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SOUTHERN COMPANY
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May 23, 2008

NL-08-0534

Docket Nos.: 50-348
50-364

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555-0001

Joseph M. Farley Nuclear Plant - Units 1 and 2
Revision 21 to the Updated Final Safety Analysis Report, 10 CFR 50.59 Report,
Technical Specification Bases Changes and Revised NRC Commitments Report

Ladies and Gentlemen:

In accordance with the 10 CFR 50.4(b) and 50.71(e), Southern Nuclear Operating Company (SNC) hereby submits Revision 21 to the Farley Nuclear Plant (FNP) Updated Final Safety Analysis Report (UFSAR). In accordance with Regulatory Issue Summary (RIS) 2001-05, "Guidance on Submitting Documents to the NRC by Electronic Information Exchange or on CD-ROM," all the current pages of the UFSAR are being submitted on CD-ROM in portable document format (PDF) with non-proprietary browser included. The revised UFSAR pages, indicated as Revision 21, reflect changes through April 30, 2008. Included on CD-ROM, in PDF format, are the current project drawings referenced in the FNP UFSAR, Revision 21.

SNC hereby files Revision 21 to its Updated Final Safety Analysis Report for Farley Units 1 and 2. The information accurately presents changes made since the previous submittal, necessary to reflect information and analyses submitted to the Commission or prepared pursuant to Commission requirement.

The FNP Unit 1 and Unit 2 Technical Specifications, section 5.5.14, "Technical Specifications (TS) Bases Control Program," provides for changes to the Bases without prior NRC approval. In addition, TS section 5.5.14 requires that Bases changes made without prior NRC approval be provided to the NRC on a frequency consistent with 10 CFR 50.71(e). Pursuant to TS 5.5.14, SNC hereby submits a complete copy of the FNP TS Bases, on CD-ROM, which reflects all changes to TS Bases for the period of November 2006 to May 2008.

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Enclosure 1 provides a table of contents with associated files names for the two CD-ROMs provided as Enclosure 2. These CD-ROM contain the FNP FSAR Rev 21, FSAR referenced drawings and the FNP TS Bases.

In accordance with the requirements of 10 CFR 50.59(d)(2), SNC hereby submits the 10 CFR 50.59 Report containing a brief description of any changes, tests, or experiments, including a summary of the safety evaluation of each. This report is provided in Enclosure 3.

Enclosure 4 provides the Revised NRC Commitments Report in accordance with the NEI 99-04, "Guideline for Managing NRC Commitment Changes," Revision 0. This report is based on the same time period as the UFSAR, Revision 21.

Mr. D. H. Jones states he is a Vice President of Southern Nuclear Operating Company, is authorized to execute this oath on behalf of Southern Nuclear Operating Company and to the best of his knowledge and belief, the facts set forth in this letter are true.

This letter contains no NRC commitments. If you have any questions, please advise.

Sincerely,

D. H. Jones
Vice President – Engineering

Sworn to and subscribed before me this 23rd *day of* May, *2008.*

Notary Public

My commission expires: 11/10/2010

NOTARY PUBLIC STATE OF ALABAMA AT LARGE
MY COMMISSION EXPIRES: Nov 10, 2010
BONDED THRU NOTARY PUBLIC UNDERWRITERS

DHJ/SYA/daj

Enclosures:
1. CD-ROM Table of Contents
2. CD-ROM (2) NRC Submittal: Contains Files 001-0031
3. 10 CFR 50.59 Report
4. Revised NRC Commitments Report

cc: Southern Nuclear Operating Company
Mr. J. T. Gasser, Executive Vice President (w/o Enclosures)
Mr. J. R. Johnson, Vice President – Farley (w/o Enclosures)
Mr. Mike Stinson, Vice President (w/o Enclosures)
RTYPE: CFA04.054; LC# 14745

U. S. Nuclear Regulatory Commission
Mr. L. A. Reyes, Regional Administrator
Mr. R. A. Jervey, NRR Project Manager – Farley
Mr. E. L. Crowe, Senior Resident Inspector – Farley

Joseph M. Farley Nuclear Plant - Units 1 and 2
Revision 21 to the Updated Final Safety Analysis Report, 10 CFR 50.59 Report, Technical Specification Bases Changes and Revised NRC Commitments Report

Enclosure 1

CD-ROM Table of Contents

Joseph M. Farley Nuclear Plant - Units 1 and 2
Revision 21 to the Updated Final Safety Analysis Report, 10 CFR 50.59 Report, Technical Specification Bases Changes and Revised NRC Commitments Report

Enclosure 1

CD-ROM Table of Contents

SEQ	CONTENT	FILENAME EXTENSION
001	**FARLEY FSAR_EF PG LST, TOC, CH1, CH2-PRT 1** Effective Page List Table of Contents Chapter 1 Chapter 2 (Part 1) § 2.1 – 2.5 Appendix 2A & 2B	**.pdf**
002	**FARLEY FSAR_CH2-PRT 2** Chapter 2 (Part 2) Appendix 2B Figures (up to 2B5A-4)	**.pdf**
003	**FARLEY FSAR_CH2-PRT 3** Chapter 2 (Part 3) Appendix 2B Figures Continued (2B5B-1 thru end of chapter)	**.pdf**
004	**FARLEY FSAR_CH3-PRT 1** Chapter 3 § 3.1 – 3.11 Appendix 3A – 3J (up to 3J figures)	**.pdf**
005	**FARLEY FSAR_CH3-PRT 2** Chapter 3 (Part 2) Appendix 3J (Figures) – Appendix 3M	**.pdf**
006	**FARLEY FSAR_CH4, CH5** Chapter 4 and 5	**.pdf**
007	**FARLEY FSAR_CH 6, CH 7, CH 8, CH9** Chapter 6, 7, 8 and 9	**.pdf**
008	**FARLEY FSAR_CH10, CH11, CH12, CH13, CH14** Chapter 10, 11, 12, 13 and 14	**.pdf**
009	**FARLEY FSAR_CH15, CH16, CH17, CH18** Chapter 15, 16, 17 and 18	**.pdf**
010	**FARLEY TECH SPECS BASES** Technical Specifications Bases	**.pdf**
011	**FARLEY FSAR_REF DWGS-PRT 01** A177048S0001V0_0 - A177048S0364V2_0	**.pdf**
012	**FARLEY FSAR_REF DWGS-PRT 02** A177048S0365V1_0 - A207048S0246V1_0	**.pdf**
013	**FARLEY FSAR_REF DWGS-PRT 03** A207048S0247AV0_0 - A509018S0010V9_0	**.pdf**

SEQ	CONTENT (FILENAME)	EXTENSION
014	**FARLEY FSAR_REF DWGS-PRT 04** A509018S0011V10_0 - D170180S0001V15_0	.pdf
015	**FARLEY FSAR_REF DWGS-PRT 05** D170210S0001V10_0 - D172711S0001V18_0	.pdf
016	**FARLEY FSAR_REF DWGS-PRT 06** D173000S0001V4_0 - D175027S0001V21_0	.pdf
017	**FARLEY FSAR_REF DWGS-PRT 07** D175031S0001V14_0 - D175042S0005V26_0	.pdf
018	**FARLEY FSAR_REF DWGS-PRT 08** D175042S0006V32_0 - D176038S0001V14_0	.pdf
019	**FARLEY FSAR_REF DWGS-PRT 09** D176039S0001V20_0 - D176920S0001V2_0	.pdf
020	**FARLEY FSAR_REF DWGS-PRT 10** D176921S0001V2_0 - D176951S0001V1_0	.pdf
021	**FARLEY FSAR_REF DWGS-PRT 11** D176952S0001V1_0 - D176972S0001V1_0	.pdf
022	**FARLEY FSAR_REF DWGS-PRT 12** D176973S0001V1_0 - D177000S0001V26_0	.pdf
023	**FARLEY FSAR_REF DWGS-PRT 13** D177001S0001V20_0 - D177334S0001V9_0	.pdf
024	**FARLEY FSAR_REF DWGS-PRT 14** D177334S0002V4_0 - D200013S0008V33_0	.pdf
025	**FARLEY FSAR_REF DWGS-PRT 15** D200019S0001V18_0 - D205022S0001V26_0	.pdf
026	**FARLEY FSAR_REF DWGS-PRT 16** D205031S0001V5_0 - D205042S0005V25_0	.pdf
027	**FARLEY FSAR_REF DWGS-PRT 17** D205042S0006V30_0 - D206006S0001V38_0	.pdf
028	**FARLEY FSAR_REF DWGS-PRT 18** D206007S0001V18_0 - D207005S0001V13_0	.pdf
029	**FARLEY FSAR_REF DWGS-PRT 19** D207006S0001V16_0 - D356597S0001V1_0	.pdf
030	**FARLEY FSAR_REF DWGS-PRT 20** D356597S0002V1_0 - U167649S0001V0_3	.pdf
031	**FARLEY FSAR_REF DWGS-PRT 21** U167650S0001V1_0 - U611138S0001V1_0	.pdf

Joseph M. Farley Nuclear Plant - Units 1 and 2
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Enclosure 2

CD-ROM (2) NRC Submittal: Contains Files 001-0031

Joseph M. Farley Nuclear Plant - Units 1 and 2
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Enclosure 3

10 CFR 50.59 Report

Joseph M. Farley Nuclear Plant - Units 1 and 2
Revision 21 to the Updated Final Safety Analysis Report, 10 CFR 50.59 Report, Technical Specification Bases Changes and Revised NRC Commitments Report

Enclosure 3

10 CFR 50.59 Report

LDCR	LD Type	5059 Full Eval?	Title
2004063	FS/TS/T	Yes	Deletion of Reactor Trip System, Function 3. b., Power Range Neutron Flux- High Negative Rate (U1/U2)

Activity: NL-04-1446; NL 05-1473; DCP 1040671101

Description of Change: This Design Change Package change eliminated the Power Range Neutron Flux- High Negative Rate Reactor Trip function.

5059 Summary: This Design Change Package change eliminated the Power Range Neutron Flux- High Negative Rate Reactor Trip function, based on the NRC approved methodology contained in Westinghouse Topical Report WCAP 1394-P-A, "Methodology for the Analysis of the Dropped Rod Event." The changes allowed for the elimination of a trip circuitry that was not credited in the FNP safety analysis, and could have resulted in an unnecessary reactor trip. These changes were implemented sequentially, concurrent with each unit's refueling outage during which the design change was implemented. Additionally, this amendment request deleted TS Bases text associated with an unconservative local DNBR.

2006023	FS/5059	Yes	Removal of Emergency Removal Cable From Fuel Transfer System

Activity: DCP 1061314201

Description of Change: This change removed the emergency removal cable for the fuel transfer conveyor car. The emergency cable was originally used as a means to retrieve a car in the event of a drive mechanism failure of the original underwater drive system. The emergency retrieval cable is no longer required since the conveyor car can be retrieved by hand cranking the winch that pushes and pulls the car.

5059 Summary: This change removed the emergency removal cable for the fuel transfer conveyor car. The emergency cable was originally used as a means to retrieve a car, in the event of a drive mechanism failure of the original underwater drive system. The current drive mechanism has electric winches that can be hand cranked to retrieve a car such that the emergency removal cable is no longer required. Removal of the cable did not affect any accidents considered in the FSAR. There was no increase in consequences of any accident considered in the FSAR. No fission product barriers were impacted. No new accidents were created. Therefore, this change did not adversely affect any design function described in the FSAR.

LDCR	LD Type	5059 Full Eval?	Title
2007019	5059	Yes	Construction Water Tie Into Sanitary Water System.

Activity: MDC M03-0-9986

Description of Change: This Minor Design Change provides a permanent means of being able to tie-in Construction Water to Sanitary Water. This enhancement reduces time, money and manpower whenever Sanitary Water is not available.

5059 Summary: The prior Sanitary Water tank had through wall corrosion on the top. It was replaced with a similar tank. Prior to replacement, the plant needed an alternate source of water, and this MDC gave design approval to provide water to the plant. In summary, an attachment was bolted onto the outlet side of valve NSY30V077 on the Construction Water line underneath the gravel on the north side of the Unit 2 Low Voltage Switch Yard. Also, the Sanitary Water line was modified at a section of piping located in the northeast comer of the Unit 2 Turbine building basement. A flex hose was used to connect the two points mentioned.

The potable water system, as described in section 9.2.4 of the FSAR, does not contribute to the initiation of any accident evaluated in the FSAR. Therefore, this minor design change will not increase the probability of an occurrence of an accident previously evaluated in the FSAR.

LDCR	LD Type	5059 Full Eval?	Title
2007020	FS/TB	Yes	Containment Sump Screen Mods

Activity: DCP 2050912001

Description of Change: The existing Plant Farley Unit 2 Emergency Core Cooling System (ECCS) and Containment Spray System (CSS) sump passive screens are to be replaced with new passive strainers to ensure adequate Net Positive Suction Head (NPSH) margin for the successful operation of the ECCS (Residual Heat Removal (RHR)) and CSS pumps during recirculation mode following all postulated accidents. Orifices are installed in the CTMT Floor and Equipment Drain system piping to support sump level during the recirculation mode in response to a design basis accident. Also, one phone is being removed from the Containment due to interference issues. The above modifications effect documents listed by reference in the UFSAR.

5059 Summary: This Design Change Package furnished Unit 2 with four (4) new disk strainer assemblies: a horizontal strainer assembly for each Residual Heat Removal (RHR) train A&B and for both CS S train pump suctions. The four (4) existing sump screens and vortex breakers were completely removed. The new disk strainers were installed as close to the existing containment post LOCA pump suction inlet as practical. The strainer assemblies are supported by a frame structure anchored directly to the floor and incorporate a piping arrangement with associated supports and anchors to connect the strainer to the appropriate RHR and CSS pump suction inlet pipe.

Other changes necessary to complete the modification included , the installation of new HHSI orifice plates, and relocation of various interferences.

GE documents that provide the bases for the total design of the strainers have been reviewed by SNC staff to assure that all design inputs (furnished by SNC and other involved organizations), applicable regulatory requirements, codes and standards have been correctly selected, described, referenced, documented and incorporated into the design. The review found these reports acceptable. These GE specific documents along with Plant Farley specific documents provided the bases for the proposed change.

LDCR	LD Type	5059 Full Eval?	Title
2007025	5059	Yes	Replace the Cooling Coils for the Containment Coolers

Activity: DCP 98-2-9378-0-007

Description of Change: This Design Change Package evaluated and recommended replacement coils for the containment coolers. The existing containment cooler coils which used copper-nickel tubes were replaced with new coils using stainless steel tubes.

5059 Summary: This Desing Change Package evaluated and recommended replacement coils for the containment coolers. The existing containment cooler coils which used copper-nickel tubes, were replaced with new coils, using stainless steel tubes. The new tube material is more resistant to erosion/corrosion. The replacement coils are approximately 1" longer; prior coils and use a waterbox design that allows plugging of individual tubes. The replacement coils are mounted within the existing containment cooler frames using the same mounting points as the existing coils. Thermal performance of the replacement cooler coils is equivalent to that of the existing cooler coils. Impacts of the replacement coils on the service water system flow balance were analyzed and found to be negligible. Due to the design and materials of construction of the replacement coils, they were enveloped by the existing service water system water-hammer analysis. Installation of the replacement coils did not affect seismic qualification of the coolers. The replacement coils were evaluated and found to be equal to or better than the prior containment cooler coils in form, fit and function.

2007037	5059	Yes	Installation Of Inservice Test Plan Service Water Dye Injection Point

Activity: DCP 2979928201

Description of Change: This Design Change Package initiated the installation of test connections on the service water supply piping and instrument tubing. These connections facilitated the testing equipment used to determine service water flow and pressure characteristics.

5059 Summary: This Design Change Package initiated the installation of test connections on the service water supply piping and instrument tubing. These connections facilitated the testing equipment used to determine service water flow and pressure characteristics. These test connections are reflected on drawings that are referenced in the FSAR. These drawings were revised after the implementation of this DCP. Therefore, there was a change to the plant as described in the FSAR.

LDCR	LD Type	5059 Full Eval?	Title
2007052	FS/TB/5	Yes	Containment Sump Screen Modifications

Activity: DCP 1050912301

Description of Change: The existing Plant Farley Unit 1 Emergency Core Cooling System (ECCS) and Containment Spray System (CSS) sump passive screens are to be replaced with new passive strainers to ensure adequate Net Positive Suction Head (NPSH) margin for the successful operation of the ECCS (Residual Heat Removal (RHR)) and CSS pumps during recirculation mode following all postulated accidents. Orifices are installed in the CTMT Floor and Equipment Drain system piping to support sump level during the recirculation mode in response to a design basis accident. Also, one phone is being removed from the Containment due to interference issues.

5059 Summary: This Design Change Package furnished Unit 1 with four (4) new disk strainer assemblies: a horizontal strainer assembly for each Residual Heat Removal (RHR) train A&B pump suction, a horizontal strainer assembly for the CSS train A pump suction, and a vertical strainer assembly with one plenum for CSS train B. The four (4) existing sump screens and vortex breakers were completely removed. The new disk strainers were installed as close to the existing containment post LOCA pump suction inlet as practical. The horizontal strainer assemblies are supported by a frame structure anchored directly to the floor and incorporate a piping arrangement with associated supports and anchors to connect the strainer to the appropriate RHR and CSS pump suction inlet pipe. The vertical strainer assembly has a plenum design that anchors directly to the containment floor covering the pump suction inlet.

Other changes necessary to complete the modification included the relocation of service air and instrument air lines, the installation of new orifice plates, the installation of HHSI Throttle Valves, the removal of breathing air purifiers, the relocation of an electrical box, and modification/relocation of existing pipe supports.

GE documents that provide the bases for the total design of the strainers have been reviewed by SNC staff to assure that all design inputs (furnished by SNC and other involved organizations), applicable regulatory requirements, codes and standards have been correctly selected, described, referenced, documented and incorporated into the design. The review found these reports acceptable. These GE specific documents along with Plant Farley specific documents provided the bases for the proposed change.

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Enclosure 4

Revised NRC Commitments Report

Joseph M. Farley Nuclear Plant - Units 1 and 2
Revision 21 to the Updated Final Safety Analysis Report, 10 CFR 50.59 Report, Technical Specification Bases Changes and Revised NRC Commitments Report

Enclosure 4

Revised NRC Commitments Report

NRC Commitments Number: **00770, 00771, 00772, 00773, 00968, 00969, 00970, 00971, 00972, 00973, 00974, 00975, 00976, 00977, 00978, 00979, 00980, 00981, 01031, 01032, 01033, 01034, 01035, 01036, 01037, 01038, 01039, 01040, 01041, 01042, 01043, 01044, 01045, 01046, 01047, 01050, 01051, 01052, 01053, 01054, 01055, 01056, 01057, 01058, 01059, 01060, 01061, 01062, 01063, 01064, 01065, 01066, 01126, 01127, 01128, 01129, 01130, 01131, 01182, 01183, 02355, 02356, 03294, 03295, 03296, 03297, 03298, 03299, 04318, 04319, 05923, 05927, 05932, 06551.**

Source Documents:

These letters and commitments are associated with FNP's response to NUREG-0612 on Handling of Heavy Loads. Items were given commitment numbers over several years. Many of the commitments were repeated in letters to the NRC and the final NUREG-0612 Phase I SER and Franklin Report that was issued July 25, 1984. This change condenses the list of commitments and marks the related repeat commitments as superseded. References to the related procedures were also added. These changes are editorial and administrative in nature and do not change the intent of the commitments.

Affected Source Documents and Commitments			
From	**Date**	**LC #**	**Subject**
APC	05-15-81	LC 00710	Initial 90-Day Response Issued the following CMTs 01056, 01057, 01058,01059, 01060, 01061, 01062, 01063,01064, 01065, 01066, 01182, 01183
APC	06-24-81	LC 00711	Six Month Response Issued the following CMTs 01051, 01052, 01053, 01054, 01055, 01126, 01127, 01128, 01129, 01130, 01131
APC	09-22-81	LC 00709	Nine Month Response Issued the Following CMTs 01045, 01046, 01047, 01050

Affected Source Documents and Commitments			
From	**Date**	**LC #**	**Subject**
APC	12-18-81	LC 03081	Spent Fuel Pool Re-Rack Issued the Following CMTs that related to Heavy Loads 05923, 05927, 05932
APC	12-22-81	LC 00368	Update of Heavy Loads CMTs Issued the Following CMTs 02355, 02356, 03294, 03295, 03296, 03297, 03298, 03299
APC	03-15-82	LC 00712	Response to an RAI from the Franklin Research Institute (FRI) Technical Evaluation Report Issued the Following CMTs 00772, 00773 01031, 01032, 01033, 01034, 01035, 01036, 01037, 01038, 01039, 01040
APC	06-01-82	LC 00715	Update to LC 00712 Sections 2.1.5.c and 2.1.8.c Head Lift Rig and Upper Internals Lift Rig are the ONLY FNP Special Lifting Devices Issued the Following CMTs 00981
APC	05-15-84	LC 00714	RAI Response on Floor Markings and Special Lift Devices Issued the Following CMTs 00978, 00979, 00980
NRC	07-25-84	LC 00707	0612 Phase I SER and Franklin Report Issued the Following CMTs 00770, 00771,00968, 00969, 00970, 00971, 00972, 00973, 00974, 00975, 00976, 00977, 01041, 01042, 01043, 01044
APC	06-13-85	LC 02402	IN 83-71 to file Lift Rigs Issued the Following CMTs 04318, 04319, 06551

Basis for Change:

These changes were performed as part of a review of the FNP Heavy Load procedures and the new NMPs that have been put in place. These change or editorial and administrative in nature and do not change the intent of the commitments. The intent of the original commitment continues to be met.

NRC Commitments Number: 10082, 10083, 10084, 10085, 10086, 10087

Source Documents:

NRC letter dated September 11, 1996, "Relief Request for use of an Alternative to ASME Code Section XI, Joseph M. Farley Nuclear Plant, Units 1 and 2 (TAC NOS. M94489 and M94490)"

Basis for Change:

As a part of the update to the 2001/2003 Section XI, CC N416-1 will no longer be utilized. The rules previously contained in CC N416-1 have been updated and incorporated into the 2001/2003 Edition of Section XI; therefore, CC N416-1 is no longer needed. These commitments are VOID.