

Tampa Bay Times

Column: Safety of St. Lucie plant is assured

By Nils Diaz, special to the Times

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As a former chairman of the U.S. Nuclear Regulatory Commission and a Tampa Bay area resident, I have serious concerns about the article recently appearing in the *Tampa Bay Times* titled "Cooling tubes at FPL St. Lucie nuke plant show significant wear."

I will focus on the issues relating to safety, specifically, mechanical wear in the tubes of a steam generator (boiler) at the St. Lucie nuclear power plant.

First and foremost, the article uses a baseless hypothetical that it frames as a "worst-case" scenario where a "tube bursts and spews radioactive fluid." This alarmist phraseology conjures a false image and an inaccurate characterization of the St. Lucie plant's safety.

A fact: On the rare occasion that one of the roughly 18,000 tubes in these heat exchangers leaks, it does not spew radioactive fluid into the environment. Instead, that water discharges into a well-isolated thick tank. Although this water can have slight levels of radioactivity, it is contained in a closed loop. Moreover, the steam generators and safety valves are inside sealed, reinforced-concrete containments. "Leak before break" is a major 20th century technical fact that strongly supports the safety framework used by nuclear power plants.

Nonetheless, this "tube-side" of the steam generators is treated as a safety issue because of the need to maintain the reactor cooling function, done primarily by water flowing through the generator tubes.

Accordingly, the cooling water function of this system is complemented with redundant systems engineered into the design of these plants. Although some tubes do experience leaks in steam boilers (at both nuclear and nonnuclear power plants), it has not resulted in a public hazard.

This issue is not novel to the nuclear industry and not to the NRC. Over several decades of operating, fixing and replacing steam generators, the industry and the NRC have established detailed, technically sound protocols for analyzing and assessing tube wear in the context of safe operating margins. The protocols have been used at St. Lucie for the past seven years of the new steam generator's operation.

I am especially surprised at the ease with which the *Times* article dismisses a clear-cut, factual statement by a qualified NRC spokesman. Scott Burnell states: "The St. Lucie steam generator wear comes from existing, well-understood causes," and "There is no steam generator safety issue, nor tube integrity safety concern, at St. Lucie."

As the former chairman of the NRC, I can assure the people of Florida that when the NRC states that the issue is well-understood and that there is no safety issue nor tube integrity concern at St. Lucie, it is because there is none. It means that there is a sustained and substantiated consensus among the independent U.S. nuclear safety agency's technical experts and the plant operator's experts. In more than 40 years of dealing with safety-related matters inside and out of the NRC, I know this to be the truth.

The public health and safety of people who live within 50 miles of St. Lucie and beyond are protected by the demanding safety framework established by the nuclear power industry and confirmed by its regulators. No member of the public in the United States has ever been exposed to a radioactive hazard detrimental to their health from an operating nuclear power plant.

I am convinced that the NRC and the plant operator have rigorously reviewed the safety of the St. Lucie Plant prior to and after the power upgrade and concluded that the public health and safety is protected.

Nils Diaz, a resident of Pinellas County, served as a member of the U.S. Nuclear Regulatory Commission from 1996 to 2006 and was its chairman from 2003-06. Before then, he was professor and director of nuclear engineering sciences at the University of Florida. Diaz holds a Ph.D. and M.S. in nuclear engineering sciences from the University of Florida. He wrote this exclusively for the Tampa Bay Times.

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Florida Power & Light's St. Lucie nuclear plant is on Hutchinson Island, about 50 miles north of West Palm Beach.

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