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December 4, 2002



Energy to Serve Your World™

HL-6313

Docket No. 50-366

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

Edwin I. Hatch Nuclear Plant – Unit 2  
Technical Specifications Revision to the  
Allowable Value for the Turbine Building Area Temperature  
High Primary Containment Isolation Setpoint

Ladies and Gentlemen:

In accordance with the provisions of 10 CFR 50.90, as required by 10 CFR 50.59(c) (1), Southern Nuclear Operating Company (SNC) hereby proposes a change to the Plant Hatch Unit 2 Technical Specifications, Appendix A to Operating License DPR-57. This submittal proposes to change the Hatch Unit 2 Technical Specifications with regard to the turbine building high temperature primary containment isolation. Specifically, SNC proposes to change the allowable value from 194°F to 200°F.

The Enclosure 1 provides a description and justification of the change. Enclosure 2 contains the no significant hazards evaluation as well as the environmental evaluation. The page change instructions along with the published and marked-up TS pages are provided in Enclosure 3. There are no associated Bases changes.

SNC requests that the change be issued prior to June 1, 2003.

In accordance with the requirements of 10 CFR 50.91, the designated state official will be sent a copy of this letter and all applicable enclosures.

Mr. H. L. Sumner, Jr. states he is Vice President of Southern Nuclear Operating Company and 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.

Respectfully submitted,

H. L. Sumner, Jr.

Sworn to and subscribed before me this 4<sup>th</sup> day of December 2002.

Jan C. Edge  
Notary Public

Commission Expiration Date: 7/27/05



A001

U.S. Nuclear Regulatory Commission

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Enclosures:

1. Description of and Justification for Technical Specifications Change
2. No Significant Hazards Evaluation and the Environmental Evaluation
3. Page Change Instructions, Published and Marked-up Pages

OCV/eb

cc: Southern Nuclear Operating Company  
Mr. P. H. Wells, Nuclear Plant General Manager  
SNC Document Management (R-Type A02.001)

U.S. Nuclear Regulatory Commission, Washington, D.C.  
Mr. Joseph Colaccino, Project Manager - Hatch

U.S. Nuclear Regulatory Commission, Region II  
Mr. L. A. Reyes, Regional Administrator  
Mr. J. T. Munday, Senior Resident Inspector - Hatch

State of Georgia  
Mr. L. C. Barrett, Commissioner - Department of Natural Resources

## Enclosure 1

### Edwin I. Hatch Nuclear Plant – Unit 2 Technical Specifications Revision to the Allowable Value for the Turbine Building Area Temperature High Primary Containment Isolation Setpoint

#### Description of and Justification for Technical Specifications Change

The proposed change is a Unit 2 Technical Specification change to the allowable value for the turbine building area temperature high primary containment isolation setpoint. SNC proposes to change the Technical Specification allowable value from 194°F to 200°F as found in Unit 2 Technical Specification Table 3.3.6.1-1, item 1.f.

The area temperature high isolation is intended to provide redundancy to the high flow instrumentation. The isolation protects against a small leak in the reactor coolant isolation boundary. If the leak is allowed to continue without isolation, offsite dose limits may be reached. However, credit for these instruments is not taken in any transient or accident analysis.

The change is desired because the current allowable value of 194°F does not provide sufficient margin from the operating temperature without compensatory measures. The present setpoint requires running the turbine building chillers in parallel during the hot summer months. It is preferable to operate one chiller and have the other chiller in standby, such that if the running chiller trips, the standby chiller will auto-start. When the chillers operate in parallel, a trip of one chiller may result in the trip of the operating chiller due to increased load. The higher setpoint will alleviate the situation.

A calculation has been performed which confirms an allowable value of 200°F for the turbine building high temperature isolation (SINH-02-003).

It is noteworthy that prior to the implementation of the Hatch improved TS in 1995, the allowable value was 200°F. This number was supplied by GE, however, no calculation existed. As a result, a calculation was performed in 1986 which used the then TS allowable value of 200°F as the analytical limit. This calculation was performed only to confirm that the existing nominal trip setpoint was adequate. Upon implementation of the improved TS, however, this calculation was erroneously referenced as the basis for an analytical limit of 200°F for TS purposes. Consequently, the allowable value became 194°F.

The calculation which supports this TS proposed change is based on a study performed by Southern Company Services which evaluated the effects of a steam leak into the turbine building. The leak detection systems are designed to detect a leak between 1% and 10% of rated steam flow. As a result, the study assumed a leak of 1% of steam flow at a limiting location in the condenser bay, that being a location at which it would be most difficult for the instrumentation to detect the leak. This resulted in an analytical limit of 207°F.

## Enclosure 2

### Edwin I. Hatch Nuclear Plant – Unit 2 Technical Specifications Revision to the Allowable Value for the Turbine Building Area Temperature High Primary Containment Isolation Setpoint

#### No Significant Hazards Evaluation and Environmental Evaluation

In 10 CFR 50.92(c), the NRC provides the following standards to be used in determining the existence of a significant hazards consideration:

*...a proposed amendment to an operating license for a facility licensed under 50.21(b) or 50.22, or for a testing facility involves no significant hazards consideration if operation of the facility in accordance with the proposed amendment would not: (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any previously evaluated; or (3) involve a significant reduction in the margin of safety.*

Southern Nuclear has reviewed the proposed license amendment request and determined its adoption does not involve a significant hazards consideration based on the following discussion.

#### Basis for No Significant Hazards Consideration

1. *The proposed Technical Specification change does not involve a significant increase in the probability or consequences of an accident previously evaluated.*

This TS revision request changes the allowable value for the turbine building high temperature primary containment isolation. The setpoint at which the isolation occurs has nothing to do with preventing a system break; therefore, this proposed change will not change the probability of occurrence of a small primary coolant system break.

For the turbine building high temperature primary containment isolation, the analytical limit has been calculated at 207°F with the allowable value at 200°F. The calculation supporting these values accounts for instrument uncertainties thus confirming that adequate margin exists between the allowable value and the analytical limit. Accordingly, the consequences of a small primary system break are not significantly increased.

2. *The proposed TS change does not create the possibility of a new or different kind of accident from any accident previously evaluated.*

Changing an allowable value does not introduce any new operating modes for any plant system or piece of equipment. All plant systems will continue to be operated, tested and

## Enclosure 2

### No Significant Hazards Evaluation and the Environmental Evaluation

maintained as before, and within their licensing and design basis. As a result, no new failure modes are introduced and the possibility of a new or different type of accident is not created.

3. *The proposed TS change does not involve a significant reduction in a margin of safety.*

Increasing the allowable value by 6°F does not result in a significant reduction in a margin of safety. A formal calculation was performed which justified an analytical limit of 207°F. This calculation determined the analytical limit based on a primary leak into the turbine building and confirmed that the allowable value adequately protects the analytical limit. As a result, the margin of safety is not significantly reduced.

### Environmental Impact

The proposed TS change was reviewed against the criteria of 10 CFR 51.22 for environmental considerations. The proposed change only involves an increase in the allowable value for the turbine building temperature primary containment isolation. As described in the previous section, it does not involve a significant hazards consideration. Since the change does not involve any radioactive waste processing systems, there are no significant increases in the amount of effluents that may be released offsite or to the cumulative occupational radiation exposure. Documented calculations support the contention that the proposed allowable value continues to provide adequate redundancy to the high flow instrumentation in protecting against a system leak. Additionally, this proposed change does not affect the Main Control Room Environmental Control system designed to protect the control room operators from excessive doses in accident conditions. Accordingly, operator occupational doses during normal and accident conditions are not increased. Based on the foregoing, Southern Nuclear Operating Company concludes that this proposed TS change requires no environmental assessment.

Enclosure 3

Edwin I. Hatch Nuclear Plant – Unit 2

Technical Specifications Revision to the  
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Page Change Instructions  
and  
Published and Marked-up Technical Specifications Pages

**Unit 2**

Remove

3.3-51

Replace

3.3-51

Primary Containment Isolation Instrumentation  
3.3.6.1

Table 3.3.6.1-1 (page 1 of 4)  
Primary Containment Isolation Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER TRIP SYSTEM	CONDITIONS REFERENCED FROM REQUIRED ACTION C.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
<b>1. Main Steam Line Isolation</b>					
a. Reactor Vessel Water Level - Low Low Low, Level 1	1,2,3	2	D	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.5 SR 3.3.6.1.6 SR 3.3.6.1.7	≥ -113 inches
b. Main Steam Line Pressure - Low	1	2	E	SR 3.3.6.1.3 SR 3.3.6.1.6	≥ 825 psig
c. Main Steam Line Flow - High	1,2,3	2 per MSL	D	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.5 SR 3.3.6.1.6 SR 3.3.6.1.7	≤ 138% rated steam flow
d. Condenser Vacuum - Low	1, 2(a), 3(a)	2	D	SR 3.3.6.1.3 SR 3.3.6.1.6	≥ 7 inches Hg vacuum
e. Main Steam Tunnel Temperature - High	1,2,3	6	D	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.5 SR 3.3.6.1.6	≤ 194°F
f. Turbine Building Area Temperature - High	1,2,3	16(b)	D	SR 3.3.6.1.2 SR 3.3.6.1.5 SR 3.3.6.1.6	≤ 200°F
<b>2. Primary Containment Isolation</b>					
a. Reactor Vessel Water Level - Low, Level 3	1,2,3	2	G	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.5 SR 3.3.6.1.6	≥ 0 inches
b. Drywell Pressure - High	1,2,3	2	G	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.5 SR 3.3.6.1.6	≤ 1.92 psig

(continued)

(a) With any turbine stop valve not closed.

(b) With 8 channels per trip string Each trip string shall have 2 channels per main steam line, with no more than 40 ft separating any two OPERABLE channels

Primary Containment Isolation Instrumentation  
3.3.6.1

Table 3.3.6.1-1 (page 1 of 4)  
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<b>1. Main Steam Line Isolation</b>					
a. Reactor Vessel Water Level - Low Low Low, Level 1	1,2,3	2	D	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.5 SR 3.3.6.1.6 SR 3.3.6.1.7	≥ -113 inches
b. Main Steam Line Pressure - Low	1	2	E	SR 3.3.6.1.3 SR 3.3.6.1.6	≥ 825 psig
c. Main Steam Line Flow - High	1,2,3	2 per MSL	D	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.5 SR 3.3.6.1.6 SR 3.3.6.1.7	≤ 138% rated steam flow
d. Condenser Vacuum - Low	1, 2(a), 3(a)	2	D	SR 3.3.6.1.3 SR 3.3.6.1.6	≥ 7 inches Hg vacuum
e. Main Steam Tunnel Temperature - High	1,2,3	6	D	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.5 SR 3.3.6.1.6	≤ 194°F
f. Turbine Building Area Temperature - High	1,2,3	16(b)	D	SR 3.3.6.1.2 SR 3.3.6.1.5 SR 3.3.6.1.6	≤ 194°F 200°F
<b>2. Primary Containment Isolation</b>					
a. Reactor Vessel Water Level - Low, Level 3	1,2,3	2	G	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.5 SR 3.3.6.1.6	≥ 0 inches
b. Drywell Pressure - High	1,2,3	2	G	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.5 SR 3.3.6.1.6	≤ 1.92 psig
(continued)					

(a) With any turbine stop valve not closed.

(b) With 8 channels per trip string. Each trip string shall have 2 channels per main steam line, with no more than 40 ft separating any two OPERABLE channels.