

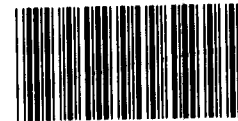
GAO

Report to the Congress and the
Chairman, Defense Base Closure and
Realignment Commission

April 1993

MILITARY BASES

Analysis of DOD's
Recommendations and
Selection Process for
Closures and
Realignments



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April 15, 1993

To the President of the Senate and the
Speaker of the House of Representatives

The Honorable James A. Courter
Chairman, Defense Base Closure and
Realignment Commission

The Secretary of Defense transmitted his recommendations for base closures and realignments to the Defense Base Closure and Realignment Commission on March 12, 1993. This report responds to the Defense Base Closure and Realignment Act of 1990 (P.L. 101-510), as amended, which requires that we provide the Congress and the Commission, by no later than April 15, 1993, a report on the recommendations and selection process. We have identified issues for consideration by the Commission and have made several recommendations to the Secretary of Defense.

We are sending copies of this report to the Chairmen, Senate and House Committees on Armed Services; the Chairmen, Subcommittees on Defense, Senate and House Committees on Appropriations; the Secretaries of Defense, the Army, the Navy, and the Air Force; and other interested parties. We will make copies available to others on request.

This report was prepared under the direction of Donna M. Heivilin, Director, Defense Management and NASA Issues, who may be reached on (202) 512-8412 if you or your staff have any questions. Other major contributors are listed in appendix V.


for Charles A. Bowsher
Comptroller General
of the United States

EXECUTIVE SUMMARY

PURPOSE

The United States is closing and realigning military bases as part of its efforts to downsize and restructure its forces and reduce defense spending. To ensure that this process is fair, Congress enacted the Defense Base Closure and Realignment Act of 1990 (P.L. 101-510). The act established an independent commission, the Defense Base Closure and Realignment Commission, and specified procedures the President, the Department of Defense (DOD), General Accounting Office (GAO), and the Commission must follow, through 1995, to close and realign bases.

Under these procedures, the Secretary of Defense on March 12, 1993, recommended 165 closures, realignments, and other actions affecting bases within the United States. The act, as amended by Public Law 102-484, requires that by April 15, 1993, GAO provide the Commission and Congress a detailed analysis of the Secretary of Defense's recommendations and selection process.

BACKGROUND

The 1993 round of closures and realignments is the second of three rounds required by the act. In 1991, DOD recommended the closure of 43 bases and the realignment of 28 others. The Commission made several adjustments to DOD's list and proposed 34 closures and 48 realignments. The President and Congress accepted the Commission's recommendations. The final round is scheduled for 1995.

For the current round, Congress retained basically the same requirements and procedures as in 1991. As before, the Secretary's recommendations were to be based on selection criteria established by DOD and on a 6-year force structure plan. However, Congress added a new requirement that DOD certify the data it presented to ensure its accuracy.

The eight selection criteria, which remained unchanged from 1991, include four related to the military value of the installations and four that address the number of years needed to recover the costs of closure and realignment; the economic impact on communities; the ability of both the existing and potential receiving communities' infrastructure to support forces, missions, and personnel; and the environmental impact. DOD guidance to the military services and defense agencies directed that they give priority to the four military value criteria.

The force structure plan is the "base force" for fiscal years 1994 to 1999 developed under the Bush administration. Major elements of the plan include 12 active Army divisions, 12 Navy carriers, and 1,098 active Air Force fighter aircraft.

The Office of the Secretary of Defense (OSD) relied on the military services and defense agencies to select bases for possible closure or realignment and established guidance concerning their selection processes. The components submitted their proposed closures and realignments to OSD in February 1993, and the Secretary of Defense made some revisions to these before transmitting his recommendations to the Commission.

RESULTS IN BRIEF

The Secretary of Defense's March 12, 1993, recommendations and selection process for base closures and realignments were generally sound. GAO believes DOD estimates of savings are overstated, but still substantial. However, the recommendations and selection process were not without problems and, in some cases raise questions about the reasonableness of specific recommendations. For example, GAO found that (1) because the Navy's process stressed the reduction of excess capacity there were cases where a base was recommended for closure, even though its military value was rated higher than bases that remained open; (2) the Army chose not to recommend a base for closure in part because of environmental cleanup costs--a reason excluded from cost of closure calculations; (3) the Air Force's documentation of the basis for some of its final recommendations makes it difficult to understand the justification for some decisions, although Air Force officials' oral explanations seemed to justify the recommendations; and (4) the Defense Logistics Agency (DLA) overstated estimated savings of its realignments. GAO provides these and other matters for the Commission's consideration.

Further, OSD did not exercise strong leadership in providing oversight of the military services and defense agencies during the process. As a consequence, some technical problems occurred, and the opportunity to consider consolidation of maintenance facilities on a DOD-wide basis was lost. In addition, GAO found the standards used for DOD's cumulative economic impact analysis were not supportable.

GAO also found that DOD's practice of ignoring governmentwide cost implications remained unchanged, even though GAO had recommended otherwise. DOD believes its responsibility is to determine whether its recommendations will result in savings to DOD, without consideration of the effects on other federal agencies. These costs could be substantial when they involve moving from General Services Administration facilities into newly constructed DOD facilities. In addition, hospital closures could also increase government Medicare costs.

PRINCIPAL FINDINGS

Improvements Needed in OSD's Oversight and Review Processes

OSD has overall responsibility for overseeing the processes the military services and defense agencies use to develop their closure and realignment recommendations. The office also reviews those recommendations and forwards them to the Defense Base Closure and Realignment Commission. GAO's evaluation of OSD's role in overseeing the process shows that while OSD provided guidance, it was not actively involved in monitoring the process. Had OSD been more involved, certain problems could have been avoided. For example, the military services, at OSD's direction, were to consider opportunities for reducing excess depot maintenance capacity. However, the process quickly broke down because, in large part, OSD did not provide the leadership needed to overcome service parochialism. In the end, an opportunity was missed to look at depot maintenance closures on a cross-service basis. In another case, OSD did not review the application of the cost model used by the various DOD components. DLA misapplied the model in a number of cases which caused the agency to significantly overstate its savings estimates.

GAO also assessed OSD's review of the components' recommendations and related issues and generally agreed with the actions that were taken. However, GAO found that the standards OSD used to assess cumulative economic impact were subjectively developed and not supportable. Consequently, the Secretary's removal of McClellan Air Force Base from the Air Force's recommended closure list based on the cumulative economic analysis is not supported.

DOD Components' Processes and Recommendations Were Generally Sound, but Some Problems Exist

The Department of the Navy recommended by far the largest number of closures and realignments, affecting 28 major bases. The Navy's recommendations and selection process were generally sound and well documented. The data, with the exception of information gathered in the final phases of the selection process, was validated by the Naval Audit Service. GAO's review showed the selections were driven by an overarching goal of reducing excess capacity among categories of bases--shipyards and air stations, for example--while considering military value. This process also relied heavily on the acceptance of certain assumptions and military judgments. For example, in the case of the Navy shipyards, an analysis of the Navy's data showed that because of the Navy's assumptions about the need for a certain amount of capacity to handle an estimated nuclear work load, Charleston shipyard was recommended for closure, even though it was rated as having a higher military value than other bases that remained open.

Generally, the Navy developed a return on investment analysis only for configurations of bases that were selected for closure and realignment. Greater savings may have resulted from alternative scenarios, as was the case for the Naval Aviation Depot category where the Navy did consider an alternative scenario.

The Army proposed closure and realignment actions that will affect seven bases. GAO found the recommendations and selection process were well documented, and the data was audited by the Army Audit Agency. However, the decision not to recommend closing Fort Monroe was not adequately justified. In particular, the use of environmental cleanup cost as a justification should not be a prime consideration because environmental restoration cost is not to be included as a basis for closure. DOD is responsible for these costs whether a base closes or not. In addition, the recommended realignment of the Defense Language Institute at the Presidio of Monterey was removed from the closure list by the Secretary of Defense because of intelligence community concerns. GAO found that there are conflicting points of view within DOD on this issue and that certain elements of the cost and savings projections raise questions.

The Air Force recommended closures and realignments affecting seven bases. GAO's review shows the recommendations appear to be generally sound. However, the judgments that were made in the final stages of the selection process for certain categories of bases were not well documented. For example, in the case of K.I. Sawyer Air Force Base, Michigan, the Air Force documentation showed that the base's military value was rated medium; however, it was grouped with bases given the lowest rating and ultimately selected for closure. GAO could not validate the basis for placing the base in the lowest category until it had discussions with Air Force officials involved in the final stages of the selection process. Without additional information, the Commission will have difficulty understanding the basis for these and several other decisions.

DLA recommended closures and realignments affecting 14 installations. Cost, rather than military value was the primary determinant in these decisions. GAO found the selection process was well documented. However, some errors were made in applying the DOD cost and savings model. As a result, savings were overstated.

The Defense Information Systems Agency recommended actions to consolidate existing facilities into 15 centers. GAO found the process was well documented. However, data accuracy problems exist. DOD is working to correct these and believes they should not affect the validity of the recommendations.

Savings Are Substantial but Do Not Include Governmentwide Costs

GAO found that DOD has made improvements to the model it uses to estimate the return on investment of its closure and realignment decisions. However, GAO found opportunities for improvements still exist. For example, DOD continues to restrict costs and savings solely to DOD, even though its actions have cost implications for other federal agencies. GAO has recommended in the past that DOD consider the governmentwide implications of its recommendations. In addition, DOD has not validated the accuracy of the basic formulas that are used in the model. GAO's revised estimate of the savings shows a reduction of about \$940 million from DOD's \$12.8 billion savings estimate for the major bases for the 20-year return-on-investment period. GAO's estimate does not include any governmentwide cost implications.

Lastly, although not a cost attributable to closure decisions, the services' initial estimates for environmental cleanup costs at the recommended bases are currently estimated at about \$725 million.

RECOMMENDATIONS

GAO makes a number of recommendations to the Secretary of Defense to improve the implementation of future DOD processes for selecting bases for closure and realignment. Included among them are actions to (1) improve OSD's oversight of the process, (2) establish procedures and milestones for considering the closure and realignments of similar military service activities, (3) develop a supportable standard for measuring cumulative economic impact, (4) improve data documentation and accuracy, and (5) include governmentwide cost implications of closure and realignment decisions.

GAO also recommends that the Defense Base Closure and Realignment Commission consider taking a number of actions, including (1) analyzing Navy recommendations where the base recommended for closure had a higher rated military value than ones remaining open and where alternative scenarios produced generally the same excess capacity reductions but cost and savings estimates were not developed, (2) requesting supporting information from the Air Force in those cases where data does not adequately explain base category ratings, (3) considering the Army actions on Fort Monroe and the Defense Language Institute, and (4) analyzing DLA cost and savings estimates.

AGENCY COMMENTS

GAO did not request official comments from the Department of Defense. However, it informally discussed its findings, conclusions, and recommendations with DOD officials and included their comments where appropriate.

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Abbreviations

AAA	Army Audit Agency
COBRA	Cost of Base Realignment Action
BRAC	Base Realignment and Closure
DFAS	Defense Finance Accounting Service
DISA	Defense Information Systems Agency
DLA	Defense Logistics Agency
DMRD	Defense Management Review Decision
DOD	Department of Defense
MSA	Metropolitan Statistical Area
NPV	net present value

OSD	Office of the Secretary of Defense
ROI	return on investment
TABS	Total Army Basing Study
TRADOC	Training and Doctrine Command

CHAPTER 1

INTRODUCTION

The United States is closing and realigning military bases as part of its efforts to downsize and restructure its forces and reduce defense spending. On March 12, 1993, the Department of Defense (DOD) recommended 165 closures, realignments, and other actions affecting bases within the United States. The recommendations were submitted to the Defense Base Closure and Realignment Commission, which will consider them as it develops its list of proposed closures and realignments for the President and Congress.

PAST BASE CLOSURE AND REALIGNMENT EFFORTS

In 1988, DOD and Congress initiated major efforts to reduce defense spending by closing and realigning military bases. The Secretary of Defense chartered a commission in May 1988 to recommend bases that could be closed or realigned, and Congress established legislative requirements for the commission. In December of that year, the DOD commission recommended the closure of 86 bases, the partial closure of 5 bases, and the realignment of 54 bases.¹ The Secretary of Defense and Congress accepted all the commission's recommendations.

In January 1990, as a result of the shrinking defense budget, the Secretary of Defense unilaterally proposed the closure of 35 additional bases and the realignment or reduction of forces at more than 20 other bases. The Office of the Secretary of Defense (OSD), however, did not provide specific written guidance to the military services and defense agencies² on how to evaluate bases for possible closure or realignment. The services, consequently, used different processes, none of which was as comprehensive and well documented as the one followed by the DOD commission in 1988.

Concerned about the Secretary's January 1990 proposals, the Congress passed the Defense Base Closure and Realignment Act of 1990 (P.L. 101-510) halting any closures based on the January list and requiring new procedures for closing or realigning bases. The act created the independent Defense Base Closure and Realignment Commission; established procedures for the President, DOD, General Accounting Office (GAO), and the Commission to follow; and required that all bases be compared equally against (1) selection criteria

¹See our report, Military Bases: An Analysis of the Commission's Realignment and Closure Recommendations (GAO/NSIAD-90-42, Nov. 29, 1989).

²In this report, military services and defense agencies are referred to as components.

to be developed by DOD and (2) a force structure plan for the following 6 fiscal years.

Under the new procedures, DOD in April 1991 recommended the closure of 43 bases and the realignment of 28.³ The Commission made several adjustments to DOD's list and proposed 34 base closures and 48 realignments. The President and Congress accepted the Commission's recommendations.

DOD is in the process of carrying out the base closures and realignments approved in 1988 and 1991.

CURRENT BASE CLOSURE AND REALIGNMENT EFFORTS

For the current round of base closures and realignments, Congress retained essentially the same requirements and procedures as in 1991. In December 1991, Congress amended the Defense Base Closure and Realignment Act to require that the Secretary of Defense submit his recommended closures and realignments to the Commission by March 15, 1993. As before, the Secretary's recommendations were to be based on DOD's selection criteria and a 6-year force structure plan. A key amendment to the Defense Base Closure and Realignment Act was a requirement that DOD certify the data it presented to ensure its accuracy.

Selection Criteria

DOD used the same eight selection criteria as in 1991. These are shown in table 1.1.

³See our report, Military Bases: Observations on the Analyses Supporting Proposed Closures and Realignments (GAO/NSIAD-91-224, May 15, 1991).

Table 1.1: DOD Criteria for Selecting Bases for Closure or Realignment

Category	Criteria
Military value	1. The current and future mission requirements and the impact on operational readiness of DOD's total force.
	2. The availability and condition of land, facilities, and associated airspace at both the existing and potential receiving locations.
	3. The ability to accommodate contingency, mobilization, and future total force requirements at both the existing and potential receiving locations.
	4. The cost and manpower implications.
Return on investment	5. The extent and timing of potential costs and savings, including the number of years, beginning with the date of completion of the closure or realignment, for the savings to exceed the costs.
Impacts	6. The economic impact on communities.
	7. The ability of both the existing and potential receiving communities' infrastructure to support forces, missions, and personnel.
	8. The environmental impact.

Force Structure Plan

The 6-year force structure plan (fiscal years 1994 to 1999) used by DOD in evaluating bases for closure or realignment was the "base force" developed under the Bush administration. Major elements of the base force include 12 active Army divisions, 12 Navy carriers, and 1,098 active Air Force fighter aircraft.

In his March 15, 1993, report to the Commission, the Secretary stated,

"I am not recommending any base for closure that would conceivably be kept open under a revised force structure plan Unless the force structure is increased above

the 'base force,' we will have all the bases we need. I am confident, therefore, that future changes will decrease [the] force structure, and will require more, not fewer, base closures than those I will recommend at this time."

Certification Requirement Added

A 1991 amendment to the Defense Base Closure and Realignment Act requires that persons who submit information to the Secretary of Defense or the Commission "shall certify that such information is accurate and complete to the best of that person's knowledge and belief." This requirement applies to service secretaries, the heads of the defense agencies, and other officials with substantial involvement in the base closure and realignment process. The Act requires the Secretary of Defense to prescribe regulations for ensuring compliance with this provision.

OSD Policy Guidance to the Services and Defense Agencies

OSD relied on the military services, the Defense Logistics Agency (DLA), and the Defense Information Systems Agency (DISA) to evaluate their bases for possible closure or realignment. In memoranda dated May 5, August 4, and December 4, 1992, OSD established requirements and guidelines concerning the processes the DOD components were to use in selecting candidates for base closure and realignment. These requirements superseded those that had been issued for the 1991 round of base closures.

In the May 5 memorandum, the Deputy Secretary of Defense provided general policy guidance, record-keeping requirements, internal control guidelines, and responsibilities. It delegated authority to issue implementation instructions to the Under Secretary of Defense (Acquisition). The Under Secretary, in turn, delegated this authority to the Assistant Secretary of Defense (Production and Logistics).

Among other instructions, the Assistant Secretary's August 4 and December 4 memoranda

- required that installations with like missions, capabilities, or attributes be grouped together for evaluation;
- stated that when a particular group of installations is found to have no excess capacity, the DOD component does not need to perform further analysis of that portion of the base structure;
- required DOD components to develop measures and factors for applying the DOD selection criteria and to describe the relationship between each measure and factor used with the criteria;

- encouraged DOD components to cooperate in looking for cross-cutting opportunities for base closures or realignments;
- required the use of the Cost of Base Realignment Actions (COBRA) cost model to calculate costs, savings, and return on investment;
- stipulated that DOD components establish procedures and criteria for certifying data;
- required that any service- or agency-specific cost factors used in the COBRA model be justified in the DOD components' documentation;
- provided instructions on calculating certain costs and savings for input into the COBRA model and clarified certain cost assumptions contained in the COBRA model;
- provided guidance on calculating the economic impact on communities affected by base closures and realignments;
- provided guidance on documenting the environmental impact of base closures and realignments;
- required DOD components to consider the impact of closures or realignments on guard and reserve units; and
- required DOD components to document the steps taken to give any communities special consideration in response to valid requests received under section 2924 of the Defense Base Closure and Realignment Act.⁴

OSD did not issue base realignment and closure (BRAC) definitions in time for the DOD components to use in their closure and realignment process. As a result, several of the closure recommendations were not consistent with OSD's definition of closure. Appendix I contains OSD's BRAC definitions along with a listing of major base "closures" which were not consistent with OSD's definition.

DOD's Recommended Base Closures and Realignments

The DOD components submitted their recommendations to OSD by February 22, 1993. OSD reviewed these recommendations and made two substantive revisions to them. OSD deleted an Air Force

⁴Section 2924 mandates that the Department give special consideration to community proposals related to base closure and realignment.

recommendation to close McClellan Air Force Base in California and deleted an Army recommendation to close the Presidio of Monterey, California, and relocate the Defense Language Institute to Arizona.

With these changes, the Secretary of Defense transmitted his recommendations to the Commission on March 12, 1993. The Secretary recommended closures of 31 major bases, realignments of 12 major bases, and other actions (closures, realignments, disestablishments, and relocations) affecting 122 smaller bases. The bases affected by the recommended actions are listed in appendix II.

DOD stated that the recommendations, if approved, will result in a total net savings of \$4 billion between fiscal years 1994 and 1999 and recurring savings of \$3.1 billion starting in the year 2000. According to DOD, the recommended base closures and realignments, combined with those approved in 1988 and 1991, will reduce the domestic base structure by about 15 percent, measured by the plant replacement value. DOD defines "plant replacement value" as what it would cost to replace all the buildings, pavements, and utilities at a base. The bases affected by the current recommendations represent about one-third of the 15-percent reduction.

OBJECTIVES, SCOPE, AND METHODOLOGY

The Defense Base Closure and Realignment Act, as amended, requires that we provide to the Commission and to Congress a detailed analysis of the Secretary of Defense's recommendations and selection process. The act specifically requires us to submit our report by April 15, 1993.

From August 1992 to March 1993, we monitored the process as it was implemented by DOD components. Our analysis of the recommendations was conducted between March 15, 1993, and April 13, 1993.

We performed our work at OSD, the military services' and defense agencies' headquarters, and various military commands and installations. We interviewed and obtained pertinent documentation from officials at these locations.

At OSD, we obtained information about policy guidance provided to DOD components and OSD's oversight role in the base closure and realignment process. In our discussions with officials, we discussed cross-servicing opportunities, OSD's use of cumulative economic impact as a criterion for assessing potential closures and realignments, and OSD's review of the recommendations submitted by the DOD components.

We also reviewed the processes the DOD components used to evaluate their bases and select candidates for closure and realignment. Because each of the components developed its own selection process

our methodology differed somewhat for each. Generally, however, we reviewed documentation and interviewed officials to determine whether the processes complied with legislative requirements and OSD guidance, were adequately documented, and employed sound methodologies and techniques.

For selected recommendations, we conducted more detailed analyses of the decision-making process. For instance, we reviewed the minutes of Navy meetings to track that service's deliberations. We generally relied on the service audit agencies to validate the data used in the selection processes. However, in varying degrees, we independently validated selected data, observed DOD component audit agency personnel as they performed their work, and in some cases examined their workpapers.

We reviewed the COBRA cost model and the components' use of the model. We evaluated the changes made to the model since the 1991 round of base closures and realignments, the model's formulas for making calculations, and the cost factors and data used as inputs into the model. We also conducted selected sensitivity analyses to determine the impact of data inaccuracies on cost and savings estimates.

We performed our work in accordance with generally accepted government auditing standards.

CHAPTER 2

OSD'S OVERSIGHT AND REVIEW OF PROCESS CAN BE IMPROVED

The Office of the Secretary of Defense had responsibility for providing guidance and overseeing and reviewing the closure and realignment recommendations for the military services and defense agencies. We identified several areas where there are opportunities to improve the implementation of these responsibilities. Our review of the actions OSD took with regard to the components' recommendations shows that its cumulative economic impact analysis is not methodologically sound.

OVERSIGHT RESPONSIBILITIES

In addition to providing selection criteria and policy guidance (see ch. 1), OSD's oversight efforts in the 1993 process included (1) seeking greater opportunities for cross-service consideration of recommendations related to maintenance depots, (2) determining the cumulative economic impact within defined geographic areas, and (3) reviewing the components' recommendations before the Secretary of Defense submitted DOD's final overall recommendations to the Defense Base Closure and Realignment Commission.

In its August 4, 1992, policy memorandum, OSD required DOD components to continually look for cross-servicing opportunities. In a December 3, 1992, memorandum, OSD directed the services to prepare integrated proposals, with cross-service inputs, to streamline DOD depot maintenance activities and increase efficiency. These were to be considered for submission to the 1993 Base Closure and Realignment Commission. Each service was to identify its excess maintenance capacity and each was assigned lead responsibility for a specific maintenance area.

In its December 4, 1992, policy memorandum, OSD provided guidance for calculating the economic impact on closing, realigning, and receiving communities. In memoranda dated December 24, 1992, and January 28, 1993, OSD instructed the services to include personnel data developed in the 1988 and 1991 rounds on their 1993 economic impact spreadsheet so that OSD could determine the cumulative economic impact on communities.

After receiving the components' proposed closure and realignment recommendations, OSD reviewed and analyzed the recommendations to ensure that they complied with law and DOD policies. The Secretary of Defense included the results of these reviews in his March 1993 report.

OSD'S OVERSIGHT ROLE COULD BE STRENGTHENED

OSD established requirements and general guidelines concerning the processes that DOD components were to use in selecting candidates for base closure and realignment. However, it did not actively oversee the process. The lack of oversight and strong leadership resulted in several inconsistencies in the process. For example, the services used different estimating processes and some incorrect cost factors in their cost models.¹ Also, inconsistencies in the military services' measures of depot maintenance costs and management processes did not allow OSD the opportunity to consider elimination of duplication in DOD maintenance depots on other than a service-by-service basis. Further, OSD's cumulative economic impact standard was not adequately justified.

Cross-service Opportunities Not Considered When Evaluating Maintenance Depots for Possible Closure

The services recommended 9 of DOD's 30 maintenance depots for closure or realignment. However, little consideration was given during the development of the recommendations to the potential for cross-servicing among the depots.² Achieving cross-service opportunities was hampered by (1) the lack of a common measure among the services' depots, (2) the lack of a strong leadership role by OSD, and (3) the short time period to implement cross-service proposals.

A Joint Chiefs of Staff Executive Working Group's study of DOD maintenance depots concluded that the depots have excess capacity³ of between 25 and 50 percent and that unnecessary duplication

¹See chapter 4 for a discussion on inconsistencies relating to the cost models.

²Cross-servicing is intended to achieve cost savings by transferring work on comparable systems from one service to the depot of another service to take advantage of economies of scale and to avoid the cost of maintaining dual capabilities in a second service.

³Excess capacity was identified by subtracting the planned fiscal year 1995 work load from the fiscal year 1987 capacity. Fiscal year 1987 was used because the study group believed it was a peak year with larger overall employment and more accurately reflected what work a depot facility could absorb during work load consolidation.

exists throughout the service depots.⁴ DOD's measure of depot capacity is the maximum number of work positions a depot can accommodate in a single 8-hour shift. In reality, when the workforce is reduced, many depots elect not to use equipment and/or change shop configuration, which results in reduced work positions and lower computed capacity levels.

In response to the Working Group's conclusions, the Secretary of Defense, in December 1992, tasked the services with developing proposals that would streamline defense depot maintenance activities through cross-servicing. Recommendations resulting from this effort were to be included for consideration during the 1993 base closure and realignment process. As part of the services' efforts, they identified excess maintenance capacity but did not address the issue of unnecessary duplication.

In early February 1993, the services attempted to include some cross-servicing as part of the 1993 base closure and realignment process, with the Army taking the lead on ground systems and equipment maintenance and the Navy the lead on rotary-wing maintenance. Fixed-wing aviation and aviation systems and ship, watercraft, and ship systems were not considered. However, no recommendations resulted from these efforts. According to several service officials, the services had difficulty overcoming their narrow views of their own depots; thus, a general consensus could not be reached, especially on issues pertaining to estimating cost. Also, the short time frame within which the services had to complete their work impeded this cross-servicing effort.

The services' attempt at considering cross-servicing opportunities for ground systems and equipment depot maintenance ended in disarray. Some of the problems brought to our attention included (1) the services' inability to agree on cost comparability measures for maintenance work that was similar but not identical and (2) the withdrawal of the Air Force's participation because of a possible compromise in the Air Force's competition with the Army for maintenance work resulting from the 1991 closure of the Army maintenance depot in Sacramento. Thus, the services made their decisions on ground systems and equipment depots independently based on each service's own excess capacity.

For rotary-wing aviation maintenance depots, Army and Navy officials said that neither service could agree on common measures to evaluate these depots. Also, these officials said that there was insufficient time to gather and certify standard data. Thus, the Army and the Navy did not consider cross-servicing or duplication when looking at their rotary-wing maintenance depots.

⁴We are currently reviewing the Working Group's methodology and analysis and plan to report on its study later in 1993.

However, the Navy did use helicopter maintenance work-load data from all three services in concluding that the work load justified maintaining two of the three rotary-wing maintenance depots.⁵

Officials from the three services all stated that consideration of cross-servicing possibilities among the depots was impeded by the lack of strong leadership and direction. For example, an Air Force official said that the services will not make any significant progress dealing with cross-service options because of the uncertainty of the direction OSD will follow. Also, other officials said that until issues concerning the management structure of DOD maintenance depots are resolved, no progress will be made among the services covering cross-service and duplication.

OSD's Economic Impact Standard Is Not Adequately Supported

Although OSD issued guidelines to DOD components for calculating the economic impact on communities of their recommended actions, it did not instruct the components on how these economic impacts were to be considered. Also, OSD's cumulative economic impact standard was not adequately justified.

DOD Components' Analysis

During their analyses of installations for closure or realignment, the components calculated the economic impact of their proposed actions on affected communities. Such calculations reflected the change in direct and indirect employment in a community, county, or metropolitan statistical area⁶ that would result from closing or realigning bases, as a percentage of the employment in the area. While each component calculated the economic impacts of its proposed actions according to OSD instructions, these impacts did not affect the components' closure and realignment recommendations.

The DOD components first determined changes in military, civilian, and contractor employment at each base (direct employment). They then entered this data into computerized spreadsheets developed by the Office of Economic Adjustment and the Logistics Management Institute. These spreadsheets contain multipliers to compute indirect loss of jobs off the base resulting from the lost spending

⁵The Air Force has its helicopters maintained at the three existing rotary depots (Corpus Christi Army Depot and Cherry Point and Pensacola Navy Depots).

⁶Generally, the economic area is defined as the county where the installation is located. If the county is part of a metropolitan statistical area (MSA), as defined by the Bureau of the Census, then the economic area is the MSA. In a few cases, the economic area is defined as a multi-county, non-MSA area.

power of base jobs. They also contain data from the Bureau of Labor Statistics on the total number of jobs in the economic areas. Thus, the spreadsheets can be used to estimate the total job impact, both direct and indirect, as a percentage of the number of jobs in the economic area.

The indirect employment multipliers assigned to installations vary according to the economic size of the area and the function of the installations; multipliers are lower in rural areas because of fewer within-area purchases and are highest for installations such as repair facilities that require extensive purchases from the surrounding economic area. So that the impact of closures and realignments still pending from earlier base closure rounds would be reflected in the cumulative economic impact considerations, the services and defense agencies were also instructed to enter data on personnel moves remaining from the 1988 and 1991 rounds of base closures and realignments.

OSD's Analysis

During prior base closures and realignments, the components calculated the cumulative economic impact a closure or realignment had on the local region; however, there was no standard specifying how the components or OSD were to consider those impacts. According to an OSD official, the cumulative economic impact on regions during the 1991 base closures was not considered significant because of the more limited number of closures and realignments up to that point in time. With the increased recommendations being proposed for the 1993 base closures, OSD again reviewed the cumulative impact of closures and realignments on specific regions.

During the 1993 process, however, OSD established a standard against which to evaluate cumulative impact. OSD compiled the information provided by the components into a master spreadsheet that calculated the cumulative effect on an economic area of 1988, 1991, and recommended 1993 actions, across services and agencies. In developing standards to determine if any area might be suffering a significant negative cumulative economic impact, OSD established three principles: (1) the standard had to be quantifiable, while still allowing room for judgment; (2) the standard had to recognize the difference in economic recovery potential, since, according to OSD, the complexities of labor markets in large metropolitan areas make economic recovery more difficult than in smaller areas; and (3) the standard had to allow for closure of bases.

According to OSD, it considered a job loss of 3 percent to constitute a "normal change" in an area employment population. OSD then subjectively determined that a job loss of 5 percent, which it termed "substantially more than 3 percent," would be a part of the standard for unacceptable economic impact. According to OSD, all areas impacted by the 1993 closure recommendations with a

cumulative economic area impact of 5 percent or greater fell into two groups: those with an employment population of at least 750,000 and those with an employment population of about 300,000 or less.

OSD subjectively chose a 500,000 employment population as the second part of its standard for unacceptable economic impact. Thus, OSD's cumulative economic impact standard was established--5 percent cumulative job loss in areas with an employment population of 500,000 or more.

When OSD applied this economic impact standard, only the Sacramento area (employment of over 750,000) met the criteria. On the basis of the components' proposed recommendations for 1993 closures in the Sacramento area, the cumulative economic impact on employment in the area would have been 5.6 percent. Therefore, the Secretary removed McClellan Air Force Base and the related DLA distribution depot from the 1993 closure recommendations.

OSD's Analysis Is Not Adequately Supported

It appears that OSD's standard of over 500,000 and over 5 percent is arbitrary. In discussions with officials from OSD, the Logistics Management Institute, the Office of Economic Adjustment, and the Department of Commerce, we were unable to validate the standard. For example, OSD officials could not provide us adequate justification for 5 percent as the appropriate job impact threshold. In addition, we found no evidence to support OSD's assumption that economic recovery would be more difficult in a larger metropolitan area than in a smaller area. Furthermore, if the measures were valid ones, consideration should have been given to the impact in areas which were very near one standard and greatly exceeded another.

For example, OSD calculations of economic impact in Oakland, California, showed a cumulative economic impact of 4.9 percent and a workforce of over 1 million. OSD officials were unable to adequately explain to us why 5 percent was considered a significant economic impact but 4.9 percent was not. Also, the data showed that in addition to Sacramento, there were 23 communities with cumulative economic impacts over 5 percent. These impacts ranged from 6.3 percent to 72 percent⁷ and workforce populations ranging from 10,957 to 309,406. For example, the job loss calculated for Charleston, South Carolina, with an employment population of 243,000, was 15.3 percent.

⁷Fort Polk, Vernon Parish, Louisiana.

Further, the considering of cumulative economic impact is late in the process making it difficult to assess alternative closures and realignments scenarios.

CHANGES TO 1993 PROPOSED CLOSURES AND REALIGNMENTS BY THE SECRETARY OF DEFENSE

After receiving the military services' and defense agencies' proposed closure and realignment recommendations on February 22, 1993, OSD reviewed the recommendations and the underlying analyses to ensure that the law and DOD policies were followed. OSD identified and resolved issues which warranted attention, including subsequently changing several recommendations before submitting them to the Defense Base Closure and Realignment Commission.

Observations on Recommended Changes

The changes deleted from the recommended closure list include (1) the Air Force's maintenance depot and DLA's distribution depot at McClellan Air Force Base, California; (2) the Army's Presidio of Monterey, California; and (3) the Marine Corps' support activity in Kansas City, Missouri. The realignment of the O'Hare Air Reserve Station from O'Hare International Airport, Chicago, Illinois, was also added to the list.

According to OSD officials, the proposed closure of McClellan Air Force Base was not recommended to the Commission because such an action, when combined with prior closures and realignments for the region, exceeded the cumulative economic impact standard established by OSD. These officials said that the proposed Army closure of the Presidio of Monterey, which required the relocation of the Defense Language Institute and the need to contract for language training, was deleted as a recommendation for closure because of concerns raised within DOD about the negative impact such actions would have on defense intelligence.⁸ The proposed closure of the Marines' support activity in Kansas City was deleted because its closure was part of the DOD Defense Finance and Accounting Service's (DFAS) consolidation recommendation. The Air Force Reserve Station at O'Hare International Airport was added as a recommended closure because the city of Chicago exercised its right under section 2924 of Public Law 101-510 to propose the O'Hare Airport reserve station relocation to a site acceptable to DOD and at no cost to the federal government. The law mandates that DOD give special consideration to such a proposal.

Other issues receiving attention by OSD included the following:

⁸The Commission has added McClellan to the list for consideration. The Presidio of Monterey has also been added. Both recommendations are discussed in more detail in chapter 3.

- Defense Finance and Accounting Service consolidation: DOD's ongoing finance center consolidation plan was affected by the 1991 Base Closure and Realignment Commission decision to close Fort Benjamin Harrison. The Commission directed DOD to submit its consolidation plan for DFAS in the 1993 round. However, because of concerns over the public policy implications of the "opportunity for economic growth" portion of the DFAS plan, the Secretary deleted the DFAS recommendation for 1993. Because the Secretary withdrew DFAS from the 1993 recommendations, we did not include our analysis of the DFAS consolidation plan in this report. (App. II provides a summary of the DFAS process.)
- Army base structure: The Secretary reviewed the Army's recommendations to determine whether they were consistent with the approved force structure plan and the need to station the forces being brought home from overseas. The Secretary concluded that no additional closure recommendations are needed at this time. As discussed in chapter 3, we found no basis to question this decision.
- Undoing previously approved recommendations: The Secretary established standards for when prior base closure recommendations approved by the Commission could be changed. OSD standards are (1) accept the change if it is required to implement a new base closure or realignment recommendation, (2) reject a change if it would reclaim ownership of any part of a base that was to be in excess due to prior closure actions, and (3) accept a change if DOD would significantly benefit either in cost savings or in military effectiveness. In our opinion, this position appears reasonable.
- Revisiting previously rejected recommendations: OSD reviewed five current recommendations that were previously rejected by the 1991 Commission. OSD determined that the Commission's prior concerns were adequately addressed during the 1993 round and should be forwarded with revisions to the 1993 Commission. We reviewed these recommendations and believe there have been substantial revisions to the prior recommendations which merit reconsideration.
- Below-threshold recommendations: OSD reviewed service and agency recommendations that were below the 300 personnel threshold and concluded that they should be submitted to the 1993 Commission. DOD is permitted to submit these recommendations under the Base Closure and Realignment Act.
- Chemical defense training: OSD evaluated the concern by the Assistant Secretary of Defense for Atomic Energy that the Army's Chemical Defense Training Facility at Fort McClellan was vital to DOD's training, deterrence, and arms control mission. OSD agreed with the Army's recommendation to close Fort McClellan

except for this training facility. We found no basis for questioning this decision.

CONCLUSIONS

OSD should exercise greater oversight and leadership over the base closure and realignment process to ensure consistency among the components' procedures for recommending closures and realignments. DOD was unable to consider the elimination of duplicative maintenance depot capacity across services because of the lack of common measures. In addition, OSD applied an arbitrary cumulative economic impact standard that is not well supported.

RECOMMENDATIONS

We recommend that the Secretary of Defense

- Provide specific direction and supervision over the base closure and realignment process to ensure consistent data collection and analysis among the DOD components. (Specific recommendations in this area are contained in chapters 3 and 4).
- Provide detailed policies and procedures for future cross-service opportunities including setting common standards and measures; also, in order for these actions to be effective, they must be started soon and have established milestones that are compatible with the time frames for the 1995 base closure and realignment process.
- Establish a supportable standard for assessing cumulative economic impact and review its process to make sure there is sufficient time to consider the results of these assessments.

We also recommend that the Defense Base Closure and Realignment Commission consider providing guidance to DOD on assessing cumulative economic impact.

CHAPTER 3

THE DOD COMPONENTS' PROCESSES AND RECOMMENDATIONS WERE GENERALLY SOUND, BUT SOME PROBLEMS AND QUESTIONS EXIST

The military services and defense agencies each used different processes that emphasized different factors for developing their base closure and realignment recommendations. Each was based on the eight DOD selection criteria and gave emphasis to military value. (App. III summarizes the selection processes used by the DOD components.) The processes the military services and defense agencies used appear to be basically sound. However, in varying degrees we found a lack of documentation, data accuracy problems, and inaccurate cost and savings estimates. In addition, there was a reliance on assumptions about future military needs and military judgments which could affect specific recommendations. We identified several specific recommendations that should be reconsidered, and in other cases we present questions for the Commission's consideration.

NAVY PROCESS AND IMPLEMENTATION WERE GENERALLY SOUND, BUT SOME QUESTIONS EXIST

The Navy had 28 major closure or realignment recommendations. This was the largest number among the services and defense agencies. Based on our review of the process, we believe the Navy's 1993 base structure evaluation process complied with force structure and criteria requirements. In addition, the process was well documented; and using a statistical sample of Navy activities, the Naval Audit Service validated the accuracy of data submitted by the bases and checked the data submitted into the analytical process. Judgments and assumptions made by senior military and civilian officials were a substantial part of the process. Therefore, we identified several cases where reasonable questions can be raised about some of the final recommendations, and we present these for the Commission's consideration and to illustrate the difficulty and complexity of the process.

Key Features of the Process

The overriding goal of the Navy's process was the elimination of as much excess base capacity as possible throughout the Navy. Implicit in this goal was the assumption that the results would represent savings to the Navy while retaining the base structure necessary to meet force structure needs. The Navy's approach was

to review similar types of bases¹ by category--for example, shipyards--and minimize the excess capacity in that category.

The Navy's first step was to determine whether excess capacity existed in each category of bases. The capacity analysis compared the estimates of maximum existing capacity in each category to the anticipated requirement based on the January 19, 1993 force structure plan (Bush administration base force). Capacity was determined on a category-by-category basis but was generally an estimate based on current facilities and equipment. For example, the requirements for naval stations were determined using the number of ships projected to be in the force in 1999, the final year of the Bush base force structure plan. Determining the requirements for major support functions, such as shipyards and naval aviation depots, was more difficult and was based on anticipated work load.²

Military value assessments on a category-by-category basis were made and evaluated along with capacity considerations in developing recommendations. When a category of bases was determined to have excess capacity, all bases in that category were evaluated against the four military value criteria. The military value score for each base in a category was generally derived from answers to as many as 151 questions. The questions were assigned point values based on the four military value criteria: readiness, facilities, mobilization, and cost/manpower. An average military value was then computed for each category.

Critical to the Navy's process was a configuration analysis which was designed to eliminate as much excess capacity as possible in each category while retaining or improving the overall military value average. It is important to note, however, that in the Navy's configuration analysis the average military value for a category of bases was more important than individual military value scores for the bases in that category. This was due to the scope of the analysis, which was category-wide rather than on a base-versus-base level. In some cases, however, the individual military

¹The Navy operates a variety of activities and functions, such as naval stations, aviation depots, training centers, etc. Throughout the Navy segment of this report, all Navy activities will be referred to as bases.

²The amount of ship and aircraft maintenance work is dependent on several factors, including operational tempo, maintenance policies and procedures, and funding. The Navy used the programmed work-load requirements through 1997, which are the most accurate figures.

value of a base was used when circumstances dictated a narrow choice between two bases. Deliberations on configurations were conducted by the Navy for the various categories, using total capacity of the category and the capacity of each base in the category. The 1999 force structure requirements were analyzed and applied in a manner designed to minimize excess capacity by category. The solutions, however, were not based solely on quantitative analysis, because assumptions based on military judgments were an important part of the process and its results. For example, the naval station analysis assumed that the split between ships located on the East and West coasts would remain consistent with current practice.

When the Navy believed it had reached the best solution in terms of capacity reduction and resulting military value average in a category, a calculation of return-on-investment was run to confirm that the results of the configuration analysis would produce savings. In only a few cases was the return-on-investment analysis run on more than one scenario. This was done to test the feasibility of an alternative, not to determine which, of competing alternatives, produced the greatest savings.

Once a closure scenario for a category was identified, evaluations were done based on the three remaining criteria: economic impact on locations near a closing base, environmental impact of a closure, and community impact on an area where functions may be located. However, the three impact criteria were not generally assessed for multiple possible scenarios. More specifically, the economic, environmental, and community impact assessments were generally done only for the final recommendations.

Observations on the Methodology Implementation

Our review of the process and its implementation centered on several categories of bases. The recommendations in those categories require acceptance of the assumptions used. The recommendations based on the Navy process eliminate excess capacity and are projected to produce savings. However, because the Navy's objective was to reduce excess capacity to the greatest extent possible, it did not routinely seek alternative closure scenarios in order to assess relative cost savings. We identified one recommendation adopted by the Navy which was based on a second alternative that produced a greater savings. In this case, however, circumstances regarding military value rather than cost led the Navy to consider this particular alternative. This and our other observations are discussed below.

Naval Audit Service Validated Most Data and Reviewed Analysis

Based on our observations, the Naval Audit Service contributed substantially to the accuracy of the Navy base structure analysis

process. It must be noted, however, that due to time constraints the Naval Audit Service did not validate the certified data collected from bases impacted by a closure/realignment decision during the final stage of the analytical process. This data was used in the return-on-investment calculations for closure scenarios. The Naval Audit Service did verify that information taken from the data calls was accurately used in the return-on-investment calculations.

The Naval Audit Service was tasked to validate data used in the Navy's process and to review the accuracy of the analysis. On March 15, 1993, the Naval Audit Service issued its report on the implementation of the Navy's 1993 process. The report concluded that effective internal controls were established and that the data used in the process was reasonably accurate and complete. The report also stated that the Navy's process met statutory and DOD requirements. The Naval Audit Service conducted their review concurrently with the base closure and realignment process, and periodically reported findings to the Navy, which took immediate corrective action.

We reviewed audit guidelines and audit work in several stages of the Naval Audit Service review. During the data validation phase, we accompanied Naval Audit Service management on supervisory visits to six East Coast Navy and Marine Corps sites. At these sites, we discussed with both management and field auditors their methodology and findings to date. We observed actual data validation tests which, in the case of building size, were done by physical verification using measuring wheels. We also observed much of the Naval Audit Service work during the closure and realignment evaluation phase, which included verifying the accuracy of input to military value, configuration, and cost and savings analyses.

Shipyards

The Navy first determined the maximum capacities of the various shipyards. This was based on the estimated maximum amount of work each shipyard could do through 1997 with existing facilities and equipment.³ These figures were compared to requirements, as identified in future-year budget estimates through 1997; the difference was considered excess capacity. In identifying closure candidates, the goal was the maximum reduction of excess capacity with a constant or higher average military value. In doing this, the Navy paid particular attention to the shipyards' ability to do work on nuclear-powered ships and their components, since this represents a large and more specialized requirement. The Navy used the most accurate information available to them to determine

³The measure of capacity was direct labor man-days based on single-shift, 8-hour days.

requirements (budget estimates through 1997); however, the accuracy of future requirements, both nuclear and non-nuclear, may be subject to question in light of possible future force reductions.

In assessing the military value of the shipyards, the Navy developed a matrix of 151 questions after consultation with their technical experts, and then assigned values to each. The large number of questions considered appears to provide a reasonable sample of shipyard attributes. The answers to the questions were taken from the certified data calls provided by the shipyards.

The configuration analysis was designed to reduce excess capacity to the maximum extent possible while meeting the Navy's nuclear and total shipyard work requirements. This analysis also sought to arrive at an average military value score which was at least as high as the original average for all bases in the category. The nuclear work-load requirements were the primary factor in developing shipyard closure recommendations. Minutes of Navy deliberations detail its decision to recommend the closure of Charleston and Mare Island Naval Shipyards.

Three other naval shipyards were rated as having a lower military value than Charleston--Pearl Harbor, Hawaii; Mare Island, California; and Portsmouth, New Hampshire. The Navy's shipyard recommendations were one case where, after excess capacity reductions were achieved, a base with a higher military value was closed in place of one with a lower military value.

Operational Air Stations

The overall goal of reduction in excess capacity for this category involved two measures. The Navy determined that these would be: apron space (square yards) and hangar space (square feet) required for various types of aircraft based on established standards. Once again, the bases provided the information used to determine the maximum capacity at those facilities and to determine their relative military value scores. The 1999 force structure plan was used to derive future requirements. The variance between requirements and maximum capacities was identified as excess.

The 95 questions which comprised the air station military value matrix were generated by the Navy in consultation with technical experts. The average military value for the category was more important in the subsequent configuration analysis than were individual scores.

We reviewed the configuration analysis and traced decisions regarding the rules for air stations to minutes of Navy deliberations. One of these rules, for example, was that a 67-percent active and 100-percent reserve aircraft basing requirement was to be preserved. Subject to military judgment, these rules guided the configuration analysis. Several configurations were

assessed before a final decision was reached. The Navy recommended Naval Air Station Cecil Field, Naval Air Station Barbers Point, Marine Corps Air Station El Toro, and Naval Air Station Alameda for closure. This resulted in excess capacity being cut by at least 50 percent while arriving at an average military value for the category that was higher than the original average for all bases in the category.

Our review of the configuration analysis showed the importance the Navy placed on excess capacity reduction. It also illustrates that some bases recommended for closure had a higher individual military value score than air stations that were retained.

Naval Stations

The capacity analysis for this category involved two measures: berthing (in feet of space and depth of water) and intermediate ship maintenance (in direct labor man-days). Each naval station provided the above data as a basis for computing maximum berthing capacity and maximum intermediate maintenance capacity. A comparison of existing capacity to the requirements for the number and types of ships in the 1999 force structure was used to determine that excess capacity existed.

We reviewed the 117 questions used to derive military value scores for naval stations. The questions were developed by the Navy in consultation with technical experts. There were special cases where military value questions relevant to naval stations were also applied to bases in other categories. An example of this is Alameda and North Island Naval Air Stations. Since both of these bases are air stations, they were assigned military values based on their responses to questions in the air station category. However, both bases are capable of berthing ships--specifically, aircraft carriers. As air stations, both received points for this capability. However, the number of points awarded was less than those received for bases assessed as naval stations because of the assumption that it is not as important from a military value standpoint for an air station to be able to berth a carrier.

The naval station configuration analysis involved the use of "cruiser equivalencies" as a means of uniformly quantifying the berthing required by the 1999 force structure as a starting point for elimination of excess capacity. We reviewed the appropriateness of "cruiser equivalents" and found it to be reasonable. A set of rules guided the configuration analysis, and we traced these rules to records of Navy deliberations and determined that the rules were based on military judgment. Some examples of these rules were: that San Diego and Norfolk, because their capacity cannot be absorbed by the other naval stations of each coast, should be a part of any solution; and that there should be berths for 67 percent of all ships, except aircraft carriers. A 100-percent requirement was set for carriers. These rules became

important with respect to assigning a priority to carrier berthing, which drove the subsequent ship assignments to a large degree.

In achieving the goal of reducing excess capacity, the Navy recommended Newport (ship berthing only), New London (ship berthing only), Staten Island, Charleston, Mobile, and San Francisco for closure. There was a close decision between whether to recommend Mobile or Pascagoula Naval Stations for closure--both have the same berthing capacity. This decision illustrates a case where individual military value scores were used as decisional factors by the Navy. Since the "cruiser equivalencies" of only one of these places were required, the Navy determined that Pascagoula's higher military value score made its retention more desirable.

In the case of North Island and Alameda, their individual military value scores were less important to the ultimate decision. Their scores as air stations were used to compute the average military value for the naval station category. However, the Navy's configuration analysis captured all berthing space, regardless of whether it was located at an air station or a naval station. The Navy determined that because the West Coast was to berth five carriers, the three carrier berths at North Island, the one at Everett, and the one at Puget Sound were required to meet future needs. This solution did not require the carrier berths at Alameda. In addition, the Navy determined that since the air station configuration resulted in the recommendation to close Alameda Naval Air Station, the Naval station recommendations made all the more sense.

Naval Aviation Depots

The measures the Navy used to determine the amount of capacity for naval aviation depots were maximum supportable direct labor man-hours in the following categories: airframes, engines, components, and other work. Each depot provided certified information concerning their capacities in the four areas with existing facilities. Comparison of the fiscal year 1997 requirements to existing capacity indicated that almost 50 percent excess capacity existed in this category.

We reviewed the 79 questions used to compute the relative military value scores for each depot. These questions were developed by the Navy with the assistance of technical experts. The questions focused on the work performed in each of the four primary areas of depot work, such as in airframe repair, and on related factors such as quality of life and the environment.

We examined the results of the Navy's configuration analysis. The Navy developed an initial scenario which would have closed the depots at Alameda, Pensacola, and Cherry Point. This configuration would retain the Norfolk depot. Subsequently, the Navy recognized that its configuration analysis of operational air stations

included a recommendation to close Cecil Field, which would create a large Navy/Marine Corps aviation concentration at Cherry Point in addition to Norfolk. The Navy decided that having a depot near an aviation fleet aircraft concentration was desirable. Both Norfolk and Cherry Point satisfy this requirement. Therefore, the Navy reran its configuration analysis to cost out the closure of the Norfolk depot in place of Cherry Point. This second configuration allowed slightly less capacity in one category of depot work than work-load projections require. The Navy judged this to be an acceptable risk. In addition, this configuration provided greater savings. The resulting recommendation was for the closure of Alameda, Pensacola, and Norfolk. This overall recommendation further reduced excess capacity and raised the average military value of the naval aviation depot category.

This case illustrates that, though the Navy clearly considered alternative configurations based on operational reasons in this case, the development of alternative scenarios could result in greater savings. The final NADEP recommendation resulted in substantially higher estimated savings. However, the scenario requires the Navy to accept some risk that it will not need the small amount of capacity indicated as lacking.

Training Centers

The capacity analysis for naval training centers focused on the numbers of personnel that could be trained using training, messing, and berthing facilities as indicators. Each training center provided data on maximum capacity for the indicators, and after comparing it to 1999 requirements, the Navy determined that excess capacity existed. The Navy developed 72 questions to derive military value scores. The questions were developed by the Navy in consultation with technical experts.

We reviewed the Navy's configuration analysis which resulted in the recommendation to close the Naval Training Centers at San Diego; California; and Orlando, Florida, and retain the Naval Training Center at Great Lakes, Illinois. The Great Lakes facility had the most capacity of any training center, particularly for trainers. In addition, the Navy indicated that the unique training equipment and facilities located at Great Lakes would be most difficult and costly to relocate or replicate at another training center. When reviewing the cost and savings data supporting this decision, we noted that the per-capita overhead costs are much higher at Great Lakes than at the other two facilities. In this case the Navy did not run alternative cost scenarios involving Great Lakes.

Inventory Control Points

In determining the amount of excess capacity in its inventory control points, the Navy used several measures. These measures include: requisition volume, staff days spent on weapons system

support, staff days spent on security assistance, and budgeted work years. Based on the certified data provided by the two inventory control points, the Navy determined that their capacity exceeded the projected 1999 requirement by 42 percent.

The Navy determined the relative military value of its two inventory control points by analyzing their responses to 64 questions. The questions, which were developed with the assistance of Navy experts, focused on the support services provided to customers, their equipment and facilities, and quality of life issues.

We examined the configuration analysis the Navy used to determine how to best reduce its excess capacity. Based on this configuration analysis, neither inventory control point had enough capacity to meet the requirement. However, since there was excess capacity in this category, the Navy decided to consolidate its two inventory control points at one location. The Navy chose to close the Aviation Supply Office in Philadelphia and relocate the necessary personnel, equipment, and support to the Ships Parts Control Center, Mechanicsburg, Pennsylvania. This realignment was considered as part of a larger group of moves, including relocating the Naval Supply Systems Command, the Defense Printing Systems Management Office, and Food Systems Office also to Mechanicsburg. One of the Navy's goals in consolidating its operations was the reduction of overhead cost. In this case, we noted that the Navy expects to eliminate 255 jobs by closing the Aviation Supply Office. These jobs are a combination of base operations and general or administrative positions. In using its cost and savings model to determine if this closure was economically feasible, the Navy considered all of the above moves as a group and did not cost them separately.

While we did not have sufficient time to fully analyze this proposed realignment, we believe that because of its relationship to several DLA and other Navy moves, the cost and savings of this realignment should be carefully considered.

ARMY PROCESS AND IMPLEMENTATION WERE
GENERALLY SOUND, BUT SOME QUESTIONS EXIST

The Army has proposed closure and realignment actions that will affect seven installations. We found that the Army's decision process for evaluating and recommending installations for closure or realignment complied with legislation, was well documented, was supported by generally accurate data, and appears reasonable. With one exception we have no reason to question the Army's recommendations. The exception is the decision by the Acting Secretary of the Army not to recommend Fort Monroe for closure. We believe the Acting Secretary's rationale was not well supported.

Process Methodology Key Features

The Army's two-phase process included an evaluation of the military value and ranking of the installations in phase I. In phase II, study candidates were selected and then put through an evaluation process which ultimately ended up in closure or realignment recommendations. Of the 95 bases which were assessed for military value, the Army selected 35 study candidates.

One key feature used in selecting the study candidates was a capacity analysis of the Army installations. This was done by comparing existing installations to the force structure plan, which is a key element in determining future basing needs. However, because the need for all installations do not lend themselves to a direct correlation with the force structure, the Army used other studies and inputs such as military value assessments, major command visions, and the Army's basing strategy in its base closure candidate selection process. The Army's philosophy is that each major command must articulate its vision (how it will organize and operate) for the future before optimal basing decisions can be made. This is especially true for the installation-intensive major commands, such as those requiring maneuver areas.

Candidate Analysis

Once the study candidates examined by the Total Army Basing Study (TABS) Groups were approved by the Under Secretary of the Army and Vice Chief of Staff, alternative approaches to addressing the candidates were developed. These alternatives were then analyzed based upon feasibility, affordability, economic impacts, and environmental impacts. The alternatives were also examined for consistency with the force structure, the Army basing strategy, the major commands' reshaping proposal (visions), and the DOD selection criteria. Portions of the analysis were performed using the following:

- COBRA model to calculate the affordability of each recommendation.
- DOD's Office of Economic Adjustment model to calculate the socioeconomic impacts.
- Impact assessments prepared by the Office of the Chief of Engineers to evaluate environmental impacts.
- Installation military value assessments.

The TABS Group used these assessments as a basis for developing recommendations to be presented for approval by the Army leadership. The standard Army approval process--Program and Budget Committee, Select Committee, and the Secretary of the Army--was used to obtain final decisions.

The Army Audit Agency (AAA) evaluated all aspects of phase II of the process. This evaluation included reviewing the return on investment calculations to include a verification of all data input into the cost model. The AAA review consisted of evaluating the appropriateness of the data sources, the approaches used, and the reasonableness of the assumptions made in the calculations.

Observations on Methodology Implementation

In our analysis of the process we evaluated both phases, which included the military value assessment and resulting rankings, the selection of candidates and the analysis of them, and the resulting recommendations. We relied heavily on the scope and results of the work done by AAA. We found that the Army followed its process and that the key features used in selecting study candidates, which included the force structure and other selection criteria established, were appropriate. We found no reason to question the resulting recommendations with the exception of the Acting Secretary's decision not to recommend Fort Monroe for closure.

Phase I

In the initial phase of the process the Army identified and categorized the installations to be reviewed and then evaluated their military value. In general, military value was based on measures of merit and related measurable installation attributes which were related to the DOD established selection criteria.

AAA performed a detailed analysis of this phase of the process. AAA performed its audit at each of the major commands--Forces Command, Training and Doctrine Command, and the Army Materiel Command--and also verified data accumulated at six installations which were randomly selected in a multi-stage statistical sample. We accompanied AAA to one of the installations it visited as well as each of the major commands, and to a limited extent validated its verification efforts. We also noted that the TABS Group did some independent verification of the major commands' submissions.

AAA found that the Army's assessment of installation military values was generally consistent with guidance that the TABS Group issued and was reliable for further use in the 1993 basing study. While AAA did find some errors, they were not material and did not cause the rankings of the installations to change. Based on AAA's review and our limited verifications of its work, we found no reason to question the data used to determine the military value or the resulting rankings of the installations.

Phase II--Candidate Selection

In determining the need for bases, the force structure was a key element. This requires assumptions relating to the number of divisions there will be in the structure and how many divisions

will be based in the United States versus overseas. Future decisions will be made by the administration which will address these questions. However, because the force structure was such a key element in base closing and realignment decisions, we believe that the Army's approach of using the Bush base force structure is reasonable given the uncertainty about future changes. In addition, because the need for many Army bases is not related, either directly or indirectly, to the number of divisions in the force structure, the other measures used for making basing decisions such as major command visions and the basing strategy, are also a reasonable approach.

The number of candidate bases selected for study as closure candidates in each of the installation categories and the number available and are shown in table 3.1.

Table 3.1: Army Installations and Number Selected as Study Candidates

Installation categories	Number of installations	Number of study candidates
Command and control	11	7
Professional schools	5	1
Depots	11	8
Maneuver	11	4
Major training areas	10	6
Branch schools	13	3
Commodity oriented	12	4
Production	13	0
Proving grounds	4	1
Ports	3	0
Medical centers	2	1
Total	95	35

The following summarizes our review of the process, with emphasis on how key features were used in selecting candidates in each of the categories.

Command and Control

The Command and Control installations such as Forts Belvoir, McPherson, and Monroe house primarily, but not exclusively, non-

deployable headquarters and activities which oversee the day-to-day functions that control the manning, equipping, training, and sustaining of the Army. There is no direct connection between the need for these types of installations and the force structure. The primary decision factors for these installations are the military value assessments and the major command vision statements as appropriate. In addition, the basing strategy states that functions should be consolidated and small, single-purpose bases should be closed where feasible. All but four of these bases were study candidates. The four that were not studied--Forts Meade, Myer, Ritchie, and Schafter--were deferred from study because there were no restructuring or reshaping initiatives in the vision statements that affected them. We are not aware of any evidence to question this decision.

The remaining bases were studied for closure or realignment. After varying degrees of analysis, they were all deferred from further study. For example, Forts McPherson and Monroe were study candidates because they are single-purpose bases. In both cases the study was deferred for operational reasons. In addition, Fort McPherson was deferred because of high costs and an extended return on investment.

The TABS Group had proposed that Fort Monroe be closed and that the headquarters of the Training and Doctrine Command be moved to a base about 20 miles away. The return on investment of this closure was calculated to be \$28 million annually beginning in 1998. The Acting Secretary of the Army, however, rejected this proposal, citing (1) the "turbulence" within the Training and Doctrine Command and (2) the installation's high environmental cleanup costs, estimated to exceed \$600 million.

We cannot support the reasons given for not considering this recommendation. First, the downsizing and restructuring of U.S. military forces have caused turbulence throughout DOD. Second, OSD has stated that restoration environmental costs are not to be a consideration in determining the return on investment. And third, the projected savings are sizeable.

Army Professional Schools

Army professional schools such as West Point and Carlisle Barracks are not related to the force structure and are considered unique in the missions they perform. The only mention in the Training and Doctrine Command's vision statement that pertained to a Professional school was the relocation of defense language training to a follow-on training location. On this basis, the Army selected the Presidio of Monterey, home of the Defense Language Institute, as a candidate for study. Following its analysis, the Army recommended the Presidio be closed and the Institute's mission be moved to Fort Huachuca, Arizona. The Army anticipated contracting with a university to provide language training.

The Secretary of Defense, however, deleted this recommendation from the list transmitted to the Commission. The Secretary cited concerns by the Assistant Secretary of Defense for Command, Control, Communications, and Intelligence that moving the Institute would severely disrupt the flow of linguists to national security missions. Among his concerns were the Army's plans to contract with a private university. In rebuttal, the Army cited other cases in which it has cooperated successfully with universities--the Judge Advocate School at the University of Virginia and the Comptroller School at Syracuse University. Further, the Army also pointed out that it has had considerable experience with realignments and that these have not resulted in significant disruptions.

We noted that base operating costs associated with the move appeared to be high; however, we did not have sufficient time to investigate the reasons. Also, the cost of the contract to provide the language training services, which is a key factor in determining the costs, has not been finalized. These final contracting costs are not known.

Depots

The major missions of Army depots (such as Anniston, Red River, Letterkenny, and Tooele) are to receive, store, issue, and maintain equipment and ammunition and to operate depot maintenance facilities for Army ammunition and equipment. There is an indirect relationship between the current depot capacity needed and the force structure. A study by the Joint Chiefs of Staff in 1992 identified a significant amount of excess depot capacity and widespread duplication among the services. The annual excess capacity identified at Army maintenance depots exceeded 8 million direct labor hours.

In analyzing the excess capacity and how to downsize, the Army considered, among other things, the following factors: the relative military value of all depots; the workforce skills; the excess capacity; the ability of the depots to accommodate new workload levels; the proximity of the depots to heavy forces; and the resulting savings. As a result, the Army is recommending that Letterkenny and Tooele be downsized and realigned to depot activities. While the Services were asked to streamline depot maintenance across service lines and eliminate duplication, as discussed in chapter 2, this was not done.

Maneuver

The Army currently has 14 divisions, 11 of which are stationed in the United States at installations such as Forts Hood and Carson. The Army force structure plans call for 12 divisions in the future, with 9 based in the United States. The Army recommended no bases for closure or realignment in this category. The Army believes it

would be premature to take these actions given the uncertain nature of the future U.S. force structure, the disposition of overseas forces, and the mix of forces. The Army also cited its fiscal year 1993 basing strategy, which states that the Army must maintain the capability to station up to 10 divisions in the United States. In addition, the Army determined that its maneuver bases are currently overcrowded. Each base has shortfalls in at least two of the four critical facility categories (barracks, family housing, maintenance, and operational/command and control).

The Army needs firm decisions on the future of the base force, disposition of forces overseas, and the mix of forces before closing a base capable of supporting a division. We found no evidence to cause us to question the reasonableness of this position.

Major Training Areas

These bases (for example, Forts Irwin, A.P. Hill and Greely) provide facilities for both the active and reserve components for large unit training exercises. With the exception of Fort Irwin (home of the National Training Center) and Fort Polk (home of the Joint Readiness Training Center), there are no active component tactical units stationed at these installations.

The need for these installations is indirectly related to the force structure. This is because there is a need for geographically dispersed large unit training areas that forces can use on a rotational basis. The primary user of these installations is the reserve components. All plans and indicators show that reserve components will not be reduced in large numbers. Also, because of demographics (the components need to be close to where they train), there appears to be is no basis for closing or realigning any of these bases at the present time.

Initial Entry/Branch Schools

Initial entry training/branch schools (such as Forts Benning, Bliss, and Jackson) have the mission of providing the Army with trained individual soldiers, developing the doctrine that describes how the Army will fight, defining the Army's material requirements, designing the Army's organizations and developing the Army's leaders.

The need for initial entry training/branch schools and how many are indirectly related to the force structure. However, these schools are directly related to the various branches of the Army--such as the Infantry school located at Fort Benning and the Armor school located at Fort Knox. The Training and Doctrine Command, which is the proponent for schools, stated in its vision statement that branch schools are necessary unless there is a change in Army doctrine or the battlefield. In other words, as long as the Army

plans to use infantry in future battles there will be a need for an infantry school. Therefore, the Command's approach is to find ways of operating the schools more efficiently through actions such as collocating or consolidating the schools to the extent possible.

The current recommendation to close Fort McClellan fits into this approach. If approved, there will be three schools located at Fort Leonard Wood--Engineers, Chemical, and Military Police. The Training and Doctrine Command is also looking at consolidating the combat service support schools--Transportation, Ordnance, and Quartermaster. According to Army officials, this action, if accomplished, does not meet the BRAC threshold of involving more than 300 authorized civilian personnel. Another initiative being looked at by the Command is the reduction of schools doing basic combat training. Currently, there are four schools--Forts Jackson, Leonard Wood, Knox, and Sill--doing basic combat training. All of them but Jackson have more than one type of training mission. According to an Army official the current thinking is to close down basic training at two of these bases that have other missions. If accomplished in this way, the action will not meet the BRAC threshold.

Commodity Oriented

Commodity-oriented installations such as Fort Monmouth, Rock Island Arsenal, and Fort Detrick are industrial facilities that include laboratories, engineering and logistical management centers, and national inventory control points. Military value was the most important factor in the analysis of this category. The need for these installations is related to performance of their mission and not the force structure. While not specifically mentioned in the Army Materiel Command's vision, the need to relocate from leased to government-owned facilities was a vision objective that affected some of these facilities. Two recommendations were made related to installations in this category--closure of Vint Hill Farms and the move of the Communications and Electronics Command from a leased building in New Jersey to Rock Island Arsenal. The closure of Vint Hill Farms, which had a low military value, supports the basing strategy to consolidate similar functions and close small installations when feasible to do so. The Communications and Electronics Command move is based on reduced operations cost.

Other Categories

Installations in the remaining Army categories (production, proving grounds, ports, and medical centers) were deferred from further study primarily because of their unique military value. For example, White Sands Missile Range, a proving ground, is one of the only sites in the United States that is large enough to fire all organic missile and artillery systems, and the Military Ocean Terminal in Oakland, California, provides the only secure water terminal facility in support of the Pacific and Far East theaters

of operation. We have no evidence to indicate that these exclusions were inappropriate.

AIR FORCE PROCESS APPEARS REASONABLE BUT DIFFICULT TO VERIFY

The Air Force has proposed closures and realignments affecting seven bases. Our review shows that these recommendations will reduce both costs and excess capacity, and that the data used was generally accurate. The Air Force selection process complied with force structure and criteria requirements. The judgments of the Base Closure Executive Group and the Secretary of the Air Force played a major role in the process. However, these judgments were not clearly documented. As a result, in some cases the Air Force process does not lend itself to independent verification of the decisions from existing documentation.

Key Factors of the Process

The principal elements of the Air Force process included: (1) DOD's future years' force structure plan; (2) a base capacity analysis; (3) a depot analysis; (4) detailed information gathered for each base; and (5) the eight DOD selection criteria.

In determining excess capacity, the Air Force performed a base capacity analysis (including on-site surveys at 48 bases) to determine the maximum number of aircraft or missions that could be accommodated at existing bases. The Air Force compared this capacity data to the future years' force structure plan to project the amount of excess capacity. This analysis resulted in the identification of four large aircraft bases and one small aircraft base as being excess to the Air Force's future needs. Additionally, the Air Force led a joint analysis of fixed-wing and rotary-wing aviation at the direction of OSD and determined that it had excess depot capacity of about 8.7 million direct labor hours.

Bases were analyzed against all eight DOD selection criteria with priority given to military value and with emphasis on readiness and training, future mission, and cost. A color coding system--red (low), yellow (medium), and green (high)--were used to distinguish between the military value attributes given to each of the bases. This analysis was based on detailed information on each base gathered through a structured questionnaire. In addition, each base was subject to a cost and savings analysis that assumed closure of the base.

Observations on Implementation of the Process

We found that the data used to support the process was generally accurate, but we could not always independently verify the process decisions without extensive interpretation and discussion with Air Force officials. We found no evidence that would lead us to

challenge the decisions. However, the decisions require acceptance of OSD and Air Force assumptions regarding future operations. The Air Force Audit Agency validated data used in the process; however, its validation did not include validating the rating of bases and the selection process at the Air Force headquarters.

The following sections provide our observations, by installation category, on each recommended closure and realignment.

Flying Category

The flying category included 38 bases that support flying operations. This category was divided into three subcategories--operations, pilot training, and special operations. The operations subcategory was further divided into missile, large aircraft, and small aircraft mission areas. The Air Force recommended actions affecting large and small aircraft bases. Our review of the recommendations illustrates the difficulty we had in tracking the decision-making process and also shows the emphasis the Air Force placed on costs and savings considerations in its decisions.

Large Aircraft

The large aircraft subcategory included 21 bases that support bomber, tanker, airlift, and mobility missions. The bases were evaluated in terms of their capability to support these missions, and some bases were evaluated more than once. The bases were rated and arrayed in three groups from most to least desirable. A discussion on each large aircraft base recommended for closure or realignment follow.

Closure of K.I. Sawyer Air Force Base, Gwinn, Michigan

Our analysis indicates that closing this base will likely result in savings and reduce large aircraft base capacity. According to the Air Force's documentation, K.I. Sawyer did not appear to rate lower than other rated bases when measured against the DOD selection criteria, even though the Air Force reported it did. However, on the basis of its rating, it was grouped in the least desirable category and selected for closure.

In reviewing the Air Force data, we were unable to independently determine the basis for the grouping. We had to rely on Air Force officials for an explanation to understand the decision. The Air Force said that the low cost to close the base and quick payback period were major factors in its grouping and recommendation for closure. We noted that this base's primary mission currently has one bomber unit with 14 B-52s. On the basis of the information provided and our review of the cost and savings data, we have no reason to disagree with the Air Force's explanation.

We noted, and the Air Force concurred, that because of an error in the Air Force COBRA analysis for recurring costs, the payback period for the closure will be 3 years instead of 1 year. However, this payback period was still among the quickest of the large aircraft bases.

Realignment of Griffiss Air
Force Base, Rome, New York

Based on our review of Air Force data, we were unable to independently determine the basis for the Griffiss grouping, and we had to rely on Air Force officials to explain the grouping.

Our analysis indicates that realigning the base will likely result in base operation savings and reduce aircraft base capacity. Air Force documentation indicates that Griffiss, like K.I. Sawyer, did not appear to rate lower than the other rated bases when measured against the DOD selection criteria, even though the Air Force reported it as being in the least desirable category. The Air Force explained that Griffiss was first selected as a closure candidate, but upon further analyses it proved more economical to leave the Rome Laboratory at Griffiss and Griffiss became a realignment action. We have no reason to disagree with the Air Force decision.

Griffiss was also considered and evaluated as a potential site for the Air Force's mobility mission on the East Coast. However, when compared to other East Coast large aircraft bases for the principal mobility attributes considered important by the Air Force, Plattsburgh Air Force Base, New York, was found to be best suited for this mission.

Realignment of McGuire Air Force
Base, Wrightstown, New Jersey

Our review of this recommendation shows that realigning the base to an Air Force reserve facility will likely result in overall savings once the realignment is accomplished. However, realigning the base to a reserve facility does not eliminate the entire base capacity from the Air Force base structure. Under this realignment, the Air Force plans to reduce the number of aircraft at McGuire from 70 to 42. When measured against the DOD selection criteria, McGuire did appear to rank low compared to other large aircraft bases, according to Air Force documentation.

McGuire was also considered and evaluated for the Air Force's mobility mission on the East Coast. When compared to other East Coast aircraft bases for the principal mobility attributes considered important by the Air Force, and airspace congestion in the New York/Philadelphia area, Plattsburgh Air Force Base was found to be best suited for this mission. The Air Force told us that consideration had been given to potential fuel supply

shortages and other operational considerations in reaching its decision. However, these considerations were based on assumptions related to mobility issues which we did not review.

Realignment of March Air Force Base, Sunny Meade, California

Our review of this recommendation shows that realigning March Air Force Base to an Air Force reserve facility will likely result in overall savings. However, realigning the base to a reserve facility does not eliminate the entire base capacity from the Air Force base structure. Under this realignment the Air Force plans to reduce the number of aircraft at March from 60 to 43. Air Force documentation shows that when March was measured against the DOD selection criteria it did rank low when compared to other large aircraft bases.

March Air Force Base was also considered for the Air Force's mobility mission on the West Coast. When compared to other West Coast aircraft bases for the principal mobility attributes, Travis Air Force Base, California, was found by the Air Force to be best suited for this mission.

Small Aircraft

There were 11 bases included in the small aircraft subcategory that provide trained combat ready aircrews, aircraft, and support personnel for deployment in support of theater work plans and contingency operations. The bases were evaluated in terms of their capability to support a fighter wing. The bases were rated and arrayed in three groups from most to least desirable.

Closure of Homestead Air Force Base, Homestead, Florida

Our analysis shows that closing Homestead Air Force Base will result in savings and reduce small aircraft base capacity. Homestead's low rating when measured against the selection criteria and the high cost to rebuild the base justify the Air Force's recommendation. Overall, Homestead rated lowest in three of the eight criteria, and it showed a fast payback and low closing costs.

Industrial/Technical Support Category

The industrial/technical support category included 10 bases that provide technical support for depot-level maintenance, research, development, test and acquisition. This category was divided into three subcategories--depots, product centers and laboratories, and test facilities. Only the depot bases were evaluated against the DOD criteria. Two of the six depots were recommended by the Air Force for closure to reduce depot capacity. The recommendations were driven by the amount of excess depot capacity and costs and

savings considerations. As with the flying category aircraft, we had difficulty tracking the decision-making process.

Closure of McClellan Air Force Base, Sacramento, California

The Air Force recommended McClellan for closure to reduce excess depot capacity by 6.3 million direct labor hours. DOD deleted the base from the list transmitted to the Commission. (See ch 2. for a more detailed discussion of this action.) Our analysis indicates that closing this base will likely reduce excess capacity. Our review of Air Force documentation indicates that McClellan has the lowest one-time closure costs (\$635 million) and quickest payback periods of the six depots. According to Air Force officials, McClellan rated low compared to the other depots, although Newark was the lowest.

Closure of Newark Air Force Base, Heath, Ohio

Our analysis shows that the closure of Newark would likely reduce overall Air Force depot capacity by 1.7 million hours. The Air Force rated Newark lower than the other depots against the selection criteria. Air Force opinion is that privatization of the facility could result in additional reduced costs to the Air Force. We noted that the Air Force in its costs and savings analysis included a \$68 million recurring contractor cost, which approximately equals the reduced personnel savings. However, the Air Force data indicates a slight savings from reduced operating costs. The Air Force is uncertain whether a buyer can be found to purchase the facility or whether it will operate as a government-owned, contractor-operated facility.

Excluded Bases

On the basis of its capacity analysis, the Air Force excluded 19 bases in categories and subcategories having no excess capacity, some excess capacity, or high costs to relocate and replicate the mission. The categories and subcategories included: the flying/pilot training, flying/special operation forces, industrial technical support/technical training centers, and other/major headquarters. Also, there were 16 bases excluded from the process because they were considered geographically or mission essential. For example, Elemendorf Air Force Base, Alaska, was considered a key port of entry into the United States, crucial to reinforcement in the Pacific, and critical to the defense of Alaska. We found no reason to question the exclusions.

DEFENSE LOGISTICS AGENCY'S BASE CLOSURE AND
REALIGNMENT PROCESS WERE GENERALLY SOUND,
BUT SAVINGS ARE QUESTIONABLE

DLA recommended closure or realignment actions affecting 14 installations.⁴ Our review found that DLA's selection process for identifying potential closure or realignment candidates was reasonable. The process followed force structure and criteria requirements and DOD policy guidance. However, we also found that due to problems in DOD's cost and savings model, the savings resulting from the DLA recommendations were overstated.

Key Features of the Process

DLA did not participate in the 1991 round of closures and realignments. At that time, the agency was involved in a major reorganization as a result of DOD's decision to transfer the distribution mission and related facilities, as well as the contract management missions and plant representative offices, from the military services to the DLA. The agency currently occupies many old, outdated facilities with high operating, maintenance, and overhead costs. DLA viewed the 1993 base closure and realignment process as an opportunity to consolidate bases and achieve significant efficiencies.

DLA's mission, unlike those of the military services, is not specified in the DOD force structure plan, even though DLA is a combat support agency. The agency based its closures and realignment analysis on the eight DOD selection criteria and the agency's concepts of operation, with reduction in cost as a key objective. The concepts of operations played a key role because they serve as long-term strategic planning documents for DLA's major business areas. Through application of the force structure plan to the concepts of operations, DLA assessed its current and future operations to identify organizational needs and base structure requirements.

To assess its installations for closure or realignment, DLA first classified its bases into four categories that reflect its operations: (1) inventory control points, (2) service and support activities, (3) distribution depots, and (4) regional headquarters.

Each base in these categories was evaluated for excess capacity and military value. DLA performed the military value analysis using the first four DOD selection criteria, along with considerations of

⁴The DLA distribution depot at McClellan Air Force Base, California, is not included in this total. This depot was removed from DOD's recommended list of closures as part of the Secretary of Defense's decisions not to close McClellan Air Force Base.

the seventh and eighth criteria. The agency developed more specific measures of merit, related to the criteria, to assess the military value of its bases.

Observations on Implementation of the Process

DLA's selection process complied with force structure and criteria requirements; however, some of its cost savings appear questionable. The data used in the selection process was certified as to its accuracy and completeness by the commanders at each of the bases. Most of the data used in the process was reviewed and favorably reported on by the DLA Office of Internal Review. We selectively reviewed the Office of Internal Review's workpapers and performed our own independent analysis of certain aspects of the process and resulting recommendations for each category of activities. Our analysis indicates that DLA's recommendations were driven by cost and savings implications.

Inventory Control Points

DLA manages six inventory control points whose responsibilities are to acquire supply items and manage inventories. By September 1994, the inventory control points are expected to manage approximately 90 percent of DOD's consumable items. The inventory control points are the Defense General Supply Center, Richmond, Virginia; the Defense Construction Supply Center, Columbus, Ohio; the Defense Electronics Supply Center, Dayton, Ohio; the Defense Personnel Supply Center and the Defense Industrial Supply Center, Philadelphia, Pennsylvania; and the Defense Fuel Supply Center, Cameron Station, Alexandria, Virginia. The Defense Fuel Supply Center was excluded from the process because it was affected by a 1988 decision to close Cameron Station.

DLA considered excess capacity at the inventory control points to be the amount of space not currently utilized and the capability to assume more work load. The revised requirements were derived from the implications of the DOD force structure plan and from the DLA concepts of operations for inventory control points. Four inventory control points--the Defense Construction Supply Center, Defense Electronics Supply Center, Defense Industrial Supply Center, and Defense General Supply Center--were evaluated for excess capacity as a group because they manage similar hardware items. The Defense Personnel Supply Center was considered separately, as it handles personnel items (including clothing, medical supplies, and food) which are not comparable to hardware items. The results of the military value analysis were used as a starting point in reconfiguring inventory control points and determining which should be evaluated for closure or realignment.

Our analysis indicates that DLA's evaluation of the inventory control points was primarily designed to identify the potential for reductions in overhead costs. DLA used DOD's cost and savings

model to evaluate the potential costs and savings of closing or realigning the inventory control points. However, several of DLA's realignment cost saving assumptions are not compatible with the basic cost model assumptions. As a result, DLA's closures and realignments savings were overstated.

Service and Support Activity Bases

When DLA began its selection process, it had four service and support activity bases--the Defense Logistics Services Center, Battle Creek, Michigan; the Defense Reutilization and Marketing Service, Battle Creek, Michigan; the Defense Logistics Agency Systems Automation Center, Columbus, Ohio; and the Defense Logistics Agency Clothing Factory, Philadelphia, Pennsylvania. The assets and resources of the DLA Systems Automation Center were subsequently transferred to the Defense Information Systems Agency, and it was excluded from the selection process. DLA determined that its remaining service and support activities have unique missions, functions, and work load. As a result, DLA evaluated these bases individually rather than as a group. We agree that this was an appropriate approach.

The Defense Logistics Service Center is responsible for implementing the legislative requirements for a federal catalog of items used by the U.S. government, providing support relating to item intelligence, and managing data development and dissemination. The Defense Reutilization and Marketing Office is responsible for property disposal (including hazardous items) and reutilization and marketing of excess personal property within DOD. Both of the activities, located in General Services Administration-owned space, were determined to have excess capacity as a result of changes in mission requirements. The reduction in their space requirements is projected to result from decreased personnel, increased workload activities, and consolidated missions/activities. DLA recommended that these activities be realigned to the Defense Construction Supply Center as a means of reducing DLA overhead cost. While this may be cost-effective from DOD's perspective, it may not be from an overall government perspective. Because of the problems in the cost model, we believe the projected savings from the consolidation will not be as large as projected. Since the move is from one government-owned facility to another, the overall cost and savings implications for the federal government should be considered in the Commission's decision.

The DLA Clothing Factory, part of the Defense Personnel Supply Center, produces approximately 3 percent of DOD's clothing requirements. Based on a study by the Defense Personnel Supply Center, DLA concluded that the work performed by the factory could be done at less cost by commercial sources. We reviewed the study and believe its overall conclusions are reasonable.

Distribution Depots

Following the lead of the military services, DLA has recommended closing five of its distribution depots that are collocated with military service maintenance depots also recommended for closure. These five depots have a total of 56 million cubic feet of storage space. In addition, DLA reviewed all distribution facilities and identified additional storage space reduction opportunities totaling 105 million cubic feet. However, no recommendations were made to close additional depots. Officials stated that this area will be looked at in the future.

Excess capacity for distribution depots was based on current storage space and production capability that exceeds current requirements, projected decreases in demand for material through 1999, increases in workload efficiencies, and reductions in inventory. Over the next several years, reducing defense operating forces in accordance with the DOD force structure plan reductions will result in a similar reduction in the DOD logistics support infrastructure. Additionally, based on the recently completed DOD supply depot consolidation, DLA projects that it will achieve efficiencies and economies of scale in distribution operations. DLA believes that its distribution initiatives will (1) redefine the distribution spectrum to include the full process cycle from vendor to customer, (2) improve the direct vendor delivery process, and (3) use a single location stockage policy that will reduce operating costs and storage requirements. The result will be a supply depot structure that is more streamlined from the current configuration, with fewer depots and less annual workload, and that operates more efficiently to support the DOD mission.

The elimination of excess capacity was a major factor in DLA's distribution depot recommendations, with some consideration given to the military services' closure and realignment recommendations. DLA was conservative in making its estimates of the excess capacity that would result from reduction of the supplies it stores for the military services. It assumed that the services would focus their inventory reduction efforts on high value items and not on those that are taking up large amounts of storage space. Accordingly, DLA translated the 42-percent inventory value reduction goal into a 30-percent space reduction estimate. DLA officials say this estimate also considers supplies returned to their depot system from reductions in force structure. A large portion of supplies stored by DLA is owned by the military services and decisions about when to buy, store, and dispose of those items is made by the services, not DLA. An estimate of how much DOD inventory will need to be stored in the future is clearly critical to determining DLA's capacity needs.

In addition, as discussed in chapter 2, the Commission has decided to consider the closure of McClellan Air Force Base. The DLA

distribution depot located there should be included in that consideration.

Regional Headquarters

The Regional Headquarters category consists of the Defense Distribution Region headquarters locations and the various headquarters sites of the Defense Contract Management Districts. The Defense Distribution Region headquarters mission is to provide overall administrative support, including resourcing and budgeting, operational support, and distribution management for all the depots located within their respective boundaries. The Defense Contract Management Districts perform worldwide contract administration services for DOD organizations, U.S. government agencies, foreign governments, and international agencies. According to DLA, the Defense Distribution Region headquarters involve less than 300 authorized civilian personnel each and were excluded because they did not meet these criteria for submission under the act.

Capacity for the Defense Contract Management Districts may be viewed in terms of the number of Defense Contract Management Area Operations and Defense Plant Representative Offices for which operational support and management oversight is performed. Excess capacity was measured by administrative space, span of control, space available to accommodate additional personnel, the type of space available, and efficiencies for the category through 1999. The evaluation of excess capacity was based on assumptions derived in part from implications and trends related to the DOD force structure plan, such as: (1) reduced procurement funding; (2) fewer major weapon systems in full-scale production; (3) more research and development contracts; (4) more maintenance, overhaul, and repair work; (5) additional reimbursable workload for the Defense Logistics Agency to provide support to civilian agencies; and (6) additional workload for the Defense Logistics Agency as military services and DOD agencies delegate more to the Defense Contract Management Command.

Since Defense Contract Management Command international field activity bases are located outside of continental United States, the command was evaluated independently. For the determination of military value, the Defense Contract Management Districts were evaluated within their peer group based on several critical areas such as essentially of mission, suitability of location, operational efficiency and expendability of mission. The results of military value analysis were used as a starting point in reconfiguring the Defense Contract Management Districts and determined which districts should first be evaluated for closure and mission realignment. Reducing the number of districts, with a corresponding reduction in overhead cost, appeared to be the basis for these recommended realignments.

In assessing DLA's recommendations for realignment or closure of the Defense Contract Management Districts, we found that the Internal Review staff for Defense Contract Management District Northcentral was unable to verify the base operating cost figures that were submitted to DLA. The cost and savings model runs submitted to us by DLA had major differences in the base operating cost of Northcentral Defense Contract Management District when compared to the other four Defense Contract Management Districts. Although we question the accuracy of the base operating costs figures for Defense Contract Management District Northcentral, our analysis shows that there are still cost savings associated with the closure of Defense Contract Management District Northcentral and Defense Contract Management District Midatlantic and the realignment of their workloads to the remaining districts.

DEFENSE INFORMATION SYSTEMS AGENCY PROCESS
AND IMPLEMENTATION WERE GENERALLY SOUND

DOD is reorganizing its data processing facilities. In its current phase, DOD plans to merge some existing facilities into 15 consolidated "megacenters." DOD estimates this consolidation will save \$599 million from fiscal years 1994 to 1999. Although none of the affected facilities exceeds the BRAC thresholds, DOD has submitted these proposed consolidations for Commission consideration because DOD believes (1) that their combined effect is significant in that 636 civilian positions will be realigned and 2,804 military and civilian positions will be eliminated and (2) that based on past experience, legislation may be passed that would delay the implementation (such as P.L. 102-396).

Key Features of the Process

In November 1989, DOD initiated plans to consolidate data processing facilities as a means of achieving budget reductions. This effort, described and directed by Defense Management Review Decision (DMRD) 924, called for each DOD component to obtain approval of a plan detailing its proposed consolidation actions. The Army's and DLA's actions under this decision are largely completed, whereas Air Force actions are still underway. Legislative restrictions have inhibited the Navy's attempts to activate its plan. DMRD 924 was followed by DMRD 918, which mandated a DOD-wide approach to consolidation and required the transfer of data processing facilities, personnel, and equipment to DISA.

In January 1993, DISA chartered a team to develop a consolidation proposal for submission to the Commission. The DISA approach is to close excess data processing facilities by moving their work loads to a selected number of megacenters located in existing facilities.

The DISA team used the most current consolidation plans developed by the Defense components under DMRD 924 as a basis for identifying

megacenter candidates. The DOD components had initially identified a total of 192 candidate sites for consolidation; the DOD components, and then the DISA team, applied certain selection criteria and reduced this number to 36. After ranking the 36 sites, the team projected the total work load and distributed it to the ranked megacenter candidates, one by one, until all work load requirements were satisfied. This exercise determined that 15 megacenters would be necessary; the remaining 21 candidate sites would be disestablished. Other sites initially identified by the component agencies have been or are being disestablished under those agencies' DMRD 924 processes, except for 23 of the Navy's sites.

Observation on Implementation of the Process

There are two processes that led to DOD's recommended list of 15 megacenters: the process used by the individual components to arrive at candidate sites and the process used by the DISA team to eventually select 15 of those sites.

We did not evaluate the components' processes during this review. However, in a December 1992 report,⁵ we stated that the Navy used verifiable data and a conceptually sound analytical rationale to ensure that its consolidation plan met applicable requirements.

DISA team members told us that they have concerns about the accuracy and completeness of some of the work load data contained in the Air Force's DMRD 924 plan. They said the Air Force plan was outdated, piecemeal, and not as complete as the other components' plans. Moreover, the Air Force Audit Agency reported in January 1993 that the Air Force's planned consolidation could actually lose rather than save money.

Regarding the DISA process used to select the 15 megacenter sites, we believe the approach DISA used and the proposals that resulted were reasonable. DISA, however, used data that was not validated for the 36 megacenter candidate sites. Recognizing this flaw, the DISA team sent members to visit the sites and validate the data. DISA officials told us that these visits, which were completed by March 15, 1993, still had not resulted in consistent and uniform data on the sites. Additional visits are to be scheduled. However, DISA officials told us that this data problem, as well as the concerns with the Air Force work-load data, are not significant enough to change the list of 15 megacenters.

⁵Information Technology: Comments on Navy Facility Consolidation Plan (GAO/NSIAD-93-87, Dec. 3, 1993).

CONCLUSIONS

The military services' and defense agencies' base closure and realignment processes produced recommendations to close 32 major bases and realign 12 others. In addition they included recommendations for closure, realignment, and disestablishment of 122 small bases. We found the processes and resulting recommendations to be generally sound. However, we did find problems concerning the adequacy of documentation and accuracy of technical data and cost and savings estimates. This occurred in varying degrees among the services and defense agencies. In most cases, these problems were not severe enough to question the recommendations. In some cases, accepting the recommendation requires acceptance of certain key judgments and assumptions. Our service- and defense agency-specific conclusions follow.

Navy

The Navy's closure and realignment recommendations represent a substantial portion of DOD's overall recommendations. We found the process used as the basis for developing the recommendations to be generally sound. We did note that the Navy's process had an overall goal of reducing excess capacity and there are situations where recommendations were made to close a base with a higher absolute military value than other bases in the same category that were not closed. Further, as a general rule the Navy did not attempt to optimize costs and savings; it only ensured that reasonable savings resulted from the scenarios that were selected. We did note in one case where selection of an alternative scenario resulted in larger savings.

Army

The Army's closure and realignment recommendations affected seven installations. The process and recommendations were generally well supported and documented. The Army's actions were principally based on force structure considerations. Given the uncertainty about future force structure changes, the Army's approach was reasonable. However, we did identify two specific concerns. First, it is unclear whether the movement of the DLI would have a negative impact on intelligence capabilities, and there are potentially significant unresolved cost and savings issues associated with the move. Second, the reasons the Army gave for not recommending Fort Monroe for closure are not well supported.

Air Force

The Air Force recommendations affected seven bases. The data used to support the selection process was generally accurate. However, in several cases, understanding the conclusion reached using the data required interpretation and discussion with Air Force officials. While we have no basis to question the decision, they

do require the acceptance of Air Force assumptions. In addition the Air Force Audit Agency was not involved in verifying data during the final stages of the process.

Defense Logistics Agency

DLA recommended closure and realignment actions involving 14 installations. Because DLA operations are not directly related to changes in the force structure, DLA focused on reducing excess capacity and optimizing savings. DLA's process was well documented, and it used generally accurate data. However, savings estimates were overstated in a number of cases. In addition, military service inventory reduction plans were not fully considered in assessing depot capacity needs.

Defense Information Systems Agency

DISA is recommending the merging of its existing facilities into 15 consolidated centers. We did not independently verify the data used in this process; however, it appears that data accuracy problems exist. The extent of these problems has not been determined by DOD.

RECOMMENDATIONS

We recommend for the 1995 round of base closure and realignments that the Secretary of Defense direct:

- the Air Force to establish procedures to fully describe all decision justifications and expand the Air Force Audit Agency involvement to include validating the military value grading and
- the Director of DLA to consider future reductions in the military services' inventory when assessing capacity needs.

We recommend that the Base Closure and Realignment Commission consider taking the following actions:

- Closely analyze those Navy recommendations where (1) the base recommended for closure had a higher military value than ones that are remaining open; (2) judgments and assumptions about the future were critical to the recommendations; and (3) an alternative scenario would have produced approximately the same amount of excess capacity reduction and military value, but cost and savings were not analyzed.
- Closely analyze the Army recommendations relating to the realignment cost of DLI and reexamine the Army's justification for not including Fort Monroe on the closure list.

- Request the Air Force to provide additional information where necessary to support the basis for its recommendations, in those cases where it is not evident from existing documentation.
- Closely analyze the Defense Logistics Agency's cost and savings estimates and include DLA's McClellan Air Force Base distribution depot in its considerations.
- Request DOD to provide its most current work-load data projections on the DISA consolidation in order to better consider the DISA recommendations.

CHAPTER 4

SAVINGS ARE SUBSTANTIAL, BUT IMPROVEMENTS CAN BE MADE TO THE ESTIMATES

DOD has corrected many of the limitations and weaknesses of the COBRA cost model used to calculate costs and savings; however, problems still exist. Further, DOD continues to exclude costs that may be incurred by other federal agencies as a result of its actions. These could be substantial, particularly where realignment recommendations involve moving from federally owned facilities and building to new DOD facilities.

Further, because of problems associated with the model, DLA miscalculated the overhead costs and savings of its proposed closures and realignments. We also have some concerns about the impact of differing assumptions used by each of the DOD components in performing their calculations. We estimate that, after correction for these problems, DOD's proposed base closures and realignments will result in savings of about \$940 million less than the \$12.8 billion in savings it estimated for major bases over the 20-year period.

We agree with DOD's position that environmental restoration costs are a liability to DOD regardless of its base closure recommendations, and that DOD should not consider those costs in developing its cost and savings estimates as a basis for closure recommendations. However, the cleanup costs are substantial. For the bases on the closure list, environmental restoration costs are estimated to be about \$725 million. The past experience has been that DOD's preliminary estimates tend to be conservative.

HOW THE COBRA COST MODEL WORKS

The cost model consists of a set of formulas, or algorithms, that use standard factors and base-specific data in its calculations. Each DOD component had its own set of standard cost factors derived from readily available information.¹ For example, the Air Force used a cost factor of \$42,986 as the average civilian salary of its personnel. This factor was derived from prior-year Air Force budgets. The Army, on the basis of engineering planning factors, used a cost factor of \$102 per square foot as the construction cost for administrative buildings. The DOD components obtained base-specific data from each installation and from centralized data bases. This data, for instance, might specify that 100 civilian positions would be eliminated if certain activities at a base are eliminated.

¹Some cost factors are identical for each component because they are mandated by regulation or law.

With these standard cost factors and base-specific data, the cost model can be used to calculate the estimated costs and savings of closure and realignment actions for both closing and receiving installations. The model can also be used to compare various closure and realignment scenarios to determine the most cost-effective one. The model also estimates both the number of years until the return on investment (ROI) of these actions is achieved and the net present value (NPV) of each action over a 20-year period. The return-on-investment year occurs when the savings generated by a closure or realignment equals the costs incurred. The net present value is the current total value of a closure or realignment over the 20-year period given certain assumptions about future inflation and interest rates.

FURTHER IMPROVEMENTS NEEDED TO THE COST MODEL

DOD has improved the cost model since it was first developed and used in 1988. However, it still does not include governmentwide cost implications, and the model's formulas have not been validated.

Improvements to the Model

The 1993 version of the cost model is the product of a number of improvements incorporated into the model since the 1988 round of closures and realignments. For the first round, the model was a complex spreadsheet, and we found a number of errors in it. By 1991, DOD had converted the model into a formal computer language and had corrected a number of problems. However, we identified several additional weaknesses and limitations in the 1991 model.

Prior to the 1993 BRAC round, representatives from each of the services and OSD participated in working groups that incorporated improvements to the model that addressed many of the weaknesses and limitations we previously identified. These improvements are shown in table 4.1.

Table 4.1: Improvements to the COBRA Cost Model

Weaknesses and limitations found in 1988 and 1991	1993 cost model features
Formulas: Users may alter algorithms.	Users cannot alter formulas.
Military construction: Actual known costs of military construction projects cannot be entered.	Military construction costs can be entered.
Data entry: Data entry format is limited and net result is inaccurate data.	Data entry format problems are eliminated.
Health care costs: Percentage of retirees liable for Medicare at each installation should be entered into model.	Percentage of retirees eligible for Medicare can be entered into the model for each installation analyzed.
Multibasing capability: Model needs an expanded capacity to include more losing and gaining facilities.	Model allows up to 15 bases to be included in the scenario as either gainers, losers, or both.
Family housing: Operational cost of family housing not fully considered.	Model includes estimates of family housing operation savings at losing bases and cost increases at gaining bases.
Force structure: Overhead savings due to force structure reductions should not be included in the model.	Overhead savings due to force structure reductions are excluded.
Homeowners Assistance Program: Methodology is not standardized for all DOD components.	Methodology has been standardized.
Land sales: Revenues from land sales are difficult to estimate.	Analyses rarely include land sales.
Documentation: Models have not been documented.	Model is documented in a users manual, algorithm manual, and programmers' manual.

Governmentwide Cost Not Included

DOD did not act on our recommendation in the 1989 and 1991 reports that Medicare costs be included in the cost model. When hospitals close, some military retirees over age 65 who previously used these facilities will be required to use Medicare, increasing the cost of this program to the federal government. DOD, however, continued to exclude Medicare costs from the 1993 cost model. DOD believes only direct DOD costs should be included. The 1993 list of recommended closures and realignments includes a number of hospitals. The associated Medicare costs will increase the total cost of these actions to the federal government, but data was not readily available to estimate these costs.

In addition, and potentially significant in terms of the acceptability of closure and realignment recommendations, is the treatment of costs when DOD moves from space it is renting from the General Services Administration. DOD counts the reductions in rent as savings even when the buildings are federally owned facilities. In some cases, the moves require construction of new DOD facilities and the rental savings are used to offset and justify the construction costs. In actuality, this may not represent an overall savings to the government.

Model Not Validated

In a June 1992 letter to the Assistant Secretary of Defense (Production and Logistics), we recommended that the cost model's algorithms and programming be independently validated. We noted that formulas for computing costs and savings are complex and have in past base closure and realignment efforts contained errors that have produced inaccurate estimates. DOD, however, has not independently validated the model.

PROBLEMS EXPERIENCED IN USING THE COST MODEL RESULTED IN OVERSTATED SAVINGS

Generally, the military services accurately applied the cost model in developing the return on investment for their recommendations. However, this was not the case for DLA. DLA did not adjust overhead rates to reflect weaknesses in the model. Other DOD components were aware of this problem from prior use of the model and made adjustments accordingly. In recalculating DLA's estimates, we found that in most cases overall estimated savings decreased significantly.

DLA Experienced Problems Using the Model

If shortcomings in the model are not compensated for, the model generates excessive savings when an installation's functions are moved to a base with a lower overhead rate. For example, DLA recommended that the functions of the Defense Logistics Service Center in Battle Creek, Michigan, be moved to the Defense Construction Supply Center in Columbus, Ohio. DLA calculated an

overhead savings of \$30.2 million annually by moving from the Battle Creek facility, based on that installation's per person overhead rate of \$71,243. In calculating the costs and savings for this move, DLA used the existing overhead rate at the Columbus facility. DLA calculated that existing overhead costs at Columbus would increase by just \$2,250 per person after this move. The Columbus facility communications costs are only 30 percent of the Battle Creek facility cost. While the consolidation should produce some cost efficiencies in existing communications, much of the communications costs at Battle Creek will be transferred to Columbus along with the functions being realigned and should be reflected in the operations cost.

In addition to the above problem, DLA realized after its recommendations had been submitted to the Commission, that it had entered erroneous information on the communications costs into the model for each base it analyzed. DLA is planning to submit revised calculations to the Defense Base Closure and Realignment Commission.

Another problem in DLA's methodology as it related to overhead costs was its use of some Army standard cost factors, including a factor that is critical to calculating overhead costs and savings. The factor is based on the relationship of assigned personnel and existing square footage to overhead costs. DLA used the Army cost factors because it lacked previous experience in the base closure and realignment process and deferred to the Army's experience. DLA, however, has primarily industrial- or commercial-type facilities that are not comparable to Army installations. Using this overhead cost factor in the model may have overstated the cost-effectiveness of recommended closures and realignments.

Revised Estimates Show Reduced Savings

When overhead costs and savings of DLA's recommended closures and realignments are recalculated to correct the previously discussed problems, the overall savings estimates decrease significantly.

To obtain a more accurate estimate of overhead costs and savings, we adjusted the overhead calculation when it appeared that (1) the savings estimate for an action was significantly overstated due to the model's overhead computation methodology and (2) costs we believe will continue at the receiving installation were claimed as savings. In place of the Army standard cost factor used by DLA, we used a more conservative cost factor--one that was similar to that used by the Navy, which is more in line with DLA-type installations. When appropriate, we adjusted the communications cost of the realigning function to the new installation and revised other overhead costs at realigning installations to reflect the possible impact of functions they are to receive. Our numbers are based on DOD figures and do not reflect the impact of non-DOD costs.

Table 4.2 shows the impact of these overhead adjustments on the overall savings and the net present value of these actions over 20 years. Although reduced, DLA's proposed closures and realignments should result in savings. As previously noted these estimates do not include governmentwide cost implications.

Table 4.2: Impact of GAO Adjustments on Savings Calculations

Base	DLA estimate	GAO estimate
Defense Logistics Service Center/Defense Reutilization Marketing Center	\$403,423,000	\$246,176,000
Defense Electronic Supply Center	190,736,000	89,211,000
Defense Personnel Support Center and Defense Industrial Supply Center ^a	474,793,000	139,919,000
Defense Clothing Factory	171,850,000	171,944,000
Defense Contract Management District West	33,160,000	18,199,000
Defense Distribution Depots, Oakland, Pensacola, Letterkenney, Charleston, Toelle	111,304,000	110,846,000
Defense Contract Management District Northcentral/Midatlantic	185,024,000	165,112,000

^aThese two bases are considered as a package because of the interrelated nature of their moves.

Problems Noted in the Components' Use of the Model

We have two other concerns about the cost and savings estimates generated by the DOD components. First, the components used cost factors in some cases that led to significantly different calculations of the specific costs and savings associated with closure and realignment actions. Second, the components decided unilaterally that they did not need to calculate some costs and savings because they believed the costs and savings would not occur or would be insignificant.

Different Cost Factors Were Used

The DOD components used different cost factors to calculate (1) the percentage of civilian salary to be paid to employees who are subject to a reduction in force, and (2) the cost increases due to the administrative support of base closure and realignment actions. We do not believe the use of different cost factors was justified. While it appears the use of these different cost factors is not significant enough to alter a closure decision, their use affects the accuracy of cost and savings estimates.

When a base is closed, DOD compensates the civilians who lose their jobs in a reduction in force. The compensation is a percentage of their salary based on their age and their years of service. The older the employee and the longer the time in service, the higher the percentage. In calculating cost and savings estimates, the Army and the Navy used a much lower percentage than that used by the Air Force and DLA. The Army and the Navy assumed they will pay 11.2 percent and 15 percent, respectively. The Air Force assumed it would pay 31 percent, and DLA assumed it would pay 42.69 percent.

The Army and the Navy based their figures on previous reductions in force. An Air Force official, however, told us that historical experience was not a sound guideline. The official stated that when future closures occur, there will be limits on the ability of DOD personnel to transfer to other positions within DOD or other federal agencies. As a result, the Air Force estimates that a significantly larger number of individuals with more time in federal service would be subject to reductions in force, which increase compensation costs. In addition, all services assumed that 30 percent of individuals affected by these reductions would find other positions in DOD or with other federal agencies under the Priority Placement program and could not be subject to reductions in force. This does not seem to be a reasonable assumption.

The Army deviated from the other DOD components in calculating the administrative costs to support closure and realignment actions. The standard factor for this cost used by all DOD components, except the Army, was 10 percent. The Army decided that this factor overstated the administrative support costs for these moves, particularly when a small percentage of individuals is realigned from a large base. The Army subsequently changed this cost factor to .1 percent. Although there was no analytical basis for the 10-percent factor, the Army's use of the low factor may understate these costs.

Certain Costs and Savings Were Excluded

The services decided that certain costs would not occur. The Army, the Navy, and the Air Force did not think that hiring new personnel

resulting from realignments would generate any costs. Also, the Army did not include factors for costs and savings for military health care at closing or realigning bases.

The Army, the Air Force, and the Navy assumed that if the base receiving additional personnel must hire new employees to meet personnel requirements, this would not result in added costs to DOD. In 1991, the Army used a standard factor for new hire costs of \$5,000 per new employee. While this cost is difficult to calculate, hiring new employees generates a cost. The Defense Logistic Agency used a standard factor of \$1,056 in its costs estimates for each new employee hired.

The Army did not calculate the costs or savings of realignment and closure actions for the military health insurance program; however, the other services did. Army officials stated that closing bases such as Fort McClellan would have increased costs for military health insurance because retirees who had used its medical facility would be required to use the military health insurance program. These officials also stated that offsetting this cost at the closing installation are medical program cost savings at receiving bases that increase their capacity to care for retirees. The Army said these costs and savings would be roughly equal and did analyze them further. In contrast, the Navy and the Air Force calculated these costs and, since these services transferred medical personnel to areas that had higher military health insurance costs than were incurred at the closing facility, they claimed savings.

REVISED SAVINGS ESTIMATES ARE
LESS, BUT STILL SUBSTANTIAL

Taking into consideration the problems previously discussed, we developed revised cost and savings estimates for all base realignments and closures having major cost and savings implications. Table 4.3 shows DOD's estimates on a service basis and our revised estimates. We calculated the net present value and the return on investment over a 20-year period, the one-time costs incurred, for major base closure and realignment recommendations. (See app. IV for estimates for each major base.) As we noted earlier, this estimate is for DOD savings only and does not reflect governmentwide cost implications.

Table 4.3: Recalculation of Components' Savings for Major Closure Recommendations

Service	DOD estimate	GAO estimate
Army NPV	\$996,393,000	\$967,751,000
Air Force NPV	2,043,602,000	1,854,401,000
Navy NPV	8,214,044,000	8,122,440,000
DLA NPV	1,570,290,000	941,407,000
Total NPV	\$12,824,329,000	\$11,885,999,000

Note: To estimate the one-time costs of these actions, we assumed that all civilian employees would receive 50 percent of their salary if subject to a reduction in force, that none of these employees would find positions in DOD or other federal agencies, and that any civilian hired due to a realignment would cost \$1,056.

CERTAIN SAVINGS ESTIMATES ARE VERY SENSITIVE
TO CHANGES IN CONSTRUCTION PROJECTIONS

We also tested the sensitivity of closure and realignment costs and savings to increases in military construction by reviewing the effect on estimates if construction costs were increased 100 percent. We found that while most estimates were not sensitive to this increase, a few were. Table 4.4 lists the closure and realignment estimates that were sensitive to the cost increase.

Table 4.4: Estimates That Are Sensitive to Military Construction Costs

Service/base	DOD estimate	Estimate with 100-percent increase in construction
Air Force/McGuire NPV One-time cost ROI (years)	\$255,132,000 197,477,000 4	\$105,776,000 361,837,000 10
Navy/NAS ^a Cecil Field NPV One-time cost ROI (years)	200,926,000 312,338,000 6	24,688,000 516,262,000 14
Navy/NTC ^b Orlando/San Diego NPV One-time cost ROI (years)	323,910,000 327,928,000 2	90,447,000 589,383,000 9
Navy/consolidation of naval aviation functions at NAWC ^c Patuxent NPV One-time cost ROI (years)	169,365,000 197,990,000 3	68,316,000 314,732,000 8

^aNaval Air Station.

^bNaval Training Center.

^cNaval Air Warfare Center.

In addition, we noted military construction costs associated with the recommendations are a substantial portion of the one-time cost of the recommendations. The Navy will require an estimated \$2 billion in military construction costs to accomplish its recommendations.

ENVIRONMENTAL CLEANUP COSTS ARE NOT
CONSIDERED IN MAKING CLOSURE DECISIONS,
BUT ARE SUBSTANTIAL

The costs of environmental restoration were not, with one exception, a factor in the DOD base closure decision-making process, and we concur that they should not be. The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (P.L. 96-510) and the Superfund Amendments and Reauthorization Act of 1986 (P.L. 99-499) require the Department to restore contaminated sites on military bases, whether the bases are closing or not. Environmental cleanup costs, however, are likely to have a significant budgetary impact since pressure for rapid conversion and reutilization of closed bases will not allow these costs to be spread over many years.

Estimated Cleanup Costs

The services' estimated cleanup costs for 32 bases affected by the 1988 and 1991 closure actions exceed \$2 billion, and their preliminary estimates for the bases recommended for closure in the current round are about \$725 million.

Service officials indicated that the 1993 BRAC estimates are preliminary because detailed environmental surveys have not been done. Past preliminary estimates have proven to be very low. For instance, when Pease Air Force Base was recommended for closure in 1988, the Air Force's initial estimated cleanup cost was \$11 million. The estimated restoration cost increased to \$63.6 million in fiscal year 1992 and \$102.1 million in fiscal year 1993. Most recently, the estimate had reached \$114 million.

It is too early to assess what impact environmental cleanup will have on the timely disposal of properties since most bases are not expected to close until the last quarter of fiscal year 1993 or later. As of December 31, 1992, DOD had sold \$15.5 million worth of base closure property.

CONCLUSIONS

Despite problems we noted concerning the accuracy of certain cost factors, DOD's 1993 recommendations for base closures and realignments should yield a substantial savings to the Department of Defense. However, DOD did not consider the governmentwide costs and savings associated with its recommendations. Although we did not have sufficient time to estimate the costs and savings, they involve such areas as the impact of hospital closures on Medicare costs and the loss of rental fees paid to the General Services Administration. Consequently, the ultimate governmentwide budgetary impact of the recommendations is not known.

The cost model used to generate the costs and savings of closure and realignments actions, while an effective instrument for generating the cost and savings of most actions, is not as effective when calculating the costs and savings of certain realignment actions. The impact of these limitations most significantly impacted DLA's cost and savings estimates.

Additionally, certain of the major recommended closure and realignment cost and savings estimates are very sensitive to changes in military construction cost estimates.

RECOMMENDATIONS

To improve DOD's cost and savings estimates, we recommend that the Secretary of Defense direct the following actions be taken:

- Identify the governmentwide implications of the 1995 base closures and realignment recommendations.
- Form working groups similar to those that previously addressed the limitations of the cost model and address problems experienced during the 1993 round. At a minimum, the group should focus on those problems that affect estimating overhead costs for realigning activities.

We also recommend that the Base Closure and Realignment Commission have (1) DOD identify those closures and realignments that have cost and savings implications that affect other federal agencies and (2) closely examine those recommendations that could be affected by the weaknesses in the cost model and that are sensitive to changes in military construction costs.

OFFICE OF THE SECRETARY OF DEFENSE
BASE REALIGNMENT AND CLOSURE DEFINITIONS

The following definitions were provided by OSD to the Department of Defense components for use in the base closure and realignment process. Following the definitions is a list of major closures which we identified as not consistent with the "close" definition.

CLOSE

All missions of the base will cease or be relocated. All personnel (military, civilian and contractor) will either be eliminated or relocated. The entire base will be excessed and the property disposed.

Note: A caretaker workforce is possible to bridge between base closure (missions ceasing or relocating) and property disposal, which are separate actions under Public Law 101-510.

CLOSE, EXCEPT

The vast majority of the missions will cease or be relocated. Over 95 percent of the military, civilian, and contractor personnel will either be eliminated or relocated. All but a small portion of the base will be excessed and the property disposed. The small portion retained will often be facilities in an enclave for use by the reserve component. Generally, active component management of the base will cease. Outlying, unmanned ranges or training areas retained for reserve component use do not count against the "small portion retained." Again, closure (missions ceasing or relocating) and property disposal are separate actions under Public Law 101-510.

REALIGN

Some missions of the base will cease or be relocated, but others will remain. The active component will still be most of the remaining portion of the base. Only a portion of the base will be excessed and the property disposed, with realignment (mission ceasing or relocation) and property disposal being separate actions under Public Law 101-510. In cases where the base is both gaining and losing missions, the base is being realigned if it will experience a net reduction of DOD civilian personnel. In such situations, it is possible that no property will be excessed.

RELOCATE

The term used to describe the movement of missions, units, or activities from a closing or realignment base to another base. Units do not realign from a closing or a realigning base to another base, they relocate.

RECEIVING BASE

A base which receives missions, units, or activities relocating from a closing or realigning base. In cases where the base is both gaining and losing missions, the base is a receiving base if it will experience a net increase of DOD civilian personnel.

MOTHBALL, LAYAWAY

Terms used when retention of facilities and real estate at a closing or realigning base are necessary to meet the mobilization or contingency needs of DOD. Bases or portions of bases "mothballed" will not be excessed and disposed. It is possible they could be leased for interim economic uses.

INACTIVATE, DISESTABLISH

Terms used to describe planned actions which directly affect missions, units, or activities. Fighter wings are inactivated, bases are closed.

MAJOR BASES IDENTIFIED AS "CLOSURES"
THAT ARE NOT CONSISTENT WITH OSD'S DEFINITION

ArmyFort George B. McClellan, Alabama

Close Fort McClellan. . . . Retain an enclave for the U.S. Army Reserves. Retain the capability for live-agent training at Fort McClellan.

NavyMare Island Naval Shipyard, Vallejo, California

Close the Mare Island Naval Shipyard (NSY). . . . Family housing located at Mare Island NSY will be retained as necessary to support Naval Weapons Station Concord.

Naval Air Station Alameda, California

Close Naval Air Station (NAS), Alameda, California Ship Intermediate Maintenance Department disestablishes.

Naval Training Center, Orlando, Florida

Close the Naval Training Center (NTC), Orlando Naval Education and Training Program Management Support Activity disestablishes.

Naval Aviation Depot, Pensacola, Florida

Close Naval Aviation Depot Pensacola (NADEP) The dynamic components and rotor blade repair will remain in place.

Naval Air Station Barbers Points, Hawaii

Close the Naval Air Station (NAS) Barbers Point Retain the family housing as needed for multi-service use.

Naval Air Station, Glenview, Illinois

Close the Naval Air Station (NAS), Glenview Family housing located at NAS Glenview will be retained to meet existing and new requirements of the nearby Naval Training Center (NTC), Great Lakes.

Naval Electronics Centers

Close Naval Electronics Systems Engineering Center (NESEC) St. Inigoes, Maryland The ATC/ACLS facility at St. Inigoes and the Aegis Radio Room Laboratory will remain in place and will be transferred to Naval Air Systems Command.

Naval Station, Staten Island, New York

Close Naval Station Staten Island Recruiting District, New York, disestablishes; Supervisor of Shipbuilding, Conversion and Repair (SUPSHIP), Brooklyn Detachment disestablishes.

Naval Station Charleston, South Carolina

Close Naval Station (NS), Charleston Family housing located within the Charleston Navy complex will be retained as necessary to support the nearby Naval Weapons Station Charleston.

Air ForceHomestead Air Force Base, Florida

Close Homestead Air Force Base (AFB), Florida All essential cleanup and restoration activities associated with Hurricane Andrew will continue until completed. If Homestead AFB resumes operations as a civilian airport, the NORAD alert facility may be rebuilt in a cantonment area.

Newark Air Force Base, Ohio

Close Newark AFB, Ohio some workload will move to other depot maintenance activities including the private sector. We anticipate that most will be privatized in place.

O'Hare International Airport,
Air Force Reserve Station, Illinois

Close O'Hare Air Reserve Station (ARS) The City desires to acquire the property for aviation-related commercial use. . . Close O'Hare ARS as proposed by the City of Chicago. . . . If these conditions are not met, the units should remain at O'Hare International Airport.

BASES AFFECTED BY DOD's MARCH 1993
BASE CLOSURE AND REALIGNMENT RECOMMENDATIONS

This appendix shows, by military service and DOD agency, the bases and activities that would be affected by the Secretary of Defense's recommendations. Table II.1 shows the major bases that were recommended for closure, table II.2 shows the major bases that are affected by realignment recommendations, and table II.3 lists the smaller bases and activities that would be affected by closures and realignments.

Table II.1: Major Bases Recommended for Closure

Service/agency	Base/installation
Army ^a	Ft. McClellan, Anniston, Alabama
	Vint Hill Farms, Warrenton, Virginia
Navy	Naval Station Mobil, Alabama
	Mare Island Naval Shipyard, Vallejo, California
	Marine Corps Air Station El Toro, Iroine California
	Naval Air Station Alameda, California
	Naval Aviation Depot Alameda, California
	Naval Hospital Oakland, California
	Naval Station Treasure Island, San Francisco, California
	Naval Supply Center Oakland, California
	Naval Training Center San Diego, California
	Naval Air Station Cecil Field, Florida
	Naval Aviation Depot Pensacola, Florida
	Naval Training Center Orlando, Florida

	Naval Air Station Barbers Point, Hawaii
	Naval Air Station Glenview, Illinois
	Naval Electronic Systems Engineering Center, St. Inigoes, Maryland
	Naval Air Station Meridian, Mississippi
	Naval Air Station South Weymouth, Massachusetts
	Naval Station Staten Island, New York
	Aviation Supply Office, Philadelphia, Pennsylvania
	Charleston Naval Shipyard, South Carolina
	Naval Station Charleston, South Carolina
	Naval Air Station Dallas, Texas
	Naval Aviation Depot Norfolk, Virginia
Air Force	Homestead Air Force Base, Florida
	K.I. Sawyer Air Force Base, Gwinn, Michigan
	Newark Air Force Base, Heath ,Ohio
	O'Hare Airport Air Force Reserve Station, Chicago, Illinois
Defense Logistics Agency	Defense Electronics Supply Center, Dayton, Ohio
	Defense Personnel Support Center, Philadelphia, Pennsylvania

^aThe Army base closure and recommendations listed are only those included in the Secretary of Defense's report.

Table II.2: Major Bases Recommended for Realignment

Service	Base/installation
Army	Ft. Monmouth, New Jersey
	Letterkenny Army Depot, Pennsylvania
	Tooele Army Depot, Utah
	Ft. Belvoir, Alexandria, Virginia
Navy	Naval Submarine Base, New London, Connecticut
	Naval Surface Warfare Center (Dahlgren) White Oak Detachment, White Oak, Maryland
	1st Marine Corps District, Garden City, New York
	Naval Education and Training Center, Newport, Rhode Island
	Naval Air Station Memphis, Tennessee
Air Force	March Air Force Base, California
	McGuire Air Force Base, New Jersey
	Griffiss Air Force Base, New York

Table II.3: Smaller Bases and Activities Recommended for Closure and Realignment

Service/agency	Base/activity
Navy	Naval Civil Engineering Laboratory, Port Hueneme, California
	Naval Facilities Engineering Command, Western Engineering Field Division, San Bruno, California
	Planning, Estimating, Repair and Alternations (Surface) Pacific, San Francisco, California
	Public Works Center San Francisco, California
	Naval Electronic Security Systems Engineering Center, Washington, D.C.
	Naval Hospital Orlando, Florida
	Naval Supply Center Pensacola, Florida
	Naval Surface Warfare Center-Carderock, Annapolis Detachment, Annapolis, Maryland
	Navy Radio Transmission Facility, Annapolis, Maryland
	Sea Automated Data Systems Activity, Indian Head, Maryland
	Naval Air Facility Detroit, Michigan
	Naval Air Facility, Midway Island
	Submarine Maintenance, Engineering, Planning and Procurement, Portsmouth, New Hampshire
	Naval Air Warfare Center-Aircraft Division, Trenton, New Jersey
	DOD Family Housing Office, Niagara Falls, New York

	Naval Air Technical Services Facility, Philadelphia, Pennsylvania
	Planning, Estimating, Repair and Alternations (Surface) Atlantic (HQ), Philadelphia, Pennsylvania
	Naval Electronic Systems Engineering Center, Charleston, South Carolina
	Naval Hospital Charleston, South Carolina
	Naval Supply Center Charleston, South Carolina
	Naval Surface Warfare Center-Port Hueneme, Virginia Beach Detachment, Virginia Beach, Virginia
	Navy Radio Transmission Facility, Driver, Virginia
	Naval Undersea Warfare Center, Norfolk Detachment, Norfolk, Virginia
	Planning, Estimating, Repair and Alternations (Surface) Atlantic, Norfolk, Virginia
	Planning, Estimating, Repair and Alternations, Bremerton, Washington
Navy National Capital Region activities	Security Group Command, Security Group Station, and Security Group Detachment, Potomac, Washington, D.C.
	Bureau of Navy Personnel, Arlington, Virginia (including the Office of Military Manpower Management, Arlington, Virginia)
	Naval Air Systems Command, Arlington, Virginia
	Naval Facilities Engineering Command, Alexandria, Virginia
	Naval Sea Systems Command, Arlington, Virginia

	Naval Supply Systems Command, Arlington, Virginia (including Defense Printing Office, Alexandria, Virginia, and Food Systems Office, Arlington Virginia
	Naval Recruiting Command, Arlington, Virginia
	Tactical Support Office, Arlington, Virginia
Navy/Marine Reserve activities	
Naval Reserve activities	Gadsden, Alabama
	Montgomery, Alabama
	Fayetteville, Arkansas
	Fort Smith, Arkansas
	Pacific Grove, California
	Macon, Georgia
	Terre Haute, Indiana
	Hutchinson, Kansas
	Monroe, Louisiana
	New Bedford, Massachusetts
	Pittsfield, Massachusetts
	Joplin, Missouri
	St. Joseph, Missouri
	Great Falls, Montana
	Missoula, Montana
	Atlantic City, New Jersey
	Perth Amboy, New Jersey
	Jamestown, New York
	Poughkeepsie, New York

	Altoona, Pennsylvania
	Kingsport, Tennessee
	Memphis, Tennessee
	Ogden, Utah
	Staunton, Virginia
	Parkersburg, West Virginia
Naval Reserve facilities	Alexandria, Louisiana
	Midland, Texas
Navy/Marine Corps Reserve Centers	Fort Wayne, Indiana
	Billings, Montana
	Abilene, Texas
Readiness Command regions	Olathe, Kansas (Region 18)
	Scotia, New York (Region 2)
	Ravenna, Ohio (Region 5)
Defense Logistics Agency	Defense Distribution Depot Oakland, California
	Defense Distribution Depot Pensacola, Florida
	Defense Contract Management District Northcentral, Chicago, Illinois
	Defense Logistics Service Center, Battle Creek, Michigan
	Defense Contract Management District Midatlantic, Philadelphia, Pennsylvania
	Defense Distribution Depot Letterkenny, Pennsylvania
	Defense Logistics Agency Clothing Factory, Philadelphia, Pennsylvania

	Defense Distribution Depot Charleston, South Carolina
	Defense Distribution Depot Tooele, Utah
	Defense Contract Management District West, El Segundo, California
	Defense Reutilization and Marketing Service, Battle Creek, Michigan
	Defense Industrial Supply Center, Pennsylvania
DOD data processing centers	
Navy	Facilities Systems Office, Port Hueneme, California
	Fleet Industrial Support Center, San Diego, California
	Naval Air Warfare Center, Weapons Division, China Lake, California
	Naval Air Warfare Center, Weapons Division, Point Mugu, California
	Naval Command Control and Ocean Surveillance Center, San Diego, California
	Navy Regional Data Automation Center, San Francisco, California
	Naval Computer and Telecommunications Station, San Diego, California
	Bureau of Naval Personnel, Washington, D.C.
	Naval Computer and Telecommunications Station, Washington, D.C.
	Naval Air Station, Key West, Florida
	Naval Air Station, Mayport, Florida
	Naval Computer and Telecommunications Station, Washington, D.C.

	Trident Refit Facility, Kings Bay, Georgia
	Naval Computer and Telecommunications Area Master Station, Pearl Harbor, Hawaii
	Naval Supply Center, Pearl Harbor, Hawaii
	Enlisted Personnel Management Center, New Orleans, Louisiana
	Naval Computer and Telecommunications Station, New Orleans, Louisiana
	Naval Air Station, Brunswick, Maine
	Naval Air Warfare Center, Aircraft Division, Patuxent River, Maryland
	Aviation Supply Office, Philadelphia, Pennsylvania
	Naval Supply Center, Charleston, South Carolina
	Naval Air Station, Oceana, Virginia
	Naval Computer and Telecommunications Area Master Station, Atlantic, Norfolk, Virginia
	Navy Data Automation Facility, Corpus Christi, Texas
	Navy Recruiting Command, Arlington, Virginia
	Naval Supply Center, Norfolk, Virginia
	Naval Air Station, Whidbey Island, Washington
	Naval Supply Center, Puget Sound, Washington
	Trident Refit Facility, Bangor, Washington

Marine Corps	Marine Corps Air Station, El Toro, California
	Regional Automated Services Center, Camp Pendleton, California
	Marine Corps Air Station, Cherry Point, North Carolina
	Regional Automated Services Center, Camp Lejeune, North Carolina
Air Force	Regional Processing Center, McClellan Air Force Base, California
	Air Force Military Personnel Center, Randolph Air Force Base, Texas
	Computer Service Center, San Antonio, Texas
	7th Communications Group, Pentagon, Arlington, Virginia
Defense Logistics Agency	Information Processing Center, Battle Creek, Michigan
	Information Processing Center, Philadelphia, Pennsylvania
	Information Processing Center, Ogden, Utah
	Information Processing Center, Richmond, Virginia
Defense Information Systems Agency	Defense Information Technology Service Organization, Indianapolis Information Processing Center, Indiana
	Defense Information Technology Service Organization, Kansas City Information Processing Center, Kansas
	Defense Information Technology Service Organization, Columbus Annex (Dayton), Ohio

SUMMARY OF SELECTION PROCESSES
USED BY DOD COMPONENTS

This appendix summarizes the processes used by the Army, the Navy, the Air Force, the Defense Logistics Agency (DLA), the Defense Information Systems Agency (DISA), and the Defense Finance and Accounting Service (DFAS) to evaluate and select bases for closure or realignment. Each DOD component developed its own selection process, so terms and definitions are not always consistent.

ARMY

The Army followed a two-phase process to select bases for closure and realignment. In the first phase, the Army identified its U.S. installations, categorized them by function, and evaluated their military value. In the second phase, the Army used the base force structure, along with the military value assessments and other information, to identify candidates for closure or realignment and then performed a more detailed analysis of the candidates. The Army followed basically the same process in making its 1991 base closure and realignments proposals.

The Army's process was directed by the Total Army Basing Study (TABS) Group, which the Army established on August 1, 1992. The TABS Group was responsible for developing, evaluating, and documenting base closure and realignment alternatives and recommending alternatives to the Secretary of the Army.

Determining Military Value

The Army identified 95 installations, which included all installations meeting the criteria for consideration by BRAC within the United States, and grouped them into 11 major installation categories related to Army functions such as training. Each category was assigned to an Army major component, which would be responsible for evaluating the bases' military value. Table III.1 shows the five Army functions and related installation categories and the evaluating components.

Table III.1: Army Installation Categories and Evaluating Components

Installation category	Number	Evaluating component
Fighting		Army Forces Command
Maneuver	11	
Major training area	10	
Subtotal	21	
Training		Army Training and Doctrine Command
Initial entry/branch schools	13	
Professional schools	5	
Subtotal	18	
Industrial		Army Materiel Command
Depots	11	
Commodity-oriented	12	
Proving grounds	4	
Production	13	
Ports	3	
Subtotal	43	
Medical centers	2	Army Health Services Command
Command and control	11	TABS Group

To assess the military value of the installations and rank them within their category, the Army developed the following five broad measures--termed "measures of merit":

- Mission essentiality: The ability of an installation to generate, project, and sustain combat power in support of national military goals.
- Mission suitability: The ability of an installation to support the operational requirements of its assigned units.

- Operational efficiencies: The cost of operating and maintaining the installation.
- Expandability: The ability of an installation to increase current mission activities and accept other functions at the same location.
- Quality of life: The ability of an installation to support soldiers and their families.

The relationship between the Army's measures of merit and DOD's criteria for military value is shown in table III.2.

Table III.2: DOD Military Value Criteria and the Army's Corresponding Measures of Merit

DOD criteria for military value	Army measures of merit
1. The current and future mission requirements and the impact on operational readiness of DOD's total force.	Mission essentiality Mission suitability
2. The availability and condition of land, facilities, and associated airspace at both the existing and potential receiving locations.	Mission suitability Expandability Quality of life
3. The ability to accommodate contingency, mobilization, and future total force requirements at both the existing and potential receiving locations.	Mission suitability
4. The cost and manpower implications.	Operational efficiencies Expandability Quality of life

The measures of merit were weighted numerically to reflect their relative importance, with the weights varying for each category. However, the mission essentiality and mission suitability measures received the strongest emphasis for all categories. Specific installation attributes were established for each measure of merit to enable comparison among installations and help provide an overall assessment of an installation's military value. The attributes, like the measures of merit, were weighted.

The Army component responsible for evaluating each installation category gathered the necessary data and assessed the military value of the individual installations. The components followed guidance issued by the TABS Group that defined the attributes, described their purpose, identified the methodology for measuring the attributes, identified the reference or source where data should be obtained, determined the unit of measure, and provided criteria for scoring the weighted values of the attributes among competing installations.

The components calculated military value using a decision support software package called Decision Pad (D-Pad). D-Pad allows the decision maker to evaluate a set of alternatives or courses of action (in this case, the installations) by weighing a given set of criteria (attributes). The output of D-Pad was a rating, ranked from best to worst relative to the criteria, for each installation. Army officials stressed that this quantitative assessment provided the starting point in the evaluation of the Army's base structure; it did not produce recommendations for closing or realigning bases.

Identifying and Assessing Alternatives

In the second phase of the Army's selection process, the TABS Group developed a list of study candidates for possible closure or realignment. The basis for selecting these candidates included the force structure plan for fiscal years 1993 to 1999 developed under President Bush. This was used to identify excess capacity. In addition, because the need for all installations do not lend themselves to a direct correlation with the force structure, the following information was also used:

- The military value assessments produced in the first phase;
- The Army's fiscal year 1993 basing strategy, which discusses (1) the Army's force structure; (2) opportunities to eliminate, collocate, or consolidate branch, school, center, and industrial base functions; and (3) the closure of small, single-purpose installations where feasible.
- The major commands' vision statements of how they saw themselves organizing and operating in the future. These vision statements were prepared specifically for the Army's base closure and realignment process and were approved by the Secretary of the Army and the Army Chief of Staff.

After considering the TABS Groups recommendations, the Under Secretary of the Army and the Army Vice Chief of Staff made the final decisions on which installations would be candidates for

further study. Of the 95 installations within the United States, 35 were approved as candidates. These are listed in table III.3 by installation category. No ports or production facilities were selected for further study.

Table III.3: Candidates for Closure or Realignment

Installation category	Base
Fighting	
Maneuver	Ft. Drum, New York
	Schofield Barracks, Hawaii
	Ft. Richardson, Arkansas
	Ft. Wainwright, Arkansas
Major training area	Ft. McCoy, Wisconsin
	Ft. Chaffee, Arkansas
	Ft. A.P. Hill, Virginia
	Ft. Dix, New Jersey
	Ft. Pickett, Virginia
	Ft. Indiantown Gap, Pennsylvania
Training	
Initial entry/branch schools	Ft. McClellan, Alabama
	Ft. Eustis/Ft. Story, Virginia
	Ft. Lee, Virginia
Professional schools	Presidio of Monterey, California
Industrial	
Depots	Tobyhanna, Pennsylvania
	Anniston, Alabama
	Red River, Texas
	Tooele, Utah
	Letterkenny, Pennsylvania
	Seneca, New York

	Sierra, California
	Savannah, Illinois
Commodity-oriented	Rock Island, Illinois
	Ft. Monmouth, New Jersey
	Vint Hill Farms, Virginia
	St. Louis Federal Center, Missouri
Proving grounds	Dugway, Utah
Medical centers	Fitzsimons, Colorado
Command and control	Ft. Belvoir, Virginia
	Ft. McPherson, Georgia
	Ft. Monroe, Virginia
	Ft. Gillem, Georgia
	Ft. Buchanan, Pennsylvania
	Ft. Hamilton, New York
	Ft. Totten, New York

Once the candidates were approved, the TABS Group assessed the return on investment (payback period in terms of years), the feasibility that the proposed actions could be completed within prescribed time frames, and the economic and environmental impacts. The group performed these assessments using (1) the COBRA cost model, (2) internal feasibility studies, (3) the Office of Economic Adjustment's economic impact model, and (4) environmental impact statements prepared by the Office of the Chief of Engineers. The TABS group provided its final list of candidates for closure and realignment to the Secretary of the Army.

NAVY

The Department of the Navy selected bases for closure and realignment using a four-step process. First, the Department of the Navy identified its U.S. installations, grouped the installations into categories and subcategories, and developed a comprehensive data base. Second, the Department of the Navy analyzed the total capacity of each subcategory and assessed the relative military value of similar bases. Third, the Department of

the Navy developed closure scenarios for reducing excess capacity in each subcategory while accommodating future force requirements. Finally, after developing options, the Department of the Navy estimated the costs and savings of the potential closure and realignment actions and analyzed their economic, community, and environmental impacts. With this information, the Department of the Navy finalized its list of recommended closures and realignments.

The Secretary of the Navy established the Base Structure Evaluation Committee to direct the selection process and recommend installations for possible closure and realignment. The Evaluation Committee consisted of six flag/general level officers, of which three were from the Navy and three were from the Marine Corps, and was chaired by a senior civilian. A team of technical experts and analysts was also formed to provide assistance.

Categorizing Installations and Developing a Data Base

The Department of the Navy identified a total of 1,027 installations within the United States without regard to whether they had fewer than 300 civilian personnel. To facilitate its analysis of these bases, the Evaluation Committee divided them into three major categories and 30 subcategories, as follows:

- Military Personnel Support: Administrative Activities, National Capital Region Activities, Recruit Training Centers, Marine Corps Recruit Depots, Training/Education Activities, Reserve Centers, Medical/Dental Activities.
- Weapon System and Material Support: Technical Centers; Inventory Control Points; Weapon Stations; Naval Aviation Depots; Shipyards/Ship Repair Facilities; Supervisors of Shipbuilding, Conversion and Repair; Marine Corps Logistics Bases; Public Works Centers; Reserve Maintenance Facilities; Industrial Reserve Plants.
- Shore Support of Operating Forces: Operational Air Stations, Reserve Air Stations, Training Air Stations, Naval Bases, Marine Corps Bases, Supply Centers, Construction Battalion Centers, Naval Facilities, Naval Satellite Operations Centers, Security Activities, Surveillance Activities, Telecommunications Activities, Miscellaneous Other Support Activities.

The Department of the Navy developed a data base of information--the Base Structure Data Base--for use in its analysis. Some of the information in the data base came from existing Department of the Navy data bases, but most of it was gathered through a series of

questions or requests for specific data sent to the installations. In accordance with the Department for the Navy's implementation of the certification requirements in the law, the responses to the data calls were certified as accurate and complete by the originator (the installation) and by each level of the chain of command up to the Evaluation Committee.

Assessing Capacity

Using the information in the Base Structure Data Base, the Department of the Navy analyzed the capacity of installations. Capacity measures varied by installation type. For example, the capacity of a naval air station was the maximum number of aircraft squadrons that could be accommodated by existing facilities; the capacity of a naval station was based on its ability to perform intermediate-level maintenance and the amount of berthing space it had, etc.

The Department of the Navy compared this capacity data against the requirements anticipated under the Bush Base force fiscal year 1999 force structure plan to determine the amount of projected excess capacity. Certain subcategories, such as medical/dental activities were found to have no or minimal excess capacity and were excluded from further consideration. The Department of the Navy also determined that it would be inappropriate to consider industrial reserve plants, which are operated by contractors.

When a subcategory was projected to have excess capacity, the Department of the Navy analyzed the military value of the individual installations within that subcategory. The Evaluation Committee utilized a series of questions relating to military value developed from the data calls that could be answered yes/no or true/false from the information in the data base. The questions were ranked on their importance, given a numerical value, and aligned with one or more of the four DOD selection criteria for military value.

Determining Closure and Realignment Options

The Department of the Navy developed a computer model as a tool to consider alternative base structure configurations for the more complex subcategories. The capacity and military value data developed in the second phase of the process provided the basic inputs for the model. The model's algorithm was constructed to produce a solution in each base category that minimized excess capacity, and to the extent possible, produced an average military value at least as high as the average for each category.

Additional constraints were entered into the model for each subcategory as the Evaluation Committee believed appropriate to consider operational realities. Thus, for example, the model was designed to require that there be at least one fleet concentration on the Atlantic Coast and one on the Pacific Coast.

The configuration options produced by the model were then evaluated. In some cases, the Evaluation Committee made changes to the configurations on the basis of military judgment. For instance, the model determined that closing the naval station and submarine base at Pearl Harbor would maximize the reduction of excess capacity, but the Evaluation Committee believed it was important to retain these bases in order to preserve a naval presence in the Pacific theater. In addition, the Department of the Navy stated that, while the Marine Corps' two training bases, two logistics bases, and two recruit depots were projected to have excess capacity, it was not possible to close any of them because the remaining base in each subcategory could not handle the 1999 force structure requirements.

Analyzing Costs and Savings and Economic and Environmental Impacts

As its final step, the Department of the Navy calculated the cost and savings, economic, and environmental impacts of the closure and realignment actions contained in the final configurations. The Department of the Navy used the COBRA cost model to analyze costs and savings and used the Office of Economic Adjustment's economic impact model to determine how the closures and realignments would affect the local area.

For installations that would receive more personnel as a result of other bases' being closed or realigned, the Department of the Navy determined the impact on local and regional infrastructure, including housing, schools, public utilities, public transportation, and recreational facilities. Two installations indicated a need to expand the local infrastructure, according to the Department of the Navy, and these costs were factored into the COBRA cost model.

AIR FORCE

The Air Force followed essentially the same selection process as it did in 1991. It first identified bases within the United States and sent them a questionnaire to collect relevant data. It then analyzed the capacity of the bases and determined base structure requirements for future years. After excluding some bases from further consideration because they are mission essential, the Air

Force performed a more detailed analysis of the remaining installations to develop its final recommendations.

Key Players in the Air Force Process

The Secretary of the Air Force appointed the Base Closure Executive Group to direct the selection process and provide him with recommended base closure and realignment actions. Staff support was provided by a working group.

The Executive Group and working group continued to function without interruption following the 1991 process. This decision allowed the retention of expertise and the ability to improve the 1993 process. The Executive Group approved an internal control plan and milestone dates for the 1993 process, and involved the Air Force Audit Agency to assist the bases and commands to validate the data collection for the questionnaire. This action resulted in additional guidance to the bases and major commands to improve the data gathering process. The audit agency reviewed the base closure questionnaire data and provided the Executive Group reasonable assurance that data used to compare active bases were materially accurate and questions asked treated all bases objectively. We monitored the Audit Agency's involvement in the process. Guidance to the major commands also established a responsible person in each command to ensure primary responsibility for certifying the accuracy of the data.

Bases Included in the Process

The Air Force identified 100 bases (75 active and 25 reserve) that met the criteria for consideration under the Defense Base Closure and Realignment Act. The Executive Group sent a detailed questionnaire to these bases to gather the necessary data for its analysis. The Executive Group also directed an analysis to determine each base's excess capacity by comparing the fiscal year 1992 force structure requirement (for example, the number of aircraft it could accommodate) with the requirement projected for fiscal year 1999. The results of the capacity analysis were used in conjunction with the force structure plan for fiscal years 1993 to 1999 to determine the Air Force's base structure requirements. In addition, the Air Force determined the costs of relocating or replicating the facilities of a given base if it were closed or realigned.

At this point, the Air Force excluded 16 installations from further consideration because they were deemed either to be essential to the Air Force's mission, or to be located in geographically important areas. For instance, Andrews Air Force Base, Maryland,

was considered a key base for providing airlift support to the President and Congress. The remaining bases--84--were grouped into five major categories and subcategories, as shown in table III.4.

Table III.4: Air Force Installation Categories

Installation category	Number
Flying	
Operations ^a	32
Pilot training ^b	5
Special operations forces	1
Industrial/technical support	
Depots	6
Product centers and laboratories	3
Test facilities	1
Training	
Technical training ^b	4
Education	^c
Other	
Major headquarters	6
Space operations	^c
Cantonments	2
Air Reserve component	
Air National Guard	14
Air Force Reserve	11

^aThis subcategory was further divided into missile bases, large aircraft bases, and small aircraft (fighter-type aircraft) bases. The missile bases were also considered under the large aircraft category.

^bOne base was considered under both the pilot training and technical training subcategories.

^cThe bases in this subcategory were deemed "mission essential" and excluded from further consideration.

The Air Force evaluated the remaining bases by subcategory, eliminating from further analysis those that were projected to have no excess capacity or unreasonably high relocation or replication costs. Six subcategories with a total of 19 installations were eliminated. These subcategories (and the number of bases) were

- industrial/technical support--test facilities (1 base),
- industrial/technical support--product centers and laboratories (3 bases),
- training--technical training (4 bases),
- flying--special operations forces (1 base),
- flying--pilot training (5 bases), and
- other--major headquarters (6 bases).¹

Color Coding and Ranking the Bases

The remaining bases (40 active and 25 reserve) were subjected individually to a more detailed analysis. The Air Force evaluated the active bases against DOD's eight selection criteria (listed in ch. 1). To do this, the Air Force developed sub-elements for each criterion. The information for the sub-elements was gathered by the working group primarily from the bases through a standard questionnaire. The bases were evaluated under common sub-elements for seven of the eight criteria. For the first criterion--current and future mission requirements and impact on operational readiness of DOD's total force--different sub-elements were developed to reflect the different missions of the various categories of bases.

The Air Force scored bases on a color-coded rating system: A "green" rating meant that for a particular characteristic, the base was more desirable for retention; "red" meant least desirable; and a "yellow" rating fell in between. Each color could also have a plus or minus designation. After scoring the bases for individual sub-elements, the Air Force gave an overall color rating for six of the eight DOD selection criteria for each base. The COBRA cost model was used in the Air Force's analysis to provide quantitative data for the other two DOD criteria.

¹One installation, Sheppard Air Force Base, Texas, was listed in two subcategories: training--technical training and flying--pilot training.

The Acting Secretary of the Air Force made the final selections of the active bases to be recommended for closure and realignment. The Air Force stated that these selections were based on the force structure plan and the selection criteria, with consideration given to excess capacity, efficiencies in base use, and evolving concepts of basing the force.

Air Reserve and Air National Guard

The 25 Air Reserve components, including Air National Guard and Air Force Reserve bases, were considered separately from active Air Force bases for two reasons. First, these bases have special relationships with their respective states, and moving units across state boundaries was believed to be impractical. Second, the force structure plan does not call for a reduction in reserve components, and the Air Force found no excess capacity. Consequently, the Air Force considered cost-effective realignments, but not closures, in evaluating reserve component bases.

Some potential realignments were analyzed, but none proved to be cost-effective. However, during this review the Executive Group identified a cost-effective air reserve realignment that did not meet the base closure threshold (300 civilians) and included it in the Air Force recommendations. The recommendation moves the Springfield, Ohio, air reserve to Wright-Patterson Air Force Base, Ohio.

The Air Force also considered that, as proposed by the city of Chicago, its air reserve base at the O'Hare International Airport, Illinois, be relocated to the Greater Rockford, Illinois, airport. This recommendation is contingent on the city of Chicago's financing the full cost of the transfer without any cost to the federal government. Such proposals are allowed under section 2924 of Public Law 101-510. This provision mandates the Department to give special consideration to the proposal.

Changes to 1988 and 1991 Base Closure Commission Recommendations

The Air Force recommended changes to six active bases and one guard base that were recommended for closure and realignment in 1988 and 1991 because of force and base structure changes and Air Force evaluations that redirected missions and functions. The changes will result in military construction cost avoidances. For example, the Air Force recommends that the 1991 Commission recommendation to close Rickenbacker Air Guard Base, Ohio, and relocate it to Wright Patterson Air Force Base, Ohio, be rescinded. The Air Force wants to retain certain functions at Rickenbacker in an cantonment area

and operate as a tenant at the Rickenbacker Port Authority airport. According to the Air Force the State of Ohio is willing pay for much of the cost associated with the operations of the airfield. The Air Force projected a savings of \$11.7 million for military construction cost avoidances at Wright Patterson.

DEFENSE LOGISTICS AGENCY

To select bases for possible closure or realignment, DLA first categorized them by function and collected pertinent data. The agency then determined whether the bases had excess capacity and evaluated their military value. Using this information, it eliminated certain bases from further consideration. For the remaining bases, DLA developed various closure and realignment scenarios and analyzed these scenarios in more detail to determine its final list of recommendations.

This effort was directed by the DLA Base Realignment and Closure Executive Group, which was assisted by a working group.

Categorizing Bases and Collecting Data

DLA identified 49 bases in the United States and grouped these into four categories by their function. These categories are listed in table III.5.

Table III.5: DLA Installation Categories

Category	Number
Regional headquarters	9
Distribution depots	30
Inventory control points	6
Service/support activities	4

To gather data for its analysis, the Executive Group sent questionnaires to the bases (DLA uses the term "primary level field activities"). The questionnaires were tailored to each category. Other data sources included DLA headquarters, OSD, and the military services.

Evaluating Capacity and Military Value

DLA analyzed how much physical space was available at each base and how much space was currently used, determined what work load changes were anticipated and whether the base had space to accommodate these changes, and evaluated whether the base had room to expand its facilities. This data was used to quantify the extent to which an installation could be constrained by physical space, production capability, and other limitations. In performing this analysis, DLA considered

- the future years' force structure plan,
- projected changes in the military services' basing and operations, and
- DLA initiatives to improve operational efficiency and effectiveness.

DLA next analyzed the military value of its bases. This analysis resulted in a ranking of each installation relative to others in its category. To perform this analysis, DLA developed four measures of merit, each of which had applicability to one or more of the DOD selection criteria. These were as follows:

- Mission essentiality: The mission assigned to an installation plays an essential role within DOD and also benefits non-DOD customers. The functions performed in accomplishing the mission may be unique. The strategic location of the facility and the span of control are important to effectively accomplishing the mission.
- Mission suitability: The installation supports assigned missions. This criterion also includes such issues as the age and condition of facilities, the quality of life, location, and proximity to transportation links.
- Operational efficiencies: The installation's mission is performed economically. Operational costs include transportation, mechanical systems, use of space, personnel costs, and facility operating costs.
- Expandability: The installation can accommodate new missions and increased work loads, including sustained contingencies. Considerations include requirements for space and infrastructure, community encroachment, and increased work load.

These measures were refined by category and assigned numerical weights to reflect their relative importance within the category. More specific sub-elements were also developed for each measure, and these were weighted as well. Each base received a final score on its military value, and the results were assigned one of three color scores: green for the highest rated bases, yellow for the next highest rated group, and red for the lowest rated group.

When the working group presented the results of its analysis to the Executive Group, the names of the individual installations were coded to preclude subjectivity regarding their scores. The Executive Group approved a final ranked stacking of the bases in each category.

Developing and Evaluating Scenarios

DLA began this stage in the process by eliminating certain bases from further consideration on the basis of their capacity and military value rankings. According to DLA, the bases that remained candidates for closure or realignment were those that were ranked "significantly lower" than similar bases within their category.

With these prospects, DLA developed alternative scenarios. A number of factors were considered, including the implications of the DOD force structure plan and projected work load estimates. DLA stated that coordination with the military services and other agencies was vital in developing scenarios that were viable. DLA evaluated the return on investment of the scenarios using the COBRA cost model. The Office of Economic Adjustment's economic impact model was used to assess community impact. DLA also reviewed the infrastructure and environmental impacts of the scenarios.

The DLA Director reviewed the Executive Group's recommended base closure and realignment actions and forwarded his recommendations to OSD.

DEFENSE INFORMATION SYSTEMS AGENCY

DISA's objective in the base closure and realignment process was to select data processing centers for disestablishment, consolidating their work loads at new "megacenters." Using plans developed by the DOD components, the agency selected candidates for consideration as megacenters. DISA established criteria for ranking the sites, scored each site against the criteria, and developed a rank ordering of the sites. To determine the number of megacenters needed, the agency determined data processing work load requirements and distributed this work load to the sites, starting with the top-ranked site, until the requirements were satisfied.

On the basis of its analysis, DISA recommended that 44 data processing centers be disestablished and their work loads transferred to 15 megacenters.

This analysis was performed by the DOD Data Center Consolidation Planning Team, which the Director of the Defense Technology Services Office established in January 1993.

Selecting Candidate Sites

The 1989 Defense Management Review called for the consolidation of data processing centers as a way to streamline administrative support systems. Following the review, OSD directed DOD components to prepare a plan for consolidating their data processing centers. The plans submitted by the Army, the Air Force, the Navy, and DLA identified a total of 158 data processing centers that were to be disestablished, their work loads transferred to consolidated centers operated by the individual DOD components.

OSD subsequently changed its approach to the management of data processing centers. In September 1992, OSD directed that a central agency--DISA--be responsible for DOD's information support capability and required that data processing facilities, technology, personnel, and other related assets be transferred to DISA. OSD also mandated that future consolidations be undertaken DOD-wide. Beginning in January 1993, DISA piggybacked its consolidation efforts onto DOD's base closure and realignment process.

The DISA team that performed the analysis is the same team that had developed the Navy's site selection methodology and consolidation plan. The team applied this methodology to DOD's megacenter planning. DISA's first step was to identify data processing centers that could be considered candidates for megacenters. The consolidation plans developed by the DOD components served as the basis for identifying candidates. DISA believed this was the most expedient approach given its 3-month deadline. The agency identified 36 candidates.

Ranking the Candidates

DISA next established criteria for ranking the candidate sites. It defined 15 selection criteria grouped into three broad categories: facilities, security, and operations and cost. The team weighted these criteria in accordance with their relative importance, as shown in table III.6.

Table III.6: DISA Selection Criteria and Their Weights

Weights in percentages

Criteria	Weight
Facilities criteria	
Total space	2
Conditioned space	18
Convertible space	2
Contiguous space	2
Air conditioning	6
Chilled water	2
Electrical power	8
Building condition	10
Subtotal	50
Security criteria	
Back-up power	10
Communications diversity	5
Security perimeters	15
Survivability	5
Subtotal	35
Operations criteria	
Proximity to fiber optic hub	2
Communications bandwidth	3
Regional operations costs	10
Subtotal	15
Total	100

Using information obtained through data calls and site visits, the team scored each candidate against the 15 criteria and weighted and

summed the results. This provided the rank order of the 36 candidate sites.

Determining the Number of Megacenters Needed

DISA determined the required number of megacenters based on data processing work loads. The agency determined the total megacenter work load by totaling the installed processing capacity of all sites to be consolidated, then adding a factor of 50 percent. According to DISA officials, the 50-percent factor was used to allow for a contingency of unspecified future work load increases.

This work load was then distributed to the candidate sites beginning with the top-ranked site. When that site's maximum capacity was reached, the work load was distributed to the next site on the list. DISA worked its way down the list until all the work load requirements were met. The results showed that DOD required 15 megacenters, and the cut-off point on the list of candidates was set accordingly. The proposed megacenters are

- Resource Management Business Activity, Columbus, Ohio;
- Logistics Systems Business Activity--Information Processing Center, Mechanicsburg, Pennsylvania;
- Logistics Systems Business Activity--Information Processing Center, Ogden, Utah;
- Logistics Systems Business Activity--Information Processing Center, Dayton, Ohio;
- Logistics Systems Business Activity--Information Processing Center, San Antonio, Texas;
- Multi-functional Information Processing Activity, St. Louis, Missouri;
- Multi-functional Information Processing Activity, Rock Island, Illinois;
- Logistics Systems Business Activity--Information Processing Center, Oklahoma City, Oklahoma;
- Multi-functional Information Processing Activity, Gunter Annex, Montgomery, Alabama;
- Multi-functional Information Processing Activity, Jacksonville, Florida;

- Resource Management Business Activity, Denver, Colorado;
- Multi-functional Information Processing Activity, Chambersburg, Pennsylvania;
- Logistics Systems Business Activity--Information Processing Center, Warner-Robins, Georgia;
- Resource Management Business Activity, Cleveland, Ohio; and
- Multi-functional Information Processing Activity, Huntsville, Alabama.

The DISA team determined the return on investment of the consolidations using the COBRA cost model. The team also reviewed the DOD selection criteria and determined that the proposed consolidations (1) met the criteria regarding military value; (2) would yield a return on investment of 247 percent; and (3) would have minimal to no economic, community, and environmental impact. Consolidations of the data processing centers are expected to achieve a net savings of \$599 million from fiscal years 1994 to 1999. Annual savings are estimated at \$290 million, with an immediate return on the one-time investment of \$408 million.

DEFENSE FINANCE AND ACCOUNTING SERVICE

The 1991 Defense Base Closure and Realignment Commission recommended that DOD submit a plan to the 1993 Commission for consolidation DFAS's finance and accounting operations. DFAS subsequently developed a plan for (1) consolidating its work force and (2) selecting sites for the consolidated finance and accounting centers, a process it refers to as the "Opportunity for Economic Growth." The Secretary of Defense, however, rejected the site selection process, citing concerns about its public policy implications. Instead, the Secretary directed that the DFAS consolidation continue, for the time being, at the existing centers. OSD plans to review options for a permanent consolidation and make a final decision later. If this review indicates that any part of the consolidation plan requires review by the Commission, the Secretary will submit recommendations as appropriate in 1995.

Consolidating Finance and Accounting Personnel

DFAS was established in January 1991 to consolidate all of the finance and accounting activities of the military services and defense agencies, with the aim of improving service and saving money. The agency had begun formulating its strategic plans and related consolidation initiatives when the Commission recommended

that these efforts be included in the base closure and realignment process.

In 1992, DFAS identified about 45,000 personnel working in the DOD finance and accounting network. About 10,000 of these are located at the five existing DFAS centers. The remaining personnel are scattered at more than 360 field offices operated by the military services and defense agencies. DFAS expects many of these personnel to eventually transfer to DFAS centers.

Initiating the Site Selection Process

When the Commission recommended that the consolidation be part of the base closure and realignment process, DFAS's initial response was to determine whether existing DOD facilities could satisfy its anticipated consolidation requirements. The Assistant Secretary of Defense (Production and Logistics) said that the existing facilities would be insufficient without considerable cost to DOD.

Subsequently, DFAS initiated a nationwide site selection process--the "Opportunity for Economic Growth." This process, modeled after a similar process used by the Bureau of Engraving and Printing in 1985, was designed to provide DFAS with modern, low-cost facilities in exchange for jobs and ancillary employment opportunities. DFAS believes this process would allow it take advantage of incentives offered by local communities hoping to attract these jobs and thereby reduce the cost to the federal government.

Soliciting Proposals

In its solicitation, DFAS requests that interested communities submit proposals for 4,000- or 7,000-employee future centers (or both). DFAS required that each proposal address specific requirements in three major categories: (1) cost to DOD, (2) site and office characteristics, and (3) community characteristics. DFAS also encouraged communities to offer special features and incentives such as transitional office space, employee benefits, training programs and facilities, and other support that would reduce costs to DOD and its employees. Since DFAS's mission does not dictate that its facilities be specially configured or located in specific geographical location, the site selection process had few restrictions.

DFAS announced the site selection process on March 2, 1992, and published it in the Commerce Business Daily on March 3, 1992. To ensure widespread publicity, DFAS also delivered the announcement to each Member of Congress and to the National Governors Association.

Evaluating the Proposals

DFAS received a total of 216 proposals from 112 communities in 33 states by the due date of June 1, 1992. To evaluate the proposals the agency developed about 50 criteria prior to receiving community proposals. Using these criteria, DFAS chose 20 communities, including a total of 44 specific sites, as finalists.

The finalists were notified on December 1, 1992, and DFAS, GAO, and DOD Inspector General officials visited each community during December to discuss each community's proposals, address questions, explain the final proposal requirements, and inspect the proposal sites. DFAS received final proposals that were limited to no more than one 4,000-employee site and one 7,000-employee site per community by the January 4, 1993, due date.

DFAS considered five existing centers equally with the community proposals because it did not consider them existing centers as having special military value related to its mission requirements, operational readiness, physical location, facilities, labor force, or mobilization support capabilities. DFAS officials reasoned that the agency is primarily an administrative support organization that can carry out its mission in any geographic location. Therefore, DFAS used the same criteria to evaluate the new proposed sites and the current center sites.

As the site selection process proceeded, DFAS needed to determine its future personnel requirements. The agency projected an increase to about 33,000 personnel by 1996 and then a decrease to about 21,000 personnel by 2012. The projected decrease beginning in 1996 is based on several key assumptions involving the downsizing of U.S. military forces, the increase in productivity, and the implementation of standard systems.

DFAS evaluated the final proposals and ranked them to employ 21,000 personnel. DFAS selected a facility structure of five 4,000-employee finance centers.

Costs and Savings

Each of the above alternatives were evaluated for costs and savings (including relocation costs). Costs during the period 1993-1999 varied from a low of about \$173 million for alternative four to a high of about \$360 million for alternative two. Annual outyear savings varied from a high of about \$47 million per year for alternative four to a low of about \$4 million for alternative two. Using DFAS's calculations, alternative four was the most advantageous to the agency. On the basis of DFAS's cost analysis,

the rate at which DFAS consolidates and transitions to a future structure is the single largest cost determinate.

These cost estimates, however, do not include salary cost savings that DFAS expects to realize from its consolidation plan. The consolidation plan will reduce the number of finance and accounting personnel from its current total of about 45,000 to 21,000 by the year 2012. If DFAS is able to carry out this plan, it projects that it will save about \$870 million per year in salary costs after the consolidation is complete.

RECALCULATION OF SERVICES COSTS AND SAVINGS

Table IV.1: Recalculation of Army Costs and Savings

Base	DOD estimate	GAO estimate
McClellan		
NPV	\$135,433,000	\$129,945,000
One-time cost	110,316,000	117,270,000
ROI (years)	3	4
Vint Hill Farms		
NPV	92,707,000	91,846,000
One-time cost	72,421,000	73,511,000
ROI (years)	3	3
Monmouth		
NPV	95,995,000	92,989,000
One-time cost	92,863,000	96,592,000
ROI (years)	3	3
Letterkenny		
NPV	166,970,000	161,071,000
One-time cost	105,696,000	112,629,000
ROI (years)	Immediate	Immediate
Tooele		
NPV	387,204,000	377,100,000
One-time cost	73,730,000	85,472,000
ROI (years)	Immediate	Immediate
Fort Belvoir		
NPV	118,084,000	114,800,000
One-time cost	11,304,000	14,967,000
ROI (years)	Immediate	Immediate
Totals		
NPV	\$996,393,000	\$967,751,000
One-time cost	\$466,330,000	\$500,441,000

Table IV.2: Recalculation of Air Force Costs and Savings

Base	DOD estimate	GAO estimate
Homestead NPV One-time cost ROI (years)	\$725,750,000 75,090,000 Immediate	\$725,132,000 75,729,000 Immediate
K.I. Sawyer ^a NPV One-time cost ROI (years)	483,418,000 143,648,000 1	302,301,000 144,394,000 3
Newark NPV One-time cost ROI (years)	6,532,000 31,624 8	599,000 38,290,000 13
March NPV One-time cost ROI (years)	305,283,000 134,798,000 2	305,221,000 134,871,000 2
McGuire NPV One-time cost ROI (years)	255,132,000 197,477,000 4	254,735,000 197,947,000 4
Griffis NPV One-time cost ROI (years)	267,487,000 120,829,000 3	266,413,000 122,017,000 3
Totals NPV One-time cost	\$2,043,602,000 \$703,466,000	\$1,854,401,000 \$713,248,000

^aThe difference between the DOD and GAO estimates was caused by an error made concerning recurring costs for this action (see ch. 3).

Table IV.3: Recalculation of Navy Costs and Savings

Base	DOD estimate	GAO estimate
NSY ^a Mare Island NPV One-time cost ROI (years)	\$1,112,028,000 279,922,000 Immediate	\$1,103,464,000 290,019,000 Immediate
MCAS ^b El Toro/NAS Barbers Point NPV One-time cost ROI (years)	1,374,169,000 898,543,000 Immediate	1,368,850,000 904,697,000 Immediate
NAS ^c Alameda NPV One-time cost ROI (years)	197,100,000 193,964,000 4	193,208,000 198,604,000 4
NADEP ^d Alameda NPV One-time cost ROI (years)	538,881,000 126,808,000 Immediate	535,313,000 130,868,000 Immediate
NAS Cecil NPV One-time cost ROI (years)	200,926,000 312,338,000 6	198,596,000 315,290,000 6
NADEP Pensacola NPV One-time cost ROI (years)	341,203,000 165,391,000 2	335,745,000 171,339,000 2
NTC ^e Orlando/San Diego NPV One-time cost ROI (years)	323,910,000 327,928,000 2	318,093,000 334,532,000 2
NS ^f Charleston NPV One-time cost ROI (years)	748,105,000 184,981,000 Immediate	739,955,000 193,978,000 Immediate
NSY Charleston NPV One-time cost ROI (years)	385,356,000 246,700,000 1	375,797,000 258,127,000 1

NADEP Norfolk NPV One-time cost ROI (years)	748,546,000 172,506,000 Immediate	738,558,000 184,113,000 Immediate
NSC ^g Oakland NPV One-time cost ROI (years)	259,963,000 119,420,000 Immediate	255,666,000 124,945,000 Immediate
Naval Hospital Oakland NPV One-time cost ROI (years)	286,367,000 57,551,000 Immediate	282,065,000 63,102,000 Immediate
Naval Hospital Orlando NPV One-time cost ROI (years)	21,831,000 51,248,000 6	19,929,000 53,699,000 6
Sub Base New London NPV One-time cost ROI (years)	502,959,000 258,873,000 Immediate	498,064,000 265,769,000 Immediate
NAS Meridian/Memphis NPV One-time cost ROI (years)	481,101,000 274,092,000 2	479,325,000 276,194,000 2
Naval aviation functions to Paxutent River NPV One-time cost ROI (years)	169,365,000 197,990,000 3	164,607,000 203,514,000 3
NESEC ^h St. Inigoes, Charleston, Washington, D.C. NPV One-time cost ROI (years)	123,817,000 147,329,000 3	122,407,000 149,092,000 3

Bureau of Navy Personnel		
NPV	118,172,000	117,802,000
One-time cost	59,252,000	60,610,000
ROI (years)	4	4
NSWC ¹ Whiteoak		
NPV	103,319,000	102,892,000
One-time cost	74,577,000	75,119,000
ROI (years)	2	2
NAWC ¹ Trenton		
NPV	74,111,000	71,781,000
One-time cost	97,020,000	99,916,000
ROI (years)	5	5
Naval supply functions consolidate to Mechanicsburg, Pa.		
NPV	102,815,000	100,323,000
One-time cost	88,947,000	91,860,000
ROI (years)	1	1
Totals		
NPV	\$8,214,044,000	\$8,122,440,000
One-time cost	\$4,335,110,000	\$4,445,387,000

^aNaval Shipyard.

^bMarine Corps Air Station.

^cNaval Air Station.

^dNaval Aviation Depot.

^eNaval Training Center.

^fNaval Station.

^gNaval Supply Center.

^hNaval Electronic Systems Engineering Center.

ⁱNaval Surface Warfare Center.

^jNaval Air Warfare Center.

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