



**This letter forwards proprietary information in accordance with 10 CFR 2.390. The balance of this letter may be considered non-proprietary upon removal of Attachments one (1) through four (4).**

December 8, 2011

L-2011-489  
10 CFR 50.90  
10 CFR 2.390

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555

Re: St. Lucie Plant Unit 2  
Docket No. 50-389  
Renewed Facility Operating License No. NPF-16

**Response to NRC Reactor Systems Branch Request for Additional Information  
Regarding Extended Power Uprate License Amendment Request**

References:

- (1) R. L. Anderson (FPL) to U.S. Nuclear Regulatory Commission (L-2011-021), "License Amendment Request for Extended Power Uprate," February 25, 2011, Accession No. ML110730116.
- (2) Email from T. Orf (NRC) to C. Wasik (FPL), "St. Lucie 2 EPU - draft RAIs Reactor Systems Branch and Nuclear Performance Branch (SRXB and SNPB)," September 6, 2011.

By letter L-2011-021 dated February 25, 2011 [Reference 1], Florida Power & Light Company (FPL) requested to amend Renewed Facility Operating License No. NPF-16 and revise the St. Lucie Unit 2 Technical Specifications (TS). The proposed amendment will increase the unit's licensed core thermal power level from 2700 megawatts thermal (MWt) to 3020 MWt and revise the Renewed Facility Operating License and TS to support operation at this increased core thermal power level. This represents an approximate increase of 11.85% and is therefore considered an Extended Power Uprate (EPU).

By email from the NRC Project Manager dated September 6, 2011 [Reference 2], additional information was requested by the NRC staff in the Reactor Systems Branch (SRXB) and the Nuclear Performance and Code Review Branch (SNPB) to support their review of the EPU License Amendment Request (LAR). The request for additional information (RAI) identified 102 questions.

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This letter contains FPL's response to RAIs 2.8.6-1 through 2.8.6-11, which FPL has renumbered as SRXB-9 through SRXB-19 for consistency with other RAI numbering. The responses to RAIs SRXB-9 through SRXB-12 and SRXB-14 through SRXB-19 are included in Attachment 1 and contain Holtec Proprietary Information. These RAI responses are considered proprietary in their entirety. The responses to RAIs SRXB-14, SRXB-18, and SRXB-19 reference Holtec proprietary reports which are contained in Attachments 2, 3, and 4, respectively. Attachment 2 contains a copy of Appendix A to Holtec Report No. HI-2012630, Rev. 2, "Burnup Credit for the MPC-32." Attachment 3 contains a copy of Holtec Report No. HI-2033031, Rev. 2, "Lumped Fission Product and PM148M Cross Sections for MCNP." Attachment 4 contains a copy of Holtec Report No. HI-2104790, Rev. 0, "Nuclear Group Computer Code Benchmark Calculations." Attachment 5 contains the Holtec Proprietary Information Affidavit. The Affidavit, signed by Holtec as the owner of the information, sets forth the basis for which the information may be withheld from public disclosure by the Commission and addresses with specificity the considerations listed in paragraph (b)(4) of § 2.390 of the Commission's regulations. Accordingly, it is respectfully requested that the information which is proprietary to Holtec be withheld from public disclosure in accordance with 10 CFR 2.390.

Attachment 6 contains FPL's response to RAI SRXB-13, which is considered non-proprietary.

This submittal does not alter the significant hazards consideration or environmental assessment previously submitted by FPL letter L-2011-021 [Reference 1].

This submittal contains no new commitments and no revisions to existing commitments.

In accordance with 10 CFR 50.91(b)(1), a copy of this letter is being forwarded to the designated State of Florida official.

Should you have any questions regarding this submittal, please contact Mr. Christopher Wasik, St. Lucie Extended Power Uprate LAR Project Manager, at 772-467-7138.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Executed on *08-December-2011*

Very truly yours,



Richard L. Anderson  
Site Vice President  
St. Lucie Plant

Attachment (6)

cc: Mr. William Passetti, Florida Department of Health

## **ATTACHMENT 5**

**Response to  
NRC Reactor Systems Branch and  
Nuclear Performance and Code Review Branch  
Request for Additional Information  
Regarding Extended Power Uprate  
License Amendment Request**

**NON-PROPRIETARY INFORMATION**

**Holtec  
Affidavit Pursuant to 10 CFR 2.390**

**(Cover page plus 5 pages)**



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Holtec International Document ID 1867-AFFI-03

**AFFIDAVIT PURSUANT TO 10 CFR 2.390**

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I, Thomas V. Fitzpatrick, being duly sworn, depose and state as follows:

- (1) I have reviewed the information described in paragraph (2) which is sought to be withheld, and am authorized to apply for its withholding.
- (2) The information sought to be withheld is information provided with Holtec letter 1867006, specifically RRTI-1867-002, Holtec Report HI-2033031, Holtec Report HI-2104790 and Holtec Report HI-2012630 which contains Holtec Proprietary information and is appropriately marked as such.
- (3) In making this application for withholding of proprietary information of which it is the owner, Holtec International relies upon the exemption from disclosure set forth in the Freedom of Information Act ("FOIA"), 5 USC Sec. 552(b)(4) and the Trade Secrets Act, 18 USC Sec. 1905, and NRC regulations 10CFR Part 9.17(a)(4), 2.390(a)(4), and 2.390(b)(1) for "trade secrets and commercial or financial information obtained from a person and privileged or confidential" (Exemption 4). The material for which exemption from disclosure is here sought is all "confidential commercial information", and some portions also qualify under the narrower definition of "trade secret", within the meanings assigned to those terms for purposes of FOIA Exemption 4 in, respectively, Critical Mass Energy Project v. Nuclear Regulatory Commission, 975F2d871 (DC Cir. 1992), and Public Citizen Health Research Group v. FDA, 704F2d1280 (DC Cir. 1983).

**AFFIDAVIT PURSUANT TO 10 CFR 2.390**

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- (4) Some examples of categories of information which fit into the definition of proprietary information are:
- a. Information that discloses a process, method, or apparatus, including supporting data and analyses, where prevention of its use by Holtec's competitors without license from Holtec International constitutes a competitive economic advantage over other companies;
  - b. Information which, if used by a competitor, would reduce his expenditure of resources or improve his competitive position in the design, manufacture, shipment, installation, assurance of quality, or licensing of a similar product.
  - c. Information which reveals cost or price information, production, capacities, budget levels, or commercial strategies of Holtec International, its customers, or its suppliers;
  - d. Information which reveals aspects of past, present, or future Holtec International customer-funded development plans and programs of potential commercial value to Holtec International;
  - e. Information which discloses patentable subject matter for which it may be desirable to obtain patent protection.

The information sought to be withheld is considered to be proprietary for the reasons set forth in paragraph 4.b, above.

- (5) The information sought to be withheld is being submitted to the NRC in confidence. The information (including that compiled from many sources) is of a sort customarily held in confidence by Holtec International, and is in fact so held. The information sought to be withheld has, to the best of my knowledge and belief, consistently been held in confidence by Holtec International. No public disclosure has been made, and it is not available in public sources. All disclosures to third parties, including any required transmittals to the NRC, have been made, or must be made, pursuant to regulatory provisions or

**AFFIDAVIT PURSUANT TO 10 CFR 2.390**

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proprietary agreements which provide for maintenance of the information in confidence. Its initial designation as proprietary information, and the subsequent steps taken to prevent its unauthorized disclosure, are as set forth in paragraphs (6) and (7) following.

- (6) Initial approval of proprietary treatment of a document is made by the manager of the originating component, the person most likely to be acquainted with the value and sensitivity of the information in relation to industry knowledge. Access to such documents within Holtec International is limited on a "need to know" basis.
- (7) The procedure for approval of external release of such a document typically requires review by the staff manager, project manager, principal scientist or other equivalent authority, by the manager of the cognizant marketing function (or his designee), and by the Legal Operation, for technical content, competitive effect, and determination of the accuracy of the proprietary designation. Disclosures outside Holtec International are limited to regulatory bodies, customers, and potential customers, and their agents, suppliers, and licensees, and others with a legitimate need for the information, and then only in accordance with appropriate regulatory provisions or proprietary agreements.
- (8) The information classified as proprietary was developed and compiled by Holtec International at a significant cost to Holtec International. This information is classified as proprietary because it contains detailed descriptions of analytical approaches and methodologies not available elsewhere. This information would provide other parties, including competitors, with information from Holtec International's technical database and the results of evaluations performed by Holtec International. A substantial effort has been expended by Holtec International to develop this information. Release of this information would improve a competitor's position because it would enable Holtec's competitor to copy our technology and offer it for sale in competition with our company, causing us financial injury.

**AFFIDAVIT PURSUANT TO 10 CFR 2.390**

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- (9) Public disclosure of the information sought to be withheld is likely to cause substantial harm to Holtec International's competitive position and foreclose or reduce the availability of profit-making opportunities. The information is part of Holtec International's comprehensive spent fuel storage technology base, and its commercial value extends beyond the original development cost. The value of the technology base goes beyond the extensive physical database and analytical methodology, and includes development of the expertise to determine and apply the appropriate evaluation process.

The research, development, engineering, and analytical costs comprise a substantial investment of time and money by Holtec International.

The precise value of the expertise to devise an evaluation process and apply the correct analytical methodology is difficult to quantify, but it clearly is substantial.

Holtec International's competitive advantage will be lost if its competitors are able to use the results of the Holtec International experience to normalize or verify their own process or if they are able to claim an equivalent understanding by demonstrating that they can arrive at the same or similar conclusions.

The value of this information to Holtec International would be lost if the information were disclosed to the public. Making such information available to competitors without their having been required to undertake a similar expenditure of resources would unfairly provide competitors with a windfall, and deprive Holtec International of the opportunity to exercise its competitive advantage to seek an adequate return on its large investment in developing these very valuable analytical tools.

**AFFIDAVIT PURSUANT TO 10 CFR 2.390**

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STATE OF NEW JERSEY     )  
  )     ss:  
COUNTY OF BURLINGTON )

Mr. Thomas V. Fitzpatrick, being duly sworn, deposes and says:

That he has read the foregoing affidavit and the matters stated therein are true and correct to the best of her knowledge, information, and belief.

Executed at Marlton, New Jersey, this 2<sup>nd</sup> day of November, 2011.

Thomas V. Fitzpatrick  
Holtec International

Subscribed and sworn before me this 2<sup>nd</sup> day of November, 2011.

*Maria C. Massi*

MARIA C. MASSI  
NOTARY PUBLIC OF NEW JERSEY  
My Commission Expires April 25, 2015



## **ATTACHMENT 6**

**Response to  
NRC Reactor Systems Branch and  
Nuclear Performance and Code Review Branch  
Request for Additional Information  
Regarding Extended Power Uprate  
License Amendment Request**

**NON-PROPRIETARY INFORMATION**

**Response to RAI SRXB-13**

**(Cover page plus 1 page)**

**Response to NRC Reactor Systems Branch and Nuclear Performance and Code Branch  
Request for Additional Information**

The following information is provided by Florida Power & Light in response to the U. S. Nuclear Regulatory Commission's (NRC) Request for Additional Information (RAI). This information was requested to support the Extended Power Uprate (EPU) License Amendment Request (LAR) for St. Lucie Unit 2 that was submitted to the NRC by FPL via letter L-2011-021 dated February 25, 2011, Accession Number ML110730116.

In an email dated September 6, 2011, from Tracy Orf (NRC) to Chris Wasik (FPL), "St. Lucie 2 EPU - draft RAIs Reactor Systems Branch and Nuclear Performance Branch (SRXB and SNPB)," the NRC requested additional information regarding FPL's request to implement the EPU. The draft RAIs consisted of 102 questions from the Reactor Systems Branch and Nuclear Performance and Code Review Branch. This letter contains FPL's response to RAIs 2.8.6-1 through 2.8.6-11, which FPL has renumbered as SRXB-9 through SRXB-19 for consistency with other RAI numbering. FPL's response to RAI SRXB-13 is provided below. This RAI response pertains to RAI 2.8.6-5, of the aforementioned email, dated September 6, 2011.

**SRXB-13**

**RAI 2.8.6-5 Provide a description of the L-insert, include its function and whether or not it can be removed.**

**Response**

The L-insert used in the Region 1 cells of the St. Lucie Unit 2 spent fuel storage racks is constructed of 7-gage stainless steel panel (Reference 1) that is folded at 90° along its long axis into an L-shaped (or chevron) cross section. The thickness of the panel is set to fit between the fuel assembly and the surrounding rack cell walls. The L-insert has an overall nominal dimension of 8.740 inches, exclusive of the locking tab region illustrated in UFSAR Figure 9.1-3a, and a panel thickness of 0.188 inches (see UFSAR Figure 9.1.3b). These inserts lock into the storage cavity using a spring locking mechanism on the upper end (see UFSAR Figure 9.1-3a). Included in the overall dimension of the L-insert is the dimension and tolerance of the out-facing elliptical dimples in the two outside faces of the L-insert. Nine dimples are spaced 15 inches apart in the axial interval of the L-insert spanning the active portion of the fuel assembly; the dimples in the two faces of the L-insert are offset axially by one half of the spacing pitch. The nominal height of the dimples above the outside surface of the L-insert is specified as 0.070 inches (Reference 1).

The function of the L-inserts in the Region 1 cells is to provide additional neutron absorption, so for the same fuel, the reactivity in Region 1 cells is always lower than in Region 2 cells. The L-inserts are designed to be in place, filling the gap between the fuel assembly and the rack cell walls, and thus providing for the larger assembly separation (pitch) before a fuel assembly is placed into the cell location. The inserts can be removed using a specially designed tool. The removal cannot be performed when a fuel assembly is present in the cell.

**Reference:**

- (1) Enclosure 1 (St. Lucie Unit 2 Criticality Safety Analysis for the Spent Fuel Storage Rack Using Soluble Boron Credit – CENPD-387) to FPL Letter L-97-325, J.A. Stall (FPL) to US Nuclear Regulatory Commission, Proposed License Amendment SFP Storage Capacity; Soluble Boron Credit, December 31, 1997.