

Doris Mendiola - Pilgrim Nuclear Power Station Licence Renewal - comments

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To: <PilgrimEIS@NRC.gov>
Date: 02/28/2007 5:40 PM
Subject: Pilgrim Nuclear Power Station Licence Renewal - comments

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 71 FR 75280
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Dear Director of Administrative Services,

The following are comments I have regarding the **Pilgrim Nuclear Power Station's application for license renewal**. Unfortunately, due to time constraints I was unable to cover all the available material. However, I did look at Supplement 29 in depth and up to page 241 and the section on "Potential Mitigating Measures". As much as I was able to cover the material it appears there are certain issues associated with the plants operation as it relates to the environment surrounding PNPS. Specifically, my main concern relates to the population of fish and other marine aquatic species effected by the operation of PNPS. The following is an outline of specific problems I have found while reviewing Supplement 29 draft.

I was impressed with the outline discussing "Potential Mitigating Measures" and consequently the marine aquatic population. PNPS is obligated as a co-habiter of it's surrounding Cape Cod Bay ecosystem to make necessary improvements to the cooling system as it currently operates.

Some of the best solutions for improvement to Aquatic Marine Populations and Cape Cod Bay waters from the list seem to be the following (as outlined in Supplement 29).

- Automated chlorine monitoring
- Alternative intake systems
- Alternative intake screen systems
- Variable speed pumps
- Closed cycle system

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If a closed cycle system includes changes in the use of water from Cape Cod Bay to another source not associated with the surrounding environment, then this would solve the problems associated with entrainment, impingement and pollution of chlorine into Cape Cod Bay.

Further, if alternative intake systems refers to another source of water for cooling and again another source for disposing of the chlorinated water, then this would solve the problem of entrainment, impingement and pollution to Cape Cod Bay. Habitat restoration and fish stocking justify the loss of viable fish and may not solve the lessening of the fish population due to PNPS cooling systems operations.

Of the 35 species listed in Supplement 29, as effected by either entrainment and or impingement or both, 16 appear to be listed as possible fish consumed by humans. The effects on the fish by chlorination, heat shock and normal discharge of waste as the result of proximity to PNPS could potentially reach human population as the result of consuming the fish listed.

These fish include:

Mackerel, Black Sea Bass, Bluefin Tuna, Blue Fish, Pollock, Atlantic Cod, Haddock, Monkfish, Summer Flounder, Winter Flounder, Yellow Tail and Long Fin Squid. Again, the concern here is human consumption and the possible deleterious effects.

I hope as stated in the PNPS Supplement 29 discussion of potential mitigating measures does more than "only provide a brief overview of technologies." These technologies provide solutions to the problems regarding the continued use of PNPS as a power source and should be thoughtfully considered.

If the chlorination and hypochlorination occurs around the time when fish are spawning to produce offspring, (Spring, Summer, Fall), and this time period lasts for 2 hours per day, with time through the plant of 5-10 minutes, then the amount of liquid chlorination

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effecting the fish population in Cape Cod Bay could be greater than what studies have shown. No study is definite and there is no data present in the report regarding the effect (long or short term) of chlorination to the marine aquatic ecosystem. This, I feel, is an important consideration evaluation of PNPS and it's relationship to the marine aquatic ecosystem. There should be further data collected and reported as to how much chlorination and chlorine is discharged into Cape Cod Bay.

I also have questions regarding some terminology. On page 47 of the PNPS Supplement 29 Draft it states:
 "The service water system is continuously chlorinated in order to control nuisance biological organisms in the service water discharge."

I think it is vitally important to define here what a "nuisance biological organism" is and also regard definitively how this organism operates solely inside the confines of the PNPS ecosystem. This unidentified organism could play a vital part in the survival of this particular diverse marine ecosystem.

Further, the "clean liquid waste with abnormally high conductivity" that may or may not be "evaluated for controlled release into the circulating water discharge canal through the liquid radioactive waste header." (Entergy 2006a).
 It is not clear whether the discharge is sent into Cape Cod Bay or a separate enclosed area.

Also, "The liquid wastes are automatically transferred to the chemical waste receiver tanks when the sump is filled to a present level. After decay and storage, the chemical liquid wastes are evaluated for discharge or reprocessed" (or released?). (Entergy 2006a). Again, it is not clear how the evaluation process works to determine where the waste can be disposed of, in the Bay or not.

On or around p.70 there are details about sediment collected and analyzed from Mass Bay area. "Metals, PAH's, PCB's, pesticides and radionuclides" were found and identified, however, the conclusion of the data stated, " Mass Bay sediment were no more contaminated than those of other urban estuaries." They were concluded as being "healthy" and of no concern. I understand the comparative analysis of this data as beneficial to the understanding of the sediment collected in Mass Bay. However, I feel the presence of toxins in the sediment should also be taken into account and evaluated as such. Describing the results of analysis as "healthy" due to their presence in "other urban coastal regions on the East Coast" seems to be faulty analysis and again, data should be analyzed and concluded on the basis of how these chemicals relate and effect the surrounding ecosystem. The effect can not be dismissed because other coastal estuaries exhibit similar toxins in the sediment.

Bald Eagles, red-bellied cooters, roseate terns, piping plovers, barn owls, arctic terns, least terns, vesper sparrows, northern parula and common tern all reside or have once resided in and around the PNPS area. They are also federally listed as endangered threatened species and depend on the PNPS area and surrounding area for survival. As early as 2005 juvenile Bald Eagles were observed at Plymouth Plantation and "wintering Bald Eagles occasionally occur in the area of PNPS.

Further "1400 feet of the transmission line ROW near it's southern and adjacent to the boundary of Myles Standish State Forest is designated **critical habitat** for the red bellied cooter. (**Critical habitat** is habitat that is considered essential to the conservation of the species and may require special management)."

These species are under the care of our federal government and PNPS is required to protect the place they live. If the PNPS site interfere with their viability and health, any problems caused by the operation of PNPS needs to be resolved immediately.

I am also very concerned with any release of radioactive effluent into the environment and need to ask how the dosage suggested on page 140 translates to lamens terms. Also, because this release of radioactive effluents has not changed and "the impact to the environment has not changed," how is this impact determined? How much is too much? How much radioactive effluence is OK? Who makes this determination?

I am very pleased with the policy of PNPS and the governmental policy as follows:

"Entrainment of fish and shellfish into the cooling water system is a potential adverse environmental impact that could be minimized by use of the best available technology."

"Licenses are required to demonstrate compliance with the phase 2 requirements at the time of renewal of their NPDES permit."

Also, I hope there is careful consideration regarding,

"Entrainment of fish and shellfish in early life stages into nuclear power plant cooling water system" as "considered a catagory 2 issue, thus requiring a site specific assessment for the license renewal review."

It is also clearly stated in supplement 29, "section 316 (b) of the clean water act (CWA) requires the location, design, construction and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impacts."

Important data will be the result of the Entergy study regarding PNPS cooling systems. Especially in light of the EPA 316(b)

regulations.

In the regulation it is stated "plants must minimize adverse environmental impacts associated with water intake systems." and "performance standards are designed to significantly reduce entrainment and impingement losses due to plant operations."

Finally, although winter flounder is the only fish present in category 2 and subject to review, it appears data and collection of data might be altered to gain more accurate representation of how many larvae, eggs and fish are adversely effected by PNPS cooling system. Less than 1% appears to be a general category to place all the fish in various stages collected for analysis. Perhaps better technology could result in more accurate data.

For example, if there are 600,000 winter flounder present at egg or larval stages and 1% die from exposure to plant daily operations this would account for less than 6,000 winter flounder deaths. This amount may appear as 1% to be small, however when it is shown as 6,000 it appears there is a much greater problem.

I also feel the occurrence of heat shock as a category 2 issue should be thoroughly examined and data taken as to how fish are effected by this occurrence.

Thanks for your time and patience in reviewing my comments. They were written and sent in the hopes they will help in the determination of what can be done to improve the relationship between the PNPS and the surrounding ecosystem. With the right technology, or as said in the Supplement, the best technology, it seems PNPS could stay in operation. There is a lot of room for improvement.

Sincerely,

Diana L Woebcke
Yarmouth Port, MA Resident

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