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TXX-15116

Ref. # 10CFR50.55a(g)(5)iii

August 3, 2015

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

SUBJECT: COMANCHE PEAK NUCLEAR POWER PLANT
DOCKET NO. 50-446
RELIEF REQUEST B-9 FOR UNIT 2 SECOND TEN YEAR INSERVICE INSPECTION
INTERVAL FROM 10CFR50.55a INSPECTION REQUIREMENTS DUE TO PHYSICAL
INTERFERENCES
(1998 EDITION OF ASME CODE, SECTION XI, 2000 ADDENDA SECOND INTERVAL
START DATE: AUGUST 3, 2004 SECOND INTERVAL END DATE: AUGUST 2, 2014)

Dear Sir or Madam:

Pursuant to 10 CFR 50.55a(g)(5)(iii), Luminant Generation Company, LLC (Luminant Power) is submitting Relief Request B-9 (see attachments) for Comanche Peak Unit 2 for the second ten year inservice inspection interval. Luminant Power has determined that certain inspection requirements of ASME Section XI are impractical due to physical interferences.

The geometry of the inlet reactor vessel nozzle safe-end to stainless steel piping weld makes the Code required examination coverage requirements impractical. Ultrasonic Testing (UT) of the subject weld was performed during the second interval to the maximum extent practical based on design configuration restrictions and no indications were detected. Supplemental examination by eddy current technique was also performed and no indications were detected. Pressure test VT-2 visual examinations were also performed with no evidence of leakage identified for the subject component. No undue risk to the public health and safety is presented by this request.

This communication contains no new licensing basis commitments regarding Comanche Peak Unit 2.

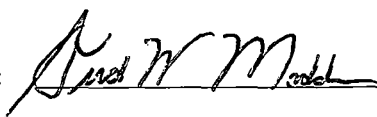
A047
NRK

Should you have any questions, please contact Mr. Jack Hicks at (254) 897-6725.

Sincerely,

Luminant Generation Company LLC

Rafael Flores

By: 

Fred W. Madden
Director, External Affairs

Attachment 1-- Relief Request B-9 for Unit 2 Second Ten Year ISI Interval from 10CFR50.55a Inspection Requirements due to Physical Interferences

Attachment 2 – Examination Data Sheets (45 pages)

c - Marc L. Dapas, Region IV
Balwant K. Singal, NRR
Resident Inspectors, Comanche Peak
Rob D. Troutt, TDLR
Jack Ballard, ANII, Comanche Peak

COMANCHE PEAK NUCLEAR POWER PLANT UNIT 2
Relief Request Number B-9 for Unit 2 Second 10 Year ISI Interval
From 10CFR50.55a Inspection Requirements due to Physical Interferences
(Second 10-Year ISI Interval Start Date: August 3, 2004; End Date: August 2, 2014)

1. ASME Code Component Affected:

Class 1 Risk-Informed Inservice Inspection (RI-ISI) piping welds as shown:

RI-ISI Piping Welds (formerly Code Category B-I)

Code Cat/Item No.	RA/R1.20
Description	Two (2) RV outlet safe-end to pipe welds and three (3) RV inlet safe-end to elbow welds.
Weld Nos	TCX- 1-4300-2 and TCX-1-4400-2 (RV Outlets) TCX-1-4400-13, TCX-1-4100-13 and TCX-1-4200-13 (RV outlet)

2. Applicable Code Edition and Addenda:

The applicable ASME Boiler and Pressure Vessel Code (hereafter referred to as the "Code") edition and addenda is ASME Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," 1998 Edition through 2000 Addenda as modified by 1 OCFR50.55a(b)(2)(xiv, xv, and xvi).

3. Applicable Code Requirement:

ASME Section XI, Figure IWC-2500-8(c) 1998 Edition through 2000 Addenda, requires a volumetric examination of a minimum weld volume of the inner $1/3 t$ (one third of the thickness) extending into the piping base metal for a distance of $1/4$ " past the edge of the weld crown for NPS 4" and larger. The subject pipe size is 27.5" and Table IWB-2500-1 calls for a surface examination of the weld.

In a letter (NRR 10580) dated October 5, 2006, from the NRC to Comanche Peak Steam Electric Station, Unit No. 1, the NRC approved in a relief request alternative Risk-Informed (RI) - ISI examinations for selected ASME Code Class 1 and 2 piping welds for the second interval. The methodology in EPRI TR-112657 Revision B-A is used as the examination method as well as for the selection of welds to be examined.

The RI-ISI program requires volumetric examination of the subject welds and extends the Code required volume of the inner $1/3t$ to $1/2$ " past the edge of the weld crown if no counterbore is present or a distance of $1/4$ " on either side of the weld counterbore, whichever is greater.

The Comanche Peak Nuclear Power Plant (CPNPP) second ten-year interval Inspection Program Plan also implements Code Case N-460, which is endorsed by the NRC in revision 17 of Regulatory Guide 1.147, "Inservice Inspection Code Case Acceptability ASME Section XI, Division 1" Code Case N-460 states, in part, when the entire examination volume or area cannot be examined due to interference by another component or part geometry, a reduction in examination coverage on any Class 1 or Class 2 weld may be accepted, provided the reduction coverage for that weld is less than 10 percent.

COMANCHE PEAK NUCLEAR POWER PLANT UNIT 2
Relief Request B-9 for Unit 2 Second 10 Year ISI Interval
From 10CFR50.55a Inspection Requirements due to Physical Interferences
(Second 10-Year ISI Interval Start Date: August 3, 2004; End Date: August 2, 2014)

NRC Information Notice (IN) 98-42, "Implementation of 10 CFR 50.55a (g) Inservice Inspection Requirements," termed a reduction in coverage of less than 10 percent to be "essentially 100 percent." IN 98-42 states, in part, "The NRC has adopted and further refined the definition of "essentially 100 percent" to mean "greater than 90 percent" ... has been applied to all examinations of welds or other areas required by ASME Section XI."

4. Impracticality of Compliance:

The automated examination of the subject piping weld was conducted from the inside diameter (ID) of the pipe. The ID configuration, i.e. counter-bore and root configuration, limited the coverage (see Table B-9 below and Attachment 2). The examination was conducted by the contact technique using the WesDyne PARAGON multi-channel data acquisition system, interfaced to a SQUID nozzle scanner. The examination was conducted to the maximum extent practical with the access provided and within the limitation of the component's geometry.

Ultrasonic detection scan for the subject weld was performed from the ID surface using 70 degree L-wave transducers applied in all four scanning directions. This examination interrogated the inner 1/3 thickness volume. An Eddy Current technique was also employed to examine the ID surfaces of this nozzle safe-end to piping weld, in accordance with procedure WDI-STD-146. The examination of the volume was conducted with axial scans at a 0.25" increment and the circumferential scans at a 0.080" incremental distance.

All UT data was digitally recorded from baseline to 100% full screen height and evaluated off-line by PDI qualified Level II or III examiners, having certification attachments issued by PDI, relative to procedure PDI-ISI-254-SE-NB revision 1.

Table B-9		
Weld No.	Description	UT Coverage
TCX-1-4300-2	Outlet Safe-End to Pipe @ 22°	84.96%
TCX-1-4400-13	Inlet Safe-End to Elbow @ 113°	85.69%
TCX-1-4400-2	Outlet Safe-End to Pipe @158°	87.37%
TCX-1-4100-13	Inlet Safe-End to Elbow @ 247°	81.50%
TCX-1-4200-13	Inlet Safe-End to Elbow @ 293°	85.74%

Code Examination Results

Automated ultrasonic examinations of the hot leg (outlet) nozzle DM and pipe welds from the nozzle bore yielded no recordable indications.

Automated ultrasonic examinations of the cold leg (inlet) nozzle DM and pipe welds from the nozzle bore yielded no recordable indications.

Supplemental eddy current examinations of the hot leg (outlet) nozzle DM and pipe welds from the nozzle bore yielded no recordable indications.

Supplemental eddy current examinations of the cold leg (inlet) nozzle DM and pipe welds from the nozzle bore yielded no recordable indications.

COMANCHE PEAK NUCLEAR POWER PLANT UNIT 2
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(Second 10-Year ISI Interval Start Date: August 3, 2004; End Date: August 2, 2014)

The visual examinations of reactor vessel interior, the reactor vessel interior attachments, and the reactor vessel core support structure revealed no recordable indications.

5. Burden caused by Compliance:

The design configuration restrictions of the subject components make the Code required examination coverage requirements for the weld volume impractical. Plant modifications or replacement of components designed to allow for complete coverage would be needed to meet the Code requirements. This would cause considerable burden to CPNPP.

6. Proposed Alternative and Basis for Use:

Proposed Alternative:

The following alternatives are proposed in lieu of the required examination coverage of essentially 100 percent:

1. Ultrasonic testing (UT) of the subject component weld was performed to the maximum extent practical during the second ten-year interval.
2. Supplemental examination by Eddy Current techniques was performed. All areas of limitation were fully examined and no indications were detected.
3. Pressure test VT-2 visual examinations were performed, as required by Code Category B-P, during the second ten-year interval. No evidence of leakage was identified for these components.

Basis for use:

The basis for use of this alternative is it provides the best examination coverage practical within the limitations of the current configuration. The volumetric examination was performed using a system (procedures, personnel, and equipment) qualified in accordance with Appendix VIII, Supplements 2 and 10. Due to the possibility that the surface roughness could adversely affect the examination, the vendor performed a supplemental Eddy Current examination to augment the ultrasonic examination and to provide increased sensitivity at the near surface. The supplemental Eddy Current technique, first used in the VC Summer reactor vessel primary nozzle examinations in 2000, has been furthered developed and has been blind tested for the Swedish authority SQC Kvalificeringscentrum AB (SQC IVDT Qualification Center) and would have detected ID connected flaws that might have been present.

This technique has also been used to supplement examination of portions of the relevant near-surface volumes during the last twenty domestic pressurized water reactor nozzle-to-pipe examinations, conducted by the vendor.

CPNPP believes that the performance of the partial volumetric examination as depicted in Table B-9, combined with the supplemental eddy current examination and visual leakage examination provide a level of safety and quality comparable to the Code required examination. There were no indications identified for this weld. There is a high level of

COMANCHE PEAK NUCLEAR POWER PLANT UNIT 2
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confidence in the structural integrity of the weld. CPNPP believes that there is no undue risk to the public health and safety presented by this request.

7. Duration of Proposed Alternative:

The second ten-year ISI interval for Unit 2 began on August 3, 2004 and ended on August 2, 2014.

8. Precedents:

Wolf Creek Nuclear Power Plant, Letter ET 06-001 1, Attachment 4, March 2, 2006

Relief Request B-11 was submitted in letter TXX-10158 from CPNPP to USNRC in December 15, 2010 for the second ten-year interval for Unit 1.

INLET NOZZLE @ 247°

WesDyne International
Reactor Vessel Weld Results Summary

COMANCHE PEAK UNIT 2

<u>WELD NO.</u>	<u>DESCRIPTION</u>	<u>COVERAGE</u>
TCX-1-4100-14	Inlet Nozzle to Safe-End @ 247°	100%
TCX-1-4100-13	Inlet Safe-End to Elbow @ 247°	*81.5%

LIMITATIONS

NO

☐

YES

☒*ID Configuration of Safe-
End to Elbow Weld

UT RESULTS

NI

☒

RI

☐NO. OF UT INDICATIONS 0STATUS N/A

ET RESULTS

NI

☒

RI


☐NO. OF ET INDICATIONS 0STATUS N/AEXAM DOCUMENTATIONINDICATION DOCUMENTATION☒ ANALYSIS LOG☐ ASSESSMENT SHEET☒ ACQUISITION LOG☐ PARAGON HARD COPY☒ SCAN PRINTOUT☐ OTHER (specify)

_____☒ COVERAGE BREAKDOWN

WESDYNE ANALYST



ANALYSIS LOG # SE-247-1

						Disk No:		
Utility: Luminant		Plant: Comanche Peak		Unit: 2		Outage: 2RF11		
Procedure No: PDI-ISI-254-SE-NB						Procedure Rev. No.: 1		
Weld No: TCX-1-4100-13,14				Weld Type: DM/SE/ELBOW		Exam. Surface: ID		
Applicable Sensitivity Calibration Data Sheet No:			PDI-SE-AX/CIRC-DET-01		Acquisition Log No: SE-247-1		PARAGON Anal. Release: 6.3.5	
UT Examiner Signature:						Level: III		Date: 10-17-2009
Data File Name	UT Channel No.	Beam Angle / Beam Direction [in or out, CW or CCW]	NI	RI	RI Resolution / Comments / Limitations	Examiner ID / Date		
N-247-PRP-IN	1	70 IN	X			SAS / 10-17-09		
N-247-PRP-IN	2	70 OUT	X			SAS / 10-17-09		
N-247-PRP-IN	5	70 IN	X			SAS / 10-17-09		
N-247-PRP-IN	6	70 OUT	X			SAS / 10-17-09		
N-247-PAR-IN	1	70 CCW	X			SAS / 10-17-09		
N-247-PAR-IN	2	70 CW	X			SAS / 10-17-09		
N-247-PAR-IN	3	70 CCW	X			SAS / 10-17-09		
N-247-PAR-IN	4	70 CW	X			SAS / 10-17-09		
N-247-PAR-IN	5	70 CCW	X			SAS / 10-17-09		
N-247-PAR-IN	6	70 CW	X			SAS / 10-17-09		
N-247-PAR-IN	7	70 CCW	X			SAS / 10-17-09		
N-247-PAR-IN	8	70 CW	X			SAS / 10-17-09		




ET Analysis Log: SE-247-1

Utility: LUMINANT		Plant: COMANCHE PEAK		Unit: 2		Outage: 2RF11	
Procedure No: WDI-STD-146				Procedure Rev. No.: 9			
Weld No. TCX-1-4100-13, 14			Weld Type: DM / SE / ELBOW				
Applicable Sensitivity Calibration Data Sheet No: ET-1				Acquisition Log No: SE-247-1			
ET Examiner Signature: <i>[Signature]</i>						Date: 10-17-2009	
Data File Name	ET Probe No.	ET Probe Scan Direction [Axial/Circ.]	NI	RI	RI Resolution / Comments / Limitations	Examiner ID / Date	
N-247-PRP-IN	1	AXIAL	X			SAS / 10-17-09	
N-247-PRP-IN	2	AXIAL	X			SAS / 10-17-09	
N-247-PRP-IN	3	AXIAL	X			SAS / 10-17-09	
N-247-PRP-IN	4	AXIAL	X			SAS / 10-17-09	
N-247-PAR-IN	1	CIRC	X			SAS / 10-17-09	
N-247-PAR-IN	2	CIRC	X			SAS / 10-17-09	
N-247-PAR-IN	3	CIRC	X			SAS / 10-17-09	
N-247-PAR-IN	4	CIRC	X			SAS / 10-17-09	



DATA ACQUISITION LOG # SE-247-1

Utility:	LUMINANT	Plant:	Comanche Peak	Unit:	2	Outage:	2RF11			
Procedure No:	PDI-ISI-254-SE-NB					Procedure Rev. No.:	1			
Applicable Sensitivity Calibration Data Sheet No:		PDI-SE-AX-DET-01 / PDI-SE-CIRC-DET-01								
UT Examiner Signature:						Level:	III	Date:	10-17-09	
Data File Name	Weld No.	Index Start	Scan Start	Total # of Sweeps	'AVE' Signal Amplitude	Gain Adj. (dB)	Operator Initials	Date (mm/dd/yy)	Time	Comments
N-247-PRP-IN 1	TCX-1-4100-13,14	-2.0°	120.72"	178	15	0	CJA	10/17/09	10:27	
N-247-PRP-IN 2	TCX-1-4100-13,14	-2.0°	120.72"	178	10	0	CJA	10/17/09	10:27	
N-247-PRP-IN 5	TCX-1-4100-13,14	-2.0°	120.72"	178	11	0	CJA	10/17/09	10:27	
N-247-PRP-IN 6	TCX-1-4100-13,14	-2.0°	120.72"	178	17	0	CJA	10/17/09	10:27	
N-247-PAR-IN 1	TCX-1-4100-13,14	127.95"	-2.0°	74	9	0	CJA	10/17/09	10:50	
N-247-PAR-IN 2	TCX-1-4100-13,14	127.95"	-2.0°	74	13	0	CJA	10/17/09	10:50	
N-247-PAR-IN 3	TCX-1-4100-13,14	127.95"	-2.0°	74	8	0	CJA	10/17/09	10:50	
N-247-PAR-IN 4	TCX-1-4100-13,14	127.95"	-2.0°	74	10	0	CJA	10/17/09	10:50	
N-247-PAR-IN 5	TCX-1-4100-13,14	127.95"	-2.0°	74	12	0	CJA	10/17/09	10:50	
N-247-PAR-IN 6	TCX-1-4100-13,14	127.95"	-2.0°	74	12	0	CJA	10/17/09	10:50	
N-247-PAR-IN 7	TCX-1-4100-13,14	127.95"	-2.0°	74	7	0	CJA	10/17/09	10:50	
N-247-PAR-IN 8	TCX-1-4100-13,14	127.95"	-2.0°	74	7	0	CJA	10/17/09	10:50	

N-247-PRP-INScanSummary10-17-2009_10-27-52

WesDyne International
Reactor Vessel Inservice Examination
Scan Parameter ExecutionSITEComanche Peak #2
CONTROL SYSTEMSQUIDSite Weld ID = NOZ 247 SE
Weld and Scan Type = NOZ 247 SE PERPENDICULAR SCAN
Scan Data File Name = N-247-PRP-IN

SCAN AREA DEFINITIONS	SCAN (inch)	INDEX (degree)
START CW :	120.720	-2.000
END CW :	135.870	182.080
START CCW :	135.870	182.080
END CCW :	120.720	-2.000

SCAN AREA COVERED	SCAN (inch)	INDEX (degree)
TOP LEFT :	120.720	-2.000
TOP RIGHT :	135.870	-2.000
BOTTOM LEFT :	120.720	182.080
BOTTOM RIGHT :	135.870	182.080

Increment Size (deg) = 1.040

Number of Indexes Specified = 178
Number of Indexes Completed = 178

Scan Started Time 10:07:15 Date 10/17/2009

Scan Completed 10:27:52 10/17/2009

OPERATOR Cyany DATE 10/17/2009 10:27:52OPERATOR N/A DATE 10/17/2009 10:27:52COMMENTS _____

N-247-PAR-INScanSummary10-17-2009_10-50-0

WesDyne International
Reactor Vessel Inservice Examination
Scan Parameter Execution

SITEComanche Peak #2
CONTROL SYSTEMSQUID

Site Weld ID = NOZ-247-SE
Weld and Scan Type = NOZ-247-SE PARALLEL SCAN
Scan Data File Name = N-247-PAR-IN

SCAN AREA DEFINITIONS	SCAN (degree)	INDEX (inch)
START CW :	-2.000	127.950
END CW :	182.000	133.790
START CCW :	182.000	133.790
END CCW :	-2.000	127.950

SCAN AREA COVERED	SCAN (degree)	INDEX (inch)
TOP LEFT :	-2.000	127.950
TOP RIGHT :	182.000	127.950
BOTTOM LEFT :	-2.000	133.790
BOTTOM RIGHT :	182.000	133.790

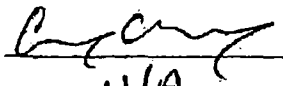
Increment Size (in) = 0.080

Number of Indexes Specified = 74

Number of Indexes Completed = 74

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Scan Started	10:29:54	10/17/2009

Scan Completed	10:50:00	10/17/2009
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OPERATOR  DATE 10/17/2009 10:50:00

OPERATOR N/A DATE 10/17/2009 10:50:00

COMMENTS _____

COMANCHE PEAK UNIT 2

RPV COVERAGE ESTIMATE BREAKDOWNS

DIRECTION / ORIENTATION

PARALLEL SCANS

CCW / CW

PERP. SCANS

IN / OUT

WELD

WELD NO.

TCX-1-4100-14

DESCRIPTION

Inlet Nozzle to Safe-End @ 247°

BEAM ANGLES

BEAM DIRECTION	70° L Dual	*ET			
	EXAM VOLUME	EXAM SURFACE			
CCW	100	100			
CW	100	100			
IN	100	N / A			
OUT	100	N / A			
UT COVERAGE = 100%					
Combined Coverage (UT & ET) = 100%					

ANALYST

SSh

COMANCHE PEAK UNIT 2

RPV COVERAGE ESTIMATE BREAKDOWNS

DIRECTION / ORIENTATION

PARALLEL SCANS

CCW / CW

PERP. SCANS

IN / OUT

WELD

WELD NO.

TCX-1-4100-13

DESCRIPTION

Inlet Nozzle Safe-End to Elbow @ 247°

BEAM ANGLES

BEAM DIRECTION	70° L Dual	*ET			
	EXAM VOLUME	EXAM SURFACE			
CCW	63.0*	100			
CW	63.0*	100			
IN	100	N / A			
OUT	100	N / A			
UT COVERAGE = 81.5% Combined Coverage (UT & ET) = 100%		Procedure limited in the detection of axial flaws per the PDQS document. Areas of limitation inspected by Eddy Current technique. *ID Configuration of Safe-End to Elbow weld			

ANALYST

[Signature]

INLET NOZZLE @ 293°

WesDyne International
Reactor Vessel Weld Results Summary

COMANCHE PEAK UNIT 2

<u>WELD NO.</u>	<u>DESCRIPTION</u>	<u>COVERAGE</u>
TCX-1-4200-14	Inlet Nozzle to Safe-End @ 293°	100%
TCX-1-4200-13	Inlet Safe-End to Elbow @ 293°	*85.74%

LIMITATIONS

NO

☐

YES

☒*ID Configuration of Safe-
End to Elbow Weld

UT RESULTS

NI

☒

RI

☐NO. OF UT INDICATIONS 0STATUS N/A

ET RESULTS

NI

☒

RI

☐NO. OF ET INDICATIONS 0STATUS N/AEXAM DOCUMENTATIONINDICATION DOCUMENTATION☒

ANALYSIS LOG

☐

ASSESSMENT SHEET

☒

ACQUISITION LOG

☐

PARAGON HARD COPY

☒

SCAN PRINTOUT

☐

OTHER (specify)

☒

COVERAGE BREAKDOWN

WESDYNE ANALYST






DATA ACQUISITION LOG # SE-293-1

Utility:	LUMINANT	Plant:	Comanche Peak	Unit:	2	Outage:	2RF11			
Procedure No:	PDI-ISI-254-SE-NB						Procedure Rev. No.:	1		
Applicable Sensitivity Calibration Data Sheet No:		PDI-SE-AX-DET-01 / PDI-SE-CIRC-DET-01								
UT Examiner Signature:							Level:	III	Date:	10-17-09
Data File Name	Weld No.	Index Start	Scan Start	Total # of Sweeps	'AVE' Signal Amplitude	Gain Adj. (dB)	Operator Initials	Date (mm/dd/yy)	Time	Comments
N-293-PRP-IN 1	TCX-1-4200-13,14	-2.0°	120.72"	178	15	0	CJA	10/17/09	12:15	
N-293-PRP-IN 2	TCX-1-4200-13,14	-2.0°	120.72"	178	8	0	CJA	10/17/09	12:15	
N-293-PRP-IN 5	TCX-1-4200-13,14	-2.0°	120.72"	178	11	0	CJA	10/17/09	12:15	
N-293-PRP-IN 6	TCX-1-4200-13,14	-2.0°	120.72"	178	14	0	CJA	10/17/09	12:15	
N-293-PAR-IN 1	TCX-1-4200-13,14	127.95"	-2.0°	74	14	0	CJA	10/17/09	12:37	
N-293-PAR-IN 2	TCX-1-4200-13,14	127.95"	-2.0°	74	12	0	CJA	10/17/09	12:37	
N-293-PAR-IN 3	TCX-1-4200-13,14	127.95"	-2.0°	74	7	0	CJA	10/17/09	12:37	
N-293-PAR-IN 4	TCX-1-4200-13,14	127.95"	-2.0°	74	12	0	CJA	10/17/09	12:37	
N-293-PAR-IN 5	TCX-1-4200-13,14	127.95"	-2.0°	74	7	0	CJA	10/17/09	12:37	
N-293-PAR-IN 6	TCX-1-4200-13,14	127.95"	-2.0°	74	9	0	CJA	10/17/09	12:37	
N-293-PAR-IN 7	TCX-1-4200-13,14	127.95"	-2.0°	74	13	0	CJA	10/17/09	12:37	
N-293-PAR-IN 8	TCX-1-4200-13,14	127.95"	-2.0°	74	11	0	CJA	10/17/09	12:37	



ANALYSIS LOG # SE-293-1

						Disk No:			
Utility:	Luminant		Plant:	Comanche Peak		Unit:	2	Outage:	2RF11
Procedure No:						PDI-ISI-254-SE-NB		Procedure Rev. No.: 1	
Weld No:			TCX-1-4200-13,14		Weld Type:		DM/SE/ELBOW		Exam. Surface: ID
Applicable Sensitivity Calibration Data Sheet No:			PDI-SE-AX/CIRC-DET-01		Acquisition Log No:		SE-293-1		PARAGON Anal. Release: 6.3.5
UT Examiner Signature: 						Level:		III	Date: 10-17-2009
Data File Name	UT Channel No.	Beam Angle / Beam Direction <small>(in or out, CW or CCW)</small>	NI	RI	RI Resolution / Comments / Limitations				Examiner ID / Date
N-293-PRP-IN	1	70 IN	X						SAS / 10-17-09
N-293-PRP-IN	2	70 OUT	X						SAS / 10-17-09
N-293-PRP-IN	5	70 IN	X						SAS / 10-17-09
N-293-PRP-IN	6	70 OUT	X						SAS / 10-17-09
N-293-PAR-IN	1	70 CCW	X						SAS / 10-17-09
N-293-PAR-IN	2	70 CW	X						SAS / 10-17-09
N-293-PAR-IN	3	70 CCW	X						SAS / 10-17-09
N-293-PAR-IN	4	70 CW	X						SAS / 10-17-09
N-293-PAR-IN	5	70 CCW	X						SAS / 10-17-09
N-293-PAR-IN	6	70 CW	X						SAS / 10-17-09
N-293-PAR-IN	7	70 CCW	X						SAS / 10-17-09
N-293-PAR-IN	8	70 CW	X						SAS / 10-17-09



ET Analysis Log: SE-293-1

Utility: LUMINANT		Plant: COMANCHE PEAK		Unit: 2	Outage: 2RF11	
Procedure No: WDI-STD-146				Procedure Rev. No.: 9		
Weld No. TCX-1-4200-13, 14			Weld Type: DM / SE / ELBOW			
Applicable Sensitivity Calibration Data Sheet No: ET-1				Acquisition Log No: SE-293-1		
ET Examiner Signature: <i>[Signature]</i>					Date: 10-17-2009	
Data File Name	ET Probe No.	ET Probe Scan Direction [Axial/Circ.]	NI	RI	RI Resolution / Comments / Limitations	Examiner ID / Date
N-293-PRP-IN	1	AXIAL	X			SAS / 10-17-09
N-293-PRP-IN	2	AXIAL	X			SAS / 10-17-09
N-293-PRP-IN	3	AXIAL	X			SAS / 10-17-09
N-293-PRP-IN	4	AXIAL	X			SAS / 10-17-09
N-293-PAR-IN	1	CIRC	X			SAS / 10-17-09
N-293-PAR-IN	2	CIRC	X			SAS / 10-17-09
N-293-PAR-IN	3	CIRC	X			SAS / 10-17-09
N-293-PAR-IN	4	CIRC	X			SAS / 10-17-09

Attachment 2 to TXX-15116

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N-293-PRP-INScanSummary10-17-2009_12-15-29

WesDyne International
Reactor Vessel Inservice Examination
Scan Parameter ExecutionSITEComanche Peak #2
CONTROL SYSTEMSQUIDSite weld ID = NOZ 293 SE
Weld and Scan Type = NOZ 293 SE PERPENDICULAR SCAN
Scan Data File Name = N-293-PRP-IN

SCAN AREA DEFINITIONS	SCAN (inch)	INDEX (degree)
START CW :	120.720	-2.000
END CW :	135.870	182.080
START CCW :	135.870	182.080
END CCW :	120.720	-2.000

SCAN AREA COVERED	SCAN (inch)	INDEX (degree)
TOP LEFT :	120.720	-2.000
TOP RIGHT :	135.870	-2.000
BOTTOM LEFT :	120.720	182.080
BOTTOM RIGHT :	135.870	182.080

Increment Size (deg) = 1.040

Number of Indexes Specified = 178

Number of Indexes Completed = 178

Scan Started Time 11:54:52 Date 10/17/2009

Scan Completed 12:15:29 10/17/2009

OPERATOR *[Signature]* DATE 10/17/2009 12:15:29OPERATOR N/A DATE 10/17/2009 12:15:29COMMENTS _____

N-293-PAR-INScanSummary10-17-2009_12-37-6

WesDyne International
Reactor Vessel Inservice Examination
Scan Parameter ExecutionSITEComanche Peak #2
CONTROL SYSTEMSQUIDsite weld ID = NOZ-293-SE
weld and Scan Type = NOZ-293-SE PARALLEL SCAN
Scan Data File Name = N-293-PAR-IN

SCAN AREA DEFINITIONS	SCAN (degree)	INDEX (inch)
START CW :	-2.000	127.950
END CW :	182.000	133.790
START CCW :	182.000	133.790
END CCW :	-2.000	127.950

SCAN AREA COVERED	SCAN (degree)	INDEX (inch)
TOP LEFT :	-2.000	127.950
TOP RIGHT :	182.000	127.950
BOTTOM LEFT :	-2.000	133.790
BOTTOM RIGHT :	182.000	133.790

Increment Size (in) = 0.080

Number of Indexes Specified = 74
Number of Indexes Completed = 74

Scan Started Time 12:17:00 Date 10/17/2009

Scan Completed 12:37:06 10/17/2009

OPERATOR C. J. King DATE 10/17/2009 12:37:06OPERATOR N/A DATE 10/17/2009 12:37:06COMMENTS _____

COMANCHE PEAK UNIT 2

RPV COVERAGE ESTIMATE BREAKDOWNS

DIRECTION / ORIENTATION

PARALLEL SCANS
PERP. SCANS

CCW / CW
IN / OUT

WELD

DESCRIPTION

Inlet Nozzle to Safe-End @ 293°

WELD NO.

TCX-1-4200-14

BEAM ANGLES

BEAM DIRECTION	70° L Dual	*ET			
	EXAM VOLUME	EXAM SURFACE			
CCW	100	100			
CW	100	100			
IN	100	N / A			
OUT	100	N / A			
UT COVERAGE = 100%					
Combined Coverage (UT & ET) = 100%					

ANALYST

[Signature]

COMANCHE PEAK UNIT 2

RPV COVERAGE ESTIMATE BREAKDOWNS

DIRECTION / ORIENTATION

PARALLEL SCANS

CCW / CW

PERP. SCANS

IN / OUT

WELD

WELD NO.

TCX-1-4200-13

DESCRIPTION

Inlet Nozzle Safe-End to Elbow @ 293°

BEAM ANGLES

BEAM DIRECTION	70° L Dual	*ET			
	EXAM VOLUME	EXAM SURFACE			
CCW	71.48*	100			
CW	71.48*	100			
IN	100	N / A			
OUT	100	N / A			
UT COVERAGE = 85.74% Combined Coverage (UT & ET) = 100%	Procedure limited in the detection of axial flaws per the PDQS document. Areas of limitation inspected by Eddy Current technique. *ID Configuration of Safe-End to Elbow weld				

ANALYST



OUTLET NOZZLE @ 22°

WesDyne International
Reactor Vessel Weld Results Summary

COMANCHE PEAK UNIT 2

<u>WELD NO.</u>	<u>DESCRIPTION</u>	<u>COVERAGE</u>
TCX-1-4300-1	Outlet Nozzle to Safe-End @ 22°	100%
TCX-1-4300-2	Outlet Safe-End to Pipe @ 22°	*84.96%

LIMITATIONS

NO

☐

YES

☒*ID Configuration of Safe-End to Pipe Weld

UT RESULTS

NI

☒

RI

☐NO. OF UT INDICATIONS 0STATUS N/A

ET RESULTS

NI

☒

RI

☐NO. OF ET INDICATIONS 0STATUS N/AEXAM DOCUMENTATIONINDICATION DOCUMENTATION☒ ANALYSIS LOG☐ ASSESSMENT SHEET☒ ACQUISITION LOG☐ PARAGON HARD COPY☒ SCAN PRINTOUT☐ OTHER (specify)

_____☒ COVERAGE BREAKDOWN

WESDYNE ANALYST



ANALYSIS LOG # SE-022-1

						Disk No:		
Utility: Luminant		Plant: Comanche Peak		Unit: 2		Outage: 2RF11		
Procedure No: PDI-ISI-254-SE-NB						Procedure Rev. No.: 1		
Weld No: TCX-1-4300-1,2				Weld Type: DM/SE/PIPE		Exam. Surface: ID		
Applicable Sensitivity Calibration Data Sheet No: PDI-SE-AX/CIRC-DET-01				Acquisition Log No: SE-202-1		PARAGON Anal. Release: 6.3.5		
UT Examiner Signature: <i>JDFunyak</i>						Level: II		Date: 10-17-2009
Data File Name	UT Channel No.	Beam Angle / Beam Direction [in or out, CW or CCW]	NI	RI	RI Resolution / Comments / Limitations		Examiner ID / Date	
N-22-PRP-ON	1	70 IN	X				JDF / 10-17-09	
N-22-PRP-ON	2	70 OUT	X				JDF / 10-17-09	
N-22-PRP-ON	5	70 IN	X				JDF / 10-17-09	
N-22-PRP-ON	6	70 OUT	X				JDF / 10-17-09	
N-22-PAR-ON	2	70 CW	X				JDF / 10-17-09	
N-22-PAR-ON	3	70CCW	X		See note below		JDF / 10-17-09	
N-22-PAR-ON	4	70 CW	X				JDF / 10-17-09	
N-22-PAR-ON	5	70CCW	X				JDF / 10-17-09	
N-22-PAR-ON	6	70 CW	X				JDF / 10-17-09	
N-22-PAR-ON	7	70CCW	X				JDF / 10-17-09	
N-22-PAR-ON	8	70 CW	X				JDF / 10-17-09	
Ch.1 PAR scan had contact problems, EPP increased scan length to cover area with Ch. 3.								



ET Analysis Log: SE-022-1

Utility: LUMINANT		Plant: COMANCHE PEAK		Unit: 2	Outage: 2RF11	
Procedure No: WDI-STD-146				Procedure Rev. No.: 9		
Weld No. TCX-1-4300-1,2			Weld Type: DM / SE / PIPE			
Applicable Sensitivity Calibration Data Sheet No: ET-1				Acquisition Log No: SE-022-1		
ET Examiner Signature: <i>JDFunyak</i>					Date: 10-17-2009	
Data File Name	ET Probe No.	ET Probe Scan Direction [Axial/Circ.]	NI	RI	RI Resolution / Comments / Limitations	Examiner ID / Date
N-22-PRP-ON	1	AXIAL	X			JDF / 10-17-09
N-22-PRP-ON	2	AXIAL	X			JDF / 10-17-09
N-22-PRP-ON	3	AXIAL	X			JDF / 10-17-09
N-22-PRP-ON	4	AXIAL	X			JDF / 10-17-09
N-22-PAR-ON	1	CIRC	X			JDF / 10-17-09
N-22-PAR-ON	2	CIRC	X			JDF / 10-17-09
N-22-PAR-ON	3	CIRC	X			JDF / 10-17-09
N-22-PAR-ON	4	CIRC	X			JDF / 10-17-09

Attachment 2 to TXX-15116

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DATA ACQUISITION LOG # SE-022-1

Utility: LUMINANT		Plant: Comanche Peak		Unit: 2		Outage: 2RF11				
Procedure No: PDI-ISI-254-SE-NB						Procedure Rev. No.: 1				
Applicable Sensitivity Calibration Data Sheet No:				PDI-SE-AX-DET-01 / PDI-SE-CIRC-DET-01						
UT Examiner Signature:		<i>JO Pinyak</i>				Level:	II	Date: 10/16,17/09		
Data File Name	Weld No.	Index Start	Scan Start	Total # of Sweeps	'AVE' Signal Amplitude	Gain Adj. (dB)	Operator Initials	Date (mm/dd/yy)	Time	Comments
N-22-PRP-ON 1	TCX-1-4300-1,2	-2.0°	110.09"	187	8	0	CWF	10/16/09	23:52	
N-22-PRP-ON 2	TCX-1-4300-1,2	-2.0°	110.09"	187	7	0	CWF	10/16/09	23:52	
N-22-PRP-ON 5	TCX-1-4300-1,2	-2.0°	110.09"	187	10	0	CWF	10/16/09	23:52	
N-22-PRP-ON 6	TCX-1-4300-1,2	-2.0°	110.09"	187	8	0	CWF	10/16/09	23:52	
N-22-PAR-ON 2	TCX-1-4300-1,2	120.34"	-2.0°	89	16	0	CWF	10/17/09	00:27	
N-22-PAR-ON 3	TCX-1-4300-1,2	120.34"	-2.0°	89	18	0	CWF	10/17/09	00:27	
N-22-PAR-ON 4	TCX-1-4300-1,2	120.34"	-2.0°	89	14	0	CWF	10/17/09	00:27	
N-22-PAR-ON 5	TCX-1-4300-1,2	120.34"	-2.0°	89	12	0	CWF	10/17/09	00:27	
N-22-PAR-ON 6	TCX-1-4300-1,2	120.34"	-2.0°	89	14	0	CWF	10/17/09	00:27	
N-22-PAR-ON 7	TCX-1-4300-1,2	120.34"	-2.0°	89	8	0	CWF	10/17/09	00:27	
N-22-PAR-ON 8	TCX-1-4300-1,2	120.34"	-2.0°	89	7	0	CWF	10/17/09	00:27	

N-22-PRP-ONScanSummary10-16-2009_23-52-8

WesDyne International
Reactor Vessel Inservice Examination
Scan Parameter ExecutionSITEComanche Peak #2
CONTROL SYSTEMSQUIDSite Weld ID = SE NOZ 22
Weld and Scan Type = SE NOZ 22 PERPENDICULAR SCAN
Scan Data File Name = N-22-PRP-ON

SCAN AREA DEFINITIONS		SCAN (inch)	INDEX (degree)
START CW	:	110.090	-2.000
END CW	:	126.280	182.140
START CCW	:	126.280	182.140
END CCW	:	110.090	-2.000

SCAN AREA COVERED		SCAN (inch)	INDEX (degree)
TOP LEFT	:	110.090	-2.000
TOP RIGHT	:	126.280	-2.000
BOTTOM LEFT	:	110.090	182.140
BOTTOM RIGHT	:	126.280	182.140

Increment Size (deg) = 0.990

Number of Indexes Specified = 187

Number of Indexes Completed = 187

Scan Started Time 23:29:25 Date 10/16/2009

Scan Completed 23:52:08 10/16/2009

OPERATOR JO Fungyal DATE 10/16/2009 23:52:08OPERATOR n/a DATE 10/16/2009 23:52:08COMMENTS _____

N-22-PAR-ONScanSummary10-17-2009_0-27-50

WesDyne International
Reactor Vessel Inservice Examination
Scan Parameter ExecutionSITEComanche Peak #2
CONTROL SYSTEMSQUIDSite Weld ID = SE NOZ 22
Weld and Scan Type = SE NOZ 22 PARALLEL SCAN
Scan Data File Name = N-22-PAR-ON

SCAN AREA DEFINITIONS		SCAN (degree)	INDEX (inch)
START CW	:	-2.000	120.340
END CW	:	182.000	127.380
START CCW	:	182.000	127.380
END CCW	:	-2.000	120.340

SCAN AREA COVERED		SCAN (degree)	INDEX (inch)
TOP LEFT	:	-2.000	120.340
TOP RIGHT	:	182.000	120.340
BOTTOM LEFT	:	-2.000	127.380
BOTTOM RIGHT	:	182.000	127.380

Increment Size (in) = 0.080

Number of Indexes Specified = 89

Number of Indexes Completed = 89

Scan Started Time 00:02:30 Date 10/17/2009

Scan Completed 00:27:50 10/17/2009

OPERATOR JO Fumyah DATE 10/17/2009 00:27:50OPERATOR N/A DATE 10/17/2009 00:27:50COMMENTS _____

COMANCHE PEAK UNIT 2

RPV COVERAGE ESTIMATE BREAKDOWNS

DIRECTION / ORIENTATION

PARALLEL SCANS

CCW / CW

PERP. SCANS

IN / OUT

WELD

WELD NO.

TCX-1-4300-1

DESCRIPTION Outlet Nozzle to Safe-End @ 22°

BEAM ANGLES

BEAM DIRECTION	70° L Dual	*ET			
	EXAM VOLUME	EXAM SURFACE			
CCW	100	100			
CW	100	100			
IN	100	N / A			
OUT	100	N / A			
UT COVERAGE = 100%					
Combined Coverage (UT & ET) = 100%					

ANALYST

Signature

COMANCHE PEAK UNIT 2

RPV COVERAGE ESTIMATE BREAKDOWNS

DIRECTION / ORIENTATION

PARALLEL SCANS

CCW / CW

PERP. SCANS

IN / OUT

WELD

WELD NO.

TCX-1-4300-2

DESCRIPTION

Outlet Nozzle Safe-End to Pipe @ 22°

BEAM ANGLES

BEAM DIRECTION	70° L Dual	*ET			
	EXAM VOLUME	EXAM SURFACE			
CCW	69.92*	100			
CW	69.92*	100			
IN	100	N / A			
OUT	100	N / A			
UT COVERAGE = 84.96% Combined Coverage (UT & ET) = 100%	Procedure limited in the detection of axial flaws per the PDQS document. Areas of limitation inspected by Eddy Current technique. *ID Configuration of Safe-End to Pipe weld				

ANALYST



OUTLET NOZZLE @ 158°

WesDyne International
Reactor Vessel Weld Results Summary

COMANCHE PEAK UNIT 2

<u>WELD NO.</u>	<u>DESCRIPTION</u>	<u>COVERAGE</u>
TCX-1-4400-1	Outlet Nozzle to Safe-End @ 158°	100%
TCX-1-4400-2	Outlet Safe-End to Pipe @ 158°	*87.37%

LIMITATIONS

NO

☐

YES

☒*ID Configuration of Safe-
End to Pipe Weld

UT RESULTS

NI

☒

RI

☐NO. OF UT INDICATIONS 0STATUS N/A

ET RESULTS

NI

☒

RI

☐NO. OF ET INDICATIONS 0STATUS N/AEXAM DOCUMENTATION☒ ANALYSIS LOG☒ ACQUISITION LOG☒ SCAN PRINTOUT☒ COVERAGE BREAKDOWNINDICATION DOCUMENTATION☐ ASSESSMENT SHEET☐ PARAGON HARD COPY☐ OTHER (specify)

WESDYNE ANALYST



ANALYSIS LOG # SE-158-1

						Disk No:				
Utility:	Luminant		Plant:	Comanche Peak		Unit:	2	Outage:	2RF11	
Procedure No:						PDI-ISI-254-SE-NB		Procedure Rev. No.: 1		
Weld No:			TCX-1-4400-1,2		Weld Type:		DM/SE/PIPE		Exam. Surface:	ID
Applicable Sensitivity Calibration Data Sheet No:			PDI-SE-AX/CIRC-DET-01		Acquisition Log No:		SE-158-1		PARAGON Anal. Release: 6.3.5	
UT Examiner Signature: <i>[Signature]</i>						Level:		II/III	Date:	10-16-2009
Data File Name	UT Channel No.	Beam Angle / Beam Direction <small>(In or out, CW or CCW)</small>	NI	RI	RI Resolution / Comments / Limitations				Examiner ID / Date	
N-158-PRP-ON	1	70 IN	X						JDF/SAS / 10-16-09	
N-158-PRP-ON	2	70 OUT	X						JDF/SAS / 10-16-09	
N-158-PRP-ON	5	70 IN	X						JDF/SAS / 10-16-09	
N-158-PRP-ON	6	70 OUT	X						JDF/SAS / 10-16-09	
N-158-PAR-ON	2	70 CW	X						JDF/SAS / 10-16-09	
N-158-PAR-ON	3	70CCW	X		See note below				JDF/SAS / 10-16-09	
N-158-PAR-ON	4	70 CW	X						JDF/SAS / 10-16-09	
N-158-PAR-ON	5	70CCW	X						JDF/SAS / 10-16-09	
N-158-PAR-ON	6	70 CW	X						JDF/SAS / 10-16-09	
N-158-PAR-ON	7	70CCW	X						JDF/SAS / 10-16-09	
N-158-PAR-ON	8	70 CW	X						JDF/SAS / 10-16-09	
Ch.1 PAR scan had contact problems, EPP increased scan length to cover area with Ch. 3.										

ET Analysis Log: SE-158-1

Utility: LUMINANT		Plant: COMANCHE PEAK		Unit: 2	Outage: 2RF11	
Procedure No: WDI-STD-146				Procedure Rev. No.: 9		
Weld No. TCX-1-4400-1, 2			Weld Type: DM / SE / ELBOW			
Applicable Sensitivity Calibration Data Sheet No: ET-1				Acquisition Log No: SE-158-1		
ET Examiner Signature: <i>JDF</i>					Date: 10-17-2009	
Data File Name	ET Probe No.	ET Probe Scan Direction [Axial/Circ.]	NI	RI	Resolution / Comments / Limitations	Examiner ID / Date
N-158-PRP-ON	1	AXIAL	X			JDF / 10-17-09
N-158-PRP-ON	2	AXIAL	X			JDF / 10-17-09
N-158-PRP-ON	3	AXIAL	X			JDF / 10-17-09
N-158-PRP-ON	4	AXIAL	X			JDF / 10-17-09
N-158-PAR-ON	1	CIRC	X			JDF / 10-17-09
N-158-PAR-ON	2	CIRC	X			JDF / 10-17-09
N-158-PAR-ON	3	CIRC	X			JDF / 10-17-09
N-158-PAR-ON	4	CIRC	X			JDF / 10-17-09



DATA ACQUISITION LOG # SE-158-1

Utility:	LUMINANT	Plant:	Comanche Peak	Unit:	2	Outage:	2RF11			
Procedure No:	PDI-ISI-254-SE-NB						Procedure Rev. No.:	1		
Applicable Sensitivity Calibration Data Sheet No:	PDI-SE-AX-DET-01 / PDI-SE-CIRC-DET-01									
UT Examiner Signature:	<i>[Signature]</i>						Level:	III	Date:	10-16-2009
Data File Name	Weld No.	Index Start	Scan Start	Total # of Sweeps	'AVE' Signal Amplitude	Gain Adj. (dB)	Operator Initials	Date (mm/dd/yy)	Time	Comments
N-158-PRP-ON 1	TCX-1-4400-1,2	-2.0°	110.09"	187	10	0	CJA	10/16/09	18:04	
N-158-PRP-ON 2	TCX-1-4400-1,2	-2.0°	110.09"	187	7	0	CJA	10/16/09	18:04	
N-158-PRP-ON 5	TCX-1-4400-1,2	-2.0°	110.09"	187	10	0	CJA	10/16/09	18:04	
N-158-PRP-ON 6	TCX-1-4400-1,2	-2.0°	110.09"	187	9	0	CJA	10/16/09	18:04	
N-158-PAR-ON 2	TCX-1-4400-1,2	120.34"	-2.0°	89	10	0	CJA	10/16/09	19:00	
N-158-PAR-ON 3	TCX-1-4400-1,2	120.34"	-2.0°	89	8	0	CJA	10/16/09	19:00	
N-158-PAR-ON 4	TCX-1-4400-1,2	120.34"	-2.0°	89	7	0	CJA	10/16/09	19:00	
N-158-PAR-ON 5	TCX-1-4400-1,2	120.34"	-2.0°	89	14	0	CJA	10/16/09	19:00	
N-158-PAR-ON 6	TCX-1-4400-1,2	120.34"	-2.0°	89	10	0	CJA	10/16/09	19:00	
N-158-PAR-ON 7	TCX-1-4400-1,2	120.34"	-2.0°	89	8	0	CJA	10/16/09	19:00	
N-158-PAR-ON 8	TCX-1-4400-1,2	120.34"	-2.0°	89	9	0	CJA	10/16/09	19:00	

N-158-PRP-ONScanSummary10-16-2009_18-3-30

WesDyne International
Reactor Vessel Inservice Examination
Scan Parameter ExecutionSITEComanche Peak #2
CONTROL SYSTEMSQUIDSite Weld ID = SE NOZ 158
Weld and Scan Type = SE NOZ 158 PERPENDICULAR SCAN
Scan Data File Name = N-158-PRP-ON

SCAN AREA DEFINITIONS	SCAN (inch)	INDEX (degree)
START CW :	110.090	-2.000
END CW :	126.280	182.140
START CCW :	126.280	182.140
END CCW :	110.090	-2.000

SCAN AREA COVERED	SCAN (inch)	INDEX (degree)
TOP LEFT :	110.090	-2.000
TOP RIGHT :	126.280	-2.000
BOTTOM LEFT :	110.090	182.140
BOTTOM RIGHT :	126.280	182.140

Increment Size (deg) = 0.990

Number of Indexes Specified = 187

Number of Indexes Completed = 187

Scan Started Time 17:40:47 Date 10/16/2009

Scan Completed 18:03:30 10/16/2009

OPERATOR Cory Adeney DATE 10/16/2009 18:03:30OPERATOR N/A DATE 10/16/2009 18:03:30COMMENTS _____

N-158-PAR-ONScanSummary10-16-2009_18-55-0

WesDyne International
Reactor Vessel Inservice Examination
Scan Parameter ExecutionSITEComanche Peak #2
CONTROL SYSTEMSQUIDSite Weld ID = SE NOZ 158
Weld and Scan Type = SE NOZ 158 PARALLEL SCAN
Scan Data File Name = N-158-PAR-ON

SCAN AREA DEFINITIONS	SCAN (degree)	INDEX (inch)
START CW :	-2.000	120.340
END CW :	182.000	127.300
START CCW :	182.000	127.300
END CCW :	-2.000	120.340

SCAN AREA COVERED	SCAN (degree)	INDEX (inch)
TOP LEFT :	-2.000	120.340
TOP RIGHT :	182.000	120.340
BOTTOM LEFT :	-2.000	127.300
BOTTOM RIGHT :	182.000	127.300

Increment Size (in) = 0.080

Number of Indexes Specified = 88
Number of Indexes Completed = 88

	Time	Date
Scan Started	18:29:57	10/16/2009
Scan Completed	18:55:00	10/16/2009

OPERATOR Conny Adams DATE 10/16/2009 18:55:00
OPERATOR N/A DATE 10/16/2009 18:55:00COMMENTS _____

COMANCHE PEAK UNIT 2

RPV COVERAGE ESTIMATE BREAKDOWNS

DIRECTION / ORIENTATION

PARALLEL SCANS

CCW / CW

PERP. SCANS

IN / OUT

WELD

WELD NO.

TCX-1-4400-1

DESCRIPTION Outlet Nozzle to Safe-End @ 158°

BEAM ANGLES

BEAM DIRECTION	70° L Dual	*ET			
	EXAM VOLUME	EXAM SURFACE			
CCW	100	100			
CW	100	100			
IN	100	N / A			
OUT	100	N / A			
UT COVERAGE = 100%					
Combined Coverage (UT & ET) = 100%					

ANALYST



COMANCHE PEAK UNIT 2

RPV COVERAGE ESTIMATE BREAKDOWNS

DIRECTION / ORIENTATION

PARALLEL SCANS

CCW / CW

PERP. SCANS

IN / OUT

WELD

WELD NO.

TCX-1-4400-2

DESCRIPTION

Outlet Nozzle Safe-End to Pipe @ 158°

BEAM ANGLES

BEAM DIRECTION	70° L Dual	*ET			
	EXAM VOLUME	EXAM SURFACE			
CCW	74.73*	100			
CW	74.73*	100			
IN	100	N / A			
OUT	100	N / A			
UT COVERAGE = 87.37% Combined Coverage (UT & ET) = 100%	Procedure limited in the detection of axial flaws per the PDQS document. Areas of limitation inspected by Eddy Current technique. *ID Configuration of Safe-End to Pipe weld				

ANALYST



INLET NOZZLE @ 113°

WesDyne International
Reactor Vessel Weld Results Summary

COMANCHE PEAK UNIT 2

<u>WELD NO.</u>	<u>DESCRIPTION</u>	<u>COVERAGE</u>
TCX-1-4400-14	Inlet Nozzle to Safe-End @ 113°	100%
TCX-1-4400-13	Inlet Safe-End to Elbow @ 113°	*85.69%

LIMITATIONS

NO

☐

YES

☒*ID Configuration of Safe-
End to Elbow Weld

UT RESULTS

NI

☒

RI

☐NO. OF UT INDICATIONS 0STATUS N/A

ET RESULTS


NI

☒

RI


☐NO. OF ET INDICATIONS 0STATUS N/AEXAM DOCUMENTATIONINDICATION DOCUMENTATION☒ ANALYSIS LOG☐ ASSESSMENT SHEET☒ ACQUISITION LOG☐ PARAGON HARD COPY☒ SCAN PRINTOUT☐ OTHER (specify)☒ COVERAGE BREAKDOWN

WESDYNE ANALYST





ANALYSIS LOG # SE-113-1

						Disk No:						
Utility:	Luminant			Plant:	Comanche Peak		Unit:	2	Outage:	2RF11		
Procedure No:						PDI-ISI-254-SE-NB			Procedure Rev. No.:			1
Weld No:				TCX-1-4400-13,14		Weld Type:		DM/SE/ELBOW		Exam. Surface:		ID
Applicable Sensitivity Calibration Data Sheet No:				PDI-SE-AX/CIRC-DET-01		Acquisition Log No:		SE-113-1		PARAGON Anal. Release:		6.3.5
UT Examiner Signature:								Level:		III	Date:	10-17-2009
Data File Name	UT Channel No.	Beam Angle / Beam Direction <small>(In or out, CW or CCW)</small>	NI	RI	RI Resolution / Comments / Limitations			Examiner ID / Date				
N-113-PRP-IN	1	70 IN	X					SAS / 10-17-09				
N-113-PRP-IN	2	70 OUT	X					SAS / 10-17-09				
N-113-PRP-IN	5	70 IN	X					SAS / 10-17-09				
N-113-PRP-IN	6	70 OUT	X					SAS / 10-17-09				
N-113-PAR-IN	1	70 CCW	X					SAS / 10-17-09				
N-113-PAR-IN	2	70 CW	X					SAS / 10-17-09				
N-113-PAR-IN	3	70 CCW	X					SAS / 10-17-09				
N-113-PAR-IN	4	70 CW	X					SAS / 10-17-09				
N-113-PAR-IN	5	70 CCW	X					SAS / 10-17-09				
N-113-PAR-IN	6	70 CW	X					SAS / 10-17-09				
N-113-PAR-IN	7	70 CCW	X					SAS / 10-17-09				
N-113-PAR-IN	8	70 CW	X					SAS / 10-17-09				



ET Analysis Log: SE-113-1

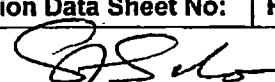
Utility: LUMINANT		Plant: COMANCHE PEAK		Unit: 2	Outage: 2RF11	
Procedure No: WDI-STD-146				Procedure Rev. No.: 9		
Weld No. TCX-1-4400-13, 14			Weld Type: DM / SE / ELBOW			
Applicable Sensitivity Calibration Data Sheet No: ET-1				Acquisition Log No: SE-113-1		
ET Examiner Signature: <i>[Signature]</i>					Date: 10-17-2009	
Data File Name	ET Probe No.	ET Probe Scan Direction [Axial/Circ.]	NI	RI	RI Resolution / Comments / Limitations	Examiner ID / Date
N-113-PRP-IN	1	AXIAL	X			SAS / 10-17-09
N-113-PRP-IN	2	AXIAL	X			SAS / 10-17-09
N-113-PRP-IN	3	AXIAL	X			SAS / 10-17-09
N-113-PRP-IN	4	AXIAL	X			SAS / 10-17-09
N-113-PAR-IN	1	CIRC	X			SAS / 10-17-09
N-113-PAR-IN	2	CIRC	X			SAS / 10-17-09
N-113-PAR-IN	3	CIRC	X			SAS / 10-17-09
N-113-PAR-IN	4	CIRC	X			SAS / 10-17-09

Attachment 2 to TXX-15116

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DATA ACQUISITION LOG # SE-113-1

Utility: LUMINANT		Plant: Comanche Peak		Unit: 2		Outage: 2RF11				
Procedure No: PDI-ISI-254-SE-NB						Procedure Rev. No.: 1				
Applicable Sensitivity Calibration Data Sheet No:				PDI-SE-AX-DET-01 / PDI-SE-CIRC-DET-01						
UT Examiner Signature:						Level:	II	Date: 10-17-09		
Data File Name	Weld No.	Index Start	Scan Start	Total # of Sweeps	'AVE' Signal Amplitude	Gain Adj. (dB)	Operator Initials	Date (mm/dd/yy)	Time	Comments
N-113-PRP-IN 1	TCX-1-4400-13,14	-2.0°	120.72"	178	17	0	CJA	10/17/09	08:03	
N-113-PRP-IN 2	TCX-1-4400-13,14	-2.0°	120.72"	178	13	0	CJA	10/17/09	08:03	
N-113-PRP-IN 5	TCX-1-4400-13,14	-2.0°	120.72"	178	12	0	CJA	10/17/09	08:03	
N-113-PRP-IN 6	TCX-1-4400-13,14	-2.0°	120.72"	178	15	0	CJA	10/17/09	08:03	
N-113-PAR-IN 1	TCX-1-4400-13,14	127.95"	-2.0°	67	9	0	CJA	10/17/09	08:25	
N-113-PAR-IN 2	TCX-1-4400-13,14	127.95"	-2.0°	67	9	0	CJA	10/17/09	08:25	
N-113-PAR-IN 3	TCX-1-4400-13,14	127.95"	-2.0°	67	9	0	CJA	10/17/09	08:25	
N-113-PAR-IN 4	TCX-1-4400-13,14	127.95"	-2.0°	67	10	0	CJA	10/17/09	08:25	
N-113-PAR-IN 5	TCX-1-4400-13,14	127.95"	-2.0°	67	8	0	CJA	10/17/09	08:25	
N-113-PAR-IN 6	TCX-1-4400-13,14	127.95"	-2.0°	67	10	0	CJA	10/17/09	08:25	
N-113-PAR-IN 7	TCX-1-4400-13,14	127.95"	-2.0°	67	13	0	CJA	10/17/09	08:25	
N-113-PAR-IN 8	TCX-1-4400-13,14	127.95"	-2.0°	67	12	0	CJA	10/17/09	08:25	

N-113-PRP-INScanSummary10-17-2009_8-3-15

WesDyne International
Reactor Vessel Inservice Examination
Scan Parameter ExecutionSITEComanche Peak #2
CONTROL SYSTEMSQUIDSite Weld ID = NOZ 113 SE
Weld and Scan Type = NOZ 113 SE PERPENDICULAR SCAN
Scan Data File Name = N-113-PRP-IN

SCAN AREA DEFINITIONS	SCAN (inch)	INDEX (degree)
START CW :	120.720	-2.000
END CW :	135.370	182.080
START CCW :	135.370	182.080
END CCW :	120.720	-2.000

SCAN AREA COVERED	SCAN (inch)	INDEX (degree)
TOP LEFT :	120.720	-2.000
TOP RIGHT :	135.370	-2.000
BOTTOM LEFT :	120.720	182.080
BOTTOM RIGHT :	135.370	182.080

Increment Size (deg) = 1.040

Number of Indexes Specified = 178

Number of Indexes Completed = 178

Scan Started Time 07:43:07 Date 10/17/2009

Scan Completed 08:03:15 10/17/2009

OPERATOR Chy any DATE 10/17/2009 08:03:15OPERATOR N/A DATE 10/17/2009 08:03:15COMMENTS _____

N-113-PAR-INScanSummary10-17-2009_8-24-54

WesDyne International
Reactor Vessel Inservice Examination
Scan Parameter ExecutionSITEComanche Peak #2
CONTROL SYSTEMSQUIDSite Weld ID = NOZ-113-SE
Weld and Scan Type = NOZ-113-SE PARALLEL SCAN
Scan Data File Name = N-113-PAR-IN

SCAN AREA DEFINITIONS	SCAN (degree)	INDEX (inch)
START CW :	-2.000	127.950
END CW :	182.000	133.230
START CCW :	182.000	133.230
END CCW :	-2.000	127.950

SCAN AREA COVERED	SCAN (degree)	INDEX (inch)
TOP LEFT :	-2.000	127.950
TOP RIGHT :	182.000	127.950
BOTTOM LEFT :	-2.000	133.230
BOTTOM RIGHT :	182.000	133.230

Increment Size (in) = 0.080

Number of Indexes Specified = 67

Number of Indexes Completed = 67

Scan Started Time 08:06:43 Date 10/17/2009

Scan Completed 08:24:54 10/17/2009

OPERATOR P. H. H. DATE 10/17/2009 08:24:54OPERATOR C. J. A. DATE 10/17/2009 08:24:54COMMENTS _____

COMANCHE PEAK UNIT 2

RPV COVERAGE ESTIMATE BREAKDOWNS

DIRECTION / ORIENTATION

PARALLEL SCANS

CCW / CW

PERP. SCANS

IN / OUT

WELD

WELD NO.

TCX-1-4400-14

DESCRIPTION

Inlet Nozzle to Safe-End @ 113°

BEAM ANGLES

BEAM DIRECTION	70° L Dual	*ET			
	EXAM VOLUME	EXAM SURFACE			
CCW	100	100			
CW	100	100			
IN	100	N / A			
OUT	100	N / A			
UT COVERAGE = 100%					
Combined Coverage (UT & ET) = 100%					

ANALYST

[Signature]

COMANCHE PEAK UNIT 2

RPV COVERAGE ESTIMATE BREAKDOWNS

DIRECTION / ORIENTATION

PARALLEL SCANS

CCW / CW

PERP. SCANS

IN / OUT

WELD

WELD NO.

TCX-1-4400-13

DESCRIPTION Inlet Nozzle Safe-End to Elbow @ 113°

BEAM ANGLES

BEAM DIRECTION	70° L Dual	*ET			
	EXAM VOLUME	EXAM SURFACE			
CCW	71.38*	100			
CW	71.38*	100			
IN	100	N / A			
OUT	100	N / A			
UT COVERAGE = 85.69% Combined Coverage (UT & ET) = 100%	Procedure limited in the detection of axial flaws per the PDQS document. Areas of limitation inspected by Eddy Current technique. *ID Configuration of Safe-End to Elbow weld				

ANALYST

[Signature]