EXHIBIT 18

November 27, 2023

UNITED STATES OF AMERICA
U.S. NUCLEAR REGULATORY COMMISSION
BEFORE THE SECRETARY

In the Matter of	)	
	)	
FLORIDA POWER & LIGHT CO.	)	
(Turkey Point Nuclear Generating Station,	)	Docket Nos. 50-250, 50-251-SLR
Units 3 and 4)	)	
	)	

DECLARATION OF JEFFREY T. MITMAN

Under penalty of perjury, I, Jeffrey T. Mitman declare:

1. My name is Jeffrey T. Mitman. I am an independent consultant specializing in nuclear reactor risk analysis.

2. By education and experience, I am a nuclear engineer, with a significant level of expertise in risk analysis. As set forth in my attached Curriculum Vitae (Exhibit 1), I have more than 40 years of experience in the nuclear industry and 16 years as a regulator with the U.S. Nuclear Regulatory Commission (NRC). My experience includes 16 years on the technical staff of the NRC as a Reliability and Risk Analyst. During my last 15 years at the NRC, I served as Senior Reliability and Risk Analyst, with significant responsibility for managing a number of risk analysis projects and teams. In 2021, I retired from the NRC and became a private consultant.

3. During my employment in the nuclear industry and the NRC, I became very familiar with NRC regulations and guidance regarding nuclear power plant safety, and with the application of risk analysis to reactor safety analysis. I am also generally familiar with the NRC's conceptual approach to the analysis of Severe Accident Mitigation (SAMA) alternatives in the context of reactor license renewal.

4. I have been retained by Miami Waterkeeper, Inc. to evaluate the Site-Specific Environmental Impact Statement for License Renewal of Nuclear Plants, Supplement 5a, Second Renewal, Regarding Subsequent License Renewal for Turkey Point Nuclear Generating Unit Nos. 3 and 4, Draft Report for Comment (NUREG-1437, Supp. 5a August 2023) ("Draft EIS"). My review focused on the adequacy of the Draft EIS to address the environmental impacts of climate change on accident risk. The purpose of this declaration is to explain the basis for my conclusion that the Draft EIS does not provide an adequate discussion of the effects of climate change on the probability and consequences of radiological accidents at the Turkey Point reactors.

5. Climate change environmental impacts constitute a new and fast-developing issue that was not addressed in the 1996 Generic Environmental Impact Statement for License Renewal of Nuclear Plants (GEIS) or the 2013 Revised License Renewal GEIS. My

review showed that the Draft EIS' evaluation of the environmental impacts of continued operation of Turkey Point Units 3 and 4 does not include any information or analysis regarding the effects of climate change on accident risk, which are potentially significant. As a result of its inadequate impact analysis, the NRC generally underestimates the environmental impacts of continuing to operate Turkey Point for another twenty years. This underestimate causes the NRC to omit or understate the benefits of the no-action alternative and mitigation alternatives.

6. The Draft EIS' failure to consider climate change effects on accident risks constitutes a significant deficiency in the Draft EIS because climate change demonstrably affects the frequency and intensity of external events and therefore has the potential to significantly increase accident risks. Moreover, the frequency and intensity of climate change effects are increasing over time. In this case, where the NRC proposes to re-license Turkey Point until 2052 (Unit 3) and 2053 (Unit 4), the time period may be as long as 29 to 30 more years from now.

7. Climate change has already started to increase the frequency and intensity of external events such as flooding, external fires (e.g., forest and wildfires), tornadoes, and hurricanes. *See, for example,* "Climate change is probably increasing the intensity of tropical cyclones," March 31, 2021 NOAA, https://www.climate.gov/news-features/understanding-climate/climate-change-probably-increasing-intensity-tropical-cyclones; "Climate Change Indicators: Weather and Climate," EPA, https://www.epa.gov/climate-indicators/weather-climate; "Global Warming and Hurricanes," NOAA Geophysical Fluid Dynamics Laboratory, April 11, 2023, https://www.gfdl.noaa.gov/global-warming-and-hurricanes/.

8. The NRC is well-aware of the issues of climate change and its impact on nuclear plant safety. After the Fukushima meltdowns, the NRC Office of Research initiated a research program to develop tools to assist in probabilistic and deterministic assessments of external hazards including seismic, high winds and flooding with a consideration of climate change. *See* "NRC Probabilistic Flood Hazard Assessment Research Program Overview," February 22 – 25, 2021 (ML21064A418) and Potential Impacts of Accelerated Climate Change," PNNL-24868, May 2016 (ML16208A282). In addition, climate change has been a topic of discussion at the NRC's Regulatory Information Conference (RIC) in recent years. *See* Climate Change Impact on the Safety of Nuclear Installations," March 8-10, 2022 (ML22140A312) & "Observations on Extreme Weather and Impacts on Nuclear Power Plants, EPRI (ML22140A320), 2022.

9. The effects of climate change on accident risk are and will continue to be site-specific and not subject to generalization. For example, the Duane Arnold plant in Iowa was prematurely and permanently shuttered after being hit with a Derecho with wind speeds exceeding 100 mph. See NRC Information Notice 2021-03: Operating Experience Related to the Duane Arnold Energy Center Derecho Event on August 10, 2020 (August 11, 2021) (ML21139A091). Climate change has been implicated in the severity of this extreme weather event ("Hints of a derecho-climate change link, ten years after 2012

storm," Washington Post, June 29, 2022, https://www.washingtonpost.com/climate-environment/2022/06/29/derecho-climate-change-severe-storm/) .

10. Because it is located in a low-lying coastal area of South Florida, Turkey Point is also vulnerable to the effects of sea level rise; and increased hurricane intensity in the form of wind speed, rainfall and storm surge. These effects and their impacts on "environmental resources" such as land use, air quality, and water resources, are recognized in the Draft EIS in Appendix D.

11. Climate change affects risk in two ways. First, it increases the likelihood or initiating event frequency of events. For example, increased storm frequency can lead to higher initiating event frequency for losses of offsite power (LOOPs).

12. Second, climate change can increase the probability of failure of design features or mitigation equipment. The 2020 Derecho at the Duane Arnold plant discussed above in par. 9 illustrates this phenomenon. While the storm may or may not be directly attributable to climate change, it is a reasonable example of the type of severe weather effects that climate change can cause today and will cause in the future. In that case, a severe windstorm caused a loss of offsite power (LOOP). As a result of the Derecho, debris accumulated at the suction of the service water systems, which are necessary to cool the emergency diesel generators (EDGs) and the emergency core cooling system (ECCS) heat exchangers. The NRC's risk analysis of the event showed an increase in the failure probabilities of the service water system, the EDGs and the ECCS due to this climate-related external event. Consideration of these risks in an EIS would provide important information regarding climate-related accident risk as well as identification of mitigation measures to address those risks.

13. A third way that climate change affects risk analysis, which is unique to flooding risk, is the "cliff edge" effect. With most hazards if the severity is increased slightly, the stress on the system is increased somewhat proportionately. However, with many flood-related issues, a small increase in the hazard can cause a dramatic and often overwhelming impact on a structure. For example, a small increase in wave height could raise the flood height sufficiently to overtop a floodwall, inundating the equipment the floodwall is designed to protect. Risk analyses for climate change-related flooding must look carefully at this cliff-edge phenomenon.

14. For instance, the National Academies under sponsorship of the National Oceanic and Atmospheric Administration (NOAA) has started a project to modernize the probable maximum precipitation (PMP) methodology (https://www.nationalacademies.org/our-work/modernizing-probable-maximum-precipitation-estimation#sectionSponsors). This project will consider approaches for estimating PMP in a changing climate, with the goal of recommending an updated approach, appropriate for decision-maker needs. PMP is a significant input into the design of critical infrastructure such as dam and reactor safety analysis directly and indirectly through its impact on probable maximum flood (PMF). The NRC is aware of this effort as they have already participated in at least one of the

initial project workshops.

15. The foregoing factual statements are correct to the best of my knowledge and the opinions stated therein are based on my best professional judgment.

/s/Jeffrey T. Mitman
Executed in Accord with 10 C.F.R. §2.304(d)

November 27, 2023

ATTACHMENT A

EXHIBIT 1 TO DECLARATION OF
JEFFREY T. MITMAN

CURRICULUM VITAE FOR JEFFREY T. MITMAN

Rockville, MD
November 2023

QUALIFICATIONS

Reliability and risk analyst with more than 40 years' experience in the nuclear industry. Skills include evaluation of probabilistic risk analyses (PRA) and management of PRA projects and teams. Highly experienced in low power and shutdown (LPSD) risk modeling issues. Solid record of bringing projects in on schedule and budget.

MAJOR ACCOMPLISHMENTS

- Transitioned NRC to detailed PRA models for LPSD significance determinations process evaluations.
- Guided development of and managed industry's first configuration risk management software tool.
- Obtained regulatory approval of EPRI's risk informed in-service inspection (RI-ISI) methodology.
- Managed first PRA of bolted spent fuel storage cask.

EXPERIENCE

PRIVATE CONSULTANT (Poolesville, MD)

Nuclear risk Analyst 2021-Present

- Reviewed Oconee Subsequent License Renewal application and prepared technical report on adequacy of environmental and safety analyses to address flooding risks.
- Reviewed and submitted comments on NRC's draft (2023) Generic Environmental Impact Statement (NUREG-1437 Revision 2).

US NUCLEAR REGULATORY COMMISSION (Rockville, MD) 2005 - 2021

Senior Reliability and Risk Analyst (NRC Office of Nuclear Reactor Regulation)

- Conducted Significance Determination Process (SDP) evaluations of reactor events including development and/or modification of required risk models.
- Served as lead analyst for low power and shutdown event issues and concerns.
- Guided development of shutdown Standardized Plant Analysis Risk (SPAR) models.
- Conducted extensive Human Reliability Analysis (HRA).
- Evaluated external event risk from dam failures.
- Served on NRC's "Japan Team" (part of USAID disaster assistance response team for Fukushima Daiichi accident), providing technical advice and support through the U.S. Ambassador to Japanese government.
- Participated in post NRC's Fukushima Near Term Task Force (NTTF) flooding guidance development.
- Developed NRC's guidance on crediting FLEX in risk-informed regulatory applications.
- Advised NRC National Fire Protection Association (NFPA) 805 team on issues related to shutdown fire risk.
- Performed evaluations of risk informed license applications.

Reliability and Risk Analyst (NRC Office of Nuclear Regulatory Research)

- Project Manager for the development of shutdown SPAR models

ERIN ENGINEERING AND RESEARCH, INC. (Walnut Creek, CA) 2004 - 2005

Lead Senior Engineer

- Prepared configuration risk management evaluation of at-power fire risk.
- Prepared configuration risk management evaluation of loss of offsite power.

ABE STAFFING SERVICES (Palo Alto, CA) 2003 - 2005

Consultant to EPRI

- Brought project and team to closure involving Dry Cask Storage PRA involving Transnuclear bolted cask containing PWR fuel.

EPRI (Palo Alto, CA) 1998 - 2003
Project Manager

- **Outage Risk Assessment and Management** (ORAM-Sentinel)

- Grew first of a kind software application for performing configuration risk management in nuclear power plants.
  - Conducted research in low power and shutdown risk; shutdown initiating event and event frequency derivation.
  - Delivered multiple versions (including alpha, beta & production), testing and full documentation.
  - Administered utility user group, marketing, contract preparation, technology transfer, technical report publication and training.
  - Actively managed both development and application contracts with multiple suppliers and customers. Managed annual $1M budget.

- **Dry Cask Storage PRA**: Initiated innovative analysis of Transnuclear cask containing PWR fuel.
  - Managed unique team with diverse experience in both cask design and PRA backgrounds.
- **Risk Informed In-service Inspections** Project (RI-ISI): Lead team in obtaining regulatory approval of methodology to safely reduce piping weld inspection requirements using combination of probabilistic and degradation analysis.
  - Responsible for methodology finalization and acceptance by industry and U.S. NRC.
  - Conducted marketing, sales, contract preparation, technology transfer, training and technical report publication.
  - Actively managed both development and application contracts with both suppliers and customers. Managed annual $1M budget.
- **Human Reliability Analysis Project**: Managed project to bring consistency on industry use of HRA methods.
  - Responsible for EPRI HRA area, including development of HRA Calculator software and establishment of associated users group.

ERIN ENGINEERING AND RESEARCH, INC. (Palo Alto, CA) 1992 - 1998
Lead Senior Engineer
Collaborated with EPRI ORAM-SENTINEL Project Manager in project development and administration, user group administration, contract preparation, technology transfer workshops, technical report generation and editing. Performed ORAM analysis of the Diablo Canyon plant. Performed ORAM Probabilistic Analysis of Perry spent fuel pool. Drafted and edited ORAM V2.0 User's Manual. Assisted in ORAM-SENTINEL software design, performed software debugging. Principle researcher and author of BWR outage contingency report. Prepared marketing and training, materials.

ABB IMPELL CORPORATION (King of Prussia, PA) 1990 - 1992
Lead Senior Engineer

- **Design Basis Documentation**: directed team of three engineers to review PECO Feedwater System Design. Wrote Design Basis Documentation reports for Limerick and Peach Bottom power plants, identifying licensing and design concerns by reviewing the system design as documented in drawings, calculations, vendor manuals, Technical Specifications, UFSAR, SER, SRP, 10CFR50.59 safety evaluations etc. and by interfacing with utility engineering personnel. Prepared Engineering Change Requests as necessary.
- **Shift Outages**: during Limerick Nuclear Power Plant refueling / maintenance outage. Coordinated all shift maintenance work and testing. Collaborated with all groups in power plant, allocating resources as needed to maintain schedule and reporting to senior plant outage management. Performed system reviews prior to placing them back in service. Conducted shift outage meetings. Tracked work group performance against schedule. Advised utility management on techniques for schedule and outage organizational improvements.

GENERAL ELECTRIC COMPANY (San Jose, CA) Experience Prior to 1990
Startup-Test Engineer

- **Shift Startup Engineer:** During power ascension phase coordinated all system testing on shift and startup interface with operations. During preoperational phase, acted as operations shift supervisor responsible for coordinating all system testing and flushing on shift from main control room. Updated senior utility management daily on testing status.
- **Additional positions:** Shift Technical Advisor, Test Engineer, Lead QC / Welding Inspector.

EDUCATION / PROFESSIONAL DEVELOPMENT

- BSE, Nuclear Engineering, University of Michigan, Ann Arbor, MI.
- Introductory VBA class, University of California, Berkeley, CA.
- Misc. business courses at various colleges and universities.
- Senior Reactor Operator Certified.
- GE Station Nuclear Engineering.
- Effective Utilization of PSA, ERIN Engineering & Research, Walnut Creek, CA.

PROFESSIONAL ASSOCIATIONS

- American Nuclear Society (ANS) member since 1978.
- ANS Nuclear elected member of Installation Safety Division Executive Committee 2015 to 2021.
- ANS Risk Informed Standards Committee (RISC).
- ANS/ASME Risk Informed Standards Writing Group on Shutdown PRA Standard.
- ASME Section XI, Working Group on Implementation of Risk Based Examination.
- MIT Professional Summer Programs Guest Lecturer at Risk-Informed Operational Decision Management Course.

PAPERS

1. Technical Challenges Associated with Shutdown Risk when Licensing Advanced Light Water Reactors, PSAM 12 2014. Co-author.
2. Comparing Various HRA Methods to Evaluate Their Impact on the results of a Shutdown Risk Analysis during PWR Reduced Inventory, PSAM11 2012. Co-author.
3. Uncertainty Analysis for Large Dam Failure Frequencies Based on Historical Data, PSAM11 2012. Co-author.
4. An Assessment of Large Dam Failure Frequencies Based on US Historical Data, PSA 2011. Co-author.
5. Development of PRA Model for BWR Shutdown Modes 4 and 5 Integrated in SPAR Model, to be presented at PSAM10 2010. Co-author.
6. Development of Standardized Probabilistic Risk Assessment Models for Shutdown Operations Integrated in SPAR Level 1 Model, PSAM9 2008. Co-author.
7. Probabilistic Risk Assessment of Bolted Dry Spent Fuel Storage Cask, Presented at ICONE12. 2004. Co-author.
8. Low Power and Shutdown Risk Assessment Benchmarking, Presented at PSA 02 2002. Co-author.
9. EPRI Human Reliability Analysis Guidelines, Presented at PSA 02 2002. Co-author.
10. Derivation of Shutdown Initiating Event Frequencies, Presented at PSAM5 2000. Co-author.
11. Quantitative Assessment of a Risk Informed Inspection Strategy for BWR Weld Overlays, Presented at ICONE 8 2000. Co-author.
12. EPRI RI-ISI Methodology and the Risk Impacts of Implementation, Presented at SMiRT 11 1999. Co-author.
13. Application of Markov Models and Service Data to Evaluate the Influence of Inspection on Pipe Rupture Frequencies published. PVP 1999. Co-author.
14. Progress in Risk Evaluation of Outages, International Conference on the Commercial and Operational Benefits of PSA. 1997. Co-author.
15. Control of Reactor Vessel Temperature/Pressure during Shutdown, GE SIL 357. June 1981. Co-author

SOFTWARE

1. HRA Calculator Version 2.0, EPRI 2003. 1003330. Project Manager (PM).
2. ORAM-Sentinel Version 3.4, EPRI 2001. 1002958. PM and co-author.

REPORTS / STANDARDS

1. "Requirements for Low Power and Shutdown PRA - ANS/ASME-58.22-2014 (Trial Use Standard)."
2. "Probabilistic Risk Assessment (PRA) of Bolted Storage Casks: Quantification and Analysis Report," EPRI 2003. 1002877. PM.
3. "Low Power and Shutdown Risk Assessment Benchmarking Study," EPRI, Palo Alto, CA and U.S. DOE. 2002. 1003465. PM and principal investigator.
4. "Dry Cask Storage PRA Scoping Study," EPRI 2002. 1003011. PM.
5. "Guidance for Incorporating Organizational Factors into Nuclear Power Plant Risk Assessments: Phase 1 Workshop." EPRI and U.S. DOE 2002. 1003322. PM.
6. "An Analysis of Loss of Decay Heat Removal Trends and Initiating event Frequencies (1989-2000)": EPRI 2001. 1003113. PM.
7. "Piping System Failure Rates and Rupture Frequencies for Use in Risk Informed In-service Inspection Applications": TR-111880-NP, EPRI 2000. 1001044. PM
8. "Application of Risk-Informed Inservice Inspection Alternative Element Selection Criteria." EPRI, Charlotte NC: 2000. TE-11482. PM.
9. "Revised Risk-Informed Inservice Inspection Evaluation Procedure," EPRI 1999. TR-112657 Revision B-A. PM & co-author.
10. "Piping System Failure Rates and Rupture Frequencies for Use in Risk Informed In-service Inspection Applications," EPRI 1999. TR-111880. PM
11. "Comparison between EDF and EPRI of Pipe Inspection Optimization Methods," EPRI Palo Alto, CA; Electricite de France, Paris, France: 1999. TR-113315. PM.
12. "Economic Feasibility Study of Implementing RBISI at 2-loop PWR," EPRI 1998. TR-107613. PM.
13. "Evaluation of Pipe Failure Potential via Degradation Mechanism Assessment," EPRI Palo Alto, CA: 1998. TR-110157. PM.
14. "Piping Failures in U.S. Nuclear Power Plants: 1961-1997," EPRI 1998.TR-110102. PM.
15. "Piping System Reliability Models and Database for used in Risk Informed Inservice Inspection Applications," EPRI 1998. TR-110161. PM.
16. "Use of Risk Informed Inspection Methodology for BWR Class 1 Piping," EPRI 1998. TR-110701. PM.
17. "ORAM v4.0 Functional Specification Outline," EPRI 1999. TR-111652. PM.
18. "Survey on the Use of Configuration Risk and Safety Management Tools at NPPs," EPRI, 1998. TR-102975. PM.
19. "ORAM-SENTINEL Demonstration at Diablo Canyon," EPRI 1998. TR-110739. PM.
20. "ORAM-SENTINEL Development at Indian Point 3," EPRI 1999, TR-110716. PM.
21. "ORAM-SENTINEL Development and ORAM Integration at Oconee," EPRI 1998. TR-111207. PM.
22. "ORAM-SENTINEL Development at Fitzpatrick," EPRI 1998. TR-110505. PM.
23. "ORAM-SENTINEL Demonstration at Sequoyah," EPRI 1998. TR-110771. PM.
24. "SENTINEL Technical Basis Report for Limerick," EPRI 1998. TR-108953. PM.
25. "Outage Risk Assessment and Management Implementation at Fermi 2," EPRI 1997. TR-109013. Co-author.
26. "Contingency Strategies for BWRs during Potential Shutdown Operations Events," EPRI 1993. TR-102973. Principal investigator.
27. "Generic Outage Risk Management Guidelines for BWRs," EPRI 1993. TR-102971. Co-principal investigator.