

# *Saprodani Associates*

Post Office Box 8413  
Jupiter, Florida 33468-8413

Telephone: (561) 972-8363  
thomas@saprodani-associates.com

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August 8th, 2011

Secretary for the Commission  
U.S. Nuclear Regulatory Commission  
Atomic Safety and Licensing Board  
Washington, D.C. 20500

***In re: Saprodani Associates' Petition for Leave to Intervene and Request for Hearing in Docket No. 50-335-LA; Florida Power & Light Company, St. Lucie Nuclear Plant (Unit 1)***

Dear Secretary:

Through its undersigned representative, Saprodani Associates hereby submits "*Saprodani Associates' Petition for Leave to Intervene and Request for Hearing in Docket No. 50-335-LA; Florida Power & Light Company, St. Lucie Nuclear Plant (Unit 1)*" in accordance with 10 C.F.R. §2.309 accordingly.

Sincerely,



Thomas Saporito  
Senior Consultant

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

Before Administrative Judges:

*In the Matter of:*

FLORIDA POWER & LIGHT COMPANY,  
(St. Lucie Nuclear Plant, Unit 1)

Docket No. 50-335-LA

ALSBP No.

DATE: 08 AUG 2011

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**SAPRODANI ASSOCIATES' PETITION FOR LEAVE  
TO INTERVENE AND REQUEST FOR HEARING**

**1. DESCRIPTION OF PROCEEDING**

In accordance with 10 C.F.R. §2.309, 10 C.F.R. §50, and a notice published by the U.S. Nuclear Regulatory Commission ("NRC" or "Commission") at Vol. 76, No. 111/Thursday, June 9, 2011, Saprodani Associates by and through and with Thomas Saporito, Senior Consultant, hereby submits its *Petition for Leave to Intervene and Request for Hearing* and contentions in connection with Florida Power & Light Company's (FPL) proposed amendment to Facility Operating License No. DPR-67 issued to FPL (the licensee) for operation of the St. Lucie Nuclear Plant (SLNP), Unit 1, located in St. Lucie County, Florida. The proposed amendment would increase the licensed core power level for SLNP Unit 1, from 2,700 megawatts thermal (MWt) to 3,020 MWt. The increase in core thermal power will be approximately 12 percent, including a 10 percent uprate and a 1.7 percent measurement uncertainty recapture, over the

current licensed core thermal power level and is categorized as an extended power uprate.

As delineated below, Saprodani Associates' contentions should be admitted, and Saprodani Associates should be granted a hearing. Saprodani Associates has requisite standing and the contentions identified below fully comply with the NRC's admissibility requirements under 10 C.F.R. §2.309:

- **Contention SA-1: The NRC and the licensee failed to adequately consider and address the impacts of increased stress to the reactor vessel with respect to embrittlement of the reactor vessel to date; and the consequences of the reactor vessel cracking or shattering as a result of increasing the licensed core thermal power level for Unit 1.**
- **Contention SA-2: The NRC and the licensee failed to adequately consider and address the significant increase in population within a 50-mile area of the SLNP; and the impacts that a serious nuclear accident would have on the inability of the increased populace to timely evacuate from a 50-mile area of the SLNP in connection with increasing the licensed core thermal power level for Unit 1.**
- **Contention SA-3: The NRC and the licensee failed to adequately consider and address the significant increase in heat generated by the SLNP and discharged into the environment via the surrounding waters of the SLNP; and the harmful affects on marine life and vegetation in connection with increasing the licensed core thermal power level for Unit 1.**
- **Contention SA-4: the NRC and the licensee failed to adequately consider and address the alternatives to the license amendment request to offset the need for increased output capacity of the SLNP Unit 1, through energy conservation, installation of energy efficient appliances, and renewable energy sources.**

## **2. STANDING**

### **2.1 Saprodani Associates has Representational Standing and Standing on its Own Behalf**

The general requirements for standing are set out under 10 C.F.R. 2.309(d)(1); (a) the name, address and telephone number of petitioner; (b) the nature of petitioner's right under the

Act to be made a party to the proceeding; (c) the nature and extent of petitioner's property, financial or other interest in the proceeding; and (d) the possible effect of any decision or order that may be issued in the proceeding on petitioner's interest. These factors will be addressed in *seriatim* as follows:

*a. The name, address and telephone number of the petitioner:*

Saprodani Associates, Post Office Box 8413, Jupiter, Florida 33468 (mailing address);  
1030 Military Trail, Unit 25, Jupiter, Florida 33458, Telephone: (561) 972-8363

*b. The nature of the petitioner's right under the Act to be made a party:*

Saprodani Associates has the right to intervene in this proceeding because its interests "may be affected by the proceeding." Section 189(a) of the Atomic Energy Act of 1954, as amended (the "AEA"), 42 U.S.C. §2239(a)(1)(A). Section 189(a) provides in relevant part that:

"In any proceeding under this chapter for the granting, suspending, revoking, or amending of any license ... the Commission shall grant a hearing upon the request of any person whose interest may be affected by the proceeding, and shall admit any such person as a party to such proceeding."

42 U.S.C. §2239(a)(1)(A).

To qualify for requisite standing, a petition must allege (1) a concrete and particularized injury, (2) that is traceable to the challenged action, and (3) that will be redressed by a decision favorable to Saprodani Associates. *See, e.g., Steel Co. v. Citizens for a Better Environment*, 523 U.S. 83, 102-04 (1998). The requisite injury may be either actual or threatened, *e.g., Wilderness Society v. Griles*, 842 F.2d 4, 11 (D.C. Cir. 1987), and must arguably lie within the "zone of interests" protected by the statutes governing the proceeding -- here, either the AEA or the

National Environmental Policy Act ("NEPA"). *See, Yankee Atomic Electric Company* (Yankee Nuclear Power Station), CLI-98-21, 48 NRC 185, 195-96 (1998); *Quivira Mining Co.* (Ambrosia Lake Facility, Grants, New Mexico), CLI-98-11, 48 NRC 1, 6 (1998).

An organization such as Saprodani Associates may demonstrate standing in its own right, or claim standing through one or more individual members who have standing. *See, Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 115 (1995). Here, Saprodani Associates' petition shows that the subject license amendment request would cause injury both to its organizational interests and to the interests of at least one of its individual members; therefore, it has both organizational and representational standing. *See, e.g., Houston Lighting & Power Co.* (South Texas Project, Units 1 and 2), ALAB-549, 9 NRC 644, 646-47 (1979).

The instant petition demonstrates that Saprodani Associates and at least one of its members, will suffer actual, concrete, particularized and imminent injuries directly resulting from granting the challenged licensed amendment, and that the injuries are likely to be prevented by a decision favorable to Saprodani Associates. The instant petition demonstrate, *inter alia*, that granting the license amendment request will result in adverse health and safety risks to Saprodani Associates and at least one of its members and the general public from emissions of radioactive materials and fission products; and from increased heat removal from the nuclear reactor core. Thus, the petition clearly demonstrates that Saprodani Associates and at least one of its members have a real stake in the outcome of the proceeding.

Commission case law clearly provides that, in making a standing determination, a

presiding officer is to "construe the petition in favor of the petitioner," *See, Georgia Tech*, CLI-95-12, 42 NRC at 115.; *Atlas Corporation* (Moab, Utah Facility), LBP-97-9, 45 NRC 414, 424 (1997). Moreover, "even minor radiological exposures resulting from a proposed licensee activity can be enough to create the requisite injury in fact." *General Public Utilities Nuclear Corp.* (Oyster Creek Nuclear Generating Station), LBP-96-23, 44 NRC 143, 158 (1996); *Atlas*, LBP-97-9, 45 NRC at 425.

Saprodani Associates' standing is additionally derived from its (and its member's) proximity to the SLNP facility. A 50-mile "proximity presumption" applies to license amendment request proceedings, *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), 53 NRC 138, 146 (2001) because "the proposed action involves a significant source of radioactivity producing an obvious potential for offsite consequences." *Georgia Tech*, CLI-95-12, 42 NRC 111 at 115. Under this presumption, Saprodani Associates and its members, employees and volunteers living and working within 50-miles of the SLNP facility are presumed to have "standing to intervene without the need specifically plead injury, causation, and redressability," because "the petitioner lives within, or otherwise has frequent contacts with, zone of possible harm from the nuclear reactor or other source of radioactivity." *Id.*; *Sequoyah Fuels Corp. & Gen. Atomic* (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 75 n. 22 (1994).

To the extent that Saprodani Associates' petition demonstrates that even regular operation of the SLNP, let alone negligent operation or intentional attacks, results in releases of radioactive emissions, and leaks, that may be directly harmful to Saprodani Associates, its employees, volunteers and members, and that these injuries would be redressed by a ruling that disallowed

the license amendment request, Saprodani Associates has demonstrated its standing to intervene.

Saprodani Associates' standing to participate in this proceeding is demonstrated by the accompanying declaration, incorporated herein by reference, of the following fact and witness:

**Fact Witness (attached here as Exhibit 1):**

1. Thomas Saporito

*c. The nature and extent of the petitioner's interest in the proceeding:*

Saprodani Associates is an organization entity with an Internet presence at <http://saprodani-associates.com>. The organization is actively engaged in various environmental protection activities and proceedings before the NRC under 10 C.F.R. §2.206; and has filed petitions before the Florida Public Service Commission (FPSC) in connection with nuclear power plant operations in the state of Florida. Saprodani Associates is a membership organization at the present with Thomas Saporito as its single member and Senior Consultant at this time. Saprodani Associates intends to apply for a business license to operate within the state of Florida in the near future; and to employ others to engage its business practices (consulting in the areas of environmental protection, finance, renewable energy, energy conservation, wind energy, solar energy, fuel cells, sales, marketing, etc.). Saprodani Associates and Thomas Saporito attend NRC public meetings and enforcement conferences in connection with nuclear plant operations in the state of Florida and across the United States of America. Thomas Saporito has been actively investigating and researching NRC investigative reports, findings, and enforcement actions in connection with commercial nuclear plant operations in the United States for approximately 20-years. Saprodani Associates through Thomas Saporito filed an enforcement

petition in connection with the Florida based Crystal River Nuclear Plant - delamination event of the nuclear reactor containment building. That matter remains under investigation by the NRC and the licensee (Progress Energy Florida) continues repair activities associated with the Crystal River Nuclear Plant. Saprodani Associates and Thomas Saporito have also participated in a wide variety of litigation and administrative proceedings in connection with nuclear power plant operations in the United States and, in particular, since the devastating Fukushima nuclear accident in Japan in which three-nuclear reactors continue to melt-down and spew radioactive particles into the environment through the air, land, and sea.

*d. The possible effect of any decision or order that may be issued in the proceeding on the petitioner's interest:*

A Commission decision allowing the subject license amendment request would subject Saprodani Associates and Thomas Saporito to the health and safety risks set forth in detail in this petition. This petition demonstrates, *inter alia*, that granting the license amendment request will result in adverse health and safety risks to Saprodani Associates and to Thomas Saporito from emissions of radioactive materials and fission products.

## **2.2 Saprodani Associates' Standing as a Matter of Discretion**

The following four factors permit discretionary intervention set-out under 10 C.F.R. 2.309(e), while incorporating by reference the elements set forth in Section 2.1 above: (a) the extent to which the petitioner's participation may reasonably be expected to assist in developing a sound record; (b) the availability of other means whereby the petitioner's interest will be protected; (c) the extent to which the requester's/petitioner's interest will be represented by existing parties; and (d) the extent to which the requester's/petitioner's participation will

inappropriately broaden the issues or delay the proceeding. Saprodani Associates requests discretionary standing in the event it is denied standing as of right or in the event none of its contentions are admitted.

*a. The petitioner's participation may reasonably be expected to assist in developing a sound record.*

Saprodani Associates' participation in the proceeding will assist the Commission in developing a sound record because Saprodani Associates will be presenting evidence in connection with the local health, safety, environmental and social issues created by the SLNP Unit 1, license amendment request. It will provide local insight, information and evidence that cannot be provided by the Applicant or other parties (if other parties are admitted).

*b. Other means are not available whereby the petitioner's interest will be protected.*

There are no other means available whereby the interests of Saprodani Associates and its member will be protected.

*c. The petitioner's interest will not be represented by existing parties.*

The interests of Saprodani Associates and its member are unique and will not be represented by the existing parties (if other parties are admitted).

*d. The petitioner's participation will not inappropriately broaden the issues or delay the proceeding.*

Saprodani Associates is not raising inappropriate issues; therefore, its participation in the proceeding will not inappropriately broaden the issues or delay the proceeding.

### **2.3 Saprodani Associates Meets Prudential Standing Requirements**

Courts have created a prudential standing requirement that a plaintiff's interests fall

within the "zone of interests" protected by the statute on which the claim is based. *See, Bennett v. Spear*, 520 U.S. 154, 162 (1997). The Atomic Energy Act and NEPA, the statutes at issue here, protect the same interests held by Saprodani Associates' member and further Saprodani Associates' purpose in protecting the health and safety of the public and the environment.

### **3. STATUTORY AND REGULATORY FRAMEWORK**

This proceeding is governed by the AEA and NEPA. The AEA sets minimum standards for the safe and secure operation of nuclear facilities. NEPA requires the NRC to consider and attempt to avoid or mitigate significant adverse environmental impacts of licensing those facilities. Although the statutes have some overlapping concerns, they establish independent requirements. *See, Limerick Ecology Action v. NRC*, 869 F.2d 719, 729-30 (3rd Cir. 1989). NEPA goes beyond the AEA, requiring the consideration of alternatives to reduce or avoid adverse environmental impacts of NRC licensing actions. *Id.*, citing 10 C.F.R. §51.71 (d).

#### **3.1 Atomic Energy Act**

The AEA prohibits the NRC from issuing a license to operate a nuclear power plant if it would be "inimical to the common defense and security or to the health and safety of the public." 42 U.S.C. §2133(d). Public safety is "the first, last, and a permanent consideration" in any decision on the issuance of a construction permit or a license to operate a nuclear facility. *Petition for Emergency and Remedial Action*, 7 NRC at 404, citing *Power Reactor Development Corp. v. International Union of Electrical Radio and Machine Workers*, 367 U.S. 396, 402 (1961)("Power Reactor Development Corp.").

#### **3.2 National Environmental Policy Act**

The instant proceeding is also governed by the National Environmental Policy Act, 42 U.S.C. §4321, et seq. ("NEPA"). NEPA mandates that federal agencies involved in activities that may have a significant impact on the environment must complete a detailed statement of the environmental impacts and project alternatives. NEPA requires, in relevant part, that all agencies of the Federal Government, including the NRC take a "hard look" at environmental impacts of proposed actions. Specifically, the NRC must:

"include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on --

- (i) the environmental impact of the proposed actions,
- (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,
- (iii) alternatives to the proposed action,
- (iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and
- (v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented."

42 U.S.C. §4332(c).

NEPA "places upon an agency the obligation to consider every significant aspect of the environment impact of a proposed action," and "ensures that the agency will inform the public that it has indeed considered environmental concerns in its decision making process." *See, Baltimore Gas & Elec. Co. v. Natural Res. Def. Counsel, Inc.*, 462 U.S. 87, 97 (1983).

"NEPA was created to ensure that agencies will base decisions on detailed information regarding significant environmental impacts and that information will be available to a wide variety of concerned public and private actors." *Morongo Band of Mission Indians v. Federal Aviation Administration*, 161 F.3d 569, 575 (9th Cir. 1998) (*quoted in Mississippi River Basin*

*Alliance v. Westphal*, 230 F.3d 170, 175 (5th Cir. 2000)). Thus, the fundamental goal of a NEPA evaluation is to require the responsible government agency to undertake a careful and thorough analysis of the need for the project and its impacts before proceeding. Agencies must consider environmentally significant aspects of a proposed action, let the public know that the agency's decision-making process includes environmental concerns, and decide whether the public benefits of the project outweigh the environmental costs. *Baltimore Gas & Elec. Co. v. Natural Resources Defense Council*, 462 U.S. 87, 97, 76 L. Ed. 2d 437, 103 S. Ct. 2246 (1983); *Utahns For Better Transportation v. United States Dept. of Transp.*, 305 F.3d 1152, 1162 (10th Cir. 2002); *Illinois Commerce Com. v. Interstate Commerce Com.*, 848 F.2d 1246, 1259 (D.C. Cir. 1988).

Both FPL and the NRC must comply with NEPA by evaluating the environmental impacts of the license amendment request and by weighing the costs and benefits of mitigating or avoiding such impacts. 10 C.F.R. §51.95(c). The NRC must prepare an environmental impact statement before making its decision of FPL's license amendment request request. *See*, 10 C.F.R. §51.95(d). FPL is required to provide an Environmental Report (ER) in connection with its license amendment request request. *See*, 10 C.F.R. §51.53(c).

Environmental impacts are categorized as either "Category 1" or Category 2." *See*, 10 C.F.R. 50, Appendix B to Subpart A, Table B-1. As a general matter, Category 1 environmental impacts may not be challenged in license proceedings. *See, Florida Power & Light Co.*, (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 12 (2001). However FPL's ER "must contain any new and significant information of which it is aware," 10 C.F.R.

§51.53(c)(3)(iv), such as the information concerning leaks, terrorism, health risks from off site radiation, and environmental justice impacts discussed herein. Moreover, NRC regulations require that Category 2 issues be evaluated for "further analysis and possible significant new information. . ." 10 C.F.R. 50, Appendix B to Subpart A, Table B-1.

Category 2 issues include offsite land use (significant changes associates with population and tax revenue changes resulting from license renewal), and the consideration of severe accident mitigation alternatives (SAMA) for all plants that have not considered such alternatives. 10 C.F.R. 50, Appendix B to Subpart A, Table B-1. 10 C.F.R. §51.53(c)(3)(ii)(I) and (L). FPL must address SAMAs in its environmental report. *See, Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), LBP-06-23, 64 NRC 257, 279, citing 10 C.F.R. §51.53(c)(3)(ii)(L). Whether or not a SAMA should be implemented depends upon a cost-benefit analysis: "a weighing of the cost to implement the SAMA with the reduction in risks to pubic health, occupational health, and offsite and onsite property." *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-17, 56 NRC 1, 8 (2002).

In addition, environmental justice (EJ) issues are not considered as part of generic EISs, and an environmental justice assessment must be performed in the licensing action for each particular facility and as part of FPL's ER. *See, NRC Policy Statement on the Treatment of Environmental Justice Matters in NRC Regulatory and Licensing Actions*, 69 Fed. Reg. 52040 (Aug. 24, 2004). FPL must also assess in its ER the environmental effects of transportation of fuel and waste in accordance with 10 C.F.R. §51.52, as well as the generic and cumulative

impacts associated with transportation operation in the vicinity of high-level waste repository site." 10 C.F.R. §51.53(c)(3)(ii)(M).

#### 4. CONTENTIONS

Saprodani Associates' four contentions should be admitted because they satisfy the requirements of 10 C.F.R. §2.309(f)(1). This rule ensures that "full adjudicatory hearings are triggered only by those able to proffer at least some minimal factual and legal foundation in support of their contentions." *See, Duke Energy Corp. (Oconee Nuclear Station, Units 1, 2, and 3)*, 49 NRC 328, 334 (1999). Specifically, Saprodani Associates contentions satisfy 10 C.F.R. §2.309(f)(1) that requires:

- a) "a specific statement of the issue of law or fact to be raised or controverted." Section 2.309(f)(1)(i).
- b) "a brief explanation of the basis for the contention." §2.309(f)(1)(ii).
- c) "that the issue raised ... is within the scope of the proceeding." §2.309(f)(1)(iii).
- d) "that the issue raised ... is material to the findings NRC must make to support the action ... in the proceeding." §2.309(f)(1)(iv).
- e) "a concise statement of the alleged fact or expert opinion which supports" the contention. §2.309(f)(1)(v).
- f) "sufficient information to show that genuine dispute exists ... on a material issue of law or fact." §2.309(f)(1)(vi).

Saprodani Associates does not have to prove its contention at the admissibility stage.

*Private Fuel Storage L.L.C. (Independent Spent Fuel Storage Installation)*, CLI-04-22, 60 NRC 125, 139 (2004). Rather, "petitioner must provide some sort of minimal basis indicating the potential validity of the contention." 54 Fed. Reg. 33, 168, 33, 170 (Aug. 11, 1989), and why the

alleged error or omission is of possible significance to the result of the proceeding. *Portland Cement Ass'n. v. Ruckelshaus*, 486 F.2d 375, 394 (D.C. Cir. 1973), *cert. denied sub nom. Portland Cement Corp. v. Adm'r, E.P.A.*, 417 U.S. 921 (1974). The contention admissibility threshold is less than is required at the summary disposition stage. "[A]t the contention filing stage the factual support necessary to show that a genuine dispute exists need not be in affidavit or formal evidenciary form and need not be of the quality necessary to withstand a summary disposition motion." 54 Fed. Reg. at 33, 171. Moreover, the "Board may appropriately view Petitioners' support for its contention in a light that is favorable to the Petitioner." *Palo Verde Nuclear Generating Station, Units 1, 2, and 3*, CLI-91-12, 34 NRC 149, 155-56 (1991). Petitioner is not required to "make its case at this stage of the proceeding, but rather to indicate what facts or expert opinions, be it one fact or opinion or many, of which it is aware at that point in time which provide the basis for its contention." 54 Fed. Reg. at 33, 170.

**Contention SA-1: The NRC and the licensee failed to adequately consider and address the impacts of increased stress to the reactor vessel with respect to imbrittlement of the reactor vessel to date; and the consequences of the reactor vessel cracking or shattering as a result of increasing the licensed core thermal power level for Unit 1.**

**A) Brief Explanation of the Basis for the Contention.**

FPL's license amendment request request does not comply with the National Environmental Policy Act, 42 U.S.C. §4321, et seq. ("NEPA") because its Environmental Report (ER) fails to adequately assess "new and significant" information concerning environmental impacts of radioactive substances which could be released into the environment as a result of a failure of the nuclear reactor vessel in which increased stresses due to the license amendment

request could cause the vessel to crack or shatter and result in a nuclear core melt-down similar to the ongoing melt-downs of three nuclear reactor cores in Japan. Such a Loss-of-Coolant (LOCA) would cause the SLNP Unit 1, containment building to explode and result in the release of nuclear fission products into the environment. The failure of FPL to take adequate account of these risks violates NEPA's requirement that environmental decisions must contain an evaluation of those aspects of a proposed action that will affect the quality of the human environment "in a significant manner or to a significant extent not already considered." *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 374 (1989)("Marsh").

**B) This is a Valid Contention Pursuant to 10 C.F.R. 2.309**

Since there are serious factual differences concerning the extent and impact of a LOCA due to a failure of the nuclear reactor vessel because of increased stress brought by the proposed license amendment request, there is a genuine dispute with regard to the sufficiency of the license amendment request. This issue is also within the proceeding's scope. 10 C.F.R. §2.309(f)(1)(iii), (f)(2)(for issues under NEPA, petitioner shall file contentions based upon the ER). NEPA mandates that the NRC consider the environmental impacts of the action FPL requests, and the NRC rules implement this mandate. 10 C.F.R. pt. 51. Thus, this issue is material to findings that must be made in this proceeding. 10 C.F.R. §2.309(f)(1)(iv).

**Contention SA-2: The NRC and the licensee failed to adequately consider and address the significant increase in population within a 50-mile area of the SLNP; and the impacts that a serious nuclear accident would have on the inability of the increased populace to timely evacuate from a 50-mile area of the SLNP in connection with increasing the licensed core thermal power level for Unit 1.**

**A) Brief Explanation of the Basis for the Contention.**

FPL's ER fails to adequately consider the impacts that the license amendment request for SLNP Unit 1 will have on the health of increased populations living near the power plant, including localities with relatively high concentrations of minority and low-income groups. Notably, the SLNP Unit 1, was licensed for operation in 1976 and there were only 43,332 people living within a 10-mile radius of the nuclear facility which includes parts of St. Lucie and Martin counties. By 2010, that area's population had ballooned to 202,010; and the 366 percent increase was the most explosive growth rate around any nuclear power plant in the United States, according to the Associated Press (AP). The AP's National Investigative Team reported that government agencies and the nuclear power industry have paid little attention to the population growth around the country's 104-nuclear reactors, "even as plants are running at higher power and posing more danger in the event of an accident." Moreover, the AP investigation found that "some estimates of evacuation times have not been updated in decades, even as the population has increased more than ever imagined. Emergency plans direct residents to flee on antiquated, two-lane roads that clog hopelessly at rush hour." Here, the SLNP Unit 1, is physically located on Hutchinson Island with a two-lane access road in and out. For these reasons, FPL should have more adequately considered this evidence in its Environmental Report.

**B) This is a Valid Contention Pursuant to 10 C.F.R. 2.309**

The specific issue of fact and law to be controverted is whether FPL's Environmental Report sufficiently assesses the health impacts of radionuclide emissions from the SLNP Unit 1, in the event that the nuclear reactor vessel cracks or shatters due to higher operational stresses brought by the proposed license amendment request request; and whether FPL's Environmental

Report sufficiently assesses the public's ability to timely and safely evacuate from the immediate area around the nuclear plant. 10 C.F.R. §2.309(f)(1)(i). Since FPL presents no evidence of new or significant evidence, or of anything unique about St. Lucie Unit 1, concerning local health impact, there is a genuine dispute with regard to the sufficiency of the license amendment request request. This issue is also within the proceeding's scope. 10 C.F.R. 2.309(f)(1)(iii), (f)(2) (for issues under NEPA, petitioner shall file contentions based upon the ER). Indeed, if the new and significant health impacts are genuine, it is hard to imagine a more material impact. For the foregoing reasons, this Contention should be admitted.

**Contention SA-3: The NRC and the licensee failed to adequately consider and address the significant increase in heat generated by the SLNP and discharged into the environment via the surrounding waters of the SLNP; and the harmful affects on marine life and vegetation in connection with increasing the licensed core thermal power level for Unit 1.**

**A) Brief Explanation of the Basis for the Contention.**

FPL's Environmental Report does not satisfy the NEPA because its methodology is flawed, and its analysis is incomplete and limited to questionable interpretations and presentation of data. It fails to acknowledge or describe potential impacts upon the marine life and vegetation in connection with increasing the licensed core thermal power level for Unit 1. Notably, there exists a variety of marine life and vegetation in the waters around the SLNP Unit 1, which would be adversely affected by an increase in heat released into those waters from the discharge area at the SLNP Unit 1.

**B) This is a Valid Contention Pursuant to 10 C.F.R. 2.309.**

The specific issue of fact and law to be controverted is whether FPL's Environmental

Report sufficiently assesses the impacts of continued operation of the SLNP Unit 1, at a greater core thermal power level on the local environmental justice communities and the marine life and vegetation in the waters around the nuclear power plant. 10 C.F.R. §2.309(f)(1)(i). Notably, since there are serious factual differences between FPL's Environmental Report and facts described herein, there is a genuine dispute with regard to the sufficiency of FPL's Environmental Report. This issue is also within the proceeding's scope. 10 C.F.R. §2.309(f)(1)(iii), (f)(2)(for issues under NEPA, petitioner shall file contentions based upon the ER). NEPA mandates that the NRC consider the environmental impacts of the action FPL requests, and the NRC rules implement this mandate. 10 C.F.R. Pt.51.

In addition, FPL's Environmental Report is inadequate because it fails to consider the lack of fish consumption advisories, or awareness of associated risks among the minority and low-income populations. Anglers who fish in the waters near and around the SLNP Unit 1, are unaware that the food they are catching for their families may contain radioactive isotopes. There has been no educational campaign or warning signs at frequented sites to inform recreational anglers not to eat fish which may contain radioactive isotopes, nor has FPL acknowledged the need for such a program during the licensed life of the nuclear plant to date. The fishermen and women are unaware that radioactive isotopes could possibly be detected in the flesh and bones of some area fish. This is especially dangerous for young children, because radioactive isotopes like strontium act like calcium in bone formation and has a half-life of approximately 30-years. During the remainder of the SLNP Unit 1, license period, there is a reasonable probability that anglers may be adversely affected by FPL's failure to properly prevent the release of radioactive

products into the environment via the air, the water and the ground as a result of a nuclear accident stemming from an increased core thermal power level sought through the license amendment request. For all the foregoing reasons, FPL's ER fails to adequately address the harmful affects on the marine life and vegetation in connection with increasing the licensed core thermal power level for Unit 1; which supports that Saprodani Associates' contention should be admitted.

**Contention SA-4: the NRC and the licensee failed to adequately consider and address the alternatives to the license amendment request to offset the need for increased output capacity of the SLNP Unit 1, through energy conservation, installation of energy efficient appliances, and renewable energy sources.**

**A) Brief Explanation of the Basis for the Contention.**

FPL's license amendment request does not comply with the National Environmental Policy Act, 42 U.S.C. §4321, et seq. ("NEPA") because its Environmental Report (ER) fails to adequately assess the potential for renewable energy and energy efficiency and conservation as an alternative to the license amendment request for the SLNP Unit 1. *See*, 10 C.F.R. §51.53(c)(3) (iv). Over the years, there have been remarkable increases in the efficiency of solar energy systems and wind energy systems to power entire homes and to generate excess electric power back to the FPL electric grid. Moreover, energy efficient appliances like on-demand electric hot water heaters can reduce a homeowner's electric power consumption by at least 50% or more. *See*, <http://saprodani-associates.com/On-Demand Hot Water Systems.html>. Replacing incandescent lamps with fluorescent lamps, installing ceiling fans, copper condensers in air conditioning systems, solar clothes dryers, etc. all serve to reduce the energy demands on FPL's electric grid, so much so, that implementation of these renewal energy systems and energy

conservation would actually reduce the load-demand on FPL's electric grid to the extent that FPL would be forced to shut-down existing power plants for lack of need.

**B) This is a Valid Contention Pursuant to 10 C.F.R. 2.309**

The specific issue of fact and law to be controverted is whether FPL's Environmental Report sufficiently assesses the potential for renewable energy and energy efficiency and energy conservation as a substitute for the increase in the SLNP Unit 1's electric power output due to the proposed license amendment request. 10 C.F.R. §2.309(f)(1)(i). Since there are serious factual differences concerning the opportunities for renewable energy and energy efficiency and energy conservation, there is a genuine dispute with regard to the sufficiency of the license amendment request. This issue is also within the proceeding's scope. 10 C.F.R. §2.309(f)(1)(iii), (f)(2)(for issues under NEPA, petitioner shall file contentions based upon the ER). NEPA mandates that the NRC consider the environmental impacts of the action FPL requests, and the NRC rules implement this mandate. 10 C.F.R. Pt.51. Therefore, this issue is material to findings that must be made in this proceeding. 10 C.F.R. §2.309(f)(1)(iv).

There are many ways to replace the increased electric generation anticipated by FPL's license amendment request. As an initial matter, the easiest alternative is to eliminate the need for the SLNP Unit 1's electric power increase through demand side options. For all these reasons, FPL's ER is insufficient in consideration of alternative energy and energy efficiency and energy conservation and this contention should be admitted.

**CONCLUSION**

For all the foregoing reasons stated above, Saprodani Associates' contentions should be

admitted in their entirety.

Respectfully submitted,



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Thomas Saporito, Senior Consultant  
Representative for Saprodani Associates  
Post Office Box 8413  
Jupiter, Florida 33468-8413  
Telephone: (561) 972-8363  
thomas@saprodani-associates.com

# **Exhibit One**

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

Before Administrative Judges:

*In the Matter of:*

FLORIDA POWER & LIGHT COMPANY,  
(St. Lucie Nuclear Plant, Unit 1)

Docket No. 50-335-LA

ALSBP No.

DATE: 08 AUG 2011

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**DECLARATION OF THOMAS SAPORITO**

I am Thomas Saporito and I am over the age of 18-years. I reside at 1030 Military Trail, Unit 25, Jupiter, Florida 33458. My telephone number is (561) 972-8363. I am the Senior Consultant for Saprodani Associates and I am the representative for Saprodani Associates in the above-captioned matter. I am also a member in good standing with Saprodani Associates. I have many years of experience in administrative law proceedings and I am more than qualified to represent Saprodani Associates and myself in the instant action.

The proposed license amendment request submitted to the U.S. Nuclear Regulatory Commission (NRC) by the Florida Power & Light Company (FPL) to increase the core thermal power level of the St. Lucie Nuclear Plant (SLNP), Unit 1, would endanger my health and safety and that of my family and friends should radioactive particles be released from the nuclear plant stemming from a nuclear accident caused by FPL's proposed license amendment request.

Likewise the consequences of FPL's proposed license amendment request would

adversely affect the operations of Saproani Associates in the same manner as described above in connection with a nuclear accident caused by increasing the core thermal power level for the SLNP Unit 1.

I live within the NRC's 50-mile zone of interest with respect to the FPL SLNP Unit 1, and Saproani Associates property and my personal property (as well as my ability to earn a living) are at risk should a nuclear accident occur at the SLNP Unit 1, as a result of granting the FPL license amendment request in the instant action.

Respectfully submitted,

A handwritten signature in blue ink that reads "Thomas Saporito". The signature is written in a cursive style.

---

Thomas Saporito, Senior Consultant  
Representative for Saproani Associates  
Post Office Box 8413  
Jupiter, Florida 33468-8413  
Telephone: (561) 972-8363  
thomas@saproani-associates.com