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GNRO-2008/00044

May 19, 2008

U.S. Nuclear Regulatory Commission
Washington, DC 20555

Attention: Document Control Desk

Subject: Report of 10CFR50.59 Evaluations and Commitment Changes –
April 1, 2007 through March 31, 2008

Grand Gulf Nuclear Station
Docket No. 50-416
License No. NPF-29

Dear Sir or Madam:

Pursuant to 10CFR50.59(d)(2) Entergy Operations, Inc. hereby submits a summary of 50.59 evaluations for the period of April 1, 2007 through March 31, 2008. Also attached is the summary of commitment changes for the same period in accordance with NEI 95-07 Guidelines.

If you have any questions or require additional information, please contact Dennis Coulter at 601-437-6595.

This letter does not contain any commitments.

Yours Truly,

A handwritten signature in black ink, appearing to read "Michael J. Larson", with a long horizontal flourish extending to the right.

Michael J. Larson
Acting Licensing Manager

MJL/DMC:dmc

Attachments: 1. Table of Contents
2. 10CFR50.59 Evaluations and Commitment Change Evaluations

cc: (See Next Page)

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cc: NRC Senior Resident Inspector
Grand Gulf Nuclear Station
Port Gibson, MS 39150

U. S. Nuclear Regulatory Commission
ATTN: Mr. Elmo E. Collins, Jr. (w/a)
Regional Administrator, Region IV
611 Ryan Plaza Drive, Suite 400
Arlington, TX 76011-4005

U. S. Nuclear Regulatory Commission
ATTN: Mr. Jack N. Donohew, Jr., NRR/APRO/ DORL (w/2)
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Washington, DC 20555-0001

Attachment 1
 Table of Contents
 Grand Gulf Nuclear Station
 10CFR50.59 Evaluation and Commitment Change Evaluation Report
 for the Period April 1, 2007 through March 31, 2008

Acronyms

ARI	Alarm Response Instruction	LOP	Loss of Power
ASTM	American Society for Testing and Materials	MAPLHGR	Maximum Average Planar Linear Heat Generation Rate
CCE	Commitment Change Evaluation	MCPR	Minimum Critical Power Ratio
CMWT	Core Megawatts Thermal	MNCR	Material Non-Conformance Report
CR	Condition Report	MOV	Motor Operated Valve
DCP	Design Change Package	MS	Mechanical Standard
EP	Emergency Procedure	MSIV-LCS	Main Steam Isolation Valve Leakage Control System
EPI	Equipment Performance Instruction	NPE	Nuclear Plant Engineering
EPRI	Electric Power Research Institute	NSSS	Nuclear Steam Supply System
ER	Engineering Request	PDMS	Plant Data Management System
ES	Electrical Standard	PPM	Parts per Million
ESF	Engineered Safety Feature	PRA	Probabilistic Risk Assessment
GE	General Electric	PSW	Plant Service Water
GG	Grand Gulf	RCIC	Reactor Core Isolation Cooling
GGN	Grand Gulf Nuclear	RFO	Refueling Outage
GPM	Gallons per Minute	RHR	Residual Heat Removal
IOI	Integrated Operating Instruction	RPV	Reactor Pressure Vessel
ISI	In Service Inspection	SCN	Standard Change Notice
IST	In Service Testing	SERI	System Energy Resources, Inc.
LBDC	License Basis Document Change	SGTS	Standby Gas Treatment System
LDC	License Document Change	SOER	Significant Operating Experience Report
LHGR	Linear Heat Generation Rate	SSW	Standby Service Water
LLRT	Local Leak Rate Test	TRM / TS	Technical Requirements Manual / Technical Specifications
LOCA	Loss of Coolant Accident	UHS	Ultimate Heat Sink

Attachment 1

Table of Contents
Grand Gulf Nuclear Station
10CFR50.59 Evaluation and Commitment Change Evaluation Report
for the Period April 1, 2007 through March 31, 2008

Safety Evaluations

Evaluation Number	Initiating Document	Summary
SE 2007-0002-R00	EC 1553	Modification to disable the trip logic of the generator terminal box liquid level automatic trip function circuit

Attachment 1
Table of Contents
Grand Gulf Nuclear Station
10CFR50.59 Evaluation and Commitment Change Evaluation Report
for the Period April 1, 2007 through March 31, 2008

Commitment Change Evaluations

Commitment Number	Source Document	Summary
CCE 2007-0001	AECM 90/0007	Revision to air-to-water heat exchanger performance verification methodology to allow inspections in lieu of thermal performance testing

Attachment 2

10CFR50.59 Evaluations and Commitment Change Evaluations

GGNS 50.59 Safety Evaluation Number

SE 2007-0002-R00

10 CFR 50.59 EVALUATION FORM

Sheet 1 of 3

I. OVERVIEW / SIGNATURES¹

Facility: GGNS

Proposed Change / Document: EC 1553

✓	614.33
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	3
DATE	6/15/07
RELATED DOCUMENT NUMBER	

Evaluation # / Rev. #: 8
2007-0002-ROD

06/25/07

Description of Change: The Deviation alarm is in for the liquid level detection for the Generator Terminal box. The problem is the circuit card for 1N43N107. This change will defeat the trip logic. **This modification will disable the Liquid Level Automatic Trip function of this circuit.** This modification will prevent spurious deviation alarms and also spurious trips that might be caused by an uncontrolled failure of 1N43N107 were it to be left in the system.

Is the validity of this Evaluation dependent on any other change? Yes No
If "Yes," list the required changes/submittals. The changes covered by this 50.59 Evaluation cannot be implemented without approval of the other identified changes (e.g., license amendment request). Establish an appropriate notification mechanism to ensure this action is completed.

Based on the results of this 50.59 Evaluation, does the proposed change Yes No require prior NRC approval?

Preparer: Alan R. Sayre / *Alan R. Sayre* / EOI/System Engineering/5-24-2007
Name (print) / Signature / Company / Department / Date

Reviewer: Robert W. Fuller / *Robert W. Fuller* / EOI / Design Engineering/5-25-07
Name (print) / Signature / Company / Department / Date

OSRC: THOMAS W. THORNTON / *Thomas W. Thornton* / 5/25/07
Chairman's Name (print) / Signature / Date

OSRC Meeting # 019-2007

II. 50.59 EVALUATION

Does the proposed Change being evaluated represent a change to a method of evaluation ONLY? If "Yes," Questions 1 - 7 are not applicable; answer only Question 8. If "No," answer all questions below.

Yes
 No

Does the proposed Change:

1. Result in more than a minimal increase in the frequency of occurrence of an accident previously evaluated in the UFSAR? Yes No

BASIS: The described change is intended to reduce the likelihood of an inadvertent turbine trip due to the failure of an electrical component. Turbine trip is an accident included in USFAR Section 15.8.1 ATWS. The main accident of concern when dealing with the turbine/generator is the generator load reject with failure of bypass flow (UFSAR 15.2.2). This is a moderate frequency event. The liquid level trips are used to protect the non safety related generator from equipment damage. With the trips bypassed, operators will be relied on to monitor liquid level parameters associated with the trip being bypassed. With the trips bypassed, the system will not initiate any action or event that would increase the frequency of occurrence of an accident previously evaluated in the FSAR.

¹ Signatures may be obtained via electronic processes (e.g., PCRS, ER processes), manual methods (e.g., ink signature), e-mail, or telecommunication. If using an e-mail or telecommunication, attach it to this form.

10 CFR 50.59 EVALUATION FORM

Sheet 2 of 3

2. Result in more than a minimal increase in the likelihood of occurrence of a malfunction of a structure, system, or component important to safety previously evaluated in the UFSAR? Yes No
BASIS: The Generator Terminal Box Liquid level detection system is not safety related or important to safety and is not evaluated in the UFSAR. The effect of bypassing the liquid level trip are limited to the trip circuit of the generator. This change will not affect any equipment used to mitigate radiological consequences of an accident since the generator is not safety related equipment. Since this change will not effect any equipment important to safety it can not increase the likelihood of occurrence of an equipment malfunction important to safety.
3. Result in more than a minimal increase in the consequences of an accident previously evaluated in the UFSAR? Yes No
BASIS: The proposed modification has no function in controlling the consequences of any accident described in the UFSAR. The Generator Terminal Box Liquid level detection system is not safety related or important to safety and is not evaluated in the UFSAR. The effect of bypassing the liquid level trip are limited to the trip circuit of the generator. This change will not affect any equipment used to mitigate radiological consequences of an accident since the generator is not safety related equipment. Since this change will not effect safety related functions associated with an accident, there is no impact to any accident consequences previously evaluated in the UFSAR.
4. Result in more than a minimal increase in the consequences of a malfunction of a structure, system, or component important to safety previously evaluated in the UFSAR? Yes No
BASIS: The proposed change does not affect any SSC that is important to safety. The Generator Terminal Box Liquid level detection system is not safety related or important to safety and is not evaluated in the UFSAR. The effect of bypassing the liquid level trip are limited to the trip circuit of the generator. This change will not affect any equipment used to mitigate radiological consequences of an accident since the generator is not safety related equipment. Since this change will not effect any equipment important to safety it can not increase the consequences of an equipment malfunction previously evaluated in the UFSAR.
5. Create a possibility for an accident of a different type than any previously evaluated in the UFSAR? Yes No
BASIS: The proposed change reduces the likelyhood of an inadvertent turbine trip, which is described in section 15.8.1 of the UFSAR. The bypassed level deviation trip affects the generator trip and will not introduce a new mode of generator/tripping failure. The trips listed in UFSAR section 10.2.2.5.1 are also used to supply protection to the generator. If the bypassed trip failed to function and one of the events occurred that this trip is designed to protect the generator against, the resulting conditions would still be bounded by the load rejection evaluation in the UFSAR. The non-safety related generator will not cause any accidents different than previously evaluated in the UFSAR.
6. Create a possibility for a malfunction of a structure, system, or component important to safety with a different result than any previously evaluated in the UFSAR? Yes No
BASIS: The proposed change does not affect any SSC that is important to safety. The generator tripping from a load rejection and no bypass flow was evaluated in the UFSAR as the most limiting accident involving the generator. THIS change will affect the trip circuit of the generator only. The tripping of the generator has been already evaluated and this change is bounded by that evaluation. Since this change is bounded by previous evaluation there is no possibility of creating a malfunction of equipment important to safety with different results than previously evaluated.
7. Result in a design basis limit for a fission product barrier as described in the UFSAR being exceeded or altered? Yes No
BASIS: The proposed modification does not affect any fission product barrier. The equipment is non safety related and is not relied upon to mitigate the consequences of an accident. No fission product barrier described in the UFSAR is affected.
8. Result in a departure from a method of evaluation described in the UFSAR used in establishing the design bases or in the safety analyses? Yes No
BASIS: The proposed modification does not result in or stem from any change to any method of evaluation

10 CFR 50.59 EVALUATION FORM

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If any of the above questions is checked "Yes," obtain NRC approval prior to implementing the change by initiating a change to the Operating License in accordance with NMM Procedure EN-LI-103.

**GGNS Commitment Change
Evaluation Number**

CCE 2007-001

COMMITMENT CHANGE EVALUATION FORM

Sheet 1 of 5

NOTE

Forward completed form to Plant Licensing.

CMS ID: P 24507 Plant Licensing Tracking Number: CCE 2007-0001

Source Document/Date: AECM-90/0007

Commitment: Deletion [] Revision [x]

Has the original commitment been implemented? [x] YES [] NO, Notify Plant Licensing

Original Commitment Description:

Commitment description based on AECM-90/0007, Attachment I, Section II.B, Page 5

Air-to-Water Heat Exchangers

The following heat exchangers are included in this category:

- ESF Switchgear Room Coolers
RHR Room Coolers
LPCS Room Cooler
HPCS Room Cooler
RCIC Room Cooler
Fuel Pool Cooling and Cleanup Room Coolers

Sufficient instrumentation is installed or will be provided to measure SSW flows and all process temperatures. The room cooler air flows will be determined by calculation.

Performance testing of these heat exchangers will be performed. Temperature and flow compensation of test results to the design conditions will be included as part of the planned testing program. If, due to insufficient heat loads, it is not possible to obtain statistically significant extrapolated results, then visual inspections of both the air and water sides of the heat exchangers will be performed, where possible, to ensure cleanliness. The test results will be trended to monitor degradation of cooling water flow.

Revised Commitment Description:

Air-to-Water Heat Exchangers

Mechanical Standard MS 39.0 delineates the testing program to verify the heat transfer capability of the air-to-water heat exchangers. The air-to-water heat exchangers in MS 39.0 included in this category are:

- ESF Switchgear Room Coolers
RHR Room Coolers
LPCS Room Cooler
HPCS Room Cooler
RCIC Room Cooler
Fuel Pool Cooling and Cleanup Room Coolers

QA RECORD stamp with fields for RT, LOGS, NUMBER OF PAGES, DATE, and RELATED DOCUMENT NUMBER.

COMMITMENT CHANGE EVALUATION FORM

Sheet 2 of 5

Performance testing of these heat exchangers will be performed. Sufficient instrumentation is installed to measure SSW flows and all process temperatures. The room cooler air flows will be determined by calculation. Temperature and flow compensation of test results to the design conditions will be included as part of the planned testing program.

If, due to insufficient heat loads, it is not possible to obtain statistically significant extrapolated test results, then performance testing will consist of monitoring of SSW flows and measuring air flow rates. Visual inspections of both the air and water sides of the heat exchangers will be performed, where possible, to ensure cleanliness. The test results will be trended to monitor degradation of cooling water and air flow rates.

Summary of Justification for Change or Deletion:

Generic Letter 89-13 required licensees to conduct a test program to verify the heat transfer capability of all safety-related heat exchangers cooled by service water. Enclosure 2 of GL 89-13 described a program that would be acceptable for heat exchanger testing. In regards to air-to-water heat exchangers, Section II.B of Enclosure 2 states:

- B. If it is not possible to test the heat exchanger to provide statistically significant results (for example, if error in the measurement exceeds the value of the parameter being measured), then
 1. Trend test results for both air and water flow rates in the heat exchanger.
 2. Perform visual inspections, where possible, of both the air and water sides of the heat exchanger to ensure cleanliness of the heat exchangers.

Thermal performance testing of the air-to-water heat exchangers has not provided consistent, qualitative data on which to trend heat transfer capability. This is due to the small heat load at test conditions and subsequent large uncertainty in the data calculations. As a result, MS 39.0 provides for an acceptable alternative to thermal performance testing in accordance with Section II.B of Enclosure 2 to Generic Letter 89-13.

Prepared By: Alex Howard / [Signature] Date: 10/10/07
Print Name/Signature

Management Approval: Billy Parman / [Signature] Date: 10/10/07
Print Name/Signature Billy Parman

Plant Licensing Management
Concurrence:

Drew Bottemiller / [Signature] Date: 10-10-07
Print Name/Signature

COMMITMENT CHANGE EVALUATION FORM

Sheet 3 of 5

PART I

- 1.1 Is the existing commitment located in the Updated Final Safety Analysis Report, Emergency Plan, Quality Assurance Program, Fire Protection Program, or Security Plan?
- YES STOP. Do not proceed with this evaluation. Instead use appropriate codified process (e.g., 10 CFR 50.71(e), 10 CFR 50.54, 10 CFR 50.59, 10 CFR 50.55) to evaluate commitment.
- NO Go to Part II.

PART II

- 2.1 Could the change negatively impact the ability of a System, Structure, or Component (SSC) to perform its safety function or negatively impact the ability of plant personnel to ensure the SSC is capable of performing its intended safety function?
- YES Go to Question 2.2.
- NO Continue with Part III. Briefly describe rationale:

The original commitment provided for allowance of visual inspections and cooling water monitoring and trending as an alternative if significant data could not be extrapolated from air-to-water heat exchanger testing. MS 39.0 will now describe an acceptable alternative to thermal performance testing of air-to-water heat exchangers as allowed by Generic Letter 89-13, Enclosure 2, Section II.B.

- 2.2 Perform a safety evaluation using the following 10 CFR 50.92 criteria to determine if a significant hazards consideration exists:
- Does the revised commitment involve a significant increase in the probability or consequences of an accident previously evaluated?
- Yes No Describe basis below:

[Empty box for describing basis below]

- Does the revised commitment create the possibility of a new or different kind of accident from any previously evaluated?
- YES NO Describe basis below:

[Empty box for describing basis below]

- Does the revised commitment involve a significant reduction in a margin of safety?
- YES NO Describe basis below:

[Empty box for describing basis below]

If any of the above questions are answered Yes, STOP. Do not proceed with the revision, OR discuss change with NRC and obtain necessary approvals prior to implementation of the proposed change. If all three questions are answered NO, go to Part III. (Attach additional sheets as necessary.)

PART III

- 3.1** Was the original commitment (e.g., response to NOV, etc.) to restore an obligation (e.g., rule, regulation, order or license condition)?
- YES Go to question 3.2.
- NO Go to Part IV.
- 3.2** Is the proposed revised commitment date necessary and justified?
- YES Briefly describe rationale (attach additional sheets as necessary) and notify NRC of revised commitment date prior to the original commitment date.
-
- NO STOP. Do not proceed with the revision, OR apply for appropriate regulatory relief.

PART IV

- 4.1** Was the original commitment: (1) explicitly credited as the basis for a safety decision in an NRC SER, (2) made in response to an NRC Bulletin or Generic Letter, or (3) made in response to a request for information under 10 CFR 50.54(f) or 10 CFR 2.204?
- YES Go to Question 4.2.
- NO Go to Part V.
- 4.2** Has the original commitment been implemented?
- YES STOP, You have completed this evaluation. Revise the commitment and notify NRC of revised commitment in summary report.
- NO Go to Question 5.1.

PART V

- 5.1** Was the original commitment made to minimize recurrence of a condition adverse to quality (e.g., a long-term corrective action stated in an LER)?
- YES Go to Question 5.2.
- NO STOP. You have completed this evaluation. Revise the commitment. No NRC notification required.
- 5.2** Is the revised commitment necessary to minimize recurrence of the condition adverse to quality?
- YES Revise the commitment and notify NRC of revised commitment in next annual/RFO interval summary report.
- NO Revise commitment. No NRC notification is required.

REFERENCES

1. NRC Generic Letter 89-13

List below the documents (e.g., procedures, NRC submittals, etc.) affected by this change .

Doc. Number/ID	Description
AECM-90/0007	Response to Generic Letter 89-13; Service Water System Problems Affecting Safety-Related Equipment
MS-39	Mechanical Standard for Thermal Performance Testing of Safety-Related Standby Service Water Heat Exchangers
CCE 2004-0002	Commitment Change Evaluation stating methodology for air-to-water heat exchanger testing.