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United States Government Accountability Office
Washington, DC 20548

March 8, 2007

The Honorable Robert M. Gates
The Secretary of Defense

Subject: *Military Personnel: DMDC Data on Officers' Commissioning Programs is Insufficiently Reliable and Needs to be Corrected*

Dear Secretary Gates:

The Defense Manpower Data Center (DMDC) is a key Department of Defense (DOD) support organization that, among other things, generates reports for defense organizations such as the military services, the Office of the Secretary of Defense, and the Joint Staff. External organizations such as GAO and federally funded research and development centers also rely on DMDC for quantitative data and analyses pertaining to a wide variety of issues, including the numbers of DOD personnel in specified occupations or demographic groups, servicemembers' attitudes, and compensation.¹

DMDC reports to DOD's Office of the Under Secretary of Defense for Personnel and Readiness. In describing its databases, DMDC states that it maintains the largest archive of personnel, manpower, training, and financial data in DOD. It also notes that the personnel data are broad in scope and extend back to the early 1970s covering all services, all components of the total force (active duty, guard, reserve, and civilian), and all phases of the personnel life cycle (accession, separation, and retirement). DMDC data serve as the basis for DOD's annual *Population Representation in the Military Forces* which, among other things, provides information on the numbers of officers who were accessioned into the military from each service's various commissioning programs: military academies, Reserve Officers' Training Corps (ROTC), Officer Candidate Schools (OCS: for the Army, Navy, and Air Force) and Officer Training School (OTS: for the Air Force).

On January 19, 2007, we issued a report on officer accessions, retention, and foreign language training.² The purpose of this report is to bring to your attention reliability

¹ For example, see GAO, *Military Personnel: Reporting Additional Servicemember Demographics Could Enhance Congressional Oversight*, GAO-05-952 (Washington, D.C.: Sept. 22, 2005) and *Military Personnel: More DOD Actions Needed to Address Servicemembers' Personal Financial Management Issues*, GAO-05-348 (Washington, D.C.: Apr. 26, 2005).

² GAO, *Military Personnel: Strategic Plan Needed to Address Army's Emerging Officer Accession and Retention Challenges*, GAO-07-224 (Washington, D.C.: Jan. 19, 2007).

issues with DMDC data that we encountered while preparing our report and to provide you with our recommendations to address these issues.

To prepare this report, we drew upon the work from our January 2007 report. As part of that examination, we requested that DMDC provide us with information on officers commissioned into the four active duty services—Army, Navy, Marine Corps, and Air Force—during fiscal years 2001, 2003, and 2005. During our data reliability assessments, we reviewed documentation on DMDC’s databases and checked the data to determine if they were consistent with information that we had obtained from some of the commissioning programs and DOD’s annual *Population Representation in the Military Forces*. After we found that some of the information from DMDC did not agree with the information that some of the commissioning programs had provided during our site visits, we requested information from the services for each of their commissioning programs in each of the three fiscal years cited. While we did not conduct independent analyses using the services’ databases, our review of documentation on these databases as well as a comparison of service-provided information to similar information from other sources and for other time periods suggest that the service-provided findings were sufficiently reliable for the purposes of that report. We then compared the DMDC- and service-provided information to quantify the extent to which the databases resulted in different findings concerning the numbers of officers commissioned each year from the various commissioning programs. We conducted our review from August 2006 through November 2006 in accordance with generally accepted government auditing standards.

Results in Brief

We found the information that DMDC provided to us on the number of officers accessed from DOD’s various commissioning programs to be insufficiently reliable for use in our January 2007 report. Government auditing standards, which are applicable to all federal agencies including DOD, require that data be valid and reliable when the data are significant to the auditor’s findings.³ More specifically, federal internal control standards require that data control activities, such as edit checks, verification, and reconciliation, be conducted and documented to help provide reasonable assurance that agency objectives are being met. We found discrepancies when we compared the DMDC-provided information on the number of officers accessed from DOD’s commissioning programs (the academies, ROTC, and OCS/OTS) to information provided by the services. In the most extreme example of a discrepancy, DMDC-provided information indicated that 17 officers were accessed from the Marine Corps’ ROTC program in fiscal year 2005, but Marine Corps-supplied information indicated that 160 officers were assessed. DMDC also provided us with information on the total number of officer accessions in fiscal year 2005, which were 6 per cent to 39 percent higher than the total numbers the four services provided us. Until DMDC corrects these data problems, it will be unable to provide policymakers with sufficiently reliable data upon which to base decisions related to officers. Therefore, we are recommending that DMDC reconcile its data with the services’ data on officer accessions from the various commissioning programs for current and past officers and verify the accuracy of findings produced with the corrected data.

³ GAO, *Government Auditing Standards: 2003 Revision*, GAO-03-673G (Washington, D.C.: June 2003).

In responding to a draft of this report, DOD partially concurred with our recommendation to reconcile DMDC and service data and did not concur with our recommendation to verify the corrected data. DOD stated, among other things, that we provided DMDC and the services with apparently different specifications in our requests for analyses. While we initially requested information on “all officers” from DMDC versus “commissioned officers” from the services, we clarified our specifications with DMDC staff before any analyses were begun. DOD also stated that DMDC has a longstanding policy to not correct historical data. In our evaluation of DOD’s comments, we cite DOD and governmentwide policies that run contrary to DMDC’s policy and emphasize the need for valid and reliable data. DOD’s comments are provided in enclosure I, and our evaluation of the comments appear at the end of this report.

Discrepancies Found in DMDC- and Service-Supplied Information on the Officers Accessed from the Various Commissioning Programs

We decided not to use the information DMDC provided to us for our January 2007 report due to our concerns about the reliability of the data on officers’ commissioning programs—a primary focus of our examinations of how officers were accessed into the military and how long they remained on active duty.⁴ Government auditing standards require that data be sufficiently valid and reliable when the data are significant to the auditor’s findings.⁵ More specifically, federal internal control standards require that data control activities, such as edit checks, verification, and reconciliation, be conducted and documented to help provide reasonable assurance that agency objectives are being met.

During our analyses, we found discrepancies when we compared the DMDC-provided information on the number of officers commissioned from each program to the numbers provided by some of the commissioning programs. To address these discrepancies, each service’s personnel headquarters office subsequently supplied us with the numbers of officers commissioned in fiscal year 2005.⁶ For all four services, the DMDC-provided numbers for total accessions were greater than the service-provided numbers: by about 28 percent for Army, 6 percent for Navy, 39 percent for Marine Corps, and 10 percent for Air Force (see table). While many of the DMDC-provided numbers for specific commissioning programs shared this pattern of being higher than the service-provided numbers, some discrepancies were in the opposite direction. For example, relative to the DMDC-supplied data, the Marine Corps-supplied information showed about 9 times (17 versus 160) as many officers being

⁴ The flexible, risk-based framework that GAO uses in accessing computer-processed data from sources outside of GAO is provided in the following guidance: GAO, *Assessing the Reliability of Computer-Processed Data*, GAO-02-15G (Washington, D.C.: September 2002).

⁵ GAO-03-673G.

⁶ Although not discussed here, we found similar discrepancies in the DMDC- and service-provided information for fiscal years 2001 and 2003, the other years that we examined in this report and in GAO-07-224. In addition, data from DOD’s *Population Representation in the Military Forces* showed that DMDC’s findings were consistent with previously published DOD-wide data for officers accessed in fiscal year 2003. We could not make the same comparisons for fiscal year 2005 because DOD had not published its *Population Representation in the Military Forces* report for fiscal year 2005 at the time that we completed the analyses documented in this report.

commissioned through ROTC in fiscal year 2005. In contrast, the Army-supplied number for officers commissioned in fiscal year 2005 from its OCS was about 26 percent larger than DMDC's number.

Table: Discrepancies in the Numbers of Officers Commissioned from Different Programs^a for Fiscal Year 2005

Service and organization supplying information	Commissioning program				Total
	Academy	ROTC	OCS/OTS	Direct/other/unknown	
Army					
DMDC	1,000	3,256	1,069	2,401	7,726
Army headquarters	954	3,067	1,352	672	6,045
Difference	46	189	-283	1,729	1,681
Navy					
DMDC	788	869	477	1,590	3,724
Navy headquarters	749	825	586	1,346	3,506
Difference	39	44	-109	244	218
Marine Corps					
DMDC	209	17	1,383	557	2,166
Marine Corps headquarters	213	160	460	728	1,561
Difference	-4	-143	923	-171	605
Air Force					
DMDC	990	2,582	873	1,037	5,482
Air Force headquarters	918	2,391	790	891	4,990
Difference	72	191	83	146	492

Source: GAO analysis of data from DMDC and the services.

^aThe four commissioning sources identified in the table were those provided by DMDC. Although other units supplying information provided additional subcategories of commissioning source (e.g., ROTC scholarship and ROTC non-scholarship), we used the four DMDC categories to facilitate the presentation of the information.

We do not know the causes for the discrepancies with DMDC's data because DMDC officials did not respond to our request for additional information or assistance in reconciling the problems found when we were preparing our January 2007 report. However, our prior work has shown reliability problems with other DMDC data and analyses. For example, in September 2006, we found problems with the reliability of mobilization data for reserve soldiers and that DMDC's processes for data analyses need improvement.⁷ When we shared our findings with the services prior to the publication of our September 2006 report, service officials suggested that some of the data discrepancies may have been introduced by DMDC analysts when they made changes as the result of their quality check procedures. Although this may be an issue, there could also have been errors in the creation of the files sent to DMDC by the services.

Findings produced from unreliable DMDC data on officer commissioning programs can lead to adverse consequences. First, it could impair officials' ability to make sound data-driven decisions. Second, the inability to use data from a single DOD-wide source—DMDC—results in redundant efforts. In the present instance, the four services had to each conduct the same analyses. Third, DOD-wide information on personnel occupations and other variables that are coded differently in the service-specific databases are difficult or impossible to compare. For our January 2007

⁷ GAO, *Military Personnel: DOD and the Services Need to Take Additional Steps to Improve Mobilization Data for the Reserve Components*, GAO-06-1068 (Washington, D.C.: Sept. 20, 2006).

report, we were unable to conduct planned analyses on officer occupations because the services do not use the DOD-wide occupational codes that DMDC uses to facilitate service-to-service comparisons for that type of information.

Recommendations for Executive Action

We recommend that you direct the Under Secretary of Defense for Personnel and Readiness to require the Defense Manpower Data Center to take the following two actions:

- reconcile its data with data from the services on accessions from the services' commissioning programs for current and past officers, and
- verify the accuracy of its corrected database through further analyses such as demographic breakouts (such as race, gender, and year accessed) for each officer commissioning program.

Agency Comments and Our Evaluation

In written comments on a draft of this report, DOD partially concurred with one of our recommendations and did not concur with our other recommendation. We continue to believe that both of our recommendations have merit and should be implemented as soon as possible to prevent further distribution and use of DMDC reports that are based on data of insufficient reliability as well as provide Congress, DOD decision makers, and others with the accurate information needed to take informed actions. DOD's comments are reproduced in enclosure I.

DOD partially concurred with our recommendation to require DMDC to reconcile its data on current and past officers with data from the services on accessions to the services' commissioning programs. The department stated that we provided DMDC and the services with apparently different specifications in requests for analyses and that reconciliation of the DMDC and service differences may not be a reasonable request. We disagree with DOD's suggestion that we provided DMDC and the services with apparently different specifications in our data requests. Although we requested information on "all officers" from DMDC versus "commissioned officers" from the services in our initial request, we clarified our interest in statistics on commissioned officers during subsequent interactions with DMDC before its staff began their analyses. We used three methods before DMDC began its analyses to explicitly indicate that we were concerned with commissioned officers only. Those three methods were (1) telephone discussions with DMDC staff to discuss our overall engagement questions about commissioned officers and the types of information that we needed, (2) written instructions that specified that we intended to construct tables showing findings by commissioning program, and (3) several pages of mocked-up tables that showed DMDC staff that we were interested in officer breakouts by commissioning source. Since warrant officers do not receive their training through a commissioning program, they should not have appeared in the information that DMDC provided us. Furthermore, if DOD is indicating that the DMDC information is different from those of the services because DMDC included both warrant officers and commissioned officers, the DMDC and service findings for the Air Force should have been exactly the same since the Air Force does not have warrant officers. However, the table presented earlier in this report shows that the DMDC-provided

information did not match the Air Force-provided information. DOD's response also noted that our recommendation may not be reasonable because the services may not have the individual servicemember records needed for the reconciliation analyses. This point is specious. As we noted earlier in this report, DMDC conducted its analyses on officers' records that it obtained from the services.

DOD did not concur with our recommendation to require DMDC to verify the accuracy of the information in its database by conducting additional analyses. The department provided two reasons for its nonconurrence. First, DOD stated that we provided conflicting guidance to DMDC and the services when making the data request. We disagree, as discussed in the previous paragraph. Second, DOD states that "DMDC has a long standing policy to not correct historical data ..." Again, we disagree with DOD's statement, as this policy seems to contradict DOD statements that may suggest otherwise. For example, the *DOD Performance and Accountability Report FY2005*⁸ states, "The DOD is committed to providing clear and reliable data to those who use it for managing, decision making, and for oversight of the DOD programs. The Department also ensures, to the greatest extent possible, that the data are quantifiable and verifiable by putting in place internal management controls and by being responsive to the insights provided by the Department's Office of Inspector General, the U.S. Government Accountability Office, and others." DMDC's policy is also counter to governmentwide auditing standards⁹ which require, among other things, that officials have implemented policies and practices to reasonably ensure that valid and reliable data are obtained, maintained, and fairly disclosed in reports. These controls help assure management that it is getting valid and reliable information about whether programs are operating properly on an ongoing basis. While we believe that it is important to understand why earlier and later analyses on the same database could result in different findings, DOD's rationale for continuing to supply erroneous findings to decision makers is inconsistent with governmentwide and DOD-wide internal control standards which specify the importance of valid and reliable data. When DMDC staff completed our data reliability questionnaire asking about the completeness and accuracy of the data, they said "We feel that it is accurate and can be used for analysis and decision making." The inconsistencies that we identified in the table in this report suggest otherwise.

We are sending copies of this report to the appropriate congressional committees. We will make copies available to others upon request. This report will be available at no charge on GAO's Web site at <http://www.gao.gov>.

⁸ DOD, *DOD Performance and Accountability Report FY2005* (Arlington, Va.: Nov. 15, 2005), p. 59.

⁹ GAO-03-673G.

If you or your staff have any additional questions about the reliability of officer commissioning data, please contact me at (202) 512-5559 or stewartd@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made major contributions to the report are listed in enclosure II.

Sincerely,

A handwritten signature in black ink that reads "Derek B. Stewart". The signature is written in a cursive style with a long horizontal flourish extending from the end of the name.

Derek B. Stewart
Director, Defense Capabilities and Management

Enclosure I: Comments from the Department of Defense



PERSONNEL AND
READINESS

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MAR 01 2007

Mr. Derek B. Stewart
Director
Defense Capabilities and Management
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20548

Dear Mr. Stewart:

This is the Department of Defense (DoD) response to the Government Accountability Office (GAO) draft report, GAO-07-372R, "MILITARY PERSONNEL: DMDC Data on Officers' Commissioning Programs is Insufficiently Reliable and Needs to be Corrected," dated January 25, 2007. DoD has reviewed the subject draft report and strongly non-concurs with Recommendation 2. Our response to the specific recommendations listed in the report is enclosed.

Our strong non-concurrence with Recommendation 2 is based on the fact that the Defense Manpower Data Center (DMDC)'s data was deemed to be incorrect based on reports provided independently by the Services. Our initial research in response to this allegation indicates that the problem is not incorrect data, but rather that the Services and DMDC were asked to provide different information to the GAO. At no time was the underlying data or the methodology used to generate the reports compared by the GAO auditors. Specifically, DMDC was requested to provide a report of "all" officers to GAO, which GAO then compared to reports from the Services containing just commissioned officers.

Sincerely,

A handwritten signature in black ink, appearing to read "David S. C. Chu".

David S. C. Chu

Enclosure:
As stated



**GAO DRAFT REPORT – DATED January 25, 2007
GAO-07-372R**

**"MILITARY PERSONNEL: DMDC Data on Officers' Commissioning Programs is
Insufficiently Reliable and Needs to be Corrected"**

**DEPARTMENT OF DEFENSE COMMENTS
TO THE RECOMMENDATIONS**

RECOMMENDATION 1: The GAO recommended that the Secretary of Defense direct the Under Secretary of Defense (Personnel and Readiness) to require the Defense Manpower Data Center (DMDC) to reconcile its data with data from the Services regarding accessions from the Services' commissioning programs for current and past officers.

DOD RESPONSE: Partially concur. The DMDC will attempt to reconcile the officer accession data that appears in the draft report to DMDC's report. However, given that the Services were apparently provided different specifications upon which to base its reports than those provided to DMDC, and not knowing specifically what specifications the Services did use to generate their numbers or having the individual member records available to compare to DMDC's, this may not be a reasonable request.

RECOMMENDATION 2: The GAO recommended that the Secretary of Defense direct the Under Secretary of Defense (Personnel and Readiness) to require the DMDC to verify the accuracy of its corrected database through further analyses such as demographic breakouts (such as race, gender, and year accessed) for each officer commission program.

DOD RESPONSE: Strongly non-concur. First, the real issue appears not to be that the data is incorrect, but rather that the GAO is providing conflicting guidance to various sources when they make requests for data. Secondly, the DMDC has a long standing policy to not correct historical data as the Service personnel applications are the "authoritative source" for military personnel data and it would be inappropriate for the DMDC to change data that was historically presented by the Services as DMDC has it archived.

Enclosure II GAO Contact and Staff Acknowledgments

GAO Contact

Derek B. Stewart (202) 512-5559 or stewartd@gao.gov

Acknowledgments

In addition to the contact above, Jack E. Edwards, Assistant Director; Laura G. Czohara; Alissa H. Czyz; Barbara A. Gannon; Cynthia L. Grant; Julia C. Matta; Jean L. McSween; Bethann E. Ritter; Angela D. Thomas; and Adam J. Yu made key contributions to this report.

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