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**New National Campaign Launched to Strengthen
Radiation, Chemical Exposure Health Protection Standards
*Groups Ask President Bush to Shift Basis of Federal Regulations
from Adult Males to Groups Most At Risk – Pregnant Women, Children***

Washington, D.C., October 19, 2006: A broad coalition of scientists, physicians, cancer prevention leaders, children's health organizations, environmental justice advocates, and women's groups today launched a national campaign to shift the basis of many U.S. radiation health protection standards from an adult "Caucasian" male model, called "Reference Man," to those most at risk, specifically including children and pregnant women..

The coalition is urging President Bush to direct all federal agencies – including the Department of Energy, the Nuclear Regulatory Commission, the Environmental Protection Agency, and the Food and Drug Administration – to review their exposure standards. A new report, produced by the Institute for Energy and Environmental Research (IEER), *Science for the Vulnerable: Setting Radiation and Multiple Exposure Environmental Health Standards to Protect Those Most at Risk*, forms the scientific basis of the campaign.

Many federal radiation protection standards, such as limits on how much residual radiation will be allowed in contaminated soil, are based on "Reference Man," a hypothetical adult "Caucasian" male who is 20 to 30 years old, weighs 154 pounds, is five feet seven inches tall, and is "Western European or North American in habitat and custom." However, other groups, including women, children, and the embryo/fetus, are often more sensitive to the harmful effects of radiation or toxic materials.

"A central principle of environmental health protection – protecting those most at risk – is missing from much of the U.S. regulatory framework for radiation," said Arjun Makhijani, Ph.D., president of IEER and co-author of the report. "Women's higher cancer risk per unit of radiation exposure is not properly reflected in current regulations. Neither is the possibility of early miscarriages or fetal malformations potentially caused by radiation exposure."

The report contains a detailed discussion of the higher risks to women, and especially to female children, of certain kinds of cancer, notably thyroid cancer. A female infant drinking contaminated milk is a hundred times more at risk of thyroid cancer than an adult male, according to the report. For the same amount of radiation dose, women have a 52% greater chance of getting cancer. It also notes that water made radioactive with tritium crosses the placenta and affects the developing embryo/fetus, and can cause early failed pregnancies as well as malformations. These health risks are not part of regulatory considerations currently despite the fact that tritium discharges are occurring from both nuclear power plants and some nuclear weapons facilities, such as the Savannah River Site.

"A considerable and growing body of evidence indicates that exposure to radiation and synthetic chemicals is contributing to increasing rates of breast cancer in the U.S. and other industrialized countries," said Jeanne Rizzo, R.N., executive director of the Breast Cancer Fund. "If we change our safety standards to specifically protect women and girls, we will spend less time, money and heartache treating diseases caused by environmental exposures."

The report provides a model for assessing some of the simpler combined effects of chemicals and radiation, including when they reinforce one another. "It is important to consider how radiation and chemicals can act together to promote cancer," said Dr. Michael Thorne, a British consultant to IEER, and a co-author of the report. "Exposure to ionizing radiation could increase the number of cells that have the potential to proliferate to form breast cancers later in life and exposure to chemicals that modify estrogen levels could preferentially enhance the survival of such cells."

"Rapidly increasing rates of cancers and other illnesses related to radiation and hazardous toxic chemicals in our environment are creating a population of grandparent-less families in our environmental justice communities," said LaDonna Williams, Executive Director of People for Children's Health & Environmental Justice. "The federal government must act now by adopting more protective standards to reverse this negative trend that is having devastating impacts on our families, health, lives and environment."

"I've never known a woman to give birth to a full-grown, 154-pound 'Reference Man'," observed Mary Brune, Co-founder of MOMS, Making Our Milk Safe. "Pregnant women, developing children, and infants require and deserve a higher degree of protection than the current regulatory framework provides. The IEER report provides realistic and inclusive guidelines for protecting the most vulnerable among us."

The report points out that the concepts to solve much of the problem already exist in the form of the "maximally exposed individual" and of the "critical group" but have not been widely applied. The government's model for setting residual radioactivity standards for cleaning up radioactively contaminated sites, RESRAD, depicts a family on the front panel display, but its standard model converts contamination to radiation dose only for "Reference Man." In the context of clean-up of Department of Energy sites, the risk to a pregnant woman farmer, the fetus, and her children should be evaluated, rather than only Reference Man. The most sensitive should be protected.

The report makes specific recommendations regarding strengthening workplace protections. Besides abandoning "Reference Man" and replacing him with the most vulnerable population subgroup, the report makes specific recommendations regarding workplace protection for the embryo/fetus. The U.S. standard for workplace radiation exposure is five times more lax than that in Germany, for instance. The maximum exposure should be lowered to 100 millirem per year, from the present 500. The report also recommends that the United States adopt a rule for radiation controlled workplaces to protect women from bodily contamination, once women inform their employers that they are breastfeeding. Unlike Europe, no such protection exists in the United States today.

In view of the potential non-cancer health risks of tritium to the embryo/fetus and pregnant women, which are absent from the framework of present radiation protection or drinking water regulations, the report recommends consideration of restricting discharges so that offsite surface water has no more than 500 picocuries per liter of tritium, which is a standard that has already been adopted by the State of Colorado for the environs of the Rocky Flats Plant, near Denver. The U.S. Department of Energy agreed to this limit as a site-specific standard in the clean-up of Rocky Flats, which has now been decommissioned. The present national drinking water maximum contaminant limit for tritium is 20,000 picocuries per liter. The report recommends an analysis to determine the feasibility of a limit of 500 picocuries per liter at all nuclear power and nuclear weapon sites, including remediation of those sites.

The IEER report and other documentation, including statements, the full definition of "Reference Man," and the Presidential Executive Order issued by President Clinton in 1997 and extended by President Bush in 2003 on protecting children from environmental health risks, are available online at www.ieer.org.