

Say Yes to Michigan, Say No to the “Plutonium State Park”

We, the undersigned organizations, are opposed to the establishment of a Michigan State Park at the Big Rock Point Nuclear Power Plant site. State parks imply invitingly clean and healthful natural conditions, contradicted by the radioactive contamination and high-level atomic waste storage still haunting the Big Rock site. On December 6th, the state’s Natural Resources Trust Fund Board may vote on an application from Consumers Energy Company seeking \$9 million towards the establishment of a state park at Big Rock.

The Big Rock Nuclear Plant on the shores of Lake Michigan near Charlevoix was permanently shut in 1997 after 35 years of atomic power production and radioactive waste generation.

A 351-acre tract (of the 563-acre property), with more than a mile of “undeveloped” -- but likely radiologically-impacted -- Lake Michigan shoreline, has been offered for sale by Consumers to the State of Michigan as a public park or recreation area. Consumers is asking the state to pay it \$20 million for the property that the company contaminated; ironically, this might shift future legal liability onto the state. The bulk of that purchase price would come from the state’s Natural Resources Trust Fund, public money earned from oil and gas revenues and earmarked to enhance public recreational opportunities. Since this proposal competes for limited Trust Fund dollars with many other worthy projects, none of which have such a toxic legacy or security concerns, it requires a careful analysis of the drawbacks and risks.

The radioactivity that the Big Rock reactor routinely released over the decades of nuclear power operation has not been completely removed from the land and waters. Ironically, despite its small size (it was a 75 megawatt reactor, compared to a more typical 1,000 megawatt reactor), Big Rock released among the largest amounts of radioactivity of any single atomic reactor in the country. Many millions of curies of radioactivity were released into the air, soil, and groundwater, as well as into Lake Michigan’s waters and sediments, risking concentration in flora, fauna, and the food chain. By way of comparison, a large university medical center, with as many as 1,000 labs in which radioactive materials are used for research, diagnosis, and treatment, may have a combined radiological inventory of only about two curies, which are not spewed into the environment as at Big Rock, but rather carefully handled and managed. The large-scale radiation releases from Big Rock were due in large part to “significant [nuclear] fuel failures” in the operating core (at times used as an experimental reactor), as well as to scores of radioactive waste and material leaks, spills, overflows, floods, and sloppy handling over the decades.

Despite the permanent shutdown of the Big Rock reactor nearly a decade ago, and its subsequent dismantlement and decommissioning, risks still abound at the site – emphasized by the presence of 441 bundles (nearly 64 tons) of highly radioactive nuclear fuel rods stored on a concrete pad surrounded by fencing, heavily armed security personnel, and guard dogs (of questionable efficacy against airborne, or remotely launched land-based and waterborne, attack scenarios).

These dangerous atomic wastes, like the radioactive contamination that spread into the air, water and soil during Big Rock’s atomic power operation, will remain hazardous for a very long time. Some radioactive poisons, such as plutonium-239, found in the high-level wastes and radioactive contamination at Big Rock, will remain deadly in even microscopic amounts for hundreds of thousands of years.

Consumers Energy and the U.S. Nuclear Regulatory Commission (NRC) admit that “residual radioactivity” continues to contaminate the soil and groundwater at Big Rock, specifically the following 24 “fission and activation products” (radioactive poisons): Hydrogen-3 (tritium); Carbon-14; Manganese-54; Iron-55; Nickel-59; Cobalt-60; Nickel-63; Zinc-65; Strontium-90; Technetium-99; Silver-110m; Iodine-129; Cesium-134; Cesium-137; Europium-152; Europium-154; Europium-155; Plutonium-238; Plutonium-239; Plutonium-240; Plutonium-241; Americium-241; Curium-243; Curium-244. Each radioactive poison has its distinctive hazardous persistence, some in the centuries, others in the millions of years. Certain radioactive poisons tend to target their risks at particular human organs: Sr-90 at bones and Cs-137 at muscles (including the heart), for example. NRC has

rubberstamped the status of radioactive contamination at Big Rock as below “permissible” doses, but that does not mean they are safe. In 2005, the National Academies of Science re-affirmed in its seventh “Biological Effects of Ionizing Radiation (BEIR)” report that any exposure to radiation, no matter how small, carries a health risk.

Consumers leaked 20,000 gallons of tritium (radioactive hydrogen) into the soil and groundwater in 1984. It requested – and obtained – permission from the NRC for “on-site disposal” – that is, not cleaning up the spill, but rather leaving it in the groundwater. The company and NRC admit that this and other tritium spills violated the Safe Drinking Water Act from 1984 to 2000, in terms of the concentration of radioactive tritium in the site’s groundwater. Consumers holds that the tritium is flowing into Lake Michigan over time, and that dilution lowers the risk to public health and the environment. But this amounts to treating the land as a radioactive septic field, and regarding Lake Michigan as an industrial sewer for radioactive discharges. This contradicts the U.S.-Canadian International Joint Commission’s call for virtual elimination of toxic chemical and radioactive discharges into the Great Lakes. It must be pointed out that tritium can bind into the human biological system at the most intimate level, including in DNA, causing cellular and genetic damage. And radioactive hydrogen is simply the first radioactive poison to enter the groundwater and Lake Michigan. Others will inevitably follow. Just recently, breakthroughs in the scientific understanding of plutonium’s solubility in groundwater have shown this most dangerous of radioactive poisons can relatively quickly travel great distances in the environment, threatening human health. NRC has allowed Consumers to release the Big Rock site for “unrestricted use” so long as radiation doses are no higher than 25 millirems per year; but the Safe Drinking Water Act limits radiation in drinking water to only 4 millirems per year, calling into question the status of Big Rock’s aquifers, which Consumers admits are contaminated with tritium.

Given the ambiguity over transfer of liability, state taxpayers might assume the legal burden for contamination or problems discovered at this site in the future. Trust Fund board members should not agree to saddle residents with such a potential very long-lasting radioactive burden on the beaches and shores of a state park.

The high-level radioactive waste isn’t going anywhere anytime soon, either. There is still not a single repository anywhere in the world for the irradiated nuclear fuel generated during the first 64 years of the Atomic Age. The U.S. Department of Energy (DOE) admits that the proposed national dumpsite at Yucca Mountain, Nevada cannot open until 2017 at the very earliest, and potentially not until much later than that. Even once a dumpsite opens, it would take many additional years to ship wastes there. And Michigan law forbids the transfer of Big Rock’s wastes to another site, such as to the Palisades nuclear plant in southwest Michigan. Thus, high-level radioactive waste will remain in storage at Big Rock for many years or even decades to come.

In the meantime, the radioactive rods at Big Rock raise obvious questions about public health, safety, and security risks, especially in regards to their susceptibility to terrorism or sabotage. In April, 2006 the investigative arm of the U.S. Congress, the Government Accountability Office, chastised the NRC for giving priority to the nuclear industry’s bottom line over needed security upgrades at nuclear power plants. The development of a state park is incongruous with a potentially catastrophic terrorist target. Inviting large numbers of families and children into close proximity to high-level radioactive waste makes no sense, in terms of the safety and security concerns.

Among the most troublesome questions is the wisdom of the state’s taxpayers potentially assuming legal liability for land with a history of radioactive releases and dangerous nuclear waste that will be there indefinitely. Despite these long-term risks, state and federal officials have declined to conduct an environmental impact statement, settling instead for a lower level “environmental assessment.”

The many concerns and questions raised above remain unaddressed. The establishment of a state park (or residential development) at Big Rock is not prudent. With many other applicants offering potential park sites without such complications, the state should not choose to favor this one. We urge the State of Michigan to reject this proposal.

Signed:

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