



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION II
245 PEACHTREE CENTER AVENUE NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

April 29, 2011

Mr. Mano Nazar
Executive Vice President and Chief Nuclear Officer
Florida Power & Light Company
P.O. Box 14000
Juno Beach, FL 33408-0420

SUBJECT: ST. LUCIE NUCLEAR PLANT – NRC OPERATOR LICENSE EXAMINATION
REPORT 05000335/2011301 AND 05000389/2011301

Dear Mr. Stall:

During the period of February 21 – March 3 2011, the Nuclear Regulatory Commission (NRC) administered operating tests to employees of your company who had applied for licenses to operate the St. Lucie Nuclear Plant. At the conclusion of the tests, the examiners discussed preliminary findings related to the operating tests and the written examination submittal with those members of your staff identified in the enclosed report. The written examination was administered by your staff on March 17, 2011.

Two Senior Reactor Operator (SRO) applicants and ten Reactor Operator (RO) applicants passed both the operating examinations and the written examination. One SRO applicant failed the written examination. One RO applicant failed the simulator portion of the operating test, and one RO applicant failed the walk-through portion of the operating test. There were two post-examination comments concerning the operating test. These comments and the NRC resolution of these comments are summarized in Enclosure 2. A Simulator Fidelity Report is included in this report as Enclosure 3.

The initial examination submittal was within the range of acceptability expected for a proposed examination. All examination changes agreed upon between the NRC and the staff were made according to NUREG-1021, Operator Licensing Examination Standards for Power Reactors, Revision 9, Supplement 1.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of the NRC's document system (ADAMS).

ADAMS is accessible from the NRC Website at <http://www.nrc.gov/reading-rm.adams.html> (the Public Electronic Reading Room).

If you have any questions concerning this letter, please contact me at (404) 997-4550.

Sincerely,

/RA/

Malcolm T. Widmann, Chief
Operations Branch
Division of Reactor Safety

Docket Nos: 50-335, 50-389
License Nos: DPR-67, NPF-16

Enclosures:

1. Report Details
2. Facility Comments and NRC Resolution
3. Simulator Fidelity Report

cc: w/encls. (See page 3)

cc w/encl:

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cc: w/encls. (See page 3)

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PUBLICLY AVAILABLE NON-PUBLICLY AVAILABLE SENSITIVE NON-SENSITIVE
ADAMS: X Yes ACCESSION NUMBER: **ML111190112** SUNSI REVIEW COMPLETE

OFFICE	RII:DRS	RII:DRS	RII: DRS	RII: DRS	RII:DRP		
SIGNATURE	RA	RA	RA	RA	RA		
NAME	G. Laska	M. Bates	K. Schaaf	M. Widmann	D. Rich		
DATE	04/27/2011	04/27/201	04/27/2011	04/28/2011	04/27/2011		
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY DOCUMENT NAME: O:\ST. LUCIE EXAMINATIONS\INITIAL EXAM 2011-301\CORRESPONDENCE\FINAL EXAM REPORT ST LUCIE 2011-301(GWL REV1).DOC

NUCLEAR REGULATORY COMMISSION

REGION II

Docket No.: 05000335, 05000389

License No.: DPR-67, NPF-16

Report No.: 05000335/2009301, 05000389/2009301

Licensee: Florida Power and Light Company (FP&L)

Facility: St. Lucie Nuclear Plant, Units 1 & 2

Location: 6351 S. Ocean Drive
Jensen Beach, FL 34957

Dates: Operating Test – February 21 – March 3, 2011
Written Examination – March 17, 2011

Examiners: G. Laska, Chief Examiner, Senior Operations Examiner
M. Bates, Senior Operations Engineer
K. Schaaf, Operations Engineer

Approved by: Malcolm T. Widmann, Chief
Operations Branch
Division of Reactor Safety

SUMMARY OF FINDINGS

ER 05000335/2011301, 05000389/2011301, 02/21-03/03/2011, and 03/17/2011; St. Lucie Nuclear Plant, Licensed Operator Examinations.

The NRC examiners conducted operator licensing initial examinations in accordance with the guidance in NUREG-1021, Revision 9, Supp.1, "Operator Licensing Examination Standards for Power Reactors." This examination implemented the operator licensing requirements of 10 CFR §55.41, §55.43, and §55.45.

The NRC administered the operating tests during the period of February 21 – March 3, 2011. Members of the St. Lucie Power Plant training staff administered the written examination on March 17, 2011. The written examination outline was provided by the NRC. The written examination, operating test outlines and operating test details were developed by the St. Lucie Nuclear Plant training staff.

Two Senior Reactor Operator (SRO) and ten Reactor Operator (RO) applicants passed both the written and operating examinations. One SRO applicant failed the written examination. One RO applicant failed the simulator portion and one RO failed the walk-through portion of the operating test. Two SRO applicants and ten RO applicants were issued operating licenses.

There were two post examination comments.

No findings were identified.

REPORT DETAILS

4. OTHER ACTIVITIES

4OA5 Operator Licensing Initial Examinations

a. Inspection Scope

The St. Lucie Nuclear Plant training staff developed the written examination and operating test. NRC regional examiners reviewed the proposed examination material to determine whether it was developed in accordance with NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 9, Supplement 1. Examination changes agreed upon between the NRC and the licensee were made according to NUREG-1021, and incorporated into the final version of the examination materials.

The examiners reviewed the licensee's examination security measures while preparing and administering the examinations to ensure examination security and integrity complied with 10 CFR 55.49, "Integrity of Examinations and Tests." Two "near miss" examination security events occurred during exam administration. The first "near miss" occurred on February 25, 2011, when one applicant was escorted to the rest room. After the applicant entered the rest room, the escort went back to the sequester room leaving the applicant unmonitored. Because all of the other applicants were in the sequester room, or on the simulator, no portion of the exam was compromised. The licensee documented this event in AR number 01626098. The second "near miss" occurred on February 28, 2011. While administering scenarios on the simulator, communications were heard on the radio between members of an outage group working on the turbine deck. Use of the radios was immediately stopped. Examiners determined that an exam compromise did not take place. Communications over the radio were limited to event #1, or event # 2 etc. No mention of actual scenario content was ever transmitted over the radio. The licensee documented this event in AR number 01626119.

The examiners evaluated three SRO and twelve RO applicants who were being assessed under the guidelines specified in NUREG-1021. The examiners administered the operating tests during the period of February 21 – March 3, 2011. Members of the St. Lucie Power Plant training staff administered the written examination on March 17, 2011. The evaluations of the applicants and review of documentation were performed to determine if the applicants, who applied for licenses to operate the St. Lucie Nuclear Plant, met requirements specified in 10 CFR Part 55, "Operators' Licenses."

b. Findings

No findings were identified. The NRC determined, using NUREG-1021 that the licensee's initial examination submittal was within the range of acceptability expected for a proposed examination.

Two SRO and ten RO applicants passed both the written and operating examinations.

A copy of the final written RO, SRO examinations, and answer keys with all changes incorporated may be accessed not earlier than March 17, 2013, in the ADAMS system (ADAMS Accession Number(s) ML111090206 and ML111090212).

Copies of all individual examination reports were sent to the facility Training Manager for evaluation and determination of appropriate remedial training.

40A6 Meetings

Exit Meeting Summary

On March 3, 2011, the examination team discussed generic issues associated with the operating test with Mr. R. Anderson, Site Vice President, and members of the St. Lucie Nuclear Plant staff. The examiners asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

PARTIAL LIST OF PERSONS CONTACTED

Licensee personnel

R. Anderson – Site Vice President
R. Lingle - Operations Manager
J. Klauck - Operations Shift Manager
S. Duston - Training Manager
T. Benton - Operations Training Supervisor
D. Lanyi - Operations SRO
J. Willsey- Operations Class Mentor
F. Dennis - ILT Training Supervisor
K. Frehafer - Licensing

NRC personnel

T. Hoag, SRI
S. Sanchez, RI

Facility Comments and NRC Resolution

A complete Text of the licensee's post examination comments can be found in ADAMS under Accession Number ML111090216.

Licensee Comments:

Items:

(1) JPM S-3, Perform Control Room Actions for Loss of Safety Related AC Bus–Unit 2

Facility Comment:

Step 3 and Step 4 of the JPM S-3 are incorrectly designated as Critical Steps.

Basis:

The aforementioned steps require the applicant to place the 2A and 2C Charging pump control switches to STOP and place Letdown Isolation valves to close. This is directed in accordance with 2-AOP-47.01A, 'Loss of A Safety Related AC Bus'.

The basis for these steps is to establish a "known configuration" for subsequent power restoration. Based upon the conditions established by the JPM, the loss of power automatically isolated letdown and secured charging. In the event these actions are not completed, if an auto action of the charging pump resulted in a pump start, the size of the load would not damage or potentially overload a bus. There is no safety significance by not completing these steps; therefore these steps are not critical for these conditions.

The immediate actions of 2-AOP-02.03, 'Charging and Letdown', which apply to this event, require that Charging be secured and control switches placed in auto. This is not consistent with the steps of 2-AOP-47.01A, 'Loss of A Safety Related AC Bus'.

The initial conditions of this JPM has letdown isolated due to loss of the 2A5 480V Load center. Immediate Operator actions of 2-AOP-02.03, 'Charging and Letdown' requires the Operator to STOP the Charging pumps and RETURN the control switches to AUTO in the event of loss of letdown.

If the applicant stopped the Charging pumps and placed the switches to auto, the backup Charging pump would cycle in response to lowering Pressurizer level of -3% deviation from setpoint and stop at +3.6% deviation from setpoint. These setpoints are such that the Tech Spec limits for high/low Pressurizer level are not exceeded. The simulator setup for this JPM requires the Pressurizer Pressure and Level channels be selected to 'Y' channel. By doing so, the automatic response of the Charging pumps to Pressurizer level deviation is not affected by the loss of 2A5 480V LC.

2-AOP-47.01A, 'Loss of A Safety Related AC Bus', directs the Operator to ENSURE the Train A Charging pump control switch is placed in STOP. This step is based on possible cycling of the backup charging pump due possible failure of selected Pressurizer level channel from loss of power. That is not the case for this JPM as stated in the above paragraph. Therefore, not placing the control switches in STOP is NOT critical.

This step is an action step, therefore, in accordance with the station's procedure writer's guide, the step is capitalized and bolded. This is consistent with all action statements in PSL's upgraded procedures.

Facility Recommendation:

Revise JPM S-3, Perform Control Room Actions for Loss of Safety Related AC Bus – Unit 2, steps 3 and 4, to remove the critical step designation.

NRC RESOLUTION:

The NRC agrees with the licensee's recommendation. After reviewing the licensee's contention and supporting documentation, it appears steps 3 and 4 are not critical to the completion of the task.

Based on the above discussion, the licensee's recommendation was accepted; JPM S-3 steps 3 and 4 were changed to remove the critical step designation.

(2) Admin JPM A-6, Respond to Security Event

Facility Comment:

Step 14 and 16, of the JPM A-3, is incorrectly designated as a Critical Step.

Basis:

The aforementioned steps requires the applicant to annotate on the Florida Nuclear Plant Emergency Notification Form that "This is a Drill", and selection of the affected unit. These steps are procedurally directed per EPIP-08, 'Off-site Notifications and Protective Action Recommendations'.

The basis for these steps is to identify that this is a drill rather than documentation of an actual emergency, and specify the affected unit. In accordance with EPIP-08, Attachment 1A, step 1, during exercises, drills or tests, each message shall be checked THIS IS A DRILL. Additionally, selection of the affected unit is required to be only one with additional information provided if both units are impacted. These are asterisked steps on Attachment 1, of the Florida Nuclear Plant Emergency Notification Form, which states, "items are evaluated for NRC Performance Indicators." During development of the JPM, the standards for NRC performance indicators acceptance criteria were used to define the critical steps for the applicant's exam.

In accordance with ADM-25.02, Appendix L, Drill/Exercise Performance step C, source documents for the NRC performance indicators are; Drill Reports, LOCT Simulator Evaluation Critique Sheets, and Actual Event Reports. This applicant JPM does NOT fall under this criteria and is not used for NRC performance indicators. Therefore the asterisk step on Attachment 1, of the Florida Nuclear Plant Emergency Notification Form does not apply.

The JPM initial condition does not inform the applicant that this is a drill or simulated condition. Applicant confusion can arise as to the condition to which they respond to this step. Emergency Drills and LOCT Simulator evaluations conduct a pre-exercise drill brief.

There is no safety significance for selecting either this is a drill or actual emergency. The state watch office was not actually contacted. Selecting both units as being affected again has no safety significance. These issues are solely with procedural compliance. Since the station's administrative procedures do not apply, the station's position is that these two steps should be designated as NOT Critical.

Facility Recommendation:

Revise JPM A-6, Respond to Security Event, steps 14 and 16, to remove the critical step designation.

NRC RESOLUTION:

The NRC agrees with the licensee's recommendation. After reviewing the licensee's contention and supporting documentation, it appears that step 14 and 16 were not critical steps required to complete the task.

Based on the above discussion, the licensee's recommendation was accepted, Administrative JPM A-6 was changed, and the critical step designation was removed from steps 14 and 16.

SIMULATOR FIDELITY REPORT

Facility Licensee: St. Lucie Nuclear Plant

Facility Docket Nos.: 05000335/2011301, 05000389/2011301

Operating Test Administered: February 21 – March 3, 2011

This form is to be used only to report observations. These observations do not constitute audit or inspection findings and, without further verification and review in accordance with Inspection Procedure 71111.11 are not indicative of noncompliance with 10 CFR 55.46. No licensee action is required in response to these observations.

While conducting the simulator portion of the operating test, examiners observed the following:

<u>Item</u>	<u>Description</u>
Instabilities were observed on the charging system.	When performing a JPM that had operators align a flowpath from the charging pump to the "A" HPSI header using Appendix "T" of EOP-99, extremely violent flow oscillations were observed. AR number 01626092 was written to document this issue.
An "Invalid Request" was received while attempting to roll the main turbine.	During scenario 7, operators received an "Invalid Request" on the DEH system while attempting to roll the main turbine to rated speed. AR number 01626089 was written to document this issue.
Select Yokogawa chart recorders fail to clear and reset.	During one scenario select Yokogawa chart recorders failed to clear when the next simulator scenario was loaded. Approximately 15 minutes of exam time was lost. AR number 01624555 was written to document this issue.
RCP shaft seizure did not occur following a loss of oil level.	During the administration of Simulator JPM "f", "RESTART RCP's DURING EOP IMPLEMENTATION Unit 2" the RCP failed to seize and trip following a loss of oil from the lower oil reservoir and high thrust bearing temperature alarms. AR number 01626016 was written to document this issue.
High Pressure Safety Injection flow was indicated with pump discharge pressure less than RCS pressure	During the administration of Simulator JPM "e" "Establish Alternate Charging Flowpath to RCS Through "A" HPSI Header," HPSI flow was indicated on flow transmitters with charging pump discharge pressure less than RCS pressure. AR number 01626099 was written to document this issue.