

# ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

## REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9102250169      DOC. DATE: 91/02/19      NOTARIZED: NO      DOCKET #  
FACIL: 50-261 H.B. Robinson Plant, Unit 2, Carolina Power & Light Co      05000261  
AUTH. NAME      AUTHOR AFFILIATION  
SHEPPARD, J.J.      Carolina Power & Light Co.  
RECIP. NAME      RECIPIENT AFFILIATION

Document Control Branch (Document Control Desk)

SUBJECT: Provides rept of changes to facility as described in Amend 9  
to updated FSAR. Rept contains brief description of changes,  
tests & experiments w/summary of safety evaluation of each.

DISTRIBUTION CODE: IE47D      COPIES RECEIVED: LTR 1 ENCL 1      SIZE: 5  
TITLE: 50.59 Annual Report of Changes, Tests or Experiments Made W/out Approv

### NOTES:

	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL
	PD2-1 LA	1 0	PD2-1 PD	5 5
	LO, R	1 0		
INTERNAL:	AEOD/DOA	1 1	AEOD/DSP/TPAB	1 1
	NRR/DLPC/LHFB11	1 1	NRR/DOEA/OEAB11	1 1
	REG FILE 02	1 1	RGN2 FILE 01	1 1
EXTERNAL:	NRC PDR	1 1	NSIC	1 1

### NOTE TO ALL "RIDS" RECIPIENTS:

PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL DESK,  
ROOM P1-37 (EXT. 20079) TO ELIMINATE YOUR NAME FROM DISTRIBUTION  
LISTS FOR DOCUMENTS YOU DON'T NEED!

TOTAL NUMBER OF COPIES REQUIRED: LTTR 15 ENCL 13

MA 4/ulb



Carolina Power & Light Company

ROBINSON NUCLEAR PROJECT DEPARTMENT  
POST OFFICE BOX 790  
HARTSVILLE, SOUTH CAROLINA 29550

FEB 19 1991

Serial: RNP/91-0318  
(10CFR50.59)

United States Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D. C. 20555

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2  
DOCKET NO. 50-261  
LICENSE NO. DPR-23  
1990 CHANGES TO THE FACILITY REPORT

Gentlemen:

Carolina Power and Light Company (CP&L) provides this report of changes to the facility as described in Amendment 9 to the Updated Final Safety Analysis Report. The enclosure is submitted as specified in 10CFR50.59(b)(2) and contains a brief description of any changes, tests, and experiments, including a summary of the safety evaluation of each. This report provides those changes made operational through August 22, 1990.

Very truly yours,

J. J. Sheppard  
General Manager  
H. B. Robinson S. E. Plant

RDC:lko

Enclosure

cc: Mr. S. D. Ebnetter  
Mr. L. W. Garner

9102250169 910219  
PDR ADOCK 05000261  
PDR

IF47  
11

AMENDMENT 9 CHANGES AS DESCRIBED IN THE SAFETY ANALYSIS REPORT

A synopsis of the changes to the facility as described in Amendment 9 to the Updated Final Safety Analysis Report is provided below. These changes have been reviewed in accordance with Plant procedures and none have been determined to involve an unreviewed safety question as defined by 10CFR50.59.

Plant Modification No. 973, MCC-6 Feeder Upgrade

DESCRIPTION: A modification to the 480 Volt MCC No. 6 Feeder was required because the existing feeder cables to MCC No. 6 had exceeded the continuous ampacity rating and could have experienced amperages in excess of the emergency overload rating of the cables. This overload condition could cause the thermal aging of these cables to be accelerated, thus reducing the life of the cables to less than forty years. This condition was discovered as part of the Design Basis Reconstitution Project.

SAFETY EVALUATION SUMMARY: The replacement of this cable decreased the probability of cable failure and increased the reliability of the equipment and safety related AC Electrical System. The FSAR was revised as a result of this modification to incorporate the combustible fire loading considerations into the Fire Hazards Analysis.

Plant Modification No. 1002, Liquid Waste Disposal Piping Reroute

DESCRIPTION: This modification extended the Spent Resin Transfer Line from the Waste Drumming Room in the Reactor Auxiliary Building to the new Radwaste Processing Facility.

SAFETY EVALUATION SUMMARY: The new piping, valves, and fittings were added to a Non-Q, Non-Seismic portion of the Liquid Waste Disposal System. Accidents analyzed in sections 15.7.2 and 15.7.3 were reviewed, and they bound the changes made by this modification because any releases due to system failures would be contained by the Auxiliary Building or the Radwaste Facility. Revisions to sections 11.2, 11.4.2.2, and 15.7 of the FSAR were made to reflect routing a portion of the Liquid Waste Disposal System piping outside of the Auxiliary Building. The Technical Specifications were not affected by this modification.

Plant Modification No. 1004, DB50/DB75 Air Circuit Breaker Upgrade

DESCRIPTION: The Electrical Distribution System was modified to upgrade the interrupting ratings of the DB-50 and DB-75 air circuit breakers which feed the emergency busses. This modification was necessary because it had been determined that short-circuit currents at these buses during certain alignments would exceed the capacity of the breakers. This condition was identified by the NRC during a Safety System Functional Inspection.

**SAFETY EVALUATION SUMMARY:** The FSAR was revised as a result of this modification to depict current limiters on the load side terminals of each breaker shown on the 480V One Line Diagram. The Technical Specifications were not affected by this modification. No equipment relating to the initiation of any FSAR Chapter 15 accident was adversely affected. The addition of safety-related current limiters, current transformers, and Amptector trip units did not introduce any single failure mechanisms, nor did the modification reduce any safety margin or the possibility of a fault causing damage to equipment.

**Plant Modification 1028, Dedicated Shutdown Bus Undervoltage Alarm**

**DESCRIPTION:** The power source for both Dedicated Shutdown (DS) undervoltage and overvoltage alarm circuits were modified. The new source enables an undervoltage alarm to be provided on a complete loss of power to the DS bus. Adequate current to "pick up" the ICS relay on both the overvoltage and undervoltage circuits is also supplied.

**SAFETY EVALUATION SUMMARY:** The DS bus and undervoltage and overvoltage relays are non-safety related and do not perform functions related to safety. The circuits provide annunciation of the DS bus abnormal voltage conditions, and changing the power source for these circuits does not change that function. The FSAR was revised to reflect the circuit alarm function.

**Plant Modification No. 1029, Individual Control Power Isolation for the Main Transformers**

**DESCRIPTION:** This modification removed the normal and alternate power sources for the main transformers cooling system and installed new normal and alternate non-safety related power supplies. This modification was required because the previous system did not allow Transmission Maintenance personnel to selectively de-energize one cooling system without affecting the other cooling system when emergency repairs were necessary. In addition, this modification reduced the load on a slightly overloaded Motor Control Center, provided adequate protection for marginally protected 75 KVA transformers in the cooling systems, and provided sufficient spare capacity to accommodate load growth.

**SAFETY EVALUATION SUMMARY:** The main transformers are used to raise the 22KV generator output to 230KV for delivery to the 230KV switchyard. During cold shutdown, the main transformers can be used to supply offsite power to balance of plant equipment. When required from a nuclear safety concern, offsite power can also be backfed through the main and auxiliary transformers during hot shutdown condition. The main transformer cooling systems are not safety related. The Technical Specifications have no requirements for the cooling system. A figure in the FSAR was revised to show that the normal power source for the cooling systems.

**Plant Modification No. 1057, Turbine Building Area Temporary Power Supply**

**DESCRIPTION:** This modification provided a permanent source of power, from offsite power, for the existing construction power stations located on the mezzanine level of the Turbine Building, and at the main transformer area. This modification was necessary to prevent the overloading of the 480VAC Switchgear Bus 2A which was previously used as a power source during pre-outage and outage periods.

**SAFETY EVALUATION SUMMARY:** The use of off-site power to supply construction power stations has no impact on any safe shutdown component or system. This modification installed new cables in the Turbine Building, which is classified as a Fire Zone. Therefore, the combustible loading of this Fire Zone was affected, and the FSAR was revised accordingly. The added combustibles for the fire zone was considered insignificant, and had no affect on compliance with 10CFR50, Appendix R.

**Special Procedure No. SP-955, Fuel Assembly Oxide Thickness and Fuel Rod Fission Gas Content Measurement (No FSAR Change)**

**DESCRIPTION:** A special procedure was implemented for inspection of spent fuel assemblies and for tracking the associated movement of the fuel. This procedure measured the thickness of the oxide layer on fuel rods from selected fuel assemblies. The information gained from this inspection was used to determine the effect of the accelerated lithium injection program on these fuel assemblies. The inspection was performed by placing a probe in contact with a peripheral fuel rod. An oxide thickness profile was then obtained as the fuel assembly was lowered past the stationary probe. This procedure also covered measurement of fission gas in selected fuel rods by using a nondestructive gamma scanning process. The gamma scans were used to determine pellet grain sizes and the effects these variations had on fission gas release. This data was needed to design fuel for longer operating cycles.

**SAFETY EVALUATION SUMMARY:** The subjects of spent fuel handling, storage, and inspection are found in the Updated FSAR, sections 9.1.2, 9.1.4, and 15.7.4, and are discussed in general. However, no specific details regarding fuel inspection as conducted by this procedure are presented. The Safety Analysis for this procedure addressed equipment weight concerns, impact of the inspection equipment on the fuel rods, and sequence of fuel assembly movement. In addition, methodologies to prevent dropping of a fuel element were utilized, and the consequences of a fuel handling accident were reviewed. During the inspection process, standard safeguards for fuel handling were maintained. This process did not result in any facility change. However, it was considered as a test not described in the safety analysis report.

Enclosure to Serial: RNP/91-0318  
Page 4 of 4

**Engineering Evaluation EE-90-142, Steam Generator Blowdown (SGBD) Steam Dump Line Orifice Replacement**

**DESCRIPTION:** An Engineering Evaluation was performed to evaluate the replacement of orifices in the Steam Generator Blowdown Steam Dump lines with the same size orifices that would reduce flow in the lines from 60 gpm to a maximum of 50 gpm per line for each of the three lines. The reduced flow was needed to reduce failures of inlet globe valves to these lines.

**SAFETY EVALUATION SUMMARY:** The replacement in kind for orifices was structurally equivalent to the original orifices. The Steam Generator Blowdown lines are not included in the Plant Technical Specifications. The system is discussed in the FSAR, and a change was required to revise the orifice flowrate. The SGBD system is not safety related.

**Plant Modification No. 999, Removal of Leakoff Lines from Primary Valves (A9-010)**

**DESCRIPTION:** The removal of gland leakoff piping, as justified through testing of valve packing sealing capabilities by industry groups, was implemented to reduce the number of flowpaths subject to possible flow of reactor coolant fluid, and thus reducing the potential for a reactor coolant leak inside containment. The affected valves have a "live-load" packing arrangement, as recommended by EPRI, to provide the current gland sealing technology to aim at achieving zero valve stem leakage.

**SAFETY EVALUATION SUMMARY:** This modification did not change the system functional operation associated with the affected valves. The removal of the leakoff lines reduced the accident probability and the accident consequences of the FSAR Chapter 15 analysis for reactor coolant system leakage. The Technical Specifications were not affected by this change.