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Analysis of DOD's 1995 Process and Recommendations for Closure and Realignment

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

The Honorable Alan J. Dixon
Chairman, Defense Base Closure and
Realignment Commission

The Secretary of Defense announced his 1995 recommendations for base closures and realignments to the Defense Base Closure and Realignment Commission on February 28, 1995. 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, 1995, a report on the recommendations and selection process. We have identified issues for consideration by the Commission as it completes its review of the Secretary of Defense's recommendations. Given that this is the last of three biennial reviews authorized under the 1990 act, we are also including matters for consideration by the Congress regarding the potential need for continuing legislation to authorize further commission reviews and authorize changes, as needed, to prior decisions.

We are sending copies of this report to the Chairmen, Senate Committee on Appropriations, Subcommittee on Defense; Senate Committee on Armed Services; House Committee on Appropriations, Subcommittee on National Security; House Committee on National Security; the Secretaries of Defense, the Army, the Navy, and the Air Force; and the Directors of the Defense Logistics Agency and the Defense Investigative Service. We will make copies available to others on request.

This report was prepared under the direction of David R. Warren, 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 VI.

Henry L. Hinton Jr.

for Charles A. Bowsher
Comptroller General
of the United States

Executive Summary

Purpose

On February 28, 1995, the Secretary of Defense recommended closures, realignments, and other actions affecting 146 domestic military installations. Of that number, 33 were described as closures of major installations, and 26 as major realignments; an additional 27 were changes to prior base closing round decisions. The Secretary projects that the recommendations, when fully implemented, will yield $1.8 billion in annual recurring savings. As required by the Defense Base Closure and Realignment Act of 1990, as amended, this report presents GAO's analysis of the Secretary's recommendations and the selection process used by the various defense components.

Background

Closing unneeded military facilities is not easy, partly because of public concern about the effects on communities and their economies and concerns about the impartiality of the decision-making process. To overcome impediments to base closures, Congress enacted legislation in 1988 (P.L. 100-526) that facilitated a successful round of base closures. Because of that success, Congress enacted the 1990 Defense Base Closure and Realignment Act (Title XXIX, P.L. 101-510), which authorized base closure rounds in 1991, 1993, and 1995. The 1990 legislation outlined a process to close and realign military installations, including the establishment of an independent, bipartisan commission to review the Secretary of Defense's closure recommendations. Base realignment and closure (BRAC) rounds in 1988, 1991, and 1993 resulted in decisions to fully or partially close 70 major domestic bases and to close, realign, or otherwise downsize hundreds of other bases, installations, and activities. DOD estimates that when fully implemented, these actions will produce savings of $4 billion per year.

The current BRAC round retained basically the same requirements and procedures as those in 1993. It included the requirement to use certified data, that is, information that was accurate and complete to the best of the originator's knowledge and belief. This requirement was designed to overcome concerns about the consistency and reliability of data used in the process. For the 1995 round, DOD emphasized the exploration of opportunities for cross-service use of common support assets. It therefore established cross-service review groups to provide the services with alternatives for realignments and closures in the areas of depot maintenance, laboratories, test and evaluation facilities, undergraduate pilot training, and medical treatment facilities.

As before, the Secretary's recommendations were to be based on selection criteria established by DOD and on a 6-year force structure plan. As indicated in table 1, DOD established eight selection criteria; they have remained unchanged since 1991.

Table 1: DOD Criteria for Selecting Bases for Closure or Realignment

Category	Criteria
Military value (priority consideration is to be given to the four military value criteria)	1. 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. 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.
Impact	6. The economic impact on communities.
	7. The ability of both the existing and potential receiving communities' infrastructures to support forces, missions, and personnel.
	8. The environmental impact.

Results in Brief

Although the Department of Defense (DOD) has in recent years undergone substantial downsizing in funding, personnel, and force structure, commensurate infrastructure reductions have not been achieved. Despite some progress in reducing excess infrastructure, it is generally recognized that much excess capacity will likely remain after the 1995 BRAC round. This view is supported by the military components' and cross-service groups' analyses, which showed far greater excess capacity than will be eliminated by the Secretary's recommendations. Currently, DOD projects that its fiscal year 1996 budget represents, in real terms, a 39-percent reduction to its fiscal year 1985 peak of recent times. By way of comparison, its 1995 BRAC recommendations would produce cumulative BRAC reductions of 21 percent in inventory of major domestic bases since 1988.

DOD's 1995 BRAC process was generally sound and well documented and should result in substantial savings. However, the recommendations and selection process were not without problems and, in some cases, raise questions about the reasonableness of specific recommendations. At the same time, GAO also noted that improvements were made to the process from prior rounds, including more precise categorization of bases and activities; this resulted in more accurate comparisons between like facilities and functions and in better analytical capabilities.

GAO raises a number of issues it believes need attention by the Congress and the Commission in considering DOD's recommendations:

- DOD's attempt at reducing excess capacity by suggesting cross-service opportunities to the services facilitated some important results. However, agreements for consolidating similar work done by two or more of the services were limited, and opportunities to achieve additional reductions in excess capacity and infrastructure were missed. In particular, this was the case at depot maintenance activities and laboratory facilities.
- Although the services have improved their processes with each succeeding BRAC round, some process problems continued to be identified. In particular, the Air Force's process remained largely subjective and not well documented; also, it was influenced by preliminary estimates of base closure costs that changed when more focused analyses were made. For these and other reasons, GAO questions a number of the Air Force's recommendations. To a less extent, some of the services' decisions affecting specific closures and realignments also raise questions. For example, the Secretary of the Navy did not consistly apply DOD's criteria when he excluded certain facilities from closure for economic impact reasons. Because the legislation authorizing BRAC expires this year, some process will be needed to handle changes and problems that arise during implementation of this and earlier rounds.

Principal Findings

BRAC Savings Are Expected to Be Substantial, but Estimates Are Preliminary

GAO estimates that the 20-year net present value of savings from DOD's recommendations will be $17.3 billion, with annual recurring savings of almost $1.8 billion. GAO notes that these estimates are not based on budget quality data and are subject to some uncertainties inherent in the process. However, GAO believes the savings will still be substantial. At the same

time, it should be noted that environmental restoration was not a factor in the DOD base closure decision-making process, and such restoration can represent a significant cost following a base closure.

DOD and its components improved their cost and savings estimates for BRAC 1995 recommendations. In developing cost estimates, they took steps to develop more current and reliable sources of information and placed greater reliance, where practicable, on standardized data. Some components sought to minimize the costs of base closures by avoiding unnecessary military construction. For example, the Navy proposed a number of changes to prior BRAC decisions that will further reduce infrastructure and avoid some previously planned closure costs.

GAO has identified a number of instances where projected savings from base closures and realignments may fluctuate or be uncertain for a variety of reasons. They include uncertainties over future locations of activities that must move from installations being closed or realigned and errors in standard cost factors used in the services' analyses. Additionally, some projected savings involve salaries for military personnel associated with BRAC reductions. It is not clear that such positions are always eliminated from the force structure. GAO completed a number of sensitivity tests to assess the potential impact of these various factors on projected costs and savings and found that they had a rather limited impact.

It should be noted that shortly after the Secretary of Defense announced his list of proposed closures and realignments, most DOD components began undertaking more rigorous assessments of expected costs of implementing the recommendations as a basis for developing budget quality data. Such efforts are currently underway primarily in the Army and Air Force, and to less extent in the Navy.

Service Recommendations Will Reduce Infrastructure, but With Little Gain in Cross-Servicing

The BRAC 1995 process reduced some infrastructure in common support areas such as hospitals and pilot training facilities. However, the lack of progress in consolidating similar work done by two or more of the services limited the extent of infrastructure reductions that could have been achieved.

DOD tried to strengthen the 1995 BRAC process by establishing cross-service groups to provide the services with proposals for consolidating similar work in the areas of depot maintenance, laboratories, test and evaluation facilities, undergraduate pilot training, and medical treatment facilities.

However, in the laboratories and test and evaluation areas, the cross-service groups were narrowly focused, and their initial proposals represented minor workload shifts that offered little or no opportunity for a complete base closure or cost-effective realignment. While the depot maintenance group identified excess capacity of 40.1 million direct labor hours, the services' recommendations would eliminate only half that amount. DOD received the services' recommendations too late in the process for meaningful give-and-take discussions to achieve greater consolidations. More time for such interactions and stronger DOD leadership will be required should there be future BRAC rounds.

DOD Components' Processes Were Sound, With Some Exceptions

While GAO found the components' processes for making their recommendations were generally sound and well supported, it did have some concerns. This was particularly the case as it related to the Air Force. Regarding the Air Force, key aspects of its process remained largely subjective and not well documented. Documentation of the Air Force's process was too limited for GAO to fully substantiate the extent of Air Force deliberations and analyses.

However, GAO determined that the initial analytical phases of the Air Force process were significantly influenced by preliminary estimates of base closure costs. For example, some bases were removed from initial consideration based on these estimates. Also, in some instances, closure costs appeared to materially affect how the bases were valued. For example, Rome Laboratory, in Rome, New York, was ranked high for retention purposes largely because of projected high closure costs. When the Air Force later looked at the laboratory at the suggestion of a cross-service group, it found that the closing costs were much lower. Consequently, the Air Force recommended closure of the laboratory. Without the cross-service group's suggestion, the Air Force might have missed this opportunity to reduce excess capacity and produce savings. The Air Force's more numerous recommendations on Guard and Reserve activities were developed outside its process for grouping or tiering bases for retention purposes, and were based largely on cost-effectiveness.

Regarding the Navy, the Secretary of the Navy's actions excluded four activities in California from consideration for closure because of concerns over the loss of civilian positions. For the activities in California, he based his decision on the cumulative economic impact of closures from all three BRAC rounds. But the economic impact of the four California activities, as defined by Office of the Secretary of Defense (OSD) criteria, is less for

individual localities than that for similar activities recommended for closure either by the Navy or by other DOD components. However, OSD did not take exception to this inconsistency.

Regarding the Army, it did not fully adhere to its regular process for installations in assessing military value when recommending minor and leased facilities for closure. In selecting 15 minor sites for closure, the Army based its decision on the judgment of its major commands that the sites were excess and of low military value. In considering leased facilities, the Army relied on its stationing strategy and its guidance to reduce leases but did not assess the facilities separately as it did for other installations. The decisions were arrived at through some departure from the process used for installations.

Some Service Recommendations Raise Issues That Should Be Considered by the BRAC Commission

GAO generally agrees with the Secretary's recommendations. However, it has specific unresolved questions about a number of Air Force recommendations and to much less extent the other components' recommendations. The following are some examples.

Even though the Air Force recognized that it had excess capacity at its five maintenance depots and was considering closing two, it opted late in the process to realign the workload rather than close any depots. However, the Air Force based its decision on preliminary data from incomplete internal studies on the potential for consolidating and realigning workload and reducing personnel levels at the depots. Some of these studies were completed after DOD's BRAC report was published and do not fully support the BRAC-recommended consolidations. These recommended consolidations appear to expand the workload at some depots that are in the process of downsizing. Thus, the Air Force's recommendation may not be cost-effective and does not solve the problem of excess depot capacity.

The Air Force also proposed the realignment of Kirtland Air Force Base, New Mexico, because it rated low relative to the other five bases in the same category. Again, closure costs appeared to heavily influence this base's rating. However, in the military value criterion most important to this group of bases, mission requirements, Kirtland rated among the highest of the six bases. Kirtland's realignment would reduce the Air Force's operational overhead, including support previously provided to the Department of Energy (DOE) and its Sandia National Laboratory located on Kirtland. However, the Air Force's savings could mean an increase in base operational support costs borne by DOE. As GAO has recommended in the

past, it believes DOD should consider the impact of significant government-wide costs in making its recommendations.

The Army's proposed realignment of the Letterkenny Army Depot has generated some concerns not only about the completeness of closure cost data but also about the extent to which the current BRAC recommendation represents a change from a 1993 BRAC decision. BRAC 1993 produced a decision to consolidate all tactical missile maintenance at one location—Letterkenny. The Army's 1995 BRAC recommendation would split up some of the work by transferring the missile guidance system workload to Tobyhanna Army Depot while preserving the tactical missile disassembly and storage at Letterkenny. Maintenance on the associated ground support equipment, such as trucks and trailers, would be done at Anniston Army Depot. There are differences of opinion concerning the impact that separating these functions would have on the concept of consolidated maintenance.

GAO also noted that the services considered closing a number of bases, but ultimately rejected them for operational and cost considerations.

Future BRAC Legislation May Be Needed to Reduce Remaining Excess Activities

According to DOD, its major domestic bases will be reduced by 21 percent after implementation of all BRAC recommendations from the current and prior rounds; however, DOD fell short of meeting the goal it established for BRAC 1995. To bring DOD's base infrastructure in line with the reductions in force structure, DOD's goal for the 1995 round was to reduce the overall DOD plant replacement value by at least 15 percent—an amount at least equal to the three previous base closure rounds. However, DOD's 1995 recommended list of base closures and realignments is projected to reduce the infrastructure by only 7 percent.

The Secretary of Defense recently stated that excess infrastructure will remain after BRAC 1995, and he suggested the need for additional BRAC rounds in 3 to 4 years, after DOD has absorbed the effects of recommended closures and realignments. However, the current authority for the BRAC Commission expires with the 1995 round. Should the Congress seek further reductions, some process will be needed. The current BRAC process, while not without certain weaknesses, has proven to be effective in reducing Defense infrastructure. Also, without new BRAC legislation, there is no process to approve modifications of BRAC decisions if implementation problems arise. BRAC Commissions in 1991 and 1993 ruled

on changes to prior BRAC round decisions, and GAO sees nothing to indicate that changes may not occur in the future.

Matters for Congressional Consideration

GAO suggests that as the Congress considers the need for future defense infrastructure reductions, it consider a process similar to that authorized in the 1990 BRAC legislation. In the meantime, it should also consider legislation to provide a process for reviewing and approving changes to prior BRAC decisions, should DOD components face difficulties in implementation.

Recommendations

GAO is making recommendations to the Secretaries of Defense and the Air Force to strengthen DOD's process should there be future BRAC rounds. It is also making recommendations to the Base Closure and Realignment Commission for its consideration.

Agency Comments

GAO did not request written comments from the Department of Defense. However, GAO 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
ABM	Anti-Ballistic Missile
AFAA	Air Force Audit Agency
AFB	Air Force Base
AFEWES	Air Force Electronic Warfare Evaluation Simulator
AFMC	Air Force Materiel Command
AFRES	Air Force Reserve
AGMC	Aerospace Guidance and Metrology Center
AGS	Air Guard Station
ALC	Air Logistics Center
AMSA	Area Maintenance Support Activity
ARB	Air Reserve Base
ARS	Air Reserve Station
ASO	Aviation Supply Office
ATCOM	Aviation Troop Command
BEA	Bureau of Economic Analysis
BLS	Bureau of Labor Statistics

BOS	Base Operating Support
BRAC	Base Realignment and Closure
BSAT	Base Structure Analysis Team
BSEC	Base Structure Evaluation Group
C4I	Command, Control, Communications, Computers, and Intelligence
CERCLA	Comprehensive Environmental Response, Compensation and Liabilities Act
CHAMPUS	Civilian Health and Medical Program of the Uniformed Services
COBRA	Cost of Base Realignment Actions
DCMC	Defense Contract Management Command
DCMD	Defense Contract Management District
DCSC	Defense Construction Supply Center
DDCO	Defense Depot Columbus, Ohio
DDMT	Defense Depot Memphis, Tennessee
DDOU	Defense Depot Ogden, Utah
DDRV	Defense Depot Richmond, Virginia
DFSC	Defense Fuel Supply Center
DGSC	Defense General Supply Center
DIS	Defense Investigative Service
DISC	Defense Industrial Supply Center
DLA	Defense Logistics Agency
DLSC	Defense Logistics Services Center
DOD	Department of Defense
DOD IG	Department of Defense, Inspector General
DOE	Department of Energy
DOSO	DLA's Operations Support Office
DPSC	Defense Personnel Support Center
DRMS	Defense Reutilization And Marketing Service
DSDC	DLA Systems Design Center
EFA NW	Engineering Field Activity Northwest
EIG	Engineering Installation Group
FISC	Fleet and Industrial Supply Center
GSA	General Services Administration
IAP	International Airport
IG	Inspector General
IC&AD	Investigations Control and Automation Directorate
ICP	Inventory Control Point
ISSC	Information Systems Software Command
IUSS	Integrated Undersea Surveillance System

JPAT	Joint Process Action Team
LANTIRN	Low Altitude Navigation and Targeting Infrared System (Night)
LMI	Logistics Management Institute
MCAS	Marine Corps Air Station
MSA	Metropolitan Statistical Area
NADEP	Naval Aviation Depot
NAESU	Naval Aviation Engineering Service Unit
NAF	Naval Air Facility
NAS	Naval Air Station
NATSF	Naval Air Technical Services Facility
NAVFAC	Naval Facility
NAVMASSO	Naval Management Systems Support Office
NAVSEA	Naval Sea Systems Command
NAWC	Naval Air Warfare Center
NBDL	Naval Biodynamics Laboratory
NCCOSC	Naval Command, Control, and Ocean Surveillance Center
NHRC	Naval Health Research Center
NISE	Naval In-Service Engineering
NISMC	Naval Information Systems Management Center
NMRI	Naval Medical Research Institute
NPRDC	Navy Personnel Research and Development Center
NPS	Nuclear Power School
NPV	Net Present Value
NRC	Naval Reserve Center
NRD	Naval Recruiting District
NRL	Naval Research Laboratory
NSWC	Naval Surface Warfare Center
NSY	Naval Shipyard
NTC	Naval Training Center
NTTC	Naval Technical Training Center
NUWC	Naval Undersea Warfare Center
NWAD	Naval Warfare Assessment Division
OEA	Office of Economic Adjustment
OMB	Office of Management and Budget
ONR	Office of Naval Research
OSD	Office of the Secretary of Defense
PWC	Public Works Center
R&D	Research and Development
RDT&E	Research, Development, Test, and Evaluation
REDCAP	Real-Time Digitally Controlled Analyzer Processor

REDCOM	Readiness Command
ROI	Return on Investment
SAILS	Strategic Analysis of Integrated Logistics Systems
SDIV	Southern Division
SIMA	Shore Intermediate Maintenance Activity
SIOP	Single Integrated Operational Plan
SPAWAR	Space and Naval War Systems Command
SRF	Ship Repair Facility
SSN	Attack Submarine, Nuclear-Powered
SUPSHIP	Supervisors of Shipbuilding, Conversion and Repair
UPT	Undergraduate Pilot Training
WDIV	Engineering Field Activity West

Introduction

In recent years, the Department of Defense (DOD) has seen substantial reductions in its funding, personnel, and force structure, and to less extent in its facilities infrastructure. DOD's attempts to close and realign military bases represent an opportunity to ensure that scarce defense resources are devoted to the most pressing operations and investments rather than to maintenance of unneeded property, facilities, and overhead.

On February 28, 1995, the Secretary of Defense announced recommendations for closures, realignments, and other actions affecting 146 domestic military installations. Of that number, the Secretary described 33 as being closures of major installations and 26 as major realignments; 27 were requested changes to prior BRAC round decisions. 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 the Congress. This year's efforts will mark the fourth round of major base closures since 1988.

Previous Base Closure and Realignment Efforts

Historically, closing unneeded facilities has not been easy, partially because of the public's concerns about the effects of closures on communities and their economies and about the impartiality of the decision-making process. Additionally, 1970s legislation requiring congressional notification of proposed closures and preparation of economic, environmental, and strategic consequence reports greatly impeded base closure efforts. Legislation enacted in 1988 (P.L. 100-526) facilitated a successful round of base closure decision-making. It outlined a special process for considering base realignment and closure (BRAC) actions, authorized a special commission to review proposed closures and realignments, and provided relief from certain statutory provisions that hindered the base closure process.

In 1990, acting without use of special enabling legislation, the Secretary of Defense found it difficult to initiate, and could not complete, additional base realignment and closure actions. Concerned about the Secretary's proposals in January 1990, the Congress passed the Defense Base Closure and Realignment Act of 1990 (Title XXIX, P.L. 101-510), which halted any major closures unless DOD followed the new act's requirements. The act created the independent Defense Base Closure and Realignment Commission; it also outlined procedures, roles, and time lines for the President, the Congress, DOD, us, and the Commission to follow. It required that all bases be compared equally against (1) selection criteria to be

developed by DOD and (2) DOD's current force structure plan. The legislation mandated rounds of BRAC reviews in 1991, 1993, and 1995.[1]

For the 1991 and 1993 rounds under the 1990 legislation, the services and defense agencies submitted their candidates for closure and realignment to the Secretary of Defense for his review. After reviewing these candidates, the Secretary submitted his recommendations to the BRAC Commission for its review. The BRAC Commission, which could add, delete, or modify the Secretary's recommendations, then submitted its recommendations to the President for his consideration. The President could either accept or reject the Commission's recommendations in their entirety; if he rejected them, the Commission could give the President a revised list of recommendations. If the President accepted the Commission's recommendations, he forwarded the list to the Congress, and the list became final unless the Congress enacted a joint resolution disapproving it in its entirety.

By DOD's count, base closure rounds in 1988, 1991, and 1993 produced decisions to fully or partially close 70 major domestic bases and close, realign, or otherwise downsize scores of other bases, installations, and activities.[2] The number of bases recommended for closure or realignment in a given BRAC round is often difficult to tabulate precisely because closure decisions are not necessarily complete closures and closures vary in size. The term base closure often conjures up the image of a larger facility being closed than may actually be the case. Military installations are rather diversified and can include a base, camp, post, station, yard, center, home port, or leased facility. Further, more than one mission or function may be housed on a given installation. For example, in 1993, the Navy closed the Norfolk Naval Aviation Depot, one of its six aircraft maintenance facilities. The Norfolk depot was located on the Norfolk Navy Base, which includes the Norfolk Navy Station, Supply Center, and Air Station.

An individual DOD base closure and realignment recommendation may actually affect a variety of activities and functions without fully closing an installation. Full closures, to the extent they occur, may involve relatively

[1]For each BRAC round, this legislation mandated that we analyze the Secretary's selection process and recommendations, and submit a report to the Congress and the BRAC Commission. Depending on the BRAC round, these reports must be completed within 30 or 45 days after the Secretary of Defense makes public the proposed realignments and closures. For information on the 1991 and 1993 rounds, see: Military Bases: Observations on the Analyses Supporting Proposed Closures and Realignments (GAO/NSIAD-91-224, May 15, 1991) and Military Bases: Analysis of DOD's Recommendations and Selection Process for Closures and Realignments (GAO/NSIAD-93-173, Apr. 15, 1993).

[2]See appendix I for definitions pertaining to DOD's base realignment and closure actions.

small facilities, rather than the stereotypically large military base. Thus, this report refers generically to a variety of sized facilities, installations, and activities as base closures.

DOD is still completing the base closures and realignments approved in 1988, 1991, and 1993. By law, DOD must currently initiate closure or realignment actions no later than 2 years after the President submits his list to the Congress and must complete implementation within 6 years. As of January 1995, DOD data shows that 51 percent of the 70 major closing actions of the prior three rounds had been completed. Bases selected for closure in BRAC 1995 must be closed by 2001.

DOD calculated that BRAC rounds in 1988, 1991, and 1993 resulted in decisions to close 14 percent of its major domestic bases, representing a 15-percent reduction in plant replacement value.[3] DOD data shows that reductions in military and civilian personnel levels during this time period have been much steeper and are slated to reach 32 percent within the next several years. Similarly, DOD states that its budget request for fiscal year 1996 is, in real terms, 39 percent below fiscal year 1985, the peak year for inflation-adjusted budget authority in recent times. Firm correlations between these data sets are problematic. Nevertheless, differences in the extent of reductions among these categories have been used to suggest the need for significant additional infrastructure reductions in BRAC 1995.

The 1995 Base Realignment and Closure Round

The 1995 BRAC round was subject to the same legislatively mandated requirements and procedures enacted in 1990, and subsequently amended, that governed BRAC rounds in 1991 and 1993. However, for the 1995 round, DOD also required that its components explore opportunities for the cross-service use of common support assets. Thus, the Office of the Secretary of Defense (OSD) organized cross-service review groups to propose alternatives for the components to consider in the following five functional areas: (1) maintenance depots, (2) laboratories, (3) test and evaluation facilities, (4) undergraduate pilot training, and (5) medical treatment facilities.

On January 7, 1994, the Deputy Secretary of Defense issued policy guidance for the 1995 BRAC round. He stipulated that his goal was to further reduce the overall DOD domestic base structure by a minimum of 15 percent of DOD-wide plant replacement value.

[3]Plant replacement value is DOD's estimate of what it would cost to replace all the buildings, pavements, and utilities at its bases using today's building standards.

Actions Taken to Help Ensure the Integrity of the Process

Several requirements of the BRAC process are designed to contribute to its fairness and integrity, including the following:

- Closure and realignment decisions must be based upon selection criteria and a current force structure plan (fiscal years 1996 to 2001) developed by the Secretary of Defense.
- All installations must be considered equally for possible closure or realignment.
- All components must use specific models for assessing (1) the cost and savings associated with BRAC actions and (2) the potential economic impact on communities affected by those actions. We have identified shortcomings in these models in prior BRAC rounds and have seen improvements made in each round to enhance their effectiveness.
- Decisions to close defense facilities with authorization for at least 300 civilians must be made under the BRAC process. Decisions to realign defense facilities authorized at least 300 civilian that involve a reduction of more than 1,000 civilians, or 50 percent or more of the civilians authorized, also must undergo the BRAC process. DOD components retain the option of including facilities/activities that fall below the threshold.
- Information used in the BRAC decision-making process must be certified; that is, the information is accurate and complete to the best of the originator's knowledge and belief. This requirement was designed to overcome concerns about the consistency and reliability of data used in the process.
- DOD components must develop and implement internal control plans identifying how they intend to conduct their BRAC process, foster accurate data collection and analyses, and document decisions.
- Service audit agencies and DOD Inspector General (IG) personnel must be extensively involved in auditing the process to better ensure the accuracy of data used in decision-making and enhance the overall integrity of the process.

Selection Criteria

DOD has used the same eight selection criteria in BRAC 1995 as it did in the prior two rounds (see table 1.1).

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

Category	Criteria
Military value (priority consideration is to be given to the four military value criteria)	1. 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. 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.
Impact	6. The economic impact on communities.
	7. The ability of both the existing and potential receiving communities' infrastructures to support forces, missions, and personnel.
	8. The environmental impact.

Force Structure Plan

Decisions under each of the last three BRAC rounds have been predicated on the most current force structure plan. The force structure plan for fiscal years 1995 through 2001 governs BRAC 1995. The planned force structure includes 10 active Army divisions, 11 Navy aircraft carriers, and 936 active Air Force fighter aircraft. This contrasts with the force structure in effect for BRAC 1993, which included 12 active Army divisions, 13 Navy aircraft carriers, and 1,098 fighter aircraft.

Key Steps in DOD Components' Decision-Making

Each of the DOD components participating in BRAC 1995—including the Air Force, Army, Navy, Defense Logistics Agency (DLA), and Defense Investigative Service (DIS)—had its own unique organization and process for identifying candidate bases or activities for closure and realignment. Yet, in varying degrees, each component incorporated similar key steps.

Establishing Base Closure Review Organizations

Each DOD component participating in BRAC 1995 was responsible for completing a review and giving the Secretary of Defense its candidates for base closure and realignment. To accomplish this objective, each

component established an internal organization for conducting the reviews. The Air Force, Navy, and DLA had executive-level review groups, with senior civilian and military personnel overseeing the BRAC process. Each organization also formed working groups functioning under its executive review group. Decisions on candidate bases to be forwarded to the Secretary of Defense were made by the respective service secretaries and agency heads.

The Army's principal organization for conducting its base closure review was a working group that functioned under the direction of a brigadier general. Periodic briefings were provided, as needed, to the senior Army leadership, including the Vice Chief of Staff, Chief of Staff, and Secretary of the Army. DIS had an executive group composed of senior agency officials who directed the functions of working groups under them.[4]

Categorizing Bases and Activities

Each DOD component grouped its bases, installations, or activities with like missions, capabilities, or attributes into categories and, where appropriate, subcategories. The Army and Air Force tended to establish categories according to the type of installations and bases. The Navy and DLA categories were more oriented to functional activities. Specifically, the services and DLA grouped their installations and bases as follows:

- The Army had 15 categories of facilities, the major ones being combat maneuver installations, major training areas, command and control/administrative support, training schools, and ammunition storage facilities.
- The Navy placed all its activities into one of five categories: operational support, industrial support, technical centers/laboratories, educational/training, and personnel support/other. Within these categories were 27 subcategories. The largest category, operational support, had 12 subcategories, which included operational air stations, reserve air stations, and naval bases. The industrial support category included subcategories such as shipyards and aviation depots. Within these subcategories were individual Navy and Marine Corps installations and activities subject to review for closure or realignment.
- The Air Force had seven base categories encompassing operations —small and large aircraft and missile bases; technical training and education facilities; undergraduate flying training; other/administrative; space

[4]DIS' interest in BRAC 1995 was limited to seeking a change to a 1988 BRAC Commission action that realigned Fort Holabird, Maryland, leaving DIS as the fort's primary tenant. During BRAC 1995, DIS sought relocation from Fort Holabird and construction of an office building at Fort Meade, Maryland. Accordingly, DIS had a rather abbreviated BRAC program and review process.

operations; industrial/depot test facilities and laboratories; and Guard and Reserve facilities.

- DLA had four functional categories: command and control, distribution depots, inventory control points, and service/support activities. Distribution depots represented the largest category, which was subdivided into stand-alone depots and specialized depots collocated with non-DLA maintenance depots of individual services. Compared with the services, which normally own or otherwise control their bases, DLA is almost always a tenant on another component's facility.

Data Gathering and Analysis to Identify Excess Capacity and Establish Military Values for Activities/Bases

Initial steps in BRAC 1995 evaluations were to (1) determine whether bases/facilities in categories/subcategories had excess capacity for future requirements and (2) assess bases and facilities against the military value selection criteria. These were important steps toward identifying bases/facilities/activities for further study as potential candidates for closure or realignment.

Data used to make these initial determinations of capacity and military value (and satisfy data requirements for other review criteria) were obtained by the DOD components through questionnaires, or data calls, that went out to their activities, facilities, and installations. This quantifiable data was unique to each category about facilities, missions, operations, and personnel. Individuals that provided this data had to certify that it was accurate and complete.

A starting point for assessing excess capacity was examining changes in future years' force structure. Beyond that, how excess capacity was evaluated varied by and within component, depending on the type of activity. The Navy, for example, used personnel throughput as a capacity indicator for its training air stations; for operational air stations, capacity was measured by the number of air squadrons that could be housed in terms of hangar and required support space. Likewise, capacity for Air Force bases with aircraft missions was evaluated in terms of the maximum number of mission aircraft that could be parked at the bases.

The Army relied upon measures besides quantifiable data to assess excess capacity. Guidance and insights on potential excess capacity were derived from a study entitled "The Army Stationing Strategy." This study, produced by the Deputy Chief of Staff for Operations and Plans at the outset of the 1995 BRAC review process, served as a frame of reference, or operational blueprint, for the Army's BRAC review process. Drawing on input from

senior leaders in the Army, this study provided operational insights and military judgments regarding each category of Army base/facility, including possible operational requirements and opportunities to reduce infrastructure. For example, the study cited the need to maintain the capability to station 10 division equivalents plus 2 armored cavalry regiments in the United States—the equivalent of 32 maneuver brigades. This requirement was predicated on the Army's force structure remaining as it is now and included contingency planning for stationing all Army forces in the United States. The study estimated that the Army could now house 29 brigades in the United States without any new construction; with military construction, it could increase its capacity to station 38 brigades. This stationing strategy formed the basis for military value assessments and was used to identify a list of installations to be studied closer for closure or realignment.

Key measures of capacity for DLA were the amount of physical space and throughput capacity available and used. Although it depended on data calls for information about storage capacity, DLA's BRAC review also used as a frame of reference "concepts of operation" for each of its organizational categories to guide decision-making. Examples of concepts of operations were increased emphasis on modern means to eliminate old, excess items; less reliance on item stockage in government depots; and greater reliance on industry delivery systems for direct delivery to military customers.

Each component developed a unique analytical approach to using DOD's military value criteria to analyze, rank, or tier facilities within its categories. Data call responses were keyed to the selection criteria. Data calls were designed to permit comparisons among installations and activities. The components assigned values to particular data call items based on their importance to the individual elements of military value. Subsequently, ranked or tiered installations and activities were used as a frame of reference by most components in selecting specific installations and activities for further assessment in terms of potential closing or realignment action. Thus, the ranking or tiering of installations was viewed more as the beginning of the deliberative process, rather than the end of it.

Identifying Potential Realignment and Closure Candidates and Analyzing Scenarios

After DOD components identified candidates for further study, they examined the feasibility of various realignment and closure scenarios. For a component with primarily one function/activity/mission at a given base or facility, scenarios focused on options for eliminating or relocating that single function or mission. The potential for closing these bases was more

apparent. Components with BRAC categories more aligned to functions than to bases could make decisions affecting several functions on a given installation before their cumulative effect provided the potential for a base closure or major realignment.

Most components relied on their staffs' technical expertise and professional judgment in identifying various alternative scenarios. For example, because several of DLA's activities were collocated with service activities or closely tied to service operations, DLA coordinated with the services in developing its scenarios. DLA considered several factors, such as the services' force structure changes, base closure or realignment plans, and projected workload estimates.

The Navy was the only service to use a computer program to configure requirements to existing capacity in each of its basing categories as a starting point for deliberation on closure/realignment scenarios. The program was designed to find a set of activities in a subcategory that achieved a reduction of excess capacity to varying degrees. The Navy also had the unique goal of maintaining an average military value at least as high as that calculated for all activities in a subcategory. Thus, it was possible to recommend some bases with higher military value for closure while leaving others open.

The services' identification of scenarios was complemented by alternatives given to them for their consideration by cross-service working groups. Appendix II provides a more complete description of the cross-service working groups' analytical processes.

Gauging Potential Costs and Savings for Various Scenarios

Important aspects of the scenarios to evaluate were the costs, savings, and payback periods associated with them. Each component assessed costs using the Cost of Base Realignment Actions (COBRA) model. This model has been used in each of the BRAC rounds, and improvements were made after each successive round to overcome identified limitations. Appendix III summarizes improvements that have been made to the COBRA model.

Determining Community, Environmental, and Economic Impacts

Although OSD policy guidance specifies that priority consideration be given to military value, economic, community, and environmental impact issues were also factors in the process. For installations that would inherit additional missions, functions, or personnel as a result of BRAC actions, the component assessed the impact on surrounding communities'

infrastructures, including housing, public utilities, transportation, and recreational facilities.

Under OSD policy guidance, environmental restoration costs were not considered in base closing decisions, since DOD is obligated to restore contaminated sites on military bases regardless of whether they are closed. Yet consideration was given to the impact of BRAC actions on such environmental issues as threatened or endangered species, wetlands, flood plains, water supplies, and air quality. Air quality issues played a larger role in BRAC 1995 than they did in previous BRAC rounds because implementing regulations for the Clean Air Act of 1990 were developed after BRAC 1993. As a result, the components, particularly the Air Force, took a harder look at air quality issues in evaluating their bases in BRAC 1995.

With succeeding BRAC rounds and the cumulative effect of closures and realignments on particular regions, the issue of economic impact on communities has grown in importance. The economic impact was calculated by measuring the direct and indirect effects on employment in the communities affected by a closure or realignment. DOD components calculated the economic impact of each of their recommendations and the cumulative impact of recommendations from this and prior BRAC rounds on individual areas of the United States. Such assessments could, although they did not in the past, provide the basis for the components to consider alternative closures and realignments. Once OSD had compiled BRAC recommendations from all of its components, it likewise made a collective assessment of economic impact. This provided the basis for determining whether final adjustments in proposed realignments and closures were needed before the Secretary submitted his recommendations to the BRAC Commission. Appendix V provides a more complete description of how economic impact was assessed and the changes made to improve this assessment for BRAC 1995. Despite initial expectations that economic impact assessments would play a larger role in BRAC for 1995 than it had in prior rounds, this did not turn out to be the case, with the exception of actions by the Secretary of the Navy to exclude some bases from closure consideration due to the cumulative effects of prior BRAC rounds (see ch. 6).

Military Judgment, Including Operational and Policy Considerations, Affects Ultimate Closure and Realignment Decisions

Although each DOD component goes through a phased and largely quantified process in evaluating its facilities and installations, final closure and realignment decisions are often influenced by military judgments, operational and policy imperatives, and other factors. These are important parts of the BRAC process. Such factors may include a service's decision to maintain certain capabilities on both the east and west coasts, or to maintain a facility having relatively low military value because of its strategic location and importance.

Military judgment and other policy factors are applied at various points throughout the evaluation process to eliminate facilities and installations from further consideration for closure or realignment. To some extent they may also be applied by a service secretary before forwarding candidates to the Secretary of Defense. Likewise, OSD, the Joint Chiefs of Staff, and the war-fighting Commanders-in-Chief also review proposed base closures and realignments, applying their military judgment as a final check on proposed recommendations.

Bases Recommended for Closure and Realignment in BRAC 1995

After reviewing a consolidated list of recommendations for closures and realignments from the services and Defense agencies, and without making any changes, the Secretary of Defense publicly announced his list of recommendations on February 28, 1995. The Secretary recommended closures, realignments, and other actions affecting 146 domestic military installations. Of that number, the Secretary described 33 as being closures of major installations and 26 as major realignments, and 27 involve requests to change (redirect) prior BRAC decisions (see app. IV).

DOD projects that its 1995 BRAC recommendations, if approved, will produce a 6-year net savings of $4.0 billion, with annual recurring savings of $1.8 billion after implementing actions are completed.

Objectives, Scope, and Methodology

The Defense Base Closure and Realignment Act of 1990, as amended, requires that we provide to the BRAC Commission and the Congress a detailed analysis of the Secretary of Defense's recommendations and selection process. Accordingly, from March 8, 1994, to February 28, 1995, we monitored the process as it was being implemented by DOD components. We analyzed the Secretary's recommendations and further analyzed the process between March 1 and April 10, 1995.

DOD and its components granted us varying degrees of access. For example, DLA allowed us to monitor all phases of its decision-making process, including all executive-level sessions at which BRAC issues were being discussed and decisions made. At the other extreme, the Air Force gave us very limited direct access to its process until after the Secretary of Defense announced her recommendations on February 28, 1995. This limited our ability to fully assess the Air Force's process.

We did our work at OSD, the military services' and defense agencies' headquarters and field locations, 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. We also interviewed and obtained pertinent documentation from officials involved in the cross-service working groups.

For each of the services, DLA, and DIS, we reviewed documentation and interviewed officials to determine whether their decision-making processes complied with legislative requirements and OSD guidance and employed sound methodologies and techniques. We broadly examined categories of bases and individual decisions within those categories to determine whether recommended closures and realignments logically flowed from available documentation and decision-making processes. For major recommendations, we tracked the recommendation in detail through the decision-making process to test the decision logic, consistency, reasonableness, and correlation with military value assessments and other decision criteria. We applied the same approach to examine alternatives suggested to the services by the five functional cross-service groups.

If the services used special cost or analytical models, we reviewed them to understand how they fit into the analytical process and examined technical documentation to ensure that these tools were appropriate for their use. We also independently examined the outputs of these models, particularly COBRA. Any errors we detected, such as in cost data, were immediately referred to DOD components for their consideration. In most instances, service audit agencies and the DOD IG made more in-depth assessments of these models and verified data entries and output pertaining to these models; they also referred errors to the components on a real-time basis to ensure needed corrections were made. In most situations, we reviewed and assessed the results of the audit agencies'

work; in selected instances, we observed the work of the audit agencies in making their assessments.

Each of the DOD components used its respective audit agency to provide real-time audit coverage of data collection and analyses processes to ensure that the data used were adequately documented and accurately incorporated in the process. Therefore, we maintained a liaison with these groups to facilitate our monitoring efforts and in selected instances observed their verification of data.

We performed our work in accordance with generally accepted government auditing standards. We did not request written comments from DOD, but we informally discussed our findings, conclusions, and recommendations with DOD officials and included their comments where appropriate.

BRAC 1995 Savings Are Expected to Be Substantial, Although Somewhat Imprecise for Now

Although projected annual recurring savings from DOD's BRAC 1995 recommendations are substantial, various sensitivity tests we completed indicated they could be overstated by 2 percent, and implementation costs could be understated by 4 percent. At the same time, the cost and savings data remain somewhat imprecise pending development of budget quality data for implementation of the recommendations.

The COBRA model is used by DOD components to estimate the costs and savings of base closures and realignments. Improvements have been made to the model after each BRAC round; however, it remains more of a comparative tool rather than a precise indicator of budget costs and savings. DOD has employed a different, but appropriate, discount rate approach for BRAC 1995 than was used in earlier BRAC rounds to project the net present value (NPV) of long-term savings. Recent changes in the actual discount rate for this approach, and DOD's reaction to that change, have created some confusion regarding the extent of long-term savings.

Cost of Base Realignment Actions Model

The COBRA model estimates the costs and savings associated with a proposed base closure and realignment action, using data that are readily available to DOD without extensive field studies. COBRA incorporates data pertaining to three major costs: the current cost of operations, the cost of operations after the closure or realignment, and the cost of implementing the realignment or closure action. Using these costs, COBRA calculates the number of years it takes to generate enough savings to offset the cost of the closure or realignment. Stated another way, it determines how long it takes for the closure or realignment action to be paid for.

COBRA computes the NPV of the BRAC action over a 20-year period, as well as one-time costs, 6-year costs and savings, and annual recurring costs and savings. COBRA data depict costs as accurately as possible; however, when uncertainty exists, COBRA inputs have tended to overestimate costs and underestimate savings as a conservative safeguard to guide decision-making.[1] While COBRA does not produce budget-quality data, it does aggregate relevant cost data to provide a consistent comparison between realignment and closure options.

[1]Environmental cleanup costs, which by OSD policy direction are not included in COBRA calculations. These costs are not a part of base-closing decisions, since they are expected to occur whether a base closes or not.

Substantial Savings Are Expected, Despite Some Errors and Uncertainties

In several instances, variances may exist in cost and savings estimates for BRAC 1995 recommendations. In other instances, cost and savings estimates remain uncertain. However, assuming the Commission approves all recommendations as presented, our analysis indicates that these variances would not significantly alter the substantial savings expected from the BRAC recommendations.

A DOD IG review completed and made public after DOD's BRAC report, including COBRA summaries, showed that several of OSD's standard cost factors supplied for the components' use either were not well supported or were outdated. These standard factors related to civilian personnel and housing costs. As a result of using these faulty standard factors, one-time costs were understated by $101 million, and in at least two instances, one-time costs increased enough to extend the return on investment (ROI) an additional year. However, our analysis also indicated the use of faulty factors caused a reduction in net present value only by approximately $68 million.

Questions have been raised about the accuracy of OSD's standard factors regarding (1) the willingness of civilian employees to relocate if their positions are moved to a new base and (2) the percentage of civilian personnel who would receive other government jobs as a result of the Priority Placement Program.

OSD's standard factor of 6 percent of civilian personnel that would be unwilling to move was based on a 1991 study of one air base. Because of concern that the percentage could be much higher, we completed a sensitivity analysis, assuming that more than two-thirds of affected civilian personnel would be unwilling to move. Our analysis showed a net result of less than a 1-percent change in one-time costs. Increased costs associated with separation of persons unwilling to move was largely offset by decreased costs associated with moving personnel.

The standard factor of 60 percent placement of civilian personnel through the Priority Placement Program (used in all of DOD's COBRAs) was challenged by the DOD IG and subsequently revised by OSD to 50 percent based on historical data. In spite of the reduction, concern remained that the percentage could be much lower. To test the impact of this factor on overall cost, we reran the COBRAs using a 20-percent placement rate. The result was a slight increase (2 percent) in one-time costs, due to a rise in severance pay that was mitigated by a decrease in moving costs.

COBRA uses authorized personnel positions for analysis; however, we found that the actual number of civilian personnel at a base may be less. To determine the impact of this difference, we completed a sensitivity analysis, assuming that the actual civilian personnel levels were 98 percent of what was authorized (an approximation based on differences in recent fiscal years). The results indicated that one-time costs decreased by $17 million, with a 6-year net increase in savings of $27.7 million. This appeared to be caused by (1) reduced moving costs because fewer positions were being realigned and (2) greater overhead savings.

DOD's BRAC policy guidance stipulates that personnel reductions associated with force structure reductions are not to be included in BRAC savings. Other military personnel reductions occurring at bases slated for closure or realignment may be counted as savings to the extent that they represent reductions in salary costs. While such reductions are taken, they may not always result in reductions in authorized end strength. The Navy and the Air Force indicate that they reduce their end strengths to match military personnel reductions resulting from BRAC; the Army, which is claiming savings from such reductions in BRAC 1995, indicates that it does not expect to take commensurate reductions in end strength. We calculate that approximately $41 million of the Army's annual recurring BRAC savings is related to such personnel reductions. Since these personnel will be reassigned elsewhere rather than taken out of the force structure, they do not represent dollar savings that can be readily allocated outside the personnel accounts.

We also found that DOD components were not always able to identify where activities from closing or realigning bases would relocate. Therefore, to fully capture costs and savings, a generic "base X" was used.[2] Collectively, the services and DLA included base X in 32 (22 percent) of their BRAC 1995 recommendations, accounting for 12 percent of all personnel realignments and 3 percent of costs. Further, in 15 of these 32 recommendations, more than half of the personnel realignments were to base X. Because base X represents an average cost option, or in the case of the Navy and Air Force a higher than average cost option, the difference between the COBRA cost estimate and the eventual implementation cost could be more or less for these recommendations. The components with the greatest number of base-X recommendations were the Army and DLA. Army and DLA officials indicated that prior BRAC experience has shown that

[2]For anticipated relocations of less than 50 miles, a generic "base Y" was used. Relocations to base Y, as for actual relocations less than 50 miles, do not include personnel moving costs.

costs associated with such moves have been similar or less than initially projected.

The net result of various sensitivity tests we completed showed that DOD's projected $1.8 billion annual recurring savings from BRAC 1995 recommendations could be overstated by $31 million, or 2 percent, and the cost to implement the recommendations could be understated by $160 million, or 4 percent. This represents a relatively limited diminution in projected cost savings.

It should be noted, however, that most DOD components undertake more rigorous assessments of expected costs very quickly after the Secretary of Defense announces his list of proposed closures and realignments, as they begin to more fully consider how to implement the recommendations and develop budget quality data for doing so. Such efforts are currently underway, primarily in the Army and Air Force, and to a lesser extent in the Navy. A more current estimate of projected costs and savings should be available before the Commission completes its work and issues its report to the President.

Comparability of COBRA Data and Implementing Budget Estimates

Various concerns have been voiced about the comparability of prior BRAC COBRA data and subsequent budget estimates prepared to implement BRAC decisions, and the same concerns pertain to the 1995 BRAC round. It is important to note that COBRA is only a starting point for preparing BRAC implementation budgets, and there are important differences in how cost data is developed for COBRA and for subsequent budget submissions. Thus, no services or defense agencies routinely compare COBRA estimates with implementing budgets. At the same time, the services and defense agencies do not update their initial estimates of BRAC savings once implementing budgets are completed.

Differences between COBRA estimates and the BRAC budget exist for myriad reasons, including the following:

- COBRA estimates, particularly those based on standard cost factors, are averages. Not surprisingly, those averages must be refined for budget purposes.
- COBRA costs are expressed in constant-year dollars; budgets are expressed in then-year (inflated) dollars.
- COBRA costs can be understated if a closing base has several tenant organizations that must be relocated. Understatement has occurred in the

past where decisions had not been finalized when the COBRA costs were estimated.

- Environmental restoration costs are not included in COBRA, but these costs are included in the BRAC implementation budgets.
- COBRA data capture costs and savings pertinent to a given installation, even if multiple tenants are involved; BRAC implementation budgets represent only a single component's costs.
- Homeowners Assistance Program costs are included in COBRA but excluded from BRAC implementation budgets.

While COBRA and budget data are not routinely compared across the board, some ad hoc assessments have shown that budgeted costs related to COBRA cost factors were less than originally projected by COBRA or even initial budget estimates. For example, the Army has found over time that actual BRAC-related personnel costs were less than initially forecast. Also, the DOD IG has done a series of audits comparing most recent budget requests for BRAC construction with the COBRA estimates for 38 affected bases. It found that the budget requests, on average, were 7.79 percent ($170.5 million) less than original estimates.

To the extent that implementation costs are less than those projected by COBRA, BRAC savings can obviously be greater than initially projected. However, as indicated previously, DOD and its components do not routinely update their initial savings estimates. In another review, we are examining the extent to which actual cost savings vary from initial estimates of prior BRAC closures and realignments.

BRAC 1995 Used a Different Discount Rate Approach to Calculate Long-Term Savings

All BRAC 1995 COBRA costs and savings are projected over a 20-year period and are adjusted, or discounted, to fiscal year 1996 dollars. COBRA uses a discount rate to calculate the present value of net savings over the 20-year period. Discounting reflects the time value of money by transforming gains and losses from different time periods to a common unit of measurement. The discount rate is also used as a factor in determining the number of years before the government realizes a return on its ROI, that is, the point at which savings begin to exceed costs associated with the closure or realignment action.

Office of Management and Budget (OMB) Circular A-94, "Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs," provides guidance on the discount rates to be used in evaluating federal programs whose benefits and costs are distributed over time. In prior BRAC rounds,

the discount rate approach used was one that OMB said approximated the rate of return on private capital. According to OMB, that approach is appropriate for analyzing public investments and regulatory programs that provide costs and savings to the general public, such as building a dam. Because the benefits of such programs occur in the private sector, the government's ROI is comparable to the rate of return expected in the private sector. The discount rates for this approach as used in BRAC 1991 and 1993 were 10 percent and 7 percent, respectively, for 20-year programs. Had this approach been used in BRAC 1995, the applicable discount rate would have remained at 7 percent.

OSD opted to use a different discount rate approach for BRAC 1995. After consulting with OMB, OSD elected to use a discount approach tied to the U.S. Treasury's borrowing rate.[3] That approach is considered appropriate for analyzing programs where a given objective is to be achieved at the least cost. An example of a program for which the use of this discount approach is applicable is an investment in an energy-efficient building system that reduces federal operating costs. At the time most BRAC 1995 COBRA analyses were done, the discount rate for this approach was 2.75 percent for 20-year programs—this rate was used by the services in completing their COBRA analyses.[4] However, on February 7, 1995, OMB completed its annual reassessment of the rate and changed it to 4.85 percent.[5] OSD did not revise its COBRA assessments to reflect this higher rate.

Although OMB officials approved of DOD's shift in the discount rate methodology for BRAC 1995, they acknowledge that economists have reached no consensus on a single conceptual approach for such analyses. It should be noted, however, that the use of a discount rate tied to the Treasury's borrowing rate is consistent with our approach in evaluating benefits and costs of public policies over time. Thus, we believe DOD's use of this approach is appropriate for BRAC.

What is the practical impact of changing discount rate approaches on expected BRAC costs and savings? In general, for base closures with closing

[3]OMB first authorized government agencies to use this discount rate in October 1992. This rate is updated each year with the President's budget submission.

[4]In subsequent chapters dealing with individual DOD components' recommendations and other bases they considered for closure, we also used the 2.75-percent rate to show NPV, since that rate was used in their decision-making.

[5]In its report to the Commission, OSD inadvertently summarized its BRAC 1995 cost data using a discount rate of 4.2 percent rather than 4.85 percent. It used the 2.75-percent rate for reporting specific recommendations.

costs concentrated in the early years and savings occurring later, the lower the discount rate, the greater the net present value of savings and the shorter the time period before net savings begin to accrue. To more precisely determine the impact of different discount rates on expected BRAC net present value savings, we reran the COBRA model for BRAC 1995 recommendations using 7 percent, 4.85 percent, 4.2 percent, and 2.75 percent discount rates (see table 2.1).

Table 2.1: Impact of Various Discount Rates on BRAC 1995 Net Present Values

Fiscal year 1996 dollars in millions

DOD component	2.75-percent discount	4.2-percent discount	4.85-percent discount	7-percent discount
Army	$8,184.2	$6,945.2	$6,463.9	$5,134.1
Navy	8,528.0	7,457.0	7,039.2	5,878.4
Air Force	3,656.1	3,056.7	2,824.6	2,186.4
DLA	1,276.7	1,077.7	1,000.6	788.4
DIS	4.2	3.4	3.1	2.2
Total	**$21,649.2**	**$18,540.1**	**$17,331.4**	**$13,989.6**

Note: Totals may not add due to rounding.

In recalculating COBRA estimates, we also sought to determine when the DOD components would receive a return on their investments, using a 2.75-percent and a 4.85-percent discount rate. In most cases, we found no appreciable difference, although in several instances (11 percent) the ROI years increased by 1 year to 2 years under the higher discount rate.

A Short-Term View of Savings Without Using a Discount Rate

Another perspective on expected savings from BRAC 1995 base closures, realignments, and redirects, without including the impact of a discount rate, is seen in the costs and savings expected during the 6-year implementation period and in the projected recurring annual savings after the 6-year implementation period. Table 2.2 summarizes those projected costs and savings.

Table 2.2: Projected 6-Year Costs and Savings From BRAC 1995

Fiscal year 1996 dollars in millions

DOD component	6-year costs	6-year savings	6-year net savings	Recurring annual net savings[a]
Army	$1,594.2	$2,796.0	$1,201.8	$725.1
Navy	1,729.5	4,501.8	2,772.3	605.3
Air Force	1,392.7	1,505.3	112.6	363.3
DLA	464.2	577.2	113.0	119.6
DIS	12.8	12.3	(.5)	.5
Total	**$5,193.4**	**$9,392.7**	**$4,199.3**	**$1,813.8**

Note: Totals may not add due to rounding.

[a]Recurring annual net savings begin after BRAC recommendations have been implemented.

Environmental Cleanup Costs Are Not Considered in Making Closure Decisions

Environmental restoration was not a factor in the DOD base closure decision-making process; however, it can represent a significant cost following a base closure. The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) 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.

For the 123 bases affected by the 1988, 1991, and 1993 closure actions, the estimated cleanup costs contained in the 1995 BRAC budget justification document will be about $4 billion. For the 33 major bases proposed for closure by BRAC 1995, the estimated cleanup costs contained in the Defense Environmental Cleanup Program Annual Report to Congress for Fiscal Year 1994 (Mar. 31, 1995) are about $2 billion.[6] For the cleanup of minor bases, for which DOD provided data, the cost estimate was $147.3 million.

The cost estimates are only preliminary ones because (1) detailed environmental surveys for BRAC 1995 bases have not been done to reflect shorter time frames to accomplish restoration and expedite the transfer of property following a base closure, (2) CERCLA cleanup studies have not been done, (3) the amount and types of contaminants to be cleaned up are

[6]DOD has not completed the cost estimate for the accelerated cleanup of the BRAC 1995 bases.

unknown, (4) changes in requirements are being issued often, and (5) technology improvements could decrease costs. As shown in our report entitled Military Bases: Environmental Impact at Closing Installations (GAO/NSIAD-95-70, Feb. 23, 1995), past cleanup cost estimates have proven to be low. For the 84 bases included in earlier BRAC rounds, where additional information was supplied in April 1994, the cost to clean up these bases rose to $5.4 billion, or over $1.6 billion more than the total estimate for these same bases in the fiscal year 1995 budget request.

It is too early to assess what impact environmental cleanup will have on the timely disposal of properties, since most of them have not closed.

Conclusions and Recommendation

Projected savings from BRAC 1995 recommendations are expected to be substantial, despite some potential areas of overstatement. At the same time, COBRA estimates included in the Secretary of Defense's report to the Commission are recognized as somewhat imprecise. Currently, some DOD components are working to obtain more complete cost data. Accordingly, we recommend that the Commission consider obtaining updated cost and savings data to the extent it is available and include this data in summary form in its report for the recommendations it forwards to the President for his consideration.

OSD Attempted to Play a Stronger Role in BRAC 1995, With Limited Success in Cross-Servicing

OSD took actions to improve its oversight of the BRAC 1995 process. It also sought to encourage the consolidation of workloads across the services and thereby reduce DOD-wide capacity for performing five common support functions. Based on the services' recommendations, some reductions in excess capacity would be achieved within the services, but the services' recommendations for closures and realignments would move very little work from one service's facilities to another's. OSD's efforts to encourage the services to share assets, consolidate workloads, and reduce capacity in the five functions were limited because of reliance on service decision-making and consensus; insufficient time; and, in some cases, a narrow analytical approach.

OSD Established Oversight and Cross-Service Groups

In prior BRAC rounds, OSD involvement was generally limited to issuing guidance and reviewing the services' recommendations just before the Secretary forwarded them to the Commission. For BRAC 1995, OSD continued its policy guidance role but also established a senior-level review group to oversee the entire BRAC process and a steering group to support it. These two groups brought key senior OSD officials into the BRAC process for the first time in a substantive way. The review group was chaired by the Deputy Secretary of Defense; the secretaries or under secretaries of the services, chairpersons of the cross-service groups, and others were members. The group met six times between January 1994 and February 1995.

The review group was authorized to review BRAC 1995 policies, procedures, and excess capacity analyses; establish closure or realignment alternatives, numerical excess capacity analyses, and reduction targets for DOD components; review BRAC 1995 work products of the DOD components and cross-service groups; and make recommendations to the Secretary of Defense regarding cross-service trade-offs and asset-sharing opportunities.

The BRAC 1995 steering group assisted the review group. It was chaired by the Assistant Secretary of Defense for Economic Security; the team leaders of each joint cross-service group, service representatives, and others were members. The steering group met 10 times between January and August 1994.

Between January and November 1994, the periodic meetings of the review and steering groups helped focus the attention of senior DOD officials on the potential for cross-servicing and facilitated the cross-service groups' process. In November and December 1994, each cross-service group sent

one or more sets of alternatives (proposals for closures, realignments, and workload consolidations) to the services for their consideration in making their final recommendations. After this point, the review group met one more time to endorse, without changes, the services' recommendations to the Secretary of Defense.

We did not attend the review, steering, and cross-service groups' meetings. However, we reviewed the minutes of their meetings and interviewed OSD and service officials who led and worked with each of the groups, DOD IG officials who attended the meetings of each group, and service audit officials who verified the data submitted to the groups. We observed service auditors verifing data collected at several activities and DOD IG auditors verifing data consolidation, analyses, and calculations for each of the cross-service groups. We assured ourselves that data discrepancies were identified and corrected. In March and April 1995, we analyzed how the cross-service groups calculated excess capacity and developed the proposals they sent to the services. We also evaluated the services' response to the cross-service groups and their recommendations for closures and realignments.

The Timing of the Cross-Service Process Limited Its Impact on OSD and Service Decisions

The cross-service group process began in January 1994. In March and April 1994, the cross-service groups sent their data calls to the services, after the services had sent their own data calls to the field activities. In July and August 1994, the steering group approved the plans the groups proposed for analyzing the data they had requested. The groups identified amounts of excess capacity, but except for depot maintenance, they did not set capacity reduction goals, as originally envisioned. In late 1994, the groups sent their proposals to the services that were responsible for considering the cross-service alternatives in their service decisions. Subsequently, OSD received the services' recommendations too late in the process for meaningful give-and-take discussions to achieve greater consolidations. Had the cross-service groups started earlier, they might have had more fully developed proposals and greater influence on the services' and the Secretary of Defense's recommendations for closures and realignments.

DOD officials told us that, ideally, the groups should have decided how they would use the information they requested before asking the questions. This would have avoided needless work on the part of the responding activities. Also, this would have given the groups more time at the end of the process to formulate their proposals to the services. In addition, if OSD

had established capacity reduction goals for each function early in the process, the services might have more carefully considered the interservicing opportunities that the groups identified.

As it was, despite the efforts of the review and steering groups, milestones slipped repeatedly throughout the process. When the groups sent their proposals to the services in late 1994, the services were already completing their analyses of their own installations. Consequently, little time remained for the review group to work with the services on additional opportunities for cross-service trade-offs and asset-sharing.

Services' Recommendations Will Reduce Some Infrastructure, but Few Workloads Will Be Cross-Serviced

In prior BRAC rounds, each service's base closure and realignment process and recommendations focused almost exclusively on its activities. They did not consider the potential for consolidating work across service lines. Recognizing this potential, the Secretary of Defense designated five common support functions as areas of special attention in BRAC 1995 and established joint cross-service groups to deal with them. The functions were depot maintenance, test and evaluation, laboratories, medical treatment facilities, and undergraduate pilot training. Appendix II discusses the structure of and analytical process used by these groups.

Among other things, the groups computed the capacity of each site performing a specific function. Then they compared the cumulative capacity of all sites with the workload projected for a given year to determine the amount of excess capacity in each area. Table 3.1 shows how much excess capacity each group identified.

Table 3.1: Amount of Excess Capacity Identified by Each Cross-Service Group

Cross-service group	Amount of excess capacity
Depot maintenance	40.1 million direct labor hours (equal to 24,830 work years[a])
Test and evaluation	495,000 test hours
Laboratories	9,800 work years
Medical treatment facilities	1 medical center is excess, and 2 medical centers and 13 hospitals should be realigned.
Undergraduate pilot training	33 percent of available airfield operations for fixed-wing aircraft and 108 percent of available ramp space for rotary-wing aircraft

[a]Direct labor hours as a measure of capacity represents the amount of workload a facility can accommodate with all work stations manned, on a single shift, 5-day, 40-hour week.

Early in the process, DOD officials debated the role of the cross-service groups. The Vice Chairman, Joint Chiefs of Staff, advocated a strong role for these groups and recommended that the services be required to incorporate the groups' alternatives in their final recommendations. Other officials believed the services had to retain the final say on closures and realignments to meet their Title 10 responsibilities.[1] The latter view prevailed. This key decision meant that cross-service groups were subordinate to the services. In other words, the services retained the power to make the final recommendations for closures and realignments of their activities.

The cross-service groups' perspective on the activities they studied differed from that of the services. They looked only at functions performed at two or more sites, or by two or more services, and those with the potential for being consolidated. In most cases, these functions represented only a portion of what was done at a specific site. Furthermore, the activity was usually only part of a base or installation. The services had the broader perspective of the entire base and its future needs. In addition, the cross-service groups did not calculate the ROI of the closures, realignments, and workload consolidations they proposed to the services. Using these factors, the services determined whether the groups' proposals were feasible and cost-effective. Finally, the groups' proposals were not definitive; four of the groups proposed two or more sets of alternatives. In effect, the groups said that given the magnitude of excess capacity, the services could close or realign one facility or another; the remaining sites could handle the workload, and would meet the objective of eliminating capacity with either choice.

In some cases, despite their different analytical approaches, both the services' and cross-service groups' analyses supported closure or realignment of the same activity. However, in most cases, the services' final recommendations were based on their own analyses, not those of the cross-service groups. Moreover, virtually all of the services' recommendations resulted in moving workloads to like facilities within the same service, as compared with the cross-service groups' proposals, which generally involved moving some workloads to other services' facilities. In most cases in which the services analyzed the ROI of the alternatives developed by the cross-service groups, they did so with some

[1]Under Title 10, DOD activities are required to "maintain a logistics capability . . . to ensure a ready and controlled source of technical competence and resources necessary to ensure effective and timely response to a mobilization, national defense contingency situations, and other emergency requirements." (10 U.S.C. 2464(a). The Secretary of Defense shall identify those logistical activities that are necessary to maintain the logistics capability described in paragraph (a). (U.S.C. 2464 (a)(2).

variation of what the groups' recommended. Generally, the variation moved more work to that service's own facilities than the alternatives presented by the cross-service groups.

As discussed below, the services' recommendations for closures and realignments eliminate some of the excess capacity in the area covered by the cross-service groups, but much of it will remain.

Depot Maintenance

The cross-service group for depot maintenance analyzed the capacity of 24 facilities to maintain and repair 57 commodities, such as aircraft engines and landing gear. The group identified 40.1 million direct labor hours of excess capacity. It provided two sets of alternatives to the services, each of which would close up to eight depots. The two sets of alternatives would have consolidated 12 or 13 workloads at single sites, and various other workloads at two or more locations.

Although some differences existed between which depots were included in each set of alternatives, the capacities of the eight depots and various workload transfers suggested for closure in the group's first alternative amounted to 30.5 million direct labor hours. The second alternative would have eliminated between 34.5 million and 36.8 million direct labor hours. In comparison, the services' BRAC 1995 recommendations for depot closures and realignments will reduce excess capacity by about 20 million direct labor hours. The services recommended (1) realigning Letterkenny Army Depot, Pennsylvania; and the Naval Undersea Warfare Center, Keyport, Washington; and (2) closing Red River Army Depot, Texas; Long Beach Naval Shipyard, California; and the Naval Surface Warfare Center, Louisville, Kentucky. These recommendations paralleled cross-service group alternatives but were fewer in number. The Air Force recommended downsizing its five air logistics centers in lieu of closing San Antonio and Sacramento Air Logistics Centers, as suggested by the group.[2] The group also suggested closing the Naval Aviation Depot, Jacksonville, Florida, and an additional shipyard—either Portsmouth, New Hampshire, or Pearl Harbor, Hawaii. The Navy did not concur with these suggestions due to strategic and operational considerations.

Even if the services' recommendations are accepted by the BRAC Commission, the excess capacity remaining will be equivalent to about four average-sized depots (5 million direct labor hours), on the basis of the

[2]The Air Force reported that downsizing these depots will eliminate 9 million of the 20 million direct labor hours the cross-service group estimated would be reduced by BRAC 1995. As discussed in chapter 4, we have concerns about the Air Force's plans for downsizing these depots.

cross-service group's approach to calculating excess capacity. Much of this excess will be in Air Force and Navy aviation repair capability.

Had the services designated a joint depot or consolidated more workloads through interservicing, one or more additional depots might have been closed. On May 4, 1994, the Deputy Secretary of Defense directed the Secretaries of the Navy and the Air Force to consider establishing a joint fixed-wing aviation depot. However, the cross-service group decided that a joint depot should be designated from among those remaining after BRAC 1995 and did not suggest establishing one in the alternatives it sent to the services.

Test and Evaluation and Laboratories

The cross-service groups for test and evaluation and laboratories had little impact on the services' recommendations. The groups identified large amounts of excess capacity, much of which will remain after BRAC 1995. DOD officials identified a number of problems that constrained the groups' efforts. These included the following:

- Test and evaluation and laboratory functions were split between the two cross-service groups, thereby creating artificial barriers around the functions and facilities that each could consider.
- The groups chose analytical frameworks that broke work down into such small pieces that some of the sets of alternatives they suggested to the services proposed numerous transfers of small workloads from one facility to another. The services did not find most of these options feasible or cost-effective.

The cross-service group for test and evaluation analyzed the capacity of 23 activities that supported test and evaluation of air vehicles, electronic combat, and armaments/weapons and identified about 495,000 test hours of excess capacity.[3] However, the group did not set capacity reduction goals.

The group provided two sets of alternatives to the services. The first set of alternatives, developed by the group as a whole, suggested numerous transfers of small workloads from one facility to another. The second set of alternatives, which was controversial, proposed larger realignments of work and, in the view of the chairpersons, had the greatest potential for reducing excess capacity. Among other things, these alternatives proposed

[3]This excess capacity existed at many installations in air vehicles, electronic combat, and armament/weapons functions and in 18 test facility categories, including open air ranges, integration laboratories, and measurement facilities.

consolidating the air vehicle test and evaluation missions of the Naval Air Warfare Center, Patuxent River, Maryland, primarily at Edwards AFB, California, or vice versa, and consolidating the electronic combat test and evaluation missions of Eglin AFB primarily at the Naval Air Warfare Center, China Lake, California, or vice versa. The chairpersons said the services did not sufficiently analyze this set of alternatives and that opportunities for consolidations, cross-servicing, and infrastructure reductions were being missed.

While the Navy and the Air Force recommended some reductions and consolidations of test and evaluation activities, each service's recommendations were based on its own analysis. The services' analysis involved little transfer of workloads to other services' facilities, and were largely unrelated to the work of the cross-service group. The Navy and the Air Force were unable to agree on the assumptions to be used in COBRA scenarios. The Army did not recommend closing or realigning any test and evaluation facilities proposed by the cross-service group. Despite the lack of time at the end of the process and the need to further refine their proposals for major realignments, the chairpersons of the cross-service group said they were reasonable and should be carefully analyzed by the services.

The cross-service group for laboratories analyzed the capacity and functions of the 29 common support functions it identified as having potential for consolidation, collocation, and cross-servicing. The group estimated that about 9,800 work years of excess capacity were within these 29 common support functions. On initial analysis, the group found its approach yielded piecemeal results that usually considered workload packages that fell below the BRAC threshold of 300 authorized civilians. At this point, the group recognized that a broader approach was needed to identify opportunities to eliminate infrastructure through cross-servicing. In late September 1994, the group identified alternatives where it thought the services could benefit from cross-servicing. The chairperson directed the group to focus data collection and analysis on the following alternatives:

- Consolidate most command, control, communications, computers, and intelligence (C^4I) acquisition and research and development (R&D) at Fort Monmouth, New Jersey.
- Consolidate air launched weapons research, development, test and evaluation at Naval Air Warfare Center, China Lake.

- Consolidate explosives at the Armament Research Development Engineering Center, Picatinny Arsenal, New Jersey, and the Naval Air Warfare Center, China Lake.
- Consolidate propellants at the Naval Air Warfare Center, China Lake.

The Navy eliminated a significant number of laboratory installations. In a more expansive recommendation, it moved its C^4I activities to San Diego rather than Fort Monmouth. The Air Force elected to realign these functions within its own infrastructure, with a contingent moving to Fort Monmouth. The Army proposed closing one laboratory, realigning its functions internally, and chose not to move its propellant work to China Lake. Subsequently, the cross-service group concluded that if the BRAC Commission accepted the services' recommendations as submitted, about 4,300 work years of excess capacity would still remain.

Medical Treatment Facilities

Of the 14 medical centers and 86 hospitals it analyzed,[4] the group suggested closing 1 medical center and realigning 2 medical centers and 13 hospitals. The group did not set an overall capacity reduction goal for BRAC 1995. The services recommended closing one medical center and two hospitals, and realigning two hospitals to clinics. The two closing hospitals are on bases that will be closed. At the time it made its suggestions, the cross-service group did not know which bases the services would recommend for closure.

For various operational reasons, the services said some of the group's suggestions were not feasible. The Air Force did not calculate the ROI for the cross-service group's suggestions. However, both the Air Force and the Navy said they were downsizing some facilities outside of the BRAC process. Because in many cases a small number of jobs are involved, a hospital can be reduced to a clinic, and clinics can be eliminated outside of the BRAC process. Both services expressed concern that downsizing hospitals to clinics as BRAC actions would limit future flexibility in that congressional action would be required if plans needed to be revised.

DOD's health care system's primary mission is to maintain the health of 1.7 million active-duty service personnel and to be prepared to deliver health care during times of war. As we have reported, a crucial task facing the Congress and DOD as they plan for the future of the military health

[4]Medical centers provide patient care and have at least two graduate medical education programs. Hospitals provide inpatient and outpatient care, and clinics provide only outpatient care.

services system is to agree on the size and structure of the medical force needed to meet wartime requirements.[5]

A recent DOD study has challenged the Cold War assumption that all medical personnel employed during peacetime are needed for wartime. Its conclusion that wartime medical requirements are much lower than the medical system programmed for fiscal year 1999 raises the question of whether U.S. military medical forces should be reduced to only those needed for wartime. Thus, as we have reported, several key variables that greatly affect the wartime demand for medical care are still in debate. And, while the cross-service group's analysis and other studies indicate that some excess capacity in medical facilities will remain after BRAC 1995, it is unclear that there is consensus on wartime requirements and therefore on how much excess capacity exists DOD-wide. In addition, because DOD is still obligated to meet the health care demands of nonactive-duty beneficiaries,[6] downsizing decisions must also be made on the cost-effectiveness of maintaining a military medical capacity larger than that needed for wartime purposes.

Undergraduate Pilot Training

The cross-service group measured capacity for undergraduate pilot training for fixed-wing aircraft by number of airfield operations at 12 installations, and ramp space availability for rotary-wing aircraft at 2 installations. For fixed-wing aircraft, the group identified excess capacity of 33 percent. For rotary-wing aircraft, the ramp space capacity was more than twice the amount needed. The group provided three sets of alternatives for the services to consider. The first, which aimed to reduce capacity and minimize the movement of functions to new sites, proposed closing Naval Air Station (NAS), Meridian, Mississippi; NAS, Whiting Field, Florida; and Reese AFB, Texas. Fixed-wing training was to be moved at the services' discretion, while rotary-wing training was to move from NAS, Whiting Field to Fort Rucker. The second alternative assumed redistribution of excess airfield operations capacity and added the closure of Vance AFB, Oklahoma, to the first alternative. The third alternative added the closure of NAS, Corpus Christi, to alternative two and transferred its outlying field and air-space capacity to NAS Kingsville.

[5]See Wartime Medical Care: Aligning Sound Requirements With New Combat Care Approaches Is Key to Restructuring Force (GAO/T/NSIAD-95-129, Mar. 30, 1995).

[6]See Defense Health Care: Issues and Challenges Confronting Military Medicine (GAO/HEHS-95-104, Mar. 22, 1995).

The Air Force recommended closing Reese AFB, and the Navy recommended closing Meridian and realigning Corpus Christi from a naval air station to a naval air facility (NAF). The group estimated that the Air Force and Navy recommendations would reduce excess capacity for fixed-wing pilot training to about 8 percent. Capacity for rotary-wing training would remain at more than twice the ramp space needed.

The Air Force disagreed with the cross-service group's second and third alternatives, which included closing Vance AFB. It viewed these alternatives as unacceptable because they both exceeded 100 percent of capacity when planned capacity requirements were considered. The Air Force concluded that for the foreseeable future, it was necessary to account for the uncertainty of such factors as the turmoil of multiple base closings and the fielding of new aircraft, including the Air Force's T-1, the Navy's T-45, and both services' joint pilot training system.

The Navy rejected the group's proposal to move its helicopter training from Whiting to Fort Rucker because its cost analysis indicated high closure costs with a 15-year ROI. The proposal, as interpreted by the Navy, would simply have collocated the Army and Navy helicopter training at Fort Rucker, not consolidated the training—a concept the Navy continues to oppose.

The Navy retained Corpus Christi as a NAF in order to provide additional airfield capacity. This additional capacity will enable the Navy to locate all of its strike training at NAS Kingsville, Texas; to accept mine warfare helicopter assets in support of the Mine Warfare Center of Excellence at Naval Station, Ingleside, California; and to move additional aviation assets to the NAF as operational considerations dictate. Because the cross-service group made no recommendations that affected the Army, no Army analysis was required.

A key policy decision for undergraduate pilot training consolidations and potential base closings was the Secretary of Defense's April 15, 1993, directive to the services to consolidate initial training on fixed-wing aircraft and to transition to a common primary training aircraft. The Secretary also directed the Army and the Navy to study alternatives for consolidating Army, Navy, and Marine Corps initial training on helicopters at Fort Rucker and to develop detailed proposals for implementation within 90 days.

The Navy and the Air Force agreed to a joint primary aircraft training system for fixed-wing aircraft and began planning for the joint training aircraft acquisition, syllabus development, and common training philosophies. The cross-service group's proposals and the services' recommendations factored in the requirements for the new joint training system. However, the Navy has not agreed to consolidate helicopter training at Fort Rucker because it considers its training requirements unique. A firm decision to consolidate helicopter training would be needed to facilitate further reductions in the infrastructure for undergraduate pilot training.

Conclusions and Recommendations

Some reductions in excess capacity were achieved within each service in support areas. However, OSD's efforts to encourage the services to share assets, consolidate workloads, and reduce capacity in five functional areas met with limited success because of reliance on service decision-making and consensus; insufficient time; and, in some cases, a narrow analytical approach. More time for interactions between the services and with OSD, and stronger DOD leadership will be required to ensure progress in the future.

Because the services did not completely analyze the set of alternatives developed by the chairpersons of the cross-service group for test and evaluation, the BRAC Commission may wish to have the services complete detailed analyses, including cost analyses, for its consideration.

If there is another BRAC round, we recommend that the Secretary of Defense

- begin the cross-service process 1 year before the services' BRAC process, and for each common support function studied, incorporate specific capacity reduction goals in OSD's initial BRAC guidance and
- prior to the BRAC round, identify and make the policy decisions necessary in each area to merge service functions that would result in further reductions in infrastructure.

The Air Force's Process Made It Difficult to Easily Track Resulting Recommendations

The Air Force recommended closures, disestablishments,[1] and realignments of 23 installations, including 7 air reserve bases. It also proposed reconsideration of seven prior BRAC decisions. The Air Force considered the alternatives suggested by the cross-service groups and incorporated five of them in its recommendations.

While some improvements in the process were made, certain aspects of the Air Force's evaluation process remained largely subjective. Initial analytical phases of the Air Force's process were influenced by preliminary estimates of base closure costs. In some instances, these closure costs appeared to materially affect how the bases were valued and thus what bases were first considered for closure and realignment. Restricted access to the Air Force's process as it was unfolding, the subjective nature of the decision process, and limited documentation in some areas affected our ability to fully assess the analyses behind some decisions, particularly those decisions excluding bases from closure or realignment. These and other factors caused us to question a number of the Air Force's recommendations.

Air Force excess capacity analyses suggested the potential for a greater number of closures and realignments than was recommended. The Air Force did not propose closure of any active-duty operational aircraft bases, although its capacity analyses showed a potential to close eight. Factors limiting Air Force closures and realignments included operational, environmental, and closure cost considerations.

Although Some Improvement Has Been Made, Concerns About the Process Remain

As in previous BRAC rounds, the Secretary of the Air Force established a group of senior Air Force military and civilian personnel—the Base Closure Executive Group—to administer BRAC 1995. The Executive Group was assisted by the Air Staff Base Closure Working Group. Minutes of the Executive Group's meetings indicated extensive interaction with, and direction from, the Secretary, for example, in setting capacity reduction goals or in selecting bases to evaluate for closure. However, when the Secretary met with members of the Executive Group and others to discuss specific closure options, the meetings were not considered official Executive Group meetings, and details of these meetings were not documented.

An important part of the Air Force process was evaluating its bases against DOD's selection criteria. The Air Force weighed all eight criteria

[1]According to OSD's BRAC definitions, bases are closed and activities are disestablished.

simultaneously, emphasizing the first five criteria, to place its bases in three tiers, suggesting high (tier 1) to low (tier 3) value for retention purposes.[2]

In prior BRAC rounds, the Air Force used a subjective color-coded scale to assign a value to individual criteria and their subelements and used subjective judgments to tier its bases.[3] The lowest-tiered bases provided the starting point for considering bases for possible closure and realignment. We reported in 1993 that the Air Force's rating and tiering approach, including limited documentation, made it difficult to track and verify the decision-making process.[4] The Air Force did improve its rating process for BRAC 1995 by establishing a numerical approach to determine the scores for five of DOD's eight selection criteria that had not been quantified in BRAC 1993 (the first three and last two). However, these values were ultimately translated once again to color codes. The color codes were still used to represent individual subelement scores and to aggregate the subsequent scores for each of the five criteria. Cost to close, ROI, and economic impact information, the three remaining selection criteria, were given numerical values.

A cumulative rating, either color-coded or numerical, was not calculated for each base, unlike the other DOD components. Instead, the Executive Group's members subjectively weighed the five criteria rated by color codes and the three criteria with numerical values, with emphasis on the military value and cost criteria, and voted by secret ballot on a base's score. A 3-point scale was used, with a base's score ranging from high to low. With 13 members voting, an individual base could receive a maximum score of 39 points. Natural break points were used to place bases in one of the three tiers. Bases placed in the lowest, or third, tier provided the starting point for considering bases for potential closure or realignment.

Prior to voting, a co-chairman of the Executive Group summarized for the members which of the eight selection criteria were most important. For the Air Force's small aircraft and large aircraft subcategories, depots, and product centers and laboratories, the co-chairman emphasized giving the greatest weight to the first criterion dealing with mission requirements and

[2]The Air Force, unlike the other services, did not establish a distinct military value for its bases.

[3]A "green" rating meant that for a particular attribute, a base was desirable for retention; "red" meant less desirable; and a "yellow" rating fell between the two. Each color could also have a plus or minus designation. In prior rounds, after scoring the bases or individual subelements, the Air Force gave each base an overall color rating for six of the eight DOD selection criteria.

[4]Military Bases: Analysis of DOD's Recommendations and Selection Process for Closures and Realignments (GAO/NSIAD-93-173, Apr. 15, 1993).

then to the fourth and fifth criteria dealing with cost and savings estimates associated with closing the bases. The minutes do not provide information about how the members actually weighed the eight criteria when voting.

Concerns About Aspects of the Air Force's Process

As in past rounds, the process was not sufficiently documented to substantiate the extent of deliberations and analyses leading to decisions to close or realign individual bases. This was especially problematic for bases where deliberations occurred and decisions were made that bases could not be closed or realigned. In these cases, we relied on oral discussions to gain insight into the rationale behind some decisions. Although Air Force Audit Agency (AFAA) personnel were permitted access to portions of the Air Force's process from the beginning, they too were not given access to all the documentation for the final recommendations until they were made public. Therefore, they are still working to complete their final reviews.[5]

Second, closure costs played a major role in the Air Force's decision-making from the beginning of its process. Unlike previous BRAC rounds, the 1995 BRAC process appeared more influenced by options that would have smaller closure costs and quicker savings. The closure costs used in the tiering process were preliminary, based on the premise that installations would be closed and, with few exceptions, all personnel, equipment, and functions would move to other locations. However, in a number of instances, we found these initial estimates were significantly higher than might be the case later, when more definitive assessments were made.

The preliminary cost estimate could vary significantly from actual costs for full or partial closures or realignments. We are concerned that this approach could have affected the extent to which bases with high closing costs or long payback periods were seriously examined for closure or realignment. However, the nature of the Air Force process and its associated documentation did not provide the basis to conclusively determine whether this was the case.

[5]AFAA oversaw and reviewed each phase of the process. It (1) reviewed and reported on the Air Force's internal control program, (2) reviewed the data collection process through statistical sampling of the color-coded criteria, (3) reviewed cross-service data collection, and (4) performed a limited review of the economic and cost data. During its reviews, AFAA provided at least 17 interim memorandums to the Air Force to disclose discrepancies to ensure timely corrective action. At the time of our report, it was completing its reviews and reports for each segment. AFAA estimates the reports will be completed between late April and June 1995.

In one instance, our analysis showed that Rome Laboratory, New York, was placed in the top tier rather than a lower tier, where it more likely would have been placed had closure costs not been emphasized. An Air Force Working Group official stated that the high preliminary closure cost ($134 million) and long payback period (over 100 years) were reasons for this placement. Later in the process, the Air Force took a closer look at Rome Laboratory based on a cross-service group suggestion to close the laboratory. The Air Force found that the costs were much lower ($52 million) and the payback period was much shorter (4 years) after calculating more precise closing cost data for this specific recommendation. Without the cross-service group suggestion, the Air Force might not have seriously considered this recommendation and might have missed an opportunity to reduce this excess capacity and produce savings.

In another instance, we found that a second-tier base (Offutt AFB, Nebraska) had lower color-coded scores in the first three criteria than a third-tier base (Ellsworth AFB, South Dakota). While not precisely stated in the Air Force documentation, the tiering decision may have resulted from significant differences in closure costs. Ellsworth's closure costs were estimated to be $41 million, while Offutt's were projected to be $515 million. However, Air Force documentation does not provide the rationale for the base's relative standing. In this case, the relative standing apparently would not have affected any decisions, since no bases were selected for closure in this basing category.

Identifying Closure and Realignment Candidates

To begin the process for selecting bases for closure, the Air Force identified all bases (active and reserve components) in the United States that had at least 300 authorized civilian positions. The Air Force identified 99 bases (72 active and 27 reserve) that for the most part met this criterion and grouped them into 7 categories, with a total of 13 subcategories.[6] The Air Force also looked at Air National Guard and Air Force Reserve bases that did not meet the base closure threshold of 300 civilian positions.

The Executive Group sent a detailed data call to the 99 bases to gather information for a comparative analysis. It also developed preliminary closure cost estimates for each base using the COBRA model.

[6]Three bases—Onizuka in California, Vance in Oklahoma, and Arnold in Tennessee—had less than the 300 authorized civilian positions but were included because of their missions.

The Secretary of the Air Force excluded 15 installations from the analysis process because they were either essential to the Air Force's mission or located in geographical areas that were strategically important. For example, McChord AFB, Washington, was excluded because it is the primary deployment base for the Army's I Corps and supports the rapid deployment of Army troops to the Pacific theater. Based on the Executive Group's analysis, the Secretary eliminated two categories and one subcategory that encompass nine additional bases because in its judgment, no significant excess capacity existed. We found no reason to question the basis for these decisions.

Capacity Analysis

To identify excess capacity, the Executive Group compared each of the 99 bases' projected force structure requirement with its total capacity and future mission requirements. For example, for bases with an aircraft mission, the Executive Group compared the maximum number of mission aircraft that could be parked at the base with the base's projected requirement. Table 4.1 displays the Air Force's categories and subcategories along with the number of bases initially considered; the number of bases excluded due to mission essentiality or insufficient capacity; and the number of bases that were selected as candidates for further study, that is, evaluated against DOD's eight selection criteria.

Table 4.1: Air Force Basing Categories and Subcategories

Category/subcategory	Total bases	Reason bases were eliminated from detailed study: Mission/ geography	Reason bases were eliminated from detailed study: No excess capacity	Bases left for detailed study
Operations				
Missiles	4	1	0	3
Large aircraft	19[a]	4	0	15
Small aircraft	15	4	0	11
Undergraduate flying training	5	0	0	5
Industrial/technical support				
Depots	5	0	0	5
Product centers and labs	6	0	0	6
Test and evaluation	3	2	0	1
Education and training				
Technical training	4	0	4	0
Education	2	2	0	0
Space				
Space support[b]	3	2	1	0
Satellite control	2	0	0	2
Other/administrative	4	0	4	0
Air Reserve component[c]				
Air National Guard	13	0	0	13
Air Force Reserve	14	0	0	14
Total	**99**	**15**	**9**	**75**

[a]Three additional large aircraft bases were considered in the missile bases subcategory.

[b]The entire space support subcategory was eliminated because the Air Force found no excess capacity. Two of its bases, Patrick AFB, FL, and Vandenburg AFB, CA, were eliminated because of mission considerations.

[c]Air reserve component bases were generally not compared against each other. Instead, they were reviewed separately for potential cost-effective relocations to other bases.

As a result of the capacity analysis, the Executive Group, in consultation with the Secretary, identified the maximum targeted number of base closures that could be achieved within each subcategory. Table 4.2 shows, by subcategory, the number of bases studied and the number of bases that the Air Force considered excess to requirements. This excess became the Air Force's base reduction goal.

Table 4.2: Air Force Bases Studied and Considered Excess

Category/subcategory	Number of bases studied	Reduction goal (excess bases)
Operations		
Missiles	3	1
Large aircraft	15	4
Small aircraft	11	3
Undergraduate flying training	5	1
Industrial/technical support		
Depots	5	2
Product centers and laboratories	6	3
Test and evaluation	1	0
Education and training		
Technical training	0	0
Education	0	0
Space		
Space support	0	0
Satellite control	2	1
Other/administrative	0	0
Air Reserve component		
Air National Guard	13	3
Air Force Reserve	14	5
Total	**75**	**23**

The Executive Group indicated that it was unlikely the Air Force could achieve reduction goals due to its constrained ability to provide parking space and facilities for aircraft. That information would be developed during later analyses when actual realignments of force structure were considered.

After considering the preliminary closing costs, capacity analyses, operational factors such as the type of aircraft supported and the impact on air quality standards, and air encroachment potential at receiving bases,[7] the Secretary of the Air Force directed the Executive Group to assess how the missions of third-tier bases might be allocated to other bases. An analysis of third-tier bases was completed, and if none were considered candidates for closure or realignment, the Secretary then directed that bases in the other tiers also be considered. During these

[7]Environmental impact is the eighth DOD selection criterion. However, because of its perceived importance, the Air Force also considered air quality within criteria two, which concerns the availability and condition of land, facilities, and associated air space. An Air Force Working Group official told us that beside being a factor in deciding whether to keep open or close a base, it was also a factor in excluding bases. For example, Beale and McGuire were eliminated from consideration as receivers of other bases' missions, because adding a new type or additional aircraft could increase the air pollution (measured in tons) beyond the allowed limits.

analyses, more detailed COBRA estimates were developed for various scenarios.

Some Air Force BRAC 1995 Recommendations Raise Questions

The Air Force recommendations addressed the targeted active component excess capacity primarily through realignments and the targeted reserve component excess capacity through closures. The Air Force recommended 23 closures, realignments, and disestablishments, and 7 changes to prior BRAC decisions. Three of the closures and the two disestablishments affect active duty facilities; no operational aircraft bases are recommended for closure. Table 4.3 shows the bases the Secretary of the Air Force recommended for closure/disestablishment and realignment by category/subcategory.

Table 4.3: Air Force BRAC Recommendations by Category

Category	Number recommended	Closure or disestablishment	Realignment
Large aircraft/missile	2	0	Grand Forks AFB Malmstrom AFB
Small aircraft	0	0	0
Satellite control	1	0	Onizuka AFB
Depots	5	0	Hill AFB Kelly AFB McClellan AFB Robbins AFB Tinker AFB
Product centers and laboratories	3	Brooks AFB Rome Laboratory	Kirtland AFB
Test and evaluation	4	AFEWES REDCAP	Eglin AFB Hill AFB
Undergraduate flying training	1	Reese AFB	0
Air Force Reserve	2	Bergstrom ARB Greater Pittsburgh IAP ARB	0
Air National Guard	5	Moffett Federal Airfield AGS Ontario IAP AGS Roslyn AGS Springfield-Beckley Municipal Airport AGS North Highlands AGS	0
Total	**23**	**12**	**11**

While we have some concerns about the Air Force's process, we found no information that would lead us to question 15 of the 23 decisions. Seven of

the 15 decisions involved cost-effective closures of air reserve component bases, which will reduce excess capacity. Our review of the other eight showed that the decisions were based on bases and activities having relatively lower scores from the eight selection criteria, excess capacity, and low projected workloads. However, we do have unresolved questions about the basis for the remaining eight recommendations.

Reese AFB Closure

The Air Force recommended closing Reese AFB, Texas, because it rated last relative to the other four bases in the undergraduate flying training category when measured against the eight DOD selection criteria. However, community concerns arose over the issues of potential errors in the Air Force's scoring of selection criterion 1 (mission requirements) and its reliance on data gathered under the cross-service group process to make this assessment.

The Air Force's initial review of the community concerns indicated that while there were data errors, they did not significantly alter the relative scoring of the bases for criterion 1 and would not have changed the recommendation. The Air Force was finalizing its response to these issues when we completed our fieldwork. Accordingly, we did not have time to fully assess the situation.

Grand Forks AFB Realignment

The Joint Chiefs of Staff review of this recommendation found that the realignment of Grand Forks AFB, North Dakota, was problematic because of questions about its potential impact on future antiballistic missile (ABM) system deployment rights under terms of the ABM treaty. Thus, the Air Force's BRAC recommendation was adjusted to specify that the missile unit at Grand Forks AFB would inactivate unless, prior to December 1996, the Secretary of Defense determined that the need to retain ballistic missile defense options would preclude this action. The Secretary of the Air Force recommended that if such a determination was made, that the Minot AFB missile group be deactivated. After receiving the Secretary of Defense's recommendations, the BRAC Commission, on March 7, 1995, added Minot AFB to the realignment list to reflect its potential for realignment.

Kirtland AFB Realignment

According to the Air Force, Kirtland AFB, New Mexico, was recommended for realignment because it rated low relative to the other five bases in the product center and laboratory subcategory, considering all eight selection criteria. Our analysis of the eight criteria does not support the Air Force's

reasoning. In addition, other issues need to be addressed: (1) certain costs to operate existing facilities may be transferred to DOE; (2) the realignment of Kirtland AFB will not reduce excess capacity in the product center and laboratory subcategory, since the Phillips Laboratory at Kirtland will not close or move; and (3) the Air Force may not have considered other issues regarding those facilities that are scheduled to remain at Kirtland.

Our analysis shows that Kirtland's first military value criterion was among the highest of the six bases rated in the subcategory. From our analysis of the remaining seven criteria, it appears that closure cost considerations (criterion 4 and 5 in the Air Force process, involving NPV and ROI years) made Kirtland an attractive realignment candidate.

Kirtland's realignment would reduce the Air Force's operational overhead, including support previously provided to DOE and its Sandia National Laboratory located on Kirtland. However, the Air Force's savings could mean an increase in operational support costs borne by DOE. Thus, while DOD might reap some savings, the government would see much less savings. We did not have time to fully assess the magnitude and validity of costs that would be shifted to DOE; however, DOE estimates they would exceed $30 million per year in addition to one-time costs of over $60 million.

In previous BRAC rounds, we expressed concern that some DOD BRAC decisions excluded costs that may be incurred by other federal agencies as a result of its actions, and we recommended that DOD at least disclose such costs. DOD did not concur with our recommendation and in this BRAC round did not identify those costs.

The Air Force will reduce overall infrastructure but not laboratory capacity with this recommendation. The Air Force's Phillips Laboratory at Kirtland will remain in place. Finally, there are questions about whether the Air Force gave adequate consideration to security and operational issues regarding weapons storage facilities at Kirtland. To all appearances, the Air Force did not thoroughly consider all the factors associated with leaving this activity at Kirtland.

Five Depot Realignments

Citing the high costs of closure, the Air Force recommended that none of its five maintenance depots be closed, but instead that each be realigned. The Air Force based the realignments, which included the consolidation of 14 commodity groups, on studies that were incomplete and ongoing

outside the BRAC process. Thus, we question the validity of the Air Force's resulting depot realignment recommendations.

The studies—considered to be a regular depot workload planning evaluation and conducted independent of the BRAC process—were initiated by the Air Force Materiel Command (AFMC) in July 1994. The purpose of the studies was to evaluate the feasibility of realigning 24 commodity/process workloads. The depot maintenance workloads for almost all weapon systems and some functional processes are currently consolidated at specific air logistics centers. For example, depot maintenance for the F-16 aircraft and for landing gear for all Air Force aircraft is consolidated at the Ogden Center, Hill AFB, Utah. The Command expected that further realignments, if approved, would occur along with other realignments as a result of the BRAC review. However, Command officials said that even though the studies were incomplete, they were asked to provide their data for use in formulating the Air Force's BRAC depot consolidation recommendation.

The workload consolidation studies are expected to be completed and reviewed by the Command and the air logistics centers by mid-April 1995. Command officials stated that once the review process is complete, they can present a coordinated position on recommended commodity or workload consolidations. Given that data from their incomplete studies were used to help make BRAC recommendations, these officials believe that they should have the opportunity to suggest revisions to them.

The findings and recommendations of the current versions of the Command's studies do not fully support the realignments and consolidations recommended in DOD's February 1995 BRAC report. For example, the Command's study team report recommends no consolidation of the plating function.[8] However, for the BRAC recommendation, the Air Force recommended this function be eliminated at one of the five depots and at the same time designated the depot as a consolidation center for hydraulics—a function dependent on plating capability. The March 10, 1995, AFMC commodity study on plating recommended no plating consolidation, noting that other consolidation study teams assumed that plating is available at each depot. Likewise, the March 1, 1995, consolidation study for the instrument and display workload recommended consolidating this workload at two sites versus the three sites called for in the BRAC report. Also, the report on advanced

[8]Plating is a metal finishing process that restores dimensions and improves properties, such as corrosion resistance, hardness, and surface smoothness to a part so that it can perform its designed functions.

composites, plastics, and metal bonding recommended workload consolidation at two sites instead of the one site recommended in the BRAC report.

In addition to inconsistencies between the preliminary Command studies and the BRAC recommendations, we noted that the studies did not cover two areas critical to making a meaningful assessment of the cost-effectiveness of proposed consolidations. Command officials affirmed that the workload consolidation reports do not address (1) the potential impact of workload consolidation on the rates charged by the air logistics centers for their services and (2) the extent to which residual workload capability would have to be retained at each depot subject to workload transfers to other depots. However, the officials said that the Command is studying both of these issues and plans to report on them as part of the workload consolidation study. These data appear to be essential for making a meaningful assessment of the cost-effectiveness of the proposed consolidations.

We also noted that workload shifts resulting from realignments proposed by the Air Force would move workload to depots that appear to be downsizing apart from BRAC. For example, one depot, Sacramento Air Logistics Center, California, is losing almost all its unique airframe workload as a result of force structure downsizing. As workload declines and commensurate personnel positions are reduced, it would become less costly in the future to close this facility. However, if the Air Force continues to spread workload among all five depots, it will continue to be costly to close any of these activities in the future.

Changes to 1991 and 1993 Base Closure Commission Recommendations

The Air Force recommended seven changes to recommendations for the closure and realignment of five bases in 1991 and 1993. These changes were made because of either force structure changes or Air Force evaluations that redirected missions and functions. The Air Force believes they will result in about $20.6 million recurring annual savings. Table 4.4 shows the recommended changes to 1991 and 1993 BRAC Commission recommendations.

Table 4.4: Recommended Changes to Prior BRAC Decisions

Base	Recommended change	Justification
Griffiss AFB	Inactivate the 485th Engineering Installation Group (EIG) and transfer its functions elsewhere.	Renovation of originally planned receiver site too costly.
Griffiss AFB	Close the airfield at Griffiss AFB and use the Fort Drum airfield for mobility, contingency, and training support to the 10th Infantry (Light) Division.	Operation of airfield at Griffiss AFB far exceeds earlier estimated costs.
Homestead AFB	Relocate 301st Rescue Squadron (AFRES) to Patrick AFB, FL, instead of reconstructing its facilities at Homestead AFB.	The relocation will enable the 301st to provide primary support to space shuttle missions more efficiently and cost-effectively with less disruption to the unit and mission.
Homestead AFB	Relocate 726th Air Control Squadron to Mountain Home AFB, ID.	Original receiving base, Shaw AFB, SC, does not have adequate radar coverage of training airspace.
Lowry AFB	Inactivate Det. 1, Space Systems Support Group; some personnel and equipment will relocate to Peterson AFB, CO.	Consolidate software support at Peterson AFB with resulting elimination of personnel positions and cost savings.
MacDill AFB	Retain MacDill airfield as part of MacDill AFB.	Deputy Secretary of Defense and Chairman of the JCS have validated airfield requirements of the two unified commands at MacDill AFB.
Williams AFB	Retain Armstrong Laboratory Aircrew Training Research Facility at its present location as a stand-alone activity.	Facilities at Orlando, FL, are not available at the estimated cost and Navy actions in 1993 BRAC reduced pilot resources necessary for the facility's work.

Impact of Cross-Service Group Alternatives on Air Force Decisions

As part of its process, the Air Force assessed alternatives offered by the five functional cross-service groups. The Air Force collected data on behalf of and under the direction of the joint cross-service groups. From the responses to the data calls, the cross-service groups conducted functional analyses of the bases within each subcategory for criterion 1 and developed ratings for them. The Air Force then developed a criterion 1 grade for each base from this data. The final Air Force recommendations incorporated five of the cross-service groups' alternatives. The Air Force considered and analyzed the following cross-service alternatives:

- Test and Evaluation. The Air Force incorporated two of the five alternatives related to test and evaluation facilities in its recommendations—the disestablishment of the Air Force Electronic Warfare Evaluation Simulator (AFEWES) Activity at Fort Worth, Texas, and the Real-Time Digitally Controlled Analyzer Processor (REDCAP) Activity at Buffalo, New York. The two activities were not part of the Air Force process because they did not meet DOD's threshold of 300 authorized civilian positions. The Air Force rejected the other three alternatives,

which included moving Air Force functions to other services, because it did not consider the moves cost-effective or operationally beneficial.

- Product Centers and Laboratories. The Air Force incorporated parts of 2 of 11 recommended alternatives related to laboratories—the closure of Rome Laboratory and relocation of its functions to Hanscom AFB, Massachusetts, and Ft. Monmouth, New Jersey. It rejected the rest, citing cost and operational considerations.
- Undergraduate Pilot Training. The Air Force incorporated one of three alternatives related to undergraduate pilot training—the closure of Reese AFB, Texas. This alternative supported the Air Force's own analysis. The other two alternatives were to close a second Air Force pilot training base. The Air Force concluded that too much capacity would be reduced if two pilot training bases were closed.
- Medical Treatment Facilities. The Air Force rejected all eight alternatives for medical treatment facilities. The Air Force said that four of the alternatives would affect readiness or have service-specific mission implications. The other alternatives were rejected because the Air Force either thought they required a more extensive evaluation of availability of other resources or wanted to keep open options to size the medical asset to fit future requirements.
- Maintenance Depots. The Air Force considered the two proposed alternatives to close two maintenance depots because they supported its own analysis, which placed both bases in the bottom tier. The two depots—Kelly AFB, Texas, and McClellan AFB, California—became the initial focus for possible closure, and, until early February 1995, the Air Force was analyzing this option. However, the Air Force concluded that one-time costs to close one or both depots would be significant ($653 million for Kelly and $514 million for McClellan and over $1 billion for both). According to a Working Group official, recommending closure of one or both depots would have precluded recommending other actions. This official also said that, although not a factor in the Air Force's analysis, the Air Staff knew that considerable additional costs would be incurred for environmental cleanup if any depots were closed. On February 3, 1995, the Secretary directed the Executive Group to concentrate on other alternatives, such as consolidations and downsizing. This new direction led to a recommendation to consolidate 14 commodity groups, realign workloads within the 5 depots, and downsize personnel.

Cost Was an Important Factor in Air Force Decisions

As indicated earlier, closure costs were an important factor in the Air Force's decision-making process. The closure and realignment of AFBs selected for the most part had relatively small implementation costs and provided immediate or near-term savings. According to a Working Group

official, the planning target to spend on implementing all recommendations was $1 billion. Table 4.5 summarizes costs and savings data for the bases recommended for closure and realignment.

Table 4.5: Estimated Costs and Savings Resulting From Air Force Recommendations

Fiscal year 1996 dollars in millions

Installation	One-time costs[a]	6-year net savings[b]	Recurring annual savings[c]	ROI[d] years	20-year NPV[e]
Grand Forks AFB	$11.9	$111.8	$35.2	Immediate	$447.0
Malmstrom AFB	17.4	5.2	5.1	4	54.3
Onizuka AFB	124.2	(125.7)	30.3	8	181.6
Five Air Logistics Centers	183.0	138.6	89.0	2	991.2
Brooks AFB	185.5	(138.7)	27.4	7	142.1
Kirtland AFB	277.5	(158.8)	62.0	3	464.5
Rome Laboratory	52.8	(15.1)	11.5	4	98.4
AFEWES	5.8	(2.6)	0.8	7	5.8
Eglin AFB	2.2	6.3	2.6	1	31.4
REDCAP	1.7	1.9	0.9	1	11.0
Utah Test and Training Range, Hill AFB	3.2	62.4	12.4	Immediate	179.9
Reese AFB	37.3	51.9	21.5	2	256.8
Bergstrom ARB	13.3	93.4	20.9	Immediate	291.4
Greater Pittsburgh ARS	22.3	36.3	13.1	2	161.1
Moffett Federal Airfield AGS	15.2	4.4	4.8	4	50.1
North Highlands AGS	1.3	(0.5)	0.2	8	1.5
Ontario IAP AGS	0.8	(0.3)	0.1	8	0.9
Roslyn AGS	2.4	0.7	0.7	4	7.6
Springfield-Beckley Municipal Air Port AGS	23.4	(5.6)	4.2	6	35.1
485th Engineering Installation Group, Griffiss AFB	0.5	26.8	2.9	Immediate	53.6
Airfield Support for Army, Griffiss AFB	51.3	(12.9)	12.7	5	110.8
301st Air Rescue Squadron, Homestead AFB	4.6	1.5	1.5	4	15.4
726th Air Control Squadron, Homestead AFB	7.4	2.3	0.2	Immediate	4.6
Det.1, Space Support Group, Lowry AFB	1.7	10.9	3.0	1	39.0
Williams AFB	0.0	18.4	0.3	Immediate	21.0
Total	**$1,046.7**	**$112.6**	**$363.3**		**$3,656.1**

(Table notes on next page)

Note: Totals may not compare to those in DOD's report due to rounding.

[a]This represents unique one-time costs to implement the recommendation.

[b]This represents net savings within the 6-year implementation period.

[c]Projected recurring annual savings after the 6-year period.

[d]Return on investment (ROI) years means the number of years after completion of the implementing action until savings begin to exceed the costs associated with the implementing action. "Immediate" means upon completion of the implementing action.

[e]Net present value (NPV) is net savings after closure costs, measured over 20 years and discounted at the rate of 2.75 percent.

AFAA did a limited review of COBRA cost and savings data associated with its service's recommendations. AFAA audited a sample of the higher cost elements calculated by COBRA for the Air Force's preliminary and more detailed closing cost analyses and determined that data entered into the COBRA model could be traced to an appropriate source. They did not verify that all inputs to COBRA were certified. Since the public announcement of the BRAC recommendations, the Air Force has sent teams of personnel, including AFAA representatives, to affected bases to develop more comprehensive data regarding expected costs and savings.

Cost and Operational Factors Eliminated Some Candidates From Consideration

Several bases (see table 4.6) were screened for possible closure but not selected because of operational considerations, environmental issues, and closure costs.

Table 4.6: Summary of Estimated Costs and Savings for Air Force Bases Not Recommended for Closure or Realignment

Fiscal year 1996 dollars in millions

Installation	One-time costs[a]	6-year net savings[b]	Recurring annual savings[c]	ROI years	20-year NPV
Beale AFB	$199.0	$62.6	$52.6	3	$566.9
Ellsworth AFB	40.7	247.7	63.4	1	849.1
Scott AFB	239.6	11.2	53.6	5	528.3
Cannon AFB	72.9	118.8	40.2	2	501.8
Holloman AFB	257.2	36.7	65.1	4	663.2
Moody AFB	97.5	85.6	36.9	2	438.4
Kelly AFB	652.8	(558.7)	70.4	10	179.5
McClellan AFB	513.7	(366.1)	95.8	5	607.0
Hanscom AFB	421.3	(370.2)	50.5	9	158.0
Los Angeles AFB	449.7	(375.8)	49.5	10	142.0
Total	**$2,944.4**	**($1,108.2)**	**$578.0**		**$4,634.2**

Note: Totals may not compare to those in DOD's report due to rounding.

[a]This represents unique one-time costs to implement the recommendation.

[b]This represents net savings within the 6-year implementation period.

[c]Projected recurring annual savings after the 6-year period.

As part of our analysis of the recommendations, we obtained information about the reasons that potential candidates were not selected for closure or realignment. Some information came from the Executive Group's minutes, while other information came from extensive discussions with Air Force Working Group officials.

Operational Aircraft and Missile Bases

The Air Force did not recommend closing any operational-type (large and small aircraft/missile) bases, even though its analysis indicated a potential excess of eight of these bases. In rating and tiering the bases, the Air Force placed only six bases in the lowest, or third, tier. Although these bases, as well as some from the second tier, were extensively reviewed as closure candidates, the Secretary of the Air Force did not recommend any for closure for operational and cost reasons.

Large Aircraft and Missile Bases

Three large aircraft bases—Ellsworth AFB (which bases the B-1 bomber), Grand Forks AFB, and Scott AFB, Illinois—were rated in the bottom tier and were considered for closure. In discussions between the Air Force

Secretary and the Executive Group regarding Ellsworth, concerns were raised about overloading Dyess AFB, Texas, the other B-1 bomber base. Other concerns were the placement of all B-1 assets at a single location and provisions in the Strategic Arms Reduction Treaty that preclude collocation of nonnuclear-capable aircraft (the B-1) with nuclear-capable aircraft (the B-52). The Secretary and the Executive Group were also concerned about the high one-time costs ($250 million) to close Scott and the disruption of the U.S. Transportation Command's activities at the base. For Grand Forks, a Working Group official said that the Executive Group's analyses and discussions with the Secretary centered on finding a base that could receive Grand Forks' 48 KC-135 aircraft as a single package. Consideration was given to moving the aircraft to McGuire AFB, New Jersey, but air quality issues there precluded the action. Also, Grand Forks is a prime location for single integrated operational plan (SIOP) purposes.

After discussing the bases in the bottom tier, the Secretary looked at candidate bases from the middle tier, giving primary attention to Minot AFB; Beale AFB, California; and Malmstrom AFB. According to a Working Group official, Minot AFB could have been closed; however, the Air Force does not intend to decrease its B-52 inventory, as planned, and a suitable receiver base could not be found. For example, moving Minot's B-52 aircraft to other bases like Beale raised air quality environmental concerns, as well as concerns over the high cost ($183 million) to move the mission. Beale AFB was cited as a potential base to receive a special operations wing returning from overseas. The Executive Group minutes point out that closing Beale and moving its U-2 aircraft would create problems of overloading aircraft and encroachment problems at the potential receiving base (Davis-Monthan AFB, Arizona). The Working Group official also said that the importance of the Minuteman Missile Field at Malmstrom AFB precluded it from being a closure candidate. The Secretary also discussed the other second tier bases (Offutt AFB and McGuire AFB) but eliminated them from further consideration because of their missions. The Secretary did recommend the realignment of Grand Forks and Malmstrom AFBs.

Small Aircraft Bases

Three small aircraft bases were rated in the bottom tier—Cannon AFB, New Mexico; Holloman AFB, New Mexico; and Moody AFB, Georgia. According to Executive Group minutes, potential receiving bases (Hill AFB, Utah; Nellis AFB, Nevada; and Shaw AFB, South Carolina) have operational constraints affecting their ability to accommodate aircraft and meet range and training requirements. According to the minutes, Cannon and Holloman had airspace and range capabilities that would be difficult to

replace if both closed. Holloman, according to a Working Group official, had the unique mission of maintaining the F-117 aircraft and had the airspace and training ranges needed to support that aircraft; therefore, it could not be considered a candidate for closure. Also, relocating its aircraft to other locations (Nellis and Shaw) would overload their base facilities. Moreover, according to a Working Group official and Executive Group minutes, moving aircraft from Moody AFB to other locations would cause air congestion problems and overloading of facilities at the prospective receiving bases (Hill and Shaw AFBs). Finally, the four active F-16C LANTIRN-equipped squadrons at Moody AFB would require a receiving base to be able to support the aircraft's specialized equipment.

After discussing the bases in the bottom tier, the Secretary looked to the middle tier bases for closure options, but basically the same operational impacts and concerns surfaced. From these analyses, the Secretary concluded that no small aircraft bases could be closed.

Product Center and Laboratory Bases

Two bases were discussed as candidates but not selected—Los Angeles AFB, California, and Hanscom AFB. According to a Working Group official, the bases were not recommended for closure or realignment because they are collocated with Federally Funded Research and Development Centers (Aerospace Corporation and MITRE Corporation). Closing either base would be costly because its respective corporation would also have to be moved. Furthermore, the Air Force did not want to lose its relationship with the high-technology industry close to those bases.

Need to Reassess Closure of Newark AFB Aerospace Guidance and Metrology Center

In our December 9, 1994, report entitled Aerospace Guidance and Metrology Center: Cost Growth and Other Factors Affect Closure and Privatization (GAO/NSIAD-95-60), we noted that the justification for closing Newark AFB/Aerospace Guidance and Metrology Center (AGMC) is not clear for several reasons. Among other things, one-time closure costs had doubled and may still be underestimated. As a result, the payback period has increased to at least 17 years and as much as over 100 years—depending on the assumptions used. Moreover, projected costs of conducting post-privatization operations could exceed the cost of current Air Force operations and reduce or eliminate projected savings. This report also pointed out other closure and privatization problems that created uncertainty about the feasibility of the Air Force's planned action.

Although DOD generally concurred with our report, the Department responded on March 8, 1995, that there was currently not enough data to

conclude that privatizing the Center's workload in place is not a feasible and cost-effective alternative. DOD noted that the Air Force strategy is to continue moving toward privatization while concurrently reassessing organic alternatives, such as moving all the AGMC workloads to other Air Force and interservice depots. DOD also noted the Air Force has engaged a contractor to provide an independent cost assessment of alternative approaches to privatization-in-place and an independent certification of the privatization source selection board methodology/conclusions. However, our review of the contractor's recent assessment of the costs of privatizing the Center's workload and of moving the workload to other organic depots indicates that the costs of both of these options may be much higher than continuing the operation of the Center as a government facility.

Conclusions and Recommendations

The Air Force is recommending the closure/disestablishment or realignment of 23 installations, including 7 reserve bases, plus 7 changes to prior BRAC decisions. Only five of the closures and disestablishments affect active-duty facilities; no operational bases are recommended for closure. The Air Force's recommendations to realign rather than close any maintenance depots did not appear to be well thought out or adequately supported. They do not fully address the problem of significant excess capacity in the depot system, and it is not clear that the realignments will achieve indicated savings. Moreover, they also appear to be adding work to depots that are being downsized outside the BRAC process.

The realignment of Kirtland AFB is estimated to save the Air Force money, but a significant amount of these savings would be offset by added costs to DOE. Also, questions arise concerning whether the Air Force gave adequate consideration to security and operational issues at Kirtland before reaching its realignment decision. Additionally, as the Commission is aware, the realignment of the Grand Forks AFB depends on a DOD decision to retain ballistic missile defense options. Likewise, community concerns regarding the Reese AFB closure were not fully resolved at the time we completed our work. These issues will need to be addressed by the Commission before a final decision is reached.

The Air Force gave great weight to preliminary closing costs before rating its bases, which influenced the relative rating of bases. The impact of closure costs on BRAC decisions cannot be fully assessed, but their greater impact may have been on eliminating bases from closure consideration. Documentation of the Air Force's process was too limited for us to

substantiate the extent of its deliberations and analyses; this made it difficult to verify what had actually transpired.

Recommendations to the Secretary of the Air Force

If the Congress should mandate future BRAC rounds and DOD retains its eight selection criteria, we recommend that the Secretary of the Air Force more fully document all analyses and decisions, including cost data.

Recommendations to the Commission

Given the uncertainty associated with the Air Force's recommendation regarding its depots, we recommend that the BRAC Commission, at a minimum, require more complete plans for eliminating excess capacity and infrastructure from the Air Force before approving the recommendation. Also, we recommend that the Commission closely examine expected cost savings and operational impacts associated with the Kirtland AFB realignment. Additionally, we recommend that the Commission have DOD identify those closures and realignments that have costs and savings implications that affect other federal agencies.

Further, in light of the available evidence indicating that closure of AGMC may not be cost-effective, we recommend that the Commission consider requiring that DOD report to the Commission on the comparative cost-effectiveness of both options under consideration, privatization-in-place or the transfer of workload to other DOD depots, versus the current cost of performing AGMC operations.

The Army's Process and Recommendations Were Generally Sound, With Cost Considerations Eliminating Some Potential Closures and Realignments

The Army is recommending the closure and realignment of 44 installations, including 3 leases of facilities, and 15 minor sites. These recommendations incorporate several alternatives provided by cross-service groups. The Army's process for evaluating and recommending installations for closure or realignment was generally sound and well documented. However, we are highlighting some recommendations for the Commission's attention because of a variance in how they were assessed compared to others or because of other open issues.

Implementation costs were a significant factor in the Army's decision-making, but only after military value analyses had identified candidate installations for study. At the same time, some candidate installations/facilities ranked relatively low in military value and had the potential for long-term savings, but they were excluded from closure or realignment consideration because of closing costs and other considerations.

Few Changes Were Made to the Army's Sound Process

The Army completed its BRAC 1995 review using basically the same process it had used in prior rounds. Only a few changes were made to the process for BRAC 1995, including (1) the basing categories for some facilities to provide a different grouping for a better assessment of relative military value and (2) a more direct and clear link between the Army's data calls and DOD's four military value selection criteria. The Army's process for evaluating and recommending installations for closure and realignment generally complied with legislation and OSD policy guidance, was well documented, was supported by generally accurate data, and appeared reasonable.[1] Although explainable, there was some variance in the Army's application of its process for two groups of installations and facilities.

In keeping with a suggestion from the 1993 BRAC Commission's report, the Army also established a separate review category for leased facilities. All leases (including groups of leases in the same headquarters and same geographical area) costing more than $200 thousand per year were identified as study candidates. However, the Army's military value analysis for leased facilities was not done in the same way as it was for installations. To assess the military value, an installation assessment was

[1]The Army Audit Agency (AAA) provided comprehensive review and oversight of each segment of the process, to include reviewing the primary data sources and analytical approaches; this included checking COBRA entries against source documents. In all cases where discrepancies were found, corrections were made. None of the discrepancies, however, were considered material or affected any of the recommended closures or realignments.

coupled with the operational requirements in the stationing strategy. In contrast, the stationing strategy alone provided the basis for the military value of leased facilities. One tenet of the stationing strategy was to minimize the use of leased facilities. The Army did not prepare installation assessments for leased facilities because it believed that they do not have the same measurable attributes and characteristics as installations and were not competing against each other for retention purposes.

The Army also included within its BRAC process a review of minor sites, many of which contained less than 100 acres and had few, if any, tenants or employees. These sites were identified by the major commands as being excess to their needs and of low military value. These sites were added during the latter stages of the Army's BRAC process and also underwent a different review from the normal military value assessment completed under the Army's BRAC process. Once identified as excess to the Army's needs and of low military value by the major commands, the Army's BRAC group evaluated the impact of closing each site on operations and the ROI.

We monitored all aspects of the decision process from the beginning. We had access to and reviewed key documents, discussing aspects with key officials, and observed the process as it occurred. We also sat in on selected meetings and were able to verify that the Army was following its established policies and procedures. As a result, we were able to track the analysis of each installation through the process. The Army gave priority consideration to military value criteria, as required, and its decision-making appeared logical, consistent, and fair. Some installations were not selected for closure, based on closing costs and/or operational considerations, even though they ranked relatively low in military value compared with other installations in the respective installation categories.

An important part of the Army's process, as in prior BRAC rounds, was periodic consultation with senior military and civilian Army officials. These key Army officials were involved in each phase of the process. Deliberative minutes were kept for each of the meetings with the key officials. These minutes documented key decisions made during the process relative to the Army's installations. The end result was the closure and realignment recommendations made by the Secretary of the Army to the Secretary of Defense.

Identifying Closure and Realignment Candidates

The Army initially identified 112 installations/facilities (including the 15 leases of facilities), which it placed in 14 categories for initial screening in BRAC 1995. The Army later added 20 minor sites for closure or realignment consideration as a separate category. Selected installations/facilities were eliminated from further consideration at various points in the process due to their strategic importance or continuing operational need. For example, Fort Bragg, North Carolina, was excluded from further study; it has a high military value because it is the home of the 82nd Airborne Division and is located near Pope AFB.

By the time the Army completed its military value assessments, it had reduced the number of candidates for further consideration to 45 installations and 15 leases of facilities. At this point, the Army selected candidates that were relatively low in military value and that the Army's stationing strategy indicated could be excess. The documentation for this part of the process clearly supported the Army's conclusions concerning the candidates selected. Table 5.1 shows the installation categories and the number of installations and candidates in each category.

Table 5.1: Army's BRAC Installations, by Category, and Potential Candidates for Closure

Installation category	Number of installations	Closure candidates
Maneuver areas	11	4
Major training areas	10	8
Command and control/administrative support	15	11
Training schools	14	5
Professional schools	4	0
Ammunition production	8	0
Ammunition storage	8	5
Commodity	9	3
Ports	3	2
Depots	4	2
Proving grounds	4	1
Medical centers	3	1
Industrial facilities	4	3
Subtotal	**97**	**45**
Leased facilities	15	15
Total	**112**	**60**

Table 5.1 does not include the 20 minor sites, which were not originally aligned with any of the BRAC installation categories. Also, the Army did not

identify candidates in the professional schools and ammunition production categories because it believed that these categories had no excess capacity. These conclusions were supported by the stationing strategy, which said that none of the schools/installations in these categories should be closed.

Once the candidates were selected and approved by the Secretary of the Army and the Army Chief of Staff, alternatives or action scenarios were identified and examined for their viability to facilitate implementing potential closures or realignments. The scenarios were derived from several sources such as force structure decisions, the Army's stationing strategy, and major Army command recommendations.

For each scenario, the Army analyzed (1) affordability, (2) economic impact, (3) environmental impact, (4) community impact, and (5) the ability to complete closure or realignment within 6 years as required.

Army's 1995 BRAC Recommendations Were Largely Well Supported

The Army recommended 44 closures and realignments (26 installations, 3 leases of facilities, and 15 minor sites) to the Secretary of Defense. From our analysis of available documentation, we concluded that the candidates recommended for closure or realignment were generally among those ranking lowest in military value in their respective categories. However, the Commission may want to more closely examine three of the Army's recommendations. One involves the recommended closure of an Army base previously rejected in two prior BRAC rounds. The other two involve realignments. One realignment involves a change in a prior BRAC decision involving the consolidation of missile maintenance functions at a single location. The other realignment, while appearing sound, is caught up in debate over the accuracy of some data. Table 5.2 shows the installations recommended for closure or realignment by installation category.

Table 5.2: Army BRAC Recommendations by Installation Category

Installation category	Number recommended for closure and realignment	Installations recommended for closure or realignment
Maneuver areas	0	None
Major training areas	6	Fort Chaffee Fort Dix Fort Greely Fort Hunter Liggett Fort Indiantown Gap Fort Pickett
Command and control/administrative support	8	Fort Buchanan Fort Hamilton Kelly Support Center Fort Meade Price Support Center Fort Ritchie Fort Totten Selfridge
Training schools	2	Fort Lee Fort McClellan
Professional schools	0	None
Ammunition production	0	None
Ammunition storage	3	Savanna Depot Seneca Depot Sierra Depot
Commodity	0	None
Ports	1	Bayonne
Depots	2	Letterkenny Red River
Proving grounds	1	Dugway
Medical centers	1	Fitzsimons
Industrial facilities	2	Stratford Plant Detroit Tank Plant
Leased facilities	3	Aviation and Troop Command Army Concepts Analysis Agency Army Information Systems Software Command
Minor sites	15	See app. IV, table 3.

Recommended Change to a Previous BRAC Decision

The Army recommended one change to a 1991 BRAC Commission recommendation regarding "Tri-Service Project Reliance." This change would cancel the relocation of environmental and occupational toxicology

research from Fort Detrick, Maryland to Wright-Patterson AFB. The Army now recommends relocating the health advisories environmental fate research and military criteria research functions of the Environmental Quality Research Branch to the Army Environmental Hygiene Agency, Aberdeen Proving Ground, Maryland, and keeping the remaining functions at Fort Detrick. The Army has determined that implementing the 1991 recommendation gives it no operational advantage. In addition, the Army found that significant new construction will be avoided because Aberdeen Proving Grounds has facilities available. We found no basis to question the Army's assumptions.

Open Issues That Should Be Addressed by the BRAC Commission

In our examination of the Army's recommendations, a question was raised about Fort McClellan being proposed for closure in BRAC 1995 after previously having been rejected for closure by the BRAC Commission. Also, some questions were raised concerning the accuracy of some data used in the military value analysis for ammunition storage installations. In addition, concerns were expressed regarding the recommendation to realign Letterkenny Army Depot. These issues are summarized below.

Fort McClellan

Of the Army's closure recommendations, only one involves an installation the BRAC Commission previously rejected for closure—Fort McClellan. Unlike its prior recommendations, the Army's BRAC 1995 recommendation would relocate the Chemical Defense Training Facility along with the Chemical School to Fort Leonard Wood. In BRAC 1993, the Army planned to keep the training facility at Fort McClellan but move the Chemical School to Fort Leonard Wood. The 1993 BRAC Commission had questioned the wisdom of separating the training facility from the Chemical School.

The report of the 1993 BRAC Commission states that if the Secretary of Defense wanted to move the Chemical School and the training facility in the future, the Army should obtain the required permits and certification for the new site before the 1995 BRAC process. However, the Army did not officially begin this process until it was certain that Fort McClellan would be recommended for closure. According to the Secretary of the Army, obtaining the required permits before Fort McClellan was recommended for closure would have been premature and also would have created unnecessary apprehension among personnel at the base. The Secretary also stated that if the permits and certifications cannot be obtained, Fort McClellan will not be closed.

Ammunition Storage Installations

Community concerns about the development of military value for ammunition storage installations centered around the accuracy of some of the information used to score all of the installations. Specifically, data in two of the attributes were questioned—ammunition storage and total buildable acres. For example, buildable acres at one facility increased by over 300 percent between BRAC rounds in 1993 and 1995. Our follow-up and that of the Army's seem to support the existence of some data inaccuracies; however, the correct information has not yet been ascertained. Army officials have informed us that they will determine what is correct and make the necessary adjustments. Using available data, we performed a sensitivity analysis (using the lower buildable acre figure from BRAC 1993) to determine the impact of changes and did not notice any change in the installation rankings. The Commission may want to ensure that the corrected data has been obtained and assessed prior to making a final decision on this recommendation.

Letterkenny Army Depot

Concerns regarding the recommendation to realign Letterkenny Army Depot, Pennsylvania, centered around the completeness of closure cost data and the extent that the current BRAC recommendation represents a change from the 1993 BRAC decision to consolidate all tactical missile maintenance at one location. Concerns have been expressed that costs associated with the proposed realignment of the tactical missile maintenance mission from Letterkenny to Tobyhanna Army Depot, Pennsylvania, are understated and could be much greater than initially indicated. We found that some one-time moving and site preparation costs were not included but currently appear to be relatively small, between $3 million to $5 million. Assuming no significant additional costs are identified, the inclusion of the $3 million to $5 million in the COBRA would have no impact on the current ROI.

Concerns also have been expressed that the 1995 recommendation represents some departure from the plan for consolidating tactical missile maintenance at one site. The 1995 recommendation would split up some of the work by transferring the missile guidance system workload to Tobyhanna while preserving the tactical missile disassembly and storage at Letterkenny. Maintenance on the associated ground support equipment, such as trucks and trailers, would be done at Anniston Army Depot, Alabama. There are differences of opinion concerning the impact of separating these functions on the concept of consolidated maintenance. The Commission may want to examine this issue further.

Impact of Cross-Service Group Alternatives on Army Decisions

In addition to completing affordability and other analyses of its study candidates, the Army assessed various alternatives suggested by the five functional cross-service groups. The Army analyzed only those cross-service group alternatives in which the Army was the "losing" military department, that is, an Army activity/function would be shifted to another service. In analyzing its cross-service group alternatives by functional category, the Army concluded the following:

- Test and Evaluation. Each alternative represented minor workload shifts and offered no opportunity for a base closure or realignment. It therefore rejected the alternatives.
- Laboratories. Each alternative represented minor workload shifts and offered no opportunity for a base closure or realignment. It therefore rejected the alternatives.
- Undergraduate Pilot Training. No alternatives were presented where the Army was the losing department. Therefore, no Army analysis was done.
- Medical Treatment Facilities. The Army accepted three of the six alternatives proposed by the cross-service group, including closure of Fitzsimmons Army Medical Center and the realignments of Kenner (Fort Lee) and Kimbrough (Fort Meade) Army hospitals to clinics. The Army modified the alternative to realign Noble Army Hospital (Fort McClellan) and recommended closure instead, since the Army is recommending the closure of Fort McClellan. The Army cited operational considerations in not accepting the remaining two alternatives.
- Maintenance Depots. The cross-service group recommended the realignment of 17 work packages that required Army analysis as the losing service,[2] and 2 closures. The Army accepted 3 work packages, modified 6 others, and rejected 8 due to either cost or operational reasons. The Army's own recommendations to close Letterkenny and Red River depots coincided with alternatives of the cross-service group.

Cost as a Factor in Army Decisions

Army installations/facilities selected for closure or realignment generally had relatively small one-time closing costs and provided almost immediate savings after completing the closure. In fact, the estimated cost of closure or realignment was one of the factors that limited the size of the Army's recommendation list. For those facilities/installations selected for further study but not recommended for closure or realignment, the reasons most frequently cited by the Army were cost and operational requirements.

[2]A work package contains the proposed transfer of a defined body of work.

To execute its 1995 BRAC actions, the Army was guided in its decisions by a $729-million budget for the 6-year implementation period. The Army exceeded the planning budget by approximately $400 million, for a total cost of $1.1 billion. Although costs were a factor in the decision-making process, we found no evidence, based on our review of the documentation and our exposure to the process, that the study group withheld any potential recommendations from the Secretary of the Army because of costs. The Army had no minimum financial criteria for closing or realigning an installation. Each was considered on its own merits. Nevertheless, a ROI during the 6-year period was viewed as favorable. In fact, recommended actions for each of the candidates were briefed to the Secretary of the Army for his approval or disapproval. Table 5.3 summarizes estimated costs and savings resulting from Army BRAC recommendations.

Table 5.3: Estimated Costs and Savings Resulting From Army BRAC Recommendations

Fiscal year 1996 dollars in millions

Installation	One-time costs[a]	6-year net savings[b]	Recurring annual savings[c]	ROI years	20-year NPV
Chaffee	$9.6	$39.4	$13.5	1	$168.2
Dix	19.4	112.2	38.3	1	477.9
Greely	22.7	43.0	19.0	1	224.8
Hunter Liggett	6.5	11.7	5.5	1	64.4
Indiantown	12.7	66.6	22.5	1	281.5
Pickett	25.5	41.1	20.7	Immediate	240.6
Buchanan	74.4	(49.6)	9.6	7	45.4
Hamilton	2.1	3.2	7.2	Immediate	74.0
Kelly	35.7	(21.9)	5.0	6	27.5
Fort Lee	2.1	15.5	3.7	1	50.5
Fort Meade	1.6	16.4	3.5	1	49.5
Price	3.6	35.5	8.5	Immediate	116.3
Ritchie	92.8	82.9	65.1	1	712.1
Totten	3.7	0.1	1.7	1	16.8
Selfridge	5.3	47.3	9.8	Immediate	139.7
McClellan	259.1	(122.0)	44.8	6	315.9
Savanna	37.8	(12.2)	12.7	2	111.9
Seneca	14.9	34.0	21.5	Immediate	241.9
Sierra	14.1	54.5	28.8	Immediate	333.0
Bayonne	44.1	(7.6)	10.1	5	90.1

(continued)

Fiscal year 1996 dollars in millions

Installation	One-time costs[a]	6-year net savings[b]	Recurring annual savings[c]	ROI years	20-year NPV
Letterkenny	50.3	206.6	77.8	Immediate	952.2
Red River	59.6	313.1	123.5	Immediate	1,497.3
Dugway	25.4	61.0	25.6	1	306.7
Fitzsimons	102.9	179.1	83.6	Immediate	983.2
Stratford	2.1	23.9	5.9	Immediate	79.7
Detroit Tank Plant	1.4	7.9	3.1	Immediate	38.2
Subtotal	**$929.4**	**$1,181.7**	**$671.0**		**$7,639.3**
Minor installations	15.6	12.6	6.6		72.5
Leases	155.2	5.7	47.6		468.2
Redirect	0.3	4.5	0.0	Immediate	4.1
Total	**$1,100.5**	**$1,204.5**	**$725.2**		**$8,184.1**

Note: Totals may not compare to those in DOD's report due to rounding and other adjustments to correct minor errors.

[a]This represents unique one-time costs to implement the recommendation.

[b]This represents net savings within the 6-year implementation period.

[c]Projected recurring annual savings after the 6-year period.

Costs and Other Factors Eliminated Some Closure Candidates

Senior Army leadership exercised operational, financial, military, and other judgments in making ultimate decisions not to recommend some installations for closure. The Secretary of the Army eliminated some candidates having (1) sizable cost savings but significant up-front closing costs, (2) relatively low military value, and/or (3) operational value considerations precluding their closure. Table 5.4 summarizes cost and savings information for selected Army installation/facilities studied but not recommended for closure or realignment.

Table 5.4: Estimated Costs and Savings for Selected Army Installations Excluded From Consideration

Fiscal year 1996 dollars in millions

Installation	One-time costs[a]	6-year net savings[b]	Recurring annual savings[c]	ROI years	20-year NPV
Drum	$405.3	$(127.2)	$121.3	4	$1,070.6
Riley	690.2	(413.4)	110.8	7	688.4
Richardson	392.8	(266.4)	56.3	8	300.4
Wainwright	390.8	(280.9)	48.5	10	213.1
A.P. Hill	5.0	45.5	14.1	Immediate	180.1
McCoy	119.5	206.9	95.4	1	1,121.6
Gillem	65.1	(16.1)	15.0	5	129.3
Meade	653.9	(499.2)	64.2	12	149.9
Monroe	93.9	(24.4)	23.8	2	208.3
Eustis/Story	480.9	(322.8)	48.4	11	152.7
Lee	716.9	(606.9)	32.1	35	(273.3)
Leonard Wood	623.9	(348.8)	82.6	8	462.9
Presidio of Monterey	429.3	(392.3)	13.5	86	(246.2)
Pueblo	17.0	2.6	29.1	Immediate	290.3
Umatilla	10.0	2.9	19.0	Immediate	190.1
Cold Laboratory	52.9	(41.4)	4.1	18	(0.5)
Natick	160.4	(77.1)	26.6	7	185.3
Picatinny	314.3	(156.3)	48.0	8	317.2
Oakland	34.6	25.2	16.1	2	179.9
Lima	3.0	20.4	6.2	Immediate	79.7
Total	**$5,659.7**	**($3,269.7)**	**$875.1**		**$5,399.8**

Note: Totals may not add due to rounding.

[a]This represents unique one-time costs to implement the recommendation.

[b]This represents net savings within the 6-year implementation period.

[c]Projected recurring annual savings after the 6-year period.

As part of our analysis of the recommendations, the following are brief summaries of the reasons that potential candidates were not selected for closure or realignment.

Maneuver Areas

Forts Drum, New York, and Riley, Kansas. The Army considered these two installations because of their relatively low military value as maneuver

installations and the Army's desire to do a broader assessment of this category. While estimated savings from closing these installations were significant, so were the associated closing costs. Citing the overall importance of maneuver installations to station and train ground forces and to support the stationing strategy, along with the high costs associated with closure, the Army decided that Forts Drum and Riley should remain open.

Forts Richardson and Wainwright, Alaska. The Army's stationing strategy seems to suggest that only one base is needed in Alaska to support one maneuver brigade and support forces. Initial Army studies show that keeping Fort Wainwright open was the better choice and that Fort Richardson would therefore be the best candidate for closure. The strategy stated that as the maneuver division is reduced to a maneuver brigade, the installation can be structured to meet the specific needs of the brigade and supporting forces. Each can support one light brigade without additional military construction. However, the Army later decided that due to strategic requirements in the Pacific and high closure costs, Fort Richardson would remain open.

Major Training Areas

Forts AP Hill, Virginia, and McCoy, Wisconsin. The Army's stationing strategy emphasized the need to reduce the number of major training areas and focused primarily on reserve component training support. As a result, Forts AP Hill and McCoy were chosen as candidates for further study. The Army decided that their closure was operationally infeasible due to the training requirements of the reserve components. It should be noted that six major training installations are being recommended for closure or realignment.

Command and Control/Administrative Support Installations

Fort Gillem, Georgia. Because of its low military value, Fort Gillem was selected as a candidate for closure. The Army concluded that Fort Gillem must remain open because of the operational support it provides to Fort McPherson, Georgia, and the high closure costs. The 1993 BRAC Commission considered Fort Gillem as a potential addition to DOD's list but ultimately concluded it should remain open.

Fort Meade, Maryland. Because of Fort Meade's large non-DOD population and its low operational value to the Army, its study for closure was suggested by the stationing strategy. Due to the high costs associated with closure and its importance to the National Capital Region, its close

proximity to Washington, D.C., and the number of tenants, the Army decided to keep it open. However, the Army recommended realigning Fort Meade by downsizing its hospital to a clinic.

Fort Monroe, Virginia. In BRAC 1993, the Secretary of the Army deleted Fort Monroe from closure consideration, citing operational reasons. However, other information suggested that high environmental clean-up costs played a part in this decision. The environmental concerns did not conform with DOD policy guidance, which states that environmental restoration costs are to be expected whether a base closes or not; therefore, they are not a basis for closure decisions.[3] The 1993 BRAC Commission added Fort Monroe to its list of candidates but did not direct its closure. The Commission did ask the Army to investigate the extent of unexploded ordnance at Fort Monroe. The Army completed the requested study and found that unexploded ordnance posed a minimal risk to the public health and environment if identified sites were left undisturbed. The Army estimated the cost to safely remove all hazards to a 10-foot depth at about $22 million.

In BRAC 1995, the Army's stationing strategy emphasized that the Training and Doctrine Command headquarters (currently located at Fort Monroe) should be stationed in the joint environment of the Tidewater, Virginia, region to allow immediate access to doctrine development agencies of other services and joint-service organizations in the region. However, Fort Monroe ranked relatively low in military value and was still recommended for further study. The Army did study closing Fort Monroe and moving the majority of its tenants to Fort Eustis. This scenario provided the basis for savings estimates shown in table 5.4. Ultimately, the Army concluded that Fort Monroe was well suited and well situated to meet its mission and that military judgment indicated that Fort Monroe should remain open.

Training Schools

Forts Eustis/Story, Virginia; Lee, Virginia; Leonard Wood, Missouri; and the Presidio of Monterey, California. Fort Eustis/Story, Fort Lee, and the Presidio of Monterey were rated relatively low in military value for training schools. Accordingly, they were selected for further study. However, citing the high cost of closure, the Army decided to keep them open. Additionally, the Army studied Fort Leonard Wood because it also was examining the closure of Fort McClellan and relocation of its schools to Fort Leonard Wood. It should be noted that under the recommendations

[3]See our report, Military Bases: Analysis of DOD's Recommendations and Selection Process for Closures and Realignments (GAO/NSIAD-93-173, Apr. 15, 1993).

finally adopted, Fort Leonard Wood became a receiving installation. Also, the Army recommended realigning Fort Lee by downsizing its hospital to a clinic.

Ammunition Storage

Pueblo, Colorado, and Umatilla, Oregon, Depot Activities. Because of their low military value, each of these depot activities was selected for further study. However, because their missions involve demilitarizing chemical agents, the Army would be unable to close either of them before the deadline of the 1995 Commission, which is 2001. Therefore, the Army discontinued its study of these installations.

Commodity Installations

Cold Regions Research and Engineering Laboratory, New Hampshire. Because this laboratory ranked relatively low in the Army's military value assessment, it was selected for further study. The only reason cited by the Army for not closing this installation was the high closing costs.

Natick Research, Development, and Engineering Center, Massachusetts. Natick's research focuses on the soldier and soldier support systems. Because of its relatively low military value, the Army reviewed the operational and financial impact of transferring Natick and associated research activities and elected to discontinue further study of closure/realignment options. Natick ultimately gained functions related to soldier systems relocating from the Aviation and Troop Command in St. Louis, Missouri.

Picatinny Arsenal, New Jersey. Picatinny's mission is to conduct and manage the research, development, and engineering for assigned armaments and ammunition systems. Picatinny scored high in the installation assessment, but it ranked low in military value. According to the Army, its facilities are older and require substantial funds for renovation or replacement. In addition, it is a single-purpose installation that cannot support integrated life-cycle functions. The closure of Picatinny was found to be costly.

Ports

Oakland Army Base, California. Oakland is an Army-owned terminal facility that supports Alaska, Hawaii, and the Pacific and Far East theaters of operation. It provides secure water terminal facilities for the rapid movement of forces into theaters of operation around the world during conflicts or fast-breaking contingencies. Because Oakland's primary

capabilities can be duplicated by commercial activities, it was selected as a candidate for study. After a review of available West Coast port activities, the Army decided that operational risks precluded the closure of Oakland. However, the Army did not elaborate on what these risks were. It only stated that the availability of West Coast commercial port facilities was insufficient to meet contingency demands.

Industrial Facilities

Lima Army Tank Plant, Ohio. Because of its low military value, Lima was selected for further study. Since the Army is recommending the closure of the Detroit Tank Plant, it decided that the Lima plant should remain as the only operating tank plant.

Conclusions and Recommendations

The Army's process and recommendations were generally sound, although some recommendations on leases of facilities and minor sites involved some variance in the process. Although there was some logic in the Army's rationale for these variances, we recommend that the Commission further assess these actions and make a determination, under its legislative authority, whether these variances represent substantial deviation from the selection criteria.

Also, some questions remain about the accuracy of some data used in assessing Army ammunition depots. Therefore, we recommend that the Commission ensure that the Army's ammunition depot recommendations are based upon accurate and consistent information and that corrected data would not materially affect military value assessments and final recommendations.

Further, the proposed realignment of Letterkenny Army Depot involves a change to a prior BRAC decision to consolidate tactical missile maintenance at a single location. Some questions exist about the impact of the realignment on the concept of consolidated maintenance. The Commission may want to examine this issue further.

Finally, the Commission will want to ensure that the Army has met all permit requirements related to the closure of Fort McClellan.

The Navy's Process and Recommendations Were Sound, With Costs, Economic Impact, and Other Factors Eliminating Some Potential Recommendations

The Navy is recommending the closure or realignment of 62 activities, including 2 leases and 18 changes to previous BRAC decisions. Its recommendations reflect 20 of the alternatives suggested by the cross-service groups. Eliminating excess capacity while maintaining or improving the average military value of Navy activities was the principal goal. The Navy believes that keeping any remaining excess capacity is prudent because of the uncertainty of future force structure levels. Operational, strategic, cost, and civilian job loss concerns were factors in excluding some candidates from closure or realignment consideration. The process employed by the Navy to arrive at these decisions appeared generally sound and well documented. However, we have identified issues associated with several recommendations that warrant additional attention by the Commission.

The Navy's Process Was Strengthened

The Navy conducted a generally thorough and well-documented evaluation of its basing requirements in developing its 1995 recommendations. The Navy conducted its 1995 base closure review in essentially the same manner as it did in 1993. The Secretary of the Navy established a group of senior military officers and civilian executives, the Base Structure Evaluation Committee (BSEC), to conduct the process and another group, the Base Structure Analysis Team (BSAT), to assist BSEC.

The Navy made several improvements to its process for 1995. One improvement was that BSAT staff consisted of officers with a greater variety of operational experience than the staff in previous rounds. For example, BSAT had an "industrial" team that included staff with substantial aircraft depot and shipyard practical experience. Its technical centers/laboratories team included the previous director of a major Navy test and evaluation center. Most of the 1993 staff had facilities and civil engineering backgrounds and relied on various functional commands for technical expertise. Although this same expertise was available and used in 1993, the Navy believes having staff with operational and technical experience on site generally enhanced the process. On the basis of our observations of the Navy's process as it was being conducted, we agree.

Another improvement in the Navy's process was that BSEC developed alternative scenarios for review. The development of alternative scenarios was a change from the 1993 process, when generally only one scenario was developed for each recommendation. In 1993, a scenario producing the greatest elimination of excess capacity in a subcategory was developed, and if the ROI was acceptable, that scenario generally became

BSEC's recommendation. In 1995, BSEC developed alternatives that reduced excess capacity by varying degrees and additional alternatives based on increases and decreases in requirements. The additional alternatives provided a form of sensitivity analysis important for areas such as ordnance activities and shipyards, in which BSEC was uncertain about the level of future workload requirements. From the various alternatives, BSEC selected specific scenarios and collected cost and savings data from activities affected by the scenarios. The results of cost and savings analyses were the basis of final BSEC deliberations in making closure and realignment recommendations.

An important part of the Navy's process, as in all prior BRAC rounds, was periodic consultation with the Navy's most senior military leaders, including the Commanders of the Atlantic and Pacific Fleets and Marine Forces, Atlantic and Pacific. In responding to closure and realignment scenarios forwarded from BSEC, these officers were encouraged to suggest alternative receiving sites for consideration.[1] BSEC also held periodic consultations with the Chief of Naval Operations, the Commandant of the Marine Corps, and senior civilian officials in the Department of the Navy. Policy imperatives that reflected current and future Navy priorities were presented to BSEC as guidance for use throughout the BRAC process. Such imperatives ensured that a capability deemed vital to the Navy would not be harmed by the process. For example, one policy imperative was that the Navy must be able to drydock large deck and complex Navy ships, refuel/defuel nuclear-powered ships, and dispose of nuclear ship reactor compartments. Such a concern was important for the Navy as a whole, as it was in previous BRAC rounds.

The final stage in the Navy's process was a review of BSEC recommendations by the Secretary of the Navy. During this review, the Secretary made a decision to eliminate several BSEC recommendations due to concerns over the cumulative job losses[2] in California. In the case of each of these activities, other activities in other states were recommended for closure or realignment that had the same or greater economic impact at the local level. In making his decision, the Secretary of the Navy expressed concern about the statewide impact. BSEC had previously removed an activity in Guam from consideration due to economic impact concerns. In no case was another activity recommended for closure or

[1]Receiving sites are Navy activities that absorb remaining equipment and personnel from closing activities.

[2]Cumulative job losses include those estimated to result from all the proposed 1995 Navy actions.

realignment as a substitute for an activity removed for economic impact reasons.

The Naval Audit Service reviewed the Navy's 1995 process to ensure that the data and processes used in developing Navy recommendations were complete and accurate. The Audit Service's involvement included validation of data being submitted by field activities, compliance with the certification requirements throughout the chain of command, and accuracy of the analytical process. We observed Navy auditors conducting their review at numerous field activities during their data validation phase and during the BSEC analytical phase. The auditors we observed were aggressive in obtaining support for data submitted through the various chains of command. They also checked final COBRA data entries against certified source documents. The Naval Audit Service report, issued to the Secretary of the Navy on February 28, 1995, concluded that the data used in the process was reasonably accurate and complete and that the analysis was conducted accurately.[3] We have no basis to dispute the conclusions of the Naval Audit Service. Further, we believe the Naval Audit Service's effort enhanced the Navy's process.

Identifying Closure and Realignment Candidates

The Navy's 1995 base closure review included all activities, regardless of size. Although only 140 of over 800 Navy activities reviewed met the Base Closure and Realignment Act's personnel threshold, BSEC believed that its review should include all activities. BSEC viewed the Navy's infrastructure as "complementary and mutually supportive"; that is, all Navy activities existed to support each other as a whole, regardless of their size. BSEC placed all Navy activities in 5 categories and 27 functional subcategories.[4] The Navy's analytical process took place at the subcategory level. Table 6.1 displays the Navy's 27 subcategories, the number of activities in each subcategory, and the activities that had excess capacity.

[3]The Navy's Implementation of the 1995 Base Closure and Realignment Process (Naval Audit Service 026-95, Feb. 28, 1995).

[4]These categories were operational support, industrial support, technical centers/laboratories, education/training, and personnel support/other.

Table 6.1: The Navy's BRAC Subcategories

Subcategory	Number of activities assessed in 1995	Activities with excess capacity
Naval bases	15	X
Marine Corps bases	3	
Operational air stations	20	X
Reserve air stations	6	X
Reserve activities	286	X
Training air stations	5	X
Training/education	29	X
Naval aviation depots	3	X
Naval shipyards	6	X
Ordnance activities	11	X
Marine Corps logistics bases	2	X
Inventory control points	2	X
Shore intermediate maintenance activities	14	X
Fleet and industrial supply centers	9	X
Public works centers	8	X
Construction battalion centers	2	
Naval security group activities	4	
Integrated undersea surveillance system facilities	2	X
Naval computer and telecommunications stations	17	
Naval meteorology and oceanography centers	6	
Medical activities	142	X
Dental activities	104	
Military Sealift Command activities	2	
Technical centers/labs	65	X
Administrative activities	33	X
Engineering field divisions & activities	9	X
Supervisors of shipbuilding	13	X
Total	**818**[a]	

[a]The Navy review started with a list of 830 activities. However, when activities were placed in subcategories, BSAT determined that 12 minor activities had been closed or were closing outside of BRAC.

Capacity and Military Value Analyses Were the Beginning Point for the Navy's Deliberative Process

Capacity analysis for each subcategory consisted of estimating the maximum available capacity and comparing it to the requirements projected in the future force structure plan. As in 1993, BSAT developed different measures of capacity, or measures of throughput, for each subcategory. For some subcategories, such as training air stations, the throughput indicator was the number of students that could be trained in a year. Throughput capacity indicators for other subcategories included direct labor hours, staff years, and spatial measures (e.g., length or width). For example, the capacity indicator for operational air stations was the "squadron module." Air station capacity was thus characterized as the number of air squadrons and their necessary support requirements that could be housed in terms of two hangar types, based on existing Navy facilities standards. In some cases, BSAT refined the indicators used in 1993. In fact, for operational air stations, BSAT developed the squadron module as a less complicated way of characterizing the space available to house air squadrons.

BSEC began its military value analysis by reviewing the matrices of questions, by subcategory, used in 1993. It then revised the matrices by adding new categories of questions and removing or modifying others. BSEC was concerned with keeping questions similar to those used in 1993 but updating them to reflect changes in the Navy's infrastructure, force structure, and operational outlook. We and the Naval Audit Service found instances where there were differences in answers to the same questions between the 1993 and 1995 matrices for a specific activity. However, we generally found that these differences were due mostly to differing circumstances between the two time periods or in the methodology required for developing answers. For example, during a review of the 1993 and 1995 shipyard military value matrices, we found that the Naval Shipyard (NSY) Long Beach, California, received credit in 1993 for conducting overhauls on submarine rescue ships and salvage ships but did not receive credit in 1995. Like many of the differences we found, this was due to the change in circumstances between the two time periods; in this case, Long Beach is no longer scheduled to perform work on those types of ships.

Whether such differences were errors or attributable to the reasons cited, our analysis showed that they would not change the relative shipyard military value ranking. Also, corrections to the relative military value scores were made throughout the process in response to errors identified by the Naval Audit Service.

The Navy used its military value analysis and the results of its capacity analysis as inputs to its configuration analysis to help identify the optimum approach to reducing excess infrastructure. The average military value of activities in a subcategory was more important in the Navy's process than the relative military value score of any one activity. The Navy's goal was to maintain the average military value of the remaining activities in each subcategory after it had identified closure and realignment recommendations.

Configuration Analysis Used for Developing Alternatives

As the starting point for the derivation of alternatives aimed at reducing excess capacity, the Navy used a computer-based model to compare existing capacity with future requirements and arrive at solutions for each subcategory that would eliminate excess capacity to the maximum extent practicable. This process was known as configuration analysis. Rules were applied to the model for each subcategory for solutions to be reasonable, though rules were kept to a minimum so as not to artificially distort the results of the model. One such rule for all subcategories was that the average military value of any solution must be at least as high as the average for the existing activities in each subcategory. An example of a rule applied to the naval shipyard subcategory was that nuclear workload must be accomplished at nuclear-capable shipyards. This reflects the realities of the workload distribution to naval shipyards. For naval bases, one rule was that the current force level distribution between the Atlantic and Pacific fleets would be maintained. This prevented the model from placing ships on either coast in a manner that was inconsistent with operational or strategic realities.

The configuration model was programmed to derive the three best alternatives for each subcategory. Each alternative successively reduced less excess capacity. For most subcategories, sensitivity analyses were also performed, whereby future requirements were increased by 10 percent and then decreased by 10 and 20 percent. This enabled BSEC to evaluate the effect of such changes on possible configuration alternatives.

BSEC generally chose several alternatives from the results of configuration analysis as scenarios to conduct cost and savings analyses. Cost and savings data for each scenario was then obtained from the affected activities and certified by the providers throughout the chain of command. BSEC then used this data in the COBRA model to evaluate relative cost and savings of scenarios.

After arriving at a set of scenarios that it was prepared to recommend to the Secretary of the Navy, BSEC conducted analyses on the impact of the proposed actions on the affected economic areas, the ability of the receiving sites' communities to absorb an increase in Department of the Navy personnel, and the environmental considerations of closing or realigning those bases. Upon reviewing the results of the impact analyses, BSEC, through its own deliberations and consultations with senior military and civilian executive officials, arrived at the recommendations provided to the Secretary of the Navy.

The Navy's 1995 BRAC Recommendations Were Generally Sound

The Navy is recommending 62 closure or realignment actions. Several actions affect large activities, such as a shipyard and a training air station. The Navy's recommendations logically flowed from its analytical process; however, one technical center facility located at an activity recommended for closure, the Naval Surface Warfare Center (NSWC) White Oak, Maryland, may be required by DOD in the future. The majority of closure and realignment actions are in the technical centers subcategory. In addition, 11 reserve activities are being recommended for closure. Four of the 12 subcategories (operational air stations, naval shipyards, training air stations, and technical centers/laboratories) accounted for 34 of the 62 Navy recommendations. The recommendations in these subcategories include about 60 percent of the total one-time costs and over 80 percent of the total job losses associated with the Navy's recommendations. Table 6.2 summarizes the number of the Navy's closure and realignment recommendations by subcategory.

Table 6.2: The Navy's 1995 BRAC Recommendations, by Subcategory

Subcategory	Closure and realignment recommendations	Redirects of previous BRAC recommendations
Naval bases	1	0
Operational air stations	2	6
Reserve air stations	1	1
Reserve activities	11	0
Training air stations	2	0
Training/education	1	3
Naval aviation depots	0	1
Naval shipyards	2	1
Fleet and industrial supply centers	2	0
Technical centers/laboratories	20	1
Administration activities	1	5
Supervisors of shipbuilding	1	0
Total	**44**	**18**

Operational Air Stations

In the operational air station subcategory, the configuration analysis indicated that excess capacity equivalent to several activities could be eliminated. As a result, several closure scenarios for cost and savings analyses were developed. The recommended closure of NAF Adak, Alaska, resulted from these analyses. However, substantial excess capacity remained in the subcategory. BSEC then reassessed 1993 BRAC decisions so it could better use existing air station capacity, rather than attempt to close additional air stations. BSEC determined that such a solution was feasible and would save construction money budgeted for the move of aircraft based on BRAC 1993 decisions.

The changes to the 1993 BRAC decisions included moving F/A-18 squadrons from NAS Cecil Field, Florida, to NAS Oceana, Virginia, rather than NAS Cherry Point, North Carolina, and moving all F-14s to NAS Oceana rather than locating some at NAS Lemoore, California. In assessing the costs and savings of these changes, the Navy used the COBRA model, but only in considering costs and savings items that would be different from the 1993 cost and savings analysis. For example, some military construction would be required at Oceana and Jacksonville, Florida, as a result of the changes made in 1995, and these costs were included. Budgeted military construction projects that would no longer be required were counted as a savings. We verified the amount of the savings. We also reviewed additional costs and savings items in the 1995 COBRA analysis and believe

that they are generally reasonable and represent what would, in fact, be different from the items in the 1993 analysis. For the air stations subcategory as a whole, the Navy made recommendations to close or reduce operations at several activities, such as NAF Adak and NAS Key West, Florida.

Training Air Stations

The capacity analysis for the training air stations subcategory indicated that future requirements for the various training paths, such as primary pilot and advanced helicopter training, was from 19 to 42 percent below peak historic levels. The Navy's best configuration analysis indicated that with even a 10- or 20-percent increase in requirements, NAS Meridian, Mississippi, should close. The Navy evaluated several scenarios involving the projected closure of NAS Meridian; NAS Corpus Christi, Texas; and NAS Whiting Field, Florida, which was recommended by the undergraduate pilot training (UPT) cross-service group. The scenario that included the closure of Whiting was rejected due to high costs and protracted ROI period. BSEC determined that the best solution was the closure of Meridian and the realignment of Corpus Christi as a NAF, which was what the Navy recommended.

The Secretary of the Navy queried BSEC about the possibility of NAS Meridian and Columbus AFB, Mississippi, being used as a joint fixed-wing training activity due to their proximity, airspace, outlying fields, and bombing range. Thus, in making its recommendation to close NAS Meridian and acknowledging that the air station is not needed for Navy UPT, the Navy suggested the potential for Meridian NAS and Columbus AFB being linked as a joint UPT base.

Naval Shipyards

As was the case for the naval shipyard subcategory in 1993, the Navy was primarily concerned with satisfying future nuclear workload requirements. Nonnuclear work could be performed at any shipyard, whereas nuclear work could be performed only at nuclear-capable shipyards. The configuration analysis produced several scenarios, all of which indicated that at least one naval shipyard, Long Beach, California, should be closed. Other scenarios also pointed to the closure of Ship Repair Facility (SRF) Guam or Portsmouth, New Hampshire, or both. BSEC determined that Portsmouth should not be closed because of uncertainties in the future of the SSN-21 program and the nature of the evolving submarine threat. If the SSN-21 program is terminated or if there is a need for an increase in total submarine force structure levels that could not be met through new

construction, the Navy would likely decide to lengthen the service life of existing SSN-688 submarines. This would involve refueling those submarines whose reactor cores are nearing the end of their design lives rather than retiring them. Thus, workload requirements for refueling SSN-688s would increase. The Portsmouth shipyard is the sole site for most SSN-688 work. The Chief of Naval Operations consulted with BSEC and concurred with these conclusions.

In 1993, the Navy did not recommend Long Beach for closure, despite demonstrated excess capacity, because of concerns about losing the capability to drydock aircraft carriers on the West Coast. The Navy's 1995 analysis indicated that Long Beach was not needed to satisfy the Navy's future requirements. In deliberating the possible closure of Long Beach, BSEC and senior naval officers and civilian officials did not believe it was necessary to retain the large drydock capability at Long Beach to support the fleet. Therefore, along with the SRF Guam, NSY Long Beach was recommended for closure. The Navy also recommended the closure of the two large surge drydocks at Philadelphia—a change from the 1991 BRAC decision—for the same reason.

Questions have been raised about the risk involved in the loss of organic shipyard depot capability on the West Coast if Long Beach is closed. These questions center around the viability of private shipyards in performing work now done at Long Beach as well as the loss of the large drydock. The Navy does not share this concern and points out that much of the work scheduled for Long Beach will be moved to the private sector and thus help these private yards.

BSEC sought to reduce the substantial excess capacity remaining in the shipyard subcategory by transferring depot-related work from two technical centers. Those two centers were then recommended for closure or realignment because the remaining technical work could be transferred to other technical centers.

Technical Centers

During the 1995 process, the Navy was concerned that excess capacity in technical centers/laboratories subcategory had not been reduced in BRAC 1993 to the same degree as in other subcategories. The Navy also wanted to further enhance the multispectrum nature of the technical centers, which encompass research, development, test, and evaluation (RDT&E). The configuration analysis for this subcategory involved complicated assessments of the existing capabilities and requirements for 29 functional

categories, such as undersea and surface ships platforms, across four phases of work: RDT&E, acquisition, lifetime support, and general. This analysis involved satisfying future requirements by transferring specific functions from various categories, such as undersea and surface ship platforms, to only those activities that performed the same function. However, functional workload could be transferred to an activity that does different life-cycle phase work; for example, undersea and surface ship platform lifetime support work could be moved to an activity with undersea and surface ship platform acquisition work.

The Navy analyzed cost and savings projections for 43 scenarios in the technical centers/laboratories subcategory and recommended 21 closure or realignment actions. As indicated earlier, capacity reductions were also realized through the transfer of depot work from technical centers to industrial activities. Depot work from NSWC Louisville, Kentucky, and the Naval Undersea Warfare Center (NUWC) Keyport, Washington, was transferred to existing shipyards. Depot work from the Naval Air Warfare Center (NAWC) Lakehurst, New Jersey, and support work from the Naval Aviation Engineering Service Unit (NAESU) Philadelphia, Pennsylvania, and Naval Air Technical Services Facility (NATSF) Philadelphia, were transferred to existing naval aviation depots (NADEPs).

The Secretary of Defense's recommendations include the complete closure of NSWC White Oak. However, in testimony before the BRAC Commission on March 1, 1995, the Chairman of the Joint Chiefs of Staff indicated that the White Oak activity houses a hypervelocity wind tunnel that serves military research and development needs and is used by other agencies, such as the National Aeronautics and Space Administration. The Chairman stated that the wind tunnel probably should be retained. The Navy maintains that the wind tunnel is excess to its needs and has no plans to retain the facility. Should a DOD component or other government agency determine that it needs the wind tunnel, that agency would have to obtain the wind tunnel facility from the Navy.

The Navy removed several technical centers from consideration for various reasons after COBRA analysis. BSEC determined that AEGIS Moorestown, New Jersey, and AEGIS Wallops, Virginia, performed work that was both dissimilar and required in each case. BSEC's concern about the possible loss of the organic explosives capability at NSWC Indian Head, Maryland, prompted it to remove that activity from consideration. As discussed later, the Naval Warfare Assessment Division (NWAD) Corona,

California, was removed from consideration in response to the Secretary of the Navy's concern about eliminating further civilian jobs in California.

Impact of Cross-Service Group Alternatives on Navy Decisions

As part of its process, the Navy assessed alternatives offered by the five functional cross-service groups. The Navy developed separate closure or realignment scenarios based on the cross-service group alternatives or incorporated alternatives into existing Navy scenarios. The Navy then issued cost-related data calls to its activities in those cases in which a joint scenario indicated that a Navy function would be shifted to another service. The Navy also obtained data in these cases from the affected activities of other services. The Navy's final recommendations include 20 that reflect portions of cross-service group alternatives. In analyzing the cross-service group alternatives, the Navy concluded the following:

- Test and Evaluation. The Navy's analyses included all alternatives provided by the test and evaluation and laboratories cross-service groups. The detailed approach utilized by the cross-service groups in this area focused on specific functions, whereas the Navy focused its review on functions in broader categories. In addition, the nature of Navy technical centers is multispectrum and includes both test and evaluation and laboratory (R&D) functions. Thus, there was not a one-for-one correlation with Navy technical center scenarios. Of the alternatives offered by the cross-service groups, many were already being considered under the Navy's process. Much more Navy technical capacity was reduced by the Navy's recommendations than was suggested within the cross-service group reports.
- Laboratories. See Test and Evaluation.
- Undergraduate Pilot Training. The Navy's recommendations incorporated parts of two of the three joint alternatives forwarded by the UPT cross-service group. BSEC rejected a third alternative that would have closed NAS Whiting Field because of high one-time costs and a long ROI period.
- Medical Treatment Facilities. Naval hospitals are true "followers" in that their presence is closely tied to the presence of other Navy and Marine Corps units in their area. The cross-service group for medical treatment facilities and graduate medical education recommended no closures of naval hospitals and the realignment of only two (Corpus Christi and Beaufort, South Carolina) into clinics. Both hospitals suggested by the cross-service group were in areas with a large active duty presence, so BSEC determined it was imprudent to lower the military medical presence. Since no operational bases with tenant hospitals were recommended for

closure, no hospitals were recommended for closure or realignment by the Navy.

- Depot Maintenance. BSEC analyzed four scenarios arising from this cross-service group, including one that examined application of a developing regional maintenance concept, which would align several depot and intermediate maintenance activities under a single regional management structure. The Navy said that the results of its COBRA analysis demonstrated that none of the scenarios resulted in a consolidation or interservicing distribution of workload that was more cost-effective than the Navy's best scenario, which was adopted as its final recommendation.

In response to the cross-service group's proposed closure of NADEP Jacksonville, the results of the Navy's scenario that contemplated creation of a Regional Maintenance Activity, Southeast, suggest that some operational and economic efficiencies could be achieved. However, the Navy concluded that prudent military judgment dictated that the application of the regional maintenance concept to NADEP Jacksonville, with its restructuring of the principal industrial activity in this area's fleet concentration, was premature. It concluded that such a concept could be executed outside the BRAC framework in the future.

Alternatives issued by the cross-service group also suggested closure or realignment of segments of functional workload by commodities from each of the five naval shipyards to other DOD depot maintenance activities. The Navy concluded that none of the scenarios resulted in a consolidation or interservicing distribution of workload that was more cost-effective than the Navy scenarios under evaluation. The cross-service group alternatives suggesting the movement of industrial workload from NUWC Keyport; NSWC Crane, Indiana; and NSWC Louisville to other naval activities were incorporated into existing Navy scenarios, consistent with the Navy's intent to move industrial work out of technical centers.

Cost as a Factor in Navy Decisions

The Navy used the COBRA algorithms as a tool to ensure that recommendations for closure and realignment actions were cost-effective. The Navy did not use COBRA as a means of finding the lowest cost alternative, but the analysis of several alternatives permitted the Navy to find ways to reduce excess capacity for less cost and satisfy operational requirements. In considering various cost and savings scenarios, the Navy was concerned with the up-front costs associated with closures and realignments and the length of time required to obtain a ROI. The Navy's process for developing cost data for closures has led to some controversy

over the reasonableness of cost estimates pertaining to several technical center recommendations.

The Navy's process was unique in that it obtained input on cost and savings data from activities identified as potential closure or realignment candidates. This has contributed to concerns about the accuracy of such data. As described earlier, BSEC obtained cost and savings data from affected activities by issuing scenario data calls through the chain of command to closing activities. The major claimant for these activities, such as the fleet commander for an air station, was responsible for coordinating data collection from all other affected activities in that scenario.

Although the cost and savings data was certified through the chain of command, in several instances involving technical centers, the reasonableness of cost and savings estimates was questioned by BSEC. This final review resulted in some substantial changes to original estimates by BSEC, which ultimately certified the data. We reviewed the changes made to several scenarios, including NSWC Louisville, NAWC Indianapolis, and NAWC Lakehurst. Some costs were disallowed by BSEC because they were already included in the COBRA algorithms. Some were disallowed because they were environmental cleanup-related costs, which are not included in BRAC analyses. Other disallowed costs involved more difficult judgments and decisions, for example, military construction requirements, productivity, and "disruption" loss. Although time constraints prevented us from completing a full review of more than a few recommendations, we found no basis to question the BSEC decisions we examined. Nevertheless, we believe the Commission should more thoroughly examine the basis for the cost exclusions associated with scenarios in the technical centers subcategory.

The estimated up-front costs of the Navy's closure and realignment recommendations are the lowest of any round of base closures for the Navy. The Navy has also estimated the longest period for ROI as being only 4 years, and most actions experience an immediate ROI. Table 6.3 displays the costs and ROI for Navy activities recommended for closure.

Table 6.3: Estimated Costs and Savings Resulting From Navy Recommendations for Closure

Fiscal year 1996 dollars in millions

Activity	One-time costs[a]	6-year net savings[b]	Recurring annual savings[c]	ROI years	20-year NPV
NAF Adak	$9.4	$108.0	$26.0	Immediate	$354.8
NSY Long Beach	74.5	725.6	130.6	Immediate	1948.6
SRF Guam	8.4	171.9	37.8	Immediate	529.0
NAWC Indianapolis	77.6	7.8	39.2	1	392.1
NSWC Louisville	103.9	(39.4)	28.6	3	243.7
NSWC White Oak	2.9	28.7	6.0	Immediate	85.9
NAS South Weymouth	17.3	50.8	27.4	1	315.2
NAS Meridian					
NTTC Meridian	83.4	158.8	33.4	Immediate	471.2
NAS Alameda					
NAS Corpus Christi					
NAWC Lakehurst	96.9	(5.0)	37.2	3	358.7
NAWC Warminster					
NCCOSC Warminster	8.4	33.1	7.6	Immediate	104.6
NISE San Diego	1.8	19.3	4.3	Immediate	60.0
NHRC San Diego	6.2	(2.0)	1.4	4	11.4
NPRDC San Diego	7.9	(4.3)	1.9	4	14.9
SUPSHIP Long Beach	0.3	0.8	0.3	1	3.3
NUWC New London	23.4	14.3	8.1	3	91.2
NRL Orlando	8.4	3.7	2.8	3	30.1
FISC Guam	18.4	14.3	31.1	Immediate	437.3
NBDL New Orleans	0.6	14.1	2.9	Immediate	41.8
NMRI Bethesda	3.7	19.0	9.5	1	111.0
NSWC Annapolis	25.0	36.7	14.5	1	175.1
NAESU Philadelphia	2.5	5.9	2.5	1	29.5
NATSF Philadelphia	5.7	1.5	2.2	3	22.7
NAWC Oreland	0.1	0[d]	0[e]	3	0.2
FISC Charleston	2.3	2.3	0.9	2	10.8
NISE Norfolk	4.6	0.1	2.1	3	20.4
NAVMASSO Chesapeake	2.2	9.0	2.7	1	34.9
NRC Huntsville	0.1	2.6	0.5	Immediate	7.2
NRC Stockton	0	2.0	0.4	Immediate	5.4
NRC Santa Ana	0	3.0	0.5	Immediate	8.1
NRC Pomona	0	1.9	0.3	Immediate	5.1

(continued)

Fiscal year 1996 dollars in millions

Activity	One-time costs[a]	6-year net savings[b]	Recurring annual savings[c]	ROI years	20-year NPV
NRC Cadillac	0	1.8	0.3	Immediate	5.0
NRC Staten Island	0	4.5	0.6	Immediate	9.8
NRC Laredo	0	1.4	0.3	Immediate	3.8
NRC Sheboygan	0	1.5	0.3	Immediate	4.1
NRC Olathe	0.2	3.9	0.7	Immediate	10.9
REDCOM New Orleans	0.6	6.0	1.9	Immediate	23.8
REDCOM Charleston	0.5	14.4	2.7	Immediate	39.9
Total	**$597.2**	**$1,418.0**	**$469.5**		**$6,021.5**

Note: Totals may not compare to those in DOD's report due to rounding.

[a]This represents unique one-time costs to implement the recommendation.

[b]This represents net savings within the 6-year implementation period.

[c]Projected recurring annual savings after the 6-year period.

[d]The 6-year net savings for NAWC Oreland is $33,000.

[e]The annual savings after implementation period for NAWC Oreland is $15,000.

As indicated in table 6.3, for some scenarios, the Navy analyzed cost, savings, and ROI data for several activities together. The nature of these scenarios did not lend itself to a separate cost and savings analysis. For example, since units, equipment, and people would be moving from NAS Meridian and NAS Alameda, California (a redirect of a BRAC 1993 decision) to NAF Corpus Christi (a realignment), and units, equipment, and people would be moving from Corpus Christi to Pensacola, Florida, the entire group of moves was considered together. In addition, since the closure of NAS Meridian depended on the closure of the Naval Technical Training Center (NTTC) Meridian and the movement of its functions to several activities, the latter was also part of the overall cost and savings analysis.

Table 6.4 displays the cost and savings information for activities the Navy has recommended for realignment. (The realignment of NAS Corpus Christi was included in table 6.3 as part of the NAS Meridian scenario.)

Table 6.4: Estimated Costs and Savings From Navy Recommendations for Realignment

Fiscal year 1996 dollars in millions

Activity	One-time costs[a]	6-year net savings[b]	Recurring annual savings[c]	ROI years	20-year NPV
NAS Key West	$0.4	$8.2	$1.8	Immediate	$25.5
Naval activities, Guam	93.1	66.2	42.5	1	474.3
NUWC Keyport	2.1	9.8	2.1	1	29.7
NISMC Arlington	0.1	0.3	0.1	2	1.7
Total	**$95.7**	**$84.5**	**$46.5**		**$531.2**

Note: Totals may not compare to those in DOD's report due to rounding.

[a]This represents unique one-time costs to implement the recommendation.

[b]This represents net savings within the 6-year implementation period.

[c]Projected recurring annual savings after the 6-year period.

Table 6.5 displays cost and savings information for activities associated with redirects of previous BRAC decisions by the Navy. (The redirect of the NAS Alameda decision is included in table 6.3 as part of the NAS Meridian/NAF Corpus Christi scenario.)

Table 6.5: Estimated Costs and Savings From Navy-Recommended Reconsiderations of Prior BRAC Decisions

Fiscal year 1996 dollars in millions

Activity	One-time costs[a]	6-year net savings[b]	Recurring annual savings[c]	ROI years	20-year NPV
MCAS El Toro	$90.2	$293.0	$6.9	Immediate	$346.8
MCAS Tustin					
NRD San Diego	0.3	0.1	0.0	1	0.1
NTC San Diego	0.6	20.0	0.1	Immediate	20.7
NTC Orlando	5.2	4.8	0.0	Immediate	5.0
NAS Cecil Field	66.6	335.1	11.5	Immediate	437.8
NADEP Pensacola	1.5	2.4	0.2	Immediate	3.8
NPS Orlando	148.0	19.5	5.3	1	71.1
NAS Agana	43.7	213.8	21.7	Immediate	418.0
NAS Barbers Point	0	17.6	0.1	Immediate	18.4
NAF Detroit	0	9.4	0	Immediate	9.3
NSY Norfolk—Philadelphia	0	51.9	8.8	Immediate	134.7
NAVSEA Arlington	159.7	47.6	9.4	Immediate	144.0
ONR Arlington[d]					
SPAWAR Arlington	24.0	120.0	25.3	Immediate	360.0
Naval Recruit Command, Washington, D.C.	6.5	1.1	0	Immediate	1.2
Naval Security Group, Washington, D.C.	0	0[e]	0	Immediate	0[e]
Total	**$546.3**	**$1,126.3**	**$89.4**		**$1,945.2**

Note: Totals may not compare to those in DOD's report due to rounding.

[a]This represents unique one-time costs to implement the recommendation.

[b]This represents net savings within the 6-year implementation period.

[c]Projected recurring annual savings after the 6-year period.

[d]The Navy reevaluated its BRAC 1993 decision, which would have involved about $9.4 million in one-time costs and a 10-year time to realize a payback. Thus, no new COBRA was run.

[e]The 6-year net savings and the 20-year net present value are both $4,000.

In some scenarios, such as MCAS Tustin and MCAS El Toro, California, the Navy analyzed the cost, savings, and ROI for several activities together. This was due to the interdependence of moves associated with these scenarios.

Costs, Economic Impact, and Other Factors Eliminated Some Candidates for Closure or Realignment

The Navy eliminated activities from closure or realignment consideration as part of its process. If no excess capacity was found in a subcategory, no further analysis was performed on that subcategory. Additionally, concerns of an operational nature, based on military judgment, caused BSEC to eliminate some activities from consideration. Once BSEC developed closure and realignment scenarios, the results of costs and savings and economic impact analyses were used to eliminate individual activities from consideration. The Secretary of the Navy eliminated some activities from consideration due to concerns about cumulative job losses. Table 6.6 shows the cost and savings information for activities in the subcategories the Navy identified as having excess capacity but did not recommend for closure or realignment. The table also includes information on the activities eliminated from consideration by the Secretary of the Navy because of concern about the magnitude of job losses in California.

Table 6.6: Estimated Costs and Savings From Selected Navy Scenarios Eliminated From Consideration

Fiscal year 1996 dollars in millions

Activity	One-time costs[a]	6-year net savings[b]	Recurring annual savings[c]	ROI years	20-year NPV
ASO Philadelphia	$68.7	($26.4)	$12.0	6	$91.4
NAVFAC Whidbey Island	27.5	(19.4)	4.6	7	27.0
SDIV Charleston	30.6	1.0	7.1	5	69.1
EFA NW Bangor	6.9	(8.1)	0.5	24	(2.4)
NAVHOSP Corpus Christi	2.7	5.1	1.4	Immediate	18.5
NAVHOSP Beaufort	1.0	(1.9)	(0.8)	Never	(9.5)
WDIV San Bruno[d]	5.5	5.8	4.8	1	51.9
NWAD Corona[d]	76.0	(31.7)	21.3	3	178.3
SUPSHIP San Francisco[d]	0.4	1.6	0.5	1	6.8
FISC Oakland[d]	25.3	47.3	18.9	Immediate	228.6

[a]This represents unique one-time costs to implement the recommendation.

[b]This represents net savings within the 6-year implementation period.

[c]Projected recurring annual savings after the 6-year period.

[d]These activities were eliminated from consideration by the Secretary of the Navy.

Capacity and Operational Concerns and Cost and Savings Analysis

The Navy's capacity analyses revealed that seven subcategories did not have sufficient excess capacity to warrant closure or realignment consideration. Those subcategories were Marine Corps bases,

construction battalion centers, naval security group activities, naval computer and telecommunications stations, naval meteorology and oceanography centers, dental activities, and Military Sealift Command activities.

In the Marine Corps bases subcategory, for example, some degree of excess capacity was indicated among the five capacity measures: maintenance space, covered storage space, barracks, messing, and administrative space. However, BSEC determined that the distribution of the relative excess capacity did not allow reductions in any combination of these categories to the extent that one of the Marine Corps bases could be closed. The capacity analysis for Military Sealift Command activities indicated that ongoing reorganization within the Command matched the changing force structure; subsequently, there was little excess capacity to eliminate. In the dental activities subcategory, BSEC determined there to be a 21-percent deficiency in dental workload, after a comparison of existing capacity to future requirements. Thus, this subcategory was also eliminated from further consideration.

The elimination of the 7 subcategories that did not have sufficient excess capacity left 20 subcategories, which BSEC analyzed to develop recommendations. BSEC did not make recommendations in 8 of the 20 subcategories: ordnance activities, Marine Corps logistics bases, inventory control points (ICP), shore intermediate maintenance activities, public works centers, Integrated Undersea Surveillance System (IUSS) facilities, medical activities, and engineering field divisions and activities.

Recommendations were not made in these eight subcategories for various reasons. In the ordnance activities subcategory, BSEC was concerned about uncertainties in future weapon storage and wartime surge requirements. BSEC also did not recommend closing either of the two Marine Corps logistics bases because the distribution of capacity at existing activities would not permit future requirements to be met if one of the activities were closed.

Of the Navy's two ICPs, the Aviation Supply Office (ASO), Philadelphia, Pennsylvania, was identified as a suitable candidate for closure. However, the results of the cost and savings analysis associated with this scenario were unsatisfactory to BSEC in that the up-front costs were considered too large and the ROI time was considered too long. In addition, current efforts by the Naval Supply Systems Command in streamlining management

structures precluded significant personnel savings from a potential 1995 action.

BSEC identified excess capacity in its shore intermediate maintenance activity (SIMA) subcategory. BSEC determined SIMAS to be "follower" activities, since they are closely tied to the presence of other Navy units in their area or their host activity. Since none of these hosts were included in the Navy's final recommendations, no SIMAS were recommended for closure or realignment. BSEC determined that public works centers (PWC) were also essentially follower activities. Thus, should the customers they support leave, they themselves would become excess. Since BSEC approved the closure or realignment of several activities on Guam (the ship repair facility, fleet and industrial support center, and piers), many public works center customers would be leaving the area. Concerned about civilian job losses on Guam that would result from the PWC's closure, BSEC determined that a sufficient number of customers would remain to justify leaving the center open.

BSEC determined through its capacity analysis that it was feasible for only one of the two IUSS facilities (Whidbey Island, Washington, and Dam Neck, Virginia) to perform all necessary functions in the subcategory. Since the naval facility (NAVFAC) at Whidbey Island had a lower military value than the facility at Dam Neck, BSEC assessed a scenario identifying NAVFAC Whidbey Island for closure. However, BSEC subsequently determined that the projected costs and savings associated with such a recommendation did not justify the loss of operational flexibility to fleet commanders of having a facility on each coast.

Even though excess capacity was also found in the medical activities subcategory, BSEC determined these to be follower activities. The cross-service group provided the Navy with an alternative to realign two naval hospitals (Beaufort and Corpus Christi) into clinics. However, since no activity with a tenant hospital in any subcategory was recommended for closure by the Navy, no hospitals were included in final recommendations.

Excess capacity was identified in the engineering field divisions and activities subcategory, although BSEC recognized that these activities were closely tied to Navy presence in a region. Southern Division, Charleston, South Carolina, and Engineering Field Activity Northwest (EFA NW), Bangor, Washington, were eliminated from consideration for closure because the scenarios did not offer a favorable payback.

In several instances, the Navy eliminated closure and realignment options due to the results of COBRA analysis. For example, the closure of NSWC Crane was dropped due to high one-time costs and no return on investment resulting from two alternatives and high one-time costs relative to the 20-year NPV for a third alternative. The decision not to recommend ASO Philadelphia for closure was also partially due to the high one-time costs and long payback period. The decision not to close the IUSS activity at NAVFAC Whidbey Island was due to BSEC's decision that the high one-time costs and limited savings did not justify the loss of operational flexibility. The realignment of the naval hospital at Beaufort to a medical clinic was not pursued because the COBRA analysis indicated that the resulting increase in CHAMPUS costs would result in the scenario never achieving a ROI.

Economic Impact Concerns

Five activities were eliminated from consideration due to concern about cumulative job losses. The Secretary of the Navy removed four activities in California from consideration because of concerns about total cumulative direct job losses in the state. BSEC removed PWC Guam because of concerns about civilian job losses that would result from that closure. The Engineering Field Activity West (WDIV), San Bruno; NWAD Corona; Supervisors of Shipbuilding, Conversion and Repair (SUPSHIP) San Francisco; and the Fleet and Industrial Supply Center (FISC) Oakland were eliminated from consideration for closure by the Secretary of the Navy based on his concerns about cumulative civilian job losses in California.

The Navy's decisions on these five activities raise several questions. Navy officials stated that the Secretary of the Navy made his decisions based on cumulative civilian job losses statewide rather than on economic impact as a percentage of an economic area's employment population. OSD guidance stipulates that economic impact is to be assessed at the economic area level (metropolitan statistical area or county) and that priority consideration should be given to the military value criteria. However, as in previous BRAC rounds, OSD has no other guidance on how the services are to consider economic impact in their deliberative process.

The cumulative job losses in California are greater than the comparable job loss in any other state. However, the individual economic impact of each of the four California activities, as defined by OSD criteria, is less than the impacts estimated for other activities in other states recommended for closure. For example, the closure of NWAD Corona would have meant a total loss of 3,055 jobs, but the closure of NAS Meridian will result in an

estimated loss of 3,324 jobs. Yet NAS Meridian remained in the Navy's final recommendations for closure. The total losses in California before the removal of the four activities was estimated to be 19,994 jobs, roughly a 0.1-percent decrease in statewide employment, whereas the estimated total losses for Mississippi are estimated to be 3,249 jobs, roughly a 0.3-percent decrease in statewide employment. Because the BRAC law (P.L. 101-510, as amended) states that all bases must be considered equally, the Commission may wish to more closely examine the Navy's decisions regarding the consideration of job losses in California.

Recommendations

We recommend that the Defense Base Closure and Realignment Commission

- explore the need for a DOD component or some other government agency to obtain the wind tunnel facility at NSWC White Oak from the Navy in order to operate it in support of its mission;
- thoroughly examine the basis for exclusions to the cost and savings data associated with closure and realignment scenarios such as NSWC Louisville, NAWC Indianapolis, and NAWC Lakehurst in the technical centers subcategory; and
- examine, from an equity standpoint, the Navy's exclusion of activities from closure and realignment consideration due to concerns over job losses.

DLA Based Its BRAC Recommendations on Sound Military and Business Analyses

The decision-making process that DLA employed to arrive at its BRAC recommendations was well documented and flowed logically from the data presented. DLA recommended nine activities for closure, disestablishment, or realignment, including a proposed change to a 1993 BRAC decision. DLA was not directly affected by the cross-service groups' recommendations.

DLA made significant improvements for its 1995 BRAC process. The installation analysis and the commercially accepted Strategic Analysis of Integrated Logistics Systems (SAILS) model provided additional insight in the decision-making process. Although DLA eliminated a sizable amount of excess capacity with the closure and disestablishment of four depots, it could reduce additional infrastructure in the future. However, such reductions are largely dependent on DLA and the services further reducing their inventories.

DLA's 1995 Process Was Much Improved Over Its 1993 Process

DLA first participated in the BRAC process in 1993. BRAC 1993 was problematic because questions arose about how decisions were made and how accurate the cost and savings estimates were. We found that DLA's BRAC 1995 process for evaluating and recommending activities for closure and realignment was well documented and that the data used was generally accurate. DLA consistently followed the requirements of the applicable BRAC law, force structure plan, DLA's concepts of operations,[1] DOD selection criteria, and OSD policy guidance to ensure that all activities reviewed were evaluated fairly and equitably.

We found that DLA took significant actions to strengthen its process for BRAC 1995. Improvements were made in nearly every phase of DLA's BRAC review process to ensure its integrity for BRAC 1995. DLA

- refined its BRAC decision rules for scenario evaluation,
- used an off-line spreadsheet approach to calculate more reliable cost and savings estimates associated with nonlabor base operating support (BOS) and communications costs,
- used independent assessments of its facilities' conditions,
- standardized procedures for calculating and reporting storage space capacity and utilization,

[1]DLA developed concepts of operations for its business areas. These concepts summarize the current position and future direction of DLA missions and activities in relation to the changes noted in the DOD force structure plan.

- incorporated a detailed analysis for evaluating its host activity installations,[2]
- adopted a commercially accepted optimization model to determine the relative operating costs of the DLA distribution depots, and
- involved the DOD IG in the data verification and validation phases of the BRAC process.

As in BRAC 1993, DLA established decision rules to assist in evaluating closure or realignment scenarios. In BRAC 1995, DLA refined these rules and placed more emphasis on adhering to them. Under the new rules, DLA was to make decisions that

- minimized infrastructure costs,
- made closing installations a top priority,
- eliminated duplicate activities and functions,
- maximized the use of shared overhead,
- optimized the use of remaining DLA space, and
- moved DLA activities from leased space to DOD-owned installations.

The decision rules determined whether a scenario was abandoned, refined, or retained for further analysis.

One of the most significant of all improvements made to DLA's 1995 BRAC process was DLA's approach to estimating costs and savings associated with BOS and communications. In BRAC 1993, we reported that DLA's savings were overstated because DLA did not adequately consider differences between base operating costs, such as nonlabor BOS and communications, when dissimilar operations were combined.[3] For BRAC 1995, DLA calculated the impact of the nonlabor BOS and communication costs and savings outside of the COBRA model; these costs were then entered into the COBRA model. DLA's method of carrying the losing site's BOS and communications costs and savings to the receiving site was more realistic and reflective of DLA's operations.

In 1993, DLA did not have a consistent basis for gathering data on the condition of its buildings and facilities. Between BRAC 1993 and 1995, DLA commissioned the Navy PWC to perform long-range maintenance planning for its facilities. This data was provided to activity commanders for

[2]At six installations, DLA is the primary tenant and hosts other DOD and non-DOD federal tenant activities.

[3]Military Bases: Analysis of DOD's Recommendations and Selection Process for Closures and Realignments (GAO/NSIAD-93-173, Apr. 15, 1993).

verification and certification under BRAC 1995. Also, during this time the DLA Operations Support Office (DOSO) developed similar data on the condition of DLA's administrative space. This data also was given to DLA activities to check and certify for use in the BRAC process. We found that by using PWC and DOSO data, consistency was gained in analyzing DLA facilities.

As in BRAC 1993, DLA required its distribution depots to use data from their Storage Space Utilization Report (805 Report) to calculate storage capacity and utilization rates for BRAC 1995. However, in an audit completed before BRAC 1995 data calls went out, the DOD IG found that these reports inconsistently reported and documented storage space capacity and utilization. On the basis of this audit, DLA provided guidance that standardized procedures for calculating and reporting storage space capacity.[4]

In BRAC 1993, DLA only assessed the military value of its activities and did not consider or analyze the military value of its installations where it was the host and other DOD and non-DOD activities were tenants. For BRAC 1995, DLA not only evaluated its activities on these installations but also analyzed the military value of these installations.[5] We believe the installation analysis provided a broader basis for considering the closure of an installation as a whole.

For BRAC 1995, DLA used SAILS, a commercially available optimization model, to help make closure and realignment decisions regarding its stand-alone distribution depots.[6] The model helped DLA identify which depots could be closed while minimizing transportation and infrastructure costs. Information such as the type of commodities, workload capacity, transportation rates, and supplier and customer geographic locations for all of DLA's distribution depots was loaded into SAILS. The model considered various configurations of closing one or two stand-alone depots based on this information.

DLA did not rely solely on the SAILS model results to decide which depots to close; these results were considered along with the military value and

[4]According to a DOD IG official, in its validation of data call questionnaire responses, no discrepancies in the storage space data were reported by the activities.

[5]DLA's six host installations are located in Columbus, Ohio; New Cumberland, Pennsylvania; Richmond, Virginia; Tracy/Sharpe, California; Ogden, Utah; and Memphis, Tennessee.

[6]Stand-alone depots distribute a wide range of material to customers in many locations. These depots are not located with a military service maintenance function.

COBRA analyses. We believe that the SAILS model was a valuable tool in assessing the operating costs of its stand-alone depots, because it helped DLA identify the most cost-effective solution.

In BRAC 1993, DLA's data was validated by DLA's Office of Internal Review and augmented by field auditors. Audit coverage was strengthened in BRAC 1995 with the addition of the DOD IG to oversee the audit effort. In order to maintain independence and objectivity in the 1995 BRAC process, we recommended, and DLA agreed, that DLA field auditors should review the data collection process of activities that were not in the same category as their own activity. This differed from the approach taken in BRAC 1993.

The DOD IG was responsible for verifying the accuracy and completeness of the certified field data, determining the adequacy of the supporting documentation, and evaluating DLA's analyses. DOD IG audit teams visited sites to verify that field activity data was collected in accordance with DLA's data collection plan and recommended corrective action where necessary. We accompanied the DOD IG on some visits and facilitated its reviews by ensuring that they were validating the most current data requested by DLA. We also independently validated some data and found the data was generally well documented and supported. For locations we did not visit, we selectively reviewed the DOD IG's workpapers.

Data used in the 1995 process was reviewed and favorably reported on by the DOD IG audit teams. The majority of errors found were due to lack of supporting documentation; all errors that were essential to DLA's analyses were subsequently corrected by the activities.

Identifying Closure and Realignment Candidates

DLA selected candidates to close, realign, or disestablish by first grouping its 39 activities into four categories and five subcategories (as shown in table 7.1). DLA then analyzed the capacity and military value of all activities within their respective categories.

Table 7.1: Categories and Subcategories of DLA Activities

Category	Subcategory	Number of activities
Command and control	Defense contract management districts	4
	Defense distribution regions	2
	Defense reutilization and marketing operations	2
Inventory control points		5
Distribution depots	Stand-alone depots	6
	Collocated depots	17
Service/support		3
Total		**39**

Capacity Analysis

An excess capacity analysis was done for activities in each BRAC category and subcategory. The intent of this analysis was to determine the usage of physical space and compare it with anticipated future requirements. Future requirements were based on (1) force structure projections, (2) military service basing and operational changes, and (3) DLA's initiatives for improving operational efficiencies and effectiveness. Activities that had significant amounts of excess capacity were considered as potential receiver sites in realignment recommendations.

In all categories except the distribution depots, excess capacity was based on the (1) total current existing administrative space, less any special use space, and (2) number of additional personnel that could be accommodated in that space. The excess capacity analysis for DLA's distribution depots was evaluated differently because of their distribution mission. For these depots, excess capacity was measured in terms of (1) workload capacity—the depot's ability to handle the in and out processing of material—and (2) physical storage space capacity—the depot's ability to store material in support of active issue, slow-moving, and war reserve material.

Military Value Analysis

DLA analyzed military value to determine the relative ranking of each activity with respect to other activities in the same category or subcategory. Military value rankings did not, by themselves, provide the basis for closure and realignment decisions. Military value was used in conjunction with DLA's concepts of operations, decision rules, other analyses (e.g., installation analysis and SAILS model results), and military judgment to make realignment and closure recommendations.

DLA's 1995 BRAC Recommendations Were Based on Multiple Analyses

DLA recommended nine activities for closure, realignment, or disestablishment. In one of these recommendations, DLA sought to change or redirect a 1993 BRAC decision. These recommendations were the culmination of extensive deliberations by DLA's Executive Group.[7] We observed these sessions firsthand and witnessed extensive deliberations about each activity and the factors and analytical tools that were used in the decision-making process.

For the nine targeted activities, DLA examined whether these decisions would have adverse economic, community infrastructure, and environmental impacts. It found that the impacts would be negligible. Table 7.2 shows DLA's 1995 BRAC recommendations by category.

Table 7.2: DLA's 1995 BRAC Recommendations, by Category

DLA category	Number of activities	Activities studied	Number of activities recommended for closure, realignment, or disestablishment	Names of activities recommended for closure, realignment, or disestablishment
Command and control	8	All	3	Defense Contract Management District South Defense Contract Management District West[a] Management Command International
Inventory control points[b]	5	All	1	Defense Industrial Supply Center[c]
Distribution depots[b]	23	All	5	Defense Depot Columbus Defense Depot Ogden Defense Depot Memphis Defense Depot Letterkenny Defense Depot Red River
Service/support activities	3	All	None	

[a]This is a redirect of a 1993 BRAC decision.

[b]The installation analysis aided in the decision-making process for selecting recommendations in these categories.

[c]This decision requires the disestablishment of the Defense Industrial Supply Center and the realignment of the workload of the Defense Construction Supply Center, the Defense General Supply Center, and the Defense Personnel Support Center.

[7]DLA's Executive Group consisted of senior-level civilian and military executives from DLA's business and staff areas. The Executive Group was chaired by the Principal Deputy Director of DLA.

Command and Control

For each subcategory of activities in the command and control category, DLA sought to determine (1) the need for those oversight capabilities; (2) the optimum location for performing the activities' missions; and (3) in the case of the Defense Contract Management Districts (DCMD), the ability of a one-, two-, or three-regional structure to provide the most manageable level of risk.

DLA's closure and realignment recommendations in this category primarily affected DCMDs. Facilities in the other subcategories were left intact due to their assessed high military value and importance to providing management oversight.

DCMD South, located in Marietta, Georgia, was recommended for disestablishment for three reasons: (1) it had the lowest military value, (2) it had a lower concentration of workload and administration offices to oversee than the Northeast District, and (3) COBRA results indicated that closing it was the most cost-effective decision of the two-district scenario options. DLA decided that although the scenario that reconfigured the three districts into one large district had the greatest ROI, the span of control overseeing 90 subordinate offices throughout the United States was not feasible.

The recommendation regarding DCMD West, located in El Segundo, California, was a redirect of a 1993 BRAC decision. The BRAC 1993 decision called for the movement of this district from leased space to DOD-owned property in Long Beach, California. The 1995 BRAC decision expanded this earlier decision by incorporating the purchase of a building by the Navy on behalf of DLA in the Long Beach area. DLA recommended this redirect action because (1) the Navy had not successfully negotiated a land exchange with the Port Authority/City of Long Beach and (2) the Long Beach Naval Shipyard, which was another option for DLA, was placed on the Navy's BRAC 1995 list for closure.

Defense Contract Management Command (DCMC) International, located in Dayton, Ohio, was not compared with the other contract management districts because its workload was not comparable to the DCMDs. On the basis of the results of DLA's analysis and military judgment, DLA recommended the merger of DCMC International with its headquarters organization in the Washington, D.C., metropolitan area. Because DCMC International could be located anywhere, DLA had the opportunity to take advantage of the location's proximity to the State Department and to the

international support infrastructure in Washington, D.C., and the surrounding area.

Inventory Control Points

DLA operates five ICPs: (1) the Defense Personnel Support Center (DPSC), Philadelphia, Pennsylvania; (2) the Defense Industrial Supply Center (DISC), Philadelphia, Pennsylvania; (3) the Defense General Supply Center (DGSC), Richmond, Virginia; (4) the Defense Fuel Supply Center (DFSC), Fort Belvoir, Virginia; and (5) the Defense Construction Supply Center (DCSC), Columbus, Ohio.

Each ICP is responsible for acquiring and managing an inventory of supply items. DFSC manages fuel-related items, while the other four manage differing mixes of weapon system, troop support, and general support items. The number of troop and general support items managed by the ICPs is relatively small, although they have high demand patterns. DLA manages nearly five times as many weapon system items as troop and general support items combined.

All activities were evaluated in terms of their military value. However, because DFSC and DPSC are one-of-a-kind activities, DLA evaluated them separately. On the basis of the results of the military value analyses on both of these activities, DLA decided that they should not be disestablished because of their unique missions. Therefore, in the case of DPSC, DLA evaluated DPSC as a receiver of similar workloads managed by the other ICPs.

DGSC, DISC, and DCSC were hardware centers and were evaluated as a group in terms of military value. Of the three, DISC received the lowest military value score. However, DLA did not consider the results of the ICP military value analysis sufficient by itself to reveal any obvious closure candidates. On the basis of DLA's ICP supply management concept of operations, DLA considered four scenarios that analyzed the types of items each ICP managed and the way they are managed. DLA determined that maintaining one troop and general support ICP was feasible, considering the small number and the commercial nature of the items. Holding the single troop and general support ICP constant, DLA varied the scenarios between having one and two weapon system ICPs.

Although one weapon system ICP and one troop and general support ICP had the greatest ROI, DLA considered the risk of having a single weapon system ICP as too great because (1) the large number of weapon system

items posed a management challenge and (2) the ICP could adversely affect the national defense if it failed to properly manage critical weapon system items. Therefore, DLA decided that two weapon system ICPs posed an acceptable level of risk to the agency. From our perspective in observing DLA's process, we found that this became a consensus decision within the Executive Group following considerable internal discussions weighing the various options.

DLA's recommendation to disestablish DISC and realign DCSC and DGSC was influenced primarily by the ICP supply management concept of operations, which stated that synergy could be gained by combining commodities with similar management requirements. Other considerations affecting the decision to retain DCSC and DGSC included (1) DLA's decision rule that emphasized maximizing the use of shared overhead (i.e., taking advantage of the depots collocated with these two ICPs), (2) the installation analysis indicating that it was more beneficial to keep DCSC and DGSC because of their relatively high military value rankings, and (3) the considerable expansion capabilities of DCSC and DGSC.

DLA recommended consolidating the troop and general support items at DPSC because (1) DPSC is almost exclusively a troop support ICP, and no other ICP manages these items; (2) the percentage of general support items at the other ICPs is minimal; and (3) the consolidation would reduce the potential management responsibilities between the ICPs. Weapon system items were realigned between DGSC and DCSC.

By disestablishing DISC and delaying the implementation (until 1999) of a 1993 BRAC recommendation to relocate DPSC to the Navy's Aviation Supply Office compound in Philadelphia, DLA avoided a substantial cost. It did so by backfilling the space already occupied by DISC and substantially reducing the amount of conversion of existing warehouse space.

Distribution Depots

DLA operates 17 collocated and 6 stand-alone distribution depots. Collocated depots are located with a service maintenance depot or major fleet support point, which is usually the distribution depot's principal customer. Stand-alone depots are not located with a maintenance function but distribute a wide range of material to customers in many locations.

Of the five BRAC recommendations in this category, three involved stand-alone depots (Columbus, Ogden, and Memphis) and two are collocated with military service facilities (Letterkenny, Pennsylvania, and

Red River, Texas). Decisions regarding the distribution depots were based on various types of analyses; a single analysis, in itself, did not drive DLA's realignment, closure, or disestablishment recommendations. Separate military value analyses were performed for the collocated and stand-alone depots.

Collocated Depots

Military value for the collocated depots was influenced by their capacities and the strategic advantage of being located with a military service maintenance customer. DLA evaluated 17 collocated depots. However, the ultimate decision to realign or close any of these activities was influenced by whether the depots' primary military service customer was closed or realigned. DLA considered various closure and realignment scenarios for its collocated depots, based on discussions with each military service's BRAC office regarding the maintenance depots each was considering for BRAC action. As a result of service decisions, DLA recommended its depots at Letterkenny and Red River for disestablishment.

Stand-Alone Depots

To assess the military value of the stand-alone depots, DLA measured the full range of support they provide to customers worldwide. DLA's recommendations were influenced by current and future capacity requirements, military value analysis, installation analysis, and the SAILS model. On the basis of the results of these analyses, DLA recommended that two stand-alone depots be closed and one realigned.

Although Defense Depot Columbus, Ohio (DDCO), ranked last in military value in the stand-alone category, the separate installation analysis ranked Columbus highest. This was a determining factor in DLA's decision to recommend Columbus for realignment and not closure. Other considerations included (1) the decision to keep the ICP open that was collocated with the Columbus depot and (2) DLA's concept of operations that cited the need for storage space for slow-moving and war reserve material.

Considered but not recommended for closure or realignment was Defense Depot Richmond, Virginia (DDRV). Its relatively low military value in the depot analysis suggested that it was a prime candidate for closure or realignment. However, the key factors that prevented its closure or realignment included (1) the Richmond installation's third-place ranking in the installation analysis, (2) the Navy PWC's assessment that the depot's facilities were the best maintained in DLA, (3) the SAILS model's favoring this depot's location on the East Coast, and (4) DLA's decision to keep the collocated Richmond ICP open.

Defense Depot Memphis, Tennessee (DDMT), and Defense Depot Ogden, Utah (DDOU), tied for third place in the stand-alone depot military value analysis. Both depots had the lowest rankings in the installation analysis, and the SAILS model showed that closing these two depots resulted in the lowest operating costs for the remaining depot structure. According to DLA, the capacities of the other depots remaining in the system could make up for the loss of the production and physical space of these two depots. By closing these two depots, DLA can eliminate excess and close entire installations. Closing DDCO and DDRV would not have produced installation closures.

Historically, we have reported that government storage capacity far exceeds storage requirements.[8] DLA officials agree with us on this issue. DLA's recommendations to close DDOU and DDMT, in addition to disestablishing two collocated depots, are based on anticipated declining inventory requirements.[9] Such reductions, if they fail to occur, could cause DLA to fall short in storage capacity. To guard against such an occurrence, DLA negotiated with the Air Force and the Navy for use of space on their bases (where DLA already has a presence) should it be needed. Conversely, if DLA and the services further reduce their inventories, additional infrastructure reductions could be possible.

Service/Support Activities

The following service/support activities were evaluated in DLA's BRAC selection process: (1) the Defense Logistics Services Center (DLSC) located in Battle Creek, Michigan; (2) the Defense Reutilization and Marketing Service (DRMS) also located in Battle Creek, Michigan; and, (3) the DLA Systems Design Center (DSDC) headquartered in Columbus, Ohio, with 12 operational sites geographically dispersed throughout the United States. These activities were evaluated independently because they do not have peer organizations within DLA and are unique in terms of their nature, mission, and function. On the basis of its analysis, DLA decided not to recommend these three activities for closure or realignment.

DLA considered two different realignment alternatives that moved DLSC from General Services Administration leased space in Battle Creek, to DOD-owned property. Military value analysis indicated that both

[8]Defense Inventory: DOD Actions Needed to Ensure Benefits From Supply Depot Consolidation Efforts (GAO/NSIAD-92-136, May 29, 1992).

[9]The decline in inventory requirements is based on DLA initiatives that DLA believes will allow it to provide supply support without holding costly inventories, drawing down troops, and disposing of obsolete material. DLA worked with the services to determine the amount of inventory that could be reduced.

realignment scenarios were feasible, although COBRA results showed that both produced relatively small savings. However, since DLSC's workload could be performed anywhere and officials could find no clear reason why the activity should be realigned, DLA decided to maintain the status quo.

DLA considered two different realignment scenarios that moved DRMS from GSA-leased space in Battle Creek, Michigan, to DOD-owned property. Military value analysis and COBRA results were similar to those for DLSC. Moreover, DLA determined that it did not make sense to move DLSC or DRMS if a decision was not made to move both activities.

DLA considered two scenarios that involved realigning all or some of DSDC's 12 satellite locations scattered throughout the United States. DLA decided that because these scenarios involved the movement of fewer than the BRAC threshold of 300 authorized civilian personnel and COBRA results showed modest savings, it would not make any changes unless a host activity was being closed. Thus, on the basis of other DLA BRAC recommendations, the three satellite sites that were tenants at the Defense Depot Memphis, Defense Depot Ogden, and Defense Depot Letterkenny were identified for realignment to other locations. A total of 140 DSDC employees are to be relocated.

Cost as a Factor in DLA Decisions

DLA considered the cost associated with its BRAC recommendations, but this did not appear to be a significant factor in determining its recommendations. Table 7.3 displays the costs, savings, and ROI for the nine activities DLA recommended for closure, realignment, or disestablishment.

Table 7.3: Estimated Costs and Savings Resulting From DLA BRAC Recommendations

Fiscal year 1996 dollars in millions

Activity	One-time costs[a]	6-year net savings[b]	Recurring annual savings[c]	ROI years	20-year NPV
Defense Contract Management District South	$3.8	$17.9	$6.1	1	$75.8
Defense Contract Management Command International	3.1	8.7	3.1	1	38.7
Defense Contract Management District West	10.3	10.9	4.2	Immediate	51.2
Defense Industrial Supply Center	16.9	59.3	18.4	Immediate	236.5
Defense Distribution Depot Columbus	7.9	51.2	11.6	Immediate	161.0
Defense Distribution Depot Memphis	85.7	14.8	23.8	3	244.3
Defense Distribution Depot Ogden	110.8	(27.8)	21.3	4	180.9
Defense Distribution Depot Letterkenny	44.9	(21.2)	12.4	3	102.1
Defense Distribution Depot Red River	58.9	(.8)	18.9	2	186.1
Total	**$342.3**	**$113.0**	**$119.8**		**$1,276.6**

Note: Totals may not compare to those in DOD's report due to rounding.

[a]This represents unique one-time costs to implement the recommendation.

[b]This represents net saving within the 6-year implementation period.

[c]Projected recurring annual savings after the 6-year period.

Conclusions

The decision-making process that DLA employed to arrive at its 1995 BRAC recommendations was well documented and flowed logically from the data presented. Although DLA eliminated a sizable amount of excess capacity with the closure and disestablishment of four depots, it could reduce additional infrastructure in the future. However, such reductions are largely dependent on DLA and the services further reducing their inventories.

Defense Investigative Service Requested a Change to Prior BRAC Decision Affecting Its Location

DIS has recommended that its Investigations Control and Automation Directorate (IC&AD) function be moved from Fort Holabird, Maryland, to a newly constructed facility at Fort Meade, Maryland. This move would reverse a 1988 BRAC Commission decision that permitted DIS to remain while other DOD entities moved from Fort Holabird. A BRAC team at DIS analyzed the proposed move and assessed its cost and savings and economic impacts.

DIS Recommendation Is Supported by Its Analysis

DIS currently has a building hosting 458 civilian employees on what remains of Fort Holabird. Fort Holabird was partially closed by the 1988 Commission, which, at DIS's request permitted it to remain. DIS will soon be the base's only tenant. The building occupied by IC&AD is old and needs refurbishment. The Corps of Engineers surveyed the building and documented many of its problems. Identified hazards include lead-based paint and asbestos, both of which would pose significant health hazards should renovations begin while employees remain in the building.

DIS formed a BRAC working group and an executive group to assess the need to move the Investigations Directorate to a new site. The DOD IG reviewed the working group's draft internal control plan, which was then approved by the DIS BRAC Executive Group. Through a military value analysis, the Executive Group determined that the Directorate could not perform its mission in a substandard facility.

The Working Group considered the future DIS personnel and workload requirements in its assessment of the size of any new site and the necessity of a new building. DIS queried the military services at installations in the Baltimore/Washington area about the possibility of moving IC&AD into existing space on those installations. The services indicated that no existing buildings would meet DIS requirements. The DIS Working Group then conducted cost and savings analyses on three options: (1) renovation of the existing building, (2) movement of the Directorate into leased space, and (3) construction of a new building on Fort Meade.

The first option (renovation) would cost about $9.2 million and would not produce a ROI for more than 100 years. The second option (lease) would produce annual lease costs of about $1.3 million and a return on investment in 14 years. The third option (construction of a new building) would cost an estimated $9.4 million and produce a ROI in 5 years. The construction option was determined to be the best from a military value

standpoint, as the Directorate's function would remain in the Baltimore/Washington area with little or no disruption in the work performed.

The Executive Group approved the recommendation to move the IC&AD function to a newly constructed building at Fort Meade. The results of a COBRA analysis showed the 6-year net cost to be $.48 million; the annual savings in the years after implementation to be $.49 million; a ROI to be realized in 5 years; and the 20-year NPV to be $4.23 million. Most of the savings would result from avoidance of the costs associated with the support services agreement between the Army and DIS for the Fort Holabird building. Since the construction and move would take place within the same economic area, the economic impact analysis indicated no impact associated with the recommendation.

The analyses performed by DIS were well documented. The results of its analyses support its subsequent recommendation. In addition, the DOD IG observed all stages of the DIS BRAC process, including its assessment of the DIS internal control and analysis plans. The DOD IG also reviewed the data used by DIS in its military value, cost and savings, and economic impact analyses.

Future Directions

The 1995 BRAC is the last round of base closure reviews authorized under the 1990 legislation. Since excess infrastructure will likely remain even if all current BRAC recommendations are adopted, future BRAC rounds may be needed. If a policy decision is made to continue BRAC rounds, legislative authority, similar to the 1990 BRAC legislation may be necessary to mitigate prior impediments to base closures.

The current and prior BRAC round recommendations, once implemented, will reduce DOD's inventory of major domestic bases by 21 percent. On the other hand, DOD states that its budget request for fiscal year 1996, in real terms, is 39 percent below fiscal year 1985. While such data are not directly comparable, they suggest the need for greater reductions in defense infrastructure and various base categories show that excess infrastructure is expected to remain.

In fact, the Secretary of Defense recently acknowledged that excess infrastructure would remain after the 1995 BRAC. He has suggested the need for additional BRAC rounds in 3 to 4 years, after DOD components have had a chance to absorb closures and realignments under this and prior rounds. The Chairman of the Joint Chiefs of Staff, in March 1, 1995, testimony before the BRAC Commission, said that excess capacity would remain after the 1995 BRAC. He cited the need for future base closure authority and said that opportunities remain regarding cross-servicing, particularly in the area of joint-use bases and training facilities. He also noted that the Commission on Roles and Missions was expected to recommend measures to enhance efficiency and interoperability. He indicated that implementing those recommendations could require a process similar to BRAC.

Our examination of DOD's BRAC process, as well as other work underway examining infrastructure, also suggests that costly excess infrastructure could remain after the 1995 BRAC. We also agree that opportunities remain for significant consolidations that will not only enhance joint operations but also reduce additional infrastructure in the process.

Our work in examining the 1995 BRAC recommendations, particularly in identifying those not proposed by defense components, suggests that a number of installations with relatively low military value were not proposed for closure because of the significant up-front closure costs, despite projecting savings in the long term. Therefore, the success of future BRAC rounds may be even more contingent on the willingness of DOD to make these up-front investments.

The current BRAC process may have certain weaknesses, but it has proven to be an effective mechanism for reducing defense infrastructure. BRAC Commission deliberations in 1993 and 1995 have included changes to prior BRAC round decisions, and future changes are likely. Since DOD cannot unilaterally change a BRAC Commission decision, and the authority for the BRAC Commission soon expires, no process will exist to authorize changes to prior decisions.

Conclusions and Matters for Congressional Consideration

Excess infrastructure is expected to remain after the 1995 BRAC process is completed, even if all of DOD's recommendations are approved. This could indicate the need for future BRAC rounds. We suggest that as the Congress considers the need for future defense infrastructure reductions, it consider a process similar to that authorized in the 1990 BRAC legislation. In the meantime, the Congress may wish to consider legislation to provide a process for reviewing and approving changes to prior BRAC round decisions that may encounter difficulties in implementation.

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 1995 base closure and realignment process. The definitions remain unchanged from the 1993 process, and are presented as stated by OSD.

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 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 host of the remaining portion of the base. Only a portion of the base will be excessed and the property disposed, with realignment (missions ceasing or relocating) 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 realigning 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 Defense. 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.

The Joint Cross-Service Groups' Analytical Process

Each cross-service group was composed of an executive group and one or more working groups. Senior OSD officials served as the chairpersons of each executive group. Representatives from each service and other DOD officials were members. Decisions were made at the executive level, after receiving input from the working groups. The cross-service groups reported to the OSD steering and review groups, which provided oversight and guidance (see ch. 3). Table II.1 lists the titles of the chairpersons of each cross-service group.

Table II.1: Chairpersons of the Five Functional Joint Cross-Service Groups

Cross-service group	Chairperson
Depot maintenance	Deputy Under Secretary of Defense for Logistics
Test and evaluation	Director, Test, Systems Engineering, and Evaluation Director, Operational Test and Evaluation
Laboratories	Director, Defense Research and Engineering
Medical treatment facilities	Assistant Secretary of Defense for Health Affairs
Undergraduate pilot training	Deputy Under Secretary of Defense for Readiness

The working groups were composed of technical experts from each of the services and OSD. They drafted the cross-service groups' data calls and analyses plans, calculated the amount of excess capacity, ranked all the activities under consideration, and prepared sets of alternative workload transfers, closures, and realignments for consideration by the services. In general, the executive groups approved products prepared by their working groups.

The Cross-Service Group Process

OSD defined the cross-service process in a BRAC 1995 policy and procedures memorandum, dated January 7, 1994; an internal control plan for managing cross-service opportunities, dated April 13, 1994; and policy memorandum number two on the analysis process, dated November 23, 1994. The following is a description of the cross-service process in the order that the steps were taken. Some steps were taken by the cross-service groups; others were accomplished by the services. To ensure accuracy, the DOD IG audited and reported on the cross-service groups' data analyses, and the service audit agencies audited the data provided by the services.

Data Collection

Each cross-service group defined the functions that were candidates for cross-service consolidation in the areas with which they dealt and the sites that performed these functions. Unlike the services, which focused on

bases or installations, the cross-service groups focused on functions that were performed in two or more locations or by two or more services or facilities with similar capabilities. Table II.2 shows the categories that each group selected for analysis and the number of locations.

Table II.2: Categories for Analysis and Locations Selected by the Cross-Service Groups

Cross-service group	Analysis categories	Locations
Depot maintenance	57 commodities, such as aircraft engines and landing gear	24 depots
Test and evaluation	Air vehicles, electronic combat, and armaments/weapons	23 activities[a]
Laboratories	29 functions, such as avionics for fixed-wing air vehicles	81 laboratories
Medical treatment facilities	Number of operating beds	14 medical centers 86 hospitals
Undergraduate pilot training	Undergraduate flying training in 10 functional groupings	12 installations for fixed-wing aircraft, 2 installations for rotary-wing aircraft

[a]Unlike the other cross-service groups, the test and evaluation group did not develop a list of activity locations to be included in its study. Instead, the group charged the military services with determining which of their facilities should be included. Twenty-three activities were included in its final analysis.

Like the services, the cross-service groups developed data calls to obtain information for their BRAC analyses. The cross-service groups submitted their data calls to the services for distribution through regular BRAC channels to the targeted activities in each service. Activities responded following the same procedures they used in responding to the service data calls. The services and their audit agencies monitored the data collection phase.

Capacity Analysis

Using data obtained in their data calls, the cross-service groups computed the capacity of each site performing a specific function. Then they compared the capacity with the projected workload to determine the amount of excess capacity in each of the functional areas. The amount of excess capacity depended on how much work was planned and the measure of capacity employed. Table II.3 shows how much excess capacity each group identified and how each measured capacity.

Table II.3: Amount of Excess Capacity and Methodology Used by Each Cross-Service Group

Cross-service group	Amount of excess capacity	Methodology for measuring excess capacity
Depot maintenance	40.1 million direct labor hours (equal to 24,830 work years).	Fiscal year 1999 capacity minus the core-funded work load[a] for fiscal year 1999.
Test and evaluation	495,000 test hours.	Peak annual work load between fiscal year 1986 and 1993 minus projected work load of .72 times the average work load in fiscal years 1992 and 1993.
Laboratories	9,800 work years.	Peak work years between fiscal year 1986 and 1993, minus the 1997 requirement, minus 20 percent.
Medical treatment facilities	1 medical center is excess, and 2 medical centers and 13 hospitals should be realigned.	Acute care occupancy rate in fiscal year 1994 for each facility compared to the active duty and family population it serves within a 40-mile area projected to 1998-99.
Undergraduate pilot training	33 percent of available airfield operations for fixed-wing aircraft and 108 percent of available ramp space for rotary-wing aircraft.	The number of airfield operations for fixed-wing and ramp space availability for rotary-wing aircraft needed to train the number of students required annually.

[a]The logistics capability maintained for national defense by DOD activities (including personnel, equipment, and facilities) to ensure the availability of a ready and controlled source of technical competence and resources to provide an effective and timely response to a mobilization, national defense contingency situations, and other emergency requirements.

The cross-service groups' data calls, like those used by the services, were also keyed to obtaining information related to the first four BRAC criteria dealing with military value. The services used these same criteria in completing the military value analyses of installations and facilities in their basing categories. The cross-service groups used these criteria to assign a functional value to each activity. Functional values represented the value of performing each function at each site in comparison with all sites in a given category.

Military Value Analysis

The services computed the military value for each of their own activities and provided this ranking to the cross-service groups. The services used their own procedures to assign military value, and each was required to present the results on a scale of one (least valuable) to three (most

valuable). The Air Force ranked its activities in three tiers in lieu of military value.

Configuration Analysis

Combining the functional values developed by the cross-service groups and the military values provided by the services, a linear program called the optimization model was used to derive sets of alternatives for each cross-service group. Other inputs to the model included total capacity, capacity reduction goals, and the policy constraints defined by each group and approved by the steering group. Table II.4 shows some of the policy constraints employed by each cross-service group.

Table II.4: Examples of Policy Constraints Employed by the Cross-Service Groups

Cross-service group	Policy constraint
Depot maintenance	The Army, Navy, Marine Corps, and Air Force will each retain at least one depot to perform essential maintenance.
Test and evaluation	DOD will retain irreplaceable air, land, and sea space that will provide at least one sea range and land range and at least one of each type of topography and climatology.
Laboratories	None.
Medical treatment facilities	Facilities will remain open if they are in an underserved primary care area, acute care beds in the community are insufficient, or less than two accredited acute care facilities are available.
Undergraduate pilot training	There will be no helicopter training at sites with less than two auxiliary fields.

The model identified options for moving workloads based on the criteria the groups wanted to optimize. The model could provide suggested workload transfers that would (1) minimize the number of sites, (2) minimize the amount of excess capacity, (3) maximize the average military value of all sites, or (4) maximize the average functional value of all sites. A group could also direct variations that would, for example, eliminate as much excess capacity as possible while maintaining an average functional value at least as high as the original set of sites.

The cross-service groups evaluated the feasibility of the various sets of alternatives for closures, realignments, and workload transfers. Then the chairpersons provided what they considered to be the best sets of options to the services for their consideration. Table II.5 summarizes the alternatives that the groups submitted to the services.

Table II.5: Alternatives the Cross-Service Groups Sent to the Services

Cross-service group	Summary of alternatives
Depot maintenance	Two options with some variations—both would close eight depots, consolidate about 13 work loads at single sites and others at two or more sites.
Test and evaluation	Core alternatives: realign work load among five core activities, which are part of the major range and test facility base. Non-core alternatives: realign work load from 11 activities to core activities.
Laboratories	Consolidate broad functional areas of work at major sites. Transfer 72 functional life cycle work load.
Medical treatment facilities	Close 1 medical center; realign 2 medical centers and 13 hospitals.
Undergraduate pilot training	Three options—close undergraduate pilot training at three, four, or five installations.

Air Force, Army, and Navy responses to each cross-service group's proposals are summarized in chapters 4, 5, and 6, respectively.

Cost of Base Realignment Actions Model (COBRA)

The COBRA model uses a set of formulas, or algorithms, that rely on three types of data elements in its calculations: base-specific data, scenario-specific data, and standardized data. Base-specific data is applied to all closure and realignment scenarios involving a given base. Examples of base-specific data include base operating and family housing costs. Scenario-specific data changes for each BRAC action and includes the number of personnel positions to be eliminated or relocated and the amount of required military construction. Standardized data elements—or standard factors—are common to a class of bases and are applicable for all scenarios that involve those bases. Some standard factors apply only to one DOD component or a subset of a component's bases, while others are applicable to all bases DOD-wide. Average salaries and moving costs are examples of standard factors used in the COBRA model.

Improvements to Model Have Been Made

The COBRA model has been used in the base closure process since 1988, and in the intervening years it has been considerably revised to deal with problems we and others identified after each BRAC round. Perhaps the most significant change was conversion of the original LOTUS spreadsheet version to PASCAL programming language prior to BRAC 1991. This change prevented the model's algorithms from being altered by anyone other than the model's programmers and better ensured consistent application of the model. Another major revision allowed the user to enter costs and savings unique to a specific base or scenario without deactivating the model's algorithms.

Refinements to the model are initiated and controlled by a COBRA Joint Process Action Team (JPAT). The JPAT is comprised of representatives from user organizations, including OSD.

Some of the more significant enhancements that affected COBRA's ability in BRAC 1995 to overcome weaknesses reported by us and others in BRAC 1993 are shown in table III.1.

Table III.1: Some COBRA Improvements Affecting BRAC 1995

BRAC 1993 shortcoming	BRAC 1995 improvement
COBRA algorithms not independently verified.	Key COBRA algorithms verified by Army Audit Agency.
Inconsistency in cost data for certain factors.	Greater emphasis on standardized cost factors.
Unable to summarize cost and saving data for multiple scenarios.	Cost and savings data for multiple scenarios can be aggregated.
ROI year is understated by 1 year in an output report.	Calculation of ROI year has been corrected.
Inconsistent treatment of recurring costs and savings.	All recurring costs and savings are half-year in the year of the BRAC action, except base operating support costs, which are full-year and unique costs entered by the user.
Time phasing of administrative planning and support costs is evenly distributed.	Administrative planning and support costs are phased according to the movement and elimination of personnel.
Additional base operating support personnel required at gaining bases are not identified.	Model considers the impact of more base operating support personnel.
Overhead savings for non-DOD salaried personnel are not considered.	Overhead savings for non-DOD personnel are considered.

Two of the more significant actions affecting BRAC 1995 are the validation of the COBRA model and a greater emphasis on using standardized cost factors.

Errors discovered in COBRA formulas during prior BRAC rounds, although corrected, indicated a need for COBRA's algorithms and programming to be validated. Thus, in 1994, the Army Audit Agency agreed to examine whether the COBRA model accurately calculated cost and savings estimates. The audit agency tested four of the model's algorithms against several of the Army's BRAC 1993 recommendations.[1] The Army Audit Agency concluded that the COBRA model correctly calculated the cost and savings estimates.

In earlier BRAC rounds, the DOD components frequently differed in the values they assigned to COBRA standard factors. Thus, in an effort to minimize differences in BRAC 1995 the JPAT agreed on common values for 36 standard factors, more than four times as many as in BRAC 1993.

[1]Tests were run on four of the model's algorithms: (1) military construction costs, (2) miscellaneous recurring costs, (3) civilian salary savings, and (4) base operating support savings. These areas represented 54 percent of the costs and 81 percent of the savings associated with the Army's BRAC 1993 recommendations.

Standardized factors introduced in BRAC 1995 included two large areas—personnel and relocation costs. The remaining standard factors were developed independently by the DOD components to account for differences deemed too large to standardize, such as factors for construction, the percentage of officers and enlisted personnel who are married, and permanent change of station costs.

Bases Affected by the Secretary of Defense's February 28, 1995, 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 IV.1 shows the major bases that were recommended for closure; table IV.2 shows the major bases that were affected by realignment recommendations; table IV.3 lists the smaller bases and activities that were affected by closures, realignments, and other actions; and table IV.4 lists the changes to previously approved BRAC recommendations.

Table IV.1: Major Bases Recommended for Closure

Service/agency	Base/installation/activity
Army	Fort McClellan, Alabama Fort Chaffee, Arkansas Fitzsimons Army Medical Center, Colorado Price Support Center, Illinois Savanna Army Depot Activity, Illinois Fort Ritchie, Maryland Selfridge Army Garrison, Michigan Bayonne Military Ocean Terminal, New Jersey Seneca Army Depot, New York Fort Indiantown Gap, Pennsylvania Red River Army Depot, Texas Fort Pickett, Virginia
Navy	Naval Air Facility, Adak, Alaska Naval Shipyard, Long Beach, California Ship Repair Facility, Guam Naval Air Warfare Center, Aircraft Division, Indianapolis, Indiana Naval Surface Warfare Center, Crane Division Detachment, Louisville, Kentucky Naval Surface Warfare Center, Dahlgren Division Detachment, White Oak, Maryland Naval Air Station, South Weymouth, Massachusetts Naval Air Station, Meridian, Mississippi Naval Air Warfare Center, Aircraft Division, Lakehurst, New Jersey Naval Air Warfare Center, Aircraft Division, Warminster, Pennsylvania
Air Force	North Highlands Air Guard Station, California Ontario IAP Air Guard Station, California Rome Laboratory, Rome, New York Roslyn Air Guard Station, New York Springfield-Beckley MAP, Air Guard Station, Ohio Greater Pittsburgh IAP Air Reserve Station, Pennsylvania Bergstrom Air Reserve Base, Texas Brooks Air Force Base, Texas Reese Air Force Base, Texas
Defense Logistics Agency	Defense Distribution Depot, Memphis, Tennessee Defense Distribution Depot, Ogden, Utah

Table IV.2: Major Bases Recommended for Realignment

Service/agency	Base/installation/activity
Army	Fort Greely, Alaska Fort Hunter Liggett, California Sierra Army Depot, California Fort Meade, Maryland Detroit Arsenal, Michigan Fort Dix, New Jersey Fort Hamilton, New York Charles E. Kelly Support Center, Pennsylvania Letterkenny Army Depot, Pennsylvania Fort Buchanan, Puerto Rico Dugway Proving Ground, Utah Fort Lee, Virginia
Navy	Naval Air Station, Key West, Florida Naval Activities, Guam Naval Air Station, Corpus Christi, Texas Naval Undersea Warfare Center, Keyport, Washington
Air Force	McClellan Air Force Base, California Onizuka Air Station, California Eglin Air Force Base, Florida Robins Air Force Base, Georgia Malmstrom Air Force Base, Montana Kirtland Air Force Base, New Mexico Grand Forks Air Force Base, North Dakota Tinker Air Force Base, Oklahoma Kelly Air Force Base, Texas Hill Air Force Base, Utah

Table IV.3: Smaller Bases and Activities Recommended for Closure, Realignment, Disestablishment, or Relocation

Service	Base/installation/activity
Army	Branch U.S. Disciplinary Barracks, California
	East Fort Baker, California
	Rio Vista Army Reserve Center, California
	Stratford Army Engine Plant, Connecticut
	Big Coppett Key, Florida
	Concepts Analysis Agency, Maryland[a]
	Publications Distribution Center, Baltimore, Maryland
	Hingham Cohasset, Massachusetts
	Sudbury Training Annex, Massachusetts
	Aviation-Troop Command (ATCOM), Missouri[a]
	Fort Missoula, Montana
	Camp Kilmer, New Jersey
	Caven Point Reserve Center, New Jersey
	Camp Pedricktown, New Jersey
	Bellmore Logistics Activity, New York
	Fort Totten, New York
	Recreation Center #2, Fayettville, North Carolina
	Information Systems Software Command (ISSC), Virginia[a]
	Camp Bonneville, Washington
	Valley Grove Area Maintenance Support Activity (AMSA), West Virginia

(continued)

Service	Base/installation/activity
Navy	Naval Command, Control and Ocean Surveillance Center, In-Service Engineering, West Coast Division, San Diego, California
	Naval Health Research Center, San Diego, California
	Naval Personnel Research and Development Center, San Diego, California
	Supervisor of Shipbuilding, Conversion and Repair, USN, Long Beach, California
	Naval Undersea Warfare Center-Newport Division, New London Detachment, New London, Connecticut
	Naval Research Laboratory, Underwater Sound Reference Detachment, Orlando, Florida
	Fleet and Industrial Supply Center, Guam
	Naval Biodynamics Laboratory, New Orleans, Louisiana
	Naval Medical Research Institute, Bethesda, Maryland
	Naval Surface Warfare Center, Carderock Division Detachment, Annapolis, Maryland
	Naval Technical Training Center, Meridian, Mississippi
	Naval Aviation Engineering Support Unit, Philadelphia, Pennsylvania
	Naval Air Technical Services Facility, Philadelphia, Pennsylvania
	Naval Air Warfare Center, Aircraft Division, Open Water Test Facility, Oreland, Pennsylvania
	Naval Command, Control and Ocean Surveillance Center, RDT&E Division Detachment, Warminster, Pennsylvania
	Fleet and Industrial Supply Center, Charleston, South Carolina
	Naval Command, Control and Ocean Surveillance Center, In-Service Engineering East Coast Detachment, Norfolk, Virginia
	Naval Information Systems Management Center, Arlington, Virginia
	Naval Management Systems Support Office, Chesapeake, Virginia
	Naval Reserve Centers at:
	Huntsville, Alabama
	Stockton, California
	Santa Ana, Irvine, California
	Pomona, California
	Cadillac, Michigan
	Staten Island, New York
	Laredo, Texas
	Sheboygan, Wisconsin
	Naval Air Reserve Center, Olathe, Kansas
	Naval Reserve Readiness Commands
	New Orleans, Louisiana (Region 10)
	Charleston, South Carolina (Region 7)
Air Force	Moffett Federal Airfield AGS, California
	Real-Time Digitally Controlled Analyzer Processor Activity, Buffalo, New York
	Air Force Electronic Warfare Evaluation Simulator Activity, Fort Worth, Texas

(continued)

Service	Base/installation/activity
Defense Logistics Agency	Defense Contract Management District South, Marietta, Georgia Defense Contract Management Command International, Dayton, Ohio Defense Distribution Depot, Columbus, Ohio Defense Distribution Depot, Letterkenny, Pennsylvania Defense Industrial Supply Center, Philadelphia, Pennsylvania Defense Distribution Depot, Red River, Texas
Defense Investigative Service	Investigations Control and Automation Directorate, Fort Holabird, Maryland

[a]This is a leased facility.

Table IV.4: Changes to Previously Approved BRAC Recommendations

Service/agency	Base/installation/activity
Army	Army Bio-Medical Research Laboratory, Fort Detrick, Maryland
Navy	Marine Corps Air Station, El Toro, California Marine Corps Air Station, Tustin, California Naval Air Station, Alameda, California Naval Recruiting District, San Diego, California Naval Training Center, San Diego, California Naval Air Station, Cecil Field, Florida Naval Aviation Depot, Pensacola, Florida Navy Nuclear Power Propulsion Training Center, Naval Training Center, Orlando, Florida Naval Training Center, Orlando, Florida Naval Air Station, Agana, Guam Naval Air Station, Barbers Point, Hawaii Naval Air Facility, Detroit, Michigan Naval Shipyard, Norfolk Detachment, Philadelphia, Pennsylvania Naval Sea Systems Command, Arlington, Virginia Office of Naval Research, Arlington, Virginia Space and Naval Warfare Systems Command, Arlington, Virginia Naval Recruiting Command, Washington, D.C. Naval Security Group Command Detachment Potomac, Washington, D.C.
Air Force	Williams AFB, Arizona Lowry AFB, Colorado Homestead AFB, Florida (301st Rescue Squadron) Homestead AFB, Florida (726th Air Control Squadron) MacDill AFB, Florida Griffiss AFB, New York (Airfield Support for 10th Infantry (Light) Division) Griffiss AFB, New York (485th Engineering Installation Group)
Defense Logistics Agency	Defense Contract Management District West, El Segundo, California

Economic Impact Assessments

The economic impact on affected communities has been one of DOD's eight criteria for making base closure and realignment decisions in the current and two previous BRAC rounds. DOD's sensitivity to this issue has increased with each succeeding round, as the cumulative impact of base realignments and closures has increased. This has caused DOD to strengthen its process for assessing potential economic impact. DOD also placed greater emphasis on aggregating the impacts of tentative closure decisions across the services for the 1995 round, as well as assessing the cumulative impact of the current and prior BRAC rounds. Though not a precise predictor of outcome, the methodology employed by OSD is considered a reasonable use of existing tools of economic impact analysis.

Economic Impact Analysis Has Improved Over the BRAC Rounds

The services and defense agencies have been required to assess the economic impact of their recommendations for potential closure or realignment in each of the recent BRAC rounds. Economic impact assessments are intended to define the impact BRAC recommendations could have on the affected community's economy in terms of total potential job change (direct and indirect). The assessments estimate impact in absolute terms and as a percentage of employment in the economic area. An affected economic area is generally defined as a metropolitan statistical area (MSA) or non-MSA county(s), unless there is evidence calling for some other definition.

Once the services and Defense agencies completed their economic impact assessments, they were reported to OSD along with the BRAC recommendations. OSD then considered economic impact from a DOD-wide perspective. The extent to which either OSD or the services and Defense agencies used the results of their analyses has varied in each BRAC round.

1991 Round

In the 1991 BRAC process OSD guidance required the services to consider the economic impact of proposed BRAC actions and report their impact calculations, but it did not specify how this assessment was to be used in the process. As a result, the services differed in the methods they employed and the extent to which they examined economic impact. However, economic impact was not a major factor for any of the services in their decision-making processes in the 1991 round.

A separate assessment was done by OSD, using the Office of Economic Adjustment (OEA) to calculate the full impacts of actions proposed by all DOD components. The OEA methodology was derived with assistance from

the Logistics Management Institute (LMI), which was retained for this purpose. The methodology appeared sound, but we noted in our 1991 report that the definition of economic areas in some cases could have overstated the potential impact. For example, if a county was identified as the economic area of a given base and that county was rural, the impact may have been overstated if the base drew employees from several counties. Having completed an assessment of economic impact, OSD did not use it to make any changes to the services' proposed closures. The cumulative impacts of the proposed 1991 actions were not considered significant because of the limited number of BRAC actions up to that time.

1993 Round

In 1993 OSD guidance to DOD components included how economic impact analyses were to be conducted but, again, did not specify how such impact was to be considered in the overall decision-making process. The DOD components were mandated by OSD to use the approach developed by OEA to calculate the direct and indirect employment impacts of a potential closure or realignment. Impacts were to be expressed in terms of job changes as a percentage of area employment. The issue of cumulative impact became more important, because of the increased numbers of recommendations. When OSD considered the estimated impact of all proposed actions in 1993, they established a standard against which to evaluate economic impact. Information from DOD components was compiled into a master spreadsheet that calculated the cumulative effect on an economic area of 1988, 1991, and recommended 1993 actions across all services and DOD agencies. A job loss of 5 percent or greater in an area with 500,000 or more jobs was determined by OSD to constitute the standard for unacceptable economic impact.

OSD subsequently used economic impact to cancel proposed closure actions affecting Sacramento, California, without explicitly addressing the implications for military value. Alternative candidates were not proposed, largely because DOD's consideration of cumulative economic impact came too late in the 1993 process, which made it difficult to assess alternative closure and realignment scenarios.

In our 1993 report we expressed concern about the subjective method OSD used to derive its threshold for determining unacceptable economic impact and the basis for not considering those areas whose impact fell close to that threshold. Further, there was no evidence to support OSD's assumption that economic recovery would be more difficult in a larger metropolitan area than in a smaller one. In reviewing DOD's proposed

closures and realignments, the BRAC Commission also expressed concern about how the economic impact criterion had been applied. Thus, the BRAC Commission recommended to DOD that, in future, they state clearly that cumulative economic impact alone would be insufficient cause for removing a base from consideration without adequate military value justification.

1995 Round

On January 7, 1994, the Deputy Secretary of Defense established the Joint Cross-Service Group on Economic Impact. This group was the vehicle through which the methodology for calculating economic impact was derived. The group was also responsible for the analysis of DOD component recommendations in order to evaluate cumulative impacts. The issue of cumulative economic impact was important once again. The cross-service group was chaired by the Deputy Assistant Secretary of Defense for Installations and included members from the military departments and OEA.

The cross-service group worked to refine the process of estimating economic impact. Its principal function was developing and refining its approach and ensuring that it would be standard across all DOD components. Representation by all services on the cross-service group greatly facilitated this.

As was the case in 1993, DOD retained LMI to provide technical assistance in developing a methodology and a computer database for use in calculating impacts by the DOD components and the cross-service group. The cross-service group defined the geographic areas they would use in the analysis process—in this case "economic areas." If an installation was part of an MSA, as defined by OMB, then the MSA was the economic area for analysis purposes. The 1993 BRAC Commission recommended that DOD clarify and standardize its geographic areas of measurement. In response, DOD established a set of rules for assigning installations to economic areas for BRAC 1995. For example, several MSAs were not appropriate for BRAC purposes in that they did not reflect the locations where those affected by BRAC actions live and work. Input from the BRAC offices of the military services on the geographic location of the military and civilian personnel associated with particular bases helped further define economic areas.

The database program developed by the cross-service group and LMI was constructed using the most recent information available from official U.S. government sources, such as the Bureau of Labor Statistics and from the

DOD components. The resulting database was much larger than that used in 1993, providing a more comprehensive set of basic economic data more closely associated with each individual economic area. The military services provided basic information to the cross-service group for input to the economic impact program. This input included such information as installation functions, base personnel numbers, and base identification codes. Each base or installation was linked in the database to background and employment information as well as economic indicators necessary to review economic impact.

The impact of a potential 1995 BRAC action, or actions, on an area is measured in terms of direct and indirect job changes estimated for 1994 through 2001, expressed in absolute terms and as a percentage of the total number of jobs in an economic area. Direct job changes are the estimated net addition or loss of jobs for military personnel, DOD civilian employees, and on-base contractors that work in support of the installation's military missions. Such changes are directly associated with base closures and realignments. Indirect job changes are the estimated net addition or loss of jobs in each affected economic area that could potentially occur as a result of the estimated direct job changes. The cross-service group and LMI developed multipliers as a means of gauging the effect of direct job changes on surrounding communities. For example, in one area, each civilian DOD job may be estimated to create or support 1.5 jobs in that area. The numbers are different for each economic area. Such multipliers essentially represent the expected purchasing level in the local economy of military personnel, military trainees, and civilian DOD employees. When multiplied by the number of people moving out of an economic area due to a proposed closure, the resulting figure represents an estimated decrease in the number of jobs in that area.

For purposes of deriving employment multipliers, DOD installations were placed into two groups: (1) facilities performing specialized functions and (2) all others. Military personnel, military trainees, and civilian DOD personnel were assigned multipliers according to their expected level of purchases in the local community. Multipliers for specialized installations were higher than other installations due to the generally higher-skilled and higher-paying positions associated with them. Specialized installations were further classified as depots, research and development facilities, or ammunition production facilities. Multipliers for the specialized functions were based on the local economic activity patterns of industries that perform similar functions. Multipliers also vary according to the size of the local economy, with larger economic areas having larger multipliers. This

is because, in small areas, a higher proportion of goods are imported into the area. Using a statistical technique, the cross-service group developed their multipliers based on actual Department of Commerce multipliers for 53 communities. The estimated values for the sample multipliers were then adjusted upward so that the resulting multipliers would reduce the likelihood that the process would underestimate the potential employment effects of BRAC.

The cross-service group asked the Bureau of Economic Analysis (BEA), Department of Commerce, to provide an independent review of its BRAC 1995 multiplier methodology. The BEA indicated that the cross-service group methodology was sound and "consistent with good regional economic impact estimation practices." They also recognized that economic impact calculated using the cross-service group multipliers would be overstated.

Assessing economic impact in 1995 involved estimating the impact of each recommendation on an economic area, the impact of all other BRAC 1995 recommendations on the same area, and the impact of previous BRAC actions on that economic area. In this round, the military services were also to include in their estimates of 1995 impacts the impacts of all previous BRAC actions, including those of other DOD components. In keeping with the recommendations of the 1993 BRAC Commission, OSD stressed that the existence of economic impact on an area due to actions in prior BRAC rounds or multiple 1995 recommendations would not, by itself, cause a recommendation to be changed. Priority was to be placed, once again, on military value in making decisions or reexamining recommendations. OSD also stated that it would not establish threshold values.

The impact of realized closures resulting from previous BRAC rounds was based on consideration of historic economic data. These included changes in unemployment rates and per capita personal income for each economic area from 1984 through 1993. Historic economic data were obtained by the cross-service group from the BEA and the Bureau of Labor Statistics and were included in the database. These economic indicators provided an indication of the current economic condition of each given area and recent trends in that condition and were presumed to reflect the effects of previous BRAC actions on local areas. When considered with potential job changes from proposed 1995 actions, they were the principal means by which the cumulative impact of proposed and past BRAC actions was considered. Thus, an area containing bases closed in 1989 and 1992 and a

base recommended for closure in 1995 could be assessed through its 1984 through 1993 unemployment rates, change in employment levels, and change in per capita personal income in order to put any estimated 1994 through 2001 employment impacts into perspective.

Once constructed, the database program was given to the services and DOD agencies for their review. Each of the services and DOD agencies reviewed the program and discussed any necessary changes with the cross-service group. This process produced refinements in the program, which was employed by every component in the BRAC process.

Economic Impact Methodology Has Limitations but Seems Reasonable for BRAC Purposes

As was the case in previous BRAC rounds, there are many types of models and computer-assisted tools in use by the private sector and the government that could be used to estimate the economic impact of base closures to some degree. The methodology used by DOD in BRAC 1995 does have some limitations in that it does not fully account for all impacts. However, these limitations appear to be more than offset by other factors that would overstate impact. One limitation in the program's data for BRAC 1995 was that current data was not available on changes in military employment levels after 1992. The data used represented the most recent official U.S. government information available. Data for 1993 and 1994 was still being compiled and analyzed during the BRAC 1995 DOD deliberative process and was therefore unavailable. DOD was concerned about abandoning its principle of relying on authoritative data by attempting to project changes in employment data for the hundreds of economic areas involved in BRAC 1995.

Additionally, the database does not develop economic multipliers individually for each economic area. Using the BEA's multiplier development technique for the large number of economic areas involved in the BRAC process would have been time-consuming and expensive. As discussed earlier, DOD arrived at its multipliers by adjusting current estimates upward. This essentially increased the multipliers for all economic areas and resulted in overstatement of impacts from BRAC actions.

The DOD database also does not consider factors that might offset local impacts, such as the potential reemployment of separated employees in other local area businesses, or possible civilian reuse of closed facilities. Thus, DOD's database is not the most accurate tool for predicting the economic picture of areas that might experience a closure or realignment.

A more accurate tool would be much more complicated, employing more community-specific information. While such a tool might be more accurate, the DOD methodology's relative simplicity and tendency to overstate the employment impact on local areas seems reasonable for BRAC purposes in terms of ensuring that the most severe potential impact is considered. Also important to DOD's estimation of economic impact is that the use of the database applies a consistent analysis to all proposed actions.

OSD's methodology for assessing economic impact was reviewed by an independent panel of six government, academic, and private sector economic experts in May 1994 and was found to be sound. The panel agreed that the use of direct and indirect job change was a reasonable way to characterize the impact of proposed closures or realignments and that DOD's planned use of historic data would adequately capture the impacts of previous BRAC actions. The reviewers noted that the methodology did not account for any of the ameliorating factors local areas would experience, such as land reutilization or reemployment associated with any economic expansion occurring in the area. The reviewers concluded that since job change multipliers were adjusted upward to avoid understating employment impacts, the results of the analyses proposed by DOD would represent a "worst-case" estimate of economic impact. It is important to note that the impact analysis done for BRAC is not a method for precisely predicting the economic events of areas that may experience a closure or realignment. It considered only the effects of current BRAC actions in the context of an areas historical economic condition, rather than taking into consideration any mitigating factors.

In addition to the independent review discussed above, the DOD IG performed an audit of a sample of the computer program's data elements in order to validate the multipliers and historic data in the program. This audit revealed a small number of instances of data inaccuracy, none of which affected subsequent economic impact calculations. It also revealed an initial lack of documentation for the sources of certain important data elements, such as unemployment figures. However, these issues were satisfactorily resolved by the DOD IG, the cross-service group, and LMI.

DOD Components and OSD Conducted Economic Impact Analyses

As the military services began to develop their closure/realignment scenarios, they used the database program to compute the economic impact of their component-unique scenarios. We found little documentation indicating that DOD components eliminated potential closure or realignment candidates from consideration for economic impact reasons. The only exceptions appeared to be in the Navy, where the Secretary of the Navy expressed his intent to minimize other closures in California if he recommended the closure of the Long Beach NSY. This prompted the Navy BSEC to keep several activities open that they were prepared to recommend for closure (see ch. 3). The Navy also decided to keep PWC Guam open, in part due to economic impact considerations. Nevertheless, the BSEC believed sufficient customers will remain on Guam to justify keeping the PWC open.

Once the services and DOD agencies submitted their recommendations to the OSD, the cross-service group on economic impact collected and merged the economic impact data files of each service and agency. The cross-service group then calculated updated values for cumulative economic impact to account for multiple BRAC 1995 actions from different DOD components in the same economic areas. The chairman of the cross-service group sent a memorandum to the services and defense agencies requesting that they review their recommendations for those installations located in areas with multiple BRAC 1995 actions. The services and defense agencies reviewed their recommendations in light of the updated cumulative economic impact values and the other seven criteria. None decided to change its recommendations. In examining the cumulative impact data, OSD also determined that no changes were required in the components' recommended closures and realignments.

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