



**Entergy
Operations**

Entergy Operations, Inc.

P.O. Box B

Killbuck, LA 70066

Tel 504-739-6650

W3F1-97-0030

A4.05

PR

February 17, 1997

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Subject: Waterford 3 SES
Docket No. 50-382
License No. NPF-38
Generic Letter 92-01, Revision 1, Supplement 1

Gentlemen:

On August 17, 1995, Entergy Operations, Waterford 3, provided a response to Generic Letter 92-01 Revision, Supplement 1 via letter W3F1-95-0127. In this letter, Waterford 3 committed to provide a schedule for providing the information requested by the Generic Letter by February 17, 1997. The purpose of this letter is to provide the complete information requested by the Generic Letter rather than just provide a schedule as previously documented by Waterford 3.

In December 1992, Entergy Operations, representing ANO-2 and Waterford 3 joined the ABB-CE Reactor Vessel Group (RVG). The primary purpose of the RVG was to abstract and evaluate the design and fabrication records for reactor vessels built by ABB-CE. The records abstracted and reviewed included Certified Material Test Reports (CMTRs) on plates and forgings, fracture toughness tests performed by ABB-CE, and chemical analyses of weld filler material as well as as-deposited weld metal chemistries. The records abstracted and reviewed included information on other plants that had the same heat of weld material as Waterford 3. These records have been received and evaluated by Waterford 3.

9702190258 970217
PDR ADOCK 05000382
P PDR

190018

AO28 11

In 1995, Entergy Operations, representing ANO and Waterford 3, joined the ABB-CE Reactor Vessel Working Group (RVWG) to address the issue of weld chemistry variability identified by Generic Letter 92-01, Revision 1. The purpose of the RVWG was to determine the best estimate copper and nickel values, including standard deviations, for each weld material heat used in the beltline region of ABB-CE fabricated reactor vessels. This effort included the collection or evaluation of original ABB-CE fabrication records, surveillance test results, and supplemental testing by other NSSS suppliers and utilities. These records and evaluations have been received and evaluated by Waterford 3.

The responses to items one (1) through four (4) of the Generic Letter are based on the collective evaluations and records generated from both the RVG and the RVWG.

Response to Item 1

The existing data base is judged to be complete as previously submitted by Waterford 3 based on the collection of records and evaluations received from the RVG and RVWG. Waterford 3 determined there was not a record available for weld metal with heat number HODA used on welds 101-124B & C to verify the initial nil ductility reference temperature (RT_{NDT}) of -60°F as previously reported to the NRC. Waterford 3 believes the initial RT_{NDT} of -60°F for welds 101-124B & C is an acceptable value. This judgment is based on an impact test record of 131 ft.-lbs. at 10°F , on other data for similar weld metals, and the fact the weld metals were produced under the same specification, ASME SFA-5.5, E-8018-C3. The weld metals thus have the same chemical composition, the same manufacturing process, and a low copper content with no significant variability in the copper content since the weld electrodes were not coated with copper. We note that pursuant to 10CFR50.61 an RT_{NDT} of -56°F may be used if a measured value of RT_{NDT} is not available.

The initial RT_{NDT} of the limiting material, plate M-1004-2, is $+22^{\circ}\text{F}$. Therefore, because of the significant difference between the reference temperatures (-60°F and $+22^{\circ}\text{F}$) any small change in the RT_{NDT} of welds 101-124B & C will not change the analysis of record.

Response to Item 2

The copper and nickel values were evaluated for validity based on available data. The best estimate copper and nickel values for the Waterford 3 vessel were determined using various statistical methods, depending on the complexity of the data. The evaluation resulted in changes to the previously reported chemistry values, and these changes are tabulated below:

Weld ID.	Heat No.	Previous Values (%)	Best Estimate (%)
101-142A/C	83653	Cu - 0.030, Ni - 0.200	Cu - 0.042, Ni - 0.102
101-171	88114	Cu - 0.050, Ni - 0.160	Cu - 0.043, Ni - 0.189
101-124A	BOLA/HODA	Cu - 0.020, Ni - 0.960	Cu - 0.027, Ni - 0.913
101-124B & C	HODA	Cu - 0.020, Ni - 0.960	Cu - 0.027, Ni - 0.947

The effects of these changes in copper and nickel values are explained in the response to Item 4.

Response to Item 3

A response for this item is not required since surveillance data is not being used for the vessel integrity evaluation.

Response to Item 4

The previous reactor vessel integrity evaluations for 10CFR50.60, 10CFR50.61, Appendix G and H, Low Temperature Overpressure Protection (LTOP), and the Pressure Temperature limits in the Technical Specifications remain bounding even though the copper and nickel values were increased slightly, which increases their reference temperatures. These previous evaluations were based on the reference temperature of plate M-1004-2, which remains the limiting material. Thus, the foregoing evaluations remain valid.

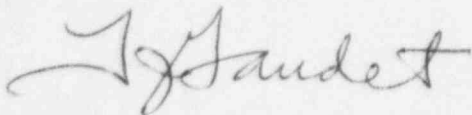
The information received from ABB-CE from the RVWG effort is currently undergoing review and validation by the industry. We will apprise the NRC should

Generic Letter 92-01, Revision 1, Supplement 1
W3F1-97-0030
Page 4
February 17, 1997

any of the results we currently have change and affect the results and conclusions herein documented.

Please contact me at (504) 739-6666 or Robert J. Murillo at (504) 739-6715 should there be any questions regarding this submittal.

Very truly yours,

A handwritten signature in cursive script, appearing to read "T.J. Gaudet".

T.J. Gaudet
Acting - Director
Nuclear Safety & Regulatory Affairs

TJG/RJM/tmm

cc: L.J. Callan, NRC Region IV
C.P. Patel, NRC-NRR
R.B. McGehee
N.S. Reynolds
NRC Resident Inspectors Office

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

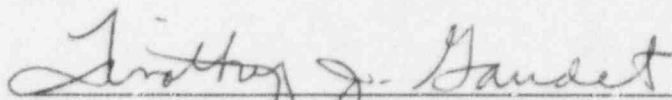
In the matter of)

Entergy Operations, Incorporated)
Waterford 3 Steam Electric Station)

Docket No. 50-382

AFFIDAVIT

Timothy Joseph Gaudet, being duly sworn, hereby deposes and says that he is Acting Director, Nuclear Safety & Regulatory Affairs - Waterford 3 of Entergy Operations, Incorporated; that he is duly authorized to sign and file with the Nuclear Regulatory Commission the attached Generic Letter 92-01, Revision 1, Supplement 1; that he is familiar with the content thereof; and that the matters set forth therein are true and correct to the best of his knowledge, information and belief.



Timothy Joseph Gaudet

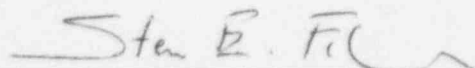
Acting Director, Nuclear Safety & Regulatory Affairs -
Waterford 3

STATE OF LOUISIANA)

) ss

PARISH OF ST. CHARLES)

Subscribed and sworn to before me, a Notary Public in and for the Parish and State
above named this 17TH day of FEBRUARY, 1997.



Notary Public

My Commission expires WITH LIFE.