

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

Docket # 50-293

Entergy Corporation

Pilgrim Nuclear Power Station

License Renewal Application

March 28, 2011

PILGRIM WATCH POST- HEARING MEMORANDUM

It is a not uncommon to call a court's or boards attention to a relevant new information post-hearing. Here, Pilgrim Watch asks that the Board take judicial notice of some important relevant facts that have arisen since the hearing as a result of the nuclear disaster at Fukushima.

1. The basic designs of the Fukushima reactors and Pilgrim NPS are essentially the same. Both are General Electric Mark I reactors designed in the 1960's that went into operation in the early 1970's. The major difference between the two appears to be that most of the spent fuel at Fukushima is stored in casks or a separate common pool.

2. The locations and extent of the areas affected by the Fukushima accident shows that areas of impact and contamination within that area cannot be predicted using a straight-line Gaussian plume model. At Fukushima the mean average annual wind direction is from West to East - offshore, like Pilgrim. However Tokyo, located about

140 miles south of Fukushima, announced that its tap water is contaminated with radioactive iodine. If true - reports from Japan also make clear that other inland areas, both north and west of the reactors have been affected.

3. The affected areas extend far beyond a 2 mile circle surrounding the reactors, and a narrow "wedge" beyond that. Even the Japanese government has admitted that the area at risk extends throughout a 20 kilometer circle, and on March 16, the U.S. NRC recommended Americans within a 50 mile radius of Fukushima evacuate. Both governments thus acknowledging plume variability; otherwise NRC would have advised only those within 2 miles and a one direction pie-shaped wedge to evacuate.

4. The basic cause of the Fukushima disaster was the loss of off-site power, due to the Tsunami. But power failures occur without Tsunami's. Nuclear power plants do not generate their own electricity; we have tragically been reminded by Japan that offsite power is needed to run every active safety system that is depended upon to prevent major accidents. Loss of power can occur from many causes: natural disasters such as hurricanes, nor'easters, snow storms, human error, mechanical failures, terrorist actions - to say nothing of the fact that the submerged electric cables that the industry relies on to bring electric power into the reactor and to power safety systems are not qualified to operate in a moist environment – as is the case at Pilgrim.

5. Today marks 32 years from the date of the Three Mile Island accident in Pennsylvania. Since then, we have had Chernobyl and now Fukushima in Japan. In other words, there has been a major nuclear accident every 11 years.

6. Without further inquiry we cannot know what severe accident consequences would have been predicted if Tokyo Electric Power Company used the same MACCS2 computer code and the straight-line Gaussian plume model embedded in the code, as has Entergy, to model the consequences of a severe accident at Fukushima. Pilgrim Watch is quite certain that the predicted consequences would have been very small, certainly far, far less than what actually happened. This is the only real basis of comparison that we actually have, and the comparison should be made.

We respectfully request that Pilgrim Watch's late filed contentions be accepted; that the Board agree that further analysis by Entergy of Pilgrim's SAMA analysis is required; and last that the Board delays its decision on the application until NRC has evaluated the lessons learned from Fukushima to be assured that the Aging Management Programs for Pilgrim are appropriate.

Respectfully Submitted,

Signed Electronically

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ATTACHMENT 1

BOSTON GLOBE EDITORIAL

At Pilgrim, NRC must address fuel rods, cables, safety plan

March 27, 2011

THE CRISIS at Japan's Fukushima Daiichi nuclear power station has kindled a badly needed reappraisal of nuclear energy safety in the United States — including at three nuclear plants that power the Boston area. For now, it appears that the worst-case scenario in Japan has been averted. But that shouldn't stop the rethinking, which should result in more stringent standards and rigorous enforcement to ensure that plants in the United States are the world's safest.

In Massachusetts, that reappraisal can start with Pilgrim nuclear station in Plymouth, which has applied to extend its license for another 20 years. The 38-year-old plant has a design similar to the reactors at Fukushima — but that's largely beside the point. Every nuclear plant poses its own set of risks. Regulators should ensure that the operators have done everything possible to understand and minimize those risks.

One of the most worrisome problems facing Pilgrim is the wet storage of nuclear waste, which is packed into a swimming-pool sized container at the site. Like many nuclear facilities, Pilgrim holds more waste than was originally intended, largely because the federal government has failed to build a long-term storage facility. If plants will be responsible for storing their own waste for the foreseeable future, regulators should place stricter limits on wet storage. In Japan, a wet storage pool apparently malfunctioned, leading to the release of radioactive material. Before the Nuclear Regulatory Commission renews Pilgrim's license, it should insist that waste go into dry storage, which is safer.

The NRC should also revisit other concerns about the aging cables at Pilgrim and the plant's security. The crisis in Japan was caused, in part, when the plant lost power needed to keep the core cool and backup systems failed. Pilgrim's safety systems are powered by submerged cables of a type that have been known to fail under damp conditions. Last year, the NRC declined to mandate more frequent inspections of the cables, a decision it should reverse.

In light of modern concerns about terrorism, which were not on the radar screen when Pilgrim opened in 1972, plants also need adequate protection from attack. Last year, the NRC disclosed that there had been an unspecified security breach at Pilgrim, but withheld details. Representative Edward Markey, a critic of nuclear power, has rightly called for a full accounting of the incident so the public can judge whether the plant is adequately secure.

Finally, the plant's owner, Entergy, should abandon a short-sighted plan to cut emergency preparedness funding in communities surrounding Pilgrim. Troy Clarkson, the town manager of Bridgewater, said that if the company goes ahead with plans to shrink the \$114,000 in annual payments the town receives from Entergy, it will curtail training and close an emergency operations center. In the event of a crisis at Pilgrim, Bridgewater is one of three communities that would be designated reception centers for evacuees. In addition to keeping up funding levels, the company should ensure those emergency scenarios are sufficient; relying on three communities to handle 100,000 South Shore residents seems unrealistic.

The NRC has never denied an application to extend a plant's license. But after the crisis in Japan, the agency must make clear that nothing but the most rigorous standards will be acceptable. ■ (Underlined text added)

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