

International Joint Commission
Canada and United States
Great Lakes Water Quality Board
Big Rock Point Panel Discussion
February 27, 2020 . 6:30-9:00
Huron Room, Odawa Hotel, Petoskey
John Jackson, Project Lead
cc Mark Burrows burrowsm@windsor.ijc.org



Dear John Jackson,

Thank you for inviting WATCH Inc. to participate in the Big Rock Panel discussion hosted by the Great Lakes Water Quality Board of the IJC. Lessons learned in the decommissioning of nuclear power facilities, from operation to shutdown, dismantling of facilities, and storage of **High Level Radioactive Nuclear Waste**, decontamination, remediation of the site and license termination activities are indeed critical to the health and safety of future generations. "Spent Fuel" is an inaccurate, misleading PR term for High Level Radioactive Nuclear Waste. This is an example of "linguistic detoxification." The term "spent fuel" was created to lull the public into complacency.

1. How satisfied were you with the public and Tribal engagement and transparency from Consumers Energy (CE) and US NRC.
 - A. Decontamination, remediation and on site information:
 - a. All information came through CE and its Private contractors.
 - b. **Without an Independent Expert in Nuclear Plant Decommissioning, there is no oversight. The NRC, CE and Contractors information on "clean up" was not independently verifiable. NRC standards were created to protect the future of the industry, not to protect the public. Standards for clean-up of the site to "Green Field" and "Unrestricted Use" were negligent and could harm future generations.**
 - c. A Big Rock employee stated to the Citizens Advisory Board, "We found no radiation where we expected none." The statement was unquestioned by the Advisory Board until I asked, "Did you find radiation where you **expected** some?" The answer revealed that **radioactivity was found in soils and around a make shift burn barrel.**
 - d. On a tour of the facility, **employees were sifting a pile of sand and paint chips** from the sphere that were radioactive through a screen to separate paint from the soil upon which they had been piled for years.
 - e. The fast track cleanup of the site seemed to place importance on **speed rather than accountability.** There did not appear to be accountable oversight.
 - B. Public Information:
 - a. Consumers Energy had regular PR "updates" in local newspapers. These updates included full page color pictures, quotes from workers, descriptions of contributions to the surrounding communities by CE charity work, and assurances of safety. **This massive PR campaign influenced newspapers and the public.**
 - b. As the environmentalist on the "Citizens Advisory Board" I worked to bring information to the Advisory Board. They were not interested. Local papers were not interested in information on casks, radiation, "fast track" concerns, etc.
 - c. "Fast Track Decommissioning" allowed Consumers Energy **to sell their liability for the Independent Spent Fuel Storage Installation (ISFSI) before technologies were tested or proven safe.**

- d. Fast Track Decommissioning (specifically in the acid treatment of the reactor, piping and the stack interior to remove radioactivity, **subjected workers to unnecessarily high doses of radiation.**
 - e. Employees of Big Rock passionately professed their love of community and pleaded for the public's trust, claiming they would never participate in any activity which was detrimental to Northern Michigan. It is ironic that Tim Petroskey, a likable nice man and long-time PR man for Consumers Energy, for the decommissioning and for the safety of 8 casks of highly radioactive nuclear waste, retired and passed the promotion of Consumers Energy's nuclear energy legacy, onto Carlin Smith, on the day of this hearing. **The creators, builders, operators and promoters of the Nuclear Energy Experiment have walked on leaving the burden of tons of deadly high-level radioactive nuclear waste, with no permanent safe storage in site, to future generations.**
- C. The Inadequate Decommissioning and Public Safety Requirements of the NRC:
- a. The NRC requirement that soil analysis and remediation only need take place to a depth of **15 centimeters (5.9 inches) under MARSSIM**, for releasing the reactor site to "unrestricted use" is dangerous and absurd. **CE documented contamination at deeper levels in soils and groundwater. (See Reportable Occurrence file.)**
 - i. Could groundwater or high lake levels wash contaminants to the surface?
 - ii. Radiation should be treated as a "**chemical of concern.**"
 - iii. Could loads of soil be placed 6 inches deep over areas of "low" contamination and meet NRC requirements? How can we know this was not done? This would literally be a "cover-up."
 - b. The requirement that the site be inspected only to the high-water mark ignores **bioaccumulation of radiation** in algae. (Bioaccumulation was documented in the IJC 1999 Nuclear Task Force's "Report of Bioaccumulation of Elements to Accompany the Inventory of Radionuclides in the Great Lakes Basin." Six months after the plant was shut down, alarms in the discharge canal sounded. CE explained that radioactive algae had backwashed up the discharge canal. (see Big Rock 3-98 incident report)
 - c. The NRC released the site to '**Greenfield**' and '**unrestricted use**' with an exception of use of groundwater because of tritium contamination. In 2003, the Oak Ridge Institute for Science and Education (ORISE, Jan 27, 2004 documented Plutonium in Water Samples at Big Rock. Inspection Report 050-00155/2003-07)[RFTA 04-001]
 - d. **There are no requirements for future testing.** This means condos could be built or a public park could be developed. Would developers be informed before the closing that soils deeper than 5.9 inches or below the high water mark could be contaminated by radioactive materials or bio accumulation in plant material?
2. How satisfied are you with the current condition of the site and how would you like the site to be used in the future?
- A. ISFSI: All High Level Radioactive Waste "Spent Fuel" produced at Big Rock prior to its 1998 shut-down is still on-site in 8 Casks (with the exception of DOE high level waste sent to England for research.)
- a. Casks cannot withstand some attacks. **In an age of increasing global insecurity, every High Level Radioactive Waste Storage Site is a target.**
 - b. **Each cask is an undetonated nuclear arsenal.** Since 9-11 we do not have the luxury of complacency.
 - c. Casks should not be in **close proximity to Lake Michigan.**
 - d. Safety requires all Casks containing **High Level Radioactive Nuclear Waste to be Monitorable, Retrievable and Above Ground. Hardened On Site Storage (HOSS) is essential.**
 - e. **The product of Nuclear Power is High Level Radioactive Nuclear Waste.** The energy produced is gone forever. The High Level Radioactive Nuclear Waste is deadly, a liability, for hundreds of thousands of years. It is the height of vanity and irresponsibility to produce High Level Radioactive Nuclear Waste.

- f. In the last four thousand years, (A fraction of the half-life of High Level Radioactive Nuclear Waste) **the Great Lakes levels have varied greatly**. During the Nipissing, lake levels were between 8 and 10 feet higher. Casks are stored at a level far below the Nipissing ridge.
 - g. We do not know how **Climate Disruption will affect Lake Michigan levels and storms**. Storm Surges, Waves over 20 feet and ice jamming are becoming more frequent. **Climate Disruption, Cyclone Winds and Climate Change were not considered in remediation**. The effects of extreme high-water levels and extreme storms were not considered in remediation.
 - h. **Heat and radiation monitors, and alarms should be installed on casks** for in-time remote readout.
 - i. **A lien should be placed on all CE property and assets by the State of Michigan to cover costs of HOSS. There is no permanent storage for High Level Radioactive Nuclear Waste in sight.**
- B. No part of the total 563 acre site should be held in private hands ever. This includes the 351 acre site offered for sale to The State of Michigan.** Consumers Energy's "Radiological Event History" in the July 1, 2004 revised "License Termination Plan" lists 63 radiation spills, leaks, overflows and floods. Throughout Big Rock's operation, radioactive waste was stored on the ground, "along the Woods Road", burned in an "incinerator constructed of cement blocks", stored in a "temporary shelter near the stack" etc. Contamination below 5.9 inches in subsurface soils could be a danger to landscapers, children with sand pails, construction workers etc. **Many of these contaminated areas were within the 351 acre site the NRC and CE declared "Unrestricted Use Green Field."**
- C. The Big Rock Site should be monitored every 5 years by an independent agency in perpetuity using newest, most accurate detection instruments.** Contaminants migrate with water, wind, land use and time.
- D. Future Use: It would be ideal for the Little Traverse Bay Bands and/or the State of Michigan to initiate much needed Safe Renewable Energy Projects. Wind, Solar, and Wave Energy are possibilities that should be explored. The company retains easements for transmission lines, overcoming a major obstacle for renewable energy transfer.**
- E. The money from the Decommissioning Trust is GONE. CE has sold its liability.**
3. Are you satisfied with onsite storage with guards?
- A. **Guards cannot protect casks containing High Level Radioactive Nuclear Waste against airborne or remotely launched missiles. High Level Nuclear Waste should be in Hardened On Site Storage, HOSS.**
 - B. Each cask contains the equivalent of 240+ Hiroshima bombs as calculated by Marvin Resnikoff. **It was documented in "The 9/11 Commission Report" that Al-Qaida had originally targeted nuclear plants.**
 - C. **Consumers Energy has washed its hands of liability by selling its ISFSI to Entergy.** Entergy has a Memorandum of Understanding Agreement with Holtec International for transfer of licensees, fuel, Nuclear Decommissioning Trusts, the ISFSI and surrounding 100 acre protection zone. Holtec is a private firm with a troubled record of negligence and cask failures in California. **This is a shell game of diminishing competence, credibility and financial accountability with each sale of High Level Radioactive Nuclear Waste.**
 - D. **A moratorium must be put in place on construction of all new Nuclear Energy Facilities** around the world because of unresolved High Level Radioactive Nuclear Waste threats.
4. Are you satisfied with standards to which the site was cleaned up.
- A. **The standards required by the NRC to clean up the site were inadequate.**
 - a. The NRC requirement that soil analysis and remediation only need take place to a depth of **15 centimeters (5.9 inches) under MARSSIM**, for releasing the reactor site to "unrestricted use" is dangerous and absurd.
 - b. **The requirement that cleanup does not have to go beyond the high-water mark disregards structures and pipes left in the water and bioaccumulation of radioactivity in plants and presents future dangers.**

- c. **Climate Change was not considered.**
 - B. **In recusing themselves from oversight (having independent experts), the DEQ and EPA were negligent.**
 - C. **Science is improving chemical and radiation contaminant instruments. The site should be independently tested every 5 years with the most modern and accurate instruments.**
 - D. **No part of the site should be sold or transferred to private ownership.**
 - E. **The site should be transferred into public ownership for stewardship. No transfer of the property should be allowed without full disclosure and an updated Environmental Impact Study.**
 - F. **The site was labeled “Green Field” and released for unrestricted use with the exception of use of groundwater which was contaminated with tritium and other contaminants. This ‘Unrestricted Use’ presents a danger to the public and future owners. While Tritium has a half-life of 12 years, its hazardous life is 120 years.**
5. Were you satisfied with how wastes were transported?
- A. **Categories and labeling of wastes is constantly changing. Below Regulatory Concern etc. is linguistic detoxification.**
 - B. **The BEIR Study has shown there is no safe level of radiation.**
 - C. **The transfer of the high level waste by rail to Barnwell was not without incident. The heavy weight of the reactor vessel damaged train tracks causing problems.**
 - D. **Transfer of High Level Radioactive Nuclear Waste by rail is an accident or incident waiting to happen. The failing and compromised condition of American Infrastructure could cause a deadly incident.**
 - E. **Transfer by barge is unacceptable. In the event of emersion in water of a cask, passive cooling would be compromised and a Critical Event could occur.**

Thank you for the invitation to participate in the IJC Great Lakes Quality Board, Big Rock Point Panel Discussion of February 27, 2020. As a member of the Citizens Advisory Board for the Big Rock Decommissioning and as an intervenor in the Big Rock Spent Fuel Expansion, the above statements are true to the best of my ability. In an unstable world **it is imperative that safe renewable energy options be promoted and subsidized, and nuclear energy be discontinued** if future generations are to survive. Nuclear Power and Nuclear Waste are not economical, safe, or climate friendly. The tons of High-Level Radioactive Nuclear Waste are stored beside reactor sites in casks that are susceptible to attack. From mining to fuel fabrication and enrichment, to nuclear fission, plant decommissioning and radioactive waste storage, Nuclear Energy leaves a path of contamination and a threat of catastrophic sabotage. See also:

<https://www.nirs.org/wp-content/uploads/reactorwatch/decommissioning/bigrockbackgrounder272007.pdf>

Sincerely,

JoAnne Beemon
Secretary WATCH Inc.