Dear Senator Roth:

As you requested, we reviewed the Department of Defense's (DOD) cost estimates and savings associated with the 1988 and 1991 base closures and realignments. Specifically, we agreed to provide you with information on (1) estimated military construction, environmental, and operations and maintenance costs and (2) estimated land sale revenues. We also evaluated how changes to these estimates would affect the two base closure and realignment accounts.

Background

Commissions on Base Realignment and Closure were established by Congress in 1988 and 1991 to review and recommend military bases within the United States for closure and realignment.

The 1988 Defense Authorization Amendments and Base Closure and Realignment Act established the first Commission together with the basis for implementing Commission recommendations. The act also established the Defense Base Realignment and Closure Account (BRAC-I) to fund one-time costs to close or realign bases. The act requires that revenues generated from land sales be deposited into the account to offset closure and realignment costs. Funding for BRAC-I actions spans fiscal years 1990 through 1995.

In December 1988, the Commission recommended 145 closures and realignments that were to start by January 1, 1990, and be completed by September 30, 1995. The Commission estimated that its recommendations would require one-time costs of about $3.1 billion and produce land revenues of about $1.4 billion.

The Defense Base Closure and Realignment Act of 1990 established the second Commission. This Commission's recommendations are funded from the Base Realignment and Closure Account (BRAC-II). Its authority spans fiscal years 1992 through 1997.
In July 1991, the second Commission recommended 34 base closures and 48 realignments. It estimated that closing and realigning these bases would require one-time costs of $4.1 billion. At that time land revenues of $1.2 billion were estimated by DOD for recommended closures.

Congress appropriates funds annually for the BRAC accounts to pay for base closure and realignment costs. The appropriations are based on military service estimates of one-time costs to close or realign the bases, less estimated land sale revenues. Appendix I compares DOD's fiscal years 1991, 1992, and 1993 6-year estimates for the one-time costs and land revenues for BRAC-I. It also shows DOD's fiscal year 1993 estimated 6-year costs and land revenues for BRAC-II.

Result in Brief

Congress may have to appropriate more money to the BRAC accounts than previously estimated. DOD's experience to date with BRAC-I has shown that while the total realignment and closure costs have remained relatively stable, land revenue projections have declined dramatically. The result is that DOD's budget estimate of the funds needed for BRAC-I more than doubled between fiscal years 1991 and 1993.

There were also significant fluctuations in the components that make up the total estimated closure and realignment costs for BRAC-I. For example, the estimate for military construction dropped from $2.2 billion to $1.5 billion, while the estimate for environmental cleanup increased from $510 million to $859 million. Operations and maintenance costs decreased by about $33 million. The changes occurred because DOD now has better data to base its estimates on and because audits have shown that some construction costs were too high or were unnecessary.

Between fiscal years 1991 and 1993, estimated land sale revenues dropped from $2.3 billion to $1.1 billion. The estimate dropped because some properties were transferred to other federal agencies and local governments without compensation and because better data was obtained on what properties might sell for.

Estimated Construction Costs Have Dropped

The overall cost of military construction associated with the BRAC accounts has decreased. From fiscal year 1991 to fiscal year 1993, the estimated BRAC-I costs dropped from $2.2 billion to $1.5 billion. The decrease resulted because later estimates were based on better construction data, force structure reductions were greater than expected, and inappropriate
costs had been identified by service audit groups and the DOD Inspector General. For example:

- The 1988 Commission recommended closure of the Naval Hospital, Philadelphia, Pennsylvania. The Navy estimated it would cost $17 million to renovate hospital space and a clinic and to build a parking structure at the Philadelphia Veterans Administration Hospital to accommodate activities coming from the Naval Hospital. The Navy eliminated the Veterans Hospital construction in its fiscal year 1993 budget justification. Instead, $7 million would be spent for building modernization at the Philadelphia Navy Yard to house the Navy Systems Engineering Station, a tenant activity at the Naval Hospital, and to establish a temporary medical facility.

- The 1988 Commission recommended that construction for the Navy Strategic Home Port Program at the Lake Charles, Louisiana, and Galveston, Texas, naval stations not be completed. It recommended that the program be moved to the Ingleside, Texas, naval station instead. The Navy’s 1991 budget justification estimated $30 million would be needed for construction at Ingleside. According to the Navy, the fiscal year 1993 budget justification for construction at Ingleside decreased to $1.2 million because force structure reductions freed up capacity there.

Finally, as a result of audits by the Army Audit Agency and the DOD Inspector General, about $191 million of BRAC-I estimated construction funds have been deleted because either the requirements were not related to base closure and realignment or the projects involved work that exceeded what was needed.

In its fiscal year 1993 budget justification, DOD estimated that it would need $2.2 billion for BRAC-II military construction. Since that justification, construction estimates we reviewed dropped. Also, the Army Audit Agency concluded in an August 1992 report that about $244 million in BRAC-II construction requirements were not adequately supported or inappropriate for base closure funding. The Army is currently reviewing the Agency's conclusions.
Environmental Cleanup Costs
Substantially Higher Than Originally Estimated

The Defense Base Closure and Realignment Act of 1990 permits the BRAC accounts to pay for environmental cleanup at closing bases. Before fiscal year 1992, cleanup at these bases covered by the 1988 act was funded by other sources. This act was changed in 1990 to preclude funding from other sources such as the Defense Environmental Restoration Account\(^1\) to clean up closing bases.

DOD estimated environmental cleanup costs for BRAC-I and BRAC-II at $1.6 billion in its fiscal year 1993 base realignment and closure budget justification. The estimate may be conservative because the BRAC-II estimate of $744 million was preliminary and additional studies and tests were underway to determine how much cleanup was needed. Experience with BRAC-I bases has shown that estimates increase significantly once more detailed studies and tests are completed. For example, when Pease Air Force Base, New Hampshire, was recommended for closure in 1988, the preliminary environmental cleanup estimate was $11 million. In fiscal year 1992, the Air Force increased the estimated cleanup to over $63 million and to over $102 million in fiscal year 1993 when it had the benefit of studies and tests that were not previously available. By December 1992, the estimate had increased to over $114 million.

Operations and Maintenance Costs

Estimated operations and maintenance costs for BRAC-I have decreased slightly—from $752.7 million in fiscal year 1991 to $719.9 million in fiscal year 1993. DOD officials stated that these changes occurred because situations changed and more current and better data were available.

Estimated operations and maintenance and other costs in DOD's fiscal year 1993 budget justification were higher for some BRAC-II actions than estimated by the cost of base realignment action (COBRA)\(^2\) analyses in April 1991. The increases resulted because some operations and maintenance costs, such as transporting equipment to new locations, were not realistically estimated by COBRA and because realignment assumptions changed after the analyses were made. For example, the COBRA model estimated transportation costs of about $8 million for the Lowry Air Force Base, Colorado, closure. DOD officials told us later that the COBRA model has been improved and can now account for such unique one-time costs.

---

\(^1\)The Defense Environmental Restoration Program was established in 1984 to clean up contamination from hazardous waste sites at DOD installations and formerly used DOD properties. The annual defense appropriation acts provided funding for the Defense Environmental Restoration account.

\(^2\)The COBRA model estimates the costs, savings, and payback for the recommended base closures and realignments. The model uses a range of standard factors as well as formulas to develop the estimates.
Its estimate at the time of the fiscal year 1993 budget submission was $19.6 million. Air Force officials did not believe the COBRA model accurately accounted for the cost to disassemble, move, and reassemble complex types of equipment and therefore understated such costs. Also, the Army assumed that equipment at closing laboratories would be used at other bases. However, the Army has since determined that much of the laboratory equipment cannot be moved and consequently, equipment purchases of over $56 million will be needed.

Revenues From Land Sales Significantly Less Than Anticipated

Land sale revenue received from base closures has been minimal. As of July 1992, only the Army has received any land sale revenue—$10.4 million for the sale of 12 stand-alone housing units. In March 1992, Army officials told us that the revenue from the sale of six of these units was about 10 percent less than expected. Moreover, estimated land sale projections are significantly lower than initially anticipated.

Between fiscal years 1991 and 1993, DOD reduced land sale revenue estimates for 1988 base closures from $2.3 billion to $1.1 billion. The reductions resulted because (1) properties were transferred to other federal agencies and local governments without compensation, (2) better information was obtained on the property values, and (3) more realistic estimates were available on which properties would actually be sold. For example:

- In 1991, the Army estimated revenues of $448 million for 9,000 acres at Fort Meade, Maryland, recommended for sale by the 1988 Commission. Since then, Congress directed the Army to transfer 8,100 acres to the Department of Interior without compensation. This reduced the revenue estimate to $147,000.
- In 1991, the Army estimated land revenues of $247 million from the sale of Cameron Station, Virginia. An updated appraisal reduced the estimate to $104 million.
- In 1991, the Air Force estimated land revenues of $1.2 billion from the sale of five air bases recommended for closure in 1988. The estimate was based on the sale of all base property. After considering that property may be publicly or federally conveyed without compensation, and using preliminary appraisals, and current market trends, the Air Force reduced the estimate for the five bases to $628 million in the fiscal year 1993 budget justification.
Also, environmental conditions at some bases prevented the sale of certain land. For example, the Army estimated it would receive over $30 million from land sales at Jefferson Proving Grounds, Indiana. However, because of costly environmental cleanup (estimated to be $79.1 million) and the time it would take to clean up its property, the revenue estimate was reduced to zero.

Scope and Methodology

We performed our work at the Office of the DOD Comptroller and military service headquarters in Washington, D.C. We also performed work at various military bases and commands, and at the General Services Administration Regional Offices. Specific locations visited are shown in appendix II.

We analyzed selected data pertaining to the one-time costs and land revenue estimates for base realignments and closures for fiscal years. We determined why DOD's estimates for BRAC-I changed between fiscal years 1991 and 1993. For BRAC-II, we compared the April 1991 COBRA estimate for selected projects to the January 1992 budget justification for fiscal year 1993. We discussed with appropriate DOD officials how their estimates were developed. We also reviewed DOD audit reports that evaluated BRAC-I and II military construction estimates. Our review was made in accordance with generally accepted government auditing standards and was performed between January and December 1992. As agreed with your office, we did not obtain written agency comments, but program officials reviewed a draft of this report. We have incorporated their comments in the report where appropriate.

Unless you publicly announce its contents earlier, we plan no further distribution of this report until 5 days after its issue date. At that time, we will send copies to the Chairmen, Senate and House Committees on Armed Services and on Appropriations; Senate Committee on Governmental Affairs; and House Committee on Government Operations. Copies will also be sent to the Director of Office of Management and Budget; the Secretaries of Defense, the Air Force, the Army, and the Navy; and other interested parties.
Please contact me on (202) 512-8412 if you or your staff have any questions concerning this report. Major contributors to this report are listed in appendix III.

Sincerely yours,

[Signature]

Donna M. Heivilin, Director
Defense Management and NASA Issues
Contents

Letter

Appendix I
BRAC-I and BRAC-II Cost and Revenue Comparisons

Appendix II
Activities Visited During This Review

Appendix III
Major Contributors to This Report

Tables
Table I.1: Comparison of DOD's 6-Year Estimates for One-Time Costs and Land Revenues for BRAC-I
Table I.2: DOD's Estimated 6-Year One-Time Costs and Land Revenues for BRAC-II

Abbreviations
BRAC  Base Realignment and Closure
COBRA  Cost of Base Realignment Action
DOD  Department of Defense
BRAC-I and BRAC-II Cost and Revenue Comparisons

Table I.1 shows the BRAC-I budget justification for fiscal years 1991, 1992, and 1993.

<table>
<thead>
<tr>
<th>Categories of one-time costs and land revenues</th>
<th>Fiscal year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Military construction</td>
<td>$2,217.7</td>
</tr>
<tr>
<td>Family housing</td>
<td>42.4</td>
</tr>
<tr>
<td>Environmental</td>
<td>524.5</td>
</tr>
<tr>
<td>Operations and maintenance</td>
<td>752.7</td>
</tr>
<tr>
<td>Military personnel-PCS*</td>
<td>58.9</td>
</tr>
<tr>
<td>Other*</td>
<td>172.6</td>
</tr>
<tr>
<td>Homeowners assistance</td>
<td>54.0</td>
</tr>
<tr>
<td>Commission expenses</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total costs</strong></td>
<td><strong>$3,298.3</strong></td>
</tr>
<tr>
<td>Land revenues</td>
<td>2,340.5</td>
</tr>
<tr>
<td>6-year budget estimates</td>
<td>957.8</td>
</tr>
</tbody>
</table>

*The 6-year estimates are estimates of the total one-time costs of base closures and realignments and land sale revenues during the period beginning with fiscal year 1990 and ending with fiscal year 1995.


*In fiscal year 1991, DOD estimated $510 million of environmental restoration costs associated with base closures and realignments. These costs were to be funded from the Defense Environmental Restoration Account and from the services operations and maintenance appropriation accounts.

*Permanent change of station.

*Equipment-type purchases.

Table I.2 shows the BRAC-II budget justification. Since this was the first submission for BRAC-II, we could not make a comparison like the one for BRAC-I in table I.1.
<table>
<thead>
<tr>
<th>Categories of one-time costs and land revenues</th>
<th>Fiscal years 1992-97</th>
</tr>
</thead>
<tbody>
<tr>
<td>Military construction</td>
<td>$2,242.5</td>
</tr>
<tr>
<td>Family housing</td>
<td>148.2</td>
</tr>
<tr>
<td>Environmental</td>
<td>744.1</td>
</tr>
<tr>
<td>Operations and maintenance</td>
<td>1,378.9</td>
</tr>
<tr>
<td>Military personnel PCS*</td>
<td>105.0</td>
</tr>
<tr>
<td>Other</td>
<td>169.5</td>
</tr>
<tr>
<td><strong>Total costs</strong></td>
<td><strong>$4,788.2</strong></td>
</tr>
<tr>
<td>Land revenues</td>
<td>1,788.0</td>
</tr>
<tr>
<td>6-year budget estimate</td>
<td><strong>$3,000.2</strong></td>
</tr>
</tbody>
</table>

*PCS is permanent change to station.
# Activities Visited During This Review

## Army
- Army Redstone Arsenal, Alabama
- Army Rock Island Arsenal, Illinois

## Air Force
- Air Force Training Command, Randolph Air Force, Texas
- Lackland Air Force Base, Texas
- Sheppard Air Force Base, Texas
- Keesler Air Force Base, Mississippi
- Lowry Air Force Base, Colorado
- Chanute Air Force Base, Illinois
- George Air Force Base, California
- Mather Air Force Base, California
- Norton Air Force Base, California
- Pease Air Force Base, New Hampshire

## Navy
- Marine Corps Command West, El Toro, California
- Tustin Marine Corps Air Station, California
- Camp Pendleton Marine Corps Air Station, California
- Marine Air Ground Combat Center, Twentynine Palms, California

## General Services Administration
- Regional Office San Francisco, California
- Regional Office Chicago, Illinois
- Regional Office San Francisco, California
## Major Contributors to This Report

<table>
<thead>
<tr>
<th>National Security and International Affairs Division, Washington, D.C.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robert L. Meyer, Assistant Director</td>
</tr>
<tr>
<td>Andrew G. Marek, Evaluator-in-Charge</td>
</tr>
<tr>
<td>Donald H. Lentz, Adviser</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dallas Regional Office</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calvin E. Phillips, Regional Assignment Manager</td>
</tr>
<tr>
<td>Anna M. Albers, Evaluator</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Los Angeles Regional Office</th>
</tr>
</thead>
<tbody>
<tr>
<td>Larry W. Aldrich, Senior Evaluator</td>
</tr>
<tr>
<td>Thaddeus S. Rytel, Jr., Evaluator</td>
</tr>
</tbody>
</table>