

Mr. James Scarola, Vice President
Shearon Harris Nuclear Power Plant
Carolina Power & Light Company
Post Office Box 165, Mail Code: Zone 1
New Hill, North Carolina 27562-0165

March 13, 2002

SUBJECT: SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1 - EMERGENCY
ACTION LEVEL CHANGES (TAC NO. MB1911)

Dear Mr. Scarola:

By letter dated May 1, 2001, Carolina Power & Light Company (CP&L) submitted proposed changes to the Shearon Harris Nuclear Power Plant (SHNPP) emergency action levels (EALs). CP&L indicated that EAL Revision 01-1 was submitted for NRC staff review and approval prior to implementation in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Appendix E. The enclosed Safety Evaluation (SE) provides a comparison of the currently approved EALs and the proposed Revision 01-1 as well as a summary of the 10 CFR 50.54(q) evaluation performed by CP&L, which included the basis for the determination that the changes do not decrease the effectiveness of the SHNPP Emergency Plan.

The Nuclear Regulatory Commission has completed its review of the proposed changes and the supporting documentation. We find that the requested changes meet the requirements of 10 CFR 50.47(b)(4) and Appendix E to 10 CFR Part 50, and these findings are summarized in the enclosed SE. CP&L stated in the May 1, 2001, letter that these changes were discussed and agreed upon with the appropriate offsite governmental authorities. Therefore, CP&L may implement the proposed changes to the EALs.

Sincerely,

/RA/

John M. Goshen, Project Manager, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-400

Enclosure: Safety Evaluation

cc w/enclosure: See next page

Mr. James Scarola, Vice President
Shearon Harris Nuclear Power Plant
Carolina Power & Light Company
Post Office Box 165, Mail Code: Zone 1
New Hill, North Carolina 27562-0165

March 13, 2002

SUBJECT: SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1 - EMERGENCY
ACTION LEVEL CHANGES (TAC NO. MB1911)

Dear Mr. Scarola:

By letter dated May 1, 2001, Carolina Power & Light Company (CP&L) submitted proposed changes to the Shearon Harris Nuclear Power Plant (SHNPP) emergency action levels (EALs). CP&L indicated that EAL Revision 01-1 was submitted for NRC staff review and approval prior to implementation in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Appendix E. The enclosed Safety Evaluation (SE) provides a comparison of the currently approved EALs and the proposed Revision 01-1 as well as a summary of the 10 CFR 50.54(q) evaluation performed by CP&L, which included the basis for the determination that the changes do not decrease the effectiveness of the SHNPP Emergency Plan.

The Nuclear Regulatory Commission has completed its review of the proposed changes and the supporting documentation. We find that the requested changes meet the requirements of 10 CFR 50.47(b)(4) and Appendix E to 10 CFR Part 50, and these findings are summarized in the enclosed SE. CP&L stated in the May 1, 2001, letter that these changes were discussed and agreed upon with the appropriate offsite governmental authorities. Therefore, CP&L may implement the proposed changes to the EALs.

Sincerely,

/RA/

John M. Goshen, Project Manager, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-400

Enclosure: Safety Evaluation

cc w/enclosure: See next page

Accession Number ML020730745

DISTRIBUTION :

PUBLIC	G. Hill (2)	B. Bonser, RII
PDII-2 Rdg.	ACRS	P Milligan
E. Dunnington (Hard Copy)	OC/LFMB	C Christiansen, RII
JGoshen	H. Berkow	K Gibson
R. Correia	OGC	

OFFICE	PM:PDII/S2	LA:PDII/S2	OGC	SC/PDII-2
NAME	JGoshen	EDunnington	SBrock	RCorreia
DATE	02/27/02	02/27/02	03/05/02	03/11/02

OFFICIAL RECORD COPY

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

ON PROPOSED CHANGES FOR
CAROLINA POWER & LIGHT COMPANY.
SHEARON HARRIS NUCLEAR POWER PLANT EMERGENCY ACTION LEVELS
DOCKET NO. 50-400

1.0 INTRODUCTION

This Safety Evaluation (SE) addresses proposed changes to the Shearon Harris Nuclear Power Plant (SHNPP) emergency action levels (EALs) submitted by Carolina Power & Light Company (CP&L, the licensee) in a letter dated May 1, 2001.

2.0 APPLICABLE REGULATIONS AND GUIDANCE

Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50.47(b)(4) states, in part: "A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee,..."

10 CFR Part 50, Appendix E, Section IV.B states, in part: "...These emergency action levels shall be discussed and agreed on by the applicant and State and local governmental authorities and approved by the NRC..."

Appendix E, Subsection IV.C, to 10 CFR Part 50 states, in part: "...Emergency action levels (based not only on onsite and offsite radiation monitoring information but also on readings from a number of sensors that indicate a potential emergency, such as pressure in the containment and response of the Emergency Core Cooling System) for notification of offsite agencies shall be described...The emergency classes defined shall include (1) notification of unusual events, (2) alert, (3) site area emergency, and (4) general emergency..."

Regulatory Guide (RG)1.101, "Emergency Planning and Preparedness for Nuclear Power Reactors," Revision 2, states, in part: "The criteria and recommendations contained in Revision 1 of NUREG-0654/Federal Emergency Management Agency (FEMA) -REP-1 are considered by the Nuclear Regulatory Commission (NRC) staff to be acceptable methods for complying with the standards in 10 CFR 50.47 that must be met in on-site and off-site emergency response plans."

Section II.D of NUREG-0654/FEMA-REP-1, Rev 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," includes the following criteria for EALs:

1. An emergency classification and emergency action level scheme as set forth in Appendix 1 must be established by the licensee.
2. The initiating conditions shall include the example conditions found in Appendix 1 [of NUREG-0654] ...

RG 1.101, Revision 3, endorsed Nuclear Management and Resources Council (NUMARC) / NESP-007, "Methodology for Development of Emergency Action Levels," as an acceptable alternative to NUREG-0654 for developing EAL schemes.

Emergency Preparedness Position No. 1, "Emergency Preparedness Position (EPPOS) on Acceptable Deviations from Appendix 1 of NUREG-0654 Based upon the Staff's Regulatory Analysis of NUMARC/NESP-007, 'Methodology for Development of Emergency Action Levels'," dated June 1, 1995, states that licensees could utilize the technical bases under the example (EALs) in NUMARC/NESP-007 to enhance and clarify some of their site-specific EALs developed from NUREG-0654. (The chosen classification scheme, whether based on Appendix 1 to NUREG-0654 or NUMARC/NESP-007, must remain internally consistent.)

3.0 BACKGROUND

In a letter dated May 1, 2001, the licensee requested NRC review and approval of proposed changes to the SHNPP EALs. Enclosure 1 to the letter provided a comparison of the currently approved EALs and proposed Revision 01-1. Enclosure 1 also provided a summary of the 10 CFR 50.54(q) evaluation performed by the licensee, including the basis for the determination that the changes do not decrease the effectiveness of the SHNPP Emergency Plan.

4.0 EVALUATION

The licensee grouped the changes in Revision 01-1 into the following three categories:

- A. Change Comparison for EAL Flowpath terminus (no event condition identified)
- B. Change Assessment - Deletion of EAL 6-2-1 for loss of Emergency Response Facility Information System (ERFIS) Computer
- C. Change Assessment - Other Administrative and Clerical Changes

The proposed changes in these three categories were reviewed using guidance provided in Appendix 1 to NUREG-0654/FEMA-REP-1, Rev.1, NUMARC/NESP-007, Rev. 2 and EPPOS No. 1, "Emergency Preparedness Position (EPPOS) on Acceptable Deviations from Appendix 1 of NUREG-0654 Based upon the Staff's Regulatory Analysis of NUMARC/NESP-007, 'Methodology for Development of Emergency Action Levels'," dated June 1, 1995.

4.1 Change Comparison for EAL Flowpath terminus (no event condition identified)

Under this category, the licensee proposed to:

Revise the EAL Flowpath terminus as follows: "Deleted ER [Emergency Response] C-003 and replaced SP-017 with SEC-NGG [Nuclear Generation Group] C-2147."

The licensee indicated that other report ability requirements are referenced at the end of the EAL flowpath in the situation where no emergency declaration condition exists. This is provided as a human factor aid to ensure that other non-Emergency Plan related actions are referenced. ERC-003 no longer contains any report ability requirements and site procedure SP-017 has been replaced by corporate NGG Procedure SEC-NGGC-2147.

The staff finds that the changes in the flowpath terminus are editorial in nature and are made to make notifications easier and are therefore acceptable.

4.2 Category B - Change Assessment - Deletion of EAL 6-2-1 for Loss of ERFIS Computer

The licensee proposed to delete the following EAL:

EAL 6-2-1 for Loss of ERFIS computer.

The licensee references NUMARC/NESP-007 EAL methodology as specifically eliminating the loss of the computer for Safety Parameter Display (SPDS) monitoring as an Unusual Event. The licensee identified the NUMARC methodology includes unavailability of compensatory computer data for evaluations of the Alert and Site Area Emergency criteria, as does the SHNPP methodology.

The licensee states that “Eliminating the loss of ERFIS as criteria requiring an event declaration does not diminish the use of the system for transmission of data to the NRC via the ERDS data link. Also, plant operational and monitoring requirements are not altered in any manner. The operational availability of the system is not being altered as a result of the EAL change.”

The licensee also references NRC EPPOS 1, specifically, “Other Changes” stating in part: “The above changes do not represent a comprehensive list of possible improvements that could be made by utilizing the technical bases in NUMARC/NESP-007. Licensees may provide to the NRC other changes that utilize NESP-007 guidance.”

In its review of this EAL revision, the staff considered guidance provided in NUREG-0654, NUMARC/NESP-007 and EPPOS-1.

EPPOS-1 provides the following guidance:

“For EALs related to loss of annunciation or indication in the Control Room, licensees may use the technical bases in the following NUMARC/NESP-007 ICs to enhance their classification schemes:

SU3 Unplanned Loss of Most or All Safety System Annunciation or Indication in the Control Room for Greater Than 15 Minutes.”

The technical bases state in part: “This IC and its associated EAL are intended to recognize the difficulty associated with monitoring changing plant conditions without the use of a major portion of the annunciation or indication equipment.”

Recognition of the availability of computer-based indication equipment is considered (SPDS, plant computer, etc.).

“Unplanned” loss of annunciators or indicator excludes scheduled maintenance and testing activities.

“Compensatory non-alarming indications: in this context includes computer-based information such as SPDS. This should include all computer systems available for this use depending on specific plant design and subsequent retrofits....”

The deletion of this indication in the licensee’s EAL scheme is consistent with the guidance in EPPOS-1 for EALs related to loss of annunciation or indication in the control room. Therefore,

the staff concludes that the deletion of the EAL for loss of the ERFIS plant process computer system is acceptable.

4.3 Change Assessment - Other Administrative and Clerical Changes

The licensee proposed:

- *The deletion of the term "ERFIS" from the Unusual Event Matrix category 6 title is consistent with the deletion of EAL 6-2-1 (loss of ERFIS plant process computer system).*
- *Renumbering of EAL 6-3-1 to 6-2-1 retains consistency in the SHNPP Specific EAL designation protocol.*

The staff's review finds that the changes in the title and numbering are editorial in nature and were made to make classification easier. These changes are acceptable.

5.0 STATE AND LOCAL GOVERNMENTAL AGREEMENT

In the May 1, 2001, letter, the licensee stated that these proposed EAL changes were discussed and agreed upon by the licensee (CP&L) and State of North Carolina and local governmental authorities as required by 10 CFR Part 50, Appendix E, IV.B.

6.0 CONCLUSION

The proposed revised EALs are consistent with guidance provided in NUREG-0654 and NUMARC/NESP-007. The staff finds that the proposed revised EAL scheme meets the requirements of 10 CFR 50.47(b)(4) and Appendix E to 10 CFR Part 50 and is acceptable; therefore, the licensee can implement the proposed revision.

Principal Contributor: P. A. Milligan

Date: March 13, 2002

Mr. James Scarola
Carolina Power & Light Company

Shearon Harris Nuclear Power Plant
Unit 1

cc:

Mr. William D. Johnson
Vice President and Corporate Secretary
Carolina Power & Light Company
Post Office Box 1551
Raleigh, North Carolina 27602

Mr. Chris L. Burton
Director of Site Operations
Carolina Power & Light Company
Shearon Harris Nuclear Power Plant
Post Office Box 165, MC: Zone 1
New Hill, North Carolina 27562-0165

Resident Inspector/Harris NPS
c/o U.S. Nuclear Regulatory Commission
5421 Shearon Harris Road
New Hill, North Carolina 27562-9998

Mr. Robert P. Gruber
Executive Director
Public Staff NCUC
Post Office Box 29520
Raleigh, North Carolina 27626

Ms. Karen E. Long
Assistant Attorney General
State of North Carolina
Post Office Box 629
Raleigh, North Carolina 27602

Chairman of the North Carolina
Utilities Commission
Post Office Box 29510
Raleigh, North Carolina 27626-0510

Public Service Commission
State of South Carolina
Post Office Drawer 11649
Columbia, South Carolina 29211

Ms. Linda Coleman, Chairperson
Board of County Commissioners
of Wake County
P. O. Box 550
Raleigh, North Carolina 27602

Mr. Mel Fry, Director
Division of Radiation Protection
N.C. Department of Environment
and Natural Resources
3825 Barrett Dr.
Raleigh, North Carolina 27609-7721

Mr. Gary Phillips, Chairman
Board of County Commissioners
of Chatham County
P. O. Box 87
Pittsboro, North Carolina 27312

Mr. Terry C. Morton
Manager
Performance Evaluation and
Regulatory Affairs CPB 7
Carolina Power & Light Company
Post Office Box 1551
Raleigh, North Carolina 27602-1551

Mr. Richard J. Field, Manager
Regulatory Affairs
Carolina Power & Light Company
Shearon Harris Nuclear Power Plant
P.O. Box 165, Mail Zone 1
New Hill, NC 27562-0165

Mr. Robert J. Duncan II
Plant General Manager
Carolina Power & Light Company
Shearon Harris Nuclear Power Plant
P.O. Box 165, Mail Zone 3
New Hill, North Carolina 27562-0165

Mr. John R. Caves, Supervisor
Licensing/Regulatory Programs
Carolina Power & Light Company
Shearon Harris Nuclear Power Plant
P. O. Box 165, Mail Zone 1
New Hill, NC 27562-0165

Mr. John H. O'Neill, Jr.
Shaw, Pittman, Potts & Trowbridge
2300 N Street, NW.
Washington, DC 20037-1128