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MILITARY BASES

An Analysis of the Commission's Realignment and Closure Recommendations





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National Security and
International Affairs Division

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The Honorable Sam Nunn
Chairman, Committee on
Armed Services
United States Senate

The Honorable Les Aspin
Chairman, Committee on
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House of Representatives

The Honorable John Warner
Ranking Minority Member
Committee on Armed Services
United States Senate

The Honorable William Dickinson
Ranking Minority Member
Committee on Armed Services
House of Representatives

The Commission on Base Realignment and Closure issued its report on December 29, 1988, that recommended closing 86 military bases, partially closing 5 bases, and realigning 54 others. This report responds to your January 12, 1989, request letter that GAO evaluate the Commission's methodology, findings, and recommendations.

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

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Executive Summary

Purpose

The Department of Defense (DOD) spends billions of dollars annually operating its domestic military bases. On May 3, 1988, the Secretary of Defense chartered a commission to recommend bases that could be realigned or closed.

The Commission's December 29, 1988, report recommended that 86 bases be closed, 5 be partly closed, and 54 others be realigned, for an annual savings of about \$694 million. In January 1989, the Chairmen and Ranking Minority Members of the Senate and House Committees on Armed Services asked GAO to review the Commission's methodology, findings, and recommendations.

Background

The Defense Authorization Amendments and Base Closure and Realignment Act (P.L. 100-526) dated October 24, 1988, required the Secretary of Defense and then the Congress to accept all or none of the Commission's realignment and closure recommendations. The Secretary accepted all of the recommendations on January 5, 1989. Legislative requirements for congressional acceptance were met during April 1989.

The Commission's methodology consisted of a two-phase process.

- Phase I grouped bases into 22 overall categories, such as training bases and administrative headquarters, and then focused on determining the military value of bases within each category, each base's capacity to absorb additional missions and forces, and the overall excess capacity within the category. The Commission then ranked the bases to identify those warranting review in phase II.
- Phase II focused on assessing the cost and savings of base realignment and closure options. Among other things, the Commission's charter required the Commission to assess environmental and economic impacts and determine if savings would exceed costs within a 6-year time frame beginning with the completion of the realignment or closure.

In both phases, the Commission used information provided primarily by the military services to quantitatively assess many factors. Besides using these quantitative data, the Commission relied heavily on its members' individual and collective judgments in making its final recommendations.

GAO's review focused on realignment and closure recommendations for 15 bases that represent about 90 percent of the Commission's estimated annual savings.

Results in Brief

Given the Commission's formidable task and tight time constraints, GAO believes the methodology developed and used by the Commission was generally sound. However, GAO found some errors were made in implementing the methodology, and estimates of annual savings were overstated. Using revised and updated data, GAO estimates that following the Commission's recommendations for the 15 bases GAO reviewed would save as much as \$453.4 million annually—about \$170 million less than the Commission's estimate, but still a substantial annual savings. According to DOD and Commission officials, even considering the errors in base rankings and cost estimates, the recommendations are still sound and logical.

The Commission's process also considered environmental and community economic impact issues. However, neither of these issues played a significant part in the Commission's decisions to realign or close bases. The Commission reasoned, and GAO agrees, that because DOD is already responsible for hazardous waste cleanup, those costs are not a consequence of the Commission's decisions to realign or close bases. GAO also agrees with the Commission that a more detailed examination of the economic impact on communities would have required more time than was available to the Commission.

GAO's work provides a number of lessons learned for future studies of base realignments and closures. Most important is the need for (1) sufficient time to collect, analyze, and verify data and (2) adequate management controls over those tasks.

Principal Findings

Errors Made in Phase I Analysis

GAO found that the Commission made errors in its phase I military value analysis. For example, those errors included double-counting square footage of some base facilities and inaccurately reporting some base acreage. In some cases, these miscalculations affected the relative military value ranking of the bases.

For example, GAO's analysis of the phase I process for Army basic and advanced individual training bases—which included Forts Dix, Sill, Knox, Leonard Wood, Bliss, Benning, McClellan, and Jackson—shows that correcting data errors results in changes to the relative military

value ranking for bases in that category. For this category the Commission recommended that Fort Dix be placed in a semi-active status. DOD and Commission officials believe even if the rankings change, the Commission's recommendation concerning Fort Dix is still sound. GAO estimates a \$43.8-million annual savings as a result of that action.

Savings Estimates Were Overstated

During the phase II process, costs and savings estimates and the Commissioners' judgments were used to develop the realignment and closure recommendations. GAO found that the Commission's overall savings estimates were overstated due to data errors, inaccurate estimates, and the exclusion of certain relevant costs. Table 1 shows a comparison of the Commission's and GAO's estimates. The costs and savings estimates are still preliminary because they depend on future decisions. For example, estimates for military construction costs and savings from land sales and personnel eliminations are subject to change.

Table 1: Comparison of Commission and GAO Estimates (Fiscal Year 1988 Dollars)

Dollars in millions

Base	Commission estimates		GAO estimates	
	Year(s) to recover closure costs	Annual ^a savings	Year(s) to recover closure costs	Annual saving
Army				
Forts Devens, Meade, Huachuca, and Holabird realignment	0	\$21.0	43 to over 200	\$8
Fort Dix	3	84.5	4	43
Fort Sheridan	0	40.8	1	22
Jefferson Proving Ground	6	6.6	38 to over 200	6
Lexington Depot	6	6.7	5	11
Presidio of San Francisco	0	74.1	7 to never	46.8 to 16
Navy				
Hunters Point	0	8.0	5	7
Air Force				
Chanute	3	68.7	3	55
George	0	70.2	2	51
Mather	1	78.7	1	61
Norton	3	67.9	5	58
Pease	0	95.7	0	81
Total		\$622.9		\$400.3 to 453.

^aAnnual savings represent the continuous annual savings that result after all costs of realigning or closing the base are recovered.

As shown in table 1, the revised costs and savings estimates for most bases did not significantly increase the time it will take to recover the costs of the recommended actions. However, in a few cases the increases are significant. For example:

- For the Presidio of San Francisco, the estimates range from recovering the cost of closure in 7 years to never recovering them. GAO could not narrow the estimate of annual savings and the cost recovery period because it had no basis for predicting future health care and National Park Service costs resulting from the closure. Consequently, GAO's estimate range represents the best and worst annual savings and cost recovery scenarios for the federal government.
- The Commission did not calculate munitions cleanup or management costs at Jefferson Proving Ground. Spent munitions are not considered hazardous waste while firing ranges are open. However, since the Commission recommended closing Jefferson, the costs incurred after closure for cleaning up or otherwise managing munitions waste should have been considered as a result of closure and included in the cost estimates. Depending on how the munitions issue is resolved, GAO estimates it could take at least 32 years longer than the Commission's estimate to recover the costs of closing Jefferson. GAO found a similar problem with Fort Meade.

GAO found two primary causes for the phase II mistakes. First, the Commission was operating under tight time constraints. The cost analyses and report preparation were accomplished in about a 2-month period. Second, the Commission did not have effective management control procedures for verifying the accuracy of the data it collected and the results of its analyses.

Costs for Hazardous Waste Cleanup Not Included in Estimates

Although GAO agrees with the Commission that hazardous waste cleanup costs that are not a result of closure should not be included in costs and savings calculations, these costs could be substantial. Preliminary estimates are as much as \$661 million. Until environmental studies and tests are completed, more specific estimates are not available. Further, the future use of properties could affect these costs and land sales proceeds.

Consideration of Economic Impact Could Be Improved

Economic impact on communities was not a determining factor in the Commission's recommendations because it planned to consider such impacts only when all other factors, such as military value, were equal

for two or more bases. However, no case arose where all other factors were equal. The Commission gathered and analyzed economic impact data to categorize the impact on communities as minimal, moderate, or severe.

In evaluating potential economic impact, the Commission did not consider indirect job losses in and around affected communities or non-DOD costs to the government resulting from realignments or closures. According to Commission officials, the Commission was working under tight time constraints and believed such costs would be minimal. Although GAO recognizes the Commission's constraints, it believes that in future studies of base realignments and closures, sufficient time should be provided to estimate economic impact costs so they can be included in cost models.

Recommendations

GAO recommends that the Secretary of Defense closely monitor the military services' base realignment and closure implementation plans. It also includes a number of recommendations to the Secretary on ways to improve the management controls and methodology of future base realignment and closure studies.

Agency and Commission Co-Chairmen Comments

DOD provided official oral comments on a draft of this report. DOD generally agreed with the report's findings, with a few exceptions, and agreed with the report's recommendations. It estimates the annual savings for the 15 bases GAO reviewed will be about \$522 million, or about \$70 million more than GAO's high range estimate. The major difference results from DOD estimating recurring military construction savings as a result of base closure. The Commission developed conservative estimates for military construction that did not include recurring savings. In view of the large amount of military construction costs resulting from the realignments and closures, GAO believes the Commission's conservative approach was correct.

DOD also disagreed with GAO's estimates of costs, savings, and years to recover the cost of closing the Presidio of San Francisco, and the realignment of Forts Devens, Meade, Huachuca, and Holabird. It estimates the Presidio closure and the realignment costs will be recovered immediately. GAO shows DOD's revised estimates. However, GAO's estimates are for a specific point in time and GAO did not selectively change its data.

DOD also provided revised cost data for the Jefferson Proving Ground closure. According to DOD officials, because of the short time frame for comments and the complexity of the issue, DOD has not completed its analysis of whether ordnance cleanup is a cost of closure and has no revised estimate of how long it will take to recover the closure costs. However, it said that including these costs where a limited cost recovery period is used could prevent closing bases where significant ordnance cleanup is required.

DOD also stated that while costs, savings, and payback are important, base realignment and closure decisions must be based primarily on military value. It also said the Commissioners relied on their judgments in making these decisions.

The Commission Co-Chairmen also provided GAO with oral comments. They believe that the report provides valuable lessons learned for future studies. They stated that time constraints were placed on the Commission's tasks due to the delay in passing the enabling legislation and the reality of the election timetable. The Co-Chairmen stated they are not in a position to comment on the accuracy of GAO's rescoring of the bases. They also emphasized that military value was a primary consideration in the Commission's analyses, and they still believe the Commission's recommendations are appropriate.

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Abbreviations

DOD	Department of Defense
GAO	General Accounting Office
OSD	Office of the Secretary of Defense

Introduction

The Department of Defense (DOD) and the Congress both recognize that realigning and closing military bases represents an opportunity to reduce defense spending. On May 3, 1988, the Secretary of Defense signed the charter establishing the Commission on Base Realignment and Closure to review and recommend bases for realignment and closure. The Defense Authorization Amendments and Base Closure and Realignment Act (P.L. 100-526), dated October 24, 1988, provided procedures for the Commission. For example, the act, among other things, sets forth the Commission's reporting requirements and procedures for the Secretary of Defense and the Congress to follow in approving or rejecting the Commission's recommendations.

On December 29, 1988, the Commission presented its report that recommended the (1) closure of 86 installations, (2) partial closure of 5 others, and (3) realignments of 54 others, meaning they will either experience an increase or decrease in size as units and activities are relocated. According to the report, the Commission's recommendations should result in an annual savings of \$693.6 million (fiscal year 1988 dollars) and a 20-year savings with a net present value¹ of \$5.6 billion (fiscal year 1988 dollars).

On January 12, 1989, the Chairmen and Ranking Minority Members, House and Senate Committees on Armed Services, requested us to examine the Commission's methodology, findings, and recommendations. This report provides the results of our examination of the Commission's work.

Commission Charter and Legislative Requirements

The Commission on Base Realignment and Closure was established to study the issues surrounding military base realignments and closures within the United States, its commonwealths, territories, and possessions. In the Commission's charter (see app. I) the Secretary of Defense stated that the Commission's primary objectives were to do the following:

- Determine, by November 15, 1988, the best process for identifying bases to be closed or realigned; how to best use federal programs to overcome

¹Net present value is a decision-making tool that is used to compare the value of various investment options in terms of today's dollars. Costs and savings estimates for each realignment and closure are inflated based on expected future inflation and then discounted to account for the time value of money. The Commission's present value analysis inflated 20 years of annual costs and savings using a constant 3-percent inflation rate, and then discounted the cash flows using a 10-percent discount rate.

the negative impact of base realignments and closures; and the criteria for realigning and closing bases. The criteria was to include at least the current and future mission requirements and operational readiness; the cost and manpower implications of realignments and closures; whether savings will exceed costs within 6 years of a closure; and the economic impact of realignments and closures.

- Review the current and planned military base structure in light of force structure assumptions, and using the process and the criteria the Commission developed, identify which bases should be realigned or closed.
- Report its findings and recommendations to the Secretary of Defense by December 31, 1988.

The Defense Authorization Amendments and Base Closure and Realignment Act (see app. II) addresses such matters as the Commission's membership (12 members appointed by the Secretary of Defense), scope of work, conditions for considering the Commission's recommendations, and guidance on implementing those recommendations. The act states that the Commission was to review all military installations inside the United States, including those under construction or planned for construction. According to the act, DOD and the Congress had to accept or reject all of the Commission's recommendations without changes. The act also sets forth how the Secretary of Defense is to implement the Commission's recommendations. The act states in part:

"The Secretary shall—

(1) close all military installations recommended for closure by the Commission on Base Realignment and Closure in the report transmitted to the Secretary pursuant to the charter establishing such Commission;

(2) realign all military installations recommended for realignment by such Commission in such report; and

(3) initiate all such closures and realignments no later than September 30, 1991, and complete all such closures and realignments no later than September 30, 1995, except that no such closure or realignment may be initiated before January 1, 1990."

Recommendations Accepted

On January 5, 1989, the Secretary of Defense accepted the Commission's recommendations and said that base closures were long overdue. According to the Chairman of the Joint Chiefs of Staff, the service chiefs agreed that the Commission's recommendations would not adversely affect military operations or the ability to carry out the national military strategy.

On March 1, 1989, House Joint Resolution 165 was introduced to disapprove the Commission's recommendations. On March 14, 1989, the House Committee on Armed Services reported unfavorably on the resolution and recommended that it not be passed. Then on April 18, 1989, the House voted overwhelmingly against the resolution. The Senate took no separate action on the resolution; thus, the resolution was not passed and legislative requirements for acceptance of the Commission's recommendations were met.

Overview of the Commission's Evaluation Process

The Commission used a two-phase approach to evaluate bases for realignment or closure. The phase I analysis (1) grouped bases into a number of categories, (2) determined the military value of bases within each category, (3) evaluated each base's capacity to absorb additional missions and forces, and (4) determined the overall excess capacity within the categories. Military value refers to how well a base meets the mission-related needs of the units or activities located there. The Commission, working with the services, ranked bases and identified those bases warranting further review. Based on this analysis, it selected a smaller number of bases for the phase II process, which focused on assessing the costs and savings of the base realignment and closure options.

Phase II also considered the environmental and economic impacts of the realignment and closure options. Costs and savings estimates included the annual savings that would result from a realignment or closure and how long it would take after completing the realignment or closure for annual savings to pay back all of the costs. The Commission referred to this as the payback period, and we use that term throughout this report.

The Commission reported that even though it depended heavily on this process, the Commissioners also used their individual judgments and deliberations in making the final recommendations. The Commission also reported that no "magic formula" could be developed that would yield precise results. It believed the process allowed it to focus on the best opportunities for realignment and closure, although the process did not eliminate subjective judgment.

Commission and DOD officials acknowledged that data and individual cost factors could vary. However, the Commission emphasized its goals were to (1) apply military value as the primary criterion and determine

if, in the categories examined, the bases had excess capacity, (2) perform a comparative analysis among bases in each category, and (3) recommend a list of bases for realignment or closure. The dominant factor the Commission used to make its recommendations is not certain in all cases. The Commission said its work also required informed, subjective assessments. The Commission also indicated the need to consider whether the list as a whole was reasonable, rather than discussing specific bases.

Objectives, Scope, and Methodology

The Chairmen and Ranking Minority Members, House and Senate Committees on Armed Services, requested us to examine the Commission's methodology, findings, and recommendations. Among other things, they requested us to evaluate

- the process used in evaluating military missions and requirements, and the military value of bases in meeting these requirements;
- the criteria used to select bases for closure or realignment;
- military and civilian personnel reductions and associated relocation and termination expenses;
- nonrecurring costs, including construction, personnel, and logistics costs;
- long-term annual savings, including the estimated payback period;
- estimated proceeds from property sales for each applicable initiative; and
- to the extent possible, what, if any, environmental restoration costs would result before excess property could be sold or transferred.

We also received letters from a number of Members of Congress expressing interest in our review. Because the concerns raised in these letters were within the scope of the Chairmen's request, it was agreed that this report would also respond to those requests. (see app. XV).

Our methodology focused on reviewing the Commission's recommendations for 15 bases. The installations recommended for closure are Pease Air Force Base, New Hampshire; Fort Sheridan, Illinois; Chanute Air Force Base, Illinois; the Presidio of San Francisco, California; George Air Force Base, California; Mather Air Force Base, California; Norton Air Force Base, California; Lexington Army Depot, Kentucky; and Jefferson Proving Ground, Indiana. The four bases recommended for partial closure or realignment included in our evaluation are Fort Devens, Massachusetts; Fort Meade, Maryland; Fort Huachuca, Arizona; and Fort Holabird, Maryland. Fort Monmouth, New Jersey, and Fort Belvoir, Virginia, were also included in the realignment. However, we did not visit

these installations. The base recommended for placement in semi-active status is Fort Dix, New Jersey. We also included the proposed naval station at Hunters Point, California, in our evaluation. The Commission recommended that it not be established as a homeport for several Navy ships. This group of bases represents about 90 percent of the Commission's estimated annual savings.

We performed our work at DOD, each base we selected for detailed review and other selected bases, several military commands, and the National Park Service. At DOD we reviewed the Commission's methodology by examining the Commission's files and discussing the methodology with former Commission staff. In addition, we tested the Commission's phase I analysis by evaluating the analyses for two categories of bases—Air Force technical training bases and Army basic and advanced individual training bases. We also tested and evaluated the cost model the Commission used to develop costs and savings estimates for various base realignment and closure options.

We also reviewed data the services had developed and given the Commission. In addition, we discussed with service officials how they obtained and evaluated the data within the service before they provided it to the Commission. At the bases we selected for detailed review, we compared the Commission's report with local commanders' assessments, and compared Commission data and cost estimates with local and command-level developed data and cost estimates.

Estimates in such areas as military construction, personnel reductions, environmental cleanup, economic assistance, and land sales proceeds are subject to change, because they are dependent on future decisions and study results. In September and October 1989, after we completed our fieldwork, the services provided us with updated estimates of these costs. Their updated estimates are part of their budget submissions for the fiscal year 1991 budget process. We did not verify the accuracy of these updated estimates. We used the military services' recent estimates to develop costs, savings, and payback estimates for individual bases. Our estimates are likely to change as DOD begins implementation of the realignments and closures in 1990.

We conducted our work from January to October 1989 in accordance with generally accepted government auditing standards.

Phase I Analysis Was Comprehensive, but Errors Were Made

Overall, the phase I methodology developed by the Commission represents an analytically sound and detailed approach in identifying candidate bases for realignment and closure. It assessed an individual base's military value based on quantitative analysis, as well as the Commissioners' judgments. However, we found that the services and the Commission made errors in implementing this methodology. They made errors in compiling and computing the quantitative information associated with determining military value. Because Commissioners made qualitative judgments, it is uncertain what effect these errors had in each case. DOD and Commission officials believe the Commission's final recommendations are sound. Our work also shows that many of the errors could have been avoided by using better management control procedures for verifying data.

Identifying Candidates for Realignment or Closure

The Commission developed a comprehensive and generally sound methodology for identifying base realignment and closure candidates. It emphasized military value as the key criterion for assessing bases in the phase I analysis. This approach included an analysis of the need for military bases and provided an opportunity to compare how individual bases in a category contribute to accomplishing DOD's missions and functions. It also examined ways to enhance mission efficiency by realigning similar forces at fewer bases. This method has the potential to enhance readiness and provide for better command, control, and mobilization for future contingencies.

According to the Commission's report, more than 2,300 installations out of 4,200 separate DOD-owned properties were identified for review. To select candidates for realignment and closure, the Commission reviewed excess capacity within a category of bases and each base's military value. The Commission defined excess capacity in terms of land, facilities, and operational environment, including air and ground maneuver space. The analysis focused on determining the amount of unused capacity for each category of bases. The Commission considered the military value of an installation in terms of how well it met the mission-related needs of its assigned units. A base's military value was determined through a comprehensive process that took place between May and September 1988. The military value analysis was the centerpiece of the phase I analysis. The following sections summarize the process.

Bases Were Divided Into Categories

The Commission provided the services with guidance and tasked them to identify all bases and assign each to a mission category, such as operating troops, administrative headquarters, and tactical air operations. The Commission established six task forces to assess the bases in 22 major categories. Table 2.1 lists the task forces and the applicable mission categories.

Table 2.1: Installation Task Forces and Mission Categories Used by the Commission

Task force	Mission category
1. Ground	Training bases Maneuver bases
2. Air	Operating tactical aircraft Operating strategic aircraft Operating mobility aircraft Operating missiles Flying training
3. Sea	Operating surface ships Operating submarines
4. Training and administration	Headquarters Training classrooms
5. Depot	Maintenance depots Supply depots Munitions facilities Industrial facilities Production facilities
6. All other	Guard & reserve centers Communications/intelligence sites Research and development laboratories Special operations bases Space operations centers Medical facilities

Attributes of Military Value Were Identified

The Commission, with help from the services, identified 21 mission-related attributes and grouped them under one of five overall factors relating to military value. The selected attributes included natural physical factors, such as expanse and type of terrain, geographic location, and weather; nature of the relationship between an installation and its surrounding community; and the quality and quantity of available facilities. Table 2.2 shows the factors and attributes.

Table 2.2: Military Value Factors and Attributes

Factor	Attribute
Mission suitability	Site-specific mission Deployment means Relationship to other activities Weather/terrain/land use Survivability Maneuver space
Availability of facilities	Operations Support Infrastructure Administration
Quality of facilities	Condition Technology Configuration
Quality of life	Family housing Bachelor housing Recreation/amenities Medical
Community support	Work force Commercial transport Infrastructure Complementary industry

Evaluation of Attributes

The Commission evaluated information on the 21 attributes that it obtained from several sources, including service headquarters, major commands, and bases. For example, the Commission obtained Air Force technical training base information from a database at the Air Training Command, the major command responsible for these bases. In contrast, the major command responsible for the Army's basic and advanced individual training requested individual bases to submit attribute data. It also collected data from existing service databases and reports.

Weights Assigned to Attributes

Weights were assigned to the attributes according to the mission requirements of the bases. The more important an attribute was to meeting a base's mission, the higher the weight it received. The heaviest weights were generally assigned to the mission suitability attributes. Mission suitability attributes are what the services identified as most important in evaluating the ability of a base to support its assigned missions.

All 21 attributes were not relevant in every base category. For example, the Air Force identified maneuver space and survivability as mission suitability attributes in the strategic bomber base category. Maneuver space is the amount of land or air space needed to carry out training missions. However, for Air Force technical training bases, no points

were assigned to those attributes because Air Force officials believed they were not important for these types of bases. Instead, the Air Force identified such attributes as the quantity and condition of bachelor housing, recreational facilities, and dining facilities as more important, because they were necessary to accomplish the training bases' missions.

Attribute Standards Established

The services compared the attribute data for each base to a service-established standard for each attribute. Based on this comparison, all attributes for each base were given one of three ratings. A green rating was given if a base met or exceeded the attribute standard. A yellow rating was given if a base marginally met the attribute standard. A red rating was given if a base was significantly short of the standard.

Military service officials made the rating determinations. The standards used for the ratings varied among the base categories. For example, in the Air Force tactical operations category a base received a green rating if its training ranges were less than 100 nautical miles from the base. However, a base in the strategic bomber and tanker category received a green rating if its training range was within 1,200 nautical miles from the base.

Scoring the Bases

The Commission staff converted these ratings to a point scale by assigning a point value to a green, yellow, or red rating. They multiplied rating points by the attribute weights and then totaled the weighted rating points for a final score. They arranged base scores by base category to illustrate the relative military value of bases within a category.

This analysis was presented to the Commissioners by the Commission staff. The Commissioners then decided which bases were to be considered as candidates for realignment or closure during phase II. The bases identified for the phase II analysis were generally those that received the lowest military value scores. There were exceptions to this general procedure. For example, after the phase I analysis was done for the Army headquarters bases subcategory, the Commission directed the Army to do a phase II analysis on all the bases in the subcategory. The Commissioners reasoned that, regardless of ranking, Army headquarters bases, such as those at the Presidio of San Francisco and Fort Sheridan, did not have to be located where they were, but could be relocated to other bases with Army operational forces.

Phase I Implementation Problems

We found the Commission made errors in implementing the phase I methodology. When corrected, some of these errors affect the relative military value ranking of the bases. However, because qualitative judgments also played a part in the process, the effect of these errors is uncertain. DOD and Commission officials acknowledge these errors, but believe the Commission's recommendations are still sound. Examples of the errors we found in the phase I process for two categories of bases are discussed below. A discussion of the phase I analysis for each of the bases we evaluated is included in appendixes III through XIV.

Errors in the Ranking of Air Force Technical Training Bases

We reviewed the military value analysis for the five bases in the Air Force technical training category, including Chanute Air Force Base, which was included in the phase II process and recommended for closure. We found that errors were made in determining military value scores. For example, the Commission double-counted facilities in establishing unmet facility requirements at the five Air Force technical training bases.

We also found that Air Force ratings did not adequately account for facilities deficiencies because they used measures that were too broad. Air Force officials gave a yellow rating to an attribute if it failed to meet the requirement, regardless of the relative size of the deficiency. We believe the scoring should have considered the size of the deficiency since relatively small deficiencies would have less of a negative impact on military value than relatively large ones.

We reranked the five Air Force technical training bases by computing scores based on elimination of double-counting of facilities and then based on the percentage of the facility deficiency (after eliminating the double-counting of projects) and the attribute's assigned weight. Appendix IX provides the details of our analysis. Table 2.3 shows the ranking of the bases after these changes are made.

Table 2.3: Ranking of Five Air Force Training Bases Based on Elimination of Double-Counting and Facilities Deficiencies

Rank order	Commission ranking	Revised ranking	Based on percentage of facilities deficiencies
1	Lowry	Lowry	Lackland
2	Goodfellow	Chanute	Keesler
3	Keesler	Goodfellow	Chanute
4	Lackland	Keesler	Lowry
5	Chanute	Lackland	Goodfellow

The Commission also considered other factors, such as the number of missions at a base and the excess capacity in the category, in selecting base closure candidates. It is not certain what the dominant factor was in all cases. According to DOD officials, even if the corrected data changed the relative ranking of the Air Force's technical training bases, Chantute is still the most logical base closure candidate, because it is a single mission base and the other bases have missions that would be more difficult to move.

Errors in the Ranking of Army Basic and Advanced Individual Training Bases

We also did a detailed evaluation of the Commission's phase I process for the eight bases in the Army basic and advanced individual training category. Fort Dix was among the bases in this category, and it was included in the phase II process. The Commission recommended placing Fort Dix in a semi-active status. We found errors in this analysis, too. Correcting the errors affects the relative military value rankings of the eight bases in this category.

These changes occurred because the Army's Training and Doctrine Command used inaccurate data in assessing military value, and the Commission made miscalculations during the scoring process. Specifically, five of the eight bases would have ranked differently if all data used had been accurate and properly scored. After correcting the errors, the rankings changed as shown in table 2.4. Appendix III contains the details of our analysis.

Table 2.4: Reranking of Army Basic and Advanced Individual Training Bases

Commission ranking		Revised ranking	
Rank order	Base	Rank order	Base
1	Fort Sill	1	Fort McClellan
2	Fort Knox	2	Fort Dix
3	Fort Leonard Wood	3	Fort Bliss
3 tie	Fort Bliss	3	Fort Leonard Wood
4	Fort Benning	3 tie	Fort Sill
4 tie	Fort McClellan	4	Fort Benning
5	Fort Dix	5	Fort Jackson
6	Fort Jackson	5 tie	Fort Knox

In making its final recommendations the Commission exercised its judgment in deciding to realign Fort Dix's mission and place it in a semi-active status supporting reserve forces training activities. For example, the minutes of the Commission's November 29, 1988, meeting show that

Fort Dix was to be closed. Then the minutes of the Commission's December 13, 1988, meeting indicate that Fort Dix was to remain as an active training base supporting active and reserve force training missions. However, according to the December 14, 1988, minutes, the Commission recommended placing Fort Dix in a semi-active status. The Commission reasoned that it could achieve additional savings by making this change. It believed that Fort Dix could continue to support its reserve force training and contingency missions as a semi-active base.

According to Commission and Army officials, the Commission probably would have selected the same realignment candidates regardless of the rankings, because of the limited size and mission of Fort Dix compared to the other bases in the category. The Assistant Secretary of Defense (Production and Logistics) supported this position. He also stated that the decision to place Fort Dix in a semi-active status was logical and endorsed by the Secretary of Defense. We believe it is not certain whether quantitative or qualitative factors would have been dominant in this case.

Review of Errors Directed

The Senate Committee on Appropriations' report number 101-132, dated September 14, 1989, on the DoD Appropriations Bill for 1990 directs the Secretary of Defense to review the issues we have discussed in this chapter.¹ The report language requires the Secretary to report to the House and Senate Committees on Armed Services and Appropriations before February 15, 1990, on whether he agrees or disagrees with our findings. The report requires that if the Secretary agrees that significant errors were made (large enough to change the ranking of candidate bases for realignment or closure), he is to provide the Committees with justification on why the bases should still be realigned or closed. If the Secretary disagrees that significant errors were made, he is to report the basis of his disagreement to the Committees.

Limited Management Control Over Data Collection and Analysis

Effective management controls help managers comply with applicable laws, policies, and procedures. Effective management control systems also provide management with reliable feedback that can help ensure program goals and objectives are met. The Commission and its staff reviewed a vast amount of data. However, the Commission did not have adequate management controls to ensure the accuracy and completeness

¹We provided preliminary information on these matters in letters to Senator Allen J. Dixon on July 7, 1989, and August 17, 1989.

of the data. Many of the data errors we found resulted from ineffective management controls for verifying the data used in the phase I analysis.

Commission's View on Adequacy of Information

The Commission stated in its December 29, 1988, report that its methodology required vast amounts of information, with DOD as the primary source. It reported that it verified its information through (1) public hearings, (2) formal and informal consultations, (3) visits to bases, (4) references to other sources, (5) collection of supplemental data when necessary, and (6) sampling and testing information to ensure accuracy. Also, the Commission reported that independent experts found its data to be reasonable, sound, and defensible. It believed it used the best available information at the time.

Management Control Weaknesses

The Commission held a number of hearings where expert witnesses appeared, visited a number of bases, and developed a limited management control plan for gathering and analyzing data. However, we believe many of the errors we found could have been avoided if a more systematic and detailed management control plan had been used.

For example, we found no guidance to the services on how they should verify data provided to the Commission. Further, even though the Commission visited various bases, the trip reports did not mention verifying data. Commission documents also indicate that DOD staff would periodically challenge service data. However, there were no written procedures for when this should be done, nor how disputes should have been resolved. Also, we could find no written examples where this was done.

Commission documents indicate that data from service costs and savings models were checked against the Commission's costs and savings model and that bases that were nominated for realignment or closure were subjected to an added level of review. We found no written documentation supporting these tests or how differences were resolved. Also, as discussed in chapter 3, we found a number of errors in the applications of the costs and savings model.

To assist in the validation of data, the Commission used an independent contractor to conduct field visits at a judgmental sample of military bases. Commission files indicate that in many cases the contractor found differences between headquarters data and base data for the bases. However, the Commission's files indicate that the data errors did not have a significant impact on the results.

Conclusions

The Commission developed a comprehensive methodology for its phase I process that focused on identifying the military value of bases. We believe the methodology and its focus were appropriate. However, the Commission could have implemented the methodology better. It made errors in the quantitative assessments of bases' military values. In addition, the Commission subjectively considered other criteria in making its decisions, such as excess base capacity and the number of missions performed at a base. We believe the dominant factor in all cases is not certain. Also, Commission and DOD officials believe the errors we found do not affect the validity of the phase I results. We believe that many of the errors we found occurred because the Commission's management controls for verifying the data were ineffective. The Secretary of Defense will be reporting formally to the House and Senate Committees on Armed Services and Appropriations on the significance of these errors.

Recommendations

If the Secretary of Defense should establish another commission or internal study group to evaluate base realignments or closures, the Secretary should direct that the process include an internal control plan designed to ensure the accuracy of the data collection and analysis processes. At a minimum the plan should include the following:

- uniform guidance defining data requirements and sources,
- procedures requiring activities participating in the study to certify the accuracy of the data they provide,
- procedures to check the accuracy of the analyses made from the data provided by the participating activities, and
- procedures for independently testing the effectiveness of the controls used by the participating activities and overall study group.

Agency and Commission Co- Chairmen Comments

DOD agreed with our findings, conclusions, and recommendations in this chapter. It stated that base realignment and closure decisions should be based primarily on military value. DOD also stated that the Commissioners relied on their judgments in making these decisions.

According to the Co-Chairmen, military value was the Commission's primary consideration in making its recommendations. They believe that the report provides valuable lessons learned for refining the methodology of future base realignment and closure studies, but are not in a position to comment on the accuracy of our rescoring of bases. They still believe the Commission's recommendations are appropriate.

Phase II Results Overstate Savings Estimates

We focused our review of the phase II process and resulting recommendations on how the Commission developed costs and savings estimates for the 15 bases included in our evaluation. We found the following:

- The Commission's costs and savings estimates for the bases we reviewed included a number of errors and excluded certain relevant costs. Also, since the Commission completed its work, the services have revised costs and savings estimates. Using this revised data and adjusting for other factors, we estimate annual savings could be as high as \$453.4 million for the 15 bases we reviewed. This is about \$170 million less than the Commission estimated.
- Costs and savings estimates are still subject to change because they are dependent on future actions that will be taken during the base realignment and closure implementation process over the next 6 years.
- The phase II process errors, just as with the errors in phase I, were attributable to ineffective management controls over the data collection and analyses processes.

Our phase II analysis for each of the bases we reviewed is discussed in appendixes III through XIV.

Overview of the Phase II Process

The focus of the phase II process was to estimate the costs and savings associated with realigning or closing bases that were selected for further study in the phase I process. First, the Commission asked the services to provide alternative basing options for the candidate bases. The services then analyzed the various options to (1) determine which options would increase military effectiveness, (2) evaluate environmental and economic impacts, as discussed in chapters 4 and 5, respectively, and (3) determine whether the options would pay back within at least 10 years.

The Commission more thoroughly reviewed base realignment and closure options that were within a 10-year payback period using cost models to identify whether savings would pay back costs within 6 years after completing the realignment or closure. The Commission primarily used the Cost of Base Realignment Actions model to make these estimates. Each service used a customized version of the model that contained service-specific standard cost factors for average salaries and allowances, as well as service-specific formulas for calculating overhead and maintenance costs. The Commission then analyzed realignment and closure options using information specific to the base.

The models calculated one-time realignment and closure costs, such as personnel and equipment moving expenses and new construction at other bases. The models also included one-time savings, such as land sales proceeds. Additionally, the models calculated annual savings from eliminating military and civilian personnel and reducing base maintenance and overhead expenses. The cost models used a net present value analysis to estimate cumulative 20-year savings in constant fiscal year 1988 dollars. They also determined whether the 6-year payback guidelines in the Commission's charter had been met.

The phase II process provided a basis for comparing costs and savings estimates for base realignment and closure options for a given scenario. However, the Commission's final recommendations incorporated the judgments of the Commissioners. The Commission's records indicate that many of its recommendations were made in the final month of the process. Some Commissioners expressed concern over the involved nature of the process and the quality of the cost estimates.

Revised Annual Savings Estimate Is Lower Than the Commission's

Our analysis of the phase II process shows that the Commission's annual costs and savings estimates were overstated due to errors in the data, estimates for land values, construction project costs, and personnel elimination savings. We believe the Commission overstated its estimate of annual savings by about \$170 to \$223 million for the bases we reviewed. We currently estimate annual savings could be as high as \$453.4 million for the bases we reviewed. This is not a final estimate because future decisions will affect actual costs and savings.

The following sections present (1) current savings estimates based on our analysis and revised service costs and savings data, (2) errors we found in the cost models, (3) the services' revised estimates for land sales proceeds, military construction costs, and personnel eliminations, and (4) some examples of changes to annual savings estimates for the bases we reviewed.

Revised Estimates of Costs and Savings

Using the military services' revised estimates of costs and savings and adjusting for other factors, we estimate the annual savings for the bases we reviewed could be between \$400.3 and \$453.4 million. The Commission estimated that its recommendations on these bases would save about \$623.9 million.

During the course of our work, we testified¹ and provided congressional members information on the difference between the Commission's initial estimates and our estimates which were based on our corrections to the cost models and the data used in them. After we completed our field-work, the services provided us with refined estimates between August and October 1989 for the costs and savings associated with base realignments and closures. Their updated estimates are part of their budget submissions for the fiscal year 1991 budget process and are being reviewed within DOD. They revised estimates for land sales proceeds, new construction, and personnel eliminations.

To provide current estimates, we have used the services' revised estimates and modified them to consider certain areas of concern from our analyses. For example, for the Presidio of San Francisco, we included costs for the National Park Service when it takes over the Presidio and costs for medicare when Letterman hospital closes. DOD did not include these costs in its estimates. However, much of the new data we used is still preliminary and subject to change. Consequently, we were unable to develop final estimates for costs and savings. Table 3.1 shows a comparison of the Commission's estimates and the revised estimates.

¹"Base Realignments and Closures" (GAO/T-NSIAD-89-8, Mar. 1, 1989); "Base Realignments and Closures" (GAO/T-NSIAD-89-24, Apr. 12, 1989); a letter to Congressman Hamilton dated June 1, 1989; and a letter to Congresswomen Boxer and Pelosi dated June 23, 1989.

Chapter 3
Phase II Results Overstate Savings Estimates

Table 3.1: Comparison of Commission's and GAO Estimates (Fiscal Year 1988 Dollars)

Dollars in millions

Base	Commission estimates		GAO estimates ^b	
	Year(s) to recover closure costs	Annual ^a savings	Year(s) to recover ^c closure costs	Annual ^a savings
Army				
Forts Devens, Meade, Huachuca, and Holabird realignment	0	\$21.0	43 to over 200 ^e	\$8.1
Fort Dix	3 ^d	84.5	4	43.8
Fort Sheridan	0	40.8	1	22.5
Jefferson Proving Ground	6	6.6	38 to over 200 ^e	6.3
Lexington Depot	6	6.7	5	11.2
Presidio of San Francisco	0 ^f	74.1	7 to never ^e	46.8 to (6.3)
Navy				
Hunters Point	0	8.0	5	7.5
Air Force				
Chanute	3	68.7	3	55.1
George	0	70.2	2	51.1
Mather	1	78.7	1	61.3
Norton	3	67.9	5	58.4
Pease	0	95.7	0	81.3
Total		\$622.9		\$400.3 to 453.4

^aThe Commission's estimates were all in fiscal year 1988 dollars. The service estimates were in then-year dollars. We have deflated these to fiscal year 1988 dollars using DOD inflation rates.

^bOur estimates include the service estimates provided to us in September and October 1989 for costs and savings associated with realigning and closing bases. The service estimates are being reviewed within DOD. Our estimates are subject to change as future decisions are made about the realignments and closures and whether and for what price property is actually sold.

^cWe used the Commission's present value analysis except that we applied a 4.4-percent inflation factor and a discount factor of 9.0 percent.

^dThe Commission reported a 5-year payback period, but, based on its own data, it should have reported a 3-year payback period.

^eWe used ranges because of the uncertainty of costs and savings estimates.

^fThe Commission's report indicated a 2-year payback period. Its press release on the closures reported an immediate payback period, which is supported by Commission data.

Cost Model Errors

We found that the Cost of Base Realignment Actions model used by the Commission and the services is a conceptually sound tool for evaluating costs, savings, and payback periods. However, we found they made a number of errors in applying the model.

Net Present Value Understated

The Commission's net present value factors were too conservative. The Commission used an inflation rate of 3 percent and a discount rate of 10 percent to do its calculations. Rates that reflect current indexes should have been used. An expected 4.4-percent inflation rate and a 9.0-percent discount rate were reasonable for the time period of the Commission's work. Adjusting the models for these factors had little impact on individual base payback periods. However, it does increase the net present value of the bases' estimated 20-year savings.

Problems in Model Applications for Some Individual Bases

In reviewing the costs and savings calculations for individual bases, we found Commission staff and military personnel made errors in applying the cost models. These included estimating errors and excluding relevant cost data. Also, local base officials questioned the amount of land sales proceeds, military construction costs, and personnel elimination savings

Errors in cost models resulted in inaccurate savings estimates. For example, the Army's estimated overhead savings from closing the Presidio and Fort Sheridan exceeded the bases' existing overhead budgets. Correcting the model errors reduces savings and increases the time it takes to pay back the closure costs.

Some model applications were not consistent with Commission recommendations. For example, according to the Commission's report, family housing at Norton Air Force Base would remain open. However, the Air Force's application of the cost model assumed the family housing would be closed. This overstated annual savings and reduced the amount of time it would take to pay back the closure costs. In another case, the Commission recommended that portions of Fort Sheridan be retained for Army reserve functions. However, the Army assumed that the entire base would be closed, thereby saving all of the overhead costs. This overstated the annual savings and reduced the time it takes to pay back the closure costs.

Some model calculations excluded cost data that should have been included. For example, the environmental mitigation costs should have included capital expenditures for water and sewage system expansions at receiving bases. The Commission collected some data, but excluded it in the cost and payback calculations we reviewed. This underestimated one-time costs and the time it would take to recover closure costs.

Also, all relevant costs were not considered. For example, the Commission and Air Force model applications for three of the five Air Force bases we reviewed did not consider all of the increased Civilian Health

and Medical Plan of the Uniformed Services (a medical insurance program) cost that would be incurred when base medical facilities close. Air Force applications included the cost of transferring retirees to the insurance program, but not their dependents. Also, in one case the number of retirees was understated.

The model application for the Presidio assumed that the medical personnel from Letterman hospital would be transferred elsewhere. It also assumed that there would be no cost to the military health insurance system. Thus, although DOD's health insurance program costs would increase in San Francisco, the model assumed this cost would be offset by a decline in insurance costs at the receiving bases. This assumes that retirees and dependents over age 65 now treated at Letterman would be covered under the medicare system. However, the model application only considered DOD costs and excluded the annual expense to medicare. This overstated savings to the federal government. We believe that studies of base closures should consider costs on a governmentwide basis.

Key Elements of Costs and Savings Revised

During our evaluation, the military services developed new approximate dates for base realignments and closures and refined estimates of the costs and savings associated with realigning and closing bases to support their future budget requests. They provided this information after we completed our fieldwork; therefore, we have not verified these data. However, these estimates should be better than the Commission's data because the services have had time to review and adjust the Commission's data to reflect revised personnel retention plans, other implementation plans, and revised land values. Table 3.2 compares the Commission's estimates and the services' revised estimates for key elements of costs and savings, including land sales proceeds, new construction costs, and the number of personnel eliminations.

Table 3.2: Comparison of Commission and Service Revised Estimates (Fiscal Year 1988 Dollars)

Dollars in millions

Base	Land sales ^a		New construction ^a		Eliminated personnel positions	
	Commission	Revised	Commission	Revised	Commission	Revised
Army						
Forts Devens, Meade, Huachuca, and Holabird realignment	\$198.5	\$198.5	\$109.4	\$172.3	392	321
Fort Dix	^b	^b	190.4	102.4	2,167	1,167
Fort Sheridan	54.8	54.8	26.8	50.1	746	892
Jefferson Proving Ground	25.0	25.0	39.5	103.4	113	131
Lexington Depot	6.0	6.0	31.6	31.1	162	263
Presidio of San Francisco	555.0	36.5	108.4	101.7	790	1,237
Navy						
Hunters Point	^b	^b	85.0	102.4	^c	
Air Force						
Chanute	.7	92.4	214.3	189.6	1,509	1,271
George	2.7	164.8	106.4	165.4	1,793	1,500
Mather	46.8	303.3	152.8	158.7	1,988	1,378
Norton	60.3	208.3	386.8	408.3	1,994	1,766
Pease	63.8	260.9	^d	6.9	2,328	2,154
Total	\$1,013.6	\$1,350.5	\$1,451.4	\$1,592.3	13,982	12,083

^aThe Commission's estimates were all in fiscal year 1988 dollars. The latest service estimates were in then-year dollars. We have deflated them to fiscal year 1988 dollars using DOD inflation rates.

^bNo land sale was recommended in the Commission's cost analysis.

^cNo personnel reduction was recommended in the Commission's cost analysis.

^dInitially, no new construction was required.

These estimates are still subject to change as the realignments and closures occur over the next 6 years.

**Proceeds From Land Sales
Uncertain**

The services' revised estimates of land sales proceeds for the bases we reviewed total about \$1.35 billion. This is an increase of about \$336 million over the Commission's estimate. In its submission to the Office of the Secretary of Defense, the Army did not alter the land sales estimates used by the Commission, except for the Presidio. The Air Force has revised its estimates of land sales proceeds. The increased values include both changes in property valuations and a consideration of the replacement value of facilities.

Land sales estimates assume that the bases could be sold for fair market value. We had no reason to question most of the services' revised estimates for land sales. However, we question whether all the land sales proceeds from Jefferson Proving Ground and Fort Meade will be realized.

It is difficult to estimate revenues from land sales because land disposal plans are not final. In some cases, land may be sold at fair market value. In other cases, it could be transferred to other federal agencies or state or local governments at little or no cost.

The House Committee on Appropriations' report number 101-176, dated July 26, 1989, on the fiscal year 1990 Military Construction Appropriations Bill recognizes that land sales proceeds may not be realized until late in the base closure time frame. The report states that DOD's proposed \$500-million request for fiscal year 1991 may be too low to effectively carry out base closures. It suggests that DOD should reconsider its base closure account funding needs before submitting its fiscal year 1991 budget request.

Military Construction Cost Estimates Have Increased

The construction cost estimates for the bases we reviewed have increased from \$1.45 to \$1.59 billion. At a number of bases we visited, base officials raised concerns about whether construction estimates were too low. According to the House Committee on Appropriations' report, the Committee was concerned about the increase in military construction cost estimates. The Committee is also concerned that base closure funds could be used to finance projects that are not directly related to base closures. The report said that before obligating fiscal year 1990 funds DOD is required to report on how funds are planned to be allocated on a project-by-project basis.

Estimated Personnel Eliminations Have Been Reduced

The services have revised their estimates for personnel eliminations. As shown in table 3.2, the revised estimates show about 1,900 fewer positions will be eliminated at the bases in our review than originally reported. The House Committee on Appropriations' report states that much of the estimated base closure savings results from large reductions in military and civilian personnel. As a result, the Committee is directing DOD to report to the House and Senate Committees on Appropriations by April 1, 1990, on how it plans to reflect military personnel reductions resulting from base realignments and closures in its end strength. The Committee is also directing DOD to provide information on when military personnel reductions will occur.

Effect of Errors and Revised Estimates on Individual Bases

According to the Commission's charter, along with such items as mission requirements and effects on operational readiness, it was to consider whether the costs of base realignment and closure recommendations would be paid back by accumulated savings within 6 years. The payback period is to begin when a base realignment or closure action is completed. We interpret the charter to mean that the Commission was to consider the 6-year payback period in making its recommendations, but not necessarily be limited by it. Even though the Commission used the 6-year payback guideline in its charter as the maximum allowable payback, it reported that the period was too limiting. Also, in March 1, 1989, testimony before the Subcommittee on Military Installations and Facilities, House Committee on Armed Services, the Commission Co-Chairman stated that he and the other Co-Chairman believe that using the 6-year payback period limited their recommendations. The Co-Chairman added that a 10-year payback period would have produced greater savings.

For most of the bases we reviewed, our adjustments and the services' revised estimates did not substantially change the payback period estimates. However, these adjustments and revised estimates did substantially change the payback periods for the Presidio, Jefferson Proving Ground, and the major realignment involving Forts Devens, Meade, Huachuca, and Holabird.

The Presidio of San Francisco

The Commission recommended that (1) the Presidio, including Letterman Army Medical Center, be closed, (2) medical assets from Letterman be redistributed throughout the Army medical system, (3) 6th Army headquarters be moved to Fort Carson, Colorado, and (4) Letterman Army Institute of Research be relocated to Fort Detrick, Maryland. By law most of the Presidio would then be transferred to the Department of the Interior to become a part of the Golden Gateway National Recreation Area. The Commission estimated an annual savings of \$74.1 million. The Commission's report indicated a 2-year payback period, but its press release and data support an immediate payback.

Because certain costs and savings estimates are subject to change, we developed a range of annual savings and payback periods for the Presidio. For example, at one end of the range, annual costs could be \$6.3 million with no payback at all and at the other end of the range annual savings could be \$46.8 million with a 7-year payback period.

Several factors account for the differences between our estimates and the Commission's. For example, a key cost factor not considered by the

Commission was potential costs to the National Park Service for operating the Presidio as a park. Local estimates of this cost are \$16.5 million annually. However, the Park Service could reduce or eliminate these annual operating costs by leasing some of the Presidio's 6 million square feet of facilities or through other types of revenue options. According to a Park Service official, there are many options for annual revenue that could help reduce annual costs. However, the Park Service will probably not complete cost and revenue studies until fiscal years 1991 or 1992.

Additionally, military medical health insurance plan costs and medicare costs will result from the closure. However, it is also difficult to estimate these costs. According to the Army, it is assuming Letterman's medical personnel will be transferred to other Army hospitals where they will treat only active duty personnel and their dependents and retirees under age 65. Using this assumption, the transfer of former Letterman personnel to other locations results in an annual increase in military medical health insurance plan costs of \$6.8 million. This occurs because of the higher average medical health cost in San Francisco versus the new locations. Since the Army assumes no retirees over 65 will be treated, the military retirees over 65 now being treated at Letterman will shift to medicare. We estimate this annual cost at \$29.9 million. The Commission estimate does not include these costs.

Because of the uncertainties of the Park Service's annual operating cost and medical costs resulting from closing Letterman hospital, we developed a range of estimated costs, savings, and payback periods for the Presidio's closure. In our worst case scenario, the annual medicare costs are \$29.9 million, annual military health insurance plan costs are \$6.8 million, and Park Service one-time costs are \$13.7 million, while its annual operating costs are \$16.5 million. Land sales are \$36.5 million (on a prorated basis). Using these assumptions and including a revised closure date of 1995 and the Army's revised data, the closure costs are never recovered because there are annual costs of \$6.3 million.

At the other end of the range, we assume there are no one-time or annual operating costs for the Park Service because revenues generated from the Presidio's facilities exceed these costs. We also assume medicare and military health insurance plan costs decline to zero in 20 years because military personnel no longer choose to retire in San Francisco. We further assume land sales are \$36.5 million (on a prorated basis). Using these assumptions and including the Army's revised data and a revised closure date of 1995, annual savings start at \$10.2 million and

increase to \$46.8 million by 2015, with the closure costs being recovered in 7 years.

We believe the Park Service could have opportunities to generate revenues from the Presidio that could at least offset its costs. Also, the medical costs will likely decline over time. However, we have no basis for estimating the actual amount or timing of these offsetting costs. Appendix VI contains additional data on our analysis of Presidio costs, savings, and payback period estimates.

Jefferson Proving Ground

The Commission reported that the closure of Jefferson would save \$6.6 million annually and costs would be paid back in 6 years. Our revised estimates show savings of \$6.3 million annually and a payback period of between 38 and more than 200 years. Several factors affect these estimates. However, the most important factor was that the Commission excluded the costs of either cleaning up or otherwise managing ordnance waste at Jefferson. We show a range of payback periods to reflect the scenarios of no cleanup of the property (the lower range) and partial cleanup of property (the upper range). We also assume no land sales proceeds in our payback estimates. DOD provided an additional option in its comments on the report. This includes constructing a road and monitoring the property. Appendix IV provides details on our estimates.

The Commission excluded hazardous waste cleanup costs as closure costs because DOD is already responsible for such cleanups. Thus, hazardous waste cleanup would not be considered a consequence of closure and was not included as a closure cost. Although the Commission reported a serious ordnance problem at Jefferson, it did not include a cost for cleaning up or managing the ordnance waste.

The Army does not regard unexploded and spent ordnance on a range as hazardous waste so long as the range remains in operation. According to Army officials, because such ordnance continues to serve various training purposes, such as practice for detonation teams and use as aerial targets, it is not hazardous waste under the Resource Conservation and Recovery Act of 1976. Assuming the Army has actual training uses for this spent ordnance, we have no basis to challenge its position. Thus, Jefferson would not have to be cleaned up if it remains open. However, once the range is closed, environmental statutes would apply and cleanup or management would be required. Therefore, we believe ordnance cleanup at Jefferson is a cost of closure, and should have been included in the cost model.

The Army is studying (1) a number of options to determine the future of the production acceptance testing for conventional ammunition, (2) how much of the current Jefferson Proving Ground mission needs to be moved to Yuma Proving Ground, and (3) innovative ways for private or public reuse of Jefferson. According to the Army, all scenarios have the potential to reduce costs as they are currently stated. It will take several months to develop revised estimates for these new options or alternatives.

The House Committee on Appropriations' report on the Military Construction Appropriations Bill for 1990 recognizes the cleanup problems at Jefferson. The Committee is directing the Secretary of Defense to report to the Committee, concurrent with the DOD fiscal year 1991 budget request, on the cost of cleaning up Jefferson. Jefferson Proving Ground is discussed further in appendix IV.

Major Realignment

The Commission recommended a major realignment of Forts Devens, Meade, Huachuca, and Holabird. It estimated an annual savings of \$21 million and costs would be paid back immediately. We currently estimate annual savings of \$8.1 million and payback periods of 43 and over 200 years. The payback period is uncertain because the costs for cleaning up or managing the ordnance at Fort Meade depends on what course of action is taken. Our low range estimate includes income from selling the property but no cleanup costs. Our high range includes income from selling the property and a cost estimate for cleaning up the range portion of the property for restricted use. DOD provided an additional option in its comments on this report. This includes fencing, monitoring the range portion of the property, and selling the remainder of the property. Appendix VIII contains details on our analysis of the realignment.

The House Committee on Appropriations' report on the Military Construction Appropriations Bill for 1990 directs the Secretary of the Army to submit a report by April 1990 on the proposed disposition of excess land at Fort Meade. The report is to include (1) the best current estimate for the environmental restoration of the entire parcel for unrestricted and restricted use, (2) the best current estimate of the fair market value based on the extent of restoration, and (3) the status of negotiations for transferring the property to the U.S. Fish and Wildlife Service or to the Secretary of the Navy. The Senate Committee on Appropriations' report number 101-132, dated September 14, 1989, on DOD's fiscal year 1990 Appropriations Bill contains a similar reporting requirement.

Commission Recognized Problems in Its Estimating Process

The Commission reported that even though cost reduction was an important reason for its chartering, the military value of bases should be the primary factor in making its decisions. Also, the Commission stated that its two-phase process was not the only possible alternative, nor was it perfect. However, it believed that the process provided an effective, methodical approach for evaluating military value. In addition, the Commission reported that the Commissioners engaged in vigorous debate on many issues with a full and frank discussion of opinions. Even though the Commissioners disagreed on many issues, they unanimously supported the recommendations in their final report. The Commission also stated there is no "magic formula" that will yield precise results, and the process enabled the Commissioners to focus on the best opportunities, although it did not replace subjective judgment.

Minutes of the Commission's meetings indicate there was considerable debate, frank discussion, and judgment involved in formulating the recommendations. It also indicates the Commissioners were concerned about the preciseness of the estimates. For example, one Commissioner said it may be difficult to completely rationalize the process. He believed the Commission would have to make a certain number of assumptions to complete the process. Also, the Commission told the services the estimating process would not provide budget quality data, and budget development remained a service function.

Validation of Model Inputs, Operations, and Results Needed

We recognize the Commission faced a difficult task in developing costs and savings estimates. This is particularly true given the vast amount of data involved and the limited time available to develop estimates. However, the number of errors we found in the cost models demonstrates ineffective management controls over verification of data in the phase II process. For example, we did not find a systematic attempt to ensure the accuracy of data gathering, data analysis, and results. As a result, the Commission did not have full oversight of the costs, savings, and payback calculations made during the process. Insufficient time also contributed to data accuracy problems. The Commission reported that in the future the phase II process should be allotted more time.

Conclusions

The Commission's costs and savings estimates for the bases we reviewed contained miscalculations, data errors, and inappropriate savings data. They also excluded certain costs. Further, the services have revised the costs and savings estimates. These factors reduced the annual savings associated with the Commission's recommendations. However, in the

aggregate the annual cost savings for the 15 bases we reviewed is substantial—amounting to as much as \$453.4 million annually.

This estimate is still not final because many of the key costs and savings factors, such as land sales revenues, construction costs, and personnel elimination figures, are subject to change. As implementation plans and budgets progress, more reliable estimates should become available. We believe the Secretary of Defense needs to closely monitor the implementation process to ensure the effectiveness and efficiency of the realignment and closure actions. Congressional committees have already requested the Secretary to report on a number of key costs and savings issues. We also believe many of the errors that were made in the phase II process could have been avoided by improving management controls over analysis tasks and increasing the time to accomplish the process.

In addition, we believe that munitions cleanup or management costs at Jefferson Proving Ground and Fort Meade are a direct result of closure recommendations. These costs should have been estimated and included in the Commission's payback calculations.

Recommendations

We recommend that the Secretary of Defense ensure that any future base realignment and closure initiatives

- allow time for sufficient study and
- develop and include cost estimates for all cost factors that are a consequence of base realignment and closure recommendations. These factors would include hazardous waste cleanup or management and medicare costs.

Also, because of the significant cost and savings associated with the base realignment and closure program, we recommend the Secretary of Defense direct the Secretaries of the Army, Navy, and Air Force to conduct annual reviews of their services' base realignment and closure implementation programs and formally report the results to him.

Further, as we recommend in chapter 2, the need for a management control plan to ensure the accuracy of data collection and analysis is equally applicable to the costs and savings development phase of any future study.

Agency Comments and Our Evaluation

DOD generally agreed with our findings, with a few exceptions, and had no objections to our recommendations. According to DOD, much of our data is preliminary service submissions to DOD's 1991 budget revision, which DOD is currently reviewing. Consequently, it said our costs, savings, and payback period estimates are preliminary. We agree and have addressed this in our report. DOD's specific comments and our evaluation are discussed below.

Military Construction Avoidance Costs

Future military construction costs are avoided by closing bases and should be included as annual savings, according to DOD. DOD estimated an annual average cost savings of \$70 million. The Commission developed conservative estimates for military construction that did not include recurring savings. In view of the large amount of military construction costs resulting from the realignments and closures, we believe the Commission's conservative approach is correct. The Army's and Navy's revised savings estimates we used to determine our estimates do not include military construction cost avoidance savings. The Air Force's estimates did include \$22 million in military construction annual cost avoidance savings, which we excluded from our estimates of costs, savings, and payback periods.

Inclusion of Ordnance Cleanup Costs

Because of the legal complexities and limited comment period, DOD has not completed its analysis of whether ordnance management or cleanup costs are a consequence of closure. However, it said including such costs could prevent closing bases with significant ordnance cleanup or management costs when a limited payback period, such as 6 years, is used. We agree that including these costs would increase overall closure costs and payback periods. However, including such costs would not, in our opinion, preclude future closures if the bases are excess to DOD needs.

Realignment of Forts Devens, Meade, Huachuca, and Holabird

DOD officials disagreed with our payback estimate for the realignment of Forts Devens, Meade, Huachuca, and Holabird. According to DOD, the Army now plans to retain a 1,500-acre portion of Fort Meade where the range is located. (This was decided after we obtained our October 10, 1989, data.) The Army plans to fence the property at an estimated one-time cost of \$445,000, and estimates annual operating costs will be \$60,000. The remaining 7,500 acres will be sold for an estimated value of \$375 million. DOD, therefore, estimates annual cost savings of \$8 million and an immediate payback. We are not in a position to conclude

whether this plan will satisfy the requirements of environmental statutes. Also, we have no basis to judge the accuracy of this new estimate. However, our estimates are based on the Army's October 10, 1989, data and we do not believe it would be appropriate to selectively update that data. The Army's newest land sales estimate illustrates the preliminary nature of the estimates for land sales and the sensitivity of the payback calculation. The calculation is particularly sensitive to large increases in one-time savings, when one-time costs are large and annual savings are small, as they are in this case.

Jefferson Proving Ground

DOD also disagreed with our cost estimates for Jefferson Proving Ground. After we obtained the Army's October 10, 1989, data, DOD decided to retain the range portion of the property and sell the remainder. This plan would require a one-time cost of \$4 million to complete a patrol road, annual operating costs of \$0.5 million, and land sales proceeds of at least \$0.9 million. Since DOD is analyzing whether ordnance cleanup and management costs are the result of this closure, they offered no revised payback estimate. We are not in a position to conclude whether fencing and monitoring will satisfy the requirements of environmental statutes. Also, we have no basis to judge the accuracy of this new estimate. However, our estimates are based on the Army's October 10, 1989, data and we do not believe it would be appropriate to selectively update that data.

The Presidio of San Francisco

DOD disagreed with our range of estimates for the Presidio of San Francisco.

- DOD commented the payback estimate should include \$555 million to reflect the economic value of the property, regardless of whether it is sold. We agree that the property has economic value; however, transferring the property between two federal agencies does not result in increases in funds to offset budget outlays related to base closures. Further, the purpose of our analysis is to identify actual dollar costs and savings for the closure.
- DOD said if we exclude the economic land value estimate, we should include \$26 million for the portion of the land that could be sold immediately. Based on Army data it does appear that 26 acres could be sold now and 10.5 acres could be available in 1999. We revised our estimate to reflect these potential proceeds.
- DOD said medicare costs should not be considered a closure cost. Because military hospitals are not necessarily planned to treat retirees and only

provide retirees treatment on a space available basis, the Congress created a military health insurance program to cover military retirees until age 65. DOD also stated military personnel pay into the medicare program trust fund while on active duty and are entitled to benefits at age 65. DOD also believes it is debatable whether medicare program trust fund expenditures are even a cost to the government, since the trust fund does not receive appropriated monies. We believe the health costs of military retirees that shift to medicare when a military hospital closes are claims against the federal government and should be included as a closure cost.

- DOD commented that the National Park Service's annual operating costs could easily be offset by revenues from leasing some of the Presidio's 6 million square feet of buildings. We included these possible revenues in our range of estimates for the Presidio.

Using the assumptions of a land value of \$555 million, no medicare costs, and no National Park Service costs, DOD estimates annual savings of \$46.8 million, with an immediate payback of closure costs.

Annual Savings Estimate

After making the various revisions for the realignment, the Presidio, and military construction cost avoidance, DOD believes that annual savings resulting from the Commission's recommendations for the 15 bases we reviewed will be about \$522 million, or about \$70 more than our high range estimate. Most of the difference can be attributed to DOD, including military construction cost avoidance as a savings.

Revised Closure Dates

DOD also provided us with revised fiscal year closure dates for the Army bases. The realignment of Forts Devens, Meade, Huachuca, and Holabird changed from 1992 to 1995; Fort Dix changed from 1992 to 1993; Fort Sheridan changed from 1992 to 1994; Jefferson Proving Ground changed from 1992 to 1995; Lexington Army Depot changed from 1992 to 1994; and the Presidio of San Francisco changed from 1992 to 1995. We revised our payback calculations to reflect these revised dates since they are consistent with the revised service data that we used in our estimates.

Commission Co-Chairmen Comments and Our Evaluation

The Commission Co-Chairmen viewed the 6-year payback period for recovering realignment and closure costs as a guideline and recognized the preliminary nature of the costs and savings estimates. According to the Co-Chairmen, the Commission believed the economic value of the land at the Presidio of San Francisco should be considered. They also believed excluding economic land value in similar situations might create a future incentive for legislation to protect bases from realignment or closure. Also, in their opinion, holding land sales proceeds at zero for Jefferson Proving Ground and Fort Meade is not appropriate because portions of the properties may be sold.

We believe costs and savings estimates should reflect actual land sales estimates. However, this would not preclude the exercise of judgment if situations similar to the Presidio were being considered (i.e., land was transferred to other federal agencies). We assumed land sales proceeds of \$198 million for Fort Meade, and we are still uncertain that any property can be sold at Jefferson.

Costs for Environmental Cleanup Not Included in Estimates

As required by the Secretary of Defense, the Commission considered environmental impacts. However, environmental cleanup costs played a very small role in the Commission's recommended actions. The Commission excluded hazardous waste cleanup costs from its payback calculations, because it reasoned that DOD is already responsible for such costs and thus they were not a result of its recommendations. Even though we agree with this position, we recognize substantial cleanup costs will be incurred. Preliminary cleanup cost estimates for all bases are \$661 million, and \$250.6 million for the 15 bases we reviewed. However, until environmental studies and tests are completed, final estimates will not be available.

Process the Commission Used to Consider Environmental Impact

The process the Commission used to consider environmental impact included forming an Environmental Task Force and holding hearings. The Commission also gathered data on environmental impacts to determine whether environmental issues would prohibit realignments and closures. In addition, the Commission developed decision papers addressing environmental impacts.

Environmental Task Force Formed

The Commission formed an Environmental Task Force in June 1988 to aid it in considering environmental impacts. The Task Force was chaired by a Commission staff member and included representatives from the Office of the Secretary of Defense and from the environmental offices of the Army, Navy, and Air Force. An Environmental Working Group with representatives from DOD aided the Task Force. The Working Group and the Task Force Chairman held a series of meetings to develop an analytical approach for considering environmental impacts for base realignments and closures.

Hearings on Environmental Issues Held

On July 28, 1988, the Commission held hearings on environmental issues. Representatives of the services, the Environmental Protection Agency, the Council on Environmental Quality, the Audubon Society accompanied by a representative of the Sierra Club, the National Wildlife Federation, and the Environmental Law Institute testified. A number of important environmental factors were identified at the hearings.

The Environmental Protection Agency and Council on Environmental Quality representatives said they could assist the Commission in considering environmental impact. The Chairman of the Commission's Environmental Task Force met with these organizations individually to discuss how to consider environmental issues.

Environmental Analysis Procedures Provided to the Services

In September 1988, the Commission formally provided the services with environmental impact analysis procedures and tasked them to complete environmental analyses by November 11, 1988. According to the procedures, the services should consider (1) threatened or endangered species, (2) wetlands, (3) historical or archeological sites, (4) pollution control, (5) hazardous materials waste, and (6) land uses.

Decision Papers on Considering Environmental Impact Issues Adopted

On October 6, 1988, the Commission developed formal decision papers addressing environmental impact analysis and environmental payback considerations. In its decision paper on environmental impact analysis, the Commission recognized that environmental considerations would probably not be a major determining factor in the Commission's decision-making process and recommended the following:

- The Commission should develop procedures to ensure that the environmental impact is evaluated, including evaluations of the costs.
- The services should perform environmental analyses using procedures developed by the Commission's Environmental Task Force.
- The Secretary of Defense would be responsible for fuller environmental analysis, mitigation procedures where appropriate, detailed cost calculations, and involvement of the public while implementing realignments and base closures.

In the decision paper on payback considerations, it was recommended that the Commission exclude hazardous waste cleanup costs in its payback calculations. The reasoning was that since DOD is already responsible for cleaning up hazardous waste at its bases, such costs should not be included as a result of realignment and closure recommendations. We agree that these costs are not a consequence of closure.

Commission officials stated that none of the Commission's recommendations would result in enough of an environmental impact on receiving bases to preclude transferring activities and forces. They stated, however, the scheduling of on-site chemical weapons disposal at Pueblo

Depot, Colorado, and Umatilla Depot, Oregon, precluded recommendations for full closure. In these two cases, the Commission recommended realignment rather than closure.

Reliable Estimates of Cleanup Costs Not Yet Available

Reliable estimates of the cleanup costs and other environmental problems at bases recommended for realignment or closure will not be available until environmental studies and testing at the bases are completed, probably in about 2 years. The Commission's October 6, 1988, decision paper on environmental impact analyses stated that the Secretary of Defense would be responsible for detailed cost calculations when the Commission's recommendations were implemented.

Since issuance of the Commission's report, DOD has been working to specify environmental impacts and estimate costs for environmental cleanups. The services provided preliminary environmental cleanup cost estimates totaling about \$661 million to the Office of the Deputy Assistant Secretary of Defense for Environment. These cost estimates are about \$549 million for the Army, \$10 million for the Navy, and \$102 million for the Air Force.

The services said the estimates are likely to change since many environmental studies and tests are not done yet. Table 4.1 shows the services' preliminary cleanup cost estimates for the bases we reviewed and the preliminary cleanup cost estimates for all of the other bases to be realigned or closed.

Chapter 4
Costs for Environmental Cleanup Not
Included in Estimates

Table 4.1: Preliminary Cleanup Cost
Estimates for Selected Bases (Fiscal Year
 1988 Dollars)

Dollars in millions	
Base	Estimate
Army	
Fort Devens/Fort Huachuca	\$0.0 ^a
Fort Holabird	0.5
Fort Dix	0.0 ^a
Jefferson Proving Ground	57.0 ^b
Lexington Depot	21.0
Fort Meade	53.0 ^c
Presidio of San Francisco	10.0
Fort Sheridan	7.0
Air Force^d	
Chanute	18.0
George	6.0
Norton	39.0
Mather	28.0
Pease	11.0
Navy	
Hunters Point	0.1 ^e
Total	\$250.6
Other bases	\$410.4
Total	\$661.0

^aNo land is expected to become available for nonmilitary use.

^bThe \$57 million is an estimate to clean up the site for use as a wildlife refuge. The Army estimated that a total of \$250 million may be required to clean up Jefferson for unrestricted use. A state of Indiana estimate is \$653 million for unrestricted use.

^cThis estimate would be for cleanup for restricted use.

^dWe deflated Air Force estimates to fiscal year 1988 dollars.

^eThe estimate is for performing an environmental assessment only. No land is expected to become available for nonmilitary use.

DOD has not yet decided the source and timing of funding for some individual cleanups. On March 1, 1989, the Deputy Assistant Secretary of Defense for Installations, in a statement before the Subcommittee on Military Installations and Facilities, House Committee on Armed Services, stated that environmental studies had just begun. He also stated

that until they are completed, DOD will not know the extent of the problems, the costs, or whether the costs will be funded from the Defense Environmental Restoration account¹ or from the base closure account.

Congressional Concern Over Environmental Cleanup Costs

The House Committee on Armed Services' report number 101-121, dated July 1, 1989, on the National Defense Authorization Act for Fiscal Years 1990-1991, raised many concerns about the environmental issues associated with base realignments and closures. The report stated in part:

"From the earliest consideration of base closure legislation one of the most serious congressional concerns involved environmental issues and how they would be addressed. Ultimately, the matter was left to the Commission, and it chose not to address specifically environmental issues because they would have to be dealt with whether or not the bases were closed or realigned."

The Committee recognized that it is difficult to estimate cleanup costs prior to required studies. However, the Committee believed that current estimates are optimistic for two reasons. First, there would be pressure to clean up the bases as soon as possible and an expedited cleanup schedule would probably have additional costs. Second, the Committee did not believe DOD's estimates were based on probable land use. The report stated that communities around the closed bases will want to make the best use of the property, which will have a major impact on cleanup standards.

The report also brought out a related problem regarding the long-term government liability for problems associated with the transfer of previously contaminated land. The report stated that under current environmental law, DOD remains liable for the consequences of hazardous or toxic contaminants at its properties, even though all known or reasonably foreseeable contamination has been removed. It also stated that DOD would still be liable if the new owner disappears, goes bankrupt, or otherwise fails to carry out a binding contract. The Committee directed the Secretary of Defense to prepare a 5-year plan that would (1) provide updated cleanup cost projections, (2) identify a dedicated source of funding, and (3) make recommendations to address technical, procedural, and land use issues.

¹The Defense Environmental Restoration Program was established in 1984 to expand efforts to clean up contamination from hazardous waste sites at DOD installations and formerly used DOD properties. The annual defense appropriations acts provide funding for the Defense Environmental Restoration account.

The House Committee on Appropriations' report on the Military Construction Authorization Bill for fiscal year 1990 also expressed concern over environmental issues associated with base realignments and closures. It stated the following:

"The Committee is concerned about the progress of the cleanup of uncontrolled hazardous wastes on the bases that are scheduled to be closed or realigned under the Defense Authorization Amendments and Base Closure and Realignment Act (Public Law 100-526). The Department has testified that the preliminary estimates indicate that the cleanup costs will exceed \$500 million, of which at least \$150 million will need to come from sources other than the Defense Environmental Restoration Account.

"The Committee is particularly concerned that these facilities not remain unutilized for years after the base closure or realignment due to insufficient progress on the cleanup. The Committee, therefore, directs the Department to take such steps as necessary to ensure that adequate funding and personnel are available to support an expedited cleanup schedule."

The Committee on Appropriations is directing the Secretary of Defense to prepare a plan similar to the plan required by the House Committee on Armed Services. The plan is to be submitted to the House Committee on Appropriations in conjunction with DOD's fiscal year 1991 budget submission.

Conclusions

The Secretary of Defense required the Commission to consider environmental impact. Our review showed that it did consider environmental impact by (1) forming a task force and a working group to develop an analytical approach, (2) holding hearings on environmental issues, (3) developing procedures for environmental analyses to be performed by the services, and (4) making decisions regarding how environmental impact would be considered.

However, these considerations had little effect on the Commission's final recommendations largely because cleanup costs were not considered to be a result of the Commission's recommendations. Although we agree with this logic, we also believe cleanup costs will be substantial—about \$661 million or more. Final estimates of these costs, however, will not be available for about 2 years, when environmental studies are complete. These costs will also depend on how the properties to be cleaned up could be used.

**Chapter 4
Costs for Environmental Cleanup Not
Included in Estimates**

The Congress is aware of the potential costs for environmental cleanup and other concerns associated with this issue, such as timeliness of cleanup efforts, and is requiring the Secretary of Defense to report on these matters. Therefore, we are not making recommendations in this area.

Agency Comments

DOD agreed with our findings and conclusions.

**Commission Co-
Chairmen Comments**

The Co-Chairmen did not comment on this chapter's findings and conclusions.

Consideration of Economic Impacts

The Secretary of Defense, in establishing the Commission, required it, among other things, to consider the economic impact on communities affected by realignments and closures, and to determine how to improve and best use federal government incentive programs to alleviate negative impacts. To do this, the Commission held hearings and decided how it would consider economic impact in its deliberations. It also provided several recommendations for improving and using incentive programs to alleviate negative impacts. Our analysis of the Commission's process shows the following:

- The Commission used base employment data and area economic statistics to characterize economic impacts on affected communities as minimal, moderate, or severe. However, consideration of economic impact was not a determining factor in the Commission's recommendations because it decided to use this information only when all other factors, such as military value, for two or more bases were equal. In no case were all other factors equal.
- The Commission used data it gathered on total employment in the economic regions where the bases were located to compute a percentage of job loss impact on local employment for communities affected by its recommendations. The calculations reflected the direct loss of military and certain civilian DOD jobs but did not include indirect job losses. This would have required the use of an economic model.
- The Commission did not include economic impact costs, including non-DOD costs resulting from its recommendations, because it was working under tight time constraints imposed by its charter and legislative reporting requirements and believed such costs would be minimal. It would have been difficult for the Commission to develop these estimates because of the tight time frames and the uncertainty of economic impact costs.
- Federal funding helped communities adjust to prior base realignments and closures. However, the funds for these types of programs have been reduced substantially in recent years, and how much state programs can fill the gap is uncertain.
- The Commission's recommendations and suggestions for using federal programs to ease the impact of realignments and closures could help. However, implementation may involve increased costs to the federal government.

Economic Impact Not a Decision Factor

During a September 14, 1988, business meeting, the Commission decided to consider economic impact on base realignments and closures by focusing primarily on the percentage job loss impact on local employment and

economic vitality. It gathered and analyzed economic impact data to identify potential impacts as either minimal, moderate, or severe. It also decided to consider economic impacts only when all other factors, such as military value, were equal. As it turned out, no such cases occurred. Thus, economic impact was not a determining factor in the Commission's decisions.

Economic Impact Analysis Could Have Been Improved

The Commission used regional economic data, base employment figures, and judgment to characterize economic impacts. It based the assessments on the number of direct jobs that would be lost to communities as a result of base realignments and closures. The individual assessments were presented as a percentage of the direct jobs lost in the communities.

The Commission's analysis of economic impact could have been improved. For example, the Commission could have specified the criteria it used to characterize economic impact. Also, if more time had been available, the Commission could have considered indirect job losses as well as direct job losses. The Commission also made some errors in its evaluation. For example, it excluded military trainees from its analysis of job losses. Also, there is no evidence that the Commission evaluated whether the economic areas were reasonably specified.

No Guidelines for Characterizing Economic Impact

DOD's Office of Economic Adjustment provided the Commission with data on the regional economies of 351 installation locations. The Commission used this information and Commissioners' judgments to characterize the economic impact of realigning or closing a particular base. However, we could find no documents outlining specific economic impact review criteria. Also, there is no evidence of how the Commission considered the data on employment growth rates and unemployment in characterizing economic impact.

Economic Impact Analysis Could Have Considered Indirect Job Losses

The Commission based its economic impact characterizations partly on the number of military and DOD civilian jobs that a community would lose. Direct job loss does not represent the total employment effects on a community. A more complete analysis should have included indirect as well as direct job losses. Indirect job losses occur due to the loss of base and base employee spending in the community.

Problems in the Commission's Evaluation of Economic Impact

We also found a problem in the Commission's calculation of percentage job loss. It may have resulted from not checking whether economic regions were defined appropriately or from not considering the combined impact of multiple recommendations on a given region. In data provided to the Commission, the Office of Economic Adjustment defined the Riverside, California, metropolitan area as the economic impact area for both Norton Air Force Base in San Bernadino, California, and George Air Force Base in Victorville, California.

The Commission chose to close two bases defined to be in the same economic impact area. For Norton, the Commission calculated the job loss to be .9 percent by dividing 6,653, its figure for the job loss at Norton, by 774,614, the employment in the Riverside metropolitan area. For George, the Commission calculated the job loss to be .8 percent, by dividing 6,132, its figure for the job loss at George, by 774,614.

If the Commission considered the two communities to be in the same economic region, it should have estimated the economic impact of closing both bases. To do this, the Commission should have added the job losses at George and Norton and subtracted the net gain at March Air Force base since it is also in the Riverside area. The combined impact in this case would be 1.2 percent, which DOD officials believe would still be minimal.

The impact of trainees on the local economy may be important for bases with large trainee populations. In the case of Chanute Air Force Base, the Commission calculated a 3-percent impact on local employment, based on the removal of 3,168 military and civilian personnel from the base. According to 1988 base data, this figure does not include trainees. Due to their lower earnings, the average economic impact of trainees may be smaller than the average impact of those personnel included in the Commission's calculations. However, the Commission should have considered the trainees in its estimates.

Comprehensive Economic Impact Model Available

If more time had been available, the Commission could have used a comprehensive economic model. In 1980, DOD adopted a regional economic analysis model (the Department of Commerce, Bureau of Economic Analysis regional economic impact of military base spending model) as a standard approach for assessing economic impacts on communities resulting from base realignments and closures. However, the model requires extensive data specific to the base and economic area being considered. Officials at the Office of Economic Adjustment said that

such an analysis for a given base requires about 6 months to complete. Given the limited time frame for the Commission to do its work, it could not have used this more sophisticated model.

Other Economic Impact Costs Not Included in Costs and Savings Estimates

The Secretary of Defense required the Commission to consider the potential costs and savings associated with its recommendations for base realignments and closures. There are several costs to DOD and other federal agencies associated with the economic impact of base realignments and closures on local communities and individuals. These costs include economic assistance to communities affected by a base realignment or closure and the cost of the Homeowners Assistance Program to DOD. The Commission did not include these economic impact costs in its cost models because it believed these costs would be minimal, and it had insufficient time to make reasonable estimates.

Economic Assistance for Prior Base Closures Was Substantial

From 1966 through 1987, 18 federal departments and agencies provided \$499 million (\$963 million in fiscal year 1988 dollars) to assist communities affected by base realignments, closures, and reductions in functions. This averaged \$13 million (in fiscal year 1988 dollars) for each of the 74 installations where assistance was provided. DOD's Office of Economic Adjustment assisted the communities in obtaining the aid. Three federal agencies provided 64 percent of the assistance to the 74 bases. The Department of Commerce provided 33 percent, the Department of Housing and Urban Development provided 17 percent, and the Environmental Protection Agency provided 14 percent.¹

Prospects for Current Economic Assistance Are Uncertain

We contacted the 18 member agencies of the Economic Adjustment Committee to determine the amount of current and future funds that might be allocated to communities affected by a base realignment or closure. Officials from the agencies that had provided financial assistance in the past said that they now have substantially smaller amounts of funds available. Also, Office of Economic Adjustment data show that resources from several agency programs used before as sources of community assistance declined about 80 percent between fiscal years 1980 and 1989.

¹Other agencies that each provided more than 1 percent of the total community assistance include the Department of Labor, the Department of Health, Education and Welfare (now the Departments of Health and Human Services, and Education), the Small Business Administration, the Department of Agriculture, DOD, the Department of the Interior, and the Department of Transportation.

Homeowners Assistance Program

DOD's Homeowners Assistance Program provides military personnel and other federal employees financial assistance in selling their homes when a base realignment or closure causes property values to drop substantially. During the Commission's July 7, 1988, hearing, a Homeowners Assistance Program official testified that the program does not have sufficient funds to meet the coming need. As a result, the Commission stated in its report that the Congress should appropriate a substantial sum for the program. The Commission did not include any estimates for program costs when calculating costs, savings, and payback periods.

According to Homeowners Assistance Program officials, the communities around Chanute and George Air Force Bases are the only areas likely to qualify for assistance. If these are the only eligible communities, program officials estimate monetary assistance will be about \$8.7 million. However, final estimates cannot be made until all eligible communities and homeowners are identified.

Other Programs Could Be Affected

The impact of base closures on some individuals and communities could result in additional costs to the federal government. Ideally, other federal program costs should be included in the overall costs of a base realignment or closure. These would be difficult to estimate even with more sophisticated regional economic analysis than the Commission undertook. Any future federal assistance will depend on a community's ability to attract new employers. For some communities, this may be difficult and significant federal social spending may result. To compute the overall impact on the federal budget, the effects on communities where base expansions occur or DOD spending is increased in some other way would also have to be considered.

Commission Made Recommendations for Easing Economic Impact

The Secretary of Defense required the Commission to determine how to improve and best use federal government incentive programs to alleviate negative impacts of base realignments and closures. Because of reduced funding for some federal programs and no guarantees of job offers to displaced civilian employees, the Commission made some recommendations and suggestions for easing the economic impact. It recommended that the Congress increase funding for DOD to help communities adjust. It also suggested the Congress consider expanding the other federal programs that had assisted base closure communities in the past. Further, the Commission recommended that civilian employees be guaranteed other jobs within DOD.

The Commission indicated that state programs have largely filled the gap caused by reductions in other federal development programs. However, several state officials we interviewed were uncertain to what extent state programs could replace federal assistance. Several states have only small loan and grant programs. According to officials from Illinois and New Jersey, the state legislatures would have to appropriate funds to provide significant assistance to affected communities in their respective states.

Conclusions

The Commission considered the economic impacts in deciding which bases to recommend for realignments or closures. However, these considerations were not determining factors in the final recommendations because the Commission decided to use this information only when all other factors, such as military value, were equal. There were no cases where all other factors were equal.

We believe the Commission's evaluation of economic impact could have been improved. For example, it could have specified the criteria it used to characterize economic impact. Also, if more time had been available, it could have considered indirect job losses and used a comprehensive economic impact model.

The Commission did not include economic impact costs in calculating costs, savings, or payback periods for its realignment and closure recommendations because it was working under tight time constraints and believed the costs would be minimal. We recognize the Commission had limited time and many of the economic impact costs are uncertain. Therefore, under these circumstances, it would have been difficult for the Commission to develop these costs and include them in its cost models.

The Commission's recommendations and suggestions for using federal programs to ease the impact could help if implemented and should be given careful consideration. However, implementing these recommendations and suggestions could increase the federal government's costs because funding for such programs is considerably lower now than in the past. Also, it is uncertain to what extent state programs can fill the gap.

Recommendations

We recommend that in future base realignment and closure studies, the Secretary of Defense (1) specify the criteria that are to be used in evaluating economic impact, including the impact area, (2) consider the feasibility of using techniques that can measure direct as well as indirect job losses, and (3) provide sufficient time for developing and considering estimates of economic impact costs where possible, including the impact on the overall federal budget.

Agency Comments

DOD agreed with our findings, conclusions, and recommendations.

Commission Co-Chairmen Comments

The Commission Co-Chairmen did not specifically comment on this chapter's findings, conclusions, and recommendations.

Charter for the Commission on Base Realignment and Closure

Defense Secretary's Commission on Base Realignment and Closure

In accordance with the provisions of the Federal Advisory Committee Act, as amended (5U.S.C. App. I), a Commission on Base Realignment and Closure is hereby ordered as follows:

Section 1. Establishment.

There is established the Defense Secretary's Commission on Base Realignment and Closure. The Commission shall be composed of twelve members appointed or designated by the Secretary of Defense. The composition of the Commission shall include persons with broad experience in government and national defense. The Secretary shall designate two Chairpersons from among the members of the Commission.

Section 2. Functions.


The Commission shall study the issues surrounding military base realignment and closure within the United States, its commonwealths, territories, and possessions. The primary objectives of the Commission shall be to:

- A. Determine, by November 15, 1988, the best process, including necessary administrative changes, for identifying bases to be closed or realigned; how to improve and best use Federal government incentive programs to overcome the negative impact of base closure or realignment; and, the criteria for realigning and closing bases to include at least:
 - 1. The current and future mission requirements and the impact on operational readiness of the military departments concerned.
 - 2. The availability and condition of land and facilities at both the existing and potential receiving locations.
 - 3. The potential to accommodate contingency, mobilization, and future force requirements at receiving locations.
 - 4. The cost and manpower implications.
 - 5. The extent and timing of potential cost savings, including whether the total cost savings realized from the closure or realignment of the base will, by the end of the 6-year period beginning with the date of the completion of the closure or realignment of the base, exceed the amount expended to close or realign the base.
 - 6. The economic impact on the community in which the base to be closed or realigned is located.
 - 7. The community support at the receiving locations.
 - 8. The environmental impact.
 - 9. The implementation process involved.
- B. Review the current and planned military base structure in light of force structure assumptions, and the process and criteria developed pursuant to subparagraph A, and identify which bases should be closed or realigned.
- C. Report its findings and recommendations to the Secretary of Defense by December 31, 1988.

Section 3. Administration.

Members of the Commission shall serve without compensation for their work on the Commission. However, members appointed from among private citizens may be allowed travel expenses, including per diem in lieu of subsistence, as authorized by law for persons serving intermittently in the government service (5U.S.C. 5701-5707), to the full extent funds are available. The Secretary of Defense shall provide the Commission with such administrative services, facilities, staff, and other support services as may be necessary. Any expenses of the Commission shall be paid from such funds as may be available to the Secretary of Defense.

The Commission shall be in place and operating as soon as possible. Shortly thereafter, the Commission shall brief the Secretary of Defense on the Commission's plan of action. The Commission's final report shall include recommendations to realign and close bases only upon a vote of a majority of the members of the Commission. The Commission should complete its work by December 31, 1988.



Frank Carlucci
Secretary of Defense

The Pentagon
May 3, 1988
(as revised November 8, 1988)

Defense Authorization Amendments and Base Closure and Realignment Act

PUBLIC LAW 100-526—OCT. 24, 1988

102 STAT. 2623

Public Law 100-526
100th Congress

An Act

To provide certain additional fiscal year 1989 defense authorization policies, to provide procedures to facilitate the closure and realignment of obsolete or unnecessary military installations, and for other purposes.

Oct. 24, 1988
[S. 2749]

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE

This Act may be cited as the "Defense Authorization Amendments and Base Closure and Realignment Act".

Defense Authorization Amendments and Base Closure and Realignment Act.
10 USC 2687 note.

TITLE II—CLOSURE AND REALIGNMENT OF MILITARY INSTALLATIONS

SEC. 201. CLOSURE AND REALIGNMENT OF MILITARY INSTALLATIONS

The Secretary shall—

- (1) close all military installations recommended for closure by the Commission on Base Realignment and Closure in the report transmitted to the Secretary pursuant to the charter establishing such Commission;
- (2) realign all military installations recommended for realignment by such Commission in such report; and
- (3) initiate all such closures and realignments no later than September 30, 1991, and complete all such closures and realignments no later than September 30, 1995, except that no such closure or realignment may be initiated before January 1, 1990.

SEC. 202. CONDITIONS

(a) **IN GENERAL.**—The Secretary may not carry out any closure or realignment of a military installation under this title unless—

- (1) no later than January 16, 1989, the Secretary transmits to the Committees on Armed Services of the Senate and the House of Representatives a report containing a statement that the Secretary has approved, and the Department of Defense will implement, all of the military installation closures and realignments recommended by the Commission in the report referred to in section 201(1);
- (2) the Commission has recommended, in the report referred to in section 201(1), the closure or realignment, as the case may be, of the installation, and has transmitted to the Committees on Armed Services of the Senate and the House of Representatives a copy of such report and the statement required by section 203(b)(2); and
- (3) the Secretary of Defense has transmitted to the Commission the study required by section 206(b).

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(b) **JOINT RESOLUTION.**—The Secretary may not carry out any closure or realignment under this title if, within the 45-day period beginning on March 1, 1989, a joint resolution is enacted, in accordance with the provisions of section 208, disapproving the recommendations of the Commission. The days on which either House of Congress is not in session because of an adjournment of more than 3 days to a day certain shall be excluded in the computation of such 45-day period.

(c) **TERMINATION OF AUTHORITY.**—The authority of the Secretary to carry out any closure or realignment under this title shall terminate on October 1, 1995.

SEC. 203. THE COMMISSION

(a) **MEMBERSHIP.**—The Commission shall consist of 12 members appointed by the Secretary of Defense.

(b) **DUTIES.**—The Commission shall—

Reports.

(1) transmit the report referred to in section 201(1) to the Secretary no later than December 31, 1988, and shall include in such report a description of the Commission's recommendations of the military installations to which functions will be transferred as a result of the closures and realignments recommended by the Commission; and

Reports.

(2) on the same date on which the Commission transmits such report to the Secretary, transmit to Committees on Armed Services of the Senate and the House of Representatives—

(A) a copy of such report; and

(B) a statement certifying that the Commission has identified the military installations to be closed or realigned by reviewing all military installations inside the United States, including all military installations under construction and all those planned for construction.

(c) **STAFF.**—Not more than one-half of the professional staff of the Commission shall be individuals who have been employed by the Department of Defense during calendar year 1988 in any capacity other than as an employee of the Commission.

SEC. 204. IMPLEMENTATION

(a) **IN GENERAL.**—In closing or realigning a military installation under this title, the Secretary—

(1) subject to the availability of funds authorized for and appropriated to the Department of Defense for use in planning and design, minor construction, or operation and maintenance and the availability of funds in the Account, may carry out actions necessary to implement such closure or realignment, including the acquisition of such land, the construction of such replacement facilities, the performance of such activities, and the conduct of such advance planning and design as may be required to transfer functions from such military installation to another military installation;

Community development.

(2) subject to the availability of funds authorized for and appropriated to the Department of Defense for economic adjustment assistance or community planning assistance and the availability of funds in the Account, shall provide—

(A) economic adjustment assistance to any community located near a military installation being closed or realigned; and

(B) community planning assistance to any community located near a military installation to which functions will be transferred as a result of such closure or realignment, if the Secretary determines that the financial resources available to the community (by grant or otherwise) for such purposes are inadequate; and

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Environmental
protection.
Waste disposal.
Hazardous
materials.

(3) subject to the availability of funds authorized for and appropriated to the Department of Defense for environmental restoration and the availability of funds in the Account, may carry out activities for the purpose of environmental restoration, including reducing, removing, and recycling hazardous wastes and removing unsafe buildings and debris.

(b) **MANAGEMENT AND DISPOSAL OF PROPERTY.**—(1) The Administrator of General Services shall delegate to the Secretary, with respect to excess and surplus real property and facilities located at a military installation closed or realigned under this title—

(A) the authority of the Administrator to utilize excess property under section 202 of the Federal Property and Administrative Services Act of 1949 (40 U.S.C. 483);

(B) the authority of the Administrator to dispose of surplus property under section 203 of that Act (40 U.S.C. 484); and

(C) the authority of the Administrator to grant approvals and make determinations under section 13(g) of the Surplus Property Act of 1944 (50 U.S.C. App. 1622g).

(2)(A) Subject to subparagraph (B), the Secretary shall exercise authority delegated to the Secretary pursuant to paragraph (1) in accordance with—

(i) all regulations in effect on the date of the enactment of this title governing utilization of excess property and disposal of surplus property under the Federal Property and Administrative Services Act of 1949; and

(ii) all regulations in effect on the date of the enactment of this title governing the conveyance and disposal of property under section 13(g) of the Surplus Property Act of 1944 (50 U.S.C. App. 1622g).

(B) The Secretary, after consulting with the Administrator of General Services, may issue regulations that are necessary to carry out the delegation of authority required by paragraph (1).

(C) The authority required to be delegated by paragraph (1) to the Secretary by the Administrator of General Services shall not include the authority to prescribe general policies and methods for utilizing excess property and disposing of surplus property.

(D) Before any action may be taken with respect to the disposal of any surplus real property or facility located at any military installation to be closed or realigned under this title, the Secretary shall consult with the Governor of the State and the heads of the local governments concerned for the purpose of considering any plan for the use of such property by the local community concerned.

State and local
governments.

(E) The provisions of this paragraph and paragraph (1) are subject to paragraphs (3) and (4).

(3) Before any action is taken with respect to the disposal or transfer of any real property or facility located at a military installation to be closed or realigned under this title, the Secretary shall notify all departments and other instrumentalities (including nonappropriated fund instrumentalities) within the Department of Defense of the availability of such property or facility, or portion thereof, and may transfer such property, facility, or portion, without reimbursement, to any such department or instrumentality. In carrying out this paragraph, the Secretary shall give a priority, and shall transfer, to any such department or other instrumentality that agrees to pay fair market value for the property or facility, or portion thereof. For purposes of this paragraph, fair market value shall be determined on the basis of the use of the property or facility on December 31, 1988. This paragraph shall take precedence over any other provision of this title or other provision of law with respect to the disposal or transfer of real property or facility located at a military installation to be closed or realigned under this title.

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(4)(A) Except as provided in subparagraph (B), all proceeds—
(i) from any transfer under paragraph (3); and
(ii) from the transfer or disposal of any other property or
facility made as a result of a closure or realignment under this
title,
shall be deposited into the Account established by section 207(a)(1).

(B) In any case in which the General Services Administration is
involved in the management or disposal of such property or facility,
the Secretary shall reimburse the Administrator of General Services
from the proceeds of such disposal, in accordance with section 1535
of title 31, United States Code, for any expenses incurred in such
activities.

(c) **APPLICABILITY OF OTHER LAW.**—(1) The provisions of the Na-
tional Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.) shall
not apply to—

(A) the actions of the Commission, including selecting the
military installations which the Commission recommends for
closure or realignment under this title, recommending any
military installation to receive functions from an installation to
be closed or realigned, and making its report to the Secretary
and the committees under section 203(b); and

(B) the actions of the Secretary in establishing the Commis-
sion, in determining whether to accept the recommendations of
the Commission, in selecting any military installation to receive
functions from an installation to be closed or realigned, and in
transmitting the report to the Committees referred to in section
202(a)(1).

(2) The provisions of the National Environmental Policy Act of
1969 shall apply to the actions of the Secretary (A) during the
process of the closing or realigning of a military installation after
such military installation has been selected for closure or realign-
ment but before the installation is closed or realigned and the
functions relocated, and (B) during the process of the relocating of
functions from a military installation being closed or realigned to
another military installation after the receiving installation has
been selected but before the functions are relocated. In applying the
provisions of such Act, the Secretary shall not have to consider—

(i) the need for closing or realigning a military installation
which has been selected for closure or realignment by the
Commission;

(ii) the need for transferring functions to another military
installation which has been selected as the receiving installa-
tion; or

(iii) alternative military installations to those selected.

Claims.

(3) A civil action for judicial review, with respect to any require-
ment of the National Environmental Policy Act of 1969 to the extent
such Act is applicable under paragraph (2), or with respect to any
requirement of the Commission made by this title, of any action or
failure to act by the Secretary during the closing, realigning, or
relocating referred to in clauses (A) and (B) of paragraph (2), or of
any action or failure to act by the Commission under this title, may
not be brought later than the 60th day after the date of such action
or failure to act.

SEC. 286. WAIVER

The Secretary may carry out this title without regard to—

(1) any provision of law restricting the use of funds for closing
or realigning military installations included in any appropria-
tion or authorization Act; and

(2) the procedures set forth in sections 2662 and 2687 of title
10, United States Code.

SEC. 206. REPORTS

(a) **IN GENERAL.**—As part of each annual budget request for the Department of Defense, the Secretary shall transmit to the appropriate committees of Congress—

(1) a schedule of the closure and realignment actions to be carried out under this title in the fiscal year for which the request is made and an estimate of the total expenditures required and cost savings to be achieved by each such closure and realignment and of the time period in which these savings are to be achieved in each case, together with the Secretary's assessment of the environmental effects of such actions; and

(2) a description of the military installations, including those under construction and those planned for construction, to which functions are to be transferred as a result of such closures and realignments, together with the Secretary's assessment of the environmental effects of such transfers.

(b) **STUDY.**—(1) The Secretary shall conduct a study of the military installations of the United States outside the United States to determine if efficiencies can be realized through closure or realignment of the overseas base structure of the United States. Not later than October 15, 1988, the Secretary shall transmit a report of the findings and conclusions of such study to the Commission and to the Committees on Armed Services of the Senate and the House of Representatives. In developing its recommendations to the Secretary under this title, the Commission shall consider the Secretary's study.

(2) Upon request of the Commission, the Secretary shall provide the Commission with such information about overseas bases as may be helpful to the Commission in its deliberations.

(3) The Commission, based on its analysis of military installations in the United States and its review of the Secretary's study of the overseas base structure, may provide the Secretary with such comments and suggestions as it considers appropriate regarding the Secretary's study of the overseas base structure.

SEC. 207. FUNDING

(a) **ACCOUNT.**—(1) There is hereby established on the books of the Treasury an account to be known as the "Department of Defense Base Closure Account" which shall be administered by the Secretary as a single account.

(2) There shall be deposited into the Account—

(A) funds authorized for and appropriated to the Account with respect to fiscal year 1990 and fiscal years beginning thereafter;

(B) any funds that the Secretary may, subject to approval in an appropriation Act, transfer to the Account from funds appropriated to the Department of Defense for any purpose, except that such funds may be transferred only after the date on which the Secretary transmits written notice of, and justification for, such transfer to the appropriate committees of Congress; and

(C) proceeds described in section 204(b)(4)(A).

(3)(A) The Secretary may use the funds in the Account only for the purposes described in section 204(a).

(B) When a decision is made to use funds in the Account to carry out a construction project under section 204(a)(1) and the cost of the project will exceed the maximum amount authorized by law for a minor construction project, the Secretary shall notify in writing the appropriate committees of Congress of the nature of, and justifica-

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tion for, the project and the amount of expenditures for such project. Any such construction project may be carried out without regard to section 2902(a) of title 10, United States Code.

(4) No later than 60 days after the end of each fiscal year in which the Secretary carries out activities under this title, the Secretary shall transmit a report to the appropriate committees of Congress of the amount and nature of the deposits into, and the expenditures from, the Account during such fiscal year and of the amount and nature of other expenditures made pursuant to section 204(a) during such fiscal year.

(5) Unobligated funds which remain in the Account after the termination of the authority of the Secretary to carry out a closure or realignment under this title shall be held in the Account until transferred by law after the appropriate committees of Congress receive the report transmitted under paragraph (6).

Reports.

(6) No later than 60 days after the termination of the authority of the Secretary to carry out a closure or realignment under this title, the Secretary shall transmit to the appropriate committees of Congress a report containing an accounting of—

- (A) all the funds deposited into and expended from the Account or otherwise expended under this title; and
- (B) any amount remaining in the Account.

SEC. 206. CONGRESSIONAL CONSIDERATION OF COMMISSION REPORT

(a) **TERMS OF THE RESOLUTION.**—For purposes of section 202(b), the term “joint resolution” means only a joint resolution which is introduced before March 15, 1989, and—

- (1) which does not have a preamble;
- (2) the matter after the resolving clause of which is as follows: “That Congress disapproves the recommendations of the Commission on Base Realignment and Closure established by the Secretary of Defense as submitted to the Secretary of Defense on _____”, the blank space being appropriately filled in; and
- (3) the title of which is as follows: “Joint resolution disapproving the recommendations of the Commission on Base Realignment and Closure.”

(b) **REFERRAL.**—A resolution described in subsection (a), introduced in the House of Representatives shall be referred to the Committee on Armed Services of the House of Representatives. A resolution described in subsection (a) introduced in the Senate shall be referred to the Committee on Armed Services of the Senate.

(c) **DISCHARGE.**—If the committee to which a resolution described in subsection (a) is referred has not reported such resolution (or an identical resolution) before March 15, 1989, such committee shall be, as of March 15, 1989, discharged from further consideration of such resolution, and such resolution shall be placed on the appropriate calendar of the House involved.

(d) **CONSIDERATION.**—(1) On or after the third day after the date on which the committee to which such a resolution is referred has reported, or has been discharged (under subsection (c)) from further consideration of, such a resolution, it is in order (even though a previous motion to the same effect has been disagreed to) for any Member of the respective House to move to proceed to the consideration of the resolution (but only on the day after the calendar day on which such Member announces to the House concerned the Member's intention to do so). All points of order against the resolution

(and against consideration of the resolution) are waived. The motion is highly privileged in the House of Representatives and is privileged in the Senate and is not debatable. The motion is not subject to amendment, or to a motion to postpone, or to a motion to proceed to the consideration of other business. A motion to reconsider the vote by which the motion is agreed to or disagreed to shall not be in order. If a motion to proceed to the consideration of the resolution is agreed to, the respective House shall immediately proceed to consideration of the joint resolution without intervening motion, order, or other business, and the resolution shall remain the unfinished business of the respective House until disposed of.

(2) Debate on the resolution, and on all debatable motions and appeals in connection therewith, shall be limited to not more than 10 hours, which shall be divided equally between those favoring and those opposing the resolution. An amendment to the resolution is not in order. A motion further to limit debate is in order and not debatable. A motion to postpone, or a motion to proceed to the consideration of other business, or a motion to recommit the resolution is not in order. A motion to reconsider the vote by which the resolution is agreed to or disagreed to is not in order.

(3) Immediately following the conclusion of the debate on a resolution described in subsection (a) and a single quorum call at the conclusion of the debate if requested in accordance with the rules of the appropriate House, the vote on final passage of the resolution shall occur.

(4) Appeals from the decisions of the Chair relating to the application of the rules of the Senate or the House of Representatives, as the case may be, to the procedure relating to a resolution described in subsection (a) shall be decided without debate.

(e) **CONSIDERATION BY OTHER HOUSE.**—(1) If, before the passage by one House of a resolution of that House described in subsection (a), that House receives from the other House a resolution described in subsection (a), then the following procedures shall apply:

(A) The resolution of the other House shall not be referred to a committee and may not be considered in the House receiving it except in the case of final passage as provided in subparagraph (B)(ii).

(B) With respect to a resolution described in subsection (a) of the House receiving the resolution—

(i) the procedure in that House shall be the same as if no resolution had been received from the other House; but

(ii) the vote on final passage shall be on the resolution of the other House.

(2) Upon disposition of the resolution received from the other House, it shall no longer be in order to consider the resolution that originated in the receiving House.

(f) **RULES OF THE SENATE AND HOUSE.**—This section is enacted by Congress—

(1) as an exercise of the rulemaking power of the Senate and House of Representatives, respectively, and as such it is deemed a part of the rules of each House, respectively, but applicable only with respect to the procedure to be followed in that House in the case of a resolution described in subsection (a), and it supersedes other rules only to the extent that it is inconsistent with such rules; and

(2) with full recognition of the constitutional right of either House to change the rules (so far as relating to the procedure of

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that House) at any time, in the same manner, and to the same extent as in the case of any other rule of that House.

SEC. 209. DEFINITIONS

In this title:

(1) The term "Account" means the Department of Defense Base Closure Account established by section 207(a)(1).

(2) The term "appropriate committees of Congress" means the Committees on Armed Services and the Committees on Appropriations of the Senate and the House of Representatives.

(3) The terms "Commission on Base Realignment and Closure" and "Commission" mean the Commission established by the Secretary of Defense in the charter signed by the Secretary on May 3, 1988, and as altered thereafter with respect to the membership and voting.

(4) The term "charter establishing such Commission" means the charter referred to in paragraph (3).

(5) The term "initiate" includes any action reducing functions or civilian personnel positions but does not include studies, planning, or similar activities carried out before there is a reduction of such functions or positions.

(6) The term "military installation" means a base, camp, post, station, yard, center, homeport facility for any ship, or other activity under the jurisdiction of the Secretary of a military department.

(7) The term "realignment" includes any action which both reduces and relocates functions and civilian personnel positions.

(8) The term "Secretary" means the Secretary of Defense.

(9) The term "United States" means the 50 States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, the Virgin Islands, American Samoa, and any other commonwealth, territory, or possession of the United States.

Approved October 24, 1988.

LEGISLATIVE HISTORY—S. 2749 (H.R. 4264):

HOUSE REPORTS: No. 100-1076 (Comm. of Conference); No. 100-563 (Comm. on Armed Services) and No. 100-753 (Comm. of Conference), both accompanying H.R. 4264.

CONGRESSIONAL RECORD, Vol. 134 (1988):

Apr. 26-29, May 2-5, 11, H.R. 4264 considered and passed House.

May 27, considered and passed Senate, amended, in lieu of S. 2355.

July 14, House and Senate agreed to conference report.

WEEKLY COMPILATION OF PRESIDENTIAL DOCUMENTS, Vol. 24 (1988):

Aug. 3, Presidential veto message of H.R. 4264.

CONGRESSIONAL RECORD, Vol. 134 (1988):

Aug. 11, S. 2749 considered and passed Senate.

Oct. 3, considered and passed House, amended.

Oct. 12, Senate and House agreed to conference report to S. 2749.

Fort Dix

The Commission recommended realigning Fort Dix, New Jersey, to a semi-active status and relocating its training functions (basic training and advanced individual training) to other Army training installations. Army installations identified by the Commission to receive Fort Dix's functions are Fort Knox, Kentucky; Fort Leonard Wood, Missouri; and Fort Jackson, South Carolina. The Commission reported that the realignment of Fort Dix to semi-active status would improve the Army's capability to (1) meet active and reserve component training requirements in the northeast, (2) support mobilization requirements when needed, and (3) absorb future Army force structure changes resulting from possible adjustments in overseas unit stationing.

The Commission estimated that the realignment of Fort Dix would save \$84.5 million annually and be paid back in 3 years.¹ We currently estimate that the realignment will result in an annual savings of \$43.8 million and the payback period will be 4 years.

Phase I Issues

Fort Dix's missions include entry level basic and advanced individual training. In the Commission's phase I analysis, Fort Dix was one of eight Army bases evaluated in the Army's basic and advanced individual training category. The other Army training bases included in the category were Forts Benning, Bliss, Jackson, Knox, Leonard Wood, McClellan, and Sill. The U.S. Army's Training and Doctrine Command had primary responsibility for assisting in the phase I analysis of the eight bases.

In assessing the eight bases, the Commission established five major categories that related to military value and the key attributes of each category. It then judgmentally assigned weights that reflected the attribute's relative importance to the missions of the bases. To calculate the military value of a base, the Commission scored each attribute using criteria developed by the Army. The measurement of each attribute was characterized by one of three ratings—green for fully satisfactory, yellow for acceptable, and red for marginal. These ratings were then converted to numeric scores for the ranking process. Table III.1 shows the major categories, military value attributes, and the various weights assigned to each attribute.

¹The Commission reported 5 years, but according to its data, it should have reported 3 years.

Table III.1: Attributes Assessed for Army Basic and Advanced Individual Training Bases and Weights Assigned

Category	Attribute	Weight
Mission suitability	Unique location or mission	149
	Encroachment (commercial or residential)	67
	Land for training maneuvers	41
	Firing ranges	33
	Support to reserve component training	30
	Water availability	7
	Mobilization capacity	3
Availability of facilities	Training and instructional facilities	119
	Vehicle maintenance facilities	22
	Administration facilities	12
	Vehicle pavements and road nets	8
	Utilities systems	7
Quality of facilities	Real property maintenance backlog costs	67
	Military construction backlog	28
	Percent of facilities that are temporary	24
Quality of life	Unaccompanied personnel housing	53
	Family housing	39
	Community facilities	9
	Medical facilities	6
Community support	Population density	3
	Transportation network	3
	Utility systems	3
Total		733

The Commission's military value ranking of the eight Army basic and advanced individual training bases is shown in table III.2. Forts Dix and Jackson ranked lowest and were selected by the Commission for phase II analysis. Ultimately, the Commission recommended (1) a realignment of Fort Dix's training functions and (2) placement of Fort Dix in a semi-active status.

**Results of Reviewing
Army Basic Training Bases**

During our April 12, 1989, testimony² before the Subcommittee on Readiness, Sustainability, and Support, Senate Committee on Armed Services, we expressed our concern that the Commission may have used incomplete and inaccurate data. We cited the category of training bases as one area where we identified problems.

We rescored and reranked the eight bases in the Army basic and advanced individual training bases category by reviewing selected military value attributes within the five major assessment categories. We reviewed 12 of the 22 attributes shown in table III.1. These attributes accounted for about 92 percent of the total weight points.

Our analysis shows that (1) the Training and Doctrine Command used inaccurate data in assessing military value and (2) the Commission made errors during the scoring process. Our review of the Commission's assessment of 12 attributes showed that every base had at least one attribute that required adjustment. Specifically, we found that five of the bases ranked differently when the errors we found were corrected. Table III.2 shows these rerankings.

Table III.2: Reranking of Army Basic and Advanced Individual Training Bases

Commission ranking		Revised ranking	
Rank order	Base	Reranking	Base
1	Fort Sill	1	Fort McClellan
2	Fort Knox	2	Fort Dix
3	Fort Leonard Wood	3	Fort Leonard Wood
3 tie	Fort Bliss	3	Fort Bliss
4	Fort Benning	3 tie	Fort Sill
4 tie	Fort McClellan	4	Fort Benning
5	Fort Dix	5	Fort Jackson
6	Fort Jackson	5 tie	Fort Knox

In analyzing the Commission's scoring of the Army's basic and advanced individual training bases we found problems such as:

- Fort Benning sent inaccurate data on its support of reserve training to the Training and Doctrine Command because Fort Benning staff misunderstood what data were required. For example, Fort Benning staff sent data on the average daily staff days of reserve support. The staff should have sent data on average weekly staff days.

²"Base Realignments and Closures" (GAO/T-NSIAD-89-24, Apr. 12, 1989).

- Fort Bliss sent inaccurate data to the Command concerning the amount of temporary facilities at the base. For example, Fort Bliss reported that 8 percent of its facilities were temporary when it should have reported 13 percent.
- Fort Dix provided the Command with inaccurate data concerning the backlog of real property maintenance and repair at the base. The Command did not consider Fort Dix's revision to the data several days later. As a result, Fort Dix's score for this attribute was lower than it should have been. Also, the Commission made a computational error that lowered Fort Dix's reserve training attribute score.
- Fort Jackson counted firing range acres in its maneuver land acreage data submitted to the Command. Only maneuver land acres should have been counted.

The Commission exercised judgment in realigning Fort Dix's mission and placing it in a semi-active status supporting reserve forces training activities. The minutes of the Commission's November 29, 1988, business meeting indicate that Fort Dix was to be closed. The minutes of the Commission's December 13, 1988, business meeting indicate that Fort Dix was to remain as an active training base supporting active and reserve force training missions. However, according to the minutes of the Commission's December 14, 1988, business meeting, the Commission recommended placing Fort Dix in a semi-active status. The Commission reasoned that it could achieve additional savings by making this change. It also believed that Fort Dix could continue to support its reserve force training and contingency missions as a semi-active base.

According to Commission and Army officials, the Commission's selection of realignment candidates probably would have been the same because of the limited size and mission of Fort Dix compared to the other bases in the category. The Assistant Secretary of Defense (Production and Logistics) supported this position. He also stated that the decision to place Fort Dix in a semi-active status was logical and endorsed by the Secretary of Defense.

In its September 14, 1989, report number 101-132 on DOD's fiscal year 1990 Appropriations Bill, the Senate Committee on Appropriations directed the Secretary of Defense to review the errors we have discussed above.³ The Secretary is to report to the House and Senate Committees on Armed Services and on Appropriations before February 15, 1990, on

³We provided preliminary information on these matters in a letter to Senator Alan J. Dixon on August 17, 1989.

whether he agrees or disagrees with our findings. If the Secretary agrees that the Commission made significant errors (large enough to change the ranking of candidate bases for realignment or closure), he is to provide the Committees with justification on why the bases should still be realigned or closed. If the Secretary disagrees that significant errors were made, he is to report the basis of his disagreement to the Committees.

Phase II Issues

The Commission estimated an annual savings of \$84.5 million for Fort Dix. The Commission's data also show the costs of the realignment would be paid back in 3 years. We evaluated the accuracy of the Commission's estimate by testing the Commission's cost model for Fort Dix and found problems. For example:

- The Commission overestimated the Fort Dix realignment cost by \$9.5 million because it double-counted the administrative planning and support costs.
- The Commission used a civilian standard salary factor of \$25,326 instead of the Army-approved factor of \$27,020. As a result, the Fort Dix annual personnel savings were understated.

Revised Estimates

After we completed our fieldwork, the Army in October 1989 provided us with revised estimates of costs and savings for the Fort Dix realignment. Using the Army's October 1989 data, including a revised closure date of 1993, and applying our revised present value factors, our estimate for Fort Dix is an annual savings of \$43.8 million and the payback period is 4 years. Some of the major differences between the Commission's estimate for Fort Dix and this estimate are shown in table III.3.

Table III.3: Comparison of the Differences Between the Commission's Estimates and the Revised Estimates for Fort Dix

Dollars in millions		
Category	Commission estimates	Revised estimates ^a
Land sales	0 ^b	
New construction	\$190.4	\$102.4
Recurring savings	84.5	43.8
Personnel eliminations		
Military positions	1,306	613
Civilian positions	861	554

^aEstimates are deflated to fiscal year 1988 dollars.

^bNo land sale was recommended.

Environmental Impact Issues

The Commission said no negative environmental impacts are anticipated because Fort Dix will remain in a semi-active status and relocation actions will not significantly alter the environmental situations at the gaining installations. The Army has developed environmental cost estimates for bases being closed. However, it did not develop an estimate for Fort Dix because the base will remain open, and no land is expected to become available for nonmilitary use. We did note that Fort Dix is on the national priority list of places where hazardous waste needs to be cleaned up.

Economic Impact Issues

According to the Commission, the realignment of Fort Dix would have a moderate impact on local employment. It calculated a 3.5-percent job loss on local employment.

Jefferson Proving Ground

The Commission recommended Jefferson Proving Ground, Indiana, be closed and its activities be relocated to Yuma Proving Ground, Arizona. According to the Commission, Jefferson's mission of evaluating ammunition for the Army can be done at Yuma at a reduced cost. The Commission also reported a serious ordnance problem at Jefferson.

The Commission estimated the closure would result in an annual savings of \$6.6 million and be paid back in 6 years. We currently estimate the annual savings will be \$6.3 million and it will take from 38 to over 200 years to recover the closure costs.

Phase I Analysis

Jefferson's primary mission is to conduct, analyze, and report on tests of ammunition and ammunition components. In evaluating the military value of Army proving ground activities, the Commission was concerned with whether

- the function of an activity was essential to the Army's mission and
- an activity's facilities were adequate to meet Army requirements without a major investment for renovation or new construction.

The Commission found that proving grounds have missions essential to the Army. The second criterion was the primary one used to identify activities that would be analyzed in phase II. According to the Commission, Jefferson's facilities were marginally adequate and needed modernizing and its ammunition testing mission could be relocated to another installation. The method for assessing the condition of the facilities was the dollar value of the backlog of mission-related construction projects needed to modernize the facilities.

Jefferson officials did not agree with the Commission's assessment. They believe the installation's facilities are in good shape and do not need rehabilitation. Also, Jefferson officials pointed out that although many of their 481 buildings were constructed in the early 1940s, all but 7 are of brick, concrete, and block masonry construction requiring low maintenance. However, the Army Test and Evaluation Command estimates Jefferson needs \$29 million for modernization.

Phase II Issues

The Commission estimated an annual savings of \$6.6 million for Jefferson and that the closure costs would be paid back within 6 years. We found some problems in the accuracy of the Commission's estimate. For example:

- The Commission's analysis did not include an estimate of the costs to clean up or otherwise manage munitions waste at Jefferson. Such cleanup or management is a consequence of the closure and should have been included.
- The Commission's cost model may have overstated the proceeds from the sale of Jefferson because the Army may not be able to sell the ranges that include munitions waste.
- The Commission's analysis overstated overhead and salary savings estimates by reducing these costs for years when the base would still be operating.

Revised Estimate

After we completed our fieldwork, in October 1989 the Army provided revised costs and savings estimates for the Jefferson closure. Using the Army's October 1989 data, including a revised closure date of 1995, applying our revised present value factors, and excluding land sales, we estimate an annual savings for Jefferson of \$6.3 million and a payback period ranging from 38 to over 200 years. Some of the major differences between the Commission's estimates for Jefferson and our revised estimates are shown in table IV.1.

Table IV.1: Comparison of the Differences Between the Commission's Estimates and the Revised Estimates for Jefferson Proving Ground

Dollars in millions		
Category	Commission estimates	Revised estimates ^a
Land sales	\$25.0	\$0.0
New construction	39.5	103.4
Munitions cleanup	0.0	0 or 56.7
Recurring savings	6.6	6.3
Personnel eliminations		
Military positions	3	
Civilian positions	110	12

^aEstimates are deflated to fiscal year 1988 dollars.

Given the uncertainty of how the munitions problem will be resolved and its cost, we developed two possible cost, saving, and payback period options for Jefferson. First, if Jefferson is closed and retained as a DOD property (no land sales), with no ordnance management costs, the annual savings would be \$6.3 million and the payback period would be 38 years. Second, if the land is cleaned up at a cost of \$56.7 million for restricted use as a wildlife preserve (an Army Toxic and Hazardous Materials Agency preliminary estimate) and retained as a DOD property.

the annual savings would still be \$6.3 million, but the payback period would be over 200 years. The increase in the payback period is attributable to the difference in the environmental cleanup cost estimate.

Since their October 1989 data submission, the Army has estimated that it could manage the munitions waste at an annual cost of \$500,000 (fiscal year 1990 dollars) and a one-time \$4-million cost to build a patrol road. It also estimates land sales proceeds of \$900,000 for the non-firing range property. We are not in a position to conclude whether fencing and monitoring will satisfy the requirements of environmental statutes. Our estimates are based on the Army's October 10, 1989, data and we did not believe it would be appropriate to selectively update that data. Using the Army's revised ordnance management costs and land sales estimates, the annual savings would be \$5.9 million and the payback period would be 54 years.

The Army in early November 1989 stated that it is studying a number of options to determine the future of the production acceptance method for testing conventional ammunition, how much of the current Jefferson Proving Ground mission needs to be replicated at Yuma Proving Ground, and innovative ways for private or public reuse of Jefferson. According to the Army, all scenarios have the potential to reduce costs as they are currently stated. According to Army officials, this level of effort will take several months to develop estimates for new options or alternatives.

Environmental Impact Issues

The Commission reported that significant environmental cleanup is required at Jefferson. However, the Commission generally decided not to consider the cost of the cleanup in its payback calculations, because DOD is already responsible for such cleanups. We agree with the Commission that such costs are not a consequence of base realignments or closures.

The report also indicated a serious ordnance problem at Jefferson. Jefferson's firing records indicate that about 23 million rounds have been fired since 1941. Of that number, about 7.6 million could be dangerous, high explosive munitions. Even though the Commission's payback calculations did not include any costs for dealing with the ordnance problem, we believe some estimate should have been included.

The Army does not regard unexploded and spent ordnance on a range as hazardous waste while the range is operating. According to Army officials, because such ordnance continues to serve various training purposes, such as practice for detonation teams and use as aerial targets, ordnance is not hazardous waste under the Resource Conservation and Recovery Act of 1976. Assuming the Army has actual training uses for this spent ordnance, we have no basis to challenge its position. Thus, the range would not have to be cleaned up if it remains open. However, once the range is closed the environmental statutes would apply and cleanup or management would be required. Therefore, we believe ordnance cleanup at Jefferson is a closure cost and should have been included in the Commission's estimate.

Ordnance management or cleanup costs at the Jefferson range from an Army annual monitoring cost of \$500,000 to a state of Indiana estimate of \$653 million for cleanup to unrestricted use. The Army Toxic and Hazardous Materials Agency is responsible for evaluating all Army installations that are closing and determining what hazards exist to the environment. According to an Agency official, such evaluations take approximately 2 years to complete. The results should help to finalize the management or cleanup cost estimates.

The Army Toxic and Hazardous Materials Agency currently estimates it will cost \$250 million to clean up Jefferson for unrestricted use. This figure is subject to change once the Agency completes an in-depth study. According to an Agency official, Jefferson probably will not be cleaned up for unrestricted use because it would not be cost-effective. He believes it is more realistic that only part of the base will be cleaned up for unrestricted use, and the remainder will be fenced off and retained by DOD.

Economic Impact Issues

The Commission said that closing Jefferson Proving Ground will have a minimal impact on local employment. The Commission did not report the number of jobs affected nor the job loss percentage.

Lexington Depot

The Commission recommended the Lexington portion of the Lexington-Bluegrass Army Depot in Kentucky be closed and its functions relocated to other Army installations. The Commission identified Letterkenny and Tobyhanna Depots in Pennsylvania and the Redstone Arsenal in Alabama as the receiving activities. The Commission reported the military value of Lexington was lower than other similar depots because of the condition of its facilities and its limited storage capacity. The Commission also said consolidating and relocating Lexington's functions will improve operational efficiency and management effectiveness.

The Commission estimated that closing Lexington would save \$6.7 million annually and the closing costs would be paid back in 6 years. Currently, we estimate \$11.2 million in annual savings and a 5-year payback period.

Phase I Issues

The Lexington Depot is a maintenance and supply activity. It primarily overhauls communications security equipment and assembles communications electronics material. The Bluegrass portion of the depot has a mission of storing conventional and chemical ammunition.

In evaluating the military value of Lexington, the Commission considered such items as availability and quality of facilities. Lexington ranked last of the 11 depots evaluated because of the condition of its facilities and its limited storage space. Lexington has received little funding to modernize its materials-handling equipment since the mid-1970s when the depot was reduced from about 2,500 personnel to its current level of 1,200 personnel.

Phase II Issues

The Commission estimated an annual savings of \$6.7 million for the Lexington closure. It also estimated the closure costs would be paid back in 6 years. We found problems in the accuracy of the Commission's estimate for Lexington. For example, the Commission did not phase in the savings from salaries and overhead expenses while the depot was preparing for closure, but started them in the first year of the closure.

Revised Estimates

Using the Army data provided in October 1989, including a revised closure date of 1994, and applying our revised present value factors we estimate an annual savings of \$11.2 million and a 5-year payback period

for the Lexington closure. Some of the differences between the Commission's estimated costs and savings for Lexington and the revised estimates are shown in table V.1.

Table V.1: Comparison of the Differences Between the Commission's Estimates and the Revised Estimates for Lexington Depot

Dollars in millions		
Category	Commission estimates	Revised estimates ^a
Land sales	\$6.0	\$6.0
New construction	31.6	31.6
Recurring savings	6.7	11.1
Personnel eliminations		
Military positions	0	
Civilian positions	162	26

^aEstimates are deflated to fiscal year 1988 dollars.

Environmental Impact Issues

The Commission reported the cleanup requirements to qualify Lexington for unrestricted land use are minimal with minor environmental impacts. The Army's preliminary estimate indicates cleanup costs of \$21 million. An official from the Army's Toxic and Hazardous Materials Agency said it is too soon to provide an accurate estimate of the cleanup cost because the Agency has not yet conducted a survey and analysis for Lexington. The Commission reported no major adverse environmental impacts are anticipated at gaining facilities.

Economic Impact Issues

The Commission said the Lexington closure will have minimal impact on local employment. We found insufficient data in the Commission's records to determine a job loss percentage.

The Presidio of San Francisco

The Commission recommended the Presidio of San Francisco, including Letterman Army Medical Center, be closed and its activities be relocated to other Army installations. The Commission reported that Fort Carson, Colorado, and Fort Detrick, Maryland, would receive most of the Presidio's activities. Letterman's medical assets are to be distributed throughout the Army force structure. The Commission recommended the closure because the Presidio has no room to expand, and the Center needs major structural repairs.

The Commission estimated the closure would save \$74.1 million annually and the payback period would be less than a year.¹ Because of the uncertainties associated with future costs and savings, we have developed a range of estimated annual savings. At one end of the range, the closure could result in annual costs of \$6.3 million and no payback, while at the other end of the range annual savings could be as much as \$46.8 million, with a 7-year payback period.

Phase I Issues

The Presidio is the headquarters for the 6th Army, which has command and control of regional reserve component forces. The Letterman Army Medical Center provides medical care for the military community in the Bay area, serves as an Army graduate medical training facility, and includes the Letterman Army Medical Institute of Research. In the Commission's phase I analysis, the Presidio was one of 15 bases evaluated in the Army administration and headquarters category. Its evaluation centered largely on measuring the mission suitability factor and site-specific mission attribute. The Commission's analysis and subsequent decision to close the Presidio was primarily based on the abilities of receiving installations to accommodate and enhance the mission of the Presidio units and activities. Two major issues considered in the Commission's phase I analysis for the Presidio were the potential for (1) relocating the 6th Army headquarters, and (2) closing the Letterman hospital.

The Commission considered the most significant issue in evaluating the military value of the Presidio was the need for 6th Army headquarters to be at the Presidio. Since the Commission believed 6th Army headquarters could be located elsewhere, the Presidio was ranked 14th out of 15 installations in the headquarters category and considered a candidate for closure.

¹The Commission reported 2 years, but its own data showed the payback period would be less than a year.

Phase II Issues

The Commission estimated an annual savings of \$74.1 million for the Presidio and a payback period of less than a year. We evaluated the accuracy of the Commission's estimate by testing the Commission's cost model for the Presidio. We found several problems in the Commission's cost estimate.

One-Time Costs

The Commission's model assumed the Presidio had a value of \$555 million, excluding 36.5 acres. However, by law upon closure most of the Presidio would be turned over to the Department of Interior's Golden Gate National Recreation Area and could not be sold under current legislation. According to the Army, a 26-acre portion of the 36.5 acres is currently available for sale. The remaining 10.5 acres contains a former Public Health Service hospital, which may be leased to the city of San Francisco. According to DOD and Commission officials, the \$555 million land value was included to account for the property's economic value.

The potential impact on National Park Service costs when the Presidio is closed and turned over to it also raises questions about the Commission's estimate. Officials from the National Park Service office in San Francisco developed estimates that included \$13.7 million in one-time costs to incorporate the Presidio into the Golden Gate National Recreation Area. This was a preliminary local estimate, and the Park Service headquarters in Washington had not yet reviewed and approved it. According to a Park Service official, no firm estimates of these one-time costs can be developed until several studies of potential uses are completed in fiscal years 1991 or 1992.

Annual Costs

We also noted the model did not account for potential increases in costs for the Civilian Health and Medical Program of the Uniformed Services when Letterman hospital is closed. The Army's preliminary estimate is a net increase in Civilian Health and Medical Program costs of \$6.8 million. This represents the difference between the higher medical costs in the Bay Area and the lower medical costs in other areas where Letterman's medical assets would be sent after the closure. The \$6.8-million estimate assumes the Center's former patients would continue to seek the same level of care. They could also seek less care or seek care through their own private insurance programs.

The Commission's estimate also did not include potential increases in medicare costs. When Letterman closes, patients who are not eligible for the Civilian Health and Medical Program (retirees and their dependents

over age 65) may have to seek medical treatment under the medicare program. Based on Army data on the Center's patient loads and national average data on medicare costs, the potential annual medicare costs could be an estimated \$29.9 million. This also assumes that the Center's military retiree patients over age 65 would continue to seek the same level of care through medicare. It is uncertain what actions these former Letterman patients might take. However, we believe it is reasonable to consider that the current number of medicare eligible patients will lessen over time.

The Commission's annual savings estimate also did not include potential National Park Service annual costs to operate the Presidio. A preliminary local estimate set this cost at \$16.5 million. However, a Park Service headquarters official stated no realistic cost estimates can be made until the Park Service completes several studies, probably by fiscal years 1991 or 1992. He said the Park Service would have many options for revenue that could in turn reduce costs. However, the Park Service has not yet addressed these options.

Revised Estimates

After we completed our fieldwork, in October 1989 the Army provided revised costs and savings estimates for the Presidio closure. Using the Army's October 1989 data, including a revised closure date of 1995, applying our revised present value factors, adjusting for the Civilian Health and Medical Program, medicare, and Park Service-related costs, and adding land sales proceeds, we developed high and low range estimates. Our estimates show a range of annual savings of \$46.8 million to an annual cost of \$6.3 million and a payback period of 7 years to not paying back. Some of the major differences between the Commission's estimate for the Presidio and this estimate are shown in table VI.1.

Table VI.1: Comparison of the Differences Between the Commission's Estimates and the Revised Estimates for the Presidio

Dollars in millions		
Category	Commission estimates	Revised estimates ^a
Land sales	\$555.0	\$36.5
New construction	108.4	101.7
Park service costs		
One time	0.0	13.7
Recurring	0.0	16.5
Civilian Health and Medical Program	0.0	6.8
Medicare	0.0	29.9
Recurring savings	74.1	46.8 to (6.3)
Personnel eliminations		
Military positions	0	36.1
Civilian positions	790	876

^aEstimates are deflated to fiscal year 1988 dollars.

^bRepresents costs.

Because of the uncertainties associated with the National Park Service's annual operating costs and revenues and medical health costs resulting from the Letterman closure, we developed a low and high range estimate of costs, savings, and payback periods for the Presidio. Our estimates include land sales proceeds of \$36.5 million, with \$26 million realized in 1994 and \$10.5 million in 1999 when the proposed lease would expire.

In our worst case scenario, the annual medicare costs are \$29.9 million, annual Civilian Health and Medical Program costs are \$6.8 million, and National Park Service one-time costs are \$13.7 million, while annual operating costs are \$16.5 million. Using these assumptions, the closure costs are never paid back because there is an annual cost of \$6.3 million. At the other end of the range, we assume there are no one-time or annual operating costs for the Park Service because revenues recover costs, and medicare and Civilian Health and Medical Program costs decline to zero in 20 years because military personnel no longer choose to retire in San Francisco. Using these assumptions, annual savings start at \$10.2 million and increase to \$46.8 million with the closure costs being recovered in 7 years.

We believe there are opportunities to generate revenues from the Presidio that could offset Park Service costs. Also, it is reasonable to consider medical costs will likely decline over time. However, we have no

basis for estimating the actual amount or timing of these revenues and costs.

Environmental Impact Issues

The hazardous waste cleanup cost estimate for the Presidio is \$9.9 million. An Army official said the estimate is preliminary and further study is needed. He also said the necessary studies were started in June 1989 and should be completed by April 1991.

Officials at the Presidio estimated it would cost \$82.5 million to clean up the hazardous waste. Staff from the Army Toxic and Hazardous Materials Agency have reviewed this estimate and believe there is no information at this time to support about \$70 million of this estimate.

Economic Impact Issues

The Commission said the Presidio closure will have minimal impact on local employment. It calculated a .5-percent job loss impact on local employment.

Fort Sheridan

The Commission recommended closing Fort Sheridan, Illinois, and relocating its operations to other Army installations. The Commission recommended that Fort Sheridan operations be moved to Fort Benjamin Harrison, Indiana, and to leased space in Chicago, Illinois. The Commission also recommended that about 60 acres containing reserve support facilities be retained at Sheridan. The Commission said Fort Sheridan is located in a heavily urbanized, high-cost area with minimal growth potential. Based on this, the Commission recommended closing Fort Sheridan.

The Commission estimated that the closure would save \$40.8 million annually with a payback period of less than 1 year. We currently estimate an annual savings of \$22.5 million with a payback period of 1 year.

Phase I Issues

Fort Sheridan is the headquarters for the 4th Army and the Army Recruiting Command. Its mission includes the command and control of reserve units in the Fort Sheridan area, recruiting functions for the Army, and area support for reserve component units and recruiting operations. In phase I the Commission evaluated Fort Sheridan and 14 other installations in the headquarters category. Its evaluation centered on measuring the mission suitability factor and site-specific mission attributes. According to Commission documents, Fort Sheridan ranked 4th of 15 bases. However, the Commission decided to perform phase II analyses on all 15 bases with Army headquarters activities. The Commission reported that Fort Sheridan was recommended for closure, because it is located in a high-cost area with minimal growth potential.

Information we obtained from Fort Sheridan officials supports the Commission's description of the base. The Chief of Staff, 4th Army, said while locating 4th Army in Chicago is more conducive to full integration of military and civilian activities and less costly, he believed the mission could be effectively accomplished elsewhere. The Chief of Staff, Army Recruiting Command, said the Command could be administered from almost any reasonable location.

Phase II Issues

The Commission estimated an annual savings of \$40.8 million for the Fort Sheridan closure, with a payback period of less than 1 year. We evaluated the accuracy of the Commission's estimate by testing the Commission's cost model for Fort Sheridan. We found several problems in the Commission's cost estimate. For example:

- The Commission overstated Fort Sheridan's annual overhead savings estimate, because it did not allocate an overhead cost for the reserve support facilities that would be retained.
- The Commission used \$35,000 to compute the annual civilian salary savings instead of the Army's approved standard factor for civilian salaries of \$27,020. As a result, the estimated civilian annual savings were overstated.

Revised Estimates

After we completed our fieldwork, in October 1989 the Army provided estimates of costs and savings for the Fort Sheridan closure. Using the Army's October 1989 data, including a revised closure date of 1994, and applying our revised present value factors results in an annual savings of \$22.5 million and a payback period of 1 year. Some of the differences between the Commission's estimates for Fort Sheridan and our revised estimates are shown in table VII.1.

Table VII.1: Comparison of the Differences Between the Commission's Estimates and the Revised Estimates for Fort Sheridan

Dollars in millions		
Category	Commission estimates	Revised estimates ^a
Land sales	\$54.8	\$54.8
New construction	26.8	50.1
Recurring savings	40.8	22.5
Personnel eliminations		
Military positions	0	275
Civilian positions	746	617

^aEstimates are deflated to fiscal year 1988 dollars.

The Senate Committee on Armed Services report number 101-81, dated July 19, 1989, on DOD's Authorization Bill for fiscal years 1990 and 1991 directs the Army to perform a cost benefit analysis of retaining more space at Fort Sheridan. The Committee said it generally supports the Commission's recommendations for Fort Sheridan. However, it said the Army should study retaining 90 acres of Fort Sheridan for an Army Reserve center rather than only 60 acres as recommended by the Commission. The Committee believes that expanding the center to approximately 90 acres would retain sufficient administrative and family housing assets to support residual military missions. The Committee also directed the Army to study family housing needs in the North Chicago area to determine whether retaining some of the base's family housing

would be cost-effective. The results of this study could affect the annual savings and the payback period.

Environmental Impact Issues

The Commission reported the Fort Sheridan closure would have a minimal environmental impact. However, it did report that some issues needed to be addressed during implementation, including (1) historic buildings, (2) a contaminated munitions burning site, (3) various landfills, (4) transformers containing hazardous chemicals, and (5) possible leaking from underground storage tanks.

The Army's preliminary environmental cleanup cost estimate for Fort Sheridan is about \$7.0 million. However, Army officials said this estimate is likely to change as studies are currently underway to determine the extent of the cleanup required.

Economic Impact Issues

The Commission reported the closure would have a minimal impact on local employment.

Realignment of Forts Devens, Meade, Huachuca, and Holabird

The Commission recommended that the Army Information Systems Command, headquartered at Fort Huachuca, Arizona, and other Command activities at Fort Belvoir, Virginia; Fort Monmouth, New Jersey; and Fort McPherson, Georgia, be moved to Fort Devens, Massachusetts. The Commission also recommended the Army Intelligence School for noncommissioned officers and enlisted personnel at Fort Devens be consolidated with the Intelligence School training operations at Fort Huachuca. The consolidation of the school and the Command at Fort Huachuca would improve the mission effectiveness and efficiency of both organizations, according to the Commission.

The Commission believed transferring the Information Systems Command element from Fort Belvoir to Fort Devens would allow activities of the Criminal Investigation Command currently at Fort Meade, Maryland, and Fort Holabird, Maryland, to be transferred to Fort Belvoir. In addition, the Commission recommended that approximately 9,000 acres at Fort Meade, with an estimated value of about \$198 million, be sold to offset most of the estimated one-time realignment costs. It estimated the realignment would result in an annual savings of \$21 million and that costs would be paid back within 1 year. Based on our analysis, we estimate the annual savings will be about \$8.1 million and the payback period ranges between 43 years and over 200 years, depending on how much it will cost to deal with munitions waste at Fort Meade.

Phase I Issues

The Commission grouped Fort Devens and Fort Huachuca with 10 other Army installations in the schools and training centers subcategory of the other schools subgroup for its phase I analysis. Although Fort Devens is an Army Forces Command base, the Army included it in this subgroup because the Intelligence School is the major tenant on the base. Some of the factors the Commission considered in evaluating these bases were quality of facilities, quality of life, deployment, and weather.

During the Commission's phase I analysis, it assessed Fort Meade along with 15 other installations in the headquarters/ administrative subcategory of the administration category. The major factors the Commission considered in this subcategory were mission suitability, and availability and quality of facilities.

Fort Holabird was 1 of 17 installations classified in the defense agency support subcategory of the all other category. This category included such diverse properties as research and development centers, communications and intelligence sites, medical facilities, and reserve component

centers. The Commission established a set of criteria for evaluating the bases in this category consistent with the evaluation process for the other categories in the phase I analysis. The criteria centered on military value and capacity.

Our review of the Commission's phase I analysis shows errors were made. For example:

- The Commission underestimated Fort Devens' mobilization functions.
- The Commission underestimated Fort Devens' training and instruction facilities.

Although Fort Devens received the lowest overall rating of the installations in the schools and training centers subcategory, the Commission recommended keeping Fort Devens open because of its importance as a mobilization and reserve center in the northeast United States. The Commission pointed out in its phase I analysis that the loss of Fort Devens would require diverting training to other already saturated bases in the region.

Fort Huachuca was ranked 5th of the 12 installations in the schools subcategory. The Commission identified the Information Systems Command at Fort Huachuca as having potential for realignment.

Fort Meade tied for 6th of the 15 installations in the administration subcategory. It received high scores for site specificity and condition of facilities; and medium scores for available administrative facilities, technology levels, and work force. However, the Commission decided to perform the phase II analysis on all of the bases in this subcategory.

Phase II Issues

The Commission estimated an annual savings of \$21 million for the realignment of Forts Devens, Meade, Huachuca, and Holabird. It also estimated the realignment costs would be paid back within 1 year. However, we found several problems in the Commission's estimates. For example, the Commission underestimated costs for such areas as equipment movement, recruiting and training, premium pay, and certain contract costs.

Revised Estimates

After we completed our fieldwork, in October 1989 the Army provided revised estimates of costs and savings for the bases involved in the realignment. Using the Army's October 1989 data, including a revised

**Appendix VIII
 Realignments of Forts Devens, Meade,
 Huachuca, and Holabird**

closure date of 1995, applying our revised present value factors, considering munitions cleanup costs, and including land sales for the realignment, we estimate annual savings of \$8.1 million and payback periods ranging from 43 years to over 200 years. Some of the major differences between the Commission's and our estimates for the realignment are shown in table VIII.1.

Table VIII.1: Comparison of the Differences Between the Commission's Estimates and the Revised Estimates for the Realignment

Dollars in millions		
Category	Commission estimates	Revised estimates ^a
Land sales	\$198.5	\$198.5
New construction	109.4	172.3
Range cleanup	0.0	0.0 or 53.0
Recurring savings	21.0	8.1
Personnel eliminations		
Military positions	280	222
Civilian positions	112	99

^aEstimates are deflated to fiscal year 1988 dollars.

Part of Fort Meade's firing ranges contains unexploded ordnance. These are not currently considered hazardous waste, and thus do not have to be cleaned up while the firing range remains open. However, when the range is closed, munitions waste would be subject to environmental statutes and would have to be cleaned up or otherwise managed. The Commission did not include estimates for this.

Because of the uncertainty of how the munitions problem will be solved, we developed a low and high range estimate. In our low range estimate, we assume land sales are \$198.5 million and no munitions cleanup is required. Using these assumptions, the annual savings are \$8.1 million and the payback period is 43 years. In our high range estimate, we assume that munitions cleanup will cost \$53.0 million and land sales are \$198.5 million. Using these assumptions, the annual savings are \$8.1 million and the payback period is over 200 years.

DOD provided an additional option in its comments on the report. This includes fencing (\$445,000) and monitoring (\$60,000 annually) this property. It also stated that land sales would be \$375 million. DOD estimates the annual savings are \$8.1 million with an immediate payback. We did not include this revised data in our estimates because we did not believe it was appropriate to selectively revise the October 1989 data we

used to make our estimates. Also, we are in no position to conclude whether fencing and monitoring will satisfy the requirements of environmental statutes.

Environmental Impact Issues

The Commission reported the realignment would result in minor environmental impacts. It also reported Fort Meade would require some environmental restoration, including cleanup of the firing range area. However, the Commission did not consider the cost of munitions cleanup in its payback calculations. According to base officials, part of the land identified for potential sale was once used for heavy ordnance target practice. This material is not considered hazardous waste as long as the range is operational. However, when the range closes, the material would have to be cleaned up or otherwise managed.

According to Army officials, because unexploded and spent ordnance continues to serve various training purposes, such as practice for detonation teams and use as aerial targets, it is not hazardous waste under the Resource Conservation and Recovery Act of 1976. Assuming the Army has actual training uses for this spent ordnance, we have no basis to challenge its position.

Once a range is closed, applicable environmental statutes would require that the ordnance either be cleaned up or otherwise managed. Thus, we believe the cost of ordnance cleanup or management is a closure cost and should have been included in the Commission's payback calculations.

The Army's current estimate for cleaning up hazardous waste at Fort Meade, including cleaning up the firing range for restricted use, is \$53.0 million. This is the Army's best estimate at this time and is based on past experience and engineering judgment. The Army Toxic and Hazardous Materials Agency has initiated its review of the property to determine the extent of contamination and estimate cleanup costs.

Economic Impact

The Commission reported the realignments will have a minimal impact on local employment.

Chanute Air Force Base

The Commission recommended closing Chanute Air Force Base, Illinois, primarily because of the low quality and limited availability of facilities at the base. Chanute is one of five technical training centers under the Air Training Command that provide training for Air Force officers, enlisted personnel, and civilians. The Commission said closing Chanute would not degrade the overall capability of the Air Force to provide technical training. It recommended relocating the training units to existing training facilities at Sheppard Air Force Base, Texas; Keesler Air Force Base, Mississippi; Lowry Air Force Base, Colorado; and Goodfellow Air Force Base, Texas, to consolidate similar courses and improve training. The Commission said this closure would have a moderate impact on local employment.

The Commission estimated an annual savings of \$68.7 million and a payback period of 3 years. We currently estimate an annual savings of \$55.1 million and a 3-year payback period.

Phase I Analysis

Chanute was one of five bases the Commission assessed in the Air Force technical training bases subcategory. We did a detailed evaluation of the Commission's phase I process for this subcategory and the Army basic training base category (see app. III). Our work shows that the Commission made errors in ranking the bases in this subcategory.

To measure military value, the Commission defined military value attributes. It then assigned relative weights to each attribute and devised a method of rating each attribute against a standard. In evaluating Air Force technical training bases, the Commission considered on-hand facilities at a base plus validated military construction projects for the base. According to the Commission staff, if the on-hand facilities met the requirement, a green rating was given. However, if military construction projects were needed in addition to the on-hand facilities to meet requirements, a yellow rating was given, regardless of the size of the deficiency. Table IX.1 shows the various weights.

Table IX.1: Categories, Attributes, and Weight Points Used to Score Air Force Technical Training Bases

Category	Attribute	Weight
Mission suitability	Training facilities	3
	Administrative facilities	2
	Bachelor housing	2
	Recreation facilities	1
	Medical and dental facilities	1
Availability of facilities	Buildings	1
	Maintenance	1
	Liquid fuels storage	1
	Explosive storage	1
	Warehousing	1
	Vehicle pavement	1
	Utilities	1
Quality of facilities	Condition	1
	Technology	1
	Configuration	1
Quality of life	Family housing	1
Community support	Work force	1
	Distance to airport	1
	Distance to train	1
	Distance to interstate	1
	Infrastructure	1
	Industry	1
Total		118

Errors in the Commission’s Ranking of Technical Training Bases

We had two concerns with the Commission’s methodology for ranking bases in the technical training subgroup. First, we were concerned that the facilities requirements included several projects that were to replace existing facilities. As replacement facilities rather than new facilities, we believe they should not have been counted in requirements computations since this overstated the requirements. Second, the ranking did not adequately account for facilities deficiencies because it used measures that were too broad.

To evaluate the accuracy of the Commission’s methodology, we reranked the Air Force’s technical training bases using data provided by the Air Training Command, including only validated nonreplacement projects for deficiencies. We then used the refined data to rerank the bases by considering the size of various facilities deficiencies.

Reranking by Eliminating Double-Counting

We discussed facilities issues with officials at the Air Force's Air Training Command and with officials at five Air Force technical training bases to determine project data that should have been used to determine deficiencies. Because of the large amount of data and the limited amount of time, we only considered projects in the mission suitability category. The five attributes in the mission suitability category accounted for about 85 percent of the total weight points. We used available project data that did not include replacement facilities and revised the ranking, as shown in table IX.2.

Table IX.2: Ranking After Eliminating Double-Counting

Rank order	Commission ranking	Revised ranking
1	Lowry	Lowry
2	Goodfellow	Chanute
3	Keesler	Goodfellow
4	Lackland	Keesler
5	Chanute	Lackland

Reranking Considering the Size of the Deficiency in Facilities

The Commission gave a yellow rating to an attribute if it failed to meet the requirement, regardless of the relative size of the deficiency. We believe relatively small deficiencies would have less of a negative impact on military value than relatively large ones. Therefore, we reranked the five Air Force technical training bases by using available data, not including replacement projects, to compute a weighted standard score based on the percent of the deficiency against the requirement. With corrected data Chanute moved from fifth of five bases to third. Table IX.3 shows our revised ranking of the bases using this analysis.

Table IX.3: Ranking Based on Facilities Deficiencies

Rank order	Commission ranking	Revised ranking
1	Lowry	Lackland
2	Goodfellow	Keesler
3	Keesler	Chanute
4	Lackland	Lowry
5	Chanute	Goodfellow

Phase II Analysis

The Commission estimated an annual savings of \$68.7 million for Chanute and a 3-year payback period. Our evaluation showed some problems in the Commission's cost estimates for Chanute. For example,

the Commission's model overstated estimates of annual savings for overhead costs.

Revised Estimates

After we completed our fieldwork, in September 1989 the Air Force provided revised estimates of costs and savings for Chanute. Using the Air Force's September 1989 data and applying our revised present value factors, we estimate an annual savings for Chanute of \$55.1 million and a 3-year payback period. Our annual savings estimate excludes an Air Force estimate of \$5.6 million for recurring savings from avoided construction at Chanute and includes an annual cost of \$2.7 million to cover retirees and their dependents shifted from DOD's health care system to medicare due to the closure. The differences between the Commission's initial estimates of costs and savings and our revised estimates are shown in table IX.4.

Table IX.4: Comparison of the Differences Between the Commission's Estimates and the Revised Estimates for Chanute Air Force Base

Dollars in millions		
Category	Commission estimates	Revised estimates ^a
Land sales	\$0.7	\$92.4
New construction	214.3	189.6
Recurring savings	68.7	55.1
Personnel eliminations		
Military positions	1,122	817
Civilian positions	387	454

^aEstimates are deflated to fiscal year 1988 dollars.

Environmental Impact Issues

The Commission reported that closing Chanute would have no negative impact on the local environment. The current Air Force estimate for hazardous waste cleanup at Chanute is \$18.0 million. However, Air Force officials said this estimate is subject to change. They added that studies are currently underway to determine the extent of the actual cleanup required.

Economic Impact Issues

The Commission reported that closing Chanute would have a moderate impact on local employment. It calculated a direct job loss impact of 3 percent. DOD officials have indicated that homeowners in Rantoul, Illinois, near Chanute could qualify for DOD's Homeowners Assistance Program. However, the actual costs to the government of providing this

assistance will not be known until the number of qualified homeowners is identified.

George Air Force Base

The Commission recommended closing George Air Force Base, California, and relocating its units and activities to other Air Force bases. Air Force bases identified by the Commission to receive George activities are Mountain Home Air Force Base, Idaho, and Davis-Monthan Air Force Base, Arizona. The Commission reported that George has degraded air training effectiveness and traffic congestion. Also, the Commission reported that other tactical fighter bases have sufficient capacity to absorb George's units. The Commission estimated the closure would save \$70.2 million annually and be paid back immediately. We currently estimate an annual savings of \$51.1 million and a payback period of 2 years.

Phase I Issues

George Air Force Base is a Tactical Air Command fighter base. The wartime missions of the base's units are to provide conventional tactical air support primarily in the defense-suppression role, close air support, and air interdiction. George was 1 of 11 Air Force tactical operations bases evaluated by the Commission during its phase I analysis. The Commission's phase I analysis resulted in George being ranked last because of the distance from the base to specialized training ranges and air traffic congestion problems. The Commission also reported that other problems at George included shortages of operation and maintenance facilities and bachelor housing, and an inadequate water supply system. We found these statements were not accurate in all instances.

Distance to Training Range

The Tonopah electronic combat training range is over 150 miles from George. Air Force officials believe a distance of 100 miles to a training range is best suited for an F-4G jet. The commander of George's training wing said the time spent flying to the Tonopah range is not a considerable waste of time and money as noted by the Commission, but rather is used for a variety of training exercises and instrument checks to prepare for entry into the range. We found that 27 percent of the F-4G sorties flown by George go to the Tonopah range, while the rest go to the R-2508 range near the base. DOD officials said having ranges near a base saves time and fuel.

Air Traffic Congestion

According to the Commission, increasing air traffic congestion in the greater Los Angeles area constrains George's flight operations. The air space manager at George believes commercial air traffic does not interfere with the base's flight operations, and George's flight operations do

not constrain the commercial air traffic. A Federal Aviation Administration military operations specialist in Palmdale, California, and an Air Force liaison to the Federal Aviation Administration agreed with the George air space manager.

In addition, according to George's air space manager, commercial traffic flies at high altitudes (18,000 to 22,000 feet) to clear the San Bernadino and San Gabriel mountains before flying into or out of the Los Angeles basin. George's planes, in contrast, fly at relatively low altitudes (7,000 to 11,000 feet) before entering the various restricted air space training ranges. DOD officials said that in discussing air traffic congestion around George, the Commission was looking to the future when air space in the Los Angeles area will be even more crowded.

Other Problems at George

The Commission noted several other problems at George, including shortages of facilities for operation and maintenance purposes and bachelor housing and an inadequate water supply system. After reviewing plans for base operations and maintenance construction projects, we noted several new facilities were planned for the next few years. These included a \$3.4-million flight training facility and a \$7.4-million dormitory complex. The water supply system is presently inadequate and scheduled for replacement, according to a George official. Planned construction includes about \$7 million to improve the water system.

Phase II Issues

The Commission estimated an annual savings of \$70.2 million for George and an immediate payback period. We evaluated the accuracy of the Commission's estimate by testing the Commission's cost model for George and found some problems. For example, the Commission's model treated military personnel relocation costs of \$6 million as a savings.

Revised Estimates

After we completed our fieldwork, in September 1989 the Air Force provided revised costs and savings estimates for George. Using the Air Force data and applying our revised present value factors, the estimates for George show an annual savings of \$51.1 million and a payback period of 2 years. Our annual savings estimate excludes an Air Force estimate of \$4.8 million in recurring savings from avoided construction at George and includes an annual cost of \$3.8 million to cover retirees and their dependents shifted from DOD's health care system to medicare due to the closure. Some of the differences between the Commission's estimate for George and our revised estimates are shown in table X.1.

Table X.1: Comparison of the Differences Between the Commission's Estimates and the Revised Estimates for George Air Force Base

Dollars in millions		
Category	Commission estimates	Revised estimates
Land sales	\$2.7	\$164
New construction	106.4	165
Recurring savings	70.2	51
Personnel eliminations		
Military positions	1,451	1,227
Civilian positions	342	27

^aEstimates are deflated to fiscal year 1988 dollars.

Environmental Impact Issues

The Commission said the George closure will have no negative impact on the local environment. The Air Force's preliminary cleanup cost estimate is \$5.8 million. However, Air Force officials said this estimate is likely to change, and studies are underway to determine the extent of the cleanup required.

The Commission also noted the movement of units currently assigned to George should not significantly alter the environmental situation at receiving bases. However, the Commission said increased storage of hazardous waste will be needed at Mountain Home Air Force Base, Idaho, and Cannon Air Force Base, New Mexico. The Commission was advised that these two bases will have no difficulty in fulfilling these needs.

Economic Impact Issues

The Commission reported closing George would have a minimal impact on local employment. It calculated a direct job loss impact of .8 percent. The Commission used the same economic impact area and the same total area employment number (774,614) in its calculations of job loss impact for George that it used for Norton Air Force Base. However, it did not consider the combined effect of the two closures on the local community. Based on the employment figures used by the Commission, we estimate the combined direct job loss impact of closing Norton and George, offset by the personnel additions at March Air Force Base, which is in the same impact area, at 1.2 percent.

Mather Air Force Base

The Commission recommended closing Mather Air Force Base, California, and transferring its navigator training school to Beale Air Force Base, California, and its Air Force Reserve unit to McClellan Air Force Base, California. The base conducts undergraduate navigator training for the Air Force, Navy, and Marine Corps, as well as foreign countries. The Commission recommended closing the base for two reasons. First, it considered Mather's military value to be less than other flight training bases, primarily because of its current facility shortages and excess capacity. Second, it considered Mather's closure cost-effective. The Commission estimated closing Mather would result in an annual savings of \$78.7 million, with a 1-year payback period. Based on our analysis, we estimate an annual savings of \$61.3 million and a payback period of 1 year.

Phase I Analysis

Mather was one of three bases assessed in the flying training subgroup of the training subcategory. The Commission used such attributes as condition of facilities, work force, and weather to evaluate bases in this subcategory. The Commission concluded in its phase I analysis that the military value of Mather was the lowest of the bases in the flying training subgroup. It also reported Mather had a shortage of buildings for training and operational purposes and a shortage of maintenance facilities. In addition, according to the Commission, the availability of vehicle pavements at the base is less than required.

Errors in the Scoring of Mather

We found Mather was evaluated on fewer attributes for the mission suitability factor than other bases in the category. Thus, although each base received the maximum score for the assigned attributes, Mather's score was lower than the other two bases.

Although the Commission knew Mather's B-52 unit would be leaving, they did not consider that the facilities used by the B-52 unit would be available for other uses. For example, the Commission noted a shortage of operation facilities. However, this shortage will be eliminated when the B-52 unit leaves. We found similar results for maintenance, administration, and housing facilities. However, reevaluating the bases in the flying training subgroup was beyond the scope of our review.

A Commission official acknowledged inconsistencies in scoring Mather, but explained some differences reflected the uniqueness of the training at different bases. He also said the cost considerations supported the Commission's decision. The major reason for closing Mather was the

reduced efficiency resulting from excess capacity when the B-52 unit withdrew. He stated that even if Mather's scores were changed and no shortages were found, its excess capacity would be sufficient to identify Mather as a candidate for closure.

Phase II Analysis

The Commission estimated an annual savings of \$78.7 million for Mather. It also estimated the costs of closure and the relocation of Mather's missions would be paid back within 1 year. We found problems in the Commission's cost model for Mather. For example, the Commission underestimated annual health-related costs because it did not consider services provided to dependents of retirees. Including these dependents increases the estimated number of eligible patients and costs.

Revised Estimates

After we completed our fieldwork, in September 1989 the Air Force provided revised estimates of costs and savings for Mather. Using the September 1989 Air Force data and applying our revised present value factors, the estimates for Mather show an annual savings of \$61.3 million and a 1-year payback period. Our annual savings estimate excludes an Air Force estimate of \$1.3 million in recurring savings from avoided construction at Mather. The major differences between the Commission's estimated costs and savings for Mather and our revised estimates are shown in table XI.1.

Table XI.1: Comparison of the Differences Between the Commission's Estimates and the Revised Estimates for Mather Air Force Base

Dollars in millions		
Category	Commission estimates	Revised estimates
Land sales	\$46.8	\$303
New construction	152.8	158
Recurring savings	78.7	61
Personnel eliminations		
Military positions	1,378	1,050
Civilian positions	610	320

^aEstimates are deflated to fiscal year 1988 dollars.

Environmental Impact Issues

The Commission reported that closing Mather would have no negative impact on the local environment. The current Air Force estimate for the Mather cleanup is \$28 million. However, according to Air Force officials,

this estimate is subject to change and studies are currently underway to determine the extent of cleanup required. Mather is on the national priority list of places where hazardous waste needs to be cleaned up.

Economic Impact Issues

The Commission reported that closing Mather would have a minimal impact on local employment. It calculated a direct job loss impact of .6 percent.

Norton Air Force Base

The Commission recommended closing Norton Air Force Base because of air traffic congestion, inadequate facilities, and excess capacity within the strategic airlift subgroup. Norton is one of the Military Airlift Command's strategic airlift bases that provide airlift for troops and military cargo. The Commission recommended relocating major units and related support activities from Norton to other bases, including March Air Force Base, California; McCord Air Force Base, Washington; and Kirtland Air Force Base, New Mexico. It recommended the Ballistic Missile Office remain at Norton because of the high relocation costs and the functional requirement for the Office to remain in the local area. Also, the Commission recommended the Air Force be given the option of moving the Air Force Audio Visual Service Center mission to March or retaining it at Norton.

The Commission estimated closing Norton and relocating major units and related support activities to other installations would save \$67.9 million annually and costs would be paid back within 3 years. Current estimates are an annual savings of \$58.4 million and a payback period of 5 years.

Phase I Analysis

Norton was one of seven bases assessed in the strategic airlift subgroup of the mobility subcategory in the Commission's phase I analysis. The Commission used such attributes as condition of buildings, work force, infrastructure, deployment, weather, and maneuver space to evaluate bases in this subgroup. The Commission reported the military value of Norton is lower than other strategic airlift installations primarily because of a combination of increasing air traffic congestion and outdated facilities. It noted a number of large warehouses are of generally poor quality. Also, the base has a shortage of storage facilities for weapons, and most other facilities need a general upgrading to meet current technological standards. The Commission reported that higher than normal expenditures would be required to maintain, repair, and replace these facilities.

Installation officials agreed that a great deal of air traffic is in the area Norton shares the same final approach control as nearby Ontario airport, resulting in heavy air traffic in the area. Also, an installation official agreed the facilities are substandard and outdated, with the exception of the water distribution system. In particular, the base's electrical distribution system is antiquated and constantly needs repair. The base also has a severe shortage of warehouse space. Norton is currently

storing items in some unsuitable warehouses and some surplus office furniture is stored outdoors.

The Commission also reported deficiencies for the quality of life at Norton, including a shortage of family housing units and inadequate medical, dental, and recreational facilities. Base records show Norton has a shortage of 1,059 family housing units. As a result, an installation official said many enlisted personnel with families are forced into high-priced and substandard housing away from the base. Base records also show a shortage of recreational facilities. According to Norton's records, its medical and dental facilities meet Air Force requirements. The Commission's figure was based on a larger requirement. According to base clinic officials, the newly remodeled medical and dental facilities are adequate.

Phase II Analysis

The Commission reported the net cost of closing Norton and relocating major units and related support activities to other installations would save \$67.9 million annually and costs would be paid back within 3 years. We found several problems in the Commission's cost estimates for Norton. For example, the Commission recommended that the family housing at Norton remain open. However, the Air Force's application of the cost model assumed that family housing would be closed. This overstated annual savings and reduced the payback period.

Revised Estimates

After we completed our fieldwork, in September 1989 the Air Force provided revised costs and savings estimates for Norton. Using the September 1989 Air Force data and applying our revised present value factors, the estimate for Norton shows an annual savings of \$58.4 million and a payback period of 5 years. Our annual savings estimate excludes an Air Force estimate of \$5.7 million for recurring savings from avoided construction at Norton. The differences between the Commission's estimated costs and savings for Norton and our revised estimates are shown in table XII.1.

Table XII.1: Comparison of the Differences Between the Commission's Estimates and the Revised Estimates for Norton Air Force Base

Dollars in millions		
Category	Commission estimates	Revised estimates
Land sales	\$60.3	\$208
New construction	386.8	408
Recurring savings	67.9	58
Personnel eliminations		
Military positions	1,318	1,111
Civilian positions	676	676

^aEstimates are deflated to fiscal year 1988 dollars.

Environmental Impact Issues

The Commission reported that closing Norton would have no negative impact on the local environment. The current Air Force cleanup estimate is \$39 million. However, current environmental studies and tests are likely to change this estimate. Norton is on the national priority listing of places where hazardous waste needs to be cleaned up.

Economic Impact Issues

The Commission reported closing Norton would have a minimal impact on local employment. It calculated a direct job loss impact of .9 percent. The Commission used the same economic impact area and the same total area employment number (774,614) in its calculations of job loss impact for Norton that it used for George Air Force Base. However, it did not consider the combined effect of the two closures on the local community. Based on the employment figures used by the Commission, we estimate the combined direct job loss impact of closing Norton and George, offset by the personnel additions at March Air Force Base, which is in the same impact area, at 1.2 percent.

Pease Air Force Base

The Commission recommended closing Pease Air Force Base, New Hampshire, because it has (1) a shortage of buildings for operational training and maintenance purposes, (2) inadequate military family housing, and (3) a shortage of recreational facilities. Also, the Commission believed excess capacity at other bomber bases could absorb Pease aircraft. The Commission recommended that Pease units and activities be relocated to other activities and that the Air National Guard squadron currently located at Pease remain there. Air Force bases identified by the Commission to absorb Pease functions include Wurtsmith, Michigan; Plattsburgh, New York; Eaker, Arkansas; Carswell, Texas; and Fairchild, Washington.

The Commission estimated the closure would save \$95.7 million annually and costs would be paid back immediately. Current estimates are an annual savings of \$81.3 million, with an immediate payback period.

Phase I Issues

Pease Air Force Base is a Strategic Air Command bomber base. It was 1 of 12 strategic air bomber bases evaluated in the operating strategic aircraft category during the Commission's phase I analysis. Over 75 percent of the total weights for the strategic bomber bases were assigned to survivability and maneuver space. Pease was 11th of the 12 bases, and was rated less than fully satisfactory for survivability, although it was rated fully satisfactory for maneuver space. Pease also received less than fully satisfactory ratings for several attributes because of its (1) lack of operational buildings and training and maintenance facilities, (2) quality of public service and recreational facilities, and (3) need to upgrade family housing.

Phase II Issues

The Commission estimated an annual savings of \$95.7 million for the Pease closure and the closure costs would be paid back immediately. We evaluated the accuracy of the Commission's estimate by testing the Commission's cost model for Pease and found only minor problems. For example, the Commission's model treated \$8 million in Pease military personnel relocation costs as a savings.

Revised Estimates

After we completed our fieldwork, in September 1989 the Air Force provided revised estimates of costs and savings for the Pease closure. Using the September 1989 Air Force data and applying our revised present value factors results in an annual savings of \$81.3 million and an immediate payback period. Our annual savings estimate excludes an Air

Force estimate of \$4.9 million for recurring savings from avoided construction at Pease. It includes an annual cost of \$6.1 million to cover retirees and their dependents shifted to medicare from DOD's health care due to the closure. Some of the differences between the Commission's estimated costs and savings and our revised estimates are shown in table XIII.1.

Table XIII.1: Comparison of the Differences Between the Commission's Estimates and the Revised Estimates for Pease Air Force Base

Dollars in millions		
Category	Commission estimates	Revised estimates
Land sales	\$63.8	\$260
New construction	0.0	2
Recurring savings	95.7	87
Personnel eliminations		
Military positions	1,931	18
Civilian positions	397	37

^aEstimates are deflated to fiscal year 1988 dollars.

Environmental Impact Issues

The Commission said the Pease closure will have no negative impact on the local environment. It also said the movement of units assigned to Pease will not significantly alter the environmental situation at gaining bases.

The Air Force's preliminary environmental cleanup cost estimate for Pease is \$11 million. However, according to Air Force officials, the estimate is likely to change, and studies are underway to determine the extent of the actual cleanup required.

Economic Impact Issues

The Commission said the Pease closure will have a minimal impact on local employment. It calculated a 2.3-percent impact on local employment.

Hunters Point

The Commission recommended the proposed strategic homeport construction for Hunters Point, California, not be executed and comparable construction should be accomplished at Pearl Harbor, Hawaii, and Long Beach and San Diego, California. Hunters Point had been designated as a homeport for one battleship, four cruisers, two destroyers, and two frigates. The mission of these ships is to protect the sea lines of communication in the Pacific, support amphibious operations, and provide deterrence. The Commission recommended relocating the battleship and two cruisers from Hunters Point to Pearl Harbor; one cruiser, two destroyers, and two frigates to San Diego; and one cruiser to Long Beach.

In responding to the Commission's recommendation, the Navy said that relocating the ships would still be consistent with the objectives of the strategic homeporting plan, and would provide adequate force dispersal, battlegroup integrity, and proximity to the Pacific operating areas.

The Commission estimated that the realignment of Hunters Point would save \$8.0 million annually and be paid back immediately. Current estimates are an annual savings of \$7.5 million, with a 5-year payback period.

Phase I and II Issues

Unlike the other installations in the Commission's study, the Commission did not use the two-phase approach to evaluate Hunters Point or the other strategic homeports, such as Galveston, Texas, and Lake Charles, Louisiana. Instead, the Commission focused on planned construction costs for the strategic homeports. The Navy's planned construction estimate for Hunters Point was \$85 million. The Commission determined, and the Navy agreed, this construction could be accomplished principally at Pearl Harbor and the other locations for the same cost. Also, the Commission determined additional personnel planned for Hunters Point would not be needed at Pearl Harbor. Using these assumptions, the Commission simplified its costs and savings analysis to include only base operation support costs. The Commission based its \$8 million annual savings on the following:

- The Navy estimated base operation support costs would be \$15 million for Hunters Point.
- The Navy estimated base operation support costs would be \$7 million for the \$85 million in facilities to be added to existing ports.
- The Commission's \$8-million annual savings estimate is the difference between the \$15- and \$7-million operation costs estimates for the bases.

The Commission made its recommendations on the strategic homeports at its final business meeting. Prior to this time, the Navy had objected to any change in its strategic homeporting program. DOD officials said a subgroup of Commissioners was formed to review strategic homeporting. They added that at the final business meeting, the subgroup of Commissioners recommended not to proceed with construction at Hunters Point, Galveston, and Lake Charles. According to these officials, this recommendation was based on Navy input. We did not find any specific analysis supporting the reasons for the Navy's change in position.

Revised Estimates

The Navy's recent construction estimate for the Hunters Point realignment is about \$102 million, or \$17 million more than the original estimate. Based on this new construction estimate and applying our revised present value factors, we estimate an annual savings of \$7.5 million and a payback period of 5 years.

Environmental Impact Issues

The Commission did not comment on hazardous waste at Hunters Point. However, recent Navy estimates include \$.1 million to do an environmental assessment.

Economic Impact Issues

The Commission said the realignment of Hunters Point will have a minimal impact on local employment.

Congressional Members Who Sent GAO Request Letters Concerning the Review

United States Senate

The Honorable Bill Bradley
The Honorable Dan Coats
The Honorable Dennis DeConcini
The Honorable Alan J. Dixon
The Honorable Wendell H. Ford
The Honorable Gordon J. Humphrey
The Honorable Frank R. Lautenberg
The Honorable Richard G. Lugar
The Honorable John McCain
The Honorable Mitch McConnell
The Honorable Paul Simon
The Honorable Pete Wilson

House of Representatives

The Honorable Frank Annunzio
The Honorable Barbara Boxer
The Honorable Jack Brooks
The Honorable George E. Brown, Jr.
The Honorable Terry L. Bruce
The Honorable Cardiss Collins
The Honorable Jerry F. Costello
The Honorable Jim Courter
The Honorable Philip M. Crane
The Honorable Richard J. Durbin
The Honorable Lane Evans
The Honorable Harris W. Fawell
The Honorable Vic Fazio
The Honorable James J. Florio
The Honorable Dean A. Gallo
The Honorable Lee H. Hamilton
The Honorable J. Dennis Hastert
The Honorable Charles A. Hayes
The Honorable Larry J. Hopkins
The Honorable William J. Hughes
The Honorable Henry J. Hyde
The Honorable Joseph P. Kennedy, II
The Honorable Jim Kolbe
The Honorable Jerry Lewis
The Honorable William O. Lipinski
The Honorable Edward R. Madigan
The Honorable Lynn Martin
The Honorable Robert T. Matsui
The Honorable Robert H. Michel

Appendix XV
Congressional Members Who Sent GAO
Request Letters Concerning the Review

The Honorable Frank Pallone, Jr.
The Honorable Nancy Pelosi
The Honorable John E. Porter
The Honorable Glenn Poshard
The Honorable John J. Rhodes, III
The Honorable Matthew J. Rinaldo
The Honorable Robert A. Roe
The Honorable Dan Rostenkowski
The Honorable Marge Roukema
The Honorable Marty Russo
The Honorable George E. Sangmeister
The Honorable Gus Savage
The Honorable H. James Saxton
The Honorable Christopher H. Smith
The Honorable Robert C. Smith
The Honorable Sidney R. Yates

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