Watchdog Group Warns of Accidents Waiting to Happen at Palisades Atomic Reactor

Covert, Michigan – New Orleans based Entergy Nuclear was forced to shut down two of its atomic reactors in two different states in just one hour on Sunday evening. Entergy’s Indian Point Unit 2 near New York City shut down due to a transformer explosion, while its Vermont Yankee reactor shut down due to yet another leak of radioactive water, the latest in a rash over the past year. Both incidents likely involved age-related degradation of plant systems, structures, or components, a problem that gets worse over time. But Beyond Nuclear, a lead watchdog on the nuclear power plant in Covert near South Haven on the Lake Michigan shore, warns that Entergy Nuclear is living on borrowed time at its Southwest Michigan reactor as well, and that indefinite deferral of long overdue safety repairs risks a major accident at Palisades.

In early 2006, Consumers Energy – Palisades’ previous owner – informed the Michigan Public Service Commission that the reactor needed a number of major safety repairs: the reactor pressure vessel head, or lid, needed replacement by July 2007; the steam generators need replacing for the second time; there are significant "embrittlement concerns" with the entire reactor pressure vessel; and sumps need major upgrades to ensure cooling water flow to the reactor core during an emergency. Since taking over ownership and operation of Palisades in early 2007, Entergy Nuclear has made none of these repairs. Palisades’ original license for 40 years of operations expires next year, at which point a U.S. Nuclear Regulatory Commission (NRC) approved 20 year license extension kicks in, allowing Palisades to operate till 2031.

In February 2010, the Vermont State Senate voted 26 to 4 to disapprove a 20 year license extension at Vermont Yankee. Since April 2010, New York State has held firm to its position that Indian Point install cooling towers to lessen impacts on Hudson River fish populations if it wishes to extend its operating license by 20 additional years.

“Entergy is infamous for buying up other utilities' atomic reactors on the cheap, as they have done at Indian Point in New York, Vermont Yankee, and Palisades, and then running them into the ground,” said Kevin Kamps of Beyond Nuclear. “Entergy defers maintenance and takes short cuts in order to maximize profits at the expense of public safety,” Kamps added.

Both the State of Vermont Legislature’s Public Oversight Panel on Vermont Yankee, as well as Entergy Nuclear’s own team of experts at Indian Point, have documented inadequate upkeep of non-safety related systems at its Northeast nuclear power plants. An excerpt of their findings is viewable at: http://www.beyondnuclear.org/storage/POP%20evaluation%20of%20Entergy%20shortcuts%20at%20VY%20and%20IP%20July%202010.pdf.

Kamps, however, asserts that safety-related systems at Palisades are being dangerously neglected.

“Palisades has perhaps the most embrittled reactor pressure vessel in the U.S., and all that’s been done about it is NRC’s repeated weakening of its Pressurized Thermal Shock safety regulations to accommodate Palisades so it can keep running despite the risks,” Kamps said. “In an emergency situation, the core cooling system, if activated, could fracture the Palisades reactor pressure vessel like a hot glass
under cold water, causing a loss of coolant to the core, a meltdown, and the potential for a catastrophic radioactivity release,” he added.

A 1982 report commissioned by NRC and carried out by Sandia National Lab, “Calculation of Reactor Accident Consequences,” or CRAC-2, reported that a major accident and radioactivity release from Palisades could cause 1,000 “peak early fatalities,” 7,000 “peak early injuries,” 10,000 “peak cancer deaths,” and $52.6 billion in property damages. Population growth in the past 28 years could now make casualty figures worse, and adjusting for inflation, property damages would now top $116 billion.

“It’s an outrage that NRC allows Palisades to continue operating with its dangerously degraded lid, three and half years past the date by which Consumers Energy had said it needed to be replaced,” Kamps said. “NRC and Entergy are gambling with the Great Lakes, 20% of the world’s surface fresh water, and drinking water supply for 40 million people downstream,” Kamps added.

In 2002, a massive corrosion hole in the reactor lid was revealed at FirstEnergy’s Davis-Besse nuclear power plant near Toledo. The incident was reported by the U.S. General Accounting Office as the “the most serious safety issue confronting the nation’s commercial nuclear power industry since Three Mile Island in 1979.” NRC’s own Office of Inspector General blamed both the NRC and nuclear utility FirstEnergy for putting profits ahead of safety. Palisades moved to replace its degraded lid in the aftermath of Davis-Besse’s near miss, but the plan to do so by 2007 now seems to be indefinitely postponed.

“Domino effect failure of degraded steam generator tubes is yet another way to cause a loss of coolant accident and potential meltdown,” Kamps said. “The risk of Palisades’ small sump becoming clogged with debris means that cooling water flow to the core could become blocked during an emergency,” Kamps added.

“Between an inadequate sump, degraded steam generators, a corroded lid, and a highly embrittled reactor pressure vessel, Palisades risks radioactive Russian roulette on the Great Lakes shore,” Kamps concluded.