



Entergy Nuclear South
Entergy Operations, Inc.
17265 River Road
Killona, LA 70057-3093
Tel 504-739-6485
jridgel@entergy.com

Jerry A. Ridgel
Acting Nuclear Safety Assurance
Director
Waterford 3

W3F1-2007-0009

February 26, 2007

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

SUBJECT: 60-Day Report for Waterford Steam Electric Station, Unit 3 Reactor
Pressure Vessel Head and Pressurizer Inspection for the Fall 2006
Refueling Outage
Waterford Steam Electric Station, Unit 3
Docket No. 50-382
License No. NPF-38

REFERENCES: 1. Entergy letter dated July 19, 2005, *60-Day Report for Waterford
Steam Electric Station, Unit 3 Reactor Pressure Vessel Head and
Pressurizer Inspection for the Spring 2005 Refueling Outage* (W3F1-
2005-0045)
2. Entergy letter dated July 27, 2004, *Response to NRC Bulletin 2004-01
Regarding Inspection of Alloy 82/182/600 Materials Used In
Pressurizer Penetrations and Steam Space Piping Connections*
(W3F1-2004-0058)

Dear Sir or Madam:

On July 19, 2005 (Reference 1), Entergy provided the results of the bare metal visual (BMV) inspections of the pressurizer penetrations for the spring 2005 refueling outage. In Reference 2, Entergy provided the response to NRC Bulletin 2004-01.

Waterford Steam Electric Station, Unit 3 (Waterford 3) resumed operation on December 27, 2006. The results of both the RPV head Order and Bulletin 2004-01 inspections are summarized in the attachment.

In summary, Entergy did not identify any boric acid leakage or primary water stress corrosion cracking of the reactor vessel head or the pressurizer during the inspections of welded connections.

A110

This letter contains no NRC commitments. If you have any questions or require additional information, please contact Ronald L. Williams at 504-739-6255.

Sincerely,



JAR/RLW/jbh/

Attachment: 60-Day Report for Reactor Vessel Head and Pressurizer Inspection for the Waterford 3 Fall 2006 Refueling Outage

cc: Dr. Bruce S. Mallett
U. S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive, Suite 400
Arlington, TX 76011

NRC Senior Resident Inspector
Waterford 3
P.O. Box 822
Killona, LA 70066-0751

U.S. Nuclear Regulatory Commission
Attn: Mr. Mel Fields MS O-7D1
Washington, DC 20555-0001

Wise, Carter, Child & Caraway
Attn: J. Smith
P.O. Box 651
Jackson, MS 39205

Winston & Strawn
Attn: N.S. Reynolds
1400 L Street, NW
Washington, DC 20005-3502

Louisiana Department of Environmental Quality
Office of Environmental Compliance
Surveillance Division
P. O. Box 4312
Baton Rouge, LA 70821-4312

American Nuclear Insurers
Attn: Library
Town Center Suite 300S
29th S. Main Street
West Hartford, CT 06107-2445

Morgan, Lewis & Bockius LLP
ATTN: T.C. Poindexter
1111 Pennsylvania Avenue, NW
Washington, DC 20004

Attachment

To

W3F1-2007-0009

**60-Day Report for Reactor Vessel Head and Pressurizer
Inspection for the Waterford 3 Fall 2006 Refueling Outage**

60-Day Report for Reactor Vessel Head and Pressurizer Inspection for the Waterford 3 Fall 2006 Refueling Outage

Waterford Steam Electric Station, Unit 3 (Waterford 3) is a Combustion Engineering (CE) designed unit with Alloy 600 reactor pressure vessel (RPV) head and pressurizer penetrations which are subject to NRC First Revised Order EA-03-009 and NRC Bulletin 2004-01. Entergy either complied with the Order or sought relaxation in accordance with the Order (referenced letters contained in Reference 1) and committed to perform NDE per NRC Bulletin 2004-01 (Reference 2). Entergy performed inspections of the Waterford 3 RPV head and pressurizer during the fall 2006 refueling outage 14. The RPV head inspections were conducted in accordance with Section IV.C of the Order, and the pressurizer inspections were conducted in accordance with Response 1(c) of Entergy's response to Bulletin 2004-01 (Reference 2). The following provides the results of the RF-14 inspections.

Table 1 Summary of Waterford 3 Fall 2006 Refueling Outage Alloy 600 Inspections

Inspection Area	Inspection Method	Extent of Inspection	Status
BMV Inspection of RPV Head [NRC Order]	RPV Head BMV	Inspect the RPV head surface 360° around each penetration for boric acid.	BMV performed on 91 CEDM nozzles, 10 ICI nozzles, vent line, and general head condition. No boric acid deposits were identified.
	Pressure Retaining Components	Inspect the CEDM and ICI housings for potential boric acid leakage.	No boric acid deposits were identified from welded connections. Minor leak on ICI # 5 Swagelok fitting was addressed by corrective action CR-WF3-2006-03673.
NDE of CEDM Nozzles [NRC Order and NRC approved Relaxation]	UT/ECT of 91 CEDM nozzles	Inspect 2" above the J-weld to the blind zone of the CEDM nozzle.	91 CEDM nozzles were examined and analyzed from the ID using Westinghouse UT/ECT probes. No flaws were detected.
	UT of nozzle Annulus (leak path)	Review interference fit in nozzle annulus above J-weld for leakage path.	As part of the CEDM ID exams a zero degree UT probe was used to establish that there was no leak path (wastage) from the nozzle annuli.
NDE of ICI Nozzles [NRC Order]	UT/ECT of ICI nozzles	Inspect 2" above the J-weld to the end of the ICI nozzle.	The 10 ICI nozzles were UT/ECT examined from the ID. No flaws were detected.
	UT/ECT of ICI Nozzle Face	Perform UT/ECT exam of ICI nozzle face where ID delivered UT/ECT tooling does not provide inspection coverage.	An automated UT/ECT on the face of the ICI nozzles was performed. No flaws were detected.

60-Day Report for Reactor Vessel Head and Pressurizer Inspection for the Waterford 3 Fall 2006 Refueling Outage

Inspection Area	Inspection Method	Extent of Inspection	Status
NDE of Vent Line [NRC Order]	ECT of wetted surface area	Perform ECT of entire wetted surface of vent line.	The ECT exam of the vent line did not reveal any flaws.
Pressurizer Inspection [Bulletin 2004-01]	Heater Sleeve	N/A	All J-welded nozzles on the pressurizer were proactively replaced or repaired by the end of RF-13.
	Side Shell, Steam Space & Bottom Instrument Nozzle	N/A	All J-welded nozzles on the pressurizer were proactively replaced or repaired by the end of RF-13.
	Pressurizer nozzle to safe end welds and large bore steam space welds BMV	Removed insulation and performed bare metal visual inspection.	BMV of large bore nozzles and safe ends did not reveal any leakage. These weld configurations were reviewed in RF-13 for future inservice inspection and potential weld overlay in RF-15 (Spring 2008).

Legend:

BMV = Bare Metal Visual

CEDM = Control Element Drive Mechanism

ECT = Eddy Current Examination

ICI = Incore Instrument

ID = Inside Diameter

MNSA = Mechanical Nozzle Seal Assembly

NDE = Non-Destructive Examination

RPV = Reactor Pressure Vessel

TE = Temperature Element

UT = Ultrasonic Examination