

Resuscitated Browns Ferry Shuttered Again

22-year Shutdown

By John LaForge

At a cost of at least \$1.8 billion, the federal government's Tennessee Valley Authority restarted the long-shutdown Browns Ferry Unit 1 on May 22, twenty years after a series of accidents and inept management forced it to close. May 24, it was shut down again due to a hydraulic leak.

Browns Ferry, with three reactors 10 miles from Decatur, Alabama, has been haunted by safety lapses and mismanagement since its startup in 1974.

In 1975, a 7 1/2 hour, \$150 million fire wrecked Unit 1's emergency core cooling system, crucial remote control circuits and caused the water level in the core to drop sharply. Cooling "was only restored when workers resorted to equipment that was not designed for emergency cooling systems," wrote Helen Caldicott in *Nuclear Power is Not the Answer*.

The reactor reopened but in 1985 TVA shuttered all three because of additional accidents and mismanagement. Unit 2 was restarted in 1991 and Unit 3 restarted in 1995.

Unit 1's 5-year, multi-billion-dollar rehab work included replacing a bewildering 150 miles of electric cables and 6 miles of giant pipe. While the nuclear industry is looking to the Browns Ferry restart as a showcase for a reactor construction boom, the enormous cost of the TVA project — and its hasty shutdown — will give pause to potential investors.

Craig Beasley, of TVA, told *The New York Times* the exact cost of the rehabilitation would not be known for some time, but would "probably" not be "much more" than \$1.8 billion.

New Reactor Construction Eyed in Wisconsin

MADISON — After two failed attempts, a committee of leading Wisconsin lawmakers on May 10 approved a proposal to repeal statutory roadblocks to nuclear reactor construction that have been in place since 1983.

Wisconsin law now requires that a federal dump be accepting high-level waste fuel before new reactors may be built. Twenty-four years since the Wisconsin statute became law, and 50 years since experts began studying the problem, the U.S. has no such a dump. (Neither has a government anywhere in the world opened a permanent repository.)

The law also requires that the cost of reactor construction, operation, decommissioning and waste disposal be "economically advantageous" compared with "feasible alternatives." (Since neither of these conditions can be met, the law is often erroneously called a "moratorium.")

Repeal sponsor Rep. Phil Montgomery, R-Green Bay, has said the current law's restrictions "are so out of line with reality that you could never meet them."

The Wisconsin Legislative Council — using the familiar canard that nuclear power is "green" — voted to recommend repeal to the full legislature. The measure must still pass Senate and Assembly utility committees as well as both full houses and the Governor's desk to become law. Governor James Doyle once promised to veto any such repeal bill.

The *Milwaukee Journal-Sentinel* said editorially Feb. 21, 2004, "the country's best minds are working on the waste issue." If true, this unsubstantiated claim is evidence that the nuclear waste problem (containment) is so complex and vast, that 50 years of research by "the country's best minds" has failed to find an answer.

Gas-powered generators currently cost 1/3 to 1/5 that of new nuclear reactors. None of the alternatives to nuclear power need disaster evacuation plans, endless waste management or tax-payer-funded accident insurance.

Nukewatch worked with other groups against the repeal proposal and provided lawmakers with a heavy packet of

Indian Point 1, 2 and 3's Explosion and Leaks

BUCHANAN, New York — An explosion and fire in a truck-sized transformer across the street from the reactor building led to a shutdown of Indian Point 3 April 6. Reporters in the Lower Hudson Online newsroom received a message headlined, "Buchanan explosion, Indian Point nuclear power plant," and some scrambled for their potassium iodide pills.

On April 2, 123 of 150 new emergency sirens failed a test run. Entergy had already been fined \$130,000 for siren failures. The next day, a water pump malfunction and low water levels in steam generators shut down Indian Point 3 for nearly a month.

Scientists have been trying to locate the source of tritium and strontium-90 leaks to the Hudson River and groundwater. Entergy is responsible for an ongoing radiation leak found in August 2005. Indian Point 1's cooling pool — shut down since 1974 — is the probable source for the strontium-90 leak. A new underground contamination was reported on April 23 at IP 3 coming from pipes 4 to 5 feet underground.

On May 10, investigators discovered contamination in Buchanan's city sewer system. The NRC found that IP workers fear retribution for raising safety concerns. The company has applied for license extensions for both IP reactors.

One week previous to the explosion, workers replaced 97 of 193 fuel bundles in the core. Buchanan Mayor Dan O'Neill said he was not concerned about the fact that the fire had taken place. Indian Point is located 35 miles from New York City. — *Journal News*, April 6, 7, 10 & 23, May 10 & 11; *Associated Press*, May 11; & *The Hinesberg Journal*, May 11 & 12, 2007

Early TVA estimates of the cost of building Browns Ferry were laughably understated. Predicted to cost about \$313 million, the first two reactors eventually cost \$500 million. *The New York Times* said this was "about \$2 billion in today's dollars." With the \$1.8 billion bill for refurbishing Unit 1, Browns Ferry's \$4 billion price tag is reason enough for today's utility investors to be skeptical of joining the pro-nuclear band wagon.

The 1975 fire was sparked by workmen using a candle inside a room full of cables directly under the control room. The destruction of critical cable systems forced the revamping of similarly situated electrical setups at reactors nationwide. The Browns Ferry emergency is considered the second most serious commercial reactor accident after the 1979 meltdown at Three Mile Island.

About the hydraulic leak that caused the May 24 shutdown, David Lochbaum, a former TVA employee now with the Union of Concerned Scientists, told *The Huntsville Times*, "It seems inconsistent with having spent all that money to get the plant to start up, but, to be fair, it is not uncommon."

In fact it is all too common that reactors are shutdown for unsafe operations.

background information. Dozens of studies show how nuclear power cannot help slow global warming, and we provided legislators with four recent reports. (These and more are available online under Wisconsin's Nuclear Debate, at www.nukewatch.com)

Wisconsin Green Party Co-chair Ron Hardy said May 9, "Nuclear energy is neither economically nor environmentally sustainable. Our current Wisconsin law has basic reasonable criteria with which to evaluate whether to build more nuclear power plants. Clearly no proposed reactor could currently meet those criteria."

Nukewatch wrote in a press statement, "With the Kewaunee reactor making headlines for poisoning nearby groundwater with radioactive tritium, the legislature should be moving to shut down nuclear reactors, not adding to our pollution problems."

California Rejects Move to Lift Reactor Building Ban

In California, which has an outright ban on new reactor construction, an identical effort to repeal the ban died in committee April 16.

No federal nuclear waste dump has been tested or opened, and the Yucca Mountain, Nevada project is so riddled with earthquake faults, water infiltration and scientific corruption that it will likely never be approved. On Feb. 7, Ed McGaffigan Jr., the longest serving member of the Nuclear Regulatory Commission, said about the roadblocks at Yucca, "It may be time to stop digging There is no chance Yucca can go forward under current statues."

Average-sized reactors each create about 1 ton of high-level nuclear waste ("spent fuel") every two weeks.

Take Action: In Wisconsin, tell lawmakers to vote against any repeal of requirements for new reactors (the Montgomery bill). Legislative hotline: 800-362-9472.

Kewaunee Emergency Backup Power Failure

GREEN BAY, Wisc. — The NRC issued a serious failure finding to operators of the Kewaunee reactor in Wisconsin after finding they failed to promptly evaluate a problem with diesel generators that supply electric power to the reactor during emergencies or accidents.

The "yellow" failure notice is second only to a "red" grade notice and denotes a high level of "safety significance," according to the NRC's four-point scale. Dominion Resources, the site's operator, was told by the NRC that the failure was of "substantial importance to safety."

Tests revealed that the reactor, 30 miles from Green Bay, had an inoperable backup diesel generator for 51 days.

—Reuters, April 10, 2007

Smoked by Grass

NEW JERSEY — Marsh grass forced a shut down on May 1, of the Salem Unit 1, 18 miles south of Wilmington, Delaware. It was the second time in a week that nature thwarted Salem's pair of reactor operations. The heavy, seaweed-like grass clogged a rotating screen designed to keep flotsam and jetsam out of the cooling water intake system. The reactor sucks in trillions of gallons of water each year. On May 24, Unit 2 of Salem shut down due to a leak of condensed liquids from non-radioactive steam used to turn the generators. The reactor also contaminated Salem's storm sewer system with hydrazine. The toxic chemical is used in nuclear power systems to control corrosion. — *The Press of Atlantic City*, May 2, & *The Wilmington, Delaware News Journal*, April 30 & May 25, 2007



Eight large windmills at Steel Winds a former "brownfield" at the Bethlehem Steel site south of Buffalo, NY can power 7,000 homes. The 27 that are planned can light 23,625.

S. Carolina Says 'No More'

South Carolina legislators voted on May 23 to close the Barnwell low-level radioactive waste dump to all but three states in June 2008, killing a measure that would have kept the dump open until 2023. Nuclear utilities across the country have to find another place to bury their nuclear waste. After June 2008, only waste from New Jersey, Connecticut and SC will be allowed into Barnwell. The three states formed a waste "compact" which has already paid the county \$10.5 million in tipping fees. After '08, the county will lose the \$2 million in annual tax revenue. Utilities not in the compact have one year left to ship to the Barnwell site, so there will likely be a 12-month rush of additional transports.

Barnwell is a community of 20,000 people that supports the dump site in spite of tritium contamination. In 1999, a total of 13,000 cubic yards of contaminated soil was removed from the grounds of the St. Paul Missionary Baptist Church.

Barnwell's owners have been accepting radioactive waste for 30 years. Since 1971, the site has taken in about 28 million cubic feet of waste. Only about 1 million cubic feet remains for the compact's waste, and SC plans to build more reactors which would exacerbate its own problems.

The dump opened as a disposal site for lightly contaminated radioactive material, such as hospital gloves and gowns. Today, it is the only commercial site in the U.S. that takes the most dangerously radioactive forms of "low-level" nuclear waste. On May 31, the entire core of Wisconsin's defunct La Crosse Boiling Water Reactor was shipped to Barnwell.

The Conservation Voters of South Carolina worked overtime to close the dump. Dump operator, Energy Solutions is not giving up and has employed 10 lobbyists to repeal the shut down amendment.

— Don't Waste South Carolina, May 2; *The Barnwell People Sentinel*, May 23; *The Rock Hill Herald*, March 29, 2007

New Study Charts Reactor Accidents Since Chernobyl

BRUSSELS — Green Party members of the European Parliament released a study of radiation accidents that have taken place since the 1986 Chernobyl disaster. Researchers at the Union of Concerned Scientists in Washington, DC, and institutes in Germany, France and Austria conducted the study titled, *Residual Risk: An Account of Events in Nuclear Power Plants Since the Chernobyl Accident in 1986*. Research coordinator Mycle Schneider in Paris, said in releasing the report, "In the course of the last 20 years, the world has lived with the illusion that it is possible to make nuclear reactors safe. In reality, every day countless incidents occur in nuclear reactors and, since Chernobyl, catastrophe has on several occasions only narrowly been avoided." A copy of the report would be a nice gift for your state and federal legislators! — *The 116-page account can be found at: http://www.greens-efa.org/cms/topics/dokbin/181/181995.residual_risk@fr.pdf*

Braidwood's Unregulated Spills

JOLIET, Illinois — Two separate spills containing radioactive tritium occurred at Braidwood, 20 miles southwest of Joliet, Ill. in May. About 5 gallons of tritium-laced water leaked from a crack in a steel storage container. Exelon personnel did not know when the leak occurred but company spokesman Bob Osgood, said it happened when a tank that held radioactive garbage collected rain water and was then jostled causing the spill. In a second incident, 1,500 gallons of contaminated water "lapped over the edge" of a retention basin May 23, when high winds hit the area. The water tested at 75,000 picocuries per liter, well above what is considered a safe level. Workers placed sandbags around the contaminated water. Exelon has acknowledged leaking millions of gallons of tritium for decades after the discovery of tritium in an area pond. The company is required to report all spills within 24 hours.

— Joliet, Ill. *Herald News*, May 6 & 25, 2007

On the Up Side: New Reactor on Hold

RALEIGH, North Carolina — Progress Energy will delay building a new nuclear reactor at the Shearon Harris nuclear site and instead push customers to use less electricity.

Robert McGehee, chief executive of the Raleigh utility, said May 30 that the company will devote the next two years to testing whether its 1.2 million customers in the state are willing to commit to energy efficiency.

Progress will develop an energy efficiency program to save 2,000 megawatts of electricity, equivalent to the capacity of several power plants.

Last year Progress and Duke were among a small group of utilities leading the way to win federal licenses for the nation's first new nuclear reactors in three decades. Duke is still committed to licensing two reactors in South Carolina, and Progress is on track to seek two in Florida.

— *The Raleigh, NC, News & Observer*, May 31, 2007