


United States Nuclear Regulatory Commission Official Hearing Exhibit	
In the Matter of:	Entergy Nuclear Operations, Inc. (Indian Point Nuclear Generating Units 2 and 3)
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**Exhibit CLE000007
Submitted 12/22/11**

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of))) ENTERGY NUCLEAR OPERATIONS, INC.) (Indian Point Nuclear Generating Units 2 and 3)))	Docket Nos. 50-247-LR and 50-286-LR Filed on December 22, 2011
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**INITIAL PREFILED WRITTEN TESTIMONY OF AARON MAIR
REGARDING
CLEARWATER’S ENVIRONMENTAL JUSTICE CONTENTION**

Q1. Please state your name and residence.

A1. My name is Aaron Mair. I reside at 612 Maywood Avenue, Schenectady, New York.

Q2. What is your profession?

A2. I am employed as a Program Research Specialist in the Public Health Information Group by the New York State Department of Health. I am testifying in my personal capacity based upon my long residency in Peekskill, NY and based upon my many years of experience and expertise in Environmental Justice and the Environmental Justice movement. My CV is attached hereto as Exhibit CLE000021.

Q3. How did your childhood experiences influence your view of Environmental Justice?

A3. The challenges faced by my family’s home community are the reason and inspiration for my life’s work as an Environmental Justice leader and expert. I grew up in Peekskill, New York, one of the poorest areas in Westchester County. As long as I can remember, Peekskill has been

one of the few places in Westchester where working class families of Color could settle without the level of racial prejudice or discrimination that was typically experienced in neighboring communities.

I was born at Grasslands Hospital (later named Westchester County Medical Center) in Valhalla, New York. From my infancy until 1986, I resided in Peekskill. I attended Peekskill elementary schools in the 1960's, graduated from Peekskill High School in 1979, and kept Peekskill as my primary residence while in college. I have a very large extended family that migrated from Inman, South Carolina to Peekskill since the 1930's; the first African-American Mayor of Peekskill (and New York State) is my first cousin Richard Jackson. My Peekskill family has celebrated family reunions in Peekskill for generations. My parents both lived, and worked in Peekskill until their respective passings in 2002 and 2006. They were survived by a host of children, grandchildren, and great-grandchildren who still call Peekskill home.

Due to my Southern and West Indian heritage, I grew up fishing from the Hudson River and waterways of Westchester County. As a child, my family frequently used fishing spots close to Indian Point Nuclear Plant including Charles Point, Lents Cove, Annsville Creek, and the Peekskill waterfront. I have distinct memories of our Uriah Hill Elementary School radiation fall-out drills and huddling in the school corridors when test alarm whistles blew. Much of what we did in our community was conditioned by the operation and presence of Indian Point, several miles away.

Q4. Please describe your experiences in the Environmental Justice Movement.

A4. Over the past twenty-five years I have been active in and helped shape what has become known as the Environmental Justice Movement. I worked and organized a grassroots community campaign from 1984 until 1994, which led to the shutdown and retrofitting of the New York Solid Waste to Energy Recovery System (ANSWERS), operated by New York State -- a regional trash incinerator in the heart of a predominantly African-American community in Albany.

I went on to found Arbor Hill Environmental Justice Corporation (AHEJ) -- a United Nations Non-Governmental Organization (NGO). From 1998 - 2000, AHEJ was an advisory member organization to the White House Council on Environmental Quality pursuant to Executive Order 12898. I also founded the W. Haywood Burns Environmental Education Center (WHBEEC), another United Nations NGO, whose purpose is to operate an environmental

education technology center and to advocate for minority urban subsistence fishermen communities in the Hudson River Valley. WHBEEC assisted the New York State Department of Health in developing fishing advisories for the Hudson River.

I was a charter member – together with West Harlem Environmental Action’s Peggy Sheppard, Cecil Corbin Mark, Dr. Robert Bullard, and Dr. Beverly Wright – in the founding of the National Black Environmental Justice Network (NBEJN), which was formed during a 1999 emergency gathering of African-American leaders in New Orleans to map out strategies to address environmental and health disparities in the African-American community. NBEJN is a national preventive health and environmental/economic justice network with affiliates in 33 states and the District of Columbia, and its members include some of the nation's leading African-American grassroots environmental justice activists, community organizers, researchers, lawyers, public health specialists, technical experts, and authors addressing the intersection of public health, environmental hazards, and economic development within Black communities.

In Peekskill, I have worked collaboratively with family, resident, and local volunteers in the formation of the Citizens For Equal Environmental Protection (CEEP). I trained residents within Peekskill on the 17 Principles of Environmental Justice, which serve as the core organizing objectives for the CEEP as well as a defining document for all grassroots organizations for environmental justice.

I have received numerous awards, honors, and recognitions for my work and expertise in the area of Environmental Justice. Other details of my experience are described in the attached C.V.

Q5. What are the 17 Principles of Environmental Justice?

A5. I was a community Delegate to the First National People of Color Environmental Leadership Summit held on October 24-27, 1991, in Washington DC, which drafted and adopted the 17 Principles of Environmental Justice. Since then, *The Principles* have served as a defining document for the growing grassroots movement for environmental justice. The Principles of Environmental Justice are as follows:

PREAMBLE

WE, THE PEOPLE OF COLOR, gathered together at this multinational People of Color Environmental Leadership Summit, to begin to build a national and international

movement of all peoples of color to fight the destruction and taking of our lands and communities, do hereby re-establish our spiritual interdependence to the sacredness of our Mother Earth; to respect and celebrate each of our cultures, languages and beliefs about the natural world and our roles in healing ourselves; to ensure environmental justice; to promote economic alternatives which would contribute to the development of environmentally safe livelihoods; and, to secure our political, economic and cultural liberation that has been denied for over 500 years of colonization and oppression, resulting in the poisoning of our communities and land and the genocide of our peoples, do affirm and adopt these Principles of Environmental Justice:

- 1) **Environmental Justice** affirms the sacredness of Mother Earth, ecological unity and the interdependence of all species, and the right to be free from ecological destruction.
- 2) **Environmental Justice** demands that public policy be based on mutual respect and justice for all peoples, free from any form of discrimination or bias.
- 3) **Environmental Justice** mandates the right to ethical, balanced and responsible uses of land and renewable resources in the interest of a sustainable planet for humans and other living things.
- 4) **Environmental Justice** calls for universal protection from nuclear testing, extraction, production and disposal of toxic/hazardous wastes and poisons and nuclear testing that threaten the fundamental right to clean air, land, water, and food.
- 5) **Environmental Justice** affirms the fundamental right to political, economic, cultural and environmental self-determination of all peoples.
- 6) **Environmental Justice** demands the cessation of the production of all toxins, hazardous wastes, and radioactive materials, and that all past and current producers be held strictly accountable to the people for detoxification and the containment at the point of production.
- 7) **Environmental Justice** demands the right to participate as equal partners at every level of decision-making, including needs assessment, planning, implementation, enforcement and evaluation.
- 8) **Environmental Justice** affirms the right of all workers to a safe and healthy work environment without being forced to choose between an unsafe livelihood and

unemployment. It also affirms the right of those who work at home to be free from environmental hazards.

9) **Environmental Justice** protects the right of victims of environmental injustice to receive full compensation and reparations for damages as well as quality health care.

10) **Environmental Justice** considers governmental acts of environmental injustice a violation of international law, the Universal Declaration On Human Rights, and the United Nations Convention on Genocide.

11) **Environmental Justice** must recognize a special legal and natural relationship of Native Peoples to the U.S. government through treaties, agreements, compacts, and covenants affirming sovereignty and self-determination.

12) **Environmental Justice** affirms the need for urban and rural ecological policies to clean up and rebuild our cities and rural areas in balance with nature, honoring the cultural integrity of all our communities, and provided fair access for all to the full range of resources.

13) **Environmental Justice** calls for the strict enforcement of principles of informed consent, and a halt to the testing of experimental reproductive and medical procedures and vaccinations on people of color.

14) **Environmental Justice** opposes the destructive operations of multi-national corporations.

15) **Environmental Justice** opposes military occupation, repression and exploitation of lands, peoples and cultures, and other life forms.

16) **Environmental Justice** calls for the education of present and future generations, which emphasizes social and environmental issues, based on our experience and an appreciation of our diverse cultural perspectives.

17) **Environmental Justice** requires that we, as individuals, make personal and consumer choices to consume as little of Mother Earth's resources and to produce as little waste as possible; and make the conscious decision to challenge and reprioritize our lifestyles to ensure the health of the natural world for present and future generations.

A copy of the Principles as well as the National Repository for the Environmental Justice Movement resides at Clark-Atlanta University: <http://www.ejrc.cau.edu/>.

Q6. Describe the demographics of the City of Peekskill.

A6. According to the last census, New York is the sixth richest state in the United States. Westchester County is the second richest county in New York State; and Peekskill, which has a population around 22,000 with a median income around \$53,000 (which ranges \$20,000 to \$40,000 below surrounding communities), is one of its poorest communities. The estimated total non-White population is slightly over 50% with a significant number of undocumented Hispanic residents.

Q7. Please describe the Environmental Justice concerns in the City of Peekskill.

A7. Peekskill has a disproportionate number of environmental health burdens including a high asthma rate due to multiple pollution sources. Because Peekskill was historically seen as low-income, with a large concentration of African-American and other people of color, it particularly has been the place where Westchester County or regional planning entities locate regional facilities that disproportionately burden the community. These negative impacts include landfills, garbage dumps, incinerators, riverfront garbage burn plant, sewage treatment plants, hazardous waste and toxic material handling sites and a host of other polluting facilities. Many dirty industries in Westchester have followed the “path of least resistance,” and have been sited in locations where the local community has the least political and economic resources. As a result, communities of color, such as those in Peekskill, have become environmental "sacrifice zones" and the “dumping grounds” for health-threatening operations.

From 1996 to 2006, I worked directly with family and friends within Peekskill to help protect their water supply and waterfront from potential harm due to sewage discharge, from the affluent (and predominantly white) Towns of Yorktown and Cortland, into the Peekskill City watershed. I provided technical assistance and training workshops on Environmental Justice, to church, local NAACP, and community forums in Peekskill. I helped arrange for Sierra Club Environmental Justice organizer grants and technical assistance from Arbor Hill Environmental Justice, and the New York League of Conservation Voters to help the community combat the expansion of the Westchester County’s Hallock’s Mill Sewage Treatment plant’s expansion and discharge into the Peekskill City watershed.

Q8. Have you reviewed the Final Environmental Impact Statement prepared for the Indian Point license renewal proceeding in December 2010.

A8. Yes.

Q9. Does the FEIS adequately assess whether there will be disparate impacts on communities of color, ethnic groups, or low income groups relating to the relicensing of Indian Point nuclear plant for an additional twenty years?

A9. No.

Q10. In what ways does it fail to make this assessment?

A10. The NRC's assertions that there is a minimal potential for disproportionate impacts on EJ communities near the plant if the facility is relicensed for another 20 years are just that – assertions, which have not been supported by a rigorous assessment of potential disproportionate impacts on EJ communities – either by the NRC Staff or by the applicant, Entergy. The FEIS fails to take into account the disparate impacts in a variety of ways. Specifically, the FEIS fails to take into account the disproportionate number of low-income people in Peekskill, the low rate of automobile ownership in Peekskill, and the rugged terrain and limited road access around Peekskill.

Q11. Does the FEIS consider the disproportionate number of low-income people in Peekskill and in other surrounding cities?

A11. No, the FEIS does not take into account that there are a disproportionate number of poor people in the City of Peekskill, the southern boundary of which is less than one mile from Indian Point. Peekskill has a total population of 23,583, as of the 2010 census, of which 60 % (<http://quickfacts.census.gov/qfd/states/36/3656979.html>) are low income or minority. Because poor people tend to live closer together, Peekskill has a density of population of 5,399 people per square mile, much higher than the density of Westchester as a whole, which is 2,205 per square mile, and New York State which is 411 per square mile. Many other nearby cities have large poor and minority populations including: Yonkers, approximately 25 miles from Indian Point with a population density of 10,880 per sq. mile; White Plains, approximately 21 miles from Indian Point, has a population density of 5,820.3 per sq. mile; and New York City, approximately 27 miles to the Bronx line, a population density of 27,012 per sq. mile (<http://quickfacts.census.gov/qfd/states/36000.html>).

The poor areas of Peekskill include Dunbar Heights, Upper Annsville, Bowman Towers, the Turnkey Apartments on Park Street, the Senior Citizen housing by Peekskill High School.

These are all low-income areas with a high percentage of people of color. The higher proportion of poor people and the higher density of population both have implications for evacuation in a radiological emergency.

Q12. Does the FEIS address the low rate of car ownership among the EJ populations in Peekskill and other surrounding areas, and what it might mean in the event of a radiological incident at Indian Point?

A12. No, the FEIS does not address car ownership in the region, a critical factor in evaluating evacuation of the region. Car ownership is much lower among low-income groups generally and in my experience, this is true in Peekskill and in New York City. According to a recent study by researchers from the Brookings Institution and the University of California at Berkeley entitled “Socioeconomic Differences in Household Automobile Ownership Rates: Implications for Evacuation Policy” (Exhibit CLE000022): “(1) in nearly all metropolitan areas there are numerically large populations of individuals residing in households with no auto access, and (2) these populations are disproportionately poor and minority.” In the United States as a whole, only 7% of the population does not have access to automobiles, while 33.4% of poor blacks do not have vehicular access. These numbers are even higher in urban areas: 68% of the poor in New York City, 47% in Buffalo, and 44% in Hartford, CT, do not have automobile access. *Id.*

Therefore, an evacuation resulting from a radiological incident at Indian Point must take into account the additional measures that must be taken because of the low car ownership among low-income groups in the area. During Katrina, for example, we saw that there was a huge differential impact on lower income groups, which resulted when buses did not arrive as they were supposed to, as compared to populations with vehicles who were able to evacuate. According to the above-referenced study, low income and minority “households, largely dependent on the limited emergency public transportation available to evacuate the city in advance of the storm, were the most likely to be left behind.” *Id.* The report concluded that “the combination of low car-ownership rates among black households coupled with racial housing segregation renders evacuation plans based on private transportation most ineffective for predominantly minority communities.” *Id.*

For poor people in Peekskill and other EJ communities within about 20 miles of Indian Point (including Haverstraw, West Haverstraw, Ossining, and White Plains), who do not have personal vehicles, public transit would be extremely limited in the event of an

emergency evacuation. There would therefore be disproportionate impact on those who are reliant on public transportation. At minimum, this is an issue that needs to be studied in the FSEIS.

Q13. Does the FSEIS address the rugged topography or the limited road egress from Peekskill?

A13. No, there is no discussion of this or potential impacts in an evacuation. In fact, because of the unusually rugged topography, and limited highways and roads that permit high vehicular traffic in and around Peekskill, it would be extremely difficult to evacuate Peekskill. The FSEIS does not address this issue. To the west of Peekskill is the Hudson River, which creates a natural barrier. There are no nearby bridges – the Tappan Zee is 18 miles to the south, which would require transport directly past the plant, and the Bear Mountain bridge is 5 miles to the north, but this requires travel along the treacherous Route 6, which is a curvy and mountainous road with one lane in each direction, and with switchbacks and hairpin turns. The major north/south thoroughfare is Route 9 – the southerly route directly goes directly toward Indian Point, and the northerly route permits very limited access with only two narrow northbound lanes. There are two major roads going east – Route 6 and Route 202 – but these roads are only two lanes in each direction and have tremendous amounts of traffic under ordinary circumstances. It is hard to imagine being anything but a parking lot during an evacuation. The only major highway in the vicinity is the Taconic State Parkway, which is 7 miles to the east and has two lanes heading north lanes. However, the northbound lanes go through the Hudson Highlands in Putnam County into Dutchess County, which is a very hilly, curvy and narrow stretch of road (two north bound lanes largely with no shoulder) for 16 miles before the Taconic reaches I-84. There are three lanes on the Taconic heading south, but these head toward Indian Point and toward the heavily populated areas of southern Westchester and New York City; presumably people will want to move toward less dense population centers away from the plant in the event of a radiological emergency.

Q14. Does the FSEIS consider public transportation options to evacuate Peekskill?

A14. No. In any event, mass transportation is not a good solution because the main train and bus lines that head out of Peekskill were designed to lead into New York City to the south, which

could lead people into harm's way. Also, compared to other parts of Westchester the poor communities in Peekskill have the least safe access to mass transportation.

Q15. What can be done to mitigate the disparate impacts of a radiological incident at Indian Point?

A15. Many things, and if the FEIS were done properly it could have identified many suggestions and opportunities for mitigating the disparate impact. For starters, many people in Peekskill do not understand that Indian Point is so close and what might happen there, so education is very important. This is even more important now because of the large influx of non-English speaking, mostly Hispanic, people who live in the area.

Also, there should be more notification drills and actual evacuation drills, so the disparate impacts can be accurately assessed, and not just guessed at. There has to be a better understanding of how low income people, without automobiles or good public transportation, will be evacuated, what types of resources are available, and what more is needed. The first responders need to understand how the evacuation will occur. Increasing awareness through an actual drill is the best way for the population to be adequately prepared. These types of mitigation are not cost-prohibitive; instead they should be considered a cost of doing business at Indian Point.

Q16. What type of disparate impacts will there be among EJ populations living further away from the plant?


A16. The disparate impacts on the huge EJ populations to the South are largely unknown, but would be large. As recently reported in the New York Times ("Operators of Indian Point Say Changes are Likely," NY Times, March 21, 2011)(attached as Exhibit CLE000023). Entergy's Director of Emergency Planning, Michael Slobodien acknowledged that neither he nor federal regulators knew whether there could be a feasible evacuation plan for New York City. What would happen to the EJ population is also unknown, but that analysis needs to be undertaken. There are literally millions of people in the EJ communities in Yonkers, Bronx, Manhattan, Queens and Brooklyn – all within 50 miles of Indian Point. Much of these populations are already suffering and burdened by their inability to transport themselves under normal circumstances. The strain of an incident at Indian Point would be unimaginable.

An evacuation plan for 50 miles around Indian Point is needed. A plan has always been needed, but the incident at the Fukushima plant in Japan has made this even more urgent. As reported in the above New York Times article, the United States Nuclear Regulatory Commission recommended that people stay at least 50 miles away from the Fukushima facility after those plants were disabled by a Tsunami. The current 10-mile evacuation plans is clearly insufficient. The lack of a 50 mile evacuation plan is much more likely to impact EJ communities, who own fewer vehicles and live in more densely packed areas, than non-EJ populations.

There are environmental justice communities in many areas within a fifty-mile radius including Beacon, Newburgh, Yonkers, the Bronx, Manhattan, Queens, and Brooklyn, as well as many others. The burden on EJ communities in these areas would be extremely challenging given the lack of automobile ownership among poor communities, and the extreme congestion.

As in Katrina, the wealthy will leave, the poor, living in higher density, without transportation, will be trapped and forced to deal with the consequences. The FSEIS does not evaluate what would happen to these millions of people in these circumstances. Such an analysis is required.

In accordance with 28 U.S.C. § 1746, I state under penalty of perjury that the foregoing is true and correct:



Aaron Mair

Date: 20 December 2011