

The Use of Depleted Uranium in the 2003 Iraq War: *An Initial Assessment of Information and Policies*

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SUMMARY

During the 2003 Iraq War, United States and United Kingdom armed forces shot ammunition made from depleted uranium (DU) at a wide variety of targets. Although there is little known about the actual quantities of DU released or the locations of contamination, it appears approximately 100 to 200 metric tons was shot at tanks, trucks, buildings and people in largely densely populated areas. The US and UK governments have announced they will medically test veterans who were exposed to DU, but the lack of a coherent environmental policy is likely resulting in Iraqi civilians and relief and development workers being unnecessarily exposed to DU contamination. Further policy action and additional research are needed to resolve the uncertainties regarding the use and effects of DU munitions in the 2003 Iraq War.

CONTENTS

1. Introduction...2
 2. Pre-War Propaganda...2
 3. The Use of Depleted Uranium in the 2003 Iraq War...4
 4. US Policy in the Wake of the Occupation of Iraq...8
 5. UK Policy in the Wake of the Occupation of Iraq...10
 6. New DU Myths Grow Out of the Iraq War...11
 7. Recommendations...12
- Endnotes...13

1. Introduction

On 20 March 2003, the governments of the United States (US) and United Kingdom (UK) ordered their armed forces to invade and occupy Iraq. During the combat of the subsequent days and weeks, American and British forces shot ammunition made from depleted uranium, a dense heavy metal that is chemically toxic and radioactive.

Although there are many more questions than answers about the DU released in Iraq since 20 March, this paper endeavors to provide a preliminary accounting of DU in the 2003 Iraq War, and offer sound policy recommendations.

2. Pre-War Propaganda

In anticipation of a war in Iraq, the Bush administration engaged in a pre-emptive public relations campaign on DU munitions. The campaign had two apparent goals: to justify the use of DU munitions as a military necessity, and to dismiss concerns about the health and environmental effects of the use of DU munitions. Pentagon spokesmen actually led the public relations effort, but the White House also directly participated. In addition, anti-DU activists waged their own propaganda campaign that has increased the visibility of the DU issue.

2.1 The White House

In January 2003, the White House released a report on the Iraqi government's "Apparatus of Lies," which noted that the regime of Saddam Hussein had used the DU issue for propaganda purposes. Although there likely is merit to claims that the use of DU munitions in 1991 has caused health effects among the Iraqi population, the Hussein regime overstated the strength of evidence linking DU to health effects, and exploited the suffering of the Iraqi people to criticize the United Nations and United States.² In fact, in the wake of the Iraq War, journalist Scott Peterson confirmed the existence of the Iraqi propaganda effort on DU in an insightful article based on his own experiences investigating DU in Iraq.³

The White House report, however, misleadingly states, "scientists working for the World Health Organization, the UN Environmental Program [sic], and the European Union could find no health effects linked to exposure to depleted uranium."⁴ In fact, scientists from these organizations never looked for health effects linked to exposure to DU in any post-combat environment; the World Health Organization and European Union produced literature reviews and analysis, and the UN Environment Programme looked only at environmental contamination from the use of DU munitions.

2.2 The US Department of Defense

Press stories reflecting the Pentagon's dual message of military necessity and harmlessness appeared in January 2003,⁵ although the public relations campaign began in earnest in March. At a March 14, 2003 press conference, Pentagon spokesmen overstated the importance of DU munitions and made numerous errors of fact and omission that perhaps reflected an urgency to deflect criticism and concern about DU on the eve of war:

- **Error of Fact:** Dr. Michael Kilpatrick, Deployment Health Support Directorate, claimed, “We [the DU Program] looked at 90 Gulf War veterans who were in or on an armored vehicle when it was struck by depleted uranium in friendly fire. And those individuals have been followed on an annual basis now we are talking 12 years post-incident.”
 - **Reality:** The DU Program, ostensibly run by the US Department of Veterans Affairs, claims to have examined 70 veterans – not 90 – since the program was set up in 1993.⁶ In addition, up to twenty of these veterans have not been examined or followed for the last 8-10 years; in 2001, just 39 veterans were examined.⁷
- **Error of Omission:** Dr. Michael Kilpatrick stated that among the veterans in the DU Program, “There has been no cancer of bone or lungs, where you would expect them – to see that.”
 - **Reality:** Dr. Kilpatrick failed to mention there has been a lymphatic cancer among the few veterans examined by the DU Program. Moreover, in 2001, Dr. Kilpatrick and US Army Col. Francis O’Donnell both falsely claimed there had been “no cancers” of any kind among the veterans in the DU Program, even though both men were present at an October 1999 meeting when the finding of lymphoma in one veteran was discussed.⁸
- **Error of Fact:** Dr. Kilpatrick claims, “Our studies in the United States over 15 years have not shown depleted uranium going from soil into groundwater.”
 - **Reality:** Depleted uranium dumped into a pit at the Starmet (formerly Nuclear Metals) manufacturing plant in Concord, Massachusetts, has leached through the soil into groundwater.⁹ The State of Massachusetts permits drinking water to contain up to 29 micrograms of uranium per liter, but test wells at the Starmet site have measured levels up to 87,000 micrograms of uranium per liter water.¹⁰ A recent study found DU in the sapwood and bark of oak trees on the Starmet site; the DU was apparently transferred to the sapwood through uptake of contaminated groundwater.¹¹

2.3 Anti-DU Activists

Not to be outdone by Pentagon propagandists, anti-DU activists developed and promoted fantastic tales about DU in the months before the war.¹² Some claims, such as comparing the release of DU to the Chernobyl disaster,¹³ were recycled from previous years.¹⁴

Others are notable for their extremism in the absence of supporting evidence:

- The use of DU munitions in Iraq is an act of genocide¹⁵
- The US military uses DU munitions to intentionally “destroy the genetic future of the Iraqi people”¹⁶
- The US military is using new, secret weapons that release large quantities of natural uranium into the environment¹⁷

By advancing these unsubstantiated claims, anti-DU activists do little to promote the creation of sound policies based on scientific evidence. These activists not only muddy the waters of the DU debate, they also provide fresh ammunition to DoD propagandists who thwart investigations and stall research on the effects of DU munitions.

It is difficult at this point in time to tell what effect if any the efforts by the White House, Pentagon, or anti-DU activists have had on the DU issue. What is clear, however, is that elements of the US government will manipulate information and even lie about the health of US combat veterans to avoid liability for DU's health and environmental effects. Equally as clear is the willingness of some anti-DU activists to promote theories as fact, fabricate data and manipulate statistics, and exploit the suffering of people to further political or financial interests.

3. The Use of Depleted Uranium in the 2003 Iraq War

Information about the use of DU munitions remains sparse, but both the US Department of Defense and UK Ministry of Defence have admitted that their forces used DU munitions in combat during March-April 2003. Tanks, fighting vehicles, and aircraft shot DU rounds (see Table 1); there is no evidence that missiles or bombs used during the war contain any DU.

Table 1 – Vehicles and Aircraft Possibly Releasing DU in Iraq, 2003

	Number Potentially Used in Combat	Number Disabled or Destroyed During Combat	Quantity of DU Released (kg)
Abrams Tanks M1A1, M1A2 (Army, Marine Corps)	Army – 638 ¹⁸ Marine Corps – ~118 ¹⁹	14 ²⁰	Unknown
Bradley Fighting Vehicles M2 (Army)	406 ²¹	16 ²²	Unknown
Light Armored Vehicles LAV-25 (Marine Corps)	60 ²³	Unknown	Unknown
Challenger 2 tanks (UK Army)	120 ²⁴	1 ²⁵	~860 ²⁶
A-10 jets (US Air Force)	60 ²⁷	1 ²⁸	58,814 or 78,419 ²⁹
AV-8B jets (US Marine Corps)	70 ³⁰	0 ³¹	Unknown
HEMMT ammunition truck (US Army)	Unknown	2 ³²	Unknown

Table compiled by Dan Fahey

In recent wars, the A-10 aircraft was the primary shooter of DU munitions, responsible for more than 85 percent of all DU released by the US military during combat operations. Based on preliminary reports, the A-10 shot far less DU in 2003 than during the 1991 war, but given the nature of the ground campaign, tanks and fighting vehicles may have shot far more DU in absolute and proportionate terms than in previous conflicts. Initial reports suggest the Abrams tank shot relatively little DU ammunition due to the lack of Iraqi tanks engaging US forces on the battlefield; Abrams crews reportedly used larger quantities of high explosive rounds against unarmored vehicles and buildings.³³ Since press reports suggest Bradley Fighting Vehicle crews made extensive use of their 25 mm

guns during combat, the Bradley may represent a significant source of DU released into Iraq. British Challenger tanks apparently shot fewer than 200 DU rounds during combat in and around Basra.

Based on available information, it appears that US and UK forces may have released approximately 100-200 metric tons of DU during combat in Iraq. It should be noted, however, that much of this expenditure appears to have been in or near urban areas, where the Iraqi people live, work, draw water, and grow and sell food. Therefore, the potential for DU exposures appears higher than in other conflicts, but this issue will be resolved only when contaminated areas are identified and assessed, and human populations are tested and monitored.

3.1 Incidents that should be investigated for release of DU and DU exposures

Based on initial US and UK government reports and press stories, it appears US and British troops may have been exposed to DU during several friendly fire incidents, as a result of the destruction of vehicles and aircraft by enemy fire, through medical treatment of wounded soldiers or civilians, or as a result of salvage or recovery operations involving contaminated equipment. Following is a preliminary list of incidents that should be investigated for the release of DU and DU exposures. Please note that different descriptions may describe the same incident, and that preliminary information obtained largely through press reports may prove to be inaccurate or unreliable.

3.1.1. *Combat - Friendly Fire*

- **20-21 March, near Safwan** – Marine Corps Cobra attack helicopter fires a Hellfire anti-tank missile into a U.S. Marine Corps M1A1 Abrams tank attached to Alpha Company, 1st Tank Battalion, 1st Marine Division. The four tank crew members survived the blast, with one Marine receiving shrapnel wounds.³⁴
- **23 March, near Nasiriyah** – A-10 fires on Marine Corps vehicles attached to 1st Battalion, 2nd Marine Regiment, 2nd Marine Expeditionary Brigade. At least one vehicle, an armored assault vehicle (possibly AAVP7A1), is hit and penetrated by A-10 fire, killing at least one Marine and possibly wounding others. A total of nine Marines and seven vehicles were destroyed in this incident, although it is believed Iraqi forces caused the majority of the deaths and damage during this engagement.³⁵
- **25 March, west of Basra** – A British Challenger tank shoots another Challenger tank, attached to the Queen's Royal Lancers, First Royal Regiment of Fusiliers, killing two soldiers and critically wounding two others.³⁶
- **24-25 March, An Najaf** – A Bradley Fighting Vehicle shoots 25 mm DU rounds into the engine compartment of an Abrams tank attached to B24, 3rd Battalion, 7th Armored Cavalry Regiment, 3rd Infantry Division.³⁷ “The 25mm [DU] rounds hit the Abrams’ ‘ready rack’ of 120mm main gun ammunition in the turret, igniting some main gun rounds. But the blast doors contained the explosion and the crew survived unscathed except for fume inhalation.”³⁸
- **28 March, near Basra** – A-10 aircraft fires upon a British convoy of five vehicles and hits two Scimitar armored vehicles attached to D Squadron, the Household Cavalry Regiment, killing one soldier and wounding at least four

others.³⁹ British troops who retrieved the body of the dead soldier wore “chemical warfare suits...because of the threat from the depleted uranium used in American weapons.”⁴⁰

3.1.2 *Combat - Enemy Fire*

- **25 March, east bank of the Euphrates River, approximately 80 km southeast of Baghdad** – Iraqi fire, possibly from a truck mounted anti-tank gun, shoots the rear of two Army Abrams tanks attached to Troop B, 3rd Squadron, 7th Armored Cavalry Regiment, 3rd Infantry Division, setting them ablaze and exploding the tanks’ ammunition. Iraqi fire also “blew up” a Bradley Fighting Vehicle during this engagement.⁴¹ According to one press account, the Abrams tanks were destroyed when Iraqi fuel trucks crashed into them, and the Bradley was destroyed when a civilian bus drove into it.⁴²
- **2 April, bridge across the Tigris at Al Numaniyah** – An Iraqi rocket propelled grenade hits the rear engine compartment of an M1A1 Abrams tank attached to the 2nd Tank Battalion, 2st Marine Division, disabling the tank.⁴³
- **4 April, Al Tuwayhah** – An Iraqi rocket propelled grenade explodes in the turret of a tank attached to the 2nd Tank Battalion, 2nd Marine Division, killing one Marine. It is not clear from press reports if the damage to the tank was of a nature to result in a release of DU munitions.⁴⁴
- **5 April, Baghdad** – During a raid into the heart of Baghdad, an Iraqi rocket propelled grenade hit the rear of an M1A2 Abrams tank attached to Charlie Company, Task Force 1-64, 3rd Armored Division.⁴⁵ After efforts to put out the fire failed, US soldiers opened the ammunition lockers inside and poured fuel into the vehicle, then dropped two incendiary grenades into the vehicle igniting an explosion. Another Abrams tank also fired a 120mm DU round into the tank’s engine compartment.⁴⁶ Another report indicates two Maverick missiles were shot at the tank to complete its destruction.⁴⁷ The destruction penetrated the DU armor on the front of the tank.⁴⁸
- **5 or 7 April, Baghdad** – Medium caliber fire (presumably Iraqi) hits the external auxiliary power unit (EAPU) on an Abrams tank attached to B24, Task Force 1-64, 3rd Armored Division, causing a fire which spread to the engine compartment, disabling the tank. The tank was subsequently stripped of parts by US soldiers.⁴⁹
- **5 April, near Al-Kut** – “Eight Marines were wounded when one of their 70-ton Abrams tanks was destroyed and two other tanks were hit by rocket propelled grenades.”⁵⁰
- **6 April, five miles south of the Baghdad city limits** – Two rocket propelled grenades strike a Bradley Fighting Vehicle attached to A Company, 3rd Battalion, 7th Infantry Division, “just above the driver’s hatch, piercing it and sending a cloud of hot white gas and flecks of shrapnel into the turret and passenger compartment,” wounding several soldiers.⁵¹ The potential for DU exposures depends upon whether 25mm DU rounds were exploded or burned during this engagement.
- **6 April, Doura intersection along Highway 8 on the southern outskirts of Baghdad** – Iraqi small arms fire and rocket propelled grenades hit two HEMMTs (large Army trucks hauling tank ammunition) attached to the 3rd Brigade, 3rd

- Infantry Division, igniting fuel and ammunition and causing catastrophic explosions and fires.⁵² Scott Peterson from the Christian Science Monitor subsequently finds “black piles of pure DU ash” and a DU tank round at the site, along with warning signs in Arabic, and civilians selling food within 50 yards of the site.⁵³
- **8 April, Baghdad** – An Iraqi Roland 2 surface-to-air missile shoots down a US A-10A aircraft attached to the 110th Fighter Wing, Air National Guard, US Air Force. The pilot ejects and is recovered in good condition, and the plane crashed into a farm area near the Euphrates River.⁵⁴ DU may have been released when the aircraft crashed and/or burned.
 - **10 April, Baghdad** – A car bomb exploded next to a Bradley Fighting Vehicle attached to C Company, First Battalion, 15th Infantry Regiment, killing one US soldier.⁵⁵ DU could have been released if the Bradley’s 25 mm ammunition exploded or burned.
 - **Date and location unknown** – A Marine Corps “M1A1 received small arms fire [rupturing the flexcell external mount fuel bladder]...fuel leaked into the engine compartment...The tank caught fire and had to be abandoned during combat. The stationary tank remained under small arms and repeated RPG fire at close range. Under cover of darkness, an Iraqi irregular tossed a Molotov cocktail into the empty tank. This coupled with the burning engine and the multiple RPG hits resulted in a total loss of the tank.”⁵⁶ Based on this description, it seems possible DU could have been released through detonation/burning of tank rounds or breach of the DU armor.
 - **Date and location unknown** – “One [Marine Corps] tank hit a tree causing a flexcell pod [external mount fuel bladder] to rupture. Fuel leaked into the engine compartment causing the engine to FOD out and the turbine to burn up. The tank had to be evacuated. There were no casualties.”⁵⁷ Depending on the severity of the fire, DU ammunition may have detonated or burned, resulting in a release of DU into the environment.

3.1.3 *Post-Combat – Vehicle Recovery and Disposal, Incidental Exposures*

During and after combat, soldiers may climb on, enter, or closely inspect destroyed military equipment contaminated by DU. Soldiers may also patrol, stand guard, camp, eat, or recreate in areas where DU munitions were shot. Until areas of DU expenditure are identified and cordoned off, the potential for soldiers to be exposed to DU exists. This is particularly true in the Iraq war, where US and UK forces apparently shot DU in urban areas that they subsequently occupied. Civilian populations, relief and development workers, oil industry employees and other people who live in or frequent contaminated areas are also at risk of exposure to DU dust and debris.

3.2 Other issues of interest

3.2.1 *Was Iraq developing DU munitions?*

A December 2002 fact sheet from The International Atomic Energy Agency indicates Iraq may have been experimenting with the development of DU munitions and counterweights. Iraq was reported to have “processed uranium dioxide to produce UF₄,

uranium metal and UF₆,” and “casted a uranium sphere of about five centimeters diameter, several hemispheres of similar size and a small number of rods weighing 1.2 kg per piece, from which to machine ‘sub-calibre munitions.’”⁵⁸

3.2.2 *Was DU looted at Al Tuwaitha?*

The Al Tuwaitha Nuclear Research Center held “some 500 tons of natural and depleted uranium,” plus 1.8 tons of low-enriched uranium.⁵⁹ During looting of the Al Tuwaitha site in April 2003, local residents reportedly emptied barrels of radioactive materials, took the barrels home, and used them for a variety of purposes including storage of drinking water. Short-term health effects have been reported among the local population, but the US administration ruling Iraq would not let inspectors from the International Atomic Energy Agency visit local communities to evaluate the health status of the Iraqi people.

3.2.3 *Are DU munitions really as necessary as the Pentagon claims?*

The US Department of Defense has overstated the importance of DU munitions for the US arsenal relative to other “tank killing” weaponry,⁶⁰ but justifies their continued use by proclaiming that DU rounds provide US forces with a vast advantage over enemy forces.⁶¹ During the 2003 Iraq War, however, a large quantity of DU rounds were apparently shot at dismounted troops, cars, trucks, buildings, and other “soft” targets that do not require DU rounds for penetration or destruction. Since even small caliber 25 mm DU rounds shot by Bradley Fighting Vehicles reportedly destroyed Iraqi T-72 tanks,⁶² it is unclear whether DU rounds are really a military necessity, or whether 120 mm tungsten alloy rounds could as efficiently destroy the antiquated tanks in the arsenals of Iraq, Iran, Syria, North Korea, and other potential adversaries.

4. US Policy in the Wake of the Occupation of Iraq

There has been very slight improvement in US policies on DU since 1991, but overall these policies remain beholden to political considerations. Proactive action now, however, could avoid scientific uncertainty and political headaches later.

4.1 Health Policy

4.1.1 *US Department of Defense*

In contrast to 1991, most US servicemen and women now receive some training about DU munitions. The overall message to the troops seems to be one of “stay away from destroyed equipment,” which is prudent for a variety of reasons. Nonetheless, where known or suspected exposures to DU have taken place, it is unclear whether US troops are receiving adequate information or medical testing.

The US Department of Defense has developed a “Post-Deployment Health Assessment” questionnaire for US troops redeploying from Iraq or other war zones.⁶³ Among the questions asked are three that may help identify troops exposed to DU:

- Question 14 asks troops to indicate if they were exposed to DU (and other hazards) sometimes, often, or never

- Question 17 asks, “Were you in or did you enter or closely inspect any destroyed military vehicles?”
- Question 18 asks, “Do you think you were exposed to any chemical, biological, or radiological warfare agents during this deployment?”

A 30 May 2003 memorandum states, “Any servicemember who indicates on the DoD [questionnaire] a possible DU exposure while deployed will be referred to a health care provider to determine the exposure level. DU bioassays are required for all personnel with Level I and II exposures.”⁶⁴ The Department of Defense classifies as Level I exposures personnel who were in or near a vehicle when it was struck by DU rounds, or who immediately entered the vehicle to attempt rescue. Level II exposures are personnel who routinely enter DU-damaged vehicles as part of their military occupation or who fought fires involving DU munitions.

The Department of Defense’s new policy appears to be a big improvement over its misguided policies of the past, but it is far from perfect. First, it places the burden on the veteran to initiate action. Some troops may not be aware if or how they were exposed to DU, and this is a particular concern because it appears DoD has not taken proactive action to identify and cordon off many areas of Iraq where DU munitions were shot. The Department of Defense should share the burden by identifying troops with known or suspected exposures to DU and automatically providing them with urine testing. Second, and perhaps more importantly, the legacy of lies from the Department of Defense, and particularly the Army Surgeon General’s Office,⁶⁵ about US veterans exposed to DU during the 1991 war makes it uncertain whether DoD can be trusted to use the information gathered in the questionnaire to ensure all potentially exposed troops receive urine testing and monitoring. Indeed, the Department of Defense had policies in place during the 1991 war that required medical testing for servicemen and women with known or suspected exposures to DU,⁶⁶ but in retrospect we can see these regulations were simply ignored. Will the new policy be ignored or only partially implemented?

Despite new DoD policy for US servicemembers exposed to DU, Pentagon spokesmen have shown a serious lack of regard for the possible health effects of DU exposure on Iraqi children. During a 14 March press briefing, Pentagon spokesman Dr. Michael Kilpatrick dismissed concerns about children being exposed to DU dust.⁶⁷ Even more disturbing was the statement by Lt. Col. Michael Sigmon, a deputy surgeon for the US Army’s V Corps, that children playing with expended tank shells would have to eat and then practically suffocate on the depleted uranium residue before any health problems occurred.⁶⁸ The suggestion that children could eat DU flies in the face of mainstream scientific opinion as expressed by the Royal Society and World Health Organization, and a recent article in the *Journal of Environmental Radioactivity* stated, “children playing with soil may be identified as the critical population group [for DU exposure], with inhalation and/or ingestion of contaminated soil as the critical pathway.”⁶⁹

4.1.2 *US Department of Veterans Affairs*

The US Department of Affairs is off to a poor start on addressing DU exposures among US troops in Iraq. A May 2003 newsletter to “Iraqi Freedom Veterans” includes a

section on “Environmental Health Hazards” troops may have been exposed to during their service, but this section and indeed the entire newsletter fails to mention DU even once.⁷⁰ The VA’s DU Program claims it will provide urine tests to veterans who request them, but it is unclear how veterans will learn about this opportunity if the VA’s own outreach materials avoid any mention of DU or urine tests.

In addition, persistent problems with the DU Program limit its utility and integrity. When the VA’s DU Program was established in 1993 with 33 veterans, a VA report noted: “The small size of the exposed population [then believed to be 33]...[makes it] highly unlikely that definitive conclusions regarding cancer induction will be obtained from the study.”⁷¹ Even after the Pentagon belatedly admitted in 1998 that more than 100 friendly fire veterans who should have been enrolled in the DU Program,⁷² only about three-dozen additional veterans have been examined, and Pentagon spokesmen have lied about the existence of cancer and tumors⁷³ among these veterans. There is growing momentum for a new policy that includes a health survey of the approximately 900 veterans of the 1991 war with Level I and II exposures, as well as creation of a separate DU study under new leadership of DU exposed veterans from the 2003 war.

4.2 Environmental Policy

There does not yet appear to be any coherent US policy on environmental assessment or remediation of DU contamination in Iraq. An April story on BBC News Online quoted a Pentagon spokesman as stating “I don’t believe we have any plans for a DU clean-up in Iraq.”⁷⁴ To date, the US government has also refused to release information about the quantities and locations of DU expenditure in Iraq, or allow UNEP’s Post Conflict Assessment Unit into Iraq to study DU.

This is a shortsighted approach that has ill served US policy in the past. Indeed, the US government’s reluctance to provide information about DU in Iraq, the Balkans, and Afghanistan has helped fuel speculation about widespread and severe health effects caused by DU in those places, which have further been cited by political groups to support opposition to the United States. The timely release information about DU and prompt environmental assessments could have resolved many of the uncertainties that persist about the effects of the use of DU munitions in other conflicts; the Department of Defense should learn from its past mistakes to proactively take steps to enable UN experts to assess and address DU contamination in Iraq.

5. UK Policy in the Wake of the Occupation of Iraq

Unlike the United States, the United Kingdom has a scientific organization actively engaged in the DU issue. The Royal Society has produced two major reports on DU, and during 2003 it spoke forcefully and often on the DU issue with a visible impact on UK policy.⁷⁵ As a result, UK government policy appears to be much more based on science than politics, in direct contrast to DU policy in the United States.

5.1 Health Policy

The UK Ministry of Defence states it will note the medical records of troops exposed to DU, and advise all troops who served in Iraq of the availability of biological testing to assess DU exposure.⁷⁶ In addition, “Other tests will be conducted as considered clinically necessary including, where appropriate, sensitive tests of kidney function.” In contrast to US policy, the UK government appears to be proactively informing all troops who served in Iraq about DU and DU testing, rather than forcing the veteran to initiate action. It remains to be seen, however, whether this policy will be implemented in a manner that provides useful data and protects the interests of British servicemen and women.

5.2 Environmental Policy

The UK government policy on environmental assessment and cleanup in Iraq appears to represent a new standard in the practice of states. The UK Ministry of Defence announced on 6 June that it shot 1.9 metric tons of DU in Iraq, and promises to release the locations of DU expenditure.⁷⁷ Although the Ministry of Defence states it has no legal obligation to clean up DU contamination in Iraq,⁷⁸ an unidentified MOD spokeswoman told BBC News Online that “morally we do recognize an obligation, as we have in the past. We helped in the removal of DU from Kosovo.”⁷⁹

While the UK action of quickly announcing the quantity of DU its forces shot a good first step, this action has little real value since the MOD has apparently not yet released the locations of DU expenditure, making it possible that countless people have encountered contaminated equipment or intact DU rounds in the Basra area. Prompt action is needed, preferably in coordination with scientists from the Royal Society and UNEP Post Conflict Assessment Unit.

6. New DU Myths Grow Out of the Iraq War

Rather predictably, anti-DU activists and people using the DU issue to further other political agendas or raise money have made new, elaborate claims about DU. Although the “major refugee exodus” and “radioactive dust haze” with genocidal effects predicted before the war failed to materialize,⁸⁰ “the newly reported outbreak of ‘Gulf War 2 syndrome’” has been blamed on DU.⁸¹ Even more astonishing is the suggestion, promoted by the UK Green Party, that the US used “small nuclear weapons in Iraq as bunker-busting weapons”⁸² – a claim for which not a shred of evidence exists.

In early April, former US Army officer Doug Rokke was quoted as claiming, “People are sick over there [Iraq] already,”⁸³ from DU and other exposures. As part of an international speaking tour organized by the Traprock Peace Center, Rokke has proclaimed the use of DU munitions a crime against God and humanity, and claimed that “at least 30 of his 100-strong team have died of ailments directly related to their [DU] exposure.”⁸⁴ In an April 14 letter to the Miami Herald, however, Assistant Secretary of Defense William Winkenwerder stated, “The Department of Defense has compiled a list of 29 people Rokke reported to be on ‘his team.’ Two have died.”⁸⁵ Indeed, by making exaggerated or unsubstantiated claims, Rokke may be inadvertently providing the

Department of Defense with evidence it is using to publicly and privately discredit him as well as the DU issue.

The old myth that large quantities of DU are used in missiles in bombs has taken a new twist with the claim that “non-depleted uranium” is being secretly used in “hard target, deep penetration, and DBHT (deeply buried hard target) weapons that combine uranium with high explosives.”⁸⁶ Citing unspecified “government reports and independent research,” the Uranium Medical Research Centre (UMRC) claims these new warheads contain “100s to 1000s of kilograms” of uranium that is “extracted from the nuclear fuels and nuclear weapons production cycles prior to the uranium enrichment phase.” UMRC claims this secret use of uranium is responsible for illnesses in Afghanistan,⁸⁷ but this assertion is undermined by the lack of any evidence that any missiles or bombs used in Afghanistan contain any natural or depleted uranium. Moreover, even if missiles or bombs contained some DU or natural uranium as a nose cone or counterweight, it is highly unlikely that any missile or bomb would contain “1000s of kilograms” of uranium.

7. Recommendations

7.1 Environmental Policy

- The US and UK governments should disclose the locations and quantities of DU expenditure
- The US government should allow the UNEP Post Conflict Assessment Unit unfettered access to all parts of Iraq to conduct environmental assessments and integrate environmental protection into the wider post-conflict reconstruction phase
- The US administration ruling Iraq should immediately post warning signs, restrict access, and clean up DU sites

7.2 Health Policy

- The US Department of Veterans Affairs should undertake a health assessment of the ~900 veterans from the 1991 war who had Level I and II exposures
- The US, UK governments should automatically test Iraq War veterans with known or suspected DU exposures
- The World Health Organization should undertake a rapid assessment of the health status of the population of Iraq and work with the US administration ruling Iraq, United Nations Environment Programme and International Atomic Energy Agency to protect the Iraqi population from environmental health hazards

Endnotes

- ¹ Dan Fahey is an independent policy analyst on the use and effects of depleted uranium munitions. Among his reports on DU are “Science or Science Fiction? Facts, Myths and Propaganda in the Debate Over Depleted Uranium Weapons” (12 March 2003) and “Don’t Look, Don’t Find – Gulf War Veterans, the U.S. Government and Depleted Uranium, 1990-2000” (30 March 2000). He lives in San Francisco, California, and can be contacted at duweapons@hotmail.com
- ² This observation is borne out by the author’s interactions with Iraqi doctors and diplomats at depleted uranium events in Geneva, Switzerland (April 2001) and Gijon, Spain (November 2001). See also, Dan Fahey, “Science or Science Fiction? Facts, Myths and Propaganda in the Debate Over Depleted Uranium Munitions,” 12 March 2003, <http://www.antenna.nl/wise/uranium/diss.html#DUMYTHS>.
- ³ Scott Peterson, “Assistance to reporter imperiled key contact,” The Christian Science Monitor, 10 June 2003.
- ⁴ Office of the President of the United States, “Apparatus of Lies – Saddam’s Disinformation and Propaganda, 1990-2003,” January 2001, 19.
- ⁵ See e.g., John J. Fialka, “Weighing Claims About Depleted Uranium,” The Wall Street Journal, 2 January 2003.
- ⁶ Susan H. Mather, MD, MPH, Chief Public Health and Environmental Hazards Officer, US Department of Veterans Affairs, letter to Mr. Dan Fahey, 30 April 2003.
- ⁷ See e.g., Dan Fahey, “Depleted Legitimacy – The US Study of Gulf War Veterans Exposed to Depleted Uranium,” 4 May 2002, www.ngwrc.org/conf2002/NGWRC-DU-Atlanta.pdf.
- ⁸ See Dan Fahey, “Science or Science Fiction? Facts, Myths and Propaganda in the Debate Over Depleted Uranium Munitions,” 12 March 2003, <http://www.antenna.nl/wise/uranium/diss.html#DUMYTHS>.
- ⁹ U.S. General Accounting Office, Hazardous Waste: Information on Potential Superfund Sites, GAO/RCED-99-22 (Washington, DC: Government Printing Office, Nov. 1998) 170.
- ¹⁰ Michael Orey, “Uranium Waste Site Has a Historic New England Town Up in Arms,” The Wall Street Journal 1 March 2001: B1.
- ¹¹ Jesse D. Edmands et al, “Uptake and mobility of uranium in black oaks: implications for biomonitoring depleted uranium-contaminated groundwater,” Chemosphere (2001) 44: 789-795.
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