CONFERENCE RESOLUTION 2
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Scientist's Communiqué

This conference affirms and accepts, with regard to the outcome of using uranium weapons, that the following facts are beyond question:

Uranium weapons are converted upon impact into ceramic and other uranium oxide particles whose mean diameters are in the range of 0.001 to 1.0 microns, with a mean diameter of 0.01 micron.

Such material is entirely novel and its properties and effects cannot be related scientifically to studies of uranium dusts from mining or processing operations.

Uranium oxide can travel hundreds of miles.

Depleted uranium dust does not remain near the target but is widely dispersed by geophysical mechanisms. It has been found in the Iraqi desert 10 years after the conflict [Busby, Iraq data]. It has been found in street dust in Gjakove, Kosovo [Busby, Nippon TV, BBC] 13 months after use. It was found in 46 percent of all samples taken in Kosovo by UNEP 13 months after use, and was also found by UNEP in Bosnia and Montenegro.

The mobility of the ceramic uranium oxide particles is due to their re-suspension in dry weather. This has been demonstrated by measuring isotope ratios of U-238 and Pa-234m / Th-234 in Kosovo [Busby, Strasbourg, 2001]; ceramic uranium oxide particles were found in unfiltered water in Kosovo [UNEP] and directly in air measurements made by UNEP in Bosnia and Montenegro. They are thus available, long after the conflict, for inhalation. Anyone in the general area of their prior use will be at risk, several years after their use or contamination. This is demonstrated by urine measurements made in Kosovo by Priest in 2001, when all 20 people sampled showed contamination, and was also demonstrated by urine tests in Gulf War veterans made 10 years after their exposure [Durakovic, Sharma]

Although the ICRP model used by risk agencies and the military predicts that depleted uranium doses are too low for measurable health effects, this model is not appropriate to internal radiation. This is because internal particle radiation causes high doses to local tissue, whereas the ICRP model is an approximation which applies to external radiation and average doses.

There is massive evidence of health risk from exposure to uranium oxide particles. This includes data from the Iraqi cancer registry which shows a rapid increase in cancer, leukemia and lymphoma after the 1991 Gulf War. The Iraqi cancer registry data includes the fact that, in 1999, the childhood leukemia in Iraq peaked in the 1991 wartime birth cohort, aged 5-9, when, usually, the peak would be in the 0-4 group. It includes Iraqi birth defect increases and those in children of Gulf War veterans data presented to this conference:

* It includes the genetic component of Gulf War Syndrome including cancer, lymphoma and leukemia;

* It includes the Italian Kosovo and Bosnia peacekeepers study of may 2001 which showed a clear and significant 3-fold increase in lymphoma in personnel stationed in the Balkans, 7.5-fold excess relative to a normal military population;

* It includes a statistically significant 2-fold excess of lymphoma in UK veterans of the Gulf War compared with a matched control group as reported in the British Parliament and by the Medical Research Council of the UK;

* It includes a more than 10-fold increase in lymphoma and leukemia recorded by the Sarajevo cancer registry between 1995 and 2001;

* It includes evidence of significant increases in lymphoma and leukemia in Spanish and Portuguese soldiers serving in Bosnia and Kosovo [Spanish data at this conference, Portuguese data Eddie Gonzales].

Finally, scientific evidence relating to the biological effects of depleted uranium particles -- and which relate to health effects -- include theoretical and cytological (cell biology) evidence such as:

* Calculations that show that dose of a 1 micron particle to tissue in the 30 micron range, is about 500 to1000 mSv (mili Sievert) in a year [Busby and Yagasaki Calculations show that a 5 mg inhalation would lead to 10^9 particles of 1 micron diameter and 10^{11} particles of 0.1 micron diameter, enough for one particle for each cell in the lymphatic system of an adult.

* Chromosome tests on UK Gulf War veterans examining Dicentric and Centric ring aberrations in peripheral lymphatic show a 5-10 fold increase in aberrations. This may be considered -- on the basis of other work -- to be equivalent to an external dose of 100-500 mSv and is similar to chromosome aberrations found in Chernobyl firemen with recorded external film badge doses of 500 mSv. This is 500 times the legal exposure limit in most countries.

* Recent work shows that Uranyl UO_2^{++} ion binds strongly to DNA, a fact that has been the basis of staining techniques known for many years.

* Recent theoretical considerations show that high atomic number particles like U will focus the energy of external natural background radiation to cause high ionization density an damage to local tissue from photoelectrons. At a 1 mSv annual external dose, there will be 1000 mSv absorbed and re-scattered locally by a 1 micron uranium particle.

--Conference participating scientists

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