

## Energy Matters

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### [NRC Halts New Nuclear Licenses: Existing Licenses in Doubt](#)

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**By Roger Witherspoon**

In an unprecedented move, the Nuclear Regulatory Commission has bowed to a court order and imposed a temporary halt in relicensing nuclear power plants until it thoroughly examines the impact of runaway meltdowns at the plants' spent fuel pools.

That action affects the relicensing evaluations of some 33 facilities at 19 sites, including Indian Point 2 and 3 on the Hudson River opposite Bear Mountain. And it leaves in limbo preliminary applications for new plants, including site reviews for possible new plants at New Jersey PSEG's Hope Creek and Salem nuclear plant sites.

But while definitely halting the granting of new licenses, the Commissioners are continuing their review process and have put on hold all new challenges by state officials and civic groups that are based on the Appellate Court ruling. And the validity of some 70 license extension granted over the past decade under the discredited rules was not addressed and is

still not clear.

“I’m not surprised that they did that,” said Geoffrey Fettus, senior attorney for the Natural Resources Defense Council (NRDC). “They acted in response to the significant amount of contentions that had been filed against plant relicenses around the country. If the NRC is going to have any coherence to the licensing process as they go forward, they have to put things in abeyance while they decide what to do.

“We need to see how the Commission is going to proceed. But at this point, they said ‘Everybody stop! Hands up while we figure out what we are going to do.’ So stay tuned.”

The unanimous decision by the NRC’s five commissioners is their first response to a decision by the US Court of Appeals in June which backed a challenge ( <http://bit.ly/OQoV1q> ) to the agency’s rule that high level nuclear waste could be stored indefinitely at reactor sites 60 or more years after the plants shut down. The agency’s temporary storage regulation, developed in 1990, updated repeatedly over the years and finalized in its current form Dec. 23, 2010, is formally known as the Waste Confidence Rule. It doubled the amount of time spent nuclear fuel rods can be stored onsite from the previous limit of 30 years. And the NRC is currently considering doubling that limit again to 120 years after the plant has closed. That would be on top of the 25 years the NRC is allowing plants to sit idle after they shut down to give the underfunded decommissioning funds a chance to accumulate enough money to cover the costs of cleaning up the nuclear site.

If the rule had been allowed to stand, the spent fuel at the Oyster Creek Nuclear Generating Station for example, which is due to close in 10 years, could be kept onsite until at least 2070 and possibly until 2130. The Salem nuclear plants, whose operating licenses were extended 20 years and may be extended another 20, could conceivably have high level radioactive waste onsite till nearly the end of the next century. There is, of course, no way to know if the plant operators will still be in existence a century and a half from now to begin the process of cleaning up the site.

The suit was brought in February by the attorneys general of New York, Connecticut and Vermont – with New Jersey signing on about a month later – the Prairie Island Indian Community, and a coalition of 24 environmental groups led by the NRDC and the Southern Alliance for Clean Energy (SACE).

At issue is one of the most dangerous aspects of nuclear power operation – the possibility of a Chernobyl-like fuel fire spewing a continuous cloud of radioactive debris into the atmosphere. The plants’ reactors contain about 100 tons of uranium, packaged in 12-foot-long fuel rods, and offload about a third of this “spent fuel” during refueling shut downs every 18 to 24 months. The spent fuel is a high level mix of radioactive material, including

plutonium, uranium, cesium, and iodine.

Over the years, thousands of tons of spent fuel have been stored in 40-foot-deep pools, which have concrete walls about five to six feet thick and a sliding entrance-way, at each individual power plant. That does not make them invulnerable. An NRC study of spent fuel pool risk, released in October, 2000, ( <http://bit.ly/eGn23T> ) stated that of all the currently flying commercial jet aircraft, “1 of 2 aircrafts is large enough to penetrate the 5-foot-thick reinforced concrete wall.... It is further estimated that 1 of 2 crashes damage the spent fuel pool enough to uncover the stored fuel.”

That would result in uncontrolled fission and a nuclear fuel fire, which would spread radiation and cause up to 25,000 deaths within a 500 mile radius, according to the NRC’s study. The U.S. Government was supposed to take charge of the nation’s spent fuel by 2010, but the planned repository at YuccaMountain in Nevada has been stalled indefinitely. As a result, nuclear operators have been moving their oldest spent fuel into 100-ton dry casks, which sit on football-field sized pads in the open.

In addition, most of the nation’s nuclear power plants have leaked radioactive liquid into the surrounding environment, either from the ageing spent fuel pools or the miles of underground pipes serving the pools and the reactors. The NRC saw no reason to examine how these may age over the coming decades.

The NRC had taken the position that since there had never been a meltdown in an American spent fuel facility, there was no need to assume that there could be and no need to examine the possible impacts of a fuel fire as part of the relicensing process. Their rule also stated that the US government would find a national repository at some point in the future and there was no need to plan for a crisis.

“Their analysis has always assumed there will be a national repository and we don’t have to think about that long term picture,” said Monica Wagner, Deputy Bureau Chief of the NY Attorney General’s Environmental Protection Bureau.

Wagner, who argued the case for New York before the three-judge Appellate panel, said the ruling, that the NRC violated the National Environmental Policy Act, “wasn’t a surprise to us.

“We were basing our argument on the NRC’s own analysis of leaks that had occurred at Indian Point and other nuclear facilities. The NRC said there have been a number of leaks in the past, we found they haven’t had significant impacts on public health and therefore there won’t be significant impacts in the future. The court absolutely agreed with us. You can’t say that past leaks haven’t had impacts on public health and from that you can assume that

future leaks won't have impacts on public health.”

The Court flatly rejected the NRC's reasoning, declaring “In concluding that permanent storage will be available ‘when necessary,’ the Commission did not calculate the environmental effects of failing to secure permanent storage – a possibility that cannot be ignored.

“Secondly, in determining that spent fuel can safely be stored on site at nuclear plants for 60 years after the expiration of a plant's license, the Commission failed to properly examine future dangers and key consequences.”

The impact of the Court's ruling on pending licenses is still to be determined. Following the Commissioners' action, the Atomic Safety and Licensing Board, which had been hearing challenges to the Indian Point license renewal, issued a statement putting all pending challenges related to the spent fuel pool on hold.

SACE attorney Diane Curran said in a statement that “This Commission decision halts all final licensing decisions – but not the licensing proceedings themselves – until NRC completes a thorough study of the environmental impacts of storing and disposing of spent nuclear fuel. That study should have been done years ago, but NRC just kept kicking the can down the road.

“When the Federal Appeals Court ordered NRC to stop and consider the impacts of generating spent nuclear fuel for which it has found no safe means of disposal, the agency could choose to appeal the decision by August 22nd or choose to do the serious work of analyzing the environmental impacts over the next few years. With today's Commission decision, we are hopeful that the agency will undertake the serious work.”

While the Appellate Court made it clear that the NRC had to develop site specific environmental assessments for any new licenses, it is not clear what impact there will be on licenses that are already granted while the now rejected rule was in effect.

Former NRC Commissioner Peter Bradford, now at the Vermont Law School, said if a state were to ask the federal courts to reopen the licenses of plants such as Salem and Hope and Oyster Creek – which received new, 20-year extensions during the last two years – “it would not be a frivolous challenge. The industry will argue that until the court decision, the NRC's Waste Confidence framework was valid. And, therefore, the actions that it took using the Waste Confidence policy were sufficient.

“On the other hand, people take the view that it is a simplistic defense and an updated form of the Waste Confidence Rule is not valid and, therefore, every action they took under that

umbrella is vitiated. I don't know how the courts are going to sort that one out."



In New Jersey, Environment Protection Commissioner Bob Martin was quick to comment when the decision was announced. "This is an important victory for the people of New Jersey," Martin said in a statement, "on an issue that has significant public health and safety implications and also the potential to negatively impact the state's environment."

But the Christie Administration has been silent since then on any plans to force the NRC to conduct a long term assessment of its ageing spent fuel pools, which have already leaked. NRC spokesman Neil Sheehan said "our view is that the licenses that have been completed are done. They are finalized. This court decision affects only the pending applications."