

April 19, 2006

Chief, Rules Review and Directives Branch  
U.S. Nuclear Regulatory Commission  
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Washington, DC 20555-0001

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RULES AND DIRECTIVES  
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To Whom It May Concern:

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I am writing regarding the proposed twenty-year license extension at Palisades nuclear plant in southwest Michigan. I oppose the license renewal because Palisades is an aging facility with a history of noncompliance, reactor pressure vessel embrittlement, radiation release, and other problems that have and will continue to affect the surrounding population beyond Covert Township, Michigan. Many of those affected in the surrounding area are of low socioeconomic status, as well as minorities, raising the issue of environmental justice.

License renewal should not be granted to the Palisades Nuclear Power Plant, because (1) both of the dry cask storage pads at Palisades are in violation of Nuclear Regulatory Commission's earthquake regulations (2) the risk of radiation to minority populations is underestimated using census block grouping; (3) radiation effects are only considered within a 50-mile radius; and (4) there is continued noncompliance of non-radiological persistent toxic chemicals to area water sources.

Potential amplification of earthquakes through soil-structure interaction, and soil liquefaction potential or other soil instability due to vibratory ground motion are of great concern, especially considering the geological nature of sand increasing the likelihood of sand avalanches (Landsman 2005). The violation of the Nuclear Regulatory Commission's own standards in storage of radioactive material must be followed.

Covert Township is one with high levels of minority populations and has many people who are of a low socioeconomic status. In the impact statement, these populations were taken into consideration, but large urban centers such as Battle Creek, Muskegon and Grand Rapids - where significant African American and Latin American communities live - were not considered. Because less than fifty percent of these cities were within the 50-mile radius, they were eliminated, and therefore significant risks to the minority populations were not fully documented.<sup>ii</sup>

The 50-mile radius considered in the impact assessment also fails to account for the movement of radiation with the wind. The radiation may expand and become less concentrated as it moves away from the epicenter (NRC 2006), but recent studies have shown that there is no safe level of ionizing radiation (NAS 2005). The effects beyond the radius cannot be ignored or discounted as negligible without serious ethical repercussions with this knowledge of toxicity of any level of radiation.<sup>iii</sup>

The impact of 20 additional years of pollution by non-radiological toxic chemicals will directly affect water quality of nearby sources, including Lake Michigan. In 2000, for example, Palisades was found to be in "continuing noncompliance" for its apparent multiple misuses of Betz Clam-Trol in Lake Michigan for the dispersion of mussels and clams affecting the reactor's water intakes (EPA 2004). The public health risks imposed by Betz Clam-Trol (Alkyl Dimethylbenzyl Ammonium Chloride) - immunological, neurological, respiratory, dermal and gastrointestinal - are counter to the Nuclear Regulator Commission's "primary mission to protect public health and safety." (ATSDR 2004 and NRC 2004)<sup>iv</sup>

For these reasons, I oppose the renewal of the Palisades Nuclear Power Plant license for an additional twenty years. The plant is a danger to not only our precious natural resources in Michigan, but to countless people who are affected by its daily operation, and many more who would be affected should a disaster occur.

Thank you for your consideration,

Morgan Dill

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**Appendix with Additional Information**

<sup>i</sup> 10 CFR Part 72.212(b)(2)(i)(B) is the law that regulates earthquake standards. The more casks loaded on the storage pads at Palisades, the more risk of erosion to the sand supporting the pads, given the large weight of the casks themselves (VSC-24 casks weigh 132 tons each), weather related erosion of the sand dunes, as well as the erosion that will occur due to more severe weather impacts from the global climate crisis and climate destabilization. Arresting erosion at both pads is important to safety and radiation containment over the long haul, given the proximity of the waters of Lake Michigan. The State of Michigan and the U.S. Army Corps of Engineers have designated the sand dunes upon which the older pad is located – so close to the waters of Lake Michigan – as a high-risk erosion zone. Though Michigan itself is a region of “low risk” for earthquake occurrence (Bricker 1977), this does not remove the chance that the event may occur, necessitating compliance with the law.

<sup>ii</sup> Census block groups are a combination of census blocks, which are statistical subdivisions of a census tract, which are intended to remove bias (USCB 2000). Though eliminating bias in collection of data, the full impact of the data is not demonstrated in regards to minority populations, in their elimination from the data set considered in the Environmental Impact Statement for Palisades (because <50% lay within the 50-mile radius).

<sup>iii</sup> Wind has played a factor at other nuclear plants, notably at Three Mile Island. The effects of radiation were present at the epicenter, and upwind, throughout Pennsylvania and beyond. Increased incidences of cancer and other health problems pervaded, and the influence of wind cannot be ignored in the transportation of radiation (Momeni 1998).

<sup>iv</sup> Maintaining unclogged water intakes using Betz Clam-Trol falls within the scoping parameter of 10 CFR Part 54 that says: (a) Plant systems, structures, and components . . . [including] (2) All non safety-related systems, structures, and components whose failure could prevent satisfactory accomplishment of any of the functions identified in paragraphs (a)(1) (i), (ii), or (iii) of this section (10 CFR 54.4 Scope). The International Joint Commission - an independent binational organization that serves to help prevent and resolve disputes relating to the use and quality of boundary waters – stated in its “Ninth Biennial Report on Great Lakes Water Quality,” that “[g]overnments monitor toxic chemicals used in large quantities at nuclear power plants, identify radioactive forms of the toxic chemicals and analyze their impact on the Great Lakes ecosystem.” The impact of Betz-Clam Trol is such that water resource quality is affected in a way that compromises the agreements made through the Boundary Waters Treaty of 1909, and subsequent Great Lakes Charter and Annex, that call for maintaining the integrity of the freshwater ecosystems.