



DEPARTMENT OF THE ARMY
U.S. ARMY AUDIT AGENCY
Installation Management Directorate
3101 Park Center Drive
Alexandria, VA 22302-1596

DCN 9397

SAAG-IMT (36-2c)

5 December 2003

MEMORANDUM FOR Director, The Army Basing Study Group

SUBJECT: Sampling Plan for Base Realignment and Closure 2005 Data
Validation—Interim Report #10 (Project Code: A-2003-IMT-0440.000)

1. You asked us to describe the process that we followed to select installations where we will perform data validation in support of BRAC 2005. This memorandum documents our response.
2. The goal for data validation is to provide adequate audit coverage at a reasonable cost; the goal is not to project sample error rates to the full population of data. Following several rounds of discussion among statisticians and auditors from USAAA, DODIG, GAO and the other Services, we concluded that the best way to ensure adequate coverage was to use a multi-stage sampling procedure. The first stage is a criteria-based (judgmental) selection of installations; the second stage is predominantly a random selection of applicable data elements combined with a cursory review of all “not applicable” answers at each installation selected. Enclosure 1 provides more details on the sampling plan and identifies the criteria we used for the first stage. Enclosure 2 identifies the installations selected (highlighted in yellow). Installations selected should not be notified at this time; we will notify them once we know when our visits will occur.
3. If you have any additional questions or need more information, please contact Mr. Lawrence Wickens at (703) 428-6524/(703) 696-9769, Mr. Clarence Johnson at (410) 278-4287, or me at (703) 681-6020.

FOR THE AUDITOR GENERAL:

Encls

for 
DAVID H. BRANHAM
Program Director
Installation Studies

DRAFT DELIBERATIVE DOCUMENT – FOR DISCUSSION PURPOSES ONLY
Do Not Release Under FOIA



Draft Deliberative Document – For Discussion Purposes Only
Do Not Release Under FOIA



U.S. ARMY AUDIT AGENCY SAMPLING PLAN FOR BRAC 2005

**For Director, The Army Basing
Study Group
20 November 2003**

Enclosure 1



SAMPLE PLAN

- **Goal: Achieve adequate audit coverage at a reasonable cost.**
 - **To accomplish goal, we will use a multi-stage sample:**
 1. **Criteria-based sample (judgmental) of installations.**
 2. **Cursory review of “not applicable” answers. Select a few questions to validate at all selected sites, where applicable, and randomly sample remaining questions – 20% minimum.**
- Attributes:**
- **Adequate and appropriate support.**
 - **Data accuracy.**



AGREED TO CRITERIA

- **1/3 of Army installations in BRAC 05 inventory:**
 - **Representation from each IMA Region.**
 - **Representation from each MACOM.**
 - **Representation across types of installations (i.e., depot, ammunition plant, arsenal, lease, etc.).**

- **1/3 of Army installations related to each JCSCG:**
 - **100% installations greater than 3 JCSCG representation.**
 - **~ 50% installations equal to 3 JCSCG representation.**
 - **~ 25% installations less than 3 JCSCG representation.**

- **For equivalent selections, audit cost is deciding factor. If cost is approximately equal, state ^{Enclosure 1}representation is considered.**



EXPECTED COVERAGE

- 33 of 99 Army installations selected:
 - Each IMA Region represented – 20%+.
 - Each MACOM represented – 17%+.
 - 5 depots; 2 ammunition plants; 4 arsenals; 2 leases; 1 medical center; and 19 other installations.
 - 7 of 7 with greater than 3 JCSCG representation – 100%.
 - 8 of 17 with 3 JCSCG representation – ~50%.
 - 18 of 75 with less than 3 JCSCG representation – ~25%.
- ~ 90% of states with Army installation represented.
- 18 of 33; USAAA field offices within local travel distance. 4

CROSS WALK JCSG TO ARMY INSTALLATIONS IN BRAC 2005 INVENTORY
As of 8 September 2003

IMA Region	MACOM	State	Installation/Activity	HQ&SA	Education	Technical	S&S	Industrial	Medical	Total	USAAA FLD OFFICE	PERCENT SELECTED IN STRATA
SOUTHEAST	AMC	ALABAMA	REDSTONE ARSENAL	X	X	X	X	X	X	6	YES	100%
SOUTHEAST	TRADOC	ALABAMA	FORT RUCKER AL	X	X	X			X	4		
SOUTHWEST	TRADOC	ARIZONA	FORT HUACHUCA	X	X	X			X	4	YES	
NORTHEAST	AMC	MARYLAND	ABERDEEN PROVING GROUND	X	X	X			X	4	YES	100%
SOUTHWEST	AMC	OKLAHOMA	MCALESTER AAP		X	X	X	X		4		
NORTHEAST	MDW	VIRGINIA	FORT BELVOIR	X	X	X			X	4	YES	
NORTHEAST	TRADOC	VIRGINIA	FORT EUSTIS	X	X	X			X	4		
SOUTHEAST	TRADOC	GEORGIA	FORT BENNING GA	X	X				X	3		
SOUTHEAST	FORSCOM	GEORGIA	FORT STEWART/HUNTER ARMY AIRFIELD, GA	X	X				X	3	YES	
NORTHWEST	TRADOC	KANSAS	FORT LEAVENWORTH	X	X				X	3		
NORTHWEST	FORSCOM	KANSAS	RILEY FORT	X	X				X	3		
SOUTHEAST	FORSCOM	KENTUCKY	FT CAMPBELL KY	X	X				X	3		
SOUTHWEST	FORSCOM	LOUISIANA	FORT POLK	X	X				X	3		
NORTHEAST	MEDCOM	MARYLAND	DETRICK FORT	X		X			X	3		
NORTHWEST	TRADOC	MISSOURI	FORT LEONARD WOOD	X	X				X	3		
SOUTHEAST	FORSCOM	NORTH CAROLINA	FORT BRAGG	X	X				X	3	YES	50%
SOUTHWEST	TRADOC	OKLAHOMA	FORT SILL OK	X	X				X	3		
NORTHEAST	AMC	PENNSYLVANIA	TOBYHANNA ARMY DEPOT	X			X	X		3		
SOUTHEAST	TRADOC	SOUTH CAROLINA	FORT JACKSON	X	X				X	3		
SOUTHWEST	TRADOC	TEXAS	FORT BLISS	X	X				X	3	YES	
SOUTHWEST	MEDCOM	TEXAS	FORT SAM HOUSTON	X	X				X	3	YES	
SOUTHWEST	FORSCOM	TEXAS	HOOD FORT	X	X				X	3	YES	
NORTHEAST	TRADOC	VIRGINIA	FORT LEE	X	X		X			3	YES	
NORTHWEST	FORSCOM	WASHINGTON	FORT LEWIS	X	X				X	3	YES	
SOUTHEAST	AMC	ALABAMA	ANNISTON ARMY DEPOT				X	X		2		
PACIFIC	USARPAC	ALASKA	FORT WAINWRIGHT		X				X	2		
SOUTHWEST	AMC	ARKANSAS	PINE BLUFF ARSENAL				X	X		2		
SOUTHWEST	AMC	CALIFORNIA	SIERRA				X		X	2		
NORTHWEST	FORSCOM	COLORADO	FORT CARSON	X					X	2	YES	
NORTHWEST	AMC	COLORADO	PUEBLO CHEMICAL DEPOT				X	X		2		
NORTHEAST	MDW	DISTRICT OF COL	FORT McNAIR	X	X					2		
NORTHEAST	MEDCOM	DISTRICT OF COL	REED WALTER AMC MAIN POST			X			X	2		
LEASE		FLORIDA	PEO STRICOM	X		X				2		
SOUTHEAST	FORSCOM	GEORGIA	FORT GILLEM	X			X			2		
SOUTHEAST	TRADOC	GEORGIA	FORT GORDON		X				X	2		
NORTHWEST	AMC	ILLINOIS	ROCK ISLAND ARSENAL	X				X		2	YES	
NORTHWEST	AMC	INDIANA	NEWPORT CHEM DEPOT				X	X		2		
NORTHWEST	AMC	IOWA	IOWA AAP				X	X		2		
SOUTHEAST	TRADOC	KENTUCKY	FORT KNOX	X	X					2	YES	
NORTHEAST	MDW	MARYLAND	FORT GEORGE G MEADE	X					X	2	YES	
NORTHEAST	AMC	MASSACHUSETTS	SOLDIER SYSTEMS CENTER	X		X				2		
NORTHWEST	AMC	MICHIGAN	DETROIT ARSENAL	X			X			2	YES	25%
NORTHWEST	AMC	MISSOURI	LAKE CITY AAP				X	X		2		
NORTHEAST	AMC	NEW JERSEY	FORT MONMOUTH MAIN POST	X		X				2	YES	
NORTHEAST	FORSCOM	NEW YORK	FORT DRUM	X					X	2		

CROSS WALK JCSG TO ARMY INSTALLATIONS IN BRAC 2005 INVENTORY

As of 8 September 2003

IMA Region	MACOM	State	Installation/Activity	HQ&SA	Education	Technical	S&S	Industrial	Medical	Total	USAAA FLD OFFICE	PERCENT SELECTED IN STRATA
NORTHEAST	AMC	NEW YORK	WATERVLIET ARSENAL			X		X		2		
NORTHEAST	USMA	NEW YORK	WEST POINT MIL RESERVATION		X				X	2		
LEASE		NORTH CAROLINA	ARO (LEASE)	X		X				2		
NORTHWEST	AMC	OREGON	UMATILLA CHEM DEPOT				X	X		2		
NORTHEAST	TRADOC	PENNSYLVANIA	CARLISLE BARRACKS	X	X					2		
NORTHEAST	AMC	PENNSYLVANIA	LETTERKENNY ARMY DEPOT				X	X		2		
SOUTHEAST	AMC	TENNESSEE	HOLSTON AAP				X	X		2		
SOUTHEAST	AMC	TENNESSEE	MILAN AAP				X	X		2		
SOUTHWEST	AMC	TEXAS	CORPUS CHRISTI ARMY DEPOT				X	X		2		
SOUTHWEST	AMC	TEXAS	RED RIVER ARMY DEPOT				X	X		2		
NORTHWEST	AMC	UTAH	DESERET CHEMICAL DEPOT				X	X		2		
NORTHWEST	AMC	UTAH	TOOELE ARMY DEPOT				X	X		2		
NORTHEAST	AMC	VIRGINIA	RADFORD AAP				X	X		2		
PACIFIC	USARPAC	ALASKA	FORT RICHARDSON	X						1		
SOUTHWEST	ATEC	ARIZONA	YUMA PROVING GROUND			X				1		
SOUTHWEST	FORSCOM	CALIFORNIA	NTC AND FORT IRWIN, CA						X	1		
SOUTHWEST	TRADOC	CALIFORNIA	PRESIDIO OF MONTEREY		X					1		
SOUTHWEST	AMC	CALIFORNIA	RIVERBANK AAP				X			1		
SOUTHEAST	FORSCOM	GEORGIA	FORT MCPHERSON	X						1	YES	
PACIFIC	USARPAC	HAWAII	FORT SHAFTER	X						1	YES	
PACIFIC	USARPAC	HAWAII	SCHOFIELD BRKS		X					1	YES	
PACIFIC	USARPAC	HAWAII	TRIPLER AMC						X	1	YES	
NORTHWEST	AMC	INDIANA	CRANE ARMY AMMUNITION ACTIVITY				X			1		
NORTHWEST	AMC	KANSAS	KANSAS AAP				X			1		
SOUTHEAST	AMC	KENTUCKY	BLUE GRASS ARMY DEPOT				X			1		
SOUTHWEST	AMC	LOUISIANA	LOUISIANA AAP				X			1		
NORTHEAST	AMC	MARYLAND	U.S.A. ADELPHI LABORATORY CTR			X				1		
NORTHWEST	AMC	MICHIGAN	US ARMY GARRISON SELFRIDGE	X						1		
SOUTHEAST	AMC	MISSISSIPPI	MISSISSIPPI AAP				X			1		
LEASE		MISSOURI	HQ, ARPERSEN	X						1	YES	
SOUTHWEST	AMC	NEVADA	HAWTHORNE ARMY DEPOT				X			1		
NORTHEAST	USARC	NEW JERSEY	FORT DIX	X						1		
NORTHEAST	AMC	NEW JERSEY	PICATINNY ARSENAL			X				1		
SOUTHWEST	ATEC	NEW MEXICO	WHITE SANDS MISSILE RANGE NM			X				1		
NORTHEAST	MDW	NEW YORK	HAMILTON FORT	X						1		
SOUTHEAST	MTMC	NORTH CAROLINA	MILITARY OCEAN TML SUNNY POINT				X			1		
NORTHWEST	AMC	OHIO	LIMA ARMY TANK PLT					X		1		
NORTHEAST	AMC	PENNSYLVANIA	SCRANTON AAP				X			1		
SOUTHEAST	USARSO	PUERTO RICO	FORT BUCHANAN	X						1		
SOUTHWEST	AMC	TEXAS	LONE STAR AAP				X			1		
NORTHWEST	ATEC	UTAH	DUGWAY PROVING GROUND			X				1		
LEASE		VIRGINIA	Army Judge Advocate General Agency	X						1	YES	
LEASE		VIRGINIA	Army Judge Advocate General School		X					1		
LEASE		VIRGINIA	Bailey's Cross-roads	X						1	YES	
NORTHEAST	MDW	VIRGINIA	FORT A P HILL		X					1		

25%

