

Attachment H

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION**

_____)	
In the Matter of)	Docket Nos. 50-250
Florida Power & Light, LLC)	50-521
Turkey Point Generating Station,)	
Units 3 & 4)	
_____)	July 24, 2018

DECLARATION OF PHILIP STODDARD, PH.D.

I, Phillip Stoddard, declare as follows:

1. I make this declaration of my own personal knowledge. If called to testify as a witness, I could and would testify competently regarding its contents.

2. I am a current member of the Natural Resources Defense Council (NRDC). I have been a member since 1993. I joined NRDC because I care about the environment and believe that it is not being adequately protected. In general, I am worried about overexploitation of natural resources, climate change and sea level rise, contamination of air, water, soil and food, and the consequent potential impacts on human health and on the natural world. In particular, one of the reasons I have contributed to the NRDC was because of my concerns about nuclear energy and its attendant risks following years of studying the operations at the Turkey Point Nuclear Generating Stations, and the special risks to mankind and the natural world posed by commercial operation of nuclear plants in a hurricane zone subject to storm surge.

3. I live at 6820 SW 64th Court, South Miami, Florida. I have lived at this address for about fifteen years.

4. My home is approximately 18 miles from the Florida Power & Light (FPL), Turkey Point Generating Station (TPGS), Units 3 & 4 in Homestead, Florida. I am aware that TPGS nuclear facility is seeking to have its operating license renewed for another 20 years by the Nuclear Regulatory Commission (NRC).

5. I used to be a “fan” of nuclear power because of its relatively low carbon footprint. Then I began looking into the safety record and environmental conditions at Turkey Point. As I studied the plant and its safety plan, I came to recognize greater hazards and environmental costs than had been made public. I was elected Mayor for the City of South Miami, Florida, in part because of my familiarity with these issues. My participation in public discussion of these issues has spanned nearly a decade. In the course of this participation, I physically toured the TPGS facility with FPL staff following the Fukushima accident, as part of FPL’s program to assure elected officials that their own nuclear operation was safe. During the proposed licensing of planned Units 6 & 7, I reviewed licensing documents and other material related to safety issues and severe accident risks posed by the TPGS facility, and I consulted with experts in nuclear safety and risk assessment concerning the risks of operation of the reactors. My particular areas of special concern are (i) vulnerability of the nuclear fuel and spent fuel containment to storm surge, (ii) environmental problems surrounding the use of cooling canals, and (iii) the extreme difficulty of evacuating southern Miami-Dade County quickly in the event of an accidental radiation release.

6. I remain unconvinced that the TPGS facility is as safe as it needs to be to operate adjacent to an urban area, subject as it is to sea level rise and hurricane-driven storm surge. I am particularly concerned about lack of careful analysis of vulnerability to storm surge of cooling systems and stored fuel. I remain concerned with the risks to continued nuclear reactor operations resulting from parts failure and human error. I am concerned about embrittlement of the reactor vessel, designed for 40 years' operation, now proposed for 80 years, with no verification that a doubling of neutron bombardment will not create special vulnerability to accidental sudden cooling. I am not convinced that the NRC has adequately assessed the full-scale, long-term consequences of continued operations of the cooling canals, a poorly conceived cooling system design that is unique to this site of porous geology. Saline leakage, overheating, evaporative concentration of salt, and storm washout are harmful to the southern reaches of the Biscayne Aquifer, Biscayne Bay, and the Southeast Coastal Everglades. The accident at Three Mile Island showed me the vulnerability of domestic nuclear plants to human error, to which TPGS has repeatedly proven prone. The disaster at the Fukushima-Daichi Nuclear Power Plant in Japan caused me increased concern about the unique vulnerabilities of nuclear power reactors to rare external events – here, the NRC's probabilistic analysis is cold comfort, since infinity (the cost to me of an accident that leaves South Miami-Dade uninhabitable) divided by ten to the 4th power (the estimated likelihood of a particular accident) is still infinity. I sincerely question whether TPGS, in its current configuration, enjoys the full benefit of modern design knowledge needed to ensure that no harm to humans or the environment could come from the extended operation of its nuclear reactors.

7. The region where I live, Southeastern Miami-Dade County, has become far more populated and developed since the original licensing of the TPGS. The population of Miami-Dade County has more than doubled, with most of the growth concentrated in the south end within 15 miles of Turkey Point. The population has been increasing by an average 1.5%. If this rate continues the population will increase by another two thirds by the end of the proposed relicensing period, 2052. By 2112, the end of the decommissioning period, the low elevation neighborhoods nearby will likely be depopulating because of sea level rise.

Recognizing the growing impossibility of timely evacuation of our greatly expanded population on a limited highway network, the current regional plan for a radiation emergency calls for “sheltering in place”. Under this plan, residents are to stay in their (powerless) dwellings, taping over the A/C vents and door seams to prevent radiation exposure. The limited ability of people to survive in a closed-up building in South Florida, in the summer heat, without air conditioning, seems not to have entered the calculus. This planning oversight might reasonably be viewed as criminal negligence in the aftermath of an actual emergency.

8. Moreover, because my home is well within the 50-mile emergency planning zone for the ingestion pathway, I am concerned that an accident at the TPGS may result in dangerous airborne levels of radioiodines, with subsequent elevations of radiation-induced thyroid cancers as reported near Chernobyl and Three Mile Island. Prevailing winds at TPGS are often in the direction of inhabited areas. No realistic plan exists to distribute potassium iodide prophylaxis to the vulnerable population before airborne exposure to radioiodines.

9. I know that the NRC must undertake an environmental review when it grants relicensing permits to nuclear power plants such as the TPGS. However, I am aware that there are a number of issues that as part of this relicensing have not been adequately or accurately analyzed. Examples include, but are not limited to (i) sea level rise, (ii) microcystins produced by cyanobacterial blooms in the cooling canals, (iii) risks from reactor embrittlement, and (iv) vulnerability to backup power, cooling systems, and spent fuel in dry casks from storm surge (including surge-propelled marine vessels). Nor has FPL provided sufficient analysis of the potential ways to mitigate the consequences of the continued operations.

10. The failure to require updated studies and plans concerns me. Sea level rise was not even on the radar when the plants were initially licensed. I want to know that if the reactors are allowed to operate for 80 years (an additional 20 years beyond the already once-extended timeframe of 40 to 60 years) that the extended operating life is supported by reliable and accurate prospective analyses and realistic mitigation strategies, sufficient to effectively eliminate environmental and safety risks or impacts.

11. I would certainly pay close attention if the NRC were to analyze carefully the significant issues of sea level rise, environmental impacts of cooling systems, changes in population safety issues, and effective mitigation measures. A clear analysis would help me feel safer and better informed of the risks my family and neighbors face as a nearby residents. Such analysis would also help me determine what steps I need to take now to protect myself and others in the event of an accident. But, because no such analysis has been conducted on these issues for decades, or ever for some of the issues, I remain deeply concerned.

12. The NRC has a duty to protect the American people, not to protect the nuclear industry. It also has a duty to keep us informed about the risks inherent in any nuclear energy plant now proposed to operate for double its design life, including any risk related to aging plants, aging materials, vulnerable fuel storage, or emerging risks from changes in climate and sea level.

13. I support NRDC's intervention in this case and authorize them to act on my behalf because I believe, with their participation, the Nuclear Regulatory Commission will be better positioned to fully review the possible impacts of the applicant's proposed relicensing for an additional 20 years, and, based on NRDC's and its experts' information, may address concerns and mitigate impacts to human health, as well as our water, land, and other resources, in the event of continued operation of the TPGS.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge, information and belief and that this declaration was executed on July 24, 2018 in South Miami, Florida.

/s/ 
Philip Stoddard, Ph.D.