



HEALTH AFFAIRS

THE ASSISTANT SECRETARY OF DEFENSE

**1200 DEFENSE PENTAGON
WASHINGTON, DC 20301-1200**

FEB 05 2007

**MEMORANDUM FOR ASSISTANT SECRETARY OF THE ARMY (M&RA)
ASSISTANT SECRETARY OF THE NAVY (M&RA)
ASSISTANT SECRETARY OF THE AIR FORCE (SAF/MR)
DIRECTOR, ARMED FORCES INSTITUTE OF
PATHOLOGY**

**SUBJECT: Operation Iraqi Freedom Depleted Uranium Bioassay Results—Sixth
Semiannual Report and Request for Data Submission**

**Reference: (a) Health Affairs Memorandum, "Operation Iraqi Freedom Depleted
Uranium Bioassay Results and Semi-Annual Data Submission,"
September 10, 2004**

My June 5, 2006, memorandum, reference (a), requested the semiannual submission of the Services' Operation Iraqi Freedom (OIF)-related depleted uranium (DU) bioassay results. The attachments summarize the data for the sixth reporting period (April 1–September 30, 2006) and the cumulative DU urine bioassay results obtained since June 1, 2003.

The next semiannual submittal from the Services is due May 1, 2007, to Force Health Protection and Readiness Programs. Please include the results from the reporting period October 1, 2006–March 31, 2007, and your cumulative totals from June 1, 2003, through March 31, 2007. In addition, the US Army Center for Health Promotion and Preventive Medicine and the Armed Forces Institute of Pathology should continue to report their analytic results for the metallic elements identified in any metal fragments removed from OIF or OEF personnel. These data will permit us to assess any long-term health hazards that may be associated with specific metal fragments.

During this latest reporting period, 41 additional individuals received DU urine bioassays. There were no new reports of individuals with confirmed elevated total uranium levels, but two additional Army members had depleted uranium confirmed in their urine. A potential level of exposure to DU could not be assigned for six additional soldiers (uncategorized exposure level) because of incomplete or missing DU exposure assessment forms. I look forward to the Army's efforts to reduce the number of their uncategorized results, now standing at 1,135 samples; please report on your efforts in the next semi-annual progress report.

As of September 30, 2006, of the 2,161 US personnel who have undergone a DU urine bioassay, no individuals had total urine uranium levels or DU levels that caused or are expected to cause adverse health effects. The total reported number of individuals bioassayed actually dropped from the previously reported figure of 2,174, even though 41 additional individuals were tested. This change and other changes in the numbers in the individual exposure categories (Levels I, II, III) resulted from the Navy's rigorous reclassification of previously reported bioassays, and to their exclusion of 57 separated individuals who were tested under the VA's program rather than the Navy/DoD program. Nine individuals had confirmed detections of DU in their urine, all of whom either had DU fragments removed or were suspected to have had retained DU fragments in their body at the time of testing. Six more have been identified with preliminary indications of DU in their urine, but their results have not been confirmed.

Please submit your reports to Col George Johnson, Program Director, Force Readiness and Health Assurance, in the Office of DoD (HA) Force Health Protection and Readiness Programs: *George.Johnson@deploymenthealth.osd.mil*, (703) 578-8523. Additional information and clinical guidance on this program is available on the Department of Defense Deployment Health Clinical Center Web site, *www.pdhealth.mil*.



William Winkenwerder, Jr., MD

Attachments:

As stated

cc:

Surgeon General of the Army
Surgeon General of the Navy
Surgeon General of the Air Force
Director, Joint Staff
Assistant Deputy Under Secretary of Defense (ESOH)
Assistant Secretary of Defense (Reserve Affairs)
Director, Health and Safety, USCG
Director, DoD Deployment Health Clinical Center
Under Secretary for Health, Department of Veterans Affairs
Baltimore VA Medical Center (Dr. Melissa McDiarmid)
Commander, US Army Center for Health
Promotion and Preventive Medicine

Service Summary of Operation Iraqi Freedom Depleted Uranium (DU) Bioassay Results
Sixth Semi-Annual Report
April 1, 2006 – September 30, 2006

Level	Army	Navy/ Marine	Air Force	TOTAL	Confirmed Elevated Total Uranium	Confirmed DU Detected in Urine Specimen	Retained Fragments or Fragment- Type Injury
I	12	0	0	12	0	2	6
II	18	1	1	20	0	0	0
III	3	0	0	3	0	0	0
Uncat	6	0	0	6	0	0	3
TOTAL	39	1	1	41	0	2	9

**Service Summary of Operation Iraqi Freedom Depleted Uranium (DU) Bioassay Results
Sixth Cumulative Report
June 1, 2003 – September 30, 2006**

Exposure Level	Army	Navy/ Marine	Air Force	TOTAL	Confirmed Elevated Total Uranium	Confirmed DU Detected in Urine Specimen	Retained Fragments or Fragment- Type Injury
I	209	71	2	282	4	8 ^a	23
II	316	97	9	422	0	0	1 ^b
III	217	85	7	309^c	0	0	7 ^d
Uncat	1135	13	0	1148^e	0	1 ^f	32
TOTAL	1877	266	18	2161	4	9^g	63

a Includes one AF member who had a small DU fragment removed from his eyelid. His urine had detectable levels of DU at the time of the fragment removal, but was negative for DU on the confirmatory test several months later.

b This individual entered a DU-impacted vehicle and got two "splinters" which were removed and analyzed; they did not contain DU.

c Includes only those Level III (incidentally exposed) personnel who received a bioassay. Bioassays are optional for Level III personnel.

d Fragments removed from Level III (incidentally exposed) personnel have been analyzed for many reasons, for instance, to ensure that fragments generated from an improvised explosive device did not contain DU.

e Uncategorized exposures consist of those individuals who were tested, some only with a spot urine sample, but had incomplete or missing DU exposure assessment forms.

f This individual (uncategorized as to level of DU exposure) with bioassay results consistent with a retained DU fragment (quite elevated) has separated from the Army and is working as a contractor in Iraq. He originally submitted a spot urine specimen rather than a 24-hour specimen, but because the DU level was extremely elevated, he is categorized as a confirmed exposure despite the fact he has not submitted a 24-hour urine specimen. The Army has contacted him and requested he submit a 24-hr urine specimen. He informed the Army intends to either follow-up (with the Army) when he returns to Germany or with the Veterans Affairs upon return to the U.S.

^g All nine of these personnel have confirmed DU embedded fragments or fragment injuries