

By Mary Lampert

Print Page

June 10, 2016 6:00AM

OF NUCLEAR INTEREST: Pilgrim's shutdown announcement only the beginning

Entergy says its Pilgrim Nuclear Power Station will shut down May 31, 2019. The next three years may be the most dangerous.

Entergy says its Pilgrim Nuclear Power Station will shut down May 31, 2019. The next three years may be the most dangerous. Pilgrim has "earned" its Nuclear Regulatory Commission (NRC) rating as one of the three worst nuclear reactors in the country (the others also owned by Entergy). There is no evidence that Entergy will make the investments necessary to stop Pilgrim's downward trajectory.

Shutting down Pilgrim is only the beginning. NRC defines "decommissioning" to include only removing enough radioactivity to allow Pilgrim's license to be terminated and the site to be released for "restricted" or "unrestricted" use. It does not include storage and management of spent nuclear fuel; neither does it include site restoration. NRC rules give Pilgrim 60 years after shut down to complete radiological decommissioning – to 2079.

Entergy chose delayed decommissioning for Vermont Yankee and will do the same in Plymouth. At Vermont Yankee, Entergy will not begin decommissioning until 54 years after shutdown.

Delaying decommissioning for more than 50 years is bad for many reasons. It delays economically productive use of the site and tax revenue; nearby property values remain depressed; unidentified contamination onsite has the opportunity to spread; and there will be no workers with specific knowledge of spills and other problems. Until the entire site is cleaned up, state and local communities will have to pay for emergency planning, and Entergy is unlikely to pay for the state's environmental monitoring.

Economics: Entergy does not have enough money to decommission now. Entergy has about \$900 million in Pilgrim's Decommissioning Trust Fund (DTF). Entergy estimated that the total cost (if the work started in 2014) to clean-up Vermont Yankee, a smaller reactor than Pilgrim, would be about 1.243 billion dollars. Pilgrim's DTF is about 350 million dollars short, even if work started today. By the time that the work is actually done, the shortfall likely will be in the billions.

In deciding how big a DTF must be, NRC assumes that the fund will grow 2 percent above, and that any cost increases will not exceed the rate of inflation. That is dreaming. NRC has stated that decommissioning costs will increase at an annual rate of about 5 percent to 9 percent, well above inflation. Between 2008 and 2014, when inflation was low, decommissioning costs increased by 60 percent. The only reasonable assumption is that the size of the fund will fall far behind escalating decommissioning costs over the next 50 years, resulting in a deficit ranging from 5 billion dollars to more than 50 billion dollars.

Who will pay? Obviously Energy should, but Pilgrim's only "assets" will be the site and nuclear waste. It is a limited liability company. Entergy told the state of Vermont that it will have no responsibility if decommissioning is not done by the end of the 60 year period.

Spent fuel safety: Toxic spent nuclear fuel should be moved out of the spent fuel pool and placed in dry casks ASAP. That is only a partial solution. Dry casks are not risk free and likely will be here for decades. There will be 60 casks standing uncovered on a concrete pad, close to Cape Cod Bay and at low elevation – exposing the casks to flooding with rising sea levels. According to NRC the casks may crack within 30 years; there is no current technology to inspect, repair or replace cracked canisters; and we will not know until after the fact if there has been a radiation leak. Each cask contains about one-half the Cesium-137 that was released at Chernobyl.

Site restoration: NRC qualifies a site for unrestricted use if the radioactive materials left on the site after the facility closes do not exceed 25 millirem per year; and 100-500 millirem per year if it is used for restricted use. This is more radiation than the Environmental Protection Agency's standard and more than some other states allow. Massachusetts needs a more conservative standard.

In any event, the only Pilgrim structures that must be removed from the site are major radioactive components such as the reactor vessel and steam generators. Those structures need only be removed to three feet below grade, and they do not have to be taken off site. NRC allows them to be demolished into rubble and then buried in the structure's foundation below grade.

Mary Lampert is director of Pilgrim Watch and co-chair of the Duxbury Nuclear Advisory Committee, and she supports the work of local citizen groups such as Pilgrim Coalition and Cape Cod Bay Watch.