

April 30, 2007

Mr. Jeffrey T. Gasser
Executive Vice President
Southern Nuclear Operating
Company, Inc.
Post Office Box 1295
Birmingham, AL 35201-1295

SUBJECT: EMERGENCY ACTION LEVEL REVISIONS FOR SOUTHERN NUCLEAR OPERATING COMPANY, INC., EDWIN I. HATCH NUCLEAR PLANT, UNIT NOS. 1 AND 2 (HNP); JOSEPH M. FARLEY NUCLEAR PLANT, UNITS 1 AND 2 (FNP); VOGTLE ELECTRIC GENERATING PLANT, UNITS 1 AND 2 (VEGP) (TAC NOS. MC9459, MC9460, MC9457, MC9458, MC9461, AND MC9462)

Dear Mr. Gasser:

By letter dated December 30, 2005, as supplemented by letters dated October 13, 2006, and April 2, 2007, Southern Nuclear Operating Company, Inc., requested prior Nuclear Regulatory Commission (NRC) approval for changes to the emergency action levels (EALs) for HNP, FNP, and the VEGP.

The requested changes to the licensee's EALs support a conversion from their current EAL scheme to a scheme based on Nuclear Energy Institute's (NEI's) 99-01, "Methodology for Development of Emergency Action Levels", Revision 4, January 2003, in accordance with Regulatory Issue Summary 2003-18, including Supplements 1 and 2, "Use of NEI 99-01, Methodology for Development of Emergency Action Levels." HNP and FNP currently use an EAL scheme based on NUREG-0654, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants." VEGP currently uses an EAL scheme based on NUMARC (Nuclear Management and Resources Counsel (now NEI)/NESP (National Environmental Studies Project) NUMARC/NESP-007, "Methodology for Development of Emergency Action Levels," Revision 2.

The NRC staff has completed a technical and regulatory review of the proposed EAL changes and supporting documentation. We have concluded that incorporation of the proposed changes do not decrease the effectiveness of the applicable Emergency Plans and that the plans, as changed, continue to meet the standards of Title 10 of the *Code of Federal Regulations*, Part 50, Section 50.47, "Emergency plans," paragraph (b) and the requirements of Appendix E to Part 50, "Emergency Planning and Preparedness for Production

J. Gasser

-2-

and Utilization Facilities.” The basis for our conclusion is contained in the enclosed safety evaluation. If you have any questions, please contact me at 301-415-1493.

Sincerely,

/RA/

Robert E. Martin, Senior Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-321, 50-366, 50-348,
50-364, 50-424, and 50-425

Enclosure:
Safety Evaluation

cc w/encl: See next page

J. Gasser

-2-

April 30, 2007

and Utilization Facilities.” The basis for our conclusion is contained in the enclosed safety evaluation. If you have any questions, please contact me at 301-415-1493.

Sincerely,

/RA/

Robert E. Martin, Senior Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-321, 50-366, 50-348,
50-364, 50-424, and 50-425

Enclosure:
Safety Evaluation

cc w/encl: See next page

DISTRIBUTION:

PUBLIC

RidsNrrPMRMartin (hard copy)
RidsRgn2MailCenter(SShaeffler)
RidsAcrcAcnwMailCenter
EWeiss, NSIR

LPL2-1 R/F
RidsNrrLAMO'Brien (hard copy)
RidsNrrDorlLpl2-1(EMarinos)
RidsOgcRp
DJohnson, NSIR

Accession Number: ML071100068

* by memo dated

OFFICE	NRR/LPL2-1/PM	NRR/LPL2-1/LA	NSIR/LIB/BC	NRR/LPL2-1/BC
NAME	RMartin:nc	MO'Brien	EWeiss *	EMarinos
DATE	4/30/2007	4/30/2007	04/18/2007	4/30/2007

OFFICIAL RECORD COPY

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO PROPOSED REVISIONS TO THE EMERGENCY ACTION LEVELS FOR THE
EDWIN I. HATCH NUCLEAR PLANT, UNIT NOS. 1 AND 2 (HNP)
JOSEPH M. FARLEY NUCLEAR PLANT, UNITS 1 AND 2 (FNP)
VOGTLE ELECTRIC GENERATING PLANT, UNITS 1 AND 2 (VEGP)
DOCKET NOS. 50-321, 50-366, 50-348, 50-364, 50-424, AND 50-425

1.0 INTRODUCTION

By letter dated December 30, 2005 (Reference No. 1), as supplemented by letters dated October 13, 2006 and April 2, 2007 (Reference Nos. 2 and No. 3), Southern Nuclear Operating Company, Inc. (SNC or licensee), requested prior Nuclear Regulatory Commission (NRC) staff approval for changes to the emergency action levels (EALs) for HNP, FNP, and VEGP.

The requested changes to the licensee's EALs support a conversion from their current EAL scheme to a scheme based on Nuclear Emergency Institute's (NEI's) NEI 99-01, "Methodology for Development of Emergency Action Levels," Revision 4, January 2003 (Reference No. 5), in accordance with Regulatory Issue Summary (RIS) 2003-18, including Supplements 1 & 2, "Use of NEI 99-01, Methodology for Development of Emergency Action Levels," (Reference No. 6). HNP and FNP currently use an EAL scheme based on NUREG-0654, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants" (Reference No. 8). VEGP currently uses an EAL scheme based on NUMARC (Nuclear Management and Resources Counsel (now NEI)/NESP (National Environmental Studies Project) NUMARC/NUMARC/NESP-007, Revision 2 "Methodology for Development of Emergency Action Levels," (Reference No. 4).

2.0 REGULATORY EVALUATION

2.1 Regulations

Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, Section 50.47, "Emergency plans," paragraph (a)(1), states that no operating license for a nuclear power reactor will be issued unless a finding is made by the NRC that the state of onsite and offsite emergency preparedness provides reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. Section 50.47 also establishes standards that must be met by the onsite and offsite emergency response plans for NRC staff to make a positive finding that there is reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. One of these standards, 50.47(b)(4),

stipulates that emergency plans include a standard emergency classification and action level scheme.

Section IV.B, "Assessment Actions," to Appendix E, "Emergency Planning and Preparedness for Production and Utilization Facilities," of 10 CFR Part 50 provides that emergency plans are to include EALs, which are to be used as criteria for determining the need for notification and participation of local and State agencies and which are to be used for determining when and what type of protective measures should be considered both onsite and offsite to protect health and safety. EALs are to be based on in-plant conditions and instrumentation, and also on onsite and offsite monitoring. Section IV.B of Appendix E provides that initial EALs shall be discussed and agreed on by the applicant and State and local authorities and be approved by NRC, and reviewed annually thereafter with State and local authorities. In addition, Section IV.B of Appendix E states that an EAL revision must be approved by the NRC before implementation if it involves: (1) the changing from an EAL scheme based on NUREG-0654/FEMA (Federal Emergency Management Agency), "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," November 1980, to a scheme based on NUMARC/NESP-007, or NEI 99-01; (2) the licensee is proposing an alternate method for complying with the regulations; or (3) the EAL revision has been evaluated by the licensee as constituting a decrease in effectiveness.

2.2 Guidance

Revision 4 to Regulatory Guide (RG) 1.101, issued in July 2003 (Reference No. 7), endorses the guidance contained in Reference No. 5 as acceptable to the NRC staff as an alternative method to that described in the following guidance for developing EALs required in Section IV of Appendix E to 10 CFR Part 50 and 10 CFR 50.47(b)(4):

1. Appendix 1 to NUREG-0654
2. NUMARC/NESP-007, Revision 2

Reference No. 6 provides guidance for developing or changing a standard emergency classification and action level scheme. In addition, this RIS provides recommendations to assist licensees, consistent with Section IV.B to Appendix E of Part 50, in determining whether to seek prior NRC approval of deviations from the guidance.

3.0 TECHNICAL EVALUATION

The proposed changes were submitted to the NRC for a technical and regulatory review prior to implementation by the licensee, as required under Section IV.B of Appendix E to 10 CFR Part 50.

This evaluation is based on a revision to EALs provided in the application letter and supplemented by SNC's response to the NRC's requests for additional information. FNP and HNP currently utilize an EAL scheme based on Reference No. 8. VEGP currently utilizes an EAL scheme based on Reference No. 4. The licensees are converting to an EAL scheme based on Reference No. 5 in accordance with the guidance from Reference No. 6.

The staff reviewed the proposed EALs against the guidance in Reference No. 5 to determine if the EALs, as proposed, meet the following guidelines:

- (1) Consistency, (i.e., the EALs would lead to similar decisions under similar circumstances at different plants);
- (2) Human engineering and user friendliness;
- (3) Potential for classification upgrade only when there is an increasing threat to public health and safety;
- (4) Ease of upgrading and downgrading;
- (5) Thoroughness in addressing, and disposing of, the issues of completeness and accuracy raised regarding NUREG-0654, Appendix 1;
- (6) Technical completeness for each classification level;
- (7) A logical progression in classification for multiple events; and
- (8) Objective, observable values.

The NRC staff reviewed the proposed EALs against EALs implemented at other plants of a similar design and has determined that the proposed EALs are consistent with EALs implemented at other plants, uses objective and observable values, and is consistent with the intent of Reference No. 5.

The staff has determined that the proposed EALs are worded such that human engineering and user friendliness concerns are addressed.

The staff reviewed the proposed EAL sets, (a group of EALs within a category related to a common concern, i.e., the Unusual Event, Alert, Site Area Emergency, and General Emergency related to a failure of the plant to shutdown via an automatic scram would be considered an EAL set), and has determined that classification upgrades are based upon an increasing threat to public health and safety, can effectively support upgrading and downgrading, follows a logical progression for multiple events, and is in accordance with the intent of Reference No. 5.

The staff reviewed the proposed EALs for technical completeness and accuracy and has determined that the proposed EALs are consistent with Reference No. 5 which was determined to be an acceptable alternative to NUREG-0654, Appendix 1 EALs (Reference No. 7).

4.0 CONCLUSION

The NRC staff performed a technical and regulatory review of the proposed changes to the HNP, FNP, and VEGP EALs. The NRC staff has determined, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the proposed emergency plan changes will not be inimical to the common defense and security or to the health and safety of the public. The NRC staff has determined that incorporation of the proposed changes do not decrease the effectiveness of the applicable Emergency Plans and the plans, as changed, continue to meet the standards of Section 50.47(b) and the requirements of Appendix E to 10 CFR Part 50.

Reference No. 9 contains the EAL Basis Documents for FNP, HNP, and VEGP.

5.0 REFERENCES

1. Letter from Southern Nuclear Operating Company, Inc., to the NRC dated December 30, 2005, "Transition to NEI 99-01 Emergency Action Level Scheme," Agencywide Documents Access Management Systems (ADAMS) Accession No. ML060180178.
2. Letter from Southern Nuclear Operating Company, Inc., to the NRC dated October 13, 2006, "Response to Request for Additional Information," ADAMS Accession No. ML063120370.
3. Letter from Southern Nuclear Operating Company, Inc., to the NRC dated April 2, 2007, "Response to Request for Additional Information," ADAMS Accession No. ML071010377.
4. NUMARC (Nuclear Utilities Management Counsel (now NEI)/NESP (National Environmental Studies Project) document, entitled NESP-007, "Methodology for Development of Emergency Action Levels," Revision 2, January 1992. ADAMS Accession No. ML041120174.
5. NEI 99-01 "Methodology for Development of Emergency Action Levels," Revision 4, January 2003, ADAMS Accession No. ML041470143.
6. Regulatory Issue Summary 2003-18, including Supplements 1 and 2, "Use of NEI 99-01, Methodology for Development of Emergency Action Levels,." ADAMS Accession No's. ML032580518, ML041550395, and ML051450482.
7. "Emergency Planning and Preparedness for Nuclear Power Reactors," RG 1.101, Revision 4, July 2003, ADAMS Accession No. ML032020276.
8. NUREG-0654, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," ADAMS Accession No. ML040420012.
9. Technical Basis for FNP, HNP and VEGP, as referenced in Enclosure 2 of reference 3, ADAMS No. ML071010426.

Principal Contributor: Don A. Johnson, NSIR/DPR

Date: April 30, 2007

Joseph M. Farley Nuclear Plant, Units 1 & 2

cc:

Mr. J. Randy Johnson
Vice President - Farley
Joseph M. Farley Nuclear Plant
7388 North State Highway 95
Columbia, AL 36319

Mr. B. D. McKinney, Licensing Manager
Southern Nuclear Operating Company, Inc.
P.O. Box 1295
Birmingham, AL 35201-1295

Mr. M. Stanford Blanton
Balch and Bingham Law Firm
P.O. Box 306
1710 Sixth Avenue North
Birmingham, AL 35201

Mr. J. Gasser
Executive Vice President
Southern Nuclear Operating Company, Inc.
P.O. Box 1295
Birmingham, AL 35201

State Health Officer
Alabama Department of Public Health
434 Monroe St.
Montgomery, AL 36130-1701

Chairman
Houston County Commission
P.O. Box 6406
Dothan, AL 36302

Resident Inspector
U.S. Nuclear Regulatory Commission
7388 N. State Highway 95
Columbia, AL 36319

William D. Oldfield
SAER Supervisor
Southern Nuclear Operating Company, Inc.
P.O. Box 470

Ashford, AL 36312

Edwin I. Hatch Nuclear Plant, Units 1 & 2

cc:

Mr. Dennis R. Madison
Vice President - Hatch
Edwin I. Hatch Nuclear
11028 Hatch Parkway North
Baxley, GA 31513

600 Peachtree St, NE, Suite 5200
Atlanta, GA 30308-2216

Laurence Bergen
Oglethorpe Power Corporation
2100 E. Exchange Place
P.O. Box 1349
Tucker, GA 30085-1349

Chairman
Appling County Commissioners
County Courthouse
Baxley, GA 31513

Mr. R. D. Baker
Manager - Licensing
Southern Nuclear Operating Company, Inc.
P.O. Box 1295
Birmingham, AL 35201-1295

Mr. Jeffrey T. Gasser
Executive Vice President
Southern Nuclear Operating Company, Inc.
P.O. Box 1295
Birmingham, AL 35201-1295

Resident Inspector
Plant Hatch
11030 Hatch Parkway N.
Baxley, GA 31531

Mr. K. Rosanski
Resident Manager
Oglethorpe Power Corporation
Edwin I. Hatch Nuclear Plant
P.O. Box 2010
Baxley, GA 31515

Harold Reheis, Director
Department of Natural Resources
205 Butler Street, SE., Suite 1252
Atlanta, GA 30334

Steven M. Jackson
Senior Engineer - Power Supply
Municipal Electric Authority of Georgia
1470 Riveredge Parkway, NW
Atlanta, GA 30328-4684

Mr. Reece McAlister
Executive Secretary
Georgia Public Service Commission
244 Washington St., SW
Atlanta, GA 30334

Arthur H. Domby, Esq.
Troutman Sanders
Nations Bank Plaza

Vogtle Electric Generating Plant, Units 1 & 2

cc:

Mr. Tom E. Tynan
Vice President - Vogtle
Vogtle Electric Generating Plant
7821 River Road
Waynesboro, GA 30830

Mr. N. J. Stringfellow
Manager, Licensing
Southern Nuclear Operating Company, Inc.
P.O. Box 1295
Birmingham, AL 35201-1295

Mr. Jeffrey T. Gasser
Executive Vice President
Southern Nuclear Operating Company, Inc.
P.O. Box 1295
Birmingham, AL 35201-1295

Mr. Steven M. Jackson
Senior Engineer - Power Supply
Municipal Electric Authority of Georgia
1470 Riveredge Parkway, NW
Atlanta, GA 30328-4684

Mr. Reece McAlister
Executive Secretary
Georgia Public Service Commission
244 Washington St., SW
Atlanta, GA 30334

Mr. Harold Reheis, Director
Department of Natural Resources
205 Butler Street, SE, Suite 1252
Atlanta, GA 30334

Attorney General

Law Department
132 Judicial Building
Atlanta, GA 30334

Mr. Laurence Bergen
Oglethorpe Power Corporation
2100 East Exchange Place
P.O. Box 1349
Tucker, GA 30085-1349

Arthur H. Domby, Esquire
Troutman Sanders
Nations Bank Plaza
600 Peachtree Street, NE
Suite 5200
Atlanta, GA 30308-2216

Resident Inspector
Vogtle Plant
8805 River Road
Waynesboro, GA 30830

Office of the County Commissioner
Burke County Commission
Waynesboro, GA 30830

