



ENTERGY

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July 29, 1992

U.S. Nuclear Regulatory Commission
Mail Station P1-137
Washington, D.C. 20555

Attention: Document Control Desk

Subject: Grand Gulf Nuclear Station
Unit 1
Docket No. 50-416
License No. NPF-29
Extension of Instrumentation Surveillance Intervals and
Allowed Outage Times
Proposed Amendment to the Operating License (PCOL-92/03)

- References:
- 1) GE Report GENE-770-06-1, "Bases for Changes to Surveillance Test Intervals and Allowed Out-of-Service Times for Selected Instrumentation Technical Specifications", February 1991
 - 2) GE Report GENE-770-06-2, "Addendum to Bases for Changes to Surveillance Test Intervals and Allowed Out-of-Service Times for Selected Instrumentation Technical Specifications", February 1991
 - 3) Letter, C. E. Rossi (NRR) to G. J. Beck (BWROG), "General Electric Company (GE) Topical Report GENE-770-06-2, 'Addendum to Bases for Changes to Surveillance Test Intervals and Allowed Out-Of-Service Times for Selected Instrumentation Technical Specifications' (BWR RCIC Instrumentation)", dated September 13, 1991
 - 4) Letter, C. E. Rossi (NRR) to R. D. Binz (BWROG), "General Electric Company (GE) Topical Report GENE-770-06-1, Bases for Changes to Surveillance Test Intervals and Allowed Out-Of-Service Times for Selected Instrumentation Technical Specifications", dated July 21, 1992

GNRO-92/00099

Gentlemen:

Entergy Operations, Inc. is submitting by this letter a proposed amendment to the Grand Gulf Nuclear Station (GGNS) Operating License. The proposed GGNS Technical Specification (TS) amendment consists of changes to selected TS instrumentation surveillance test intervals and allowed outage times. These TS changes are based upon General Electric Company (GE) Reports (References 1 and 2). The changes described in these GE Reports have been reviewed and approved generically by the NRC in References 3 and 4.

Attachment 2 of this letter provides a detailed description of the proposed TS changes and justification for the changes. Attachment 2 also details the basis for the Entergy Operations'

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determination that the proposed amendment involves no significant hazards considerations based on the guidelines presented in 10CFR50.92.

The affected TS pages marked up indicating the proposed changes are included as Attachment 3.

Attachment 5 provides trip unit drift data to support the justification contained in Attachment 2 for the proposed TS changes.

In accordance with the provisions of 10CFR50.4, the signed original of the requested amendment is enclosed. This amendment request has been reviewed and accepted by the Plant Safety Review Committee and the Safety Review Committee.

Yours truly,



WTC/BSF

attachments: 1. Affirmation per 10CFR50.30
2. GGNS PCOL-92/03
3. Mark-up of Affected Technical Specification Pages
4. Sample Proposed Technical Specification Pages
5. GGNS Trip Unit Drift Data in Support of PCOL-92/03

cc: Mr. D. C. Hintz (w/a)
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BEFORE THE
UNITED STATES NUCLEAR REGULATORY COMMISSION

LICENSE NO. NPF-29

DOCKET NO. 50-416

IN THE MATTER OF
MISSISSIPPI POWER & LIGHT COMPANY
and
SYSTEM ENERGY RESOURCES, INC.
and
SOUTH MISSISSIPPI ELECTRIC POWER ASSOCIATION
and
ENERGY OPERATIONS, INC.

AFFIRMATION

I, W. T. Cottle, being duly sworn, state that I am Vice President, Operations GGNS of Entergy Operations, Inc.; that on behalf of Entergy Operations, Inc., System Energy Resources, Inc., and South Mississippi Electric Power Association I am authorized by Entergy Operations, Inc. to sign and file with the Nuclear Regulatory Commission, this application for amendment of the Operating License of the Grand Gulf Nuclear Station; that I signed this application as Vice President, Operations GGNS of Entergy Operations, Inc.; and that the statements made and the matters set forth therein are true and correct to the best of my knowledge, information and belief.

W. T. Cottle
W. T. Cottle

STATE OF MISSISSIPPI
COUNTY OF CLAIBORNE

SUBSCRIBED AND SWORN TO before me, a Notary Public, in and for the County and State above named, this 29 day of July, ~~1991~~ 1992 pg 7-29-92

(SEAL)

Patricia Hoaghegan
Notary Public

My commission expires:

7-1-93

GGNS PCOL 92/03

A. SUBJECT

1. PCOL-92/03 Extension of Instrumentation Surveillance Intervals and Allowed Outage Times
2. Affected Technical Specifications:
 - a. End-of-Cycle Recirculation Pump Trip System Instrumentation, Limiting Condition for Operation, 3.3.4.2 Action b and c.1- Page 3/4 3-41
 - b. End-of-Cycle Recirculation Pump Trip System Instrumentation, Table 3.3.4.2-1 - Page 3/4 3-43
 - c. End-of-Cycle Recirculation Pump Trip System Surveillance Requirements, Table 4.3.4.2.1-1 - Page 3/4 3-46
 - d. Reactor Core Isolation Cooling System Actuation Instrumentation, Table 3.3.5-1 - Pages 3/4 3-48 and 3-49
 - e. Reactor Core Isolation Cooling System Actuation Instrumentation Surveillance Requirements, Table 4.3.5.1-1 - Page 3/4 3-51
 - f. Control Rod Block Instrumentation, Surveillance Requirement 4.3.6.1 - Page 3/4 3-52
 - g. Control Rod Block Instrumentation, Table 3.3.6-1 - Pages 3/4 3-53 and 3-54
 - h. Radiation Monitoring Instrumentation, Table 3.3.7.1-1 - Pages 3/4 3-60 and 3-61
 - i. Radiation Monitoring Instrumentation Surveillance Requirements, Table 4.3.7.1-1 - Page 3/4 3-62
 - j. Plant Systems Actuation Instrumentation, Table 3.3.8-1 - Pages 3/4 3-93 and 3-94
 - k. Plant Systems Actuation Instrumentation Surveillance Requirements, Table 4.3.8.1-1 - Page 3/4 3-96
 - l. Safety/Relief Valves, Surveillance Requirements 4.4.2.1.1 and 4.4.2.1.2 - Pages 3/4 4-5 and 4-6
 - m. Safety/Relief Valves Low-Low Set Function, Surveillance Requirement 4.4.2.2.1 - Page 3/4 4-7
 - n. Suppression Pool Surveillance Requirement 4.5.3.1b - Page 3/4 5-9
 - o. Recirculation Pump Trip Actuation Instrumentation Bases, 3/4.3.4, Page B 3/4 3-3a
 - p. Reactor Core Isolation Cooling System Actuation Instrumentation Bases, 3/4.3.5 - Page B 3/4 3-3a

- q. Control Rod Block Instrumentation Bases, 3/4.3.6, Page B 3/4 3-4
- r. Radiation Monitoring Instrumentation Bases, 3/4.3.7.1 - Page B 3/4 3-4
- s. Plant Systems Actuation Instrumentation Bases, 3/4.3.8 - Page B 3/4 3-6
- t. Safety/Relief Valves Bases, 3/4.4.2 - Page B 3/4 4-2
- u. Suppression Pool Bases, 3/4.5.3 - Page B 3/4 5-3

B. DISCUSSION

1. This license amendment request proposes to revise the Grand Gulf Nuclear Station (GGNS) Technical Specifications (TSs) and associated Bases listed above to increase the surveillance test intervals (STIs) and allowed out-of-service times (AOTs) for selected instrumentation. The proposed TS changes have been justified using probabilistic analytical methods and are based on BWR Owners' Group (BWROG), of which Entergy Operations, Inc. is a member, sponsored General Electric Company (GE) generic reports (References 1 and 2). This proposed amendment applies those generic reports to GGNS.
2. Topical Report, "BWR Owners Group Response to NRC Generic Letter 83-28, Item 4.5.3," (Reference 3) provided justification for the acceptability of current Reactor Protection System (RPS) STIs. In addition, Reference 3 established a basis for extending STIs and AOTs for RPS based on reliability analyses which estimate RPS failure frequency.
3. In response to growing concerns over the impact of current testing and maintenance requirements on plant operation, particularly as related to instrumentation systems, the BWROG initiated a program to develop a justification to be used to revise instrumentation TS. Operating plants have experienced many inadvertent reactor trips and safeguards actuations during performance of instrumentation surveillances, causing unnecessary transients and challenges of safety systems. Significant time and effort on the part of operating staffs have been devoted to performing, reviewing, documenting and tracking the various surveillance activities, which in many instances seemed unwarranted based on the high reliability of the equipment. Therefore, significant benefits for operating plants appeared to be achievable through revision of instrumentation test and maintenance requirements.
4. Consequently, the analyses of Reference 3 were further developed in other Topical Reports (References 4 through 9) to provide justification for extending TS STIs and AOTs for the RPS, Emergency Core Cooling Systems (ECCS), Control Rod Block, and Isolation Actuation instrumentation. References 4 through 9 also included proposed TS changes to facilitate implementation of the analyses results. References 4 through 9 were submitted to the NRC by the BWROG and subsequently approved as detailed in NRC Safety Evaluation Reports (SERs) (References 10 through 15). These SERs describe the acceptability of both the analyses and the proposed TS changes provided to the NRC. In addition, References 10 through 15 provided criteria for plant specific implementation of the generically approved TS changes.

5. The NRC has reviewed and approved the TS changes applicable to the RPS for GGNS in Amendment No. 67 (References 16 through 18). Also, the NRC has reviewed and approved the TS changes applicable to the ECCS, Control Rod Block and Isolation Actuation instrumentation for GGNS in Amendment No. 97 (References 19, 24, and 25).
6. In References 1 and 2, the technical bases for the extension of TS STIs and AOTs for additional TS instrumentation were presented. These changes were proposed to ensure consistency with approved STI and AOT changes to the RPS, ECCS and Isolation Actuation instrumentation. The instrumentation included in the reports were either the same or similar instrumentation to that analyzed in previous analyses.
7. This amendment request proposes changes to the End-of-Cycle Recirculation Pump Trip (EOC-RPT) instrumentation, the Reactor Core Isolation Cooling (RCIC) system actuation instrumentation, Control Rod Block instrumentation, Control Room Ventilation Radiation Monitoring instrumentation, the Plant Systems Actuation instrumentation (i.e., Containment Spray and Suppression Pool Make Up system instrumentation), the Safety/Relief Valve (S/RV) Pressure instrumentation, the S/RV tailpipe pressure switches and the S/RV low-low set function instrumentation. These changes are specifically discussed and designated in the TS mark-ups of References 1 and 2 and are therefore not further discussed here.

Differences Between the TS Mark-ups Provided in the References 1 and 2 and TS Changes Proposed in this Submittal

8. The proposed changes to TS section 3/4.3.4.2 include an additional change on Table 4.3.4.2.1-1 which is not reflected in the TS mark-ups provided in Reference 1. This additional change consists of changing the calibration frequency required by footnote # from once per 31 days to once per 92 days. The mark-ups contained in Reference 1 did not identify this required change since the TS pages marked up in Reference 1 were from the BWR 4 Standard TS and did not contain this footnote requirement. This additional proposed change is justified by the analysis of Reference 1. Since as discussed in Reference 1 section 3.2, the changes proposed are bounded by the analysis of Reference 4. The scope of the analysis of Reference 4 included the evaluation of the effects of the extension of the required calibration intervals to 92 days, therefore, the extension of the surveillance interval required by footnote # to 92 days is bounded by these analyses. Note: Discussions with GE has identified that Reference 1 Attachment page A-10, including the mark-ups on the page, is the BWR 4 Standard TS and was included in Reference 1 for information only. These mark-ups are not associated with the analysis of Reference 1 and are, therefore, not included in the proposed TS changes.
9. The changes proposed in Reference 1 section 3.3 to TS section 3/4.3.4.1, Anticipated Transient Without Scram (ATWS) Recirculation Pump Trip System Instrumentation, are not included in this submittal. Also, the changes proposed in Reference 1 section 3.7 to TS section 3/4.3.8, Plant Systems Actuation Instrumentation, Trip Function 2, Feedwater System/Main Turbine Trip System, Reactor Vessel Water Level - High Level 8 are not included in this submittal. Applicability of the generic analysis to GGNS for this instrumentation has not yet been confirmed, therefore, these changes are not currently requested. When applicability of the analysis has been confirmed these changes will be submitted under another cover.

10. The proposed changes to TS Table 3.3.5-1, Reactor Core Isolation Cooling System Actuation Instrumentation, modifies the GGNS Action 50 to correspond to the BWR 6 Standard TS and the Action 50 proposed in Reference 2 and accepted by the NRC via Reference 22. The GGNS proposed Action 50 does differ from the Action 50 marked up in Reference 2 in that the GGNS Action 50 does not discuss the inoperability of a channel on a per trip system bases. The GGNS TS to which this Action requirement applies does not address the minimum number of channels per trip system but addresses the minimum total number of channels available. Therefore, the proposed GGNS Action requirement does not refer to the number of channels available in a trip system. The changes proposed to Action 50 are consistent with the configurations assumed in the analysis presented in References 2 and 5.

11. The proposed changes to TS section 3/4.3.7.1 on pages 3/4 3-60 through 3-62 involve changes to the STIs and AOTs for the Fuel Handling Area Ventilation Radiation Monitor, the Fuel Handling Area Pool Sweep Exhaust Radiation Monitor, the Containment and Drywell Ventilation Exhaust Radiation Monitor, and the Control Room Ventilation Radiation Monitor. Reference 1 did not contain TS mark-ups detailing these proposed changes. The changes to the STIs and AOTs for the Control Room Ventilation Radiation Monitor are described and discussed in Reference 1 although no mark-ups are provided.

The Fuel Handling Area Ventilation Radiation Monitor, the Fuel Handling Area Pool Sweep Exhaust Radiation Monitor, and the Containment and Drywell Ventilation Exhaust Radiation Monitor instrumentation function both as Isolation Actuation instrumentation, as addressed in TS 3/4.3.2, and as radiation monitoring/alarm instrumentation, as addressed in TS 3/4.3.7.1. These monitors use the same radiation detectors and analog conditioning circuitry to perform both of these functions. Extensions to AOTs and STIs required by TS section 3/4.3.2 were evaluated and requested in References 19 and 25 and approved by the NRC in Reference 24 for the Isolation Actuation function of this instrumentation. The changes proposed in this amendment request to the TS 3/4.3.7.1 affects the radiation monitoring/alarm function of the instruments and are needed to ensure consistency between different specifications for the same equipment. Discussion of the applicability of the analysis to these proposed changes was transmitted to the NRC in the Response to Question 9 of Reference 23.

12. The proposed changes to TS section 3/4.3.6, Control Rod Block Instrumentation, are consistent with the changes justified in Reference 1 section 3.10 and mark-ups on Reference 1 Attachment pages A-40 and A-42. The proposed TS changes create a new Action 64 instead of modifying the existing Action 62 as marked up in Reference 1. The Reference 1 mark-ups were based on the BWR 4 Standard TS and are different from the current GGNS TS. As a result, a new Action requirement was needed to comply with the evaluation presented in Reference 1 section 3.10. Note: Reference 1 Appendix page A-44 has additional TS mark-ups indicated on the page. These mark-ups correspond to changes evaluated in a different topical. The NRC has already reviewed and approved these TS changes for GGNS in Amendment No. 97 (References 19, 24, and 25).

13. The proposed changes to TS section 4.5.3.1 on page 3/4 5-9 involve changes to STI and surveillance AOT for the wide-range suppression pool water level instrumentation. TS section 4.5.3.1 addresses the surveillance requirements for the monitoring and alarm functions of the wide-range suppression pool water level instrumentation while TS section 3/4.3.8.1 addresses the Suppression Pool Mark-up system actuation function of this instrumentation. The changes requested to TS section 4.5.3.1 are consistent with the changes requested for TS section 3/4.3.8.1, Suppression Pool Make Up (SPMU) system, suppression pool water level instrumentation. The changes to TS section 3/4.3.8.1 were evaluated and discussed in Reference 1 section 3.7. The SPMU system instrumentation controlled by 3/4.3.8.1 uses the same wide-range suppression pool water level trip points as is controlled by TS 4.5.3.1. The proposed changes to TS Section 4.5.3.1 are, therefore, bounded by the analysis provided in Reference 1 section 3.7 and needed for consistency. The requirements for narrow-range suppression pool water level instrumentation are not changed.
14. The TS pages affected by this proposed amendment are included as Attachment 3 and are marked up to reflect the proposed changes.

C. JUSTIFICATION

1. The effect on safety of the proposed extensions to the STIs and AOTs of the subject instrumentation has been addressed in References 1 and 2. These documents conclude that the changes proposed are consistent with NRC approved changes to the RPS, ECCS and Isolation Actuation instrumentation and that the changes do not result in a degradation to overall plant safety. In the generic SERs which reviewed these documents (References 22 and 26), the NRC concluded that the proposed TS changes are acceptable subject to the Licensee documenting 1) plant-specific applicability and 2) that instrument drift is bounded by the generic analysis assumptions. The NRC also issued Reference 20 which provided clarification for the SERs' condition concerning instrument drift. These acceptance conditions are addressed below for each generic CE Report.

GENE-770-06-1, "Bases for Changes to Surveillance Test Intervals and Allowed Out-of-Service Times for Selected Instrumentation Technical Specifications", February 1991

2. GENE-770-06 provides the technical bases for extending STIs and AOTs for EOC-FPT system instrumentation, Control Rod Block instrumentation Control Room Fresh Air instrumentation (i.e., Control Room radiation monitoring instrumentation at Grand Gulf), Containment Spray actuation instrumentation and SPMU actuation instrumentation. Portions of these systems contain common instrumentation with the RPS, ECCS, Control Rod Block and Isolation instrumentation evaluated in previous GE Topical Reports (References 4 through 9), and the proposed STI and AOT changes for this common instrumentation is consistent with and bounded by the analyses described in the GE Topical Reports. The proposed STI and AOT changes for other portions of these systems involve instrumentation that is similar in type to the RPS, ECCS or isolation actuation instrumentation. In addition, existing redundancy of the logic configuration is either more extensive or comparable to the redundancy of previously analyzed instrumentation. GENE-770-06-1 concludes that the previous analyses can be used to justify the proposed changes, and that the proposed changes do not result in a degradation to the overall plant safety. The NRC Staff has reviewed and approved GENE-770-06-1 in Reference 26.

GENE-770-06-2, "Addendum to Bases for Changes to Surveillance Test Intervals and Allowed Out-of-Service Times for Selected Instrumentation Technical Specifications", February 1991

3. GENE-770-06-2 provided additional analyses to support changes to STIs and AOTs for the RCIC system actuation instrumentation. The RCIC fault tree models and input data were documented in Reference 5. The analyses of GENE-770-06-2 for the BWR 6 calculated that the water injection function failure frequency is changed by less than 1% if the RCIC STI is increased to 3 months, along with the ECCS STIs. The magnitude of extending both the RCIC and ECCS STIs was well within the acceptance criteria of Reference 6. As noted in GENE-770-06-2, Reference 6 analyses show that the increase in water injection function failure was acceptably low ($\leq 3\%$) when the STIs and AOTs of RCIC and ECCS instrumentation were changed to the proposed values. The NRC Staff has reviewed and approved GENE-770-06-2 in Reference 23.

Applicability of GENE-770-06-1 and GENE-770-06-2 to GGNS

4. Entergy Operations, Inc. has applied the generic analyses and technical bases of References 1 and 2 to GGNS. In so doing, the following conditions were met:

- a. Confirm the applicability of the generic analyses to the plant.

As described in GENE-770-06-1, the analyses provided in References 4 through 9 were used as the bases to bound the changes proposed by the GENE. As documented in previous GGNS amendment requests (References 16 and 19), Entergy Operations has confirmed that the generic analyses of Reference 4 through 9 apply to GGNS. Based upon this and a review of the instrumentation logic configuration descriptions of GENE-770-06-1, it was confirmed that the technical bases presented in GENE-770-06-1 are applicable to GGNS.

GENE-770-06-2 provided analyses of the RCIC instrumentation using fault tree and input data described in Reference 5, and using the BWR 5/6 model described in Case 5A of Reference 6. As described in the amendment request for ECCS instrumentation (Reference 19), Entergy Operations confirmed that the ECCS generic model (which included the RCIC system) described in References 5 and 6 was applicable to GGNS. It is therefore confirmed that the generic analyses of GENE-770-06-2 are applicable to GGNS.

- b. Confirm that any increase in instrument drift due to the extended STIs is properly accounted for in the setpoint calculation methodology. (For additional information on this issue, see Reference 20).

The subject instrumentation channel drift characteristics are considered when the TS trip setpoints are established. The setpoint calculations for GGNS conservatively assume that the channel setpoint drift occurs without correction during the entire 18-month channel calibration interval (The

setpoint calculations for the radiation monitors discussed in section C.5 assume 18 months of drift although they are calibrated on a 12 month interval). Extension of the functional test intervals and associated calibrations, as proposed herein, will therefore have no effect on the instrumentation setpoint calculations. The GGNS setpoint methodology thus continues to properly account for instrument drift.

Additionally, further information concerning the drift experience for affected trip units at GGNS is included in Attachment 5 of this submittal. This information supports the conclusion that instrument drift is not a significant concern in extending the functional test interval from monthly to quarterly.

5. As noted previously in section B, a TS change is proposed for TS Section 3/4.3.7.1, Radiation Monitoring Instrumentation to extend the STIs and the AOTs for the Containment and Drywell Ventilation Exhaust Radiation Monitor, Fuel Handling Area Ventilation Exhaust Radiation Monitor and the Fuel Handling Area Pool Sweep Exhaust Radiation Monitor. These monitors are the same radiation monitors for which STI and AOT extensions for their Isolation Actuation functions were requested in Reference 19 and approved by the NRC in Reference 2. The changes proposed in this amendment would increase the STI for functional tests from monthly to quarterly, their AOT from 1 to 24 hours, and their surveillance AOT from 2 to 6 hours. These changes are wholly consistent with the proposed changes to primary containment isolation instrumentation and secondary containment isolation instrumentation STIs and AOTs approved by the NRC in Reference 24, and are needed to ensure that the specifications governing the same equipment are not in conflict. Further justification for the extensions is described in Reference 19. Discussion of the applicability of the analysis to these proposed changes was transmitted to the NRC in the Response to Question 9 of Reference 23.
6. An additional change is requested to TS Section 4.5.3.1, as discussed in section B. This change extends the Channel Functional STI from 31 to 92 days and provides a six hour surveillance AOT for the wide-range suppression pool water level instrumentation. The wide-range suppression pool water level instrumentation uses the same trip units as the SPMU system instrumentation. This amendment request proposes changing the Channel Functional STI and the surveillance AOT for the SPMU instrumentation in an identical fashion. This change is therefore needed to ensure consistency among the specifications. Justification for the extension of the SPMU STI and AOTs is provided in Paragraph 2 of this section.

D. NO SIGNIFICANT HAZARDS CONSIDERATIONS

1. Energy Operations, Inc. is proposing that the GGNS TS be amended to extend surveillance test intervals and allowed outage times for the instrumentation supporting the DC-RPT, RCIC, Containment Spray, SPMU, S/RV relief, low-low set, and tailpipe pressure, Control Room Ventilation, Radiation Monitoring, and the wide range suppression pool level instrumentation. The proposed TS changes minimize unnecessary testing and remove unnecessarily restrictive allowed outage times.

2. The Commission has provided standards for determining whether a no significant hazards consideration exists as stated in 10CFR50.92(c). A proposed amendment to an operating license involves no significant hazards 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 accident previously evaluated; or (3) involve a significant reduction in a margin of safety.
3. Grand Gulf Nuclear Station (GGNS) has evaluated the no significant hazards considerations in its request for a license amendment. In accordance with 10CFR50.91(a), GGNS is providing the following analysis of the proposed amendment against the three standards in 10CFR50.92:

- a. No significant increase in the probability or consequences of an accident previously evaluated results from this change.

The proposed Technical Specification (TS) changes increase the Surveillance Test Intervals (STIs) and Allowed Out-Of-Service Times (AOTs) for instrumentation supporting a number of TS functions. There are no changes in any of the affected systems themselves. Since there are no such changes, there can be no change in the probability of occurrence of an accident. Regarding the consequences of an accident, General Electric (GE) reports GENE-770-06-1 and GENE-770-06-2 (References 1 and 2) showed that for the instrumentation evaluated, the effects of the extension in STIs and AOTs are bounded by previous GE analyses (References 4 through 9). The previously performed GE analyses (References 4 through 9) showed that the changes to the STIs and AOTs produced negligible impact. The proposed changes are those discussed in GENE-770-06-1 or GENE-770-06-2 and their supporting information, or are changes to specifications which have instrumentation common to that changed in the GE analysis. The proposed instrumentation changes are, therefore, bounded by analyses that showed no effect or minimal increases in the unavailability of safety functions for similar changes. The NRC concurred in References 10 through 15 with the conclusions of the GE reports listed as References 4 through 9. The NRC has also concurred in References 22 and 26 with the conclusions of GENE-770-06-1 and GENE-770-06-2. All of the changes requested are bounded by analyses presented in GE reports which have been reviewed and approved on a generic bases by the NRC.

Further, given the resulting reduction in test related plant scrams and test induced wearout of equipment, the net effect of these changes is expected to represent a net improvement to overall plant safety.

There is therefore no increase in the probability or consequences of a previously evaluated accident due to the proposed changes.

- b. This change would not create the possibility of a new or different kind of accident from any previously analyzed.

Neither the design nor the functional operation of the affected instrumentation is being changed. The proposed changes only involve a change in the STIs and AOTs. These changes will not impact the function of monitoring system variables over their anticipated ranges for normal operation, anticipated operational occurrences, or accident conditions.

The proposed changes do not introduce any new modes of plant operation, make any physical changes, or alter any operational setpoints.

Therefore, the possibility of a new or different kind of accident from any previously evaluated is not created.

- c. This change would not involve a significant reduction in the margin of safety.

The proposed changes do not alter the manner in which safety limits, limiting safety system settings, or limiting conditions for operation are determined. The impact of reduced testing, other than as addressed above, is to allow a longer time interval over which instrument uncertainties (e.g., drift) may act. The current affected instrumentation setpoints already account for the effects of drift and include a sufficient allowance to tolerate extensions of the STIs. Implementation of the proposed changes is expected to result in an overall improvement in safety, as follows:

- i. Reduced testing will result in fewer inadvertent reactor trips, less frequent actuation of ESF components, and greater equipment availability.
- ii. Improvements in the effectiveness of the operating staff in monitoring and controlling plant operation will be realized. This is due to less frequent distraction of the operators to attend to instrumentation testing.

4. Based on the above evaluation, Entergy Operations, Inc. has concluded that operation in accordance with the proposed amendment involves no significant hazards considerations.

E. REFERENCES

- 1) GE Report GENE-770-06-1, "Bases for Changes to Surveillance Test Intervals and Allowed Out-of-Service Times for Selected Instrumentation Technical Specifications", February 1991
- 2) GE Report GENE-770-06-2, "Addendum to Bases for Changes to Surveillance Test Intervals and Allowed Out-of-Service Times for Selected Instrumentation Technical Specifications", February 1991

- 3) GE Topical Report NEDC-30844P-A, "BWR Owners Group Response to NRC Generic Letter 83-28, Item 4.5.3", March 1988
- 4) GE Topical Report NEDC-30851P-A, "BWR Owners Group Technical Specification Improvement Analyses for BWR Reactor Protection System", March 1988
- 5) GE Topical Report NEDC-30936P-A, "BWR Owners Group Technical Specification Improvement Methodology (With Demonstration for BWR ECCS Actuation Instrumentation) Part 1", December 1988
- 6) GE Topical Report NEDC-30936P-A, "Technical Specification Improvement Methodology (With Demonstration for BWR ECCS Actuation Instrumentation) Part 2", December 1988
- 7) GE Topical Report NEDC-30851P-A, Supplement 1, "Technical Specification Improvement Analysis for BWR Control Rod Block Instrumentation", October 1988
- 8) GE Topical Report NEDC-30851P-A, Supplement 2, "Technical Specification Improvement Analysis for BWR Isolation Instrumentation Common to RPS and ECCS Instrumentation", March 1989
- 9) GE Topical Report NEDC-31677P-A, "Technical Specification Improvement Analysis for BWR Isolation Actuation Instrumentation", July 1990
- 10) Letter, A. C. Thadani (NRR) to T. A. Pickens (BWROG), "Review of BWR Owners Group Reports NEDC-30844P and NEDC-30851P on Justification for an Extension of On-Line Test Intervals and Allowable Out-of-Service Time for BWR Reactor Protection Systems", dated July 15, 1987
- 11) Letter, A. C. Thadani (NRR) to D. N. Grace (BWROG), "General Electric Company (GE) Topical Report NEDC-30936P, 'BWR Owners Group Technical Specification Improvement Methodology (With Demonstration for BWR ECCS Actuation Instrumentation), Part 1'", dated December 9, 1988
- 12) Letter, C. E. Rossi (NRR) to D. N. Grace (BWROG), "General Electric Company (GE) Topical Report NEDC-30936P, 'BWR Owners Group Technical Specification Improvement Methodology (With Demonstration for BWR ECCS Actuation Instrumentation) Part 2'", dated December 9, 1988
- 13) Letter, C. E. Rossi (NRR) to D. N. Grace (BWROG), "General Electric Company (GE) Topical Report NEDC-30851P, Supplement 1, 'Technical Specification Improvement Analysis for BWR Control Rod Block Instrumentation'", dated September 22, 1988
- 14) Letter, C. E. Rossi (NRR) to D. N. Grace (BWROG), "General Electric Company (GE) Topical Report NEDC-30851P, Supplement 2, 'Technical Specification Improvement Analysis for BWR Isolation Instrumentation Common to RPS and ECCS Instrumentation'", dated January 6, 1989
- 15) Letter, C. E. Rossi (NRR) to S. D. Floyd (BWROG), "General Electric Company (GE) Topical Report NEDC-31677P, 'Technical Specification Improvement Analysis for BWR Isolation Actuation Instrumentation'", dated June 18, 1990

- 16) Letter, O. D. Kingsley, Jr. (GGNS) to USNRC, "Extension of RPS Instrumentation Surveillance Intervals and Allowed Outage Times (PCOL-88/09)", dated June 30, 1988
- 17) Letter, W. T. Cottle (GGNS) to USNRC, "Extension of RPS Instrumentation Surveillance Intervals and Allowed Outage Times - Supplemental Information for PCOL-88/09", dated February 19, 1990
- 18) Letter, L. L. Kintner (NRR) to W. T. Cottle (GGNS), "Issuance of Amendment No. 67 to Facility Operating License No. NPF-29 - Grand Gulf Nuclear Station, Unit 1, Regarding Reactor Protection System (TAC No. 68692)", dated April 24, 1990
- 19) Letter, W. T. Cottle (GGNS) to USNRC, "Extension of Instrumentation Surveillance Intervals and Allowed Outage Times (PCOL 91/12)" dated June 26, 1991
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- 21) Letter, W. P. Sullivan and J. F. Klapproth (GE) to M. L. Wohl (USNRC), "Clarification of Technical Specification Changes Given in ECCS Actuation Instrumentation Analysis", dated March 22, 1990
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- 23) Letter, R. D. Binz IV (BWROG) to T. E. Murley (NRR), "BWR Owners' Group Response to Questions on Topical Report GENE-770-06-1", dated December 20, 1991
- 24) Letter, Paul W. O'Connor (NRR) to William T. Cottle (Entergy), "Issuance of Amendment No. 97 to Facility Operating License No. NPF-29 - Grand Gulf Nuclear Station, Unit 1 (TAC No. M80700), dated May 20, 1992.
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