Florida Power & Light Company, 6501 S. Ocean Drive, Jensen Beach, FL 34957

FPL

April 21, 2003

L-2003-098
10 CFR 50.59(d)

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D. C. 20555

Re: St. Lucie Unit 1
Docket No. 50-335
Report of 10 CFR 50.59 Plant Changes

Pursuant to 10 CFR 50.59(d)(2), the attached report contains a brief description of any changes, tests, and experiments, including a summary of the 50.59 evaluation of each which were made on Unit 1 during the period of April 30, 2001 through October 25, 2002. This submittal correlates with the information included in Amendment 19 of the Updated Final Safety Analysis Report submitted under separate cover.

Please contact us should there by any questions regarding this information.

Very truly yours,

William Jefferson, Jr.
Vice President
St. Lucie Plant

WJ/spt

Attachment

IE47

St. Lucie Unit 1
Docket No. 50-335
L-2003-098 Attachment

ST. LUCIE UNIT 1
DOCKET NUMBER 50-335
CHANGES, TESTS AND EXPERIMENTS
MADE AS ALLOWED BY 10 CFR 50.59
FOR THE PERIOD OF
APRIL 30, 2001 THROUGH OCTOBER 25, 2002

St. Lucie Unit 1
Docket No. 50-335
L-2003-098 Attachment

INTRODUCTION

This report is submitted in accordance with 10 CFR 50.59 (d)(2), which requires that:

i) changes in the facility as described in the SAR;
ii) changes in procedures as described in the SAR; and
iii) tests and experiments not described in the SAR

that are conducted without prior Commission approval be reported to the Commission in accordance with 10 CFR 50.90 and 50.4. This report is intended to meet these requirements for the period of April 30, 2001 through October 25, 2002. Note that, where practical, summaries from more recent 10 CFR 50.59 evaluations have also been included in this report.

This report is divided into three (3) sections. First, changes to the facility as described in the Updated Final Safety Analysis Report (UFSAR) performed by a Plant Change/Modification (PC/M). Second, changes to the facility/procedures as described in the UFSAR, or tests/experiments not described in the UFSAR, which are not performed by a PC/M. And third, a summary of any fuel reload 50.59 evaluation.

Each of the documents summarized in Sections 1, 2, and 3 includes a 10 CFR 50.59 evaluation that evaluated the specific change(s). Each of these 50.59 evaluations concluded that the change does not require a change to the plant technical specifications, and prior NRC approval is not required.

St. Lucie Unit 1
Docket No. 50-335
L-2003-098 Attachment

TABLE OF CONTENTS

St. Lucie Unit 1
Docket No. 50-335
L-2003-098 Attachment

SECTION 1

PLANT CHANGE / MODIFICATIONS

St. Lucie Unit 1
Docket No. 50-335
L-2003-098 Attachment

PLANT CHANGE/MODIFICATION 00110

REVISION 1

NFPA CODE COMPLIANCE SUPPRESSION SYSTEM MODIFICATION

Summary:

This PC/M provides modifications to resolve Code non-conformances associated with the existing fire suppression systems installed at St. Lucie Unit 1. The following fire suppression systems (sprinkler, fixed water spray) were modified via this PC/M:

a) turbine lube oil piping pre-action sprinkler system (el. 19.5' and 39.5'),
b) turbine lube oil reservoir deluge system, and
c) main transformer 1A/1B deluge system.

Revision 1 of this PC/M provided clarification that the increased flow due to additional protection provided by this PC/M does not compromise the volumetric capacity of the city water storage tank for non-safety related systems. The system modifications required to correct the code non-conformances entailed:

a) addition of hangers to properly support the fire protection piping,
b) replacement of sprinkler heads to prevent cold soldering, and
c) modification of existing suppression systems to provide additional protection to system components.

St. Lucie Unit 1
Docket No. 50-335
L-2003-098 Attachment

PLANT CHANGE/MODIFICATION 02110

REVISION 0

REACTOR HEAD PENETRATION INSPECTION AND REPAIR

Summary:

In response to NRC Bulletin 2002-02, inspections will be performed for the Unit 1 reactor vessel head penetrations during Cycle 18 and subsequent refueling outages. This PC/M provides repair contingencies for defects identified in the nozzle, weld material or base material for each head penetration (CEDM, ICI, and head vent).

Repair of CEDM nozzles involves removal of existing thermal sleeves by remote machining, a roll expansion to ensure the nozzle does not move during the repair process, and semi-automated machine tooling to remove the lower portion of the CEDM nozzle to a depth above the existing J-groove weld.

Repair of ICI nozzle defects involves a combination of manual grinding and carbon air arcing to remove a defect. Welded tempered or non-tempered bead approaches will be followed. The chosen process will depend upon the extent of the defect.

Repair of vent line nozzle includes two scenarios: non-temper bead or a temper bead repair depending on the depth machined to remove the indications in the weld and/or nozzle.

Since no repairs were required as a result of the inspection efforts, this PC/M was not implemented, and was subsequently closed.

SECTION 2

50.59 EVALUATIONS

St. Lucie Unit 1
Docket No. 50-335
L-2003-098 Attachment

EVALUATION SEFJ-02-009
REVISION 1

EVALUATION OF HIGHER OPERATING LIMIT FOR SILICA IN THE RCS

Summary:

This evaluation was prepared to examine plant operations with increased silica levels in the reactor coolant system (RCS).

With continued degradation of the Boraflex material used in the spent fuel pool racks and the corresponding increased silica level in the pool, the time to reduce the silica level in the RCS becomes an operational concern at startup following refueling. This is due to the fact that during refueling, the RCS coolant is mixed with spent fuel pool water. The current silica limit in the RCS during operation is 1 ppm.

This evaluation determined that the current limit of 1 ppm silica might be relaxed to 3 ppm based on EPRI's studies and analyses that include industry experience with silica at this level. Operation with up to 3 ppm silica is acceptable, provided the concentrations of other zeolite forming elements (Ca, Mg, and Al) are maintained below the EPRI recommended guidelines.

St. Lucie Unit 1
Docket No. 50-335
L-2003-098 Attachment

EVALUATION SENS-02-010
REVISION 0

CONTAINMENT PURGE SYSTEM ISOLATION VALVES

Summary:

The purpose of this evaluation was to provide the following change associated with the 48-inch containment purge valves.

Revision of UFSAR Table 6.2-16 to delete valves FCV-25-1 and 6 as containment isolation valves. Valves FCV-25-2, 3, 4 and 5 are the credited containment isolation valves. Valves FCV-25-1 and 6 were never designed nor intended to act as containment isolation valves.

SECTION 3

RELOAD EVALUATION

St. Lucie Unit 1
Docket No. 50-335
L-2003-098 Attachment

PLANT CHANGE/MODIFICATION 02014

REVISION 0

ST. LUCIE UNIT 1 CYCLE 18 RELOAD

Summary:

This PC/M provided the reload of the Framatome core design of St. Lucie Unit 1 Cycle 18. The core is designed for a cycle length of 12,190 EFPH.

This engineering modification package provided:

1) The design of the St. Lucie Unit 1 Cycle 18 core, includes the replacement of 93 irradiated fuel assemblies (76 fresh batch Z and 17 assemblies currently residing in the spent fuel pool).

2) The safety analysis for Cycle 18 reload design was performed by Framatome-ANP and FPL using NRC-approved methodology. The linear heat rate value corresponding with the fuel centerline melt limit for Cycle 18 is 24.58 kW/ft.

3) The average steam generator tube plugging is not to exceed 15% average with a maximum asymmetry of +/- 7% about the average.