

By Carol Dudek

What is depleted uranium?

Depleted uranium is a byproduct of the process of making enriched uranium. The technology isolates the uranium-235 needed for nuclear reactors and warheads and discards uranium-238 (depleted uranium).

Centrifuge process

Natural uranium ore is ground, treated and converted into a gas.

The uranium gas is pumped into a cylinder that rotates at twice the speed of sound.

The heavier of the two isotopes, **uranium-238**, is drawn against the sides of the centrifuge cylinder . . .

. . . separating it from the lighter **uranium-235**.

The uranium passes through hundreds of centrifuges to refine it further. A single centrifuge cylinder is typically 6 feet tall and a few inches in diameter.

The centrifuge process creates 11% enriched uranium (235) and 89% depleted uranium (238)

Use of depleted uranium in armor

Depleted uranium is the most effective material for tank armor due to its extreme density – about 1.6 times that of lead – and hardness. But when damaged, the armor may release particles that are chemically toxic and radioactive.



M-1 Abrams tank

Use of depleted uranium in munitions

Depleted uranium's density and hardness also make it a choice for weapons to tear through enemy targets and burst into flames on contact. Scientists worry that battlefield remnants of depleted uranium could cause health problems in both U.S. military personnel and Iraqi civilians.



Rounds fired by the M-1 Abrams tanks, for example, contain about 9 pounds of depleted uranium. As the weapons pierce armor, small bits of depleted uranium ignite.



Depleted uranium penetrator with stabilizing fins

Exposure to depleted uranium

U.S. military sources say the effectiveness of weapons and armor made with depleted uranium outweighs the risks of exposure. Opponents disagree. There are three ways people could become exposed to depleted uranium in areas where it has been used in combat:



Cancer risk
Fears of cancer from exposure to depleted uranium are related to its radioactivity. The black star at left shows tracks made over 48 hours by alpha rays emitted by a radioactive particle lodged in an ape's lung tissue. (The particle is invisible.) Damaged cells can become cancerous.

SOURCES: Associated Press; cncr.org

News-Journal

Late in 2016 the Pentagon admitted it fired depleted uranium (DU) weapons in Syria, after repeated denials. More than a ton was dropped, and now Syria joins Iraq (the most toxic nation on earth), Afghanistan, Gaza and the Balkans with a future of severe birth defects, increased cancer rates and an irradiated environment.

The US told journalists in 2015 that aircraft deployed in Syria would not be armed with DU munitions. But activists who doggedly pursued answers learned from a congressional aide that the US fired DU in Syria on November 18 and 23, 2015. Now, PAX and the International Coalition to Ban Uranium Weapons are calling for full disclosure so that the risk of contamination can be assessed and the clean up of toxic materials can begin. Syrian civilians expressed concern about radiation as air strikes on Raqqa and north Syria escalated. Many worry that the secrecy of operations may point to even wider use of the heavy metal. Without a chance admission by a congressional aide, the US would never have volunteered its use of DU in the strikes.

Depleted uranium is forever radioactive and its dust spreads for miles in the wind,

contaminating everything - food, water, soil, schools and hospitals. The European Parliament advocates a moratorium on DU weapons. The UN passed a sixth resolution aimed at diminishing DU contamination and asking for help in cleaning up sites. Sadly no assistance has come. Although a huge majority of member states supported the resolution, shamefully the US, UK, France and Israel voted against. Under present law, countries guilty of exploding depleted uranium have no obligation to clean up, in contrast to agreements for clearing land mines and cluster munitions. No rules regulate the production, use, stockpiling or destruction of DU weapons. There are no warning systems for civilians facing exposure.

More than half the DU fired in Iraq is still unaccounted for and the US refuses to release data. But recently-declassified documents show most of the radioactive ammo fired in 2003 was not at armored vehicles and tanks, but at personnel and buildings in densely populated areas of Iraq and Afghanistan. Before the 1991 Gulf War Iraq's cancer rate was 40 cases in 100,000; after four years it climbed to 800 in 100,000; in 2005 the rate doubled to 1,600 cases in 100,000. Birth defects have skyrocketed in Fallujah, a site of high contamination of metals including uranium. Nervous system defects there are 33 times the rate in Europe, and heart defects are 13 times greater. 14.7% of babies in Fallujah have birth defects. The World Health Organization investigated the relation of abnormal birth defects in southern Iraq and environmental contamination but the report never got through the Security Council.

The Pentagon claimed the bombings were in defense of the Syrian people yet reneged on its promise that DU would not be used. This reminds us that the US invaded Iraq to destroy non-existent WMDs and left a devastating radioactive legacy.