PUBLIC SUBMISSION

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Docket: NRC-2009-0279 Potential Changes to Radiation Protection Regulations

Comment On: NRC-2009-0279-0098 Radiation Protection; Advance Notice of Proposed Rulemaking

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Submitter Information

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General Comment

See attached file(s)

Attachments

150621_nrc-2009-0279-0098_radiation_protection

Sunday, June 21, 2015

Secretary U.S. Nuclear Regulatory Commission Washington, DC 20555-0001 ATTN: Rulemakings and Adjudications Staff

Subject: Make radiation standards MORE protective and protect the most vulnerable from radiation exposure -- Radiation Protection; Advance Notice of Proposed Rulemaking (Docket ID: NRC-2009-0279-0098)

Dear NRC Commissioners and Staff:

The Nuclear Regulatory Commission's Radiation Standards, 10 CFR 20, currently allow too much radioactivity to be released from the nuclear power fuel chain, its uranium mills, fuel factories, waste dumps and processors. I am, therefore, pleased to learn that the Nuclear Regulatory Commission (NRC) is considering rewriting its radiation exposure regulations and would hope that the NRC would reduce allowable radioactive releases, doses, and risks. Disappointingly, the NRC is proposing to align its exposure regulations with international standards, which would essentially leave out protection of pregnancy life stages by failing to specifically account for some unique vulnerabilities during this time.

"It is horrifying that we have to fight our own government to save the environment." -- Ansel Adams

The cancer risks from the current standards are too high, especially for women, children, and babies. Prenatal and childhood life stages are known to be particularly vulnerable to damage from radiation exposure with prenatal life stages being uniquely vulnerable. If you protect these life stages, you protect everyone.

Studies of childhood cancer risks indicate that none of the current or proposed exposure limits for the in utero life stage are protective enough. Right now, radiation is allowed to cause 1 fatal cancers in 286 people exposed. The Environmental Protection Agency (EPA) risk goals protect to 1 in 10,000 risk for cancer incidence for other toxins. Setting a risk standard for radiation that causes so much more cancer than allowed by EPA makes radiation a privileged pollutant. This risk number does not include sensitive life cycles.

"As we peer into society's future, we—you and I, and our government—must avoid the impulse to live only for today, plundering for our own ease and convenience the precious resources of tomorrow. We cannot mortgage the material assets of our grandchildren without risking the loss also of their political and spiritual heritage. We want democracy to survive for all generations to come, not to become the insolvent phantom of tomorrow."

-- Dwight D. Eisenhower

Background radiation is already responsible for a certain amount of childhood cancers. Therefore, NRC radiation exposure concepts like "As Low As Reasonably Achievable" (ALARA) will never be protective enough for prenatal life stages because any additional radiation exposure will present additional risk. Encouraging this risk favors industry profits over public health.

Cancer risk in just the exposed generation isn't the only risk radiation exposure poses. Additionally, non-DNA damage may be caused by radiation, but would be harder to attribute to radiation under current damage assumptions. Evidence for crossgenerational damage exists in real life low-dose exposure scenarios.

"Our duty to the whole, including to the unborn generations, bids us to restrain an unprincipled present-day minority from wasting the heritage of these unborn generations. The movement for the conservation of wildlife and the larger movement for the conservation of all our natural resources are essentially democratic in spirit, purpose and method." -- Theodore Roosevelt

I strongly urge the NRC to:

- Reduce the legal radioactivity permitted to be released into air and water; never increase them again. Reduce the legal dose to members of the public (from 100 or more millirems/year to 1 or a few or, better yet: zero) from each nuclear power facility. NRC risk numbers show current levels could be causing 1 in 286 men, 1 in 190 women and 1 in 41 baby girls to die from cancer. Protect everyone to the level needed by the most vulnerable—don't "average" by gender or age.
- 2. Stop the additional radioactive releases to sewage. Delete Table 3 of Appendix B of the current rule. On top of high risks from air and water emissions, NRC allows discharges into sewage that can give doses of 500 MORE millirems per year!
- 3. Protect the most vulnerable. I support reducing the allowable exposure during the reproductive phase of our life cycle. Set standards to protect infants and the embryo/fetus but reduce the legal exposure for pregnant workers and the embryo/fetus to less than the international recommendations (100 mr/remainder of pregnancy) and the public dose (100 mr/year). Less or no radiation at this part of our lifecycle will better protect all life-stages. Protect worker rights and privacy.
- 4. Release or rewrite the explanation for all changes so you can make them public; don't refer to copyrighted documents. People should not have to pay hundreds of dollars to see what's being considered.

It's time to acknowledge radiation causes health problems other than cancer and protect against those as well, including heart disease, reduced immunity, mental retardation, and more. Please also pay attention to the danger to our gene pool and reproductive phase of our lifecycle. Current NRC exposure standards fail to protect early human life stages. Any change in these standards needs to correct these failures. If you don't make the radiation rules stronger for us, our kids, our DNA, and for nuclear workers, then don't change them at all.

"A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise." -- Aldo Leopold

Thank you for your consideration of my comments. Please do NOT add my name to your mailing list. I will learn about future developments on this issue from other sources.

Sincerely, Christopher Lish Olema, CA