

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
BEFORE THE COMMISSION

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In the Matter of)
Entergy Nuclear Generation Company)
Entergy Nuclear Operations Inc.)
Pilgrim Nuclear Power Station)
License Renewal Application)

Docket # 50-293 LR

Affidavit of E. Pine duBois

1. My name is E. Pine duBois and I live at 93 Elm St., Kingston, which is approximately 8.53 miles from PNPS. I have lived there for almost 17 years. I have lived in Kingston, within 12 miles of PNPS for 37 years.
2. I am the executive director and a cofounder of the Jones River Watershed Association, Inc. (JRWA). JRWA is a 501(c)(3) corporation that was formed in 1985. "The purposes of the corporation shall include the exercise of power and authority to acquire and preserve natural resources and wildlife areas for the use and enjoyment of present and future generations, to preserve and protect historic sites, to educate the public about the wise use of natural resources, and to work with other organization having the same purposes." As part of this mission, JRWA has worked to monitor and improve the habitats and populations of diadromous fishes, including, in particular, river herring. The annual filings for JRWA are complete through corporate year 2010.

3. I have been directly involved with JRWA's operations and programs since 1985. This involvement has included work on many projects to perform in water research, studies, fish monitoring, etc., that relate to river habitats, and water quality and stream flows, as well as the interrelationship between fresh water rivers and marine ecosystems. As a result of my work, JRWA and I have received numerous awards, grants, and recognition for the work that I led to protect river and marine aquatic ecosystems. As a result of my experience and on the job learning about fisheries in Cape Cod Bay and the Jones River, I have been designated by JRWA to make comments in various regulatory processes, including the relicensing of PNPS. I have also been designated and authorized by JRWA and its members to request a hearing in the above-referenced licensing proceeding before the NRC and/or ALSB.
4. The address of JRWA is Jones River Landing Environmental Heritage Center (Jones River Landing) at 55 Landing Rd. Kingston, not quite 8 miles from PNPS. Jones River Landing is a supporting organization of JRWA. Together, the organizations own three parcels of land totaling about one acre on the Jones River including two historic boatyards. JRWA owns two additional properties within the Jones River watershed containing about 13 acres.
5. Of approximately 219 households that are active members of the JRWA, 215 families live and work within a 50-mile radius of the PNPS. JRWA members live, work and recreate in the Jones River and Cape Cod Bay. Some members raise oysters in the bay and go boating to enjoy fishing, exercise, kayaking and birding. Others raise food crops, including organic cranberries, and

produce organic vegetables and animals for home use or sale through Community Supported Agriculture programs; members engage in photography and other forms of artistry requiring nature observation. Many volunteer to help count fish in the annual monitoring program. For the last six years, over 50 JRWA volunteers have maintained a river herring count on the Jones River during the spawning season in April and May.

6. In about 1991, I first became concerned about the potential impact of PNPS upon the fisheries in the Jones River and on the marine aquatic resources of Cape Cod Bay to which the river discharges. I became concerned because of discussions I had with Robert Lawton who worked for MA Division of Marine Fisheries (DMF) to assess the impact of PNPS on the fish populations in Jones River. I became aware of the terrible impact PNPS had on these fish and the need for restoration efforts.
7. Since it was founded, JRWA has taken action to try to improve the water quality of Jones River by soliciting grants to improve flows and storm water discharges so that river herring and other fish could productively spawn. Beginning in 1994, we installed water quality systems at the Elm St. dam and in the estuary to improve water quality in the river, and we established a volunteer monitoring program to find discharges and to sample water quality. At the request of Bob Lawton, Boston Edison supplied JRWA with a grant that helped defray the costs of lab work for this program.

8. In the summer of 2000, the Board of Directors determined that JRWA should expand its mission beyond the 30 square mile reach of the Jones River Watershed to include Cape Cod Bay (CCB), and other connected regions in Southeastern Massachusetts. The Jones River is the largest river draining to CCB and the Bay is a critical habitat within the Gulf of Maine. Catadromous and anadromous fish that inhabit the Jones River swim to the river from CCB. This includes the near shore areas in front of PNPS.
9. In 2001, the previous fish ladder at Elm St. dam on the Jones River in Kingston was replaced using state funds with an Alaskan Steep Pass type in order to assist the diadromous fish, and especially the river herring, in migration and spawning. I became a member of the fish committee in Kingston so that I could learn more about the condition of the herring and to assist in improving this important fishery in the Jones River. In 2003, JRWA purchased Jones River Landing and began a closer working relationship with DMF on programs to monitor river herring and other species, including American eels and Sand Tiger Sharks. All these species use CCB seasonally for critical life cycle support including foraging for food, spawning migration, and nursery habitats for their young. All near shore species that enter the Jones River must swim past the PNPS.
10. In the spring of 2005, JRWA began its volunteer monitoring program to count river herring that pass at the Elm Street fish ladder on Jones River under the statewide DMF initiative and training. I went to the initial training and initiated the program in Jones River.

11. JRWA knows from our annual counts that the Jones River river herring population is severely diminished in relation to the historic population. A 1926 State Legislative Report, and local anecdotal reports, discuss massive herring populations in Jones River and throughout the region, prior to 1980. One of the first laws of the Commonwealth was to protect the migration of alewives.
12. JRWA has adopted a goal to restore river herring spawning to Silver Lake, which is about 11 miles from PNPS. To do this, JRWA became involved with a region-wide effort to protect the river herring and improve their habitat because of significant populations declines. We work with our partners in the Watershed Action Alliance of Southeastern Massachusetts to secure grants and created an educational kiosk to promote restoration of herring runs by removing dams and restoring rivers in towns and watersheds in the region.
13. Recently, I became aware of the existence and details of the NPDES permit for PNPS that regulates the intake and discharge of once through cooling water from Cape Cod Bay. I learned that the NPDES permit expired in 1996. I tried to find out more about the permit in 2007, and found that there had been no action on the application for NPDES permit renewal filed by Boston Edison in 1995.
14. In 2006 and 2007, I studied reports relative to operations at PNPS to provide comment at the hearings and in writing to the NRC on the PNPS application to renew its operating license for 20 years.

15. The reports provided by Entergy show that river herring (blueback herring and alewives) are killed every year at the PNPS facility, and are the third most numerous species impinged over all (Normandeau 2006b).
16. JRWA has continued its herring count every year since 2005 and has reported our results to NOAA and DMF, who are keeping records of other runs in Massachusetts. We also became involved with the Herring Alliance, which is addressing the problem of fisheries by-catch and working to have federal regulations adopted that will prevent the accidental catch of river herring at sea, especially by mid-water trawlers. On its website (http://www.mass.gov/dfwele/dmf/spotlight/river_herring.htm) DMF states that the by-catch of river herring. “While significant, this amount of mortality is not sufficient to cause the coastwide decline of the river herring stocks and so there must be other, currently unidentified factors contributing to mortality.” (Webpage as above, Spotlight: River Herring Moritorium; emphasis added)
17. Starting in 2007, JRWA worked to remove the Wapping Rd. dam in order to enlarge the spawning habitat for river herring upstream, and ultimately to restore river herring to Silver Lake.
18. From 2007 through 2011, JRWA secured grant funds and managed the project to remove the Wapping Rd dam on the Jones River, which was JRWA’s first major structural alteration to advance its goal to restore the spawning population of river herring. This was the first of three dams being

targeting by JRWA. The Wapping Road dam was demolished in September 2011. Local, state and federal funds applied to the five year effort was about 0.75 million dollars.

19. I reviewed the NRC's 2006 draft supplemental environmental impact statement prepared under NEPA for PNPS. I attend and provided testimony at the NRC public meetings held in Plymouth, Massachusetts in January 2007. JRWA's testimony and February 2007 written comments included information about the impact of PNPS's once through cooling water operations on marine aquatic species, diadromous fish, including river, herring, and the overall impact on the health of CCB.
20. In that testimony, JRWA requested that the once through cooling operations at PNPS be improved or that Pilgrim not be re-licensed for another 20 years because of the existing, known impacts of facility operations on marine aquatic resources.
21. It is JRWA's position that the NRC re-licensing record lacks scientific data sufficient to assess the impact on Cape Cod Bay from PNPS operations. Since the health of CCB is linked to Jones River's ability to protect anadromous and catadromous fisheries in the region, JRWA is harmed if the environmental impact assessment fails to include material and relevant scientific data on impacts to the Bay.
22. At the time, I was aware that the NPDES permit renewal process for PNPS was considering changes and improvements to once through cooling at the facility. JRWA had relied upon U.S. EPA to move forward in a timely manner

to renew the PNPS NPDES permit while NRC was reviewing and deciding the parameters for reissuing the facility's operating license. JRWA knew the NRC's role includes review of the impact of PNPS on marine aquatic resources including endangered, threatened, and candidate species, and fish habitat. JRWA relied on EPA and the NRC to perform their responsibilities in this regard.

23. In the spring of 2011, I contacted EPA to determine where the NPDES process was in review, and obtained the permit that was issued in 1991. In December I asked for an update on their process to issue the permit and to review their file. By early February 2012, JRWA learned: that the NPDES permit process for PNPS was stalled; that the consultation process under the Endangered Species Act between NMFS and the NRC had not been concluded on the NRC 2006 Biological Assessment; that the NRC has not completed an Essential Fish Habitat Assessment for Alewives, blueback herring, Rainbow smelt that migrate through CCB, past the PNPS and into Jones River, a designated EFH; and that Atlantic sturgeon is now proposed for listing as endangered under the ESA by NOAA. Further, we learned that, in November 2011, river herring had been designated as a candidate species by NMFS.

24. On February 6, 2012, JRWA sent a letter to NMFS to request a copy of their concurrence letter with the NRC biological assessment and PNPS GEIS conclusions regarding Endangered Species and EFH. A copy is attached hereto as Exhibit 1. JRWA sought to determine if NMFS had completed its consultation with the NRC on the Biological Assessment. JRWA also raised

concerns about the overall impact of PNPS operations on the marine aquatic resources in Cape Cod Bay, and informed NMFS of significant informational and data gaps in the BA. JRWA has not received any written reply to this letter or evidence of NMFS formal concurrence.

25. On March 2, 2012 an acquaintance sent me an electronic copy of a NRC letter dated February 29, 2012 to NMFS requesting their concurrence on the Atlantic Sturgeon. JRWA has not received any notice from the NRC on this issue.

26. JRWA's interests in the health of the Jones River and Cape Cod Bay, and its ability to carry out its mission is harmed by the following issues relating to PNPS's plans to continue to use once through cooling water during the 20 year re-licensed period: (a) The absence of NMFS concurrence on the NRC's 2006 Biological Assessment and the failure to include results of the ESA § 7 process in the final GEIS; (b) the incomplete ESA § 7 process on Atlantic sturgeon; (c) the lack of an Essential Fish Habitat Assessment and compliance with the consultation provisions of the Magnuson Stevens Fisheries Act; (d) the lack of information on river herring, and (e) the lack of information in the GEIS on these issues.

27. The information referred to in the preceding paragraph is critical to fully assessing the impacts of the continued operation of PNPS for 20 more years on the interests of JRWA in the marine aquatic resources in Cape Cod Bay that are linked to the Jones River.

Executed in Accord with 10 C.F.R. 2.304(d) on March 6, 2012

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

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March 6, 2012