

RulemakingComments Resource

From: SUSAN MICHETTI <SUNLIGHTRISING@GMAIL.COM>
Sent: Wednesday, July 08, 2015 12:44 PM
To: RulemakingComments Resource
Subject: [External_Sender] Comment on Waste Rules: Docket ID NRC-2011-0012

I am very interested in the rules that the NRC makes to govern low level nuclear waste, especially since so much of that waste ends up in our backyards.

I have some significant concerns about the proposed revisions to Part 61, but first wanted to express my support for one part: The proposed revisions appear to allow states to maintain their reliance upon classification tables, for example to enforce bans on Class B&C wastes. Thank you for including that in the final rules. States must have the right to keep hotter wastes out, if they violate state laws.

There are several key concerns that I'd like to highlight.

1. The new regulations reduce the compliance period. At first staff chose a 10,000 year period, but that's been reduced to only 1,000 years. This is less protective of public health and the environment. It may be hard to look so far ahead, but we owe it to future generations to model in detail to ensure safety.

IT IS IRRESPONSIBLE TO NOT USE THE FULL TIME SPAN IN WHICH THE RESULTS OF DECISIONS MADE NOW WILL ADVERSELY IMPACT THE FUTURE GENERATIONS. IT IS SAYING TO FUTURE GENERATIONS THAT IF YOU CANNOT BEAR CHILDREN AND ARE STERILE BECAUSE WE WERE NEGLIGENT, TOO BAD AS IT IS IRREVERSIBLE. THAT COULD HAPPEN TO THE ENTIRE POPULATION OF HUMANS AND WIPE HUMANITY OFF THE FACE OF THE EARTH DUE TO RECKLESS, CARELESS, DECISIONS MADE WITH HUBRIS AND LACK OF SUFFICIENT CONCERN FOR ALL LIFE NOW AND IN THE FUTURE. STERILITY IS A KNOWN FACT AFTER 4 GENERATIONS. WE HAVE YET TO SEE THE IMPACTS OF THREE MILE ISLAND, CHERNOBYL, AND FUKUSHIMA ON HUMAN REPRODUCTION, AND THE EFFECTS OF SMALLER EXPOSURES HAS ALSO NOT BEEN SUFFICIENTLY STUDIED FOR REPRODUCTION SAFETY INTO FUTURE GENERATIONS AFTER GENETIC DAMAGE. HOWEVER, IT IS PREDICTABLE, JUST NOT FULLY OBSERVED YET IN HUMANS DUE TO THE TIMEPERIOD REQUIRED TO PASS THAT EXISTS INTO THE FUTURE, BUT IT HAS BEEN OBSERVED IN ANIMAL STUDIES.

2. We are concerned that licensees (such as EnergySolutions) can choose to simply order a study if they want to bring a new waste stream. This move towards the WAC approach has the potential to transfer decision-making power to consultants and overwhelm states with complex models. STUDIES ARE NOT SCIENTIFIC AND NOT VALID UNLESS THEY ARE VIGOROUS, THOROUGH, REPLICABLE, AND PEER REVIEWED. THESE ARE THE TYPE OF STUDIES THAT RESPONSIBLE AGENCIES DEALING WITH ANY TYPE OF TOXIC OR ANY TYPE OF CHEMICAL THAT MAY POSE DANGER TO LIVING ORGANISMS AND HUMANS, LIKE RAD WASTE ABSOLUTELY DOES, MUST REQUIRE. ANYTHING LESS IS RECKLESS, IRRESPONSIBLE, AND UNSCIENTIFIC, AND DOOMING OUR ENVIRONMENT AND VIRTUALLY ALL OF ITS LIVING ORGANISMS, INCLUDING HUMANS. STUDIES FUNDED BY THOSE WHO PROFIT FROM BUSINESSES RELATED TO THE STUDIES TEND TO BE NOTORIOUS FOR FLAWED SCIENCE AND UNREPLICABLE FINDINGS AS WELL AS TOO NARROW FINDINGS THAT DO NOT PERTAIN THE COMPLETE OVERALL CONSEQUENCES OF EXPOSURES TO THEIR WASTE PRODUCTS. ANYTHING LESS THAN ACTUAL SCIENTIFIC STUDIES FUNDED BY INDEPENDENT SOURCES WITHOUT DEEP ARMS TO REACH INTO THE RESULT OR TO IMPACT THE FINDINGS IS UNACCEPTABLE WHEN IT COMES TO ANY TOXIC, PARTICULARLY NUCLEAR WASTE.

3. Next, I disagree with the dramatic limitations placed on the number of intruder scenarios to be considered. This approach is not appropriate for long-lived nuclear waste streams that will require more advanced predictive modeling. Just looking at scenarios happening now is absurdly restrictive given the potential for harm for millennia. FULL CONSIDERATION OF PLANNED TERRORISM, CHILDREN'S UNMONITORED ACTIVITIES, AND HOMELESSNESS AND MENTAL ILLNESS MUST BE CONSIDERED, FOR EXAMPLES. THE IMPACTS OF MAJOR PLANETARY CATASTROPHES MUST BE CONSIDERED, SUCH AS CLIMATE CHANGE, FLOODING, GLACIERS, VOLCANOES, EARTHQUAKES, ASTEROID AND OTHER OUTER SPACE INTRUSIONS AND HITS, FOR EXAMPLES.

4. Finally, I request that the NRC classify Depleted Uranium. As a unique waste stream that continues to grow more radioactive for 2.1 million years, it makes no sense this has been arbitrarily lumped into the Class A category -- with waste that's only hazardous for a few hundred years. I urge the NRC to finally classify this waste accurately to inform ongoing disposal efforts. CALLING RAD WASTE LOW LEVEL, MEDIUM LEVEL, OR HIGH LEVEL ARE ARBITRARY AND MISLEADING AND CONFUSING DESIGNATIONS, BECAUSE VIRTUALLY ALL NUCLEAR WASTE HAS DECAY PRODUCTS WITH VARIOUS DIFFERENT HALF-LIVES. THESE HALF-LIVES CAN CONTINUE DOWN A CHAIN OF RADIOACTIVE DECAY EVENTS THAT CAN EXTEND HUNDREDS, THOUSANDS, AND MILLIONS OF YEARS WITH CERTAIN RADIOACTIVE MATERIALS. IN FACT VIRTUALLY ALMOST ALL OF IT DOES LAST MUCH LONGER THAN MOST PEOPLE RECOGNIZE. THE LENGTH OF RADIOACTIVITY AND ITS DAMAGE TENDS TO BE SCIENTIFICALLY UNDERESTIMATED IN MOST GOVERNMENT ANALYSES, AND THIS REQUIRES CORRECTIONS IF AGENCIES ARE TO BE RESPONSIBLE AND SUFFICIENTLY ACCURATE.

ALL EXPOSURES TO RADIOACTIVITY CAUSE DAMAGE TO LIVING ORGANISMS AND TO HUMANS. IT IS A QUESTION OF HOW MUCH DAMAGE. THE DAMAGE IS REPRESENTED STRAIGHTFORWARD BY A LINEAR LINE THAT DIRECTLY CORRESPONDS TO EXPOSURE AND TO LENGTH OF TIME OF THAT EXPOSURE. THIS IS STRAIGHT SCIENCE OF THE MOST PREDICTABLE TYPE. THE MEMBRANES ON THE RED BLOOD CELLS APPEAR TO SHOW THE FIRST LINE OF DAMAGE IN HUMANS AND WARM-BLOODED ORGANISMS. ANY EXPOSURE, HOWEVER BRIEF, SHOWS SOME DEFORMITY TO THE MEMBRANE ON THE RED BLOOD CELLS. THIS IS UNDISPUTED MEDICAL SCIENCE. THE QUESTION IS HOW LONG DOES IT TAKE AN INDIVIDUAL'S IMMUNE SYSTEM TO REPAIR THE DAMAGE AND IF IT CAN REPAIR ALL THE DAMAGE. HEALTHIER ORGANISMS MAY BE ABLE TO REPAIR THE DAMAGE FROM VERY SHORT EXPOSURES. OLDER ORGANISMS AND VERY YOUNG ORGANISMS AND THOSE ALREADY CHALLENGED WITH OTHER PROBLEMS MAY NEVER RECOVER AND MAY HAVE SHORTENED LIFE SPANS AS A DIRECT RESULT OR OTHER CHALLENGING MEDICAL PROBLEMS, SUCH AS THYROID MALFUNCTIONS AND THYROID CANCER OR LEUKEMIA OR STILL BIRTHS, ETC. THESE ARE SCIENTIFIC AND MEDICAL FACTS THAT MUST BE CONSIDERED AND PROTECTED SUFFICIENTLY FROM NEGLIGENT AND IRRESPONSIBLE EXPOSURES TO THE GENERAL PUBLIC, TO WORKERS, AND TO SCIENTISTS AND OTHERS.

Thank you for the opportunity to comment.

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