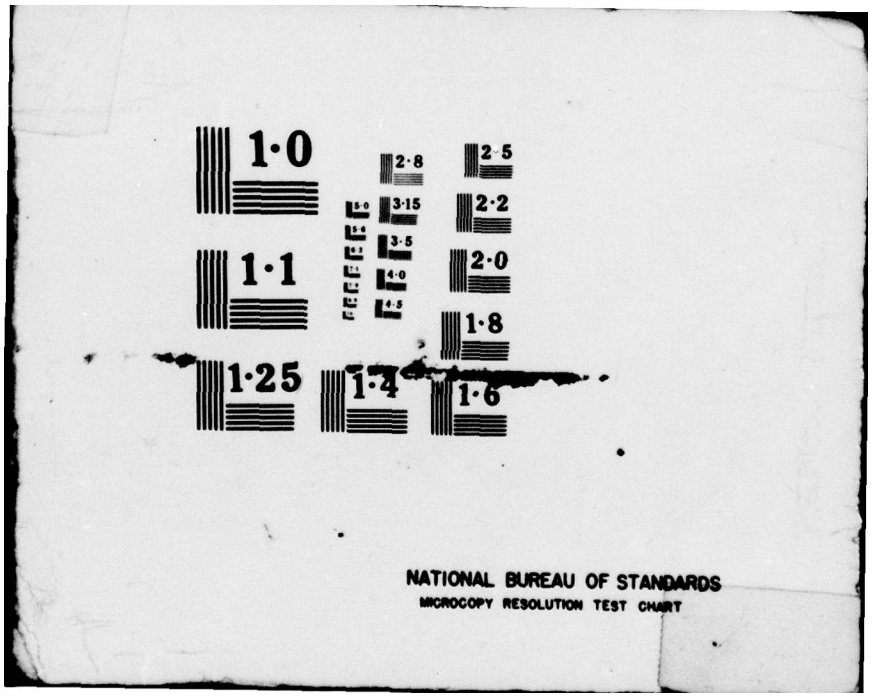
AD-A074 493 ARMY MATERIEL DEVELOPMENT AND READINESS COMMAND ALEX--ETC F/G 5/1
CIVILIAN HIGH GRADE REDUCTION ANALYSIS.(U)
DEC 78

UNCLASSIFIED NL

1 OF 1
AD-
A074493

END
DATE
FILMED
11-79
DDC


1·0
1·1
1·25
1·4
1·6
1·8
2·0
2·2
2·5
2·8
3·15
3·5
4·0
NATIONAL BUREAU OF STANDARDS
MICROCOPY RESOLUTION TEST CHART

LEVEL II

CIVILIAN HIGH GRADE REDUCTION ANALYSIS

AD A074493

DDC FILE COPY

DECEMBER 1978

UNCLASSIFIED

27 SEP 1979

SECURITY CLASSIFICATION OF THIS PAGE *(When Data Entered)*

REPORT DOCUMENTATION PAGE	READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER	2. GOVT ACCESSION NO. 3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) (6) Civilian High Grade Reduction Analysis.	5. TYPE OF REPORT & PERIOD COVERED (9) Final Report.
	6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) Office of the Deputy Commanding General for Resource Management	8. CONTRACT OR GRANT NUMBER(s)
9. PERFORMING ORGANIZATION NAME AND ADDRESS HQ, Department of Army Materiel Development and Readiness Command, 5001 Eisenhower Avenue Alexandria, VA 22333	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS HQ DARCOM, ATTN: DCGRM Task Group (11) 5001 Eisenhower Avenue Alexandria, VA 22333 274-9198/9269	12. REPORT DATE December 1978
	13. NUMBER OF PAGES 55
14. MONITORING AGENCY NAME & ADDRESS *(if different from Controlling Office)* (12) 59p.	15. SECURITY CLASS. *(of this report)* UNCLASSIFIED
	15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT *(of this Report)*

Approved for Public Release; Distribution Unlimited.

17. DISTRIBUTION STATEMENT *(of the abstract entered in Block 20, if different from Report)*

18. SUPPLEMENTARY NOTES

19. KEY WORDS *(Continue on reverse side if necessary and identify by block number)*

Resources	Civilian Personnel
Management	Career Management
Personnel Management	DA Civilians
Skill Levels	Performance Evaluation

392 673

20. ABSTRACT *(Continue on reverse side if necessary and identify by block number)*

This publication describes a project undertaken ~~by the US Army Materiel Development and Readiness Command (DARCOM)~~ to quantitatively analyze the effect of civilian high grade reductions with DARCOM and the associated impact these reductions have had on DARCOM's managerial and functional responsibilities. Comparisons within the Department of Defense and other federal agencies of high grade strengths over time are included.

Conclusions: (1) Other federal agencies are unaffected, with the exception

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE *(When Data Entered)*

of the National Aeronautics and Space Administration (NASA), (2) High grade ceilings compounded effects of continued organizational instability, (3) Duel ceilings magnify impacts, (4) DARCOM ceiling unrealistic in light of increasing workload and deteriorating performance, (5) Reimbursable spaces should be excluded from base, (6) Reductions overtime balanced through proper position management, (7) high grade cuts result in few, if any, savings.

Recommendations: (1) Recommended immediate actions; (a) Single ceiling; (b) Authority to include authorized positions in base; (c) single resource package ($, spaces, grades); (D) increase 79 ceiling to cover new missions and transfers; and (E) determine impact of civil service reform act on PL D95-79; (2) actions to be taken as soon as possible: remove high grade ceilings.

FOREWORD

DARCOM has undertaken a quantitative analysis of the effect of civilian high grade reductions within the command and the associated impact these reductions have had on the Command's managerial and functional responsibilities. Comparisons within the Department of Defense and other Federal Agencies of high grade strengths over time are included. This study is entitled The DARCOM Civilian High Grade Reduction Analysis and is presented in 7 Sections.

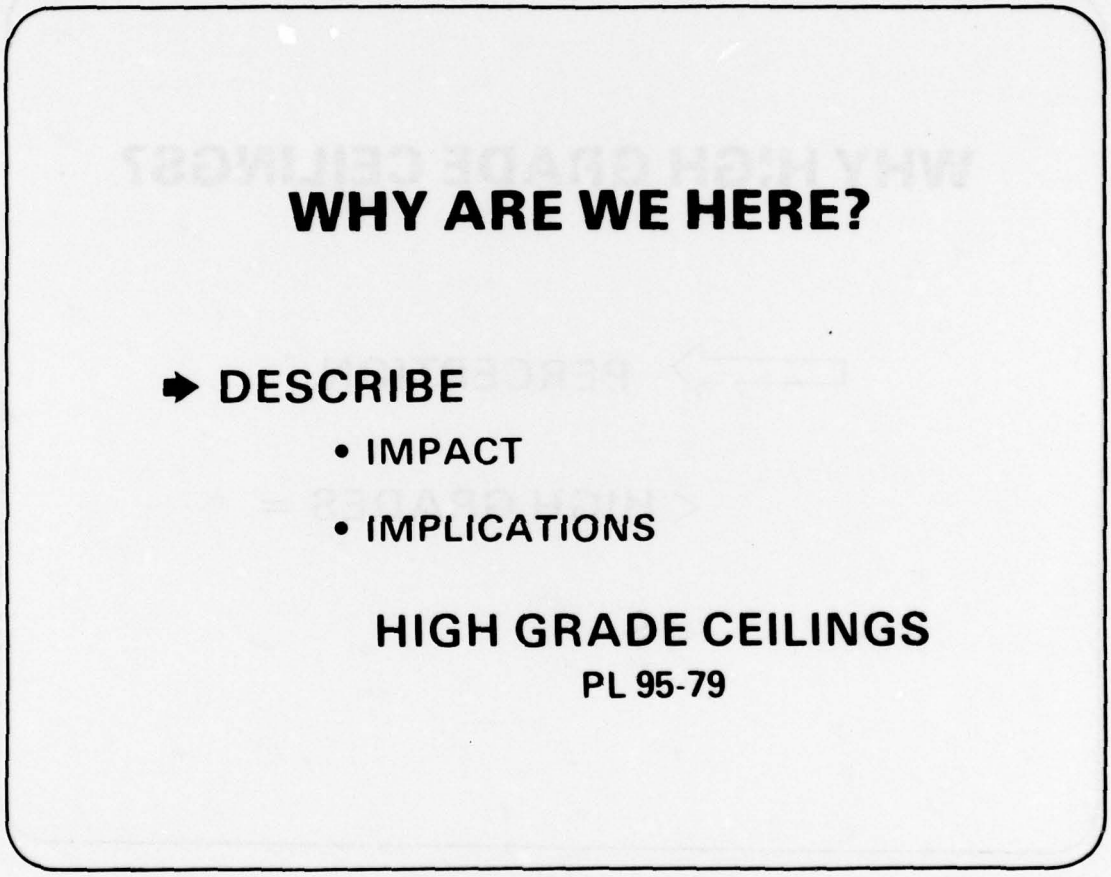
SECTIONS

CIVILIAN
HIGH GRADE
REDUCTION ANALYSIS

DARCOM DEC 78

WHY ARE WE HERE?

Tight controls over the civilian high grade population, GS-13 and above, have been employed by the Department of the Army and AMC/DARCOM for many years. These controls have generally manifested themselves in the form of ceilings on the high grade population. Public Law 95-79, the Defense Appropriation Authorization Act, 1978, is the latest of these high grade control initiatives and provided the impetus for this study (Chart I-1).

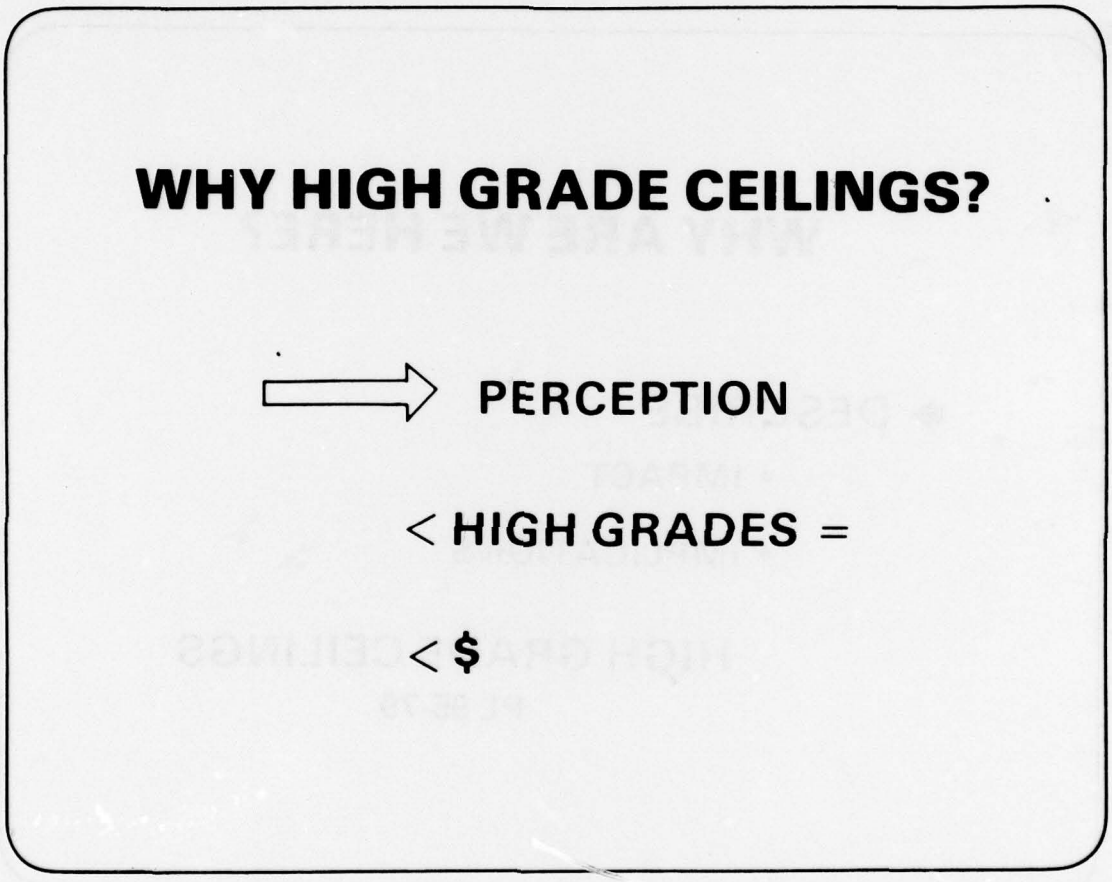


I-1

The first portion of this analysis will describe the requirements of the law, followed by a historical trace of high grades over time and a comparison with other components of DOD and other Federal Agencies. But first, why the reductions?

WHY HIGH GRADE CEILINGS?

Simply stated, high grade ceilings were imposed to save money (Chart I-2). The common perception was that a reduction in the number of employees serving in the grades GS-13 and above would result in substantial savings in the Defense budget. This perception will be treated in that portion of this analysis devoted to cost/savings.

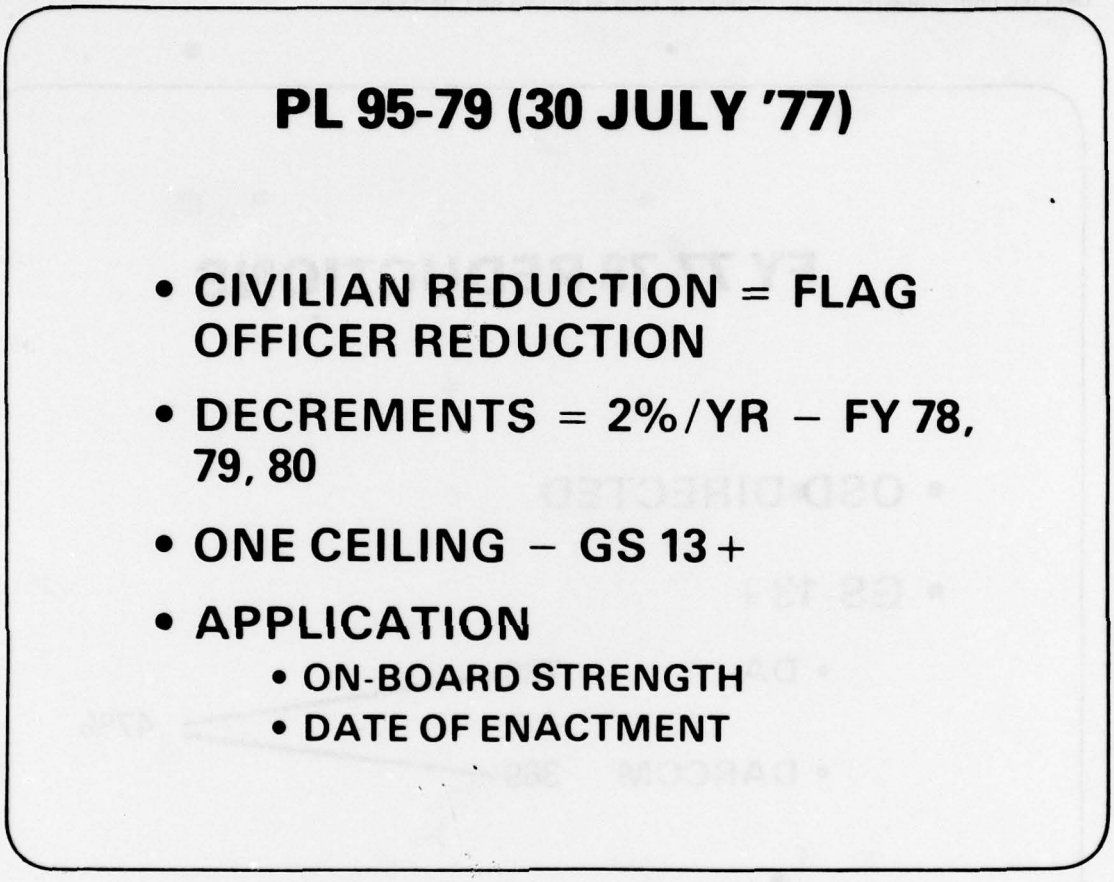


I-2

The ceilings were imposed as a result of language contained in PL 95-79. We will next examine the requirements of the law.

PL 95-79—CRITICAL ELEMENTS

Chart I-3 summarizes the language of PL 95-79.



I-3

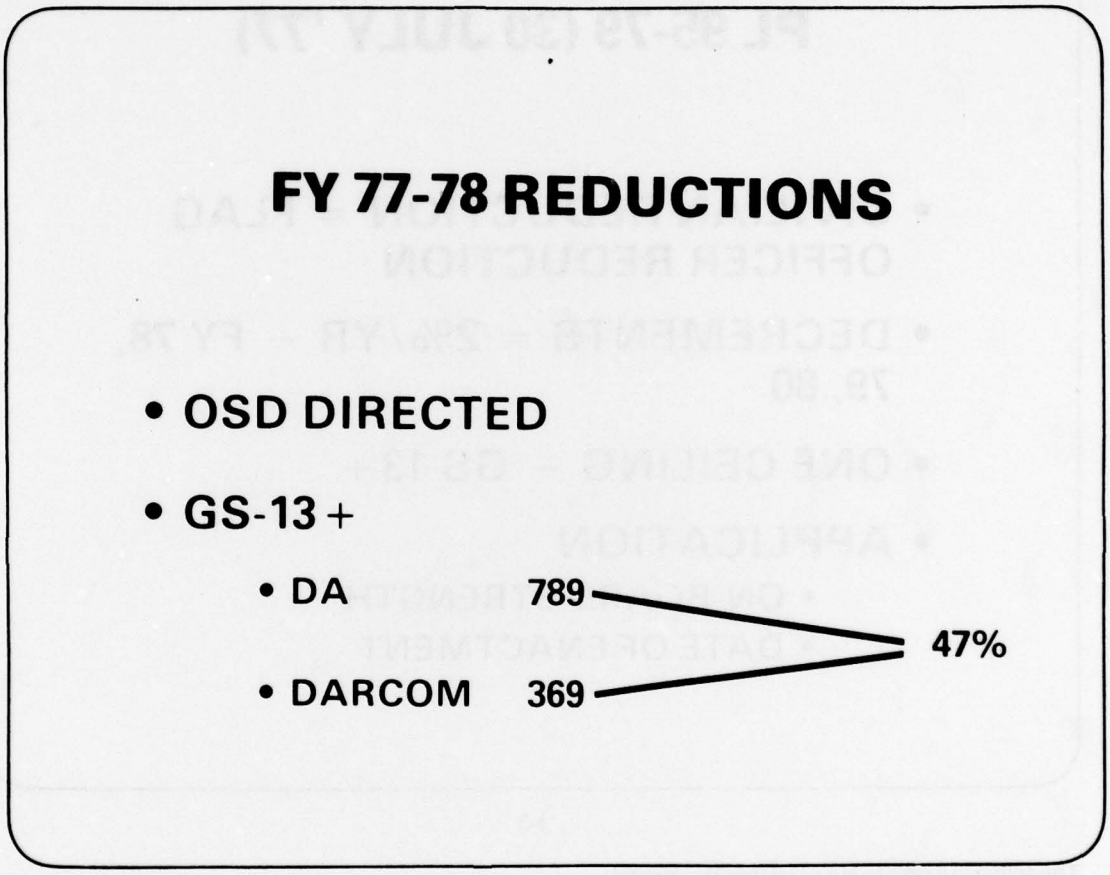
The following points are of particular interest:

- The civilian high grade reductions are equal in percentage (2 percent a year) to general officer reductions and will be taken over the period FY 78-80.
- *One ceiling* was established – GS-13 and above.
- The ceilings are based upon the *on-board strength*, as opposed to authorized strength, as of the date of enactment of the law, 30 Jul 77.

The second point, *one ceiling*, is particularly important as it relates to OSD implementation.

FY 77-78 REDUCTIONS

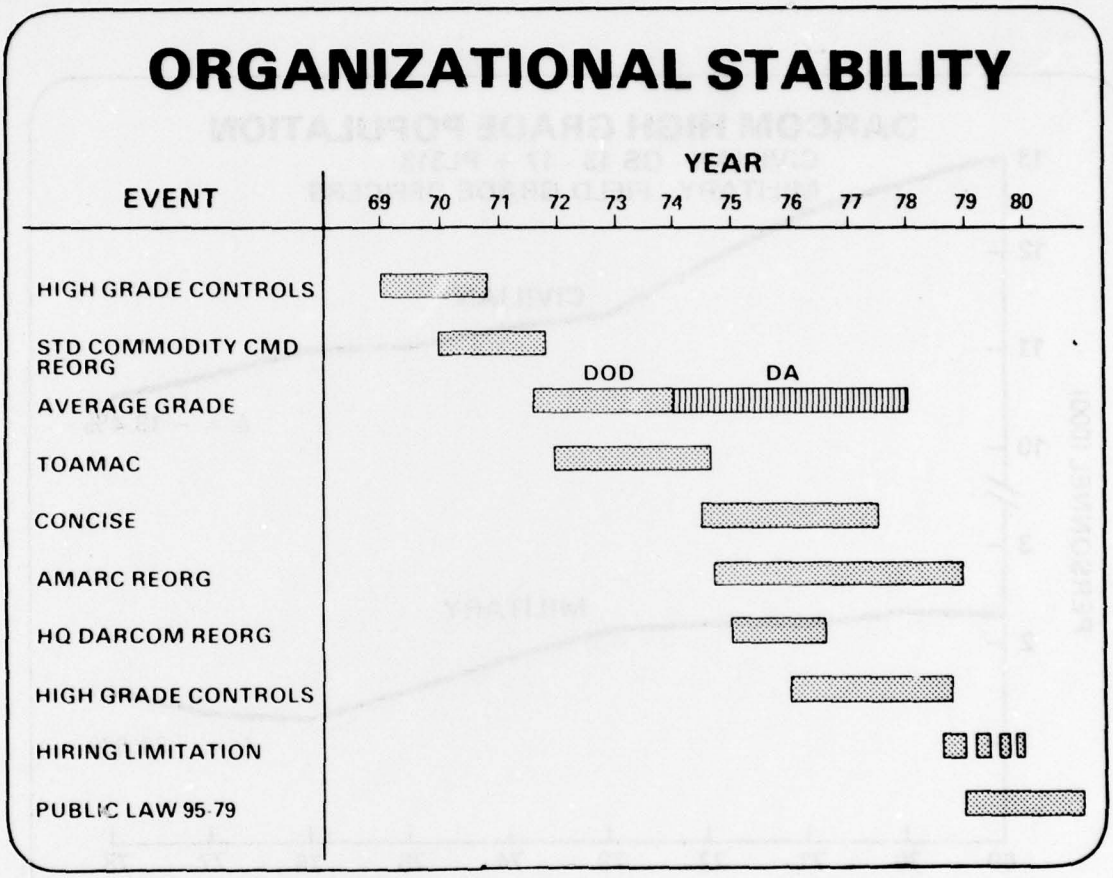
PL 95-79 followed right on the heels of an OSD induced high grade reduction in FY 77-78. This OSD directed high grade reduction resulted in cuts as shown on Chart I-4.



I-4

These cuts, in turn, were preceded by several other organizational events (Chart I-5) which, over the past 10 years, have created a condition of continuing undesirable instability.

ORGANIZATIONAL STABILITY

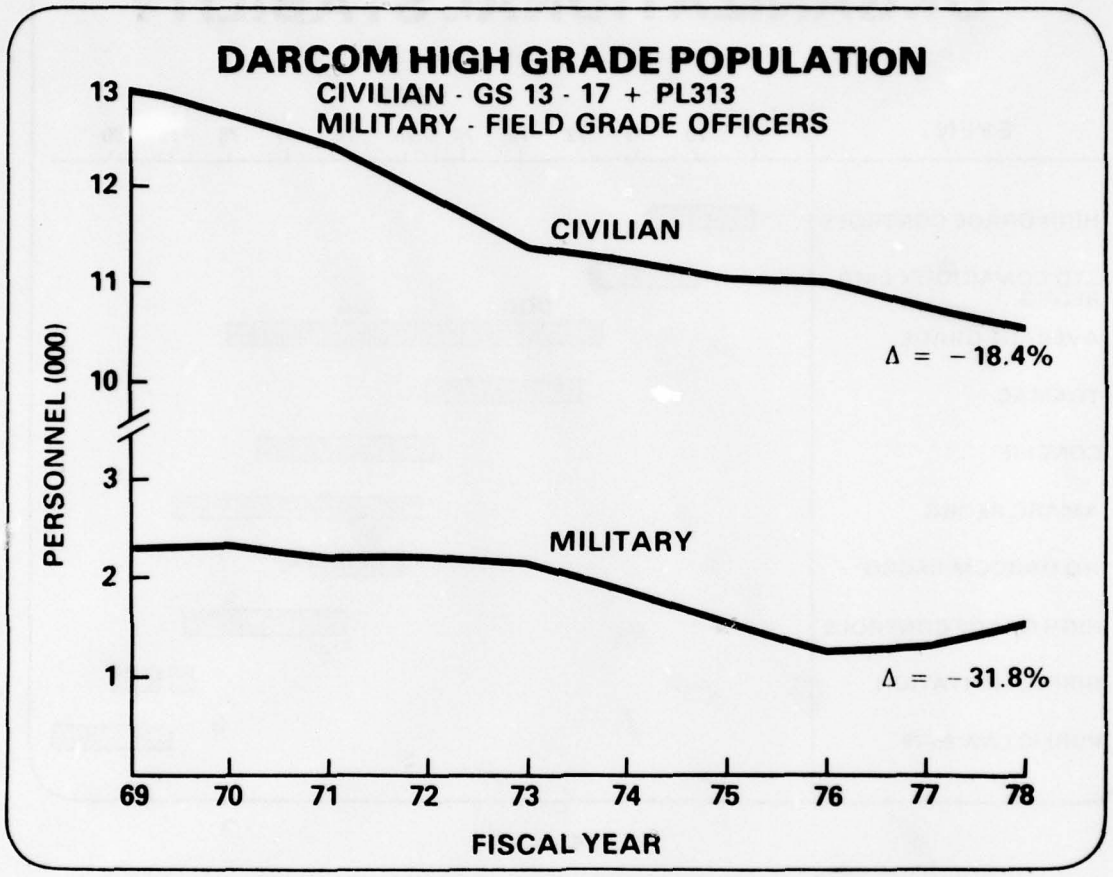


I-5

It is significant to note that these events overlap—there has been no period between events during which DARCOM has been able to achieve organizational equilibrium.

DARCOM HIGH GRADE POPULATION

The result of these events, all of which resulted in fewer high grade civilians and field grade officers, is shown on Chart I-6.

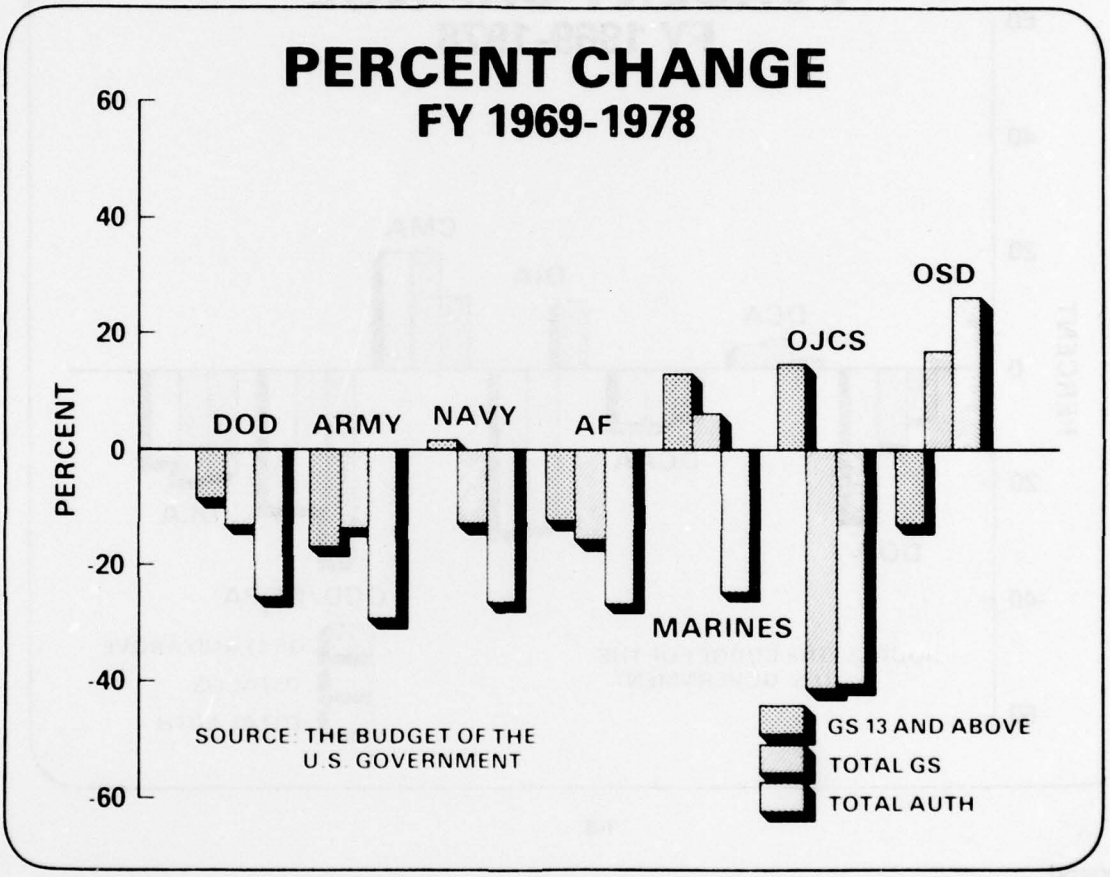


I-6

To place these reductions in proper perspective, we will examine high grade trends within the Department of Defense and other Federal Agencies.

PERCENT CHANGE—DEFENSE

Chart I-7 illustrates, on a relative basis, the reductions that the Army has undergone from 1969-78. It is significant that the Army has reduced a greater percentage of high grades than any other component shown.



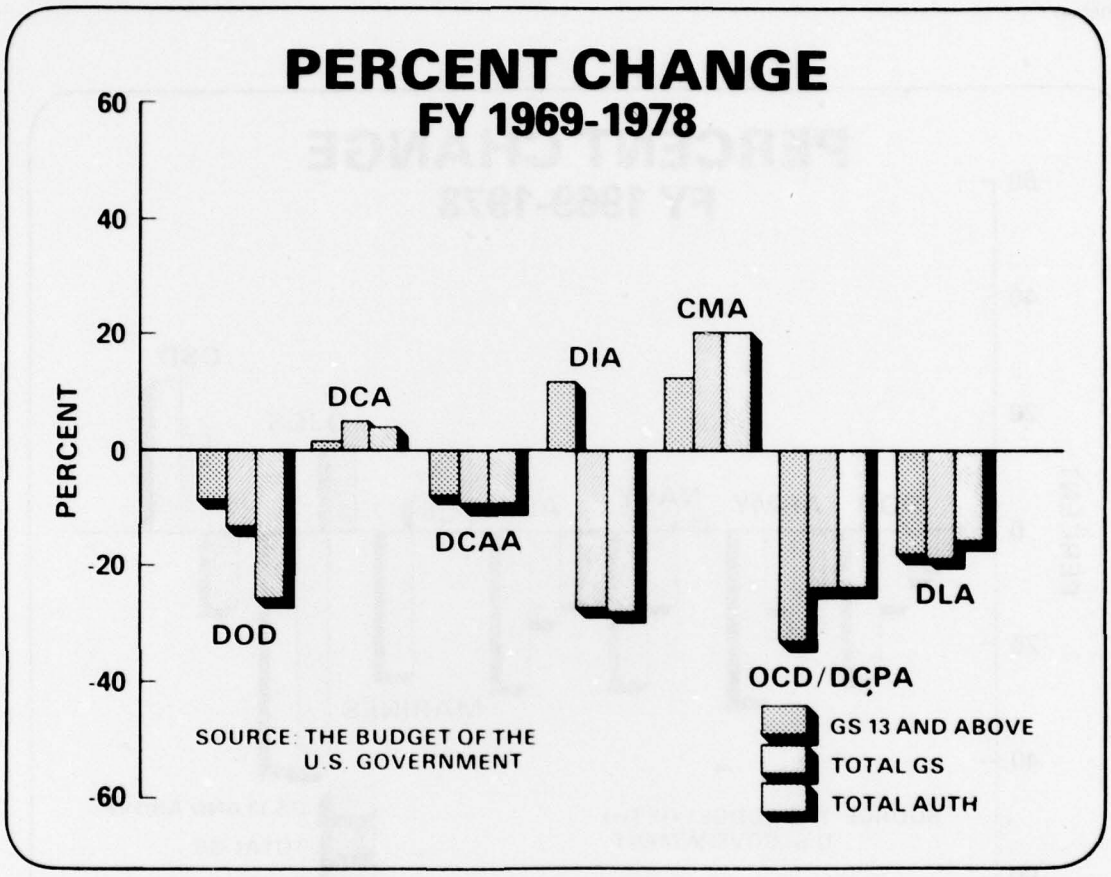
I-7

Legend

DOD — Department of Defense
AF — Air Force
OJCS — Office of the Joint Chiefs of Staff
OSD — Office of the Secretary of Defense

PERCENT CHANGE—OTHER DEFENSE AGENCIES

For comparative purposes, trends are also displayed for other Defense Agencies (Chart I-8).



I-8

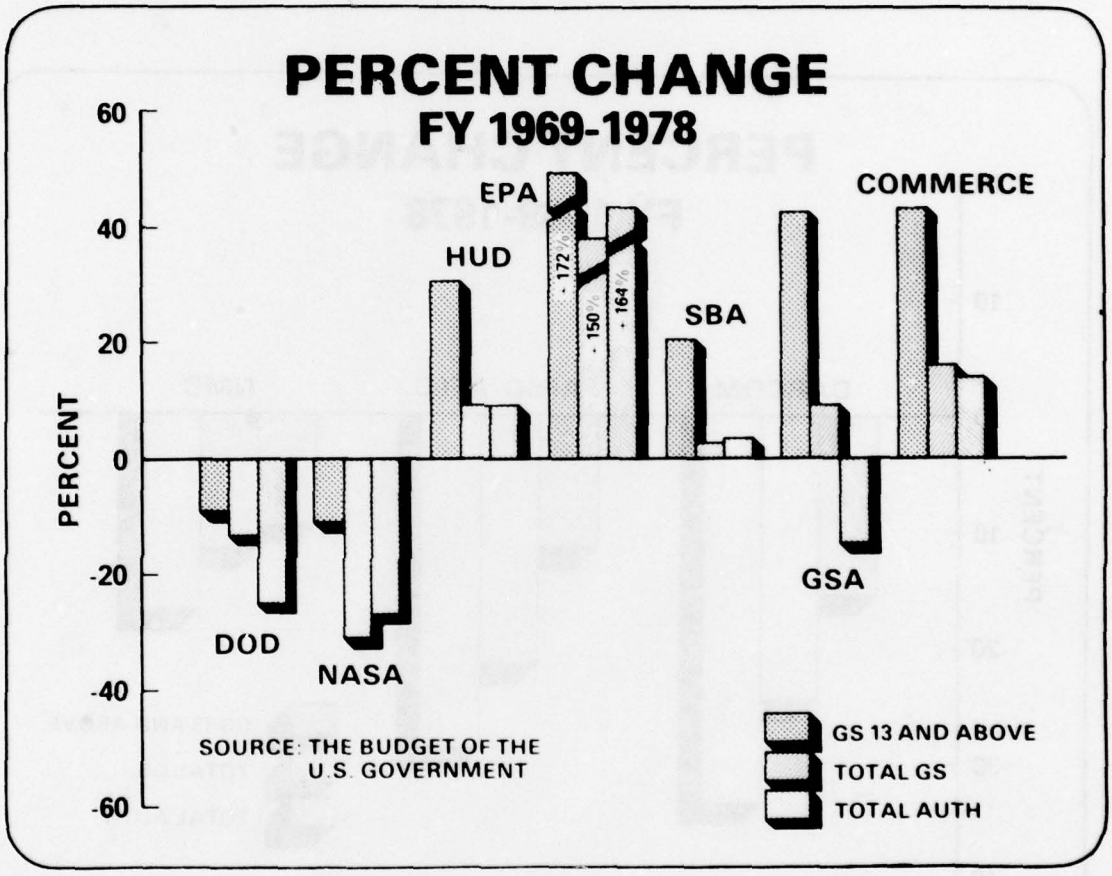
Legend

DOD	—Department of Defense
DCA	—Defense Communications Agency
DCAA	—Defense Contract Audit Agency
DIA	—Defense Intelligency Agency
CMA	—Court of Military Appeals
OCD/DCPA	—Office of Civil Defense/Defense Civil Preparedness Agency
DLA	—Defense Logistics Agency

A rather startling contrast appears when comparing DOD with other Agencies in the Executive Branch.

PERCENT CHANGE—EXECUTIVE BRANCH

In viewing this chart one might ponder wny OSD has not been more inclined to contest this issue (Chart I-9).



I-9

Legend

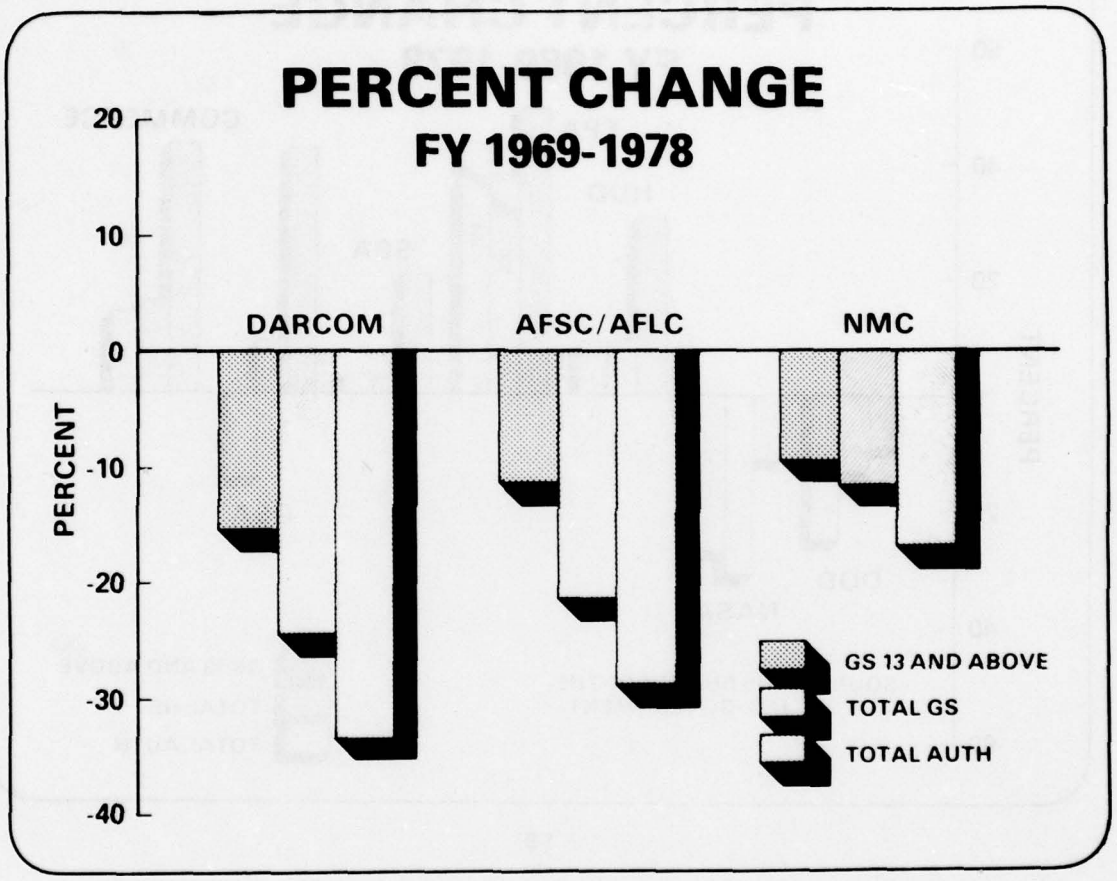
EPA — Environmental Protection Agency
NASA — National Aeronautics and Space Administration
HUD — Housing and Urban Development
SBA — Small Business Administration
GSA — General Services Administration

We next turn our attention to our sister Materiel Commands.

PERCENT CHANGE—MILITARY DEVELOPMENT AND LOGISTICS

Chart I-10 shows the relative decline in total DARCOM, AFSC/AFLC and NMC. The careful reader will recall that DLA (Chart I-8) has experienced a similar decline.

The Army's wholesale base, documented in the DARCOM Manpower Baseline Requirement Study, and as we will confirm in this study, is in jeopardy.



I-10

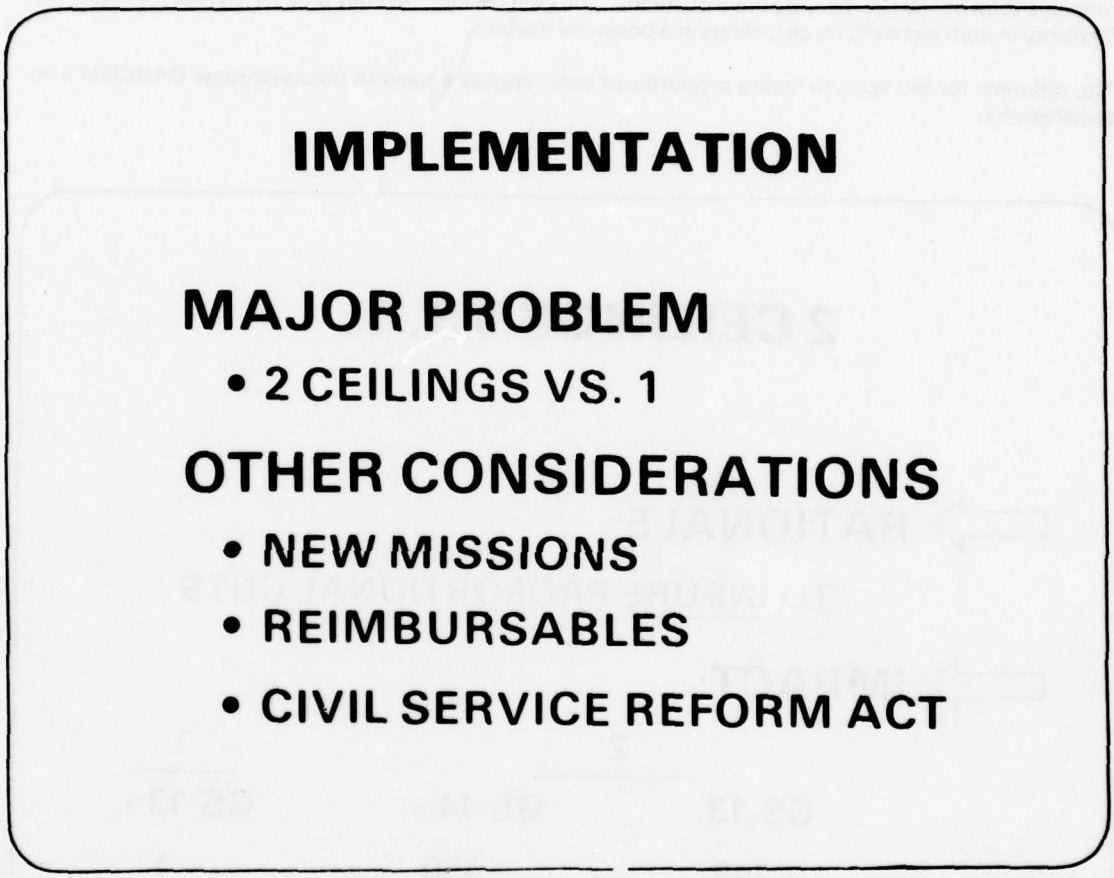
Legend

DARCOM —U.S. Army Materiel Development and Readiness Command
AFSC/AFLC — Air Force Systems Command/Air Force Logistics Command
NMC —Navy Materiel Command

We move next to an examination of the OSD implementation of PL 95-79.

IMPLEMENTATION

OSD implemented the public law using two high grade ceilings—one for GS-13's and the other for GS-14 and above. DARCOM views this as creating a major problem. This problem and other considerations of the implementation are shown below (Chart II-1), and will be discussed further.

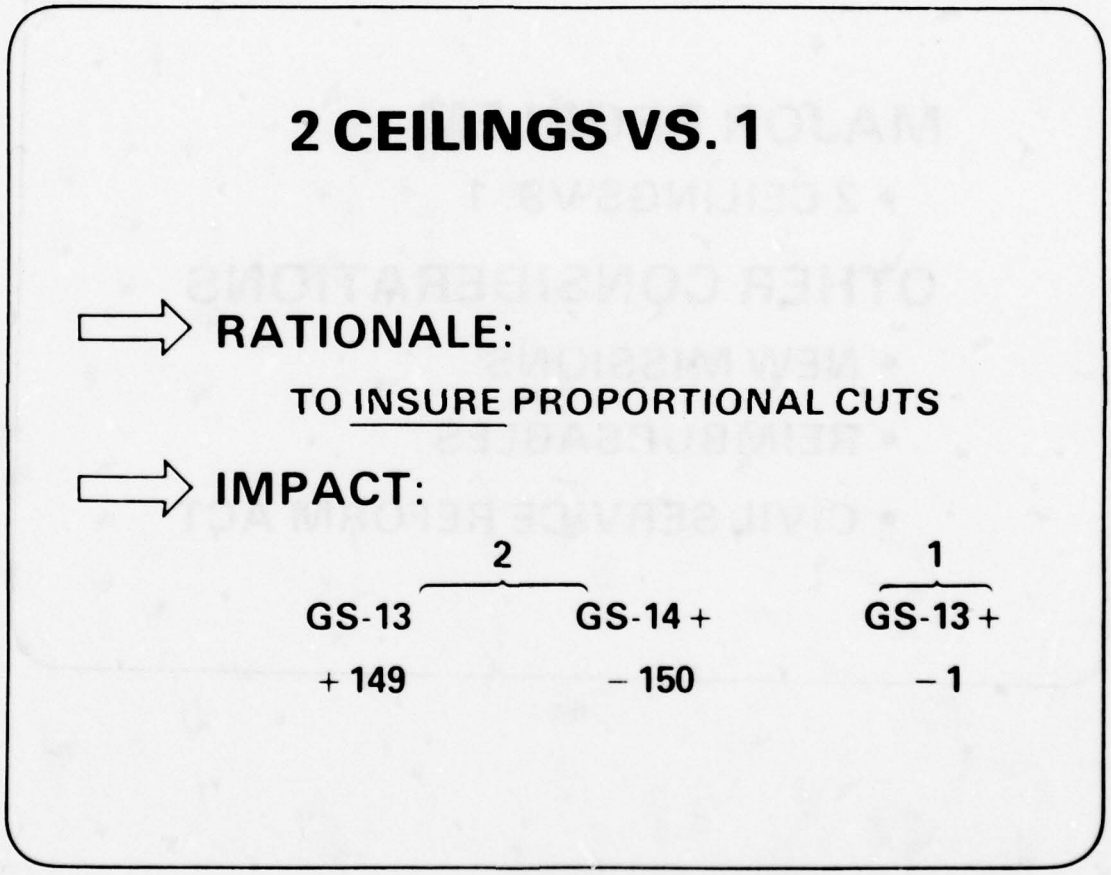


II-1

2 CEILINGS VS 1

The OSD split of the Congressionally mandated single ceiling into two ceilings presents DARCOM with a very real and auditable problem as illustrated on Chart II-2. In simple terms, if the single Congressional Ceiling were applied, only one high grade incumbent would have to be reduced—assuming DARCOM used vacancies as a way of achieving the reduction. With the dual ceiling, however, we will be forced to reduce a total of 150 GS-14 and above positions. The dual ceilings severely limit DARCOM management flexibility in administering these ceilings in a balanced manner.

The rationale for the split, to insure proportional cuts, implies a need to micro-manage DARCOM's internal affairs.

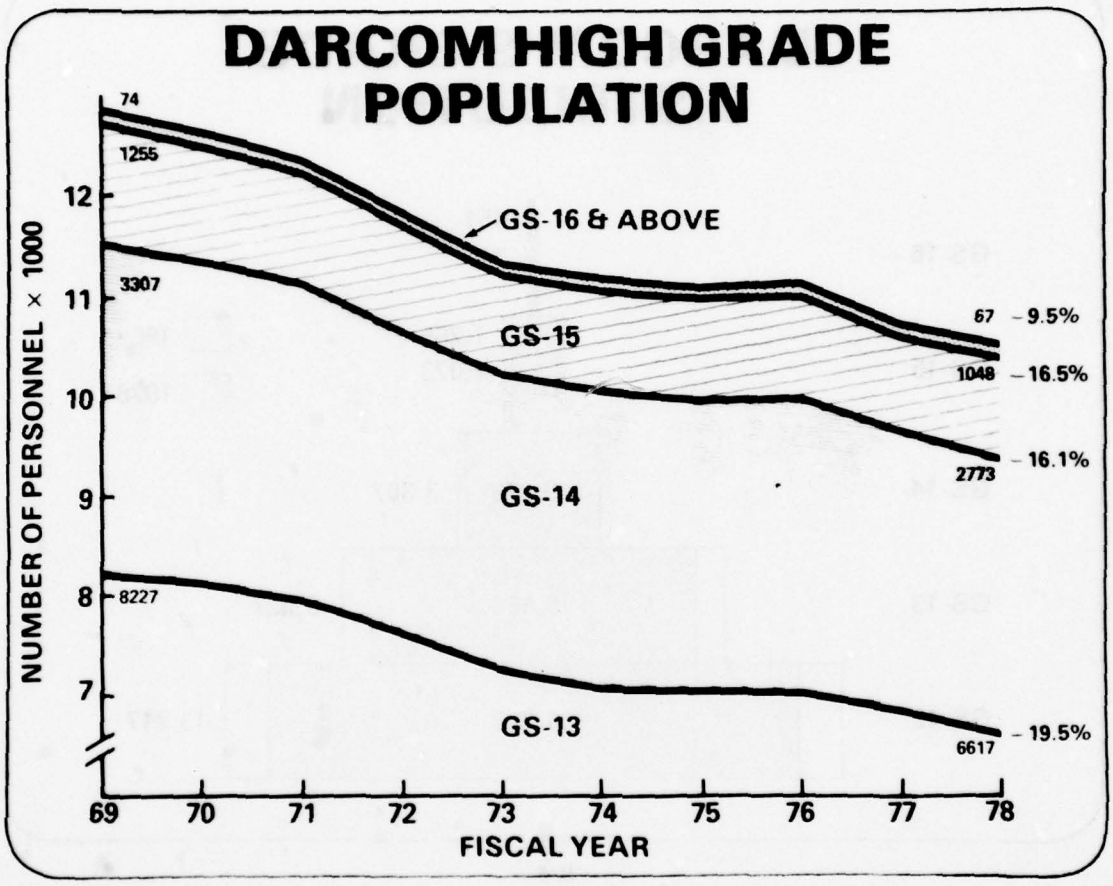


II-2

We look to history and conclude that this rationale is invalid as shown on the next four charts.

DARCOM HIGH GRADE POPULATION

The decline in personnel strength since 1969 has been accompanied by a total high grade population decline of 18.4% (Chart II-3). The reader will note that the cuts were taken in a balanced manner.

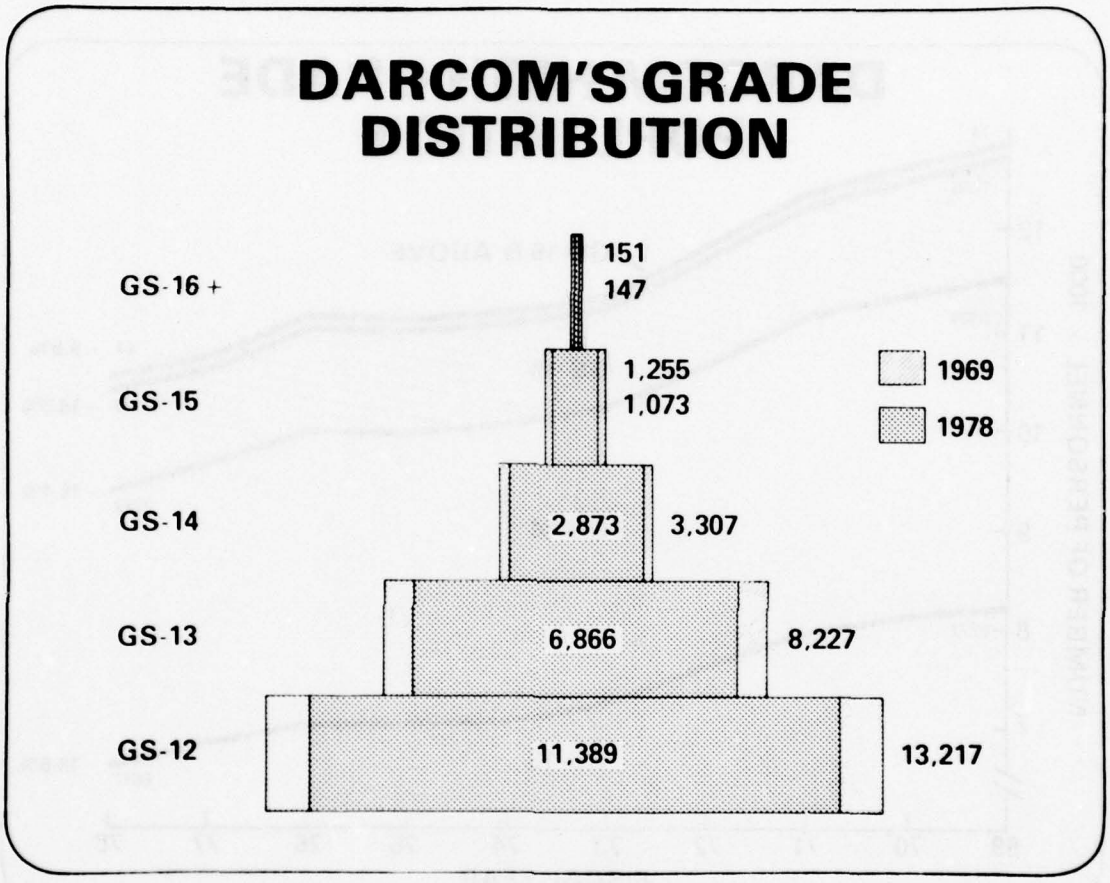


II-3

This trend is plotted in pyramidal fashion in the succeeding chart.

DARCOM'S GRADE DISTRIBUTION

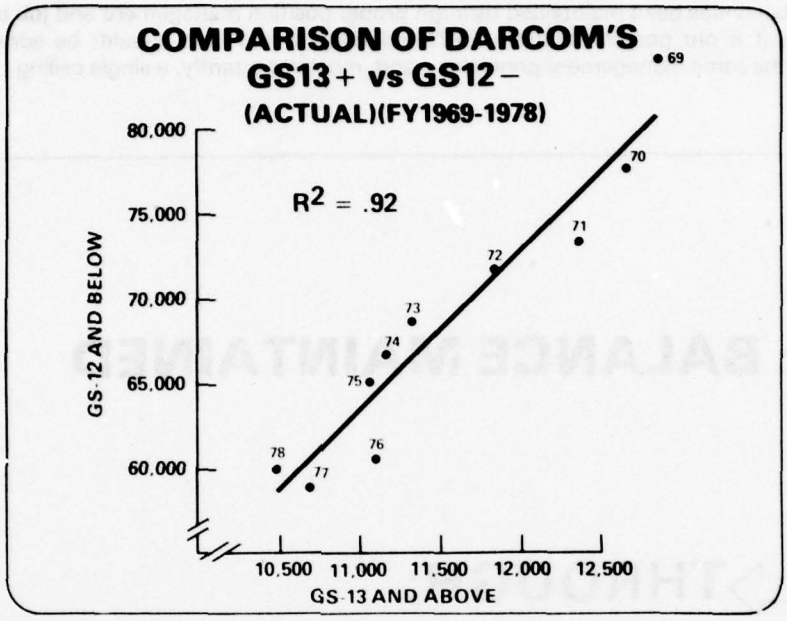
The shape of the distribution (Chart II-4) has remained virtually constant indicating that cuts and reductions absorbed during the period have been taken proportionally.



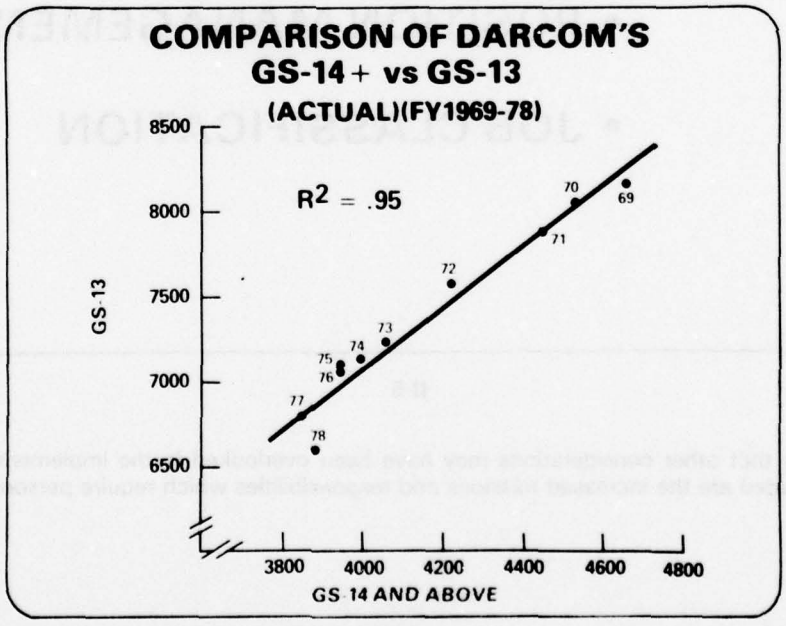
II-4

A further illustration of this condition is displayed on charts II-4A and II-4B. Simple regression models show a very high correlation (R^2 = .92) between GS-12 and below as a function of GS-13 and above. The same high correlation (R^2 = .95) holds for GS-13 as a function of GS-14 and above.

HIGH GRADE TRENDS



II-4A

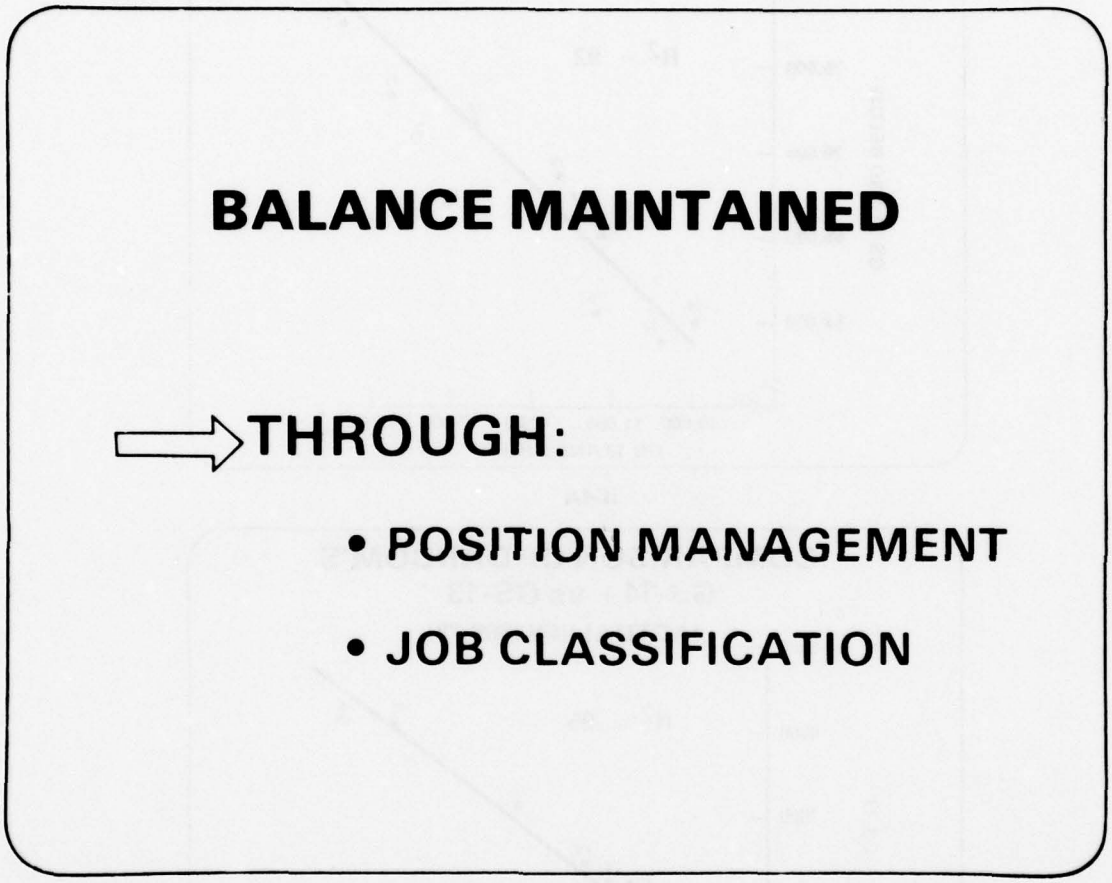


II-4B

Now, how have we achieved this balance?

BALANCE MAINTAINED

Answer—the balance has been maintained through proper position management and job classification (Chart II-5). And it is our position that the FY79 reduction would (and should) be administered by DARCOM using the same management principles—and, most importantly, a single ceiling.



II-5

DARCOM holds that other considerations may have been overlooked in the implementation of the public law. Included are the increased missions and responsibilities which require personnel and high grade support.

NEW MISSIONS & TRANSFERS

The total required high grade positions tied to the additional missions passed to DARCOM since 30 Jul 77 are depicted on Chart II-6. To date, we have been credited with less than half those required for these new missions.

NEW MISSIONS & TRANSFERS
(31 JUL 77 — 30 JUN 78)

HIGH GRADES REQUIRED	214
ARMY CREDITED FOR	− 99
PENDING OSD APPROVAL	115

II-6

The new missions include many diverse activities.

NEW MISSIONS & INTRA-DOD TRANSFERS

Chart II-7 identifies new missions and those transferred to the Army from other DOD components.

NEW MISSIONS & INTRA-DOD TRANSFERS

- **PENDING OSD APPROVAL**

	GS-13 + POS. AFFECTED
ERDA COAL GASIFICATION PROG	7
TRISERVICE H.E. LASER TEST FAC	17
SINGLE MGR. CONV. AMMO	62
FOREIGN MIL SALES	9
DIA MPR INCR	18
PRODUCT ENG SERVICES (FROM DLA)	2
DARCOM TOTAL	115
OTHER ARMY RQMTS	93
TOTAL ARMY RQMTS	208

- **ASSIGNED MISSIONS WITH NO ADJUSTMENT IN HIGH GRADES**

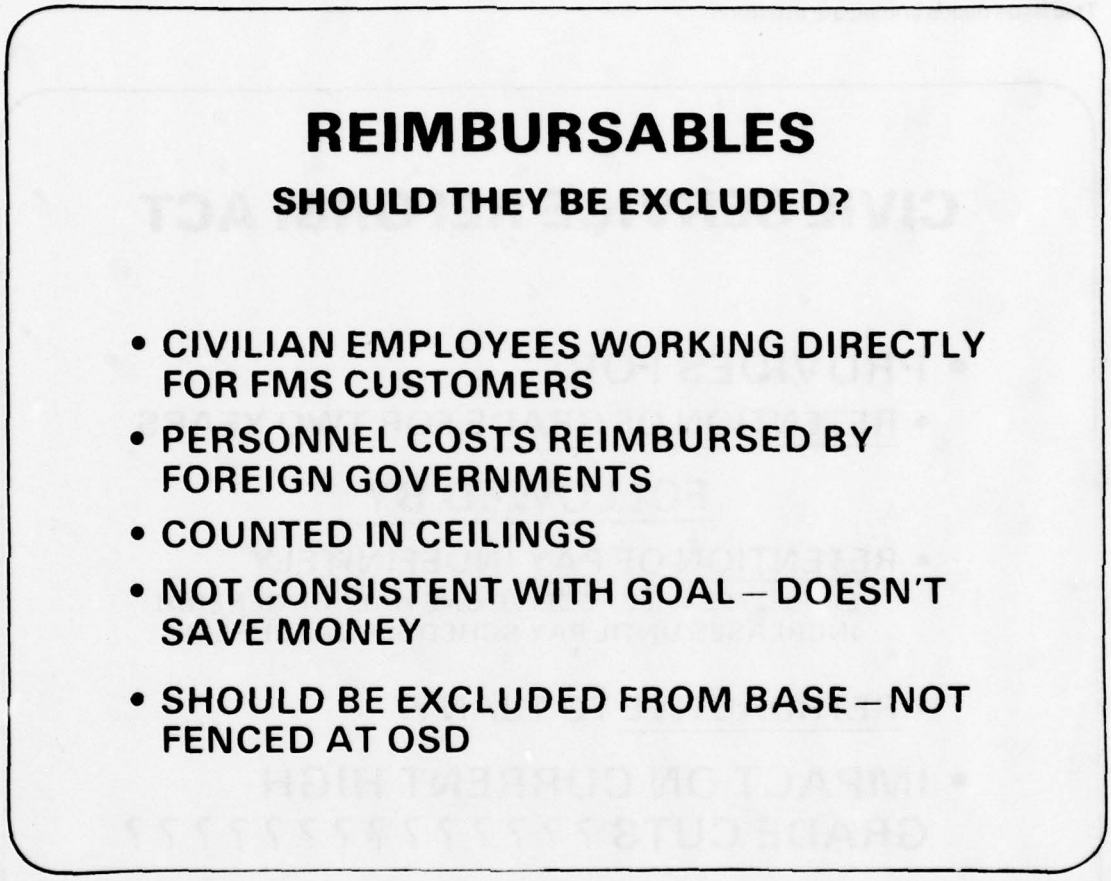
II-7

Although the missions have been assigned, no upward adjustment has been made to the high grade ceilings in recognition of the added responsibilities.

Other adjustments are required with reference to reimbursable customer workload.

REIMBURSABLES--SHOULD THEY BE EXCLUDED?

The law mandates high grade ceilings without appropriate adjustments to the base figure for positions totally cost supported by foreign governments. Chart II-8 cites considerations and contains a recommendation that exclusion of these positions from the OSD base (from which the ceilings are computed) is in order.



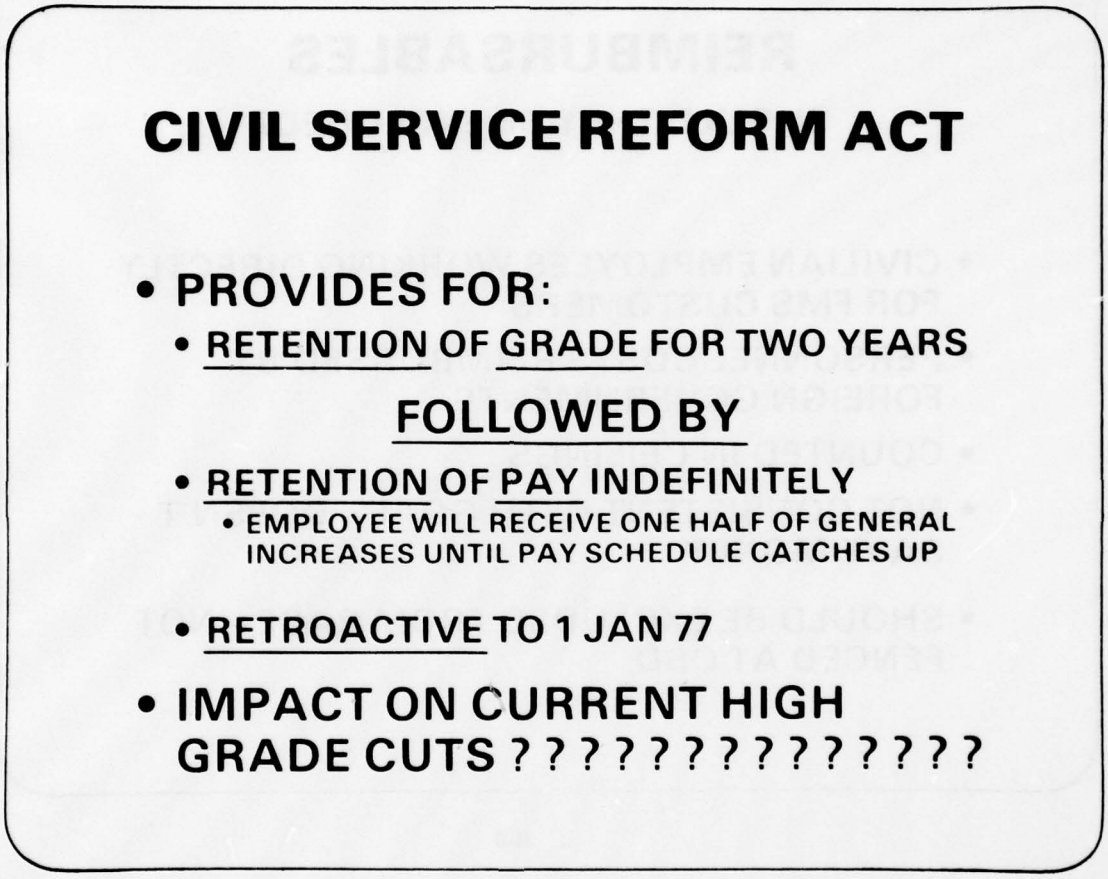
II-8

The next consideration affecting implementation of the law deals with the recently legislated Civil Service Reform Act.

CIVIL SERVICE REFORM ACT

Chart II-9 contains those provisions of the Civil Service Reform Act which could affect high grade ceilings. The full impact of the Reform Act on PL 95-79 cannot be assessed until we know how the Reform Act will be implemented.

This issue needs immediate attention.



II-9

Before turning our attention to Section III, Management Impacts—we will summarize the reductions from 30 Sep 76 to the end FY 79.

REQUIRED REDUCTIONS—FY 77-79

Chart II-10 identifies the DARCOM losses. The reduction in *filled* high grade positions of 7.5% caused by OSD high grade ceilings and PL 95-79 is misleading. Total reduction from *authorized* positions is 9.2%. The authorized number represents a more accurate sizing of the command wide requirement than the number of filled positions which is little more than an accident of time.

REQUIRED REDUCTIONS FY 77—FY79

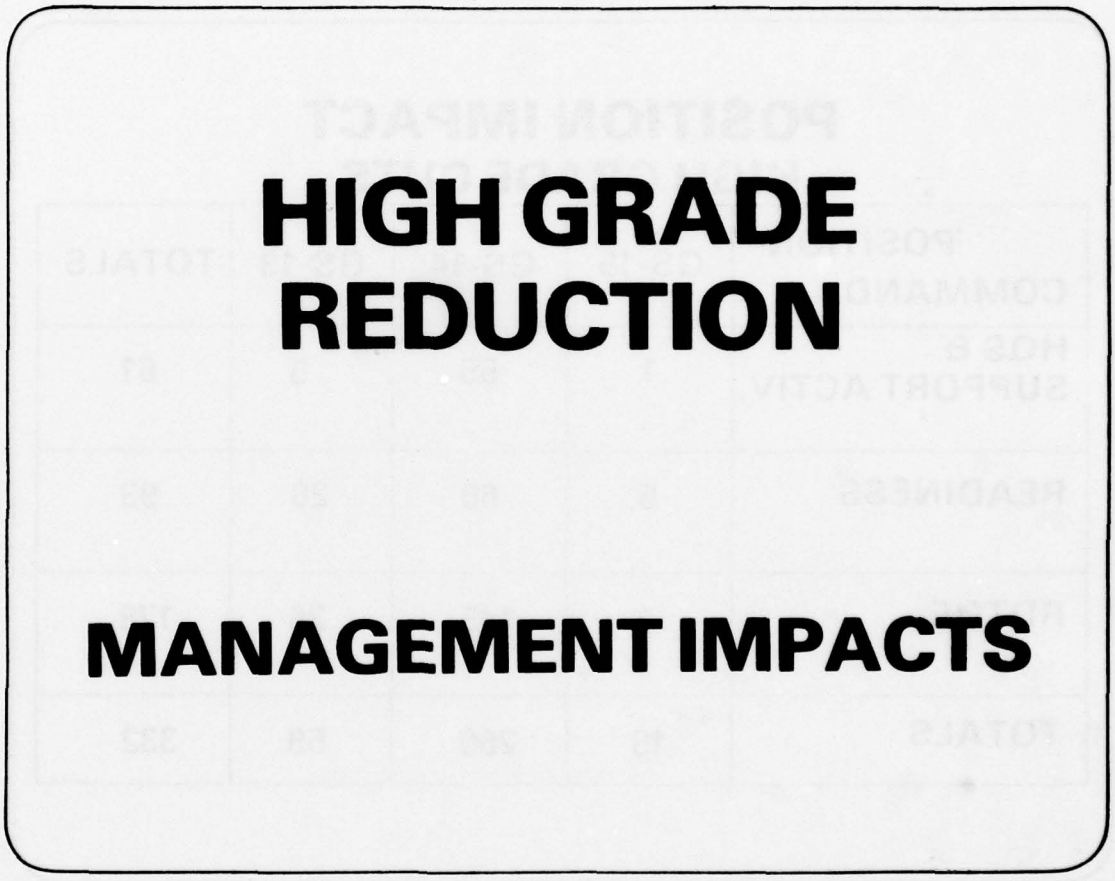
	GS-13 + FILLED	GS-13 + AUTH FILLED & VACANT
30 SEP 76	11,169	11,384
ADDED MISSIONS & TRANSFERS	214	214
	11,383	11,598
FY 79 CEILING	– 10,549	– 10,549
DIFFERENCE	– 834 (7.5%)	– 1,049 (9.2%)

II-10

The management impacts of these reductions are described in the next section.

HIGH GRADE REDUCTION—MANAGEMENT IMPACTS

Having examined the history of past cuts, and the requirements for the on-going cuts, we will next examine the management impacts of these continued reductions in DARCOM's senior civilian workforce (Chart III-1).



III-1

First, we'll view the number of positions impacted.

POSITION IMPACT—HIGH GRADE CUTS

332 high grade *positions* will be impacted (Chart III-2). The cuts will be spread across all commands and all functional areas.

POSITION IMPACT
HIGH GRADE CUTS

POSITION COMMAND	GS-15	GS-14	GS-13	TOTALS
HQS & SUPPORT ACTIV.	1	55	5	61
READINESS	5	60	28	93
RDT&E	7	145	26	178
TOTALS	13	260	59	332

III-2

MANAGEMENT IMPACTS

The management impacts are listed on Chart III-3. Succeeding charts will address each.

HIGH GRADE REDUCTIONS
MANAGEMENT IMPACTS

- INCREASED EMPLOYEE/SUPERVISOR RATIO
- DOMINO/RIPPLE MULTIPLIER
- CAREER OPPORTUNITIES LOST
- LOSS OF TECHNICAL EXPERTISE
- REPROMOTABLES
- EEO IMPLICATIONS

III-3

EMPLOYEE/SUPERVISOR RATIOS

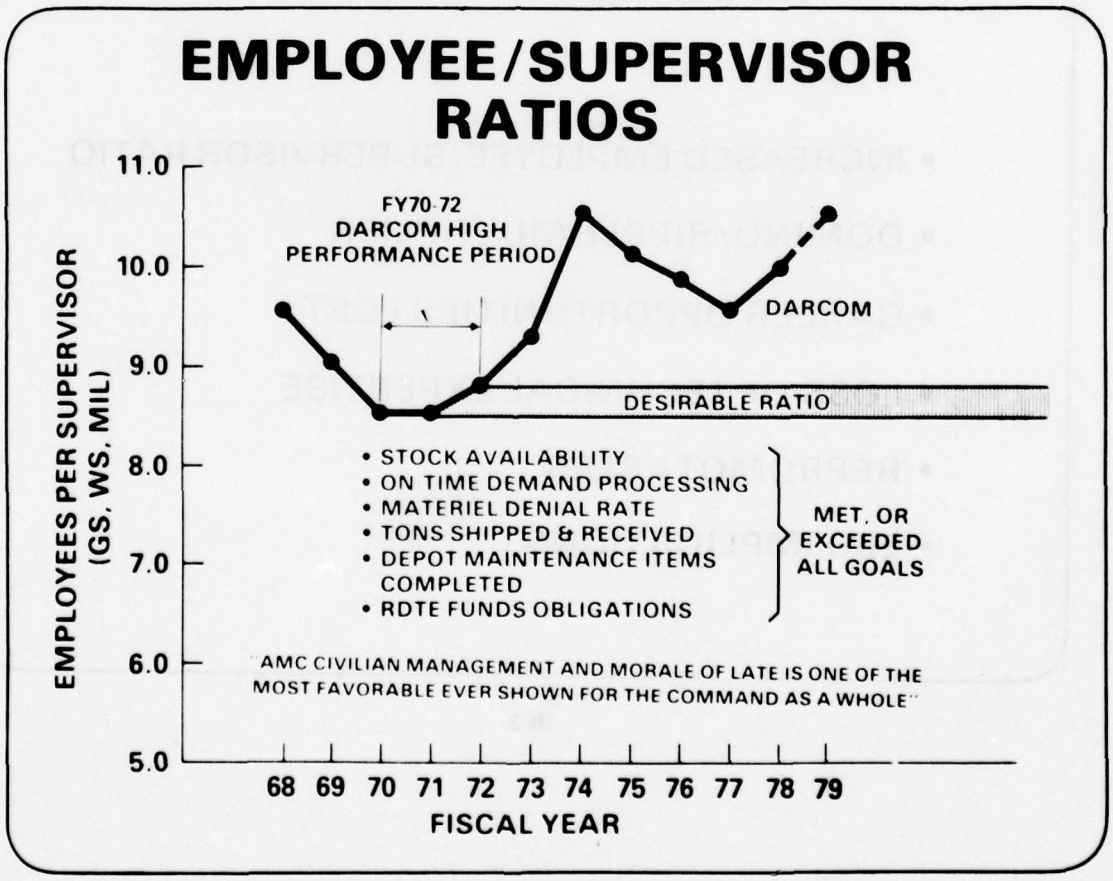
First, the Employee/Supervisor (E/S) ratio (Chart III-4) indicates that in FY 1970-72 DARCOM had its best performance *and* its lowest number of employees to supervisor ratio. DARCOM (then the Army Materiel Command) met or exceeded all of its most important goals.

DARCOM, after an undesirable upward movement peaking in FY 74, managed to reverse the E/S ratio toward the optimum level.

Unfortunately, this trend stopped in FY 77, and has since been going the wrong way.

PL 95-79 will perpetuate this undesirable trend.

We will next examine the domino/ripple effect.



III-4

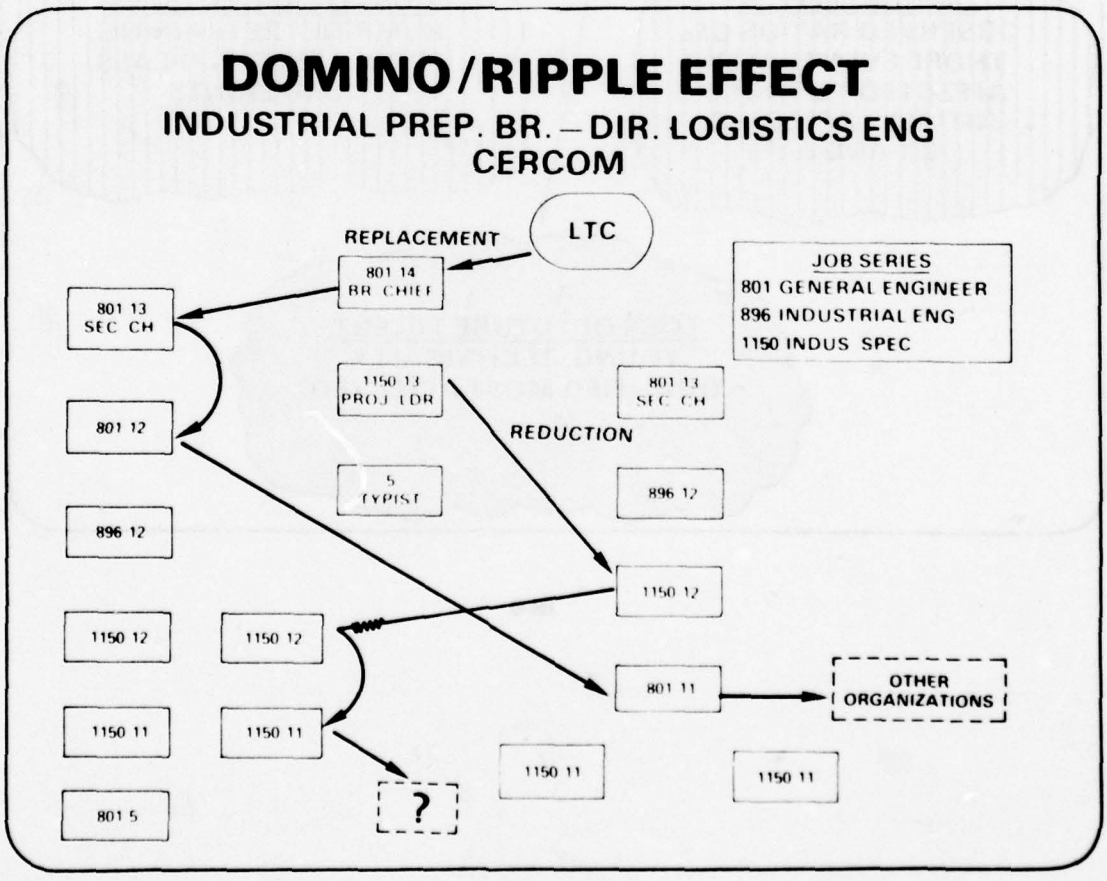
DOMINO/RIPPLE EFFECT

Chart III-5 describes the domino ripple effect and how it multiplies the impact of even a single reduction. An actual case supplied by the U.S. Army Communications & Electronics Materiel Readiness Command (CERCOM), is cited. A GS-14 engineer position was eliminated and replaced with a Lieutenant Colonel. Under "bumping" rules, the GS-14 engineer was downgraded to a GS-13, and "bumped" the subordinate GS-13 section chief, who in turn, bumped a GS-12. A GS-11 was then displaced and transferred to another organization. In reality, four civilians were displaced and their productivity seriously reduced.

A Project Leader (GS-13 industrial engineer) was also reduced in grade. He "bumped" a GS-12, who tried to bump another GS-12. Because of seniority, he could not be placed into the similar GS-12 position, and instead, was downgraded. The GS-11, whom he displaced, moved to an unknown position or left CERCOM.

In summary, to downgrade a GS-14 and a GS-13, eight positions within this organization were significantly impacted, and the position structure of the two sections within the branch were adversely impacted. At least one other organization, and perhaps two, received employees who may or may not have been adequately trained – they had only "minimum qualifications".

The turbulence resulting from such reductions/changes in position cannot be assessed simply by coun- the numbers of employees directly affected.

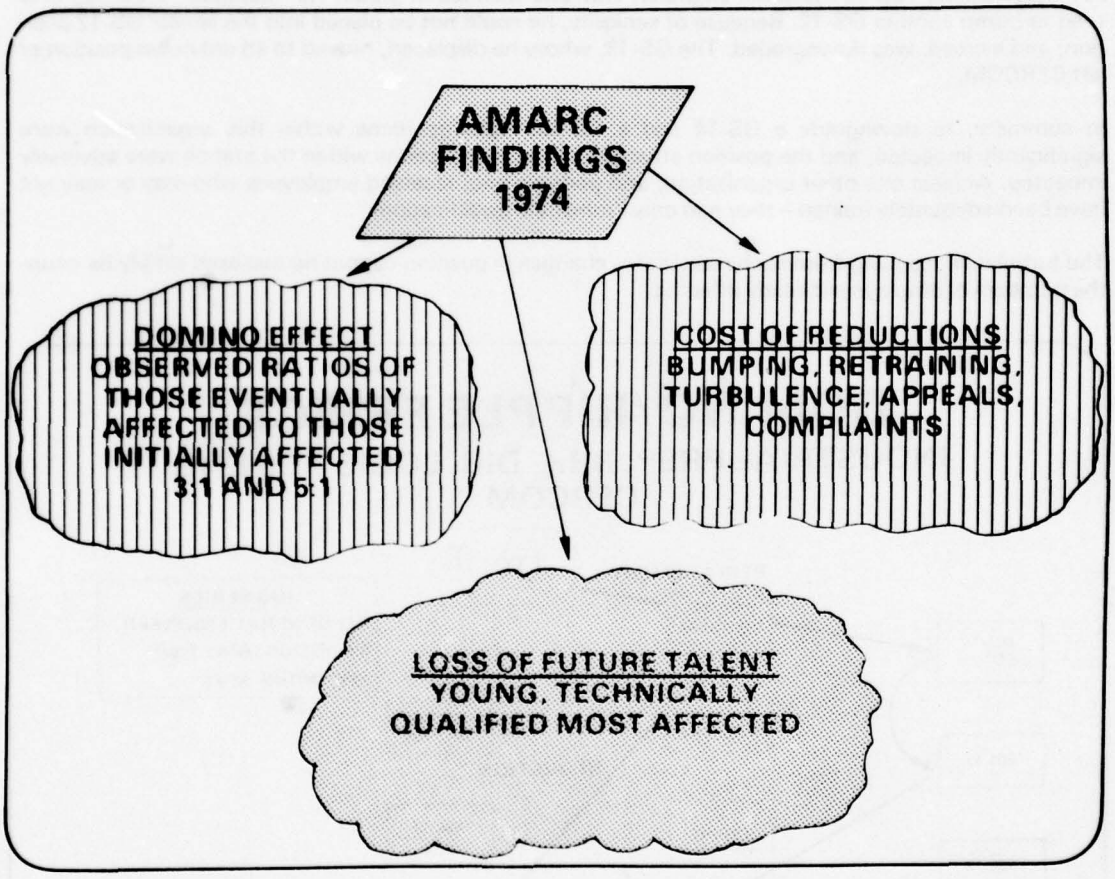


III-5

Other studies have documented the domino/ripple effect.

AMARC FINDINGS

The example just shown forced a four to one ripple impact. The Report of the Army Materiel Acquisition Review Committee (AMARC) stated that the most carefully planned and implemented reorganizations have a personnel turbulence ratio of between three and five to one. DARCOM's experience shows that if reorganizations—and accompanying cuts—are hastily taken, the domino effect sometimes reaches a ten to one ratio. Regardless of the ratios, AMARC found the costs to implement to be high. More importantly, the young, technically qualified people are the ones most affected (Chart III-6).



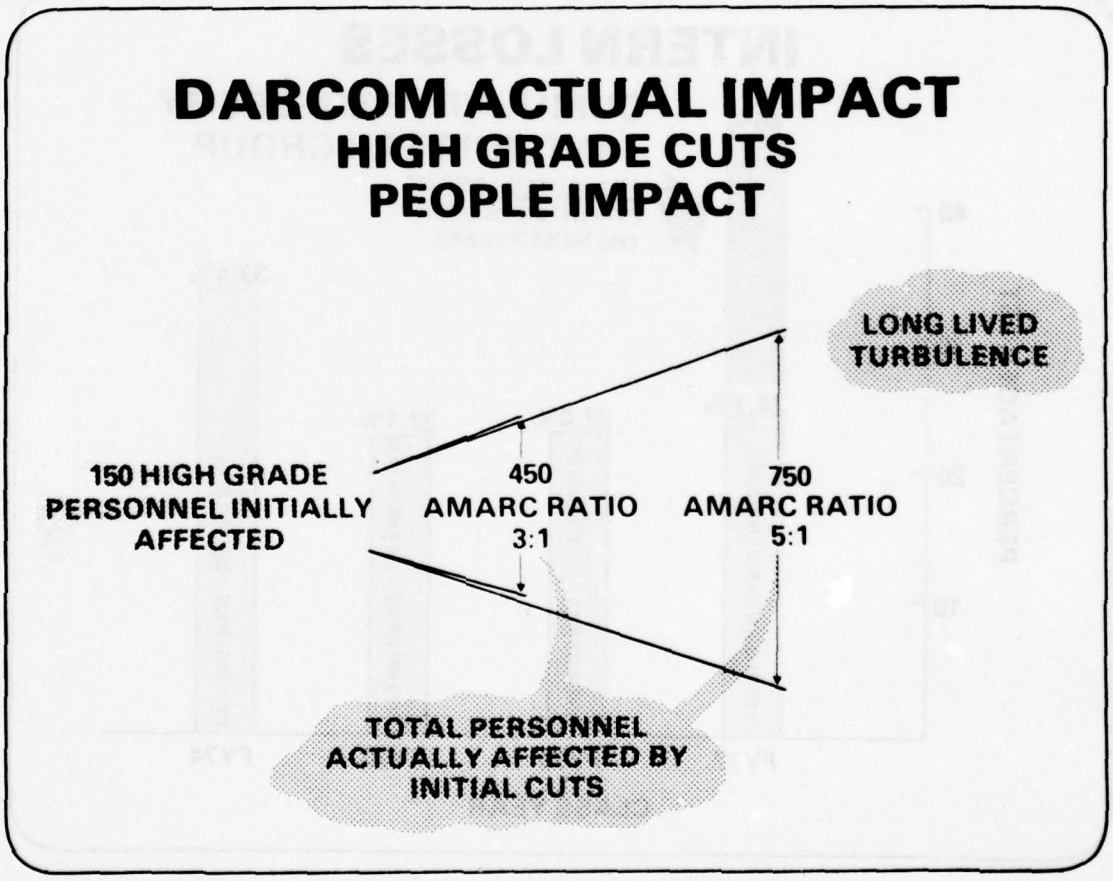
III-6

DARCOM PEOPLE IMPACT

So far in this section we have talked position cuts. While most of these positions have incumbents, some are vacant. We now will address *people* cuts—those tentatively identified to be reduced from their current GS-13 or above positions.

Due to the imposition of two high grade ceilings, 150 people are affected. Using the AMARC established ripple effect (Chart III-7) between 450 and 750 people filling key jobs will have their jobs changed in some way—reduced grade or responsibility, increased responsibility/span of control.

Those familiar with the DARCOM Baseline Study will recall that all of the associated turbulence and induced inefficiencies occur at a time when DARCOM has conclusively established a need for one more person for every four it now has.



III-7

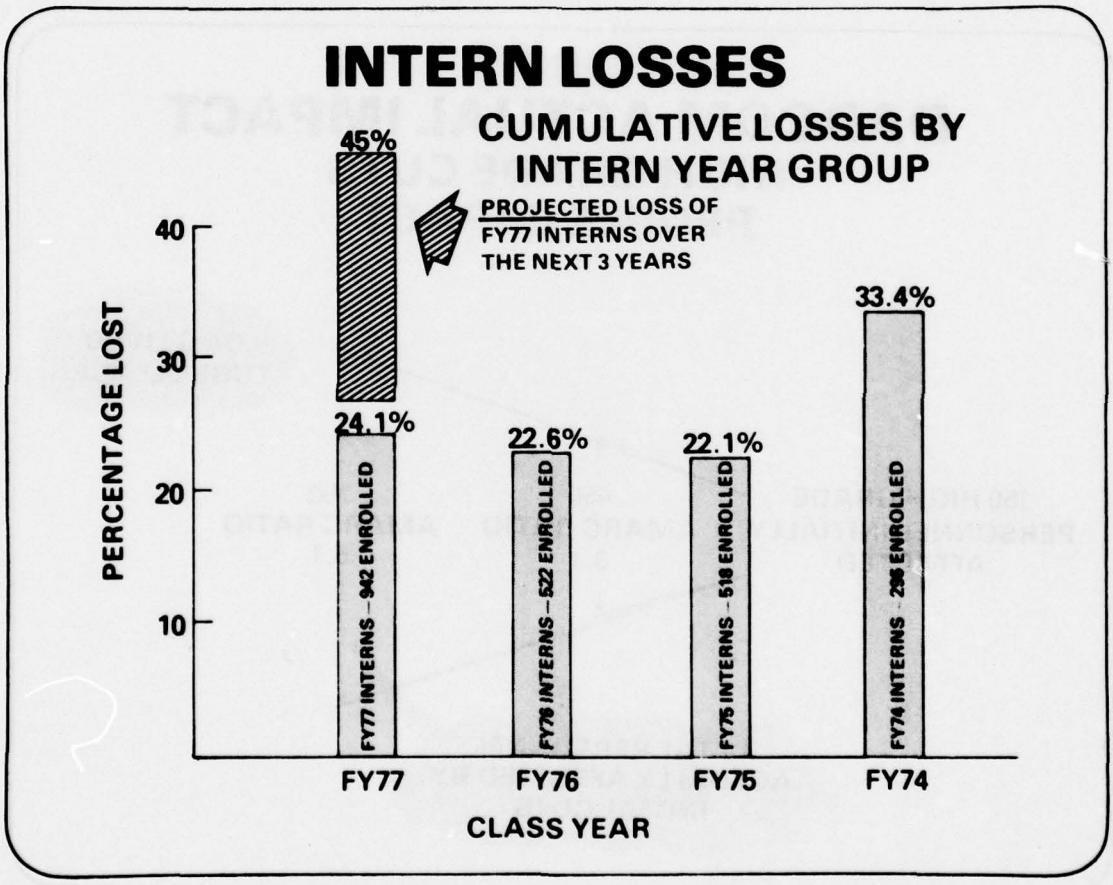
As stated earlier, this turbulent ripple undulates across the totality of DARCOM.

INTERN LOSSES

The undesirable effect is reflected in DARCOM's ability to retain our interns—those bright young men and women being trained for future top level management positions (Chart III-8).

We have already lost a third of our FY 74 graduate interns, almost a fourth of our 1975 and 1976 interns, and by 1981, we project that we will lose almost one-half of the class of FY 77. In short, we are training our interns for other Federal agencies and private industry.

It is worthy to note that within the next 10 years, 42,000 white collar civilians of a current DARCOM workforce of 69,000 will be eligible for retirement. A potential 60% loss of expertise demands that this command manage, retain and cultivate its interns to assure continuity of management.



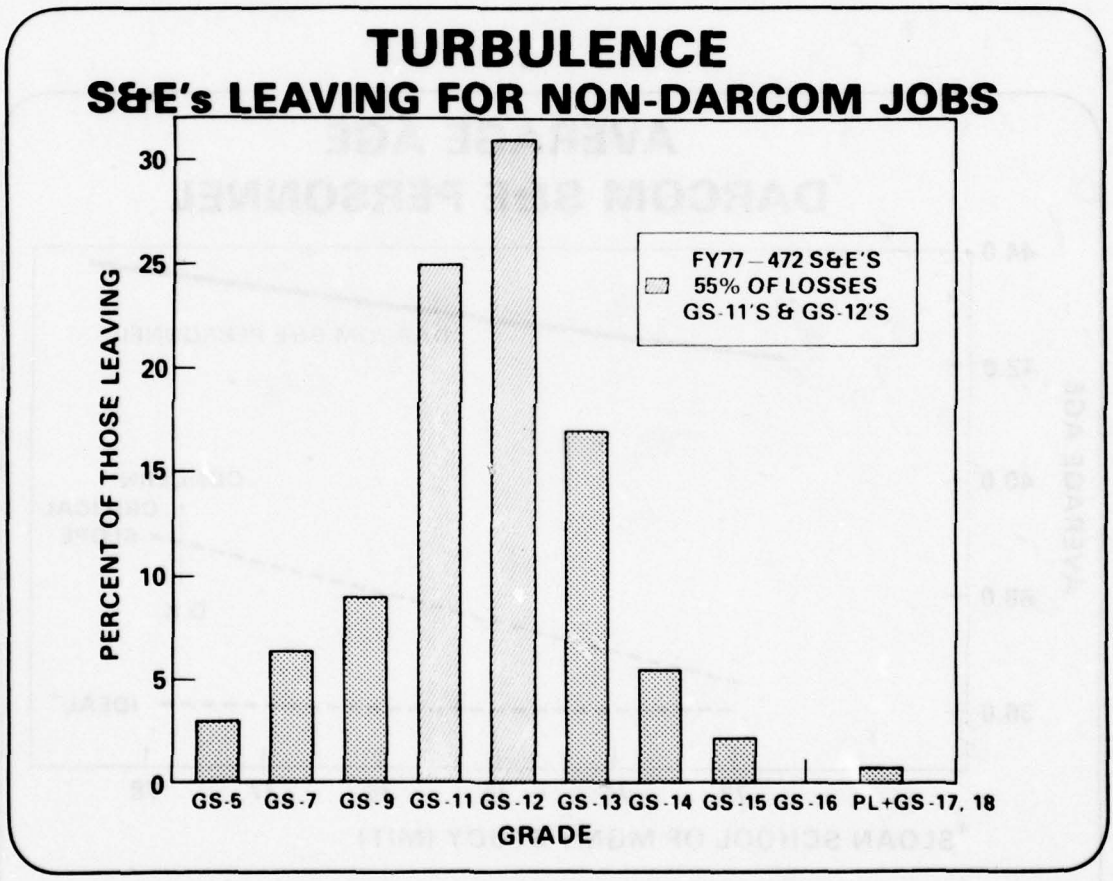
III-8

We are also experiencing losses in other critical areas.

TURBULENCE—S&E's LEAVING FOR NON-DARCOM JOBS

As in the case of our interns, the young, technically trained Scientists and Engineers (S&E) are leaving in record numbers. 55% of all FY 77 losses were in grades 11 and 12 (Chart III-9).

They left because their prospects for further advancement within DARCOM were poor—the continuing manpower cuts, high grade cuts, and bumping and shifting were all too obvious to those whom we hired to refresh and perpetuate our technical base.



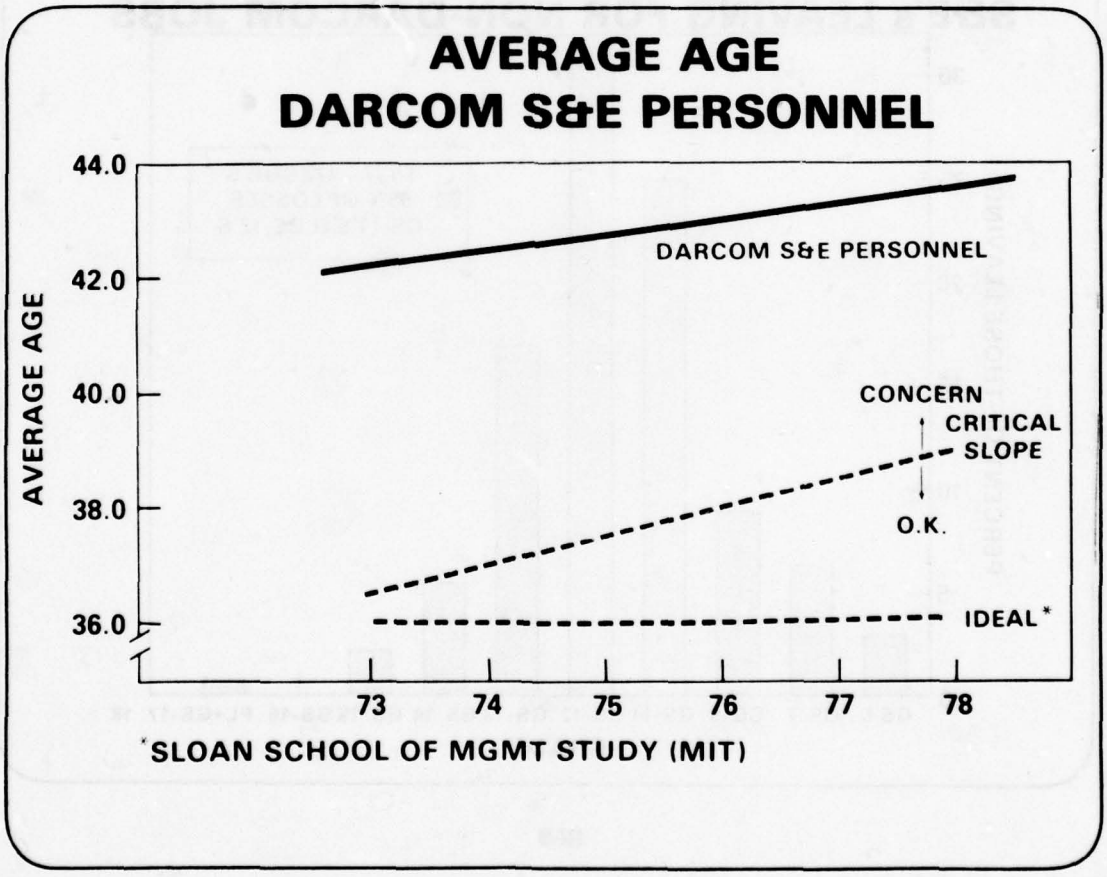
III-9

Losses of these lower graded S&E's contributes to another DARCOM problem; an aging workforce.

AVERAGE AGE—DARCOM S&E PERSONNEL

The loss of young S&E's is reflected in the growing age of that sector of DARCOM's workforce. Chart III-10 shows the increase in the average age of DARCOM's S&E's from 1972 to 1978. The broken line traces the results of a Sloan School (MIT) study of the productivity and creativity of scientific and engineering populations which concluded that the optimum age of the S&E workforce was 36. It is significant to note that the average age of the DARCOM S&E population (solid line) is well above the critical slope.

The high grade reductions, through the bumping process, quit rate and transfer rate will result in further reductions to the shrinking younger portion of the S&E workforce—and continue the upward trend in the average age.



III-10

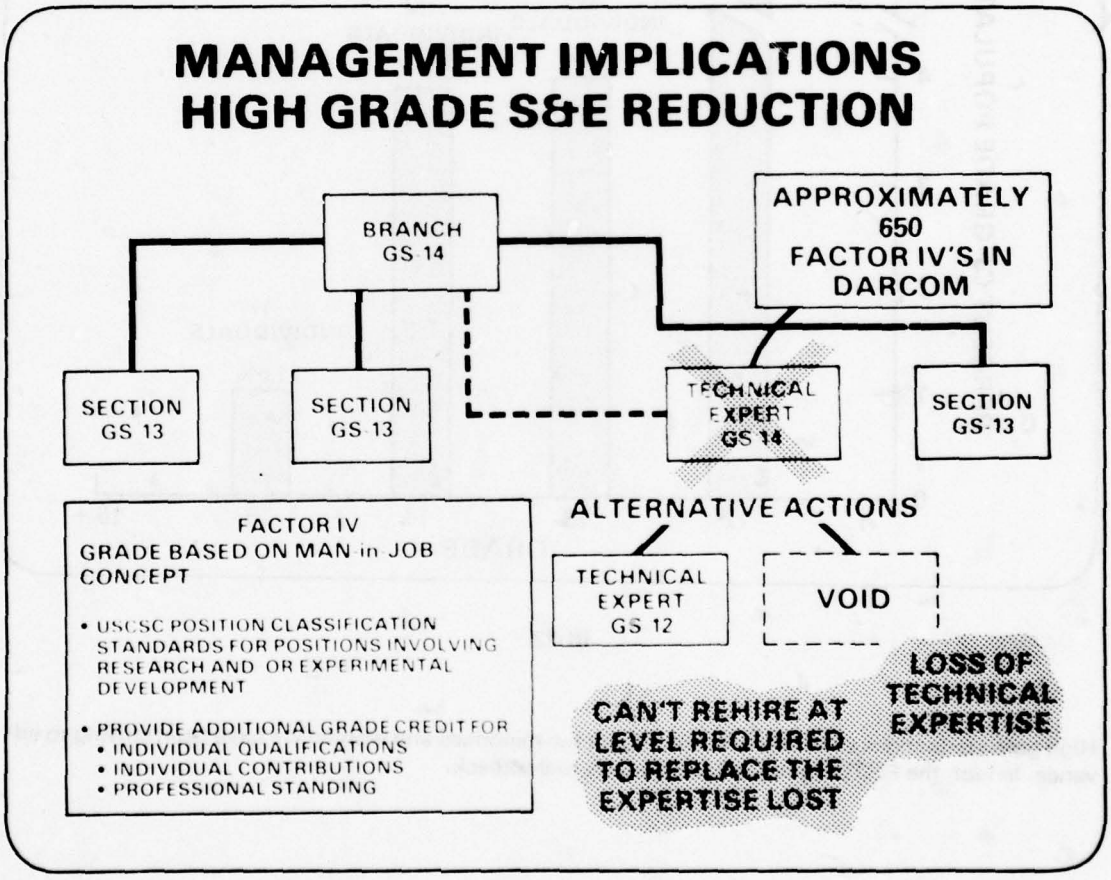
Next we will view another problem caused by the reduction of high grade S&Es.

MANAGEMENT IMPLICATIONS—HIGH GRADE S&E REDUCTION

The federal scientific community rewards outstanding individuals by providing an additional grade to hire and retain them in the workforce. There are approximately 650 such individuals in DARCOM; they are termed Factor IV's. Virtually all are GS-13's and above.

Chart III-11 depicts the impacts of reducing a high grade Factor IV. Since that individual was originally hired or promoted based on his qualifications, contributions, or professional standing, his forced downgrading will probably result in a loss of his expertise to DARCOM. We also will be unable to rehire at the level necessary to replace the individual. Because the current high grade limitation is placed only on the Defense Department, DARCOM's affected Factor IVs will probably transfer to non-Defense agencies, who also have growing needs for those highly qualified in science and engineering.

In short, we are consciously defeating the intent of the Factor IV program—another shot in the foot.

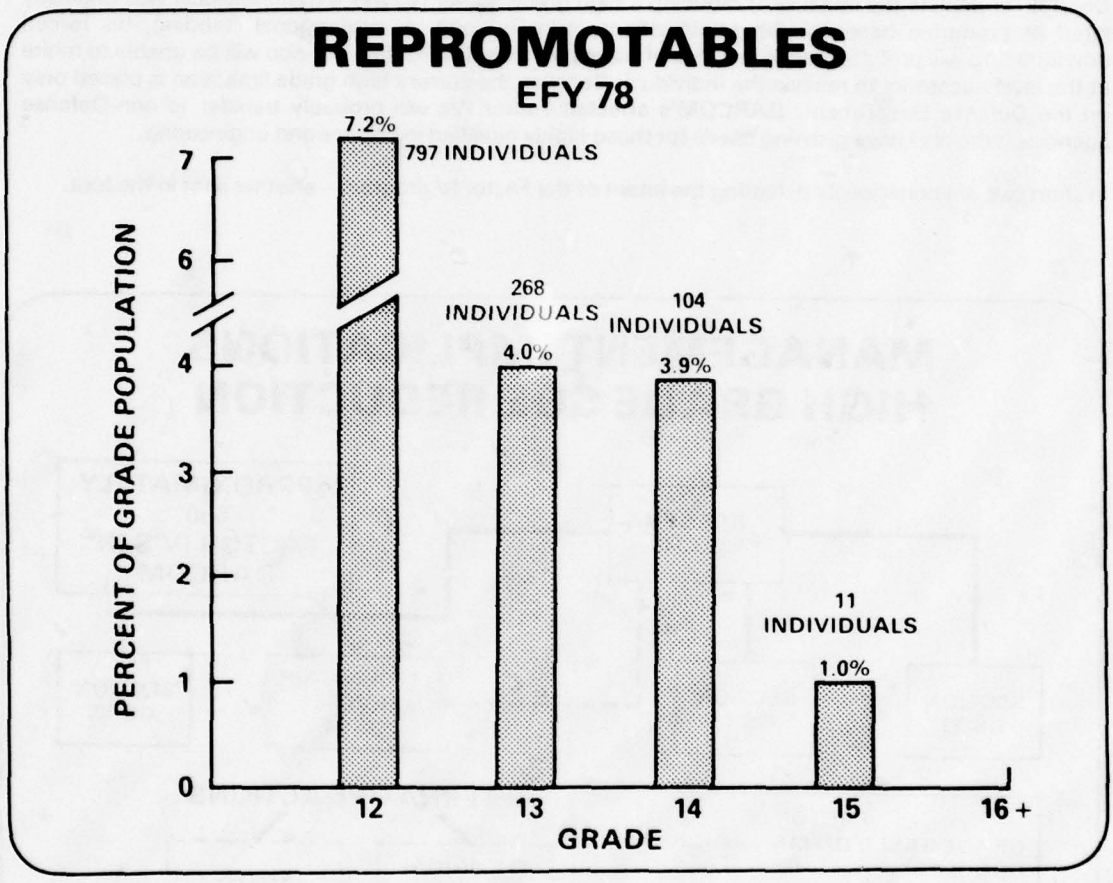


III-11

Next we will illustrate another in a series of obstacles placed in the path of the young and eager talent we need to replace our documented aging workforce.

REPROMOTABLES

DARCOM currently has 797 GS-12's (7.2%) previously downgraded people who have first choice—even over some more capable—to be repromoted (Chart III-12). This is not to say that the 797 are not deserving—just that younger talent queues up behind these people. In grades 13 through 15, 383 repromotables stand in the way of career progressions.

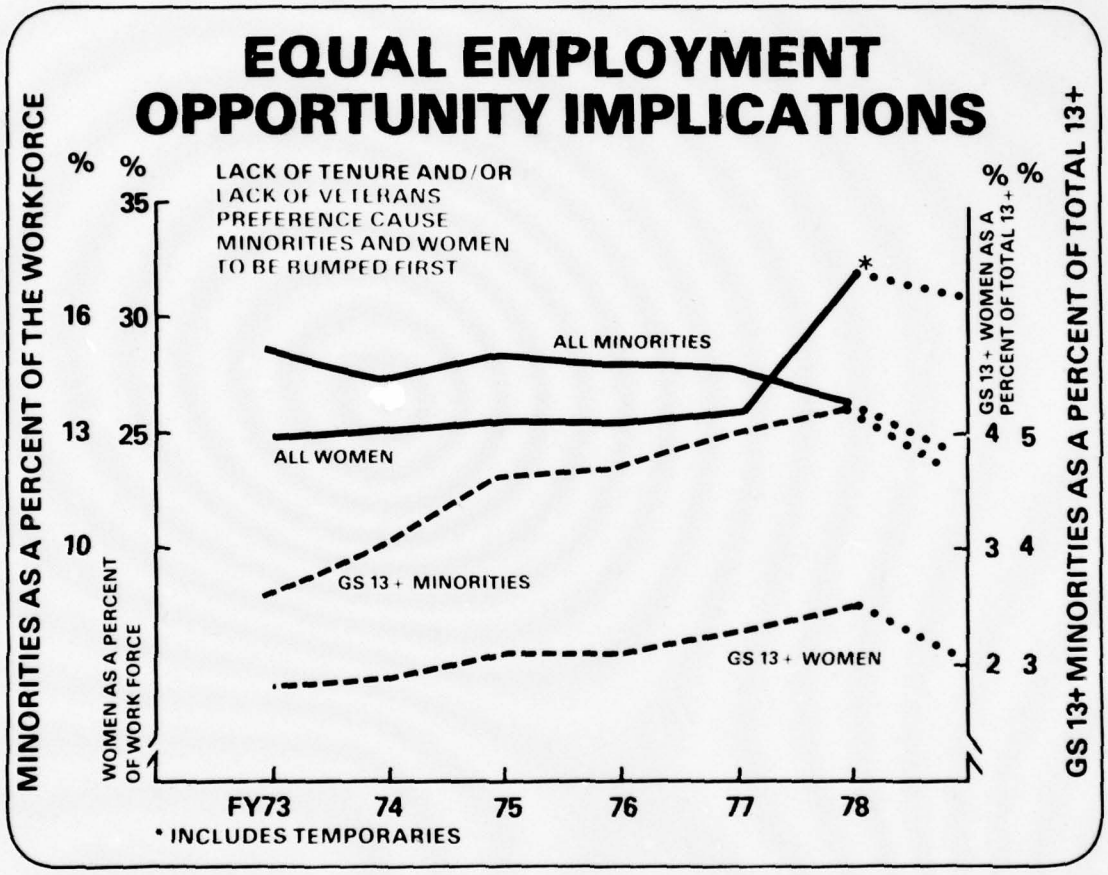


III-12

High grade reductions will also adversely impact the minorities and women we have been striving to advance. In fact, the EEO program will suffer a very real setback.

EQUAL EMPLOYMENT OPPORTUNITY—IMPLICATIONS

DARCOM has a gain—albeit small—in hiring and promoting deserving minority and women employees in recent years (Chart III-13). Unfortunately, due to the fact that women in high grades tend to be non-veterans, and minorities tend to have little tenure, these individuals probably will be reduced (according to existing rules) before white males.

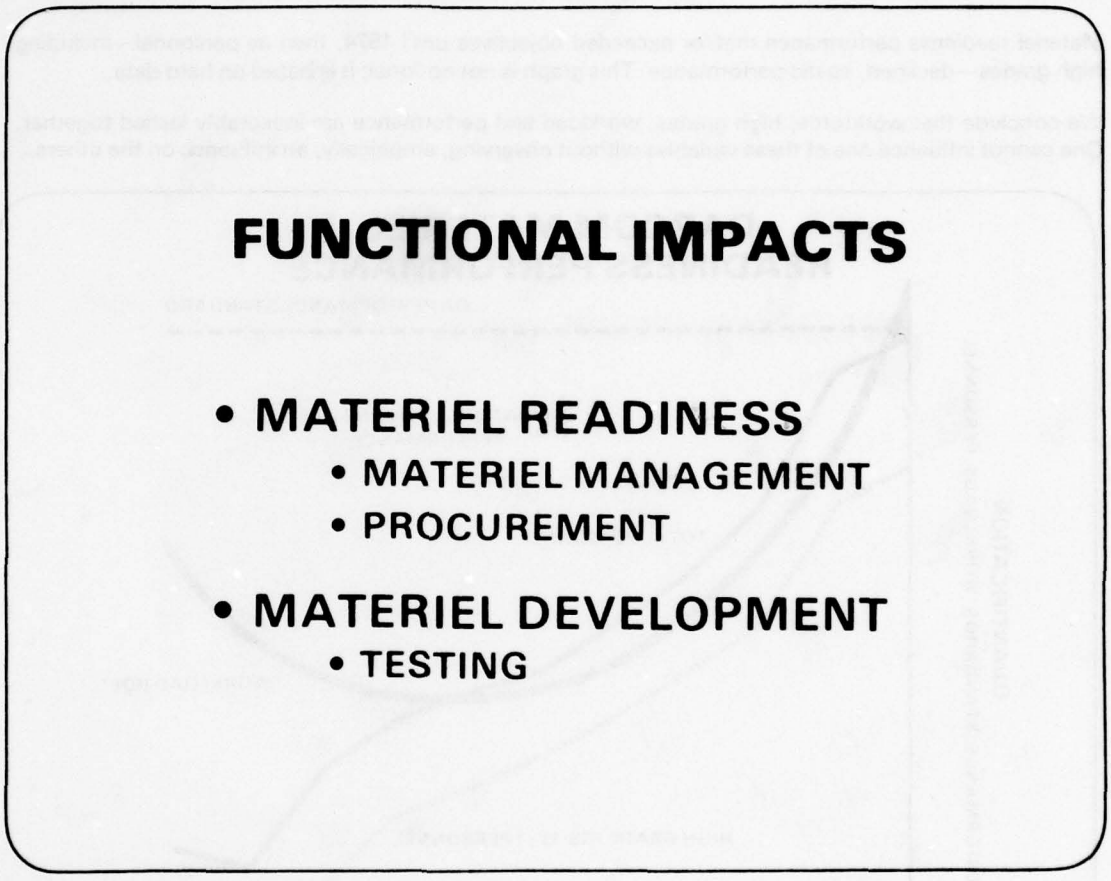


III-13

Next we move to functional impacts.

FUNCTIONAL IMPACTS

We will address impacts related to our readiness and development responsibilities. (Chart IV-1).



IV-1

The first chart generally describes DARCOM's personnel resources and materiel readiness workload trends over time.

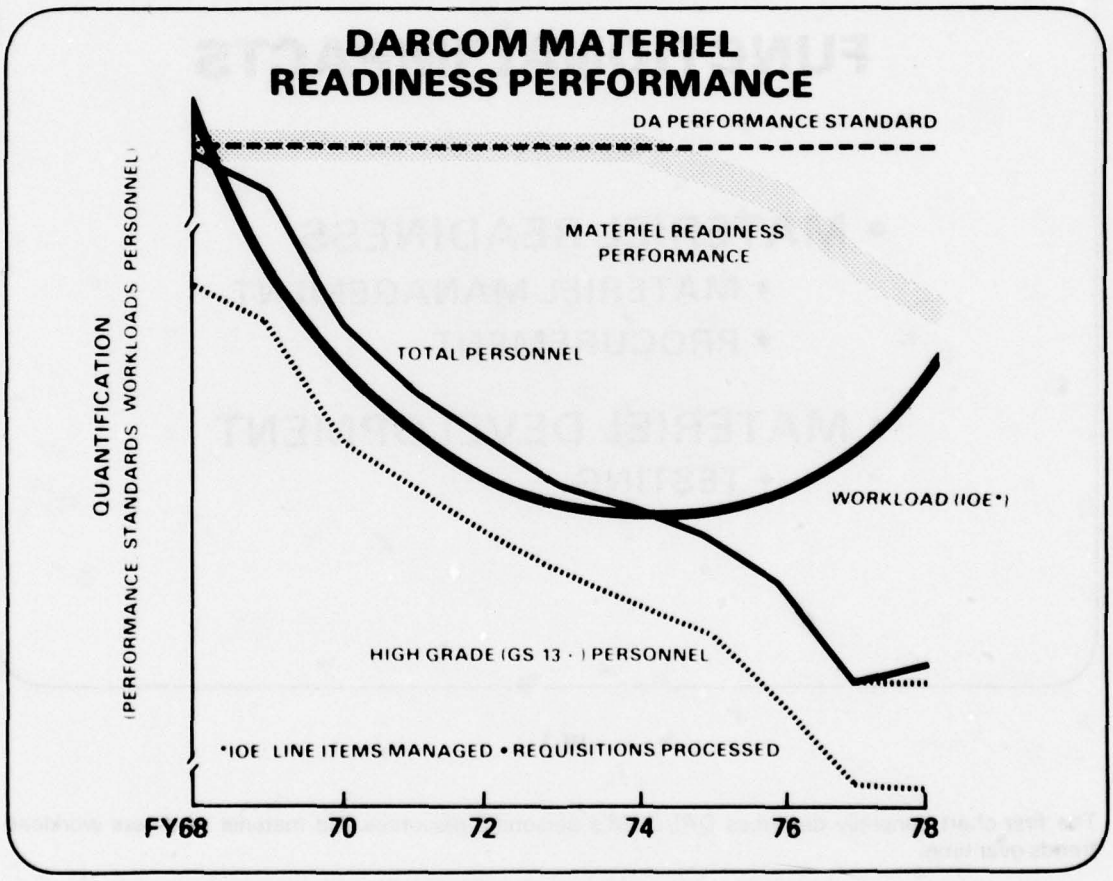
DARCOM MATERIEL READINESS PERFORMANCE

Note the closeness of fit of the total personnel, workload[1] and high grade curves between FY 68 and 74 (Chart IV-2).

Also, recall the high productivity previously shown related to employee/supervisor ratio midway between these dates (FY70-72).

Materiel readiness performance met/or exceeded objectives until 1974, then as personnel—including high grades—declined, so did performance. This graph is not notional; it is based on hard data.

We conclude that workforce, high grades, workload and performance are inexorably lashed together. One cannot influence one of these variables without observing, empirically, an influence on the others.



IV-2

To compound our readiness problems the Army will field within the next five years the major systems listed on Chart IV-3.

Footnote:
[1]Readiness workloads are measured by an index entitled Intensity of Operational Employment (IOE), which relates the behavior of the density of fielded systems and the frequency of use of these systems to mission workload of the wholesale logistics base. This measurement uses line items managed factored by requisitions processed to indicate readiness workloads.

SYSTEMS SCHEDULED FOR FIELDING DURING THE NEXT FIVE YEARS

These systems along with our increasing product improvement and security assistance programs place a huge burden upon our decreasing Readiness Command populations.

SYSTEMS SCHEDULED FOR FIELDING DURING THE NEXT FIVE YEARS

AIR DEFENSE

- STINGER
- ROLAND
- PATRIOT
- DIVAD GUN

ARMOR

- M60A3
- XM 1
- CFV
- IFV

AVIATION

- UH 60
- CH 47 MOD
- AAH 64

COMMAND AND CONTROL

- TOS
- PLRS

TARGET SYSTEMS

- REMBASS
- RPV
- SOTAS

COMMUNICATIONS

- TACSATCOM
- MOBILE SUBS ACC EQ
- TAC COMMO CONTROL
  - AN/TTC 39
  - AN/TYC 39
- SRWBR
- ULS
- MOD REC TRAFFIC TERM
- SINCGARS

ENGINEER

- SLUFAE
- FAMECE
- UET
- GEMSS

FIELD ARTILLERY

- TACFIRE
- COPPERHEAD
- TPQ 36
- TPQ 37
- BCS
- GLLD
- FOV KIT
- GSRS
- FAMAS
- PERSHING II

INFANTRY

- LWCMS
- VIPER
- I 81 MORTAR

INTELLIGENCE

- TRAILBLAZER
- QUICKLOOK
- TACELIS
- QUICK FIX
- MULTEWS
- TACJAM
- TECHNICAL ESM

SUPPORT

- 50 000 LB CONT HANDLER

IV-3

As an example, the following charts describe the U.S. Army Armament Materiel Readiness Command's (ARRCOM) current materiel management capability, and projects its capacity to keep up with the increasing workload.

ARRCOM MATERIEL MANAGEMENT—PERFORMANCE AND STRENGTHS

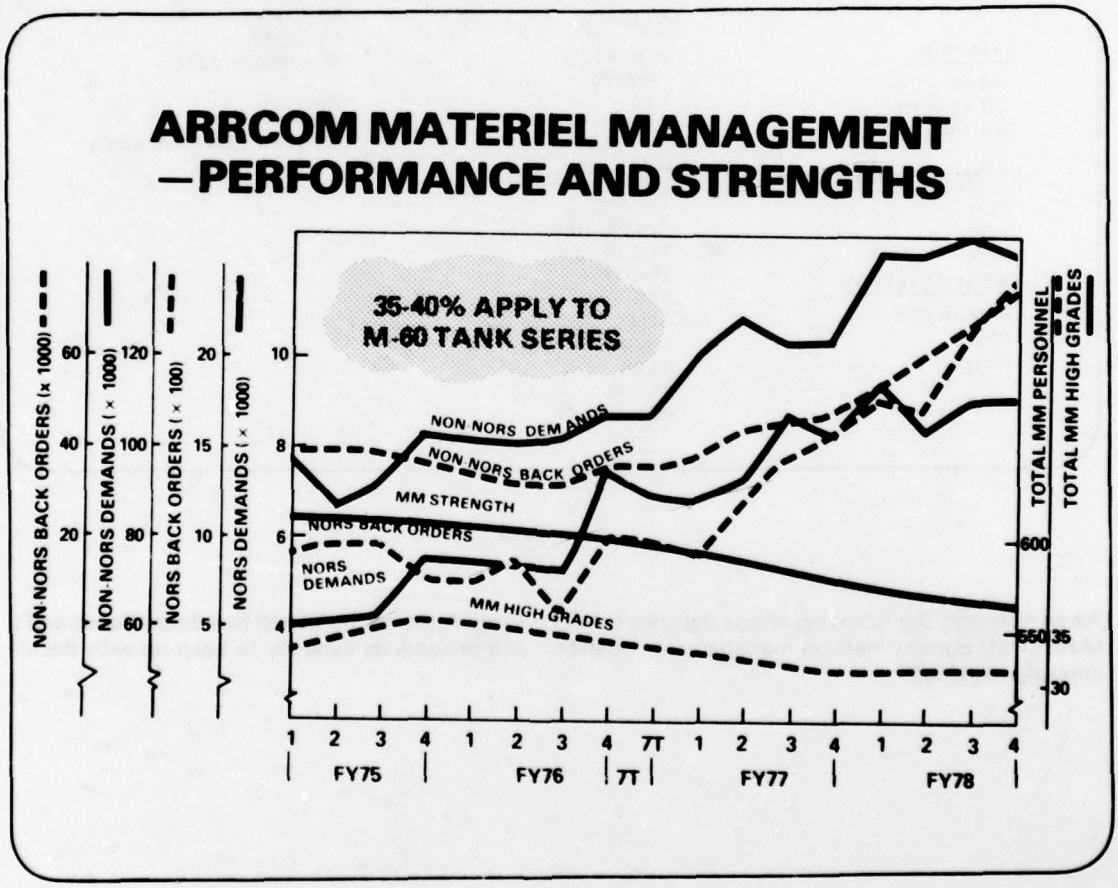
Chart IV-4 illustrates some most undesirable trends. As long as materiel management strengths, high-grades and workload (as indicated by Not Operationally Ready Supply (NORS) and non-NORS demands upon ARRCOM's supply responsibilities) remained relatively constant, backorders also remained constant. When manpower strength and high grades began drawing down and demands began to increase, back-orders also increased.

In short, these curves tell us that:

- workload is increasing significantly
- personnel strength continues to decline
- high grade strength also continues to decline
- back-orders are increasing sharply

These back-orders mean that the field and its weapon systems are waiting longer for repair parts. As a consequence, order-ship time goes up, requisition objectives go up, the pipeline lengthens, and the demands on the wholesale system increase proportionately.

If this trend continues the Army will experience unacceptable readiness impacts on its current first line M-60 series tank, Vulcan Air Defense Gun, M-109 howitzer and M-107/110 SP guns, and others as well.



IV-4

The workload at ARRCOM will increase sharply within the next three years because of new line items, shown on the next chart (Chart IV-5), which require intensive management until routine supply procedures are established. This condition is not projected—it is upon us.

ARRCOM NEW SYSTEMS

ARRCOM line items will increase by 31% in the next several years. And they increase at the same time the population of workers and high grades is decreasing. We project that after a brief lag period, the catch up costs will be enormous—if we have time!

ARRCOM
NEW SYSTEMS

END ITEMS	EST SECONDARY ITEMS FY79	FY80	FY81
XM1	3,200		
DIVADS			3,600
GEMSS	700		
OFT		100	
FADFT	49		
MONOCULAR	141		
MILES	200		
RADAR CHRONOGRAPH	200		
APPS	100		
PHOTOLOCATOR	150		
STATTS	200		
PIVADS		600	
ARM S S (ALL)	600	100	1,000
INF REMOTE TARGET		500	
ALL OTHERS	1,023	1,184	
TOTALS 27	6,563	2,484	4,600
		13,647	

ARRCOM
TOTAL LINE ITEMS
MANAGED-END FY 78
44,098
FY 79-81 NEW LINES:
13,647
31% INCREASE IN 3 YEARS

IV-5

With these new systems comes the requirement for Integrated Logistics Support (ILS)—the support planning that starts in the design stage and continue throughout the life cycle.

INTEGRATED LOGISTIC SUPPORT (ILS)

Chart IV-6 shows nine major functional activities of ILS which must be performed in order to assure that new systems receive proper support when fielded.

Parts must be identified, catalogued, bought, and distributed through the standard supply system. Special tools and test equipment must be developed, acquired and positioned in planned deployment locations. Technical data—central to the development of publications/manuals and for reprocurement—must be obtained. Special facilities, systems maintenance and personnel skills must be developed.

All these, and other functions as well, require experience, technical judgement, and top level management. To reduce high grades at a time when almost 50 new systems are being introduced will have severe impacts on these new systems, and also on the older, first line equipment already fielded with our forces or those of our Allies that continue to have ILS requirements until washout.

INTEGRATED LOGISTIC SUPPORT

• SUPPLY REQUIREMENTS	PROVISIONING, CATALOGING, SPECIAL TOOLS, ETC.
• SUPPORT & TEST EQUIPMENT	DEVELOPMENT, ACQUISITION, POSITIONING
• TECHNICAL DATA	PUBLICATIONS, SPECIFICATIONS, DRAWINGS, ETC.
• SPECIAL FACILITIES	BUILDINGS, CONCRETE PADS, TEST CELLS, ETC.
• MAINTENANCE PLANNING	LEVELS AND TYPES
• PERSONNEL & SKILLS	PROPER NUMBERS & ADEQUATE SKILLS
• TRANSPORTATION & HANDLING	ENGINEERING FOR SPECIAL REQUIREMENTS
• MANAGEMENT INFORMATION	TYPES OF DATA, SOFTWARE SYSTEMS
• FINANCIAL RESOURCES	FORECASTING, BUDGETING, ALLOCATION

RESPONSIBILITIES
DARCOM R&D COMMANDS – PLANNING AND SCHEDULING
DARCOM READINESS COMMANDS – ILS EXECUTION

IV-6

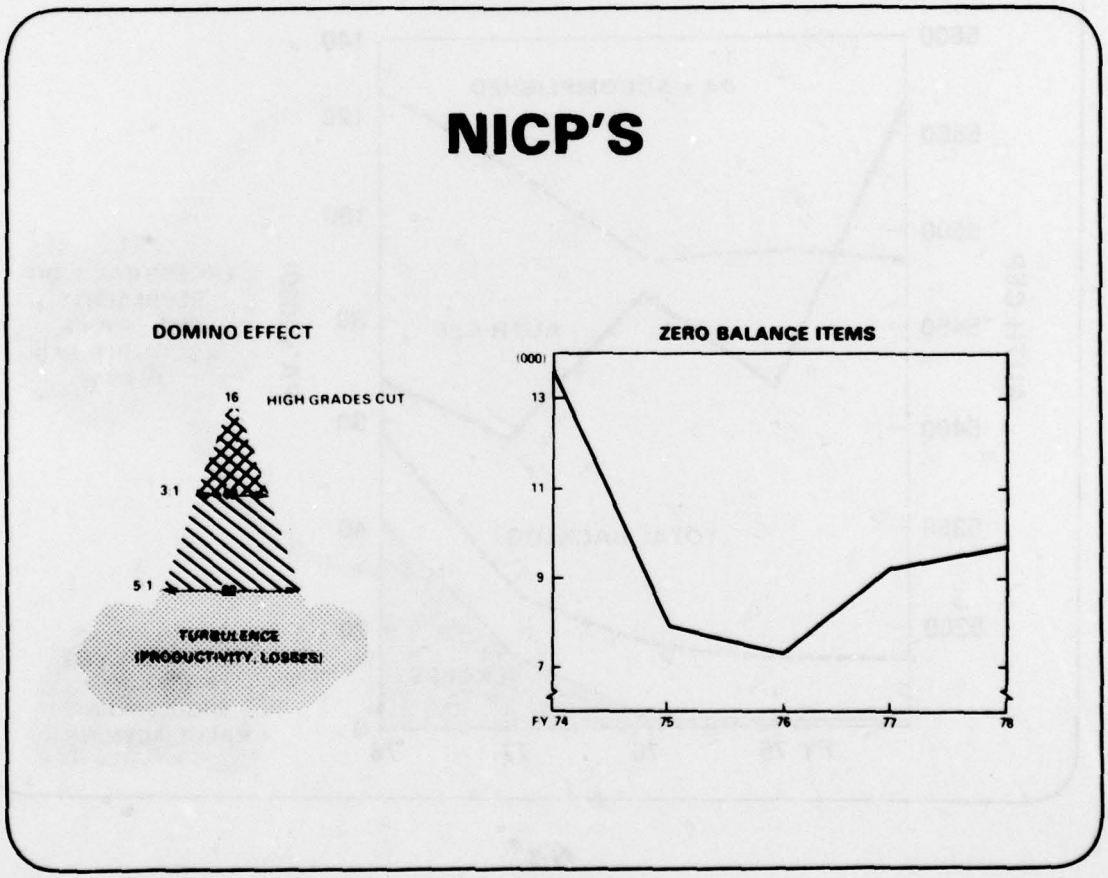
DARCOM's capability to manage its new and fielded systems is centered in the National Inventory Control Points (NICPs).

NATIONAL INVENTORY CONTROL POINTS (NICPs)

Sixteen of the high grade positions to be reduced in the current drawdown will be taken in NICP's (Chart IV-7).

The domino effect, based on the AMARC report findings, indicates that between 48 and 80 key personnel in NICPs will be directly affected. Those indirectly affected through changes of supervisor and/or direction could number significantly more, and are indicated by the resulting cloud of turbulence.

To illustrate an example of our concern, we view the chart on the right which shows that since FY 76 our zero balance items—those out of stock due to a variety of reasons including a shortage of people—have been increasing. We predict with confidence that continued high grade cuts, and the accompanying ripple effects and turbulence, will result in increases in zero balance items at a time when the Army cannot permit further degradation in logistics performance. Stock availability and backorder trends are following the same undesirable trend.



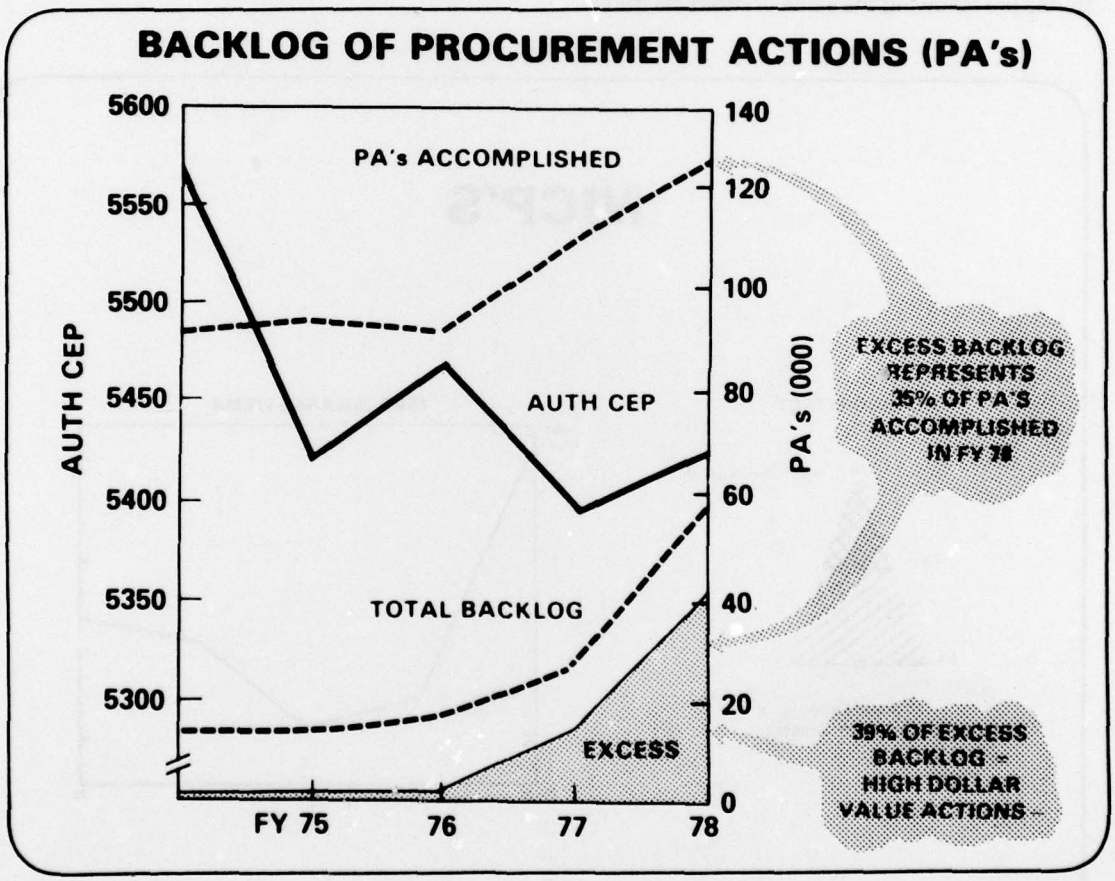
IV-7

Contributing to our growing zero balance item status is an inability to procure necessary items on a timely basis.

BACKLOG OF PROCUREMENT ACTIONS

The shortage of personnel is in evidence when examining DARCOM's recent procurement performance. Because of reduced personnel strength, to include the lack of adequate high grade personnel, DARCOM's current excess procurement action (PA) backlog represents 35% of all PAs accomplished in FY 77 (Chart IV-8). This backlog of over 40,000 actions is composed of 16,770 high dollar value actions (39%). These require approximately 13½ times the effort required to award low dollar value, purchase order type, contracts.

It should be noted that only 18% of the 124,000 PAs awarded in FY 78 were high value, thus, normalized workloads significantly exceed the 40,000 excessive backlog found by simply counting unawarded Procurement Actions. By the end of FY 79 the predicted backlog will exceed 53,000 procurement actions.

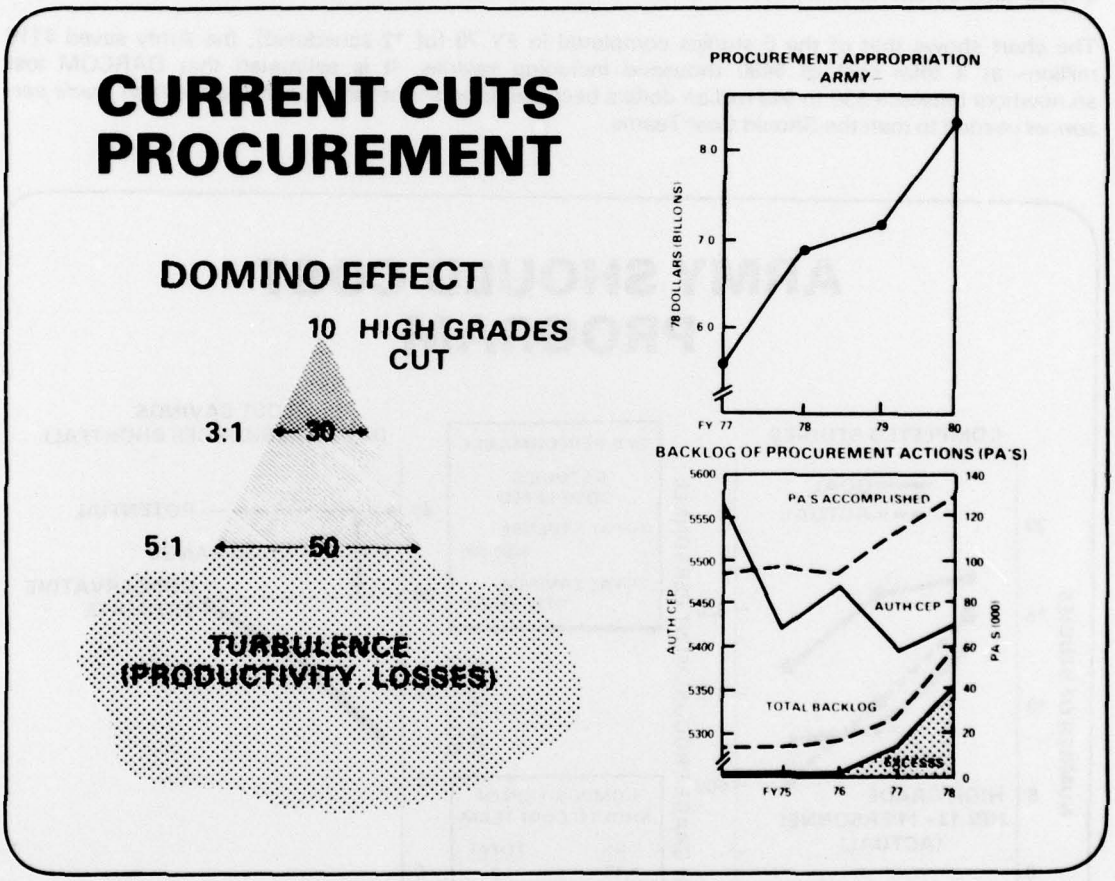


IV-8

Procurement will also be impacted by high grade cuts (Chart IV-9).

CURRENT CUTS—PROCUREMENT

Ten high grade positions will be cut in the procurement community. As many as 50 people could be directly affected—at a time when the procurement budget is getting larger and we are falling further *behind in our current workload (see insets). What is not shown is the backlog in procurement* planning, contract close-outs, career training, production management, maintenance of bidders lists, post contract reviews, and many other things which DARCOM should do but is now unable to accomplish.



IV-9

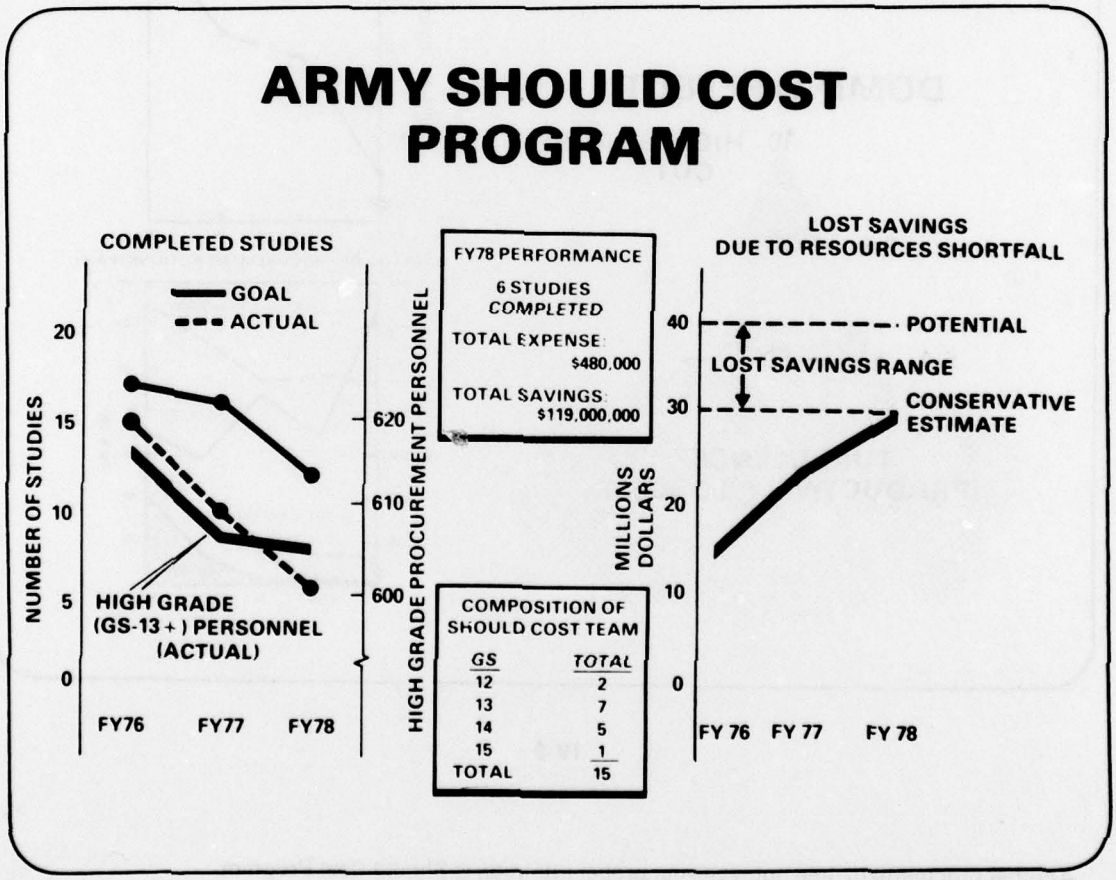
Another procurement area not receiving proper attention is Should Cost Program.

ARMY SHOULD COST PROGRAM

The economic merit of conducting Should Cost studies is well documented.

Hand picked teams composed of 15 or so high grade personnel, visiting contractor and sub-contractor sites, examine cost accounting, management practices, and technical operations (Chart IV-10). Based on their assessments, the Army is in a strong position to negotiate. With such studies, contract costs are normally decreased from 10% to 15%. Without Should Cost studies, negotiations normally result in driving initial estimates down by only 6%.

The chart shows that of the 6 studies completed in FY 78 (of 12 scheduled), the Army saved $119 million—at a total cost of $480 thousand including salaries. It is estimated that DARCOM lost somewhere between $30 to $40 million dollars because of personnel shortages and the *high grade personnel* needed to man the Should Cost Teams.



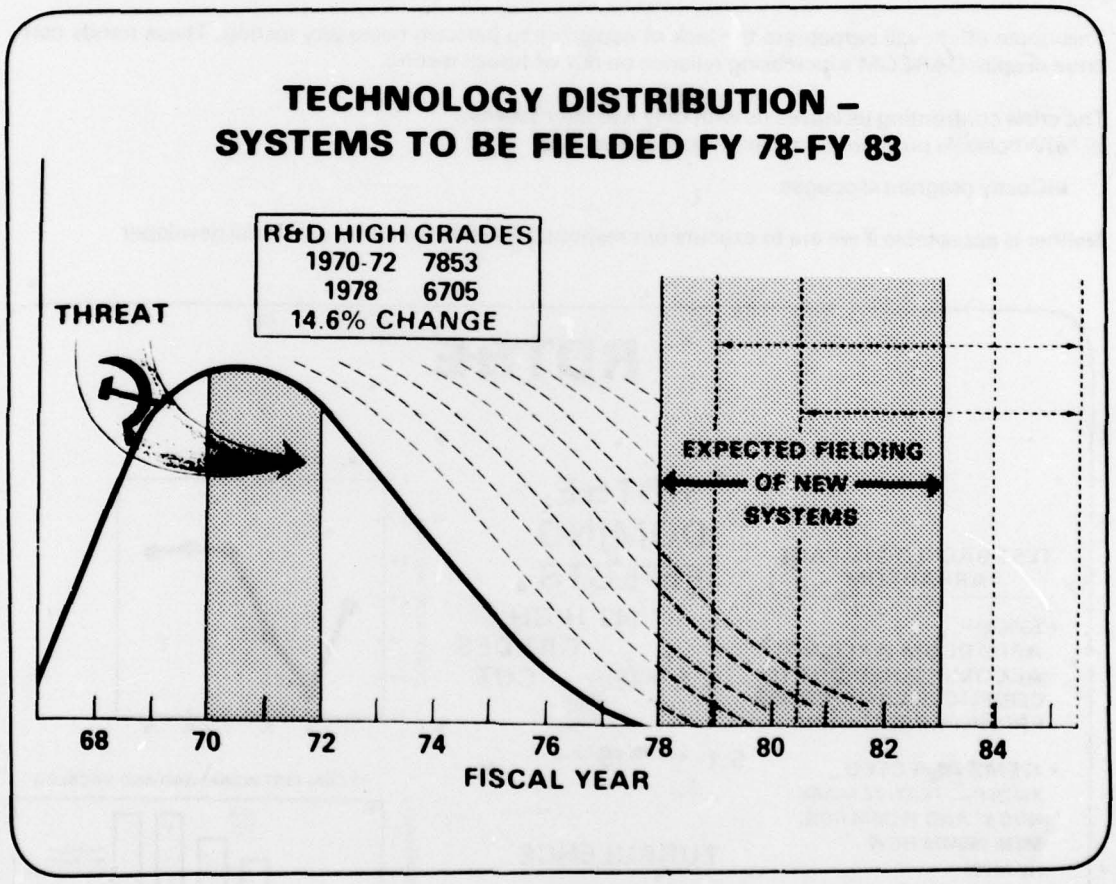
IV-10

The impact of high grade reductions in our Materiel Development populations will be described next.

TECHNOLOGY DISTRIBUTION

The scientists and engineers on board in the 1970-72 time frame, using the technology available during that period, were responsible for the effort required to develop the 50 new systems which will be introduced over the next five years (Chart IV-11). These systems were developed in response to the threat identified at that time.

Since 1970-72, DARCOM's high grade S&E personnel have decreased more than 14%. This might be an acceptable decline if the threat had decreased. But it has not. As a consequence of both continuing personnel and high grade reductions, the U.S. is lagging the Soviets in many critical areas of ground warfare.[1]



IV-11

The following chart depicts the magnitude of the personnel and high grade cuts in the DARCOM S&E community, in general, and, more specifically, in two commands.

Footnote:
[1]A classified chart is available to demonstrate the weapons system lag condition.

RDT&E

RDT&E funding continues to grow as shown on Chart IV-12. However, and as an example of a shortage of U.S. Army Test and Evaluation Command (TECOM) personnel, including high grades, 55% of the U.S. Army Armament Research and Development Command's test programs will not be accomplished. ARRADCOM's systems include munitions, thick wall cannons and howitzers, protective items, mines and other critically needed materiel. Testing delays run up costs, delay initial fielding dates (which in itself destroy schedules tied to all functions of ILS), and extend our reliance on older, less capable weapon systems.

The 143 proposed high grade RDT&E position cuts will have a ripple impact on up to 700 key S&E people at a time when our development programs should be enhanced in light of the increasing (and well documented) threat.

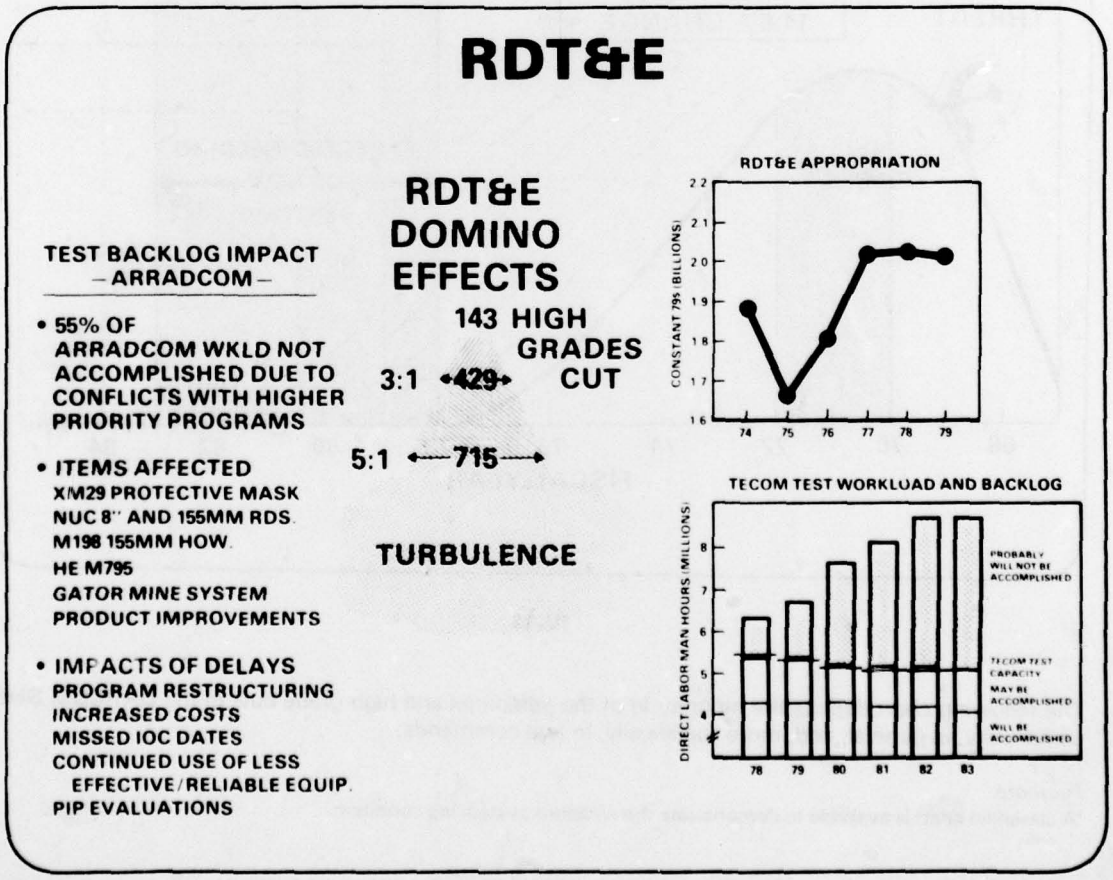
This ripple effect will perpetuate the lack of capability to perform necessary testing. These trends continue despite DARCOM's increasing reliance on out-of-house testing.

The crisis confronting us leaves us with only two alternatives.

a) Wholesale program terminations or suspensions.

b) Costly program slippages.

Neither is acceptable if we are to execute our responsibilities as the Army's materiel developer.



IV-12

Our attention is next directed to the stated reason for high grade reductions, i.e. save money.

COST/SAVINGS ANALYSIS ASSUMPTIONS

Chart V-1 contains the assumptions used in computing the costs and saving resulting from the 332 high grade position cuts.

The Civil Service Reform Act provisions, particularly that which ensures the indefinite retention of pay, are of significance to the outcome of this analysis.

Costs and savings were based on differences to the Federal Government, and are not necessarily restricted to DARCOM.

COSTS/SAVINGS ANALYSIS ASSUMPTIONS

- CIVIL SERVICE REFORM ACT IS APPLICABLE (I.E., PAY RETAINED)
- MINIMIZE COSTS AND MAXIMIZE SAVINGS
- POSITIONS TO BE DOWNGRADED HAVE BEEN IDENTIFIED, BY COMMAND AND GRADE (TOTAL 332)
- RIPPLE-EFFECT IN THIS CIRCUMSTANCE IS 5 TO 1

V-1

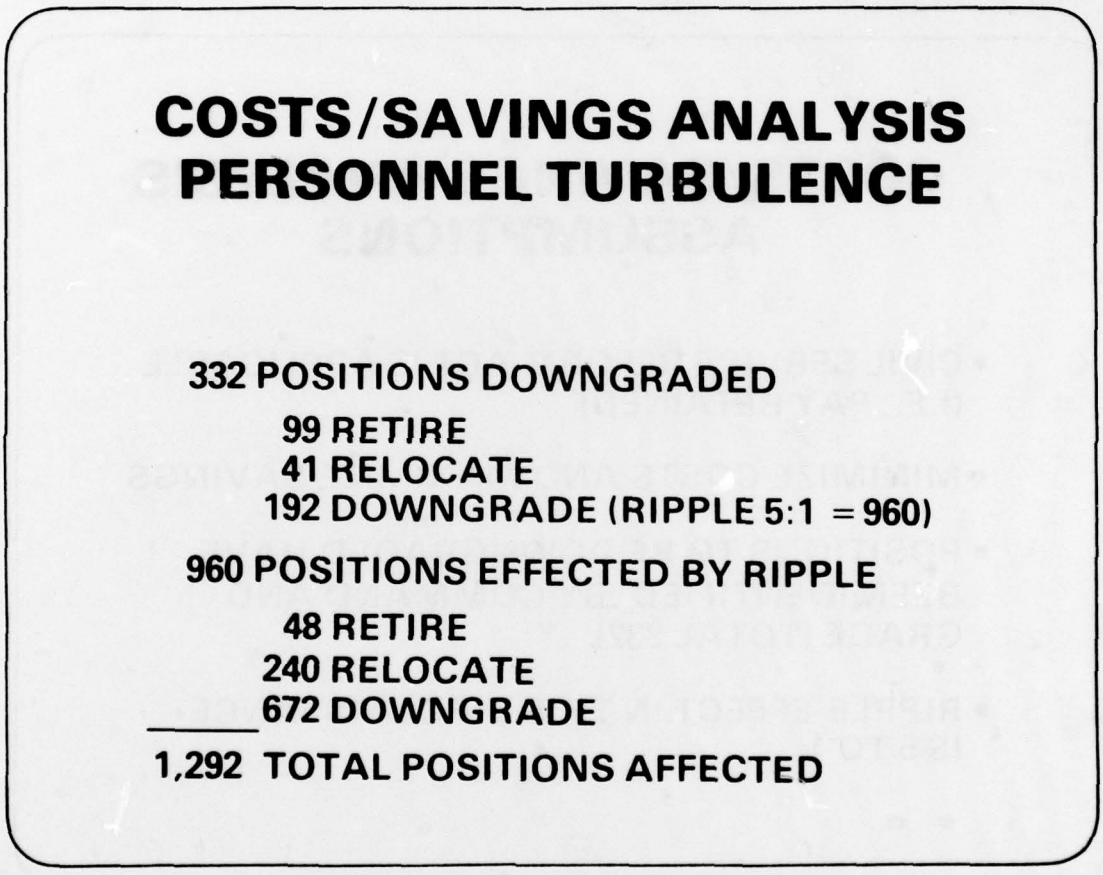
Estimated personnel actions resulting from the cuts are calculated as shown on Chart V-2.

COSTS/SAVINGS ANALYSIS—PERSONNEL TURBULENCE

Retirement computations are based on average age and length of service of senior high grades (primarily GS-15's and GS-14's).

Those electing to relocate are primarily at the GS-13 level and below.

The 5 to 1 ripple effect is applied only to those positions where the incumbent elects to accept a downgraded position.



V-2

From these assumptions and estimates, we calculated the costs and savings shown on Chart V-3.

COST/SAVINGS ANALYSIS

Costs incurred are a composite of processing actions, recruitment, training, PCS for relocations, and lost productivity. Each option (retire, relocate, downgrade) is separately costed.

Savings are computed using the differences in salary and government contribution to benefits between the old grade and a new grade.

Not shown on the chart is the time required to recover the costs through the savings. The break even point is reached 8.3 years from the date the action starts. But, as history teaches us, the break even point may never be reached because of consequential organizational changes which may be required (whose costs are not computed) and their real impact on the costs of effective management.

COST/SAVINGS ANALYSIS

($000)

COSTS	YEARS 1	2	3	4	5	5 YEAR TOTAL
RETIRE	59	0	0	0	0	59
RELOCATE	2,132	0	0	0	0	2,132
DOWNGRADE	7,241	4,612	4,612	4,612	4,612	25,689
						27,880

SAVINGS						
RETIRE	692	1,384	1,384	1,384	1, 384	6,228
RELOCATE	1,116	2,232	2,232	2,232	2,232	10,044
DOWNGRADE	0	0	0	0	0	0
						16,272

V-3

From an analysis we conclude the following (Chart VI-1).

CONCLUSIONS

- OTHER FEDERAL AGENCIES UNAFFECTED – EXCEPT NASA
- HIGH GRADE CEILINGS COMPOUNDED EFFECTS OF CONTINUED ORGANIZATIONAL INSTABILITY
- DUAL CEILINGS MAGNIFY IMPACTS
- DARCOM CEILINGS UNREALISTIC IN LIGHT OF INCREASING WORKLOAD AND DETERIORATING PERFORMANCE
- REIMBURSABLE SPACES SHOULD BE EXCLUDED FROM BASE
- REDUCTIONS OVERTIME BALANCED THROUGH PROPER POSITION MANAGEMENT
- HIGH GRADE CUTS RESULT IN FEW, IF ANY, SAVINGS

VI-1

We recommend the following (Chart VII-1).

RECOMMENDATIONS

- IMMEDIATE
  - SINGLE CEILING
  - AUTHORITY TO INCLUDE AUTHORIZED POSITIONS IN BASE
  - SINGLE RESOURCE PACKAGE ($, SPACES, GRADES)
  - INCREASE 79 CEILING TO COVER NEW MISSIONS AND TRANSFERS
  - DETERMINE IMPACT OF CIVIL SERVICE REFORM ACT ON PL 95-79
- ASAP
  - REMOVE HIGH GRADE CEILINGS

VII-1