

OF NUCLEAR INTEREST: Pilgrim Station's impact on endangered right whales

By **Kevin Cassidy and Meg Sheehan**

Wicked Local

Posted Jun 14, 2013 @ 02:00 PM

On Jan. 12, an endangered North Atlantic right whale, affectionately named Wart by researchers, and her newborn calf showed up in Cape Cod Bay. The whales spent at least eight days outside Plymouth Harbor before moving on. This was the first documented mother-calf right whale sighting in Cape Cod Bay in January in 27 years, and it may be the earliest documented right whale birth in the region. On Jan. 21, Wart and her calf were spotted just off the jetty that forms the discharge canal at the Pilgrim Nuclear Power Station in Plymouth – the first sighting of mother-calf pair near Pilgrim.

Instead of Plymouth, Wart should have been in right whale calving grounds off the coast of Florida in January. Why was she in Cape Cod Bay instead? Did Wart and her calf venture closer to Pilgrim's wastewater discharge canal than right whales have before because they were attracted to Pilgrim's thermal plume? What effects might the thermal plume have on a nursing right whale and her newborn calf?

These questions prompted a local group to ask federal wildlife experts to take a second look at Pilgrim's potential impact on right whales. The Jones River Watershed Association (JRWA) has invoked the federal Endangered Species Act (ESA) and asked the National Marine Fisheries Service (NMFS) and the Nuclear Regulatory Commission (NRC) to "reinitiate consultation" on this issue.

The Endangered Species Act (ESA) was made into a law in 1973. Congress recognized that America's rich natural heritage is of "esthetic, ecological, educational, recreational, and scientific value to our Nation and its people." The ESA requires certain measures to protect our nation's native plants and animals from extinction. The law helps to protect endangered and threatened species and improve the ecosystems on which they rely for survival. Since the law was passed, the country has seen the pace of extinctions accelerate. Now more than ever, the ESA is an important tool for preserving what's left of our natural heritage, including right whales and a critical area of their habitat, Cape Cod Bay.

In 2006, when Entergy asked the NRC to renew Pilgrim's license, the ESA required an evaluation of effects on endangered and threatened species in the area, including right whales. Pilgrim's effects include harm from its "once-through" cooling system that withdraws more than a half billion gallons a day of seawater from Cape Cod Bay and discharges it back into the bay heated and polluted. The discharge water has temperatures up to 32 degrees Fahrenheit higher than when it was withdrawn, and is sometimes as hot as 120 degrees.

Pilgrim's once-through cooling water system sucks in millions of smaller aquatic species that are trapped, or "impinged," on screens, or that travel through the screens into the internal piping, a

process known as “entrainment.” The heat kills most of the small organisms that are entrained, including copepods, a plankton that is food for right whales. Pilgrim discharges a plume of hot water that reaches nearly a thousand acres into Cape Cod Bay, primarily at the surface, which may adversely affect animals’ behaviors.

In spring 2012, the NRC and NMFS concluded that Pilgrim’s continued operations were not likely to adversely affect right whales. That conclusion was based, in part, on the NRC’s belief that no right whales had ever been observed near Pilgrim. It turns out that assumption was incorrect. Since 1997, there have been six sightings (five confirmed, one probable) of 12 right whales within two miles of the plant. However, the sighting of a mother-calf pair right outside the discharge canal at Pilgrim, in the thermal plume area, is new information. This is the basis for JRWA’s request to NMFS and NRC to “reinitiate consultation” under the ESA. The federal agencies ought to look at this new information and determine whether Pilgrim’s operations may affect right whales in a way the NMFS and the NRC had not previously considered.

Taking another look at Pilgrim’s effects on right whales is not a theoretical exercise. Right whales are one of the most endangered species on Earth. There are only about 500 remaining. In 2000, there was only one calf born to the entire population, and only about 12 calves are born a year on average. Now that a mother-calf right whale pair has been observed near Pilgrim, reassessing the potential effects of another 20 years of the plant’s operations is just what Congress had in mind in 1973 when it passed the Endangered Species Act to protect endangered whales and Cape Cod Bay.

Kevin Cassidy is an environmental attorney with Earthrise Law Center, who represents the Jones River Watershed Association. Meg Sheehan is an attorney and Plymouth native.