



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

November 19, 2014

EA-14-131

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

**SUBJECT: ST. LUCIE PLANT – FINAL SIGNIFICANCE DETERMINATION OF WHITE
FINDING AND NOTICE OF VIOLATION; NRC INSPECTION REPORT
05000335/2014010 AND 05000389/2014010**

Dear Mr. Nazar:

This letter provides you the final significance determination of the preliminary White finding discussed in NRC Inspection Report (IR) 05000335/2014009 and 05000389/2014009, "Preliminary White Finding and Apparent Violations," dated September 24, 2014 (ADAMS Accession Number ML14267A337). The finding involved the failure to implement measures to ensure the watertight integrity of the Unit 1 reactor auxiliary building and was documented as apparent violation (AV) 05000335/2014009-01.

In a telephone conversation with Mr. David Dumbacher of NRC, Region II, on October 1, 2014, Mr. Eric Katzman of your staff indicated that Florida Power & Light Co. (FPL) did not contest the characterization of the risk significance of this finding and that you declined your opportunity to discuss this issue in a regulatory conference.

In a letter dated October 23, 2014 (ADAMS Accession Number ML14300A013), you provided a response to the NRC staff's preliminary determination regarding the finding. Your response indicated that you concurred with the NRC's preliminary characterization and basis for the finding. In addition, your letter discussed corrective actions that included, in part, the repair of flood seals, flood response procedure revisions, additional site walkdowns of flood protection features, and improved internal and external flood barrier integrity as a result of an extent of condition review. After considering the information developed during the inspection, and the information provided in your written response, the NRC has concluded that the finding is appropriately characterized as White, a finding of low to moderate safety significance.

The NRC has also determined that the failure to install internal flood barriers in conduits that penetrated the Unit 1 reactor auxiliary building (RAB) exterior wall at elevations below the design flood height and the failure to identify those missing flood barriers during flooding

walkdowns performed in response to the NRC's "Request for Information Pursuant to Title 10 of the *Code of Federal Regulations* 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3, of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident," dated March 12, 2012, are violations of Appendix B to 10 CFR 50, Criterion III, "Design Control" and Criterion XVI, "Corrective Action," respectively, as cited in the attached Notice of Violation (Notice). The circumstances surrounding the violations were described in detail in the September 24, 2014, inspection report. In accordance with the NRC Enforcement Policy, the Notice is considered escalated enforcement action because it is associated with a White finding.

Because plant performance for this issue has been determined to be beyond the licensee response column, we will use the NRC's Action Matrix to determine the most appropriate NRC response for this event. We will notify you, by separate correspondence, of that determination.

Based on the information developed during the inspection of the White finding described above, the NRC has concluded that an additional violation of NRC requirements occurred. Specifically, the NRC determined that a violation of 10 CFR 50.9(a) occurred when FPL failed to provide the NRC with complete and accurate information in a 10 CFR 50.73 report and a 10 CFR 50.54(f) response that described the safety significance of degraded and missing flood penetration seals at St. Lucie Unit 1 and Unit 2. The violation, the significance of which was evaluated using the NRC's traditional enforcement process, is cited in the enclosed Notice and the circumstances surrounding it were described in detail in NRC IR 05000335/2014009 and 05000389/2014009 dated September 24, 2014, as AV 05000335, 389/2014009-02 (ADAMS Accession Number ML14267A337).

In the letter transmitting the inspection report, we provided you with the opportunity to address the apparent traditional enforcement violation identified in the report by either attending a predecisional enforcement conference or by providing a written response before we made our final enforcement decision. In a letter dated October 20, 2014 (ADAMS Accession Number ML14294A466), you provided a written response to the apparent violation, which agreed with the NRC's characterization of the violation and provided an explanation concerning the submittal of inaccurate information.

As discussed in the Enforcement Policy, the severity level of a violation involving the failure to provide the NRC with complete and accurate information will be based upon the material nature of the information and whether it would likely have caused the NRC to reconsider a regulatory position or undertake a substantial further inquiry. In this case, the NRC concluded that the failure to provide complete and accurate information regarding missing and degraded flood barriers and the resultant safety significance in a 10 CFR 50.73 report and a 10 CFR 50.54(f) response submitted on December 27, 2012, and November 27, 2012, respectively, impeded the NRC's regulatory process. Had FPL accurately reported the safety significance of these issues as required, additional NRC review and follow-up inspection likely would have occurred, which may have prompted FPL to adopt compensatory measures or corrective actions, thereby precluding further incidents. Therefore, this violation 10 CFR 50.9(a) has been categorized in accordance with the NRC Enforcement Policy at Severity Level III.

In accordance with the NRC Enforcement Policy, a base civil penalty in the amount of \$70,000 is considered for a Severity Level III violation.

Because your facility has not been the subject of escalated enforcement actions within the last two years, the NRC considered whether credit was warranted for Corrective Action in accordance with the civil penalty assessment process in Section 2.3.4 of the Enforcement Policy. In the case of the 10 CFR 50.73 report, your response stated that the safety significance of the degraded electrical manhole penetration seals was improperly assessed because the St. Lucie design basis flood analysis did not address the duration of a precipitation event or the possibility of site pooling. As for the inaccurate information provided in the 10 CFR 50.54(f) response, the cause of the issue was attributed to inadequate review by the vendor of RAB flooding feature drawings as well as invalid assumptions by the vendor that all the conduits penetrating the RAB exterior wall had been inspected during the electrical manhole inspection walkdowns. FPL also acknowledged that inadequate oversight of the vendor walkdowns and a failure to challenge the walkdown scope and the results also played a part in inaccurate information being submitted in the 10 CFR 50.54(f) response. As discussed in your October 20, 2014, letter, the St. Lucie staff implemented corrective actions that included direct FPL supervision of site flood protection walkdowns which utilized lessons learned from the initial walkdowns, an independent review of walkdown results by a third party, and the submittal of complete and accurate flood hazard information to the NRC. Based on the root cause analysis and the promptness of corrective actions, the NRC has concluded that credit is warranted for the factor of Corrective Action.

Therefore, to encourage prompt identification and comprehensive correction of violations, and in recognition of the absence of previous escalated enforcement action, I have been authorized, after consultation with the Director, Office of Enforcement, not to propose a civil penalty in this case. However, significant violations in the future could result in a civil penalty.

The NRC has concluded that information regarding: 1) the reason for the violations, 2) the corrective actions that have been taken and the results achieved, and 3) the date when full compliance was achieved is already adequately addressed on the docket in your letters dated October 20, and October 23, 2014. Therefore, you are not required to respond to this letter unless the description therein does not accurately reflect your corrective actions or your position. In that case, or if you choose to provide additional information, you should follow the instructions specified in the enclosed Notice.

In accordance with 10 CFR 2.390 of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter, its enclosure, and your response, if you choose to provide one, will be made available electronically for public inspection in the NRC Public Document Room and in the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such information, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). The NRC also includes significant enforcement actions on its Web site at (<http://www.nrc.gov/reading-rm/doc-collections/enforcement/actions/>).

M. Nazar

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If you have any questions concerning this matter, please contact Shane Sandal of my staff at (404) 997-4513.

Sincerely,

/RA/

Victor M. McCree
Regional Administrator

Docket Nos. 50-335, 50-389
License No. DPR-67, NPF-16

Enclosure: As stated

cc Distribution via ListServ

M. Nazar

4

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/RA/

Victor M. McCree
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Enclosure: As stated

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PUBLICLY AVAILABLE NON-PUBLICLY AVAILABLE SENSITIVE NON-SENSITIVE

ADAMS: Yes ACCESSION NUMBER: ML14323A786 SUNSI REVIEW COMPLETE FORM 665 ATTACHED

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|--------------|------------|------------|------------|-------------|--------------|------------|------------|
| OFFICE | RII:DRP | RII:DRP | RII:DRP | RII:DRP | RII:EICS | RII:ORC | HQ:OE |
| SIGNATURE | Via email | Via email | Via email | SRS /RA/ | Via email | Via email | Via email |
| NAME | JReyes | JHanna | TMorrissey | SSandal | DGamberoni | SPrice | RFretz |
| DATE | 11/06/2014 | 11/04/2014 | 11/05/2014 | 11/03/2014 | 11/04/2014 | 11/04/2014 | 11/10/2014 |
| E-MAIL COPY? | YES NO | YES NO | YES NO | YES NO | YES NO | YES NO | YES NO |
| OFFICE | HQ:NRR | RII:DRP | RII:DRP | RII:ORA | RII:ORA | | |
| SIGNATURE | Via email | MSL /RA/ | JTM /RA/ | LDW /RA/ | VMM /RA/ | | |
| NAME | LCasey | MLesser | JMunday | LWert | VMcCree | | |
| DATE | 11/10/2014 | 11/05/2014 | 11/05/2014 | 11/ 17/2014 | 11/ 18 /2014 | | |
| E-MAIL COPY? | YES NO | YES NO | YES NO | YES NO | YES NO | YES NO | YES NO |

OFFICIAL RECORD COPY DOCUMENT NAME: [HTTP://FUSION.NRC.GOV/REGIONS/RII/DRP/BRANCH3/SL/QUARTERLY REPORT INPUT/RAB FLOODING/ST LUCIE IR 2014010 FINAL SIGNIFICANCE LETTER.DOCX](http://fusion.nrc.gov/regions/rii/drpb/branch3/sl/quarterly-report-input/rab-flooding/st-lucie-ir-2014010-final-significance-letter.docx)

Letter to Mano Nazar from Victor M. McCree dated November 19, 2014.

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FINDING AND NOTICE OF VIOLATION; NRC INSPECTION REPORT
05000335/2014010 AND 05000389/2014010

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NOTICE OF VIOLATION

Florida Power & Light Co.
St. Lucie Plant
Units 1 and 2

Docket Nos.: 50-335, 389
License Nos.: DPR 67, NPF 16
EA-14-131

During an NRC inspection completed on September 24, 2014, three violations of NRC requirements were identified. In accordance with the NRC Enforcement Policy, the violations are listed below:

- A. Appendix B to 10 CFR Part 50, Criterion XVI, Corrective Action, states, in part, that measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and non-conformances are promptly identified and corrected.

Contrary to the above, from November 26, 2012, until January 9, 2014, the licensee failed to promptly identify and correct conditions adverse to quality involving missing external flood barriers in the Unit 1 reactor auxiliary building (RAB). Specifically, the licensee performed flooding walkdowns in response to the NRC's "Request for Information Pursuant to Title 10 of the *Code of Federal Regulations* 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3, of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident," dated March 12, 2012. The walkdowns, conducted using the guidance contained in Nuclear Energy Institute (NEI) 12-07, "Guidelines for Performing Verification Walkdowns of Plant Flood Protection Features," dated May 2012, were completed on November 26, 2012, and failed to identify missing internal flood barriers on six conduits that penetrated the Unit 1 RAB wall below the design basis external flood elevation. This condition was identified when the site experienced a period of unusually heavy rainfall on January 9, 2014, and approximately 50,000 gallons of water entered the -0.5 foot elevation of the RAB through two of the six degraded conduits in the ECCS pipe tunnel.

- B. Appendix B to 10 CFR Part 50, Criterion III, Design Control, states, in part, that measures shall be established to assure the design basis for those structures, systems, and components to which this appendix applies are correctly translated into specifications, drawings, procedures and instructions.

Unit 1 UFSAR Section 3.1.2, "Criterion 2 - Design Basis for Protection against Natural Phenomena," states, in part, that structures, systems, and components important to safety shall be designed to withstand effects of natural phenomena such as floods without loss of capability to perform their safety function.

Unit 1 UFSAR Section 3.4.1, "Flood Elevations," states that wave runup of 17.2 feet from the probable maximum hurricane (PMH) is possible.

Unit 1 UFSAR Section 3.4.4, "Flood Protection," states that structures and components whose failure could prevent safe shutdown of the plant or result in significant uncontrolled release of radioactivity are protected from the effects of high water levels and wave runup associated with PMH conditions by one or more of the following: a) design of structures and components to withstand such effects where functionally required, b) positioning of the structures and components such that they are located at sufficient grade to preclude

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inoperability due to external flooding, and c) housing within waterproof structures. Condition c) specifically identifies that the shield building and reactor auxiliary building (RAB) are the only seismic Class 1 structures with basements and that these are completely waterproofed to finish grade.

Contrary to the above, from 1978 and 1982 until 2014, the licensee failed to translate the design basis associated with external flood protection into specifications, drawings, procedures and instructions. Specifically, permanent change modifications (PCM) 77272, "Primary Water Degassifier and Transfer Pump" and PCM 80105, "Waste Monitor Tank Addition," implemented in 1978 and 1982 respectively, added six power supply conduits in the emergency core cooling system (ECCS) pipe tunnel that penetrated the Unit 1 RAB wall below the design basis external flood elevation and did not include internal flood barriers to protect safety-related equipment from the effects of a design basis external flood event. As a result, the Unit 1 RAB was not completely waterproofed to finish grade, and structures and components whose failure could prevent safe shutdown of the plant or result in significant uncontrolled release of radioactivity were not protected from the effects of high water levels and wave runup associated with PMH conditions. This condition was identified when the site experienced a period of unusually heavy rainfall on January 9, 2014, and approximately 50,000 gallons of water entered the -0.5 foot elevation of the RAB through two of the six degraded conduits in the ECCS pipe tunnel.

The two violations described above are associated with a White Significance Determination Process finding for Unit 1.

- C. 10 CFR 50.9(a) requires, in part, that information provided to the Commission by a licensee or information required by the statute or by the Commission's regulations, orders or license conditions to be maintained by the licensee shall be complete and accurate in all material respects.

Contrary to the above, the licensee provided inaccurate and incomplete information as evidenced by the following two examples:

1. Licensee Event Report (LER) 05000335/2012-010-00, dated December 27, 2012, was inaccurate and incomplete in that it only discussed the flooding effects from a probable maximum hurricane (PMH), and did not discuss potential limiting conditions involving the duration of a precipitation event or the possibility of site pooling when determining the impact of the degraded and missing flood seals on water intrusion into the Unit 1 and Unit 2 RABs. The safety evaluation documented in the LER was based on non-conservative assumptions regarding site flood inundation times. Consequently, the LER did not identify that the Unit 2 missing or degraded flood seals represented an inoperable condition prior to the implementation of compensatory measures and the LER did not identify that the charging pumps on Unit 1 would also have been impacted as a result of the flood barrier degradation. Additionally, the LER did not identify and evaluate the effect of the missing internal flood barriers in six conduits that penetrated the Unit 1 RAB wall. This information was material to the NRC in that it was used to determine the safety significance of the degraded and missing external flood barriers as well as the appropriate NRC follow-up and response to the event report.

2. By cover letter dated November 27, 2012, the licensee submitted to the NRC a report entitled "Flooding Walkdown Report, FPL060-PR-001, Rev. 0, In Response to the 50.54(f) Information Request Regarding Near-Term Task Force Recommendation 2.3: Flooding for the St. Lucie Plant." The report was submitted in response to the NRC's "Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3, of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident," dated March 12, 2012. The NRC determined that the licensee's report was inaccurate and incomplete in that it failed to include the missing conduit seals on six conduits in the Unit 1 ECCS pipe tunnel adjacent to the RAB as non-conforming items. In addition, the licensee's report failed to identify that the Unit 2 missing or degraded flood seals represented an inoperable condition prior to the implementation of compensatory measures. This information was material to the NRC, in that it was used to determine compliance with the current licensing basis, the safety significance of the degraded and missing external flood barriers, and used to determine follow-up NRC response.

This is a Severity Level III violation (Enforcement Policy paragraph 6.9).

If you contest this enforcement action, you should provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001.

Your response, if you choose to provide one, will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>, to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy, or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Dated this 19 day of November 2014