IPRenewalCEmails

From: eknolmay@ramapo.edu
Sent: Wednesday, March 11, 2009 5:53 PM
To: Andrew Stuyvenberg
Subject: Liz Knolmayer -Comments
Attachments: drew.doc

Drew,

Here are my comments concerning flora. I am sorry I did not get an opportunity to meet you during the public comment field trip.

Liz Knolmayer

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Comment Number: 67

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Subject: Liz Knolmayer -Comments
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From: eknolmay@ramapo.edu

Created By: eknolmay@ramapo.edu

Recipients:
"Andrew Stuyvenberg" <Andrew.Stuyvenberg@nrc.gov>
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Files	**Size**	**Date & Time**
MESSAGE	156	3/11/2009 5:53:32 PM
drew.doc	33856	

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Drew Stuyvenberg

Project Manager

Nuclear Regulatory commission

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Washington, DC 20555

As an environmental student attending Ramapo College, I have become increasingly aware of the relicensing process at Indian Point power plant that is currently happening. Our class recently has had the opportunity to review the DSEIS. Below are some environmental assessments that have been brought to my attention that have not been sufficiently raised and analyzed by the NRC.

There has been a proven link between lichen and nuclear emissions that has not been fully analyzed in the DSEIS. One noted example of this is in Russia, at their North Test Site which is located on the Novaya Zemlya archipelago in the Arctic Ocean. In this North Test Site for the USSR, lichens were found to be incredibly helpful in understanding not only air pollutants, but also aiding as nuclear indicators for the test site and areas surrounding it. Radioactive levels varied from region to region not depending on distance but from the atmospheric precipitation from the site. This alone is a serious concern due to the fact that Indian Point is located on a flowing body of water, which tends to have more precipitation in the area, spreading the radioactive nucleotides over larger areas.

Lichens have been proven to accumulate both 137Cs and Strontium 90. Lichens found at Indian Point power plant will mirror the affects of radioactive nucleotides that were found in and surrounding the North Test Site. According to a study by Richard Harris, “Preliminary List of the Lichens of New York”, there are 808 species of lichen in the New York area alone, some most likely surrounding Indian Point. In addition, there have been no deposition measurements outside of the Indian Power Plant area that could accurately estimate nuclear levels. Why has there been no testing for lichen in the area? There needs to be proper testing for a range of at least 50 miles, similar to what the North Test site has concluded.

In continuation with the testing that has been performed by Entergy and Indian Point, there have been several instances where items of importance, such as flora and fauna, were not properly taken into consideration. One immediate example of this is the level of Strontium 90 found in fish. The DSEIS states that there are no excessively high amounts found in local fish compared to fish from other areas, but also that the Strontium 90 studies are incomplete. Why has there been only certain fish sampled as well as only certain areas studied? Similar to the fish data collected, there has also been many SPDES permit regulations that have either been neglected or limits stretched.

There needs to be more compliance from Indian Point in regards with the SPDES permit. Excessive amounts of nutrients or increase in temperature throughout waterways can create sudden blooms of phytoplankton or algae. After the large amount of phytoplankton die,

decomposition uses up large amounts of oxygen. New York State has a water quality standard for thermal discharges, which provides that "all thermal discharges to the waters of the State shall assure the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife and on the body of water." 6 NYCRR § 704.1. This is clearly not happening due to a lack of information.

The SPDES permit issued in 2003 causes the dramatic intake and use of Hudson River water. Why have the impacts not been properly monitored? Indian Point currently has an administratively extended SPDES permit. They extended the permit but a tri-axel, 3 dimensional permit study never occurred. There has been no information saying that Indian Point has done any current testing on water temperature or fish testing.

In addition, Indian Point needs to be regulated through the context of the State's water quality standard and criteria for Thermal discharges, based on 6 NYCRR Part 704 of the discharge permit, this criteria requires "that a minimum of one-third of the surface as measured from water edge to water edge at any stage of the tide, shall not be raised to more than 4 degrees Fahrenheit over the temperature that existed before the addition of heat of artificial origin." There is insufficient data collected ultimately making the original SPDES permit invalid.

The once through cooling system also has several negative factors that outweigh the short economic loss of using the BTA. Loss of fish, from entrainment and impingement, directly affects the delicate phytoplankton food chain. With fewer predators, outbreaks of phytoplankton might occur. There is no consideration for the affects of a decreasing aquatic fauna population. Marine webs are extremely complex and delicate, altering any level could be detrimental to another. Why has Indian Point not taken into consideration that these cooling measures only hinder a balanced fish population. In addition, the increase in water temperature may cause phytoplankton to distort and rupture. Harmful algae blooms triggered from excess heat or loss in fish population is also an issue not discussed. Periodically, decomposition of large algal blooms diminishes the dissolved oxygen in the water and blocks out sunlight. This decomposition has been tied to fish die-offs that occur throughout the year. These are just a few consequences of the harmful effects of putting unnaturally high temperatures of liquid into marine water.

Lastly, from an environmental justice perspective, there needs to be un-biased, up-to-date information collected on the spread of Strontium 90. The study needs to focus on the passage of Strontium 90 from mothers to children in the surrounding 70 mile radius from Indian Point.

As a future environmentalist professional, I would like to thank you and the NEPA process for allowing all arguments to be heard. Each assessment should allow the facts to speak for themselves, but when the facts are absent, what speaks? Thank you for your time in this matter.

Liz Knolmayer

Work Cited

USE. DEC. NYSPDES. (SPDES) DRAFT PERMIT RENEWAL WITH MODIFICATION. 2003. 4 Mar. 2009 <http://www.dec.ny.gov/docs/permits_ej_operations_pdf/IndianPointFS.pdf>.

Holm, Elis. "Distribution of Np and Pu in Swedish lichen samples (Cladonia stellaris) contaminated by atmospheric fallout." 2003. Sceince Direct. 4 Mar. 2009. Keyword: www.sciencedirect.com.