

From: Mary Olson <olson.mary@gmail.com>
Sent: Saturday, October 30, 2021 12:07 AM
To: NRC-EJReview Resource
Subject: [External_Sender] "Docket ID NRC-2021-0137-0001"
Attachments: COMMENTS OF MARY OLSON.pdf

Greetings. I was using Regulations.gov and got a screen error at 11:55. I was correcting it, and pressed submit at 11:59. The screen said ERROR.

Please accept the attached comments as timely since it took me all of 4 minutes to find this alternative means to send the attached to you.

THANK YOU.

Mary Olson
olson.mary@gmail.com / cell 828-242-5621

Never doubt that a small group of people can change the world -- indeed, it is the only thing that ever has -- Margaret Mead

Federal Register Notice: 86FR36307
Comment Number: 100

Mail Envelope Properties

(CA+aSRq5h1swbNGexs5F_48MROzQX+3=WFwoMSWOe09=RWkRAaQ)

Subject: [External_Sender] "Docket ID NRC-2021-0137-0001"
Sent Date: 10/30/2021 12:06:37 AM
Received Date: 10/30/2021 12:06:53 AM
From: Mary Olson

Created By: olson.mary@gmail.com

Recipients:

"NRC-EJReview Resource" <NRC-EJReview.Resource@nrc.gov>
Tracking Status: None

Post Office: mail.gmail.com

Files	Size	Date & Time
MESSAGE	519	10/30/2021 12:06:53 AM
COMMENTS OF MARY OLSON.pdf		136935

Options

Priority: Normal
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:

October 29, 2021

COMMENTS OF MARY OLSON

To the US NRC: Environmental Justice – Systematic Assessment of NRC Programs, Policies and Activities

For identification, the commenter is the Founder and Acting Director of Gender and Radiation Impact Project (www.genderandradiation.org)

THESE COMMENTS EXPRESS THE VIEWS OF MARY OLSON, AS AN INDIVIDUAL ONLY

Comment made via:

<https://www.regulations.gov/commenton/NRC-2021-0137-0001>

CONCLUSION: NRC acknowledged in 2001 (Federal Register July 30) that every 20 years of operation of a nuclear reactor under its license results in 12 human deaths (probably all Reference Men) and these are across the production of nuclear fuel (mining, milling, conversion, enrichment, conversion, fuel fabrication and transportation and wastes associated with these) AND the use of the nuclear fuel to produce electric power. It is not clear whether the resulting wastes from fission at the reactor site are included in the seemingly SMALL, but reported, number of deaths...

The IAEA is a source of nuclear information—I could not parse a reactor-experience-years for the USA alone, but as of 2019, there were 18,329 reactor years, globally. Assuming death-due-to-fission is sort of the same worldwide, we can then posit that an expression of death from nuclear energy (probably not including fission waste, and ROUTINE ONLY—no accidents) is, as of 2019, see:

<https://www.iaea.org/newscenter/news/iaea-releases-2019-data-on-nuclear-power-plants-operating-experience>) :

18,329 reactor-years ÷ 20 x 12(per NRC) = **10,997 cancer deaths (worldwide)**—ALL REFERENCE MEN (read on) and therefore NOT ONE a child, a woman, or anyone with a lifestyle / culture outside urban/industrial... and ALL of these will be at higher risk than the Reference Man that NRC uses to evaluate radiation harm...when adding those with disproportionate harm, the true number is 5—10 times higher—in the range of 50,000 to 100,000 total. Again, no accidents, no fission waste. This is NO LONGER “nobody died from nuclear energy.” And more of those who died were NOT Reference Men, were not in the dominant / urban / industrial lifestyle, and were, disproportionately female, lower income, People of Color, Indigenous, Black or Hispanic...and children.

NRC does not have a need to address Environmental Justice as an “issue”, it needs to stop licensing environmental crimes.

COMMENT WITH CITATIONS:

The advent of fission--splitting atoms—which results in millions of unnatural radioactive elements and attendant waves of radiation and an assortment of energized particles collectively “radioactivity” and associated radiation result in the commitment of our government to “regulate” radiation exposure and the activities that can result in this exposure of workers and the public.

These regulations are NOT to protect people, or the environment only—they are FIRST and FOREMOST to enable the continued activity of fission, and the use or management of the resulting fission products. The number one reasons for fission: security and electric power (BOTH) have alternative, non-fission options that do not result in radiation or radioactivity.

Therefore we must also add that regulation of “special nuclear material” is in part to PERPETUATE the regulation and the creation of this material.

What does this introduction have to do with the topic “Environmental Justice”? We must first start with the TRUTH that exposure to ionizing radiation comes in largest part from fission, and that fission is not a necessary activity.

There has been a lie—no, a BIG LIE—that we have to have fission for defense, and electric power. Neither is true. Nonetheless, the presumption of the necessity of nuclear weapons and nuclear energy have created the presumption of loss due to radiation causing cancers at an “acceptable level” and while not discussed, there has been the silent presumption of loss of fertility and / or loss of early and even late-stage pregnancy due to problems caused by radiation exposure.

The institutionalization of the “acceptance” and “acceptable-ness” of some level of disease and some level of death has been so hidden from the practitioners of fission and their regulators that it has been invisible to them, just like radiation itself. An example is that when this commenter pointed out (circa 1991) that the NRC’s own policy on deregulation of radioactive waste by declaring it “Below Regulatory Concern” was based on an (NRC) “acceptable” death-rate of 1 in 286, members of the NRC’s own policy staff were shocked! One in 286 is so high compared to the “social contract” that federal regulation of dangerous industries will kill only 1 in a million members of the public. This stark reality of a “bag limit” in 1 in 286 was shocking because the neat and tidy table showing probability of death due to exposure to the regulatory limit-level of ionizing radiation every year for 70 years was shown as 3.5 deaths in 1000 exposed. All I did back in 1991 was to divide 1000 by 3.5, which equals 286...and so 1 in 286 is the same as what the table says... $1 \text{ in } 286 = 3.5 \text{ in } 1000$ and NEITHER of these expressions of harm—DEATH from cancer—is the same as 1 in 1,000,000—the promise, or even the compromise made by the Environmental Protection (EPA) agency for 1 cancer death in 100,000 for most toxic exposures. Truth is, NRC does not even deliver the truly degraded level offered to those living near SUPERFUND sites—which, in the EPA cannon is a risk of 1 in 10,000.

SHOCKER. Go check. These numbers were published in the Federal Register in 1990, in the Expanded BRC policy statement. And these are the ones presumed to apply to EVERYONE. But, hey, you forgot, 10CFR20 proclaims throughout, that radiation standards are not based on anyone except Reference Man. You know him... he is defined—the envelope specifies that he is a HE; he is an adult—25-30 years, with an adult body, but more than that—he is specified as having a culture and habitat corresponding to the industrialized DOMINANT society of North American, and Northern Europe...and he is WHITE.

So, hey your Environmental Justice query better include: ALL CHILDREN and ALL WOMEN, and ALL ELDERS...hey, pretty much anyone who is not REFERENCE MAN.

So, it has taken me 30 years—but I am here to tell you that the 1000 people exposed in the table in the BRC policy are NOT members of the Public—they are ALL REFERENCE MEN. Every single last one. And so, that number 3.5 in 1000 actually is “best case.”

After 60 years of tracking the lives and deaths of the people who survived the US nuclear attack on Hiroshima and, days later, Nagasaki, it is clear: exposure to ionizing radiation during the first 5—10 years

of life is many times more harmful than exposure during adulthood. IN the case of boys, exposure resulted in 5 times more cancer than if the exposure had come later, in the Reference Man age group (Olson, 2019; Makhijani et al, 2006). Exposure of young girls resulted in cancer as an outcome at rates TWICE that of boys—and so a full 10 times higher than males in the Reference Man age group. (ibid, citations are in the paper: Disproportionate Impact of Radiation and Radiation Regulation: <https://doi.org/10.1080/03080188.2019.1603864> with author’s final draft with all citations freely available here: <https://drive.google.com/file/d/1dfyosBnR8l1RoWAN8AU3dIBN9endTEOU/view>)

Taken together, this is evidence that far more than half the global population is disproportionately impacted, and not adequately reflected in the regulatory basis or risk evaluations used by NRC.

So, NRC’s regulations are a case of EXTREME social and gendered privilege.

When sacrifice—human sacrifice—is tied to specific geographies (rural) and communities (Indigenous, low-income, non-English speaking) then these socially disproportionate impacts become multipliers for the disproportionate harms tied to AGE and GENDER. Girls and Women in Indigenous and PoC communities where uranium is mined or processed or any type of radioactive waste or residual contamination is present suffer this multiplier effect. It is the BIG LIE that we need to mine uranium for fission, coupled with the BIG PRESUMPTION that Reference Man is an acceptable model to create the idea that ANY human suffering is “acceptable” – especially when ALL WOMEN, ALL CHILDREN are excluded from the “exposed group” being evaluated, and ultimately UNPROTECTED.

Finally, that part about deaths. Yes, nuclear energy does kill people—and the NRC itself told us that July 30, 2001 in the Federal Register when the correction to the 1996 re-licensing regulation was published. See the Nuclear Information and Resource Service Press Release from July 31 2001: <http://archives.nirs.us/press/07-31-2001/1>

We recall, the production of nuclear fuel—MINING, MILLING, CONVERSION, ENRICHMENT, CONVERSION, FABRICATION will result, for each 20 years of reactor operation, according to NRC, in TWELVE human beings dying of cancer. This is one reactor. 20 years. We have had over 130 reactors in the USA... licensed initially for 40 years—so 24 deaths per initial license... routine operation... not including accidents! NIRS estimated 2,400 deaths in the USA due to the reactor fleet of 103 in 2001...and NIRS accepted the NRC death-by-nuclear-fuel and fission number without factoring disproportionate impacts due to biological sex or age, since BEIR VII had not yet been published.

The introduction to these comments derives the numbers for a global impact of 50,000—100,000 cancer deaths...based on the IAEA number of over 18,329 reactor years to date. You, NRC Regulators, you should redo my calculations since you know the reactor-years for the USA (I couldn’t find that number)... you can generate your own number of deaths, and, let’s be clear, until you stop using Reference Man as the base of your assumptions—those are NOT general public deaths. Those are Reference Men, and they are the most resistant—the hardest to kill.

I rest my case.

Your operation is a king-pin in the business of the perpetuation of an industry that WILL ALWAYS kill people, and your part in it is to sanitize human sacrifice, which, with the multiplier of racism and targeting of marginalized communities, results in SACRIFICE ZONES. These zones are disproportionate in the siting of nuclear activities in the first place, in the inability of the community to “opt out,” and disproportionate in the impact of radiation on females of all ages, and all children.

As a result, there is systemic environmental INJUSTICE directly attributable to the nuclear licensing that NRC has engaged for many decades.

In order to adequately address “Environmental Justice” NRC must first recognize, confess to, and seek assistance to correct its decades of ENVIRONMENTAL CRIMES.

I believe that every perpetrator has the right to humane treatment—and I hope, sincerely, that my comments will wake up, at least a few of you, to your status. I hope you will seek help, for yourself first, and then for the agency. Impacted People do not want revenge—we want justice—and change.

Are you ready to back REAL protection?

Then you must be ready to allow that building and licensing any more reactors may be a bad idea...and you must go to bat to CHANGE the Atomic Energy Act which basically ties your hands as professionals—if a proposal meets your regs, you must license it.

Well. Either the statute has to change, OR your regulations should all be ZERO.

Respectfully submitted,

Mary Olson

Olson.mary@gmail.com

<http://www.nirs.org/wp-content/uploads/climate/sovacool-et-al-hansen.pdf>