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National Security and
International Affairs Division

B-279590

June 25, 1998

The Honorable Christopher H. Smith
House of Representatives

Subject: Military Base Closures: Realignment of the Naval Air Development Center, Warminster, Pennsylvania, and Closure of the Naval Air Warfare Center, Aircraft Division, Trenton, New Jersey

Dear Mr. Smith:

In response to your request, we reviewed estimated costs, savings, and personnel attrition associated with the realignment/relocation of Naval Air Development Center operations in Warminster, Pennsylvania, and Naval Air Warfare Center (Aircraft Division) operations in Trenton, New Jersey, to other locations. The relocations resulted from 1991 and 1993 base realignment and closure (BRAC) commission recommendations. Our objectives were to determine (1) whether current estimated cost and savings estimates differ from original BRAC commission estimates and, if so, the effect on the payback period and (2) the extent to which employees relocated with their respective operations.

RESULTS IN BRIEF

Because of limitations in available data, we were unable to precisely identify the changes in cost and savings estimates for the two locations. Thus, our analysis of changes in estimated cost and savings represents a rough order of magnitude. Using available data, however, we determined in consultation with the Navy that Warminster and Trenton relocation estimated costs are more and the estimated recurring savings are less than estimated by the respective BRAC commissions. For Warminster, the current cost estimate, excluding environmental restoration, is about \$298 million, or \$114 million higher than the initial estimate, while the current annual savings estimate of about \$19 million is less than the initial estimate. Similarly, for Trenton, the current cost estimate, excluding environmental restoration, is about \$133 million, or \$36 million higher than the initial estimate, while the current annual savings estimate of about \$12 million is less than the initial estimate. This resulted in an increase in the estimated payback period—from 9 to 33 years for Warminster and from 5 to 18 years for Trenton.

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In both relocations, relatively large numbers of employees did not relocate with the operations. However, Navy officials stated that no substantial adverse mission impact has resulted or is expected to result.

BACKGROUND

The 1991 BRAC Commission recommended closing and realigning several Navy research, development, test, and evaluation; engineering; and fleet support facilities and establishing four distinct warfare centers as part of an overall facility consolidation plan. Part of that effort involved the realignment of the Naval Air Development Center, which at that time was located in Warminster, Pennsylvania. Warminster's operations became part of the Naval Air Warfare Center, Aircraft Division, and were relocated to the Patuxent River Naval Air Station in Lexington Park, Maryland. This realignment was completed in 1996.

The 1993 BRAC Commission recommended the closure of the Naval Air Warfare Center, Aircraft Division, Trenton, New Jersey. The Department of Defense (DOD) viewed the closure of the Trenton activity and the subsequent relocation of its operations as completing the establishment of the Naval Air Warfare Center at Lexington Park, as recommended by the 1991 BRAC Commission. Former Trenton activity operations are being relocated to the Patuxent River activity and the Air Force's Arnold Engineering Development Center in Tullahoma, Tennessee. Those actions are expected to be completed in December 1998.

In developing their recommendations for closures and realignments, the 1991 and 1993 BRAC Commissions considered the estimated costs and savings of these actions along with various other factors. To develop estimates, for comparative purposes, the Commissions used a Cost of Base Realignment Actions (COBRA) model that compared initial cost and savings estimates along with associated payback periods for various closure and realignment scenarios.

Following final approval of BRAC recommendations, DOD submits annual budgets to the Congress that contain cost and savings estimates that are more current and more refined than COBRA estimates. As we have previously reported, important differences exist between COBRA estimates and those developed as part of DOD's budget to implement BRAC recommendations.¹ For example,

¹Military Bases: Lessons Learned From Prior Base Closure Rounds (GAO/NSIAD-97-151, July 25, 1997).

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- COBRA estimates are often based on standard cost factors and are later refined for budget purposes.
- COBRA estimates do not include the cost of environmental restoration, whereas that cost is included in implementation budgets. Environmental costs are not considered during the BRAC decision-making process.
- COBRA costs are expressed in constant-year dollars; budgets are expressed in then-year (inflated) dollars.

While the military services are supposed to update these budget estimates over time, previous work has shown that the savings estimates are not routinely updated in the annual budget submissions.

WARMINSTER COSTS, SAVINGS,
AND PERSONNEL ATTRITION

Our analysis of the estimated costs and savings associated with relocating Warminster operations showed that the current estimated costs are higher than 1991 BRAC Commission estimates and that the estimated savings are less than initially expected. As a result, the payback period, or the time required for accrued annual savings to outweigh initial investment costs, will be longer than originally anticipated. While our analysis did indicate greater estimated costs and less estimated savings, neither the Navy nor we could identify the precise magnitude of the changes. Our analysis also showed that fewer employees relocated from Warminster than originally estimated.

A number of factors complicated our cost and savings analysis. First, DOD does not have a separate BRAC budget for the Warminster realignment; costs are commingled with costs for other activities. While DOD's BRAC budget request for fiscal year 1999, submitted to the Congress in February 1998, includes an estimate of Naval Air Warfare Center costs related to Warminster, the costs are commingled with costs related to Trenton, Patuxent River, and its China Lake, California, Weapons Division locations. Second, because COBRA data do not include specific budget categories that are used in the DOD BRAC budget, we could not make a direct comparison and precisely identify all estimated cost and savings changes. Finally, because of the passage of time since the 1991 decision, cost and savings data and supporting documentation for changes were either lacking or incomplete.

Current Cost Estimate Is
Greater Than Initial Estimate

Despite the data limitations, we determined in consultation with the Navy that \$298 million in estimated costs, exclusive of environmental restoration, can be attributed to the Warminster relocation in establishing the Naval Air Warfare Center, Aircraft Division, at Patuxent River. This represents a 62-percent increase, or about \$114 million more than the original COBRA estimate of \$184 million. Further, the Navy estimates that environmental restoration costs, which are not considered in the COBRA estimates, are about \$22 million. Thus, the estimated total cost for relocating the Warminster operations is about \$320 million.

In making our comparison, we used 1991 BRAC Commission COBRA estimates for relocating Warminster operations and estimates contained in DOD's BRAC budget request for fiscal year 1999 for establishing the Naval Air Warfare Center at Patuxent River. Because the budget request does not clearly identify all costs that are directly attributable to the Warminster relocation, we, in consultation with Navy officials, constructed a current cost estimate for the relocation. That estimate includes all identified Warminster costs in the 1999 budget request, military construction costs at Patuxent River that are attributable to Warminster, and a prorated share of other costs for establishing the Warfare Center at Patuxent River. Table 1 shows the results of our analysis.

Table 1: Comparison of Initial Warminster Cost Estimate With Current Estimate

Dollars in millions

Cost category	1991 BRAC Commission estimate	Current estimate ^a	Increase
Military construction	\$116	\$125	\$9
All other ^b	68	173	105
Total	\$184	\$298	\$114

^a Based on DOD's BRAC budget request for fiscal year 1999.

^b "All other" costs include such estimated costs as relocating and separating personnel, moving equipment and supplies, and administrative costs.

As shown in table 1, the current cost estimate for military construction, which was incurred for constructing science and engineering facilities at Patuxent River to accommodate former Warminster operations, is comparable to the initial estimate.

However, we identified three areas of considerable increase in the cost estimates associated with the "all other" category—communications networking, facility renovation, and laboratory equipment relocation—that account for most of the \$105 million increase in that category. Our analysis showed that the Navy incurred costs for communications networking and facility renovation that were apparently not considered in the initial COBRA cost estimate. According to Naval Air Systems Command budget request documentation, the Navy programmed \$39 million for acquiring and installing integrated data and communications at Patuxent River. We found no such costs in the original COBRA estimate. On a proportional basis and in consultation with Navy officials, we attributed about 92 percent, or \$36 million of that amount, to the Warminster relocation. Warminster transition officials we spoke to surmised that some of the data and communications cost could be attributed to dispersing various functions across existing facilities at Patuxent River in an effort to reduce facility requirements. These officials also suggested that some of the increased costs could be attributed to a change in accounting for costs; that is, at one time, some communications costs, such as communication wiring in facilities, were included in military construction accounts and not identified separately, as is now the practice. As to facilities, the Navy spent \$16 million for various renovations throughout the Patuxent River base that were not identified in initial COBRA estimates. As with communications, we attributed \$15 million of that amount, on a proportional basis, to the Warminster relocation.

The cost for moving laboratory equipment and supplies was apparently greatly underestimated in the initial COBRA estimate. According to Naval Air Systems Command documentation, the Navy spent about \$48 million for moving laboratory equipment from Warminster to Patuxent River. Because we could not obtain adequate supporting documentation to precisely identify the initial COBRA estimate, we could not specifically identify the magnitude of any cost increase. However, available data indicated that the cost increase was at least \$26 million due to higher than anticipated costs for moving the laboratory equipment, which Navy officials acknowledged would be more complex and costly than moving standard office equipment.

Current Recurring Savings Estimate
Is Lower Than Initial Estimate

Naval Air Warfare Center officials currently estimate that the annual recurring savings from the Warminster relocation is about \$19 million due to reductions in authorized personnel positions. This estimate is based on actual civilian position eliminations and current salary data for the types of positions eliminated. We could not verify this estimate by reviewing the 1999 budget request for similar reasons to those discussed earlier in the cost section. The current estimate is about \$6 million less than the initial 1991 BRAC Commission estimate of \$25 million. Because no other data were available, we used the \$19-million savings estimate in our analysis.

Higher Costs, Lower Savings
Increase Payback Period

The effect of an increase in estimated costs and a decrease in expected savings is an increase in the payback period. Using initial estimated one-time costs of \$184 million and annual recurring estimated savings of \$25 million, the COBRA model initially computed a payback period of 9 years to relocate Warminster operations to Patuxent River. In making the payback computation, COBRA also discounts the cost and saving estimates to account for the time value of money. Using the current cost estimate of \$298 million and annual recurring savings estimate of \$19 million, the payback period would be about 33 years.

Fewer Employees Relocate
Than Originally Estimated

Our analysis of personnel actions showed that fewer employees actually relocated from Warminster to Patuxent River than originally expected. Of the 1,656 Warminster persons offered transfers to Patuxent River, 635 accepted the offers and relocated. These numbers are based on official transfer-of-function letters sent out by the Naval Air Warfare Center and the actual number of permanent change-of-station orders processed. The transfers were less than envisioned in 1991. The COBRA model used by the 1991 BRAC Commission projected that 985 of the 1,605 personnel that would be offered transfers would actually transfer to Patuxent River. A senior Naval Air Warfare Center official told us that while losing experienced employees had some initial effect on their aviation programs, the impact was not serious.

TRENTON COSTS, SAVINGS,
AND PERSONNEL ATTRITION

As with Warminster, our analysis of the estimated costs and savings associated with relocating Trenton operations showed that the current estimated costs are higher than the 1993 BRAC Commission estimates and that the current estimated savings are less than initially estimated. As a result, the payback period is longer than originally anticipated.

Current Cost Estimate Is
Greater Than Initial Estimate

The Navy estimates that the current costs, exclusive of environmental restoration, are \$133 million for relocating Trenton operations to Patuxent River and Tullahoma. This represents a 37-percent increase, or about \$36 million more than the original COBRA estimate of \$97 million. Further, the Navy estimates that environmental restoration costs, which are not considered in COBRA, are about \$24 million. Thus, the estimated total cost for relocating the Trenton operations is about \$157 million.

In making our cost estimate comparison, we used initial 1993 BRAC Commission COBRA data for relocating Trenton operations and cost data contained in DOD's BRAC budget request for fiscal year 1999 for establishing the Naval Air Warfare Center at Patuxent River. Table 2 shows the results of our analysis.

Table 2: Comparison of Initial Trenton Cost
Estimate With Current Estimate

Dollars in millions

Cost category	1993 BRAC Commission estimate	Budget estimate ^a	Increase
Military construction	\$47	\$79	\$32
All other ^b	50	54	4
Total	\$97	\$133	\$36

^a Based on DOD's BRAC budget request for fiscal year 1999.

^b "All other" costs include such estimated costs as relocating and separating personnel, moving equipment and supplies, and administrative costs.

As shown in the table, the primary area of cost increase was for military construction. DOD's fiscal year 1999 budget included about \$79 million in new construction—about \$53 million for laboratory and testing facilities at Arnold Engineering Development Center in Tullahoma and \$26 million for a propulsion system evaluation facility at Patuxent River. The 1993 BRAC Commission estimate did not anticipate construction at Patuxent River and, according to Navy officials, the requirement arose largely because the Air Force would not do helicopter testing at Tullahoma. Also, according to a Trenton transition office official, some additional funds were needed for administrative space at Patuxent River to handle the volume of personnel movement into Patuxent River.

Current Recurring Savings Estimate
Is Lower Than Initial Estimate

Naval Air Warfare Center officials currently estimate that the annual recurring savings from the Trenton relocation is about \$12 million due to reductions in authorized personnel positions. This estimate is based on actual civilian position eliminations and current salary data for the types of positions eliminated. The current estimate is about \$7 million less than the initial 1991 BRAC Commission estimate of \$19 million.

Higher Costs, Lower Savings
Increase Payback Period

As with Warminster, the effect of an increase in estimated costs and a decrease in expected savings is an increase in the payback period. Using initial estimated one-time costs of \$97 million and annual recurring savings of \$19 million, the COBRA model computed a payback period of 5 years for relocating the Trenton operations to Patuxent River. Using the current cost estimate of \$133 million and annual recurring savings estimate of \$12 million, the payback period would be about 18 years.

Many Employees Chose
Not to Relocate

Because of incomplete COBRA data, we were unable to determine whether actual personnel transfers from Trenton to Patuxent River and Tullahoma were more or less than envisioned by the 1993 BRAC Commission. Our discussions with Navy officials showed that 136 personnel positions were authorized for Trenton employees who wished to relocate. According to a Trenton transition office official, transfer-of-function letters were given only to those employees who indicated they would relocate. The 84 employees who were offered transfers accepted—76 were to transfer to Patuxent River and 8 were to go to

Tullahoma. The 52 remaining personnel chose not to relocate with their positions. At the time of our work, about 70 permanent change-of-station orders had been issued, and Navy officials had no reason to expect that the remaining 14 employees would not relocate. According to a senior Naval Air Warfare Center engineering official, the Trenton transition has had minimal impact on technical programs and no adverse impact is expected in the future.

CONCLUSION

Our analysis of available data indicates in general that the estimated costs are greater and estimated savings are less for the two BRAC relocations. Because of limitations in available data, the estimates we present represent rough order of magnitude.

AGENCY COMMENTS AND OUR EVALUATION

DOD provided written comments on a draft of this report, which are included in appendix I. DOD generally agreed that the estimated costs are greater and the estimated savings are less than originally anticipated for the two Navy relocations. DOD also agreed with the reasons for the cost growth as cited in the report. However, DOD disagreed with the degree of precision it thought we had attached to the cost estimate increases. DOD stated that comparing latest budget request data to original COBRA data would create limitations and undermine the precision of analyses based upon them. We agree that precisely identifying the magnitude of cost estimate increases is difficult, primarily because COBRA data are generally not of budget quality and costs directly attributable to the relocations were difficult to precisely identify. For these reasons, we reported that the analysis of estimate changes should be considered as a rough order of magnitude.

DOD also acknowledged that it could improve its management oversight of the costs and savings attributable to BRAC actions. DOD stated that it was taking a number of steps to address this issue, including requiring that future congressional budget submissions report, to the maximum extent possible, updated savings figures. Also, DOD said it is providing appropriate guidance to the military services regarding the retention of historic documents deemed critical to BRAC closure actions. We believe that a fuller and more accurate accounting of the costs and savings attributable to BRAC is needed to provide decisionmakers with better data with which to assess BRAC implementation actions.

SCOPE AND METHODOLOGY

To ascertain if there were any cost and savings estimate changes over time in the two Navy facility relocations, we compared initial estimates developed by the respective 1991 and 1993 BRAC Commissions with DOD's current estimates. Our comparison was based on COBRA data used by the Commissions to develop their estimates and DOD's fiscal year 1999 BRAC budget submission, which depicts current estimates. We did not adjust the COBRA or budget data to account for inflation because the relative difference is minimal, that is, the difference between COBRA and budget cost data when inflated is about the same as the difference between numbers not inflated, \$2 million for Warminster and \$4 million for Trenton. Because of various data limitations, we could not always directly compare all relocation costs and savings projections in the COBRA model with DOD's budget submission and therefore could not always precisely identify significant changes in the estimates. For these situations, we discussed data difficulties with appropriate officials at the Naval Air Systems Command and the Naval Air Warfare Center in Patuxent River and various Navy headquarters offices in Washington, D.C., to clarify the magnitude of any apparent differences in the estimates. In situations in which the data for the two activities were commingled with other activities' data, we used professional judgment and prorated differences that were attributable to the affected relocations, where necessary, to arrive at estimate changes. We also reviewed DOD obligational data for the two activities to ascertain the extent of costs incurred to date for the relocations. To corroborate our efforts, we discussed and obtained agreement with cognizant Navy officials on our approach and results. Finally, our payback analysis used the current Office of Management and Budget discount rate of 3.6 percent to account for the time value of money. Also, because we could not precisely determine when savings began to actually accrue, we assumed that costs were incurred during the 6-year implementation period and that savings began to accrue after that period.

To determine the extent of personnel attrition for the two Navy relocations, we reviewed pertinent documents and conducted interviews with various Naval Air Warfare Center officials. For the Warminster relocation, we compared actual transfers with projected transfers as developed by the 1991 BRAC Commission. We attempted to do the same for the Trenton relocation but could not identify original transfer projections from the Commission COBRA data.


We conducted our review between November 1997 and April 1998 in accordance with generally accepted government auditing standards.

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We are providing copies of this report to the Chairmen and Ranking Minority Members of the Senate Committee on Armed Services and the House Committee on National Security; the Director, Office of Management and Budget; and the Secretaries of Defense and the Navy. We will also make copies available to others on request.

Please contact me at (202) 512-8412 if you or your staff have any questions concerning this report. Major contributors to this report are Barry W. Holman; James R. Reifsnyder; Raymond C. Cooksey, Jr.; and Joseph J. Faley.

Sincerely yours,


David R. Warren, Director
Defense Management Issues

COMMENTS FROM THE DEPARTMENT OF DEFENSEACQUISITION AND
TECHNOLOGY

OFFICE OF THE UNDER SECRETARY OF DEFENSE

3000 DEFENSE PENTAGON
WASHINGTON, DC 20301-3000

June 11, 1998

Mr. David R. Warren
 Director, Defense Management Issues
 National Security and International Affairs Division
 United States General Accounting Office
 Washington, DC 20548

Dear Mr. Warren:

This is the Department of Defense response to the General Accounting Office (GAO) Draft report, "MILITARY BASE CLOSURES: Cost Increases Related to Two Navy Base Realignments," Dated May 8, 1998, (GAO Code 709308/OSD Case 1611).

We acknowledge that, in general, the estimated costs are greater and the estimated savings are less for the relocation of the Warminster and Trenton technical centers to the new Naval Air Warfare Center (Aircraft Division) at Patuxent River NAS. The primary reasons for the cost growth are attributable to a number of unforeseen requirements as accurately reported in the audit.

We disagree, however, with the reported level of precision attributed to the magnitude of this difference, such as a 62 percent increase for Warminster. The estimates used for comparison to our latest budget request included the original Cost of Base Realignment Action (COBRA) data developed in 1991 and 1993. As the report itself acknowledges, COBRA data are unrefined and carry with them limitations that would undermine the precision of analyses based upon them.

However, we can do a better job of estimating the costs of closures, whether through COBRA or in the budget. Specifically, we need to improve our estimates of the costs related to a closure where cost sharing among different activities is required, such as the movements to Patuxent River NAS that are the subject of this report. And, we will continue to validate all requirements through our budgeting processes to ensure that budgets accurately reflect valid requirements and costs.

Additionally, the Department is taking steps to provide appropriate guidance to the Military Services regarding the retention of historical documents critical to analyses such as this audit. These actions would address some of the shortcomings reflected in this report. To improve our management oversight of the costs and savings associated with BRAC actions, the Department is taking the following steps:

1. Reconciling and deobligating excess obligations when final costs are known.
2. Reconciling the costs of actual workload increases at gaining activities used to offset budget savings estimates.

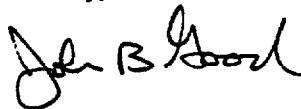


3. Requiring that the Executive Summary and Budget Justification of the Biennial Budget Estimates are updated for savings and replace prior year estimated savings with actual savings, to the maximum extent possible.

While cost is a consideration during our BRAC analysis, the composite of four other criteria, namely military value, is afforded priority consideration. We are pleased to note that the report substantiates savings for these actions, although the payback periods are longer.

We appreciate the opportunity to comment on the draft of this audit.

Sincerely,



John B. Goodman
Deputy Under Secretary
(Industrial Affairs & Installations)

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