Template #
NMSS/RGN-005

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-8064

February 22, 2000

EA 99-305

William A. Eaton, Vice President
Operations - Grand Gulf Nuclear Station
Entergy Operations, Inc.
P. O. Box 756
Port Gibson, Mississippi 39150

SUBJECT: NOTICE OF VIOLATION
(NRC Special Inspection Report No. 50-416/99-19)

Dear Mr. Eaton:

This refers to your letter dated February 4, 2000, responding to the four apparent violations described in the subject inspection report. Our inspection reviewed the circumstances surrounding a bearing failure which rendered the high pressure core spray (HPCS) diesel generator inoperable on September 9, 1999. You described this event in Licensee Event Report 1999-004 dated October 12, 1999. The results of our inspection were provided to your staff during the inspection exit meeting on December 10, 1999, and the inspection report was issued on January 7, 2000.

Based on the information developed during the inspection and the information that you provided in your February 4, 2000, response to the inspection report, the NRC has determined that four violations of NRC requirements occurred. These violations are cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding them are described in detail in the subject inspection report. The violations are related to the failure of the HPCS diesel generator, which was caused by your staff's failure to resolve issues surrounding the correct oil level needed for the HPCS diesel generator bearing. In July 1998, your staff recognized a conflict between the nameplate data and a vendor drawing for the amount of oil needed for the bearing. Without resolving this inconsistency, your staff lowered the oil level in the HPCS diesel generator east end bearing (to address questions about "frothing" in the oil) to less than the minimum specified in the controlled vendor drawing on July 9, 1999. On September 9, 1999, the HPCS diesel generator bearing failed during the performance of Surveillance 06-OP-1P81-R-0001, "HPCS Diesel Generator 18 Month Functional Test," Revision 104. The most probable cause of the failure was inadequate lubrication of the bearing due to an insufficient supply of lubrication oil. The violations cited in the attached Notice involved: (1) exceeding the Technical Specification 3.8.1 limiting condition for operation regarding the emergency diesel generators; (2) failing to include the diesel generator bearings as a potential cause for the "Generator RTD Temp Hi" alarm in the applicable alarm response instruction; (3) revising a work package that changed the degree of the impact statement to the plant without the required reviews; and (4) failing to initiate condition reports on two separate occasions when nonconformances were discovered.

The safety significance of these violations is that the HPCS diesel generator, if called upon, would not have been able to perform its intended safety function for approximately 74 days. The HPCS diesel generator is the independent onsite power supply for the HPCS emergency core cooling system and is the only source of emergency AC power for plant safety equipment during a station blackout (loss of offsite power coincident with a failure of the Division I and II standby diesel generators). Therefore, these four violations are classified in the aggregate in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions" (Enforcement Policy), NUREG-1600 as a Severity Level III problem.

In accordance with the Enforcement Policy, a base civil penalty in the amount of $55,000 is considered for a Severity Level III problem. Because your facility has not been the subject of escalated enforcement actions within the last 2 years, the NRC considered whether credit was warranted for *Corrective Action* in accordance with the civil penalty assessment process in Section VI.B.2 of the Enforcement Policy. Your corrective actions included establishing a significant event response team (SERT), resolving inconsistent information regarding the oil level, reviewing configuration control practices, reviewing this condition with engineering personnel, addressing the alarm response instruction, reviewing practices regarding maintenance work packages, reviewing practices regarding information tags, discussing with engineering department staff management expectations regarding condition reports, and resolving questions about frothing/aeration in the diesel generator bearing oil. Based on these actions, we have determined that credit for the *Corrective Action* factor is warranted.

Therefore, in recognition of your prompt and comprehensive corrective actions, and the absence of previous escalated enforcement action, I have been authorized not to propose a civil penalty in this case.

In your February 4, 2000, letter, you expressed concern with our characterization that the SERT Root Cause report failed to be self-critical or thorough. Our characterization was based on the fact the report did not address two items which we considered to be failed barriers. In recognition that the SERT team did consider these two items, we agree with you that the SERT report was self-critical and thorough.

The NRC has concluded that information regarding the reason for the violations, the corrective actions taken and planned to correct the violations and prevent recurrence and the date when full compliance will be achieved is already adequately addressed on the docket in Inspection Report No. 50-416/99-19, LER 1999-004, and your February 4, 2000 letter. Therefore, you are not required to respond to this letter unless the description therein does not accurately reflect your corrective actions or your position. In that case, or if you choose to provide additional information, you should follow the instructions specified in the enclosed Notice.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure, your February 4, 2000 letter, and any further response you choose to provide will be placed in the NRC Public Document Room.

Sincerely,

Ellis W. Merschoff
Regional Administrator

Docket No. 50-416
License No. NPF-29

Enclosure: Notice of Violation

cc (w/encl):
Executive Vice President
and Chief Operating Officer
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President, District 1
Claiborne County Board of Supervisors
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General Manager
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Entergy Operations, Inc.
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Dr. F. E. Thompson, Jr.
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Vice President
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Jackson, Mississippi 39286-1995

Director, Nuclear Safety
and Regulatory Affairs
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P.O. Box 756
Port Gibson, Mississippi 39150

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Accession Nbr:
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Vice President, Operations
Grand Gulf Nuclear Station
Entergy Operations, Inc.
P.O. Box 756
Port Gibson, Mississippi 39150

NOTICE OF VIOLATION

Entergy Operations, Inc.
Grand Gulf Nuclear Station

Docket No. 50-416
License No. NPF-29
EA 99-305

During an NRC inspection conducted on November 29 through December 10, 1999, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, the violations are listed below:

A. Grand Gulf Nuclear Station Technical Specification 3.8.1.b requires that three diesel generators be operable in Modes 1, 2, and 3. Technical Specification 1.1 defines OPERABLE as follows: "A system. . . .shall be OPERABLE or have OPERABILITY when it is capable of performing its specified safety function(s). . ." The emergency diesel generator's safety function is to provide an alternate safety-related electrical power source in response to an event involving the loss of off-site power, for the duration of the event.

Contrary to the above, from July 9 to September 21, 1999, Grand Gulf Nuclear Station operated in Mode 1 without three operable emergency diesel generators. Specifically, the Division III diesel generator was inoperable during this period as a result of an inadequate supply of oil in the generator's east end bearing. The oil level was below the required level shown on controlled Drawing 3636-009, "Electric Products Co. No. 150 AC Synchronous Generator," Revision 5. (01013)

B. Grand Gulf Nuclear Station Technical Specification 5.4.1 requires that written procedures be established, implemented, and maintained covering the applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, "Typical Procedures for Pressurized Water Reactors and Boiling Water Reactors," February 1978. Section 5 of Appendix A requires that procedures for alarm conditions contain the meaning of the annunciator, the source of the signal, the immediate action that is to occur automatically, the immediate operator action, and the long-range actions.

Contrary to the above, as of September 21, 1999, Alarm Response Instruction 04-1-02-1H22-P118-1A-A3, "Generator RTD High Temp," Revision 15, was inadequate in that it did not identify the diesel generator bearings as a potential cause for the alarm, nor did it provide guidance to operators for increased temperature in the diesel generator bearings. (01023)

C. 10 CFR Part 50, Appendix B, Criterion V requires, in part, that activities affecting quality be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances.

Grand Gulf Procedure 01-S-18-4, "Planning Guideline," Revision 0, Step 6.1, states that revisions to work packages that change the degree of the impact statement to the plant will be reviewed by either the 1300 hours review meeting or other normal planning meetings.

Contrary to the above, on July 9, 1999, revisions were made to Maintenance Action Item (MAI) 219074 that changed the degree of the impact statement to the plant, and were

not reviewed by any normal planning meeting. Specifically, the MAI was written to troubleshoot a chattering temperature switch on the west end generator bearing. But, additional work was added to drain the oil from the HPCS diesel generator east end generator bearing and refill the bearing with 3.75 gallons of oil. No work was performed on the chattering temperature switch on July 9, 1999. The east end bearing was drained and refilled with 3.75 gallons and the west end bearing was drained to the point that it was within the required band. The steps changed the degree of the impact statement to the plant and were not reviewed. (01033)

D. 10 CFR Part 50, Appendix B, Criterion V requires, in part, that activities affecting quality be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances.

Grand Gulf Procedure 01-S-03-10, "GGNS Condition Report," Revision 3, Paragraph 6.1.1 required that individuals initiate a condition report whenever a non-conformance is discovered. A non-conformance is a deficiency in characteristic, documentation, or procedure which renders the quality of an item unacceptable or indeterminate.

Contrary to the above, condition reports were not initiated when non-conformances were discovered in the following two instances.

1. On July 17, 1998, the system engineer identified in the work performed section of Work Order 210237 that 18 quarts (4.5 gallons) of oil had to be added after the vendor drawing (Controlled Drawing 3636-009, "Electric Products Co. No. 150 AC Synchronous Generator," Revision 5) was used to place the operating band on the Division III diesel Bearing B sight glass and that the plate on the side of the bearing housing was stamped with 3.75 gallons as the bearing oil volume. On October 6, 1998, the system engineer documented in the System Engineering Logbook (a computer based database) that the bearing housing nameplate volume did not match the drawing sight glass level markings. No Condition Report was written to correct this discrepancy.

2. On June 20, 1999, the system engineer became aware that the frothing observed in the Division III diesel generator Bearing B could be an indicator of an impending bearing failure. No condition report was written to resolve this potential deficiency. (01043)

These violations represent a Severity Level III problem (Supplement I).

The NRC has concluded that information regarding the reason for the violations, the corrective actions taken and planned to correct the violations and prevent recurrence and the date when full compliance will be achieved is already adequately addressed on the docket in Inspection Report No. 50-416/99-19, LER 1999-004, and your February 4, 2000 letter. However, you are required to submit a written statement or explanation pursuant to 10 CFR 2.201 if the description therein does not accurately reflect your corrective actions or your position. In that case, or if you choose to respond, clearly mark your response as a "Reply to a Notice of Violation," and send it to the U.S. Nuclear Regulatory Commission, ATTN: Document Control

Desk, Washington, DC 20555 with a copy to the Regional Administrator, Region IV, 611 Ryan Plaza Drive, Suite 400, Arlington, Texas 76011, and a copy to the NRC Resident Inspector at the facility that is the subject of this Notice, within 30 days of the date of the letter transmitting this Notice of Violation (Notice).

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001.

If you choose to respond, your response will be placed in the NRC Public Document Room (PDR). Therefore, to the extent possible, the response should not include any personal privacy, proprietary, or safeguards information so that it can be placed in the PDR without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.790(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Dated this 22nd day of February 2000