



February 24, 2017

William Dean, Director  
U.S. Nuclear Regulatory Commission

Daniel Dorman  
Region 1 Office Administrator  
U.S. Nuclear Regulatory Commission

**RE: Pilgrim Nuclear Power Station, Plymouth, MA**

Dear Mr. Dean and Mr. Dorman,

This letter is to follow-up our conversation after the public hearing that took place in Plymouth, MA on January 31, 2017. I appreciate the time you spent at the hearing and for our discussion afterwards. I would still like to meet with you again, when you return in mid-March. I would like to reiterate that the NRC should seriously consider withdrawing Pilgrim's license and closing the facility before refueling takes place in spring 2017 for the reasons outlined below.

Pilgrim provides no benefit, only risk to our community and the Commonwealth. We do not need Pilgrim's electricity. When it goes offline now, no one goes without electricity. A recent forward capacity auction by ISO-New England secured commitments from power generators that will produce more than enough power three years from now and at an even lower price than last year's auction, showing that the market can fill Pilgrim's void effectively.<sup>1</sup>

It is vital that you consider the big picture when assessing infrastructure failures at Pilgrim. If there is no need for the risk, and the dimensions of loss can only grow, you cannot justify forcing the facility to continue. Entergy is operating Pilgrim because the NRC has left it in Column 4, rather than moving it to Column 5 and requiring shutdown.

Another refueling at Pilgrim is wasteful and increases the dangers for residents and environment, and only delays needed cleanup. To what advantage? The money Entergy is losing each day for enhanced oversight should be re-allocated to soften the blow of closure on Plymouth and its workers. An accident will raise the cost of cleanup and lead to greater hardship for all those involved and affected.

---

<sup>1</sup> Mohl, B. Feb. 9, 2017. Power auction goes smoothly for 2020-2021: Closings of Brayton Point, Pilgrim causing no disruptions. Commonwealth Magazine. < <http://commonwealthmagazine.org/energy/power-auction-goes-smoothly-for-2020-2021/>>

An incident at Pilgrim would affect the health and safety of people within 50 miles and beyond. Homeowners' insurance would not cover the resulting costs. Our local environment would suffer. Our economy – one of the best in the nation<sup>2</sup> – relies heavily on fishing and tourism, and is largely dependent on a healthy Cape Cod Bay. One bad day at Pilgrim would devastate our health, environment, and economy for decades, if not generations, to come.

After years of enhanced federal oversight, Pilgrim continues to operate very poorly and is one of the worst performing reactors in the nation. The two facilities in Column 4 are both owned by Entergy, suggesting a real and systemic problem within the company.

Over the past year, as you know, Pilgrim has been plagued with problems. These problems continued after the NRC left Plymouth at the end of January. Faulty valves, leaks and other failures are clearly getting more frequent and Entergy has less incentive to make costly fixes as the scheduled 2019 shutdown date gets closer. Additional oversight is not the cure. Pilgrim should be shut down and its economic resources should be freed up to secure the site and retrain employees.

Allowing Pilgrim to refuel this spring delays decommissioning and cleanup of the site, and significantly adds to the hazardous material stranded on our shoreline. Having no permanent storage solution for this highly dangerous radioactive waste is a serious problem. How does the NRC justify adding more highly radioactive unstable fuel to the site? No need, no gain, no logic.

Furthermore, delaying Pilgrim's closure adds to the detrimental impacts to Cape Cod Bay and the local environment. Pilgrim has been leaking radionuclides into the soils and groundwater at least since testing began in 2006, and its daily massive water consumption causes impingement and entrainment of billions of aquatic organisms each year. We objected when Pilgrim's operating license was renewed in 2012 with an expired Clean Water Act NPDES permit, because an expired NPDES permit should have disqualified renewal. EPA published a new draft NPDES permit in 2016, yet the final permit is still pending and Pilgrim is currently operating under one of the longest expired permits in the country—contravening the Clean Water Act. Regulators throughout government appear to be ill equipped to manage the extent of Pilgrim's problems and universally fail to constraint its impacts. Continuing to allow damage to Cape Cod Bay and local environmental resources, especially at a time of significant global climate change, is unacceptable, and at the very least, a violation of public trust.

It is vital you comprehend the real potential for danger that our changing climate – with resulting storms and rising seas – brings to the Pilgrim site. Postponing decommissioning and cleanup increases the probability the site will experience serious impact, as well as a significant rise in groundwater. Storing radiological waste close to the shore at levels barely above the

---

<sup>2</sup> Massachusetts' overall economy is the best in the U.S., according to an analysis of federal economic statistics by Governing magazine. <<http://www.governing.com/topics/politics/gov-state-economic-rankings-governor-ratings.html>>

regional floodplain is irresponsible and will further complicate and dramatically challenge operations and cleanup efforts.

Pilgrim's location on the Atlantic coast increases operational risks, as storm related shutdowns have demonstrated. The conditions on-site are time sensitive, with continual release of unbound contaminants into the Cape Cod Bay Ocean Sanctuary.<sup>3</sup> There is no rational justification to continue Pilgrim's operations. **Climate change related issues alone should qualify Pilgrim for Column 5. A cease and desist order is justified.**

Attached is an aerial photo of the Pilgrim site taken in November 2016 during moderate wind and weather conditions (Appendix A), which shows the protective jetty over-washed with seawater, despite Entergy's claims that the jetty cannot be breached. However, in a Category 1 hurricane, as well as a significant nor'easter, both the easterly revetment and the southerly jetty would be submerged. The 5 to 30 foot waves typical of these storms in Cape Cod Bay could reach exposed infrastructure. It is imperative that the NRC understands and appreciates the vulnerability, both of Pilgrim's operations and of the nuclear waste storage areas, to storm forces. Pilgrim is built on sand over bedrock at sea level. There is no rugged defense.

Also attached is an image of the ocean current and temperatures off the east coast of the U.S. and a screen shot of sea level rise (Appendix B). NASA notes that the temperature in the Gulf Stream is rising faster than ocean temperatures anywhere else on the globe. The Gulf of Maine (GOM) temperatures are the rising the fastest, and Cape Cod Bay provides the southern boundary of the GOM. The U.S. East Coast could be a climate change hotspot where global warming could slow currents, lead to greater ocean temperature, and cause sea levels to rise more as compared to rest of globe.<sup>4</sup> It is also an area where storms of unprecedented proportions and consequence could, and are likely to occur.

From what we understand, EPA's cleanup standards typically do not apply to commercial nuclear reactor sites and our state's Department of Environmental Protection (MassDEP) defers to federal standards. Your agency will be responsible ensuring Pilgrim's site is cleaned-up to acceptable standards – why wait and make it harder to accomplish?

We recently issued a draft report titled "Entergy's Legacy of Contamination at Pilgrim Nuclear Power Station."<sup>5</sup> It summarizes decades of radiological releases at Pilgrim and provides a foundation for understanding cleanup needs post shutdown. We urge you to read this report to

---

<sup>3</sup> NOAA Fisheries also announced a significant expansion of critical habitat for critically endangered North Atlantic right whales in Jan. 2016 -- including almost all of the Gulf of Maine and ALL of Cape Cod Bay.

<sup>4</sup> See: <https://uanews.arizona.edu/story/sea-level-spiked-for-two-years-along-ne-north-america> and <http://onlinelibrary.wiley.com/doi/10.1002/2015JC011346/full>

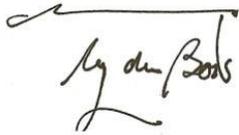
<sup>5</sup> CCBW/JRWA. Feb. 2017. Entergy's Legacy of Contamination at Pilgrim Nuclear Power Station [http://www.capecodbaywatch.org/wp-content/uploads/2016/12/RAD-REPORT\\_2016.12.16\\_FINAL.pdf](http://www.capecodbaywatch.org/wp-content/uploads/2016/12/RAD-REPORT_2016.12.16_FINAL.pdf)

understand our concerns regarding cleanup needs, both radiological and non-radiological. A link to the report is provided below.

Now more than ever, the risk that Pilgrim poses to our community greatly outweighs any perceived benefit. Again, we ask the NRC to prohibit the spring refuel and enforce shutdown as soon as possible to protect our families, community, environmental resources, and local economy.

We are eager to follow-up with you about these issues, and could do so prior to your annual meeting in late March. Please contact me at your convenience to set up a time to meet, or if you have any questions and would like to discuss these issues further.

Sincerely,

A handwritten signature in black ink, appearing to read "Pine duBois". The signature is written in a cursive style with a horizontal line above the name.

Pine duBois, Executive Director  
Jones River Watershed Assoc., Kingston, MA  
pine@jonesriver.org  
w: 781-585-2322; m: 781-424-0353

Entergy's Legacy of Contamination at Pilgrim Nuclear Power Station. Dec. 2016 Report by JRWA/CCBW. <https://goo.gl/LIONHL>

[enclosure]

Appendix A: Aerial Photo of the Pilgrim Site

Appendix B: Ocean current and temperature off the U.S. East Coast

cc:

Governor Charlie Baker  
Attorney General Maura Healey  
Senator Ed Markey  
Senator Elizabeth Warren  
Congressman Bill Keating  
Senator Vinny deMacedo  
Representative Tom Calter  
Representative Josh Cutler  
Representative Jim Cantwell  
David Lochbaum, Union of Concerned Scientists

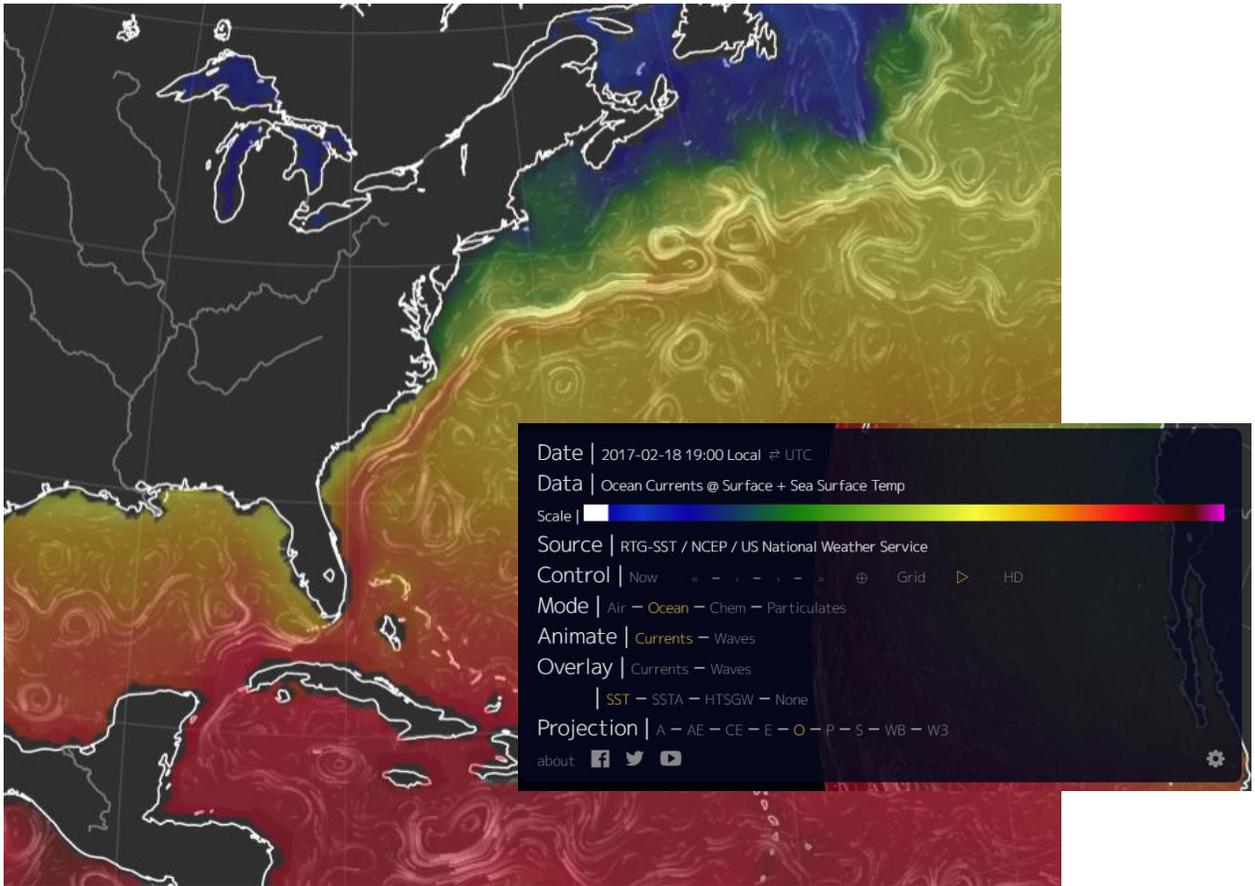
## Appendix A

Photo: Pilgrim Nuclear Power Station on November 18, 2016. Estimated to be just after a 12-ft. high tide and with moderate wind conditions (6-14 mph) from NNE.



## Appendix B

Ocean current and temperature off the U.S. East Coast. Source: [www.earth.nullschool.net](http://www.earth.nullschool.net)



Ocean sea level rise over 22 years is extreme off the northeast U.S. coast.

Source: [https://climate.nasa.gov/climate\\_resources/145/](https://climate.nasa.gov/climate_resources/145/)

Pilgrim

