

From: Kay Cumbow [kcumbow@greatlakes.net]
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To: Rulemaking Comments
Subject: Re: CACC's Comments on Docket ID NRC20100267

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OFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

July 6, 2011
 Secretary, U.S. Nuclear Regulatory Commission
 Washington, DC 20555-0001
 Attn: Rulemakings and Adjudications Staff
 fax 301-415-1101
Rulemaking.Comments@nrc.gov

Re: Comment on Docket ID NRC20100267

NRC "Draft Regulatory Basis for a Potential Rulemaking on Spent Nuclear Fuel Reprocessing Facilities"

On June 10, 2011, the NRC published a notice in the Federal Register seeking comment on the NRC developing regulations for future facilities engaged in the reprocessing of "spent", or more accurately, irradiated nuclear fuel. CACC is submitting this comment in response to that notice, and for the record.

Citizens for Alternatives to Chemical contamination (CACC) is a statewide grass-roots environmental and social justice non-profit 501 C3 organization based in mid-Michigan, U.S.A., whose members have worked for decades to promote and protect the health of our Great Lakes communities and watersheds.

CACC has many serious concerns and questions about the reprocessing of irradiated fuel and the likely effects to the health of our communities and watersheds. Even if a reprocessing facility was limited to the SE United States, Chernobyl, Fukushima and other nuclear accidents have shown us that radioactive emissions travel worldwide on winds and water. And if this fast-paced scheme succeeds, then it may set precedence for 1) more such facilities perhaps located in the Great Lakes or other areas of the U.S. - or 2) utilize irradiated fuel from reactors in Michigan or other Great Lakes states (or potentially even reactor fuel from Canadian provinces,) which could lead to transport of irradiated fuel on our highways, waterways and rails - all of which would have enormous environmental and human health implications to these critical fresh waters of the Great Lakes and our communities. Yet, no public meetings, workshops or hearings have been held in the midwest, or the Great Lakes Basin on this critical issue. Reprocessing could also lead to the use of mixed oxide plutonium fuel or MOX being used in regional reactors. MOX burns hotter and releases more radioactivity in an accident.

Plutonium is one of the most potent carcinogens on earth, with very long half-lives of radioisotopes. No guaranteed method has been found to isolate it or the many other long-lived biohazardous radionuclides found in irradiated fuel (or many of the other radioactive wastes generated by reprocessing), for the geologic time lengths needed to protect the health and DNA of humans and the life in our watersheds and oceans. Reprocessing irradiated fuel, (which remains lethal to humans if exposed, for a very long time period after removal from cooling in the fuel pools,) does NOT isolate or lessen the amounts of these persistent toxins, but merely spreads their destructive radioactive footprint over a much larger area.

Global and U.S. experiences with reprocessing have shown that reprocessing irradiated fuel:

- Produces more radioactive waste - not less - and these are typically waste streams that expose workers to greater radioactivity, and are far more difficult to work with and clean up
- Contaminates or presents a threat of long-term biohazardous contamination to groundwater and critical watersheds

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In addition, the entire nuclear fuel chain has proven destructive to the health of communities and watersheds. This includes uranium mining, milling and the many steps of processing uranium to produce nuclear fuel. These activities alone have universally contaminated watersheds for virtually forever, depriving communities of safe drinking waters, fisheries, waters for agriculture or recreation and left illness and death among former workers, their families and communities.

Further in the fuel chain, nuclear power has unseen routine and largely unmonitored radioactive emissions, both planned and accidental, and poses an ongoing threat to the long-term environmental health of all communities and watersheds that are downwind or downstream from these radioactive emissions or from those emissions that could result from a serious accident or incident.

Long-term biohazardous radioactive wastes, (the end of the nuclear fuel cycle), must be isolated from the food chain for geological periods of time. The nuclear industry itself will only guarantee dry cask storage for irradiated fuel for one hundred years! Yet, repackaging these casks is highly dangerous to the health of workers and technically very difficult. Earthquakes, leaks into groundwater, flooding, volcanic action and other natural events can bring dangerous buried wastes into contact with the biosphere. Many of these radioactive wastes that are produced or used in reprocessing irradiated fuel, bioaccumulate in nature, (including various organs and DNA of the human body). Many of the radionuclides that bioaccumulate also bioconcentrate, just like DDT, with devastating consequences to those at the top of the food chain - like human beings, other large mammals and birds.

In the late 1990s, studies were done of adolescents' teeth (molars collected during dental treatment) in Great Britain, including Scotland and Northern Ireland. Plutonium was found in all teeth analyzed. The closer the children had lived to Sellafield, a reprocessing facility, the more plutonium they had in their teeth. The facility discharges plutonium into the Irish Sea. The research was done by a Professor working for the UK Atomic Energy Authority, who did not think that the contamination levels posed a risk. However, plutonium is an alpha emitter and, as such, can do far greater damage internally than other forms of radiation, even at miniscule amounts. (One millionth of a gram of plutonium can cause lung cancer, if inhaled, for example and plutonium mixed with chlorine becomes 1,500 times more soluble to the intestinal tract, allowing it to concentrate in the bone and liver of animals. This information regarding the synergistic effect of chlorine with plutonium is from the book, *Water Fit to Drink* by Carol Keogh, published in 1980 by Rodale Press.)

In the case of La Hague reprocessing facility in France, it has been documented that plutonium (and other radionuclides) have contaminated the North Sea and has reached as far as the Arctic Circle. An increase of childhood leukemia has been documented near La Hague.

In the case of West Valley, New York, where DOE operated a reprocessing facility for only six years, there are biohazardous radioactive wastes still buried there, that present a serious threat to drinking water, groundwaters and the Great Lakes, as well as to the people of the Seneca Nation, who depend on these waters. Closed decades ago, little has been done to clean up this site, and it now appears that DOE plans to leave most of these dangerous radioactive wastes underground and put our tax dollars instead into producing more of these biohazardous and dangerous wastes which would contaminate more workers, more communities and watersheds.

Kevin Kamps, radioactive waste specialist at Beyond Nuclear has stated that "During its operations, West Valley had among the highest worker exposures, and worst water contamination, in the U.S. nuclear power industry. West Valley suffered so many accidents (including fires), technical glitches and failures that only one years worth of projected reprocessing throughput was accomplished in six years of operations."

Here are but a few of our questions:

How can the NRC proceed with a plan for writing regulations for new irradiated fuel reprocessing facilities, when the site at West Valley is still largely contaminated and is a decided long-term threat to clean groundwater, nearby communities and surrounding watersheds, including Lake Erie and the Great Lakes, and yet the U.S government is unwilling or unable to clean up this contaminated site?

How can the NRC proceed in good faith with this regulation process, when there is a history of sick and contaminated workers from West Valley, who have had to petition the government for assistance?

How can the NRC proceed in good faith with this critical new regulation process with such a short comment period (20 business days), in a time period when many citizens are on vacation from work and school, spending needed time with family? It would seem that haste can make waste (radioactive waste, in this case.) With a 20 business day comment period, we question if the U. S. NRC does not really wish to hear citizen comments on this very important issue, that could have major impacts on U.S. citizen's lives.

For these and many other reasons, CACC is opposed to the NRC (or DOE) writing regulations for or otherwise accommodating the reprocessing of these lethal radioactive wastes, highly dangerous to human health and DNA - indeed all life in our watersheds - a process that only produces a greater amount of highly radioactive wastes, that historically has contaminated many more nuclear workers, and poses greater problems with waste storage and potential contamination to the environment.

CACC believes this call for developing regulations for potential reprocessing facilities is putting the cart before the horse. We call for a Programmatic Environmental Impact Statement to be done, with hearings throughout the U.S., including the Great Lakes region and the major geographical regions in the U.S., as it appears from the Federal Register posting that public meetings or workshops (and no official hearings) on this critical matter have only been held in the southwest, the southeast and Washington DC. A cradle to grave assessment of the radioactive wastes generated in reprocessing should also be done.

Further, CACC calls for at least a sixty day extension of this *extremely* short notice regarding the NRC writing regulations for irradiated fuel reprocessing facilities. These are regulations for facilities that have the potential to affect *many* communities throughout the U.S. and wider notice and much greater citizen and municipal participation needs to be served and environmental and health issues need to be addressed first and foremost.

Thank you for this very short opportunity to give comments.

Kay Cumbow,
Member, Education Committee
Citizens for Alternatives to Chemical Contamination
8735 Maple Grove Road
Lake, MI 48632-9511

Please contact me via email: <kcumbow@greatlakes.net>