Audit Report

OFFICE OF THE INSPECTOR GENERAL

DEFENSE BASE REALIGNMENT AND CLOSURE BUDGET DATA FOR THE REALIGNMENT OF UNDERGRADUATE PILOT TRAINING FROM REESE AIR FORCE BASE, TEXAS, TO COLUMBUS AIR FORCE BASE, MISSISSIPPI

Report No. 98-015 October 27, 1997

Department of Defense

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Acronyms

AFB	Air Force Base
AFFF	Aqueous Film Forming Foam
BRAC	Base Realignment and Closure
MILCON	Military Construction

INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
400 ARMY NAVY DRIVE
ARLINGTON, VIRGINIA 22202-2884

October 27, 1997

MEMORANDUM FOR UNDER SECRETARY OF DEFENSE (COMPTROLLER)
ASSISTANT SECRETARY OF THE AIR FORCE
(FINANCIAL MANAGEMENT AND COMPTROLLER)

SUBJECT: Audit Report on Defense Base Realignment and Closure Budget Data for the Realignment of Undergraduate Pilot Training From Reese Air Force Base, Texas, to Columbus Air Force Base, Mississippi (Report No. 98-015)

We are providing this audit report for your information and use. This report is one in a series about FY 1997 Defense base realignment and closure military construction costs. We considered management comments on a draft of this report when preparing the final report.

Comments on the draft conformed to the requirements of DoD Directive 7650.3 and left no unresolved issues. Therefore, no additional comments are necessary.

We appreciate the courtesies extended to the audit staff. Questions on the audit should be directed to Mr. Wayne K. Million, Audit Program Director, at (703) 604-9312 (DSN 664-9312) or Mr. Michael A. DiRenzo, Audit Project Manager, at (703) 604-9314 (DSN 664-9314). See Appendix D for the report distribution. The audit team members are listed inside the back cover.

David K. Steensma

David K. Steensma
Deputy Assistant Inspector General
for Auditing

Office of the Inspector General, DoD

Report No. 98-015 **October 27, 1997**
(Project No. 7CG-5002.20)

Audit Report on Defense Base Realignment and Closure Budget Data for the Realignment of Undergraduate Pilot Training From Reese Air Force Base, Texas, to Columbus Air Force Base, Mississippi

Executive Summary

Introduction. This report is one in a series about FY 1997 Defense base realignment and closure military construction costs. Public Law 102-190, "National Defense Authorization Act for Fiscal Years 1992 and 1993," December 5, 1991, directs the Secretary of Defense to ensure that the amount of the authorization that DoD requested for each military construction project associated with Defense base realignment and closure does not exceed the original estimated cost provided to the Commission on Defense Base Closure and Realignment (the Commission). If the requested budget amounts exceed the original project cost estimates provided to the Commission, the Secretary of Defense is required to explain to Congress the reasons for the differences. The Office of the Inspector General, DoD, is required to review each Defense base realignment and closure military construction project for which a significant difference exists from the original cost estimate and to provide the results of the review to the congressional Defense committees.

Audit Objectives. The overall audit objective was to determine the accuracy of Defense base realignment and closure military construction budget data. Specifically, the audit objectives were to determine whether the proposed military construction projects are based on valid Defense base realignment and closure requirements, whether military construction decisions were supported, and whether the analysis considered existing facilities. This report provides the results of the audit of project EEPZ973006R1, "Aircraft Maintenance Hangar," valued at $1.1 million, and one conjunctively funded operation and maintenance military construction project valued at $237,000. The conjunctively funded project was reviewed because it expanded the scope of the $1.1 million base realignment and closure project. This audit also assessed the adequacy of the management control program as it applied to the audit objective. The management control program will be discussed in a summary report on FYs 1997 and 1998 Defense base realignment and closure military construction budget data.

Audit Results. The Air Force underestimated the requirements and costs for project EEPZ973006R1, "Aircraft Maintenance Hangar," valued at $1.1 million. The Air Force used incorrect category codes to develop the project requirements. As a result, the project was underbudgeted by $1.28 million. The operation and maintenance project was adequately supported and funded. See Appendix C for a summary of invalid or partially valid requirements for the project we reviewed.

Summary of Recommendations. We recommend that the Under Secretary of Defense (Comptroller) place project EEPZ973006R1 on administrative withhold until management submits a revised DD Form 1391 to accurately reflect requirements and costs. We recommend that the Commander, Air Education and Training Command, conduct a site survey and validate the requirements for the Aircraft Maintenance Hangar. We also recommend that the Commander, Air Education and Training Command, submit a revised DD Form 1391 that accurately reflects valid Defense base realignment and closure requirements and costs for the project.

Management Comments. The Under Secretary of Defense (Comptroller) concurred with the recommendation to place funding for project EEPZ973006R1 on administrative withhold. The Air Force concurred with the recommendation to conduct a site survey and validate the requirements for the project. The Air Force also submitted a new DD Form 1391, valued at $1.7 million, to reflect a revised requirement and design and a new, validated, cost estimate. See Part I for the complete discussion of management comments and Part III for the complete text of management comments.

Audit Response. The Under Secretary of Defense (Comptroller) and the Air Force comments are responsive to the recommendations and no additional comments are required.

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Part I - Audit Results

Audit Background

The Office of the Inspector General, DoD, is performing audits of the Defense base realignment and closure (BRAC) process. This report is one in a series about FY 1997 BRAC military construction (MILCON) costs. For additional information on the BRAC process and the overall scope of the audit of BRAC MILCON costs, see Appendix B.

Commission Recommendation. The FY 1995 Commission recommended the closure of Reese Air Force Base (AFB), Texas. The Commission further recommended that the 64th Flying Training Wing be deactivated and its assigned aircraft be redistributed or retired. The Commission found undergraduate pilot training requirements had decreased because of the drawdown in the force structure.

Missions at Columbus Air Force Base, Mississippi. The 14th Flying Training Wing's missions are undergraduate pilot training in T-37, T-38, and T-1A jet trainers and introduction to fighter fundamentals training in the AT-38. Pilots selected to fly fighter/bomber aircraft train on the T-38 and AT-38 aircraft.

Audit Objectives

The overall audit objective was to determine the accuracy of BRAC MILCON budget data. The specific objectives were to determine whether the proposed projects were valid BRAC requirements, whether the decision for MILCON was supported with required documentation including an economic analysis, and whether the economic analysis considered existing facilities. Another objective was to assess the adequacy of the management control program as it applied to the overall audit objective.

This report provides the results of the audit of project EEPZ973006R1, "Aircraft Maintenance Hangar," valued at $1.1 million, and one conjunctively funded operation and maintenance military construction project valued at $237,000, for the realignment of undergraduate pilot training from Reese AFB to Columbus AFB.

See Appendix A for a discussion of the scope and methodology. The management control program will be discussed in a summary report on FYs 1997 and 1998 BRAC MILCON budget data.

Prior Audits and Other Reviews

Three summary reports have been issued for the audits of BRAC budget data for FYs 1992 through 1996. Those reports list individual projects. Since April 1996, numerous additional audit reports have been issued that address DoD BRAC budget data for FYs 1997 and 1998. Details on those reports are available upon request.

Aircraft Maintenance Hangar

The Air Force underestimated the requirements for project EEPZ973006R1, "Aircraft Maintenance Hangar," valued at $1.1 million. The Air Force used an incorrect category code included in Air Force Handbook 32-1084, "Facility Requirements," September 1, 1996, to develop the project requirements. When developing the project requirements, the Air Force used category code 211-154, for a maintenance building, but should have used category code 211-111, for a maintenance hangar. Consequently, the Air Force did not include adequate cost estimates for site preparation and a fire suppression system. The costs for site preparation and the fire suppression system resulted in an additional estimated cost of $1,284,374. As a result, the project cannot be completed until additional funds are made available.

Change in the Scope of the Original Project. Headquarters, Air Education and Training Command, conducted a BRAC site survey at Reese AFB in October 1995. The Air Force determined three additional covered parking spaces were needed at Columbus AFB for aircraft relocating from Reese AFB.

DD Form 1391, "Military Construction Project Data," March 19, 1996, for Project EEPZ973006R1 included 950 square meters for a new aircraft maintenance hangar to support the relocation of aircraft from Reese AFB. The project was estimated to cost $1.1 million. The project scope was increased from 950 square meters to 1150 square meters. The Air Force agreed to conjunctively fund an FY 1997 Operation & Maintenance (O&M) Project, EEIC529220 "Construct Addition To BRAC Hangar, (Companion Project To EEPZ973006R1)," valued at $237,000. The O&M project included 200 square meters to increase the size to accommodate three covered bays for T-1A aircraft rather than two bays for T-37 and a bay for T-1A aircraft. The Air Force planned to use an existing hangar space for the two T-37 and one T-1A BRAC spaces. The scope changed because the Air Force planned to put three T-1A aircraft in the hangar rather than the T-37 aircraft.

Site Preparation and Fire Protection

The Air Force did not estimate sufficient funds to cover the cost for site preparation and fire protection for project EEPZ973006R1. The U.S. Army Corps of Engineers estimated the Air Force needed $610,792 for fire protection and $644,927 for site preparation for construction of the maintenance hangar. This resulted in an additional estimated cost of $1,284,374, including escalation and contingencies. The Air Force representatives admitted the original budget estimate was unrealistic.

Site Preparation. Site work required major demolition and excavation. The proposed site for the hangar is located on an existing concrete apron. Part of the concrete apron will be removed to construct the hangar and to redirect storm water runoff. Demolition of an existing metal shed and wooden fence will be

required. Excavation is required to provide a storm water retention pond to support the fire protection system. During our visit, Air Force personnel stated that an alternative location may be selected to construct the hangar to reduce the site work cost.

Fire Protection. Criteria included in Air Force Engineering Technical Letter (96-1), January 22, 1996, provides fire protection criteria for facilities housing aircraft on Air Force installations. The criteria applies to adjacent aircraft and the facility during a fuel spill fire. The new aircraft maintenance hangar will be protected by an overhead Aqueous Film Forming Foam (AFFF) fire suppression system. AFFF is an organic additive for fire fighting water. The AFFF causes a foaming action that enhances the water's fire fighting capability during fuel type fires.

The table below summarizes the estimated costs of the Aircraft Maintenance Hangar project and the project understatement.

Aircraft Maintenance Hangar Project Costs	
Hangar	$1,547,467
Covered walkway	15,389
Alterations to building	91,173
Site work	730,345
Total	**$2,384,374**
Estimate per DD Form 1391	(1,100,000)
Estimated project understatement	**$1,284,374**

Recommendations, Management Comments, and Audit Response

1. We recommend that the Under Secretary of Defense (Comptroller) place project EEPZ973006R1 on administrative withhold until management submits a revised DD Form 1391 to accurately reflect requirements and costs.

Under Secretary of Defense (Comptroller) Comments. The Under Secretary of Defense (Comptroller) concurred with the recommendation to place funding for project EEPZ973006R1 on administrative withhold.

2. We recommend that the Commander, Air Education and Training Command:

a. Conduct a site survey and validate the requirements for the aircraft maintenance hangar.

b. Submit a revised DD Form 1391, "Military Construction Project Data," for project EEPZ973006R1, "Aircraft Maintenance Hangar," that accurately reflects valid Defense base realignment and closure requirements and costs.

Air Force Comments. The Air Force concurred with the recommendation to conduct a site survey and validate the requirements for the project. The Air Force stated that site work was underestimated due to a programming oversight involving the requirement for a fire suppression system and extensive site preparation. The Air Force also submitted a new DD Form 1391, valued at $1.7 million, to reflect a revised requirement and design and a new, validated, cost estimate.

Audit Response. The Air Force comments are responsive to the recommendations and no additional comments are required. The Air Force provided adequate documentation supporting the project requirements and revised cost estimates.

Part II - Additional Information

Appendix A. Scope and Methodology

Scope

Scope of This Audit. We examined the BRAC MILCON budget request, economic analysis, and supporting documentation, and interviewed Air Force personnel responsible for planning, programming and developing the requirements for the BRAC MILCON project to expand the aircraft maintenance hangar at Columbus AFB. Project EEPZ973006R1, "Aircraft Maintenance Hangar," was estimated at $1.1 million.

Audit Period, Standards, and Locations. This economy and efficiency audit was performed during January through May 1997 in accordance with auditing standards issued by the Comptroller General of the United States as implemented by the Inspector General, DoD. The audit did not rely on computer-processed data or statistical sampling procedures.

Contacts During the Audit. We visited or contacted individuals and organizations within DoD. Further details are available upon request.

Appendix B. Background of Defense Base Realignment and Closure

Commission on Defense Base Closure and Realignment. On May 3, 1988, the Secretary of Defense chartered the Commission on Defense Base Closure and Realignment (the Commission) to recommend military installations for realignment and closure. Congress passed Public Law 100-526, "Defense Authorization Amendments and Base Closure and Realignment Act," October 24, 1988, which enacted the Commission's recommendations. The law also established the Defense Base Closure Account to fund any necessary facility renovation or MILCON projects associated with BRAC. Public Law 101-510, "Defense Base Closure and Realignment Act of 1990," November 5, 1990, reestablished the Commission. The law also chartered the Commission to meet during calendar years 1991, 1993, and 1995 to verify that the process for realigning and closing military installations was timely and independent. In addition, the law stipulates that realignment and closure actions must be completed within 6 years after the President transmits the recommendations to Congress.

Required Defense Reviews of BRAC Estimates. Public Law 102-190, "National Defense Authorization Act for Fiscal Years 1992 and 1993," December 5, 1991, states that the Secretary of Defense shall ensure that the authorization amount that DoD requested for each MILCON project associated with BRAC actions does not exceed the original estimated cost provided to the Commission. Public Law 102-190 also states that the Inspector General, DoD, must evaluate significant increases in BRAC MILCON project costs over the estimated costs provided to the Commission and send a report to the congressional Defense committees.

Military Department BRAC Cost-Estimating Process. To develop cost estimates for the Commission, the Military Departments used the Cost of Base Realignment Actions computer model. The Cost of Base Realignment Actions computer model uses standard cost factors to convert the suggested BRAC options into dollar values to provide a way to compare the different options. After the President and Congress approve the BRAC actions, DoD realigning activity officials prepare a DD Form 1391, "FY 1997 Military Construction Project Data," for each individual MILCON project required to accomplish the realigning actions. The Cost of Base Realignment Actions computer model provides cost estimates as a realignment and closure package for a particular realigning or closing base. The DD Form 1391 provides specific cost estimates for an individual BRAC MILCON project.

Limitations and Expansion to Overall Audit Scope. Because the Cost of Base Realignment Actions computer model develops cost estimates as a BRAC package and not for individual BRAC MILCON projects, we were unable to determine the amount of cost increases for each individual BRAC MILCON project. Additionally, because of prior audit efforts that determined potential problems with all BRAC MILCON projects, our audit objectives included all large BRAC MILCON projects.

Overall Audit Selection Process. We reviewed the FY 1998 BRAC MILCON $354.3 million budget submitted by the Military Departments and the Defense Logistics Agency. We excluded projects that were previously reviewed by DoD audit organizations. We grouped the remaining BRAC MILCON projects by location and selected all projects in the budget. We also reviewed those FY 1997 BRAC MILCON projects that were not included in the previous FY 1997 budget submission, but were added as part of the FY 1998 BRAC MILCON budget package.

Appendix C. Projects Identified as Invalid or Partially Valid

Table C-1. Causes of Invalid or Partially Valid Projects

Project Location	Project Number	Causes of Invalid Projects		Causes of Partially Valid Projects	
		Overstated	Unsupported	Overstated	Unsupported
Columbus AFB, MS	EEPZ973006R1			X*	

*Project EEPZ973006R1 requirements and costs were understated.

Table C-2. Recommended Changes in Project Estimates

Project Location	Project Number	Amount of Estimate on DD Form 1391 (thousands)	Recommended Amount of Change	
			Invalid Projects (thousands)	Partially Valid Projects (thousands)
Columbus AFB, MS	EEPZ973006R1	$1,100		($600)
Total		**$1,100**		**($600)**
Total Invalid and Partially Valid Projects				**($600)**

Appendix D. Report Distribution

Office of the Secretary of Defense

Under Secretary of Defense (Comptroller)
  Deputy Chief Financial Officer
  Deputy Comptroller (Program/Budget)
Deputy Under Secretary of Defense (Industrial Affairs and Installations)
  Principal Assistant Deputy Under Secretary of Defense (Industrial Affairs and Installations)
Assistant Secretary of Defense (Public Affairs)
Director, Defense Logistics Studies Information Exchange

Department of the Army

Auditor General, Department of the Army

Department of the Navy

Assistant Secretary of the Navy (Financial Management and Comptroller)
Auditor General, Department of the Navy

Department of the Air Force

Assistant Secretary of the Air Force (Financial Management and Comptroller)
  Deputy Assistant Secretary of the Air Force (Installations), Base Transition Division
Headquarters, Air Education And Training Command, Randolph AFB
  Commander, 14th Flying Training Wing, Columbus AFB
Auditor General, Department of the Air Force

Other Defense Organizations

Director, Defense Contract Audit Agency
Director, Defense Logistics Agency
Director, National Security Agency
  Inspector General, National Security Agency
Inspector General, Defense Intelligence Agency

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Office of Management and Budget
Technical Information Center, National Security and International Affairs Division, General Accounting Office

Non-Defense Federal Organizations and Individuals (cont'd)

Chairman and ranking minority member of each of the following congressional committees and subcommittees:

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Senate Subcommittee on Defense, Committee on Appropriations
Senate Subcommittee on Military Construction, Committee on Appropriations
Senate Committee on Armed Services
Senate Committee on Governmental Affairs
House Committee on Appropriations
House Subcommittee on Military Construction, Committee on Appropriations
House Subcommittee on National Security, Committee on Appropriations
House Committee on Government Reform and Oversight
House Subcommittee on Government Management, Information and Technology, Committee on Government Reform and Oversight
House Subcommittee on National Security, International Affairs, and Criminal Justice, Committee on Government Reform and Oversight
House Committee on National Security

Part III - Management Comments

Under Secretary of Defense (Comptroller) Comments

OFFICE OF THE UNDER SECRETARY OF DEFENSE
1100 DEFENSE PENTAGON
WASHINGTON, DC 20301-1100

COMPTROLLER
(Program/Budget)

August 25, 1997

MEMORANDUM FOR ASSISTANT INSPECTOR GENERAL FOR AUDITING, DOD IG

SUBJECT: DoD IG Draft Audit Report on Defense Base Realignment and Closure Budget Data for Realignment of Undergraduate Pilot Training From Reese Air Force Base, Texas, to Columbus Air Force Base, Mississippi (Project No. 7CG-5002.20)

This responds to your memorandum of July 25, 1997, requesting our comments on the subject report.

The audit recommends that the USD (Comptroller) place the funding for project EEPZ973006R1, "Aircraft Maintenance Hangar," at Columbus Air Force Base, Mississippi, on administrative withhold until the Air Force submits a revised DD Form 1391 to accurately reflect requirements and costs. The audit contends that the Air Force underestimated the requirements and costs of the project by $1.2 million because they used incorrect category codes to develop the project requirements.

We generally agree with the audit and its recommendations and will place the funds associated with the Aircraft Maintenance Hangar project on administrative withhold until the audit issue is resolved.

Henry R. Sodano
Director for Construction

Assistant Secretary of the Air Force Comments

Final Report Reference

DEPARTMENT OF THE AIR FORCE
WASHINGTON, DC

Office of the Assistant Secretary

21 August 1997

MEMORANDUM FOR ASSISTANT INSPECTOR GENERAL FOR AUDITING
OFFICE OF THE INSPECTOR GENERAL
DEPARTMENT OF DEFENSE

FROM: SAF/MIIT
1660 Air Force Pentagon
Washington, DC 20330-1660

SUBJECT: Draft Audit Report on Defense Base Realignment and Closure Budget Data for the Realignment of Undergraduate Pilot Training from Reese Air Force Base, Texas, to Columbus Air Force Base, Mississippi (Project No. 7CG-5002.20, July 25, 1997).

This is in reply to your memorandum requesting the under Secretary of Defense (Comptroller) place project EEPZ 973006R1, "Aircraft Maintenance Hangar" on administrative withhold until Management submits a revised DD Form 1391 to accurately reflect requirements and costs.

The Air Force CONCURS. The requested DD Form 1391 is attached.

Not included. Available upon request.

Your second recommendation is that Air Education and Training Command (HQ AETC) conduct a validated site survey to assess the cost overruns for the Aircraft Maintenance Hangar and submit a revised DD Form 1391 for Project EEPZ 973006 R1 that accurately reflects valid Base Realignment and Closure (BRAC) requirements and costs.

The Air Force CONCURS. During the requirements costing phase we used the category code for a maintenance facility (vs. maintenance hangar) thinking that it would better reflect the (lower) cost of the smaller hangar requirement. As it turned out, this was not the case since the cost factors for the maintenance facility did not consider the requirement for an Aqueous Film Forming Foam (AFFF) fire suppression system. The site work was underestimated due to a programming oversight. The new facility was sited on an existing concrete apron to meet operational needs. We originally believed that this would result in minimal site work and cost, as reflected in the original program documents. However, this siting actually placed the facility in a low area of the apron, which required extensive site preparation, including slab removal and replacement, to provide an adequate site for the facility. A thorough survey and validation of requirements was conducted as part of the design phase of the project. Current Working Estimate (CWE) reflects current design and accurate costs required to complete the project.

The new DD Form 1391 (attached) reflects the correct category code.

RAYMOND A. NEALL, Lt Col, USAF
Chief, Base Transition Division

Attachment:
DD Form 1391

cc:
HQ AETC/CE/XPP/FMA/DS
HQ USAF/ILEC
SAF/FMBIC
SAF/MII

Audit Team Members

This report was prepared by the Contract Management Directorate, Office of the Assistant Inspector General for Auditing, DoD.

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