

From: Susan Michetti
Sent: Monday, October 26, 2015 8:13 PM
To: Hanlon, Edward <Hanlon.Edward@epa.gov>;
Subject: PROTECT THE VULNERABLE FROM ALL IONIZING RADIATION

TO WHOM IT MAY CONCERN:

THE EPA NEEDS TO PROTECT THE VULNERABLE FROM ALL IONIZING RADIATION. To do less than this is negligence and morally deficient as all living organisms are vulnerable to this. Protection had been insufficiently conducted AROUND NUCLEAR POWER PLANTS AND other DOMESTIC USES OF NUCLEAR SUBSTANCES FROM CRADLE TO GRAVE. Worse yet, living organisms have not been sufficiently protected to MILITARY USES OF IONIZING RADIATION. I ask the EPA to protect the vulnerable to the fullest extent of the scope of its authority.

THE MEDICAL ADVERSE HEALTH EFFECTS ARE CLEAR. ALL IONIZING RADIATION CAUSES ADVERSE HEALTH EFFECTS, STARTING WITH SHORT TERM LOWEST LEVELS, including those that fall beyond lowest detectable measurements, as all exposure is known to consistently cause red blood cell changes in membranes that is linear in nature. Membranes changes are known to interfere and alter NUTRIENT AND DETOXIFICATION FUNCTIONS as well as other functions. Membrane changes ALLOW INAPPROPRIATE SUBSTANCES TO ENTER THE CELLS VIA THE MEMBRANE malfunction and also prevent appropriate substances as required nutrients to enter. These contribute to cellular chaos (which may or may not lead to premature cell apoptosis or to cellular proliferation as tumor or cancer eventually, in sufficient quantities of damaged cells). These cellular processes and functions directly impact WELL-BEING AND QUALITY OF LIFE AND HEALTH. ULTIMATELY, THEY DETERMINE VIABILITY OF THE CELL, and in sufficient numbers even the viability of THE HOST IN WHICH THE CELL RESIDES when a certain threshold of cell death occurs in a very limited time-frame or proliferation leading to cancer or tumors.

THESE scientific facts have been known for decades. I expect that you already know these facts, or that you should know these facts. ALSO REPRODUCTIVE DAMAGE MAY OCCUR WITH INCREASED EXPOSURE AND DOSAGES--THE POINT AT WHICH BIRTH DEFECTS actually occur MAY NOT BE PRECISELY KNOWN, BUT THE THREAT TO THE VIABILITY OF FUTURE GENERATIONS IS KNOWN by genetic science in terms of ionizing radiation. It may take 4 generations for the actual extent of the irreversible damage to be observed clinically.

THE EGGS IN FEMALES ARE ALL MADE when these females are children. EXPOSURE TO IONIZING RADIATION IS KNOWN TO DAMAGE THE MITOCHONDRIAL DNA OF THESE EGGS IRREVERSIBLY, RESULTING IN PREDICTIONS OF FUTURE GENERATIONS OF SERIOUS BIRTH DEFECTS. THESE EXPOSED EGGS TO IONIZING RADIATION IN FEMALE CHILDREN WHILE DEVELOPING THEIR REPRODUCTIVE SYSTEMS can NOT be REGENERATED AS ADULTS AFTER A PREGNANCY. INSTEAD, EXPOSURE AS A CHILD TO SUFFICIENT IONIZING RADIATION DAMAGES THE

ONLY SET OF EGGS in that female child, because THAT set of eggs IS ONLY MADE ONE-TIME--- WHILE THE CHILD IS DEVELOPING AND GROWING. THE FEMALE REPRODUCTION SYSTEM DOES NOT CONTINUE TO MAKE EGGS AS AN ADULT. IT DOES NOT MAKE NEW EGGS AFTER PREGNANCY. THE EGGS ARE ONLY MADE ONCE DURING CHILDHOOD REPRODUCTIVE DEVELOPMENT. I have repeated this using different language because it is a critical point to the future viability of the human race.

Male sperm is also damaged from ionizing radiation, but males continue to create new sperm during their life-span, leaving studies of male sperm to look at different biological parameters than female eggs. Yet, viable male sperm may not be able to create viable offspring without viable eggs from a female without mitochondrial DNA damage in her only set of eggs. THIS IS EXTREMELY SERIOUS AND damage to female eggs on a widespread basis THREATENS THE SURVIVAL OF THE HUMAN RACE INTO THE FUTURE.

CERTAINLY, THE EXPOSURES FROM CHERNOBYL AND FUKASHIMA FAR EXCEEDED THE DOSAGE(S) that damage FEMALE EGGS. THIS IS DIRECTLY OBSERVED BY THE CLINICAL MEDICAL FACTS ALREADY collected and KNOWN FROM CHERNOBYL-- BEYOND ANY QUESTION. THERE ARE LARGE NUMBERS OF SERIOUS BIRTH DEFECTS WITH CHILDREN BORN WITHOUT EYES, NOSES, MOUTHS, ORGANS, LIMBS, OR THE ABILITY TO SURVIVE WITHOUT MEDICAL LIFE SUPPORT SYSTEMS. THESE BIRTH DEFECTS WILL NEVER SUPPORT THE HUMAN COMMUNITY CONSTRUCTIVELY, AS THEY WILL HAVE TO BE TAKEN CARE OF FOR THEIR LIFESPAN UNDER EXTREMELY CHALLENGING AND DIFFICULT CONDITIONS, TO SAY NOTHING OF THE EXTREME COSTS INVOLVED. It must be heart-breaking for parents of such off-spring, particularly if they object to abortion or if they have abortion denied to them.

IT HAS BEEN IRRESPONSIBLE AND NEGLIGENT to fail to conduct sufficient scientific research and studies EXTENDING BEYOND THE KNOWLEDGE ALREADY ACCUMULATED in scope and detailed parameters, despite the recommendations coming from previously conducted scientific studies that pointed clearly, often through specific articulation within reports, TO THE NEED FOR MORE STUDIES. In particular, we need expanded STUDIES THAT DEAL WITH the scope of PUBLIC EXPOSURE ON A WIDESPREAD BASIS.

ALL PEOPLE ARE VULNERABLE TO IONIZING RADIATION ON A LINEAR BASIS, WHICH RESULTS IN VERY CLEAR CAUSE AND EFFECTS MEASUREMENTS IN MOST AREAS ALREADY KNOWN. \

STUDIES NEED TO BE CONDUCTED SPECIFICALLY MEASURING DAMAGE AND SCOPE OF DAMAGE TO ENDOCRINE SYSTEM, TO IMMUNE SYSTEM, TO CARDIOVASCULAR SYSTEM AND CIRCULATION, AND TO CNS AND BRAIN AND COGNITIVE FUNCTIONS AS WELL AS THE MUCH MORE KNOWN WIDE-SPREAD PUBLIC CALL FOR CANCER AND CELL PROLIFERATION STUDIES. Endocrine studies need to be expanded into cortisol, adrenal, melatonin, and serotonin levels and receptors and cascades as well as the alterations from normality causing abnormal functional changes, as

general indicators show these hormones and their functions altered by radiation in general. Certainly the medical problems created by Chernobyl speak to this damage. On the level of earliest damage, obviously deformed membranes on red blood cells from any exposure level would impact cardiovascular circulation, which in turn causes other adverse health effects that need quantification and other data collection at much earlier endpoints of exposure early in exposure levels. Radiation contains frequency wavelength characteristics and such are known in general to impact the central nervous system which uses a primary electrical transmission system involving wavelengths to transfer information to hormones and to the brain; This requires studies of those functions with extremely careful and precise measurements in terms of intensity identification, frequency identification, and absorption by skin and body parts in terms of how it alters these internal CNS transmissions, particularly pre-ganglion changes that affect thermal control and other functions, as well as the impacts upon executive functions of the brain. Again, the clinical records of Chernobyl speak to the need for such studies.

It is unacceptable to continue to produce ionizing radiation as well as to be reckless with its transportation and waste storage when the future of humanity likely may depend upon not producing ionizing radiation and upon preventing exposure of ionizing radiation to all humans as well as all living organisms. These should be matters that EPA automatically studies and from which it protects the public.

Please protect all living organisms from ionizing radiation as all are vulnerable. Please conduct the long-recommended studies to learn more about adverse health effects from ionized radiation. We also need to study the harm to those already exposed to ionizing radiation, particularly from Three Mile Island and other "accidents" in the USA regarding power plants, but also involving transportation and storage, if exposure victims can be identified who will give consent for measurements of the sort that will not further harm them and further lead to the accumulation of radiation in their bodies. This is a very serious issue and deserves to be treated very seriously.

Sincerely and Respectfully,

Susan Michetti
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