

OUR DISORDERED WORLD: REPORTS FROM THE FRONT

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DID THE U.S. USE CHEMICAL AND RADIOLOGICAL WARFARE IN THE GULF WAR?

There is a broad international consensus that biological, chemical and nuclear weapons kill indiscriminately, continue to kill and injure after a war is over, and ought to be outlawed. Because of this, the United Nations inspection of Iraq is supported in so far as it claims to be uncovering, with the purpose of destroying and preventing further production of such warfare materials. Clearly, there is also some universal discomfort at the length of time this is taking and the fact that sanctions against the Iraqi People, including restrictions on food and medicine, continue during this search process. Another important factor in public perception is the taunting way Saddam Hussein seems to deal with the United States and the United Nations, and the Iraqi controlled news media portrayal of the crisis to the Iraqi people. This provokes anger and a desire to force compliance and to proclaim moral authority in the battle for perception and public opinion.

The missing factor in the saber rattling is the fact that even though it is almost seven years since the cessation of hostility, there are at least 80,000 Gulf War service men and women with an unknown illness. The Gulf War syndrome, as it is known, still has no generally accepted etiology, diagnosis, or treatment. There are a number of factors which may be implicated in this sickness, at least of some proportion of the cases, and it is important to assess the impact of each of these factors, especially since hostility may be resumed in the Gulf. After all, the Iraqi people, children, women and men civilians, also appear to be suffering from Gulf War syndrome, according to Dr. Siegwart-Horst Gunther, an Austrian physician who has been working there.

Making civilians sick after the close of a war is the very effect which this "holy war" against biological, chemical and nuclear warfare is claiming to wage. There are grave questions in the international community about restrictions on food and medicine destined for Iraq, but deliberately causing chronic debilitating illness and deformed offspring among civilians constitutes direct biological, chemical and/or radiological warfare and is totally unacceptable. This problem is not even being debated.

Many probable causes of Gulf War syndrome have been proposed. First, there were the vaccines intended as protection against nerve and biological warfare agents. Use of these can be stopped. There was also the intense smoke and chemical pollutants released by the continuous oil well fires. Hopefully, with "precision" bombing and no fleeing army, this danger would be mitigated. The Old World Leishmaniasis, a parasitic disease transmitted by the bite of sand flies indigenous to the region also is not now a problem to Iraqi's, and it also not likely to be a problem in renewed fighting with no troops on the ground. The widespread use of pesticides and insecticides by the ground troops during the war is also not likely to be

repeated. None of these potential causes would fully account for Gulf War syndrome among the Iraqi people, including severely deformed children in Iraq born after the war. None would be expected to be involved in military "punishment" of Saddam Hussein undertaken in the near future.

However, two of the likely causes of Gulf War illness are still serious problems, and they continue to threaten UN military, and civilians in Iraq should hostilities break out again. These hazards include the bombing of Iraqi chemical or biological stockpiles, creating clouds of toxic materials, and the use of depleted uranium ordnance and armor by the United States.

If the places where the suspected Iraqi arsenals are kept is unknown to the United Nations, then the bombing of such a site cannot be easily ruled out. This outcome is in the realm of "possible". However, the use of depleted uranium ordnance by the United States appears to be certain and such use is very problematic. History is likely to judge this military use of depleted uranium (DU) as the use of chemical and radiological warfare agents nominally to prevent Iraq from using them.

Depleted uranium is chemically the same as natural uranium, which is chemically toxic as well as being radioactive. Uranium occurs naturally in soil and is present in trace quantities in food, and is not considered under these circumstances to be unusually hazardous. Depleted uranium is so called because it is the waste from uranium processing, which is designed to concentrate the more fissionable U 235, so that the residue from the natural uranium is mostly the more weakly radioactive U 238. Normally the U 235 is not completely removed from what is called depleted uranium, but about half of it has been removed. Depleted uranium also contains traces of radioactive thorium, protoactinium, and other radionuclides, just as does natural uranium.

The military use of depleted uranium capitalizes on its pyrophoric property. When heated in air to 500 degrees Centigrade it oxidizes slowly, sustaining combustion and forming respirable aerosols. These aerosols of uranium are very light and can travel more than 42 kilometers (26 miles) from the release point. This was discovered in 1979 by workers at the Knolls Atomic Laboratory north of Albany, New York. While investigating the National Lead Industries (NL), reportedly fabricating DU penetrators for 30 mm canon rounds and airplane counter weights, they found DU contamination on their own air filters 42 km from the factory. According to Dr. Leonard Deitz, of Knolls, "this is by no means the maximum fallout distance for DU aerosol particles". The NL was closed down, decontaminated and dismantled in 1983 for emitting more than 150 micro curie (387 grams) of DU. The aerosol is much more hazardous than naturally occurring uranium particles in soil or food, because it is easily breathed into the lungs where, because it is not very soluble in water, it can stay with a half time of 300 days. One GAU-8/A penetrator in an aircraft 30 mm canon round contains 272 grams of DU.

During the Gulf War an estimated 300 metric tons of DU were fired. The friction on reaching target causes it to aerosolize. Using a conservative estimate that only 1% aerosolized, this would have produced 3 million to 6 million grams of DU aerosol. The Doha fire alone, which the US has blamed for much of the Gulf War illness, included the burning of significant amounts of DU. Although the aerosol problem was known, the cleanup crew was not provided respirators or other protections provided for in the military manual (See Department of the Army Technical Bulletin TB 9-1300-278, "Guidelines for Safe Response to Handling, Storage and Transportation Accidents Involving Army Tank Munitions or Armor

which Contain Depleted Uranium", September 1990). The Doha fire involved 6 hours of violent explosions, and 18 additional hours of residual fires. More than 9000 pounds (4.1 million grams) of depleted uranium were lost in this fire. This had the potential of producing up to 4.1 million aerosol particles. No service men or women were protected from inhaling and ingesting these aerosol particles along with the other hazardous smoke and fumes of the war, and these deadly aerosols, undetectable to the senses, spread far and wide over the battlefield.

According to a survey of 10,051 Gulf War Veterans conducted by Victor Sylvester of the Operation Desert Shield/Desert Storm Association between 1991 and 1995, 82% of the Gulf War veteran handled DU, or entered captured Iraqi vehicles which had been contaminated with DU. Many took DU fragments home as souvenirs. Some of the service personnel, assigned to unload battle damaged tanks destroyed by armor piercing DU shells from friendly fire, reported that such tanks were later declared by a Battle Damage Assessment Team to be "hot", giving off between 2.6 and 10 mSv/hour radiation dose inside. The maximum permissible radiation dose to members of the public is 1 mSv per year. Service men and women received this in less than an hour. The service personnel had not been forewarned and had taken no protective actions.

The expected health effects of chronic lung burdens of depleted uranium include fibrosis of the irradiated lung tissue, lung cancer, eventual entry of the DU into blood over the subsequent years, with effects on liver and kidney, together with incorporation of DU into bone. When in bone, the uranium can cause irradiation in the sensitive stem cells which form the white blood cells, especially the monocytes. Clinical manifestations of this toxicity and irradiation include kidney and liver damage, anemia, depressed cellular immune system and general heavy metal poisoning. Uranium can pass the placenta, causing congenital malformations, and can be carried to the infant in Mother's milk. It can damage the ovum and sperm, causing genetic damage to offspring.

Only 24 of the US Gulf War Syndrome patients have been examined for uranium lung burden. The DU aerosol is insoluble and expected to stay in the lungs three or four years, delivering a radiation dose to the tissue. Using old equipment, admittedly not very sensitive, Dr. Belton Burroughs and Dr. David Slingerland of the Veterans Administration Medical Center in Boston, were able to identify fourteen of the 24 as having measurable lung burdens of DU. The testing was terminated, and all records have subsequently been "lost". Some urine samples were sent to the US Army Radiochemistry Laboratory in Aberdeen, Maryland, for testing. Some samples never reached the laboratory, and the results of those that did were supposedly "lost". The Medical Doctor who gave this testimony to the U.S. Congress, Dr. Asaf Durakovic, an internationally recognized expert in internal contamination with radioactivity, has lost his job with the Veterans Administration. The Canadian program of testing does not include DU contamination assessment.

An important memorandum, dated 1 March 1991, on the Effectiveness of Depleted Uranium Penetration, written by Lt. Col. M.V.Ziehm, Los Alamos National Laboratory, sheds some light on the reluctance of the U.S. to deal with this issue. It states:

"There is a relatively small amount of lethality data for uranium penetrators, either the tank fired long version or the GAU-8 round fired from A-10 close air support aircraft. The recent war has likely multiplied the number of DU rounds fired at targets by orders of magnitude. It is believed that DU penetrators were very effective against Iraqi armor; however, assessments of such will have to be made.

"There has been and continues to be concern regarding the impact of DU on the environment. Therefore, if no one makes a case for the effectiveness of DU on the battlefield, DU rounds may become politically unacceptable and thus be deleted from the arsenal.

"If DU penetrators proved their worth during our recent combat activities, then we should assure their future existence (until something better is developed) through Service/DoD proponentcy. If proponentcy is not garnered, it is possible that we stand to lose a valuable combat capability.

"I believe we should keep this sensitive issue at mind when after action reports are written".

In a 1974 US military report entitled: "Medical and Environmental Evaluation of Depleted Uranium", it is rather boldly stated that although an uncontrolled release of depleted uranium may have a significant impact locally: "...the problems from the use of DU on the battlefield or at sea are insignificant when compared to other dangers of combat".

On 16 August 1993, the Office of the Surgeon General, US Department of the Army, issued its: "Depleted Uranium (DU) Safety Training" document. In it they stated that the expected effects from exposure include possible increase of cancer (lung and bone) and kidney damage. It recommends:

"That you convene a working group to define competing risks of combat with DU weapons, to identify countermeasures against DU exposure and finally to assess the risks associated with each potential countermeasure. The working group could then optimize the trade-off between DU risk and battlefield countermeasures to maximize the survivability of the soldier."

Note that the term "Survivability" means the ability to accomplish the soldier's mission in combat, and does not extend to his or her post war life.

Clean up after such a dirty war, including medical care for all combat and civilian personnel, friend and foe, as well as environmental cleanup has proven to be enormous. According to Lt. Gregory K. Lyle, in

an internal memo, the civilian populations of Saudi Arabia and Kuwait as well as those of Iraq, were coming increasingly into contact with DU Ordnance. Toxic war souvenirs, post conflict cleanup (by agreement with host nations), uranium oxide dust, and beta particles from fragments and intact DU rounds were all serious health threats. According to this memo, the contact exposure rate from these items might reach 2 mSv per hour. In just 30 minutes, the individual would receive the maximum permissible dose of radiation for one year. Iraqi children who are known to have played with such discarded ordnance are now suffering from leukemia.

Shall the global community, now clearly condemning land mines, ignore a military assault on Iraq and on its own service personnel with more uses of DU? How many separate categories of horror need to be outlawed before war itself is outlawed?

It is time for new approaches to security, new implementation of conflict resolution methodology, and renewed pledge of responsibility to those who have risked their lives in support of democracy and international order. The abandonment of the Gulf War veterans in pursuit of military advantage and arms sales, and the continued threat to civilians and one's own troops posed by biological, chemical and radiological warfare, including the use of depleted uranium, is disgraceful. The United Nations is urged to remove itself from its supportive position for this policy of military force immediately!

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US Central Command Log, "11ACR Fire in Doha: Updates from CENTCOM Forward", July 12, 1991. Entry 3 note that: "Depleted uranium rounds are going off." Entry 10 states: "EOD (Explosive Ordnance Disposal) POC (Point of Contact) state "that burning depleted uranium puts off alpha radiation. Uranium Particles when breathed can be hazardous. 11ACR (11th Armored Cavalry Regiment) has been notified to treat the area as though it were a chemical hazard area, i.e. stay upwind and wear protective mask in the vicinity." Based on interviews with the personnel, this warning was not passed on to the soldiers by their commanders.

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US Federally Sponsored Research on Persian Gulf Veterans' Illnesses reports two projects on Depleted Uranium: (1) Studies of veterans with DU fragments imbedded due to friendly fire. Preliminary reports note:

"Fibrous tissue adhere to DU but not Ta (Tantalum control) pellets in situ, but capsule formation is not yet evident. Uranium levels are high and dose-dependent in kidney, bone, and urine, and moderately high in muscle, brain and spleen. Estimated completion of this research is 1998. (2)

A rodent study to predict carcinogenic effects of long term exposure to imbedded DU fragments in humans. Preliminary results not available. Completion 1998.

There are 89 other Federally funded studies, none of which deal with the DU question.

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Geneva Coordinator of Desert Concerns: Philippa Winkler, +44-117-973-7746 UK, assisting with the UN process to ban DU weaponry. Attny: Karen Parker, San Francisco, CA.