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Palisades Nuclear Plant and Big Rock Point Plant Consideration of Approval of Transfer of Control of Licenses and Conforming Amendments

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Palisades Nuclear Plant and Big Rock Point Plant Consideration of Approval of Transfer of Control of Licenses and Conforming Amendments

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Submitter Information

Email: kevin@beyondnuclear.org

Organization: Beyond Nuclear and Don't Waste Michigan

General Comment

Thanks to Kay Cumbow, Palisades watchdog in Michigan, for alerting me to this information below.

It is from the 1980s. 3 overflows in 8 years from the cooling towers at Palisades, and according to Consumers Power, the radioactive contamination came from the South Radwaste Building, after the overflows mixed with heavy rains and flooded the South Radwaste Building. 3 overflows in an 8 year period before the problem was fixed. They state that the radioactivity came from the Radwaste Building, but are not certain, since other leaks are/were allowed, as well. Also they just list the "principle" radioactive contaminants, which leaves questions about the other unnamed radioactive contaminants. Just a 6-inch cover of soil on top to protect against wind erosion at the onsite South Radwaste Area. See maps on pages 9 & 10. How have heavy rains/flooding impacted Palisades over the years and decades, especially radioactively contaminated areas such as those documented below.

All such radioactive contamination on site, at both Palisades and Big Rock Point, must be cleaned up, no matter how deeply below ground it has migrated, nor how broadly -- including off the Palisades and Big Rock Point property lines, including into Lake Michigan itself, and its sediments.

REQUEST UNDER 10 CFR 20.302 TO RETAIN CONTAMINATED SOIL ONSITE AT PALISADES PLANT (TAC NO. 67408) References: (1) CPCo's letter, T. C. Bordine to NRC
<https://www.nrc.gov/docs/ML0608/ML060870601.pdf>

Snip: "By letters dated November 12, 1987 and January 29, 1988 (Reference 1) the Consumers Power Company submitted a request pursuant to 10 CFR 20.3024a) for the disposal of contaminated soil onsite at Palisades Nuclear Plant."

The 6,000 cubic feet of onsite contaminated soil contain a total radionuclide inventory of 5.1 mCi, based

on radioactive material that was deposited in the soil due to the flooding of the South Radwaste Building. The contaminated area is located inside the security fence, and is on company's controlled land. This area (South Radwaste Area) is fenced in within the plant's south security fence.

Snip: "The area known as the South Radwaste Area has been contaminated by several cooling tower overflows (three times in an eight-year period) and redistributed by heavy rain showers. The flooding was due to instrument failures that caused the cooling tower bypass valve to open during normal operation. This valve is now electrically isolated during cooling tower operation.

The licensee conducted a soil survey because the South Radwaste Building was in the main path of water overflows from the cooling tower. In the survey, the licensee found that radioactive material was deposited in the soil because of the flooding (associated with these cooling tower overflows) of contaminated areas inside the South Radwaste Building. Although the majority of the radioactive material has been packaged as radwaste and will be subsequently shipped offsite (16 boxes each having a volume of 98 cubic feet) containing 85% of the estimated activity), a large volume of low level contaminated soil is contained in the fenced area described as South Radwaste Area (Area B). The South Radwaste Area is located directly south of the plant's south security fence (see Figures 1 and 2). - - 2 - The specific area contaminated is noted as Area B on the survey grid map. The total activity of this area (5.1 mCi) is based on 6,000 cubic feet of soil contaminated with the spoils from the South Radwaste Building. Table I lists the principal nuclides identified in the contaminated soil. The activity in this table is based on measurements in 1987, and in a recent submittal (Reference 5) the activity concentrations in the contaminated area are now showing a 10 percent drop in activity. The radionuclide half-lives, which are dominated by 30-year Cs-137, meet the staff's 10 CFR 20.302 guidelines (6) which apply to radionuclides with half-lives less than 35 years. The contaminated soil has a six-inch layer of clean topping material (gravel) to prevent migration of the radioactive material via wind erosion. The approval to retain the soil in place will be documented in the licensee's FSAR and ODCM. Table 1 Average Nuclide Concentration (pCi/g) Total Activity (mCi) Co-60 0.05 0.079 Cs-137 30 5.0 Total 5.079 RAD)IOLOGICAL IMPACTS The licensee has evaluated the following potential exposure pathways to members of the general public from the radionuclides in the contaminated soil: (1) external exposure caused by direct radiation from radionuclides in the soil; and (2) internal exposure from inhalation of resuspended radionuclides. The staff has reviewed the licensee's calculational methods and assumptions and finds that they are consistent with NRC Regulatory Guide 1.109, Calculation of Annual Doses to Man from Routine Releases of Reactor Effluents for the Purpose of Evaluating Compliance with 10 CFR Part 50, Appendix I, 'Revision 1, October 1977; the staff finds the assessment methodology acceptable.