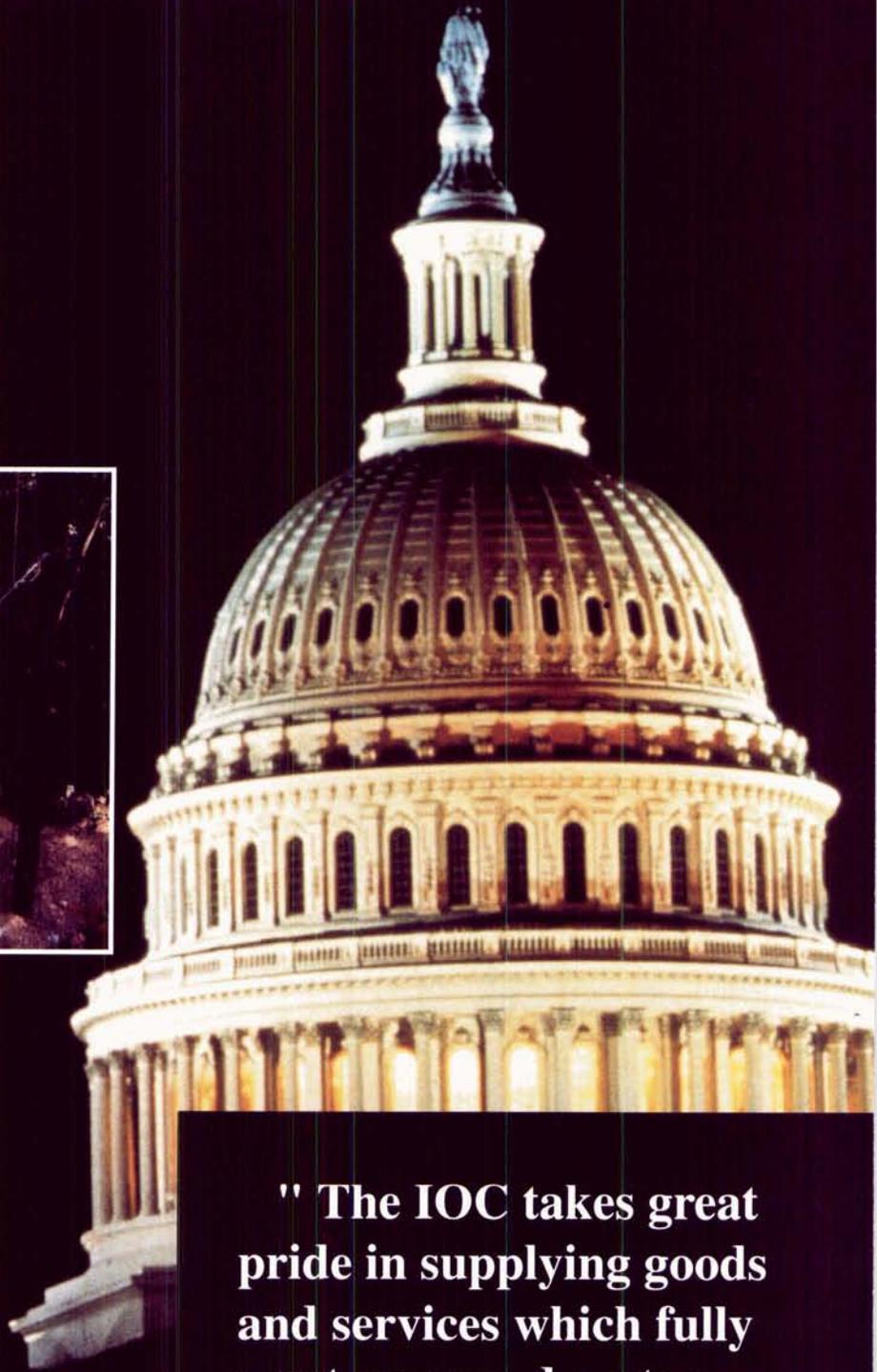
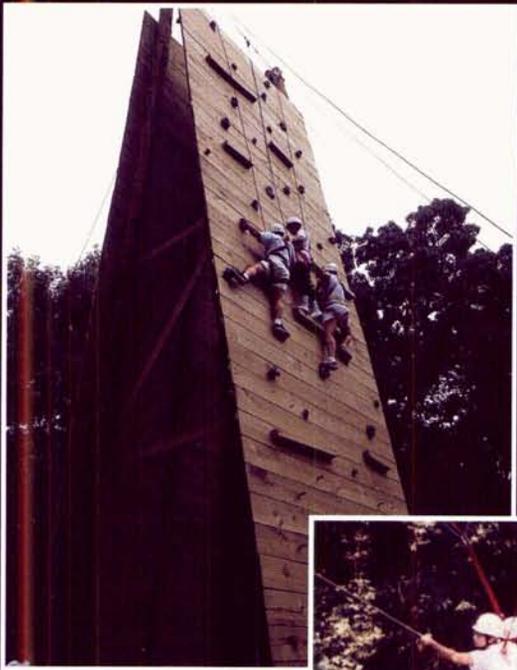
Responsive Replenishment of Parts

The IOC is deeply involved in a defense initiative to integrate equipment, software, communication, human resources, and business practices to rapidly manufacture, repair, and deliver items on demand with continuous improvements in the processes. The goal is to supply parts on demand with high reliability and quality at competitive prices. IOC has two Army sites, one electronic and one mechanical, for the initial implementation.



Paladin partnership with United Defence represents a quality relationship

FACING PAGE: Rigorous training emphasizes teamwork
UPPER LEFT: HEARTS wall **CENTER:** HEARTS High-Y



" The IOC takes great pride in supplying goods and services which fully meet or exceed customers' expectations. "

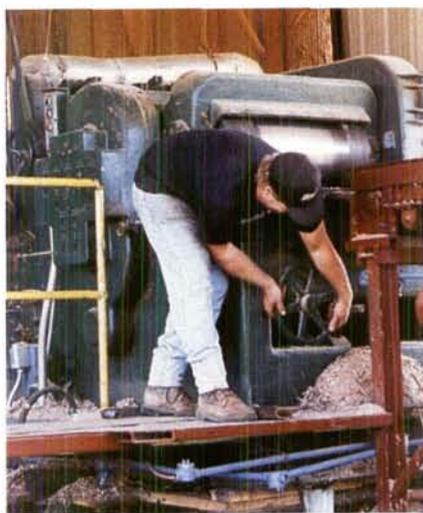
" The IOC is a model of environmental stewardship and leadership... "

Facility Utilization Incentives

IOC offers incentives for commercial as well as government use of the underutilized capacity at government-owned/contractor-operated Army Ammunition Plants. The initiative, enacted by Congress, allows contractors to acquire use of government facilities for non-military manufacturing, rework, and storage. The opportunities for contractors are appealing because of the various incentives and minimal bureaucracy. The initiative benefits all parties: contractors may be eligible for incentives for marketing, excess equipment sales, loan guarantees, and employment; use of land, buildings, and equipment; access, in some cases, to existing environmental permits and waste treatment facilities; and favorable market rates for utility services. The community benefits from jobs retained or created, revenue generated, and industrial development. The Army benefits by maintaining readiness and critical skills and by reducing maintenance and product costs.

Reshaping the Industrial Base

The IOC has a dynamic strategy entitled Ammunition Facility Strategy for the 21st Century (AMMO-FAST-21) to reshape the ammunition industrial base to a smaller size, while establishing more flexibility and maintaining the capability to meet today's peacetime ammunition requirements and tomorrow's technologically improved ammunition needs. This strategy is achieved through a mixture of government and commercial capabilities and facilities. To structure the govern-



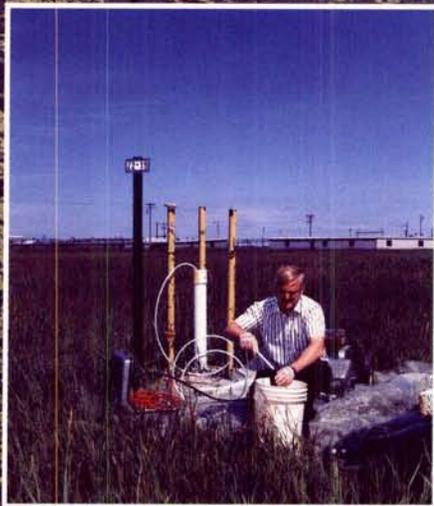
Army seeks commercial enterprises

ment-owned base, similar critical ammunition items are grouped into commodity families based upon manufacturing technologies. The corresponding groupings are called Group Technology Centers. Specified Mission Facilities will have a production and at least one other mission, such as supply depot operation. Critical skills and capability are maintained primarily with traditional workload. Development of acquisition strategies in support of commercial producers is integral to the command policy and strategy. It is IOC policy to accomplish this by competitive means, using best value contracting methods, as appropriate, and other measures which will ensure the survival of a viable commercial industrial base. Partnering between government and contractors assures that all readiness needs are satisfied.

Environmental Stewardship

The IOC is committed to protecting the environment. The IOC is a national leader in environmental and natural resource stewardship while maintaining timely production of materiel for the service member in the field. The IOC faces the largest restructuring of funds, facilities, equipment, personnel, and operations in recent history. As the force is restructured, the base structure will decline, putting more pressure on the land, air, and water necessary to support our mission of supplying and maintaining a ready force. The IOC assumes the stewardship of these resources and is correcting past violations of its environmental trust. The IOC's environmental strategy has four pillars: Compliance, Restoration, Prevention, and Conservation. The IOC works closely with federal agencies, states, industry, and the public to achieve environmental compliance. Restoration of previously contaminated sites is underway to reclaim these sites as quickly as possible to protect human health and the environment. Pollution prevention has already started with the breaking of the "throw away" attitude. Recycling is being used to conserve resources. In some cases, 100 percent of the material being used in the IOC manufacturing processes is recyclable. The IOC is a model of environmental stewardship and leadership for others to follow.

FACING PAGE: Environmental responsibility **BOTTOM CENTER:** Ground water testing **BOTTOM RIGHT:** Environmentally sound treatment of waste materials--incinerator complex



FACILITIES CAPABILITY

THE IOC CAN MEET THE CUSTOMERS' NEEDS, LARGE OR SMALL

IOC facilities support customers worldwide. The versatility extends from controlled, low-volume specialty lines to mass production. The IOC can accommodate renovation, overhauls, upgrades, and repairs on nearly all of the ground equipment for the Army and Marine Corps, on helicopters for all services, and on a variety of other equipment and materiel ranging from radar to missiles. The facilities are flexible and cost-effective. Always, manufacturing and remanufacturing processes are executed with exacting quality. IOC operates some of the most modern, technologically advanced manufacturing and remanufacturing facilities in the world. Through concurrent engineering and integrated logistics support, the command retains a role in research and development and

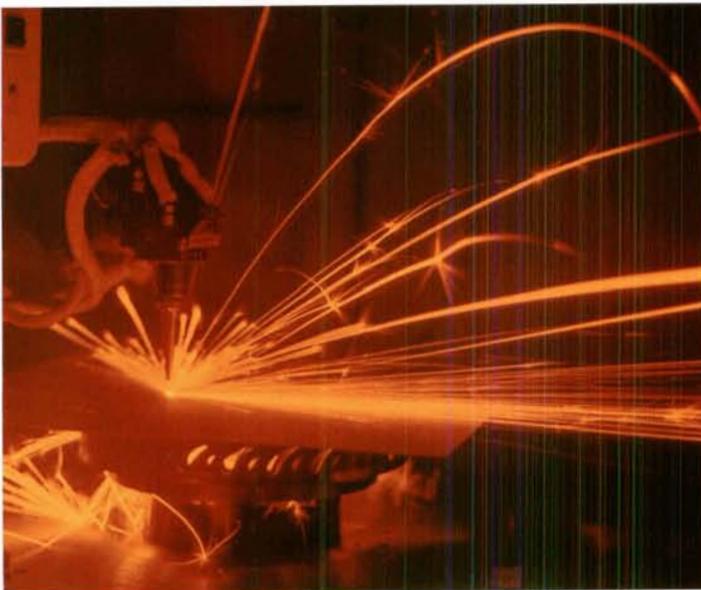
fielding of new weapon systems and ammunition. Facilities consist of depots, arsenals, ammunition plants, and activities. The range of IOC's capabilities can meet the needs of nearly any manufacturing or remanufacturing project, large or small. Significant capabilities include:

Casting — IOC facilities can melt ferrous, non-ferrous, and alloy metals by induction furnaces and then cast into single components weighing up to 12,000 pounds. IOC can also deliver precision investment castings to tolerances within .005 inch per inch.

Forging — Forging is performed by both closed and open die forging with air drop hammers. In addition, rotary forging of solid or hollow pieces up to 22 inches in diameter and 32 feet in length is successfully accomplished.

Machining — Conventional and numerically controlled precision milling, grinding, profiling, turning, boring, and cutting are performed. IOC facilities can handle single component pieces weighing up to 60,000 pounds. Facilities can machine explosives to exacting specifications. IOC facilities also house metal pressing, punching, forming, shearing, and crimping equipment. Other computer numerically-controlled equipment includes Electric Discharge Machining, laser/plasma cutting, and simultaneous multi-head drilling.

*FACING PAGE:
Foundry pour from an
induction furnace.*



Laser cutting turbine vane



Low pressure steam forge

A large industrial furnace is shown pouring molten metal into a mold. The scene is filled with bright orange and yellow light from the molten metal, with a shower of sparks falling from the mold. In the background, a worker wearing a protective suit and helmet is visible, working in the dark environment of the factory.

" The IOC operates some of the most modern, technologically advanced manufacturing and remanufacturing facilities in the world . "

" The IOC facilities have automated systems which provide secure indoor storage ... "

Finishing — IOC finishes products with a full range of heat treatment, plating, anodizing, and coating facilities and equipment capable of chemical agent-resistant coat painting and chemically or electrically applying chrome, nickel, cadmium, and copper.

Fabrication — IOC's fabrication capabilities include riveting, certified precision soldering, and welding of ferrous, non-ferrous, and exotic metals such as titanium. Welding processes also incorporate robotics. Integrated circuits can be hot air flow soldered on a multilayer, printed circuit board. Other related capabilities include fabrication of plastics, rubber, textiles, and leather goods.

Plastic Injection/Rubber

Molding — IOC facilities have a full range of hot/cold processes that can produce up to a 75-ton and 18-inch by 24-inch work piece. Their rubber injection molding machine is capable of forming dies from 14 liters to 630 tons.

Automated Storage and

Retrieval Systems — The IOC facilities have automated systems which provide secure indoor storage locations for parts and provide the ability to track parts in inventory and to efficiently deliver items to manufacturing/remanufacturing areas.

Rubber Recovery — IOC operates an environmentally safe rubber product facility. The facility removes old rubber to recondition road wheels and tracks of tracked vehicles.

*FACING PAGE: Storage igloo
UPPER LEFT: Inert bombs
UPPER RIGHT: Cannon tubes*



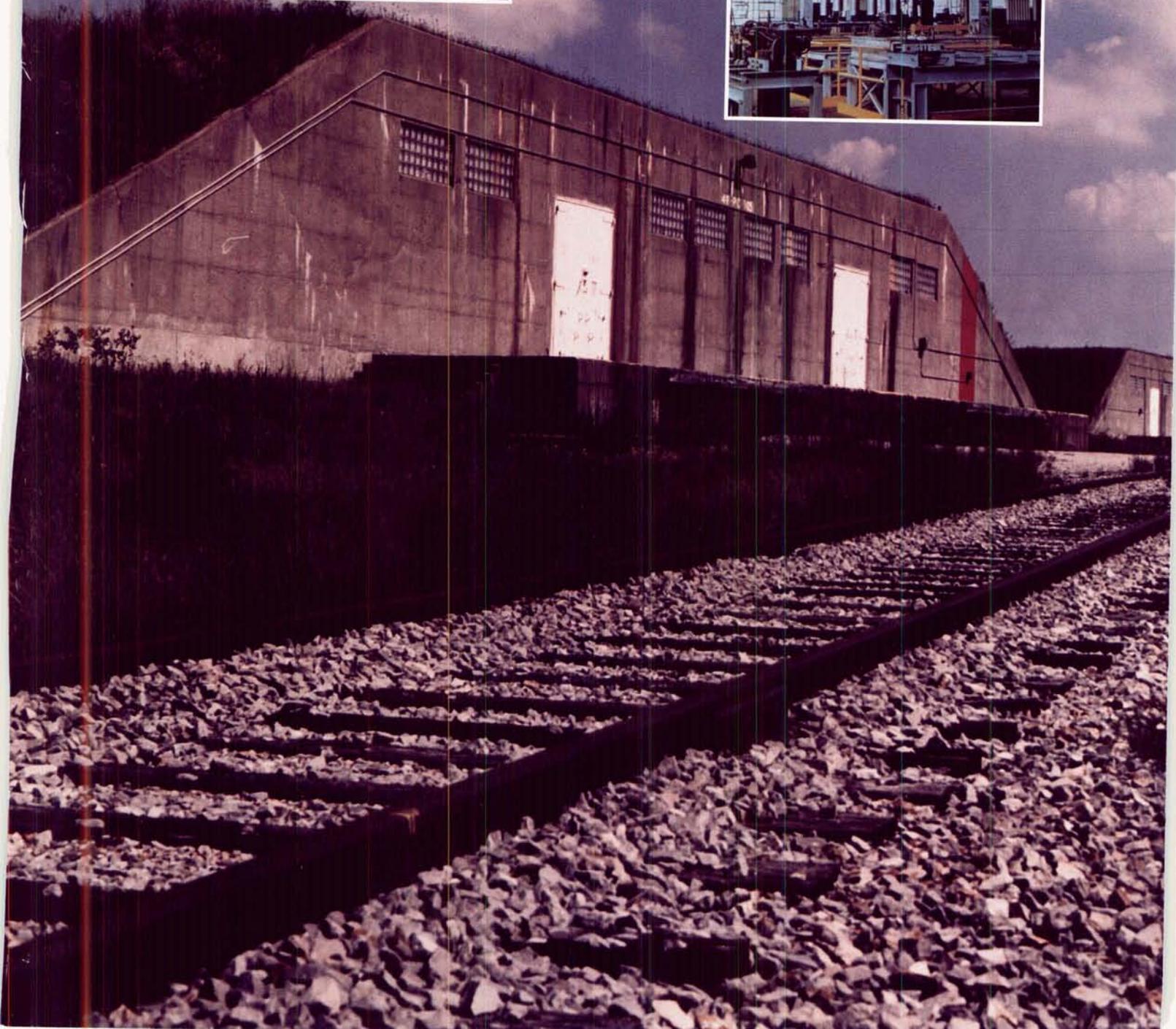
Spray painting stencils



Bradley welding repair



Tire rebuilding



" Facilities and equipment meet or exceed rigorous safety requirements."

Ammunition Load, Assemble, and Pack (LAP) —

The IOC has the LAP capability that loads items as small as 112 grains to 4500 lb bombs and 40,000 lb shock charges. The IOC assembles items as simple as blank rifle cartridges and as complex as smart ammunition. The manufacturing and integration processes are routinely performed on common and specialized materials with quality always instilled in the product. Packaging expertise enables long term storage with high dependability. The IOC facilities are capable of producing everything from research and development lots to mass production quantities.

Insensitive Munitions — The IOC is a major producer of insensitive explosives and has extensive load, assembly, and packaging capability with insensitive munitions such as Plastic Bonded Explosive (PBX) for warheads, projectiles, and bombs.

Cast/Cure — IOC can cast/cure explosives. IOC facilities have high shear mixers ranging from 5 to 600 gallon capacity, explosive presses ranging from 6 to 800 ton, a vacuum dispensing system, and explosive cure magazines.

Pressing — IOC can undertake projects requiring up to 800-ton pressing for explosive billet forming and pressing.

Melt/Pour — IOC melts and pours explosives, including Teteryl, HTA-3, RDX, Composition B-4, Composition B, Baritol, Cyclotol, Octol, Tritinol, and H6. The automated melt-loading process can handle more than 34,000 pounds of explosive material in a single 10-hour shift. Facilities and equipment meet or exceed rigorous safety requirements.

Explosive/Propellants —

The IOC capabilities include the largest production facility of bulk explosives in the free world. The IOC provides explosives to all DoD services. The IOC also provides propellant for tank, artillery, small arms ammunition, and rocket motors.



Mine assembly



155mm projectiles

FACING PAGE: Smoke munitions UPPER LEFT: Hellfire warhead pressing UPPER RIGHT: Control-room for small caliber ammunition LOWER RIGHT: 5/54 projectiles



"... renovate, rebuild, rehabilitate, and maintain high technology systems."

Topographic Equipment and Military Locomotives —

The IOC has the only DoD facility to repair and overhaul topographic equipment. The IOC also manages the facility to repair military locomotives.

Whirl Tower — The IOC main rotor blade test facility can aerodynamically balance composite blades for the UH-60A Blackhawk and the CH-47 Chinook helicopters.

Tank and Armored Assault Vehicle Testing —

IOC has high-speed test tracks to test tanks and armored assault vehicles in varied applications such as fording, swimming, and navigating longitudinal and traverse slopes.

Renovation, Rebuild, Rehabilitation, and Maintenance —

IOC facilities renovate, rebuild, rehabilitate, and maintain high technology systems. These include the M1 Abrams tank and other heavy combat vehicles and their components, the Bradley Fighting Vehicle and other light and medium tracked vehicles and weapon systems, DoD tactical missile systems including 7M Sparrow and ATACMS, the AH-64 Apache and other helicopters and components, and communications and electronics systems including Defense Satellite Communications Systems. The IOC also performs modifications and upgrades of systems, such as the upgrade of M109 howitzers to Paladins.

Environmentally Controlled Clean Rooms —

Clean rooms repair, overhaul, and calibrate aircraft instruments, fire control, and communications equipment. They contain precise instrumentation capable of measurements in millionths of an inch. Clean rooms range from Class 10,000 to 100,000. The IOC also has Electro Static Discharge (ESD) work stations which prevent damage to sensitive electronic components.

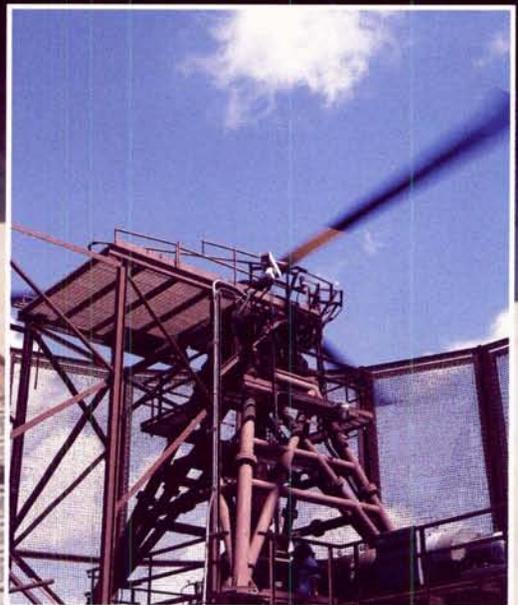
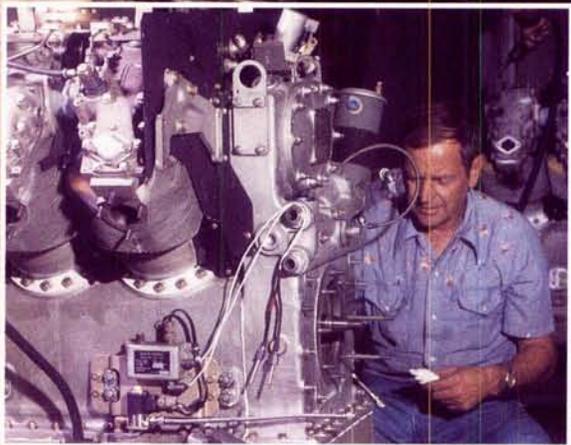
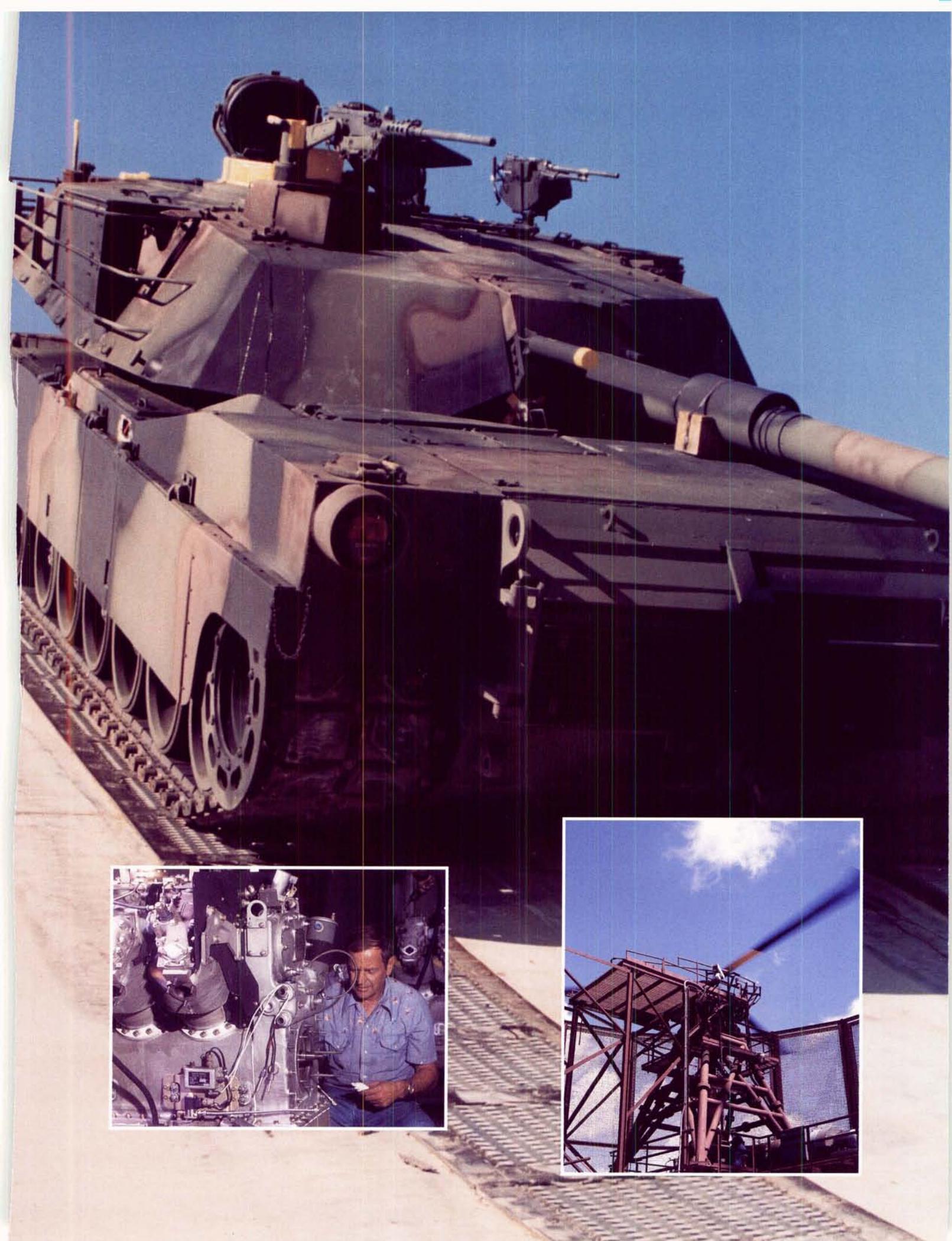
*FACING PAGE: Tank on test track
LOWER LEFT: Engine rebuild
LOWER RIGHT: Whirl tower rotor
blade test*



U.S. Army locomotive



Sparrow missile



" The IOC has the only DoD test facilities to repair and test microwave communications equipment."

Research and Development (R&D)

— The IOC provides support in the development of new products. To incorporate the latest technology into the design of products, IOC employs the best and brightest engineers, scientists, and technicians who utilize state-of-the-art computer hardware and software. IOC depots, arsenals, and ammunition plants have on-site laboratory and testing facilities. Having developers and designers work closely with manufacturers creates a synergy that results in innovative, workable solutions.

Demilitarization/Disposal

— The IOC operates demil, disposal, and recycling facilities that are state-of-the-art. The disposal systems are safe and environmentally sound. More and more emphasis is placed on resource recovery and recycling rather than on

open burning, detonation, or throw-away. The facilities can demil missiles, ammunition, propellants, explosives, and pyrotechnics. Processes used include incineration, neutralization, solvent recovery, wash out/steam out, flash burn, open burn, deactivation furnace, and underground detonation. Literally tons of ammunition are safely and efficiently demilitarized each year.

Environmental Stress

Screening — IOC has the largest such testing facility in the Department of Defense. The facility consists of 12 temperature chambers and five vibration tables. Each chamber has a 48 cubic foot capacity and can undergo temperature changes of up to 20 °C (Centigrade) per minute, within the range of -73 to 173 °C. The vibration tables are capable of 6000 force pounds for a bandwidth of 20 to 2000hz.

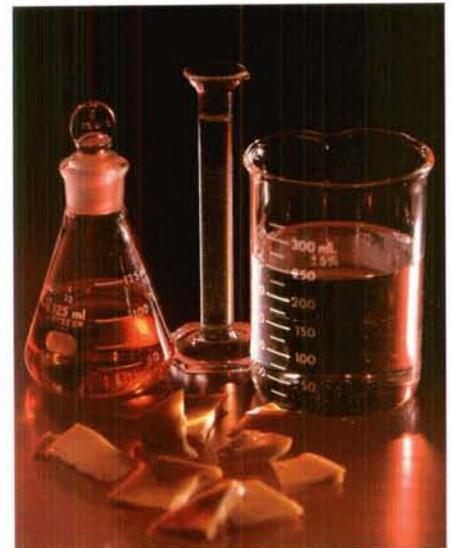
Testing — IOC facilities can perform destructive and nondestructive chemical and physical tests. Facilities have X-ray, magnetic particle, liquid penetrant, ultrasonic, and eddy current equipment. X-ray capabilities include penetration to 15 inches in steel and real-time imaging. IOC possesses the world's largest facility dedicated solely to nondestructive testing. The facility can efficiently radiographically inspect components and finished ammunition ranging in size from small fuzes to 8-inch projectiles and Patriot missile warheads.

Ground Radio Testing

— IOC has the only DoD test facilities to repair and test microwave communications equipment. Literally tons of ammunition are safely and efficiently demilitarized each year.



Loading tray for flashing furnace

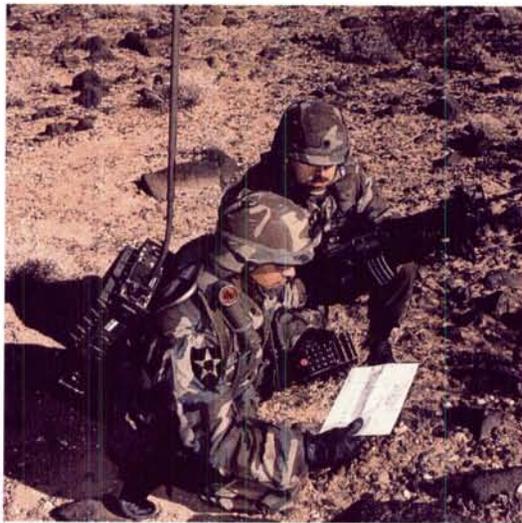


Research and development

FACING PAGE: Maintaining worldwide communications

IOC facilities support the following products:

- Aircraft Bombs
- Armored Recovery, Construction and Bridging Equipment
- Artillery Systems
- Chemical Defensive Equipment
- Communications and Electronics Systems
- Electro-Optics/Night Vision
- FASCAM, Artillery-ICM Ammunition
- 40mm Grenades, Tank Ammo, Fuzes, Mortars
- Helicopter and Associated Aeronautical Equipment
- Inland Petroleum Distribution Systems and Water Support Systems
- Light Armored Vehicles
- Navy Gun Ammunition
- RDX/HMX Explosives, Propellants (Solventless, Solvent, Single/Double Base)
- Satellite Communication Systems
- Small Arms
- Small Caliber Ammunition
- Smoke, Pyrotechnics
- Tactical Missile Systems/Warheads
- Tanks/Gun Tubes
- Test Program Sets
- Vehicle and Generator Engines



WORLDWIDE TROOP SUPPORT

Prepared to support troops, whatever the mission

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

Conflict Planning Strategy

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

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

Other Military Contingencies

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

Peacetime

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

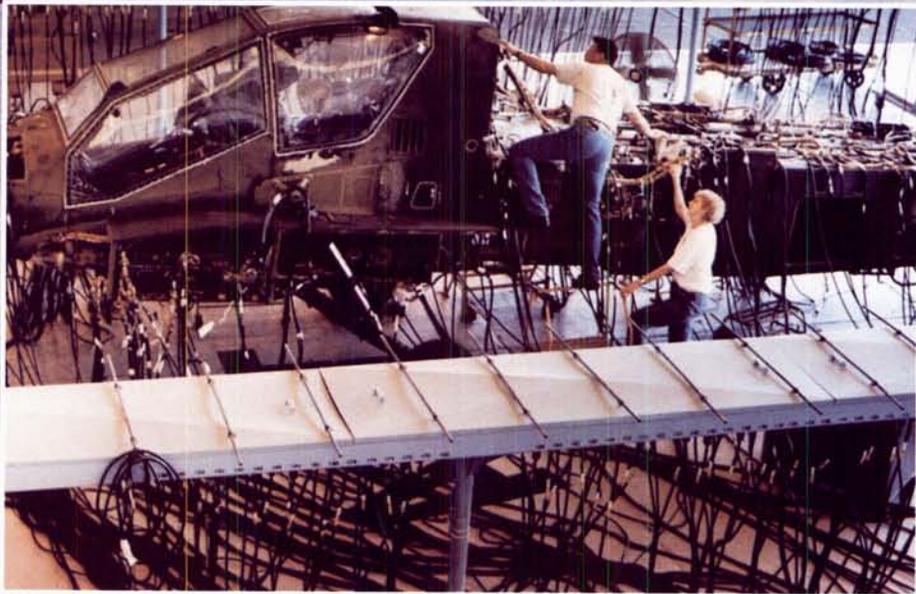


Shipping materiel for quick response



Bradley maintenance

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



"... the ability to rapidly project a ready force ..."

SPECIAL DEFENSE MISSIONS

Single Manager for Conventional Ammunition (SMCA)

The IOC is the Department of Defense's SMCA. IOC manages conventional ammunition and related items from cradle to grave for all of the services. The command works closely with research and development agencies to assure that what is being developed will be compatible with items already in the inventory and supportable within the present system. A national inventory control point manages the Army's worldwide stockpile of conventional ammunition as well as the wholesale inventory for all services. The stockpile is stored at depots and other facilities in safe and secure magazines and igloos. The national maintenance point manages demilitarization programs and oversees efforts to upgrade ammunition already in the inventory. When ammunition deteriorates or becomes obsolete or excess, it is disposed of under the management of the

national maintenance point. The Conventional Ammunition Demilitarization Contracting Team within SMCA serves as a one-stop center for execution of the demilitarization program. Supplying (or shipping) ammunition from production and storage sites to the troop front lines is another part of SMCA's mission.

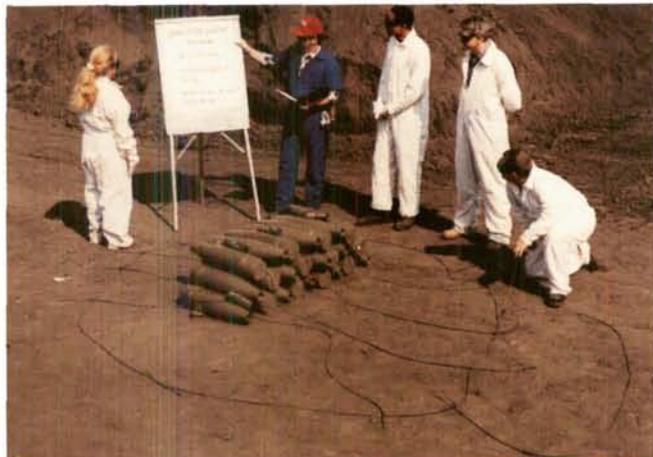
U.S. Army Defense Ammunition Center and School (USADACS)

Under the auspices of the IOC, USADACS manages six major mission areas --- technical training, logistics engineering, explosives safety, demilitarization technology, technical reviews and assistance, and career program management for civilian and military personnel involved in the business of ammunition logistics. The USADACS' Ammunition School trains Department of Defense military and civilian, and allied, students in logistics, explosives safety, and the entire gamut of Army and Joint Services ammunition items.

USADACS logistics engineers design, prototype, and field Ammunition Peculiar Equipment, validate procedures and equipment, and provide instrumentation support on-site. The Department of the Army Technical Center for Explosives Safety at USADACS provides explosives and chemical agent safety technical information and assistance to support DA headquarters, major commands, and the safety community Army-wide. Through its Demil Technology Office, USADACS manages demilitarization research and development initiatives for DA conventional ammunition and Joint Services large rocket motors. Working with Department of Energy and the Services, USADACS focuses on resource recovery, recycling and developing environmentally-acceptable alternatives. The Quality Assurance Specialist (Ammunition Surveillance) and Ammunition Management Career Programs are both managed for DA by ammunition experts at USADACS.



Demil of bombs using steam-out procedure



Students learn demilitarization operations on the USADACS demolition range

FACING PAGE: Propellant

IOC CAPABILITY STATISTICS

The IOC...

- produces gun mounts, assembles howitzers, prepares tool kits, and develops prototypes for advanced engineering models.

- supports power projection by the three largest Operational Project Stocks in the Army: the Island Petroleum Distribution System, the Water Support System, and the Force Provider.

- produces tank and artillery cannons, guided munitions, and Naval drive shafting.

- is capable of producing pyrotechnics and smoke munitions; including colored smoke, irritants, incendiaries, red phosphorus, white phosphorus, and HC.

- has the capability to both produce fuzes, primers, delay plungers, delay elements, boosters, CBU dispensers, and demolition kits and to rework/renovate various items.

- has a 6 million electron volt X-ray facility.

- provides full service life cycle support for over 500 DoD C-E systems ranging from hand-held radios to advanced satellite communications systems.

- has the capability to produce such diverse items as detonators weighing 20 grams to 40,000 pound cast shock charges.

- has the prime Load, Assemble and Pack (LAP) plant for 120mm tank ammunition, warheads, demolition charges, and high explosive artillery.

- has a unique incinerator complex with the capability to effectively incinerate and dispose of defective chemicals, metals, explosive materials, wood, cardboard, and out-dated medical supplies.

- has the premier Western Area Demilitarization Facility using environmentally sound procedures.

- manufactures over seventy formulations of RDX and HMX-based explosives, TATB and non-explosive products such as composition D-2.

- is involved in adopting new ways to do business. Examples include Paladin Enterprise, Labor-Management Partnership, and QUADTEC.

- provides interservice helicopter repair and overhaul services to a broad customer range including Navy, Marines, Air Force, Reserve Units, foreign governments, and State and Federal Government agencies.

- has the Army's only roadwheel and track shoe rebuild and manufacturing facility, which has overhauled more than 2,000,000 track shoes and 500,000 roadwheels, with a savings of more than \$96,000,000.

- is the sole source supplier of M77 Grenades for the Multiple Launch Rocket System (MLRS) Program.

For facility and capability information contact the:

**Business
Development Team**
1-800-IOC MAKE
(1-800 462-6253)
309 782-3681
DSN 793-3681

**Headquarters
Industrial Operations Command**

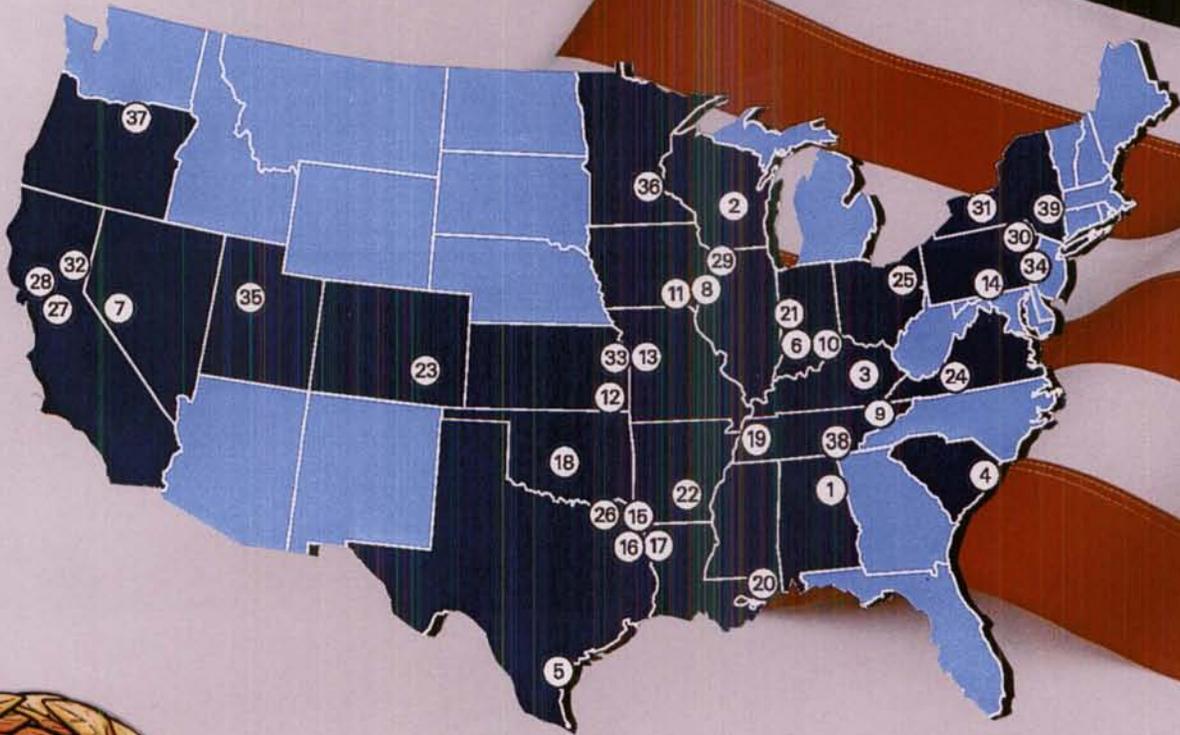
Rock Island, IL 61299-6000

For general information contact:

External Affairs
309 782-5421
DSN 793-5421

- | | |
|-----------------------------------------------------------|------------------------------------|
| 1. Anniston Army Depot | 23. Pueblo Army Depot Activity |
| 2. Badger AAP | 24. Radford AAP |
| 3. Blue Grass Army Depot | 25. Ravenna AAP |
| 4. Charleston/U.S. Army Strategic Mobility Logistics Base | 26. Red River Army Depot |
| 5. Corpus Christi Army Depot | 27. Riverbank AAP |
| 6. Crane AAA | 8. Rock Island Arsenal |
| 7. Hawthorne Army Depot | 28. Sacramento Army Depot Activity |
| 8. HQ IOC | 29. Savanna/USADACS |
| 9. Holston AAP | 30. Scranton AAP |
| 10. Indiana AAP | 31. Seneca Army Depot Activity |
| 11. Iowa AAP | 32. Sierra Army Depot |
| 12. Kansas AAP | 33. Sunflower AAP |
| 13. Lake City AAP | 34. Tobyhanna Army Depot |
| 14. Letterkenny Army Depot | 35. Tooele Army Depot |
| 15. Lone Star AAP | 36. Twin Cities AAP |
| 16. Longhorn AAP | 37. Umatilla Army Depot Activity |
| 17. Louisiana AAP | 38. Volunteer AAP |
| 18. McAlester AAP | 39. Watervliet Arsenal |
| 19. Milan AAP | |
| 20. Mississippi AAP | |
| 21. Newport AAP | |
| 22. Pine Bluff Arsenal | |

Support Activity
Far East, Korea
 Army Depot Activities
Pisa, Italy
Hythe, England



Document Separator

NAVAL SEA SYSTEMS COMMAND

NSWC

Naval Surface Warfare Center

CRANE DIVISION

Status of BRAC Implementation



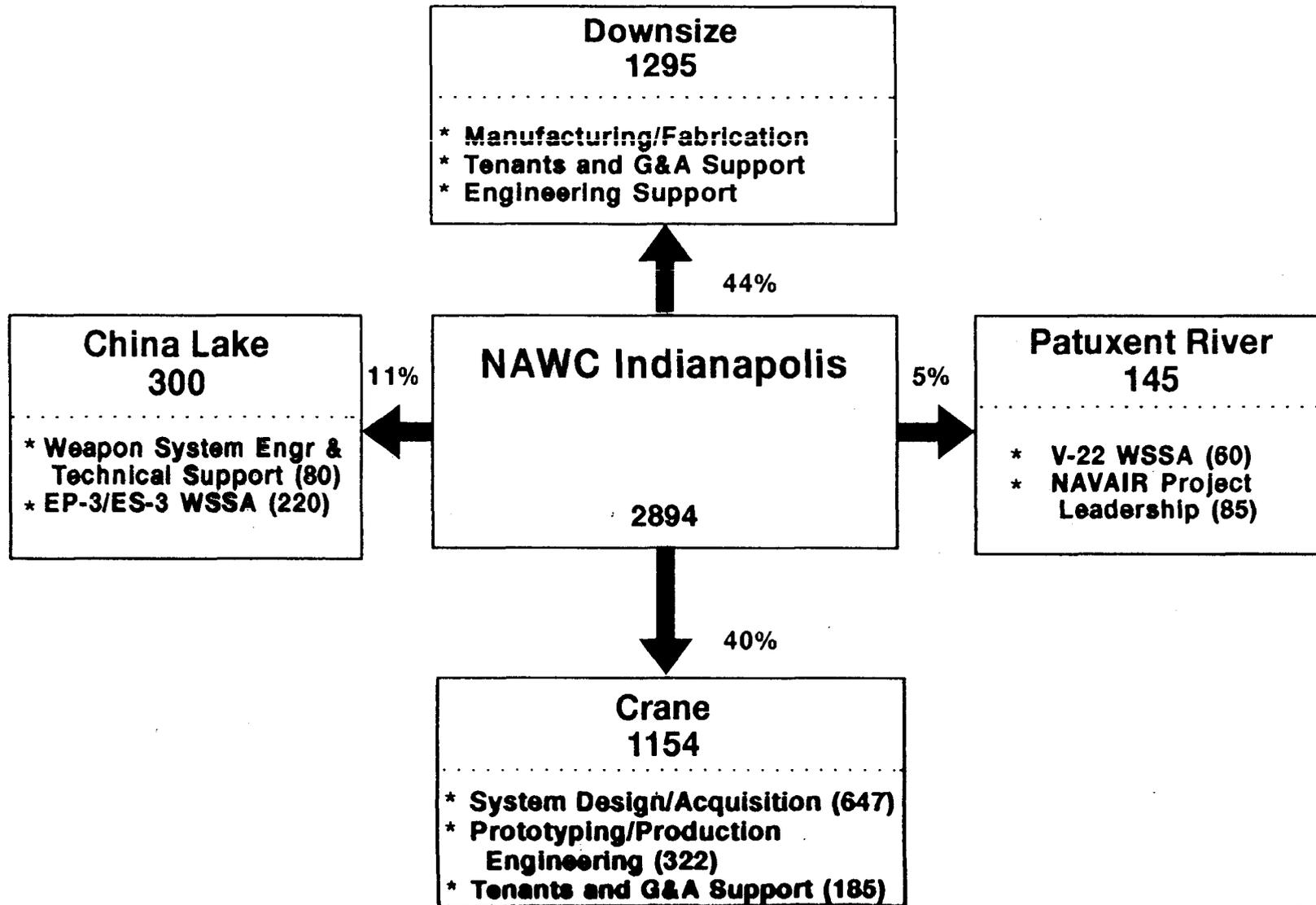
3 APRIL 1995

Crane
3/17

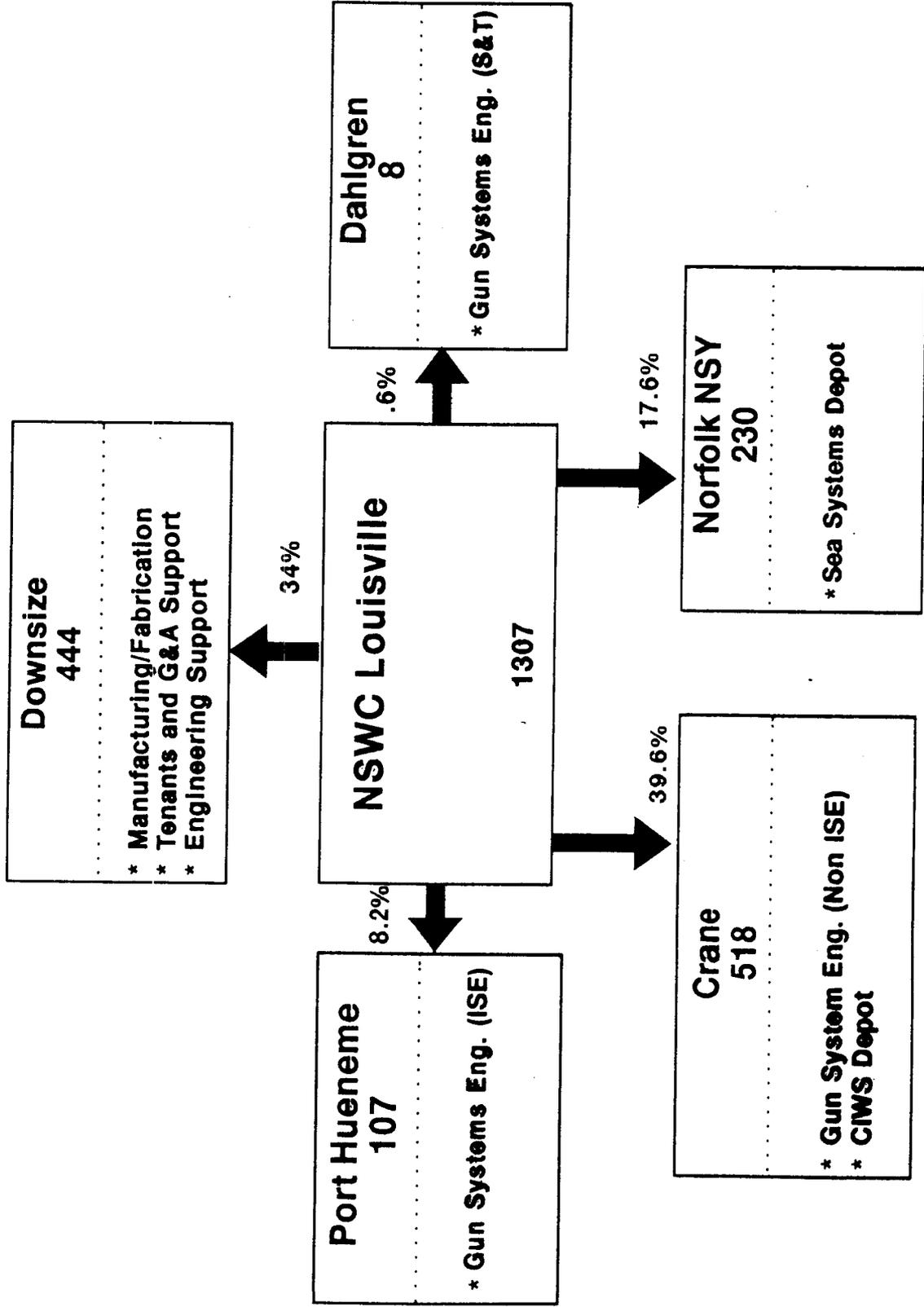
PRESIDENTS BUDGET END STRENGTH

	<u>94</u>	<u>2/95</u>	<u>95</u>	<u>96</u>	<u>97</u>	<u>98</u>
CRANE	3,547	3,485	3,286	3,082	3,043	2,792
LOUISVILLE	1,994	1,828	1,591	1,490	1,470	1,298
TOTAL	5,541	5,313	4,877	4,572	4,513	4,090
<i>BRAC Elimination</i>					-444	-444
<i>BRAC Transfer Out</i>					-345	-345
<i>Indianapolis BRAC Transfer In</i>					+1,154	+1,154
TOTAL					<u>4,878</u>	<u>4,455</u>

BSEC APPROVAL SCENARIO



BSEC APPROVAL SCENARIO



TECH CENTERS/LABORATORIES

* 65 Activities Considered

- 19 Activities Recommended for Closure/Realignment:

<u>Activity</u>	<u>Cost</u>	<u>Save</u>	<u>ROI Yr.</u>	<u>SS Savings</u>	<u>20 Yr Savings</u>
NAESU	\$2.5M	\$4K	1 Yr	\$2.5M	\$29.5M
NATSF	\$5.7M	\$2K	3 Yrs	\$2.2M	\$22.7M
NAWC Oreland	\$50K	0	3 Yrs	\$15K	\$175K
NUWC New London	\$23.4M	\$5.3M	3 Yrs	\$8.1M	\$91.3M
NRL Orlando	\$8.4M	0	3 Yrs	\$2.8M	\$30.1M
NBDL New Orleans	\$0.6M	\$3K	Immed.	\$2.9M	\$41.8M
NPRDC	\$7.9M	\$9K	4 Yrs	\$1.9M	\$15.0M
NAVMASSO	\$2.2M	0	1 Yr	\$2.7M	\$34.9M
NISE West San Diego	\$1.8M	0	Immed.	\$4.3M	\$60.0M
NAMRI	\$3.4M	\$38K	1 Yr	\$9.6M	\$111.1M
Warminster	\$8.3M	\$5.6M	Immed.	\$7.6M	\$104.8M
NSWC White Oak	\$2.9M	\$2.5M	Immed.	\$6.0M	\$85.9M
NSWC Annapolis	\$25.0M	0	1 Yr	\$14.5M	\$175.1M
NISE East Norfolk	\$4.6M	0	3 Yrs	\$2.1M	\$20.4M
Indianapolis/Louisville	\$193.3M	\$0.1M	2 Yrs	\$71.2M	\$657.7M
NWAD Corona	\$76.0M	\$3K	3 Yrs	\$21.3M	\$178.4M
NHRC San Diego	\$6.2M	\$0.7M	4 Yrs	\$1.4M	\$11.6M
NAWC Lakehurst	\$99.6M	\$1.6M	3 Yrs	\$37.2M	\$357.0M
TOTAL	\$471.6M	\$15.8M		\$198.2M	\$2.0B

- Site Technical Workyears Eliminated: 15,499

- Site Technical Workyears Remaining: 41,484

SCENARIO LISTING

SCENARIO NUMBER	DESCRIPTION																											
Indianapolis/ Louisville	Close Indianapolis and move to Louisville																											
Indianapolis/Crane	Close Indianapolis and move to Crane																											
Indianapolis/Crane Alternative	Close Indianapolis and move to Crane, Pax River, China Lake																											
3-20-020-028	Close Louisville and move to Crane (Assume that Indianapolis is also closed and transferred to Crane)																											
3-20-0202-034	Close Crane																											
3-20-0188-037	Close Glendora																											
2-14-0114-012/ 2-14-0117-013	Realign Depot from Crane and Louisville to Norfolk NSY and close Louisville																											
2-14-0114-012A (C)	Realign Depot and associated engineering from Crane to Norfolk Naval Shipyard																											
2-14-0114-012A (L)	Realign CIWS depot to Crane																											
3-20-202-091	RELOCATE CRANE DEPOT WORKLOAD Avionics/Elec to NADEP North Island Tactical Missiles to ALC Ogden EO/NV to NSY Puget Sound Sea/Weapons Systems to NSY Norfolk																											
3-20-0195-092	RELOCATE LOUISVILLE DEPOT WORKLOAD Realign Sea Systems-Weapons depot to NSY Norfolk																											
<u>GAINING BASE:</u> - # ?? 2-14-0114-081 2-14-0115-086 2-14-0116-088 2-14-0118-090 3-20-0212-039 AF#11 J23	<table border="0"> <thead> <tr> <th>TYPE</th> <th>LOSING BASE</th> <th>WKYRS</th> </tr> </thead> <tbody> <tr> <td>NOMIS</td> <td>Indian Head</td> <td>(10 wkys)</td> </tr> <tr> <td>RADAR</td> <td>LONG BEACH</td> <td>(15 wkys)</td> </tr> <tr> <td>RADAR</td> <td>NORFOLK</td> <td>(2 wkys)</td> </tr> <tr> <td>RADAR</td> <td>PEARL HARBOR</td> <td>(2 wkys)</td> </tr> <tr> <td>NV/EO</td> <td>PUGET SOUND</td> <td>(1 wkys)</td> </tr> <tr> <td>GAGE LAB</td> <td>CORONA</td> <td>(183 wkys)</td> </tr> <tr> <td>NV/EO</td> <td>McCLEALLAN AFB</td> <td>(67 wkys)</td> </tr> <tr> <td>PYRO</td> <td>PICATINNY ARMY</td> <td>(18 wkys)</td> </tr> </tbody> </table>	TYPE	LOSING BASE	WKYRS	NOMIS	Indian Head	(10 wkys)	RADAR	LONG BEACH	(15 wkys)	RADAR	NORFOLK	(2 wkys)	RADAR	PEARL HARBOR	(2 wkys)	NV/EO	PUGET SOUND	(1 wkys)	GAGE LAB	CORONA	(183 wkys)	NV/EO	McCLEALLAN AFB	(67 wkys)	PYRO	PICATINNY ARMY	(18 wkys)
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**CRANE DIVISION
NAVAL SURFACE WARFARE CENTER
BRIEFING BOOK**



Prepared for:

MR. LARRY JACKSON

7 April 1995

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NAVAL SURFACE WARFARE CENTER
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ACOUSTIC SENSOR TEST

Crane Division operates a complex of hydroacoustic test facilities which simulate the ocean environment and evaluate the performance of acoustic products including sonar transducers and hydrophones, sonobuoys, acoustic countermeasure devices, hull coatings, test range transducers and torpedo acoustic guidance systems. Crane also provides engineering, production and repair support in addition to test services on these and related products and systems.

The Glendora Lake test facility is a 364 acre area solely owned and controlled by the Navy. Free field hydroacoustic measurements are conducted in water depths exceeding 100 feet. Very low ambient noise levels along with a half-mile tow range allow for mechanical noise testing under various current and sea state conditions. An isolated small lake is available for high power testing.

Three acoustic tank facilities provide hydroacoustic measurements at simulated depths to 5770 feet over the range of ocean water temperatures and at frequencies from 900 to 350,000 Hz.

Low frequency test facilities provide for hydroacoustic measurements from 5 to 2000 Hz over the range of ocean water temperatures and depths.

Several hydrostatic tanks are available to verify product and cable watertight integrity to simulated depths of 4600 feet.

These capabilities are used to test in-house and commercial products, evaluate in-house prototype or small quantity production of products supplied to the Fleet, or used to evaluate the development of procurement documentation for competition.

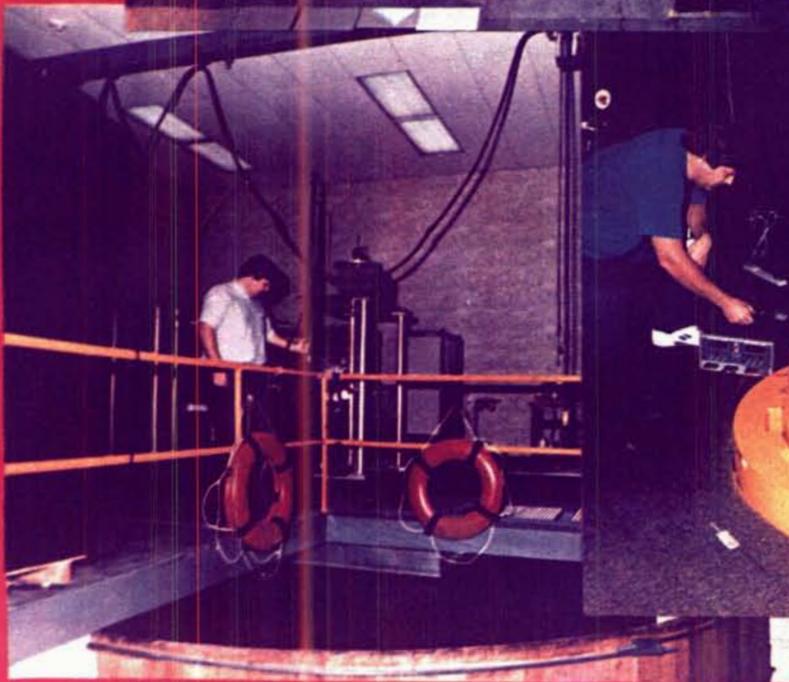
ACOUSTIC SENSORS TEST



ANECHOIC TEST FACILITY



TEST AND EVALUATION
DOCUMENTATION
DESIGN VERIFICATION



HYDROSTATIC TEST FACILITY



AN 500-170 P/N: 100-100-100 SERIAL: 100-100-100	AN 500-170 P/N: 100-100-100 SERIAL: 100-100-100	AN 500-170 P/N: 100-100-100 SERIAL: 100-100-100	AN 500-170 P/N: 100-100-100 SERIAL: 100-100-100	AN 500-170 P/N: 100-100-100 SERIAL: 100-100-100
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-16-	-13-	-9-	-14-	-12-

SURFACE MISSILE SYSTEMS (SMS) LAUNCHERS

SMS Launchers supported by NSWC Crane Division include the Mk 5 Terrier; Mk 13, and Mk 26 Tartar; Mk 112 ASROC; Mk 32 SVTT; Mk 44 ABL Missile Launchers and the Mk 36 Decoy Launcher.

Manufacture, assemble, overhaul, repair, renovate, alter and modify SMS Launchers and components.

Proof, test and evaluate combat subsystems, equipments and components related to SMS launchers.

Maintain a technology base of facilities, equipment and skilled and experienced personnel in the area of SMS launchers and the Mk 36 decoy launcher, to execute the industrial mobilization plan.

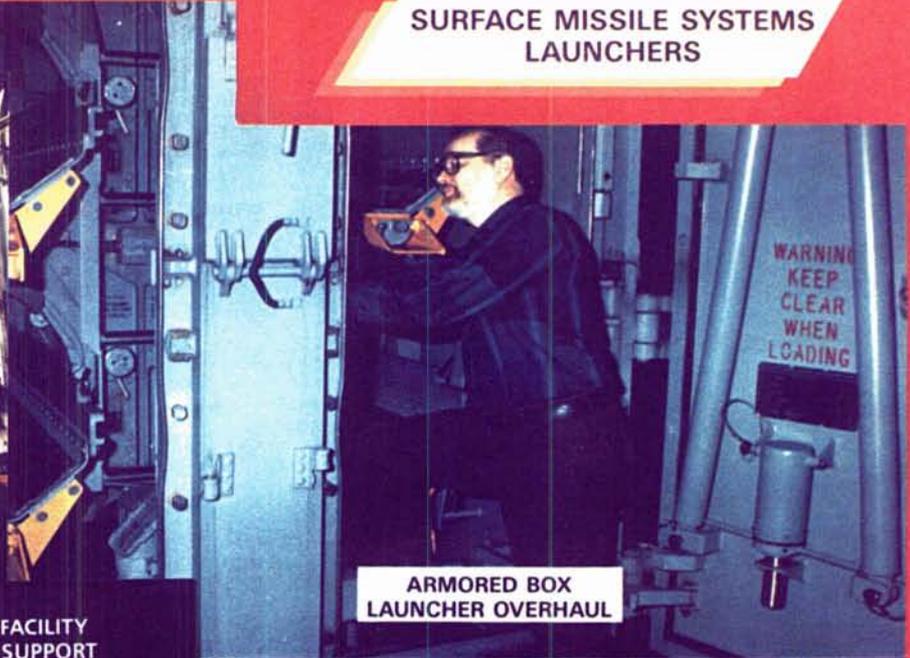
Performs engineering functions in support of the Mk 34, Mk 36 and Mk 50 Decoy Systems. Acts as In-Service Engineering Agent, Acquisition Engineering Agent and Design Agent for these systems.

**SURFACE MISSILE SYSTEMS
LAUNCHERS**



**TERRIER LAUNCHER
TEST STAND**

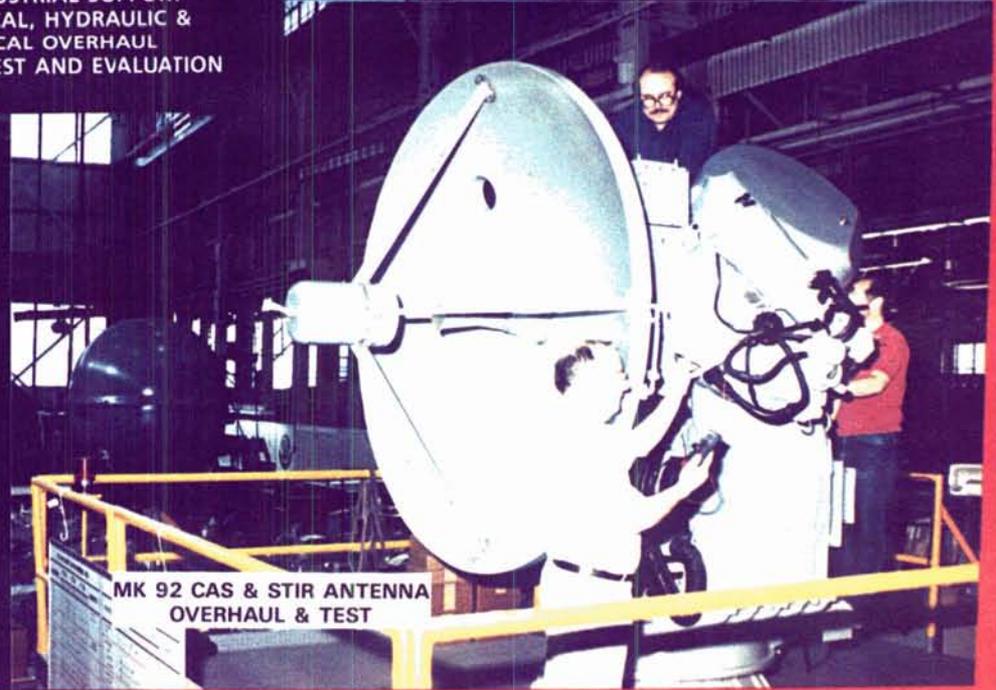
- DEPOT OVERHAUL FACILITY
- FLEET INDUSTRIAL SUPPORT
- MECHANICAL, HYDRAULIC & ELECTRICAL OVERHAUL
- SYSTEM TEST AND EVALUATION



**ARMORED BOX
LAUNCHER OVERHAUL**



**TERRIER TEST STAND
CONTROL ROOM**



**MK 92 CAS & STIR ANTENNA
OVERHAUL & TEST**

SMALL ARMS

The Division provides design, development, acquisition, test, and evaluation of small arms, weapons, night vision devices, laser range finders, laser markers, and individual combat equipment in support of special operations forces. Specialized test facilities and equipment include:

A 1000-yard outdoor test range for pressure/velocity testing, accuracy evaluation, and functional firing of small arms and small arms ammunition. Scopes, laser devices, and 25mm gun systems are tested here also.

A class 100,000 night vision clean room used to support test, evaluation, and repair of image intensifier tubes, lasers, and various electro-optic devices and chemical agent detectors.

A unique new 100-meter underground test range for engineering development and evaluation of small arms weapons up to 25mm, which includes a controlled environment for ballistic testing of small arms ammunition and controlled illumination for test and evaluation of night vision devices and laser devices.

These facilities are used to support development, transition to production, and procurement of a wide variety of small arms weapons systems. The facilities also support in-house development and overhaul programs of small arms and night vision devices.

These comprehensive facilities, combined with in-depth engineering and technical expertise in the same location, make Crane Division a truly world-class weapons engineering resource.



WEAPONS



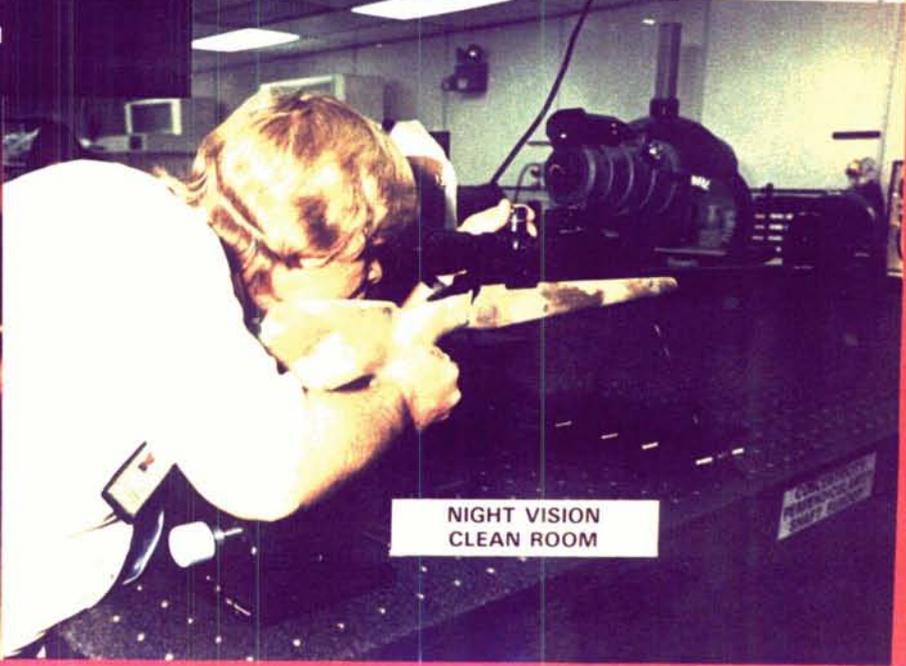
SMALL ARMS

OUTDOOR TEST RANGE

- DEVELOPMENT
- PROTOTYPES
- DESIGN VALIDATION
- REPAIR SUPPORT



UNDERGROUND 100 METER RANGE



NIGHT VISION CLEAN ROOM

MICROELECTRONIC TECHNOLOGY

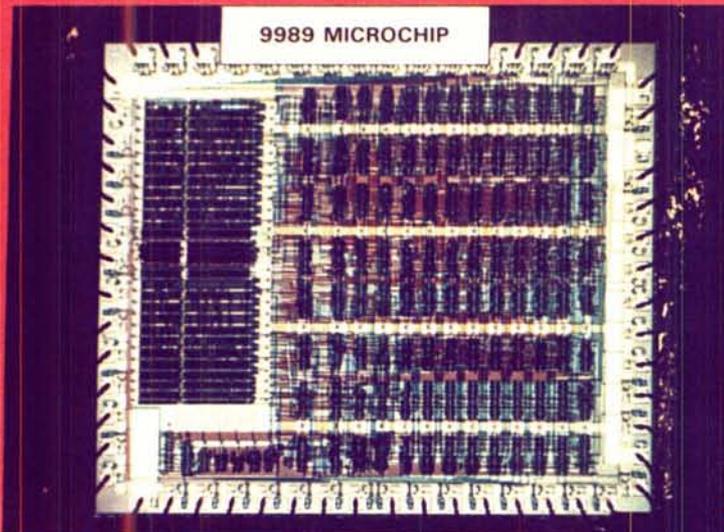
NSWC Crane Division has some of the most comprehensive failure analysis and material analysis facilities in the world. Selected examples of these capabilities shown here include:

The linear accelerator which provides pulsed gamma radiation with a dose rate up to 1×10^{13} rads (si/sec) and 25 channels of data acquisition. This system provides the highest dose rate within DOD. This capability is used for design verification and transition to production of radiation hardened components intended for use in strategic systems. In addition, the capability is used to evaluate production radiation hardened parts and to monitor production processes used to manufacture those parts.

Thermal management expertise is provided to assure high reliability of BSY-1 and BSY-2 systems. The thermal imaging system is used to analyze contractor's electronics cabinets and circuit cards for BSY-1 and BSY-2.

A scanning auger capable of determining surface composition and elemental distribution in solid materials containing elements with an atomic number greater than 3 in concentration greater than 1%. This capability is used for electronic and ordnance component construction process and failure analysis.

MICROELECTRONIC TECHNOLOGY



9989 MICROCHIP



LINEAR
ACCELERATOR

- HARDWARE STANDARDIZATION
- MATERIAL ANALYSIS
- RADIATION EFFECTS



SCANNING AUGER

THERMAL IMAGING
SYSTEM

MISSION

"Provide quality and responsive engineering and industrial base support of weapon systems, subsystems, equipments and components as assigned by the Commander, Naval Surface Warfare Center. This includes full spectrum support to our customers with principal emphasis on excellence in: Electronic Warfare, Gun and Gun Fire Control Systems, Microelectronic Technology, Electronic Module Test and Repair, Microwave Components, Electrochemical Power Systems, Acoustic Sensors Test, Surface Missile Systems Launchers, Small Arms, Conventional Ammunition Engineering, Pyrotechnics, Mechanical Devices, Management and Distribution of Naval Drawings, and Physical Security, Night Vision/Electro-Optics, and Radar Engineering and Industrial Support."



The Crane Division of the Naval Surface Warfare Center is a consolidation of the previous Naval Weapons Support Center Crane and the Naval Ordnance Station Louisville. It combines the expertise and assets of both facilities into an integrated command supporting the development, production, evaluation, installation, and maintenance of electronic and mechanical products integral to combat and weapon systems. Crane Division is one of five Divisions comprising the Naval Surface Warfare Center with full spectrum research, development, acquisition, test and evaluation, and support capability for surface warfare combat and weapon systems and hull, mechanical, and electrical systems. The Crane Division employs approximately 5,380 persons in Southern Indiana and the Louisville, Kentucky, area. It operates as a Defense Business Operations Fund Command, receiving no directly appropriated funds for its operations. The Command's existence depends upon its ability to efficiently and effectively provide essential services and products to its customers.

HISTORY

Crane Site, Crane Division, Naval Surface Warfare Center

Commissioned in 1941 as Naval Ammunition

Depot, Burns City, Crane was one of four inland activities constructed to load, store and issue ammunition to the Fleet. The site was chosen because it permitted storage and production of large quantities of ammunition without endangering populated areas. It was centered on 34,000 acres that had been cleared by the WPA in the late 1930s for development of a state forest. Approximately 30,000 additional acres were purchased by the Navy from private owners to complete the facility. In 1943, the name was changed to NAD Crane in honor of Commodore William Montgomery Crane, the first chief of the Navy's Bureau of Ordnance. The name changed again in 1975, to Naval Weapons Support Center, to reflect the facility's growing involvement in high-technology weapons systems.

In 1977, it was decided by the Secretary of Defense to combine all conventional ammunition acquisition under the responsibility of a single service. The ammunition production and storage function was passed to the Army, and the Crane Army Ammunition Activity was established as a Crane tenant to accomplish this task for Naval ammunition.

Today, Crane serves a modern and sophisticated Navy as a recognized leader in diverse and highly technical product lines, such as microwave devices, acoustic sensors, small arms, microelectronic technology, and more.

The pride and professionalism of Crane's workforce have significantly benefitted the Navy and the taxpayer through better products at lower cost. Crane stands as an industrial leader in providing better methods and technology in the production of modern naval combat weapons systems.

Crane has enhanced its potential to serve the Navy well into the future by such actions as recruiting and training the very best personnel, acquiring state of the art equipment and facilities, and development of modern management practices. In addition, significant advances have been made in developing and broadening of associated private sector capabilities which will provide a strong technological base to meet emerging national defense requirements.

Crane, one of the region's largest employers, is proud of its fifty-year history of service to the Fleet, the nation, and southern Indiana.

Louisville Site, Crane Division, Naval Surface Warfare Center

Naval Ordnance Station Louisville was officially commissioned by the Navy on October 1, 1941 to produce ordnance material and munitions in response to the expanding war in Europe and the South Pacific. Actual construction of the Station had begun in January 1941 with the first production beginning just six months later in July.

Louisville was selected from more than 200 other sites as the location of the new facility because of the city's access to transportation, labor, and raw materials. An earlier decision had determined that the new facility would be located inland away from possible enemy attack.

Established as the Naval Ordnance Plant Louisville, the Station was initially operated by

Westinghouse Electric Company. During its peak wartime operation, Naval Ordnance Station Louisville had 4,480 employees and produced high numbers of gun mounts, barrels, and parts, as well as minor caliber projectiles.

On February 25, 1946, the contract with Westinghouse ended and the Station became Navy-operated, as well as Navy-owned--the same structure in effect today.

During the post-war period, employment declined. By early 1950, the Station had been placed on standby and the workforce had decreased to only 100 personnel.

As a result of the Korean conflict, the Station was re-activated in 1950 and quickly became the major naval facility it is today. The Station's name was changed from Naval Ordnance Plant Louisville to Naval Ordnance Station Louisville in 1966.

In 1980, Naval Ordnance Station Louisville was designated the Overhaul and Repair Facility for the Phalanx Close-In Weapon System. The first overhauls of Phalanx systems began in fiscal year 1986.

Today, the Station is a unique industrial facility providing major overhaul and engineering support for naval gun and missile launching systems. It also manufactures gun barrels, missile hardware, and a wide variety of parts. The Station is the Navy's center for producing small weapon system parts using Flexible Computer Integrated Manufacturing (FCIM) technologies and methods.

Naval Ordnance Station is the Louisville area's fourth largest industrial employer. The Station and its employees contribute heavily to the economy and quality of life in the Kentuckiana community.

TECHNICAL CAPABILITES

The concept of Product Areas and Technical Capabilities to support them is the keystone in the evolving strategic architecture of the Naval Surface Warfare Center. They tie back, at the highest level, to the approved Leadership Areas. Product Areas identify major products for which the Naval Surface Warfare Center has technical capabilities and which, in the aggregate, constitute the Centers of Excellence for the Surface Warfare.

The Naval Surface Warfare Center defines it's technical capability as the blending of intellectual and physical assets provided by a cadre of technical people with knowledge, skill, experience, and requisite facilities and equipment that yield the ability to deliver technical products. This technical capability enables the accomplishment of Naval Surface Warfare Center key mission elements, particularly in the case of value judgements affecting technological superiority. The core technical capabilities are the raison of d'etre of each Division.

The 17 Technical Capabilities are comprised of 100 projects at the Crane site which are made up approximately 1,200 task assignments, and 60 projects at the Louisville site which are made up of approximately 250 task assignments.

TECHNICAL CAPABILITIES

- * **Electronic Warfare**
- * **Gun and Gun Fire Control Systems**
- * **Microelectronic Technology**
- * **Electronic Module Test and Repair**
- * **Microwave Components**
- * **Electrochemical Power Systems**
- * **Acoustic Sensors Test**
- * **Surface Missile Systems Launchers**
- * **Small Arms**
- * **Conventional Ammunition Engineering**
- * **Pyrotechnics**
- * **Mechanical Devices**
- * **Management and Distribution of Naval Drawings**
- * **Physical Security**
- * **Night Vision/Electro-Optics**
- * **Mine Countermeasures**
- * **Radar Engineering and Industrial Support**

THE NAVAL SURFACE CENTER PRODUCT AREAS

- **SHIPS AND SHIP SYSTEMS**
- **SURFACE SHIP COMBAT SYSTEMS**
- **LITTORAL WARFARE SYSTEMS**
- **NAVY STRATEGIC WEAPON SYSTEMS**
- **ORDNANCE**

Special Assets/Capabilities. The following assets and capabilities are located in Crane Division's Centers of Excellence:

Technical Capabilities

SPECIAL ASSETS/CAPABILITIES

Electronic Warfare

- Electronic Warfare Engineering and Repair Facility
- Corrosion Control Facility

Gun and Gun Fire Control Systems

- Gun and Gun Fire Control Engineering, Overhaul and Repair Facilities
- Electronics Lab and Systems Integration Test Facility
- Gun Weapon Systems Technology R&D Management
- Gun Weapon Systems Corrosion Control Program Management

Microelectronic Technology

- Gun Mount Engineering Test Stands
- World Class, Failure Analysis Facility
- Open Computer Systems Engineering Facility
- Commercial Technologies Evaluation & Integration Capability
- Prototype Printed Circuit Board Fabrication Facility

Microwave Components

- Microwave Tube and Components Engineering and Repair Facility
- Microwave Antenna Test Facility
- Night Vision Electro-Optics Engineering and Repair Facility

Technical Capabilities

Electrochemical Power Systems

Acoustic Sensors Test

Surface Missile Systems Launchers

Small Arms

SPECIAL ASSETS/CAPABILITIES

- Complete Electrochemical Power Systems Test Facility with Associated Material Analysis, Environmental and Specialized Lithium Battery Safety Test Capabilities

- Hydroacoustic Test Facility

- Sonobuoy Test Engineering/Evaluation Complex

- Acoustic Systems Engineering/Depot Maintenance Facility

- Acoustic Countermeasures Repair

- Sensor Depot Facility

- Towed Array Handlers

- Depot Maintenance Facility for Surface Missile Systems

- Surface Missile Systems Test Facilities

- Aluminum Honeycomb Panel Repair

- Class A Optical Repair Facility

- Motor Load Test Facility (600 HP)

- FACT PC Wiring Harness Analyzer

- Small Arms Engineering and Overhaul Facility

- Indoor and Outdoor Range

- Small Arms Repair Facility

Technical Capabilities

Small Arms (cont)

Conventional Ammunition Engineering

Pyrotechnics

Mechanical Devices

SPECIAL ASSETS/CAPABILITIES

- Navy Registry for Small Arms
- Classified Computer Facility
- Metal Parts Coating Line
- Arms, Ammunition and Explosives Security
- Active Optical Target Detector Range
- Missile Mobile Test Facility
- Spectroscopy Laboratory
- Combustion Test Chamber
- Photometric Tunnel
- Windstream Facility
- Prototype Pyro Loading and Manufacturing Facility
- Ordnance Material Characterization Laboratory
- Environmental and Radiographic Test Facility
- Ordnance Test Area - 88 Acre Outdoor Range
- Mechanical Devices Engineering, Overhaul, and Repair Facilities
- Pneumatic and Hydraulic Test
- Electro/Mechanical Test
- Design and Analysis

Technical Capabilities

Mechanical Devices (cont)

*Management and Distribution
of
Naval Drawings*

Physical Security

SPECIAL ASSETS/CAPABILITIES

- Prototyping and Pilot Production
- State-of-the-art Metal Plating/Surface Finishing Facility
- Precision Machining (to 1/10,000ths)
- Heat Treating
- Laser Cutting
- Electron Beam Welding
- Fiberglass Forming and Repair
- Epoxy Coating of Precision Machined Parts
- Flame/Plasma Spray
- D.O.D. Optical Storage and Retrieval System for Engineering Drawings (JEDMICS).
- JEDMICS 'Beta' Test Site and and Joint Program Office Engineering Support Activity
- Central Index for Navy Engineering Drawings and Associated Logistics Data (NEDALS)
- Central Order Point for all NAVSEA Engineering Drawings
- Research and Development
- Life Cycle Support for Shipboard Physical Security and Shipboard Nuclear Weapons Security Equipments

Technical Capabilities

Physical Security (cont)

Radar Engineering and Industrial Support

Mine Countermeasures

SPECIAL ASSETS/CAPABILITIES

- Shipboard High Security Locking Systems
- Shipboard Communication Systems
- Shipboard Intrusion Detection Systems
- Alteration-Installation-Teams/Fleet Installation/Field Services
- Ship Mockup/Test Facility
- High Security Locks and Keys
- Software Systems Integration
- Special Weapons Support Equipment
- AA&E Ashore Support Equipment
- Antenna Analysis Facility
- Radar Component Test & Repair Facility
- Shipboard Radar System Test
- In-Service Engineering Facilities
- Software Development/Maintenance Facilities
- Depot Repair Facilities
- Automated Test Systems
- MCM Combat Systems ISEA/Training Facility
- Integrated Logistics Support Systems

CRANE DIV KEY PERSONNEL

<u>Code</u>	<u>Directorate</u>	<u>Name</u>	<u>Phone</u>
A	Commander	CAPT J. (Jeff) Carney	DSN 482-1210 Comm 812-854-1210
ED	Executive Director	D. M. (Dave) Reece	DSN 482-3666 Comm 812-854-3666
AL	Deputy Commander	CAPT J. (Jon) Cummings	DSN 989-5211 Comm 502-364-5211
EDL	Deputy Executive Director	G. G. (Gerry) Grattan	DSN 989-6240 Comm 502-364-6240
B	Executive Officer	CDR B. R. (Barney) Bafford	DSN 482-1411 Comm 812-854-1411
BL	Executive Officer	CDR M. P. (Mike) Hansell	DSN 989-5311 Comm 502-364-5311
05	Management Systems	L. W. (Larry) Weaver	DSN 482-1361 Comm 812-854-1361
06	Employee Services	L. (Lila) Massa	DSN 482-1507 Comm 812-854-1507
09	Public Works	CDR L. A. (Larry) Laws	DSN 482-1344 Comm 812-854-1344
11	Supply	CAPT C. M. Vinson	DSN 482-1122 Comm 812-854-1122
20	Gun Weapons Systems	R. (Russ) Bentley	DSN 989-5159 Comm 502-364-5159
30	Weapons Projects	T. V. (Tom) Barker	DSN 989-5965 Comm 502-364-5965
40	Ordnance Engineering	C. (Chuck) Harden	DSN 482-1282 Comm 812-854-1282
50	Close In Defense	E. (Ed) Givan	DSN 989-5919 Comm 502-364-5919
60	Electronic Development	N. (Nyle) Riegler	DSN 482-1487 Comm 812-854-1487
70	Electronic Maintenance	L. (Larry) Nash	DSN 482-1363, X4002 Comm 812-854-1363, X4002
80	Microwave Systems	W. (Bill) Kaiser	DSN 482-1807 Comm 812-854-1807
90	Mechanical	B. (Bernie) Austin	DSN 989-5965 Comm 502-364-5965

BIOGRAPHY

CAPT JAMES M. CARNEY COMMANDER CRANE DIVISION NAVAL SURFACE WARFARE CENTER

A native of Massachusetts, Captain Carney was born in Boston and raised in North Dartmouth. In 1970, he graduated from the U.S. Naval Academy with a Bachelor of Science Degree.

His First Assignment was as Anti-Submarine Warfare Office aboard the Norfolk Virginia based USS LEARY (DD 879). After only 15 months on board, Captain Carney flected up to Weapons Officer. During this initial tour, he qualified as a Surface Warfare Officer.

Following a short assignment on the staff of the Commandant, Fifth Naval District, Norfolk, Virginia, Captain Carney attended the U. S. Naval Postgraduate School in Monterey, California where he was awarded a Master's Degree in Electrical Engineering in June 1976.

After attending the Department Head Course in Newport, Rhode Island, Captain Carney was assigned to the USS DAVIDSON (FF 1045) as Operations Officer. While serving aboard this pearl Harbor frigate, he received the Pacific Fleet Junior Officer Excellence in Shiphandling Award. Captain Carney's next assignment was as Operations Officer and Chief of Staff on the staff of Commander, Destroyer Squadron 25.

In January 1981, Captain Carney was designated an Engineering Duty Officer and completed his qualifying tour while assigned as the Head, Topside Design and Electromagnetic Effects Division to the Commander, Naval Electronic Systems Command in Washington, D.C. His next assignment was as Combat Systems Maintenance Officer on the staff of the Commander, Naval Surface Force, U.S. Pacific Fleet. Following this tour, he was assigned as the Commanding Officer of the Integrated Combat System Test Facility in San Diego, California. His most recent tour was as the AEGIS Technical Representative in Moorestown, New Jersey. Captain Carney is currently the Commander of the Crane Division, Naval Surface Warfare Center, Crane, Indiana. He is a graduate of Pennsylvania State University's Executive Management Program.

Captain Carney has made deployments to the Caribbean and Mediterranean Seas; Western and Southern Pacific, and Indian Oceans. his personal and unit awards include two Meritorious Service Medals, two Navy Commendation Medals, the Navy Expeditionary Medal and the Sea Service Deployment Ribbon.

Captain Carney is married to the former Kathleen M. Flynn of Warwick, Rhode Island. They reside on Center, Crane, Indiana with their three children, Anne, Jason, and Justin.



BIOGRAPHY

**CAPT JON R. CUMMINGS
DEPUTY COMMANDER
CRANE DIVISION
NAVAL SURFACE WARFARE CENTER**



Captain Jon R. Cummings enlisted in the Navy in 1964. After attending the training schools required for the Navy's Nuclear Propulsion Program, he was a member of the pre-commissioning unit for the USS TRUXTUN (DLGN 35) on which he served until May 1969. He was then selected for the Navy Enlisted Scientific Education Program and attended the University of Missouri, where he received a Bachelor of Science Degree Cum Laude in Meteorology.

On graduation from Officer Candidate School, Captain Cummings served as Gunnery Assistant and Main Propulsion Assistant on USS LYNDE MCCORMICK (DDG 8), and was subsequently transferred to the staff of Commander Cruiser Destroyer Force, U.S. Pacific Fleet, where he was selected as an Engineering Duty Officer. He then was a member of the initial staff of Commander, Naval Surface Force Pacific Fleet, where he served until 1975.

Captain Cummings then attended the Naval Postgraduate School in Monterey, California, where he was awarded a Master's of Science Degree in Physics. His subsequent tours were Ship Repair Facility, Yokosuka, Japan, where he was the USS MIDWAY's (CV 41) Ship Superintendent and Type Desk Officer, and the Regular Overhaul Type Desk Officer; Personal Exchange Officer with the Royal Australian Navy in Canberra; New Construction and Conversion Project Officer, Supervisor of Shipbuilding, San Diego; and Repair Officer on USS ACADIA (AD 42). He then reported to the Supervisor of Shipbuilding, Pascagoula, Mississippi, where he was the Amphibious Ship (LHD) New Construction Program Manager's Representative and Deputy.

Captain Cummings has among his military decorations the Meritorious Service Medal, Navy Commendation Medal, Navy Achievement Medal, Combat Action Ribbon, and Naval Enlisted Good Conduct Medal.

Captain Cummings is married to the former Maureen R. Dye of San Diego. They have two children; Gillian Cummings and Sean Cummings.

BIOGRAPHY

**DAVID M. REECE
EXECUTIVE DIRECTOR
CRANE DIVISION
NAVAL SURFACE WARFARE CENTER**

Mr. David M. Reece, a member of the Senior Executive Service, is the Executive Director of the Crane Division of the Naval Surface Warfare Center at Crane, Indiana.

Mr. Reece was born and grew up in the Panama Canal Zone. He came to the United States in 1958 to attend college at Rose-Hulman Institute of Technology in Terre Haute, Indiana. After graduating with a B.S. in Electrical Engineering, Mr. Reece joined the General Electric Company in Schenectady, New York, until he went on active duty as a platoon leader with the Army Combat Corps of Engineers in Germany. After active duty, Mr. Reece returned to General Electric and worked in GE field service in Indiana, Kentucky, Ohio, and Illinois until he joined Crane as an Electronic Engineer in support of the POSEIDON System in 1966.

During his engineering career with the Navy at Crane, Mr. Reece has become known nationally for his contributions in electronic packaging and standardization. He has written numerous articles that have been published in technical journals and has received several awards in recognition of his technical contributions. He is one of the founders of the Navy's extremely successful Standard Electronic Module Program that has saved millions of dollars while contributing to significantly increased readiness and reliability of user systems.

Mr. Reece has held progressively more responsible engineering management positions while at Crane, and was the founder and Director of the Center's Electronic Development Department. He was assigned as Center Technical Director in June 1985. In January 1992, he became the first Executive Director of the Crane Division of the Naval Surface Warfare Center. He has received numerous awards in recognition of his management contributions, including many outstanding performance ratings and the U.S. Navy Superior Civilian Service Award. He has received a master's degree in Public Administration from Indiana University, and completed several other advanced management and executive programs. Mr. Reece has been recognized with an honorary Doctor of Engineering Degree from Rose-Hulman Institute of Technology for his engineering and engineering leadership.

Mr. Reece is active in many professional organizations, supports several community activities, and serves on the Boards of Visitors for Indiana University School of Public and Environmental Affairs and Indiana University-Purdue University School of Engineering, Boards of Directors for the Navy's Electronics Manufacturing Productivity Facility (EMPF) and the Greene County Economic Development Corporation, and the Boards of Advisors for Rose-Hulman Institute of Technology and Speed Scientific School, University of Louisville.

Mr. Reece and his wife, Nancy, have two sons, Gregory and Andrew, and reside in Bloomington, Indiana.



Biography

GERALD G. GRATTAN
DEPUTY EXECUTIVE DIRECTOR
CRANE DIVISION
NAVAL SURFACE WARFARE CENTER

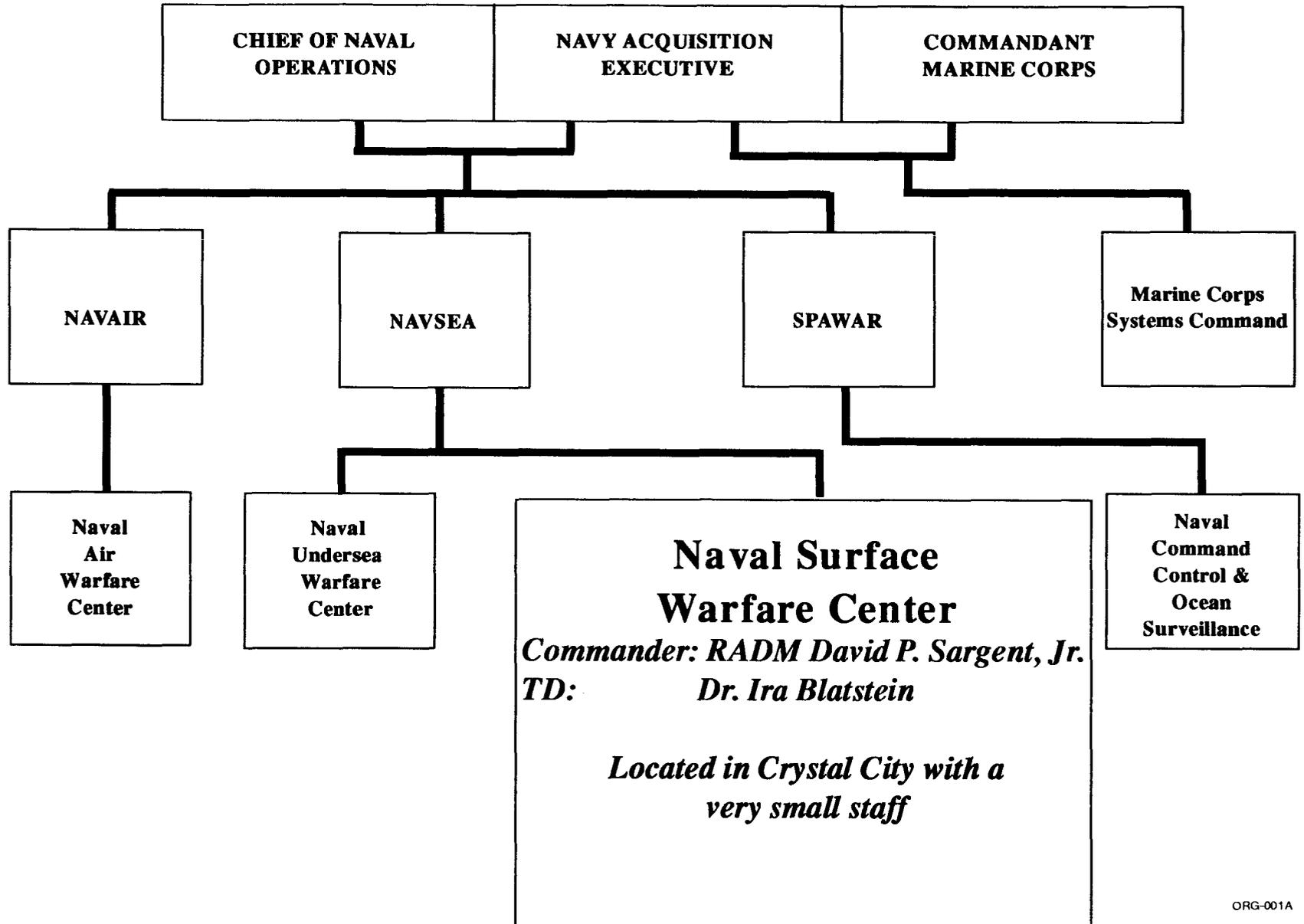
In April 1993, Mr. Grattan became Deputy Executive Director of the Crane Division, Naval Surface Warfare Center.

Mr. Grattan received from the University of Louisville, his Bachelor of Mechanical engineering in 1962, his Master of Engineering in 1973 and a Juris Doctor in 1967.



He was a project Engineer for Design of the MK 25 Mod 2 Torpedo Tube from 1962-1965 and a Project Engineer for applying Glass Reinforced Plastic to Navy use in 1965-1967. Mr. Grattan served on the SSEB for AEGIS in 1968. He was a Project Engineer, for the Lance Missile Conversion Study, Chaffroc from 1971-1972. During the Viet Nam War, Mr. Grattan was the Director of the Intensive Care Unit for Guns. In 1973-1974 he was the Manager of 5"/Mk 42 Gun Branch, GSED Naval Ordnance Station, Louisville. In 1974-1979 he was the Manager of the Major Caliber Light Weight Gun Branch, GSED of Naval Ordnance Station, Louisville. He became the Manager of the Production Engineering Branch, Industrial Department at Naval Ordnance Station, Louisville in 1979-1980. In 1980-1981 he was the Manager of the MK 45/MK 75 Gun Branch, GSED of Naval Ordnance Station, Louisville. From 1981-1989 he was the Deputy Director of GSED of Naval Ordnance Station, Louisville. During this time he was also double hatted as the SSEB Element Chairman for Naval Gun Fire Support Study in 1984 and he was Manager of the Gun Division, GSED, Naval Ordnance Station, Louisville in 1987. In 1989 he was promoted to the Director of the Planning Department, Naval Ordnance Station, Louisville. In 1990 he became the Director of the Gun Weapons Systems Department, Naval Ordnance Station, Louisville. He also served in a double hatted position as the Deputy Technical Director of Naval Ordnance Station, Louisville in 1991. In 1992 he became the Director of the Gun Weapons Systems Directorate, Crane Division, Naval Surface Warfare Center.

WARFARE CENTERS REPORT TO SYSCOMS



MISSION

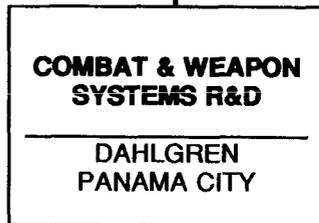
SURFACE WARFARE CENTER

To be the Navy's RDT&E and Engineering Support Center for Sea Surface Platforms, Surface Ship Combat Systems, Coastal Warfare Systems, and other Offensive and Defensive Systems Associated with Surface Warfare.

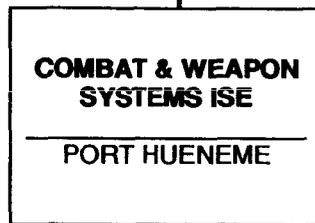
LEADERSHIP AREAS

(FUNCTIONAL)

COMMANDER
NAVAL SURFACE WARFARE CENTER



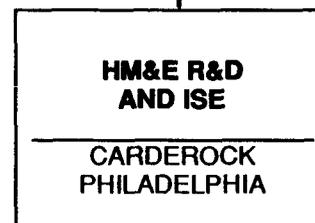
- Electronic Warfare
- Combat and Weapons Systems
- Mines and Mine Countermeasures
- Directed Energy
- Nuclear Weapons Effects
- Surface Warfare Analysis Modeling
- Amphibious Warfare
- Diving and Salvage
- Special Warfare



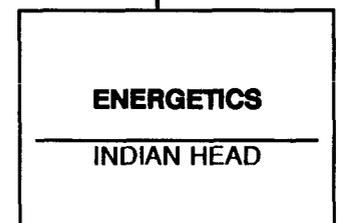
- Combat & Weapon Systems ISE
- Underway Replenishment
- Mine ISE



- Electronic Warfare
- Gun Systems
- Electronic Devices
- Pyrotechnics
- Mechanical Devices

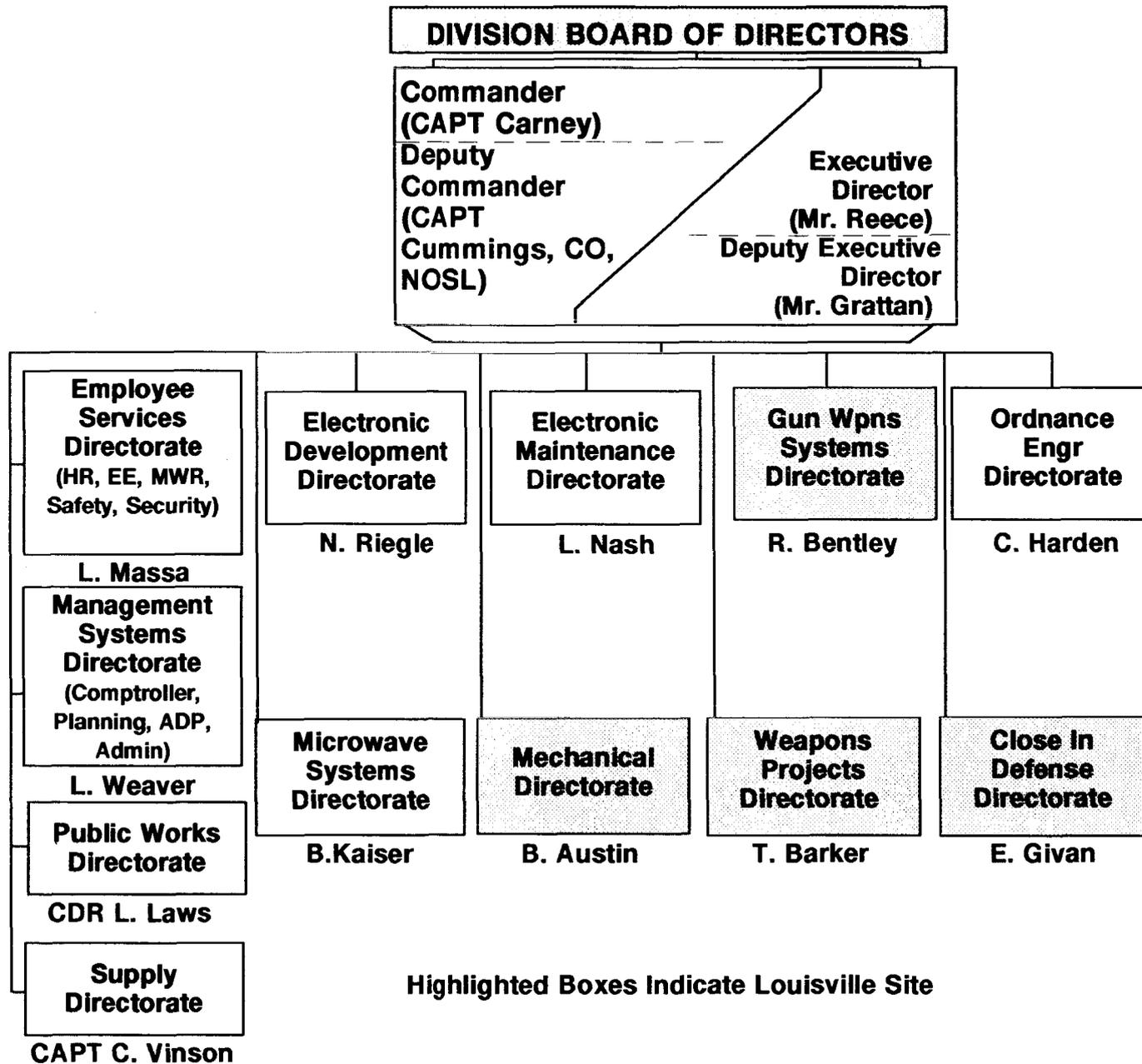


- Ship and Subs HM&E
- Propulsion
- Ship & Sub Materials



- Ordnance Devices
- Special Weapons Support
- Low Rate/Prototype Energetic Materials
- Explosives

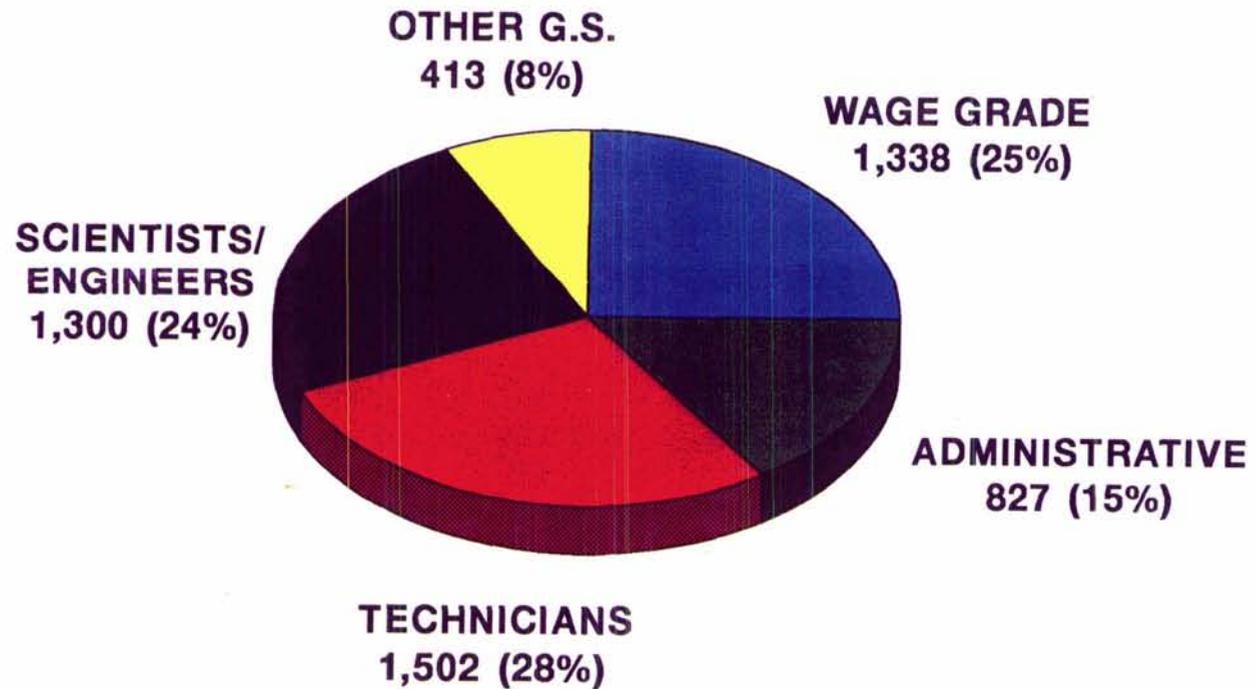
NAVAL SURFACE WARFARE CENTER CRANE DIVISION



Highlighted Boxes Indicate Louisville Site

CRANE DIVISION HUMAN RESOURCES

TOTAL - 5,380



MANAGEMENT AND DISTRIBUTION OF NAVAL DRAWINGS

NSWC Crane provides the following in the area of Management and Distribution of Naval Drawings:

Manages the NAVSEA Engineering Drawing Support Activity (NEDSA) at the Louisville site with more than 7 million engineering images. Reproduces and distributes more than 1.2 million drawings and technical documents annually.

Provides life cycle technical support and management of the NAVSEA Engineering Drawing Asset Locator System (NEDALS) and the Navy's Engineering Data Management Information and Control System (EDMICS).

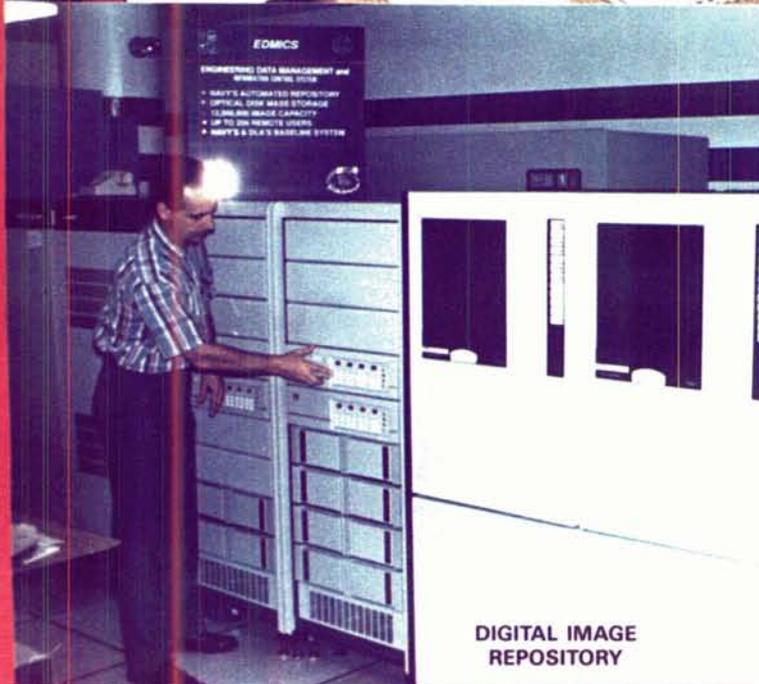
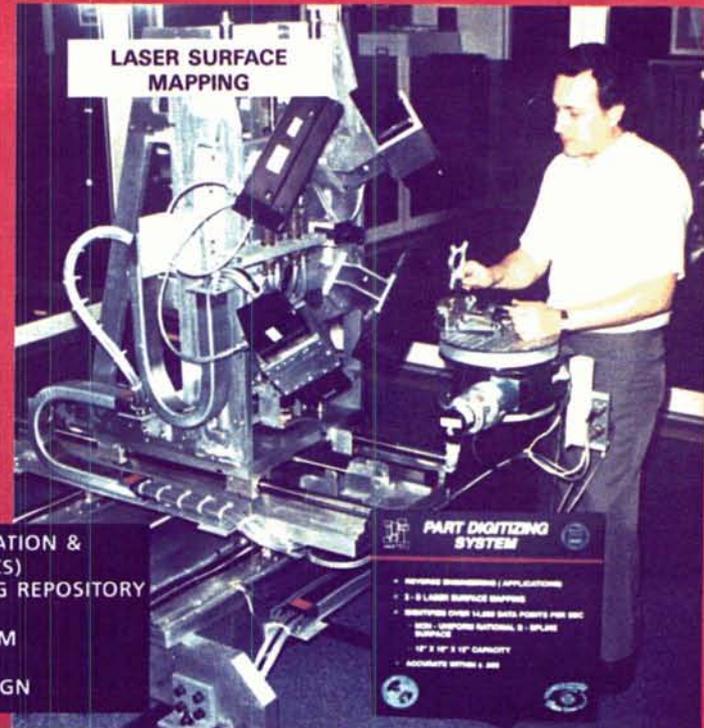
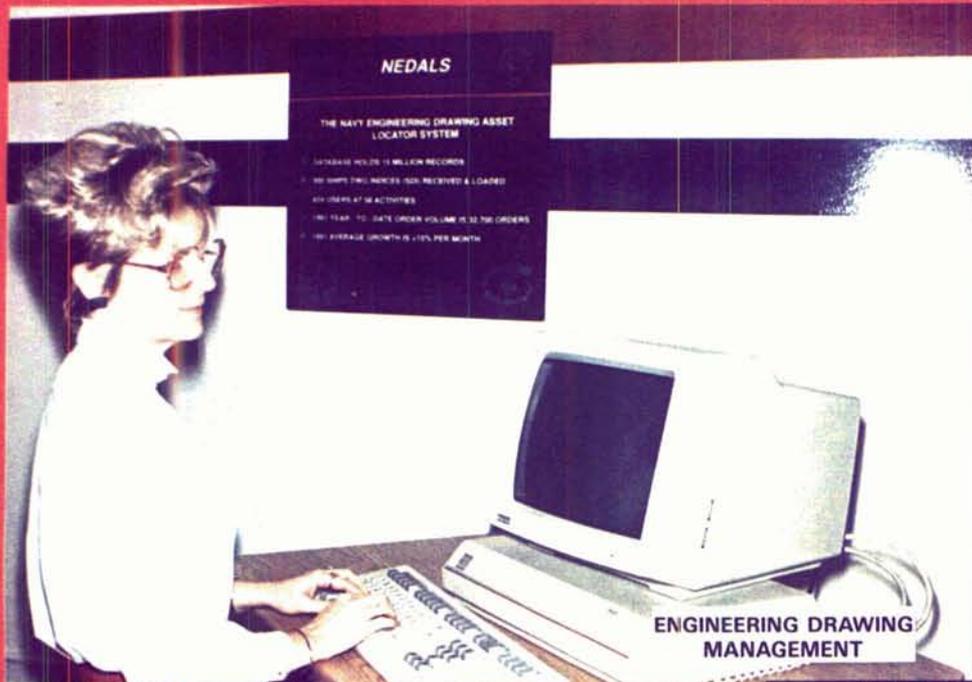
Provides leadership and support in the Navy Computer-Aided Acquisition and Logistics Support (CALS) efforts.

Provides conversion of technical drawings from traditional paper and microfiche to digital format on magnetic and optical media (EDMICS).

Generates technical documentation in digital format directly from small mechanical parts utilizing 3-D laser surface mapping technology and reverse engineering techniques (PARDS).

Provides technical leadership and support for advanced integrated manufacturing and procurement technologies, such as RAMP/FCIM, EDMICS, and NEDALS.

MANAGEMENT AND DISTRIBUTION OF NAVAL DRAWINGS



- DIGITAL IMAGE GENERATION & CONVERSION (EDMICS)
- ENGINEERING DRAWING REPOSITORY (7 MILLION IMAGES)
- PART DIGITIZING SYSTEM
- PDES FILE GENERATION
- COMPUTER-AIDED DESIGN



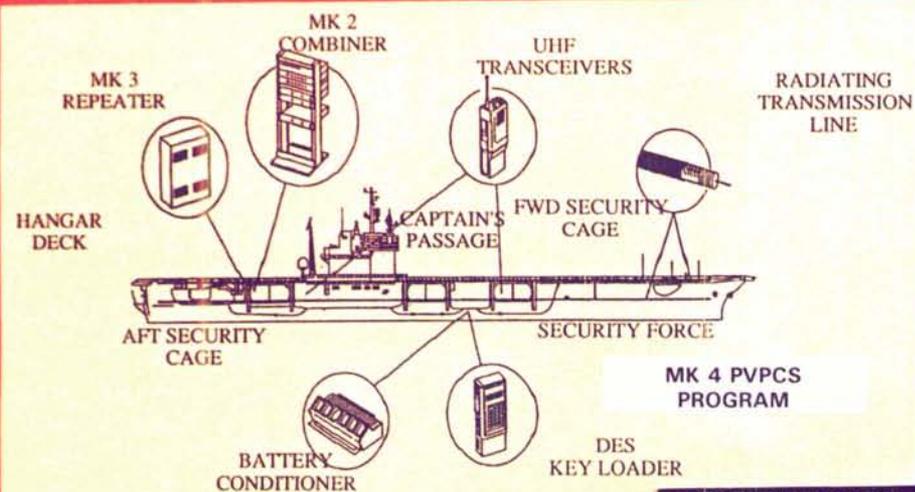
PHYSICAL SECURITY

NSWC Crane Division provides the following in the areas of Physical Security:

Serves as NAVSEASYSKOM Program Manager for the Shipboard Nuclear Weapons Security (SNWS) Program and the Shipboard Physical Security (SPS) Program. Serves as the CNO, N09N1, Program Manager for the Secure Magazine Door Installation Program.

Provides engineering services in support of Physical Security Programs afloat and ashore. Acts as the Technical Design Agent, Acquisition Engineering Agent, Design Agent, Integrated Logistics Support Manager/Agent, Production Support Agent and In-Service Engineering Agent for the Mk 4 Protected Voice Portable Communication System (PVPCS), Mk 1 Magazine Security System (MSS), Mk 6 Shipboard Internal Locking Systems Module (SMILS), DOD Defense Locking Systems, Shipboard Physical Security RDT&E Program, and Special Weapons and AA&E Ashore Physical Security Program.

PHYSICAL SECURITY SHIPBOARD

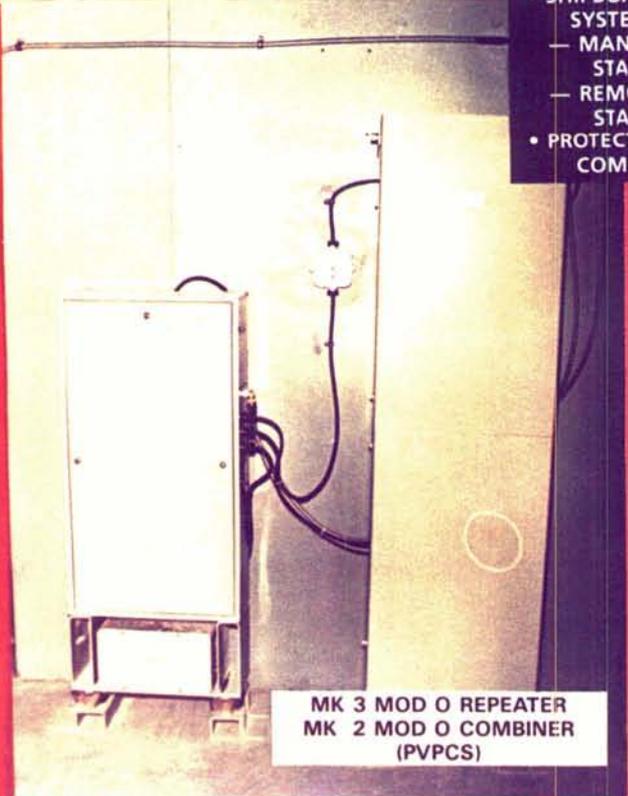


MK 4 PVPCS PROGRAM

- SHIPBOARD ACCESS CONTROL SYSTEM (SACS)
- MANAGEMENT ACCESS CONTROL STATION
- REMOTE ACCESS CONTROL STATION
- PROTECTED VOICE PORTABLE COMMUNICATION SYSTEM (PVPCS)



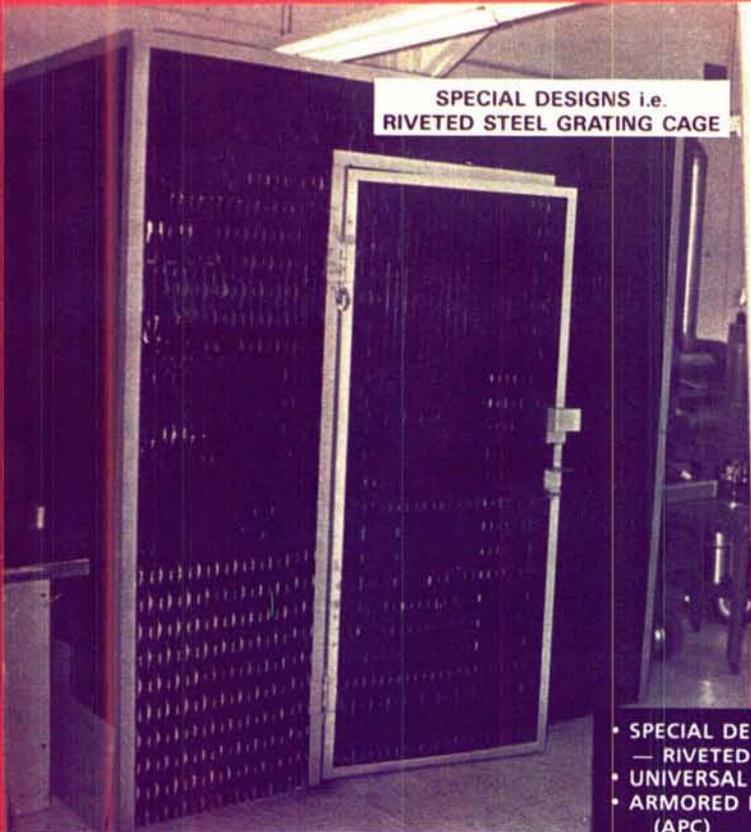
REMOTE ACCESS CONTROL STATION (RACS)



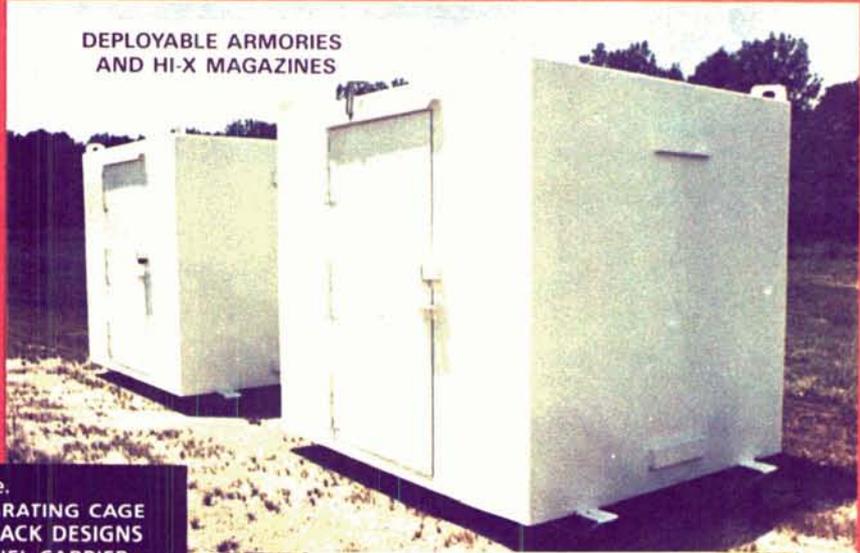
**MK 3 MOD 0 REPEATER
MK 2 MOD 0 COMBINER (PVPCS)**



MANAGEMENT ACCESS CONTROL STATION (MACS)



SPECIAL DESIGNS i.e.
RIVETED STEEL GRATING CAGE



DEPLOYABLE ARMORIES
AND HI-X MAGAZINES

- SPECIAL DESIGNS i.e.
— RIVETED STEEL GRATING CAGE
- UNIVERSAL ARMS RACK DESIGNS
- ARMORED PERSONNEL CARRIER (APC)
- DEPLOYABLE ARMORIES AND HI-X MAGAZINES



UNIVERSAL ARMS RACK
DESIGN



ARMORED PERSONNEL
CARRIER (APC)

RADAR ENGINEERING AND INDUSTRIAL SUPPORT

Radar support includes Engineering, Acquisition Engineering Agent, Systems Maintenance, system Overhaul, Deputy Program Management and Ships Parts Control Center (SPCC) Repair Depots.

Examples of Test and Repair Facilities located at NSWC Crane Division include:

Antenna Analysis Facilities

- Outdoor and Compact Ranges
- Anechoic Chamber

Radar Component Test & Repair Facilities

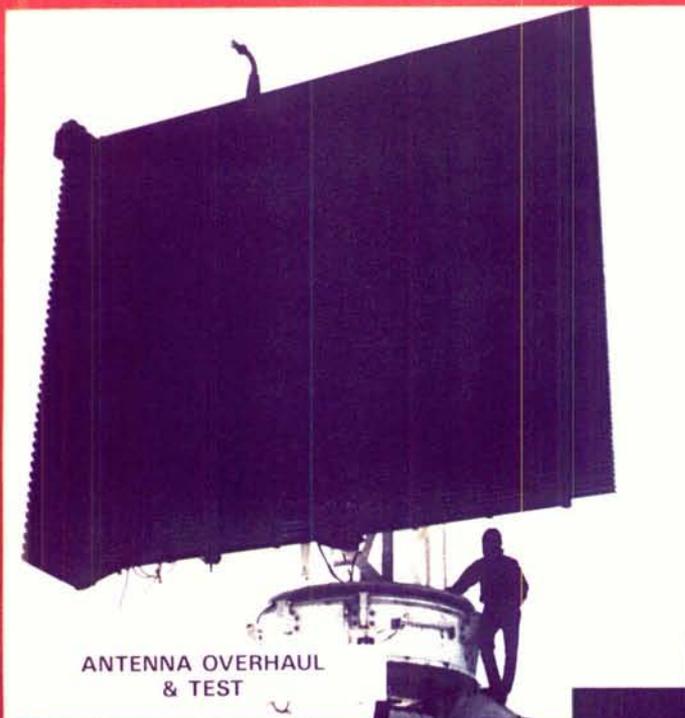
- Class 10,000 Clean Room
- Micro-Miniature Repair
- MMIC Design and Test
- RF Network Analysis

Shipboard Radar System Test

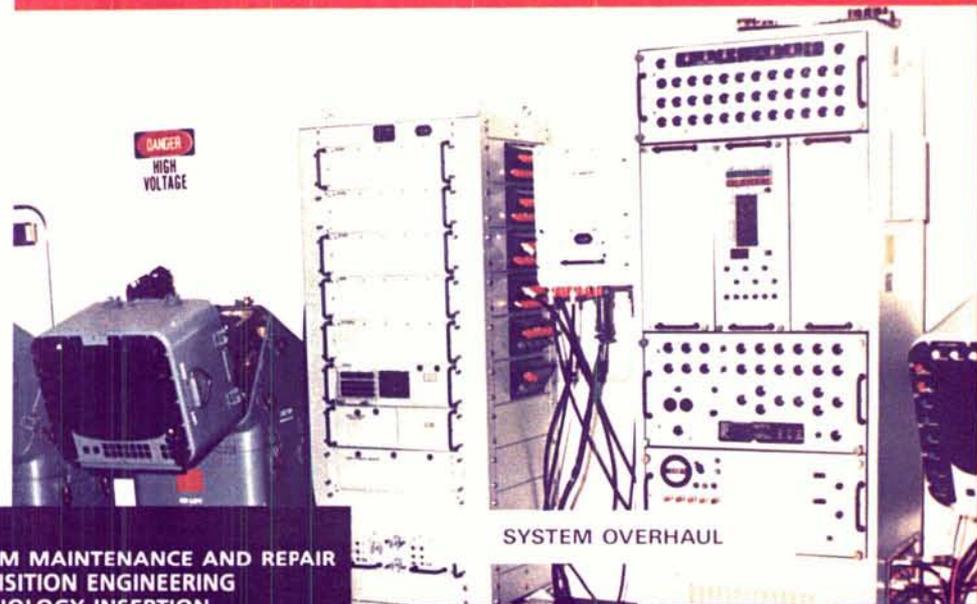
- Specialized "Hotel" Services
- Electrical Performance Testing
- System Test Beds

These facilities are used to support various NAVSEA Program Offices, SPCC and the Fleet for Test, Evaluation, and Repair of the Navy, Marine Corps, and Coast Guard Radar Systems.

RADAR ENGINEERING AND INDUSTRIAL SUPPORT



ANTENNA OVERHAUL
& TEST



SYSTEM OVERHAUL

- SYSTEM MAINTENANCE AND REPAIR
- ACQUISITION ENGINEERING
- TECHNOLOGY INSERTION
- FAILURE ANALYSIS



SYSTEM TEST
& EVALUATION

SPS-48E SYSTEM NO. 1
PPI DISPLAY
(TARGET TRACKS)

DRCP TRACK TRUE BEARING ENTER MODE AND RADAR



MICROMINATURE REPAIR

NIGHT VISION/ELECTRO-OPTICS

Night Vision/Electro-Optics (NVEO) provides Program Management and Technical Support to the broad range of night vision, electro-optic, and chemical warfare detection equipment and systems in use by the Department of Defense.

NVEO serves as the U.S. Navy Night Vision Program Manager as well as the In-Service Engineering Agent, the Cognizant Field Activity, the Technical Design Agent, the Acquisition Engineering Agent, and the Assistant Program Manager for Logistics. NVEO is the U.S. Navy Interim Depot Repair Facility and the Intermediate Repair Facility. NVEO is also the U.S. Army Interim Depot.

NVEO provides acquisition and Life Cycle support for the following technologies:

Image Intensification

-Aviator Goggles, Weapon Sights, Night Vision Goggles, Surveillance Scopes, Components

Lasers

-Rangefinders, Designators, Markers, Weapon Aiming, Signalling

Thermal Imaging/Infrared

-Weapon Sights, Fire control, Chemical Agent Detection, Surveillance/Navigation, Target Detection and Tracking

Chemical/Biological Agent Detectors

-Ionization, Thermal

Multi-Sensor Systems

-Thermal Imaging, Lasers, Fiber Optic Transmission, TV & LLLTV Sensors, Video Tracking (EX 46 MOD 0 Sight and Navy Mast Mounted Sight)

**NIGHT VISION
ELECTRO-OPTICS**

**IMAGE INTENSIFICATION
DEVICES**



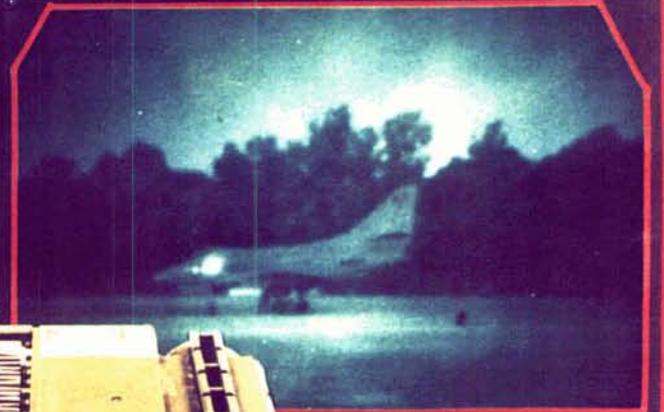
1. ACQUISITION ENGINEERING
2. IN-SERVICE ENGINEERING
3. MAINTENANCE AND REPAIR
4. FIELD SERVICE
5. PROGRAM MANAGEMENT

Navy Mast Mounted Sight

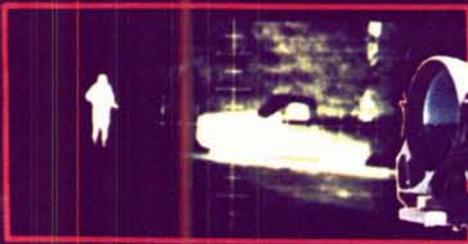


**MULTI-SENSOR THERMAL
IMAGING SYSTEMS**

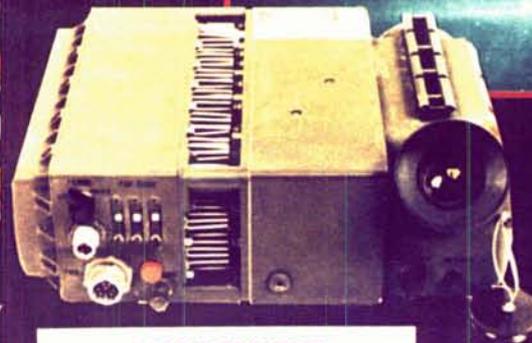
USS Missouri



**CHEMICAL DETECTION
DEVICES**



LASER DEVICES



MINE COUNTERMEASURES SYSTEMS DEPARTMENT

The Mine Countermeasures (MCM) Systems Department provides Project Management and Technical Support to the various Sonar, Navigation, and Command & Control Systems used on the AVENGER class and OSPREY class Mine Countermeasures ships.

The MCM Systems Department serves as the Acquisition Engineering Agent (AEA), In-Service Engineering Agent (ISEA), Software Support Activity (SSA), Depot Repair Facility, Production Facility, and Integrated Logistics Support Agency for the MCM Combat Systems.

The MCM Systems Department provides Technical Support for the following MCM systems:

*AN/SSN-2(V) Precise Integrated
Navigation System*

- Ownship Position Fixing and Navigation, Mission Planning, Contact Processing, Ship Control

*AN/SQQ-32(V) Mine Hunting
Sonar Set*

- Variable Depth High-Resolution Sonar, Separate Detection and Classification Subsystems

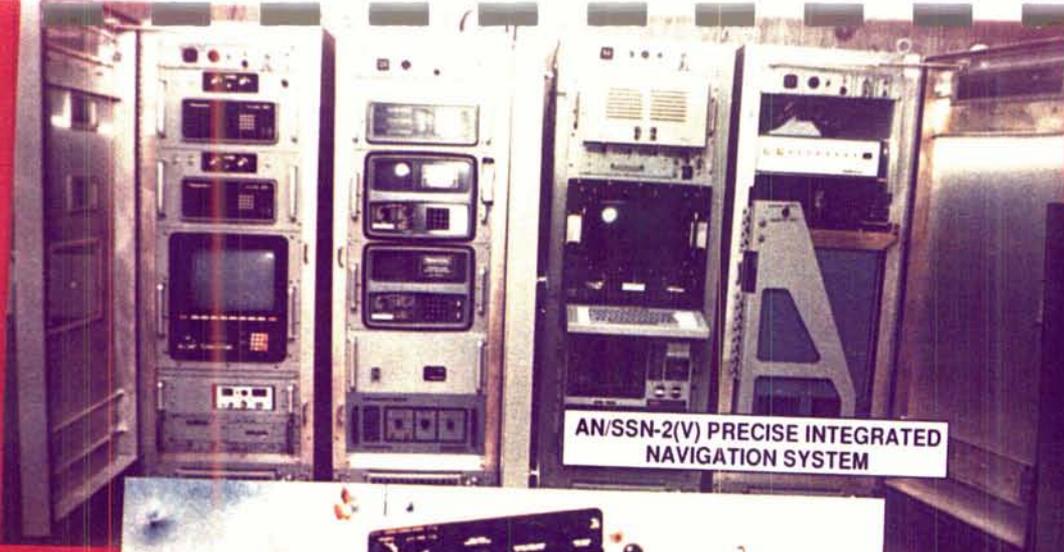
*AN/SQQ-30 Mine Classifying-Detecting
Set*

- Variable Depth High-Resolution Sonar

*AN/SQQ-35 Sound Ranging Set
Sonar*

- Dual Frequency, High-Resolution Side-Scan Sonar, Tracker System, Variable Range

MINE COUNTERMEASURES



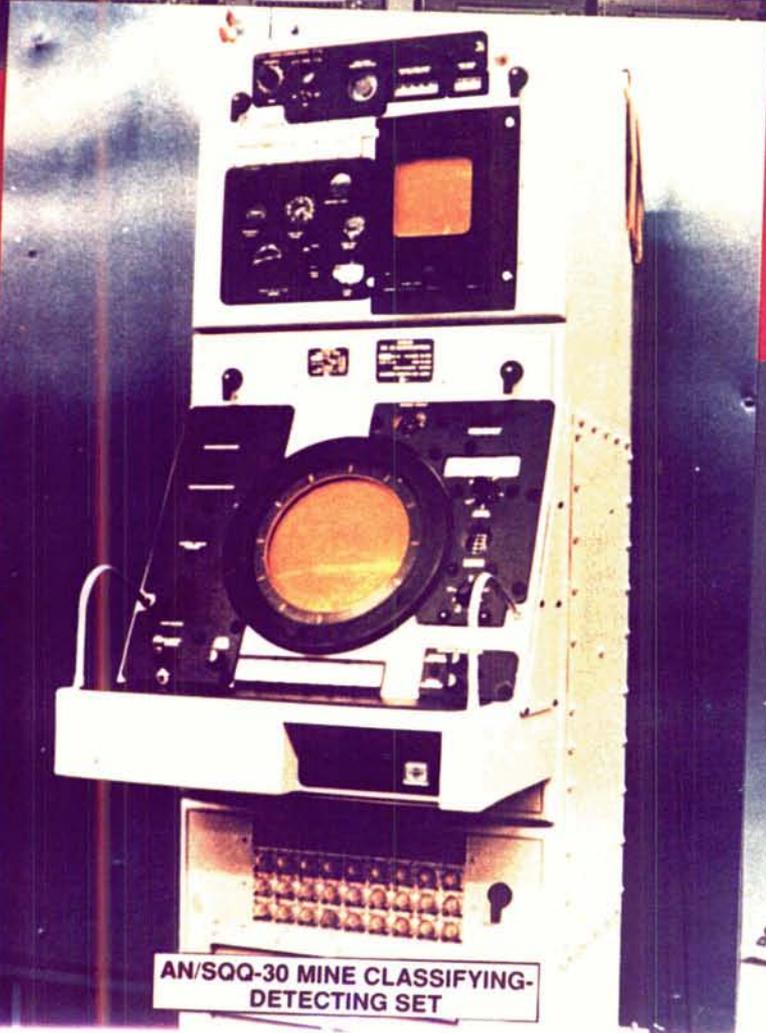
AN/SSN-2(V) PRECISE INTEGRATED
NAVIGATION SYSTEM

A photograph showing several vertical racks of electronic equipment. The racks are filled with various components, including a monitor screen, control panels, and circuit boards. The equipment is housed in a metal cabinet with open doors.



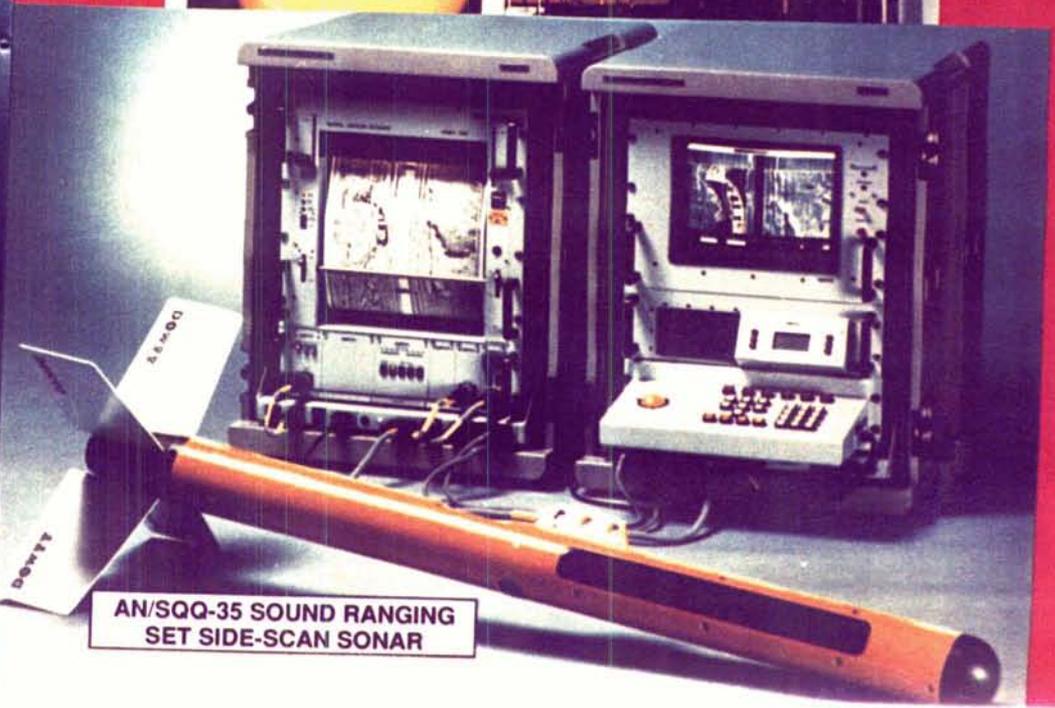
AN/SQQ-32(V) MINE HUNTING
SONAR SET

A photograph of a yellow, cylindrical sonar set mounted on a structure. The set has a textured middle section and is surrounded by various cables and mechanical components. The background is dark, suggesting an interior of a ship.



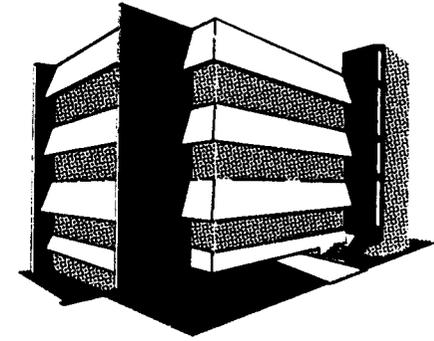
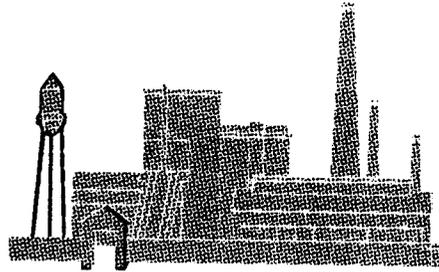
AN/SQQ-30 MINE CLASSIFYING-
DETECTING SET

A photograph of a large, white, rectangular electronic set. It features a prominent circular display or sensor on the front panel, along with various control buttons and a keyboard. The set is mounted on a metal frame.

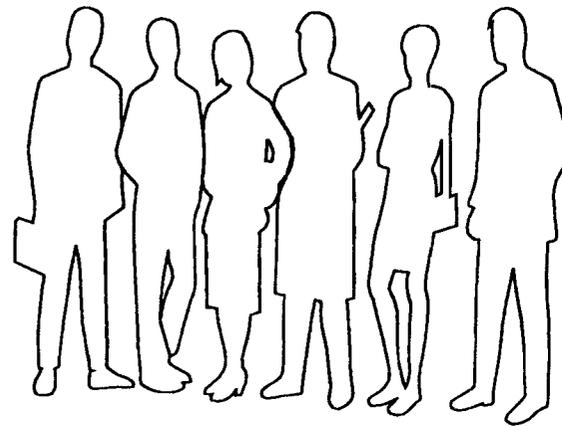


AN/SQQ-35 SOUND RANGING
SET SIDE-SCAN SONAR

A photograph of a large, white, rectangular electronic set with two main display screens. A long, orange, cylindrical sonar probe is positioned in front of the set. The set is mounted on a metal frame.



COMMUNITY OUTREACH





CRANE DIV PROVIDES TO INDIANA AND KENTUCKY

- **JOBS**
- **CONTRACTS**
- **TECHNOLOGY TRANSFER**
- **EDUCATIONAL SUPPORT**
- **RECREATIONAL/WILDLIFE PROGRAMS**
- **EXCESS EQUIPMENT**
- **DISASTER ASSISTANCE**
- **FIRE PROTECTION**
- **EMPLOYEE CONTRIBUTIONS TO HUMAN SERVICES AGENCIES**
- **BLOOD DONATIONS TO AMERICAN RED CROSS**



INDIANA AND KENTUCKY PROVIDE TO CRANE DIV

- **EDUCATED AND COMMITTED WORKFORCE**
- **INFRASTRUCTURE (TRANSPORTATION, UTILITIES, ETC.)**
- **SERVICES (HOTELS, RENTAL CARS, ETC.)**
- **SECURITY PROTECTION**
- **SUPPORTIVE COMMUNITY**
 - Mission Support
 - Economic Development
 - Quality of Life
- **CLEAN ENVIRONMENT**
- **DISASTER ASSISTANCE**
- **FIRE PROTECTION**
- **POLICE PROTECTION**

**CRANE DIV 1992-93 SCHOOL PARTNERSHIP
PROGRAM**

<u>ACTIVITY</u>	<u>SCHOOLS</u>	<u>STUDENTS</u>
CRANE SCIENCE FAIR	25	320
SCIENCE FAIR WORKSHOP	14	500
SCHOOL FAIRS	3	400
CENTER TOURS	41	1,750
TUTORING	14	700
CAREER DAYS	2	500
SHADOWING	3	100
CLASS PRESENTATIONS	10	300

EDUCATION
INDIANA-KENTUCKY EDUCATIONAL INSTITUTIONS

- **INDIANA UNIVERSITY:**
Public Management Certificate
Special Seminars
Masters In Public Affairs
Undergraduate Programs
- **PURDUE UNIVERSITY:**
Graduate Engineering (IHETS)
Special Seminars
- **ROSE-HULMAN:**
Graduate Engineering
- **BALL STATE:**
MBA (IHETS)
- **VINCENNES UNIVERSITY:**
Undergraduate Programs
- **IVY TECH:**
Undergraduate Programs
Special Seminars
- **INDIANA UNIVERSITY SOUTHEAST:**
Undergraduate Programs
- **UNIVERSITY OF LOUISVILLE:**
Graduate Engineering
Undergraduate Engineering
Graduate Programs
Undergraduate Programs
Special Seminars
- **JEFFERSON COMMUNITY COLLEGE:**
Associate Degree
- **BELLARMINE COLLEGE:**
Graduate Program
Undergraduate Programs

CRANE DIV MEMBERSHIP IN COMMUNITY ORGANIZATIONS

ECONOMIC DEVELOPMENT

- Indiana Business Modernization & Technology Corporation
- Indiana Economic Development Council
- Southern Indiana Development Commission
- Southwestern Indiana Development Council
- Bloomington Economic Development Commission
- Bedford Economic Development Committee
- Daviess County Economic Development Committee
- Greene County Economic Development Committee

BOARDS OF VISITORS

- SPEA Board of Visitors
- IU/PU Engineering Board of Visitors
- Rose-Hulman Board of Visitors

CHAMBERS OF COMMERCE

- Indiana
- Bedford
- Bloomington
- Bloomfield
- Daviess County
- Martin County
- Pike County
- Louisville

EDUCATION

- Bloomington Partners in Education Committee
- Bloomington Chamber Education Committee
- Bedford Chamber Education Committee
- Jefferson County Vocational Education Advisory Council

MISCELLANEOUS

- Southern Indiana Mayors' Roundtable
- Crane Div Board of Visitors
- Electronics Manufacturing Productivity
- Metro United Way
- Regional Armed Forces Committee
- Rubbertown Mutual Aid Association
- Naval Sea Cadets
- Boy Scouts of America
- Hildebrand House

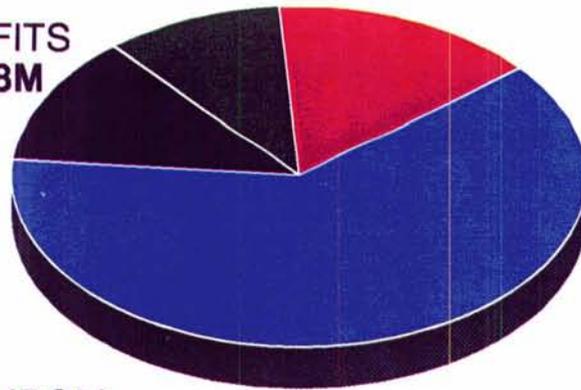
CRANE DIV'S IMPACT ON THE ECONOMY FY 94 (ACTUALS)

INDIANA/KENTUCKY

TRANSACTIONS/
OTHER GOVT.
AGENCIES
\$40.4M

CONTRACTS
\$60.7M

BENEFITS
\$49.8M

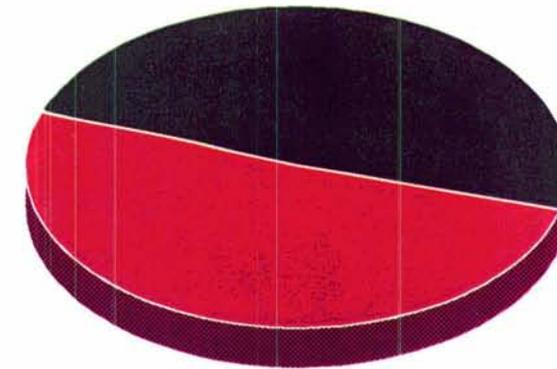


PAYROLL
\$252.1M

\$403.0M

OUT OF STATE

TRANSACTIONS/
OTHER GOVT.
AGENCIES
\$175.3M

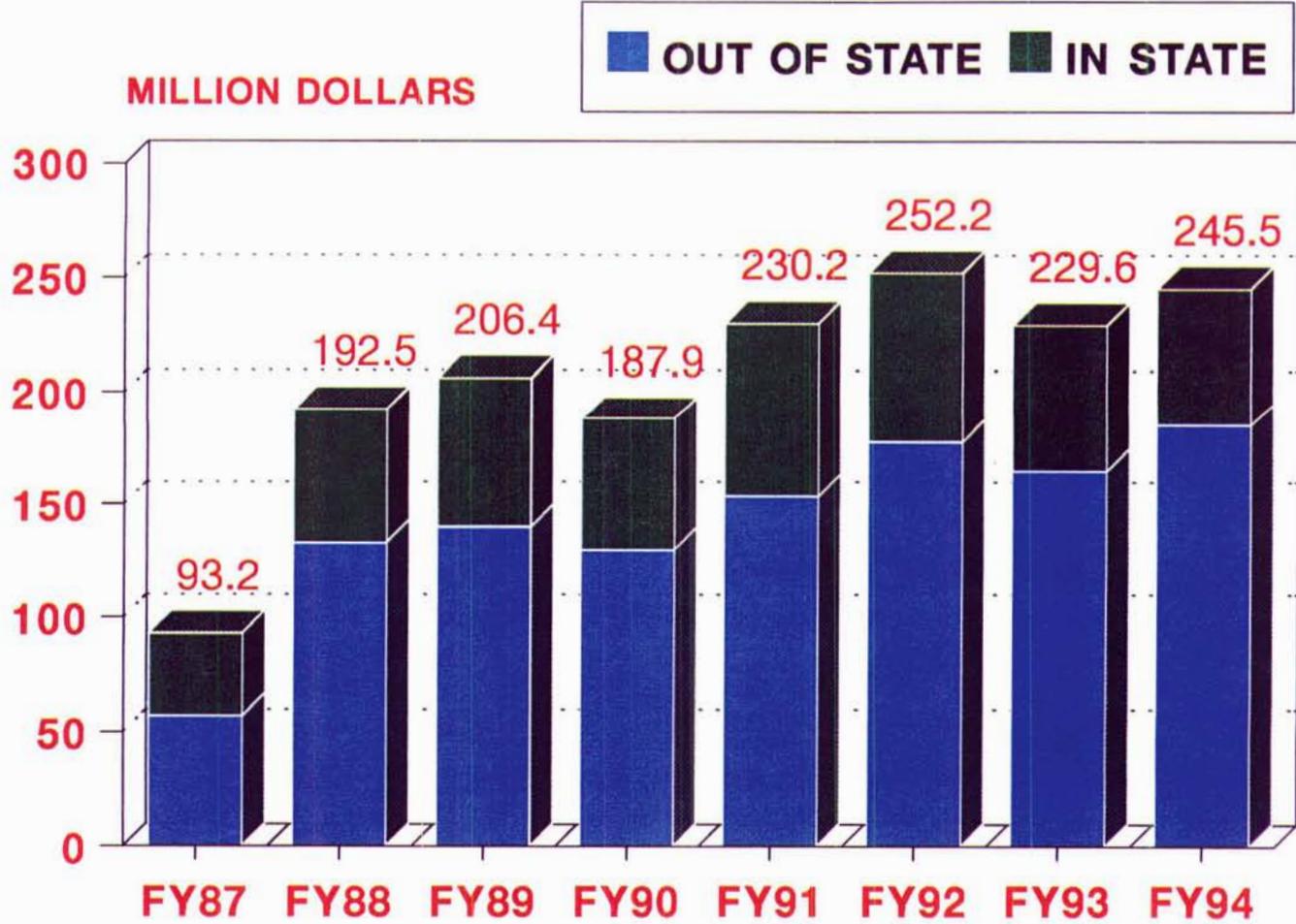


CONTRACTS
\$184.8M

\$360.1M

GRAND TOTAL: \$763.1M

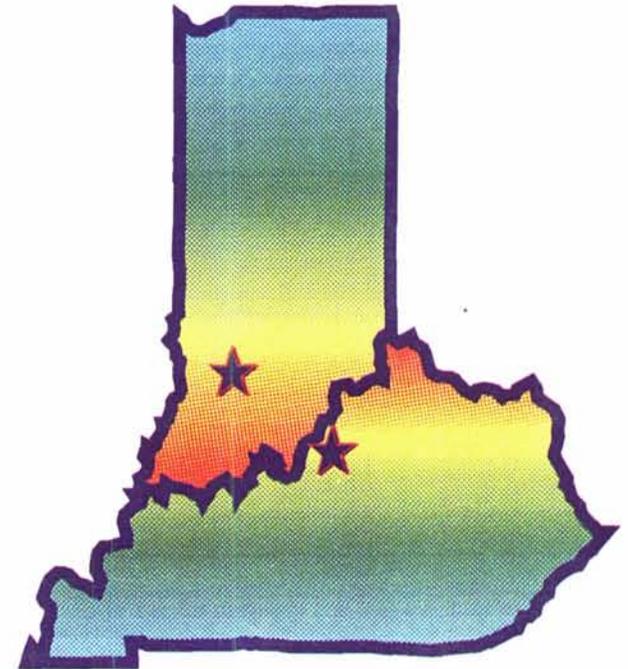
GROWTH IN CONTRACTING



*FY91-93 Reflects Crane/Louisville

EXCELLENT GEOPOLITICAL POSITION

- **SECURE LOCATION**
- **STATE AND LOCAL COMMUNITY SUPPORT**
- **AVAILABLE RESOURCES SUPPORT EXPANSION**
- **LOW COMMERCIAL VALUE OF LAND**
- **AVAILABLE HIGHLY TRAINED AND MOTIVATED LABOR RESOURCE**



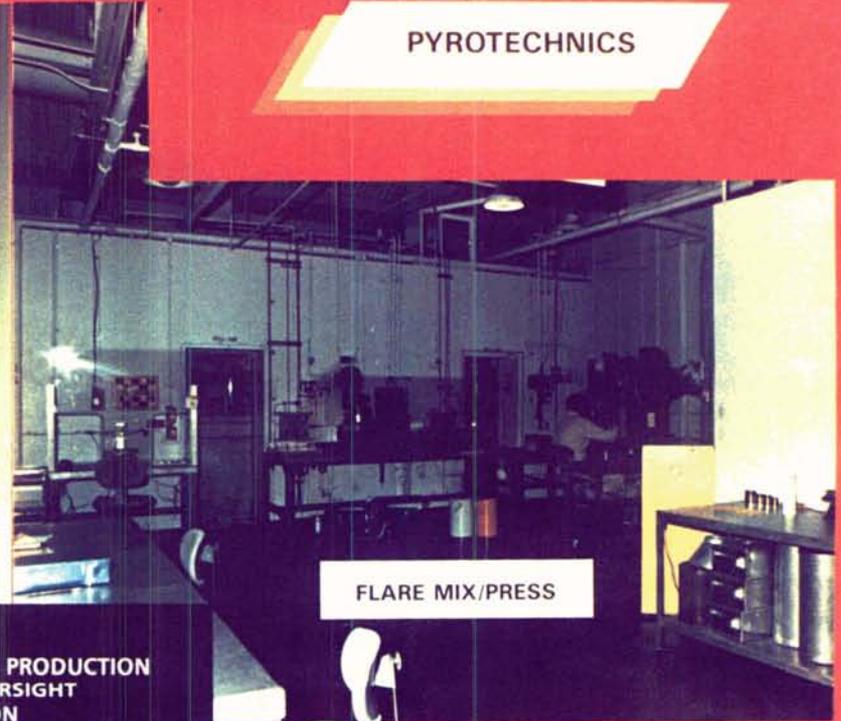
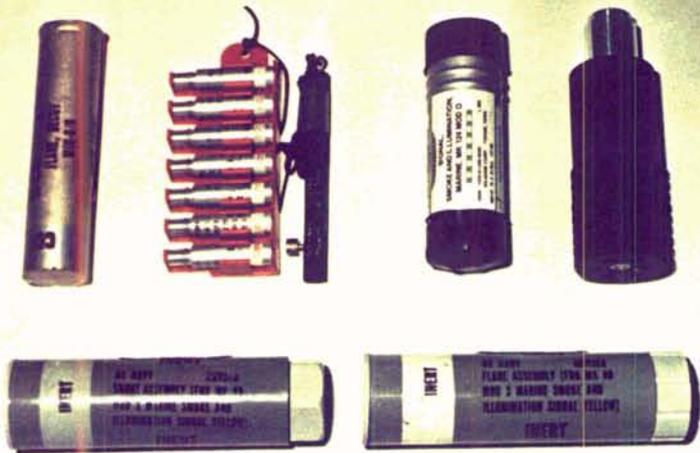
CRANE DIVISION



*VITAL TO THE NAVY
VITAL TO THE INDIANA/KENTUCKY ECONOMY
A GOOD NEIGHBOR*

PYROTECHNICS

PYROTECHNIC DEVICES

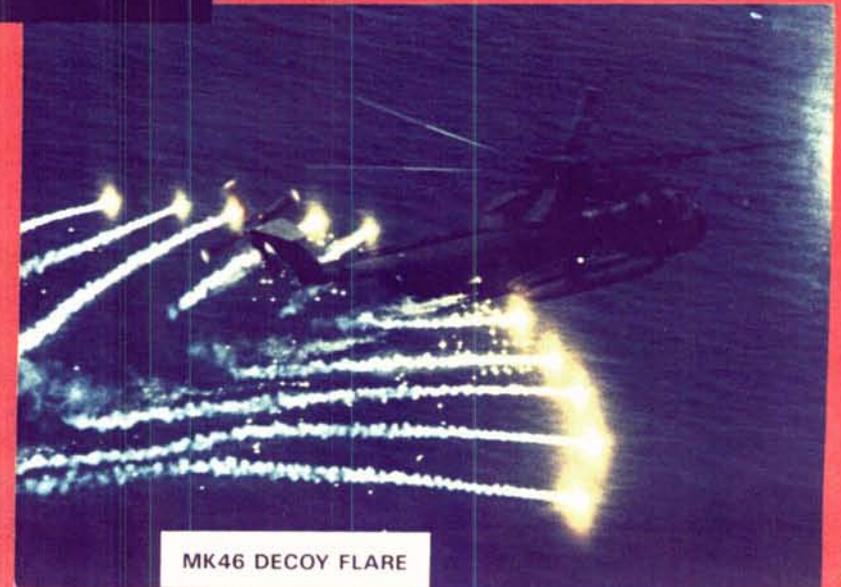


FLARE MIX/PRESS

- LOW RATE INITIAL PRODUCTION
- PRODUCTION OVERSIGHT
- SAFETY VALIDATION



FLARE TEST ROBOT



MK46 DECOY FLARE

MECHANICAL DEVICES

NSWC Crane Division's provides the following for Mechanical Devices:

Provides overhaul, repair, and full life-cycle support for a broad range of mechanical devices, and major mechanical components for naval weapons systems. Components include regulators, hydraulic pumps, hydraulic power drives (train and elevation), control system valve blocks, buffers, recoil cylinders, fuse setter assemblies, bearing transmitters, and target destination transmitters.

The Louisville site provides full overhaul, repair, and test of the devices. The devices are tested utilizing special test equipment, including dynamometers, and other hydraulic, pneumatic, and electro/mechanical test equipment.

Engineering services available include design and analysis. Prototyping and pilot production of improved devices is provided by the Louisville site's extensive manufacturing and machining capabilities.

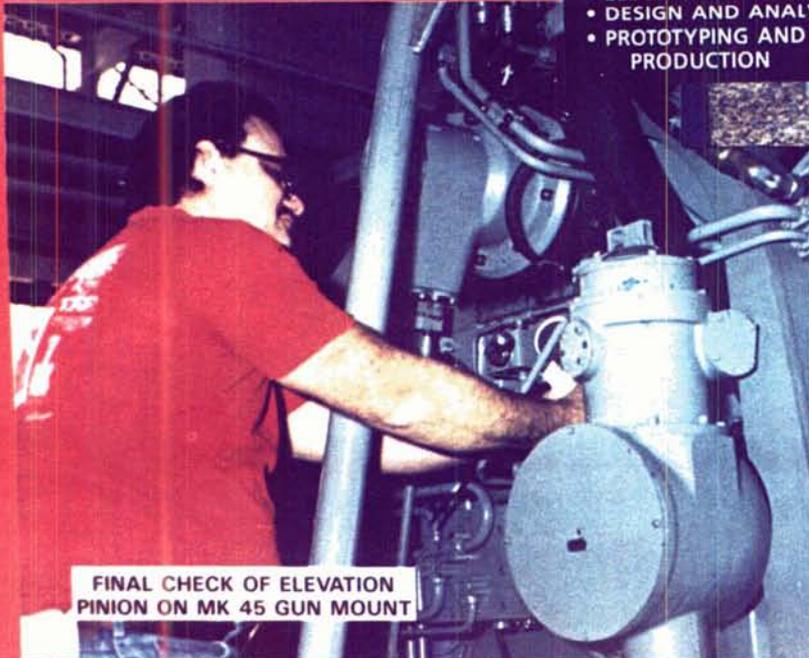
MECHANICAL DEVICES



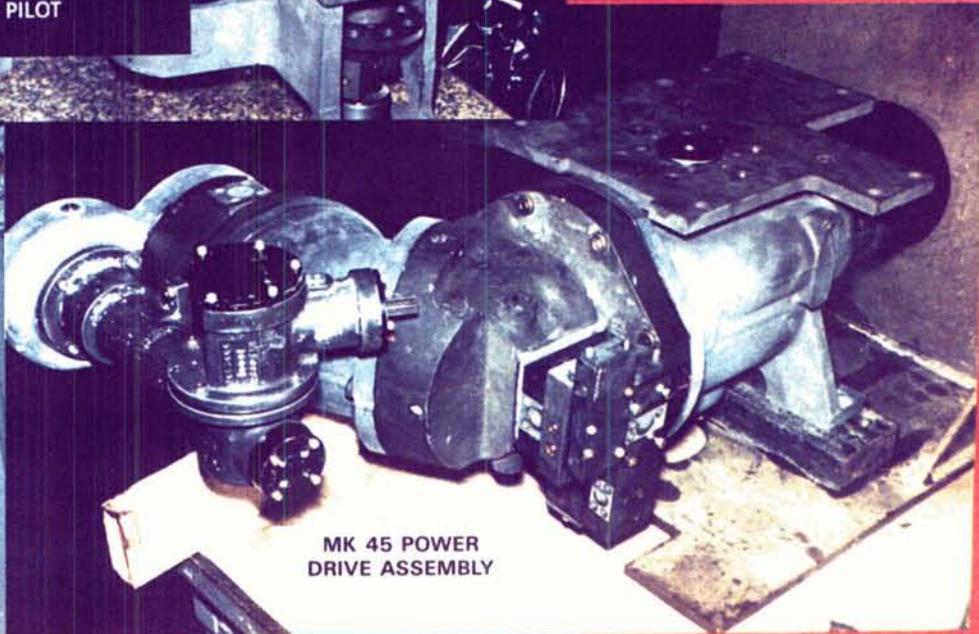
ELECTRO-HYDRAULIC TEST OF ELEVATION RECEIVER/REGULATOR

OVERHAUL OF MK 45 TRAIN REGULATOR

- RE-MANUFACTURE AND REPAIR
- ASSEMBLY
- PNEUMATIC AND HYDRAULIC TEST
- ELECTRO/MECHANICAL TEST
- DESIGN AND ANALYSIS
- PROTOTYPING AND PILOT PRODUCTION



FINAL CHECK OF ELEVATION PINION ON MK 45 GUN MOUNT



MK 45 POWER DRIVE ASSEMBLY

METAL PARTS FABRICATION

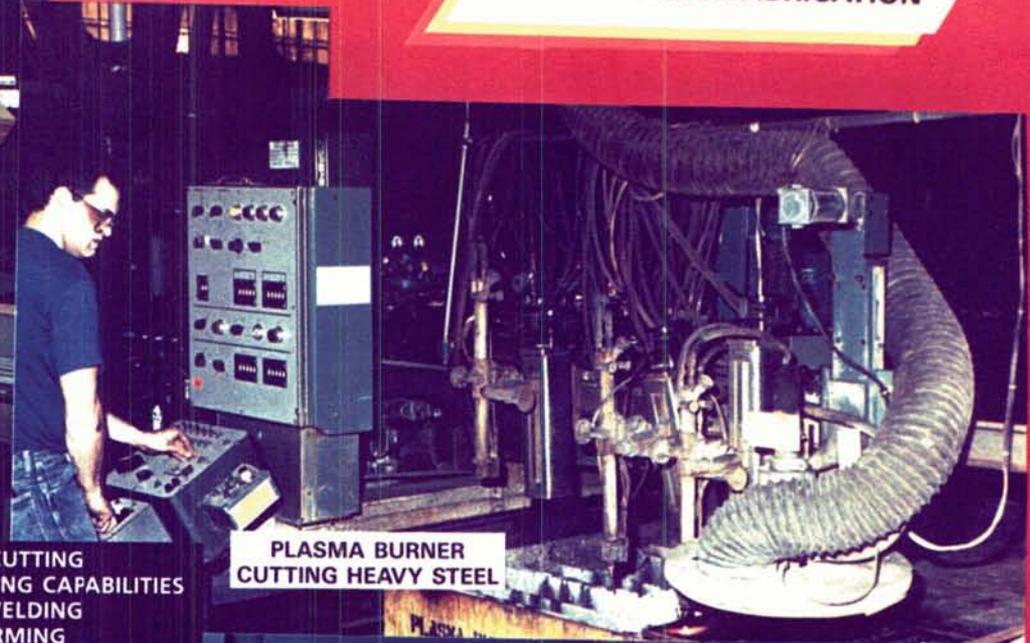
Mechanical Parts Fabrication and machining capability for small parts to large weldments. Complete capability for machining, plating, striping, heat treating, coating, and painting. Precision of machining to 1/10,000ths of an inch. Surface treatment capability includes a state-of-the-art plating facility and paint booths that will hold large gun mounts. Current products include:

- Rocket motors
- Warheads
- Missile launcher stands
- Ammunition lockers
- Small machined parts
- Gun barrels
- Fiberglass gun covers
- Machine gun mounts
- Mine anchors

METAL PARTS FABRICATION



CNC LASER CUTTER
& TURRETT PUNCH



PLASMA BURNER
CUTTING HEAVY STEEL

- PLASMA & LASER CUTTING
- FULL RANGE WELDING CAPABILITIES
- ELECTRON BEAM WELDING
- PIPE AND TUBE FORMING
- METAL FORMING, SHEARING,
PUNCHING
- PLASTIC FABRICATION (FIBERGLASS)



FABRICATED MK 5
READY SERVICE LOCKER



7,250 TON
BRAKE PRESS

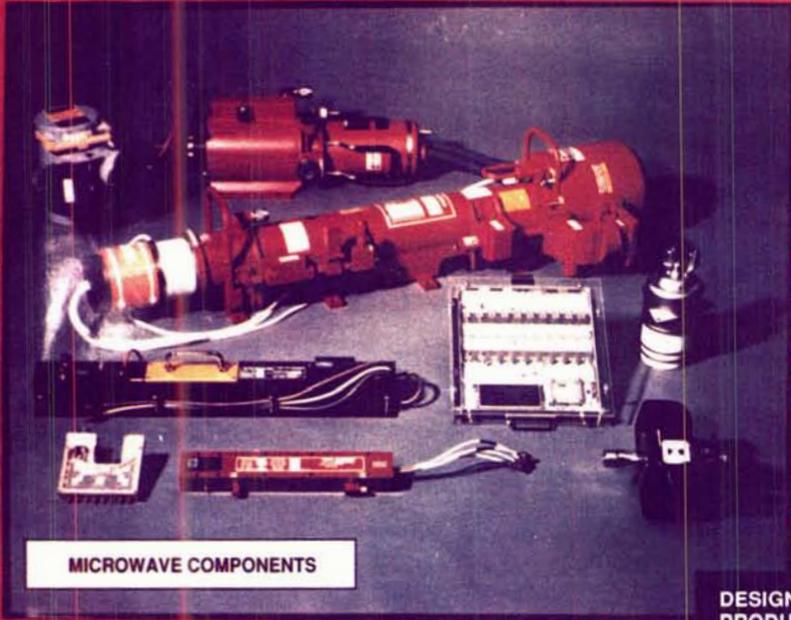
MICROWAVE COMPONENTS

The Microwave Component's Technical Capability focuses on baselining the design and manufacture of microwave tubes (MWTs) and microwave solid state devices (MSSDs) through performance measurements in military weapons and feedback to design and manufacture for product improvements. Crane is tasked as the full spectrum life cycle manager of MWTs and MSSDs and performs duties beginning with initial specification development through research, design, transition to production, introduction to fleet, operation, and forecasting replacement demands. Driven by the high costs and technical complexity of microwave components, Crane performs the inherently governmental role of "Smart Buyer" with vast experience in design, manufacture and acquisition of MWTs and MSSDs. Crane assumes responsibility for ensuring affordable and usable products while coordinating technological advancements in an economically sensitive industry.

The combination of MWT and MSSD test and analysis capabilities and "hands-on" involvement of highly skilled personnel in the entire life cycle of MWTs and MSSDs is unique, not existing elsewhere in government or private industry. Specialized and fully operational state-of-the-art microwave and high voltage equipment with a replacement value of over \$115M is housed in 90,000 square feet of modern facilities. The equipment is comprised of over 60 power supplies, modulators, and integrated circuit test stations capable of performing the full gamut of qualification and evaluation tests on crossed field amplifiers, switch tubes, traveling wave tubes, klystrons, magnetrons, and other devices.

An example of success is the reduction in acquisition cost per socket operating hour of AEGIS Weapon System MWTs from \$4.55 in 1983 to \$0.61 in 1994; this translates to a reduction of replenishment cost per AEGIS cruiser from over \$3 million to less than \$400K.

MICROWAVE COMPONENTS



MICROWAVE COMPONENTS

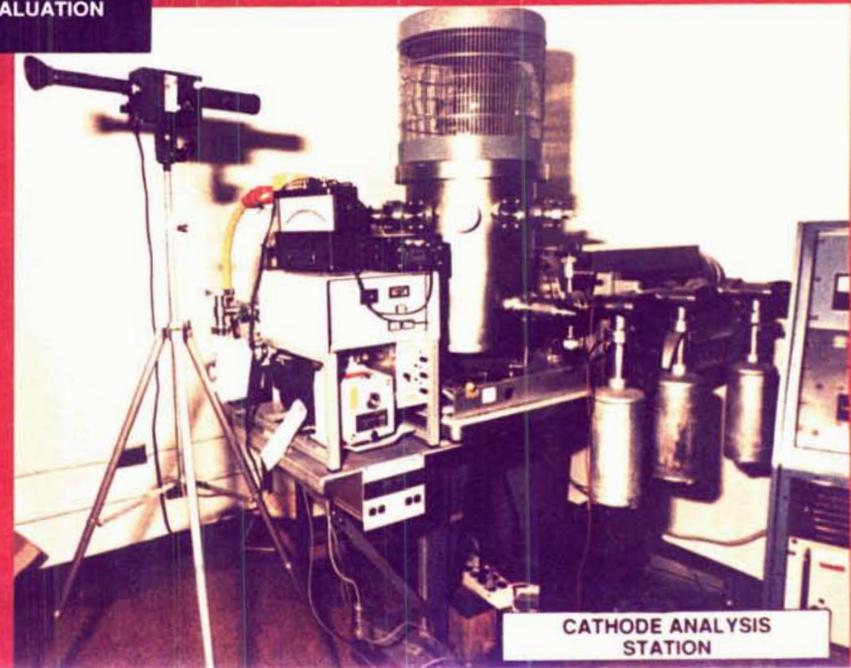


MICROWAVE SOLID STATE TEST SET

DESIGN EVALUATION
PRODUCT IMPROVEMENTS
PROCESS ANALYSIS
FAILURE ANALYSIS
PERFORMANCE EVALUATION
REPAIR



MICROWAVE TUBE TEST STATION



CATHODE ANALYSIS STATION

ELECTROCHEMICAL POWER SYSTEMS

The Division provides design, acquisition, test, evaluation, surveillance, standardization, and system safety support for all types of Electrochemical Power Systems, including primary, rechargeable, and reserve batteries. The Division also provides support for test and evaluation of related equipment, including chargers, inverters, and discharge units. Specialized test facilities and equipment include:

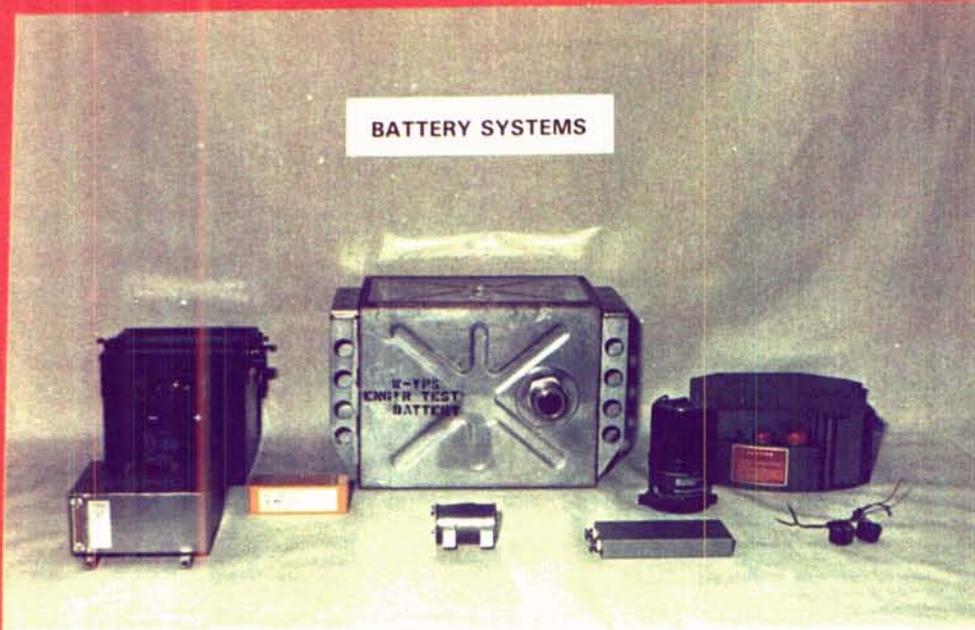
Complete facilities for teardown, wet chemical analysis, and spectroscopic analysis of battery materials for all electrochemistries.

Computer controlled, state-of-the-art facilities for test and evaluation of all sizes and types of batteries, including FBM batteries and high energy (lithium) batteries.

A new X-ray photoelectron spectrometer for identification of battery component surface layer elements and molecules. This system has the unique feature of permitting very large sample sizes, including entire battery electrodes.

ELECTROCHEMICAL POWER SYSTEMS

BATTERY SYSTEMS



CHEMICAL ANALYSIS

- FAILURE/MATERIAL ANALYSIS
- PRODUCTION OVERSIGHT
- SAFETY VALIDATION
- QUALIFICATION PRODUCTION LOT & SURVEILLANCE TESTING

X-RAY PHOTOELECTRON
SPECTROGRAPH



FBM BATTERY
TEST



CONVENTIONAL AMMUNITION ENGINEERING

Conventional ammunition support includes development, prototyping, functional, and non-destructive testing of demolition and Fleet Ballistic Missile ordnance devices. Examples of specialized test facilities and equipment located at NSWC Crane Division include:

An 85-acre outdoor test facility for functional testing of in-service and developmental pyrotechnic and ordnance components.

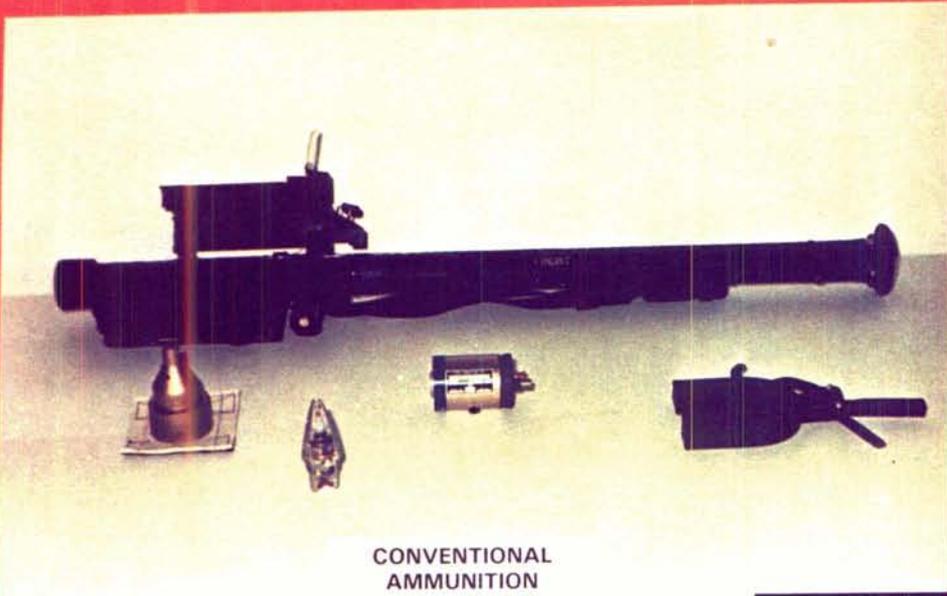
The SSPO Ordnance Test Facility which supports functional, quality, reliability, and safety evaluation of ordnance subsystems and related components for Polaris, Poseidon, Trident I, and Trident II Missiles.

Facilities also include prototyping, low rate initial production, teardown, and physical and chemical analysis capabilities.

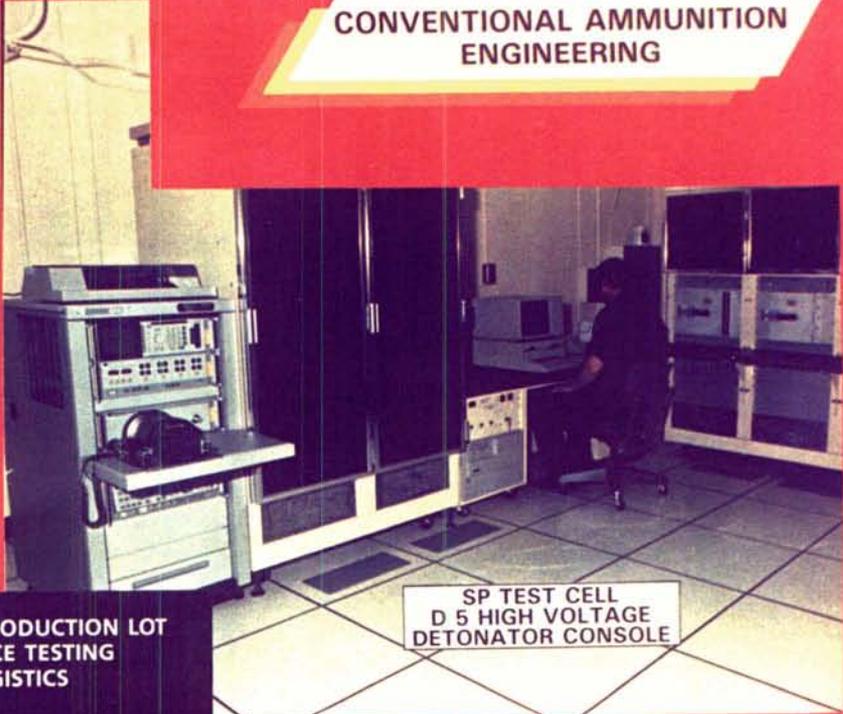
These capabilities combined with the material analysis capabilities, are also essential to determination of safe, environmentally sound, demilitarization and disposal techniques for ordnance items.

The Division's ordnance capability, combined with its materials and electronics expertise, form a unique special ordnance resource within Navy and DOD.

**CONVENTIONAL AMMUNITION
ENGINEERING**



**CONVENTIONAL
AMMUNITION**



**SP TEST CELL
D 5 HIGH VOLTAGE
DETONATOR CONSOLE**

- QUALIFICATION PRODUCTION LOT AND SURVEILLANCE TESTING
- AMMUNITION LOGISTICS DEVELOPMENT
- DESIGN VERIFICATION
- TRANSITION TO PRODUCTION



TEST CELLS



ORDNANCE TEST AREA

PYROTECHNICS

Special ordnance support includes development, prototyping, functional, and non-destructive testing of pyrotechnic devices.

Examples of specialized test facilities and equipment located at NSWC Crane Division include:

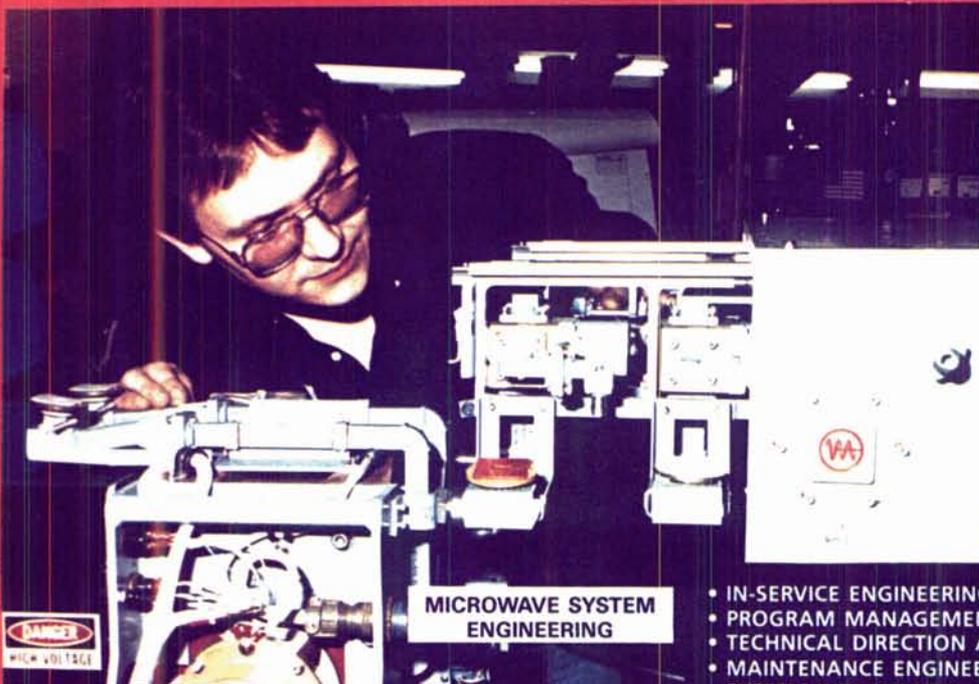
An 85-acre outdoor test facility for functional testing of in-service and developmental pyrotechnic and ordnance components.

The flare mix and test area where flare compounds are mixed and compressed for use in decoy and illuminating flares.

A robotic or flare test used to measure spectral intensities from ultraviolet through infrared.

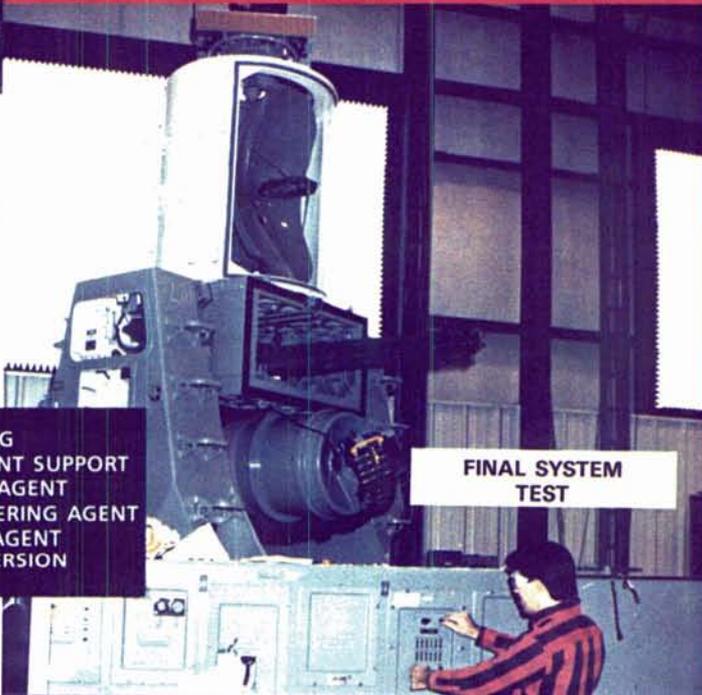
These capabilities are used to prototype, evaluate, and validate special ordnance item designs, determine their safety for use, measure their effectiveness, and monitor their production through sample evaluation.

GUN & GUN FIRE CONTROL SYSTEMS (PHALANX)



MICROWAVE SYSTEM ENGINEERING

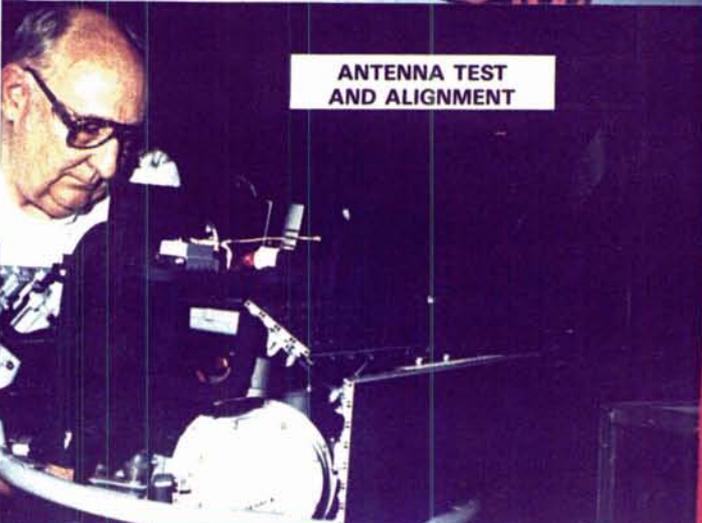
- IN-SERVICE ENGINEERING
- PROGRAM MANAGEMENT SUPPORT
- TECHNICAL DIRECTION AGENT
- MAINTENANCE ENGINEERING AGENT
- SYSTEM INTEGRATION AGENT
- OVERHAUL AND CONVERSION



FINAL SYSTEM TEST



CLASS A OVERHAUL



ANTENNA TEST AND ALIGNMENT



DISPERSION

- INITIAL INVESTIGATION
- BARRELS RETURNED FROM FLEET
- DRAWING AND QUALITY PLAN
- TEST FIRING OF FLEET RETURNS
- CURRENT PLAN

ELECTRONIC MODULE TEST & REPAIR

NSWC Crane Division has complete capability to design, develop, manufacture, test and repair electronic circuit cards including the newest ceramic substrate material and surface mount component technologies. Examples shown here include:

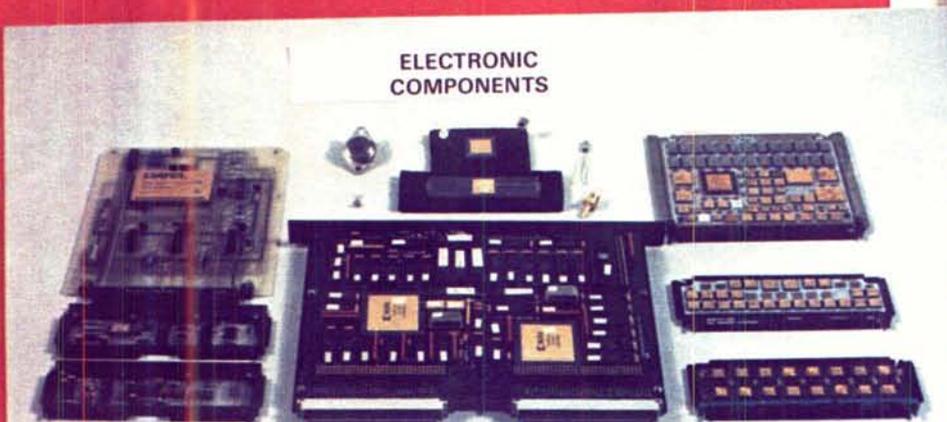
A state-of-the-art circuit card test facility and equipment providing capability to design, develop, test, evaluate, and repair complex circuit card assemblies and components.

A maintenance facility providing capability to test and repair commercial circuit cards, associated assemblies, and components for the SIGINT community. A SCIF and appropriate security billets are available to handle special security requirements.

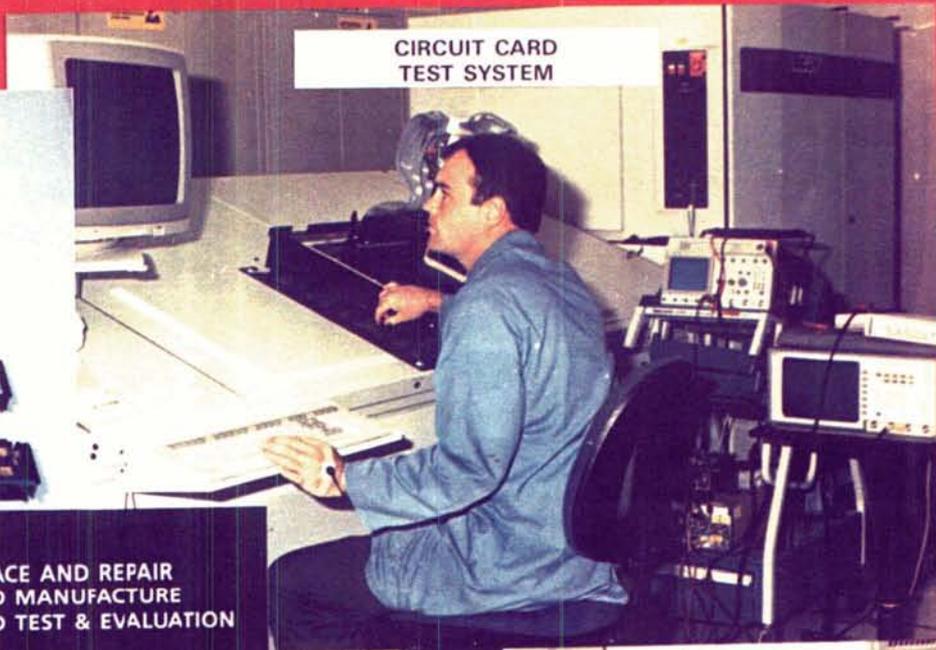
A circuit card manufacturing facility used to prototype designs, prove out design packages, test and evaluate commercial products, and manufacture limited quantities where procurement documentation does not exist.

**ELECTRONIC MODULE
TEST AND REPAIR**

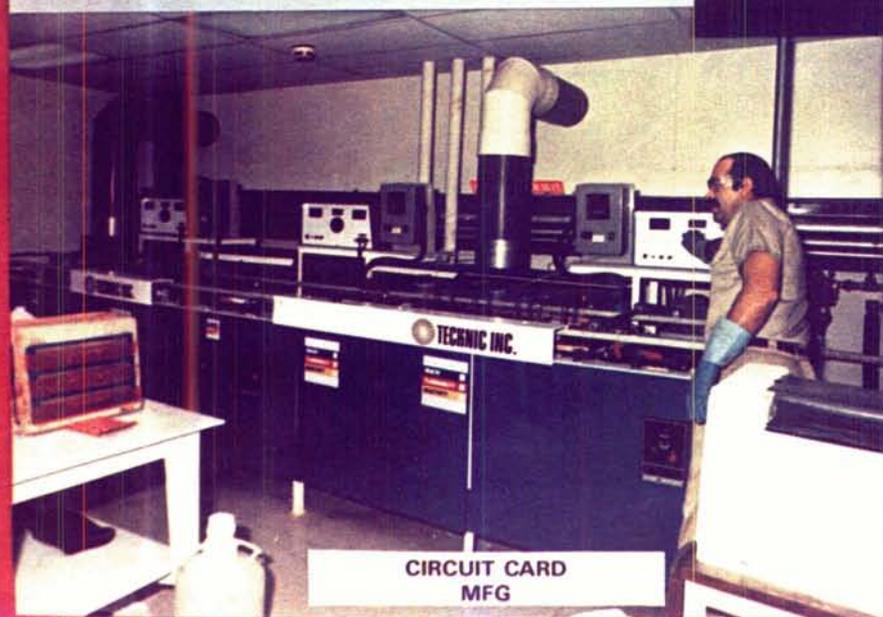
**ELECTRONIC
COMPONENTS**



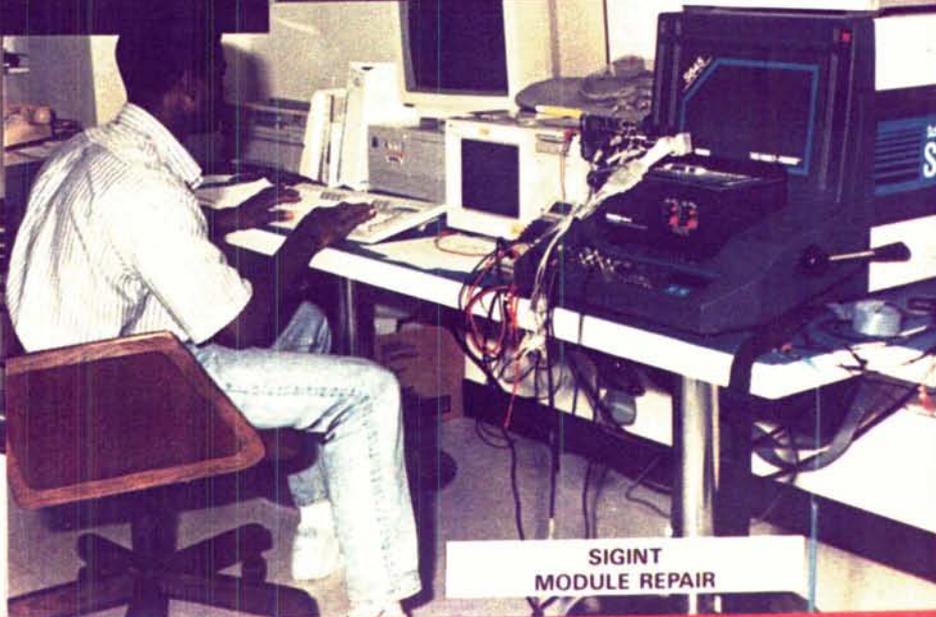
**CIRCUIT CARD
TEST SYSTEM**



- MAINTENANCE AND REPAIR
- CIRCUIT CARD MANUFACTURE
- CIRCUIT CARD TEST & EVALUATION

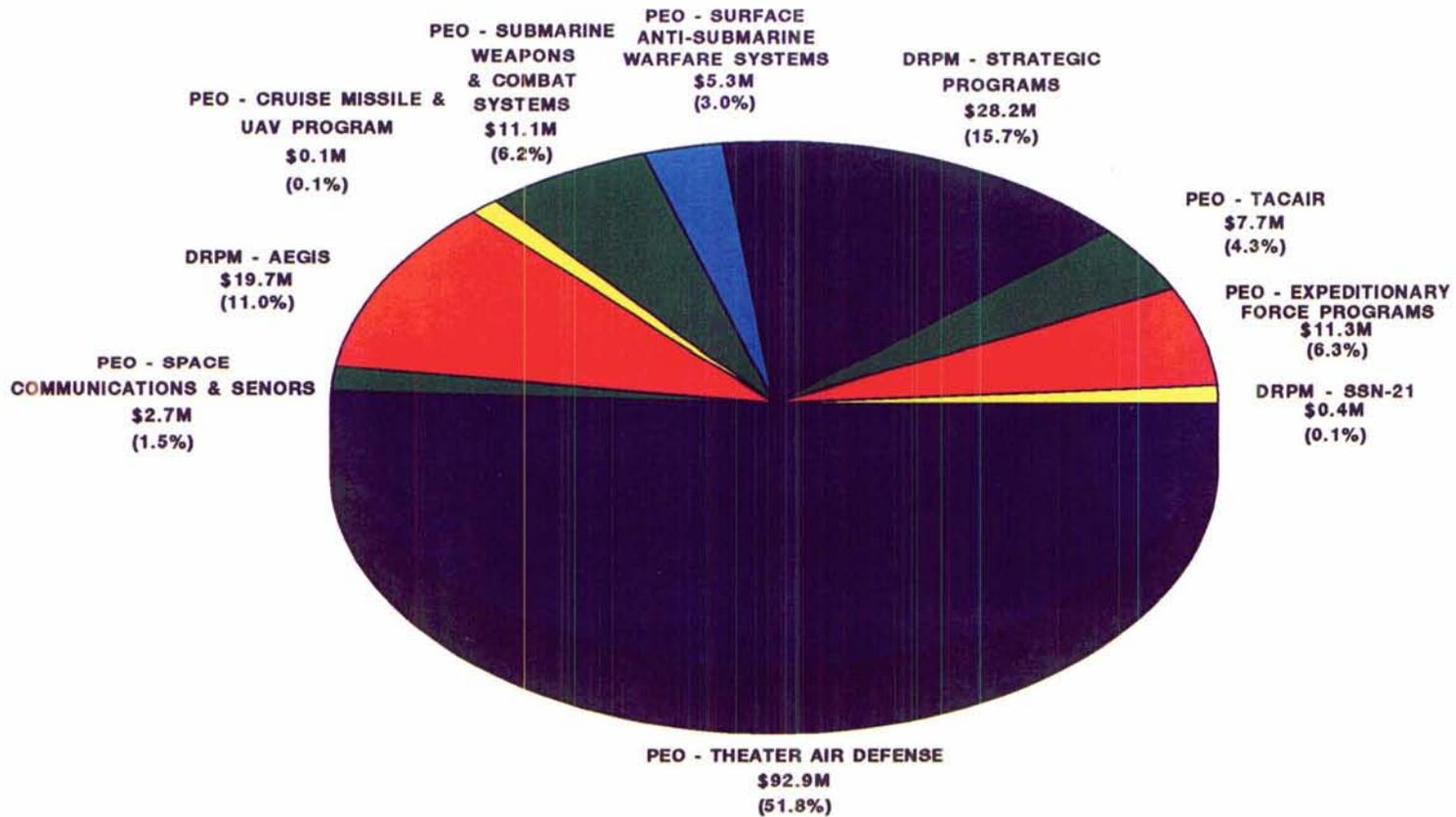


**CIRCUIT CARD
MFG**



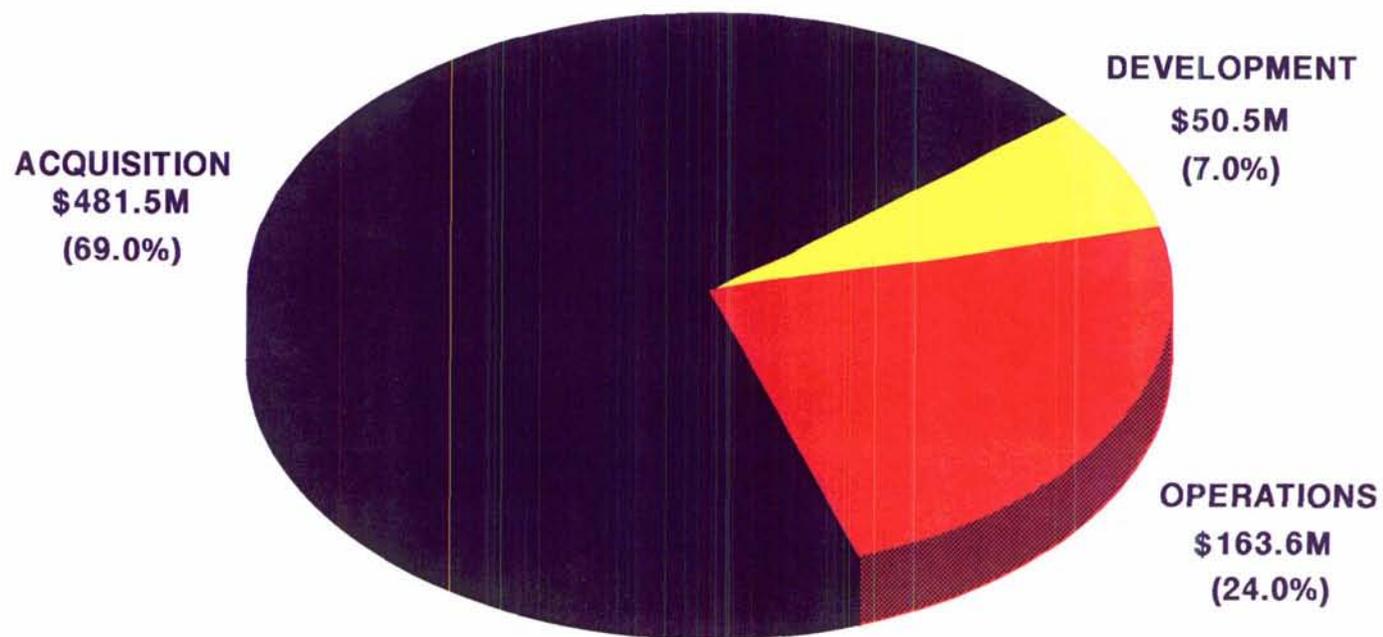
**SIGINT
MODULE REPAIR**

CRANE DIVISION PEO/DRPM SUPPORT FY 94 PROJECTED



\$179.4M

**CRANE DIVISION
LIFE CYCLE SUPPORT OF SYSTEMS
FY 94 (PROJECTED)**



\$695.6M

CRANE DIVISION

NAVY'S PREMIER PRODUCT ENGINEERING & INDUSTRIAL CAPABILITY
FUNCTIONS



DEVELOPMENT

- DETAILED PRODUCT DESIGN
 - ELECTRONIC-MECHANICAL-CHEMICAL
- PROTOTYPE MANUFACTURE
- TEST & ANALYSIS

TRANSITION TO PRODUCTION

- TECHNICAL DATA PACKAGE
- LOW RATE INITIAL PRODUCTION
- PROCESS/PRODUCT VALIDATION

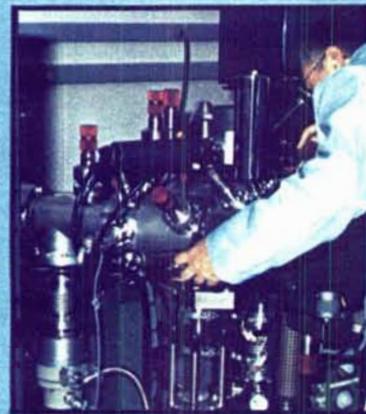
PRODUCTION OVERSIGHT

- PROCESS CERTIFICATION & MONITORING
- PRODUCT CERTIFICATION
- PRODUCT ACCEPTANCE

PRODUCT MAINTENANCE

- OVERHAUL/REPAIR DEPOT
- DEVELOP/SUPPORT "O" & "I" CAPABILITY

WORLD CLASS FACILITIES



FAILURE/MATERIAL ANALYSIS



MICROWAVE SYSTEMS (SLQ-32)



CONTROLLED WEAPONS RANGE

ELECTRONIC WARFARE

NSWC Crane Division provides comprehensive engineering, logistics and maintenance/repair support for the ALQ-99 Airborne Countermeasures System and SLQ-32 Shipboard Countermeasures System. Specialized repair and test capabilities include:

The ALQ-99 Pod Repair and Refurbishment Program provides a universal platform for operation with all configured aircraft and equipment using the ALQ-99 Electronic Countermeasures System. In addition, reliability and maintainability improvements are being incorporated to extend the Pod life cycle and reduce operational costs.

The Automated Receiver Test Station is an NSWC designed, developed and built test station that offers unique test and fault isolation capabilities for surveillance receivers utilized in the ALQ-99 Electronic Countermeasures System.

The Armament Control Unit (ACU) Test Station is part of the computer system test console and is used for test and repair of the ACU used in the ASQ-155 Ballistics Computer System. This test station is a "hot bench" tester which simulates aircraft armament wiring to facilitate fault isolation, repair and verification of the ACU.

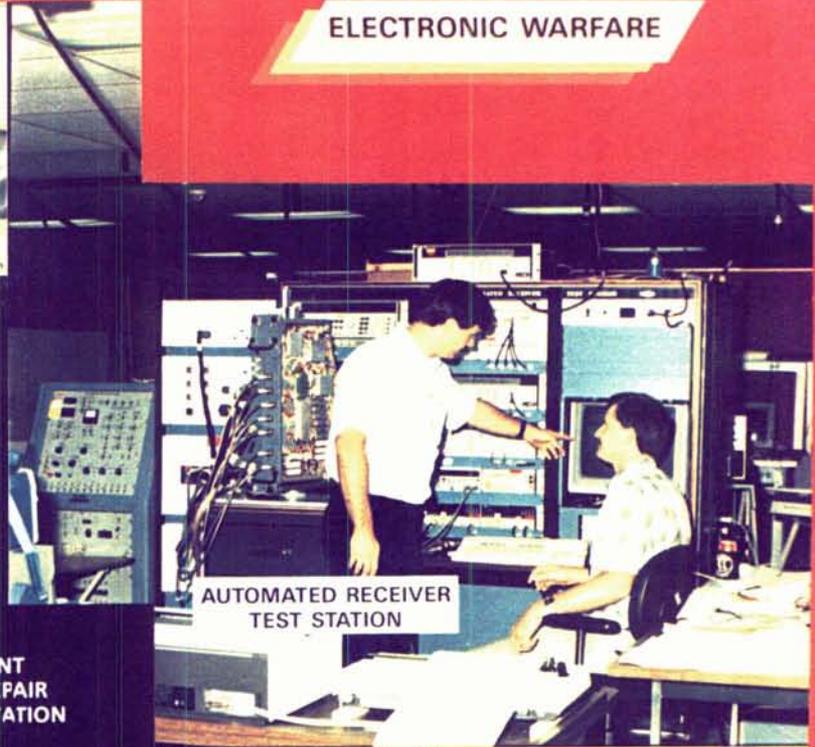
Crane Division performs comprehensive repair, alignment and calibration on the SLQ-32 Countermeasures System and has designed and built testers that are being supplied to the Fleet for test and repair of the SLQ-32 System.

Specialized repair and test capabilities along with a consolidated team approach allow NSWC to provide both effective and efficient support of Electronic Warfare Systems for the Navy, Marine Corps and Air Force.

ELECTRONIC WARFARE



ALQ-99
POD REPAIR WORK



AUTOMATED RECEIVER
TEST STATION

- LOGISTICS MANAGEMENT
- MAINTENANCE AND REPAIR
- TECHNICAL DOCUMENTATION



ARMAMENT CONTROL
UNIT TEST STATION



SLO-32

GUN AND GUN FIRE CONTROL SYSTEMS

NSWC Crane Division provides the following for Guns and Gun Fire Control Systems:

Manufacture, assemble, overhaul, repair, renovate, alter and modify gun and gun fire control systems and components.

Proof, test and evaluate combat subsystems, equipments, and components related to gun and gun fire control systems.

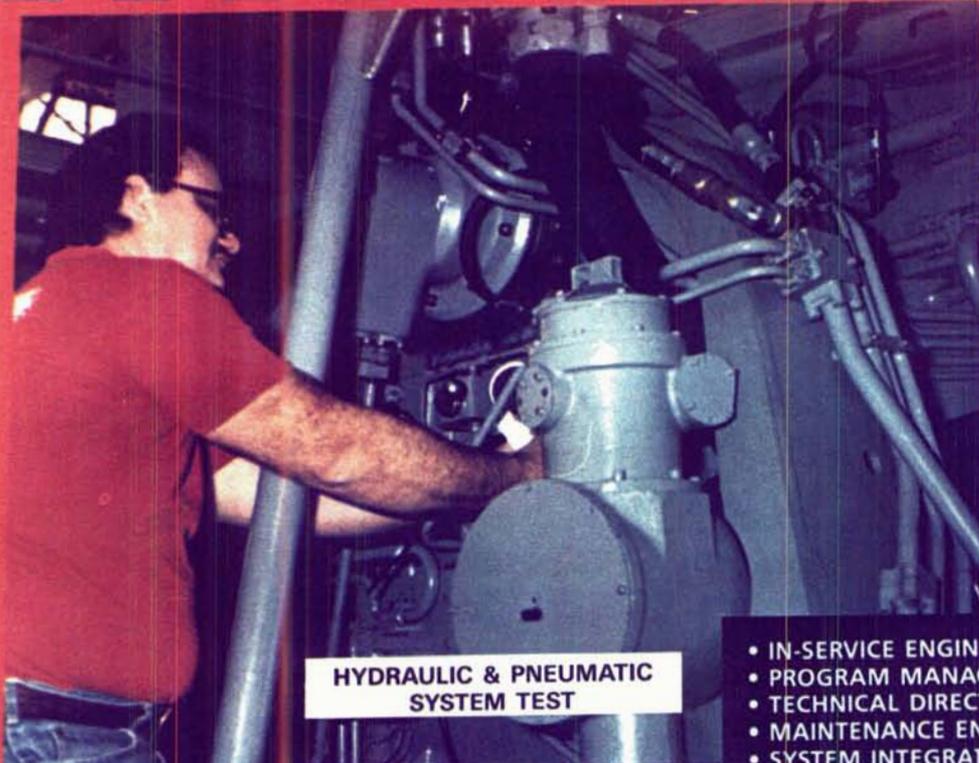
Perform engineering functions in support of combat systems life cycle for gun and gun fire control systems. Act as Technical Direction Agent, System Integration Agent, Design Agent, In-Service Engineering Agent in accordance with NAVSEAINST 5400.57A.

Conduct research and development of combat subsystems, equipments and components related to gun and gun fire control systems.

Maintain a technology base of facilities, equipment and skilled and experienced personnel in the area of gun and gun fire control systems to execute the industrial mobilization plan.

Coordinate Navy efforts in minor caliber guns with U.S. Army and U.S. Air Force.

GUN & GUN FIRE CONTROL SYSTEMS



HYDRAULIC & PNEUMATIC SYSTEM TEST

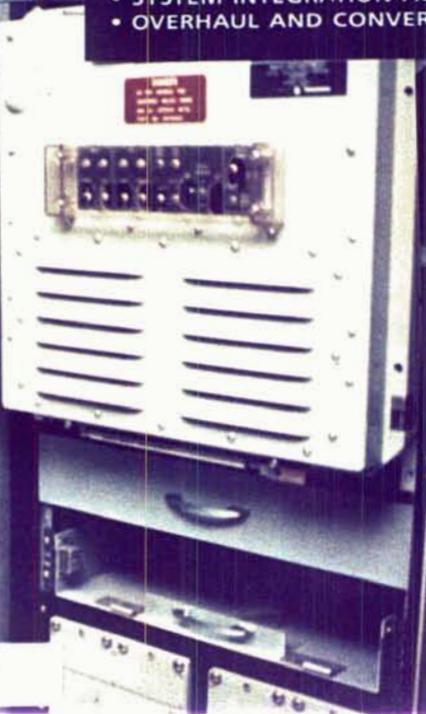


OVERHAUL

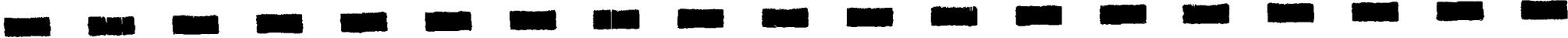
- IN-SERVICE ENGINEERING
- PROGRAM MANAGEMENT SUPPORT
- TECHNICAL DIRECTION AGENT
- MAINTENANCE ENGINEERING AGENT
- SYSTEM INTEGRATION AGENT
- OVERHAUL AND CONVERSION



GUN SYSTEM TEST STAND



SYSTEM ENGINEERING AND INTEGRATION

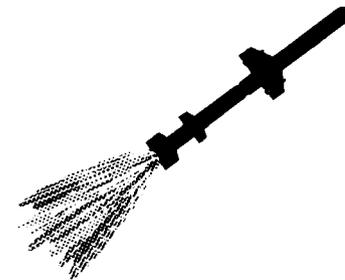


VISION

**"To be the Navy's Premier Product
Engineering and Industrial Activity"**

MAJOR PROGRAMS/SYSTEMS

- TRIDENT/POSEIDON/POLARIS
- ALQ-99
- SLQ-32
- STANDARD MISSILE
- CLOSE IN WEAPONS SYSTEMS
- MK 34 GUN SYSTEM
- AEGIS
- SQQ-89
- AN/BSY-1 AND 2
- MCM
- ADVANCED GUN SYSTEM



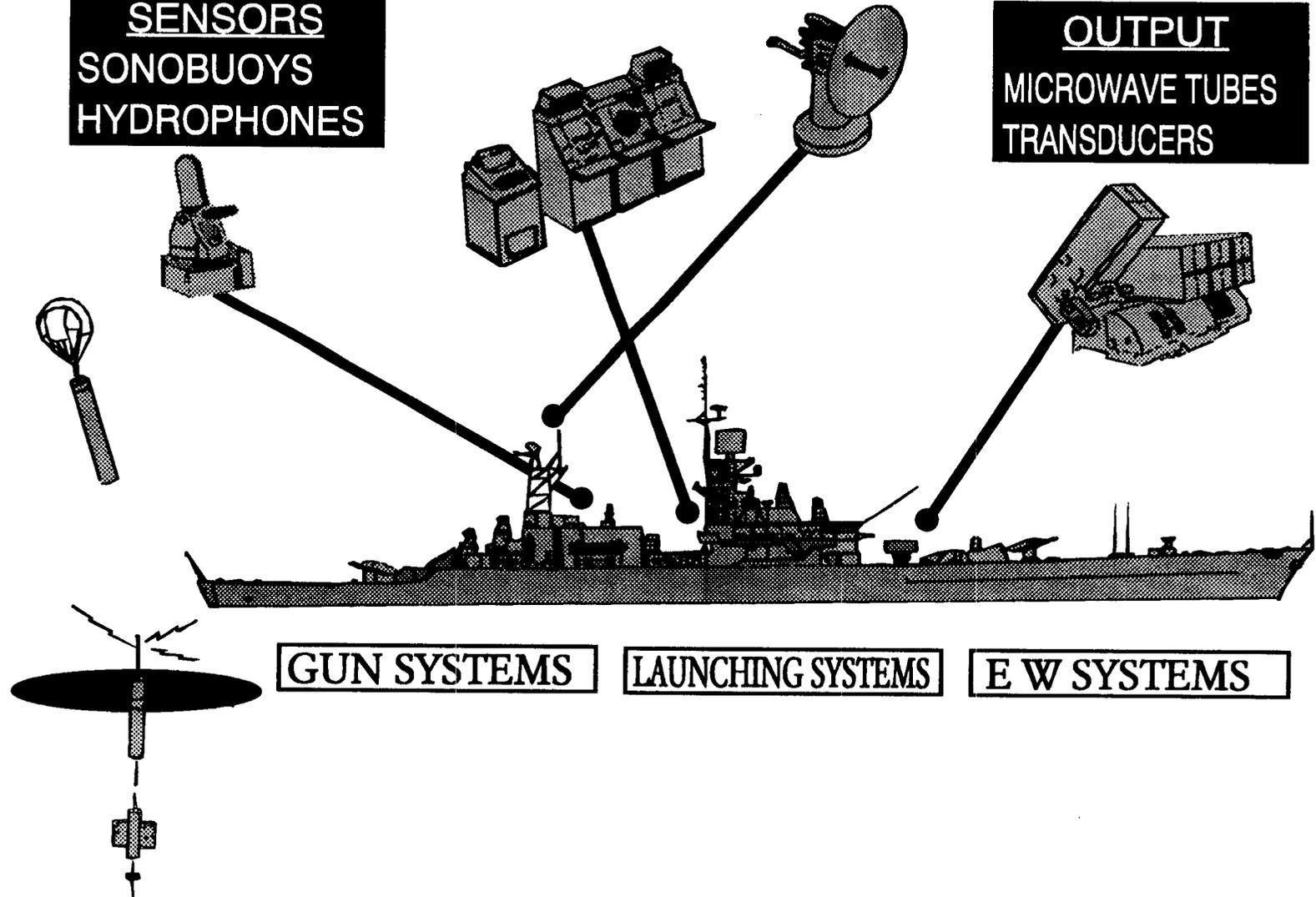
**ELECTRONIC/MECHANICAL SYSTEMS
BUILDING BLOCKS**

PROCESSING
CIRCUIT CARDS
COMPONENTS

POWER
POWER SUPPLIES
BATTERIES

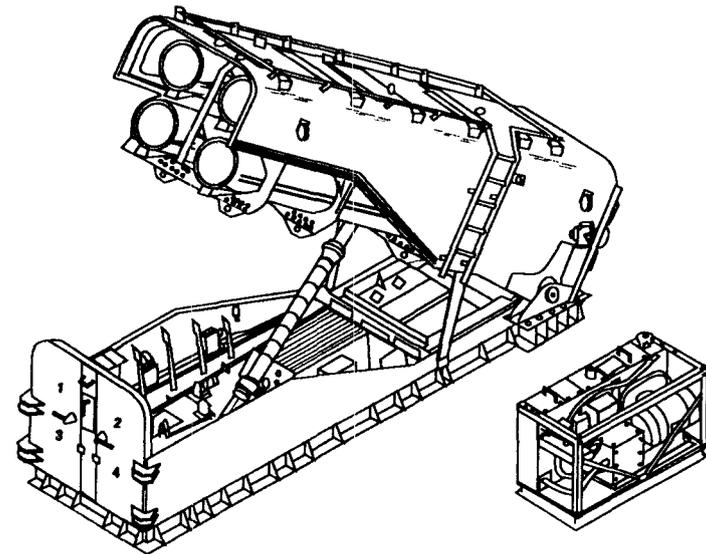
SENSORS
SONOBUOYS
HYDROPHONES

OUTPUT
MICROWAVE TUBES
TRANSDUCERS



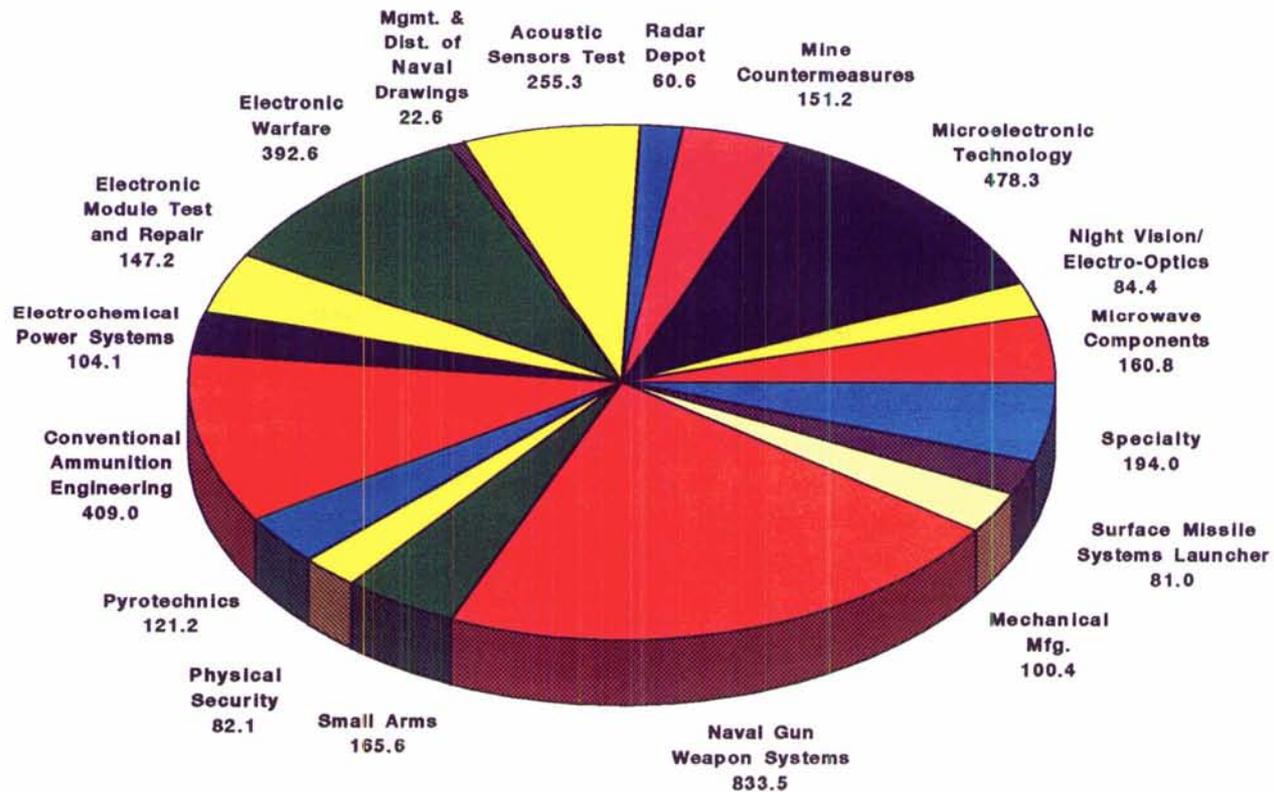
LOW INTENSITY CONFLICT SUPPORT MAJOR PROGRAMS

- WEAPONS DEVELOPMENT
- SPECIAL ORDNANCE
- 25MM SHIP GUN
- STABILIZED WEAPONS
PLATFORM SYSTEMS
- AMMUNITION ENGINEERING
- NIGHT VISION
- PYROTECHNICS



TC SIZE (WORKYEARS - FY 94 PROJECTED)

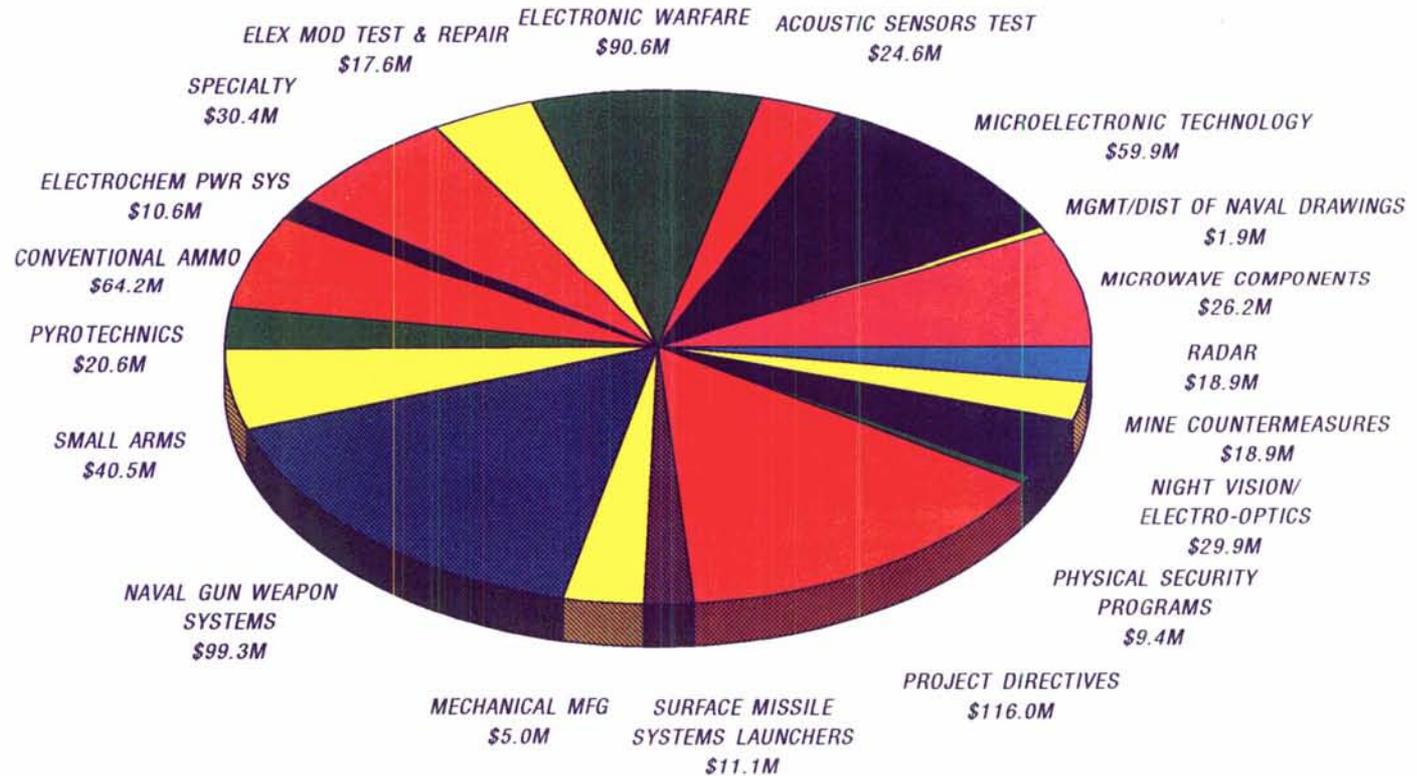
TOTAL: 3843.9



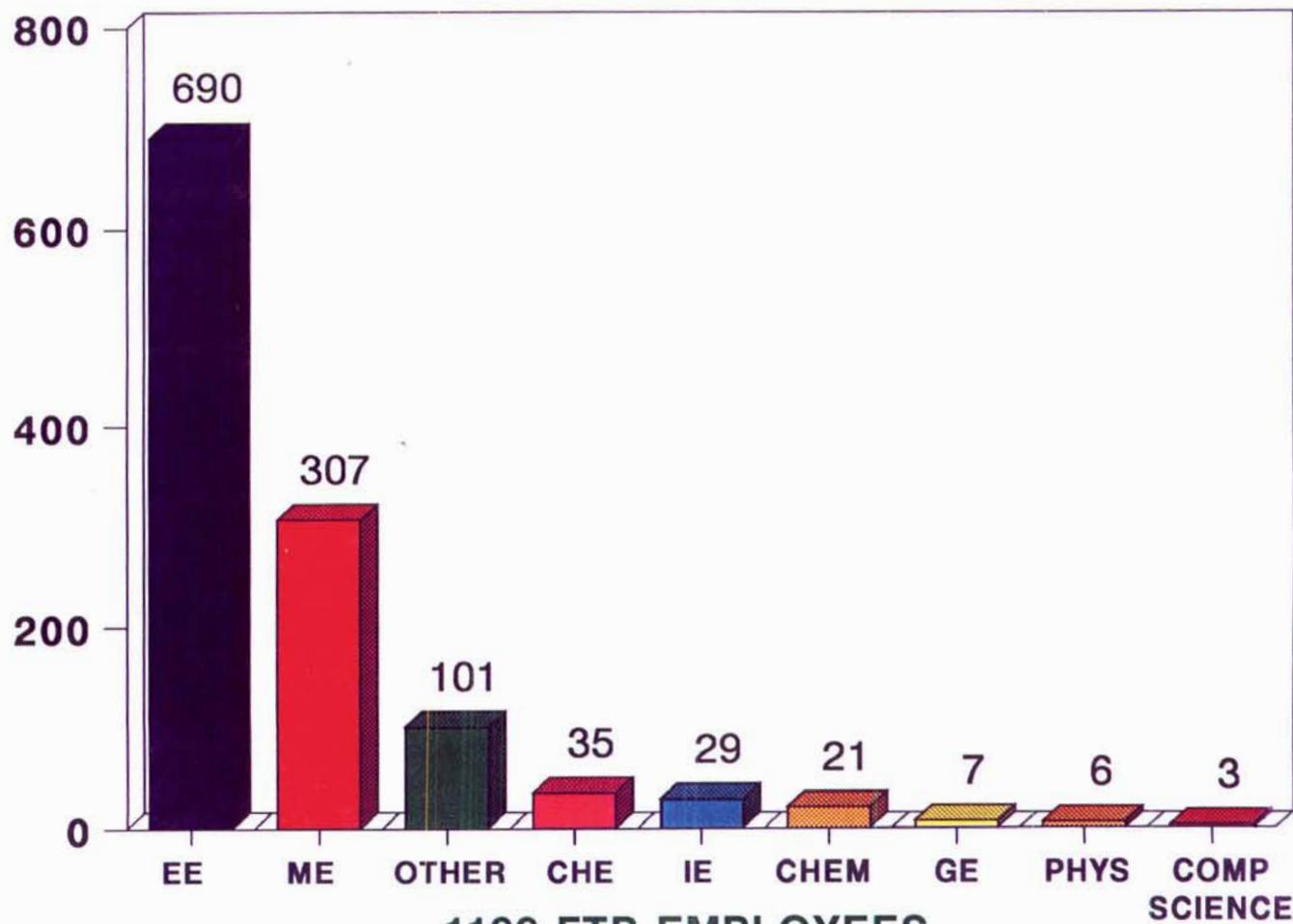
CRANE DIVISION

TOTAL OBLIGATIONAL AUTHORITY

TOTAL: \$695.6M



CRANE DIVISION ENGINEERS AND SCIENTISTS (BY DISCIPLINE)

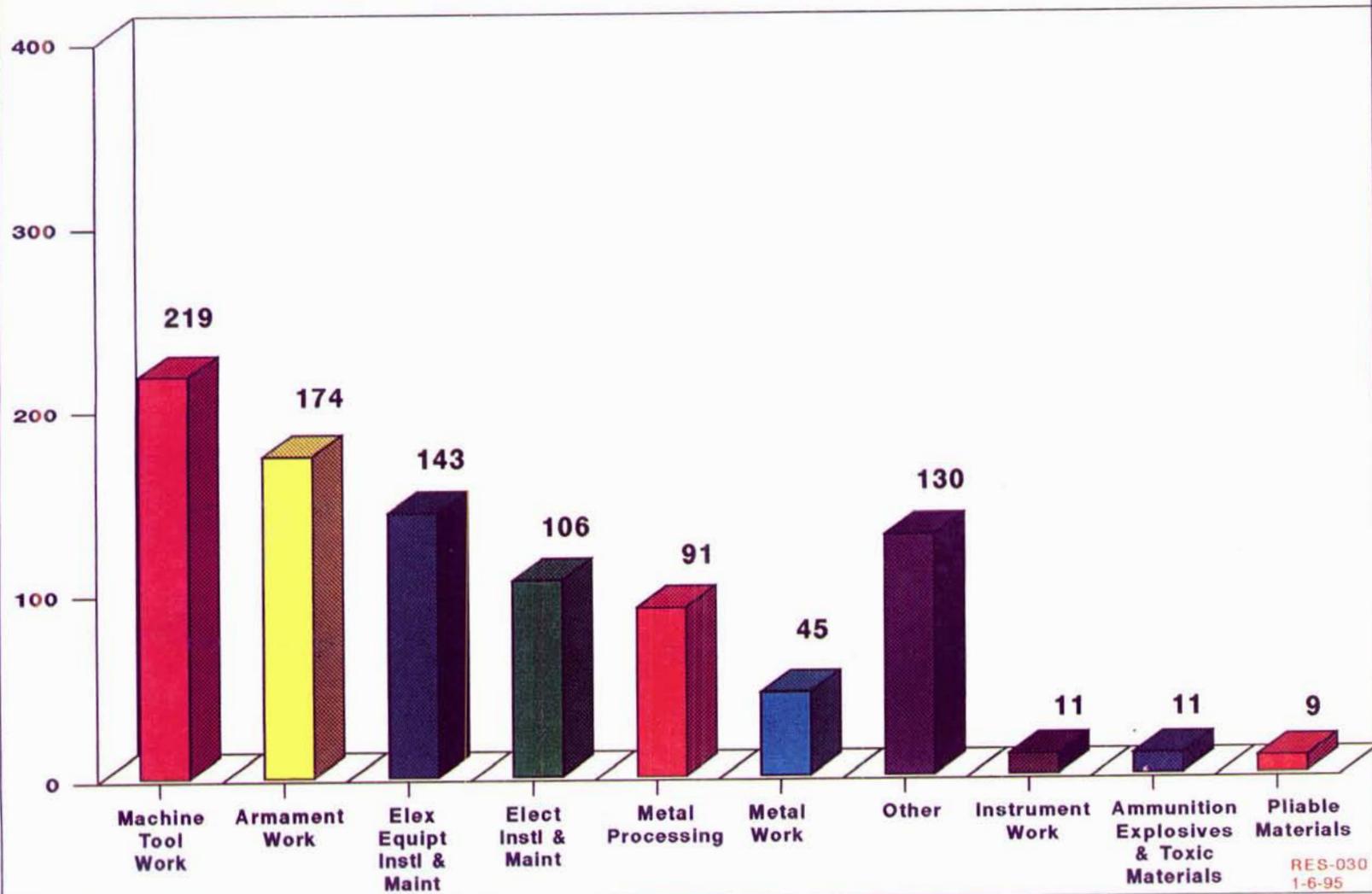


1199 FTP EMPLOYEES

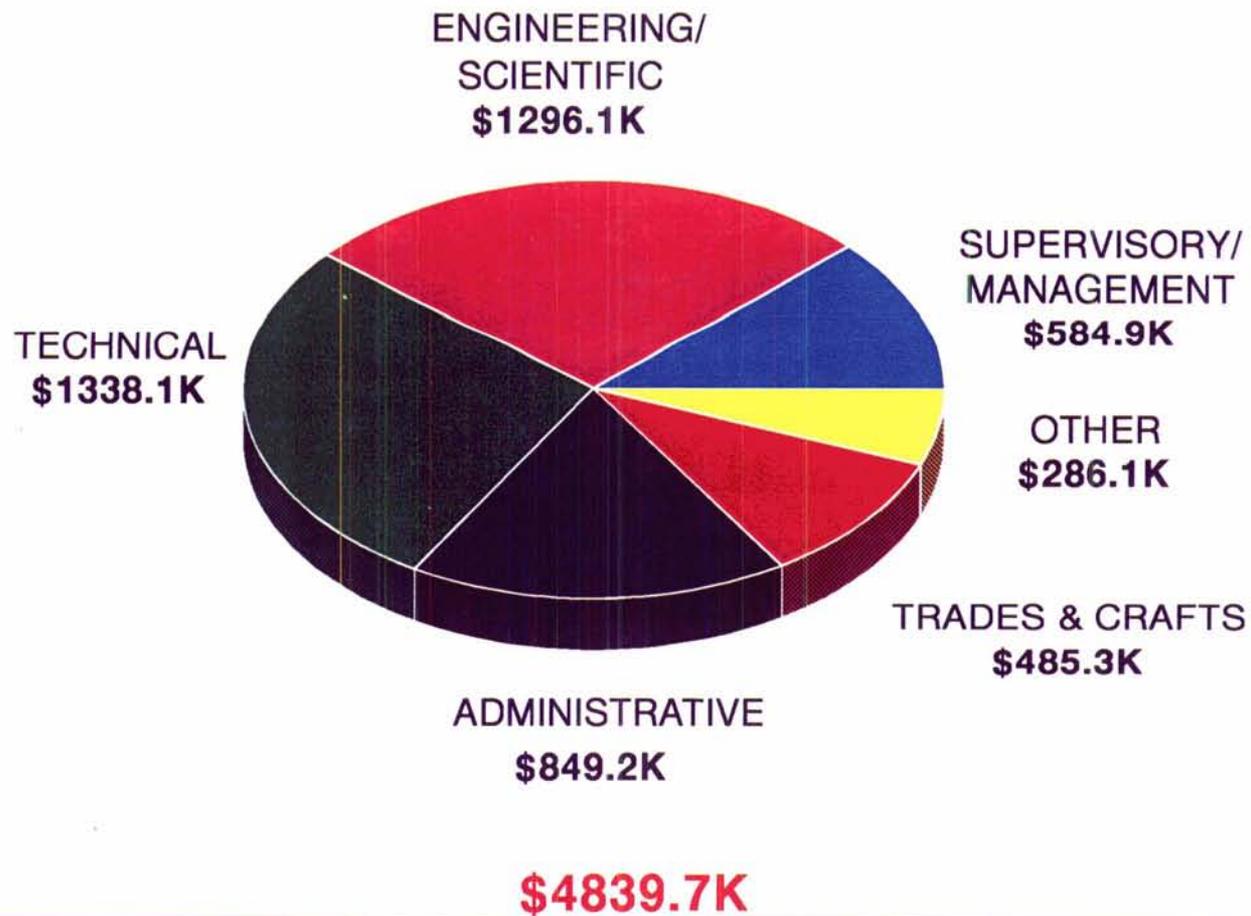
RES-022
1-6-95

CRAFTS

TOTAL DIRECT: 939

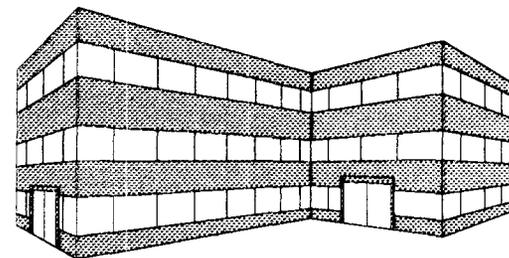


CRANE DIVISION TRAINING INVESTMENTS - FY 94



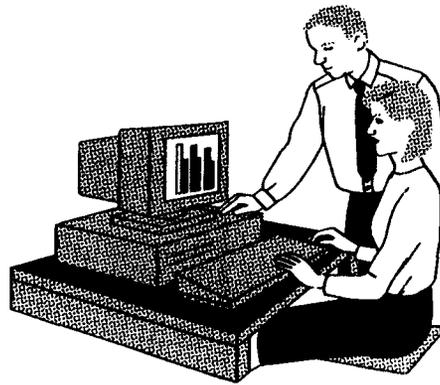
CRANE DIVISION PHYSICAL RESOURCES

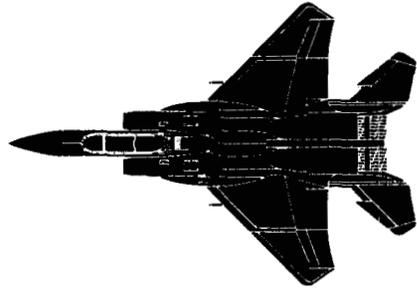
- **TOTAL LAND AREA - 62,983 ACRES (97.8 SQUARE MILES)**
 - **TIMBERLAND - 50,395 ACRES**
 - **PERIMETER FENCE - 75 MILES**
 - **PAVED STREETS & HIGHWAYS - 185 MILES**
 - **UNPAVED ROADS - 226 MILES**
 - **RAILWAY - 170 MILES**
- **BUILDINGS AND STRUCTURES - 2,892 (12.6 MILLION SQUARE FEET)**
 - **OPERATIONS - 4.7 MILLION SQUARE FEET**
 - **STORAGE - 7.9 MILLION SQUARE FEET**
- **LAND VALUE - \$79,012,000**
- **FACILITY VALUE (CPV) - \$1.5 BILLION**
- **EQUIPMENT VALUE (ACE) - \$321 MILLION**



LABOR AND MANAGEMENT

- **COST EMPHASIS**
- **CUSTOMER SATISFACTION**
- **GOOD LABOR/MANAGEMENT RELATIONS**
- **STRONG WORK ETHIC**
- **CAPABLE/RESPONSIVE/COST EFFECTIVE**





WHAT WE DO



MISSION

Provide Quality and Responsive Engineering and Industrial Base Support of Weapon Systems, Subsystems, Equipments and Components as assigned by the Commander, Naval Surface Warfare Center. This includes full spectrum support to our customers with principal emphasis on excellence in:

Electronic Warfare

Gun and Gun Fire Control Systems

Microelectronic Technology

Electronic Module Test and Repair

Microwave Components

Electrochemical Power Systems

Acoustic Sensors Test

Surface Missile Systems Launchers

Mine Countermeasures

Small Arms

Conventional Ammunition Engineering

Pyrotechnics

Mechanical Devices

Radar Depot

**Management and Distribution of
Naval Drawings**

Physical Security

Night Vision/Electro-Optics



WELCOME



Defense Base Closure and Realignment Commission

**Red River Army Depot
Defense Distribution Depot Red River, Texas
Texarkana, Texas
6 April 1995**



AGENDA



- **Overview**
- **Introduction to Red River Army Depot**
- **Command Briefings**
 - **RRAD Briefing**
 - **DDRT Briefing**
- **Community Briefing**
- **Tour Defense Complex Mission Areas**
- **Aerial Tour of Defense Complex**

SDSRR-R

4 April 1995

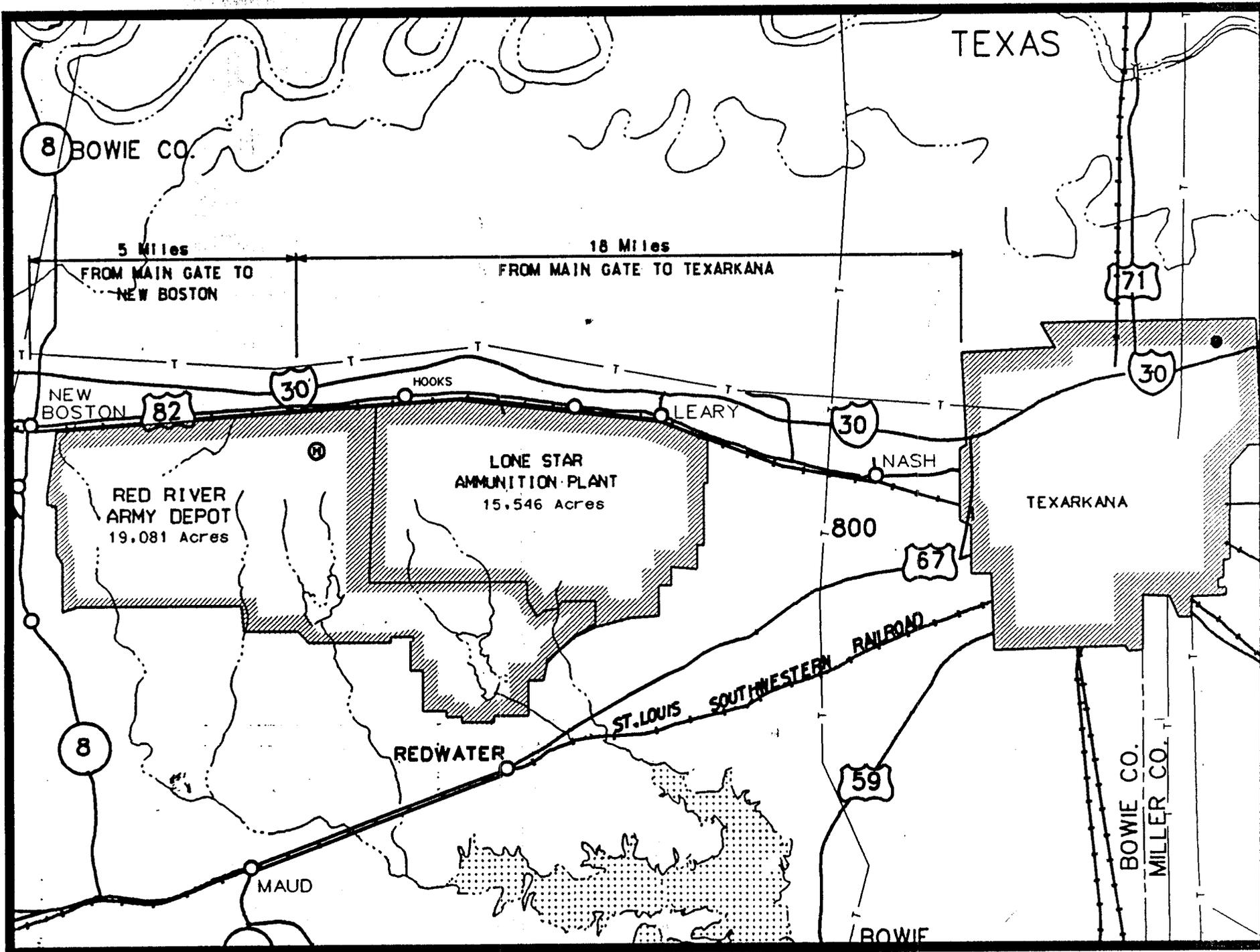
**RED RIVER ARMY DEPOT
TEXARKANA, TX**

ITINERARY

DEFENSE BASE CLOSURE AND REALIGNMENT COMMISSION VISIT

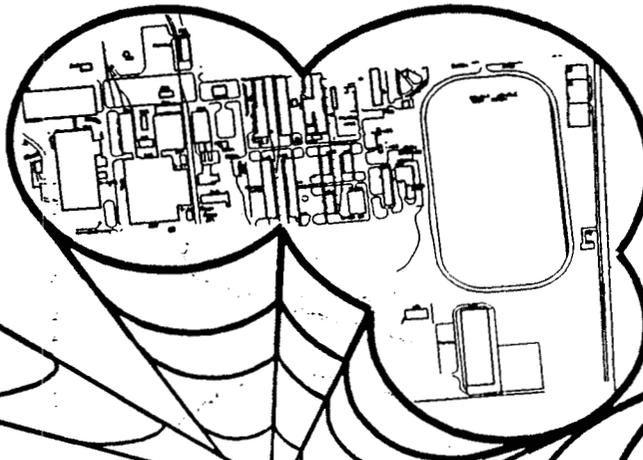
DATE OF VISIT: 6 April 1995

<u>HOUR</u>	<u>SCHEDULE</u>	<u>NOTES:</u>
1210 hrs	Depart for Airport from RRAD	Party Consists of COL Hall, Congressman Chapman, LTC Knapper, Phillip DuVall, BG (Ret) Donovan, Pat Pierce, and Swede Lee
1300 hrs	Commissioners Arrive	Arriving Military Air
1306 hrs	Travel to Depot	Travel by Bus. Party will consist of COL Hall, Congressman Chapman, LTC Knapper, Phillip DuVall, BG (Ret) Donovan, Pat Pierce, Swede Lee, Mr. Dixon, Mr. Kling, Mr. Cornella, Mr. Lyles, Mr. Borden, LTC Miller, Mr. Cook, and Ms. King
1331 hrs	Arrive at Bldg 320 <ul style="list-style-type: none">• Command Briefing - RRAD• Command Briefing - DDRT• Community Briefing	Entrance to Conference Room by invitation only.
1424 hrs	Vehicle Tour	
1432 hrs	Mission Area Tours	
1629 hrs	Aerial Tour of Defense Complex	Passengers in 1st Helicopter: COL Hall, Mr. Dixon, Mr. Kling, Mr. Cornella, and LTC Miller. 2nd Helicopter: LTC Knapper, Mr. Lyles, Mr. Borden, Mr. Cook, and Ms. King.
1654 hrs	Arrive at Airport	
1659 hrs	Wheels Up	Military Aircraft

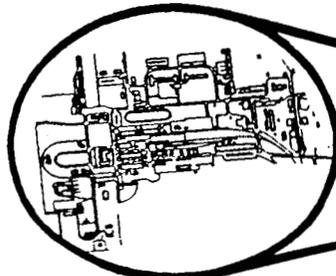


RED RIVER ARMY DEPOT

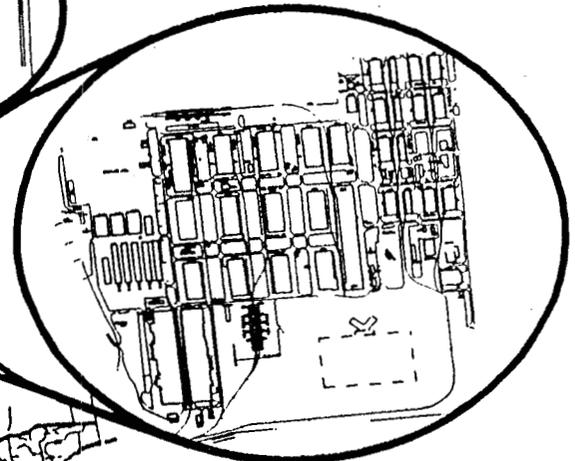
DEFENSE REUTILIZATION
AND MARKETING



DIR OF
MAINTENANCE

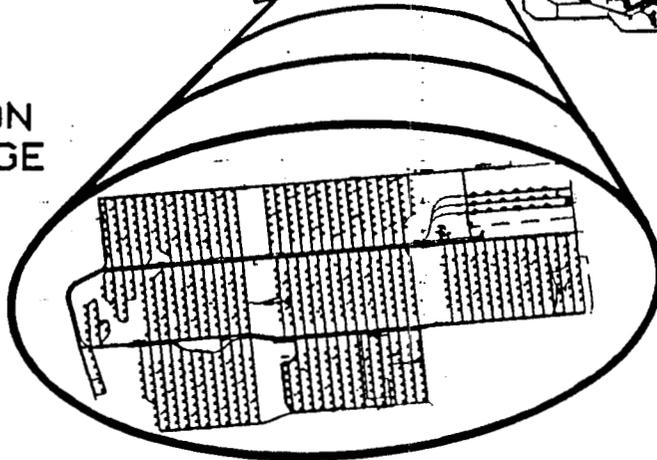


BASE OPS



DEFENSE
LOGISTICS
AGENCY

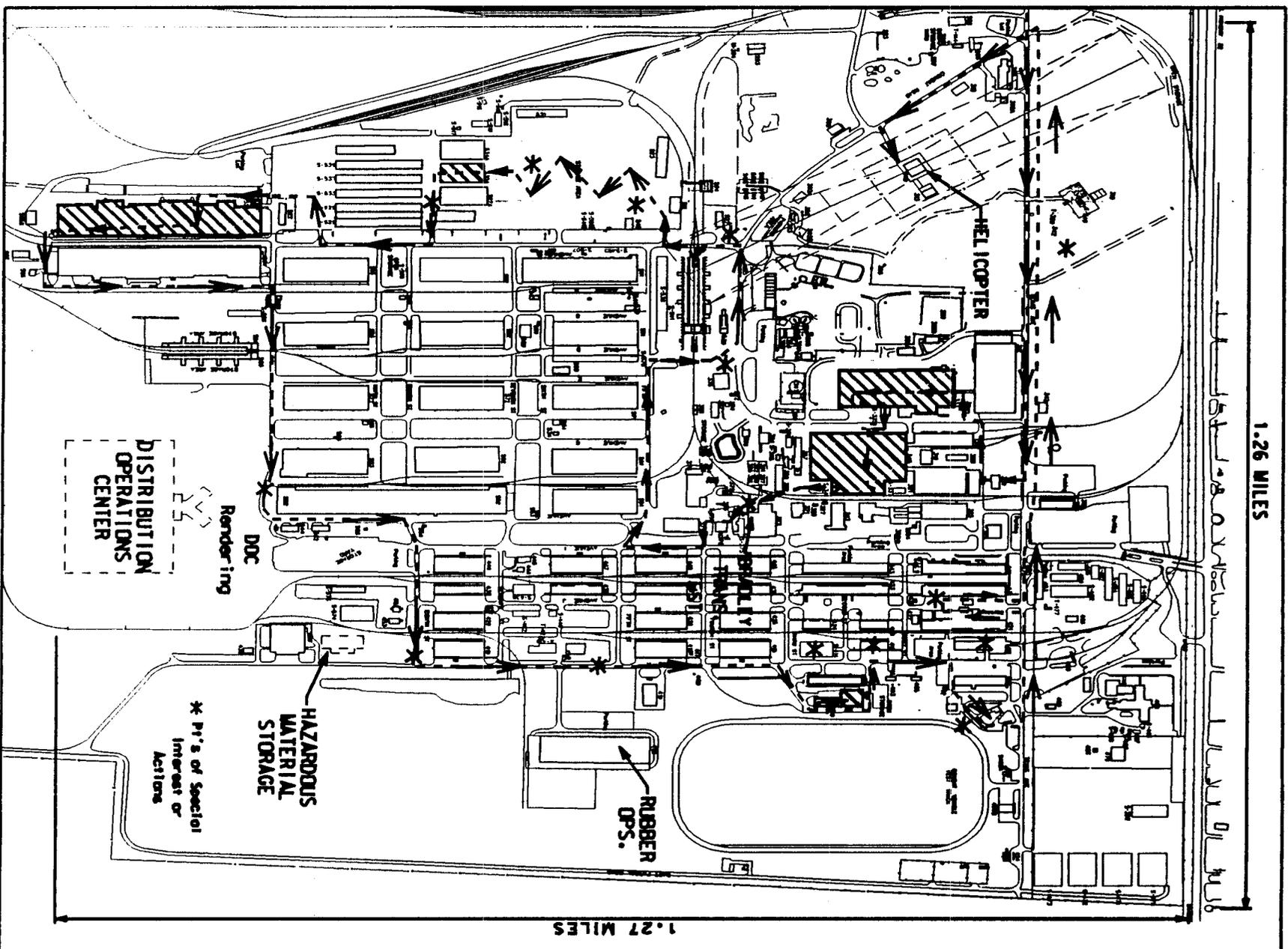
AMMUNITION
AND STORAGE



MISSILE
RECERTIFICATION
OFFICE



TOUR ROUTE



Document Separator



Commissioner Alan J. Dixon
Defense Base Closure
and
Realignment Commission

Red River Army Depot
Defense Distribution Depot Red River, Texas
Texarkana, Texas
6 April 1995

Red River Army Depot



Community Briefings



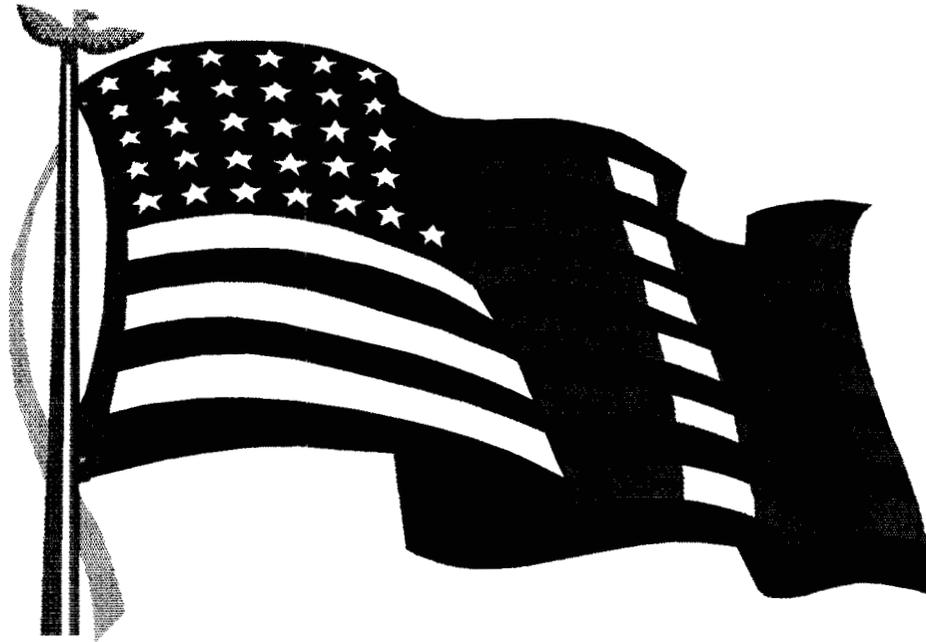
Red River Army Depot
On Site Visit
April 06, 1995

Chart 1 - Community Case

Introduction

Good evening Commissioner Dixon, Kling, Cornella and members of your staff. I am Congressman Jim Chapman, Representative of the First Congressional District of Texas. It is a pleasure to have you at Red River so that you may have the opportunity to see for yourself the military value of this great installation. Colonel Hall and Colonel Knapper have briefed you on the installation and the missions they perform. I am sure that upon completion of your visit, you will draw the same conclusion that we have, Red River is a national treasure and should not be closed. Meanwhile, it is my responsibility to inform you of my concerns, the community's concerns, with DoD's recommendations.

***Red River Army Depot
On Site Visit
April 06, 1995***



**Briefing: Community Case
Presented By: Congressman Jim Chapman**

Chart 2 - Community Concerns

We have obtained the Army and DLA data that are the baseline for their decision to recommend closure of Red River Army Depot and disestablishment of Defense Distribution Depot Red River. Our review of this data has led us to conclude that DoD's overall analysis is flawed.

I led a delegation to the Pentagon on January 05, 1995. We briefed Deputy Assistant Secretary of Defense Robert Bayer and Under Secretary of Army Joe Reeder on Red River's military value and specifically requested that they evaluate Red River as a single defense complex inclusive of Red River Army Depot, Defense Distribution Depot Red River, and the other tenants.

That did not happen!

The Army and DLA analysis of military value and cost were reviewed separately and independently. There was no assessment of the combined military value nor an assessment of the combined cost or COBRA analysis conducted.

Red River is the only Army depot with a large co-located DLA distribution mission and several large tenants. Red River does not fit the standard army depot maintenance model nor the standard DLA co-located supply support to depot maintenance model. Because of this, the true military value of this installation and the total cost for closure was not considered.



Community Concerns

- DoD analysis is flawed
- Community formally requested the analysis consider Red River as a military complex
- That did not happen

Chart 3 - Flaws in the Army Methodology

We have also discovered several flaws in the Army methodology and COBRA analysis.

- Savings are overstated

First of all, Army savings being claimed as BRAC savings include reductions in personnel strength that are a result of force structure reductions and have nothing to do with BRAC. We estimate that the savings may be overstated by as much as \$116 million due to workload reductions and other base operations cost. When you look at the Red River and Anniston workload reduction between FY96 and FY99, 72% of the workload reduction is at Anniston with only 28% reduction at Red River. This would suggest we are downsizing/closing the wrong installation.

- Costs not included

There are also costs of closure that have not been included in the Army analysis. DLA's decision to close Defense Distribution Depot Red River was based solely on the Army's decision but the Army analysis did not include the cost of disestablishment of Defense Distribution Depot Red River and relocation of their stock.

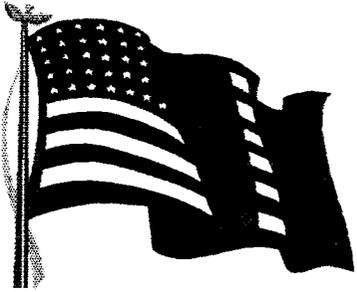
We estimate that the DLA relocation cost to be \$319 million. This includes relocation of almost 14,000 vehicles and about 120,000 tons of mission stock. The cost of construction (MILCON) required at Anniston to accept the maintenance and distribution mission was not included. A conservative estimate of \$34 million is based on DLA's estimate of \$19 million for hardstand and the Department of Defense Joint Service Group estimate of \$15 million for relocation of combat vehicle workload to Anniston. We believe additional construction will be required since Anniston is shown as having zero excess supply capacity and ranks last of all depots in the Future Requirements (expansion capability) part of the military value model.

- Requirements not considered

Other requirements that were not included in their cost of closure analysis are the supply, preservation and packaging, and storage requirements in support of the rubber products mission currently performed by DLA.

Also, the fact that tenant support such as medical services, property disposal, and calibration are still required in support of the remaining rubber and ammunition missions.

The Defense Finance Accounting Service Non-Appropriated Fund Accounting Office and Army Missile Recertification Office were not considered.



Flaws in Army Methodology

- Savings are overstated
 - Non-BRAC savings are included \$116 million

- Costs not included
 - DLA relocation \$319 million
 - Construction requirements at Anniston \$ 34 million

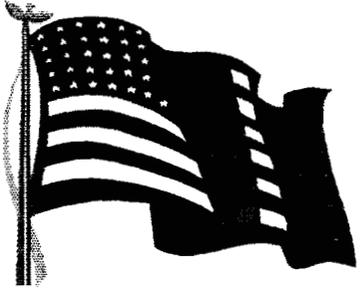
- Requirements not considered
 - Supply/storage support for Rubber Products
 - Tenant support of enclaved and other operations
 - Non-appropriated Fund Accounting
 - Missile Recertification Office

Chart 4 - Flaws in the DLA Methodology

We have found several flaws in the DLA methodology. First, DLA's Military Value ranking criteria placed Red River 5 of 17 in the Co-located Military Value matrix. That ranking was based on Red River's support to the co-located maintenance operation. Red River would have scored higher on military value except that DLA's model penalized Red River for having a large distribution mission. But DLA's military value assessment was not the basis of the recommendation.

The most serious flaw is that DLA's decision to close Defense Distribution Depot Red River was driven by the Army recommendation to close Red River Army Depot. The DLA justification states, ". . . the primary reason for their existence is to provide rapid response in support of the maintenance operation." While this is true at other Army depots, the facts simply do not support that justification at Red River. Only 12% of Defense Distribution Depot Red River business is with the maintenance operation, 8% is with other local customers, and 80% is in support of the world-wide distribution mission.

And finally, the decision was not based on cost/savings. DLA's independent cost analysis shows a return on investment of two years. However, the community analysis indicates the stock relocation cost is understated and the true return on investment is 22 years.



Flaws in DLA Methodology

- Evaluated as co-located depot. No credit was given for distribution mission to external customers
- Decision based solely on Army recommendation to realign maintenance mission
- Decision not based on cost/savings

Chart 5 - Return on Investment

As a result of the flaws I have just addressed, I take issue with the Army's calculation on return on investment. The Army says they will receive an immediate return on investment. This is simply not the case. Using DoD data we estimate that the return on investment will be 57 years, four years longer than this fine installation has been in existence. What a travesty if we let this happen. It simply does not make sense!

Let me give you a little more detail on the computations. When you take out the savings claimed by the Army that are the result of Force Structure changes not BRAC, the only real savings that would accrue are base operations or overhead personnel. This is 337 personnel or \$13.1 million per year. The community used the Army's estimate for recurring cost which includes the base operations personnel required to support the remaining operations enclaved to Lone Star Army Ammunition Plant. The annual net savings is \$7.3 million. We believe the one-time cost is understated by \$319 million for relocation of DLA stocks, associated personnel costs, and equipment relocation, and \$34 million of construction required at Anniston. When the one time cost is divided by the annual net savings, the results of return on investment is 57 years.



Return on Investment

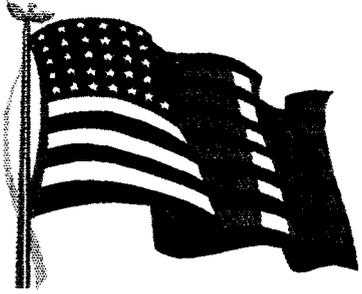
	<u>Army</u> (\$M)	<u>Community Estimate</u> (\$M)
Recurring Savings	\$129.0	\$13.1
Recurring Cost	\$5.8	\$5.8
Annual Net Savings	<hr/> \$123.2	<hr/> \$7.3
One Time Cost	\$59.6	\$412.6
Return on Investment	Immediate	57 years

Chart 6 - Profitability

MG Benchhoff, Commander of the Installation Operations Command, considers the profitability (Net Operating Result) as the primary depot performance measure.

The profitability (Net Operating Result) is simply the difference in the revenue received from customers for products produced, such as Bradley Vehicles, minus the expenses of producing the products.

As the depots increase efficiency and reduce expenses, they in effect generate a "profit." This "profit" is returned to the customers the next year through lower prices.



Profitability

"I consider the planned annual net operating result (NOR) as the primary depot performance measure, therefore we should reward positive variances from the planned NOR."

**DENNIS L. BENCHOFF
Major General, USA
Commanding, 20 Jan 94**

Chart 7 - Profitability

This chart depicts the performance of the depots during FY90 - FY94. Results charted are the difference between each depot's planned Net Operating Result and the actual accomplishment. Red River was by far the most profitable of the three vehicle maintenance depots (Anniston, Red River, Letterkenny).



Profitability

Cumulative FY90 -- FY94

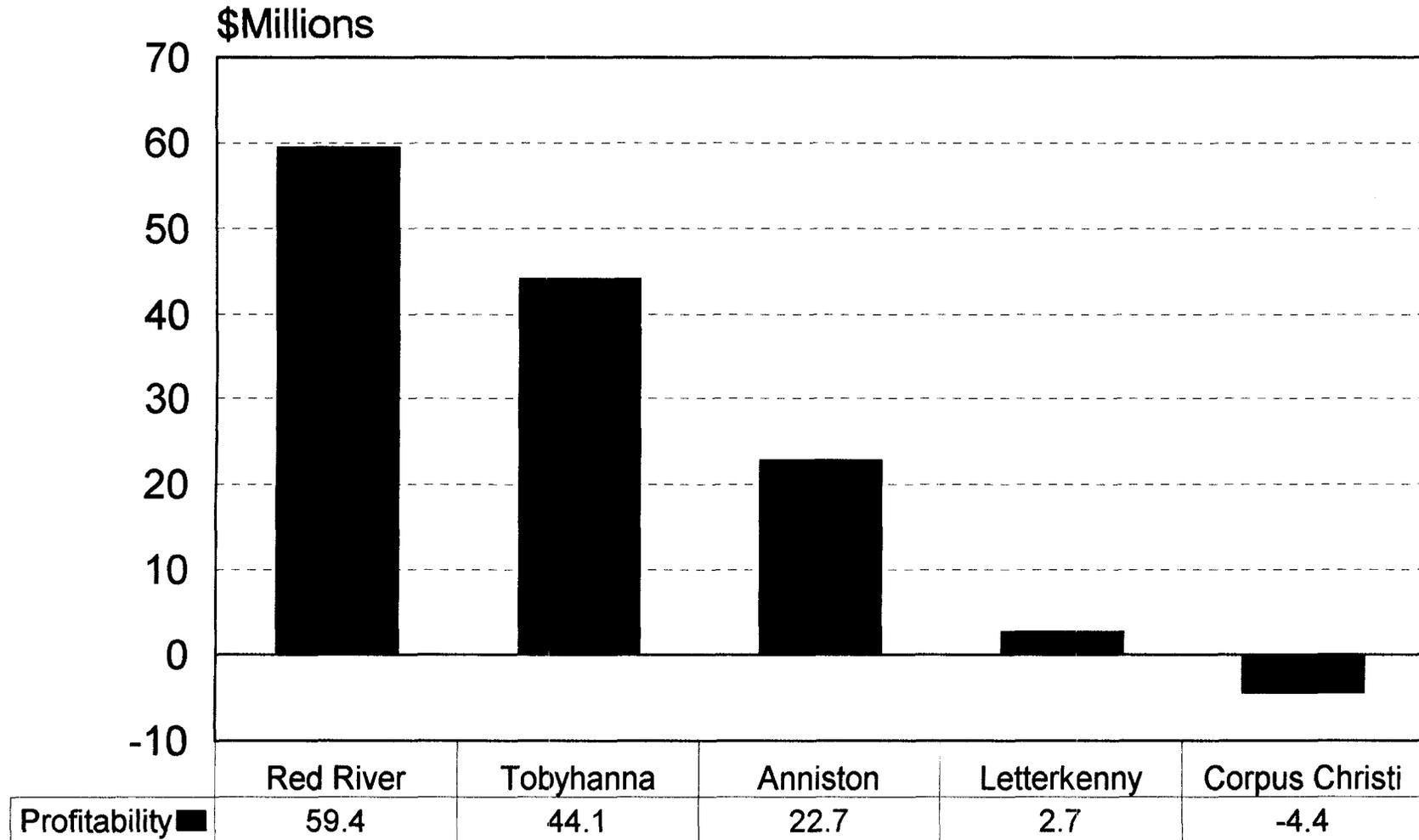


CHART 8 - WHERE WE ARE

Here's where we are. The Army has three vehicle maintenance depots Red River, Anniston, and Letterkenny. The recommendation is to close Red River, realign Letterkenny, and retain Anniston as the Army's only vehicle maintenance depot. The FY 99 workload projection supports the need for 1.75 depots not 1. I personally believe the workload may be understated and here's why. During the 1980's and 90's the Army bought thousands of new weapon system vehicles. Now, very few new vehicles are being procured. As the vehicles continue to get older, the maintenance requirements go up. Since the Army's estimate of maintenance workload is based on past experience, it could be significantly understated.

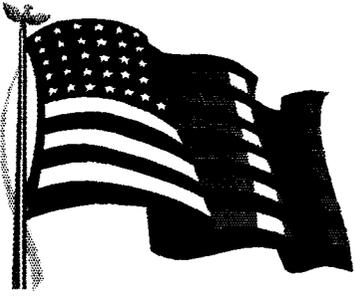


Where We Are

- Maintenance depots are required to sustain readiness
- Army has three vehicle maintenance depots
- Army recommends closure/realignment of two depots
- Workload will support 1.75 depots*

Chart 9 - Where We Are (continued)

In addition, distribution depots are required to maintain readiness. Approximately 50% of the CONUS troops are stationed in the Central United States and 80% of Red River's distribution mission is in the support of external customers.



Where We Are

(Continued)

- Distribution depots are required to sustain readiness
- Approximately 50% of CONUS troops are stationed in the Central United States
- 80% of Red River distribution mission is in support of external customers

CHART 10 - WHAT WE NEED TO DO

I believe this is what we need to do.

First, we should follow the concepts recommended by the Defense Science Board in April of 1994. The Board, made up of senior defense military and industrial leaders, identified excess depot maintenance capacity, the need to downsize to CORE workload, and the need to preserve both the organic and industrial base.

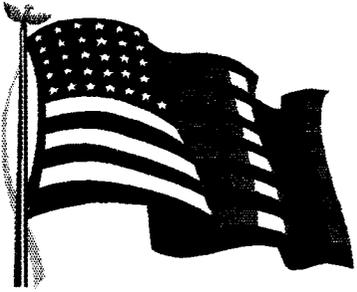
The community and I believe that we have a plan that will achieve the desired result. We believe the Army should retain its two most efficient vehicle depots Red River and Anniston. Downsize both to CORE workload. This would maintain the knowledge base and readiness level that will be lost for many years if transferred.

The Army should realign Letterkenny's track vehicle and missile maintenance workload to Red River and Anniston. Both Red River and Anniston have existing missile facilities and skills available to accommodate the missile workload.

We should then partner with industry. The Defense Science Board recommended that maintenance and overhaul of CORE systems be retained in the depots and modification and upgrade be reserved for industry. The most efficient approach is to perform any modification and upgrade at the time of overhaul. By teaming with industry and providing excess depot facilities for industry use, the Army can help preserve both the organic and industrial skill base.

Red River and United Defense, producers of the Bradley and M113 Family of Vehicles, have already explored some possible teaming arrangements. Both parties believe the concept is a very good one. An agreement where Red River will serve as a sub-contractor to United Defense on the M113 A2/A3 conversion program is near completion.

And finally, we need to maintain the distribution mission at Red River.



What We Need To Do

- Follow concepts recommended by the Defense Science Board Task Force on Depot Maintenance Management, April 1994
- Retain two most efficient vehicle depots
 - Red River
 - Anniston
- Downsize both to CORE workload
 - Maintain knowledge base
 - Maintain readiness level
- Realign Letterkenny vehicle and missile workload to Red River and Anniston
- Team with industry
 - Preserve industrial base
 - Increase capacity utilization
- Maintain the distribution mission at Red River

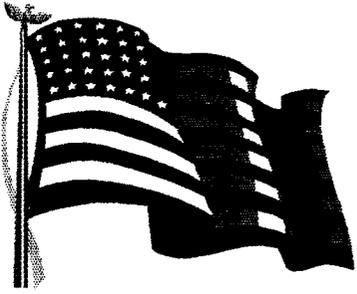
CHART 11 - EVERYBODY WINS

And best of all, Everybody Wins!

The Army, private industry, and perhaps most importantly the taxpayer. This approach will provide the CORE readiness base required at the lowest possible cost.

Ladies and Gentlemen, at this time, I want to introduce you to retired Brigadier General Pat Donovan. He is a man who knows first hand the vital role that Red River plays in the Army's readiness posture. General Donovan is a former commander of Red River Army Depot, was the program manager for the Army's light combat weapons systems: the Bradley and M113 Family of Vehicles maintained at Red River. He was also the project manager for the M60 Tank maintained at Anniston.

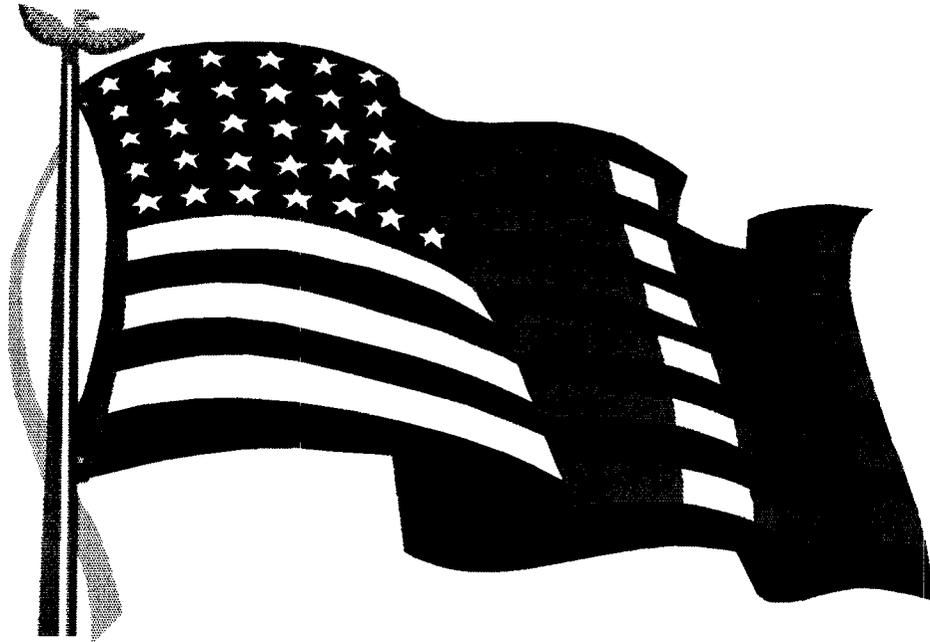
I also want you to know that he is here today, not as a paid consultant, but as a man concerned about the Army's readiness and because it's the right thing to do....General Donovan.



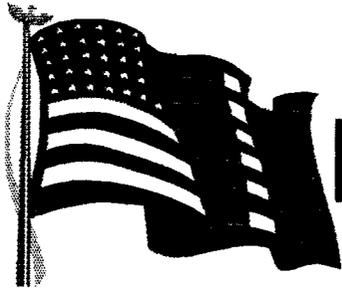
Everybody Wins

- Army
- Private Industry
- Taxpayer

***Red River Army Depot
On Site Visit
April 06, 1995***



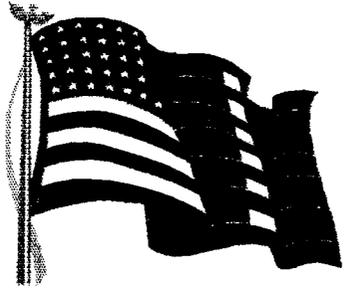
**Briefing: A Soldier's Perspective
Presented By: General Claude B. Donovan, USA (Ret.)**



Readiness and Sustainability

Foundation For DoD Depot Maintenance

Flexible and responsive depot maintenance contributes significantly to the operational readiness and sustainability of United States combat forces. It is essential for national defense that Department of Defense activities maintain a logistic capability (including personnel, equipment and facilities) to ensure a ready and controlled source of technical competence and resources necessary to ensure effective and timely response to a mobilization, . . . contingency, . . . or other emergency requirement.



Readiness and Sustainability

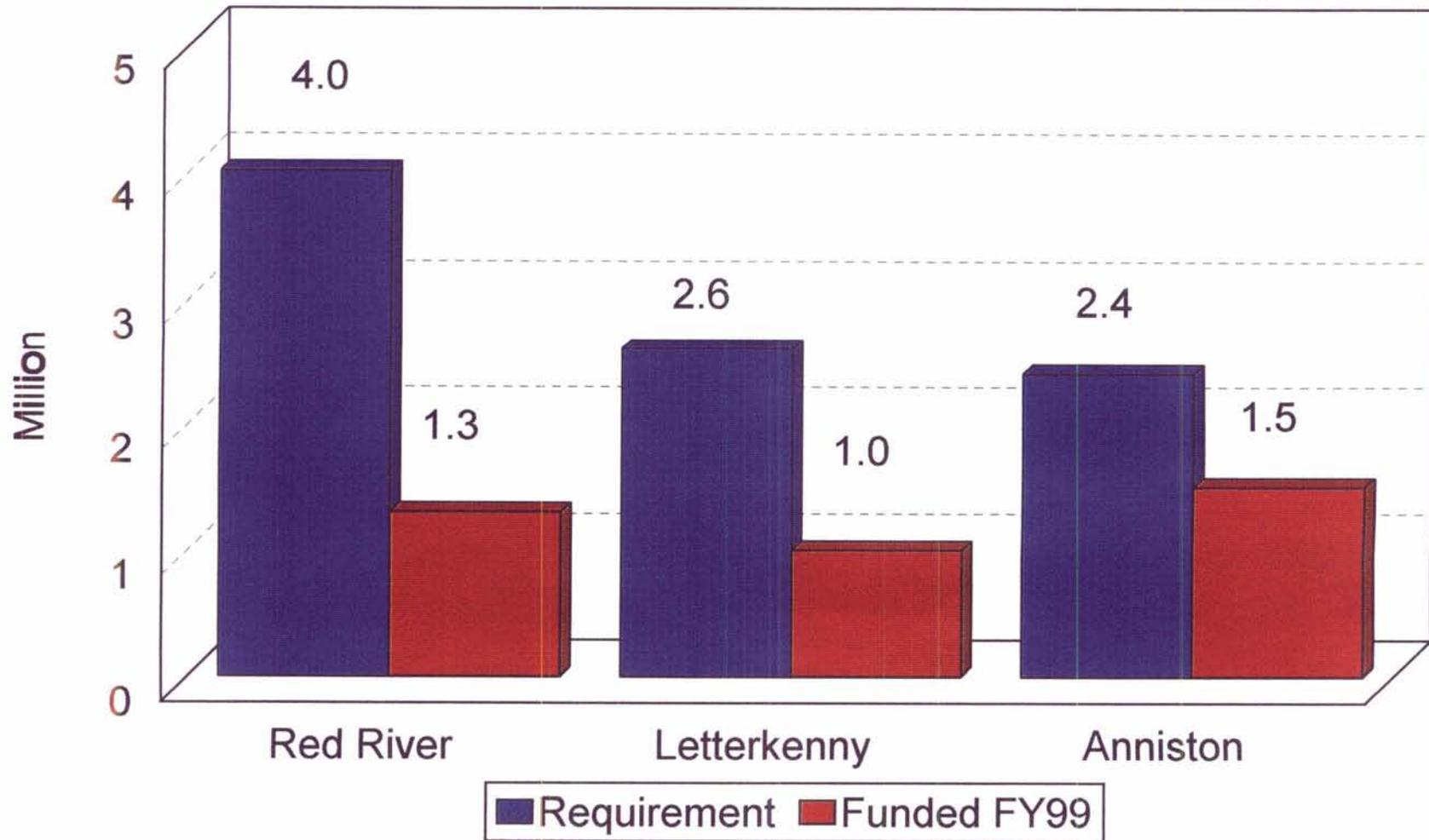
Foundation for DOD Depot Maintenance

"Organic depots exist to support the readiness and sustainability requirements of United States combat forces. It is essential that DoD maintenance depots provide flexible and responsive depot maintenance support capabilities in consonance with Service Secretaries' Title 10 readiness responsibilities. The Task Force supported this vital role of the DoD organic depots, agreeing that there is an irreducible minimum of depot maintenance capability that must be provided by organic depots. These capabilities, defined as CORE, comprise skills, competencies and facilities that must exist in organic depots and shipyards. CORE requirements are derived by each Service in an analytical manner as support requirements related to current military strategies (e.g., force structure and the Joint Chiefs of Staff two major regional conflict scenario). The Task Force agreed that the CORE concept is the correct approach to derive essential organic depot maintenance capabilities, and all but the Air Force agreed that it is a vital role of each Service to provide for the organic depot support of its CORE capabilities."



AMC Core Workload

Direct Labor Hours





BRAC 95

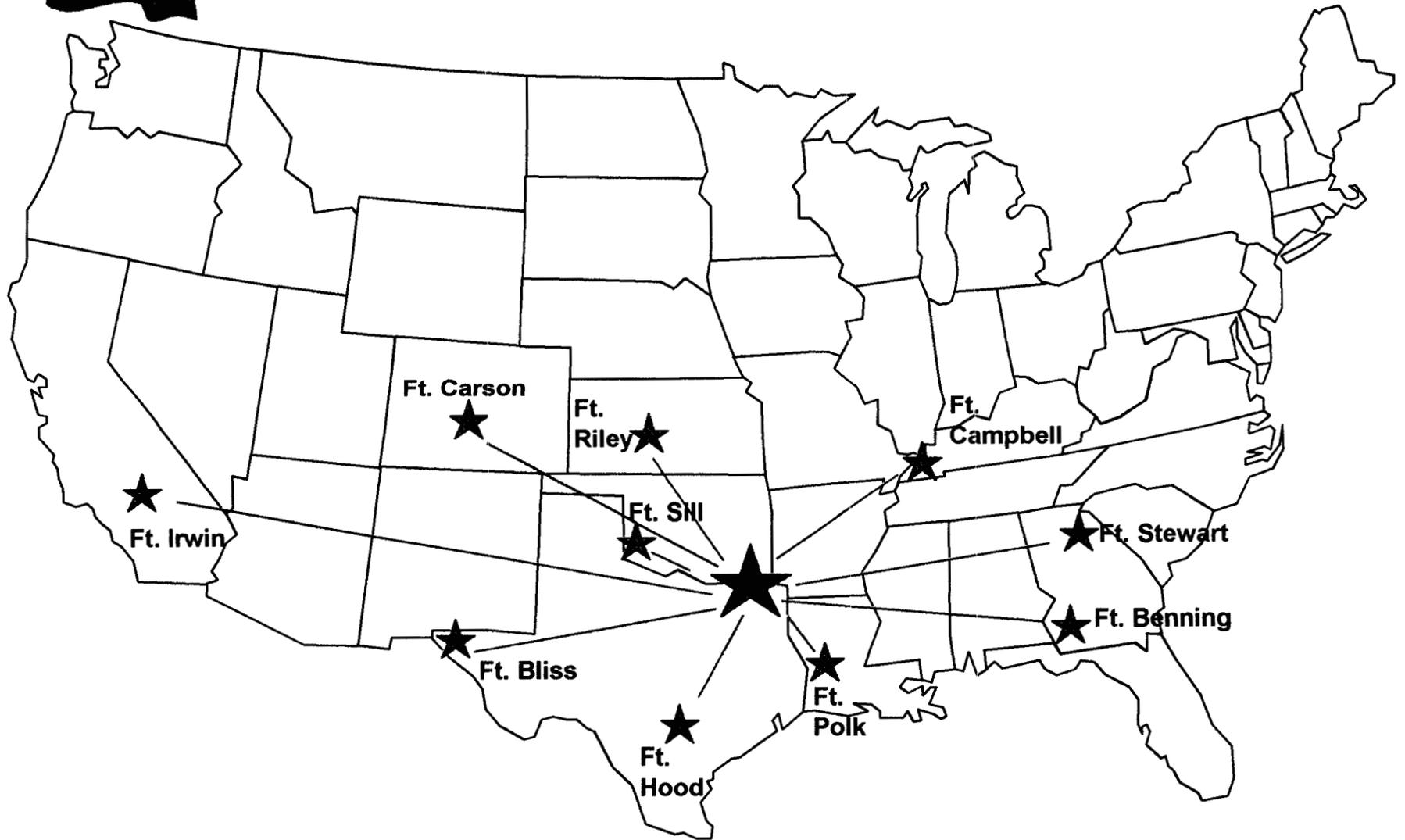
Impact on Depot Capacity (MDLH)

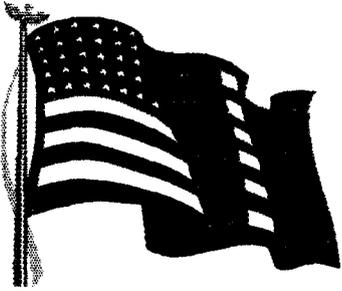
	<u>FY99 Workload</u>	<u>Capacity Index</u>	<u>Utilization Index</u>
Red River	1.493	3.233	46%
Anniston	1.763	3.200	55%
Letterkenny	1.961	2.485	79%
	<u>5.217</u>	<u>8.918</u>	<u>58%</u>
Less Letterkenny	5.217	6.433	81%
Letterkenny & Red River	5.217	3.200	163%

*Data Source is Defense Depot Maint Council Business Plan, FY95-99



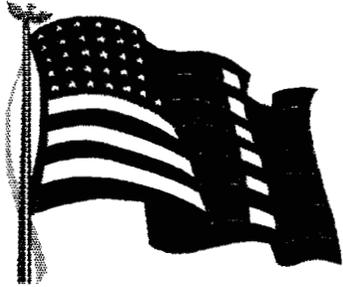
DDRT Top Ten Customers





What We Need To Do

- Follow concepts recommended by the Defense Science Board Task Force on Depot Maintenance Management, April 1994
- Retain two most efficient vehicle depots
 - Red River
 - Anniston
- Downsize both to CORE workload
 - Maintain knowledge base
 - Maintain readiness level
- Realign Letterkenny vehicle and missile workload to Red River and Anniston
- Team with industry
 - Preserve industrial base
 - Increase capacity utilization
- Maintain the distribution mission at Red River



Red River Military Value

"Co-located with Red River Distribution Depot and Lone Star Army Ammunition Plant, Red River Army Depot plays a vital role in our nation's military. The vehicle maintenance work done by Red River, the worldwide supply mission performed by its Defense Logistics Agency tenant facility, and the quality munitions produced by Lone Star constitute a unique complex serving our nation with exceptional distinction."

Vice President Al Gore

Source: Memorandum, dated February 3, 1995, to The Honorable William Perry, Secretary of Defense

***Red River Army Depot
On Site Visit
April 06, 1995***



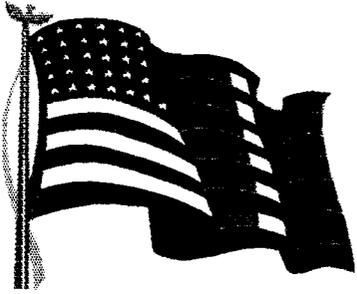
Briefing: Red River - *A Quality Depot*
Presented By: Bob Barnes



Red River Army Depot

A National Quality Leader

- Formally named Winner of 1995 Federal Quality Improvement Prototype Award by the Federal Quality Institute, 2 March 1995
- Federal sector award criteria synonymous with Malcolm Baldrige Award
- Depot Recognized as a Quality Leader by:
 - Vice President Gore (National Quality Conference, July 1994)
 - National Partnership Council
 - Government Executive Magazine (July 1994)
 - Federal Times Newspaper (18 July 1994)
 - September 1994 Status Report of National Performance Review

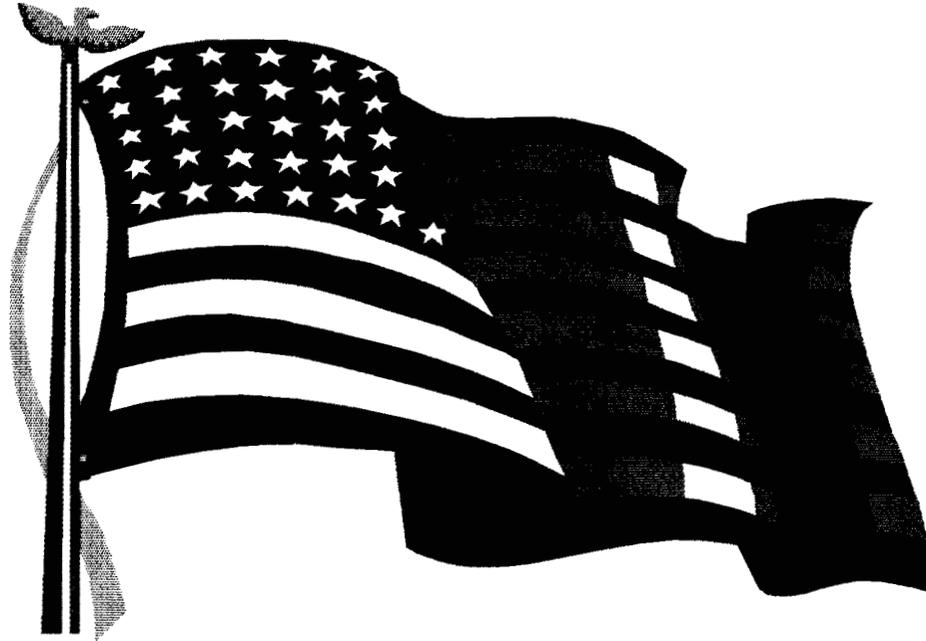


Red River Army Depot

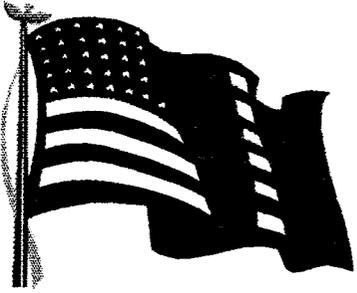
A "Unique" Quality Team

- Importance of award lies with the accomplishments during pursuit
- Successful in spite of downsizing, major reorganization, and BRAC threats
- Most important asset is the summation of the members as one unique team
- Quality should be a part of the BRAC Criteria
 - Quality products
 - Performance efficiency
 - Responsiveness and readiness to customers

***Red River Army Depot
On Site Visit
April 06, 1995***



Briefing: Community Impact
Presented By: Robert E. "Swede" Lee



BRAC Impact

- Highest economic impact of any closure
- 10% of the total civilian job cuts in BRAC 95 are at Red River
- Projected job losses equal 13.6% of total employment
- Area unemployment rate increases to 21.7%

Document Separator



We
Support
The
Soldier

Red River Army Depot



People With A Vision Proudly Creating Excellence



Red River Army Depot

Three Major Missions



We
Support
The
Soldier

- **Maintenance**
 - **Performs Depot Level Maintenance on a Variety of Combat Vehicles, Weapon, and Support Systems.**
- **Ammunition**
 - **Performs Depot Level Maintenance, Storage, and Demilitarization on a Variety of Ammunition and Missiles.**
- **Missile Recertification**
 - **Sole-Source Support to United States Forces and Various Foreign Military Sales for Recertification of Patriot and Hawk Missiles.**



Unique Missions



We
Support
The
Soldier

- **Conversion/Modification of Light Tracked Vehicles**
- **Rebuild of Roadwheel, Track, Bias and Radial Tires**
- **Design and Manufacture of Prototype Combat Vehicles**
 - **Large Area Mobile Protected Smoke System**
 - **M113 Armored Personnel Carrier (Stretched)**
 - **USAF Explosive Ordnance Disposal Vehicle**
 - **Joint Readiness Training Center Light Armored Vehicle Conversion**
 - **National Training Center Opposing Forces Surrogate Vehicles**
- **Special Fabrication Projects**
 - **Single Channel Ground and Airborne Radio System (SINCGARS) Installation Kits**
 - **Combat Identification Panels**



Interservice Support



We
Support
The
Soldier

- **Marine Corps**
 - **Amphibious Armored Vehicle Roadwheels**
 - **Hawk Missiles**
 - **Negotiations Currently Ongoing for 500 High Mobility Multi-Purpose Wheeled Vehicles (HMMWV)**

- **Navy - Armament Subsystems**

- **Air Force**
 - **Explosive Ordnance Disposal Vehicle**
 - **Maverick Missiles**



DoD's "CORE" Weapon Systems Supported



We
Support
The
Soldier

- **Bradley Fighting Vehicle System (BFVS)**
- **Multiple Launch Rocket System (MLRS)**
- **M113 Family of Vehicles (FOV)**
- **Fire Support Team Vehicle (FIST-V)**
- **Heavy Equipment Transporters (HET)**
- **M9 Armored Combat Earthmovers (ACE)**
- **Palletized Load System (PLS)**
- **Reverse Osmosis Water Purification Units (ROWPU)**



Army Mechanized Division Structure



We
Support
The
Soldier

• Bradleys	311
• Multiple Launch Rocket System (MLRS)	72
• M113 Family of Vehicles (FOV)	706
• M1 Abrams	255
• M109's	72
• M9 Armored Combat Earthmovers (ACE)	64

We support 77% of all tracked vehicles in a typical mechanized division.

• High Mobility Multi-Purpose Wheeled Vehicle	1700
• Cargo Truck	1500
• Heavy Expanded Mobile Transport Truck (HEMTT)	500
• Heavy Equipment Transporters (HET)	24
• Light Equipment Transporters (LET)	3
• Palletized Load System (PLS)	63

Note: Items highlighted in blue represent core systems supported by Red River Army Depot



We
Support
The
Soldier

Fleet Densities

Current USA Inventory

Bradleys	6,724
M113 FOV	25,600
MLRS	747
Total	33,071

10 Division Army

Bradleys	6,724
M113 FOV	17,353
MLRS	747
Total	*24,824

Non-USA/World

Bradleys	400+
M113 FOV	50,000
MLRS	86

**Current Production Rates = 24-Year Cycle*



Unique Capability to Support Logistics Power Projection



**We
Support
The
Soldier**

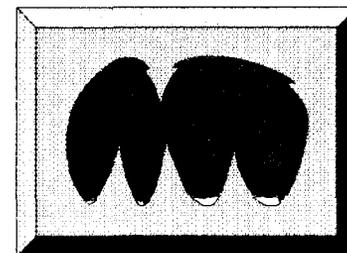
- **Unserviceable Assets at RRAD**
 - **Bradleys - 732**
 - **M113 Family of Vehicles - 2,553**
 - **Tactical Wheeled Vehicles - 810**
- **Power Projection Capability**
 - **Bradleys - 50/Month**
 - **M113 Family of Vehicles - 200/Month**
- **Mobilization + 6 Months - RRAD Could Provide:**
 - **300 Bradleys**
 - **1200 M113 Family of Vehicles**



VALUE OF KNOWLEDGE **Support Provided in the Field** **Fiscal Years 1994 & 1995**



We
Support
The
Soldier



- **98 Site Visits**
- **257 Members Deployed**
- **Examples of Support:**
 - **MLRS MWO Application - CONUS/OCONUS**
 - **MLRS VOLEP - CONUS/OCONUS**
 - **M113A3 Fielding - Ft. Stewart, Georgia**
 - **Bradley MWO Application - CONUS Locations**
 - **MLRS Retrofit - CONUS/OCONUS**
 - **Deprocessing - Kenya/Rwanda**
 - **Bradley Repair - Ft. Bliss, Texas**
 - **AR3 (Army Equipment Afloat) Handoff - Kuwait**
 - **MLRS Relay Box Mod - Germany**
 - **Combat Identification Panels - Korea**
 - **Bradley Radio Repair - Ft. Carson, CO**

RAPID RESPONSE



RRAD Support Provided to DESERT SHIELD / DESERT STORM



We
Support
The
Soldier

- **Deployed 315 Members**
 - 257 to CONUS Destinations
 - 176 to OCONUS Destinations
- **Provided 30,304 Mandays of Support**
 - Painted 6,000 Items for 1st Cavalry
 - Provided Staff to USA Spt Gp in Saudi
 - Upgraded 300 BFVS in Saudi
 - Assisted USA Spt Gp in Modification of M1A1s
 - Fabricated 1,000 M9ACE Roadwheels
 - Accelerated Secondary Item Production
- **Force Reconstitution**

Increased Production By 1 Million Manhours





Unique Environment of Cultural Change



**We Support
The Taxpayer**

- **Partnerships with Customers**
- **Union & Management Partnerships - All Organizational Levels**
 - **58% Reduction in Number of Grievances (FY92-FY94)**
- **Reduction of Organizational Layers from Five to Three**
 - **Decreased the Number of Supervisors by 51% (FY94)**
 - **Increased Member to Supervisor Ratio - 15:1**
- **State-Of-The-Art Training**
 - **Increased Training Hours Per Member from 17 to 71**
 - **"HEARTS" Teambuilding (RRAD-4986; Other-1570)**
 - **Cost Avoidance of More Than \$3 Million**
- **Empowerment of Our Members**
 - **Decreased Injuries by More Than 11%**
 - **FY94 Suggestion Savings of \$1.2 Million**
 - **FY94 Value Engineering Savings of \$7.8 Million**
 - **Reduced Local Regulations by 53%**
 - **Increased Productivity at a Savings of \$14.8 Million**
- **85 Self-Managed Work Teams - 27% of Members**
- **129 Process Action Teams - 70% Cross-Functional**

UNITED WE CONTINUE OUR QUALITY JOURNEY INTO THE 21ST CENTURY!



Summary

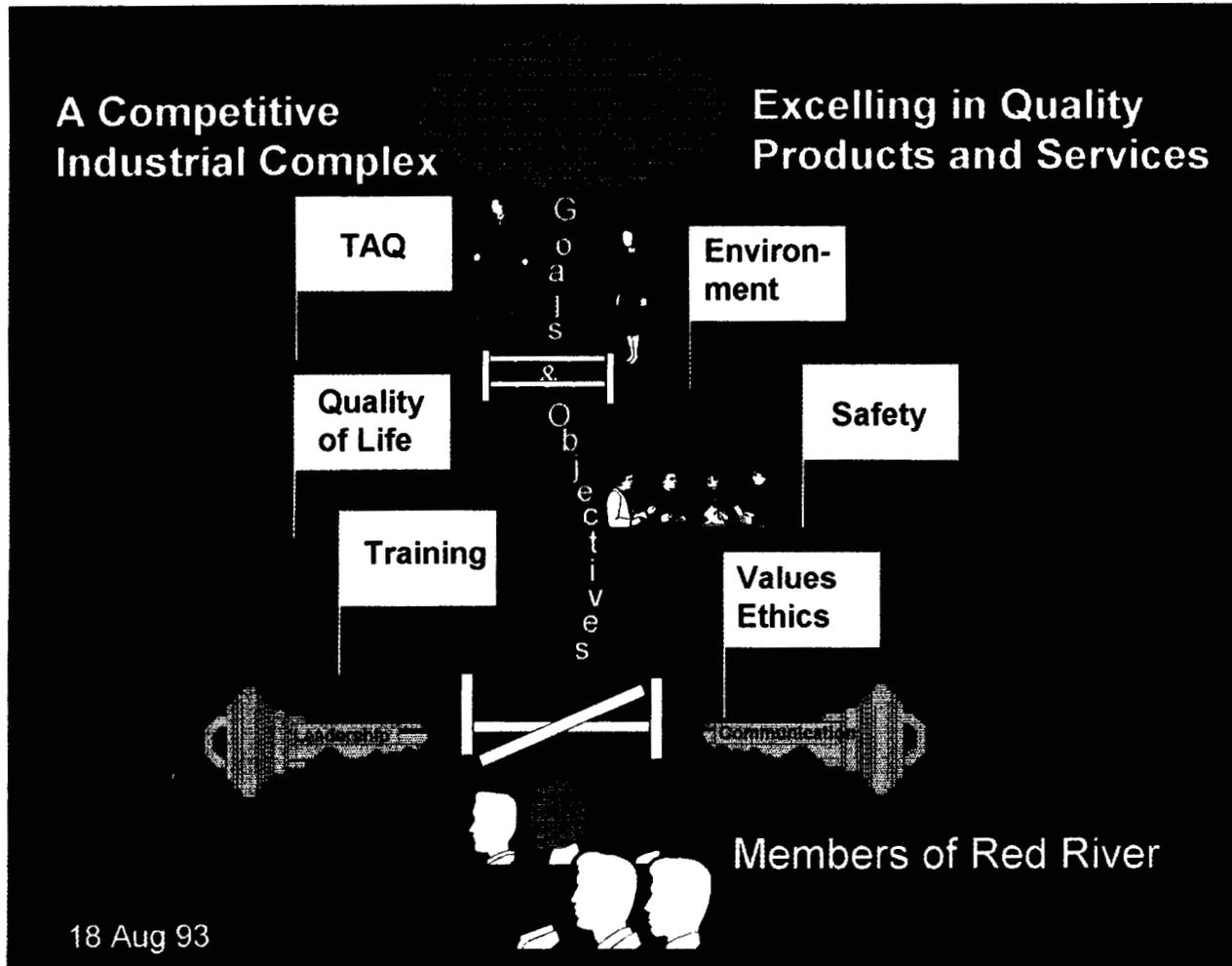


We
Support
The
Soldier

- **Depot With Three Major Missions**
- **One-of-a-Kind Capabilities**
- **75% of Heavy Division Tracked Vehicles**
- **Unique Body of Rapidly Deployable Knowledge**
- **National Leader Of Cultural Change and Increased Efficiency**

SHARED VISION

SHARED VALUES



HONESTY

ETHICS

ACCOUNTABILITY

RESPECT

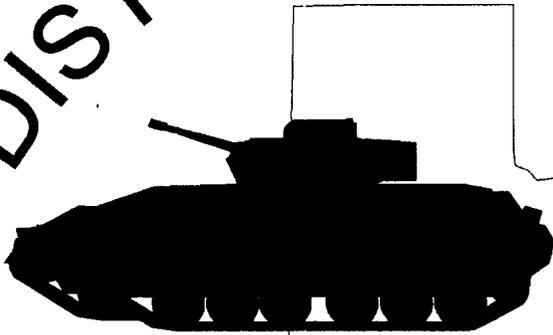
TRUST

SUPPORT

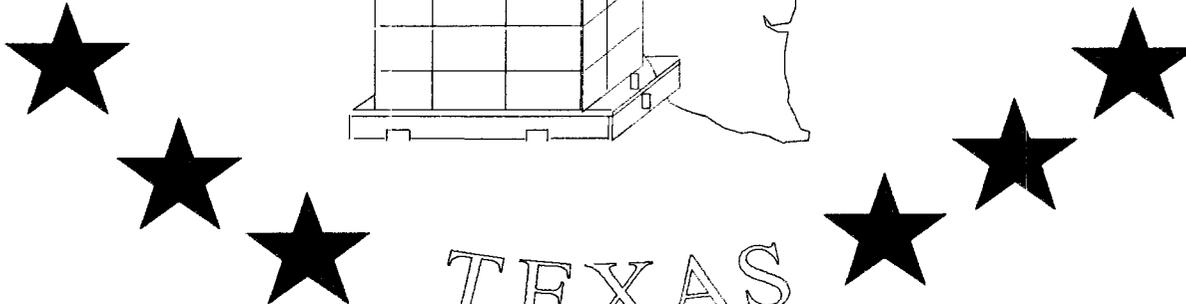
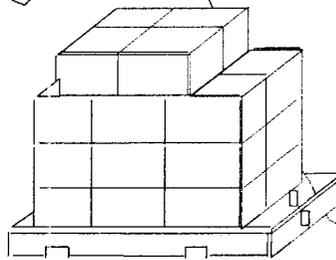


A New Way of Thinking---A New Way of Doing Business

DEFENSE DISTRIBUTION DEPOT RED RIVER



Distribution Is Our Business



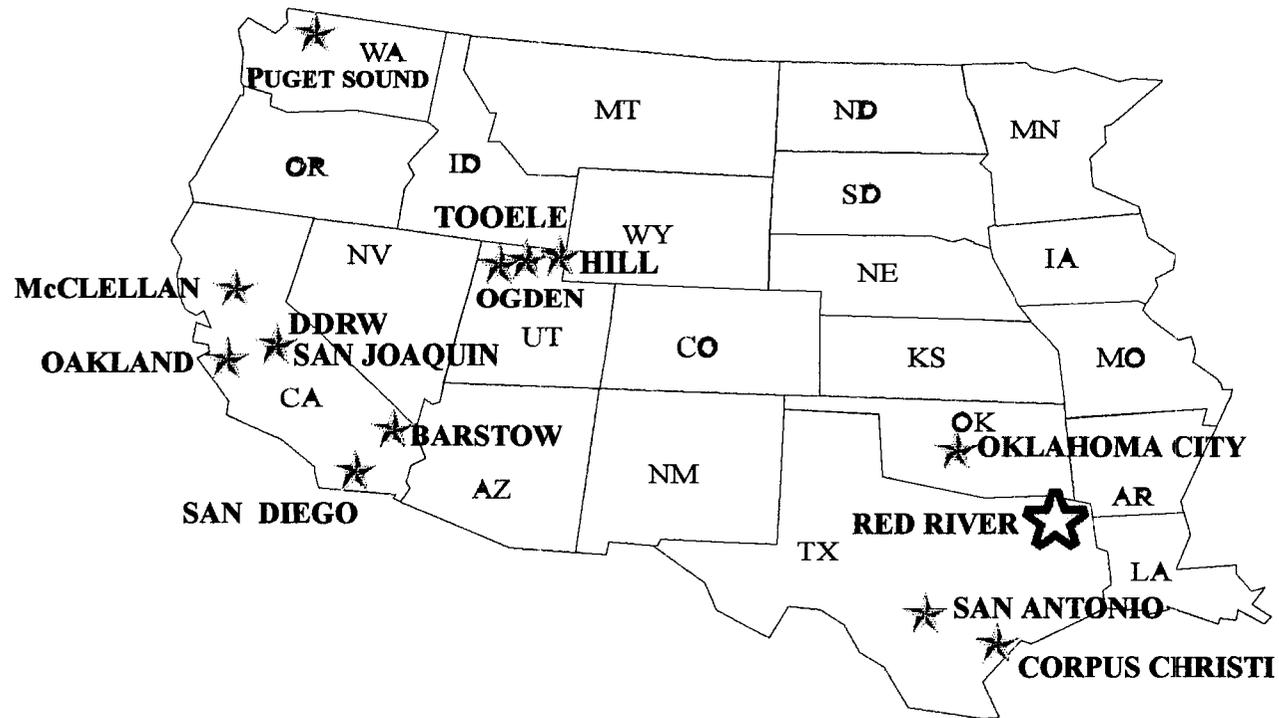
TEXAS



DEFENSE DISTRIBUTION REGION WEST



We
Support
The
Soldier

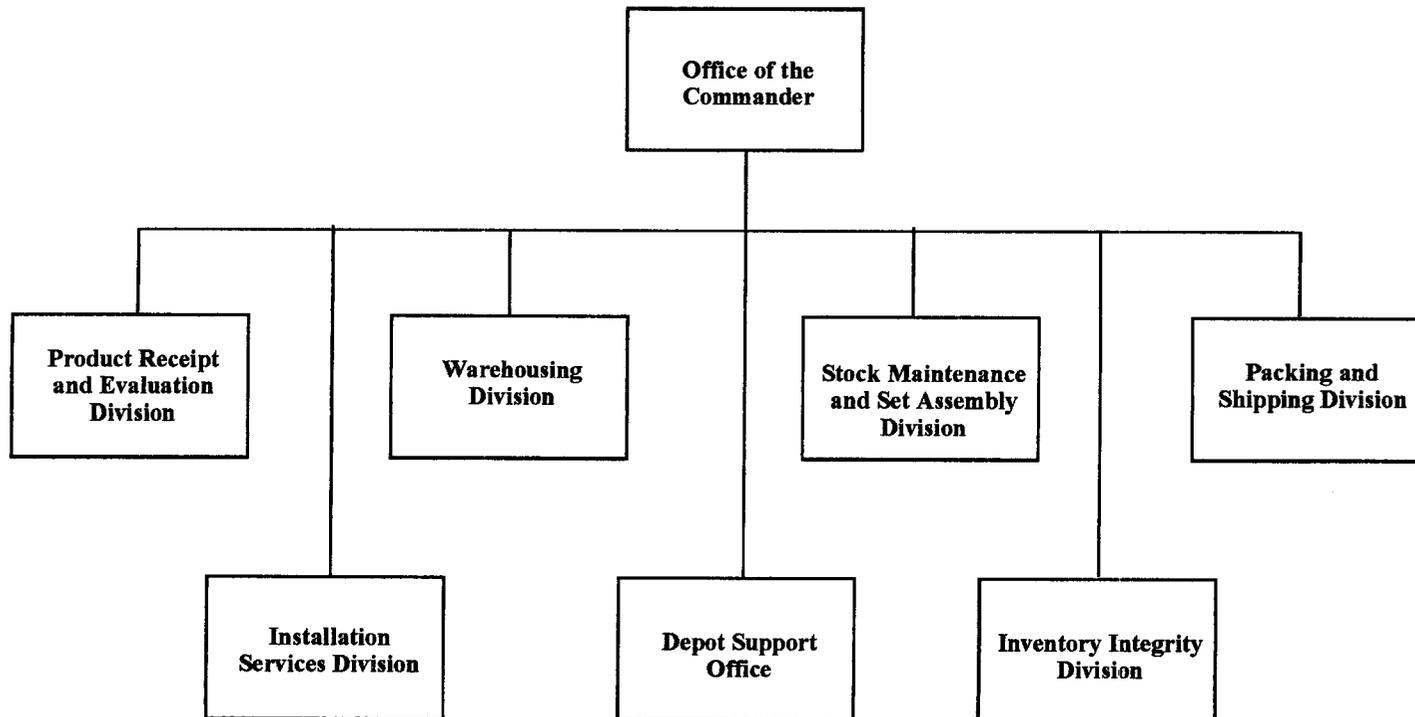




DEFENSE DISTRIBUTION DEPOT RED RIVER



We
Support
The
Soldier





PERSONNEL STRENGTH



We
Support
The
Soldier

CLASSIFICATION

NO.

GS

325

WG/WS/WL

698

MILITARY

1

TOTAL

1,024



FACILITIES



We
Support
The
Soldier

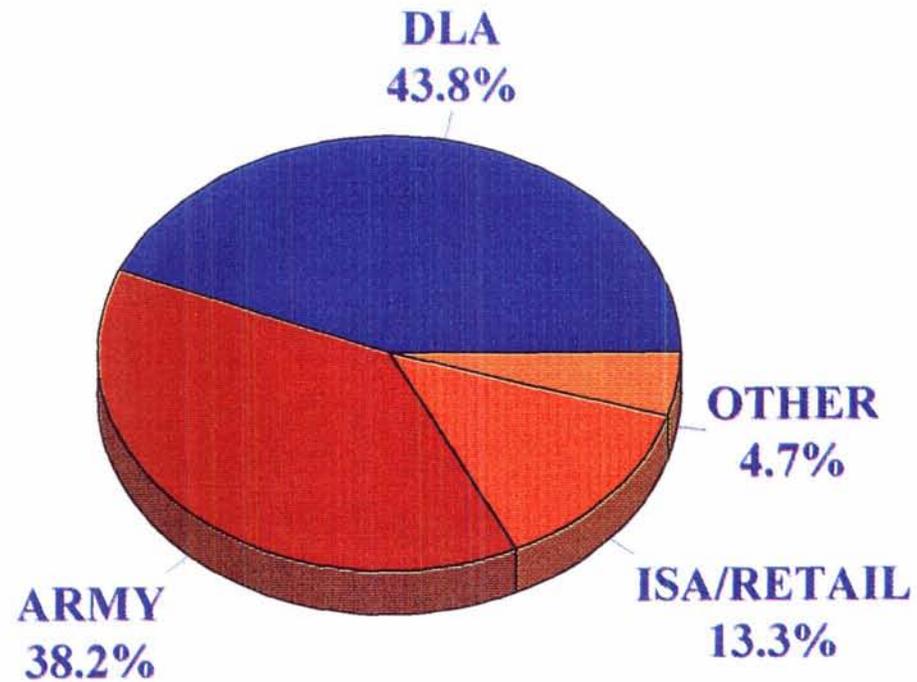
CATEGORY	SQ FT
COVERED STORAGE	2,202,496
OUTSIDE STORAGE	2,925,790
TOTAL SPACE	5,128,286
GENERAL HEATED/UNHEATED	38
HAZARDOUS/FLAMMABLE	8
CHILLED	3
CONTROLLED HUMIDITY	13
TOTAL WAREHOUSES	62
SHEDS/SHELTERS	130



PROFILE OF ASSETS IN STORAGE



We
Support
The
Soldier



% LINES

As of 31 Jan 95