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March 20, 2014

The comments below were read by a friend at the public hearing in Fulton, MO yesterday afternoon. I'm mailing them for the record.

Comments on Draft Supplement 51 to the GEIS for License Renewal of Nuclear Plants for Callaway, Unit 1

My name is Arlene Sandler. I live at 6947 Columbia Ave. in University City, MO and I'm unable to attend this hearing today. Although I am a complete cynic about the value of citizen testimony in a process that has historically been a rubber stamp by the Nuclear Regulatory Commission with its industry-friendly regulations, I felt I had to make a few comments about a technology that I have opposed for decades.

During my involvement with the Missouri Coalition for the Environment's efforts to compel Union Electric to provide increased monitoring of radioactive sludge from the Callaway plant back in the 1980's, I spent a lot of time reading "Incident Reports," which were required published announcements of unexpected events at nuclear power plants. As I read through many, many pages of examples of human error and equipment malfunctions at nuclear power plants all over the country, I realized then that nuclear power was a very risky way to generate electricity and I am even more convinced of that today. We have been very lucky so far in the United States, but catastrophic accidents at Chernobyl and Fukushima have forced people from their homes, caused deaths, disease, and birth defects and produced contamination over a wide area. Radioactive water is still leaking into the Pacific Ocean from Fukushima, and one article I read reported that it would take 100 years to clean up the site of the disaster. And there have been quite a few near-misses. Pick up a copy of *We Almost Lost Detroit* at the library.

Some concerns and questions about extending the Callaway license until 2044:

1. The potential risk of contaminating water. Lake Thunderbird, Lake Lochaweenoo, and Canyon Lake are within a 6-mile radius of the plant. The longest river in North America, the Missouri is 5 miles away. I'm concerned about contamination not only from an accident, but from routine releases during the daily operation of the plant for an additional 20 years.

2. Risks from indefinite storage of high-level radioactive waste storage on site.

There is no permanent repository for spent fuel rods, so all the rods that have ever been removed from the Callaway reactor are in a pool which will be filled to capacity by 2020. Ameren states in its *Callaway Plant Environmental Facts-2011*: "Spent nuclear fuel consists of bundles of fuel rods called 'fuel assemblies' that have been removed from the nuclear reactor when they can no longer sustain a nuclear reaction." But crowded together, over time, in a pool filled to capacity, with barriers prone to corrosion, those assemblies **can** start a nuclear chain reaction.

Just how dangerous are these rods? "Spent fuel rods give off about 1 million rems (10,000 Sv) of radiation per hour at a distance of 1 foot-enough radiation to kill people in a matter of seconds." (Bob Alvarez, Institute for Policy Studies. "Spent Nuclear Fuel Pools in the U.S.: Reducing the Deadly Risks of Storage.")

Does a specific plan exist right now for the design and construction for a new spent fuel pool at Callaway?

3. It's all about the money. In Appendix F of this GEIS draft, p. F-2, Ameren reports that "16 potentially cost-beneficial SAMA (Severe Accident Mitigation Alternatives) will be entered into Callaway's long-range plan development process for further implement consideration." Why isn't the plan for these mitigation alternatives part of the re-licensing requirements right now? Are there accident mitigation alternatives that are more costly and therefore, not being considered at all?

In its Executive Summary in the draft, the NRC "concluded that none of the potentially cost-beneficial SAMA relate to adequately managing the effects of aging during the period of extended operation. Therefore they need not be implemented as part of the license renewal." What does this mean? Which severe accident mitigation alternatives **would** be able to manage the effects of plant aging?

How many additional sediment retention ponds will be needed as part of the wastewater treatment system if the Callaway license were extended? What kind of monitoring will be done?

4. Common sense. If there is no location for the radioactive waste that has been accumulating at nuclear power plants since they began generating electricity, why would any rational person want to continue to create more?

Nuclear power has some unique characteristics that Amory Lovins, Chief Scientist of the Rocky Mountain Institute describes: "Nuclear power is the only energy source where mishap or malice can kill so many people so far away; the only one whose ingredients can help make and hide nuclear bombs; the only climate solution that substitutes proliferation, accident, and high-level radioactive waste dangers."

I urge the NRC not to rubber stamp this operating license request. Let Callaway's expire in 2024. Thank you for the opportunity to comment.

Arlene Sandler

