



**Entergy  
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**W. T. Cottle**

Vice President  
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Grand Gulf Nuclear Station

March 8, 1991

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  
120 Day Response to Generic Letter 89-10, Supplement 3

GNRO-91/00048

Gentlemen:

The NRC issued Supplement 3 to Generic Letter 89-10, "Consideration of the Results of NRC-Sponsored Tests of Motor Operated Valves," to all licensees on October 25, 1990 (MAEC-90/0277). This supplement concerned test data from the Idaho National Engineering Laboratories (INEL) Motor Operated Valve (MOV) testing program which suggested that deficiencies may exist in MOVs in the RCIC, HPCI, RWCU and isolation condenser systems of BWR facilities. In order to determine if deficiencies did exist, each licensee was requested to perform a safety assessment of the isolation valves in the specified systems considering design, operating, and maintenance factors presented in Supplement 3.

In response, Entergy Operations, Inc. submitted the results of a safety assessment on December 11, 1990 (AECM-90/0217) for the Grand Gulf Nuclear Station (GGNS). The safety assessment concluded that the as-installed configurations of the applicable isolation valves were adequate. This conclusion was premised on the specified MOVs having a thrust capacity exceeding that predicted using INEL data or an evaluation which demonstrated that an MOV with less than predicted thrust capability does not represent a significant safety concern. GGNS also evaluated the thrust capability of MOVs in other systems and, for those systems reviewed, identified no conditions detrimental to valve functionality.

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March 8, 1991

GNRO-91/00048

Page 2 of 3

Supplement 3 also requested a 120 day response providing the criteria used to evaluate the capacity of the subject MOVs, identifying any MOV not meeting these criteria, and establishing a schedule for any corrective action required. This requested information is provided in the Attachment. Recommended torque switch adjustments as noted in the Attachment will be performed prior to start-up following the next refueling outage, RF05. This outage is currently scheduled to begin in April, 1992.

If you require additional information, please advise.

Yours truly,

WTC/WKH/ams

attachment: Evaluation Criteria, Results, and Schedule

cc: Mr. D. C. Hintz (w/a)  
Mr. J. Mathis (w/a)  
Mr. R. B. McGehee (w/a)  
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BEFORE THE  
UNITED STATES NUCLEAR REGULATORY COMMISSION

\_\_\_\_\_  
LICENSE NO. NPF-29

\_\_\_\_\_  
DOCKET NO. 50-416

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

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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 Response to Generic Letter 89-10, Supplement 3; that I signed this letter 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 8 day of March, 1991.

(SEAL)

Patricia McLaughlin  
Notary Public

My commission expires:

My Commission Expires July 1, 1993

20 Day Response to Generic Letter 89-10, Supplement 3  
Evaluation Criteria, Results, and Schedule

CRITERIA:

INEL test data was reviewed for applicability to the GGNS RWCU and RCIC<sup>1</sup> steam supply isolation valves. As a result of the review, it was considered appropriate for the purpose of the immediate assessment required by Supplement 3 to consider the results of the INEL 10" William Powell flex wedge gate valve test to be applicable to the two GGNS RCIC 10" William Powell flex wedge gates. It is recognized, however, that similarity cannot necessarily be established based on vendor, type, and size alone. None of the INEL data is considered to apply to the RWCU 6" William Powell flex wedge gate valves since 10" William Powell gate valves were tested.

Based on the above application of the INEL testing and subsequent industry sponsored evaluations, GGNS concludes that in the absence of valve specific test data for the subject MOVs, actuators should be sized utilizing a disk factor of 0.5 since blowdown isolation conditions are postulated. Where valve specific blowdown test data is available, it should be used. These criteria should be applied in conjunction with material limits and degraded voltage conditions.

RESULTS:

Applying the above criteria to the subject MOVs, it is concluded that all have adequate capacity to isolate against postulated blowdown flows. However the current torque switch setting for two MOVs will require adjustment or confirmation that sufficient delivered thrust results. These MOVs are identified as E51F063, the inboard RCIC steam supply isolation valve, and G33F251, the outboard RWCU post-pump mode supply isolation valve.

E51F063 is a 10" William Powell gate valve similar in size, type, and manufacturer to that tested by INEL. The valve is equipped with an SMB-1 actuator and a 40 ft-lb motor. Field measurement of delivered thrust during the last refueling outage indicates it to be less than that required during the INEL test. This condition was previously evaluated with acceptable conclusions as stated in the December 11, 1990, GGNS submittal (AECM-90/0217). However, torque switch settings will be adjusted accordingly during RFO5.

<sup>1</sup>Due to the Mark III, BWR/6 design, it was not necessary to address HPCI system or isolation condenser in the safety assessment and this response.

G33F251 is a 6" William Powell gate valve driven by an SMB-0 actuator with a 25 ft-lb motor. This type valve was not tested by INEL and was therefore evaluated using a disk factor of 0.5. No field measurement of delivered thrust is currently available but the switch setting recorded for the closing direction during the last refueling outage closely corresponds to the recorded setting for three other identical RWCU MOVs for which delivered thrust is known. In all three cases delivered thrust exceeds that required to support the use of a 0.5 disk factor. Based on this comparison, it is believed that torque switch setting for G33F251 is also adequate. However, delivered thrust will be measured in RFO5 and any necessary torque switch adjustments will be made.

The above measures are considered adequate until more applicable flow test data becomes available during the course of implementing the recommendations of Generic Letter 89-10. This is consistent with the "two stage" approach recommended by the NRC.

SCHEDULE:

The noted torque switch adjustments will be performed as necessary during RFO5, currently scheduled to begin in April, 1992.