

3311 Arsenal
St. Louis, MO 63118
November 29, 1981

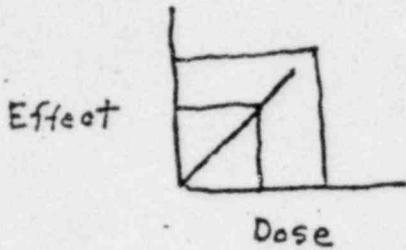
Mr. James G. Keppler, Regional Director
Region III
U.S. Nuclear Regulatory Commission

PRINCIPAL STAFF	
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Dear Mr. Keppler:

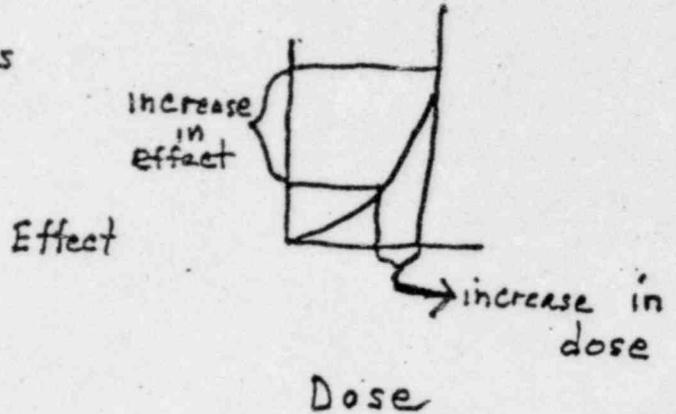
After reviewing the Callaway Nuclear Power Plant Draft Environmental Impact Statement (NUREG-0813), I would like to submit the following comments:

- 1) The Callaway Draft Environmental Impact Statement (DEIS) does not appear to give information on the probable levels of emissions that would come from this plant in case of the most probable accidents.
- 2) On page 5-20, radiiodines, carbon-14, and tritium are all specified for 15 millirems as the maximum allowable dosage per year. All three have the same estimated dose limit despite the fact that they have very different half-lives which indicates significant differences in toxicity. This suggests that the 15 millirems is more of an estimate than it is a figure derived from real knowledge of the physiological effect of each. No information is given in the EIS in how the 15 millirem figure was arrived at.
- 3) Page 5-21 refers to one group of data (on amounts of radioactivity released through vents and discharge points) reported in the Radioactive-Effluent-Release Reports. What other safety-related information does this report give? Will it be available to the public?
- 4) The EIS implies that nuclear plant emissions are equal to or less than normal background radiation. However, the types of radiation involved in background vs. nuclear are somewhat different. Those of the power plant may be more toxic. Further, the EIS does not deal with the disproportionately additive effect of power plant radiation on top of background radiation. One additional unit of radiation (such as that of a power plant added to background radiation) produces more than one additional unit of toxicity. I.E., the majority of evidence indicates that the relationship between dose and effect is not linear:



Studies show this cannot be assured

versus



Studies show this is the safest and most reliable assumption

Ample evidence for this is provided in the BEIR Report (ref. 28) referred to in the EIS on P. 5-29.

5) The EIS does not specify whether the Callaway emissions are intermittent or continuous. If the exposure is continuous (and thus acting without let-up, no matter how large or small the total dose), its dose is more toxic than the same total dose would be if received intermittently, since intermittent exposure gives the body's recuperative or compensating mechanisms a chance to "rest" or catch up. Any textbook on the health effects of pollutants will verify this.

6) With regard to Table 5.2 on P. 5-25, "Underground metal miners" is redundant or overlapping with uranium miners. It does not reveal whether a breakdown of types of metal miners would show a type with higher fatality than uranium miners, or lower. If uranium miners are one of six types of underground metal miners, the 422 deaths/year for uranium miners could be the highest group among the 1275 deaths listed.

I hope these comments will be of interest to you as you prepare the final environmental impact statement.

Very truly yours,

Carey Noss
Carey Noss