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

In the Matter of	Docket Nos. 50-247-LR and 50-286-LR
ENTERGY NUCLEAR OPERATIONS, INC. (Indian Point Nuclear Generating Units 2 and 3)	December 22, 2011

INITIAL PREFILED WRITTEN TESTIMONY OF ERIK A. LARSEN, MD, FACEP REGARDING
CLEARWATER'S ENVIRONMENTAL JUSTICE CONTENTION EC-3A

Q1. Please state your name and residence.

A1. My name is Dr. Erik A. Larsen. I reside at 87 Depot Place, Nyack, New York 10960.

Q2. In what capacity are you testifying today?

A2. I am testifying in my capacity as a physician and as a concerned citizen with expertise in emergency medical response. It is important to distinguish that I am not speaking on behalf of or as a representative of or spokesperson for any of my current or former employers, including White Plains Hospital, Westchester County Medical Center at Valhalla, the National Disaster Medical System (NDMS), US Disaster Medical Assistance Teams (DMAT), the NYC Medics Response Team, neither am I testifying on behalf of any other agency or organization in which I am or was a member.

Q3. What is your profession?

A3. I am an emergency physician, currently employed as the Associate Medical Director of White Plains Hospital Center Emergency Department in White Plains, NY, and as an Assistant Professor of Emergency Medicine at NY Medical College. I have board certified/residency training in Emergency Medicine with experience in flight, disaster, and wilderness medicine. I am also the Associate Medical Director of LifeNet-NY and STAT Flight and have been medical director of multiple local Emergency Medical Services (EMS) agencies, TEC rescue and SWAT teams. Prior to working at the White Plain Hospital Emergency Department, I was employed as the Director of Westchester County Department of Emergency Services in Valhalla, NY.

I received my medical degree from Medical College of Ohio and am a fellow of the American College of Emergency Physicians/ACEP-Disaster Section. I have been a member of the National Disaster Medical System (NDMS) and the US Disaster Medical Assistance Team (DMAT) since 1989 and am currently the chief medical officer of NDMS Region 2 (NY, NJ, Puerto Rico, USVI). In this capacity I served as the Medical Director at the New Orleans International

Airport during Hurricane Katrina, as well as the Medical Director of the NDMS Rapid Needs Assessment Team during Hurricane Wilma. In addition, I traveled with the NYC Medics Response Team during the 2006 Pakistan Earthquake. In 2006 I was honored to receive the NY State Department of Health/Emergency Medical System Council Award for Physician of Excellence. My CV is attached hereto as Exhibit CLE000020.

Q4. Beyond your extensive experience with Emergency Medicine, have you ever worked with a patient or patients that have been exposed to radiation?

A4. While I was an attending physician at the Westchester County Department of Emergency Services at Valhalla, I had occasion to treat a worker from Indian Point whose foot got caught in a piece of equipment while working the hot zone during an inspection of fuel rods. It took the entire ER and other radiologically trained staff to deal with this one case, which included washing to decontaminate the wound, and containing all the wash water. All equipment including x-ray machines, specialized stretchers, surgical instruments, etc. had to also be protected and decontaminated. Valhalla is the major Level 1 trauma center for a 50-mile area or more and had the highly specialized equipment and trained staff to address this radiological emergency, where most other facilities within the 10-mile emergency evacuation zone or even within the 50-miles radius would not. The ER was cleared and prepped to receive this one patient with a single injury that was complicated by exposure to high levels of radiation, while all other ambulances in Westchester and from distant points were rerouted from our highly skilled facility for more than four hours. In the event of a more extensive radiological emergency at Indian Point, which resulted in multiple radiological exposures, which involved single or multi-trauma, our resources would have become rapidly exhausted. Mass decontamination would be virtually impossible.

Q5. From your extensive experience with emergency management can you please comment on the ability of staff, teachers and caregivers to stay with the people (children or adults) in their care, in the case of a severe disaster?

A5. It is my experience that there are amazing and heroic responses to emergencies, however all disaster agencies have found that this inherent generosity breaks down for people who have families involved in a disaster. In Katrina, workers had no way to get to hospitals to give care. Even those who were not flooded, and also tended to look after the welfare of their own family members first, which is why NDMS sends in Master Teams to assist – trained rescue workers that do not have these local and familial ties.

Q6. Are you familiar with the Witt Report, which questions the viability of an evacuation from Indian Point?

A6. Yes, I am.

Q7. What is your understanding of the viability of an evacuation of non-ambulatory patients from hospitals close Indian Point?

A7. I do not believe that the current plan is viable for either ambulatory or non-ambulatory patients. Given my experience with one single patient with severe radiological exposure, it is unrealistic to think that the existing facilities in the region could adequately deal with a serious

accident or incident at Indian Point. Transporting non-ambulatory patients would be extremely challenging, especially those on ventilators or other forms of life support.

Q8. Do you have any knowledge of ways in which members of communities of color or low-income might be disproportionately impacted by a severe incident or accident at Indian Point?

A8. In the case of a nuclear disaster, all ambulance service will be triaged, and people with access to personal transportation will be better able to get to a hospital or reception center, than those who cannot afford their own vehicles. In addition, although Emergency Medical Services must all follow the Emergency Medical Treatment and Active Labor Act (EMTALA), which requires Emergency Response Depts./ERs to treat patients -- regardless of ability to pay, or whether or not they have insurance coverage, but once they are stabilized, if they require additional care, other physicians, health care providers and facilities can and do refuse to take them.[1] This leaves patients whose ability to pay for medical services is compromised at a severe disadvantage for obtaining follow up treatment, medication, etc. as compared with patients who have insurance coverage or can afford to pay for additional care.

Q9. Do you have any recommendations that would improve the ability to deliver care, to safely evacuate or to reduce the potential impacts on members of environmental justice communities as part of the license renewal for Indian Point?

A9. I believe that the first step is to make Indian Point as safe as possible to reduce the risk of an accident. If Indian Point is to be relicensed for another 20 years, I do not think it's realistic to expect the emergency medical services in the region surrounding Indian Point to respond to a serious disaster at facility, because the capacity would quickly become overwhelmed. However, to be as prepared as possible, it is essential to create a more robust and comprehensive plan – one that accurately takes into account the reality of existing resources, the person-hours required to treat each patient given the extent of injury and exposure and that considers the propensity of caregivers to want to attend to their own families in the event of a disaster. What we currently have is simply not adequate. Given the risk and potential consequences, we need to set the bar as high as possible, which means that far greater support for the hospitals and agencies that would have to respond to such an event than are presently accounted for. This will require workable contingency plans to effectively treat those who could be exposed to radiation and address the need to evacuate patients, including those who are non-ambulatory.

Q. If called to testify at the hearing for the Indian Point relicensing application, are you willing to serve as a witness?

A. Yes, I am willing to serve as a witness in support of Clearwater's Contention EC-3A.

[1] http://www.cms.gov/EMTALA/01_Overview.asp#TopOfPage

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

Erik A. Larsen, MD, FACEP

Date: 12/20/2011