Audit Report

OFFICE OF THE INSPECTOR GENERAL

JOINT CROSS-SERVICE GROUP FOR UNDERGRADUATE PILOT TRAINING 1995 BASE REALIGNMENT AND CLOSURE PROCESS

Report No. 95-175

April 13, 1995

Department of Defense

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Acronyms

AFB	Air Force Base
BRAC	Base Realignment and Closure
JCSG	Joint Cross-Service Group
NAS	Naval Air Station
UPT	Undergraduate Pilot Training

INSPECTOR GENERAL
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Report No. 95-175

April 13, 1995

MEMORANDUM FOR DEPUTY UNDER SECRETARY OF DEFENSE (READINESS)

SUBJECT: Report on the Joint Cross-Service Group for Undergraduate Pilot Training 1995 Base Realignment and Closure Process (Project No. 4CG-5016.05)

Introduction

We are providing this report for your information and use. This report is one in a series of reports that discusses the review of the Joint Cross-Service Groups (JCSGs) for 1995 base realignment and closure (BRAC 95) implementation of the internal control plan for managing the identification of DoD cross-Service opportunities. Six JCSGs implemented the BRAC 95 Steering Group's internal control plan to ensure the accuracy, completeness, and integrity of the information upon which the Secretary of Defense recommendations for realignments and closures to the 1995 Commission on Defense Base Closure and Realignment (the 1995 Commission) are based. The Inspector General, DoD, was directed by the Deputy Secretary of Defense to review the adequacy and implementation of the internal control plan over this process.

Audit Results

The JCSG for Undergraduate Pilot Training (UPT) implementation of the internal control plan was generally effective. We identified the following deficiencies to management, and management took the appropriate action to correct the deficiencies:

o computer-analysis scoring sheet errors and

o identifying and referencing source documents for scoring sheet determinations.

Audit Objectives

The overall audit objective was to assess the adequacy of the BRAC 95 Steering Group's internal control plan. The specific objective of this audit was to determine whether the JCSG-UPT adequately implemented the internal control plan. A summary report will discuss the overall audit objective.

Scope and Methodology

We reviewed the JCSG-UPT process for collecting and analyzing BRAC 95 data. We did not review the data collection process of the Military Departments.

We attended JCSG-UPT meetings and reviewed the formal minutes of the meetings.

We validated the JCSG-UPT process used to derive undergraduate pilot training site functional values and functional capacities from data the Military Departments submitted.

We verified that the JCSG-UPT applied certified data for developing alternative recommendations to the Military Departments.

Statistical Sampling Methodology. We applied statistical sampling to validate the 4,631 data call responses used for scoring functional values. The sampling plan was developed by the Quantitative Methods Division, Audit Planning and Technical Support Directorate, Office of the Assistant Inspector General for Auditing, DoD. The statistical sampling was used to assess the reliability of the computer processed data used in computer models for the JCSG-UPT process. The details of the statistical sampling plan and results are in Enclosure 1.

Audit Standards and Locations. This program audit was conducted from January 1994 through March 1995. The audit was conducted in accordance with auditing standards issued by the Comptroller General of the United States as implemented by the Inspector General, DoD. Accordingly, we included tests of internal controls considered necessary. We conducted the audit at various DoD organizations and locations. Enclosure 3 lists the organizations we visited or contacted.

Internal Control Plan

On April 13, 1994, the Steering Group issued the BRAC 95 internal control plan for the JCSGs to use in the BRAC 95 process. The objective of the internal control plan was to ensure the accuracy, completeness, and integrity of the information upon which the Secretary of Defense recommendations for realignments and closures will be based.

The internal control plan established two principal mechanisms to control the review and analytical process: organization and documentation.

Implementation of Organizational Controls. Organizational controls consisted of the establishment of three organizations that were separated by distinct functional boundaries and levels of decisionmaking authorities. An Inspector General, DoD, summary report will discuss the implementation of organizational controls.

Implementation of Documentation Controls. Documentation controls were divided into the following control elements: data information and collection, certification, record keeping, oral briefings, outside studies, technical experts, and access to records. We reviewed the JCSG-UPT implementation of these controls.

The primary purpose of the internal control plan was to provide a consistent set of management controls for all JCSGs and to ensure the accuracy of the data collection and analysis process. In addition, the internal control plan incorporated the certification procedures in Public Law 101-510, "Defense Base Closure and Realignment Act of 1990," November 5, 1990, as amended, and policy guidance issued in the Deputy Secretary of Defense memorandum, "1995 Base Realignment and Closures," January 7, 1994.

Audit Background

The Deputy Secretary of Defense memorandum established policy, procedures, authorities, and responsibilities for selecting bases for realignment or closure under Public Law 101-510, as amended. To oversee the entire process and to enhance opportunities for consideration of cross-Service tradeoffs and multi-Service use of the remaining infrastructure, the memorandum established a BRAC 95 Review Group, a BRAC 95 Steering Group, and six BRAC 95 JCSGs. In addition, the Deputy Secretary of Defense directed the Inspector General, DoD, to review the activities of the JCSGs to ensure such activities comply with the requirements of the internal control plan.

BRAC 95 Review Group Authorities. The Review Group oversees the entire BRAC 95 process. The Review Group was chaired by the Deputy Secretary of Defense and included a senior representative from each Military Department, chairperson(s) of the Steering Group, and each JCSG; and senior representatives from other DoD Components. Authorities of the Review Group included, but were not limited to:

- o reviewing BRAC 95 analysis policies and procedures,
- o reviewing BRAC 95 excess capacity analyses,
- o establishing BRAC 95 closure or realignment alternatives and numerical excess capacity reduction targets for consideration by the DoD Components, and
- o making recommendations to the Secretary of Defense.

BRAC 95 Steering Group Authorities. The Steering Group assisted the Review Group in exercising its authorities and reviewed DoD Component supplementary BRAC 95 guidance. The Steering Group was chaired by the Assistant Secretary of Defense (Economic Security) and was composed of representatives from each Military Department, each JCSG, and other DoD Components.

BRAC 95 Joint Cross-Service Groups Authorities. The JCSGs were established in six areas with significant potential for cross-Service impact in the BRAC 95 process. The six JCSGs are:

- o depot maintenance,
- o test and evaluation,
- o laboratories,
- o medical treatment facilities including graduate medical education,
- o undergraduate pilot training, and
- o economic impact.

The JCSGs are chaired by senior DoD officials, with members from each Military Department and other DoD offices, as considered appropriate by the chairperson.

Joint Cross-Service Group Responsibilities. The JCSGs (excluding the JCSG for Economic Impact) were tasked to perform the following functions.

- o Establish guidelines, standards, assumptions, measures of merit, data elements, and milestone schedules for cross-Service analysis of the common-support functions.
- o Perform an excess-capacity analyses.
- o Develop closure or realignment alternatives and numerical excess-capacity reduction targets for Military Department consideration.
- o Analyze cross-Service tradeoffs.

The JCSG for Economic Impact had the following unique responsibilities.

- o Establish the guidelines for measuring economic impact and, if practicable, cumulative economic impact.
- o Analyze DoD Component recommendations under those guidelines.
- o Develop a process for analyzing alternative closures or realignments necessitated by cumulative economic impact considerations, if necessary.

Joint Cross-Service Group Process. To fulfill its responsibilities, each group generally performed the following tasks.

- o Developed analytical framework and methodology for analyzing cross-Service opportunities.

o Developed data call requirements to use in the analysis.

o Determined capacity requirements and functional values and prepared optimization scenarios.

o Analyzed the results for operational feasibility.

o Recommended cross-Service opportunities to the Military Departments.

Discussion

Data Information and Collection. The JCSG-UPT received and reviewed certified data call information the Military Departments submitted for validity and consistency. When the JCSG-UPT determined inconsistences existed in the data or that additional data was required, supplemental data call requests were sent to the Military Departments.

The JCSG-UPT identified all UPT sites within each Military Department. The UPT sites provided programs supporting the selection and undergraduate training of pilots, naval flight officers, and navigators. The 14 UPT sites identified were at Naval Air Stations (NAS), Air Force Bases (AFB), and other training sites.

Undergraduate Pilot Training Sites

Military Department	Training Site	Location
Army	Fort Rucker	Alabama
Navy	Corpus Christi NAS	Texas
	Kingsville NAS	Texas
	Meridian NAS	Mississippi
	Pensacola NAS	Florida
	Whiting Field NAS	Florida
Air Force	Air Force Academy	Colorado
	Columbus AFB	Mississippi
	Hondo Field	Texas
	Laughlin AFB	Texas
	Randolph AFB	Texas
	Reese AFB	Texas
	Sheppard AFB	Texas
	Vance AFB	Oklahoma

The JCSG-UPT developed its analytical plan and data call requirements from January through March 1994. The analytical plan established measures of merit with relative weights for determining the functional capabilities and measuring excess functional capacities of the 14 UPT sites. The JCSG-UPT identified 10 common support functions associated with UPT: flight screening, primary pilot training, airlift tanker pilot training, maritime pilot training, bomber

fighter pilot training, strike advanced pilot training, helicopter pilot training, primary Naval flight officer training, weapons system officer training, and panel navigator training. All members of the JCSG-UPT approved the analytical plan. The data call requirements provided information to determine UPT functional requirements, functional value, and functional capacity.

Functional Requirements. Functional requirements define the DoD outyear military airspace and facilities needed for the 10 UPT functions. Derived from data call responses, the results were used by the JCSG-UPT to identify excess capacity.

Functional Value. The Decision-PAD computer analysis model was used to determine the functional value of UPT functions at the 14 UPT sites. The Decision-PAD model assigned functional values by combining the data derived from the UPT site data call responses with weight assignments identified in the JCSG-UPT analytical plan.

Procedurally, the JCSG-UPT analyzed data call responses and placed the appropriate scored results on master input sheets for each UPT site. The scored results from the master input sheets were combined with assigned weights for placement in the Decision-PAD model.

To conduct the data analysis process and score the master input sheets, the JCSG-UPT established a subgroup working team. This working team consisted of members from the JCSG-UPT supported by functional experts from the Military Departments. Whenever consensus could not be achieved within the working team, issues were elevated to the JCSG-UPT for discussion and resolution. The JCSG-UPT ratified all working team results.

Functional Capacity. Functional capacity defines each UPT site's present ability to perform each of the 10 UPT functions. The JCSG-UPT derived functional capacity values for each UPT site from the data call response. Functional capacity scoring was conducted in the same manner as functional value scoring.

In April 1994, the JCSG-UPT sent the data call questionnaires to the Military Departments. The Military Departments forwarded the questionnaires to the UPT sites. The UPT sites completed and certified the data call responses and forwarded them through their chains of command for further reviews and certifications. The data call responses were then passed to their respective Military Department BRAC organizations for delivery to the JCSG-UPT.

In August 1994, the JCSG-UPT working team determined that additional data were needed to facilitate the completion of the functional value scoring process. The working team outlined the additional data requirement at the August 12, 1994, JCSG-UPT meeting. The JCSG-UPT authorized the working team to request the additional data from the UPT sites. Because of time constraints, the working team initially obtained the additional information by telephone or FAX, and then later received the UPT sites' certified responses that were placed in data call folders.

Military Value. In addition to the UPT site data call requirements, the Military Departments were to make military value determinations for each of their UPT sites. The numeric values, ranging from one to three, measured the site's value to the Military Department as a UPT site. As opposed to a ranking system, the Military Departments could assign the same numeric military value to multiple UPT sites. Military values were to be used in the JCSG-UPT analytical process. During the review, we confirmed that the JCSG-UPT used the military values provided by the Military Departments.

Certifications. In compliance with the Defense Base Closure and Realignment Act and the BRAC 95 Steering Group's internal control plan, we determined that UPT site data call responses, including additional information responses, were certified as accurate and complete. The Base Closure and Realignment Act provides that the DoD can use only certified data and information to make decisions and recommendations on prospective cross-Service basing alternatives. The BRAC 95 Steering Group's internal control plan required that the Military Departments certify all data call responses as accurate and complete to the best of their knowledge and belief before its submission to the JCSG-UPT.

Record Keeping. The JCSG-UPT maintained adequate documentation and controls for supporting its UPT cross-Service base closure and realignment alternatives. Record keeping included the analytic plan, UPT site data call responses, functional and capacity value determinations, UPT functional requirements, UPT site military values obtained from the Military Departments, scoring values applied in the Optimization Model, alternative recommendations developed, oral briefings documentation, information from outside studies, the services of technical experts, and records access documentation.

Oral Briefings. The JCSG-UPT received oral briefings from multiple levels within the DoD. As required by the BRAC-95 Steering Group's internal control plan, the substance of the briefings with slides was recorded in the JCSG-UPT meetings minutes.

Outside Studies. The JCSG-UPT did not use outside study results or conclusions in its analyses and deliberations. All data the JCSG-UPT used were solely derived from certified UPT site data call responses and results from sanctioned models.

Technical Experts. The JCSG-UPT did not use technical experts. The JCSG-UPT and its working team relied solely on certified UPT site data call responses and the JCSG-UPT members' combined training, technical experiences, and judgment.

Access to Records. All JCSG-UPT working team data and deliberations were conducted in a secure working area at the Center for Naval Analysis, Arlington, Virginia. UPT site folders maintaining data call responses and related products were stored in locked file cabinets. All data and documents were

treated as sensitive "close hold" information with access restricted to authorized personnel. When JCSG-UPT meeting and working team sessions were finished, all documents were collected and secured.

Data Reviews. The JCSG-UPT performed two reviews of the UPT site data. One review evaluated the quality of the data call responses to determine whether the responses were correctly answered and complete. Another review evaluated and scored information needed to determine functional and capacity values and functional requirements. The JCSG-UPT working team provided staff support and developed products for the JCSG-UPT's review and approval.

Audit Review of Data Review Process. Because we considered the data reduction and analysis process high risk, we made audit tests to determine whether the derived scores on the Decision-PAD model master input sheets were verifiable to the UPT site data call books. Initially we judgmentally selected 60 scored values from the most heavily weighted functional value determinations. We found an error rate of approximately 10 percent. An error was defined as a wrong score. We did not measure differences to determine beneficial or detrimental effect because the JCSG-UPT analytical plan was an incremental building process. The JCSG-UPT had to complete each incremental step in the process before moving to the next step. We also determined that data call responses used in deriving scores needed to be identified and cross-referenced to provide an audit trail.

As a result of our initial review, the JCSG-UPT working team corrected the errors, revalidated the scored values, and created audit trails to certified data call responses before they ran the Decision-PAD model. Our subsequent statistical review of scored functional values placed on master input sheets showed that the error rate had been reduced to less than 5 percent.

Optimization Model. The JCSG-UPT used the BRAC Joint Cross-Service Group Optimization Model as a tool to help develop base closure and realignment alternatives. The Optimization Model generated solution sets of functional alternatives by combining military values with results from the UPT sites functional and capacity value determinations and functional requirements. We determined that data placed in the Optimization Model was traceable to certified UPT installation source documents.

Development of Alternative Recommendations. The JCSG-UPT developed three functional base closure and realignment alternatives using the Optimization Model as a tool that would consolidate cross-Service functions at fewer UPT sites. The JCSG-UPT agreed to the most feasible alternatives and its rationale was recorded in JCSG-UPT meeting minutes. The JCSG-UPT briefed the BRAC 95 Steering Group and forwarded the recommendations to the Military Departments for consideration in their BRAC 95 process.

Conclusion. Based on our review, we concluded that the JCSG-UPT complied with the internal control plan established by the Deputy Assistant Secretary of Defense.

Management Comments

We provided a draft of this report to the addressee on March 15, 1995. Because we made no recommendations and did not claim monetary benefits, no official comments were required. However, the Deputy Assistant Secretary of Defense (Installations) did comment and concurred with the report. Enclosure 2 provides his comments.

We appreciate the courtesies extended to the audit staff. If you have questions on this memorandum, please contact Mr. John E. Meling, Program Director, at (703) 604-9091 (DSN 664-9091) or Mr. David M. Wyte, Project Manager, at (703) 604-9027 (DSN 664-9027). Enclosure 4 lists the distribution of this report.

David K. Steensma

David K. Steensma
Deputy Assistant Inspector General
for Auditing

Enclosures

Statistical Sampling Documentation

Sampling Plan

Sampling Purpose. The purpose of the statistical sampling plan was to estimate the percent of entries on UPT Functional Value master scoring sheets that contained errors.

Universe Represented. The audit universe was defined as all master scoring sheet entries for 10 functional areas and 13 sub-functional categories at 12 military organizations. This universe contained a total of 4,631 entries.

Sampling Design. A simple random sample of 228 entries was drawn from the audit universe.

Sampling Results

Confidence Interval Table. Statistical projection of the sample data are shown in the table.

Percentage of Master Scoring Sheet Entries with Errors

95-Percent Confidence Interval	Percent
Lower Bound	1.9
Point Estimate	4.8
Upper Bound	7.8

Confidence Interval Statement. We are 95-percent confident that from 1.9 percent to 7.8 percent of the 4,631 master scoring sheet entries contained errors. The unbiased point estimate, 4.8 percent, is the most likely single value for the percentage of errors in this universe.

Office of the Assistant Secretary of Defense Comments

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ECONOMIC SECURITY

06 APR 1995

MEMORANDUM FOR INSPECTOR GENERAL, DEPARTMENT OF DEFENSE

SUBJECT: Draft Audit Report on Joint Cross-Service Group for Undergraduate Pilot Training, 1995 Base Realignment and Closure Process (Project No. 4CG-5016.05)

I have reviewed the draft report and concur in the auditor's description of the process used by the Joint Cross-Service Group (JCSG) for Undergraduate Pilot Training to develop alternatives for consideration by the Military Departments during their BRAC analyses.

The Inspector General, DoD, has been a key part of the Department's BRAC process by providing advice and review of organizational and internal management controls for JCSG activities. The involvement of the Inspector General enhanced the process by helping to ensure the accuracy, completeness, and integrity of the information used as a basis for development of functional alternatives by the Joint Cross-Service Groups.

Robert E. Bayer
Deputy Assistant Secretary of Defense
Installations

Organizations Visited or Contacted

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  Deputy Assistant Secretary of Defense (Installations)
    Director, Base Closure and Utilization

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