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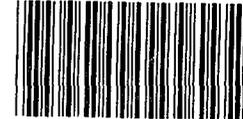


Logistics and  
Communications  
Division

B-172707

JULY 31, 1979

The Honorable William F. Goodling  
House of Representatives



109984

Dear Mr. Goodling:

In response to your April 6, 1979, request, we have reviewed the Army's economic justification for its decision to phase out aircraft maintenance operations at the New Cumberland Army Depot, Pennsylvania. These operations essentially involve the overhaul and repair of helicopter components.

*ABCD 11/2*

Over the past several years, the Army has implemented a number of realignments to reduce unnecessary support, headquarters, and overhead structure costs and to improve combat forces. New Cumberland is one of several military installations involved in realignment actions announced by the Department of Defense (DOD) on March 29, 1979.

The Army proposes to accomplish its planned realignment in phases during fiscal years 1979 through 1982. The Army plans to transfer aircraft maintenance functions from New Cumberland to the Corpus Christi Depot, Texas. Also the Army plans to (1) eliminate depot-level overhaul of OH-58 helicopters and (2) overhaul CH-47 helicopters when they are being modernized by a contractor. The Army estimates that these actions will reduce New Cumberland's aircraft maintenance workload by 50 percent.

We examined the most significant items in the Army's estimates of costs and savings as a result of transferring aircraft maintenance functions to the Corpus Christi Depot, and to other organizations. The proposed realignment appears economically justified. One-time costs will be repaid within 1 year, well within the 7- to 10-year payback period established by DOD as the basis for economic justification for base closure or realignment.

The Army's original costs and savings estimates were based on a 1977 study, which did not reflect the current situation. We asked the Army to provide us with more current information.



*Letter Report*

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According to the updated information, the Army would save about \$10.8 million annually by the end of fiscal year 1982, and would incur a one-time cost of about \$5.8 million to implement the actions. We <sup>GM</sup> estimated that the Army would save \$9.4 million annually and would incur a one-time cost of \$6.6 million.

On May 18, 1979, we discussed the results of our review with your office. The enclosure to this letter contains details on our review. As you suggested, we did not request written comments from the Army. However, we have discussed with Army officials, the points addressed in the enclosure.

We are sending copies of this report to the Director, Office of Management and Budget; the Secretary of Defense; and other interested parties upon request.

Sincerely yours,



R. W. Gutmann  
Director

Enclosure

REVIEW OF  
PLANNED REALIGNMENT OF  
NEW CUMBERLAND ARMY DEPOT

BACKGROUND

Over the past several years, the Army has implemented a number of realignments to reduce unnecessary support, headquarters, and overhead structure costs and to improve combat forces. Actions taken have been in consonance with the Army's long-range installation and stationing requirements.

In December 1975 the Office of the Secretary of Defense advised the Army of a budget decision to reduce the Army's civilian employment and associated funds for fiscal year 1977 and subsequent years. That decision triggered a review of the Army base structure to achieve further economies through realignment of installations and activities. The Army identified various candidates and/or alternatives in the preliminary phase, including consolidation of the aircraft maintenance functions that were being performed at the New Cumberland and Corpus Christi Army Depots.

The Army established a task group to take a critical look at the depots performing aircraft maintenance in terms of their capacities, projected workload, and other relevant factors, and to identify the most economical and effective means of accomplishing this maintenance. The group identified four alternative courses of action.

1. Disestablish the aircraft depot maintenance function at New Cumberland and transfer the workload to Corpus Christi.
2. Disestablish the aircraft depot maintenance function at New Cumberland and transfer the CH-47 helicopter workload to a contractor with the balance of the workload to go to Corpus Christi.
3. Disestablish the aircraft depot maintenance function at New Cumberland and arrange for the CH-47 helicopter workload to be accomplished by the Navy's Air Repair Facility at Cherry Point, North Carolina, with the balance of the workload to go to Corpus Christi.

4. Close the Corpus Christi activity and transfer all aircraft depot maintenance functions to New Cumberland.

In September 1976 the group reported that only alternatives 1 and 2, involving disestablishment of the aircraft maintenance function at New Cumberland, would be feasible. The group concluded, however, that neither of these alternatives offered personnel or costs savings of a magnitude to justify implementation. The group recommended, therefore, that existing operations be continued pending action on plans that would affect the workloads at the depots and change the economics of the situation.

#### Evaluation of alternatives

In February 1977 the Army asked subordinate activities for additional data regarding the two alternatives. A report, prepared as a case study and justification folder, was issued in September 1977. It recommended that all aircraft maintenance activities at New Cumberland, except for maintenance of air delivery equipment items, be transferred to Corpus Christi. The Army estimated that this would result in (1) annual recurring savings of \$12.9 million and (2) a one-time cost of \$9.36 million.

The Army deferred decision on this recommendation in order to consider another alternative proposed by the Governor of Pennsylvania. The Governor offered State-owned airport facilities near the New Cumberland Army Depot to support expansion of that activity's aircraft maintenance mission.

The Army Audit Agency was requested to review (1) the case study and justification folder and (2) the feasibility study for utilizing Harrisburg International Airport as an Army aircraft maintenance facility. The Agency reviewed the reasonableness and accuracy of significant dollar items contained in the two studies, with the following results.

- In a January 1978 report, the Agency concluded that the data in the case study and justification folder could be relied on for decision purposes, after adjusting the estimated annual cost savings from \$12.9 to \$11.1 million and the estimated one-time cost from \$9.4 to \$7.6 million.

--In a July 1978 report, the Agency stated that the adjusted cost data and staffing data used in the feasibility study for utilizing Harrisburg International Airport were also reasonable for decision purposes, except for some economic factors that required further support or development.

The Army analyzed the State's proposal and concluded that, while the entire Army depot-level workload could be accommodated at Harrisburg International Airport, the State-owned facility, the disadvantages outweighed the advantages.

#### Selection of preferred alternative

On March 29, 1979, the Army announced that its preferred alternative was to consolidate aircraft maintenance functions at Corpus Christi. At the same time, the Army disclosed other management decisions that would reduce New Cumberland's aircraft maintenance workload by about 50 percent. These decisions, made after the issuance of its case study and justification folder in September 1977, involved (1) eliminating depot-level overhaul of OH-58 helicopters and (2) overhauling CH-47 helicopters concurrently with the modernization of the aircraft by a contractor, rather than at a government facility. The Army proposed to accomplish the realignment on a phased basis during fiscal years 1979 through 1982.

The Army had estimated annual savings of \$11.1 million, offset by a one-time cost of approximately \$7.6 million. Early in our review, it was apparent that data regarding costs and savings and personnel to be dislocated by the realignment were no longer appropriate. The data had been developed in connection with the September 1977 study and did not reflect the impact of the Army's decisions concerning overhaul of the OH-58 and CH-47 helicopters.

We discussed the situation with Army officials and requested an updating of the information in the light of these events which significantly altered basic assumptions used in the September 1977 study. Army personnel assembled additional information and made adjustments to the computations. On May 8, 1979, the Army provided us its estimate of the current costs and savings attributable to the proposed realignment. The Army Audit Agency had not audited this information.

SCOPE OF REVIEW

We reviewed pertinent records and reports supporting the Army's determination of the economic advantages of its planned realignment. We obtained information from and held discussions with Army officials and personnel from

- the Materiel and Readiness Command, Alexandria, Virginia;
- the Depot Systems Command, Chambersburg, Pennsylvania;
- the New Cumberland Army Depot, New Cumberland, Pennsylvania;
- the Army Audit Agency, Alexandria, Virginia; and
- the CH-47 Project Management Office, Aviation Readiness and Development Command, St. Louis, Missouri.

We toured the aircraft maintenance facilities at the New Cumberland Army Depot to observe aviation maintenance activities. We also met with selected employees from the Depot to provide them an opportunity to comment on the planned realignment.

We also obtained information and held discussions with officials of the Boeing Vertol Company, Ridley Park, Pennsylvania, regarding the overhaul costs that could be anticipated during modernization of the CH-47 helicopters.

REALIGNMENT OF NEW CUMBERLAND  
AIRCRAFT MAINTENANCE ACTIVITIES  
WOULD REDUCE COSTS

The Army's updated estimates indicated that implementation of the proposed realignment actions would save \$10.8 million annually by the end of fiscal year 1982. A one-time cost of about \$5.8 million would also be incurred to implement the actions.

We estimate that the Army would save \$9.4 million annually and would incur a one-time cost of \$6.6 million. Our estimates differ from the Army's because in some instances the Army (1) did not use current information, (2) used forecasted rather than actual data, (3) used improper estimating methodology, (4) made arithmetical errors, and (5) did not include all applicable one-time costs.

Following is a comparison of our data with the Army's estimates of recurring savings and nonrecurring costs.

	<u>Army estimates</u>	<u>GAO estimates</u>
	----(000 omitted)----	
Gross savings by eliminating aviation maintenance activities at New Cumberland	\$21,546	\$22,563
Offset by added recurring costs resulting from:		
Consolidating repair and modification of aircraft components and repair of component parts at Corpus Christi	\$5,283	\$7,807
Contractor overhaul of CH-47 airframe components while modernizing the aircraft	4,105	4,054
Expanded field repair rather than depot-level overhaul or CH-58 helicopters	<u>1,335</u>	<u>10,723</u>
	<u>1,335</u>	<u>13,196</u>
Net annual recurring savings	<u>\$10,823</u>	<u>\$ 9,367</u>
One-time costs	<u>\$ 5,818</u>	<u>\$ 6,576</u>

Savings at New Cumberland

Except for the maintenance of air delivery equipment items, the Army plans to eliminate all aviation maintenance activities at New Cumberland by the end of fiscal year 1982. The principal functions to be eliminated include complete overhauls of CH-47 and OH-58 airframes, repair and modification of aircraft components, and repair of unserviceable component parts.

The Army estimated that 988 civilian and 15 military positions would be eliminated at New Cumberland, resulting in annual savings of \$21.5 million. Our estimate is that 868 civilian and 15 military positions would be eliminated with annual savings of \$22.6 million.

The Army's updated position on personnel reduction and gross savings was computed on the basis of personnel authorizations and budgetary data for fiscal year 1977. We made our computations using personnel costs and other cost data forecasted for New Cumberland for fiscal year 1979, the most current available. We estimate that the elimination of the aviation maintenance functions would save about \$22.6 million annually.

The following is a comparison of the Army's estimate and our estimate of the number of positions that would be eliminated from the various mission/functional categories and the related costs.

Army computations

	<u>Number of positions</u>	<u>Average staffing costs</u>	<u>Gross annual savings</u>
Civilian mission/ function:			
Maintenance	782	\$23,131	\$18,088,821
Supply support	106	15,945	1,690,170
Base operations	<u>100</u>	15,010	<u>1,501,000</u>
Total civilian	988		21,279,991
Military:			
Officers (7) and enlisted men (8)	<u>15</u>		<u>266,698</u>
Total civilian and military	<u>1,003</u>		<u>\$21,546,689</u>

GAO computations

Civilian mission/ function:			
Maintenance	689	\$26,562	\$18,301,621
Supply support	94	16,919	1,590,386
Base operations	<u>85</u>	27,889	<u>2,370,574</u>
Total civilian	868		22,262,581
Military:	<u>15</u>		<u>300,240</u>
Total civilian and military	<u>883</u>		<u>\$22,562,821</u>

We found that increased costs of personnel benefits and goods and services resulting from salary and wage increases and other inflationary factors more than offset cost reduction attributable to the decreases in the numbers of employees. For example, while the number of authorized aircraft maintenance positions decreased from 785 in fiscal year 1977 to 704 in fiscal year 1979, a reduction of 10.32 percent, the Army estimated that inflationary factors pushed costs up generally by 13.09 percent.

Added recurring costs  
at Corpus Christi

The Army plans to transfer to Corpus Christi the New Cumberland aircraft maintenance functions of repairing or modifying aircraft components and repairing component parts. This will necessitate adding maintenance and support positions at Corpus Christi. Based on actual workload data for fiscal year 1978, we estimate that an additional 293 civilian and 3 military positions will be needed. Our estimate of military positions is the same as the Army's estimate.

The following is a comparison of the Army's estimate and our estimate of the number of additional civilian positions needed.

<u>Mission/function</u>	<u>Number of positions</u>	
	<u>Army</u>	<u>GAO</u>
Maintenance	191	241
Supply support	26	32
Base operations	<u>16</u>	<u>20</u>
Total	<u>233</u>	<u>293</u>

Using personnel and other costs forecasted for Corpus Christi for 1979, we estimated the added annual recurring costs would be \$7.8 million.

Added recurring costs for overhaul  
work during CH-47 modernization

The Army plans to award a commercial contract to modernize the 361 CH-47 helicopters in its active inventory. The Army anticipates that the first group of helicopters to be modernized will be inducted in fiscal year 1981, and that it will take about 12 years before all the aircraft are modernized. According to the Army, those CH-47 airframe components that are not to be modernized will be overhauled, as necessary, by the contractor. The Army estimated that in doing this the contractor will be absorbing about 36 percent of New Cumberland's CH-47 overhaul workload.

Using actual workload data for fiscal year 1978, we estimate that the New Cumberland work force involved in performing complete overhaul of CH-47 airframes has the capability of annually overhauling about 22 aircraft. Based on this capability and forecasted contractor costs, we estimate that the contractor would incur annual costs of \$4.05 million to perform tasks associated with airframe overhaul that are not required for modernization of the aircraft.

Added recurring costs to perform field  
repair of OH-58 helicopters

An Army study indicated that the principal cause of induction of OH-58 helicopters for depot overhaul was damage to their honeycomb panels. The study also indicated that the panels could be repaired at the field level. This led to a determination that the requirement for depot overhaul of OH-58s be eliminated in fiscal year 1979.

OH-58 helicopters will be repaired by a team of two repair specialists who will travel to field locations. Field units will disassemble the aircraft and reassemble it after the specialists make the needed repairs. The Army plans to repair an average of 76 helicopters a year during the 5-year period beginning in fiscal year 1980. We examined forecasted costs of labor, materials, and travel and found the Army's estimate of \$1.3 million to repair 76 helicopters in the field each year to be reasonable.

ONE-TIME COST AS A RESULT OF  
PLANNED REALINEMENT ACTIONS

In performing an economic analysis of a candidate for realignment action, it is a Department of Defense criterion that a one-time cost be amortized by net annual recurring savings in less than 7 to 10 years, except in unusual cases. We found that one-time costs would be amortized in less than 1 year based on both the Army's estimate and our estimate.

The Army's estimates of one-time costs relate to (1) severance pay for employees to be displaced at New Cumberland, (2) relocating civilian and military employees from New Cumberland to Corpus Christi, (3) transferring equipment from New Cumberland to Corpus Christi, and (4) recruiting

and training new employees at Corpus Christi and the productivity lag of new employees. The following is a comparison of the Army's estimate and our estimates.

<u>Cost factors</u>	<u>Army</u>	<u>GAO</u>
Severance pay	\$2,938,572	\$1,826,370
Unemployment compensation	-	1,522,080
Productivity lag at Corpus Christi	958,320	1,214,640
Relocation of civilian personnel	1,003,656	998,024
Equipment packing, crating, and unpacking	487,435	487,237
Equipment removal and installation	138,626	138,626
Equipment transportation	90,780	90,721
Recruiting new personnel	128,700	161,850
Training of civilian personnel	59,500	124,500
Transfer of military personnel	7,218	7,218
Temporary duty travel	<u>5,412</u>	<u>5,412</u>
Total	<u>\$5,818,219</u>	<u>\$6,576,678</u>

Primary reasons for differences in the estimates are (1) differing estimates of the number of civilian personnel positions that would be eliminated at New Cumberland and that would be needed at Corpus Christi, (2) the Army's exclusion of any costs for unemployment compensation, and (3) differing methods used in estimating severance pay and training costs.