August 27, 2013

L-2013-253
10 CFR 2.202

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555-0001

St. Lucie Units 1 and 2
Docket Nos. 50-335 and 50-389

Florida Power & Light/St. Lucie's First Six-Month Status Report to the Overall Integrated Plan in Response to March 12, 2012 Commission Order to Modify Licenses with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051)

References:

1. NRC Order Number EA-12-051, Order to Modify Licenses with Regard to Reliable Spent Fuel Pool Instrumentation, dated March 12, 2012, Accession No. ML12056A044.
2. NRC Interim Staff Guidance JLD-ISG-2012-03, "Compliance with Order EA-12-051, Reliable Spent Fuel Pool Instrumentation," Revision 0, dated August 29, 2012, Accession No. ML12221A339.
3. NEI 12-02, "Industry Guidance for Compliance with NRC Order EA-12-051, 'To Modify Licenses with Regard to Reliable Spent Fuel Pool Instrumentation," Revision 1, dated August 24, 2012, Accession No. ML12240A307.
4. FPL Letter L-2012-384, dated October 25, 2012, Florida Power & Light (FPL)'s Initial Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051), Accession No. ML12300A420.
5. FPL Letter L-2013-079, dated February 28, 2013, Florida Power & Light/St. Lucie's Overall Integrated Plan in Response to March 12, 2012 Commission Order to Modify Licenses with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051), Accession Number ML13063A026.
6. NRC Letter to Florida Power and Light St. Lucie Nuclear Plant, Units 1 and 2 – Request for Additional Information Regarding Overall Integrated Plan for Reliable Spent Fuel Pool Instrumentation (TAC Nos. MF0090 and MF0091), dated July 16, 2013 Accession No. ML13196A079.
7. FPL Letter L-2013-223, dated July 26, 2013, Florida Power and Light St. Lucie Nuclear Power Plant Units 1 and 2 Response to Request for Additional Information Regarding Overall Integrated Plan in Response to Order EA-12-051, "Reliable Spent Fuel Pool Instrumentation," Accession No. ML13219A838.

A001
NRR

On March 12, 2012, the Nuclear Regulatory Commission ("NRC" or "Commission") issued an order (Reference 1) to Florida Power & Light (FPL). Reference 1 was immediately effective and directs FPL to implement and maintain reliable spent fuel pool water level instrumentation. Specific requirements are outlined in Attachment 2 of Reference 1. Reference 1 required submission of an Overall Integrated Plan by February 28, 2013. The NRC Interim Staff Guidance (ISG) (Reference 2) was issued August 29, 2012 which endorses industry guidance document NEI 12-02, Revision 1 (Reference 3) with clarifications and exceptions identified in Reference 2. Reference 3 provides direction regarding the content of this Overall Integrated Plan.

Reference 4 provided the FPL/St. Lucie initial status report regarding reliable spent fuel pool instrumentation, as required by Reference 1. Reference 5 provided the Overall Integrated Plan pursuant to Section IV, Condition C.1, of Reference 1. Reference 6 forwarded an NRC request for additional information (RAI) concerning the Overall Integrated Plan, and in Reference 7 FPL provided the initial response to the RAIs.

This letter provides the first 6-month update to FPL/St. Lucie's Overall Integrated Plan for installing and maintaining reliable spent fuel pool water level indication that satisfies the requirements of Reference 1. This letter also provides replies to portions of the outstanding RAIs of reference 6 and the status of the RAI replies still under development.

The information in the enclosure provides the first six-month update to the FPL/St. Lucie Overall Integrated Plan for reliable spent fuel pool instrumentation pursuant to Reference 3. The enclosed Overall Integrated Plan update is based on conceptual design information that is current as of this letter. As design details and associated procedural guidance are finalized, additional information, as well as revisions to the information contained in the enclosure to this letter, will be communicated to the NRC in the 6-month Overall Integrated Plan updates as required by Reference 1.

This letter contains no new regulatory commitments.

If there are any questions regarding this submittal, please contact Eric Katzman, St. Lucie Licensing Manager, at (772) 467-7734.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on August 27 , 2013.

Respectfully submitted,

Joseph Jensen
Site Vice President
St. Lucie Plant

Enclosure:
First Six-Month Status Report for the Implementation of Order EA-12-051, Order Modifying Licenses With Regard to Reliable Spent Fuel Pool Instrumentation

cc: Director, Office of Nuclear Reactor Regulation
NRC Regional Administrator
NRC Resident Inspector

ENCLOSURE 1

FLORIDA POWER & LIGHT
ST. LUCIE NUCLEAR POWER PLANT

FIRST SIX MONTH STATUS REPORT FOR THE IMPLEMENTATION OF ORDER EA-12-051, ORDER MODIFYING LICENSES WITH REGARD TO RELIABLE SPENT FUEL POOL INSTRUMENTATION

1 Introduction

Florida Power & Light St. Lucie Nuclear Power Plant Units 1 and 2 developed an Overall Integrated Plan (Reference 1 in Section 7), documenting the modification with regard to reliable Spent Fuel Pool (SFP) instrumentation in response to Reference 2. This attachment provides an update of milestone accomplishments since submittal of the Overall Integrated Plan, including any changes to the compliance method, schedule, or need for relief/relaxation and the basis, if any.

2 Milestone Accomplishments

St. Lucie Unit 1 has selected and entered into a purchase agreement to procure SFP level instruments that, when installed, will meet all the criteria designated in the Overall Integrated Plan submitted on February 28, 2013 (Reference 1).

3 Milestone Schedule Status

There currently are no changes to the Milestone Schedule provided in the Overall Integrated Plan (Reference 1, Attachment 2) except correction of a typographical error in Unit 1 "Complete Design" date, from 3Q 2015 to 3Q 2014. Any changes to the following target dates will be reflected in the six month updates:

The current milestones are:	Unit 1	Unit 2
▪ Commence Engineering and Design	In progress	In progress
▪ Complete Design	3Q 2014	1Q 2015
▪ Complete Procurement of SFP Instruments	4Q 2014	2Q 2015
▪ Complete Installation of SFP Instruments	1Q 2015	3Q 2015
▪ Instruments Operational and Training completed	2Q 2015	4Q 2015
Required implementation date:	RF26 2Q 2015	RF22 4Q 2015

4 Changes to Compliance Method

There currently are no changes to the compliance method documented in the Overall Integrated Plan (Reference 1). Consistent with the requirements of Order EA-12-051 and the Order guidance documents, the six month reports will delineate any proposed changes to compliance methods.

5 Need for Relief/Relaxation and Basis for the Relief/Relaxation

St. Lucie is not requesting relief from the requirements of Order EA-12-051 (Reference 2) or guidance document JLD-ISG-2012-03 (Reference 4) at this time.

Consistent with the requirements of Order EA-12-051 (Reference 2) and the guidance in NEI 12-02 (Reference 5), the six month reports, will delineate progress made, any proposed changes in compliance methods, updates to the schedule, and if needed, requests for relief and their bases.

6 Requests for Additional Information

A response to the Request for Additional Information (RAI) received on July 16, 2013 (Reference 6) was provided on July 26, 2013 (Reference 3).

The following table provides a summary of the remaining open RAIs that were received on July 16, 2013 (Reference 6) in response to the initial Overall Integrated Plan submittal.

Open RAIs	Status
RAI-3 a, b, c – Mounting	In progress
RAI-4 a, b, c – Qualification	In progress
RAI-6 a, b – Power Supplies	In progress
RAI-7 a, b – Accuracy	In progress
RAI-8 a, b, c, d – Testing	In progress
RAI-10 a, b – Procedures	In progress
RAI-11 a, b, c – Testing and Calibration	In progress

The response to the RAIs in the table above requires design information that is not available at this time. A response to the RAIs will be provided in the February 2014 semi-annual update.

The following RAI responses for RAI 2 and RAI 9.a, 9.b, and 9.c were not available for submittal in Reference 3, and are provided below.

3.0 INSTRUMENTATION DESIGN FEATURES

3.1 Arrangement

The OIP states, in part, that

> *The two SFP level instrument channels will be installed in diverse locations, arranged in a manner that provides reasonable protection of the level indication function against missiles that may result from damage to the structure over the SFP. As indicated above,*

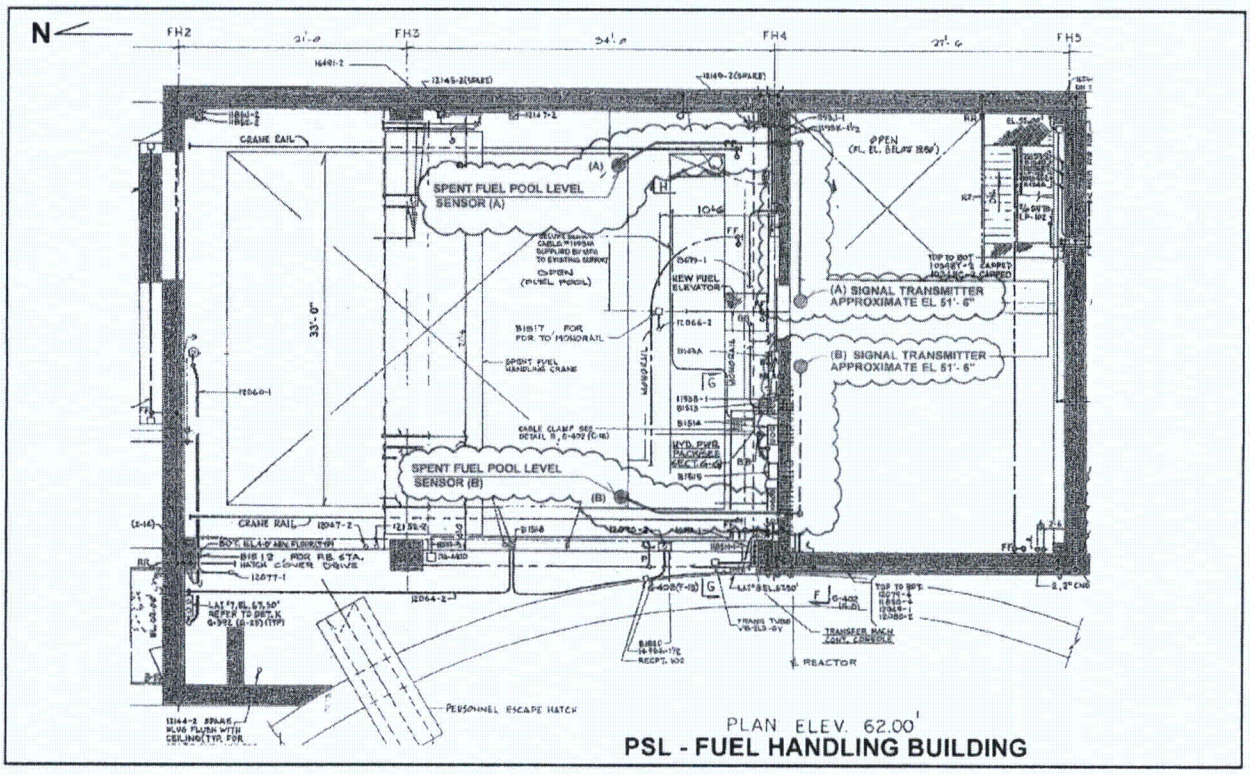
the primary and backup SFP level sensors will be installed in the South side of each unit's SFP, as close to the opposite corners as practical to maintain maximum attainable separation. Sensor conditioning electronics and battery backup will be mounted in a remote location separated from the SFP by a reinforced concrete wall(s) which will provide suitable radiation shielding for the electronics.

RAI-2

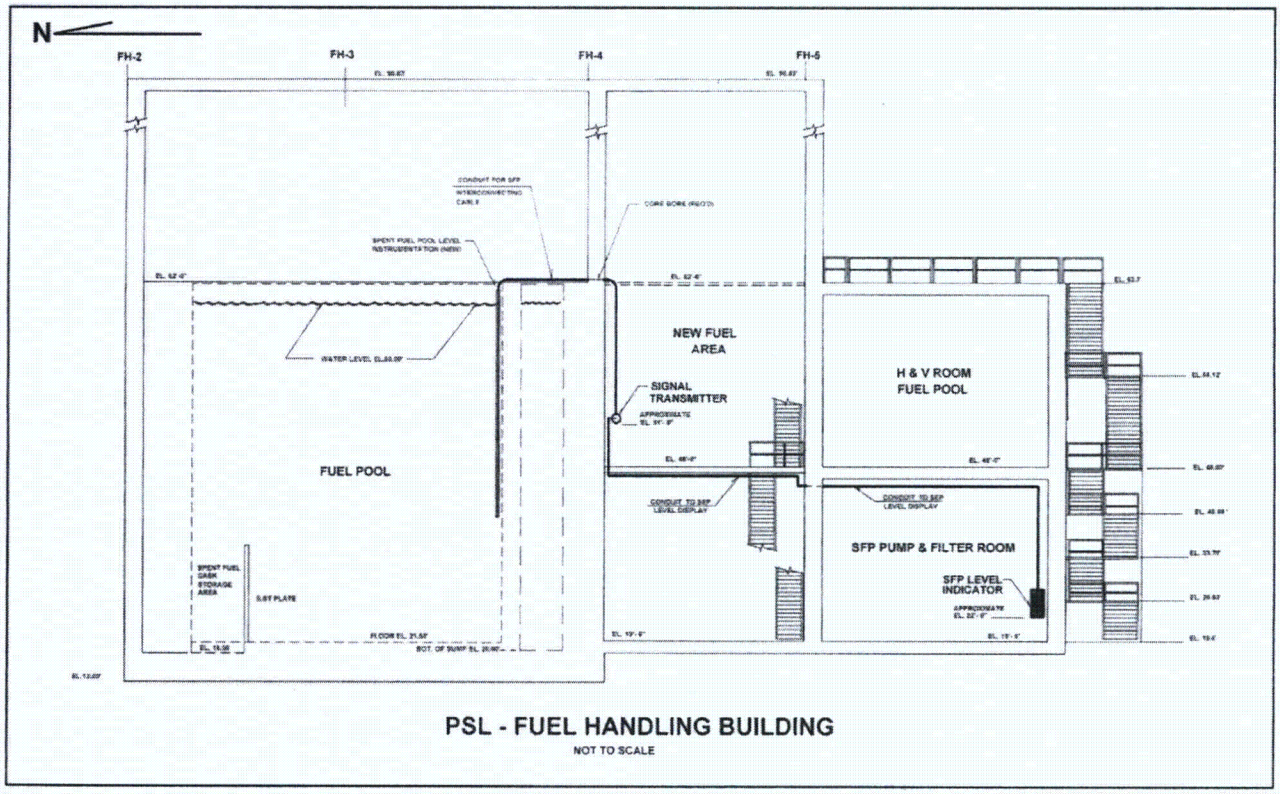
Please provide a clearly labeled sketch or marked-up plant drawing of the plan view of the SFP area, depicting the SFP inside dimensions, the planned locations/placement of the primary and back-up SFP level sensors, and the proposed routing of the cables that will extend from the sensors toward the location of the local electronics cabinets and read-out/display devices in the main control room or alternate accessible location.

FPL Response to RAI-2

The following sketch shows the planned locations of the two level probes, located in the south end of the pool as close to the opposite corners as practical. As shown, the inside pool dimension of this side of the pool is 33 feet. The wiring from these sensors will be routed to maintain this distance until outside the spent fuel pool room to the extent possible. Once outside the SPF room, channel wiring will be separated in accordance with plant design basis channel separation criteria. (The sketches in this submittal are from Unit 1 drawings, but the general locations are applicable to both units. Ignore the column identifiers.)



The following simplified sketch shows the proposed location of each major component of one typical channel. This Unit 1 sketch is typical for both units.

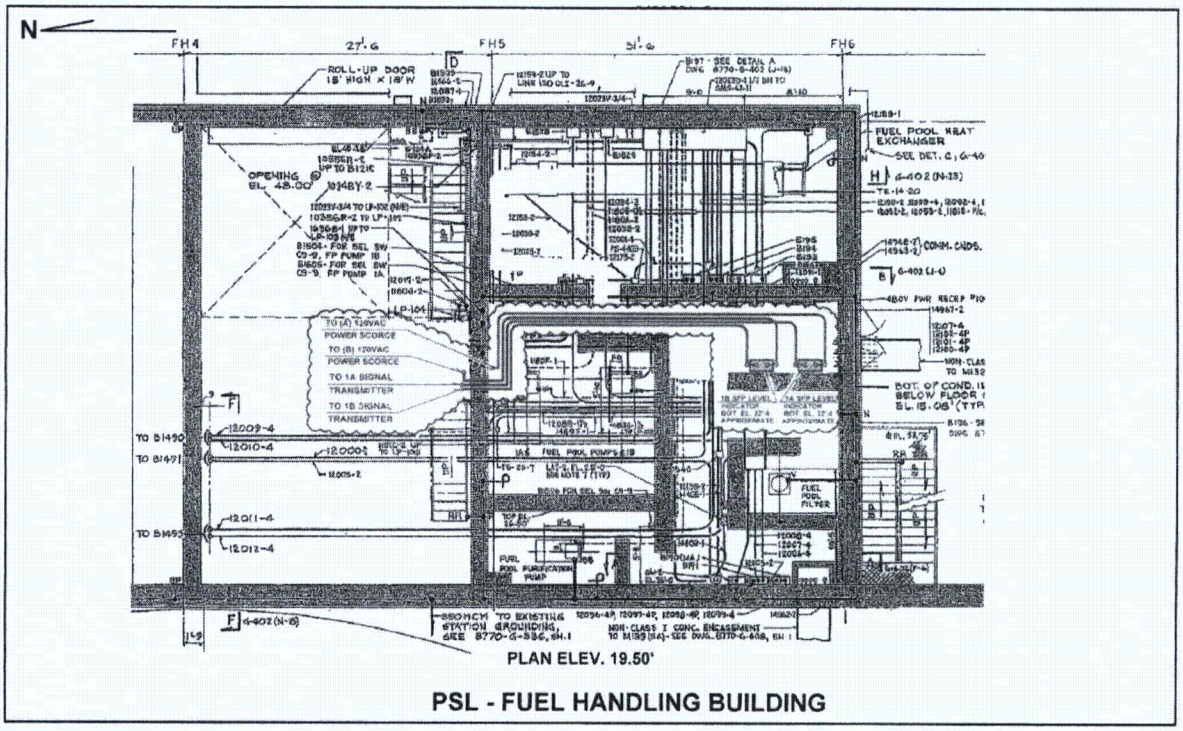


PSL - FUEL HANDLING BUILDING

NOT TO SCALE

As shown, the signal transmitter for each channel is located outside the SFP room, one floor elevation lower in the new fuel storage area. The level indicator enclosures, including independent UPS and backup batteries for each channel, are located on the ground floor of the SFP pump and filter room (plant elevation 19.5').

The proposed conduit routing is shown in the final drawing below. The proposed routing uses a combination of new and existing conduits and raceways. Each channel's conduit and indicator enclosures will be separated in accordance with the plant design basis channel separation criteria. The boxes may be mounted in slightly different areas of this room for each unit based on existing mounting space and interferences, but they will be located in the same general area. The proposed Unit 1 configuration is depicted below.



PSL - FUEL HANDLING BUILDING

3.8 Display

The OIP states, in part, that

> *The design will include remote indication that will be accessible during post event conditions.*

RAI-9

Please provide the following:

a) *The specific location for the primary and backup instrument channel display.*

b) *Since both the primary and backup display locations are not in the main control room, please provide a description of the location for the primary and back up displays, including primary and alternate route evaluation, habitability at display location(s), continual resource availability for personnel responsible to promptly read displays, and provisions for communications with decision makers for the various SFP drain down scenarios and external events.*

c) *The reasons justifying why the locations selected will enable the information from these instruments to be considered "promptly accessible". Include consideration of various drain-down scenarios.*

FPL Response to RAI-9.a

The primary and backup instrument channel displays will be located in the spent fuel pool pump and filter area on the 19.5' elevation of the spent fuel pool building.

FPL Response to RAI-9.b

The primary SFP display access route from the control rooms would be down the West interior stairs to the RAB 19.5' elevation, out the North RAB door and across the yard into the Fuel Handling Building 19.5' elevation South door. The short outside portion of this route is above the design basis flood elevation and is sheltered from storm winds by the adjacent seismically qualified structures. The plant Severe Weather Preparations procedure also specifically installs personnel lifelines for storm access between the RAB and FHB (Reference 7).

Alternate SFP display access routes from the control rooms include a diverse route out the East side of the control rooms and across the RAB 62' elevation roof to the 62' elevation FHB roof and down the South FHB exterior stairs and into the 19.5' elevation South door.

Habitability at the display location is acceptable because the displays are located inside the 19.5 foot elevation of the FHB and the top of the Spent Fuel Pool is in a completely different portion of the FHB at the 62' elevation. Any steam from the SFP surface would be vented out through the FHB L-shaped hatch opening. Radiation shielding for drain down scenarios would be provided by the multiple concrete walls between the fuel assemblies and the display location. Operations personnel will be available to read the display because they will be entering the FHB to perform Emergency Operating Procedure and FLEX Support Guideline actions. Operations personnel will utilize portable plant radios to communicate SFP display information directly to the control rooms.

FPL Response to RAI-9.c

The information from these instruments will be promptly accessible because access to the displays and plant portable radios for communication with the control room are readily available as described above. Access would not be constrained under drain-down scenarios because the displays are located in a completely different section of the FHB from the SFP as described above.

7 References

The following references support the updates to the Overall Integrated Plan described in this enclosure.

1. Florida Power and Light St. Lucie Nuclear Power Plant Units 1 and 2 Overall Integrated Plan in Response to March 12, 2012 Commission Order to Modify Licenses with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051), dated February 28, 2013 [ML13063A026]
2. NRC Order Number EA-12-051, "Issuance of Order to Modify Licenses with Regard to Reliable Spent Fuel Pool Instrumentation," dated March 12, 2012 [ML12056A044]
3. Florida Power and Light St. Lucie Nuclear Power Plant Units 1 and 2 Response to Request for Additional Information Regarding Overall Integrated Plan in Response to Order EA-12-051, "Reliable Spent Fuel Pool Instrumentation", dated July 26, 2013 [ML13219A838]
4. JLD-ISG-2012-03, "Compliance with Order EA-12-051, Reliable Spent Fuel Pool Instrumentation," Revision 0, dated August 29, 2012 [ML12221A339]
5. NEI 12-02, Revision 1, "Industry Guidance for Compliance with NRC Order EA-12-051, 'To Modify Licenses with Regard to Reliable Spent Fuel Pool Instrumentation'", dated August, 2012 [ML12240A307]
6. NRC Letter to Florida Power and Light St. Lucie Nuclear Plant, Units 1 and 2 – Request for Additional Information Regarding Overall Integrated Plan for Reliable Spent Fuel Pool Instrumentation (TAC Nos. MF0090 and MF0091), dated July 16, 2013 [ML13196A079]
7. Administrative Procedure 0005753, Severe Weather Preparations, Revision 71