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GNRO-2003/00045

August 11, 2003

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

SUBJECT: 60 Day Response to NRC Generic Letter 2003-01:
"Control Room Habitability,"
Grand Gulf Nuclear Station, Unit 1
Docket No. 50-416
License No. NPF-29

REFERENCE: Letter GNRI-2003/00056 from USNRC to All BWR License Holders,
NRC Generic Letter 2003-01, "Control Room Habitability," dated
June 12, 2003.

Dear Sir or Madam:

Entergy Operations, Inc. (EOI), as operator of the Grand Gulf Nuclear Station hereby submits a 60-day response to NRC Generic Letter 2003-01 (Reference 1).

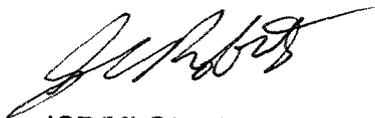
Entergy Operations, Inc., has reviewed the actions requested by NRC Generic Letter 2003-01 and has determined that the 180-day completion schedule cannot be met at Grand Gulf Nuclear Station. Therefore, EOI is submitting this 60-day response.

As requested by the Generic Letter, EOI is proposing an alternative course of action. Attachment 1 details this proposal and includes the basis for this course of action. Attachment 1 also includes a schedule for the submittal of a response to Item 1 (subparts (a), (b), and (c)) and the responses to Items 2 and 3 of the Generic Letter.

Attachment 2 summarizes the commitments in Attachment 1.

If you have any questions or require additional information, please contact Matt Crawford at 601-437-2334.

Sincerely,



JCR/MLC/amt

Attachments:

1. 60-day Response to NRC Generic Letter 2003-01, Control Room Habitability
2. List of Regulatory Commitments

cc: U. S. Nuclear Regulatory Commission
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Mr. L. J. Smith (Wise Carter)
Mr. N. S. Reynolds
Mr. H. L. Thomas

Attachment 1

GNRO-2003/00045

**60-day Response to NRC Generic Letter 2003-01
Control Room Habitability**

1. INTRODUCTION

Entergy Operations, Inc. (EOI), has reviewed the actions requested by NRC Generic Letter 2003-01 and has determined that the 180-day completion schedule cannot be met at Grand Gulf Nuclear Station (GGNS), Unit 1.

As requested by the generic letter, GGNS is providing below a proposed alternative course of action via this response. The basis for the acceptability of the alternative course of action and a schedule for completion is also provided.

This letter also provides the responses to items 2 and 3 of Generic Letter 2003-01.

2. PROPOSED ALTERNATIVE COURSE OF ACTION

EOI proposes to complete each of the initial, "one-time actions" described in Section 3 of NEI 99-03, Revision 1 (Reference 2) for GGNS. Specifically, these actions are:

- Assemble CRH licensing and design bases (3.1.1)
- Assemble CRH analyses (3.1.2)
- Document CRH licensing and design bases and analyses (3.1.3)
- Assess and evaluate licensing/design bases and operator dose analyses (3.2.1)
- Confirm that limiting DBA has been used to assure adequacy of CRH design (3.2.2)
- Assess and evaluate potential sources of hazardous chemicals. Update hazardous chemicals surveys as necessary (3.2.3)
- Assess and evaluate control room in leakage (3.2.4)
- Assess and evaluate control room during smoke events (3.2.5)
- Assess and evaluate the adequacy of existing control room emergency ventilation system technical specifications (3.2.6)

(The corresponding Section of NEI 99-03, Rev. 1 is shown in parenthesis.) These initial actions will provide the technical and licensing basis for additional actions, such as Modifications, Tests, Technical Specification changes, License Amendments, or further analyses.

Initial Actions Summary Report

Following completion of the above actions, EOI will submit to the NRC, a report summarizing the results and a plan and schedule for the resolution of any significant discrepancies or conditions adverse to quality. The report will address Section 1, including subparts 1(a), 1(b) and 1(c), of Generic Letter 2003-01.

3. BASIS FOR ACCEPTABILITY OF ALTERNATIVE COURSE OF ACTION

The GGNS control room is a neutral pressure design with a recirculating cleanup system to maintain low airborne activity levels. The inleakage requirements are currently maintained by Operating License Condition 2.B (38) which states that: "EOI shall operate Grand Gulf Unit 1 during MODES 1 through 3 with an allowable control room leak rate not to exceed 2000 cfm (not including ingress/egress leakage of 10 cfm)." Before the implementation of the alternative source term in 1998, this inleakage limit was 590 cfm.

EOI has reviewed the design bases radiological and toxic gas analyses associated with the GGNS control room. The radiological analyses apply an unfiltered inleakage rate of 2000 cfm (plus 10 cfm for ingress and egress) while the toxic gas analyses apply a value of more than 4000 cfm. These inleakage rates are consistent with the analysis assumption inleakage of 2000 cfm.

Although no explicit analyses have been performed to address a smoke event, the following considerations mitigate the impact of a smoke event at GGNS.

- Each redundant alternate shutdown panel is located in separate and adjacent rooms that are separate fire areas located in the control building three elevations below the control room and are outside the control room envelope.
- Multiple egress paths are available out of the control room to these alternate shutdown rooms. The control room has multiple exits with at least one exit on both the east and west sides of the room. Outside of each exit, there is a stairwell which can be taken to the elevation of the alternate shutdown rooms. Access to each alternate shutdown room from each of these stairwells is through separate fire areas.
- The operators are trained in the use of self-contained breathing apparatus, which are staged in the control room envelope.

The GGNS control room has been tested using pressurization methods and demonstrated an inleakage rate of 435 cfm. Considering the issues described in GL 2003-01, EOI cannot provide information that confirms the GGNS control room meets the applicable regulatory requirements and is hereby responding to GL 2003-01 within 60 days. However, there is no immediate safety concern because:

- The GGNS control room has been tested using pressurization methods and demonstrated an inleakage rate of 435 cfm, which is less than 25% of the 2000 cfm current design basis inleakage value.
- The control room envelope boundary is maintained via an integrity program in which openings are controlled and tracked. Since the radiological analyses assume infinite inleakage in MODES 4 and 5, larger openings are permitted in MODES 4 and 5 consistent with the larger design basis inleakage assumptions of the toxic gas analyses.
- The radiological and toxic gas analyses contain many conservatisms such as worst-case meteorological conditions, chemicals, core source terms, and minimum charcoal and HEPA filter efficiencies.

Considering the arguments posed by the NRC in GL 2003-001 regarding the inadequacy of pressurization test techniques, EOI commits to perform a tracer gas test on the GGNS control room envelope using test methods in accordance with ASTM E-741 (Reference 3) and perform an evaluation of the results. There is only a limited number of companies qualified to conduct ASTM E-741 (or equivalent) tracer gas tests. Allowing for time to perform the design basis review; to plan, schedule and perform the test; and to summarize the results, EOI will submit a report documenting these results by June 30, 2005.

The current GGNS allowable leak rate in Operating License Condition 2.B (38) does not include a requirement for periodic testing. EOI is following the development of TSTF-448 (Reference 4) and will propose appropriate changes to the GGNS Technical Specifications to ensure the integrity of the control room envelope is maintained. Proposed Technical Specification changes will be included with the test results submitted by June 30, 2005.

4. PROPOSED SCHEDULE

EOI will submit written responses to items 1, 1(a), 1(b) and 1(c) of GL 2003-01 for GGNS no later than June 30, 2005. This response will include a summary of the "initial action" evaluations and assessments described in Section 3 of NEI 99-03, Revision 1. The response will also include plans and schedules for resolving significant discrepancies, adverse conditions, required modifications, and a control room habitability program, as necessary.

5. GL 2003-01 ITEM 2, COMPENSATORY MEASURES

No compensatory measures are necessary to demonstrate control room habitability at GGNS.

6. GL 2003-01 ITEM 3, APPLICABILITY OF GENERAL DESIGN CRITERIA

GGNS is required to meet General Design Criteria (GDC) 19 as documented in Section 3.1.2.2.10 of the GGNS Updated Final Safety Analysis Report (UFSAR). The control room ventilation system is designed to maintain the control room environment for a 30-day continuous occupancy after a DBA per the requirements of GDC 19. The operation of that system in maintaining the control room envelope habitability is discussed in the GGNS UFSAR, Section 6.4.

7. REFERENCES

1. USNRC Generic Letter 2003-01, "Control Room Habitability," June 12, 2003.
2. Nuclear Energy Institute, NEI 99-03, Revision 1, "Control Room Habitability Guidance," March 2003.
3. American Society for Testing Materials (ASTM) E741, "Standard Test Methodology for Determining Air Change in a Single Zone by Means of a Tracer Gas Dilution"
4. Industry/TSTF Standard Technical Specification Change Traveler – 448, "Control Room Habitability"

Attachment 2

GNRO-2003/00045

List of Regulatory Commitments

List of Regulatory Commitments

The following table identifies those actions committed to by Entergy in this document. Any other statements in this submittal are provided for information purposes and are not considered to be regulatory commitments.

COMMITMENT	TYPE (Check one)		SCHEDULED COMPLETION DATE (If Required)
	ONE-TIME ACTION	CONTINUING COMPLIANCE	
EOI will prepare and submit to the NRC, a written report summarizing: 1. the results of the "initial actions" described in Section 3 of NEI 99-03, Rev. 1, 2. results of the tracer gas test, and 3. proposed changes to the GGNS Technical Specifications.	X		June 30, 2005
EOI proposes to complete each of the initial, "one-time actions" described in Section 3 of NEI 99-03, Revision 1 (Reference 2) for GGNS.	X		June 30, 2005
EOI commits to perform a tracer gas test on the GGNS control room envelope using test methods in accordance with ASTM E-741 (Reference 3) and perform an evaluation of the results.	X		June 30, 2005