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Entergy Nuclear Operations, Inc.
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JAFP-08-0109
October 20, 2008

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

SUBJECT: James A. FitzPatrick Nuclear Power Plant
Docket No. 50-333
License No. DPR-59

Submittal of the Final Ultrasonic Test Results on the N2C-SE Weld Overlay

REFERENCES: 1) Entergy Letter to NRC, JAFP-08-0102, "James A. FitzPatrick Request for Relief (RR-7 Revision 1) - Proposed Alternative to ASME Code Requirements for Weld Overlay Repairs", dated October 1, 2008

Dear Sir or Madam:

Enclosure 2 of reference 1 documented commitments to submit to the NRC, within fourteen days of the completion of the final ultrasonic test (UT) on the weld overlay proposed in the subject relief request, the following:

1) Weld overlay examination results including a listing of indications detected;

2) Disposition of indications using the standards of ASME Section XI, Subsection IWB-3514-2 and/or IWB-3514-3 criteria and, if possible, the type and nature of the indications; and

3) A discussion of any repairs to the weld overlay material and/or base metal and the reason for the repairs.

In summary the weld overlay repair was performed to N-2C-SE per work order 00106631 and Relief Request RR-7. No repairs, to the weld overlay material and/or base material, were required. Ultrasonic Examination of the weld overlay was performed per ASME Appendix VIII requirements (see Enclosure 1). The examination identified no recordable indications and noted the original axial flaw as previously identified in the original examination. No indications required evaluation to ASME Section XI, Subsection IWB 3514-2 and/or IWB-3514-3 criteria.

Enclosure 1 of this letter contains a copy of the GE Hitachi Examination Summary, Report No. 08UT175.

There are no new commitment made in this letter and the final commitment made in reference 1 will be completed as scheduled.

A047
NRR

If you have any questions or require additional information, please contact Mr. Eugene Dorman, Acting Licensing Manager, at 315-349-6810.

Sincerely,

Eugene Dorman
Acting Licensing Manager

ED/ed

cc:

Mr. Samuel J. Collins, Regional Administrator
U.S. Nuclear Regulatory Commission, Region
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Enclosure 1 to JAF-08-0109

James A. Fitzpatrick Nuclear Power Station
Docket No. 50-333

GE HITACHI EXAMINATION SUMMARY SHEET
REPORT No. 08UT175

HITACHI	EXAMINATION SUMMARY SHEET	Report No.: 08UT175

Site: **Fitzpatrick** Component ID: **N2C-SE**

Outage: **RFO18** **WELD OVERLAY**

System: **02-2** ASME Cat.: **B-F** ASME Item **B5.10** Aug Req **N/A**

Exams Performed	Data Sheet	Cal Sheet	Procedure	Calibration Block	Exam / Oper. Personnel	Cert Level	Date
45° RL	D-106	N/A	ENN-NDE-9.29 Ver/Rev 1	CAL-DPTH-070	Scott Erickson	III	10/4/2008
ODCR RL	D-105	N/A	ENN-NDE-9.29 Ver/Rev 1	CAL-DPTH-070	Scott Erickson	III	10/4/2008
70° RL	D-104	N/A	ENN-NDE-9.29 Ver/Rev 1	CAL-DPTH-070	Scott Erickson	III	10/4/2008
0° Long.	D-103	N/A	ENN-NDE-9.29 Ver/Rev 1	CAL-DPTH-070	Scott Erickson	III	10/4/2008

Examination Results:

During the Manual Ultrasonic Examination of the above referenced component, no new ISI or PSI recordable indications were detected utilizing a 0°, 70° RL, and ODCR RL for the PSI portion and 45° RL for the ISI portion of the exam.

No change observed to the thru-wall height (0.51") of previously recorded flaw prior to weld overlay repair.

100% of the code required volume was examined.

This UT Examination meets the 2001 Edition of ASME Section XI with the 2003 Addenda and is in accordance with Appendix VIII 2001 Edition as amended and mandated by 10CFR50 Amended Requirements, Final Rule dated October 1, 2004

Examination results were compared to Data Report N/A *from:* N/A ☐ *Change*

These examinations were performed under Work Order: 00125346 ☐ *No Change*

This Summary and the following data sheets have been reviewed and accepted by the following personnel:

Paul Johnson — Prepared By: — III — Level: — 10-4-08 — Date:

Utility Review: — Date: 10/6/08

ANII Review: — Date: 10/7/08

RWP: N/A

Dose: 251 mr.

HITACHI

Ultrasonic Calibration and Examination Record
Manual Piping and Components

Site/Unit: Fitzpatrick / 1
Outage: RFO18

Report Number: 08UT175
Data Sheet Number: D-106
Linearity Sheet: L-007

Calibration Data for Block: CAL-DPTH-070

Procedure: ENN-NDE-9.29

Ver / Rev: 1 DRR: N/A

SS	FLAT	2.0"
Material	Size	Thick
Ultragel II	06225	
Couplant:	Couplant batch	
261732	95° F	
Thermometer S/N	Cal Temp.	

Calibration	Cal Time
Initial Cal:	1105
Cal Check:	1252
Cal Check:	1314
Final Cal:	1400

DAC Construction

Scan Direction: Ax
Cal Reflector: .8" SDH
Signal Amplitude: 80%
Signal Sweep: 5.40 Div
Signal dB: 27.1 dB
Sweep 0-10 = 2.000 in Metal Path

Calibration Verification

Field Simulator Block S/N: CAL-RHOM-117

Reflector	NSDH	N/A
Amplitude	40%	N/A
Gain (dB)	27.1	N/A
Sweep (SD)	2.2	N/A

Acceptable Linearity performed: 9/18/2008

Search Unit Data

RTD	01-107	2(8x14) mm/Rect.
Manufacturer:	Serial Number	Size/Shape:
0.45	45°	45°
Incident Point:	Nominal Angle:	Measured Angle:

2.0 MHz	TRL2-Aust	RL	2
Frequency:	Style:	Mode:	Elements:

Search Unit Cable

RG-174	12'	0
Cable Type:	Length:	Connectors:

Instrument Settings

Panametrics / Epoch 4		031534305
Manufacturer/Model:		Serial Number:
7.615 µs	0.2318 in./µsec.	0.8 - 3.0
Zero:	Velocity:	Narrowband Filter:

Auto	Fullwave	2.000 in	Sq. / Max
Rep Rate:	Rectification:	Range:	Pulser/Energy:
400 Ohms	0%	2.0 MHz	Dual
Damping:	Reject:	Frequency:	Mode:

Exam Comments / Limitations:

Exams performed to maintain a 5% to 20% noise level.
PROBE FOCUSED AT 30mm FS 10-6-08

Exam Data for Weld: N2C-SE

WELD OVERLAY
Configuration:

OD	120° F	261732
Exam Surface:	Exam Temp.	Exam Thermometer

Axial Circ	UPST DNST	Scan dB	Recordable Indications	Exam Angle
Ax	UPST	33.1	NRI	45°
Ax	DNST	33.1	NRI	45°
Circ	UPST	39.1	NRI	45°
Circ	DNST	39.1	NRI	45°

Exam Start: 1252 Exam End: 1314

SRE Scott Erickson III
Initials: Examiner: Level:

N/A N/A
Initials: Examiner 2: Level:

Initial Cal/Exam Date: 10/4/2008

Paul Johnson III 10-4-08
GE Reviewed By: Level: Date:

Utility Review: 10/6/08 Date:

ANII Review: 10/7/08 Date:

HITACHI

Ultrasonic Calibration and Examination Record
Manual Piping and Components

Site/Unit: Fitzpatrick / 1
Outage: RFO18

Report Number: 08UT175
Data Sheet Number: D-105
Linearity Sheet: L-007

Calibration Data for Block: CAL-DPTH-070

Procedure: ENN-NDE-9.29
Ver / Rev: 1 DRR: N/A

SS	FLAT	2.0"	Calibration	Cal Time
Material	Size	Thick	Initial Cal:	1111
Ultragel II	06225		Cal Check:	1237
Couplant:	Couplant batch		Cal Check:	1251
261732	95° F		Final Cal:	1407
Thermometer S/N	Cal Temp.			

DAC Construction

Scan Direction: Ax
Cal Reflector: .1" SDH
Signal Amplitude: 80%
Signal Sweep: 3.80 Div
Signal dB: 35.7 dB
Sweep 0-10 = 1.500 in Metal Path

Calibration Verification

Field Simulator Block S/N: CAL-RHOM-117

Reflector	NSDH	N/A
Amplitude	80%	N/A
Gain (dB)	31.4	N/A
Sweep (SD)	6.1	N/A

Acceptable Linearity performed : 9/18/2008

Search Unit Data

RTD	04-392	2(10x15) mm/Rect.
Manufacturer:	Serial Number	Size/Shape:
0.5	ODCR	80°
Incident Point:	Nominal Angle:	Measured Angle:

2.0 MHz	85°TRL2-Aust	RL	2
Frequency:	Style:	Mode:	Elements:

Search Unit Cable

RG-174	6'	0
Cable Type:	Length:	Connectors:

Instrument Settings

Panametrics / Epoch 4			031534305
Manufacturer/Model:			Serial Number:
9.825 µs	0.2311 in./µsec.		0.8 - 3.0
Zero:	Velocity:		Narrowband Filter:
Auto	Fullwave	1.500 in	Sq. / Max
Rep Rate:	Rectification:	Range:	Pulser/Energy:
400 Ohms	0%	2.0 MHz	Dual
Damping:	Reject:	Frequency:	Mode:

Exam Comments / Limitations:

Exams performed to maintain a 5% to 20% noise level.
PROBE FOCUSED AT 12 mm FS 10-6-08

Exam Data for Weld: N2C-SE

WELD OVERLAY
Configuration:

OD	120° F	261732
Exam Surface:	Exam Temp.	Exam Thermometer

Axial Circ	UPST DNST	Scan dB	Recordable Indications	Exam Angle
Ax	UPST	37.7	NRI	80°
Ax	DNST	37.7	NRI	80°
Circ	UPST	37.7	NRI	80°
Circ	DNST	37.7	NRI	80°

Exam Start: 1237 Exam End: 1251

SRE Scott Erickson III
Initials: Examiner: Level:

N/A N/A
Initials: Examiner 2: Level:

Initial Cal/Exam Date: 10/4/2008

Paul Johnson III 10-4-08
GE Reviewed By: Level: Date:

Utility Review: Date: 10/6/08

ANII Review: Date: 10/7/08

HITACHI

Ultrasonic Calibration and Examination Record
Manual Piping and Components

Site/Unit: Fitzpatrick / 1
Outage: RFO18

Report Number: 08UT175
Data Sheet Number: D-104
Linearity Sheet: L-007

Calibration Data for Block: CAL-DPTH-070

Procedure: ENN-NDE-9.29
Ver / Rev: 1 DRR: N/A

SS	FLAT	2.0"	Calibration	Cal Time
Material	Size	Thick	Initial Cal:	1108
Ultragel II	06225		Cal Check:	1218
Couplant:	Couplant batch		Cal Check:	1236
261732	95° F		Final Cal:	1405
Thermometer S/N	Cal Temp.			

DAC Construction

Scan Direction: Ax
Cal Reflector: .5" SDH
Signal Amplitude: 80%
Signal Sweep: 5.70 Div
Signal dB: 47.1 dB
Sweep 0-10 = 2.500 in Metal Path

Calibration Verification

Field Simulator Block S/N: CAL-RHOM-117

Reflector	NSDH	N/A
Amplitude	80%	N/A
Gain (dB)	47.1	N/A
Sweep (SD)	3.8	N/A

Acceptable Linearity performed: 9/18/2008

Search Unit Data

RTD	87-296	2(8x14) mm/Rect.
Manufacturer:	Serial Number	Size/Shape:
0.35	70°	70°
Incident Point:	Nominal Angle:	Measured Angle:

2.0 MHz	70°TRL2-Aust	RL	2
Frequency:	Style:	Mode:	Elements:

Search Unit Cable

RG-174	12'	0
Cable Type:	Length:	Connectors:

Instrument Settings

Panametrics / Epoch 4			031534305
Manufacturer/Model:			Serial Number:
9.275 µs	0.231 in./µsec.		0.8 - 3.0
Zero:	Velocity:		Narrowband Filter:
Auto	Fullwave	2.500 in	Sq. / Max
Rep Rate:	Rectification:	Range:	Pulser/Energy:
400 Ohms	0%	2.0 MHz	Dual
Damping:	Reject:	Frequency:	Mode:

Exam Comments / Limitations:

Exams performed to maintain a 5% to 20% noise level
PROBE FOCUSED AT 25mm FS 10-6-08

Exam Data for Weld: N2C-SE

WELD OVERLAY
Configuration:

OD	120° F	261732
Exam Surface:	Exam Temp.	Exam Thermometer

Axial Circ	UPST DNST	Scan dB	Recordable Indications	Exam Angle
Ax	UPST	49.1	NRI	70°
Ax	DNST	49.1	NRI	70°
Circ	UPST	49.1	NRI	70°
Circ	DNST	49.1	NRI	70°

Exam Start: 1218 Exam End: 1235

SRE Scott Erickson III
Initials: Examiner: Level:

N/A N/A
Initials: Examiner 2: Level:

Initial Cal/Exam Date: 10/4/2008

Paul Johnson III 10-4-08
GE Reviewed By: Level: Date:

Utility Review: Date: 10/6/08

ANII Review: Date: 10/7/08

HITACHI

Ultrasonic Calibration and Examination Record
Manual Piping and Components

Site/Unit: Fitzpatrick / 1
Outage: RFO18

Report Number: 08UT175
Data Sheet Number: D-103
Linearity Sheet: L-007

Calibration Data for Block: CAL-DPTH-070

Procedure: ENN-NDE-9.29
Ver / Rev: 1 DRR: N/A

SS	FLAT	2.0"	Calibration	Cal Time
Material	Size	Thick	Initial Cal:	1115
Ultragel II	06225		Cal Check:	1152
Couplant:	Couplant batch		Cal Check:	1217
261732	95° F		Final Cal:	1402
Thermometer S/N	Cal Temp.			

DAC Construction

Scan Direction: Ax
Cal Reflector: .5" SDH
Signal Amplitude: 80%
Signal Sweep: 2.40 Div
Signal dB: 37.6 dB
Sweep 0-10 = 2.000 in Metal Path

Calibration Verification

Field Simulator Block S/N: CAL-RHOM-117

Reflector	NSDH	N/A
Amplitude	80%	N/A
Gain (dB)	34.4	N/A
Sweep (SD)	1.5	N/A

Acceptable Linearity performed: 9/18/2008

Search Unit Data

KBA	01031	.43"x.22"/Rnd.
Manufacturer:	Serial Number	Size/Shape:
N/A	0°	0°
Incident Point:	Nominal Angle:	Measured Angle:

2.0 MHz	MSEB2	Long.	2
Frequency:	Style:	Mode:	Elements:

Search Unit Cable

RG-174	12'	0
Cable Type:	Length:	Connectors:

Instrument Settings

Panametrics / Epoch 4			031534305
Manufacturer/Model:			Serial Number:
9.96 µs	0.2283 in./µsec.		0.8 - 3.0 MHz
Zero:	Velocity:		Narrowband Filter:
Auto	Fullwave	2.000 in	Sq. / Max
Rep Rate:	Rectification:	Range:	Pulser/Energy:
400 Ohms	0%	2.0 MHz	Dual
Damping:	Reject:	Frequency:	Mode:

Exam Data for Weld: N2C-SE

WELD OVERLAY
Configuration:

OD	120° F	261732
Exam Surface:	Exam Temp.	Exam Thermometer

Exam Comments / Limitations:

Exams performed to maintain a 5% to 20% noise level.

Axial Circ	UPST DNST	Scan dB	Recordable Indications	Exam Angle
Ax	UPST	43.6	NRI	0°
Ax	DNST	43.6	NRI	0°

Exam Start: 1158 Exam End: 1216

SRE Scott Erickson III
Initials: Examiner: Level:

N/A N/A
Initials: Examiner 2: Level:

Initial Cal/Exam Date: 10/4/2008

Paul Johnson III 10-4-08
GE Reviewed By: Level: Date:

10/6/08
Utility Review: Date:

10/7/08
ANII Review: Date:

HITACHI

Ultrasonic Examination Indication Report

Site: *Fitzpatrick* Procedure: *ENN-NDE-9.29 / 1 / N/A*

Data Report Number: *08UT175*

Cal / Data Sheet Number: *D-106*

Weld ID: *N2C-SE* Drawing: *MKS-003* Size: *FLAT* Thickness: *2.0"* Exam Start: *1252*

Lo Location: *Top Dead Center* Wo Location: *Weld Overlay Centerline* Weld Width: *N/A* Weld Height: *N/A* Exam End: *1314*

Ind No.	Angle Used	% of DAC	Indication Length			W Distance			Metal Path			Ax / Circ	Upst/ Dnst	Comments:
			L1	L Max	L 2	W1	W Max	W 2	MP 1	MP Max	MP 2			
1	45	30	-.4	0	+.4	N/A	44.15*	N/A	1.538	2.33	N/A	Circ	Centerline	TWS=0.51" no change in thru-wall size from pre-WOR exam (08UT061). *Transducer location for flaw signal tip.

Sketch N/A

SRE *Scott Erickson* III 10/4/2008
Examiner Level: Date:

Paul Johnson III 10-4-08
GE Reviewed By: Level: Date:

10/6/08
Utility Review: Date:

10/7/08
ANII Review: Date: