

Nuclear Management Company, LLC Prairie Island Nuclear Generating Plant 1717 Wakonade Dr. East • Welch MN 55089

March 6, 2003

L-PI-03-28 10 CFR 50.55a

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

PRAIRIE ISLAND NUCLEAR GENERATING PLANT DOCKET NO. 50-282 LICENSE NO. DPR-42 REQUEST FOR RELIEF NO. 14 FOR THE UNIT 1 3RD 10-YEAR INTERVAL INSERVICE INSPECTION PROGRAM

On August 5, 1994 we submitted for review our third 10-year Inservice Inspection Examination Plan for Unit 1 and, on March 28, 1995, a response to a request for additional information to that plan. The NRC issued its evaluation of the third 10-year Interval Program Plan on February 22, 1996.

The purpose of this letter is to submit a relief request for "limited examinations" associated with that plan. Attached is Unit 1 Relief Request No. 14, Revision 0 which addresses those limited examinations. We are requesting relief pursuant to 10 CFR Part 50, Section 50.55a(g)(5)(iii) due to the impracticality of obtaining "100%" examination coverage for the affected items.

This letter contains no new commitments and no revisions to existing commitments. Please contact Jack Leveille (651-388-1121, Ext. 4142) if you have any questions related to this letter.

Joseph M. Solymosey

Site Vice President Prairie Island Nuclear Generating Plant

cc: (see next page)

AD47

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cc: Regional Administrator, USNRC, Region III

Project Manager, Prairie Island Nuclear Generating Plant, USNRC, NRR

NRC Resident Inspector - Prairie Island Nuclear Generating Plant

Chief Boiler Inspector, State of Minnesota

P. Fisher, Hartford Insurance

Enclosure: ISI Relief Request No. 14 (Rev. 0), Prairie Island Unit 1, 3<sup>rd</sup> Interval, with attached examination reports

#### Limited Examination

SYSTEM: Various Category: Various

Class: 1 and 2 Item: Various

### Impractical Examination Requirements:

ASME Section XI (1989 no addenda) Code requires full examination of inservice inspection (ISI) components per Table IWB-2500-1, and IWC-2500-1. Reg. Guide 1.147 endorses Code Case N-460, "Alternative Examination Coverage for Class 1 and Class 2 Welds." This code case allows greater than 90% coverage of a weld to meet the "essentially 100%" requirement.

NRC Information Notice 98-42 "Implementation of 10 CFR 50.55a(g) Inservice Inspection requirements" Dec. 1, 1998, states, "The NRC has adopted and further refined the definition of 'essentially 100 percent' to mean 'greater than 90 percent' in 10 CFR 50.55a(g)(6)(ii)(A)(2) for required examination coverage of reactor pressure vessel welds. This standard has been applied to all examination of welds or other areas required by ASME Section XI.

The Prairie Island construction permit was issued in 1967. This facility was designed and constructed with limited accessibility due to component configurations and/or physical barriers for which 100% coverage is not achievable on some ISI components examined for the Third Ten Year Interval.

#### Basis for Relief:

The following 10 CFR 50.55a paragraphs apply to the inservice inspection of components in accordance with the ASME Section XI code:

50.55a(g)(1): For a boiling or pressurized water-cooled nuclear power facility whose construction permit was issued before January 1, 1971, components (including supports) must meet the requirements of paragraphs (g) (4) and (g)(5) of this section to the extent practical.

50.55a(g)(4): Throughout the service life of a boiling or pressurized water-cooled nuclear power facility, components (including supports) which are classified as ASME Code Class 1, Class 2, and Class 3 must meet the requirements, except design and access provisions and preservice examination requirements, set forth in Section XI of editions of the ASME Boiler and Pressure Vessel Code ... to the extent practical within the limitations of design, geometry and materials of construction of the components.

50.55a(g)(5)(iv): Where an examination requirement by the code or addenda is determined to be impractical by the licensee and is not included in the revised inservice inspection program as permitted by paragraph (g)(4) of this section, the basis for this determination must be demonstrated to the satisfaction of the Commission.

Prairie Island was designed and constructed prior to development of ASME XI, therefore design for accessibility and inspection coverage is not in many cases,

sufficient to permit satisfying the current Code requirements. Limitations to inspections are primarily due to obstructions and interference.

Summary of the limited examinations are described below and also included in Table 1, Limited Examinations – Prairie Island Unit 1 – 2002 Refueling Outage.

### Part A: Category B-A, "Pressure Retaining Welds in Reactor Vessel"

Reactor Vessel (RV) Weld (W-6), Head to Flange: Volumetric coverage limited, due to flange configuration and lifting lugs, to 54.2%. See the following attachments:

Attachment 1, ISI drawing ISI-49

Attachment 2, Examination Report Number 2002U074

Attachment 3, Examination Report Number 96-0094, 96-0094R1 & 96-0094R2

Attachment 4, Examination Report Number 96-0095, 96-0095R1 & 96-0095R2

Attachment 5, Examination Report Number 96-0111, 96-0111R1 & 96-0111R2

### Part B: Category B-J, "Pressure Retaining Welds in Piping"

Reactor Coolant (RC) Weld (W-2) Safe-End to 45° Elbow: Volumetric coverage limited, due to safe end configuration and proximity of adjacent safe end to nozzle weld, to 50%. See Attachment 6, ISI drawing ISI-29A and Attachment 7, Examination Report Number 2002U055.

Reactor Coolant (RC) Weld (W-21), Nozzle to Pipe: Volumetric coverage limited, due to configuration and material attenuation, to 50%. See Attachment 8, ISI drawing ISI-24 and Attachment 9, Examination Report Number 2002U062.

Reactor Coolant (RC) Weld (W-18), Valve to Elbow: Volumetric coverage limited, due to upstream valve, SI-9-1, to 50%. See Attachment 8, ISI drawing ISI-24 and Attachment 10, Examination Report Number 2002U063.

Reactor Coolant (RC) Weld (W-1), Nozzle to Pipe: Volumetric coverage limited, due to material attenuation and weld configuration, to 50%. See Attachment 11, ISI drawing ISI-3A and Attachment 12, Examination Report Number 2002U064.

Reactor Coolant (RC) Weld (W-9), Nozzle to Pipe: Volumetric coverage on limited, due to material attenuation and weld configuration, to 50%. See Attachment 13, ISI drawing ISI-2 and Attachment 14, Examination Report Number 2002U066.

Reactor Coolant (RC) Weld (W-2), Nozzle to Pipe: Volumetric coverage on nozzle side limited, due to configuration, to 75%. See Attachment 11, ISI drawing ISI-3A and Attachment 15, Examination Report Number 2002U067.

Residual Heat Removal (RH) Weld (W-1), Valve to Pipe: Volumetric coverage on valve side limited, due to 1" drain line at BDC, to 48.15%. See Attachment 16, ISI drawing ISI-19A and Attachment 17, Examination Report Number 2002U068.

Residual Heat Removal (RH) Weld (W-1), Elbow to Pipe: Volumetric coverage limited, due to welded supports located at 90° and 270°, to 86.55%. See Attachment 18, ISI drawing ISI-3B and Attachment 19, Examination Report Number 2002U069.

Reactor Coolant (RC) Weld (W-6LS2U), Elbow to Pump: Volumetric coverage limited, on pump side due to configuration, to 70%. See Attachment 20, ISI drawing ISI-12B and Attachment 21, Examination Report Number 2002U076.

Reactor Coolant (RC) Weld (W-5), Red 50° Elbow to Nozzle: Volumetric coverage on upstream side limited, due to taper configuration and downstream side limited, due to configuration to 66.15%. See Attachment 22, ISI drawing ISI-13A and Attachment 23, Examination Report Number 2002U077.

Reactor Coolant (RC) Weld (W-6), Bent Pipe to Safe End: Volumetric coverage limited, due to joint configuration and proximity of safe-end taper from weld toe, to 75.38%. See Attachment 24, ISI drawing ISI-30B and Attachment 25, Examination Report Number 2002U096.

# <u>Part C</u>: Category C-C "Integral attachments for Vessels, Piping, Pumps and Valves"

Feedwater (FW) integrally attached weld (H-2IA) limited to surface examination of 0% due to permanent guard pipe and penetration configuration. See Attachment 26, ISI drawing ISI-69 and Attachment 27, Examination Report Number 2002M034.

Main Steam (MS) integrally attached weld (H-7IA) limited due to surface examination of 0% due to permanent guard pipe. See Attachment 28, ISI drawing ISI-68A and Attachment 29, Examination Report Number 2002M035.

Feedwater (FW) integrally attached weld (H-7IA) limited to surface examination of 0% due to permanent guard pipe. See Attachment 26, ISI drawing ISI-69 and Attachment 30, Examination Report Number 2002M036.

Feedwater (FW) integrally attached weld (H-4IA) limited to surface examination of 0% due to permanent guard pipe. See Attachment 26, ISI drawing ISI-69 and Attachment 31, Examination Report Number 2002M038.

Main Steam (MS) integrally attached weld (H-2IA) limited due to surface examination of 0% due to permanent guard pipe. See Attachment 32, ISI drawing ISI-68B and Attachment 33, Examination Report Number 2002M039.

Feedwater (FW) integrally attached weld (H-9IA) limited to surface examination of 0% due to permanent guard pipe. See Attachment 26, ISI drawing ISI-69 and Attachment 34, Examination Report Number 2002M041.

# <u>Part D</u>: Category C-F-1 "Pressure Retaining Welds in Austenitic Stainless Steel or High Alloy Piping"

Safety Injection (SI) Weld (W-10), Pipe to Valve: Volumetric coverage limited on valve side, due to configuration, to 50%. See Attachment 35, ISI drawing ISI-100A and Attachment 36, Examination Report Number 2002U052.

Safety Injection (SI) Weld (W-20), Pipe to Valve: Volumetric coverage limited on valve side, due to configuration, to 50%. See Attachment 37, ISI drawing ISI-89A and Attachment 38, Examination Report Number 2002U061.

Safety Injection (SI) Weld (W-14), Pipe to Valve: Volumetric coverage limited on valve side, due to configuration, to 50%. See Attachment 39, ISI drawing ISI-99B and Attachment 40, Examination Report Number 2002U086.

Safety Injection (SI) Weld (W-18), Pipe to Valve: Volumetric coverage limited on valve side, due to configuration, to 41.75%. See Attachment 41, ISI drawing ISI-97C and Attachment 42, Examination Report Number 2002U089.

Residual Heat Removal (RH) Weld (W-1), Penetration to Pipe: Volumetric coverage limited, due to penetration sleeve, to 0%. See Attachment 43, ISI drawing ISI-53B and Attachment 44, Examination Report Number 2002U100.

Residual Heat Removal (RH) Weld (W-14), Pipe to Penetration: Surface examination coverage limited, due to penetration sleeve, to 0%. See Attachment 45, ISI drawing ISI-89B and Attachment 46, Examination Report Number 2002P140.

Residual Heat Removal (RH) Weld (W-1), Penetration to Pipe: Surface coverage limited, due to penetration sleeve, to 0%. See Attachment 43, ISI drawing ISI-53B and Attachment 47, Examination Report Number 2002P141.

Residual Heat Removal (RH) Weld (W-14), Pipe to Penetration: Volumetric coverage limited, due to penetration sleeve, to 0%. See Attachment 45, ISI drawing ISI-89B and Attachment 50, Examination Report Number 2002U099.

# <u>Part E</u>: Category C-F-2 "Pressure Retaining Welds in Carbon or Low Alloy Steel Piping"

Main Steam (MS) Weld (W-6LSUD), Pipe to Pipe: Volumetric coverage limited, due to permanent guard pipe, to 0%. See Attachment 28, ISI drawing ISI-68A and Attachment 48, Examination Report Number 2002U094.

Feedwater (FW) Weld (W-9), Pipe to Pipe: Volumetric coverage limited, due to permanent guard pipe, to 0%. See Attachment 26, ISI drawing ISI-69 and Attachment 49, Examination Report Number 2002U095.

Main Steam (MS) Weld (W-6LSUD), Pipe to Pipe: Surface coverage limited, due to permanent guard pipe, to 0%. See Attachment 28, ISI drawing ISI-68A and Attachment 51, Examination Report Number 2002M040.

Feedwater (FW) Weld (W-9), Pipe to Pipe: Surface coverage limited, due to permanent guard pipe, to 0%. See Attachment 26, ISI drawing ISI-69 and Attachment 52, Examination Report Number 2002M042.

### Additional Means of Establishing Integrity:

In addition, system pressure tests and associated visual inspections (VT-2) required by Section XI are performed at their required frequency to ensure the piping system is capable of maintaining pressure integrity. Attachment 53, List of Section XI VT-2 Examinations lists the most recent system pressure test completed for each system affected.

System integrity is monitored during normal operation by many direct and indirect methods, e.g., containment radiation monitoring, containment air monitoring, containment sump monitoring, containment temperature monitoring, system walk downs, surveillance testing, etc.

In addition to the ultrasonic (UT) volumetric examination with limitations for the listed B-A Category weld, the required surface examination (MT) was completed, Attachment 54, Examination Report Number 2002M027.

In addition to the UT volumetric examination with limitations for the listed B-J Category welds, the required surface examinations (PT) were completed, Attachments 55 - 65, Examination Report Numbers 2002P080, 2002P097, 2002P099, 2002P101, 2002P113, 2002P100, 2002P110, 2002P112, 2002P087, 2002P127, and 2002P139.

In addition to the UT volumetric examination with limitations (other than 0%) for the listed C-F-1 Category welds, the required surface examinations (PT) were completed, Attachments 65 - 69, Examination Report Numbers 2002P072, 2002P084, 2002P134 and, 2002P132.

#### Alternate Examination:

The limitations have been noted on the ISI examination reports and are included in the 2002 ISI Outage Summary Report. NMC will continue to document limitations.

All in-service inspections at Prairie Island Unit 1 have been completed to the greatest extent practical. When limitations to required inspections are encountered, Metals & Materials Resources North procedure ISI-LTS-1 is applied. ISI-LTS-1 (Attachment 70) is used when an ASME Section XI Code required examination results in less than 90% coverage. It requires a review of the procedures to obtain maximum coverage and documentation of the limitation. The procedure also examines whether an alternative method could be used to obtain better coverage as allowed by the Code. This procedure was used for all the items identified above and the maximum inspection coverage was achieved.

Limitations are due to design, geometry, and materials of construction of the components. NMC will continue to utilize the most current techniques available for future examinations.

# ISI Relief Request No. 14 (Rev. 0), Prairie Island Unit 1, 3<sup>rd</sup> Interval Table 1. Limited Examinations - Prairie Island Unit 1 – 2002 Refueling Outage

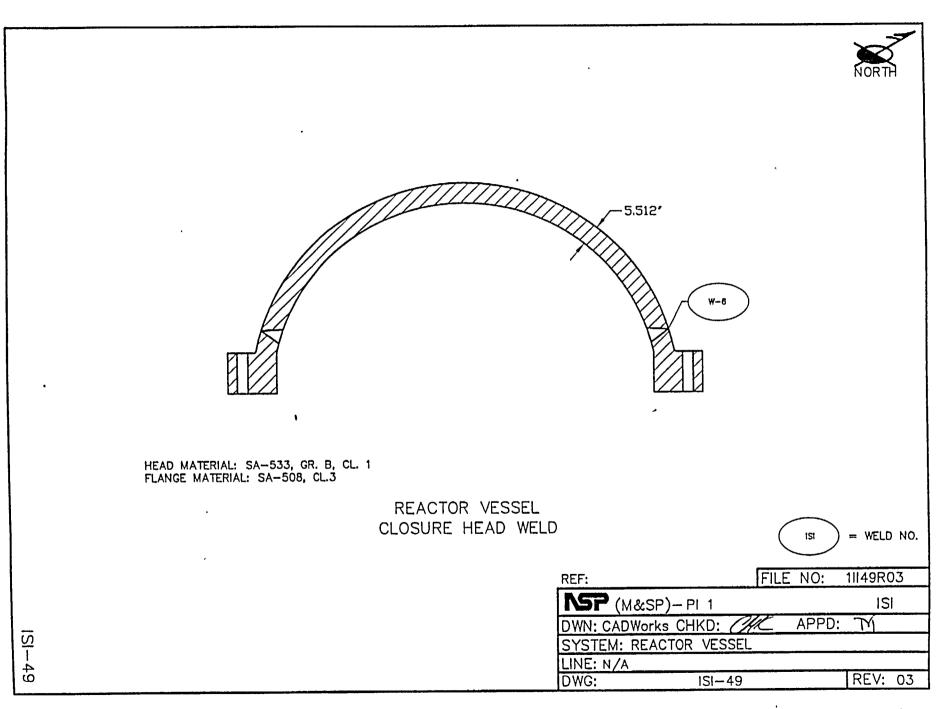
Category	Item No.	SYSTEM	ISO	Comp ID	Description	Method	% Coverage	REPORT	Limitation :	Attach.
B-A	B1.40	Reactor Vessel	ISI-49	W-6 301095	Head to Flange	Volumetric UT	54.2%	2002U074	Limited to flange configuration (lifting lugs).	1, 2, 3, 4, 5
B-J	B9.11	Reactor Coolant	ISI-29A	W-2 300900	Safe-End to 45 degree Elbow	Volumetric UT	50%	2002U055	Limited due to safe end configuration and proximity of adjacent safe end to nozzle weld.	6, 7
B-J	B9.31	Reactor Coolant	ISI-24	W-21 300656	Nozzle to Pipe	Volumetric UT	50%	2002U062	Limited due to configuration and material attenuation.	8, 9
B-J	B9.11	Reactor Coolant	ISI-24	W-18 300654	Valve to Elbow	Volumetric UT	50%	2002U063	Limited due to upstream valve.	8, 10
B-J	B9.31	Reactor Coolant	ISI-3A	W-1 300159	Nozzle to Pipe	Volumetric UT	50%	2002U064	Limited due to weld configuration and material attenuation.	11, 12
B-J	B9.31	Reactor Coolant	ISI-2	W-9 300136	Nozzle to Pipe	Volumetric UT	50%	2002U066	Limited due to material attenuation and weld configuration.	13, 14
B-J	B9.11	Reactor Coolant	ISI-3A	W-2 300148	Nozzle to Pipe	Volumetric UT	75%	2002U067	Limited on nozzle side due to configuration.	11, 15
B-J	B9.11	Residual Heat Removal	ISI-19A	W-1 300649	Valve to Pipe	Volumetric UT	48.15%	2002U068	Limited due to 1" drain line at BDC.	16, 17
B-J	B9.11	Residual Heat Removal	ISI-3B	W-1 300171	Elbow to Pipe	Volumetric UT	86.55%	2002U069	Limited due to welded supports at 90° and 270°.	
B-J	B9.10	Reactor Coolant	ISI-12B	W-6LS2U 300527	Elbow to Pump	Volumetric UT	70%	2002U076	Limited on pump side due to configuration.	20, 21

# ISI Relief Request No. 14 (Rev. 0), Prairie Island Unit 1, 3<sup>rd</sup> Interval Table 1. Limited Examinations - Prairie Island Unit 1 – 2002 Refueling Outage

Category	Item No.	SYSTEM	ISO	Comp ID Summary #	Description	Method	% % Coverage	REPORT	Limitation	Attach.
B-J	B9.11	Reactor Coolant	ISI-13A	W-5 300543	Red 50° Elbow to Nozzle	Volumetric UT	66.15%	2002U077	Limited on upstream side due to taper configuration and downstream side due to configuration.	22, 23
B-J	B9.11	Reactor Coolant	ISI-30B	W-6 300926	Bent Pipe to Safe End	Volumetric UT	75 38%	2002U096	Limited due to joint configuration and proximity of safe- end taper from weld toe.	24, 25
C-C	C3.20	Feedwater	ISI-69	H-2IA 321703	Integrally attached weld	Surface MT	0%	2002M034	Inaccessible due to permanent guard pipe and penetration configuration.	26, 27
C-C	C3.20	Main Steam	ISI-68A	H-7IA 321594	Integrally attached weld	Surface MT	0%	2002M035	Inaccessible due to permanent guard pipe.	28, 29
C-C	C3.20	Feedwater	ISI-69	H-7IA 321705	Integrally attached weld	Surface MT	0%	2002M036	Inaccessible due to permanent guard pipe.	26, 30
C-C	C3.20	Feedwater	ISI-69	H-4IA 321707	Integrally attached weld	Surface MT	0%	2002M038	Inaccessible due to permanent guard pipe.	26, 31
C-C	C3.20	Main Steam	ISI-68B	H-2IA 321639	Integrally attached weld	Surface MT	0%	2002M039	Inaccessible due to permanent guard pipe.	
C-C	C3.20	Feedwater	ISI-69	H-9IA 321702	Integrally attached weld	MT	0%	2002M041	Inaccessible due to permanent guard pipe.	26, 34
C-F-1	C5.21	Safety Injection	ISI-100A	W-10 305081	Pipe to valve	Volumetric UT	50%	2002U052	Limited on valve side due to configuration.	35, 36

# ISI Relief Request No. 14 (Rev. 0), Prairie Island Unit 1, 3<sup>rd</sup> Interval Table 1. Limited Examinations - Prairie Island Unit 1 – 2002 Refueling Outage

Category	Item No.	SYSTEM	ISO	Comp ID	Description	Method	.%. O.	REPORT	Limitation	Attach:
C-F-1	C5.11	Safety Injection	ISI-89A	W-20 301445	Pipe to valve	Volumetric UT	Coverage 50%	2002U061	Limited on valve side due to configuration.	37, 38
C-F-1	C5.21	Safety Injection	ISI-99B	W-14 305015	Pipe to Valve	Volumetric UT	50%	2002U086	Limited on valve side due to configuration.	39, 40
C-F-1	C5.21	Safety Injection	ISI-97C	W-18 303060	Pipe to Valve	Volumetric UT	41.75%	2002U089	Limited on valve side due to configuration.	41, 42
C-F-1	C5.11	Residual Heat Removal	ISI-53B	W-1 301326	Penetration to Pipe	Volumetric UT	0%	2002U100	Inaccessible due to penetration sleeve.	43, 44
C-F-1	C5.11	Residual Heat Removal	ISI-89B	W-14 301858	Pipe to Penetration	Surface PT	0%	2002P140	Inaccessible due to penetration sleeve.	45, 46
C-F-1	C5.11	Residual Heat Removal	ISI-53B	W-1 301326	Penetration to Pipe	Surface PT	0%	2002P141	Inaccessible due to penetration sleeve.	43, 47
C-F-1	C5.11	Residual Heat Removal	ISI-89B	W-14 301858	Pipe to Penetration	Volumetric UT	0%	2002U099	Inaccessible due to penetration sleeve.	45, 50
C-F-2	C5.50	Main Steam	ISI-68A	W-6LSUD 301584	Pipe to Pipe	Volumetric UT	0%	2002U094	Inaccessible due to permanent guard pipe.	28, 48
C-F-2	C5.51	Feedwater	ISI-69	W-9 301701	Pipe to Pipe	Volumetric UT	0%	2002U095	Inaccessible due to permanent guard pipe.	26, 49
C-F-2	C5.50	Main Steam	ISI-68A	W-6LSUD 301584	Pipe to Pipe	Surface MT	0%	2002M040	Inaccessible due to permanent guard pipe.	28, 51
C-F-2	C5.51	Feedwater	ISI-69	W-9 301701	Pipe to Pipe	Surface MT	0%	2002M042	Inaccessible due to permanent guard pipe.	26, 52





# **UT Vessel Examination**

Sit	e/Unit:	PNGP	1	PI1				P	rocedure: _	ISI-	UT-3A			Outage No.:	PI1	RFO20	02
Summa	ry No.:		30109	5				Proced	dure Rev.: _	8 TC	N 02-3	<u> </u>		Report No.:	2(	002U07	4
Work	scope:		ISI					Work C	Order No.:	02	00860			Page:	1	of	7
Code:		198	9			Code	Cat.:	В-А	\	Loc	ation:			Cont 715			
Drawing No.:			ISI-	-49			_	Description:	HEAD - FLA	NGE	•						
System ID:	RV						•			**							
Component ID:	W-6									Size/Ler	ngth:	3.2" / 41'	Thi	ckness/Diame	eter:	5.71"	/ 13'
Limitations:	See Co	omment	s.							·	_	t Time:	1100	Finish Ti	me: _	153	<del></del>
Examination S	urface:	insi	de 🗌	0	utside 🗹		••	Surface Con	dition: Blen	ded / Mach	lned	<del></del>					
Lo Location:	Cer	nterline	Stud Ho	le 1	_ Wo Lo	ocation:			· · · · · · · · · · · · · · · · · · ·			Sonotrace	40	Batch No	:	#001	43
Temp. Tool Mf	g.:	Те	latemp		_ Sei	ial No.:		NSP 178	}	Surface T	emp.:	65	°F				
Cal. Report No	o.:					2002C	A118,	2002CA119, 2	002CA120								
Angle Used	0	45	45T	60	60T		1										
Scanning dB	34.0	50.0	50.0	58.0	58.0		1										
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ATTACHMENT 2 PAGE 1 OF 7



N/A

## **Ultrasonic Indication Report**

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		Site/Unit			PI1				edure: _		SI-UT-3A		_	Outage No.:		RFO20	<del></del>
		mmary No.		3010	95	<del></del>	P	rocedure	Rev.:	8	TCN 02-	3	<b>_</b>	Report No.:	20	02U07	<u>'4</u>
	V	Vorkscope	):	IS	!		W	Vork Orde	er No.: _		0200860		_	Page:	2	of _	7
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#	No.	Of	٨	/lax	20%	Of Mex	20%	Of Max	Of	Max	Of	Amp.					
1	1	DAC 20%	W 2.5*	MP 2.41*	W1	MP	W2	MP	221"	221.5"	Max 222"		45 Degree			<del></del>	
1	2	20%	2.5"	2.51"	-	<del> </del>		-	235"	237"	239*		45 Degree	***		····································	
1	3	20%	2.5*	2.41"	<u> </u>			<u> </u>	282.5"	285.5*	287"		45 Degree				
1	1	35%	3.85"	3.84"	3.3"	3.38"	4.1"	4.15"	218"	222.5"	223"		60 Degree				
1	2	35%	3.6*	3.69"	3.15"	3.22"	4.5"	4.45"	233"	235"	237"	<u> </u>	60 Degree		-		
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Examiner N/A	Level	N/A			Signatur	е //				en, Jerry		Jun	P.W	Signa	ture LV. TI		Date   11-29-02
Other	Level	N/A			Signatur	e ,			Date ANI	I Review			7/1	Signa	ture		Dat

Clow, Ron

11/30/02



### **Limitation Record**

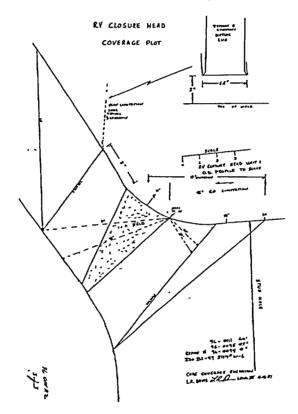
Site/Unit:	PNGP /	Pi1	Procedure:	ISI-UT-3A	Outage No.:	PI1RFO2002		
Summary No.:	301095	<u> </u>	Procedure Rev.:	8 TCN 02-3	Report No.:	2	002U0	74
Workscope:	ISI		Work Order No.:	0200860	Page:	3	of	7

Description of Limitation:

Refer to previous data reports 96-0094, 96-0095 and 96-0111 for limitation and determination of percent coverage data.

Sketch of Limitation:

J\lddeal\_Photos\PI1RFO2002\UT Photos\2002U074-1.bmp



Limitations removal requirements:

None

Radiation field. N/A

Examiner	Level	III	Signature	Date	Reviewer	1	?>	Signature	)	Date
Blechinger	, Todd P	•	dull. Kul	11/23/2002	Clay, Sean P.	$\mathcal{L}$	17th	200	r# 11.	-27-02
Examiner	Level	N/A	Signature	Date	Site Review		\	Signature	III.	Date
N/A					Wren, Jerry P.	$\searrow$	Fu	p.un u	11-29	-02
Other	Level	N/A	Signature	Date	ANII Review	$\overline{c}$		Signature	)	Date
N/A			•		Clow, Ron	/	XC	L	11/3	0/02
-										



# Determination of Percent Coverage for UT Examinations - Vessels

Site/Unit:	PNGP	1	PI1	Procedure:	ISI-UT-3A	Outage No.:	PI1	RFO2	002
Summary No.:		30109	95	Procedure Rev.:	8 TCN 02-3	Report No.:	20	)02U0	74
Workscope:		ISI		Work Order No :	0200860	Page:	4	of	7

#### 0 deg Planar

Scan	100.000	_ % Length X _	50.000	% volume of length / 100 =	50.000	_ % total for 0 deg
<u>45 deg</u>						
Scan 1	100.000	_ % Length X _	94.000	% volume of length / 100 =	94.000	_ % total for Scan 1
Scan 2	100.000	_% Length X _	38.900	% volume of length / 100 =	38.900	_ % total for Scan 2
Scan 3	100.000	_ % Length X _	50.000	% volume of length / 100 =	50.000	_ % total for Scan 3
Scan 4	100.000	_ % Length X _	50.000	% volume of length / 100 =	50.000	% total for Scan 4

Add totals and divide by # scans =	58.225	% total for 45 dec
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

Other deg	60	_				
		-				
Scan 1	100.000	_ % Length X	94.400	% volume of length / 100 = _	94.400	% total for Scan 1
Scan 2	100.000	_% Length X	23.600	% volume of length / 100 = _	23.600	% total for Scan 2
Scan 3	100.000	_% Length X	50.000	% volume of length / 100 =	50.000	% total for Scan 3
Scan 4	100.000	_% Length X	50.000_	% volume of length / 100 =	50.000	% total for Scan 4
Add tot	als and divide	by # scans =	54.500	% total for 60 deg		

#### Percent complete coverage

Add totals for each angle and scan required and divide by # of angles to determine;

54.242 % Total for complete exam

#### Note:

Supplemental coverage may be achieved by use of other angles / methods. When used, the coverage for volume not obtained with angles as noted above shall be calculated and added to the total to provide the percent total for the complete examination.

Site Field Supervisor: Date: 11-27-02

Summary No.: 301095

Examiner: N/A

Other: N/A

### Supplemental Report

Report No.: 2002U074 Page: Examiner: Blechinger, Todd P. Level: Ш Reviewer: Clay, Sean P. Date: 11-27-02 Date: 11-29-02 Site Review: Wren, Jerry P. Level: N/A Date: 1/30/02 ANII Review: Clow, Ron Level: N/A

Comments: None

Sketch or Photo: J\lddeal\_Photos\PI1RFO2002\UT Photos\2002U074-2.bmp

MATERIALS & SPECIAL PROCESSES INSERVICE INSPECTION - NONDESTRUCTIVE EXAMINATION PROCEDURE **PRAIRIE ISLAND UNIT 1 OUTAGE** 

#### **Determination of Percent Coverage Worksheet** (UT - Vessel)

Initial Exam Rpt No 96-0094; 96-0095

Procedure No: ISI-UT-3A (Rev 5)

96-0111

ISO No: ISI-49

Item No: W-6

Applicable Code Figure No: IWB-2500-5

0 deg Planar

Scan 100 % length X 50 % volume of length / 100 = 50 % total for 0 deg

45 deg

Scan 1 100 % length X 94.0 % volume of length / 100 = 94.0 % total for Scan 1 Scan 2 100 % length X 38.9 % volume of length / 100 = 38.9 % total for Scan 2

Scan 3 100 % length X 50.0 % volume of length / 100 = 50.0 % total for Scan 3

Scan 4 100 % length X 50.0 % volume of length / 100 = 50.0 % total for Scan 4

Add totals and divide by # scans = 58.2 % total for 45 deg

Scan 1 100 % length X 94.4 % volume of length / 100 = 94.4 % total for Scan 1

Scan 2 100 % length X 23.6 % volume of length / 100 = 23.6 % total for Scan 2

Scan 3 100 % length X 50.0 % volume of length / 100 = 50.0 % total for Scan 3

Scan 4 100 % length X 50.0 % volume of length / 100 = 50.0 % total for Scan 4

Add totals and divide by # scans = 54.5 % total for 60 deg

#### Percent complete coverage

Add totals for each angle and scan required and divide by # angles to determine;

#### 54.2 % total for complete exam

Note: Supplemental coverage may be achieved by use of other angles / methods. When used, the coverage for volume not obtained with angles as noted above shall be calculated and added to the total to provide the percent total for the complete examination

NSP Field Supervisor.

1095a\_%L.DOC



### Supplemental Report

Report No .: 2002U074 Page:

Summary No.: 301095

Examiner: Blechinger, Todd P.

Level:

Reviewer: Clay, Sean P.

Examiner: N/A Other: N/A

Level: N/A Level: N/A

Ш

Site Review: Wren, Jerry P. ANII Review: Clow, Ron

Date: 1//30/02

Comments: None

Sketch or Photo: J.\lddeal\_Photos\PI1RFO2002\UT Photos\2002U074-3 bmp



Xcel Energy, Inc Prairie Island Nuclear Generating Plant 1717 Wakonade Dr. E Welch, MN 55089

November 25, 2002

#### Review of Indications Unit 1 2002 RFO

Report # - 2002U074 Component ID - W-6 (Head to Flange) Method - UT 45° and 60°

Code - ASME Section XI '89 with No Addenda NRC Reg. 1.150 Rev. 1

Indication(s) - #1 thru #6 Procedure - ISI-UT-3A Rev. 8 With TCN 02-3

These indications are being reviewed after being identified during the scheduled examination of weld W-6 on 11/22/2002. The indications have been previously identified during previous examinations and found to be acceptable

The indications observed on 11/22/2002 are reported as "linear" with a maximum amplitude of 35% DAC

#### **Assumptions**

Based on nominal wall thickness and curvature correction the indications are not within the inner 25% of the through-wall dimension (see attached calculations)

#### Summary

The procedure referenced above is intended to reflect the requirements of Reg. Guide 1.150 Rev 1 Appendix A "Alternative Method" paragraph 6 2 b , allows "Reflectors which are at metal paths representing 25% and greater of the through-wall measured from the inner surface should be recorded in accordance with the requirements of ASME Section XI and characterized at 50% DAC \* The reflectors in question are within the outer 75% of through-wall thickness, are sub-surface and are not suspected of being cracks. The amplitude of the subject reflectors does not exceed 50% of DAC and therefore do not require characterization/companson to the code for an acceptance/rejection determination

The indications noted on report # 2002U074 are acceptable and require no further evaluation.

Reviewed By:

Jehry Wren, UT Level III

Inspection Supervisor

### Supplemental Report

Report No.: 2002U074 7 Page:

Summary No.: 301095

Examiner: Blechinger, Todd P.

Level. Ш Reviewer: Clay, Sean P.

Examiner: N/A

Level: N/A

N/A

Site Review: Wren, Jerry P.

Other: N/A

Level:

ANII Review: Clow, Ron

Comments: None

Sketch or Photo: J.\lddeal Photos\PI1RFO2002\UT Photos\2002U074-4 bmp

Radius = 66 93\* 45° Measured Angle = 45 9° (2002BS008) 60° Measured Angle = 62 4° (2002BS007)

#### Determination of correction factor

Indication Calculations Report # 2002U074

Radius =  $66.93^{\circ}$  (R). Surface distance to max amp point = 1.73 (C). C/R = .026 TAN IND #1 45° INV TAN =  $1.48^{\circ}$  .COS = .999 . { R / COS } – R = 0.022 correction factor.

IND #2 45° Radius =  $\underline{6693}^{\circ}$  (R). Surface distance to max amp point =  $\underline{180}$  ( C). C/R =  $\underline{.027}$  TAN. INV TAN =  $\underline{154}$  .COS =  $\underline{.099}$  . ( R / COS ) – R =  $\underline{0.0242}$  correction factor

IND #3 45° Radius =  $\underline{66.93}$  (R). Surface distance to max amp point =  $\underline{173}$  (C). C/R =  $\underline{.026}$  TAN INV TAN =  $\underline{148}$  . COS =  $\underline{.999}$  . (R / COS) – R =  $\underline{0.022}$  correction factor.

Radius =  $\underline{66.93}^{\circ}$  (R) Surface distance to max amp point =  $\underline{3.68}$  (C) C/R =  $\underline{.055}$  TAN IND #1 60° INV TAN =  $\underline{3.15}$  . COS =  $\underline{.998}$  . (R/COS) – R =  $\underline{0.101}$  correction factor.

IND #2 60° Radius =  $\underline{66.93^{\circ}}$  (R) Surface distance to max amp point =  $\underline{3.94}$  (C) C/R =  $\underline{.059}$  TAN. IND #2 60° INV TAN =  $\underline{3.37}$  . COS =  $\underline{.9982}$  . (R / COS ) – R =  $\underline{0.116}$  correction factor

IND #3 60° Radius = <u>66 93°</u> (R) Surface distance to max amp point = <u>3.74</u> (C) C/R = .056 TAN. INV TAN = <u>3.198</u> .COS = .9984 . ( R / COS ) = R = 0.044 correction factor.

#### Determine the lower depth of the flaw from the exam surface

IND #1 45°  $\frac{2.41^{\circ}}{1.00}$  (metal path at 20% lower) ° COS of the measured angle  $\frac{45.9^{\circ}}{1.00}$  =  $\frac{1.677}{1.00}$ . correction factor = 1 655 Inches depth.

IND #2 45°  $\frac{2.51"}{correction factor = 1.72}$  inches depth

IND #3 45\* committee factor and the factor and the measured angle 45.9° = 1 677 correction factor = 1 655 Inches depth.

IND #1 60°  $\frac{4.15"}{}$  (metal path at 20% lower) ° COS of the measured angle  $\frac{62.4°}{}$  =  $\frac{1.923}{}$  - correction factor =  $\frac{1.822}{}$  inches depth.

IND #2 60°  $\frac{4.45^{\circ}}{\text{correction factor}}$  =  $\frac{4.65^{\circ}}{\text{correction factor}}$  =  $\frac{4.65^{\circ}}{\text{corre$ 

IND #3 60°  $\frac{4.22^{\circ}}{\text{correction factor}} = \frac{1.955}{\text{correction factor}} = \frac{1.955}{\text{correc$ 

IND #1 45° 71 02% From ID Surface

IND #2 45\* 69 83% From ID Surface

IND #3 45° 71 02% From ID Surface

IND #1 60° 68 10% From ID Surface

IND #2 60° 65 92% From ID Surface

IND #3 60° 67 59% From ID Surface

Northern States P Operations & Main Materials & Speci	tenanc	e Supt   0°		rie Island RASONIC EX ORT (3rd	MINA	ATION		Report# Source Doc	
System R.V. CLOSURE HEAD	1 1	ISO ISI- 49		Item W- 6				Item De HEAD -	scription
Material A533grBcl1 / SA50	8 CL 3	Size/Leng 41'	th T	hick/Dia 5.512	Ter		)* F'	Surface BLENDED	Condition
Procedure ISI-UT-3A Re	7 <u>5</u>	Field Change	e <u>*</u>	W R Numb 951133		ISI		ntractor	Exam Date 01/16/96
Calibration Report Nmbr WDC-	001	Beam Angle 0° (Nom			Temp Gauge S/N ISI-012			m Start ( xam End (	9 <u>1132</u> hours 1529 hours
Evaluation Level 20% DAC		ting Level		Block f Std <u>LN</u>	25A 4T-1		Re Sca	f Sensit n Sensit	ivity <u>11</u> dB
RESULTS NAD = No Apparent Discontinuities; L = Linear; S = Spot; M = Multiple									

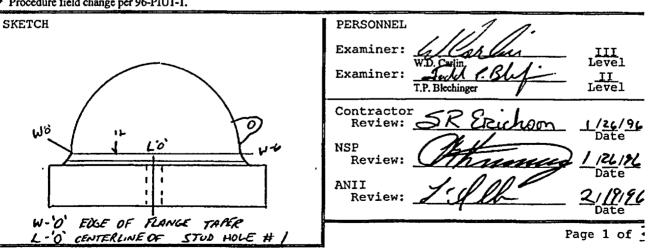
GEO = Geometry Visual = Non-Section XI Visual Examination

Scan Nmbr		Indication Type	Sweep Loc'n		Surf Dist	Circ Location	Axial Location	Indication Length	Amp %DAC
1L 1L 1L 1L 1L	IND IND IND IND IND	LINEAR LINEAR LINEAR LINEAR LINEAR	3.2 3.2 4.0	2.49 2.49 3.01	N/A N/A N/A N/A	26.75 37.6 43.0 195.75 251.3	4.25 3.55 4.65 2.60 5.40	0.3" SPOT 0.4" SPOT 0.2"	

LIMITATIONS: No automated exam from 71.6" to 85.6"; 203.7" to 217.6"; 333.9 to 346.0" due to lifting lugs. No automated exam from 97.6" to 107"; 293.0" to 303.2" due to guide stud. No downstream exam due to flange configuration.

REMARKS: See attached evaluation.

\* Procedure field change per 96-PIU1-1.



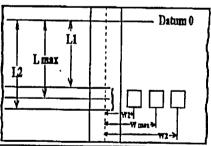
# MATERIALS & SPECIAL PROCESSES

# INDICATION DATA TABULATION SHEET

### Examination Report # 96-0094

	] :		@ MAX AMP			F	ORWAR	RD_	B/	ACKWAI	RD	İ	1	i		1
ind	Scan	% of		<u>W</u> Max			6 DAC o Max Am			6 DAC o		<u>L1</u> 20%	<u>L</u>	<u>L2</u> 20%	<u>0°</u> Back	
#	#	DAC	W	S Div	MP	W <sub>1</sub>	W1 S Div MP			S Div	MP	DAC	MĀX	DAC	Amp	REMARKS
_1_	1L_	_29_	4.25	3.6	2.70	4.0	3.6	2.70	4.4	3.6	2.70	26.6	26.75	26.9	100	
_2_	1L	20	3.55	3.2	2.49	*	3.2	2.49	*	3.2	2.49	*	37.6	*	95	* SPOT IND
_3_	1L	27	4.65	3.2	2.49	4.3	3.2	2.49	4.85	3.2	2.49	42.7	43.0	43.1	70	0.07.110
4_	1L	20	2.60	4.0	3.01	*	4.0	3.01	*	4.0	3.01	*	195.75	*	40	* SPOT IND
5	1L	22	5.40	3.7	2.88	5.3	3.7	2.88	5.5	3.7	2.88	251.2	251.3	251.4	70	01 01 1110
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**SCALED PLOT** 



\* NOTE - For flaw indications that peak at less than 20% DAC, dimensions are to be taken from the 50% Max Amp pts.

Examiner J. W. P. Buf

Date 1/26/96

Page 2 of 2

North Opera Mater	tions		Le Isl ASONIC RT (3		MINA	OITA	1		ort# rce Doc		10	1						
System R.V.		RE HEAD	)	ISO ISI-	49			1	tem - 6					tem De EAD -			n	
Mater A533g		/ SA50	8 CL		ize/Le 41'		h	·Th	ick/D: 5.5		Ten		0° F		urface lended		iti	on
Proced ISI-U		Re	_ Fie	ld Cha	*	W R 1 951	Numbe 1339		ISI	Cor	itra	actor			ate 9/96			
	Calibration Report Nmbr WDC-001  Evaluation Level Reporting Level Cal Bi											/N	Exa F	m : Cxai	Start ( n End (	113 152	2 9	hours hours
	ation DAC		lock Std		25A C-1(	15			Sensit: Sensit:									
RESUL!	RESULTS NAD = No Apparent Discontinuities; GEO = Geometry Visual											S = n XI	Spo Vis	t; ual	M = Mu L Exami	ıltip İnatio	le on	
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			ANII Review: Jeff 2/19/9: Date						/ <b>9</b> / <b>9</b> :									
			Page 1 of								of							

 $\omega$ 

7

## PI-1 Indication Review

Rpt # - 96-0094

Item # - W-6 (360 deg)

New Iso # - same

Method - UT 0°

iso # - 1-ISI-49

Indication # - 1 through 5

New Item # - same

Procedure - NSP-UT-3A Rev 5 w/ FC 96-PIU1-1

Code - ASME Sect XI '89 with No Addenda NRC Reg Guide 1.150 Rev 1

#### Discussion -

These indications are being evaluated as a result of an informational examination done during the Winter '96 outage. The reason for performing this examination was to clear up concerns about previous exams as to reference location for 0 deg and to obtain baseline automated examination data.

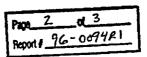
The indications were reported as "Linear", and the largest one measured 0.55" X 0.4" with a maximum amplitude of 29% DAC. Based on nominal wall thickness, the indications are not within the inner 25% of the through-wall dimension. (see calculations below). The indication data with this report indicates that there was no complete loss of back associated with these indications that the recording of these indications was a result of amplitude in regard to DAC. In addition there were no indications that were greater than or equal to the remaining back reflection. Previous evaluations related to the examinations in this and the adjacent areas were performed in conjunction with report #94-0203 and the results were found to be acceptable.

### **Assumptions** -

- There is no change in metal path associated with these indications, they are laminar in nature.
- Based on nominal wall thickness, the indications are not within the inner 25% of the through-wall dimension.

# Code requirements -

The procedure noted above provided the examiner with criterion for evaluating and recording indications under circumstances determined from the following source documents; ASME Sect XI IWA-2232 refers to Appendix 1 which refers to Sect V Art 4 with supplements (the supplements do not affect this evaluation). For laminar reflectors, T-441.3.2.9 (a) requires recording of "... all areas giving indications equal to or greater than the remaining back reflection" for determining interference with angle beam examinations. T-441.3.2.9 (b) requires recording of "... all areas where one or more discontinuities produce a continuous total loss of back reflection accompanied by continuous indications in the same plane" for acceptance. For planar reflectors found by straight beam, T-441.3.2.10 requires recording of all reflectors that produce a response equal to or greater than 50% of the distance-amplitude correction (DAC). The Reg Guide requirement for "Indications without Changing Metal Path" (from



#### PI-1 Indication Review

Appendix A) is to record when any continuous dimension exceeds one inch for the outer 75% of the through-wall dimension and, if the indication falls within the inner 25% of the through-wall dimensions, recording should be at 20% DAC and evaluation performed at 50% DAC.

### Summary -

The indications noted on report #96-0094 do not fall under these criterion and do not require further evaluation.

#### Calculations -

Determination of % through wall (depth from OD surface)

Ind #1 - 2.70" MP / 5.512" T = 0.4898 or 48.98%

Ind #2 - 2.49" MP / 5.512" T = 0.4517 or 45.17%

Ind #3 - 2.49" MP / 5.512" T = 0.4517 or 45.17%

Ind #4 - 3.01" MP / 5.512" T = 0.5461 or 54.61%

Ind #5 - 2.88" MP / 5.512" T = 0.5225 or 52.25%

MP stands for Metal Path taken from page 1 of the UT report.

The 5.512" T is the thickness of the component taken from the value on the UT report.

Prepared By Tou Souls

Reviewed By 10 ON

Reviewed By

Northern States Po Operations & Maint Materials & Specia	enance	Supt	0.	. UI		e Island ASONIC EXF RT (3rd	MIN	OITA	1		ort# 9		R2 1095
System R.V. CLOSURE HEAD		ISO ISI- 49	<b>a</b>			Item W- 6					em Des EAD - I	scripti FLANGE	on
Material A533grBcl1 / SA508		Size	e/Leng	gth	Tì	nick/Dia 5.512	Te	mp	•F			Condit	ion
Procedure ISI-UT-3A Rev		Field	Chang	ge	W R Numb	er	IS	[ Cor	ntra	ctor	Exam 12/3	Date 12/97	
Calibration Report Nmbr		Beam	Angle (Nor	e minal	Temp Gau	ige	s/N			Start (		hours hours	
Evaluation Level % DAC		rting I B DAC	Level	Ca	Block Std	₹V-4	A	Re Sca	ef S an S	Sensiti Sensiti	vity _ vity _	dB dB	
RESULTS NAD = No GEO = Geo	Appare metry	ent Dis	scont:	inuit Vis	s; L = Lir l = Non-Se	ear ecti	; S = on X	= Spo [ Vis	ot; sual	M = Mi Exami	ıltiple ination		
Scan Res- Indicat Nmbr ults Type	ion Sw Lo	weep Me oc'n Pa	etal S	Surf Dist	Circ Location		Axial Locat			India Lengt	ation h	Amp %DAC	
LIMITATIONS. Exam limita	ations furt	ther evalua	ated Se	e attach	ed P	ercent Coverag	e She	et				أنخور	
REMARKS: Report provides	addition	al limitatio	on inform	mation	only.								
						-							
SKETCH					PERSONN Examine Examine Contrac Revie NSP Revie ANII Revie	er: er: ctor ew:	DA	in Ida	P.	wan		II evel Date // 12/1/2 Date // 1/3/2 Date	

### MATERIALS & SPECIAL PROCESSES INSERVICE INSPECTION - NONDESTRUCTIVE EXAMINATION PROCEDURE **PRAIRIE ISLAND UNIT 1 OUTAGE**

## **Determination of Percent Coverage Worksheet** (UT - Vessel)

Initial Exam Rpt No: 96-0094; 96-0095

Procedure No: ISI-UT-3A (Rev 5)

96-0111

ISO No: ISI-49

Item No: W-6

Applicable Code Figure No: IWB-2500-5

0 deg Planar

Scan 100 % length X 50 % volume of length / 100 = 50 % total for 0 deg

45 dea

Scan 1 100 % length X 94.0 % volume of length / 100 = 94.0 % total for Scan 1

Scan 2 100 % length X 38.9 % volume of length / 100 = 38.9 % total for Scan 2

Scan 3 100 % length X 50.0 % volume of length / 100 = 50.0 % total for Scan 3

Scan 4 100 % length X 50.0 % volume of length / 100 = 50.0 % total for Scan 4

Add totals and divide by # scans = 58.2 % total for 45 deg

60 deg

Scan 1 100 % length X 94.4 % volume of length / 100 = 94.4 % total for Scan 1

Scan 2 100 % length X 23.6 % volume of length / 100 = 23.6 % total for Scan 2

Scan 3 100 % length X 50.0 % volume of length / 100 = 50.0 % total for Scan 3

Scan 4 100 % length X 50.0 % volume of length / 100 = 50.0 % total for Scan 4

Add totals and divide by # scans = 54.5 % total for 60 deg

## Percent complete coverage

Add totals for each angle and scan required and divide by # angles to determine;

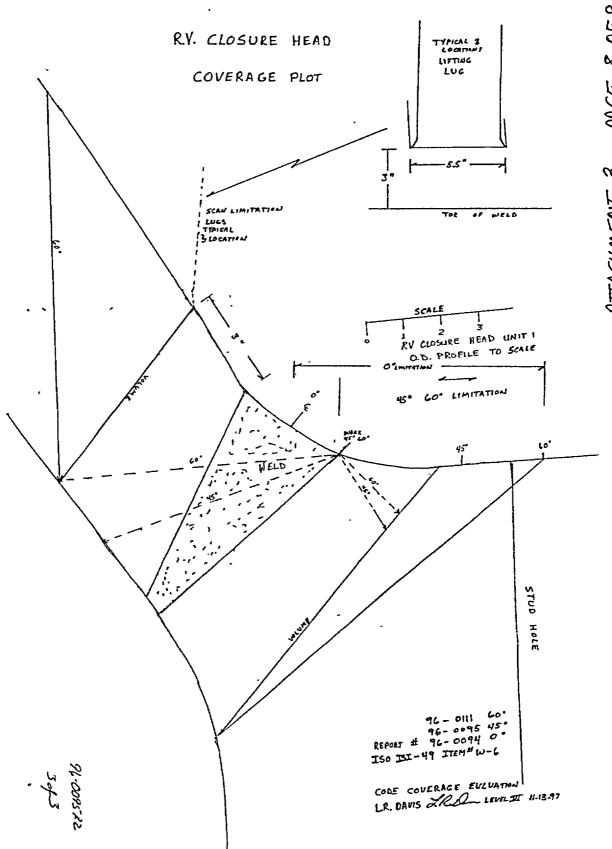
### 54.2 % total for complete exam

Note: Supplemental coverage may be achieved by use of other angles / methods. When used, the coverage for volume not obtained with angles as noted above shall be calculated and added to the total to provide the percent total for the complete examination.

NSP Field Supervisor:

Date: <u>2/9/98</u> 243

1095a %L.DOC



33		_		-							
Northern States P Operations & Main Materials & Speci	tenand	ce Supt	45° U	LTR	ie Island ASONIC EX DRT (3rd	I	Report# 96-0095 Source Doc=B 1. 40 S/N 1095				
System		ISO			Item	<del></del>	<del></del>		Item De	escription	
R.V. CLOSURE HEAD		ISI- 49	W- 6						HEAD -		
Material A533grBcl1 / SA50	B CL :		Length 1'	Ti	hick/Dia 5.512	Ter		)*F	Surface Condition BLENDED		
Procedure ISI-UT-3A Rev	7 5	Field C	hange <u>*</u>		W R Numb 951133		ISI	Con	tractor	Exam Date 01/16/96	
Calibration Report Nmbr WDC-	002	Beam Ai 45°	ngle (Nomina	1)		p Gauge S/N ISI-012		Exam Start Exam End			
Evaluation Level 20% DAC		rting Lev % DAC	vel C		Block 25A f Std LMT-105			Ref Sensitivity 11 Scan Sensitivity 23			
DECULES NAD NO	-							-			

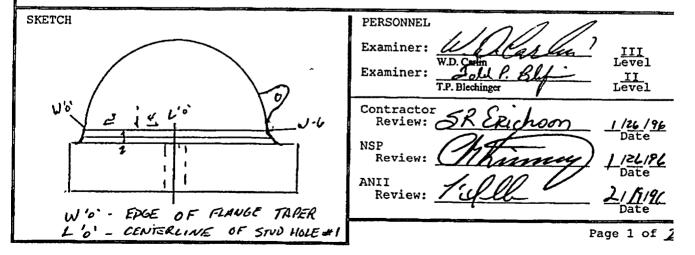
RESULTS NAD = No Apparent Discontinuities; L = Linear; S = Spot; M = Multiple GEO = Geometry Visual = Non-Section XI Visual Examination

			7	7					
Scan Nmbr	Res- ults	Indication Type	Sweep Loc'n	Metal Path	Surf Dist	Circ Location	Axial Location	Indication Length	Amp %DAC
1 1 1 1 1 2 3	IND IND IND IND IND IND NAD NAD	LINEAR	2.2 2.2 2.2 2.2	2.57 2.57	1.2 1.1 1.25 1.15 1.05 1.1	215.3 220.1 232.8 235.0 237.4 287.5	1.2 1.1 1.25 1.15 1.05 1.1	1.1" 0.5" 0.7" 1.8" 0.3" 0.4"	30 30 25 40 23 24

LIMITATIONS: No automated exam from 70.0" to 89.25"; 200.6" to 219.8"; 332.1" to 350.4" due to lifting lugs. No automated exam from 97.0" to 107.5"; 291.8" to 302.4" due to guide studs. These areas were scanned manually.

REMARKS: See attached evaluation. Exam start 1/16/96. Exam end 1/17/96.

\* Procedure field change per 96-PIU1-1. Indication #1 is within limitation area 200.6" to 219.8". Indication was measured manually.



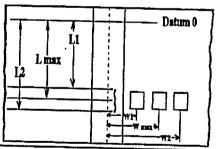
# MATERIALS & SPECIAL PROCESSES

# INDICATION DATA TABULATION SHEET

### Examination Report # 96-0095

			@ MAX AMP			F	ORWAR	מא	В	CKWA	RD	1	į	1	ı	1
Ind	Scan	% of		W Max		1	6 DAC o Max Am		* 20%	6 DAC o	r 50%	<u>L1</u> 20%	•	<u>L2</u> 20%	0° Back	
#	#	DAC	W	S Div	MP	W <sub>1</sub>	S Div	MP	W <sub>2</sub>	S Div	MP	DAC	MĀX	DAC	Amp	REMARKS
1_	1	30	1.2	2.2	2.56	1.2	2.2	2.56	1.4	2.3	2.70	214.8	215.3	215.9	N/A	THRU WALL DIM. 0.12
2	1	30	1.1	2.2	2.51	1.0	2.1	2.50	1.3	2.4	2.68	219.8	220.1	220.3	N/A	THRU WALL DIM. 0.075
3	1	25	1.25	2.2	2.57	1.15	2.1	2.47	1.35	2.3	2.70	232.7	232.8	232.8	N/A	THRU WALL DIM. 0.096
5	1	40	1.15	2.2	2.52	0.95	2.1	2.45	1.6	2.5	2.84	234.8	235	236.6	N/A	THRU WALL DIM. 0.16
6	1	23	1.05	2.2	2.49	1.0	2.1	2.49	1.10	2.2	2.52	237.3	237.4	237.6	N/A	THRU WALL DIM. 0.02
-0-	!	24	1.1	2.1	2.47	1.1	2.1	2.47	1.3	2.2	2.62	287.4	287.5	287.8	N/A	THRU WALL DIM. 0.06
	VI ED	DI 07														

**SCALED PLOT** 



\* NOTE - For flaw Indications that peak at less than 20% DAC, dimensions are to be taken from the 50% Max Amp pts.

Page 2 of 2

ATTACHMENT 4 PAGE 2 OF 10

Opera	tions	tates Po & Main & Specia	tenai	nce S	Supt	4	5° t	JLTF		Island NIC EX (3rd	MA.	INA	OITA	1		ort# rce Doc	≔B 1.	40	1 1095
System R.V.		RE HEAD		ISC	) [- 49	9				Item W- 6					Į.	tem De EAD -	-		on
Mater A533g		/ SA50	8 CL	3	Size	e/Ler	ngth	7		k/Dia 5.512	1	ren		0. E	1	urface lendec		liti	.on
Proce			W	R Num 95113		r	· ISI	Cor	itra	actor			Date 9/96						
	Calibration Report Nmbr WDC-002  Beam Angle 45 (Nominal)  Evaluation Level   Peporting Level   Cal										uge -01		/N						hours hours
	Evaluation Level Reporting Level Cal 20% DAC 20% DAC Re										2! MT:	5A -1(	05		Ref Sensitivity can Sensitivity				
RESUL	RESULTS NAD = No Apparent Discontinuitie GEO = Geometry Visua										nea ect	ar;	S =	Spc Vis	ot;	M = M L Exam	ultip inati	le on	
Scan Nmbr	Scan Res- Indication Sweep Metal Surf												xial ocat			Indi Leng	catio th	n	Amp %DAC
									•										
LIMITAT	TONS:	Scans limit	ed to lo	ower 60	)% (ap	porx) o	of weld	, see	attacl	hed sketch	ics 1	and	12.						
REMARI	S: See	attached ev	aluatio	n.	· · · · · ·	<del>, i</del>				***************************************							<del></del>		
* Procedu	re field	change per 9	6-PIU	1-1				•											
SKETC	H								1	PERSON	NEI				-				
										Examin	er:	_	N/A					Le	vel
										Examin	er:	-	N/A					Le	vel
			Contra Revi				N/	4											
									NSP OL					2/	ate 19196				
											ANII Review:    ANII						19186		
1												-				· · · · · · · · · · · · · · · · · · ·	Pa		1 of

### PI 1 Indication Review

Rpt # - 96-0095

Iso # - ISI-49

Item # - W-6

Indication # - 1 through 6

New iso # - same

New Item # - same

Method - UT 45°

Procedure - NSP-UT-3A Rev 5 w/

FC 96-PIU1-1

Code - ASME Sect XI '89 with No Addenda NRC Reg Guide 1.150 Rev 1

#### Discussion -

These indications are being evaluated as a result of an informational examination done during the Winter '96 outage. The reason for performing this examination was to clear up concerns about previous exams as to reference location for 0 deg and to obtain baseline automated examination data.

The indications were reported as "Linear" with a maximum amplitude of 40% DAC. Previous evaluations related to the examinations in this and the adjacent areas were performed in conjunction with reports #94-0240 and 90-323, and the results were found to be acceptable.

Assumptions -

- Based on nominal wall thickness, the indications are not within the inner 25% of the through-wall dimension. (see calculations below)

Summary -

The procedure referenced above is intended to reflect the requirements of Reg. Guide 1.150 Rev 1. Appendix A "Alternative Method" paragraph 6.2 b., allows that "Reflectors which are at metal paths representing 25 percent and greater of the through-wall measured from the inner surface should be recorded in accordance with the requirements of ASME Section XI and characterized at 50 percent DAC." The reflectors in question are within the outer 75 percent of the through-wall thickness, are not surface related and are not suspected of being cracks. The amplitude of the subject reflectors does not exceed 50 percent DAC and do not require characterization/comparison to the code for an acceptance/rejection determination.

The indications noted on report #96-0095 are acceptable and require no further evaluation.

Report # 96-0095R1

### PI 1 Indication Review

Calculations - From calibration report WDC-002 the 1/4 T hole is at 2.0 screen divisions and 1.86" metal path with a measured angle of 45 deg in the cal block.

0.7071 \* 2.56"MP = 1.8102" depth from outer Ind #1 - cos 45 deg = 0.7071 1.8102" / 5.512" = 0.3284 or 32.84% through-wall surface

0.7071 \* 2.51 MP = 1.7748" depth from outer Ind #2 -  $\cos 45 \deg = 0.7071$ 1.7748" / 5.512" = 0.3220 or 32.20% through-wall surface

0.7071 \* 2.57"MP = 1.8172" depth from outer  $100 + 3 - \cos 45 \deg = 0.7071$ 1.8172" / 5.512" = 0.3297 or 32.97% through-wall surface

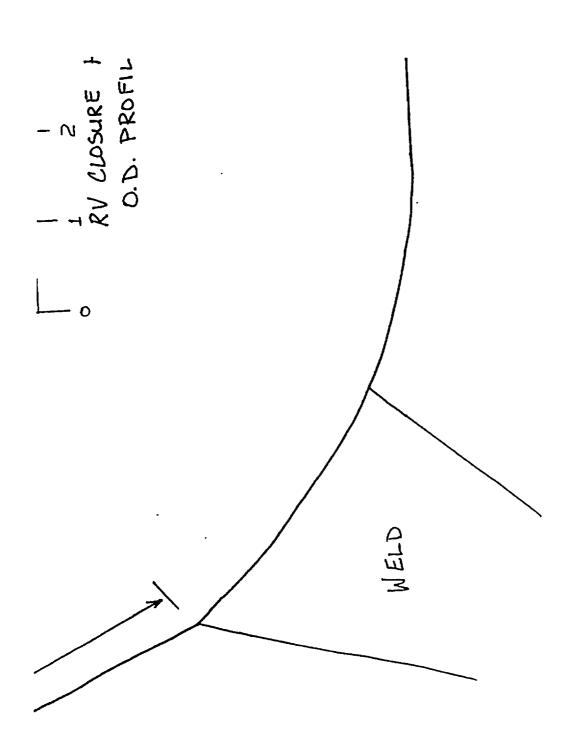
0.7071 \* 2.52 MP = 1.7819" depth from outer Ind #4 -  $\cos 45 \deg = 0.7071$ 1.7819" / 5.512" = 0.3233 or 32.33% through-wall surface

0.7071 \* 2.49 MP = 1.7607" depth from outer Ind #5 - cos 45 deg = 0.7071 1.7607" / 5.512" = 0.3194 or 31.94% through-wall

0.7071 \* 2.47 MP = 1.7465" depth from outer Ind #6 -  $\cos 45 \deg = 0.7071$ 1.7465" / 5.512" = 0.3169 or 31.69% through-wall surface

MP refers to metal path taken from pg 1 of the UT report. The 5.512" T is the thickness of the component taken from the value on the UT report.

Prepared By Jan Sould
Reviewed By De OCK



Opera	tions	tates Po & Main & Specia	tenai	nce Si	ıpt	45° t	LTR		sland NIC EXA (3rd	AMI	OITAN	N	, -	port# !	96-00951 B 1. 40 S/N	
System R.V.		RE HEAD		ISO ISI-	- 49		-		Item W- 6					tem Des	-	on
Mater A533g		/ SA50	8 CL		Size/Le 41'	ngth	T		/Dia	Тє	emp	·F	s	urface	Condit	ion
Proced ISI-U		Re	,	_ Fie	eld Cha	nge _		W	R Numb	oer	is	I Con	ntr	actor	Exam 12/1	Date 2/97
Calib: Report			В€	am Ang (N	le omina	1)	Te	mp Gai	ıge	s/N			Start @ m End @		hours hours	
	ation DAC	Level		Bloc £ St		₹ <b>V</b> -4	1A			Sensiti Sensiti		dB dB				
RESUL	rs ni Gi	AD = No EO = Geo	rent y	Discon	tinui Vi	s; L = Linear l = Non-Secti			; S =	= Spc	ot; sua.	M = Mu l Exami	ltiple nation			
Scan Nmbr	Res- ults	Indicat Type	Sweep Loc'n	Metal Path	Surf Dist		Circ	tion		Axial Locat			Indic Lengt	ation h	Amp %DAC	
LIMITAT	IONS:	Exam limita	itions f	urther ev	aluated S	ee attac	hed P	ercent	Coverage	She	et				<u>, , , , , , , , , , , , , , , , , , , </u>	
REMARK	S: Rep	ort provides	addıti	onal limi	tation info	rmation	only.							***		
SKETCH	i								ERSONN xamine				e.	w_		II.
								E	xamine	r: .	N/A	ı '				vel vel
								C	ontrac Revie			ıldı	<u>o</u>	کیم		1 <u>1</u> /1)
									SP Revie	w: _	A.		K 1	na de	<u> </u>	9/98 ate
								, A	Revie	w: _	1'	A	<u>!</u>	<u> </u>	<u>_</u>	<u>9/98</u> ate
								1							Page	1 of <u>3</u>

# MATERIALS & SPECIAL PROCESSES INSERVICE INSPECTION - NONDESTRUCTIVE EXAMINATION PROCEDURE PRAIRIE ISLAND UNIT 1 OUTAGE

# Determination of Percent Coverage Worksheet (UT - Vessel)

Initial Exam Rpt No: 96-0094; 96-0095

Procedure No: ISI-UT-3A (Rev 5)

96-0111

ISO No: ISI-49

Item No: W-6

Applicable Code Figure No: IWB-2500-5

0 deg Planar

Scan 100 % length X 50 % volume of length / 100 = 50 % total for 0 deg

45 deg

Scan 1 100 % length X 94.0 % volume of length / 100 = 94.0 % total for Scan 1

Scan 2 100 % length X 38.9 % volume of length / 100 = 38.9 % total for Scan 2

Scan 3 100 % length X 50.0 % volume of length / 100 = 50.0 % total for Scan 3

Scan 4 100 % length X 50.0 % volume of length / 100 = 50.0 % total for Scan 4

Add totals and divide by # scans = 58.2 % total for 45 deg

60 deg

Scan 1 100 % length X 94.4 % volume of length / 100 = 94.4 % total for Scan 1

Scan 2 100 % length X 23.6 % volume of length / 100 = 23.6 % total for Scan 2

Scan 3 100 % length X 50.0 % volume of length / 100 = 50.0 % total for Scan 3

Scan 4 100 % length X 50.0 % volume of length / 100 = 50.0 % total for Scan 4

Add totals and divide by # scans = 54.5 % total for 60 deg

#### Percent complete coverage

Add totals for each angle and scan required and divide by # angles to determine;

#### 54.2 % total for complete exam

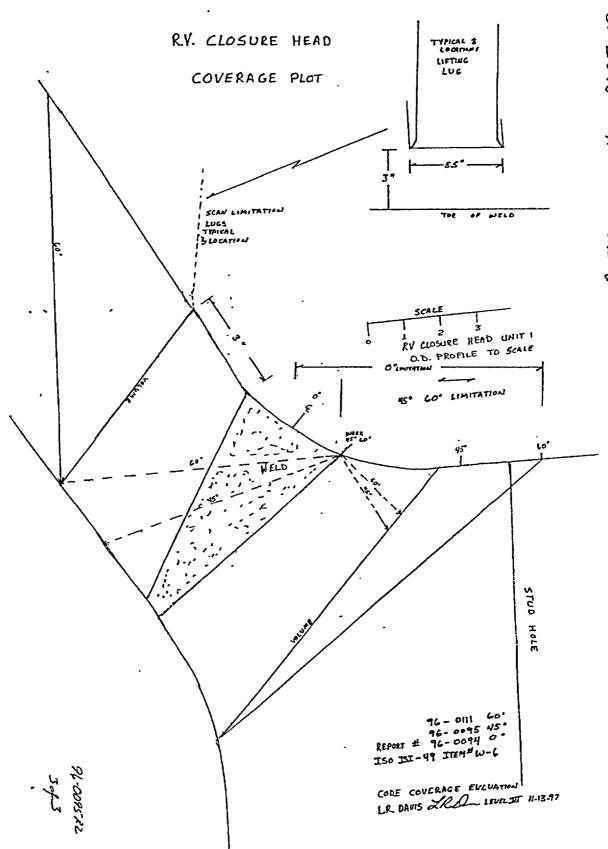
**Note:** Supplemental coverage may be achieved by use of other angles / methods. When used, the coverage for volume not obtained with angles as noted above shall be calculated and added to the total to provide the percent total for the complete examination.

NSP Field Supervisor:

Date: 2/9

Zofs

1095a\_%L.DOC



Opera	tions	tates P & Main & Speci	tenar	nce Su	pt	Prairie Island Unit 1 60° ULTRASONIC EXAMINATION REPORT (3rd 10yr)						Report# 96-0111 Source Doc=B 1, 40 S/N 1095		
Syste R.V.		RE HEAD		ISO ISI-	49	Item W- 6						Item Description HEAD - FLANGE		
Mater A533g		/ SA50	8 CL		ize/Le 41'	- 1							rface Condition ENDED	
Proce ISI-U		Re¹	7 <u>5</u>	_ Fie	ld Cha	inge	*	W R Numb 951133		ISI	Cont	ractor	Exam 01/1	Date 17/96
Calib Repor			003	Ве	am Ang 60° (N		al)	Temp Gau	_	S/N ·	Exam Ex	Exam Start @ <u>1730</u> ho Exam End @ <u>1730</u> ho		
	ation DAC	Level		ortin 0% DA	g Leve C	1		Block E Std <u>LN</u>	25A T-1		Ref Scan	Sensiti Sensiti	vity _ vity _	16 dE 28 dE
RESUL	TS NA GI	AD = No EO = Geo	Appa	rent Y	Discon	tinu V	ities isual	s; L = Lin l = Non-Se	ear,	S =	Spot Visu	; M = Mu al Exami	ltiple nation	
Scan Nmbr	Res- ults	Indicat Type			Metal Path	Sur Dis	f (	Circ Location	-	Axial Locat		Indic Lengt	ation	Amp %DAC
1 1 1 1 1 1 1	1     IND     LINEAR     2.1     3.50       1     IND     LINEAR     2.1     3.50       1     IND     LINEAR     2.1     3.57       1     IND     LINEAR     2.1     3.52       1     IND     LINEAR     2.1     3.52       1     IND     LINEAR     2.2     3.65       1     IND     LINEAR     2.2     3.71       1     IND     LINEAR     2.1     3.53						21 22 23 23 28 28	5.5 8.1 2.7 4.0 6.9 2.5 5.4 9.3	2. 2. 2. 2. 2.	6 5 6 6 7		0.5" 1.3" SPOT 0.3" 0.4" 0.3" 0.3"		40 40 20 24 40 23 24 33

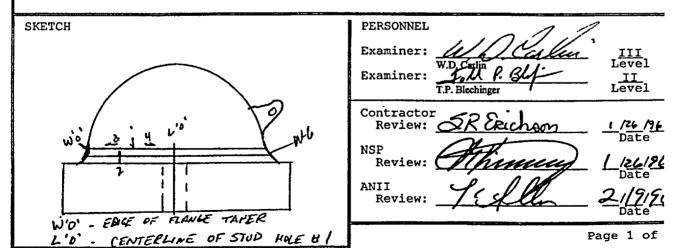
LIMITATIONS: No automated exam from 71.5" to 91.1"; 200.9" to 220.5"; 333.2" to 351.8" due to lifting lugs. No automated exam from 98.0" to 107.8"; 293.0" to 303.8" due to guide studs. These areas were scanned manually.

REMARKS: Exam start 1/17/96. Exam end 1/18/96.

11123

NAD NAD NAD

\* Procedure field change per 96PIU1-1. Indications 1&2 are within limitation area 200.9" to 220.5". Indications were measured manually.



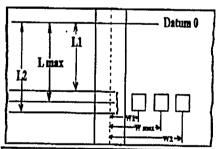
# MATERIALS & SPECIAL PROCESSES

# INDICATION DATA TABULATION SHEET

## Examination Report # 96-0111

		@ MA	XAMP		F	ORWAR	D	В	ACKWA	RD	1	I	I	İ	i	
Scan	% of		<u>W</u> Max								<u>L1</u> 20%	L	<u>L2</u> 20%	<u>0°</u> Back		
#		W	S Div	MP	W <sub>1</sub>	S Div	MP	W2	S Div	MP	DAC	MĀX	DAC	•	REMARKS	
1	40	2.6	2.1	3.50	2.1	1.9	3.30	2.6	3.1	3.50	215.3	215.5	215.8		THRU WALL DIM .07	
1	40	2.6	2.1	3.50	2.1	1.8	3.15	3.2	3.5	4.12	217.2	218.1	<u> </u>		THRU WALL DIM .09	
1	20	2.5	2.1	3.57	*	*	*	*	*	*	*		*		*SPOT INDICATION	
11	24	2.6	2.1	3.52	2.3	1.9	3.32	2.8	3.2	3.70	233.8		234.1		THRU WALL DIM .07	
1		2.6	2.1	3.52	2.1	1.8	3.13	3.2	3.5	4.10	235.8	236.9			THRU WALL DIM .17	
1		2.6	2.2	3.65	2.3	2.0	3.37	2.8	3.4	3.80	282.3	282.5	<del></del>		THRU WALL DIM .08	
1				3.71	2.3	2.0	3.36	3.0	3.4	4.00	285.3	285.4			THRU WALL DIM .11	
1	33	2.5	2.1	3.53	2.1	1.9	3.20	3.3	3.6	4.32	288.9	289.3	289.6	N/A	THRU WALL DIM .20	
		<del></del>	<del>                                     </del>													
						,					- <del></del>				; ,	
		# DAC 1 40 1 40 1 20 1 24 1 40 1 23 1 24 1 33	Scan     % of DAC       #     DAC       1     40       1     40       2.6       1     20       2.5       1     24       2.6       1     23       2.6       1     24       2.7       1     33       2.5	# DAC W S Div  1 40 2.6 2.1  1 40 2.6 2.1  1 20 2.5 2.1  1 24 2.6 2.1  1 40 2.6 2.1  1 24 2.6 2.1  1 33 2.6 2.2  1 33 2.5 2.1	Scan # DAC     W Max       # DAC     W S Div MP       1 40 2.6 2.1 3.50       1 20 2.5 2.1 3.57       1 24 2.6 2.1 3.52       1 40 2.6 2.1 3.52       1 23 2.6 2.2 3.65       1 33 2.5 2.1 3.53	Scan # DAC       W Max       * 20%         # DAC       W S Div MP       W1         1 40 2.6 2.1 3.50 2.1       3.50 2.1         1 20 2.5 2.1 3.57 *       1 24 2.6 2.1 3.52 2.3         1 40 2.6 2.1 3.52 2.1       2.3         1 23 2.6 2.2 3.65 2.3       2.1 3.52 2.1         1 33 2.5 2.1 3.53 2.1       2.1 3.53 2.1	Scan # DAC         * 20% DAC o Max Am           # DAC         W S Div         MP         W1         S Div           1 40 2.6 2.1 3.50 2.1 1.9         1.9         1.8           1 20 2.5 2.1 3.57 * *         *         *           1 24 2.6 2.1 3.52 2.3 1.9         1.8           1 23 2.6 2.1 3.52 2.1 1.8         1.8           1 24 2.7 2.2 3.65 2.3 2.0         1.9           1 33 2.5 2.1 3.53 2.1 1.9	Scan # DAC         W Max         * 20% DAC or 50% Max Amp           # DAC         W S Div         MP         W1         S Div         MP           1         40         2.6         2.1         3.50         2.1         1.9         3.30           1         40         2.6         2.1         3.50         2.1         1.8         3.15           1         20         2.5         2.1         3.57         *         *         *         *           1         24         2.6         2.1         3.52         2.3         1.9         3.32           1         40         2.6         2.1         3.52         2.1         1.8         3.13           1         23         2.6         2.2         3.65         2.3         2.0         3.37           1         24         2.7         2.2         3.71         2.3         2.0         3.36           1         33         2.5         2.1         3.53         2.1         1.9         3.20	Scan # DAC         W Max         * 20% DAC or 50% Max Amp         * 20° Max Amp           # DAC         W S Div         MP         W1         S Div         MP         W2           1         40         2.6         2.1         3.50         2.1         1.9         3.30         2.6           1         40         2.6         2.1         3.50         2.1         1.8         3.15         3.2           1         20         2.5         2.1         3.57         *         *         *         *           1         24         2.6         2.1         3.52         2.3         1.9         3.32         2.8           1         40         2.6         2.1         3.52         2.1         1.8         3.13         3.2           1         23         2.6         2.2         3.65         2.3         2.0         3.37         2.8           1         24         2.7         2.2         3.71         2.3         2.0         3.36         3.0           1         33         2.5         2.1         3.53         2.1         1.9         3.20         3.3	Scan # DAC         * 20% DAC or 50% Max Amp         * Max Amp <th colspa<="" td=""><td>Scan # OAC         * 20% DAC or 50% Max Amp         * 20% DAC or 50% Max Amp           # DAC         W S Div         MP         W1         S Div         MP         W2         S Div         MP           1         40         2.6         2.1         3.50         2.1         1.9         3.30         2.6         3.1         3.50           1         40         2.6         2.1         3.50         2.1         1.8         3.15         3.2         3.5         4.12           1         20         2.5         2.1         3.57         *</td><td>Scan # OAC         * 20% DAC or 50% Max Amp         * 20% DAC or 50% Max Amp         L1 20% DAC or 50% Max Amp         L1 20% DAC or 50% Max Amp         L1 20% DAC or 50% Max Amp         L20% DAC or 50% Max Amp         DAC           1         40         2.6         2.1         3.50         2.1         1.9         3.30         2.6         3.1         3.50         215.3           1         40         2.6         2.1         3.50         2.1         1.8         3.15         3.2         3.5         4.12         217.2           1         20         2.5         2.1         3.57         *</td><td>Scan # DAC         * 20% DAC or 50% Max Amp         * 20% DAC or 50% Max Amp         L1 20% DAC or 50% Max Amp         L1 20% DAC or 50% Max Amp         L1 20% DAC or 50% Max Amp         L1 20% DAC or 50% Max Amp         L1 20% DAC or 50% Max Amp         DAC MAX           1         40         2.6         2.1         3.50         2.1         1.9         3.30         2.6         3.1         3.50         215.3         215.5           1         40         2.6         2.1         3.50         2.1         1.8         3.15         3.2         3.5         4.12         217.2         218.1           1         20         2.5         2.1         3.57         *         *         *         *         *         *         *         222.7           1         24         2.6         2.1         3.52         2.3         1.9         3.32         2.8         3.2         3.70         233.8         234           1         40         2.6         2.1         3.52         2.1         1.8         3.13         3.2         3.5         4.10         235.8         236.9           1         23         2.6         2.2         3.6</td><td>Scan # DAC         * 20% DAC or 50% Max Amp         * 20% DAC or 50% Max Amp         L1 20% DAC         Max Amp         * 20% DAC or 50% Max Amp         L1 20% DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         MAX         23.8         23.8         23.8         23.8         23.2         3.32         3.5         4.10         23.8<td>Scan # DAC         W Max Max         * 20% DAC or 50% Max Amp         * 20% DAC or 50% Max Amp         * 20% DAC or 50% Max Amp         L1 20% DAC MAX DAC MAX         L 20% DAC MAX         L 20% DAC MAX         L 20% DAC MAX         Back Amp           1         40         2.6         2.1         3.50         2.1         1.9         3.30         2.6         3.1         3.50         215.3         215.5         215.8         N.A           1         40         2.6         2.1         3.50         2.1         1.8         3.15         3.2         3.5         4.12         217.2         218.1         218.5         N.A           1         20         2.5         2.1         3.57         *         *         *         *         *         *         *         *         *         *         N/A         *</td></td></th>	<td>Scan # OAC         * 20% DAC or 50% Max Amp         * 20% DAC or 50% Max Amp           # DAC         W S Div         MP         W1         S Div         MP         W2         S Div         MP           1         40         2.6         2.1         3.50         2.1         1.9         3.30         2.6         3.1         3.50           1         40         2.6         2.1         3.50         2.1         1.8         3.15         3.2         3.5         4.12           1         20         2.5         2.1         3.57         *</td> <td>Scan # OAC         * 20% DAC or 50% Max Amp         * 20% DAC or 50% Max Amp         L1 20% DAC or 50% Max Amp         L1 20% DAC or 50% Max Amp         L1 20% DAC or 50% Max Amp         L20% DAC or 50% Max Amp         DAC           1         40         2.6         2.1         3.50         2.1         1.9         3.30         2.6         3.1         3.50         215.3           1         40         2.6         2.1         3.50         2.1         1.8         3.15         3.2         3.5         4.12         217.2           1         20         2.5         2.1         3.57         *</td> <td>Scan # DAC         * 20% DAC or 50% Max Amp         * 20% DAC or 50% Max Amp         L1 20% DAC or 50% Max Amp         L1 20% DAC or 50% Max Amp         L1 20% DAC or 50% Max Amp         L1 20% DAC or 50% Max Amp         L1 20% DAC or 50% Max Amp         DAC MAX           1         40         2.6         2.1         3.50         2.1         1.9         3.30         2.6         3.1         3.50         215.3         215.5           1         40         2.6         2.1         3.50         2.1         1.8         3.15         3.2         3.5         4.12         217.2         218.1           1         20         2.5         2.1         3.57         *         *         *         *         *         *         *         222.7           1         24         2.6         2.1         3.52         2.3         1.9         3.32         2.8         3.2         3.70         233.8         234           1         40         2.6         2.1         3.52         2.1         1.8         3.13         3.2         3.5         4.10         235.8         236.9           1         23         2.6         2.2         3.6</td> <td>Scan # DAC         * 20% DAC or 50% Max Amp         * 20% DAC or 50% Max Amp         L1 20% DAC         Max Amp         * 20% DAC or 50% Max Amp         L1 20% DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         MAX         23.8         23.8         23.8         23.8         23.2         3.32         3.5         4.10         23.8<td>Scan # DAC         W Max Max         * 20% DAC or 50% Max Amp         * 20% DAC or 50% Max Amp         * 20% DAC or 50% Max Amp         L1 20% DAC MAX DAC MAX         L 20% DAC MAX         L 20% DAC MAX         L 20% DAC MAX         Back Amp           1         40         2.6         2.1         3.50         2.1         1.9         3.30         2.6         3.1         3.50         215.3         215.5         215.8         N.A           1         40         2.6         2.1         3.50         2.1         1.8         3.15         3.2         3.5         4.12         217.2         218.1         218.5         N.A           1         20         2.5         2.1         3.57         *         *         *         *         *         *         *         *         *         *         N/A         *</td></td>	Scan # OAC         * 20% DAC or 50% Max Amp         * 20% DAC or 50% Max Amp           # DAC         W S Div         MP         W1         S Div         MP         W2         S Div         MP           1         40         2.6         2.1         3.50         2.1         1.9         3.30         2.6         3.1         3.50           1         40         2.6         2.1         3.50         2.1         1.8         3.15         3.2         3.5         4.12           1         20         2.5         2.1         3.57         *	Scan # OAC         * 20% DAC or 50% Max Amp         * 20% DAC or 50% Max Amp         L1 20% DAC or 50% Max Amp         L1 20% DAC or 50% Max Amp         L1 20% DAC or 50% Max Amp         L20% DAC or 50% Max Amp         DAC           1         40         2.6         2.1         3.50         2.1         1.9         3.30         2.6         3.1         3.50         215.3           1         40         2.6         2.1         3.50         2.1         1.8         3.15         3.2         3.5         4.12         217.2           1         20         2.5         2.1         3.57         *	Scan # DAC         * 20% DAC or 50% Max Amp         * 20% DAC or 50% Max Amp         L1 20% DAC or 50% Max Amp         L1 20% DAC or 50% Max Amp         L1 20% DAC or 50% Max Amp         L1 20% DAC or 50% Max Amp         L1 20% DAC or 50% Max Amp         DAC MAX           1         40         2.6         2.1         3.50         2.1         1.9         3.30         2.6         3.1         3.50         215.3         215.5           1         40         2.6         2.1         3.50         2.1         1.8         3.15         3.2         3.5         4.12         217.2         218.1           1         20         2.5         2.1         3.57         *         *         *         *         *         *         *         222.7           1         24         2.6         2.1         3.52         2.3         1.9         3.32         2.8         3.2         3.70         233.8         234           1         40         2.6         2.1         3.52         2.1         1.8         3.13         3.2         3.5         4.10         235.8         236.9           1         23         2.6         2.2         3.6	Scan # DAC         * 20% DAC or 50% Max Amp         * 20% DAC or 50% Max Amp         L1 20% DAC         Max Amp         * 20% DAC or 50% Max Amp         L1 20% DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         DAC         MAX         MAX         23.8         23.8         23.8         23.8         23.2         3.32         3.5         4.10         23.8 <td>Scan # DAC         W Max Max         * 20% DAC or 50% Max Amp         * 20% DAC or 50% Max Amp         * 20% DAC or 50% Max Amp         L1 20% DAC MAX DAC MAX         L 20% DAC MAX         L 20% DAC MAX         L 20% DAC MAX         Back Amp           1         40         2.6         2.1         3.50         2.1         1.9         3.30         2.6         3.1         3.50         215.3         215.5         215.8         N.A           1         40         2.6         2.1         3.50         2.1         1.8         3.15         3.2         3.5         4.12         217.2         218.1         218.5         N.A           1         20         2.5         2.1         3.57         *         *         *         *         *         *         *         *         *         *         N/A         *</td>	Scan # DAC         W Max Max         * 20% DAC or 50% Max Amp         * 20% DAC or 50% Max Amp         * 20% DAC or 50% Max Amp         L1 20% DAC MAX DAC MAX         L 20% DAC MAX         L 20% DAC MAX         L 20% DAC MAX         Back Amp           1         40         2.6         2.1         3.50         2.1         1.9         3.30         2.6         3.1         3.50         215.3         215.5         215.8         N.A           1         40         2.6         2.1         3.50         2.1         1.8         3.15         3.2         3.5         4.12         217.2         218.1         218.5         N.A           1         20         2.5         2.1         3.57         *         *         *         *         *         *         *         *         *         *         N/A         *

SCALED PLOT



+ NOTE - For flaw indications that peak at less than 20% DAC, dimensions are to be taken from the 50% Max Amp pts.

Examiner Marian Date 1/26/96

Page  $\underline{\gamma}$  of  $\underline{\gamma}$ 

0	ione	ates Po & Maint Specia	enan	ce sup	ses REPORT (3rd 10yr)						Source Doc-B 1. 40 S/N 1095  Item Description				
System		E HEAD		ISO ISI-		-		Item W- 6				HE.	AD - 1	FLANGE	
Materi	al	/ SA508	CL	1	ze/Len 41'	gth	Thic	k/Dia 5.512	Те		0°F	Surface Condition			
Proced	lure	Rev			d Chan	ge <u>*</u>	¥	7 R Numb 951133	er 9	. ISI			ctor	02/	Date 19/96
Calibr Report	ration	e minal		Temp Gau	-		1	Exam	End (	1730	hours hours				
Evalua	Evaluation Level Reporting Level Ca									105	Sc	an S	ensit:	-	28 dB
RESUL	rs NA	AD = No EO = Ge	ies; ual	L = Li: - Non-S	nea: ect:	s; S =	Sp Vi	ot; sual	M = M	ultiplo ination	e n				
Scan Nmbr	Res-		Surf Dist	Ci. Lo	rc cation		Axia: Loca			Indi Leng	cation th	Amp %DAC			
						l									
1															
LIMITA	TIONS:	Scans limi	ited to l	ower 60%	(approx)	of weld,	See att	ached sketcl	nes I	and Z.					
REMAR	KS: Se	e Attached	evaluati	ion.			<u></u>		A SE PARA						
* Proced	ure field	change per	96-PIU	J1 <b>-1</b>			<del>حراست بين</del> ا	PERSON	MET				<del> </del>		
SKET	CH							Exami							<u>Leve</u> l
								Exami	ner:	N//				<del>.</del>	Level
								Contra Rev			N	14	<i>f</i>		_/_/_ 
								NSP Rev	iew	E	H	fu	m	· ( <u> </u>	<u>Z//9</u> /9
								ANII Rev	iew	: 1	ر بر	li	lh		2/494 Date
													المامية في المام	Pa	ge 1 of

## PI 1 Indication Review

Rpt # - 96-0111

Iso # - ISI-49

Item # - W-6

Indication # - 1 through 8

New Iso # - same

New Item # - same

Method - UT 60°

Procedure - NSP-UT-3A Rev 55 w/ FC 96-PIU1-1

Code - ASME Sect XI '89 with No Addenda NRC Reg Guide 1.150 Rev 1

#### Discussion -

These indications are being evaluated as a result of an informational examination done during the Winter '96 outage. The reason for performing this examination was to clear up concerns about previous exams as to reference location for 0 deg and to obtain baseline automated examination data.

The indications were reported as "Linear" with a maximum amplitude of 40% DAC. Previous evaluations related to the examinations in this and the adjacent areas were performed in conjunction with reports #94-0241 and 90-324, and the results were found to be acceptable.

**Assumptions -**

- Based on nominal wall thickness, the indications are not within the inner 25% of the through-wall dimension. (see calculations below)

Summary -

The procedure referenced above is intended to reflect the requirements of Reg. Guide 1.150 Rev 1. Appendix A "Alternative Method" paragraph 6.2 b., allows that "Reflectors which are at metal paths representing 25 percent and greater of the through-wall measured from the inner surface should be recorded in accordance with the requirements of ASME Section XI and characterized at 50 percent DAC." The reflectors in question are within the outer 75 percent of the through-wall thickness, are not surface related and are not suspected of being cracks. The amplitudes of the subject reflectors do not exceed 50 percent DAC and do not require characterization/ comparison to the code for an acceptance/rejection determination.

The indications noted on report #96-0111 are acceptable and require no further evaluation.

> Page 2 Report # 96-0111R)

# Pl 1 Indication Review

Calculations - From calibration report WDC-003 the 1/4 T hole is at 2.0 screen divisions and 2.65" metal path with a measured angle of 60 deg in the cal block.

0.5 \* 3.5 MP = 1.75" depth from outer surface Ind #1 -  $\cos 60 \deg = 0.5$ 1.75" / 5.512" = 0.3175 or 31.75% through-wall

0.5 \* 3.5"MP = 1.75" depth from outer surface  $100 #2 - \cos 60 \deg = 0.5$ 1.75" / 5.512" = 0.3175 or 31.75% through-wall

0.5 \* 3.57"MP = 1.785" depth from outer surface 100 = 0.51.785" / 5.512" = 0.3238 or 32.38% through-wall

0.5 \* 3.52 MP = 1.76" depth from outer surface Ind #4 -  $\cos 60 \deg = 0.5$ 1.76" / 5.512" = 0.3193 or 31.93% through-wall

0.5 \* 3.52 MP = 1.76" depth from outer surface Ind #5 -  $\cos$  60 deg = 0.5 1.76" / 5.512" = 0.3193 or 31.93% through-wall

0.5 \* 3.65 MP = 1.825" depth from outer surface Ind #6 -  $\cos 60 \deg = 0.5$ 1.825" / 5.512" = 0.3311 or 33.11% through-wall

0.5 \* 3.71"MP = 1.855" depth from outer surface  $100 + 7 - \cos 60 \deg = 0.5$ 1.855" / 5.512" = 0.3365 or 33.65% through-wall

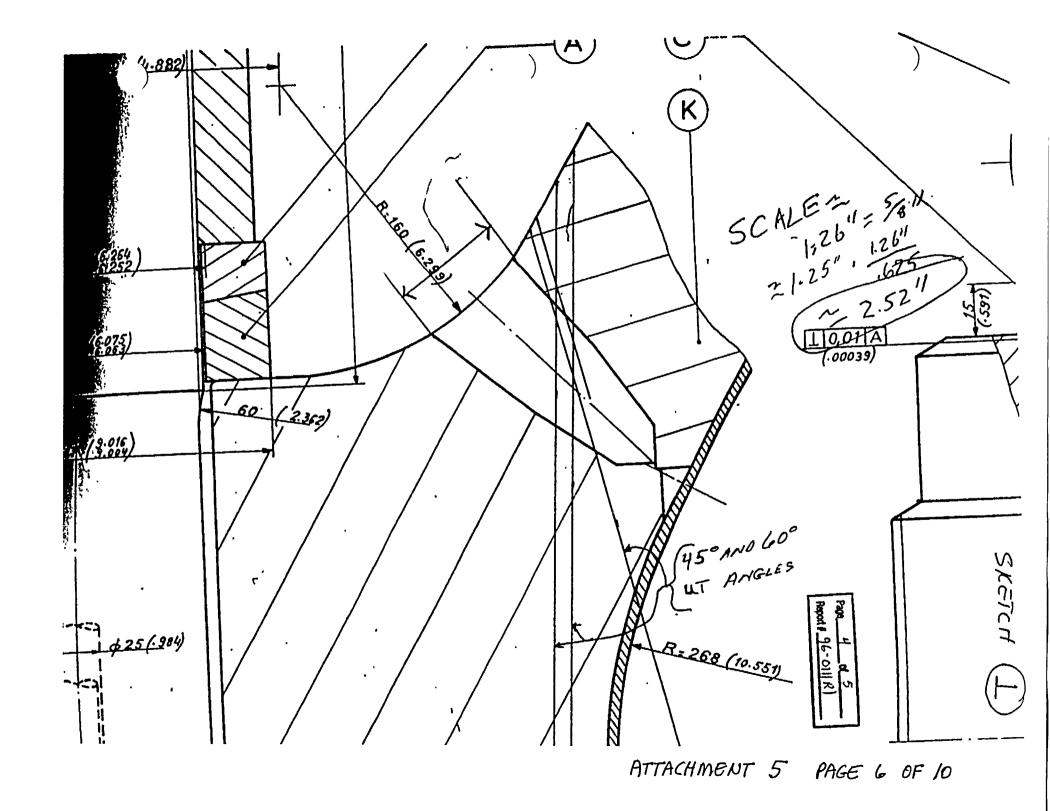
0.5 \* 3.53"MP = 1.765" depth from outer surface 1nd #8 - cos 60 deg = 0.51.765" / 5.512" = 0.3202 or 32.02% through-wall

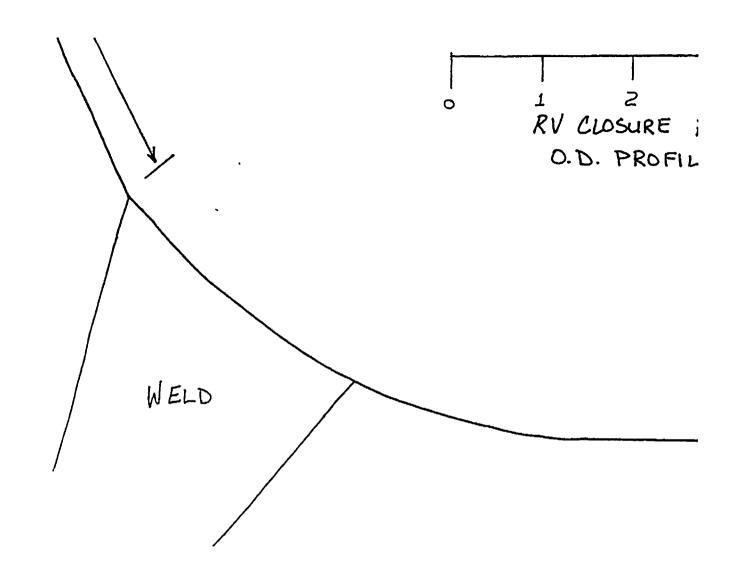
MP refers to metal path taken from pg 1 of the UT report. The 5.512" T is the thickness of the component taken from the value on the UT report.

Prepared By 10m Jones

Reviewed By 10 m/15

a 5 Report # 96-0111R1





Northe Operat Materi	tions	Prairie Island Unit 1 60 ULTRASONIC EXAMINATION REPORT (3rd 10yr)  REPORT (3rd 10yr)  Report # 96-0111R Source Doc-B 1. 40 S/N						40	_										
System		RE HEAD		ISO	- 49					Item W- 6				- 1		m Des	-	•	on
Materi	ial	/ SA50		5	Gize/Le	_	h	Thi		/Dia	T	emp	• F	1		face			ion
Proced ISI-UT	dure				eld Cha	nge	W R Numbe			er	• 1	ISI C	ont:		tor			Date 2/97	
Calibration Beam Angle (Nominal)									Temp Gauge S/N Exam Start @ Exam End @						hours hours				
									loc St		RV-	4A	_   s	Ref can	Se Se	nsit:	ivit	y _	dB dB
RESULT	RESULTS NAD = No Apparent Discontinuiti GEO = Geometry Visu									= Lir Non-Se	nea ect.	r; s	S = S XI V	pot 1su	; M al	= Mu Exam:	ultip inat:	ole	
Scan Res- Indication Sweep Metal Surf Circ Axial Indication Nmbr ults Type Loc'n Path Dist Location Location Length												on	Amp %DAC						
:																			
										<b></b>						· · · i			
LIMITAT	TONS	Exam limit	ations	further e	valuated.	See a	ttache	d Lin	nıtat	tion Data	Shee	et.							
REMARK	(S. Rep	oort provide	s addit	ional lim	itation inf	ormai	tion or	nly.											
SKETC	H									ERSON			7.	, (-	) (	.)			
									_	xamın		ηC	учеп	7		<u> </u>			evel
N/A Level										evel									
Contractor Review: A Lacol () () () () () Date																			
										ISP Revi	ew:	_(:	11)	la		<u> </u>			1 <u>9 198</u> Date
	ANII Review: 1. Jill 2/9/58 Date																		
																	P	age	1 of _

## MATERIALS & SPECIAL PROCESSES INSERVICE INSPECTION - NONDESTRUCTIVE EXAMINATION PROCEDURE **PRAIRIE ISLAND UNIT 1 OUTAGE**

# **Determination of Percent Coverage Worksheet** (UT - Vessel)

Initial Exam Rpt No: 96-0094; 96-0095

Procedure No: ISI-UT-3A (Rev 5)

96-0111

ISO No: ISI-49

Item No: W-6

Applicable Code Figure No: IWB-2500-5

0 deg Planar

Scan 100 % length X 50 % volume of length / 100 = 50 % total for 0 deg

45 deg

Scan 1 100 % length X 94.0 % volume of length / 100 = 94.0 % total for Scan 1

Scan 2 100 % length X 38.9 % volume of length / 100 = 38.9 % total for Scan 2

Scan 3 100 % length X 50.0 % volume of length / 100 = 50.0 % total for Scan 3

Scan 4 100 % length X 50.0 % volume of length / 100 = 50.0 % total for Scan 4

Add totals and divide by # scans = 58.2 % total for 45 deg

60 deg

Scan 1 100 % length X 94.4 % volume of length / 100 = 94.4 % total for Scan 1

Scan 2 100 % length X 23.6 % volume of length / 100 = 23.6 % total for Scan 2

Scan 3 100 % length X 50.0 % volume of length / 100 = 50.0 % total for Scan 3

Scan 4 100 % length X 50.0 % volume of length / 100 = 50.0 % total for Scan 4

Add totals and divide by # scans = 54.5 % total for 60 deg

# Percent complete coverage

Add totals for each angle and scan required and divide by # angles to determine;

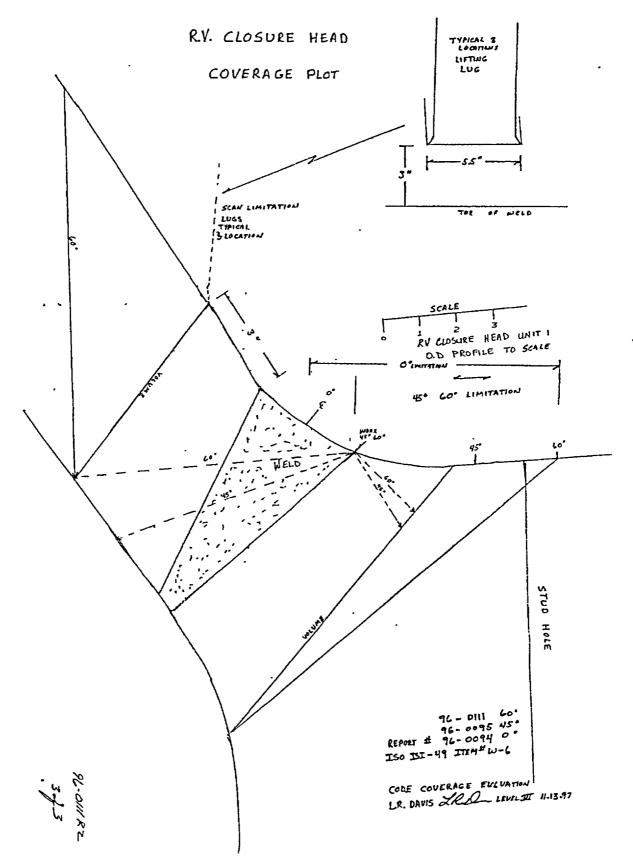
# 54.2 % total for complete exam

Note: Supplemental coverage may be achieved by use of other angles / methods. When used, the coverage for volume not obtained with angles as noted above shall be calculated and added to the total to provide the percent total for the complete examination.

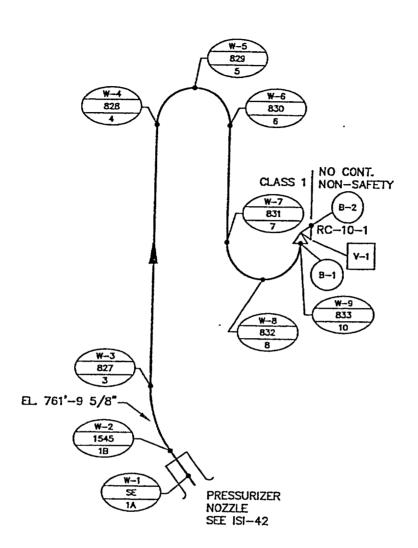
NSP Field Supervisor:

Date:  $\frac{2/9/98}{243}$ 

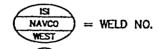
1095a %L.DOC







6" PRESSURIZER SAFETY LINE LOOP 'A'



BOLT NO.

ST = BOLT NO.

REF: XH-106-335	FILE NO:	1129AR02

<b>NSP</b> (M&S	SP) Pl 1	ISI
DWN: TJH	CHKD: Own	APPD: Ou
SYSTEM: RE	ACTOR COOLANT	
LINE: 6-RC-2	20A	
DWG:	ISI-29A	REV: 02



S	ite/Unit	PNGP	/	Pl1			Pro	ocedure:	ISI-UT-	16A	Out	age No.: F	PITRE	02002	<u> </u>
Summa	ary No.		30090	00			Procedu	ıre Rev.:	1		Re	port No.:	20021	U055	
Wor	kscope	:	ISI				Work Or	der No.:	02008	60		Page: 1	_ 0	f _	4
Code:	•	1989	,			Code Cat.:	B-J		Location	n:	Cont	Prz Vault			
Drawing No.:			ISI-2	9A			Description: S	SAFE END - 4	15° ELBOW						
System ID:	RC	1 121 111													
Component ID:	W-2								Size/Length:	1.1" / 19"	Thickne	ess/Diameter:	: .7	19"/	6"
Limitations:	No sc	ans on sa	afe end s	ide due	e to configi	uration.				Start Time:	1256	Finish Time:	:	1312	
Examination S	Surface	Insi	de 🔲	Ou	itside 🗸		Surface Cond	lition: <u>Blend</u>	ed		· · · · · · · · · · · · · · · · · · ·				
Lo Location:	!	Extradose	of Elbo	w	_ Wo Loca	ation:	Centerline of V	<i>N</i> eld	Couplant: _	Sonotrac	e 40	Batch No.: _	1	<del>‡</del> 0014:	3
Temp. Tool M	fg.: _	Te	latemp		Seria	I No.:	NSP 134	<del></del>	Surface Tem	p.: <u>85</u>	°F				
Cal. Report No	o.:		<u>-</u> <u>-</u>		20020	A100, 200	2CA101								
Angle Used	Г	) 45	45T	60			]		•						
Scanning dB		58.0	58.0	76.0											
Indication(s):	Yes	□ No	∘ 🗹			Sca	un Coverage: Up	ostream 🗌	Downstream		ccw 🗹				
Comments:			_				•	_							
None															
<b>.</b>	4145	_			050 =										
Results:	NAD		IND		GEO 🗆	-					<del></del>				<del></del>
Percent Of Co	verage	Obtained	> 90%:		No	<del></del>	Reviewed Previou	ıs Data:	Yes						
	Level				Signature		Date	Reviewer	Y	۸. ۵	Signatu	re			Date
Blechinger, To				<u>رے کشے</u>		1		Clay, Sean		MAC		JII		11-2	2-02
Examiner N/A	Level	N/A		:	Signature	V	Date	Site Review Wren, Jerry	( \	- 01	Signatur	re ソ・ロエ			Date
	Level	N/A			Signature		Date	ANII Review		20/1/	Signatur		(1-)	<u>27-</u> c	Date
N/A								Clow, Ron		FIL			11/.	22/0	

# ENT 7 PAGE

# NIVIC

### **Limitation Record**

Site/Unit:	PNGP	1	PI1
Summary No.:		3009	000
Workscope:		IS	1

Procedure: ISI-UT-16A
Procedure Rev.: 1

Outage No.:
Report No.:

PI1RFO2002 2002U055

Work Order No.:

o.: <u>0200860</u>

Page: 2

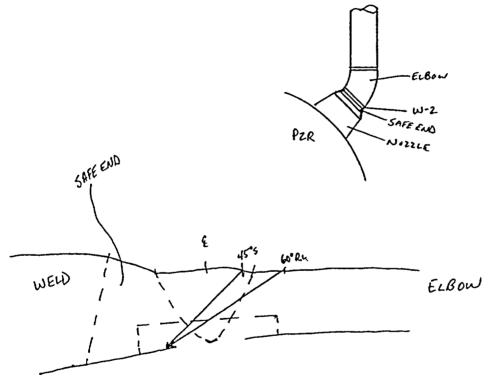
2 of 4

Description of Limitation:

Safe end configuration and proximity of adjacent safe end to nozzle weld.

Sketch of Limitation:

J.\lddeal\_Photos\PI1RFO2002\UT Photos\2002U055-1.bmp



Limitations removal requirements:

Single sided exam - Although the examination was performed through 100% of the code required volume. Procedure ISI-UT-16A is not qualified for the detection of flaws on the far side of single side access exams. The techniques provided by this procedure were used for a best effort examination for flaws on the far side of the weld.

Radiation field. 20 mR

Level	III	Signature	Date	Reviewer	1	Signature	Date
Todd P.	•	Jell! Blef	11/19/2002	Clay, Sean P.	Alli	DL LIE	//-22-07
Level	N/A	Signature	Date	Site Review		Signature	Date
				Wren, Jerry P.	Au	C.W~~W.III	11-22-02
Level	N/A	Signature	Date	ANII Review		Signature	Date
				Clow, Ron	120	· ·	11/22/02
	Todd P. Level		Todd P. July Bluf Level N/A Signature	Todd P. 11/19/2002 Level N/A Signature Date	Todd P. 11/19/2002 Clay, Sean P.  Level N/A Signature Date Site Review Wren, Jerry P  Level N/A Signature Date ANII Review	Level N/A Signature Date Site Review Wren, Jerry P.  Level N/A Signature Date ANII Review	Level N/A Signature Date Site Review Wren, Jerry P. Signature Lv. III.  Level N/A Signature Date ANII Review Signature



# Determination of Percent Coverage for UT Examinations - Pipe

Site/Unit:	PNGP	PNGP / PI1		Procedure:	ISI-UT-16A	Outage No.:	PI1RFO2002		002
Summary No.:		300900	)	Procedure Rev.:	1	Report No.:	20	02U0	55
Workscope:		ISI		Work Order No.:	0200860	Page:	3	of	4

<u>45 deg</u>						
Scan 1	0.000	_ % Length X	0.000	% volume of length / 100 =	0.000	% total for Scan 1
Scan 2	100.000	_ % Length X	100.000	% volume of length / 100 = _	100.000	% total for Scan 2
Scan 3	100.000	% Length X _	50.000	% volume of length / 100 =	50.000	% total for Scan 3
Scan 4	100.000	_ % Length X	50.000	% volume of length / 100 =	. 50.000	% total for Scan 4

Add totals and divide by # scans = 50.000 % total for 45 deg

Other deg - 60 (to be used for supplemental scans)

The data to be listed below is for coverage that was not obtained with the 45 deg scans.

Scan 1	0.000	_ % Length X	0.000	_ % volume of length / 100 =	0.000	_ % total for Scan 1
Scan 2	100.000	_ % Length X	100.000	% volume of length / 100 =	100.000	_ % total for Scan 2
Scan 3	0.000	_ % Length X	0.000	% volume of length / 100 =	0.000	_ % total for Scan 3
Scan 4	0.000	_ % Length X	0.000	% volume of length / 100 =	0.000	_ % total for Scan 4

#### Percent complete coverage

Add totals for each scan required and divide by # of scans to determine;

75.000 % Total for complete exam

Site Field Supervisor:

Jen P. Wn Date: 11-22-02



# **Supplemental Report**

Report No.: 2002U055

Page:

Summary No.: 300900

Examiner: Biechinger, Todd P.

Other: N/A

Examiner: N/A

Level: 111

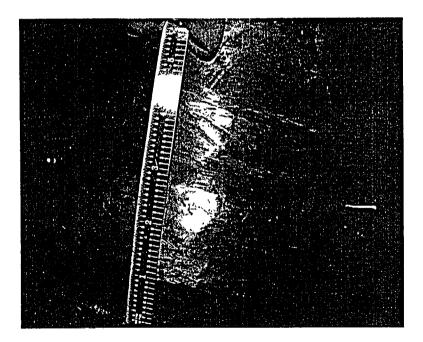
N/A Level: Level: N/A Reviewer: Clay, Sean P.

Site Review: Wren, Jerry P.

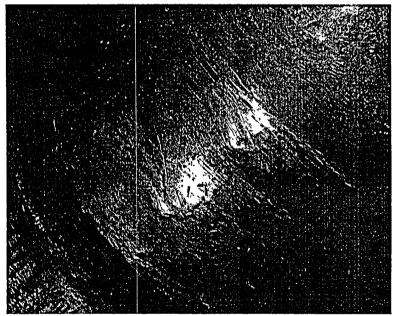
ANII Review: Clow, Ron

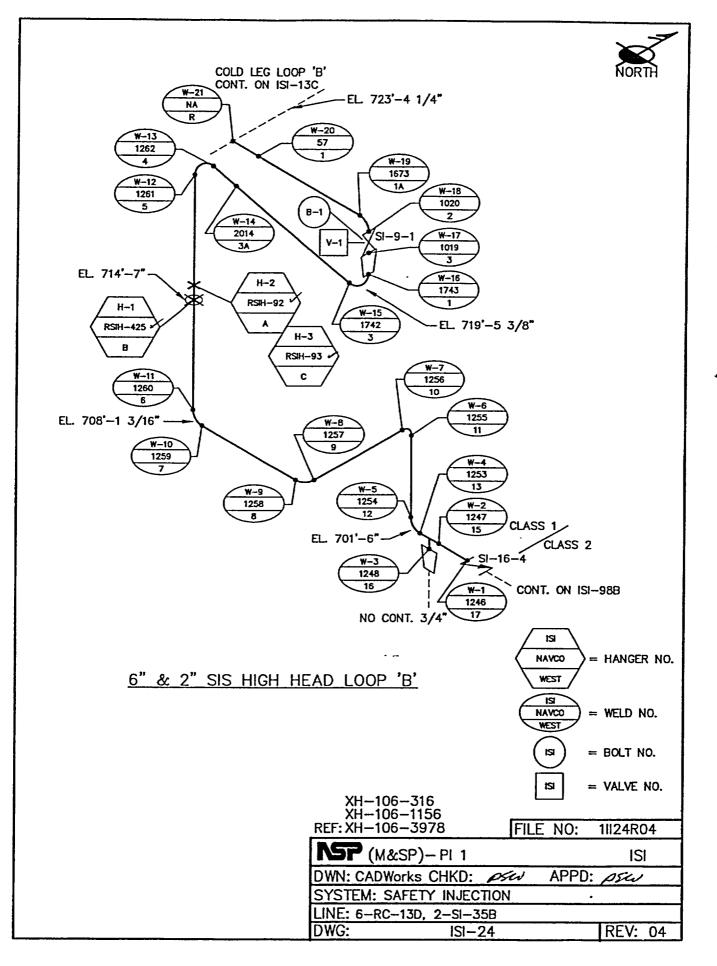
Comments: None

Sketch or Photo: J.\lddeal\_Photos\PI1RFO2002\Misc Photos\bob\PIC00013.JPG



J:\Iddeal\_Photos\PI1RFO2002\Misc Photos\bob\PIC00010.JPG







S	Site/Unit:	PNGP	1	PI1			Pro	cedure:	ISI-UT-16	Α	Out	age No.: P	11RF0200	2
Summ	ary No.:		3006	56			Procedu	e Rev.:	1		Rej	oort No.:	2002U062	
Wor	kscope:		isi				Work Ord	der No.:	0200860			Page: 1	of _	4
Code:		1989	)	· · · · · · · · · · · · · · · · · · ·	_ (	Code Cat.:	B-J		Location:		Con	t B Vault		
Drawing No.:			ISI-	24			Description: N	OZZLE TO PIP	E					
System ID:	RC													
Component ID:	W-21							Siz	e/Length:	1.2"/31.0"	Thickne	ess/Diameter:	2.0" / 6	.0"
Limitations:	One si	ded exar	n, no axi	ial scans	on down	stream sid	ie of weld.		Sta	art Time:	1536	Finish Time:	1612	<u>?</u>
Examination :	Surface:	Insid	de 🔲	Outs	ide 🗹		Surface Cond	ition: Blended						
Lo Location:		Datu	m "0"		Wo Loca	ation:	Centerline of V	/eldCo	uplant:	Sonotrace	40	Batch No.:	#0014	13
Temp. Tool M	lfg.:	Te	latemp		Seria	l No.:	NSP 178	Su	rface Temp.:	80	_°F			
Cal. Report N	lo.:					2002CA10	7							
Angle Used	0	45	45T	60		<u> </u>	1							
Scanning dB		53.0	1											
Indication(s):	Yes	N	· 🗹	1,1		Sca	ı .n Coverage:    Up	stream 🖾 🗀 Do	wnstream [	cw 🗹	ccw 🗹			
	103	⊔ '''	<b>y</b>			OCA	in Coverage. Op	Sircain 🖭 De	Wilsircani _		0011			
Comments:														
None														
Results:	NAD [	<b>₹</b>	IND 🗀	1	GEO 🗌									
Percent Of Co	verage (	Obtained	> 90%:		No	_	Reviewed Previou	s Data:	Yes	_				
Examiner	Level [			0	ignature	· · · · · · · · · · · · · · · · · · ·	Data	Reviewer			Signatu	···		Date
Knott, Brian	reve: [		Gu,		ignature	nstt	1	Clay, Sean P.	A	AJGH I	Signatui	LVIII	11-5	0-02
	Level [		////?		ignature /	· · · · ·		Site Review	8		Signatu			Date
Stevermer, A			della					Wren, Jerry P.	Y-)en	7-17-19			11-27.	
Other N/A	Level !	N/A /		S	ignature		1	ANII Review Clow, Ron		1///	Signatu	re	u land	Date
11/A								GIOW, NOII		·			11/27/02	<u> </u>

ATTACHMENT 9 PAGE 1 OF 4



# **Supplemental Report**

Report No.: 2002U062 Page:

Summary No.: 300656

Examiner: Knott, Brian-

Examiner: Stevermer, Aaron

Other: N/A

Level: II Level:

Level: N/A

Reviewer: Clay, Sean P.

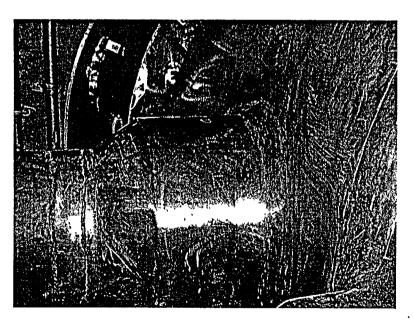
Site Review: Wren, Jerry P.

ANII Review: Clow, Ron

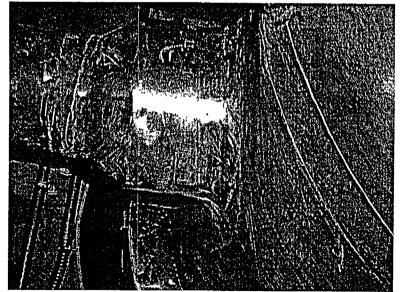
Date: //-26-02 Date: //-27-02 Date: ///27/02

Comments: None

Sketch or Photo: J.\lddeal\_Photos\PI1RFO2002\UT Photos\2002U062-1 jpg



J:\lddeal\_Photos\PI1RFO2002\UT Photos\2002U062-2 jpg





## **Limitation Record**

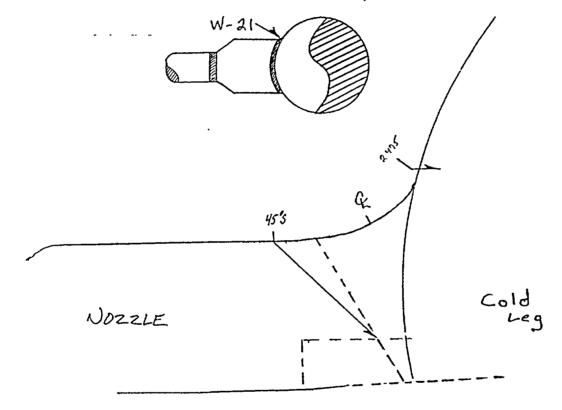
Site/Unit:	PNGP / PI1		PI1	Procedure:	ISI-UT-16A	Outage No.:	PIÌRFO2002			
Summary No.:	300656		56	Procedure Rev.:	1	Report No.:	20	02U	062	
Workscope:	ISI		l	Work Order No.:	0200860	Page:	3	of	4	

Description of Limitation:

No scans on hot leg side of the weld due to configuration and attenuation. No 60 degree RL performed due to technique limitations based on thickness and diameter considerations falling outside typical equipment parameters of PDI Table 1 document.

Sketch of Limitation.

J \lddeal\_Photos\PI1RFO2002\UT Photos\2002U062-1.bmp



#### Limitations removal requirements:

Single sided exam - Although the examination was performed through 100% of the code required volume. Procedure ISI-UT-16A is not qualified for the detection of flaws on the far side of single side access exams. The techniques provided by this procedure were used for a best effort examination for flaws on the far side of the weld.

Radiation field: N/A

Examiner	Level II	Signature	Date	Reviewer		Signature	Date
Knott, Bri	an Sil	an L. Xnott.	11/21/2002	Clay, Sean P.	10 rest	L 1.	<i>III 11-26-</i> 62
Examiner	Level	Signature	Date	Site Review	82 0:1	Signature	Date
Steverme	r, Aaron	Marin	11/21/2002	Wren, Jerry P.	Glen V.W.		11-27-02
Other	Level N/A	Signature	Date	ANII Review		Signature	Date
N/A		4		Clow, Ron	1500		11/27/02



# Determination of Percent Coverage for UT Examinations - Pipe

		PI1	Proced	lure: ISI-UT-16A	Outage N	lo.: PI1RF02002
mary No.:	30065	56	Procedure F	Rev.: 1	Report N	lo.: 2002U062
orkscope:	ISI		Work Order	No.: 0200860	Pa	ge. <u>4</u> of <u>4</u>
					-	
<u>45 deg</u>						
Scan 1	100.000	% Length X _	100.000	% volume of length / 100 =	100.000	% total for Scan 1
Scan 2	0.000	% Length X	0.000	% volume of length / 100 =	0.000	_ % total for Scan 2
Scan 3	100.000	% Length X _	50.000	% volume of length / 100 =	50.000	% total for Scan 3
Scan 4	100.000	% Length X	50.000	% volume of length / 100 =	50.000	_ % total for Scan 4
	Add totals an	d divide by # scar	ns =	_ % total for 45 deg		
Other de	g - 0	(to be used for	supplemental s	scans)		
				stained with the 45 deg scans.		
Scan 1	0.000	% Length X	0.000	% volume of length / 100 =	0.000	% total for Scan 1
Scan 2	0.000	% Length X	0.000	% volume of length / 100 =	0.000	% total for Scan 2
Scan 3	0.000	% Length X	0.000	% volume of length / 100 =	0.000	% total for Scan 3
Scan 4	0.000	% Length X	0.000	% volume of length / 100 =	0.000	% total for Scan 4
				_		
Percent o	complete cove	rage				
		required and divide	e by # of scans	to determine;		
50.000	% Total for	complete exam				
	1	$\bigcirc$ $0$ .				
Site Field	Supervisor:	Hunt.l	U~	Date: _//_	26-02	-



S	ite/Unit:	PNGP	1	Pl1			Pro	cedure:	ISI-UT-1	6A	Out	tage No.: _	PITE	FO20	02
Summ	ary No.:		3006	54			Procedu	re Rev.:	1		Re	port No.:	200	2U06	3
Wor	kscope:		ISI		<del></del>		Work Or	der No.:	020086	50		Page:	1	of	3
Code:		1989			(	Code Cat.:	B-J		Location	1:	Con	nt B Vault	•		
Drawing No.:			ISI-	24			Description: V	ALVE - ELB	ow						
System ID:	RC								·						
Component ID:	W-18								Size/Length:	1.35" / 21.0	" Thickn	ess/Diamete	er:	.7" /	6.0"
Limitations:	One sid	led exam	, no axi	al or cli	rc scans o	n valve sid	le due to configu	ıration.		Start Time:	1520	Finish Tim	e:	153	
Examination 9	Surface:	Insid	e 🗆	Out	side 🗸		Surface Cond	ition: Flat To	opped						
Lo Location:		Datun	n"0"		Wo Loca	ation:	Centerline of V		Couplant:	Sonotrac	e 40	Batch No.:		#001	143
Temp. Tool M	fg.:	Tela	atemp		Seria	l No.:	NSP 178		Surface Temp	o.: 80	۰۴				
Cal. Report N	o.:				20020	A108, 200	2CA121				<del></del>				
Angle Used	0	45	45T	60											
Scanning dB		30.1	36.1	76.1											
Indication(s):	Yes [	] No	$ \mathbf{V} $			Sca	n Coverage:    Up	stream 🔲	Downstream [	✓ cw 🗹	ccw <b></b>				
Comments:															
RL Examinat	ion prefe	ormed or	11/24/2	2002. E	xam times	are 1018 -	1028.								
	ion prois				,	410 1010	1020.								
		_													
Results:	NAD 🔀	_	IND 🗌		GEO 🗌	_									
Percent Of Co	verage O	btained >	90%:	<del></del>	No	F	Reviewed Previou	s Data:	Yes						
Examiner	Level II		ク・	5	Signature		Date	Reviewer	7.	20	Signatu	re			Date
Knott, Brian			Mar	<u>-</u> _	Kn	ott	11/21/2002		· XX	The		LITT		11-	26.02
Examiner Stevermer, Aa	Level_II	1/L	1	- (	Signature			Site Review		0,	Signatu	re Lv. III	-		Date
	Level N	16	(an	9	Signature		11/21/2002 Date	ANII Review		en ( . C	Signatu		1 (-	26	3- 0 Z Date
N/A	(4)	<u>'</u> ^		<b>.</b>			i	Clow, Ron			Oignatu		//	125/0	



## **Limitation Record**

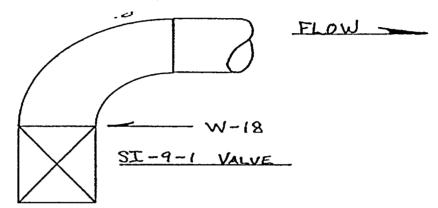
Site/Unit:	PNGP / PI1		PI1	Procedure:	ISI-UT-16A	Outage No.:	PI1RFO2002				
Summary No.:	300654		54	Procedure Rev.:	1	Report No.:	2002U063				
Workscope:	: ISI		1	Work Order No.:	Work Order No.: 0200860		2	of	3		

Description of Limitation:

No upstream scan 1 due to upstream valve SI-9-1.

Sketch of Limitation:

J.\lddeal\_Photos\PI1RFO2002\UT Photos\2002U063-1.bmp



VALVE ELBOW

Limitations removal requirements:

Single sided exam - Although the examination was performed through 100% of the code required volume. Procedure ISI-UT-16A is not qualified for the detection of flaws on the far side of single side access exams. The techniques provided by this procedure were used for a best effort examination for flaws on the far side of the weld.

Radiation field. N/A

Examiner	Level	11		Signature	Date	Reviewer	1 = 1	Signature	Date
Knott, Brian			Tru	11.11	11/21/2002	Clay, Sean P.	Dent	W LUII	11-26-02
Examiner	Level	ساا		8tgnature	Date	Site Review	0	Signature	Date
Stevermer,	Aaron		llast	Stam	11/21/2002	Wren, Jerry P.	Sking !!	the will	11-26-02
Other	Level	N/A	7	Signature	Date	ANII Review	47/1	Signature	Date
N/A						Clow, Ron	1866		11/25/02



# Determination of Percent Coverage for UT Examinations - Pipe

Site/Unit:	PNGP	PNGP / PI1		Procedure:	ISI-UT-16A	Outage No.:	PI1	002	
Summary No.:	300654		4	Procedure Rev.:	1	Report No.:	20	02U0	63
Workscope:	ISI			Work Order No.:	0200860	Page:	3	of	3

45 deq						
Scan 1	0.000	% Length X _	0.000	% volume of length / 100 =	0.000	% total for Scan 1
Scan 2	100.000	% Length X _	50.000	% volume of length / 100 =	50.000	% total for Scan 2
Scan 3	50.000	% Length X _	50.000	% volume of length / 100 =	25.000	% total for Scan 3
Scan 4	50.000	% Length X _	50.000	% volume of length / 100 =	25.000	% total for Scan 4

Add totals and divide by # scans = \_\_25.000 % total for 45 deg

Other deg - 60 (to be used for supplemental scans)

The data to be listed below is for coverage that was not obtained with the 45 deg scans.

Scan 1	0.000	% Length X _	0.000	% volume of length / 100 =	0.000	_ % total for Scan 1
Scan 2	100.000	% Length X _	100.000	% volume of length / 100 =	100.000	_ % total for Scan 2
Scan 3	0.000	% Length X _	0.000	_ % volume of length / 100 =	0.000	_ % total for Scan 3
Scan 4	0.000	% Length X	0.000	% volume of length / 100 =	0.000	_ % total for Scan 4

#### Percent complete coverage

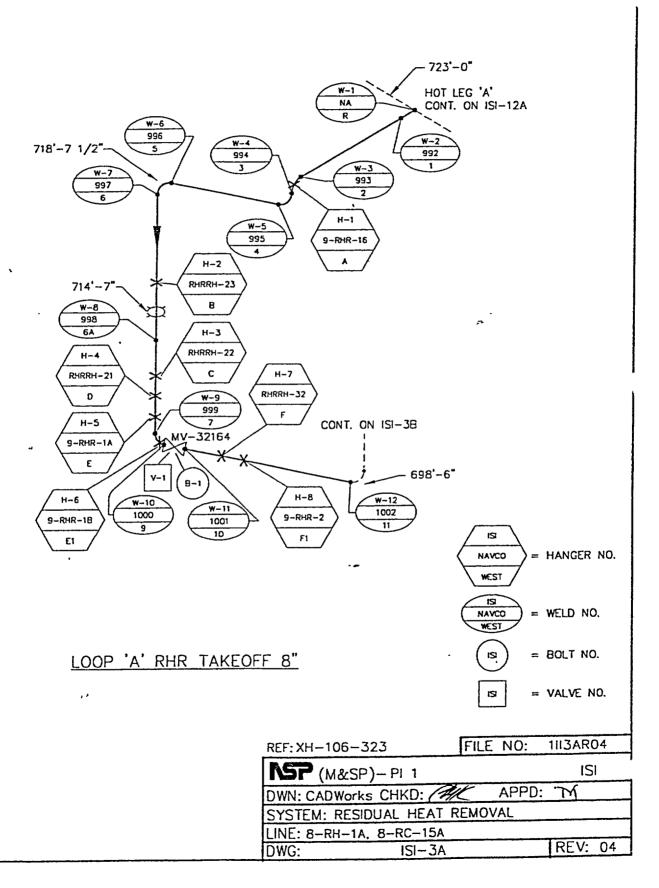
Add totals for each scan required and divide by # of scans to determine;

50.000 % Total for complete exam

Site Field Supervisor:

my P.W. W. III Date: 11-26-02







S	Site/Unit:	PNGP		PI1			Pro	ocedure:	ISI-UT	-16A		(	Outage No.:	PI1	RFO20	02
Summ	ary No.:		30015	59			Procedu	ıre Rev.:	1				Report No.:	20	02U06	4
Wor	kscope:		ISI				Work O	rder No.:	0200	860			Page:	1	of _	4
Code:		1989				Code Cat.:	B-J	· · · · · · · · · · · · · · · · · · ·	Locati	on:		C	ont A Vault			
Drawing No.:			181-3	ВА			Description:	NOZZLE - PIPI	<b>=</b>							
System ID:	RC						-	·····						-		· · · · · · · · · · · · · · · · · · ·
Component ID:	W-1				•				Size/Length	1:	2.2" / 40"	Thic	kness/Diame	eter:	2.4"	/8"
Limitations:	See Co	mments.	· · · · · · · · · · · · · · · · · · ·							Start	Time:	1703	Finish T	me: _	172	20
Examination 5	Surface:	Insid	e 🗌	Ou	tside 🗸		Surface Cond	dition: Blende	d						F	
Lo Location:	7	op Dead	l Center		Wo Loo	ation:	Centerline of	Weld (	Couplant:		Sonotrace	e 40	Batch No	·.:	#001	143
Temp. Tool M	lfg.:	Tela	atemp		Seria	al No.:	NSP 134		Surface Ter	mp.: _	95_	_ °F				
Cal. Report N	lo.:					2002CA11	0									
Angle Used	0	45	45T	60			7			•						
Scanning dB		67.6	67.6													
_							J .n Cawarana - U			<b>.</b>	OW C	0014	<u></u>			
Indication(s):	Yes [	] No				Sca	ın Coverage: U	pstream [_]	Downstrear	11 💌	cw <b>∑</b>	ccw	$\checkmark$			
Comments:																
Technique li	mitations	encoun	tered di	ue to jo	int thickn	ess and dia	ameter. No scar	ns on hot leg s	ide of wel	d due	to configu	ration.				
Results:	NAD C	<b>a</b>	IND (		CEO [											
	NAD 🔀		IND 🗌		GEO 🗌					<del></del>						
Percent Of Co	verage O	btained >	90%:		No		Reviewed Previous	us Data:	Yes							
Examiner	Level III			<u> </u>	Signature	7	Date	Reviewer	_			Signa	aturo			Date
Blechinger, Te				MP.	Signature			Clay, Sean P	. <i>D</i>		3by		2011		1/	24-02
Examiner	Level II		<u>.</u>		Signature		Date	Site Review		-	<u> </u>	) Signa	ature			Date
Thomas, Trav				har.				Wren, Jerry	· <i>Q</i>	-	<u>(                                    </u>		. 111	11	-24	-02
	Level N	/A		;	Signature		Date	ANII Review	//	//		Signa	ature		,	Date
N/A								Clow, Ron	_/_					11	126 1	72



#### **Limitation Record**

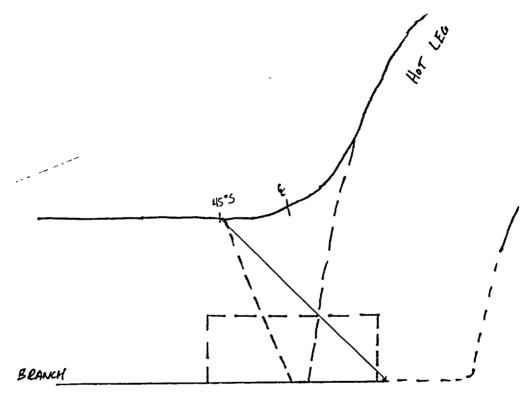
Site/Unit.	PNGP / PI1		PI1	Procedure:	Procedure: ISI-UT-16A		PI1RF02002		002
Summary No.:	300159			Procedure Rev.:	1	Report No.:	20	02U0	64
Workscope:	ISI		Work Order No.:	0200860	Page:	2	of	4	

Description of Limitation:

No scans on hot leg side of weld due to material attenuation and joint configuration. No 60 degree RL exam performed due to technique limitations based on thickness and diameter considerations falling outside typical equipment parameters of PDI Table 1 document.

Sketch of Limitation:

J.\Iddeal\_Photos\PI1RFO2002\UT Photos\2002U064-1 bmp



Limitations removal requirements:

1 3-5-03

1 3-5-03

1 Single sided exam - Although the examination was performed through 100% of lock required

1 None Single sided exam - Although the examination was performed through 100% of lock required

1 Volume. Procedure 151-UT-16A is not gualified for the detection of flows on the for side of single side

1 Volume. Procedure 151-UT-16A is not gualified for the detection of flows on the forth

1 Volume. Procedure used for a best effort

1 Examination for flows on the far side of the weld.

Radiation field: 80 mR

Examiner	Level	111	Signature	Date	Reviewer			Signature	Date
Blechinge	r, Todd P	•	JUP. Bluf	11/21/2002	Clay, Sean P.	Met	Der	Lott	11-24-02
Examiner	Level	11	Signature	Date	Site Review		C).	Signature	Date
Thomas,	<b>Fravis</b>		20 Mon	11/21/2002	Wren, Jerry P	. An	, 1.0	W.III	1+24-02
Other	Level	N/A	Signature	Date	ANII Review		7/1	Signature	Date
N/A					Clow, Ron				11/26/02



# **Supplemental Report**

Report No.: 2002U064 Page:

Summary No.: 300159

Examiner: Blechinger, Todd P.

Examiner: Thomas, Travis

Other: N/A

Level:

Level:

Level: N/A

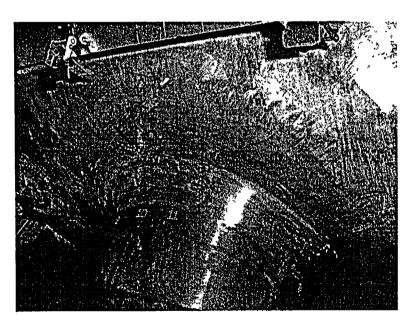
Reviewer: Clay, Sean P. Site Review: Wren, Jerry P.

ANII Review: Clow, Ron

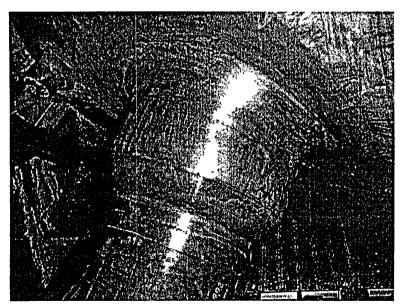
Date: //-24-02 Date: //-24-02 Date: ///26/02

Comments: None

Sketch or Photo: J.\lddeal\_Photos\PI1RFO2002\UT Photos\2002U064-1.jpg



J:\Iddeal\_Photos\PI1RFO2002\UT Photos\2002U064-2.jpg





# **Determination of Percent Coverage for UT Examinations - Pipe**

Site/Unit:	PNGP	PNGP / PI1		Procedure:	Procedure: ISI-UT-16A		PI1RFO2002			
Summary No.:	300159		59	Procedure Rev.:	1	Report No.:	2002U064			
Workscope:	ISI			_ Work Order No.:	0200860	Page:	4	of	4	

<u>45 deq</u>						
Scan 1	0.000	% Length X _	0.000	% volume of length / 100 = _	0.000	_ % total for Scan 1
Scan 2	100.000	_ % Length X _	100.000	% volume of length / 100 =	100.000	% total for Scan 2
Scan 3	100.000	_ % Length X _	50.000	% volume of length / 100 =	50.000	% total for Scan 3
Scan 4	100.000	_ % Length X _	50.000	_ % volume of length / 100 = _	50.000	% total for Scan 4

Add totals and divide by # scans = 50.000 % total for 45 deg

Other deg - 0 (to be used for supplemental scans)

The data to be listed below is for coverage that was not obtained with the 45 deg scans.

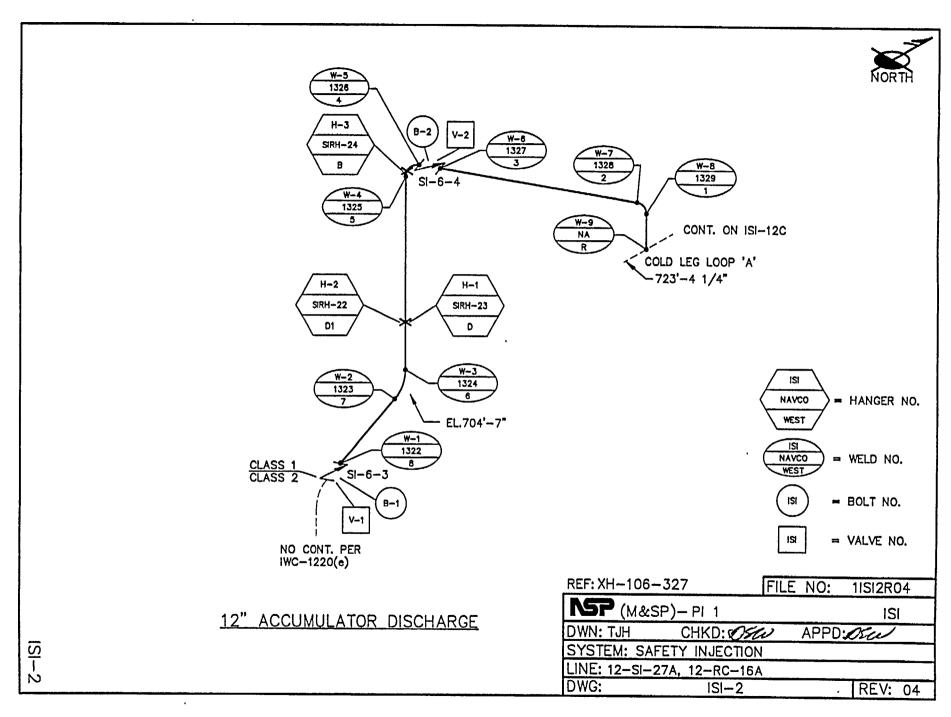
Scan 1	0.000	% Length X _	0.000	% volume of length / 100 = _	0.000	% total for Scan 1
Scan 2	0.000	% Length X _	0.000	% volume of length / 100 = _	0.000	% total for Scan 2
Scan 3	0.000	% Length X _	0.000	% volume of length / 100 = .	0.000	% total for Scan 3
Scan 4	0.000	% Length X _	0.000	% volume of length / 100 =	0.000	% total for Scan 4

#### Percent complete coverage

Add totals for each scan required and divide by # of scans to determine;

50.000 % Total for complete exam

LV. [II Date: 11-24-02





S	ite/Unit:	PNGP	1	PI1			P	rocedure: _	ISI-UT-1	6A	Ou	tage No.:	PIIR	FO200	2
Summ	ary No.:		30013	36			Proced	lure Rev.:	1		Re	eport No.:	200	2U066	
Wor	kscope:		ISI				Work C	Order No.:	020086	0		Page:	1	of	3
Code:		1989				Code Cat.:	B-J		Location		Co	nt A Vault			
Drawing No.:			ISI-	-2			Description:	NOZZLE - P	IPE						<del></del>
System ID:	RC											·			
Component ID:	W-9								Size/Length:	2.8" / 52.5"	Thickr	ess/Diamete	r:	2.8" / 1	12"
Limitations:	No sca	ns on br	anch du	e to co	nfiguratio	n.			S	tart Time:	1609	Finish Time	e:	1629	)
Examination S	Surface:	Insid	le 🗌	Ou	ıtside 🔽		Surface Cor	ndition: <u>Bien</u>	ded						
Lo Location:		Top Dead	d Center	•	_ Wo Lo	cation:	Centerline of	f Weld	Couplant:	Sonotrac	e 40	Batch No.:		#0014	43
Temp. Tool M	lfg.:	Tel	atemp		_ Seri	al No.:	NSP 178	8	Surface Temp	.:80	_ °F				
Cal. Report N	o.:		···			2002CA1	12								
Angle Used	0	45	45T	60			]								
Scanning dB		64.0	70.0												
Indication(s):	Yes	No	<b>∀</b>			Sca	an Coverage:    l	Jpstream 🗹	Downstream [	_ cw ☑	CCW 🖸	2			
Comments:															
See attached	i iimitati	on recor	d.												
Results:	NAD F	<b>7</b>	IND [		GEO [	1									
Percent Of Co	•					•	Reviewed Previ	oue Data:	Yes						
	verage (	Julaineu .	> 50 /0.		No		Treviewed Frevi	ous Dala.	res						
Examiner	Level II				Signature			e Reviewer	70.=		Signati	ure			Date
Thomas, Trav				Iran	Nomar	<u> </u>		2 Clay, Sear		THE		1.11		11-	24-02
ı	Level [				Signature			e Site Revie	~ <i>X</i>	DU1	Signati	ure	11	22	Date
VanRuler, Ch	Level N				آبد <i>ل ت</i> Signature			2 Wren, Jer e ANII Revie		y Con	// Signati	ITA	11.	- 21-	- 0 2 Date
N/A	Feaci L	VA			Jignatule		Dali	Clow, Rot		1///	/ Signati	u. 0	11/2	7/02	Date
								···							

 $\mathcal{O}$ 

R

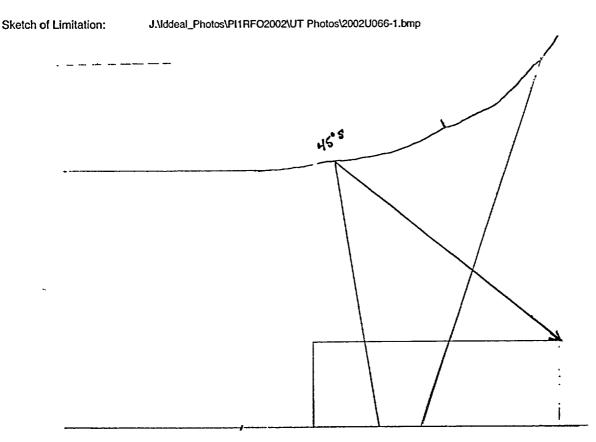


### **Limitation Record**

Site/Unit:	PNGP / PI1		PI1	Procedure:	ISI-UT-16A	Outage No.:	PI1RFO2002				
Summary No.:	300136		36	Procedure Rev.:	11	Report No.:			2002U066		
Workscope:	-	IS	l	Work Order No.:	0200860	Page:	_2	of	3		

Description of Limitation:

No scans on cold leg side of weld due to material attenuation and joint configuration. No 60 degree RL exam performed due to technique limitations based on thickness and diameter considerations falling outside typical equipment parameters of PDI Table 1 document.



Limitations removal requirements.

POUR Single Sided exam - Although the examination was performed through 100° to of

the code required volume. Procedure 151-UT-16A is not qualified for the detection

of flows on the farside of single sided access exams. The techniques provided by

this procedure were used for a best effort examination for flows on the farsid

Radiation field: 135 mR/hr - General Area

Examiner Level II	Signature	Date	Reviewer		Signature	Date 11-24-02
Thomas, Travis	Ira Chon_	- 11/22/2002	Clay, Sean P.	Alm.	2/1/2	NIII
Examiner Level IIR	Signature	Date	Site Review		Signature	Date
VanRuler, Christopher D.	Chiloth	11/22/2002	Wren, Jerry P.	Strunt	?W~	11-25-02
Other Level N/A	Signature	Date	ANII Review	47/11	Signature	Date
N/A			Clow, Ron	1200	-	11/23/or



# Determination of Percent Coverage for UT Examinations - Pipe

Site/Unit:	PNGP / PI1		Procedure:	Procedure: ISI-UT-16A				PI1RFO2002				
Summary No.:	300136		Procedure Rev.:	1	Report No.:	2002U066						
Workscope:	ISI		Work Order No.:	0200860	Page <sup>-</sup>	3	of	3_	_			

Scan 1	100.000	% Length X _	100.000	% volume of length / 100 =	100.000	% total for Scan 1
Scan 2	0.000	% Length X _	0.000	% volume of length / 100 = _	0.000	_ % total for Scan 2
Scan 3	100.000	% Length X _	50.000	% volume of length / 100 =	50.000	% total for Scan 3
Scan 4	100.000	% Length X _	50.000	% volume of length / 100 =	50.000	% total for Scan 4

Add totals and divide by # scans = 50.000 % total for 45 deg

Other deg - 0 (to be used for supplemental scans)

The data to be listed below is for coverage that was not obtained with the 45 deg scans.

Scan 1	0.000	% Length X _	0.000	% volume of length / 100 = _	0.000	% total for Scan 1
Scan 2	0.000	% Length X	0.000	% volume of length / 100 = _	0.000	% total for Scan 2
Scan 3	0.000	% Length X	0.000	% volume of length / 100 =	0.000	% total for Scan 3
Scan 4	0.000	% Length X	0.000	% volume of length / 100 = _	0.000	% total for Scan 4

#### Percent complete coverage

Add totals for each scan required and divide by # of scans to determine;

50.000 % Total for complete exam

Site Field Supervisor:

Date: 11-24-02



S	ite/Unit:	PNGP	1	PI1			Pro	cedure:	ISI-UT-1	6A	Out	tage No.:	PI1F	RFO20	02
Summ	ary No.:		30014	48			Procedur	re Rev.:	1		Re	port No.:	20	02U06	7
Wor	kscope:		ISI				Work Ord	der No.:	020086	80		Page:	1	of _	4
Code:		1989				Code Cat.:	B-J		Location	:	Con	nt A Vault			
Drawing No.:			ISI-	3A			Description: N	OZZLE - PIF	E						
System ID:	RC		·				_								
Component ID:	W-2				_				Size/Length:	.9" / 27"	Thickn	ess/Diamete	er:	.8" /	8"
Limitations:	itations: No scans on nozzle side due to		o configur	ation.					1645	Finish Tim	e:	170	1		
Examination 9	Surface:	Insid	e 🔲	Out	tside 🗹		Surface Condi	ition: Blend	ed						
Lo Location:		op Dead	Center		Wo Loc	ation:	Centerline of W	Veld	Couplant:	Sonotrac	e 40	Batch No.:		#001	43
Temp. Tool M	lfg.:	Tela	atemp		Seria	l No.:	NSP 134		Surface Temp	.: 95	°F				
Cal. Report N	o.:	<u> </u>			20020	A113, 200	2CA114		· · · · · · · · · · · · · · · · · · ·						
Angle Used	0	45	45T	60			]								
Scanning dB		46.0	52.0	78.0											
Indication(s):	Yes [	] No	$ \mathbf{Z} $			Sca	n Coverage: Up	stream 🔲	Downstream [	Z cw Z	ccw 🔽				
Comments:															
None															
Results:	NAD 🔽	3	IND 🗆		GEO □										
Percent Of Co	verage O	btained >	90%:		No		Reviewed Previou	s Data:	Yes					<u> </u>	
	Level III				Signature,	1,		Reviewer	2.		Signatu	rė			Date
Blechinger, To						<u>r</u>	11/21/2002			Mbr		LVIII		11-8	24-02
Examiner Thomas, Trav	Level    is				Signature ' Now Thor	<b>***</b>	Date   11/21/2002	Site Review Wren. Jerry		~ P.Wr	Signatu	re	1	1-25	Date
	Level N	/A			Signature	in a		ANII Review		3777	Signatu	re		. 23	Date
N/A								Clow, Ron	<u>(</u>				_//	126/	12



## **Limitation Record**

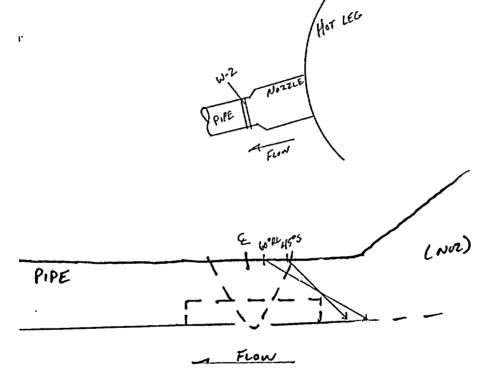
Site/Unit:	PNGP	1	PI1	Procedure:	ISI-UT-16A	Outage No.:	PI:	1RF02	002
Summary No.:	mary No.: 300148		Procedure Rev.:	1	Report No :	2	2002U067		
Workscope:		IS	SI	Work Order No.:	0200860	Page:	2	of	4

Description of Limitation:

No scans on nozzle side due to configuration.

Sketch of Limitation:

J.\Iddeal\_Photos\PI1RFO2002\UT Photos\2002U067-1 bmp



#### Limitations removal requirements:

Single sided exam - Although the examination was performed through 100% of the code required volume. Procedure ISI-UT-16A is not qualified for the detection of flaws on the far side of single side access exams. The techniques provided by this procedure were used for a best effort examination for flaws on the far side of the weld.

Radiation field: N/A

Examiner	Level III	Signature	Date	Reviewer	1	Signal	ture Date
Blechinge	r, Todd P.	J. D.P. Blif	11/21/2002	Clay, Sean P.	43m	v Agra	LIII 11-24-02
Examiner	Level [[	Signature	Date	Site Review		O 1 Signal	
Thomas, T	ravis	Traither	11/21/2002	Wren, Jerry P	. Au	, t. Whi	11-25-02
Other	Level N/A	Signature	Date	ANII Review		Signal	ture Date
N/A				Clow, Ron	KE	<u> </u>	11/26/02

# MACHINENT IS PI

# NIVIC

# **Supplemental Report**

Report No.: 2002U067

Page: 3 of 4

Summary No.: 300148

Examiner: Blechinger, Todd P.

Level: III

Reviewer: Clay, Sean P.

Date: 11-24-02

Examiner: Thomas, Travis

Level: II

Site Review Wren, Jerry P.

Date: 11-25-02

Other: N/A

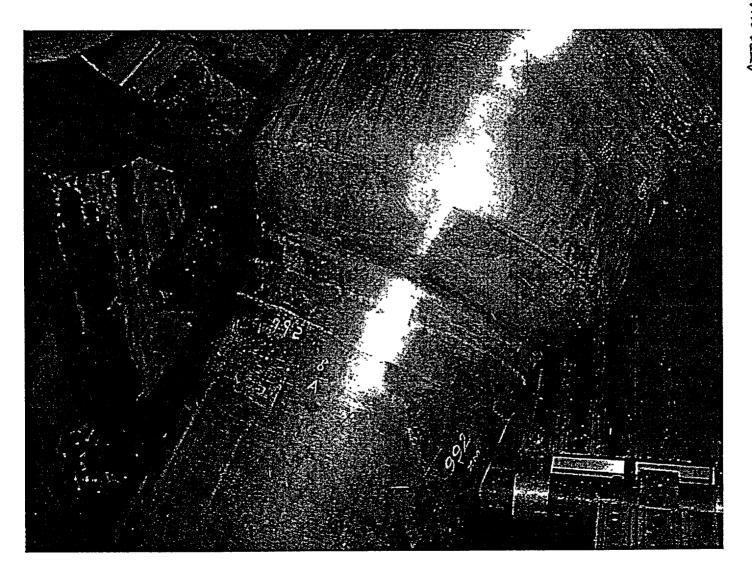
Level: N/A

ANII Review Clow, Ron

low, Ron Date: 11/26/62

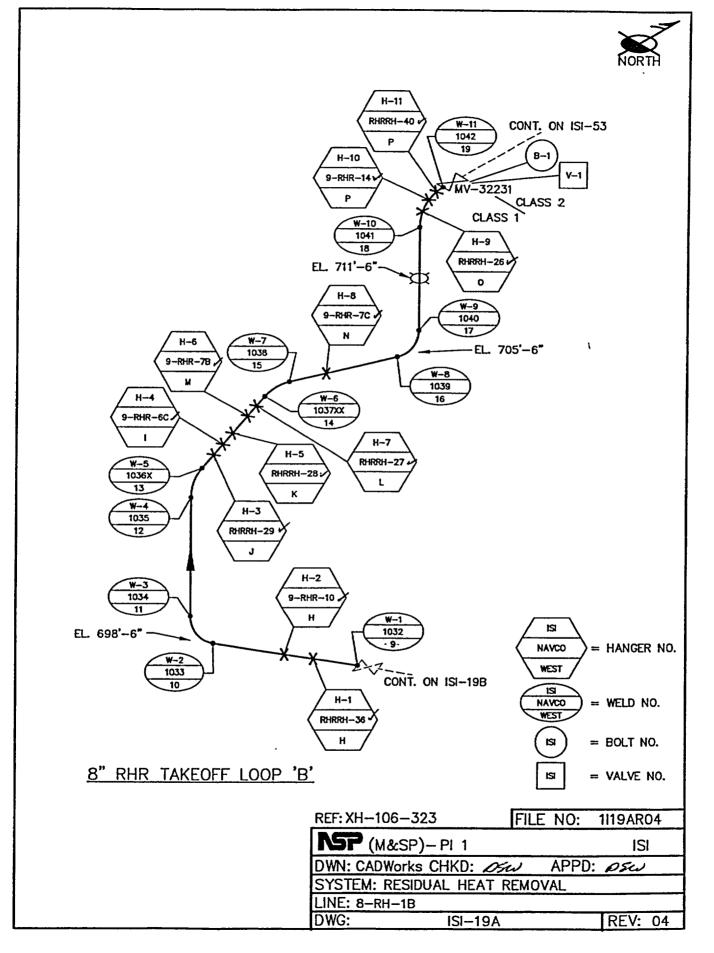
Comments: None

Sketch or Photo: J.\lddeal\_Photos\PI1RFO2002\UT Photos\2002U067-1.jpg





	PNGP /	PI1	Proced	ure: ISI-UT-16A	Outage N	lo.: PI1RFO2002
nary No.:	30014	8	Procedure R	lev.: 1	_ Report N	lo.: 2002U067
rkscope:	ISI	· · · · · · · · · · · · · · · · · · ·	Work Order	No.: 0200860	– Pa	ge: _4 of _4
45 deg Scan 1	0.000	% Length X	0.000	% volume of length / 100 =	0.000	% total for Scan
Scan 2	100.000	% Length X	100.000	% volume of length / 100 =	100.000	— % total for Scan 2
Scan 3	100.000	% Length X	100.000	% volume of length / 100 =	100.000	 _ % total for Scan 3
Scan 4	100.000	% Length X _	100.000	% volume of length / 100 =	100.000	_ % total for Scan 4
	Add totals and					
	naa totais uni	d divide by # scar	ns = <u>75.000</u>	% total for 45 deg		
	rad totals and	d divide by # scar	is = <u>75.000</u>	_ % total for 45 deg		
	rau totals uni	d divide by # scar	ns = <u>75.000</u>	% total for 45 deg		
	Add totals and	d divide by # scar	ns = <u>75.000</u>	_ % total for 45 deg		
Other de		d divide by # scar				
	<b>q</b> - 60	_ (to be used for	supplemental s			
The data	q - 60 to be listed belo	_ (to be used for ow is for coverage	supplemental s	cans) tained with the 45 deg scans.	0.000	% total for Scan
The data	<b>q -</b> 60 to be listed belo	_ (to be used for ow is for coverage t % Length X	supplemental s that was not ob 0.000	cans) tained with the 45 deg scans.  % volume of length / 100 =	0.000	% total for Scan
The data Scan 1 Scan 2	g - 60 to be listed belo  0.000  100.000	_ (to be used for ow is for coverage to % Length X % Length X	supplemental s that was not ob  0.000  100.000	cans) tained with the 45 deg scans. % volume of length / 100 = % volume of length / 100 =	100.000	
The data	g - 60 to be listed belo  0.000  100.000	_ (to be used for ow is for coverage t % Length X	supplemental s that was not ob 0.000	cans) tained with the 45 deg scans.  % volume of length / 100 =		% total for Scan % total for Scan % total for Scan % total for Scan





# **UT Pipe Weld Examination**

Summ	Site/Unit: _nary No.: _		30064 ISI				Procedu	ocedure: ure Rev.: rder No.:				tage No.: port No.: Page:		RFO200 02U068 of	
Code: Drawing No.: System ID:	R	1989 H 90W	ISI-1	9A		Code Cat.:	B-J Description:	VALVE - PIP	Locatio E	n:	Co	ont 695			
Component ID: Limitations:	: W-1			due to	configural	tion, 1" dra	in line at BDC.		Size/Length:	.8" / 27" Start Time:	Thickne	ess/Diamete Finish Time	_	.8" / 8	
Examination S Lo Location: Temp. Tool M Cal. Report N	T		d Center		Seria		Surface Cond Centerline of N NSP 134	Weld	Couplant:	Sonotrac	_	Batch No.:		#0014	3
Angle Used Scanning dB Indication(s): Comments: None		45 46.0 No	45T   52.0 ✓	78.0			n Coverage: Up	ostream 🗍	Downstream	☑ cw ☑	ccw 🗹				
Results: Percent Of Co	NAD <b>☑</b> overage Ob	='	IND   90%:		GEO [	 F	Reviewed Previou	ıs Data:	Yes		· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·		
Blechinger, To Examiner I Thomas, Travi	Level			Dras 2	Signature . Signature Signature Signature		11/21/2002 Date 11/21/2002 Date		/ P. 🔷	apla Cold	Signatur L+ III Signatur LU-	e III	1[	11-24 1-27 11/27/6	Date



# **Supplemental Report**

Report No.: 2002U068

Summary No.: 300649

Examiner: Blechinger, Todd P.

Examiner: Thomas, Travis

Other: N/A

Level: III

Level: II
Level: N/A

Reviewer: Clay, Sean P.

Site Review: Wren, Jerry P.

ANII Review: Clow, Ron

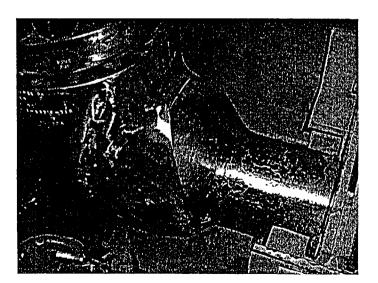
Date: 11-24-02

Date: //- 27-02

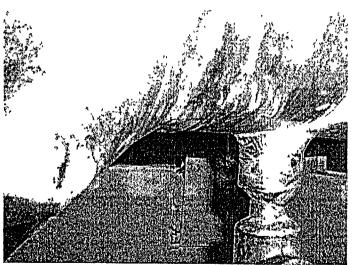
Date: 11/27/02

Comments: None

Sketch or Photo: J \iddeal\_Photos\PI1RFO2002\UT Photos\2002U068-1 jpg



J:\iddeal\_Photos\PI1RFO2002\UT Photos\2002U068-2.jpg





Site/Unit:	PNGP	1	/ PI1		Procedure:	Procedure: ISI-UT-16A		PI1RF02002			
Summary No.:	300649			Procedure Rev.:	1	Report No.:	20	)02U0	68		
Workscope:		IS	<u> </u>		Work Order No.:	0200860	Page:	3	of	4	

Description of Limitation:

No scans on valve side due to configuration. Coupling located at bottom dead center 1.3" from weld toe limits downstream scan for 2".

Sketch of Limitation J. VALVE

ASSE 60° PL

PIPE

FLOW

Limitations removal requirements:

Single sided exam - Although the examination was performed through 100% of the code required volume. Procedure ISI-UT-16A is not qualified for the detection of flaws on the far side of single side access exams. The techniques provided by this procedure were used for a best effort examination for flaws on the far side of the weld.

## Radiation field. N/A

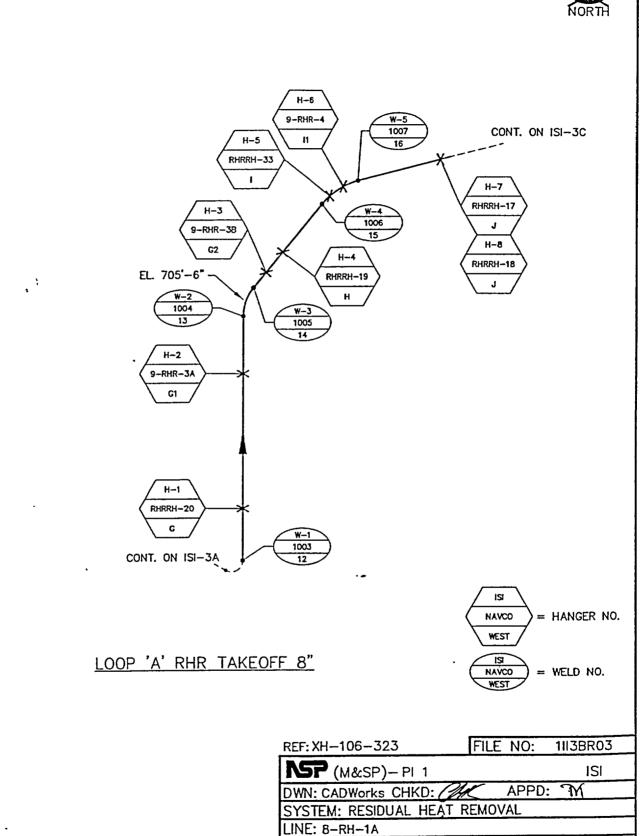
Examiner	Level III	Signature	Date	Reviewer	1	Signature	Date
Blechinge	r, Todd P.	Jul. By	11/21/2002	Clay, Sean P.	Allus	TO LITT	11-24-02
Examiner	Level	Signature	Date	Site Review		Signature	Date
Thomas, 1	<b>Travis</b>	2ran Thom	11/21/2002	Wren, Jerry P.	Fin	(.W~ LV.711	11:27-02
Other	Level N/A	Signature	Date	ANII Review	7.77	Signature	Date
N/A				Clow, Ron	$_{\mathcal{L}}$	<u> </u>	11/27/02



Site/Unit:	PNGP /	PI1	Proced	lure:	ISI-UT-16A	_ Outage N	lo.: PI1RFO2002
Summary No.:	30064	19	Procedure F	Rev.:	1	Report N	lo.: 2002U068
Workscope:	ISI		Work Order	No.:	0200860	_ Pa	ge <u>4</u> of <u>4</u>
	,						<del></del>
45 deg							
Scan 1	0.000	% Length X _	0.000	_ % volume	of length / 100 =	0.000	_ % total for Scan 1
Scan 2	92.600	% Length X	100.000	_ % volume	of length / 100 =	92,600	_ % total for Scan 2
Scan 3	100.000	% Length X _	50.000	_ % volume	of length / 100 =	50.000	% total for Scan 3
Scan 4	100.000	% Length X	50.000	_ % volume	of length / 100 =	50.000	% total for Scan 4
	Add totals an	nd divide by # sca	ns = 48.150	% total f	or 45 deg		
Other de	eq - 60	(to be used for	supplemental :	scans)			
The data	to be listed bel	low is for coverage	that was not ol	btained with	the 45 deg scans		
Scan 1	0.000	% Length X	0.000_	% volum	e of length / 100 =	0.000	% total for Scan 1
Scan 2	92.600	% Length X	100.000	% volum	e of length / 100 =	92.600	% total for Scan 2
Scan 3	0.000	% Length X	0.000	% volum	e of length / 100 =	0.000	% total for Scan
Scan 4	0.000	% Length X	0.000	% volum	e of length / 100 =	0.000	% total for Scan 4
		<del></del>		<del></del>			
<u>Percent</u>	complete cov	erage					
Add tota	ls for each scar	n required and divid	ie by # of scan	s to determin	ne;		
+48. <del>71.30</del> 0		r complete exam					
478 m		•					
			011		Doto: 41	מ או	
Site Fiel	d Supervisor:	the	7 · · · · ·	~	Date:	27-02	-



REV: 03



DWG:

ISI-3B



# **UT Pipe Weld Examination**

Si	ite/Unit:	PNGP	1	PI1	<del></del>		Pro	cedure:	ISI-UT	-16A			Outage No.:	PI1	RFO20	)02
Summa	ary No.:		30017	71		•	Procedu	re Rev.:	1				Report No.:	20	02U06	39
Worl	kscope:		ISI				Work Or	der No.:	0200	860			Page:	1	of	4
Code:		1989			(	Code Cat.:	B-J		Location	on:			Cont 695			
Drawing No.:			ISI-3	3B	<del></del>		Description: E	LBOW - PIPE		_						
System ID:	RH						_				,					
Component ID:	W-1		<del> </del>					s	ze/Length	n:	1.0" / 27"	Th	ickness/Diame	eter:	.8"	/8"
Limitations:	Welded	support	s locate	d at 90	degrees a	nd 270 de	grees.			Start	Time:	1606	Finish Ti	me: _	16	26
Examination S	Surface:	Insid	e 🗆	Out	side 🔽		Surface Cond	ition: Blended								
			<del></del>			- 47		<del></del>				••	D-4-1- N1-			
Lo Location:	Ex	tradose	of Elbo	<u>w</u>	Wo Loca	ation:	Centerline of V	VeldC	ouplant:		Sonotrace	40	Batch No	·: —	#00	143
Temp, Tool Mf	fg.:	Tela	atemp	<del></del>	Seria	l No.:	NSP 134	s	urface Ten	np.:	95	_°F				
Cal. Report No	o.:				20020	A113, 200	2CA114			-						
Angle Used	0	45	45T	60			]									
Scanning dB		46.0	52.0	78.0												
Indication(s):	Yes [	] No	✓			Sca	- an Coverage: Up	stream 🗹 D	ownstrear	n 🗹	cw 🗹	CCI	N 🗹			
Comments:																
60 Degree RL	L perform	ned in ar	eas of l	imitatio	ns only.											
-	•				•											
<b>-</b>		_			050 5											
	NAD 🔽	-	IND 🗆		GEO 🗌	_									<del></del>	
Percent Of Cov	verage O	btained >	> 90%:		No	<b>–</b>	Reviewed Previou	ıs Data:	Yes							
Examiner I	Level III			۶	Signature LIP. B	11/	Date	Reviewer	1		0	Sig	nature			Date
Blechinger, To								Clay, Sean P.	17	<u>تحلا</u>	CERP		Ly III		_//-	24-02
	Level II				Signature	U		Site Review		r	01.	Sig	nature			Date
Thomas, Travi	Level N				<i>Phon</i> Signature			Wren, Jerry P ANII Review		u	2.Cu	<del></del>	nature		<u>-25</u>	ーク之 Date
<b>J</b> 11101																



Site/Unit:	PNGP	1	PI1
Summary No.:		300	171
Workscope:		10	1

Procedure:	ISI-UT-16A
Procedure Rev.:	1

Outage No : P

PI1RFO2002 2002U069

Work Order No.: 0200860

Page:

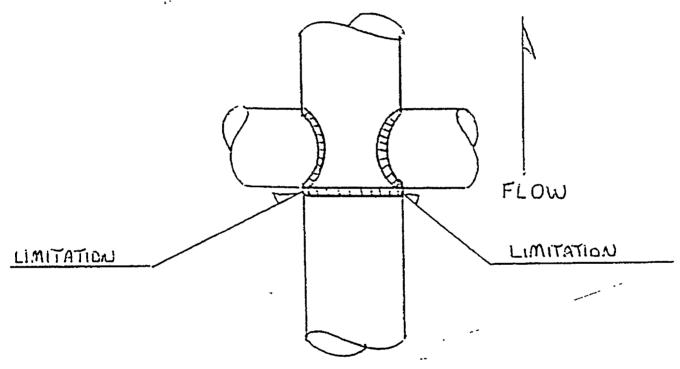
2 of 4

Description of Limitation:

Welded support limits exam at 90 degrees and 270 degrees for 5" at each location on the downstream scan and 4.5" at each location on the downstream side for the CW and CCW scans.

Sketch of Limitation:

J\lddeal\_Photos\PI1RFO2002\UT Photos\2002U069-1.bmp



Limitations removal requirements:

None

Radiation field: 20 mR

Examiner	Level III	Şīgnature ·	Date	Reviewer	Signature	Date
Blechinge	r, Todd P.	Jul. By	11/21/2002	Clay, Sean P.	Aluxon Lutt	11-24-02
Examiner	Level [[	Signature	Date	Site Review	Signature	Date
Thomas, 1	<b>Fravis</b>	Iran for-	11/21/2002	Wren, Jerry P.	Au C. Win	11-25-02
Other	Level N/A	Signature	Date	ANII Review	Signature	Date
N/A				Clow, Ron	IXCL	11/26/02



Site/Unit:	PNGP	1	Pl1	Proced	dure:	ISI-UT-16A	Outage I	No.:	PI1	RFO200	2
nmary No.:		30017	1	Procedure F	Rev.:	11	Report I	No.:	20	02U069	
Vorkscope: _		ISI		Work Order	No.:	0200860	– Pa	age:	3	of	4
					*						
<u>45 deg</u>											
Scan 1	100	.000	% Length X _	100.000	_ % volu	me of length / 100 =	100.000	<u>"</u> %	total fo	or Scan	1
Scan 2	63.	000	% Length X _	100.000	_ % volu	me of length / 100 =	63.000	%	total fo	or Scan	?
Scan 3	100	.000	% Length X _	91.600	_ % volu	me of length / 100 = _	91.600	%	total fo	or Scan	}
Scan 4	100	.000	% Length X _	91.600	_ % volu	me of length / 100 = _	91.600	%	total fo	or Scan	ļ
Other de The data		0 ed beld	_ (to be used for ow is for coverage			ith the 45 deg scans.					
<del>-</del>	to be list				otained w	ith the 45 deg scans. ume of length / 100 =	0.000		% total	for Scar	1
The data	to be list	ed belo	ow is for coverage	that was not ob	otained w		0.000			for Scar	
The data	to be list	ed belo	ow is for coverage % Length X	that was not ob	otained w	ume of length / 100 =			% total		2
The data Scan 1 Scan 2	0 0	ed belo	w is for coverage  Kength X  Length X	0.000 0.000	otained w % vol % vol	ume of length / 100 = ume of length / 100 =	0.000		% total % total	for Scar	3

# ATTACHMENT 19

# **Supplemental Report**

Report No.: 2002U069 Page:

Summary No.: 300171

Examiner: Blechinger, Todd P.

Level. III

Reviewer: Clay, Sean P.

Date: <u>//-25-02</u> Date: <u>//-25-</u>02

Examiner: Thomas, Travis

Level.

Site Review: Wren, Jerry P.

Other: N/A

Level: N/A

ANII Review: Clow, Ron

Date: 11/26/02

Comments: None

Sketch or Photo: J\lddeal\_Photos\PI1RFO2002\UT Photos\2002U069-1 jpg



ATTACHMENT 20 PAGE 1 OF 1



# **UT Pipe Weld Examination**

S	ite/Unit:	PNGP		PI1			Pr	ocedure:			Ou	tage No.: _	PI1RFO2002		02
Summ	ary No.:		3005	27			Procedu	ure Rev.:	4		Re	port No.:	20	02U07	5
Wor	kscope:		ISI				Work O	rder No.:	020086	0		Page:	1	of	5
Code:		1989				Code Cat.:	B-J		Location	•	Cor	nt A Vault			
Drawing No.:			ISI-1	2B			Description:	ELBOW - PU	JMP						
System ID:	RC						•								
Component ID:	W-6LS2	U							Size/Length:	2.0" / 118"	Thickn	ess/Diamet	er:	2.9" /	31"
Limitations:	No scar	ns on do	wnstrea	am side	due to co	onfiguration	n.		S	tart Time:	1045	Finish Tin	ne:	112	
Examination S	Surface:	Insid	e 🗌	Out	tside 🗹		Surface Con-	dition: Macl	ined			***			
Lo Location:	Ex	tradose	of Elbo	<u>w</u>	Wo Lo	cation:	Centerline of	Weld	Couplant:	Sonotrac	e 40	Batch No.:	;	#001	43
Temp. Tool M	fg.:	Tela	atemp		Seri	al No.:	NSP 178		Surface Temp	.: 75	_ °F				
Cal. Report N	o.:			20	02CA124	, 2002CA12	25, 2002CA126								
Angle Used	0	45	45T	60			1								
Scanning dB	46.3	84.0	84.0				1								
Indication(s):	Yes [	] No	<b>V</b>			Sca	an Coverage:    U	pstream 🔽	Downstream F	] cw ☑	ccw 🔽	1			
Comments:	_	_	_					<b></b>			00 <u>v</u>	,			
Scanned at r	eference	due to e	xcessiv	/e grain	noise.										
				, , g	1101001										
Results:	NAD 🔽	1	IND 🖂		GEO 🗆										
Percent Of Co		_	_		No	-	Reviewed Previou	us Data:	Yes						
Examiner	_evel				Namatura '		5-1-	I.S. :							
Blechinger, To	***		_	AUP.	Signature Bull			Reviewer Clay, Sean	P. ***	SAN	Signatu —	re J. III		11	Date
Examiner I	-evel N/	A			Signature			Site Review		Puh	Signatu	re	1.		<u>26-02</u> Date
Other I	-evel N/	A			Signature		Date	ANII Review	v J		Signatu			-28. 9/02	Date
								1					1112	7102	



Site/Unit:	PNGP	1	PI1	
Summary No.:		3005	27	_
Workscope:		IS	1	

Procedure: ISI-UT-11A Procedure Rev.:

Outage No.: PI1RF02002 Report No.: 2002U076

Work Order No:

0200860

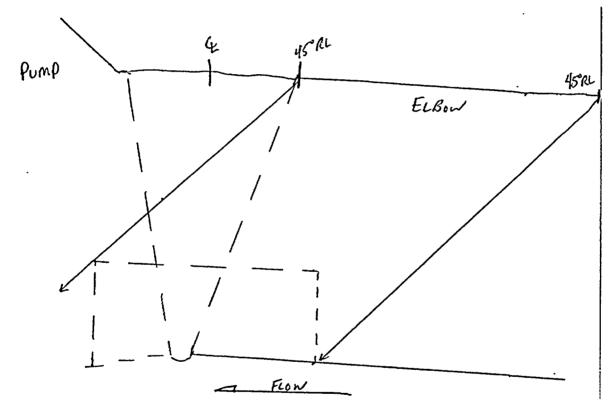
Page:

Description of Limitation:

No scans on pump side due to configuration.

Sketch of Limitation:

J\lddeal\_Photos\PI1RFO2002\UT Photos\2002U076-1.bmp



Limitations removal requirements:

None

Radiation field: 30 mR/hr

Examiner Blechinger	Level III	Signature ·		Reviewer Clay, Sean P.	Dorre	Signature	Date II 11-27-02
Examiner N/A	Level N/A	Signature	Date	Site Review Wren, Jerry P.	Oug	Signature	Date
Other N/A	Level N/A	Signature		ANII Review Clow, Ron	P.O.	Signature	Date



nary No.:	·	PI1	Proced	ure: ISI-UT-11A	_ Outage i	No.: PI1RFO200
,	3005	27	Procedure R	lev.: 4	_ Report i	Vo.: <u>2002U076</u>
orkscope:	IS		Work Order	No.: 0200860	_ Pa	age: <u>3</u> of
45 deg						
Scan 1	100.000	% Length X _	100.000	% volume of length / 100 =	100.000	% total for Scan
Scan 2	0.000	% Length X _	0.000	% volume of length / 100 =	0.000	% total for Scan
Scan 3	100.000	% Length X _	90.000	% volume of length / 100 =	90.000	% total for Scan
Scan 4	100.000	% Length X _	90.000	% volume of length / 100 =	90.000	% total for Scan
	Add totals a	nd divide by # sca	ns = 70.000	% total for 45 deg		
	Add totals a	nd divide by # sca	ns =	_ % total for 45 deg		
	Add totals a	nd divide by # sca	ns = <u>70.000</u>	_ % total for 45 deg		
	Add totals a	nd divide by # sca	ns =	% total for 45 deg		
	Add totals a	nd divide by # sca	ns = <u>70.000</u>	_ % total for 45 deg		
Other de		·	ns = 70.000 supplemental s	_ `		
	g <u>-</u> 0	(to be used for	supplemental s	_ `		
	g <u>-</u> 0	(to be used for	supplemental s	cans)		
	g <u>-</u> 0	(to be used for	supplemental s	cans)	0.000	% total for Scar
The data	g - 0 to be listed be 0.000	(to be used for low is for coverage	supplemental s	cans) tained with the 45 deg scans.	0.000	% total for Scar % total for Scar
The data	g - 0 to be listed be 0.000	(to be used for low is for coverage % Length X	supplemental s that was not ob 0.000	cans) tained with the 45 deg scans % volume of length / 100 = _		% total for Scar
The data Scan 1 Scan 2	g - 0 to be listed be 0.000 0.000	(to be used for low is for coverage % Length X % Length X	supplemental s that was not ob 0.000	cans) tained with the 45 deg scans.  % volume of length / 100 =  % volume of length / 100 =	0.000	

# ATTACHMENT 21 PAGE 4 OF

P

# **Supplemental Report**

Report No.:

2002U076

Page:

Summary No.: 300527

Examiner: Blechinger, Todd P.

Level: III

Reviewer: Clay, Sean P.

Date: 11-27-02

Examiner. N/A

Level: N/A

Level: N/A

Site Review: Wren, Jerry P. ANII Review: Clow, Ron

Date: 11-28-02 Date: 11/29/02

Other: N/A

Comments: None

Sketch or Photo: J \lddeal\_Photos\PI1RFO2002\UT Photos\2002U076-1.jpg



# ATTACHMENT 21 PAGE 5 OF

# NIVIC

# **Supplemental Report**

Report No.: 2002U076

Page: 5 of 5

Summary No: 300527

Examiner: Blechinger, Todd P.

Level. III

Reviewer: Clay, Sean P.

Date: 11-27-02

Examiner: N/A

N/A

Level N/A

Site Review: Wren, Jerry P.

Wren, Jerry P.

Date: 11-28-02

Other: N/A

Level. N/A

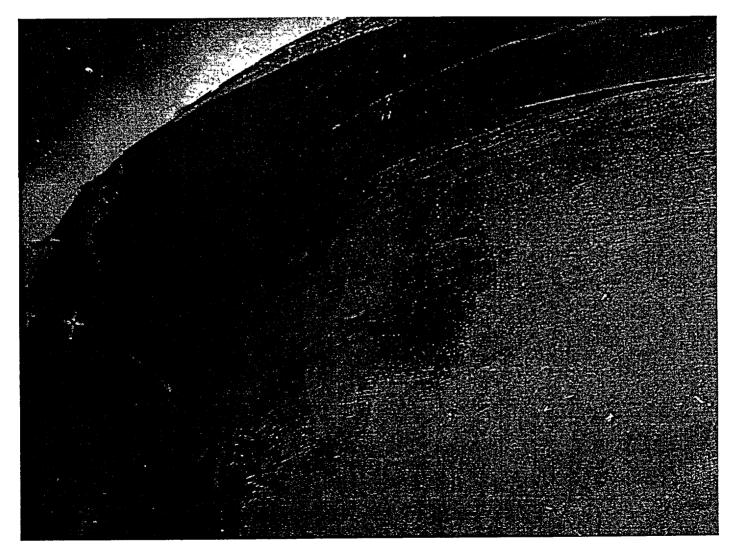
ANII Review: Clow, Ron

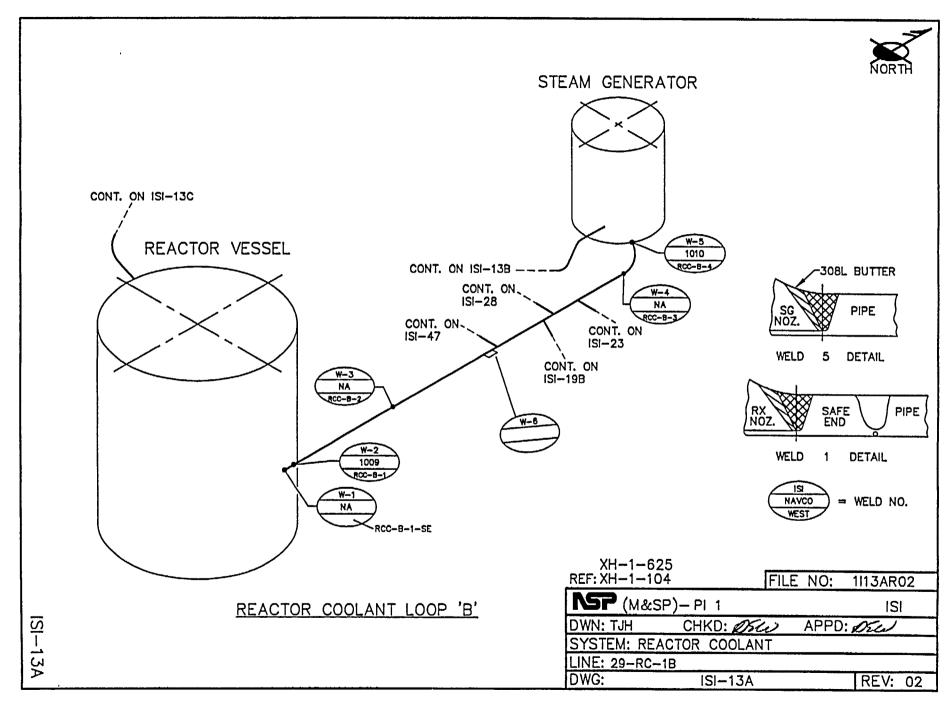
low, Ron Date:

Date: 11/25/02

Comments: None

Sketch or Photo: J.\lddeal\_Photos\PI1RFO2002\UT Photos\2002U076-3 jpg





ATTACHMENT 22 PAGE 1 OF |



# **UT Pipe Weld Examination**

8	Site/Unit:	PNGP /	PI1			Pro	cedure:	ISI-UT-	11A	Ou	tage No.:F	211RF020	002
Summ	nary No.:	30	0543			Procedu	re Rev.:	4		Re	eport No.:	2002U07	7
Wor	rkscope:		ISI			Work Or	der No.:	02008	60		Page: 1	of	5
Code:		1989		Co	ode Cat.:	B-J		Locatio	n:	Coi	nt B Vault	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Drawing No.:		IS	SI-13A	·	•	Description: R	ED 50° ELB	OW-NOZZLE					
System ID:	RC					· —							
Component ID:	W-5							Size/Length:	2.0" / 110	" Thickn	ess/Diameter	2.9"	/ 29"
Limitations:	No dow	nstream exa	ms due to	configuration	on. Up sc	an limited due t	o configurat	ion.	Start Time:	0935	Finish Time	10:	20
Examination	Surface:	Inside [	Ou	ıtside 🗹	***************************************	Surface Cond	ition: Machi	ned					
Lo Location:	7	Гор Dead Cer	nter	Wo Locat	ion:	Centerline of V	Veld	Couplant: _	Sonotra	ce 40	Batch No.: _	#00	143
Temp. Tool M	//fg.:	Telatem	p	_ Serial I	No.;	NSP 178		Surface Tem	p.: <u>90</u>	°F			
Cal. Report N	lo.:		2	002CA124, 2	002CA12	5, 2002CA126							
Angle Used	0	45 45	T 60										
Scanning dB	46.3	84.0 84	.0										
Indication(s):	Yes [	] No ☑			Scar	n Coverage: Up	stream 🗹	Downstream	□ cw 5	g ccw <u>v</u>	]		
Comments:													
Scanned at	reference	due to exce	ssive graiı	n noise. Mai	ntained 2	0% noise level d	luring exam						
							•						
Results:	NAD N	] IND	П	GEO □									
Percent Of Co	-	-	_	No	F	Reviewed Previou	s Data:	Yes					· · · · · · · · · · · · · · · · · · ·
Examiner	Level ()	<u> </u>		Signature, .		Date	Reviewer			Signatu	ıre		Date
Blechinger, T			I who	1P. Bly		11/26/2002	Clay, Sean	P. 451	WHILL			11-0	27-02
Examiner N/A	Level N	/A		Signature		Date	Site Review Wren, Jerry	<i>-</i>	en Pu	Signatu	ire IL		Date ぞっこ
Other	Level N	/A		Signature		Date	ANII Review		10//	Signatu	ire		Date
N/A							Clow, Ron		K CK			1/12	9/02



Work Order No.:

Site/Unit:	PNGP	1	PI1	
Summary No.:		3005	43	
Workscope:		IS		

Procedure: ISI-UT-11A

Procedure Rev.: 4

0200860

Outage No.: PI1RFO2002

Report No.: 2002U077

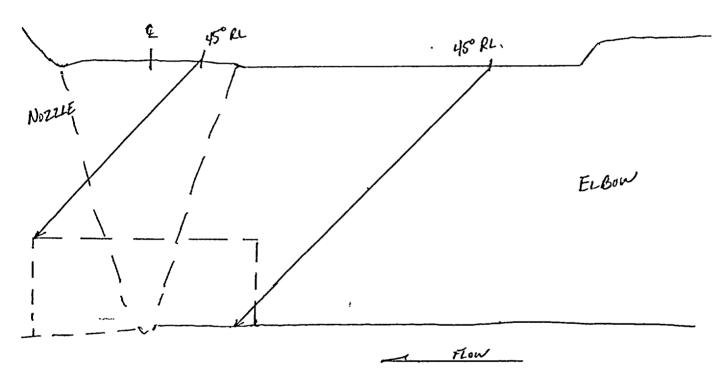
Page: 2 of 5

Description of Limitation:

Scans on elbow limited due to taper configuration. No scans on nozzle due to configuration.

Sketch of Limitation:

J:\Iddeal\_Photos\PI1RFO2002\UT Photos\2002U077-1.bmp



Limitations removal requirements:

None

Radiation field: 60 mR/hr

Examiner	Level	111	Signature	/ Date	Reviewer	/ _	Signature	Date
Blechinger,	Todd P.		2 glill RUY	11/26/2002	Clay, Sean P.	DEXT	L.TI	11-27-02
Examiner	Level	N/A	Signature	Date	Site Review		Signature_	Date
N/A					Wren, Jerry P.	Dant	· Who will	11-28-02
Other	Level	N/A	Signature	Date	ANII Review	/2/	Signature	, Date
N/A	•				Clow, Ron	180	1	11/29/02



_	PNGP /	PI1	Proced	dure: ISI-UT-11A	Outage N	lo.: PI1RFO2002
Summary No.:	30054	13	Procedure F	Rev.: 4	Report N	lo.: <b>2002U077</b>
Workscope:	ISI		Work Order	No.: <b>0200860</b>	Pag	ge: <u>3</u> of <u>5</u>
· · · · ·						
<u>45 deg</u>						
Scan 1	100.000	% Length X	84.600	% volume of length / 100 =	84.600	_ % total for Scan 1
Scan 2	0.000	% Length X	0.000	% volume of length / 100 =	0.000	_ % total for Scan 2
Scan 3	100.000	% Length X	90.000	% volume of length / 100 =	90.000	_ % total for Scan 3
Scan 4	100.000	% Length X	90.000	% volume of length / 100 =	90.000	_ % total for Scan 4
	Add totals an	id divide by # scan	s = 66.150	% total for 45 deg		
	•			<b>\</b>		
Other de		_ (to be used for s	• •	•		
i ne data	to be listed bel	ow is for coverage t	nat was not or	otained with the 45 deg scans.		
Scan 1	0.000					
		% Length X	0.000	% volume of length / 100 = _	0.000	% total for Scan 1
Scan 2	0.000	<pre>% Length X _ % Length X _</pre>	0.000	% volume of length / 100 = _ % volume of length / 100 = _	0.000	% total for Scan 1
Scan 2 Scan 3		<del></del>		<del></del>		
		% Length X	0.000	% volume of length / 100 =	0.000	% total for Scan 2
Scan 3	0.000	% Length X	0.000	% volume of length / 100 =% volume of length / 100 =	0.000	% total for Scan 2
Scan 3	0.000	% Length X	0.000	% volume of length / 100 =% volume of length / 100 =	0.000	% total for Scan 2 % total for Scan 3
Scan 3 Scan 4	0.000	% Length X _ % Length X _ % Length X _	0.000	% volume of length / 100 =% volume of length / 100 =	0.000	% total for Scan 2
Scan 3 Scan 4	0.000 0.000	% Length X % Length X % Length X	0.000 0.000	% volume of length / 100 =  % volume of length / 100 =  % volume of length / 100 =	0.000	% total for Scan 2
Scan 3 Scan 4	0.000 0.000	% Length X _ % Length X _ % Length X _	0.000 0.000	% volume of length / 100 =  % volume of length / 100 =  % volume of length / 100 =	0.000	% total for Scan 2
Scan 3 Scan 4	0.000 0.000 complete cove	% Length X % Length X % Length X	0.000 0.000	% volume of length / 100 =  % volume of length / 100 =  % volume of length / 100 =	0.000	% total for Scan 2
Scan 3 Scan 4  Percent	0.000 0.000 complete cove	% Length X % Length X % Length X erage required and divide	0.000 0.000 0.000	% volume of length / 100 =  % volume of length / 100 =  % volume of length / 100 =	0.000	% total for Scan 2

# ATTACHMENT 23

# **Supplemental Report**

Report No.:

2002U077

Page:

Summary No.: 300543

Examiner: Blechinger, Todd P.

Examiner: N/A

Other. N/A

Level: III Level: N/A

Level: N/A

Reviewer. Clay, Sean P.

Site Review: Wren, Jerry P.

ANII Review: Clow, Ron

Date: 11-27-02

Date: 11/29/02

Comments: None

Sketch or Photo: J\lddeal\_Photos\PI1RFO2002\UT Photos\2002U077-3 jpg



# ATTACHMENT 23

P

# **Supplemental Report**

Report No. 2002U077 Page:

Summary No.: 300543

Examiner: Blechinger, Todd P.

Level: III

Reviewer: Clay, Sean P.

Date: 11-27-02

Examiner: N/A

Level: N/A

Site Review: Wren, Jerry P.

Date: 11-28-02

Other: N/A

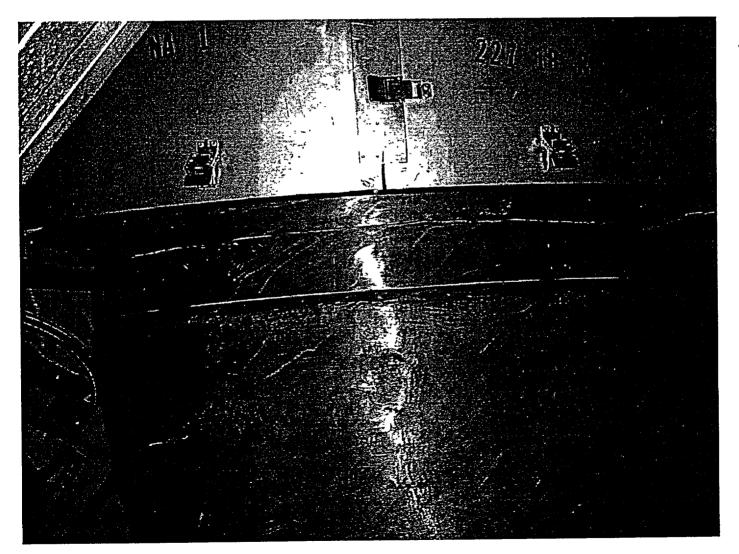
Level: N/A

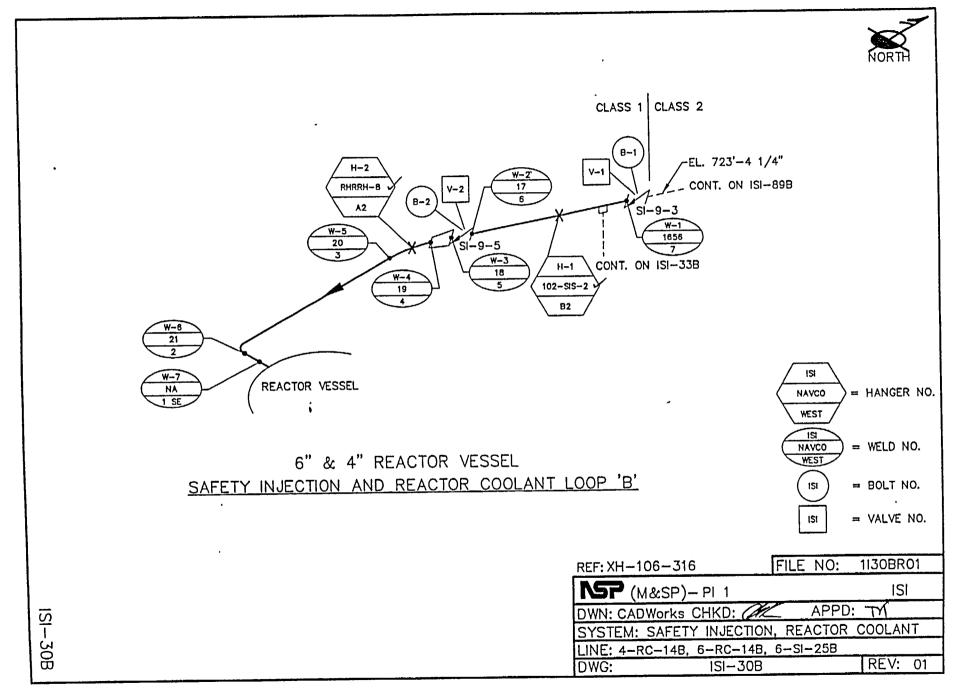
ANII Review: Clow, Ron

Date: 11/29/02

Comments: None

Sketch or Photo: J.\lddeal\_Photos\PI1RFO2002\UT Photos\2002U077-2 jpg





ATTACHMENT 24 PAGE I OF I



# **UT Pipe Weld Examination**

S	Site/Unit:	PNGP	1	PI1			Pro	cedure:	ISI-UT-	16A	Out	tage No.: _	PI1F	RFO20	02
Summ	ary No.:		30092	26			Procedu	re Rev.:	1		Re	port No.:	20	2009	6
Woi	rkscope:		ISI				Work Ord	der No.:	02008	60		Page:	1	of _	4
Code:		1989			с	ode Cat.:	B-J		Location	n:	Cont	Sand Plug			
Drawing No.:			ISI-3	0B			Description: B	ENT PIPE -	SAFE END						
System ID:	RC						_								
Component ID:	W-6								Size/Length:	.85" / 13.75	" Thickn	ess/Diamet	er:	.56"	/ 4"
Limitations:	See att	ached lin	nitation	record.						Start Time:	1140	Finish Tim	ie:	115	57
Examination 9	Surface:	Insid	е 🔲	Outs	ide 🗹		Surface Cond	ition: <u>Blend</u>	ed						
Lo Location:		Top Dead	l Center	<u> </u>	Wo Loca	tion:	Centerline of V	Veld	Couplant: _	Sonotrac	e 40	Batch No.:		#001	143
Temp. Tool M	lfg.:	Tela	atemp		Serial	No.:	NSP 173		Surface Tem	p.: <u>80</u>	°F				
Cal. Report N	lo.:				2002C	A146, 2002	2CA147								
Angle Used	0	45	45T	60	70RL										
Scanning dB		53.0	53.0		82.0	i.									
Indication(s):	Yes [	] No	$ \mathbf{V} $			Sca	n Coverage: Up	stream 🗹	Downstream	<b>⊘</b> cw <b>⊘</b>	ccw 🔽	]			
Comments:															
70 Degree su	uppleme	ntal exam	n from u	pstream	side utiliz	ed as a g	ood practice.								
Results:	NAD [	7		(	GEO □										
Percent Of Co	verage C	btained >	> 90%:		No	F	Reviewed Previou	s Data:	Yes						
Examiner	Level II			ŞI	gneture	/)	Date	Reviewer	1	^	Signatu	re			Date
Auer, Robert				Ken	67/1/6		11/30/2002			HOTEL	2	LUJII		_/52	2-01-02
Examiner N/A	Level N	/A		' Si	greture			Site Review Wren, Jerry		run P.	Signatu	re Lv. [[[	,		Date
	Level N	/A		Si	gnature			ANII Review		001	Signatu	re		0-2	Date
N/A								Clow, Ron		CER			. 1	2/2/0	

ATTACHMENT 25 PAGE 1 OF 4



Work Order No.:

Site/Unit:	PNGP	1	PI1	
Summary No :		300	926	
Workscope:		IS	SI	

Procedure: ISI-UT-16A
Procedure Rev.: 1

0200860

Outage No.: PI1RFO2002

Report No.: 2002U096

of

Page:

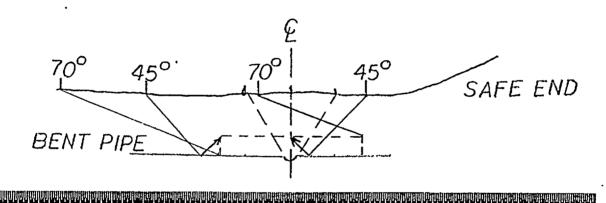
Description of Limitation:

Joint configuration and proximity of safe-end taper limit scan 2 to 0.4" from weld toe.

Sketch of Limitation:

J.\iddeal\_Photos\PI1RFO2002\UT Photos\2002U096-1.bmp

W-6



FLOW

None

Radiation field: > 500 mR/hr

Limitations removal requirements:

Examiner	Level	11	( Signature)	Date	Reviewer	1	Signature	Date
Auer, Robe	rt G.		Rout Xla	11/30/2002	Clay, Sean P.	ASSIGNATION	LuIII	1201-02
Examiner	Level	N/A	Signature	Date	Site Review		Signature	Date
N/A					Wren, Jerry P.	Aus P.V	No in III	12-2-02
Other	Level	N/A	Signature	Date	ANII Review	001	Signature	Date
N/A			•		Clow, Ron	180		12/2/02



		PI1	Procedu	re: ISI-UT-16A	Outage No.	: PI1RFO2002
ımmary No.: _	30092	26	Procedure Re	v.: <u>1</u>	_ Report No.	:2002U096
Workscope: _	ISI		Work Order N	o.: <u>0200860</u>	Page	: <u>3</u> of <u>4</u>
45 deg						
Scan 1	100.000	% Length X _	64.000	% volume of length / 100 =	64.000	% total for Scan 1
Scan 2	100.000	% Length X _	37.500	% volume of length / 100 =	37.500	% total for Scan 2
Scan 3	100.000	% Length X	100.000	% volume of length / 100 =	100.000	% total for Scan 3
Scan 4	100.000	% Length X _	100.000	% volume of length / 100 =	100.000	% total for Scan 4
	Add totals a	nd divide by # sca	ns = <u>75.375</u>	% total for 45 deg		
_						
Other de	g - 0	(to be used for	supplemental so	cans)		
Other de The data	<del></del>	<del>-</del> '		cans) ained with the 45 deg scans.		
	<del></del>	<del>-</del> '				
	<del></del>	<del>-</del> '	that was not obt		0.000	_ % total for Scan 1
The data	to be listed be	elow is for coverage	that was not obt	ained with the 45 deg scans.	0.000	_
The data	0.000	elow is for coverage % Length X	0.000 0.000	ained with the 45 deg scans.  _ % volume of length / 100 =		_ % total for Scan 1 _ % total for Scan 2 _ % total for Scan 3
The data Scan 1 Scan 2	0.000 0.000	% Length X	0.000 0.000 0.000	ained with the 45 deg scans.  % volume of length / 100 =  % volume of length / 100 =	0.000	_ _ % total for Scan 2 _ % total for Scan 3
Scan 1 Scan 2 Scan 3	0.000 0.000	% Length X % Length X % Length X	0.000 0.000 0.000	ained with the 45 deg scans.  % volume of length / 100 =  % volume of length / 100 =  % volume of length / 100 =	0.000	- _ % total for Scan 2 _ % total for Scan 3
Scan 1 Scan 2 Scan 3	0.000 0.000	% Length X % Length X % Length X	0.000 0.000 0.000	ained with the 45 deg scans.  % volume of length / 100 =  % volume of length / 100 =  % volume of length / 100 =	0.000	- _ % total for Scan 2 _ % total for Scan 3
Scan 1 Scan 2 Scan 3 Scan 4	0.000 0.000	% Length X % Length X % Length X % Length X % Length X	0.000 0.000 0.000	ained with the 45 deg scans.  % volume of length / 100 =  % volume of length / 100 =  % volume of length / 100 =	0.000	- _ % total for Scan 2 _ % total for Scan 3
Scan 1 Scan 2 Scan 3 Scan 4	0.000 0.000 0.000 0.000	% Length X % Length X % Length X % Length X % Length X	0.000 0.000 0.000	ained with the 45 deg scans.  % volume of length / 100 = % volume of length / 100 = % volume of length / 100 = % volume of length / 100 =	0.000	- _ % total for Scan 2 _ % total for Scan 3
Scan 1 Scan 2 Scan 3 Scan 4	0.000 0.000 0.000 complete cov	% Length X % Length X % Length X % Length X % Length X	0.000 0.000 0.000	ained with the 45 deg scans.  % volume of length / 100 = % volume of length / 100 = % volume of length / 100 = % volume of length / 100 =	0.000	- _ % total for Scan 2 _ % total for Scan 3
Scan 1 Scan 2 Scan 3 Scan 4	0.000 0.000 0.000 complete cov	% Length X % Length X % Length X % Length X % Length X	0.000 0.000 0.000	ained with the 45 deg scans.  % volume of length / 100 = % volume of length / 100 = % volume of length / 100 = % volume of length / 100 =	0.000	_ _ % total for Scan 2
Scan 1 Scan 2 Scan 3 Scan 4	0.000 0.000 0.000 complete cov	% Length X % Length X % Length X % Length X % Length X verage an required and divider complete exam	0.000 0.000 0.000 0.000	ained with the 45 deg scans.  % volume of length / 100 = % volume of length / 100 = % volume of length / 100 = % volume of length / 100 =	0.000	_ _ % total for Scan 2 _ % total for Scan 3

# Report No.: 2002U096 Page: Date: 12-2-02 .Date: 12/2/02

ATTACHMENT 25

# **Supplemental Report**

Summary No.: 300926

Examiner: Auer, Robert G.

Level: II

Reviewer: Clay, Sean P.

Examiner: N/A

Level: N/A

Site Review: Wren, Jerry P.

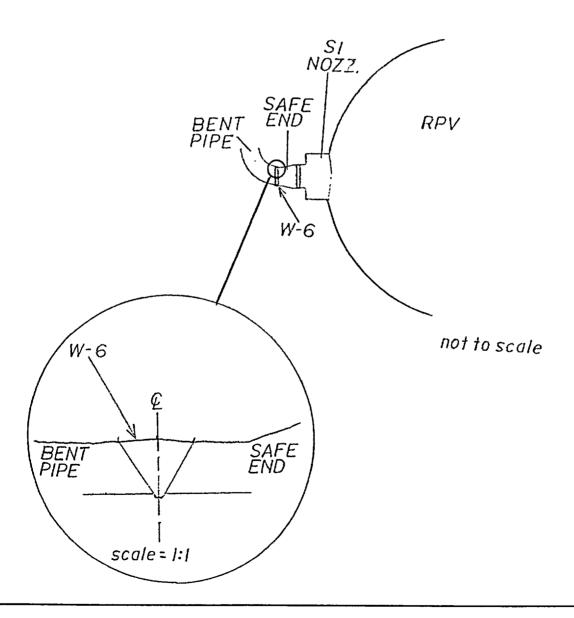
Other: -N/A

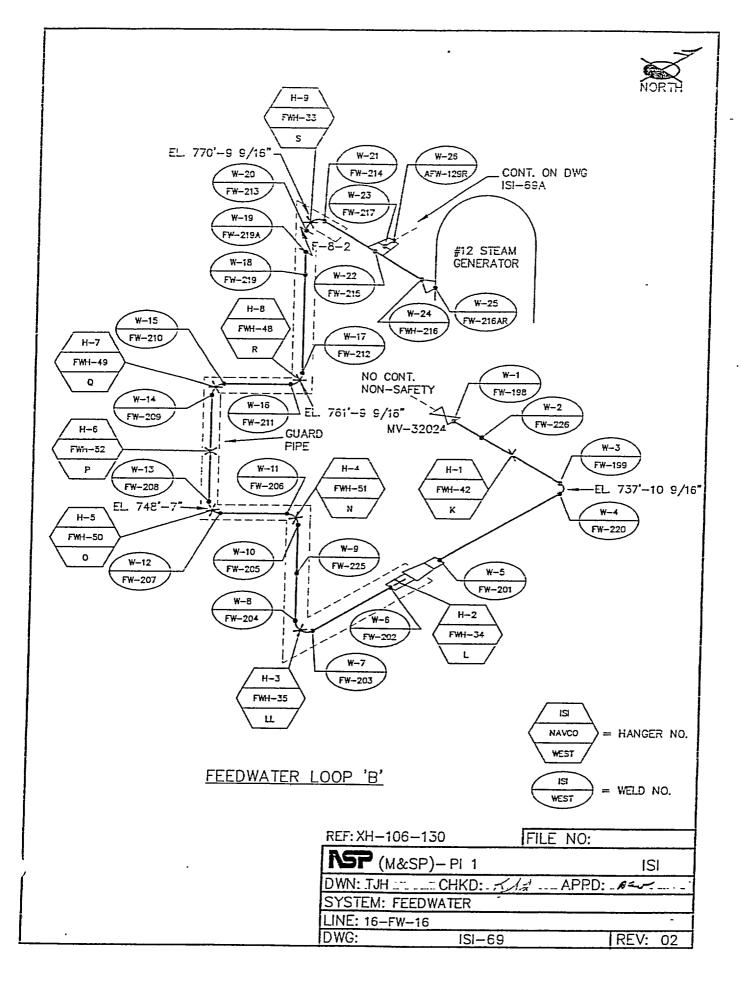
Level: N/A

ANII Review: Clow, Ron

Comments: Component drawing, photo not available due to location and ALARA concerns.

Sketch or Photo: J.\lddeal\_Photos\PI1RFO2002\UT Photos\2002U096-2 bmp





# ATTACHMENT 27 PAGE 1 OF 4



# **Magnetic Particle Examination**

Site	/Unit. Pr	NGP /	PI1			Procedu	re:	ISI-MT	-1	_ Ou	tage No.: _	PI1F	RFO20	)02
Summary	/No.:	32	21703		Proc	cedure Re	·v.:	12		_ Re	eport No.: _	200	02M03	34
Workso	:ope:		ISI		Worl	k Order No	o.:	020086	50	<u> </u>	Page: _	1	of _	4
Code:	1	989		Code	Cat.:	c-c	Lo	ocation:			Cont 735			
Drawing No.:		ISI-	-69		Des	scription:	INTEGRAL	. ATTAC	HMENT (S	SEISMIC	RESTRAIL	(TV		
System ID:	FW					-								
Component II	D: H-21A									Size/l	Length:		N/A	
Limitations:	Exam	area has					rd pipe and			— liguratio	n			
Light Meter	r Mfg.:					Serial No	o.;			Illumin	ation:			uw/cm²
Temp. Tool	I Mfg.:					Serial No	o.:				e Temp.:			
Resolution:			Not Use				<del></del>				_			
Lift Block S	erial No.:						Surface Co	ndition:						
Lo/Wo Loc	ation:						Field One	ntation: .						
Magnetic F	Particle Ma	aterial										_		
Brand					v	Wet 🗌	Mixed:	Yes [		Ap	oplied By:	D	Ousting	<b>3</b> 🗆
Type:					ŀ	Dry 🗌		No [				Sp	oraying	<b>a</b> 🗆
Batch No.:				FI	luoresc	ent 🗌	With:					Fk	ooding	) []
Equipment	:	<u> </u>							Serial No					
Head Shot				Ampere	∋s		Fixed Sp	acing			A	C 🗆	DC	
Adj. Spacin	ng 🗌			inches			Encirclin	g Coils			Turr	าร		
Prods. Spa	icing 🗌			inches			Current (	(machine	setting)				Ampe	eres
Indication	Loc	Loc	Diameter	Length	7	Гуре				Remarks	5			
No	L	w		İ	<b>]</b>	R/L								
			1		<del>                                     </del>		1							
	!	<del> </del>		-	<del> </del>		<del> </del>							
	<u> </u>			ļ!	<u> </u>									
Comments:	: » l. »	1				1.1.	<u> </u>							
Comments:	NO PI	(CV:UN	S WWW	r. Su	NH I	121103	<b>&gt;</b> .							
Results:	NA	/D 🗌	IND [	J	GEO									
Percent Of	Coverage	Obtained	> 90%:		No		Reviewe	d Previou	ıs Data:		N/A			
Examiner	Level	<u> </u>	Sign	aturo		Date	Reviewer				Signature			Date
Timm, Jere			while	<u>/</u>	11/		Halling, Da		J. J. J.	<u>ball</u>		<u> ಬಂಬ</u>	<u>30</u>	
Examiner N/A	Level	N/A /	Sign	ature		L	Site Review		> (	0.15	Signature	Ш		Date
Other	Level	AT/A	Sign	ature			Wren, Jerr ANII Review		Jun 9	7,007	Signature		2-1-0	Z_ Date
N/A	20.0.	WA	O.g	aturo			Clow, Ron		K (C)	1	Jignataro	12].	102	Daic



# **Supplemental Report**

Report No.:

2002M034

Page:

Summary No.: 321703

Examiner: Timm, Jeremy T.

Level: III

Reviewer: Halling, David

Examiner: N/A

Level: N/A

Site Review: Wren, Jerry P

Date: 12/1/02

Other: N/A

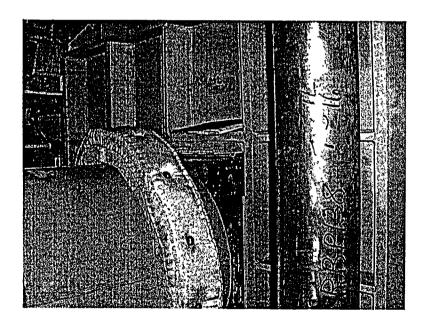
N/A Level:

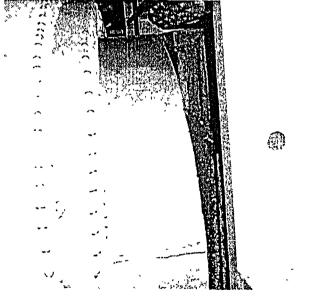
ANII Review: Clow, Ron

Comments: None

Sketch or Photo: J:\lddeal\_Photos\PI1RFO2002\MT Photos\2002M034-1 jpg

J'\lddeal\_Photos\PI1RFO2002\MT Photos\2002M034-2.jpg







Site/Unit:	PNGP	1	PI1
Summary No.:		32170	03
Workscope:		ISI	

Procedure:	ISI-MT-1
Procedure Rev.:	12
Work Order No.:	0200860

Outage No : PI1RF02002

Report No.: 2002M034

of

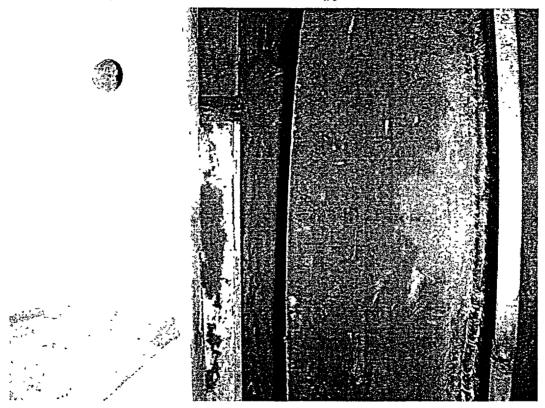
Page:

Description of Limitation:

Examination area has no access due to permanent guard pipe and penetration configurations.

Sketch of Limitation:

J.\lddeal\_Photos\PI1RFO2002\MT Photos\2002M034-3 jpg



Limitations removal requirements:

Guard pipe cannot be removed.

Radiation field: N/A

Examiner	Level	111	/Signature,	Date	Reviewer		Signature	Date
Timm, Jere	my T.		motor	11/29/2002	Halling, David	SA.	Unllen a	20.02
Examiner	Level	N/A	Signature	Date	Site Review	7	Signature	Date
N/A					Wren, Jerry P	Acry !	WM LUI	12-1-02
Other	Level	N/A	Signature	Date	ANII Review		Signature	Date
N/A					Clow, Ron	00		12/1/02



# **Determination of Percent Coverage for Surface Examinations**

Site/Unit:	PNGP	/ PI1	<del></del>	Procedure:	ISI-MT-1	Outag	e No.: _	PI1	RFO2	002
Summary No.:		321703		Procedure Rev.:	dure Rev.: 12 Report			No.: 2002M03		
Workscope:		ISI	<del></del>	Work Order No.:	0200860		Page: _	4	of	4
	Length	hown in appli 0.000 ea required		eference drawing) idth 0.000 square inches						
Coverage A			0.000	on in (Tabel and a			•			
	Area exar		0.000	_ sq in. / Total area re	_	0.000	_ sq in. -	•		
=	Percent c	overage	<u>O</u> Sav	% (area required - ar UH 1   ZY   03	ea of limitations =	area examined	i)			

## To determine length of a circumferential weld

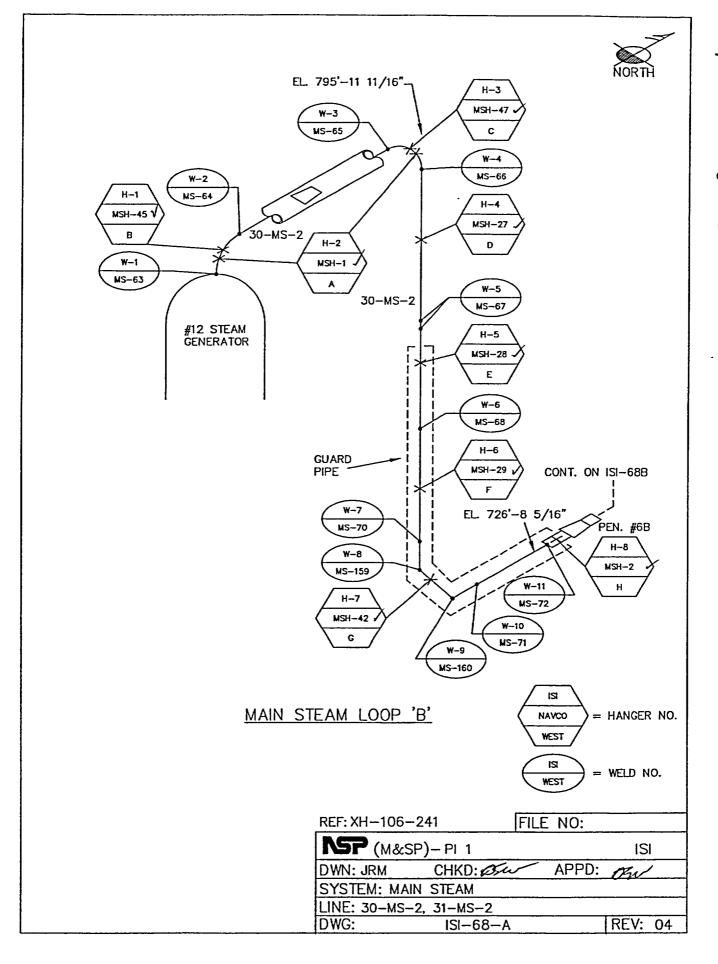
Note - Diameter refers to actual external diameter not pipe size (see table below)

Diameter \_\_\_\_\_ \* (Pi) 3.1416

= Length \_\_\_\_\_ inches

Pipe Size	Actual Diameter	(Length) Circumference	Pipe Size	Actual Diameter	(Length) Circumference
2	2.375	7.46	12	12.75	40.06
2.5	2 875	9.03	14	14.0	43.98
3	3.5	11.0	16	16.0	50.27
3.5	4.0	12.57	18	18.0	56.55
4	4.5	14.14	20	20.0	62.83
5	5.563	17.48	22	22.0	69.12
6	6.625	20.81	24	24.0	75.40
8	8 625	27.10	30	30.0	94.25
10	10.75	33.77			

Date: 12-1-02



# TACHMENT 29 PAGE 1 1

# NMC

# **Magnetic Particle Examination**

Site	/Unit:I	PNGP /	PI1		Procedu	re:	ISI-MT-	1	Outage No.: _	PIII	RF02	002
Summary	'No.:	32	321594 Procedure Rev		ev.:	12		Report No.:	20	2002M035		
Workso	cope:	<u>-</u>	ISI		Work Order N	o.:	020086	0	Page:	1	of	3
Code:		1989		Code	Cat.: C-C	L	ocation:		Cont 715			
Drawing No.:		ISI-	68A		Description:	INTEGRAL	ATTACI	HMENT (	ANCHOR ELBOW /	8)		
System ID.	MS											-
Component I	D: <b>H-7</b> 1 <i>A</i>	\		Diso.	rd.				Size/Length:		N/A	
Limitations:	Exan	n area und	ler permar	$\circ$		HH 1/21/	હ					
Light Meter	Mfg.:				Serial N	o.:			Illumination:			uw/cm²
Temp. Too						o.:			Surface Temp.:			
Resolution:			Not Use						· •			
Lift Block S	erial No.	<u> </u>				Surface Co	ndition:					
Lo/Wo Loc	ation:					Field Orie	ntation:					
Magnetic F	Particle M	Material										
Brand:				<del></del>	Wet 🗌	Mixed.	Yes [	]	Applied By:	ľ	Dustin	g 🔲
Туре:					Dry 🗌		No [	]		Sį	prayin	g 🔲
Batch No.:					uorescent 🗌	With:			<u> </u>	F	loodin	g 🔲
Equipment	: <u></u>								o.:			
Head Shot				Ampere		Fixed Sp				c 🗆	DC	
Adj. Spacin	ıg 🗌			inches		Encirclin	g Coils		Turr	าร		
Prods. Spa	cing 🔲			inches		Current (	(machine	setting)			Amp	eres
Indication	Loc	Loc	Diameter	Length	Туре				Remarks		<del></del> -	
No.	L	l w			R/L							
					· · · · · · · · · · · · · · · · · · ·	<del>                                     </del>		•				
· · · · · · · · · · · · · · · · · · ·		-				<u> </u>	· · · · ·					
									····	<del></del>		
				•								
Comments:	·	····(aiÀD	112 da	des C	حمايط، اديم	<u> </u>	<del></del> . <del>.</del>		· · · · · · · · · · · · · · · · · · ·			
Commence	. No	previo	us un	<i>μ</i> α. 8	nut Italoz	•						
Results:	N	AD []	IND [		GEO 🗌							
Percent Of	Coverage	e Obtained	l > 90%:		10	Reviewe	d Previou	s Data:	N/A			
Examiner	Level		Sign	ature	Date	Reviewer		$\widehat{}$	, Sjgnature			Date
Timm, Jere			~~~	for_	11/29/2002			<u> O</u> 1	dolly	<u>N</u>	<u> </u>	1.
Examiner N/A	Level	N/A	/ / Sign	ature	Date	Site Review		<b>A</b> -	O Signature	TII.	-	Date
Other	Level	N/A	Sian	ature	Date	Wren, Jerr		, ru	Signature		2-1-	Date
N/A		WA	3			Clow, Ron		2	1	1.	21,16	



Site/Unit.	PNGP	1	Pl1
Summary No.:		321	594
Workscope:		IS	SI

Procedure: ISI-MT-1 Procedure Rev.: 12 Work Order No.: 0200860

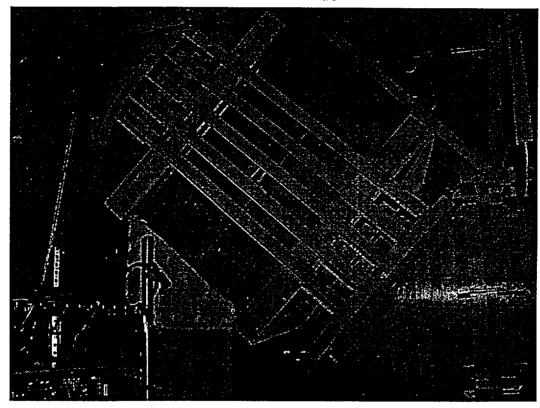
Outage No.: PI1RF02002 Report No.: 2002M035 Page:

Description of Limitation:

Entire examination area under permanent guard pipe.

Sketch of Limitation:

J \lddeal\_Photos\PI1RFO2002\MT Photos\2002M035-1 jpg



Limitations removal requirements:

Permanent guard pipe cannot be removed.

Radiation field: N/A

Examiner	Level	111	Signature,	Date	Reviewer	Signature	Date
Timm, Jere	my T.		(mx 140	11/29/2002	Halling, David A.	(1) A. Halli	10030,00
Examiner	Level	N/A	<b>S</b> ignature	Date	Site Review	Signature	Date
N/A			•		Wren, Jerry P.	Ant. Un	12-1-02
Other	Level	N/A	Signature	Date	ANII Review	Signature	Date
N/A					Clow, Ron	1500	12/1/02



### **Determination of Percent Coverage for Surface Examinations**

Site/Unit: Summary No.:			Pr	Procedure: ISI-MT-1 Procedure Rev.: 12		Outage No.:		PI1RFO2002 2002M035			
Workscope:			Work Order No.:		0200860	Page:	3	of	3		
Area Requi	red (as shown	in applicable c	ode referer	nce drawing)							

Coverage	Achieved
----------	----------

Area examined	0.000	sq. in. / Total area required (100%)	0.000	sq. in.
= Percent coverage	0	% (area required - area of limitations =	area examin	— ed)
	SI	WH 1/24/03		

### To determine length of a circumferential weld

Note - Diameter refers to actual external diameter not pipe size (see table below)

Diameter \_\_\_\_\_\_ \* (Pı) 3.1416 = Length 0.000 inches

Pipe Size	Actual Diameter	(Length) Circumference	Pip Size		(Length) Circumference
2	2.375	7.46	12	12.75	40.06
2.5	2.875	9.03	14	14.0	43.98
3	3.5	11.0	16	16.0	50.27
3.5	4.0	12.57	18	18.0	56.55
4	4.5	14.14	20	20.0	62.83
5	5.563	17.48	22	22.0	69.12
6	6.625	20.81	24	24.0	75.40
8	8.625	27.10	30	30.0	94.25
10	10.75	33.77	Ī		

Date: 12-1-02

# ATTACHMENT 30 PAGE 1 OF 4



### **Magnetic Particle Examination**

Site	/Unit: P	NGP /	PI1		Procedure		ISI-MT-	1	Outage No.: PI11		1RFO2002	
Summary	No.:	32	21705		Procedure R	ev.:	12		Report No.:	200	2M03	6
Workso	cope:		ISI		Work Order N	lo.:	020086	0	Page:	1	of _	4
Code:	•	1989		Code	Cat.: C-C	: Lo	ocation:	**,:	Cont 735			
Drawing No.:		ISI	-69		Description:	INTEGRAL	ATTACH	IMENT (	ANCHOR ELBOW)			
System ID:	FW									-		
Component I	D: <b>H-7</b> IA								Size/Length:			
Limitations:	Entire	examina	tion area	under pe	rmanent guard	l pipe.						
Light Meter	Mfg:		· · · · · · · · · · · · · · · · · · ·		Serial N	lo.:			Illumination:		u	w/cm²
Temp. Too	I Mfg:								Surface Temp.:			°F
Resolution:	:		Not Us	ed					_			_
Lift Block S	erial No.:	-				Surface Co	ndition:					
Lo/Wo Loc	ation:	<del> </del>				Field Orie	ntation: _					
Magnetic F	Particle M	aterial										
Brand:				_	Wet 🗌	Mixed:	Yes [	]	Applied By:	D	usting	
Type:				_	Dry 🗌		No 🗌	]		Sp	raying	
Batch No.:				FI	uorescent 🗌	With:				Fic	oding	
Equipment:								Serial No	o.:			
Head Shot		-		Ampere	s	Fixed Sp	acing		AC		DC	
Adj. Spacin	g 🗆			inches		Encirclin	g Coils		Turn	IS		
Prods. Spa	cing 🔲		·	inches		Current (	machine	setting)		<del></del>	Ampe	res
Indication	Loc	Loc	Diameter	Length	Туре			<u> </u>	Remarks			
No.	L	w			R/L	İ						
						<u> </u>						
						<del> </del>						
		<u> </u>							<del></del>			
										-		
Comments:	No p	reviou	s data	· 8M+	1/21/03	l	·		<del>-</del>			1
Results:		AD 🗌	IND [		GEO 🗌							
Percent Of	Coverage	Obtained	> 90%:	!	No .	Reviewed	d Previous	s Data:	N/A			<del></del>
Examiner	Level	111	// Sign	aluje	Date	Reviewer		$\overline{}$	Signature			Date
Timm, Jere	my T.		mes			Halling, Da	vid A.	(V)	Lella A. A.		<u> </u>	
Examiner N/A	Level	N/A	Sign	ature	Date		( )	~	P. W. Signature LV-Z	II.		Date
Other	Level	N/A	Sign	ature	Date	Wren, Jerr ANII Review		rey	Signature	lo		Date
N/A		IVA	Jigit			Clow, Ron		X	Olymature	12	1.10	



Work Order No.:

Site/Unit:	PNGP	1	PI1	
Summary No.:		3217	705	
Workscope:		IS		

Procedure: ISI-MT-1
Procedure Rev.: 12

0200860

Outage No.: Report No.: PI1RFO2002 2002M036

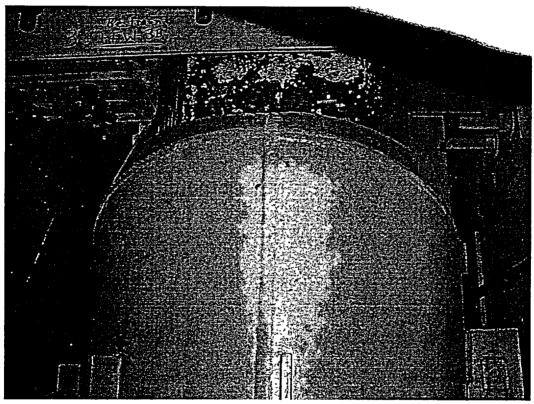
Page: 2 of 4

Description of Limitation:

Weld to be examined under permanent guard pipe.

Sketch of Limitation:

J \lddeal\_Photos\PI1RFO2002\MT Photos\2002M036-1.jpg



Limitations removal requirements:

Guard pipe is permanent and cannot be removed.

Radiation field: N/A

Examiner	Level	111	Signature	Date	Reviewer	Signature	Date
Timm, Jere	my T.		hor	<b>311/29/2002</b>	Halling, David A.	(1) A Hally	470300
Examiner	Level	N/A	Signature	Date	Site Review	Signature	- Date
N/A			·		Wren, Jerry P.	Dry P.Whi	12-102
Other	Level	N/A	Signature	Date	ANII Review	Signature	Date
N/A			···		Clow, Ron	JU	12/1/02

### **Supplemental Report**

Report No:

2002M036

Page.

Summary No.: 321705

Examiner: Timm, Jeremy T.

Level. III

Reviewer: Halling, David A.

Date: Nov. 30, 02

Examiner N/A

Level N/A

Site Review: Wren, Jerry P.

Date: 12-1-02

Other: N/A

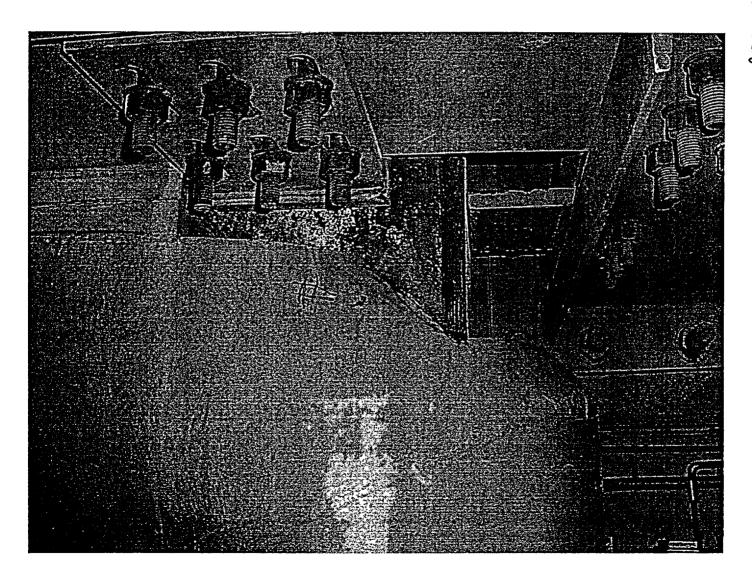
Level: N/A

ANII Review: Clow, Ron

Date: 12/1/02

Comments None

Sketch or Photo: J.\lddeal\_Photos\PI1RFO2002\MT Photos\2002M036-2 jpg





### **Determination of Percent Coverage for Surface Examinations**

Site/Unit:	PNGP	1	PI1			Pr	ocedure:		ISI-MT-1		Out	age No.:	PI1	RF02	002
Summary No.:	mmary No.: 321705				Procedu	ure Rev.:		12		_ Re	port No.:	20	002M0	36	
Workscope:		Work Order No.: 02008			0200860		_	Page:	4	of	_4				
Area Requ	ired (as s Length = Total A		0.000		Widt	h	o.000 o.ooo	 S							
Coverage	Achieved Area exa			0.000		sq in./	Total are	ea requir	ed (100%)		0.000	sq. in	ı <b>.</b>		
=			-		$\overline{}$				of limitation	s = area	a exami				

### To determine length of a circumferential weld

Note - Diameter refers to actual external diameter not pipe size (see table below)

Sm# 1/24/03

Diameter <u>0.000</u> \* (Pi) 3.1416

= Length \_\_\_\_\_ o.000 \_\_\_\_ inches

Pipe Size	Actual Diameter	(Length) Circumference	Pipe Size	Actual Diameter	(Length) Circumference
2	2.375	7.46	12	12.75	40.06
2.5	2.875	9.03	14	14.0	43.98
3	3.5	11.0	16	16.0	50.27
3.5	4.0	12.57	18	18.0	56.55
4	4.5	14.14	20	20.0	62.83
5	5.563	17.48	22	22.0	69.12
6	6.625	20.81	24	24.0	75.40
8	8 625	27.10	30	30.0	94.25
10	10.75	33.77			

Am P. Wh 20. [1] Date: 12-1-02.

## DENT 31 PAGE 1

## NMC

### **Magnetic Particle Examination**

Site/	Unit: Pl	NGP /	Pl1		Procedu	re:	ISI-MT-	1	Outage No.: _	PI1I	RFO20	002
Summary	No.:	32	1707		Procedure Re	v.:	12		Report No.: _	20	02M0	38
Workso	ope:		ISI		Work Order N	o.:	020086	0	Page: _	1	of _	3
Code:	1	989		Code (	Cat.: C-C	Lo	ocation:		Cont 735			
Drawing No:		ISI-	69		Description:	INTEGRAL	ATTACH	MENT (AN	CHOR ELBOW)			
System ID.	FW						,	•				
Component II	D. <b>H-4IA</b>								Size/Length:		N/A	
Limitations:	Entire	exam ar	ea under p	ermanen	t guard pipe.							
Light Meter	Mfg.:				Serial N	o.:			llumination:			uw/cm²
Temp. Tool									Gurface Temp.:			°F
Resolution:			Not Use	d								
Lift Block S	erial No.:					Surface Co	-					
Lo/Wo Loc	ation:				<del></del>	Field Orie	ntation:					
Magnetic F	Particle M	aterial										
Brand.					Wet 🗌	Mixed	Yes [	)	Applied By:	1	Dustin	g 🗌
Type:				_	Dry 🗌		No [	]		S	prayin	g 🗆
Batch No.:				FI	uorescent 🗌	With: _				F	loodin	g 🗌
Equipment.								Serial No.:				<del></del>
Head Shot				Ampere	s	Fixed Sp	pacing			c 🗆	DC	
Adj. Spacin	ig 🗌			ınches		Encirclin	ng Coils		Tur	ns		
Prods. Spa	cing 🗌			inches		Current	(machine	setting)	O		Amp	eres
Indication	Loc	Loc	Diameter	Length	Type			R	emarks			
No.	L	w			R/L							
	-					-						
		ļ				<del> </del>						
		<u> </u>	<u> </u>									
Comments	· No m	el  i	data	· XW	H 112103	<u>-l</u>		***				
	•											
Results:	N	AD 🗌	IND		GEO 🗆 .			<del> </del>				
Percent Of	Coverage	Obtaine	1 > 90%:	1	No	Reviewe	ed Previou	ıs Data:	N/A			
Examiner	Level	[III	/ Sign	ature	Date	Reviewer			Signature		٠ ١	Date
Timm, Jere	emy T. Level	1/2	for the	ature	11/29/2002 Date	Halling, D Site Revie			Signatura		n <i>003</i>	<u>גס 20</u> Date
N/A	FGAGI	N/A /	y Sigi	ialui <del>C</del>	Date	Wren, Jer		tmp	Signature	II,	21-	
Other	Level	N/A	Sıgr	ature	Date	ANII Revie		7//	Signature		. , .	Date
N/A						Clow, Ro	n /	20	·	• 14	11/0	2



Site/Unit.	PNGP / PI1					
Summary No.:		3217	707			
Workscope:		IS	1			

Procedure:	ISI-MT-1				
Procedure Rev.:	12				
Work Order No.:	0200860				

Outage No.: PI1RFO2002

Report No.: 2002M038

Page 2 of 3

Description of Limitation:

Entire examination area under permanent guard pipe.

Sketch of Limitation:

J \lddeal\_Photos\PI1RFO2002\MT Photos\2002M038-1 jpg



Limitations removal requirements:

Guard pipe is permanent and cannot be removed.

Radiation field. N/A

Examiner	Level	11	7 Signature	Date	Reviewer	Signature	Date
Timm, Jere	my T.		la stor	11/29/2002	Halling, David A.	a & Gally	y0030 05
Examiner N/A	Level N	N/A	Signature	Date	Site Review Wren, Jerry P.	EN CON LE	Date 12-1-02
Other N/A	Level N	V/A	Signature		ANII Review Clow, Ron	8 Ignature	Date 12/1/02

 $\sim$ 



### **Determination of Percent Coverage for Surface Examinations**

Site/Unit: Summary No.: Workscope:	PNGP	/ 32170	PI1 7			Proce ocedure ork Orde	-		ISI-MT-1 12 0200860	Outage Repor	-	 02M0:	
	red (as s Length = Total Ar	shown in	0.000		feren dth	ce drawi	ing)	_			age.		
	chieved Area exa		0.0	00 <u>0</u> S1	_			-	d (100%) limitations	 000 examined	sq. in.		

### To determine length of a circumferential weld

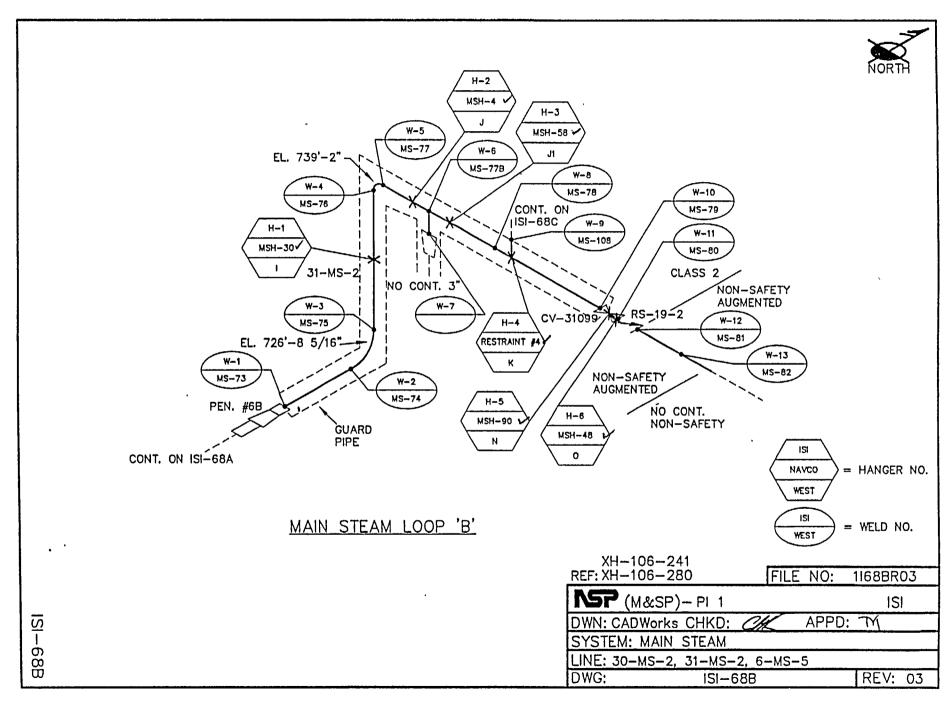
Note - Diameter refers to actual external diameter not pipe size (see table below)

Diameter \_\_\_\_\_\_ \* (Pi) 3.1416

= Length \_\_\_\_\_ 0.000 inches

Pipe Size	Actual Diameter	(Length) Circumference	Pipe Size	Actual Diameter	(Length) Circumference
2	2.375	7.46	12	12.75	40.06
2.5	2.875	9.03	14	14.0	43.98
3	3.5	11.0	16	16.0	50.27
3.5	4.0	12.57	18	18.0	56.55
4	4.5	14.14	20	20.0	62.83
5	5.563	17.48	22	22.0	69.12
6	6.625	20.81	24	24.0	75.40
8	8.625	27.10	30	30.0	94.25
10	10.75	33.77			

Jan Date: 12-102



## 4CHMENT 33 PAGE 1 OF



### **Magnetic Particle Examination**

Site/Unit:	PNGP /	PI1		Procedu	re:	ISI-MT-1		Outage No.: _	PI1F	RFO20	102
Summary No.:	32	21639		Procedure Re	v.:	12		Report No.:	200	2M03	19
Workscope:		ISI		Work Order No	o.:	0200860		Page: _	1	of	3_
Code:	1989		Code (	Cat.: C-C	Lo	ocation		Aux 715			
Drawing No.:	ISI-	68B		Description:	INTEGRAL	. ATTACHM	ENT (CONS	TANT SUPPO	PRT)		
System ID: MS											
Component ID: H-2	lA.						Siz	ze/Length:			
Limitations: Ent	ire exam ar			t guard pipe.							
Light Meter Mfg.:				Serial No	o.:		Illun	nination.		1	uw/cm²
Temp. Tool Mfg.:							_	ace Temp.: _			°F
Resolution:		Not Use						_			
Lift Block Serial N	o.:				Surface Co	ndition:	·				
Lo/Wo Location:					Field Orie						
Magnetic Particle	e Material										
Brand:				Wet □	Mixed:	Yes 🗌		Applied By:	E	Ousting	3 🗆
Туре:			_	Dry 🗌		No 🗌			Sp	oraying	<b>)</b> 🗆
Batch No.:				uorescent 🗌	With:				FI	ooding	g 🗀
Equipment:							erial No.:				<del></del>
Head Shot [					Fixed Sp	acing		A	c 🗆	DC	
Adj. Spacing [	<u> </u>		inches		Encirclin	g Coils	<u> </u>	Tun	ns		
Prods. Spacing [	J		inches		Current (	(machine se	etting)			Amp	eres
Indication Loc	Loc	Diameter	Length	Type			Rema	arks			
No. L	w			R/L							
		-			ļ						
Comments: No	previous	L deta	11216	l nみ.	<u> </u>						
Results:	NAD 🗀	IND [		GEO 🗌				,			
Percent Of Covers	age Obtained	d > 90%:		No	Reviewe	d Previous I	Data:	N/A			
1	el III	) Sign	ature		Reviewer		<u></u>	Signature		١	Date
Timm, Jeremy T.	al aus	WIX	<u> </u>	11/29/2002	Halling, Da			Melling Cianatura	k	<u> 2005</u>	<u> </u>
Examiner Lev	el N/A	- Sign	ature	Date	Site Review Wren, Jerr		Fran Pi	Signature	1	- 2-1-	Date
	el N/A	Sign	ature	Date	ANII Revie			Signature			Date
N/A		•			Clow, Ron	. /	XX	<i>y</i> -	1.	2/,/	, l



Site/Unit.	PNGP	1	PI1
Summary No.:		3216	39
Workscope:		IS	1

 Procedure:
 ISI-MT-1

 Procedure Rev.:
 12

 Work Order No.:
 0200860

Outage No.: PI1RFO2002

Report No.: 2002M039

Page: 2 of 3

Description of Limitation:

Weld to be examined under permanent guard pipe.

Sketch of Limitation:

J:\Iddeal\_Photos\PI1RFO2002\MT Photos\2002M039-1.bmp



Limitations removal requirements:

Guard pipe is permanent and cannot be removed.

Radiation field: N/A

Examiner	Level	111	Signature	Date	Reviewer	Ç , Şig	nature [	Date
Timm, Jere	my T.			11/29/2002	Halling, David A.	E)A Gall	~ NOV 80	اده
Examiner N/A	Level	N/A	Signature		Site Review Wren, Jerry P.	P.W.	nature [	Ďate
Other N/A	Level	N/A	Signature	Date	ANII Review Clow, Ron		nature [	Date



### **Determination of Percent Coverage for Surface Examinations**

Site/Unit: Summary No.:		321639		Procedure:	ISI-MT-1	Outage Report	-		RFO20	
Workscope:		SI		Work Order No.:	0200860	<del></del>	age:	3	of	3
	ired (as shown Length = Total Area re	0.000		eference drawing)  /idth 0.000  square inches	·					
Coverage A	Achieved									
	Area examine	ed	0.000	sq. in. / Total area	required (100%)	0.000	sq. in.			

% (area required - area of limitations = area examined)

### To determine length of a circumferential weld

= Percent coverage

Note - Diameter refers to actual external diameter not pipe size (see table below)

SMH 1/21/03

Diameter \_\_\_\_\_ \* (Pi) 3.1416

= Length \_\_\_\_\_0.000

Pipe Size	Actual Diameter	(Length) Circumference	Pipe Size	Actual Diameter	(Length) Circumference
2	2.375	7.46	12	12.75	40.06
2.5	2.875	9.03	14	14.0	43.98
3	3.5	11.0	16	16.0	50.27
3.5	4.0	12.57	18	18.0	56.55
4	4.5	14.14	20	20.0	62.83
5	5.563	17.48	22	22.0	69.12
6	6.625	20.81	24	24.0	75.40
8	8.625	27.10	30	30.0	94.25
10	10.75	33.77			

Jun P. Wr. III Date: 12-1-02:

## ACHINERUT 34 PAGE 1 OF 3



### **Magnetic Particle Examination**

Site/Unit	: PNC	3P /	PI1		Procedu	re:	ISI-MT-1		Outage No.: _	PI1I	RFO20	)02
Summary No.	:	32	1702		Procedure Re	v.:	12		Report No.:	20	02M04	11
Workscope	: <u> </u>		ISI		Work Order N	o.:	0200860	<u>-</u>	Page: _	1	of	3
Code:	198	39		Code (	Cat.: C-C	Lo	ocation:		Cont 735			
Drawing No.:		ısı-	69		Description:	SEISMIC R	ESTRAIN1	Γ				
System ID:	FW											
Component ID: 1	H-9IA								Size/Length:		N/A	
Limitations:	Examina	ition ar	ea not acc	essible (	due to permane	nt guard pi	ipe.					
Light Meter Mfg	j:				Serial N	o.:		<u></u>	Illumination:			uw/cm²
Temp. Tool Mfg						o.:			Surface Temp.:			°F
Resolution:			Not Use						_			
Lift Block Seria	l No.:					Surface Co	ndition:					
Lo/Wo Location						Field Orie	ntation:					
Magnetic Parti	icle Mate	erial										
Brand.			<del> </del>		Wet 🗌	Mixed:	Yes 🗌		Applied By:	ι	Dustin	g 🗌
Туре:					Dry 🗌		No 🗌			Sı	praying	g 🗆
Batch No.:					uorescent 🗌	With:				FI	loodin	g 🗌
Equipment:					• <del></del> •• ·							
Head Shot				Ampere	es	Fixed Sp	acing		Α	c 🗆	DC	
Adj. Spacing				inches		Encirclin	g Coils	<b>_</b>	Tur	ns		
Prods Spacing				inches		Current (	machine s	etting)	O		Amp	eres
Indication I	Loc	Loc	Diameter	Length	Туре				Remarks			
No.	L	w			R/L							
			1									
			-									
								•				
Commonto: /												
Comments:	o prei	1 DWC	duta	smy	Ilziloz.							
Results:	NAD		IND [	]	GEO 🗌							
Percent Of Cov		_	-	<del></del>	 No	Reviewe	d Previous	Data:	N/A	_		
Examiner L	evel III		Sign	ature	Date	Reviewer	-		, , , Signature		,	Date
Timm, Jeremy				to	11/29/2002	Halling, Da	avid A.	()+	Molly	Δ	6030	202
	.evel N	/A /		ature	Date	Site Review	,	~	Signature	ш <u>-</u>		Date
N/A			C	nture.	Dete	Wren, Jerr ANII Revie		m	1.002		2-1-	ひて Date
Other L	.evel N	'A	Sign	ature	Date	Clary 2	<u>"</u> /	X	Signature		12/11	



Site/Unit:	PNGP	1	PI1	
Summary No.:		3217	702	_
Workscope:		IS	31	

Procedure.	ISI-MT-1
Procedure Rev.:	12
Work Order No.:	0200860

Outage No.: PI1RFO2002

Report No.: 2002M041

2

of

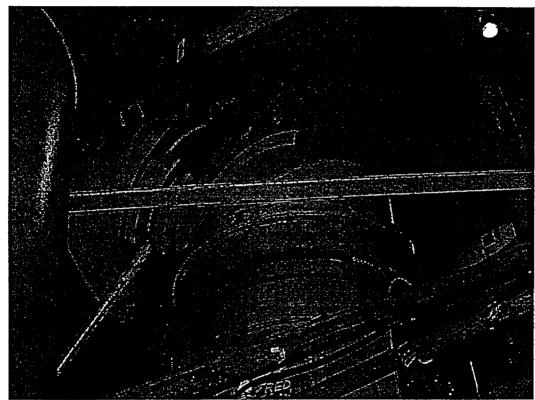
Page:

Description of Limitation:

Examination area has no access due to permanent guard pipe.

Sketch of Limitation:

J \lddeal\_Photos\PI1RFO2002\MT Photos\2002M041-1.jpg



Limitations removal requirements:

Guard pipe cannot be removed.

Radiation field. N/A

Examiner	Level III		8ignature	_ Date	Reviewer	Signature	Date
Timm, Jere	my T.	,	borten	11/29/2002	Halling, David A.	OA Helly	NOV30,02
Examiner N/A	Level N	/A /	Signature		Site Review Wren, Jerry P.	Sygnature P.W.	Date 12-1-0 Z
Other N/A	Level N	/A	Signature	Date	ANII Review Clow, Ron	R Signature	Date



### Determination of Percent Coverage for Surface Examinations

Site/Unit:	PNGP / PI1		/ PI1 Procedure:		ISI-MT-1	Outage No.:	PI1RF02002			
Summary No.:	321702		'02	Procedure Rev.:	Procedure Rev.: 12		2002M041			
Workscope:	ISI		<u> </u>	Work Order No.:	0200860	Page:	3	of	3	

Area Required (as shown in applicable code reference drawing)

Length 0.000 \* Width 0.000 = Total Area required 0.000 square inches

### **Coverage Achieved**

Area examined 0.000 sq. in. / Total area required (100%) 0.000 sq. in examined (100%) 0.000 sq. in the examined (100%) 0.000 sq. in

### To determine length of a circumferential weld

Note - Diameter refers to actual external diameter not pipe size (see table below)

Diameter \_\_\_\_\_\_\* (Pi) <u>3.1416</u>

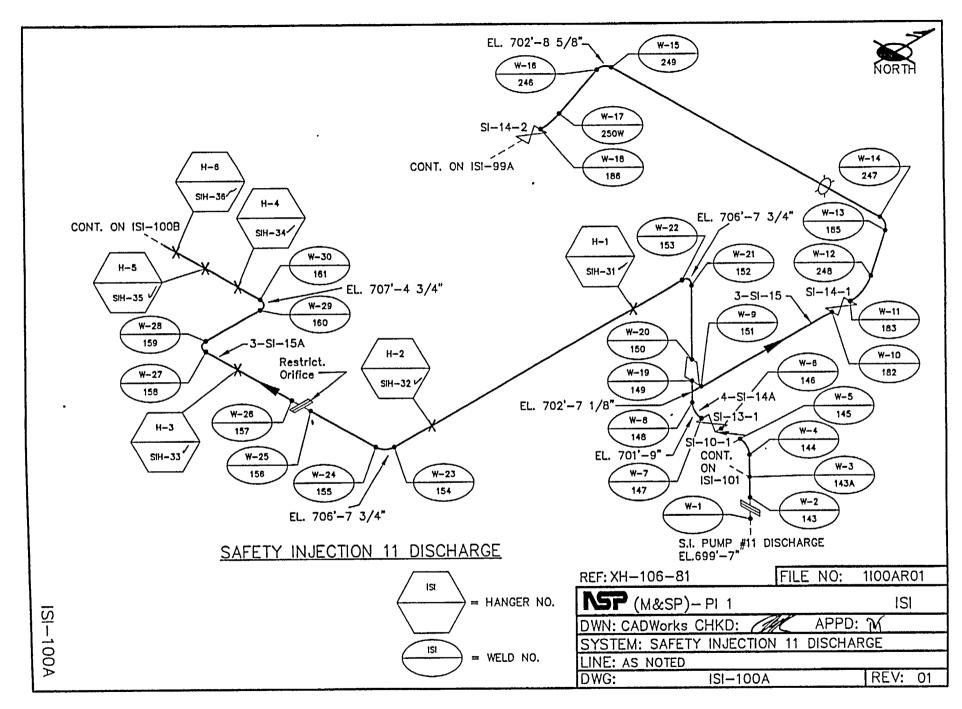
= Length \_\_\_\_\_ inches

Pipe Size	Actual Diameter	(Length) Circumference	Pipe Size	Actual Diameter	(Lengt Circumfe
2	2.375	7.46	12	12.75	40.0
2.5	2.875	9.03	14	14.0	43.98
3	3.5	11.0	16	16.0	50.27
3.5	4.0	12.57	18	18.0	56.55
4	4.5	14.14	20	20.0	62.83
5	5.563	17.48	22	22.0	69.12
6	6.625	20.81	24	24.0	75.40
8	8.625	27.10	30	30.0	94.25
10	10.75	33.77			

Site Field Supervisor:

Jup. Wn iv. III

Date: 12-1-02



ATTACHMENT 35 PAGE 1 OF 1



### **UT Pipe Weld Examination**

Site/Unit: PNGP / PI1			Pro	cedure:	edure: ISI-UT-16A		Outage No.: PI1RFO2002			2		
Summ	ary No.:	305	081	_	Procedu	re Rev.:	1		Rep	ort No.: 2	002U052	
Wor	kscope:	]:	SI	•	Work Or	der No.:	0210380			Page: 1	of _	3
Code:		1989		Code Cat.:	C-F-1		Location:		Au	x 695		
Drawing No.:		ISI	100A		Description: P	IPE - VALVE						
System ID:	SI											
Component ID:	W-10					Si	ze/Length:	.7" / 10.9"	Thickne	ss/Diameter:	.438" /	3"
Limitations:	No scar	ns on valve du	e to configura	tion.			Sta	ırt Time:	1321	Finish Time:	1335	5
Examination S	Surface:	Inside 🔽	Outside		Surface Cond	ition: <u>Blended</u>						
Lo Location:		op Dead Cent	er W	o Location:	Centerline of V	Veld Co	ouplant:	Sonotrace	40 I	Batch No.:	#0014	43
Temp, Tool M	fg.:	Telatemp	)	Serial No.:	NSP 134	St	urface Temp.:	90	_°F			
Cal. Report N	o.:		2	2002CA094, 200	2CA095							
Angle Used	0	45 45T	60 7	0	]							
Scanning dB		39.5 45.5	6	1.5	1							
Indication(s):	Yes [			Sca	un Coverage: Up	stream ☑ Do	ownstream 🗀	cw <b>✓</b>	ccw <b>☑</b>			
, ,	100	] 110 [4]		000	ootolago. op	0ou	oooa	J., E.	0011 <u>(</u>			
Comments:	da <b>a</b> a aa	llabla							•			
No previous	oata ava	ilable.										
Results:	NAD ⋤	] IND [	] GEO	_			<del></del>					
Percent Of Co	verage O	btained > 90%	: <u>No</u>		Reviewed Previou	s Data:	N/A	-				
	Level III		Signa	ture		Reviewer	$\overline{K}$	~ ^	Signature			Date
Blechinger, To						Clay, Sean P.	<u>Det</u>	TO THE	LITT		<u> </u>	9-02
Examiner N/A	Level N	<b>/</b> A	Signa	ture V	Date	Site Review Wren, Jerry P.	$\alpha$	- e lu	Signature		11-20.	Date
Other	Level N	/A	Signa	ture	Date	ANII Review		5///	Signature	<del></del>	,	Date
N/A						Clow, Ron	1	7/L	· · · · · · · · · · · · · · · · · · ·		11/21/0	02



Work Order No.:

Site/Unit:	PNGP	1	PI1	
Summary No.:		3050	081	
Workscope:		IS	1	

Procedure: ISI-UT-16A
Procedure Rev.: 1

0210380

Outage No : PI1RFO2002
Report No.: 2002U052

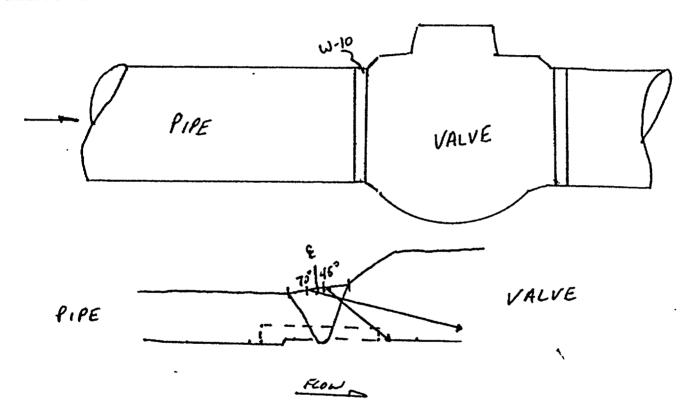
Page: 2 of 3

Description of Limitation:

Valve Body Taper.

Sketch of Limitation:

J\iddeal\_Photos\PI1RFO2002\UT Photos\2002U052-1.bmp



### Limitations removal requirements:

Single sided exam - Although the examination was performed through 100% of the code required volume. Procedure ISI-UT-16A is not qualified for the detection of flaws on the far side of single side access exams. The techniques provided by this procedure were used for a best effort examination for flaws on the far side of the weld.

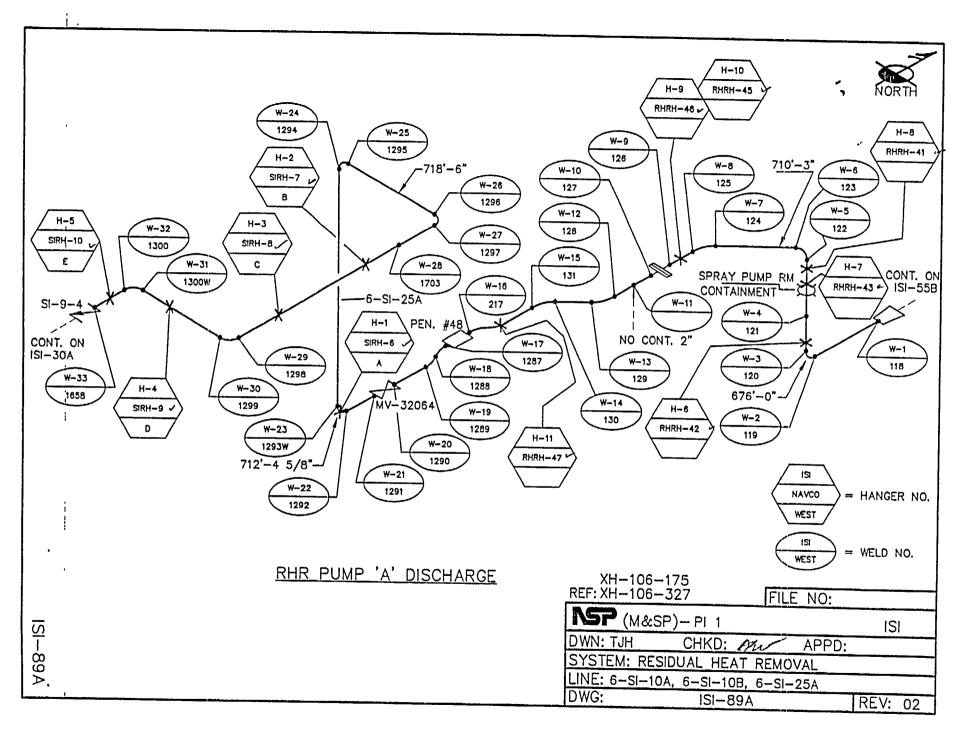
Radiation field: < 1 mr

Examiner	Level III	Signature	_ Date	Reviewer	_/_	Signature	Date
Blechinger	, Todd P.	I LIP Ble	11/13/2002	Clay, Sean P.	Dui	DL NI	II 11 18 02
Examiner N/A	Level N/A	Signatur		Site Review Wren, Jerry P.	Am	Pun Signature	/-20~02
Other N/A	Level N/A	Signature		ANII Review Clow, Ron	1	% gnature	Date 11/21/02



## Determination of Percent Coverage for UT Examinations - Pipe

Site/Unit:	PNGP / PI1		Proced	lure:	ISI-UT-16A	Outage N	lo.: PI1RI	O2002
Summary No:	3050	081	Procedure F	Rev.:	1	Report N	lo: 2002	2U052
Workscope:	IS	1	Work Order	No.:	0210380	Pa	ge: 3	of 3
<u> </u>						<del>-</del>	<del></del>	
<u>45 deg</u>								
Scan 1	100.000	% Length X _	100.000	_ % volu	me of length / 100 =	100.000	% total for	Scan 1
Scan 2	0.000	% Length X	0.000	_ % volu	me of length / 100 =	0.000	_ % total for	Scan 2
Scan 3	100.000	% Length X	50.000	_ % volu	me of length / 100 =	50.000	% total for	Scan 3
Scan 4	100.000	% Length X	50.000	_ % volu	me of length / 100 =	50.000	_ % total for	Scan 4
	Add totals a	nd divide by # sca	ns = <u>50.000</u>	_ % to	tal for 45 deg			
Other de	g - 70	(to be used for	supplemental s	scans)				
The data	to be listed be	elow is for coverage	that was not ob	otained w	ith the 45 deg scans.			
Scan 1	100.000	) % Length X	100.000	% vo	lume of length / 100 =	100.000	% total fo	r Scan 1
Scan 2	0.000	% Length X	0.000	% vo	lume of length / 100 =	0.000	% total fo	r Scan 2
Scan 3	0.000	% Length X	0.000	% <b>v</b> o	lume of length / 100 =	0.000	% total fo	r Scan 3
Scan 4	0.000	% Length X	0.000	% vo	lume of length / 100 =	0.000	% total fo	r Scan 4
Percent (	complete cov	<u>/erage</u>						
11-18-02	s for each sea	ın required and divid	lo by # of ecans	to deter	mine.			
		or complete exam	e by # of scalls	to deter				
20,0 Small		n complete exam						
Otto Et al.	Cunordoon	Den (	211-		Data: (1	-10.452		
Site Field	Supervisor:	Jun 6	7,00		Date	-18.02	-	



ATTACHMENT 37 PAGE 1 OF 1



### **UT Pipe Weld Examination**

Site/Unit:	PNGP / PI1		Procedure:	ISI-UT-16A	Outage No.: P	1RFO2002
Summary No.:	301445		Procedure Rev.:	1	Report No.:	2002U061
Workscope:	ISI		Work Order No.:	0200860	Page: 1	of <u>4</u>
Code:	1989	Code Cat.:	C-F-1	Location:	Cont 715	
Drawing No.:	ISI-89A		Description: PIPE - VA	.VE		
System ID: SI		<del> </del>				
Component ID: W-20				Size/Length: 1.0" / 21"	Thickness/Diameter:	.7" / 6"
Limitations: No sca	ns on valve due to cor	nfiguration.		Start Time:	1000 Finish Time:	1019
Examination Surface:	Inside 🗌 O	utside <b>☑</b>	Surface Condition: Gr	ound Smooth		
Lo Location:	Top Dead Center	Wo Location:	Centerline of Weld	Couplant: Sonotra	ce 40 Batch No.:	#00143
Temp. Tool Mfg.:	Telatemp	Serial No.:	NSP 134	Surface Temp.: 80	°F	
Cal. Report No.:		2002CA105, 200	2CA106			
Angle Used 0	45 45T 60	60 RL				
Scanning dB	58.0 64.0	76.0				
Indication(s): Yes	□ No 🗹	Sca	n Coverage: Upstream 🔽	Downstream CW 🔽	CCM €	
Comments:						
None					•	
Results: NAD [	✓ IND []	GEO □				
Percent Of Coverage			Reviewed Previous Data:	Yes		
- Oldon O. Goverage				163	***************************************	
Examiner Level   Blechinger, Todd P.	II _4	Signature .	Date Reviewe		Signature	Date 11-24-82
Examiner Level (		Signature	Date Site Rev	$C \setminus C \setminus C \setminus C$	Signature	Date
Thomas, Travis		rashon-	11/20/2002 Wren, Jo Date ANII Rev		Signature	//-24-0 ¿
Other Level   N/A	N/A	Signature	Clow, R		Signature	1//26/62 Date



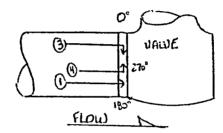
Site/Unit:	PNGP	PNGP / PI1		Procedure:	ISI-UT-16A	Outage No.:	PI1RFO2002				
Summary No.:	301445		445	Procedure Rev.:	Procedure Rev.: 1		2002U061				
Workscope:	ISI		Work Order No.:	0200860	Page:	2	of	4			

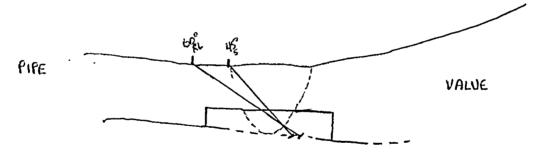
**Description of Limitation:** 

Valve Body Configuration.

Sketch of Limitation:

J.\lddeal\_Photos\PI1RFO2002\UT Photos\2002U061-1.bmp





Limitations removal requirements:

Single sided exam - Althought the examination was performed through 100% of the code required volume. Procedure ISI-UT-16A is not qualified for the detection of flaws on the far side of single side access exams. The techniques provided by this procedure were used for a best effort examination for flaws on the far side of the weld.

Radiation field: N/A

Examiner	Level	III	Signajure '	Date	Reviewer	P	Signature	Date
Blechinger	Todd P.		JUP.Ry	11/20/2002	Clay, Sean P.	Alux	Dhe LOTTE	11-2402
Examiner	Level	[]	Signature	Date	Site Review	7-	Signature	Date
Thomas, Ti	avis		Iran Chom-	11/20/2002	Wren, Jerry P.	Den	-W-	11-24-02
Other	Level	N/A	Signature	Date	ANII Review	12/1/	Signature	Date
N/A					Clow, Ron	1800	•	11/26/02



### **Supplemental Report**

Report No.: 2002U061

Page: 3 of 4

Summary No.: 301445

Examiner: Blechinger, Todd P.

Examiner: Thomas, Travis

Other: N/A

Level: III

Level: N/A

Reviewer: Clay, Sean P.

Site Review: Wren, Jerry P.

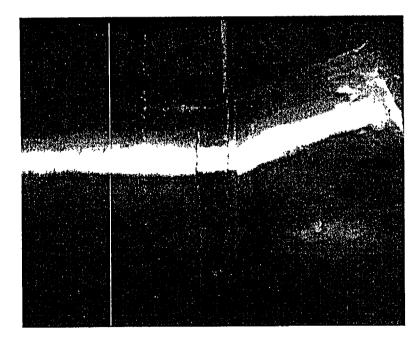
ANII Review: Clow, Ron

n, Jerry P. Date:

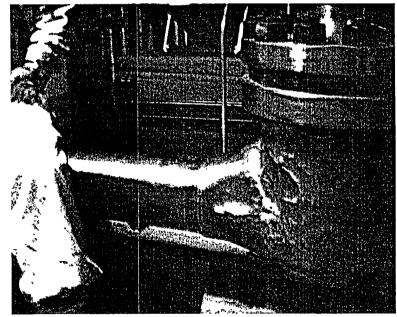
Date: //- 2 /- 0 Z Date: // 26 / 02

Comments: None

Sketch or Photo: J.\lddeal\_Photos\PI1RFO2002\Misc Photos\bob\PIC00017.JPG



J.\Iddeal\_Photos\PI1RFO2002\Misc Photos\bob\PIC00018.JPG





## Determination of Percent Coverage for UT Examinations - Pipe

Site/Unit:	PNGP	1	Pi1	Procedure:		ISI-UT-16A	Outage I	No.:	PI1RFO2002			
Summary No.:		30144	5	Procedure I	Rev.:	1	Report No.:		20	02U0	51	
Workscope:		ISI		Work Order	No.: _	0200860	Pa	age:	4	of .	4	
<u>45 deq</u>												
Scan 1	100	0.000	% Length X _	100.000	_ % vol	lume of length / 100 = _	100.000	%	total f	or Sca	n 1	
Scan 2	0.	.000	% Length X _	0.000	% vol	lume of length / 100 = _	0.000	_ %	total f	or Sca	n 2	
Scan 3	100	0.000	% Length X _	50.000	% vol	lume of length / 100 = _	50.000	_ %	total f	or Sca	n 3	
Scan 4	100	0.000	% Length X _	50.000	_ % vol	lume of length / 100 = _	50.000	_ %	total f	or Sca	n 4	
	Add to	tals an	d divide by # sca	ns =50.000	0_%t	otal for 45 deg						

Other deg - 60 (to be used for supplemental scans)

The data to be listed below is for coverage that was not obtained with the 45 deg scans.

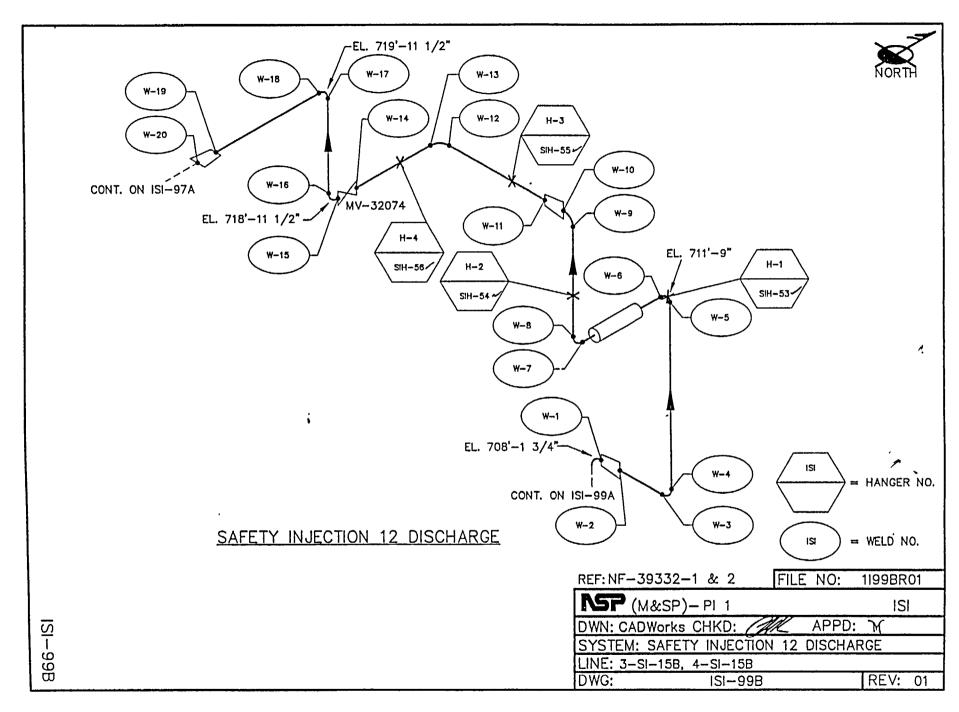
% total for Scan 1	50.000	% volume of length / 100 =	50.000	% Length X _	100.000	Scan 1
% total for Scan 2	0.000	% volume of length / 100 = _	0.000	% Length X _	0.000	Scan 2
% total for Scan 3	0.000	% volume of length / 100 = _	0.000	% Length X _	0.000	Scan 3
% total for Scan 4	0.000	% volume of length / 100 =	0.000	% Length X	0.000	Scan 4

### Percent complete coverage

Add totals for each scan required and divide by # of scans to determine;

Site Field Supervisor:

Jun P. W. Date: 11-24-02



ATTACHMENT 39 PAGE 1 OF 1



### **UT Pipe Weld Examination**

S	ite/Unit: _	PNGP	1	PI1	PI1 Procedure: ISI-UT-16A		SA	Outage No.: PI1RFO2002			02				
Summ	ary No.:		3050 <sup>-</sup>	15			Procedu	ure Rev.:	1		Re	port No.:	200	2008	6
Wor	kscope:		ISI				Work O	rder No.:	0200860	)		Page:	1	of _	6
Code:		1989			(	Code Cat.:	C-F-1		Location:		Cont outer Anu				
Drawing No.:			ISI-9	9B			Description:	PIPE - VALVE							<del></del>
System ID:	SI						•								_
Component ID:	W-14		·				· · · · · ·		Size/Length:	.8"/11"	Thickne	ess/Diamete	r:	.42"	/3"
Limitations:	One side	ed exam	due to	valve 3	<del>207A.</del> M	V-3207	4. 8MH	1/2/03	St	art Time:	1507	Finish Time	e: <u> </u>	151	7
Examination 9	Surface:	Insid	e 🗌	Ou	tside 🔽		Surface Con	dition: As We	lded						
Lo Location:	т	op Deac	l Center	•	Wo Loca	ation:	Centerline of	Weld	Couplant:	Sonotrac	e 40	Batch No.:		#001	43
Temp. Tool M	fg.:	Tela	atemp	· · · · · ·	Seria	l No.:	NSP 173		Surface Temp.	:70	°F				
Cal. Report N	o.:				20020	A141, 200	2CA142	<del> </del>							
Angle Used	0	45	45T	60	70										
Scanning dB		56.0	56.0	N/A	83.0										
Indication(s):	Yes <b></b>	] No				Sca	n Coverage: U	pstream 🗹	Downstream [	] cw ✓	ccw 🗹	ł			
Comments:															
of flaws on the of the weld.	he far sid No p	e of sing	gle side US ()/	access uta.	s exams. T SW1H	he technic	ough 100% of th ques provided b	ne code requi ny this proced	red volume. P ure were used	rocedure ISI- for a best ef	UT-16A is no fort examina	ot qualified Ition for flav	for ti ws oi	he det n the f	ection ar side
Results:	NAD [		IND 🗆		GEO ☑	_									
Percent Of Co	verage Ol	otained >	90%:		No	F	Reviewed Previo	us Data:	N/A	_					
ŀ	Level II			00.	Signature			Reviewer	2/1.		Signatu	re			Date
Auer, Robert (				14049	My fr			Clay, Sean		XBA		V.TII		11-	30.02
Examiner Thomas, Trav	Level    is			. 0	Signature		Date 11/27/2002	Site Review Wren, Jerry		~ èn	Signatu	EU-III	ι:	<b>⊋-</b> 1-	Date
	Level N/	A			Signature	· · · · · · · · · · · · · · · · · · ·	Date			3/11	Signatu	re			Date
N/A								Clow, Ron	(X				/	12/2	102

ATTACHMENT 40 PAGE 1 OF 6



### **Ultrasonic Indication Report**

MINIC	~ <b>)</b>										•						
		Site/Unit	: PNG	iP /	PI1			Proc	edure: _	1	SI-UT-16	A	Ou	tage No.:	PITRF	02002	
•		mmary No.		3050	)15		P	rocedure	Rev.:		1		Re	eport No.:	2002	U086	
	١	Vorkscope	:	IS	1		W	ork Orde	er No.: _		0200860	)	_	Page: _	2 0	of <u>6</u>	
Se		ngle: tion: <u>W</u> e			Q.		-		ping We erritic Ve		2*T				Wo		
MP RBF L	Distance	Path ning Back I ce From Da		n	Wi W	1 0	Distance I	From Wo From Wo From Wo	At 2	20% 0	mum Re f Max (Fo f Max (Fo	orward)		L Lmax L2	1		ATUM Lo
Scan	Indication	%	V	v	Fo	rward	Baci	kward	L1	L	L2	RBR	T	R	lemarks		
#	No.	Of	<b></b>	ax		Of Max		Of Max	Of	Max	Of	Amp.					
1	1	DAC 50%	W	MP	W1	MP	W2	MP	Max	<u> </u>	Max	<u> </u>					···
- <del>'</del>	'	50%	0.9	1.0		<u> </u>	ļ	<u> </u>		2.2		ļ	Root Geometr	у			
						ļ	ļ			<u> </u>		<u> </u>					
							ļ				<u> </u>	<u> </u>					
							<u> </u>			1		1					
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							i					<del>                                     </del>	<b> </b>		· • · · · · · · · · · · · · · · · · · ·	·· ·······	
		<u> </u>				<del>                                     </del>	<del> </del>		<del></del>		<del>                                     </del>	<del> </del>	<del></del>				
			~			1	<del> </del>	-		<del> </del>	1	<del> </del>	<u> </u>				
						<del> </del>	<del> </del>			<del> </del>	ļ	<u> </u>					
	<u></u>		<u>{</u>			<u></u>	<u> </u>	<u> </u>	l <u></u>	<u> </u>	ـــــــ	<u> </u>	<u></u>			···	
Examiner Auer, Ro	bert G.			Perlo	Signatu			D 11/27/20	ate Rev		P. 5	DO	Dar	Signatu Lu	ire	//-	Date -30-02
Examine		II .			Signatui	e			ate Site			\	Q	Signatu	re		Date
Thomas,					01			11/27/20				Jun	2P.W		·III	12-	1-02
Other N/A	Level	N/A			Signatur	.6		Đ	ate ANI		•		P.L	Signatu	re		Date
11/7	<del> </del>								1010	w, Ron		1				121	2/02

### **Supplemental Report**

Summary No.: 305015

Examiner: Auer, Robert G.

Examiner: Thomas, Travis

Other: N/A

Level:

Level.

Level: N/A

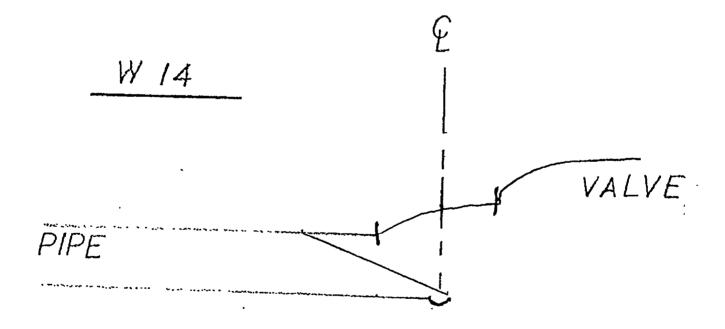
Reviewer: Clay, Sean P.

Site Review: Wren, Jerry P.

ANII Review. Clow, Ron

Comments: Root Geometry

Sketch or Photo: J.\lddeal\_Photos\PI1RFO2002\UT Photos\2002U086-1.bmp



FLOY

NMC	P	NMC

Site/Unit:	PNGP	1	PI1	
Summary No.:		305	015	
Workscope:		IS		

Procedure: ISI-UT-16A Procedure Rev.: 1

0200860

Outage No.: PI1RF02002 Report No.: 2002U086

Work Order No.:

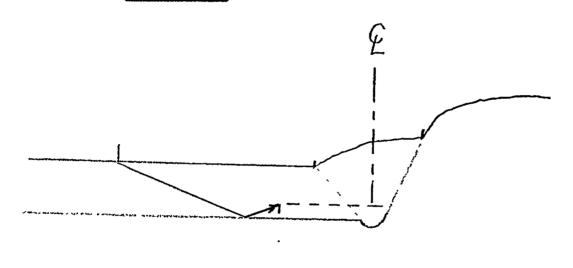
Page:

Description of Limitation:

No scan on valve side due to configuration. See photo.

Sketch of Limitation:

J:\Iddeal\_Photos\PI1RFO2002\UT Photos\2002U086-2.bmp



FLOW

Limitations removal requirements:

None

Radiation field: N/A

Examiner	Level	11	Signature	Date	Reviewer	1	Signature	Date
Auer, Robe	rt G.		Kortelle-	11/27/2002	Clay, Sean P.	Ambo	、加瓜	11-30-02
Examiner	Level	11	Signature	Date	Site Review	0- 0	Signature	Date
Thomas, Tr	avis			11/27/2002	Wren, Jerry P.	Aug Ci	W LU.#	12-102
Other	Level	N/A	Signature	Date	ANII Review		Signature	Date
N/A					Clow, Ron	CC		12/2/02



## Determination of Percent Coverage for UT Examinations - Pipe

Site/Unit:	PNGP /	PI1	Procedure:	ISI-UT-16A	Outage No :	PI1	RFO2	002
Summary No.:	305015		Procedure Rev.:	11	Report No.:	2002U086		
Workscope:	ıs	i	Work Order No.:	0200860	Page:	5	of	6

<u>45 deg</u>						
Scan 1	0.000	_ % Length X _	0.000	% volume of length / 100 = _	0.000	% total for Scan 1
Scan 2	0.000	% Length X _	0.000	% volume of length / 100 = _	0.000	% total for Scan 2
Scan 3	100.000	_ % Length X _	50.000	% volume of length / 100 = _	50.000	% total for Scan 3
Scan 4	100.000	% Length X _	50.000	% volume of length / 100 =	50.000	% total for Scan 4

Other deg - 70 (to be used for supplemental scans)

The data to be listed below is for coverage that was not obtained with the 45 deg scans.

Add totals and divide by # scans = 25.000 % total for 45 deg

Scan 1	100.000	_ % Length X _	50.000	_ % volume of length / 100 = _	50.000	_ % total for Scan 1
Scan 2	100.000	% Length X _	50.000	% volume of length / 100 =	50.000	_ % total for Scan 2
Scan 3	0.000	% Length X _	0.000	% volume of length / 100 =	0.000	_ % total for Scan 3
Scan 4	0.000	% Length X _	0.000	% volume of length / 100 =	0.000	_ % total for Scan 4

### Percent complete coverage

Add totals for each scan required and divide by # of scans to determine;

50.000 % Total for complete exam

Site Field Supervisor: Date: 11-30-02



### **Supplemental Report**

Report No: 2002U086

Page:

Summary No.: 305015

Examiner: Auer, Robert G.

Level: II

Reviewer: Clay, Sean P.

Date 11-30-02

Examiner: Thomas, Travis

Level: 11 Site Review: Wren, Jerry P.

Date: 12/2/62

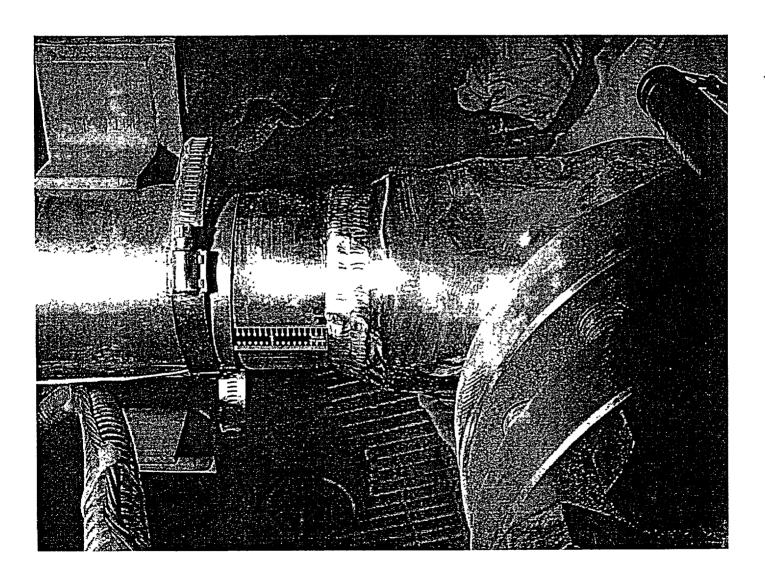
Other: N/A

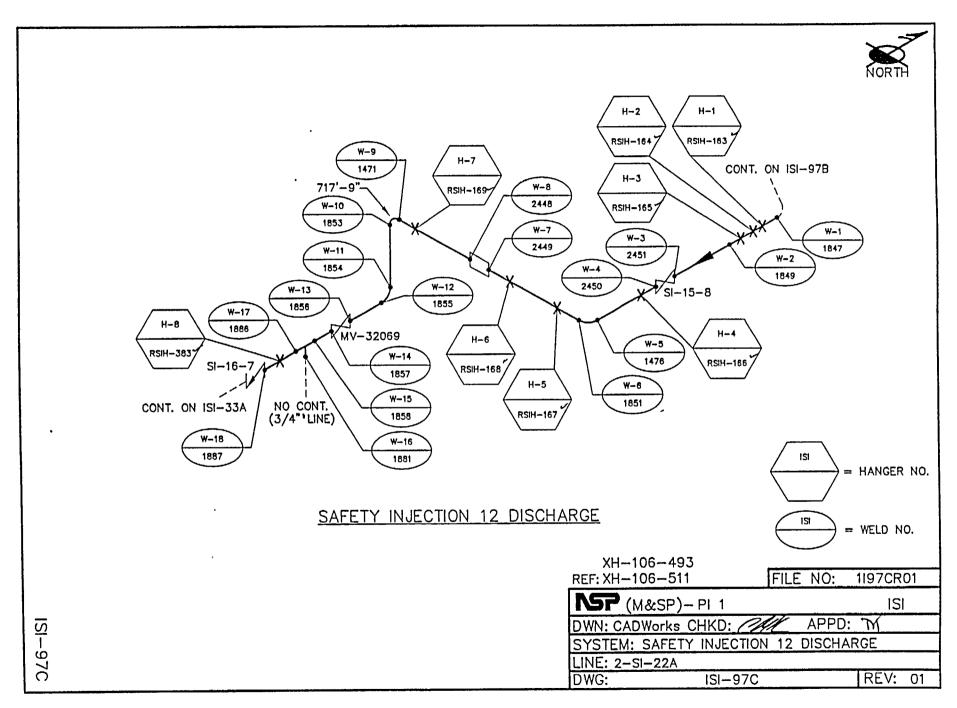
Level: N/A

ANII Review: Clow, Ron

Comments: None

Sketch or Photo: J.\lddeal\_Photos\PI1RFO2002\UT Photos\2002U086-3 bmp





## NMC

### **UT Pipe Weld Examination**

		PNGP		PI1			Dana	Procedure: _		T-16A			Outage No.:		RFO20	
	ary No.: kscope:		30306 ISI		<del></del>			edure Rev.: _ c Order No.:	'	1 0860	<del></del>		Report No.: _ Page:		02U08 of	<del></del>
Code:		1989				Code Cat.:	····	F-1	Locat				Cont 715			
Drawing No.:			ISI-9	7C			Description	: PIPE - VAL	VE				· · · · · · · · · · · · · · · · · · ·			
System ID:	SI								·		·					
Component ID:	W-18								Size/Lengtl	h:(	0.5" / 7.5"	Thic	kness/Diame	ter: _	.30"	/ 2"
Limitations:	See Co	mments.	1	····						Start	Time:	1620	Finish Ti	me: _	163	30
Examination S	Surface:	insid	le 🗀	Ou	tside 🗹		Surface C	ondition: As \	Velded							
Lo Location:		Top Deac	<u>i Center</u>	, 	. Wo Loo	cation:	Centerline	of Weld	Couplant:	<del></del>	Sonotrac	e 40	Batch No.	.:	#001	43
Temp. Tool M	fg.:	Tel	atemp	<del></del>	. Seria	al No.:	NSP 1	73	Surface Te	mp.: _	70	°F				
Cal. Report No	o.:	<del> </del>			2002	CA139, 200	2CA140	·								·
Angle Used	0	45	45T	60	70	T	]									
Scanning dB		62	62		85											
Indication(s):	Yes [	No	$\mathbf{Z}$			Sc	an Coverage:	Upstream 🗹	Downstrea	m 🔲	cw 🗹	ccw	abla			
Comments:																
No scan on v	alve due	to confi	iguratio	n. No a	ıxlal scan	on bottom	2.5" due to s	tantion from s	upport 1-RSI	IH-383.	See atta	ched limit	ation sheet.			
													•			
Results:	NAD 💽	2	IND 🗌		GEO 🗀											
Percent Of Co	verage O	btained >	• 90%:		No		Reviewed Pre	vious Data:	N/A							
	Level II	R	10-	-1	Signature			ate Reviewer	7.		¬ C .	Signa				Date
Auer, Robert C Examiner		<u> / 4</u> /	wy	ČL.	<u>Ciamatuma</u>	<del></del>	<del></del>	02 Clay, Sea		الملا	<del>770</del>				<u> </u>	0-02
N/A	Level N	/A ,		-	Signature		Da	ate   Site Revie Wren, Jer	\ \.	- -en-	,e.u	Signa	LU, III	1-	1-/-0	Date 2_
Other I	Level N	/A		Ş	Signature		Da	ANII Revie		P	7	Signa	iture		2/2/	Data
												·				

ATTACHMENT 42 PAGE 1 OF 4

## ATTACHMENT 42 PAGE 2 OF

	_
NMC	B
3 m(t = 3 m;	

### **Limitation Record**

Site/Unit:	PNGP	1	Pl1	Procedure:	ISI-UT-16A	Outage No.:	PI1RF02002				
Summary No.:		3030	60	Procedure Rev.:	1	Report No.:	20	)02U0	89		
Workscope:	ISI		l	Work Order No.:	0200860	Page:	2	of	4		

Description of Limitation:

Single sided exam - Although the examination was performed through 100% of the code required volume. Procedure ISI-UT-16A is not qualified for the detection of flaws on the far side of single side access exams. The techniques provided by this procedure were used for a best effort examination for flaws on the far side of the weld.

Sketch of Limitation:

J.\lddeal\_Photos\PI1RFO2002\UT Photos\2002U089-1.bmp

W18.

VALVE

PIPE

FLOW

Limitations removal requirements:

None

Radiation field: <2 mR/hr

Examiner	Level	11	Signature /	Date	Reviewer		Signature	Date
Auer, Robe	rt G.		Trade The	11/27/2002	Clay, Sean P.	HOW	LVE	II 11-30-62
Examiner N/A	Level	N/A	Signature	Date	Site Review Wren, Jerry P.	Jun 6	Signature	Date 12-1-0 と
Other N/A	Level	N/A	Signature	Date	ANII Review Clow, Ron	PO	Signature	Date 12/2/02



## Determination of Percent Coverage for UT Examinations - Pipe

Site/Unit:	PNGP / PI1		Pl1	Procedure:	ISI-UT-16A	Outage No.:	PI1RFO2002		002
Summary No.:	303060		50	Procedure Rev.:	Procedure Rev.: 1		2002U089		
Workscope:	ISI			Work Order No :	0200860	0200860 Page:		of	4

<u>45 deg</u>						
Scan 1	0.000	% Length X _	0.000	% volume of length / 100 =	0.000	% total for Scan 1
Scan 2	0.000	% Length X _	0.000	% volume of length / 100 =	0.000	% total for Scan 2
Scan 3	100.000	_ % Length X _	50.000	% volume of length / 100 =	50.000	% total for Scan 3
Scan 4	100.000	% Length X _	50.000	% volume of length / 100 =	50.000	% total for Scan 4

Add totals and divide by # scans = 25.000 % total for 45 deg

Other deg - 70 (to be used for supplemental scans)

The data to be listed below is for coverage that was not obtained with the 45 deg scans.

Scan 1	67.000	_ % Length X	50.000	% volume of length / 100 =	33.500	_ % total for Scan 1
Scan 2	67.000	_ % Length X	50.000	% volume of length / 100 =	33.500	_% total for Scan 2
Scan 3	0.000	_ % Length X	0.000	% volume of length / 100 =	0.000	_ % total for Scan 3
Scan 4	0.000	_ % Length X	0.000	% volume of length / 100 =	0.000	_ % total for Scan 4

### Percent complete coverage

Add totals for each scan required and divide by # of scans to determine;

41.750 % Total for complete exam

Site Field Supervisor: Date: 11-30-02

### **Supplemental Report**

Report No.: 2002U089

Page.

Summary No.: 303060

Examiner: Auer, Robert G.

Level: II

Reviewer: Clay, Sean P.

Examiner: N/A Other: N/A Level: N/A

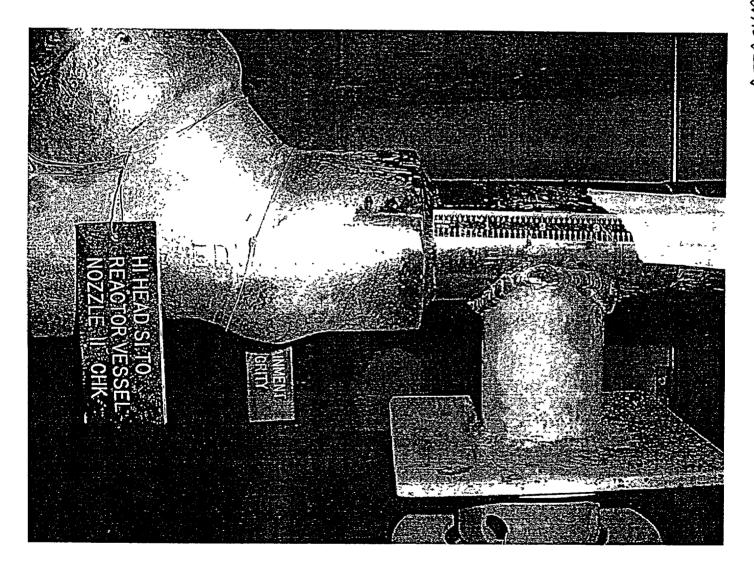
Site Review: Wren, Jerry P.

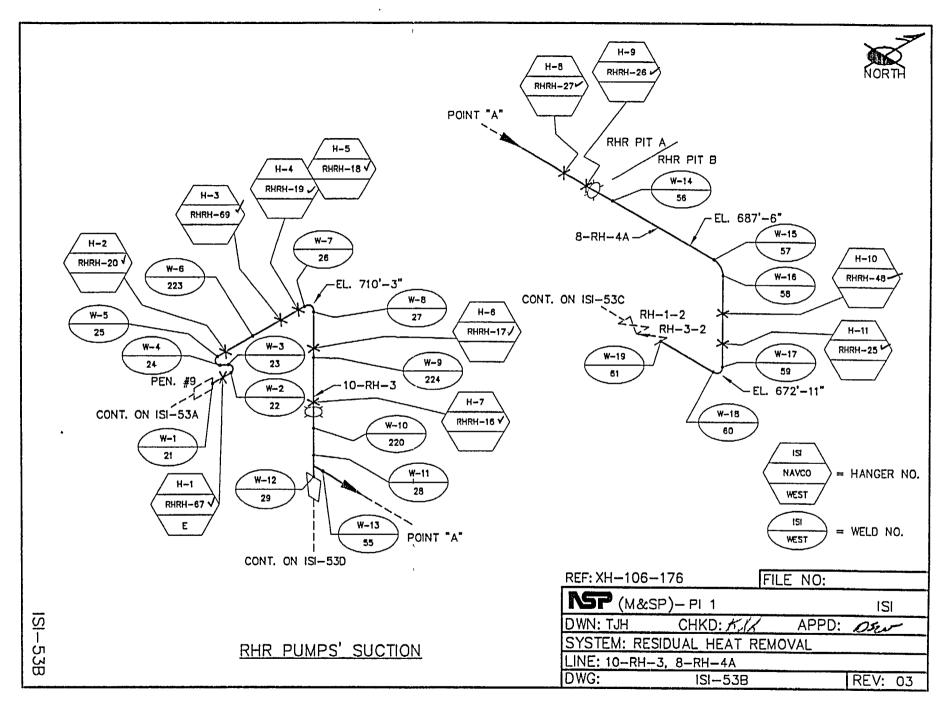
Level: N/A

ANII Review: Clow, Ron

Comments: None

Sketch or Photo: J \lddeal\_Photos\PI1RFO2002\UT Photos\2002U089-2 bmp





ATTACHMENT 43 PAGE 1 OF !



#### **UT Pipe Weld Examination**

S	Site/Unit:	PNGP /	Pl	<u> </u>		Pro	cedure:	ISI-UT-1	6A	Outa	age No.: _	PI1F	RF020	02
Summ	ary No.:		301326			Procedu	re Rev.:	11	·····	Rep	ort No.: _	20	02U10	<u>)</u>
Wor	rkscope:		ISI			Work Ord	der No.:	021038	30		Page: _	1	of _	4
Code:		1989			ode Cat.:	C-F-1		Location	ı:	Au	x CSPR			
Drawing No.:			ISI-53B			Description: P	EN 9 - PIPE			<del>-</del>				<del></del>
System ID:	RH										==			
Component ID:	W-1							Size/Length:	10" / 31.4"	Thickne	ss/Diamet	er: _	.5" /	10"
Limitations:	See att	ached phot	tos.						Start Time:	N/A	Finish Tin	ne: _	N/A	4
Examination (	Surface:	inside		Outside <b>☑</b>		Surface Cond	ition: Grou	nd Smooth						
Lo Location:	•	Fop Dead C	Center	Wo Loca	ition:	Centerline of V	Veld	Couplant: _		<del></del>	Batch No.:			
Temp. Tool M	Mfg.:	N//	A	Serial	No.:	N/A		Surface Temp	o.: <u>N/A</u>	°F				
Cal. Report N	lo.:				N/A									
Angle Used	0	45	45T 60											
Scanning dB														
Indication(s):	Yes [	] No ₩	<u> </u>		Sca	n Coverage: Up	stream 🗌	Downstream	□ cw □	ccw □				
Comments:														
No exam per	rformed (	due to rest	ricted acc	ess.										
No previ	ous c	lata.	SMUH	1/21/03.										
Results:	NAD [	۸I ر	10 🗆	GEO 🗀										
Percent Of Co	overage C	_ Obtained > 9	90%:	No	_	Reviewed Previou	ıs Data:	N/A						
Examiner	Level II			Signature		Data	Reviewer	_		Signatu	70			Date
Halling, David	•••		De. (	Signature			Clay, Sean	P. MIL	SOL	•			12-n	4·0.2
Examiner	Level N	I/A	. <del></del>	Signature)			Site Reviev	( ex	0. 1	Signatu	re			Date
N/A				<u> </u>			Wren, Jerr		2 J.W	$\sim$	· <u></u>		<u> 2-5</u>	つこ
Other N/A	Level N	I/A		Signature		Date	ANII Review			Signatu	re	lo	2/5%	Date



#### **Determination of Percent Coverage for UT Examinations - Pipe**

Site/Unit:	PNGP / PI1	Procedure:	ISI-UT-16A	
Summary No.:	301326	Procedure Rev.:	1	_
Workscope:	ISI	Work Order No.:	0210380	

	Outage No.:	PII	HFU2	002	
_	Report No.:	20	02U10	00	
	Page:	2	of	4	

			au3			
45 deg			GW3-5-03			
Scan 1	0.000	% Length X	31.400	% volume of length / 100 = _	0.000	% total for Scan 1
Scan 2	0.000	% Length X	<del>-31.400</del>	% volume of length / 100 =	0.000	% total for Scan 2
Scan 3	0.000	% Length X	<del>31.400</del>	% volume of length / 100 = _	0.000	% total for Scan 3
Scan 4	0.000	% Length X	<del>31.400</del>	% volume of length / 100 =	0.000	% total for Scan 4
	- "					

% total for 45 deg Add totals and divide by # scans = 0.000

Other deg - 0 (to be used for supplemental scans)

The data to be listed below is for coverage that was not obtained with the 45 deg scans.

Scan 1	0.000	% Length X	0.000	_ % volume of length / 100 = _	0.000	_ % total for Scan 1
Scan 2	0.000	% Length X	0.000	_ % volume of length / 100 = _	0.000	_ % total for Scan 2
Scan 3	0.000	% Length X	0.000	% volume of length / 100 =	0.000	% total for Scan 3
Scan 4	0.000	% Length X	0.000	% volume of length / 100 =	0.000	% total for Scan 4

#### Percent complete coverage

Add totals for each scan required and divide by # of scans to determine;

0.000 % Total for complete exam

2 P.W. W. III Date: 12-5-02

PAGE ATTACHMENT 44

PAGE 3 OF



#### **Limitation Record**

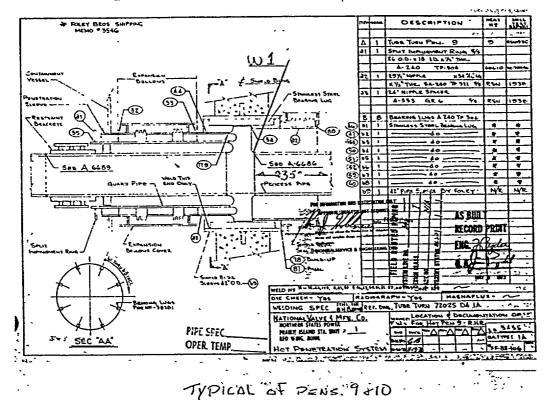
Site/Unit:	PNGP	1	PI1	Procedure:	ISI-UT-16A	Outage No.:	Pi1	RFO2	002
Summary No.:		3013	326	Procedure Rev.:	1	Report No.:	20	002U1	00
Workscope:		IS	il	Work Order No.:	0210380	Page:	3	of	4

Description of Limitation:

There is no physical access due to penetration sleeve.

Sketch of Limitation:

J \lddeal\_Photos\PI1RFO2002\UT Photos\2002U100-1 bmp



Limitations removal requirements:

None

Radiation field. N/A

Examiner Halling, Dav	Level	11	Signature		Reviewer Clay, Sean P.	1	2 Garres	Signature	Date 12-05-02
Examiner N/A	Level	N/A	Signature	Date	Site Review Wren, Jerry P	$\succeq$	DE PU	Signature LV-TIII	Date
Other N/A	Level	N/A	Signature	Date	ANII Review Clow, Ron		P	Signature	Date 12/5/02

## Аттаснмелт 44

### NMC

#### **Supplemental Report**

Report No:

2002U100

Page:

Summary No.: 301326

Examiner: Halling, David A.

Level: II

Reviewer: Clay, Sean P.

Date: 12-04-02

Examiner: N/A

Level: N/A

Site Review. Wren, Jerry P.

Other: N/A

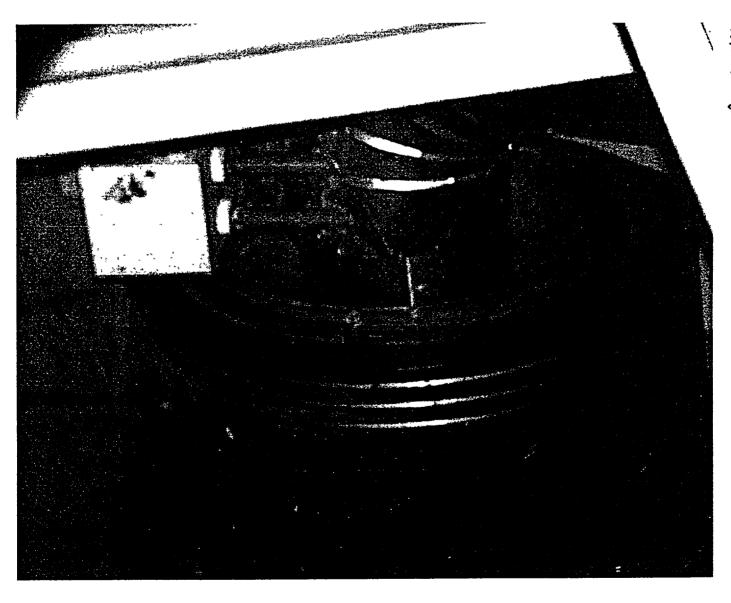
Level: N/A

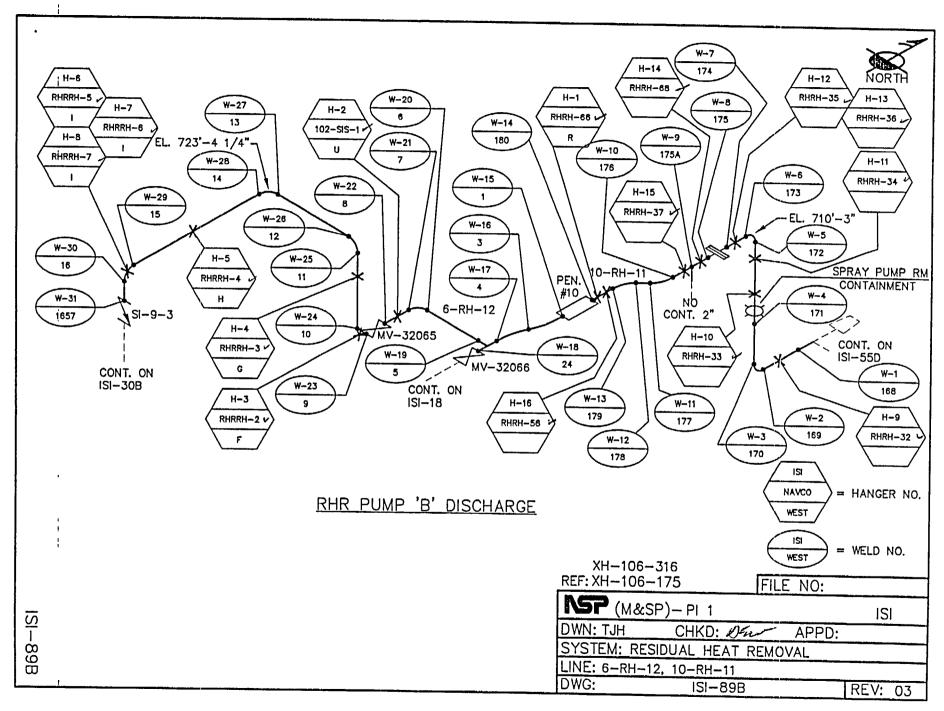
ANII Review: Clow, Ron

Date: 12/5/2

Comments: None

Sketch or Photo: J\lddeal\_Photos\PI1RFO2002\UT Photos\2002U100-1.jpg





# TACHMENT 46 PAGE 1 E



#### **Liquid Penetrant Examination**

Site	Unit: Pl	NGP /	PI1		Procedure:	ISI-PT-1	Outage No.:	PI1RFO2002
Summary	No.:	30	1858		Procedure Rev.:	14	Report No.:	2002P140
Works	cope:		ISI		Work Order No.:	0210380	Page:	1 of 4
Code:	1	989		Code (	Cat.: <u>C-F-1</u>	Location:	Aux CSPF	}
Drawing No.:		151-1	39B		Description: PIP	E - PEN 10		
System ID:	RH							
Component I	D: <b>W-14</b>						Size/Length:	10"/31.4"
_imitations:	See at	tached p	hotos.					
Temp. Tool	Mfg.:		N/A		Serial No.:	N/A	Surface Terr	np.: <u>N/A</u> °F
Comparato	Block Ter	np.: S	ide A: <u>N</u>	<u>/A</u> °F	Side B: N/A	°F Resolution:	Not U	sed
Lo/Wo Loca	ation:	Top D	ead Cente	r/Weld C	enterline	Surface Condition:	Ground Sm	nooth
		Cleaner			Penetrant	Remover	ſ	Developer
Brand								
Туре					•			
Batch No.								
Time	Evap.			Dwell		Evap.	Develop	
	Time Exa	am Starte	d:			Time Exam Completed:		
Indication	Loc	Loc	Diameter	Length	Туре		Remarks	
No.	L	w			R/L			
Comments	! :	I	l					
		l due to r	estricted a	ccess.	do previous	data 8mH 1/21	03.	
Results:	N	AD <b>☑</b>	IND		GEO 🗌			
Percent O	Coverage	Obtaine	d > 90%:		No .	Reviewed Previous Data:	N/A	<u> </u>
Examiner	Level	III _	Şigi	nature		eviewer	Signature	Date
Halling, Da	Level	N/A	<u>6,4C</u> ini2	nature		ay, Sean P.	Signature	12-0402 Lu:III Date
N/A					w	ren, Jerry P.	July	-12-4-02
Other	Level	N/A	Sigi	nature	1	VII Review	Signature	Date 12/5/02



#### **Determination of Percent Coverage for Surface Examinations**

Site/Unit:	PNGP	1	Pl1	Procedure:	ISI-PT-1	Outage No.:	PI1	RFO2	002
Summary No.:		3018	58	Procedure Rev.:	14	Report No.:	20	002P1	40
Workscope:		ISI		Work Order No:	0210380	Page:	2	of	4

Area Required (as shown in applicable code reference drawing)

Length 31.400 \* Width = Total Area required 62.800 square inches

Coverage Achieved

0.000 sq. in. / Total area required (100%) Area examined 62.800 0.000 % (area required - area of limitations = area examined) = Percent coverage

To determine length of a circumferential weld

Note - Diameter refers to actual external diameter not pipe size (see table below)

Diameter 10.000 \* (Pi) 3.1416

inches = Length 31.416

Pipe Size	Actual Diameter	(Length) Circumference		Pipe Size	Actual Diameter	(Length) Circumference
2	2.375	7.46	[	12	12.75	40.06
2.5	2.875	9.03	•	14	14.0	43.98
3	3.5	11.0		16	16.0	50.27
3.5	4.0	12.57		18	18.0	56.55
4	4.5	14.14	Ī	20	20.0	62.83
5	5.563	17.48	Ī	22	22.0	69.12
6	6.625	20.81	Ī	24	24.0	75.40
8	8.625	27.10		30	30.0	94.25
10	10.75	33.77				

2 LuIII Date: 12-4-02



#### **Limitation Record**

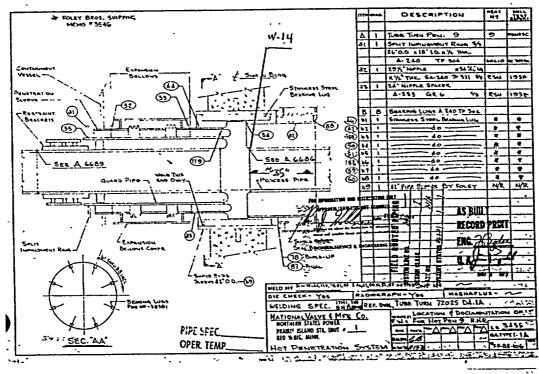
Site/Unit:	PNGP	1	PI1	Procedure:	ISI-PT-1	Outage No.:	PI1	RF02
Summary No.:		3018	<b>358</b>	Procedure Rev.:	14	Report No.:	20	002P1
Workscope:		IS	1	Work Order No.:	0210380	Page:	3	of

Description of Limitation:

There is no physical access due to penetration sleeve.

Sketch of Limitation:

J.\Iddeal\_Photos\PI1RFO2002\PT Photos\2002P140-1 bmp



Typical FOR PEN 9 and 10

Limitations removal requirements:

None

Radiation field N/A

Examiner	Level	III ~	\ \ Signature	Date	Reviewer	7	Signature	Date
Halling, Da	vid A.	Q	4.1480°	12/4/2002	Clay, Sean P.	etter.	Also	12-05.0
Examiner	Level	N/A	Signature	Date	Site Review	$\overline{}$	Signature	Date
N/A					Wren, Jerry P.	Aus	( Whi	12-5-02
Other	Level	N/A	Signature	Date	ANII Review		Signature	Date
N/A					Clow, Ron	190	V	12/5/02



#### **Supplemental Report**

Report No: 2002P140

Page<sup>-</sup>

Summary No.: 301858

Examiner. Halling, David A.

Examiner: N/A

Other: N/A

Level 111

Level. N/A

Level: N/A

Reviewer. Clay, Sean P.

ANII Review: Clow, Ron

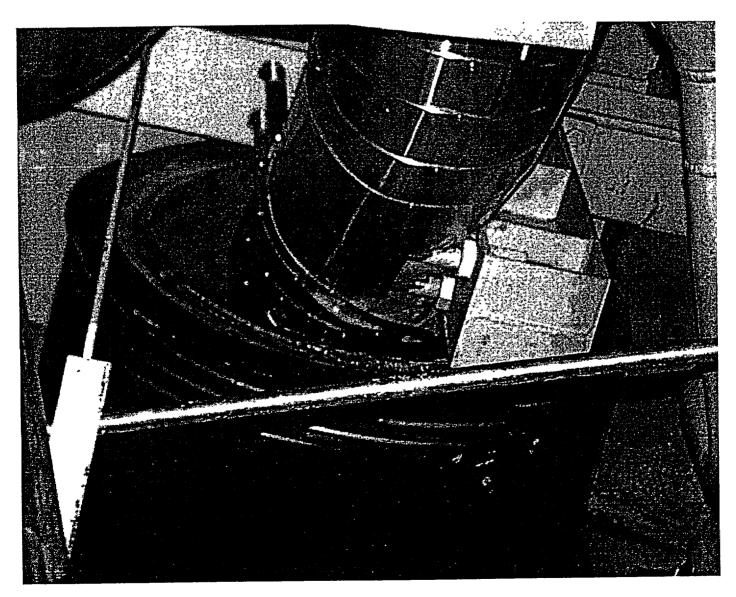
Site Review. Wren, Jerry P.

Date: 12-0402 Date: 12-5-02

Date: 12/5/02

Comments: None

Sketch or Photo: J \iddeal\_Photos\PI1RFO2002\Misc Photos\301858 jpg



# TACHMENT 47 PAGE 1 O



#### **Liquid Penetrant Examination**

Site	e/Unit: Pl	NGP /	PI1		Procedure	e: ISI-PT-	<u>-1</u>	Outage No :	PI1RFO2	002
Summary	y No.:	30	01326		Procedure Rev	v.: <u>14</u>		Report No.: _	2002P14	41
Works	cope:		ISI		Work Order No	o.: 021038	10	Page _	1 of	4
Code:	-	1989		Code	Cat.: <b>C-F-1</b>	Location:		Surface Temp.: N/A  Not Used  Ground Smooth  Develope  Develop  arks  N/A  Signature  Signature		
Drawing No.:										
System ID:	RH								<u> </u>	
Component I	ID: <u>W-1</u>							Size/Length: _	10"/31	1.4"
Limitations:	See at	ttached p	hotos.				· · · · · · · · · · · · · · · · · · ·			
Temp. Tool	Mfg.:		N/A		Serial N	lo.: N/A	<u> </u>	Surface Temp	.:N/A	°F
Comparato	r Block Te	mp.: §	3ide A: <u>N</u>	<u>⊮A</u> °F	Side B: N/A	°F Reso	lution:	Not Use	ed	
Lo/Wo Loca	ation:	Top D	ead Cente	r/Weld C	enterline	Surface Condition	n:	Ground Smo	oth	
		Cleaner			Penetrant	Ren	mover	De	eveloper	
Brand										
Туре										
Batch No.										
Time	Evap			Dwell		Evap		Develop		
	Time Ex	am Starte	ıd.			Time Exam Co	ompleted:			
Indication	Loc	Loc	Diameter	Length	Туре		Rema	ırks		
No.	L	w		<u>'</u>	R/L					
-										
Comments	Ls:	<u> </u>	.1	<u></u>	1		- 1 -			
No exam	performed	l due to r	estricted a	iccess.	No previou	o olata. 8WH	1/21/03			
Results:	N	IAD 🗌	IND		GEO □					
Percent O	of Coverage	e Obtaine	d > 90%:		No	Reviewed Previou	us Data:	N/A	- -	
Examiner	Level	111	Sign	nature		Reviewer	MIT L	Signature		Date
Halling, Da		لاي	Lldo!	nature		Clay, Sean P. Site Review	mer.	Signature	_/;/	<u> </u>
N/A	Lovei	N/A	<b>U</b> 191	lature U		Wren, Jerry P.	Dun 0.6	<i>v</i> /~	125	حر ک
Other N/A	Level	N/A	Sigr	nature		ANII Review Clow, Ron	2///		12/5	Date
IN/A*					<b>.</b>	CIUW, INCI. /	× / /		• •	•



#### Determination of Percent Coverage for Surface Examinations

Site/Unit.	PNGP	1	Pl1	Procedure:	ISI-PT-1	Outage No:	PI1	RFO2	002
Summary No:		30132	26	Procedure Rev.:	14	Report No.:	20	02P1	41
Workscope:		ISI		Work Order No.:	0210380	Page:	2	of	4

Area Required (as shown in applicable code reference drawing)

 Length
 31.400
 \* Width
 2.000

 = Total Area required
 62.800
 square inches

**Coverage Achieved** 

Area examined 0.000 sq. in. / Total area required (100%) 62.800 sq. in.

= Percent coverage 0.000 % (area required - area of limitations = area examined)

#### To determine length of a circumferential weld

Note - Diameter refers to actual external diameter not pipe size (see table below)

Diameter \_\_\_\_\_ \* (Pi) 3.1416

= Length \_\_\_\_\_ 31.416 \_\_\_\_ inches

Pipe Size	Actual Diameter	(Length) Circumference	Pipe Size		(Length) Circumference
2	2.375	7.46	12	12.75	40.06
2.5	2 875	9.03	14	14.0	43.98
3	3.5	11.0	16	16.0	50.27
3.5	4.0	12.57	18	18.0	56.55
4	4.5	14.14	20	20.0	62.83
5	5.563	17.48	22	22.0	69.12
6	6.625	20.81	24	24.0	75.40
8	8.625	27.10	30	30.0	94.25
10	10.75	33.77			

Site Field Supervisor:

Jup-Wn Will

Date: 12-5-02



#### **Limitation Record**

Site/Unit:	PNGP	1_	Pl1	
Summary No.:		3013	326	_
Workscope:		IS	ſ	

Procedure: ISI-PT-1
Procedure Rev.: 14

Outage No : \_\_\_\_ Report No.:

PI1RFO2002 2002P141

Work Order No.:

0210380

Page.

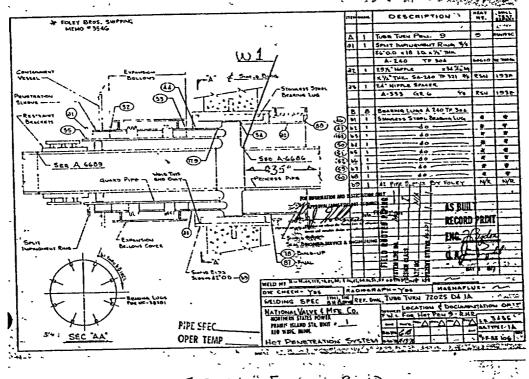
3 of 4

Description of Limitation:

There is no physical access due to penetration sleeve.

Sketch of Limitation:

J \lddeal\_Photos\PI1RFO2002\PT Photos\2002P141-1.bmp



TYPICAL OF PENS. 9+10

Limitations removal requirements:

None

Radiation field: N/A

Examiner	Level III	Signature	Date	Reviewer	1 - 1	Signature	Date
Halling, Da	• • • • • • • • • • • • • • • • • • • •	W.A. Hallen	12/4/2002	Clay, Sean P.	1 gull	<u>~</u>	12-05-02
Examiner	Level N/A	Signature	Date	Site Review		Signature	Date
N/A				Wren, Jerry P	Au Co	Wanter	125-02
Other	Level N/A	Signature	Date	ANII Review	7)///	Signature	Date
N/A				Clow, Ron	190		12/5/02

## ATTACHMENT 47



#### **Supplemental Report**

Report No:

2002P141

Page:

Summary No.: 301326

Examiner: Halling, David A.

Level: III

Reviewer: Clay, Sean P.

Date: 12-04-02

Examiner: N/A

Level: N/A

Site Review: Wren, Jerry P.

Date: 12-5-02

Other: N/A

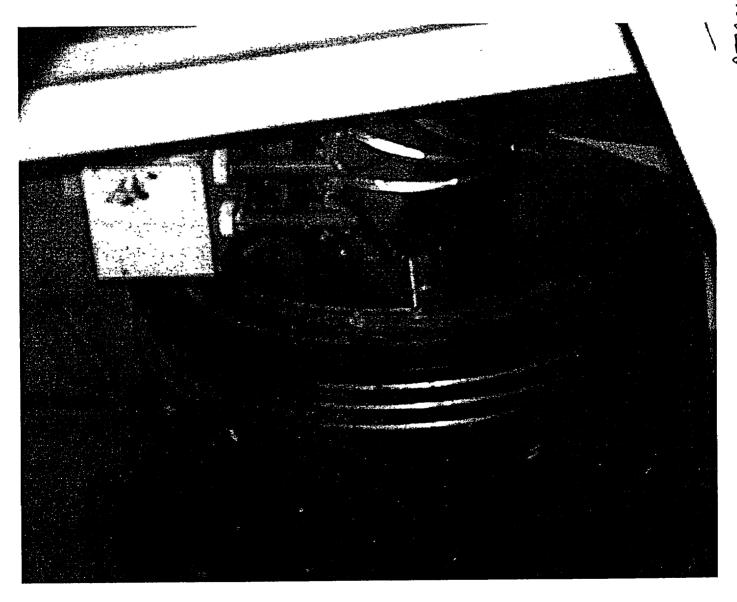
Level: N/A

ANII Review: Clow, Ron

Date. 12/5/02

Comments: None

Sketch or Photo: J\iddeal\_Photos\PI1RFO2002\UT Photos\2002U100-1 jpg





#### **UT Pipe Weld Examination**

S	ite/Unit:	PNGP /	PI1	_	Pro	ocedure:	ISI-UT-1A		Outage No.:	PI1RFO2002
Summa	ary No.:	3015	84	_	Procedu	ire Rev.:	1		Report No.:	2002U094
Worl	kscope:	IS	l	<del>-</del>	Work Or	der No.:	0200860		Page:	1 of 4
Code:		1989		Code Cat.:	C-F-2		Location:		Cont 715	
Drawing No.:		ISI-	68A		Description: F	PIPE - PIPE	•			
System ID:	MS				_					
Component ID:	W-6LSU	D		guard	- /		Size/Length:	N/A	Thickness/Diamete	r: N/A
Limitations:	Entire e	xam area unde	r permanent	( )	8mH 1/21	03	Star	t Time:	N/A Finish Time	
Examination S	Surface:	Inside 🗌	Outside		Surface Cond	dition:				
Lo Location:			w	o Location:	Centerline of V	Weld	Couplant:		Batch No.:	
Temp. Tool Mi	fg.:		<del></del>	Serial No.:			Surface Temp.:		.°F	
Cal. Report No	o.:									
Angle Used Scanning dB	0	45 45T	60							
Indication(s):	Yes [	] No 🔽		Sc	– an Coverage:    Up	ostream 🗀 🔝	Downstream 🔲	cw□	ccw 🗆	
Comments:	Yev'i ou	ıs data.	8mH 1/2	ulo3.				_		
Results:	NAD [	IND [	GE(	P 🗆						
Percent Of Cov	verage Ol	otained > 90%:	No	<u> </u>	Reviewed Previou	ıs Data:	N/A			
Examiner I	Level III		Signa			Reviewer Clay, Sean P	. Sev	DG	Signature	Date //-30-02
Examiner I	Level N/		Signa			Site Review ( Wren, Jerry		7 P.W.	Signature	Date
Other t	Level N/	A	Signa	ture		ANII Review Clow, Ron	F	a	Signature	Date 12/1/02



#### **Limitation Record**

Site/Unit:	PNGP	1	PI1
Summary No.:		3015	584
Workscope:		IS	i

Procedure: ISI-UT-1A
Procedure Rev.: 1
Work Order No.: 0200860

Outage No.: PI1RFO2002

Report No.: 2002U094

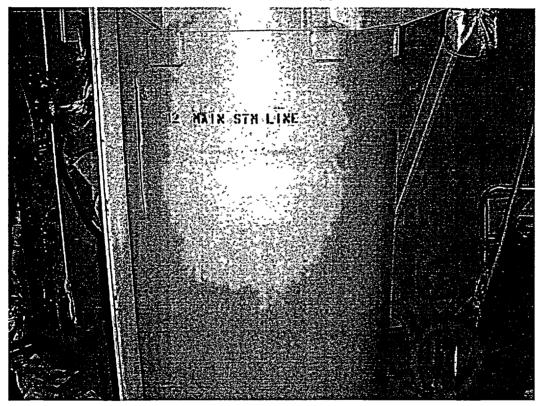
Page: 2 of 4

Description of Limitation:

No access due to entire weld under permanent guard pipe.

Sketch of Limitation:

J.\Iddeal\_Photos\PI1RFO2002\UT Photos\2002U094-1.jpg



Limitations removal requirements:

Guard pipe is permanent and cannot be removed.

Radiation field. N/A

Examiner	Level	III	7 Signature	Date	Reviewer		Signature	Date
Timm, Jere	my T.		/hullf	11/29/2002	Clay, Sean P.	1 July	- LVIII	11-30-02
Examiner	Level	N/A	Signature	Date	Site Review	$\overline{\wedge}$	Signature	Date
N/A					Wren, Jerry P.	Jun V.	Jan W.M	12-1-02
Other	Level	N/A	Signature	Date	ANII Review	001	Signature	Date
N/A				•	Clow, Ron	1811		12/1/02



### Determination of Percent Coverage for UT Examinations - Pipe

nmary No.:	PNGP /	PI1	Proce	dure: ISI-UT-1A	Outage I	No.: PI1RFO2002
	30158	34	Procedure	Rev.: <u>1</u>	Report I	No.: 2002U094
Vorkscope: _	ISI		Work Order	No.: 0200860	_ Pa	age: <u>3</u> of <u>4</u>
<u>45 deq</u>						
Scan 1	0.000	% Length X _	0.000	% volume of length / 100 =	0.000	% total for Scan 1
Scan 2	0.000	% Length X _	0.000	% volume of length / 100 =	0.000	% total for Scan 2
Scan 3	0.000	% Length X	0.000	% volume of length / 100 =	0.000	% total for Scan 3
Scan 4	0.000	% Length X	0.000	% volume of length / 100 =	0.000	% total for Scan 4
	Add totals an	d divide by # sca	ns =0.000	) % total for 45 deg		
Other dec		_ (to be used for		•		
<del></del>		<del>-</del> ·		scans) btained with the 45 deg scans.		
<del></del>		<del>-</del> ·		•	0.000	% total for Scan
The data	to be listed bel	ow is for coverage	that was not o	btained with the 45 deg scans.	0.000	
The data	to be listed bel	ow is for coverage	that was not o	btained with the 45 deg scans.  % volume of length / 100 = _		% total for Scan 2
The data of Scan 1	0.000	ow is for coverage  % Length X  % Length X	0.000 0.000	btained with the 45 deg scans.  % volume of length / 100 =  % volume of length / 100 =	0.000	% total for Scan 1 % total for Scan 2 % total for Scan 3
Scan 1 Scan 2 Scan 3	0.000 0.000	% Length X % Length X % Length X	0.000 0.000 0.000	% volume of length / 100 =% volume of length / 100 =% volume of length / 100 =%	0.000	% total for Scan 2
Scan 1 Scan 2 Scan 3	0.000 0.000	% Length X % Length X % Length X	0.000 0.000 0.000	% volume of length / 100 =% volume of length / 100 =% volume of length / 100 =%	0.000	% total for Scan 2
Scan 1 Scan 2 Scan 3 Scan 4	0.000 0.000	% Length X % Length X % Length X % Length X	0.000 0.000 0.000	% volume of length / 100 =% volume of length / 100 =% volume of length / 100 =%	0.000	% total for Scan
Scan 1 Scan 2 Scan 3 Scan 4	0.000 0.000 0.000 0.000	% Length X % Length X % Length X % Length X % Length X	0.000 0.000 0.000 0.000	btained with the 45 deg scans.  % volume of length / 100 = % volume of length / 100 = % volume of length / 100 = % volume of length / 100 =	0.000	% total for Scan 2
Scan 1 Scan 2 Scan 3 Scan 4	0.000 0.000 0.000 0.000 complete cove	% Length X % Length X % Length X % Length X	0.000 0.000 0.000 0.000	btained with the 45 deg scans.  % volume of length / 100 = % volume of length / 100 = % volume of length / 100 = % volume of length / 100 =	0.000	% total for Scan 2



#### **Supplemental Report**

Report No.: 2002U094

Page: 4 of 4

Summary No.: 301584

Examiner: Timm, Jeremy T.

Level. III

Reviewer: Clay, Sean P.

Date: 11-30-02

Examiner: N/A

Other: N/A

N/A

Level: N/A

Site Review: Wren, Jerry P.

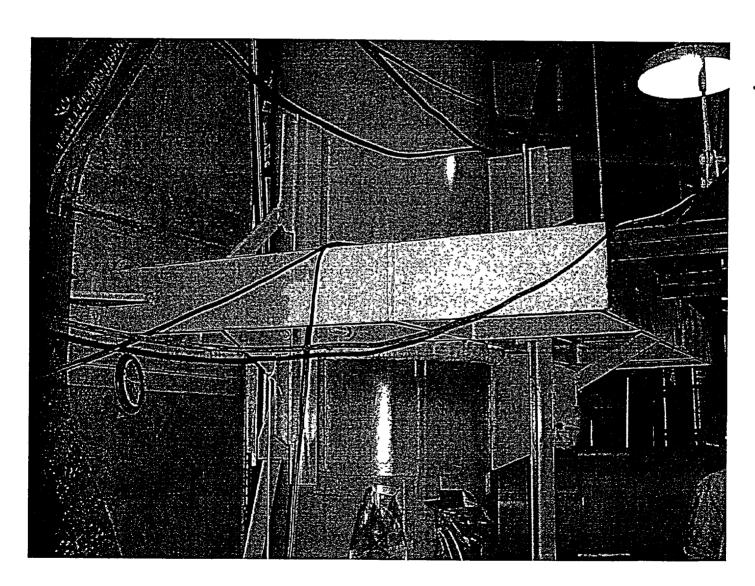
ANII Review: Clow, Ron

Vren, Jerry P. [

Date: 12/1/02

Comments: None

Sketch or Photo: J\Iddeal\_Photos\PI1RFO2002\UT Photos\2002U094-2 jpg





#### **UT Pipe Weld Examination**

S	ite/Unit:	PNGP	1	PI1			Prod	cedure:	ISI-UT-1A		Outage No.:	PI1RFO2	002
Summ	ary No.:		30170	1			Procedur	e Rev.:	1		Report No.:	2002U09	95
Wor	kscope:		ISI		<u> </u>		Work Ord	ler No.:	0200860		Page:	<u>1</u> of	3
Code:		1989			Code	Cat.:	C-F-2		Location:		Cont 735		
Drawing No.:			ISI-6	9		_	Description: P	IPE - PIPE					
System ID:	FW							···					<u> </u>
Component ID:	W-9								Size/Length:		Thickness/Diamete	ər:	
Limitations:	Entire e	xam is u	nder pe	rmanen	t guard pipe.				Star	t Time:	Finish Tim	e:	
Examination 8	Surface:	Inside	• 🗆	Outs	side 🗌		Surface Condi	tion:					
Lo Location:					Wo Location	:	Centerline of W	/eld	Couplant:		Batch No.:		
Temp. Tool M	lfg.:				Serial No.	:			Surface Temp.:		°F		
Cal. Report N	o.:							·					•
Angle Used	0	45	45T	60									,
Scanning dB													
Indication(s):	Yes [	] No	<b>V</b>			Scar	n Coverage: Up	stream 🗌	Downstream 🗌	cw□	ccw 🗆		
Comments:													
No prev	rious (	hata.	8W	4 Ibu	103.								
•													
Results:	NAD F	<u> </u>	IND []		GEO 🗌								
Percent Of Co	_					_	Reviewed Previou	s Data:	N/A				
- Felcelit Of Oc	weraye C	bianeu >	90 70.		No	<u>'</u>	teviewed i Teviou	<u> </u>					
1	Level II	<u> </u>		ع ر ص	ignature			Reviewer	Ar.	_1	Signature		Date
Timm, Jeremy				rle	<u> </u>			Clay, Sean		DA	LITT		-30 <u>-0</u> 2
Examiner N/A	Level N	/A		8	Signature		Date	Site Review Wren, Jerr		P.W.	Signature	12-1-0	Date
	Level N	//A		9	Signature	<del></del>	Date	ANII Review		7/1	Signature		Date
N/A								Clow, Ron	(FC	<u>v</u>		12/1	02



#### **Limitation Record**

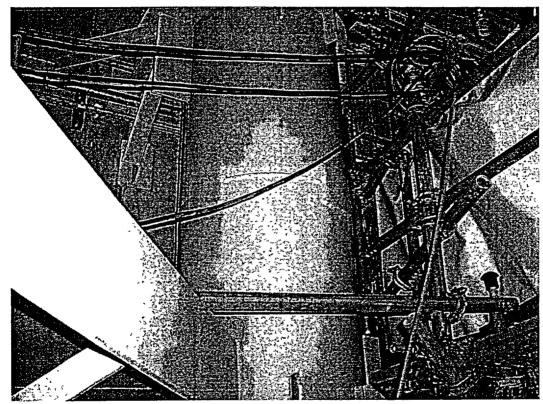
Site/Unit:	PNGP	1	Pl1	Procedure:	ISI-UT-1A	Outage No.:	PI1	RFO2	2002
Summary No.:		3017	01	Procedure Rev.:	1	Report No.:	20	002U0	95
Workscope:		IS	l	Work Order No.:	0200860	Page:	2	of	3

Description of Limitation:

Entire exam is under permanent guard pipe.

Sketch of Limitation:

J.\Iddeal\_Photos\PI1RFO2002\UT Photos\2002U095-1 jpg



Limitations removal requirements:

Guard pipe is permanent and cannot be removed.

Radiation field: N/A

Examiner	Level	Ш		Signature	Date	Reviewer		Signat	ıre	Date
Timm, Jere	my T.		Clare	Stu	11/30/2002	Clay, Sean P.	1960	J 2095	·II //	1-30-02
Examiner N/A	Level	N/A	//	Signature	Date	Site Review Wren, Jerry P.	$\langle \cdot \rangle$	Signati	40111	Date
Other	Level	N/A		Signature	Date	ANII Review	0,	Signati	ure	Date
N/A		•				Clow, Ron	14		12/1	102



#### **Determination of Percent Coverage for UT Examinations - Pipe**

Site/Unit:	PNGP /	<i>!</i>	PI1	Procedure:	ISI-UT-1A	Outage No.:	Piti	RFO2	002
Summary No.:	3	01701		Procedure Rev.:	1	Report No.:	20	02U0	95
Workscope:		ISI		Work Order No.:	0200860	Page:	3	of	3

45 deg						
Scan 1	0.000	% Length X _	0.000	% volume of length / 100 = _	0.000	% total for Scan 1
Scan 2	0.000	% Length X	0.000	% volume of length / 100 =	0.000	% total for Scan 2
Scan 3	0.000	% Length X _	0.000	% volume of length / 100 =	0.000	% total for Scan 3
Scan 4	0.000	% Length X _	0.000	% volume of length / 100 = _	0.000	% total for Scan 4

0.000 % total for 45 deg Add totals and divide by # scans =

Other deg - 0 (to be used for supplemental scans)

The data to be listed below is for coverage that was not obtained with the 45 deg scans.

% total for Scan 1	0.000	% volume of length / 100 =	0.000	% Length X _	0.000	Scan 1
% total for Scan 2	0.000	% volume of length / 100 =	0.000	% Length X	0.000	Scan 2
% total for Scan 3	0.000	% volume of length / 100 = _	0.000	% Length X _	0.000	Scan 3
% total for Scan 4	0.000	% volume of length / 100 = _	0.000	% Length X	0.000	Scan 4

#### Percent complete coverage

Add totals for each scan required and divide by # of scans to determine;

0.000 % Total for complete exam

Tang P. W. LV-III Date: 11-30-02



#### **UT Pipe Weld Examination**

	Site/Unit: PNGP / PI1 Summary No.: 301858 Workscope: ISI							cedure: e Rev.:	ISI-UT-1 1		-	-			O200	
Wor	kscope:		ISI				Work Ord	ler No.:	021038	10	-		Page: 1	_ ′	of _	4
Code:		1989				ode Cat.:	C-F-1		Location	:		Aux	CSPR			
Drawing No.:			151-8	9B			Description: P	IPE - PEN 1	<u> </u>							<u> </u>
System ID:	RH									<del> </del>		<del></del>	·····			· · · · · · · · · · · · · · · · · · ·
Component ID:	W-14						,		Size/Length:	10"/31.	4"	Thicknes	s/Diameter:	:	.5" /	10"
Limitations:	See atta	ched pl	notos.						S	start Time:	N/A	<u> </u>	finish Time:	· —	N/A	4
Examination 9	Surface:	Insid	le 🗆	Out	side 🔽	· · · · · · · · · · · · · · · · · · ·	Surface Condi	tion: <u>Grour</u>	d Flush							
Lo Location:	7	op Dead	d Center	<u> </u>	Wo Loca	ation:	Centerline of W	/eld	Couplant:			В	atch No.: _			
Temp. Tool M	lfg.:	1	N/A		Serial	No.:	N/A		Surface Temp	o.: <u>N/A</u>	°F					
Cal. Report N	o.:			<u></u>												
Angle Used	0	45	45T	60												
Scanning dB																
Indication(s):	Yes [	] No	· 🗹			Sca	n Coverage: Up	stream 🔲	Downstream	□ cw		ccw 🗆				
Comments:																
No exam per	formed o	lue to re	stricted	acc <<<	s. No	previo	us data. ,	smH 1/2	103.							
Results:	NAD [	]	IND 🗆		GEO [		· . · . · · · · · · · · · · · · · · · ·						<u> </u>			
Percent Of Co	verage O	btained :	> 90%:		No	_	Reviewed Previou	s Data:	N/A	_						
	Level		<u></u>		Signature			Reviewer	Anis	26		Signature			_	Date
Halling, David	Level N		<u>4</u>		Signature		12/4/2002 Data	Clay, Sean Site Review		1 2 a		<u>レップ</u> Signature		<u> </u>	<u> 2-0</u>	94-02 Date
N/A	ravei M	A			ngilalule			Wren, Jerry	~ ` X	. P.	بركر	LV. I		12	? - 5	-الالا -الالالا
	Level N	/A		8	Signature			ANII Reviev	'	200	, ,	Signature				Date
N/A					· · · · · · · · · · · · · · · · · · ·			Clow, Ron	()	CA	<del></del>	· · · · · · · · · · · · · · · · · ·		1.	2/5/	62



0.000

Site Field Supervisor:

% Total for complete exam

### Determination of Percent Coverage for UT Examinations - Pipe

Site/Unit: P	NGP /	PI1	Proced	ure: ISI-UT-16A	Outage I	No.: PI1RFO2002
nary No.:	30185	8	Procedure F	lev.: 1	Report I	No.: 2002U099
orkscope:	ISI		Work Order	No.: 0210380	Pa	ge: 2 of 4
				<b>-</b>		
45 deg			Dr 3-50	>		
Scan 1	0.000	% Length X _	<del>31:400</del>	% volume of length / 100 =	0.000	% total for Scan 1
Scan 2	0.000	% Length X _	- <del>31.400</del>	% volume of length / 100 =	0.000	% total for Scan 2
Scan 3	0.000		<del>31.400</del>	% volume of length / 100 =	0.000	% total for Scan 3
Scan 4	0.000	% Length X	31:400	% volume of length / 100 =	0.000	% total for Scan 4
. А	dd totals an	d divide by # sca	ns = <u>0.000</u>	% total for 45 deg		
Other deg			ns = 0.000	_		
Other deg	0	(to be used for	supplemental s	_		
Other deg	0	(to be used for	supplemental s	scans)	0.000	% total for Scan 1
Other deg . The data to	0 be listed bel	(to be used for ow is for coverage	supplemental sthat was not ob	scans) otained with the 45 deg scans.	0.000 0.000	% total for Scan 1
Other deg - The data to Scan 1	0 be listed bel 0.000	(to be used for ow is for coverage % Length X	supplemental sthat was not ob	scans) otained with the 45 deg scans % volume of length / 100 =		
Other deg	0 be listed bel 0.000 0.000	(to be used for ow is for coverage % Length X % Length X	supplemental s that was not of  0.000  0.000	scans) otained with the 45 deg scans. % volume of length / 100 = % volume of length / 100 =	0.000	% total for Scan 2
Other deg	0 be listed bel 0.000 0.000	_ (to be used for ow is for coverage % Length X % Length X % Length X	supplemental sthat was not obtended to the control of the control	scans)  otained with the 45 deg scans.  % volume of length / 100 =  % volume of length / 100 =  % volume of length / 100 =	0.000	% total for Scan
Other deg	0 be listed bel 0.000 0.000	_ (to be used for ow is for coverage % Length X % Length X % Length X	supplemental sthat was not obtended to the control of the control	scans)  otained with the 45 deg scans.  % volume of length / 100 =  % volume of length / 100 =  % volume of length / 100 =	0.000	% total for Scan :

Date: 12-5-02



### Determination of Percent Coverage for UT Examinations - Pipe

Workscope:         ISI         Work Order No.:         0210380         Page:         2           45 deg         Scan 1         0.000         % Length X         31.400         % volume of length / 100 =         0.000         % total           Scan 2         0.000         % Length X         31.400         % volume of length / 100 =         0.000         % total           Scan 3         0.000         % Length X         31.400         % volume of length / 100 =         0.000         % total	-	<b>T.</b>			dure:	ISI-UT-16A	Outage N	lo.: <u>Pl1</u>	
45 deg  Scan 1 0.000 % Length X 31.400 % volume of length / 100 = 0.000 % total  Scan 2 0.000 % Length X -31.400 % volume of length / 100 = 0.000 % total  Scan 3 0.000 % Length X 31.400 % volume of length / 100 = 0.000 % total  Scan 4 0.000 % Length X 31.400 % volume of length / 100 = 0.000 % total	Vorkscope:	ISI	<u> </u>	Procedure f	Rev.:	1	_ Report N	No.: <u>20</u>	02U0
Scan 1       0.000       % Length X       31.400       % volume of length / 100 =       0.000       % total         Scan 2       0.000       % Length X       31.400       % volume of length / 100 =       0.000       % total         Scan 3       0.000       % Length X       31.400       % volume of length / 100 =       0.000       % total         Scan 4       0.000       % Length X       31.400       % volume of length / 100 =       0.000       % total	· · · · · · · · · · · · · · · · · · ·			Work Order	No.:	0210380	_ Pa	ge: <u>2</u>	of
Scan 1       0.000       % Length X       31.400       % volume of length / 100 =       0.000       % total         Scan 2       0.000       % Length X       31.400       % volume of length / 100 =       0.000       % total         Scan 3       0.000       % Length X       31.400       % volume of length / 100 =       0.000       % total         Scan 4       0.000       % Length X       31.400       % volume of length / 100 =       0.000       % total	45 dea			AN 3-50	-3				
Scan 2       0.000       % Length X       -31.400       % volume of length / 100 =       0.000       % total         Scan 3       0.000       % Length X       -31.400       % volume of length / 100 =       0.000       % total         Scan 4       0.000       % Length X       -31.400       % volume of length / 100 =       0.000       % total		0.000	% Length X	Ũ		e of length / 100 =	0.000	% total f	or Sca
Scan 3       0.000       % Length X       -31.400       % volume of length / 100 =       0.000       % total         Scan 4       0.000       % Length X       -31.400       % volume of length / 100 =       0.000       % total	Scan 2	0.000		- <del>31.400</del>	– % volume		0.000	— % total f	or Sca
	Scan 3	0.000	% Length X		_ _ % volum	e of length / 100 =	0.000	— _ % total f	or Sca
Add totals and divide by # scans = 0.000 % total for 45 deg	Scan 4	0.000	" Length X	<del>-31.400</del>	~ % volume	e of length / 100 =	0.000	% total f	or Sca
Over 4	0		o/ Lamesta V		9/	no of longth / 100	0.000	% total	for S:
						-		<del></del>	
	Scan 2	0.000	% Length X	0.000	% volun	ne of length / 100 = _	0.000	% total	tor So
Scan 2 0.000 % Length X 0.000 % volume of length / 100 = 0.000 % total  Scan 2 0.000 % Length X 0.000 % volume of length / 100 = 0.000 % total	Scan 3	0.000	% Length X	0.000	% volun	ne of length / 100 = _	0.000	% total	for So
Scan 2 0.000 % Length X 0.000 % volume of length / 100 = 0.000 % total	Scan 4	0.000	% Length X	0.000	% volun	ne of length / 100 = _	0.000	% total	

Sita Field Supervisor:



#### **Limitation Record**

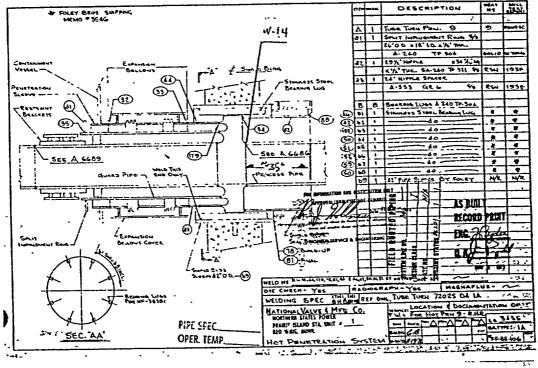
Site/Unit:	PNGP	1	PI1	Procedure:	ISI-UT-16A	Outage No:	PI1	RFO2	002	
Summary No.:	301858		358	Procedure Rev.:	11	Report No.:	20	02U0	99	
Workscope:	ISI		il	Work Order No:	0210380	Page:	3	of	4	

Description of Limitation:

There is no physical access due to penetration sleeve.

Sketch of Limitation:

J \Iddeal\_Photos\PI1RFO2002\UT Photos\2002U099-1.bmp



Typical FOR PEN 9 and 10

Limitations removal requirements:

None

Radiation field: N/A

Examiner Halling, Da	Level	li .	Signature		Reviewer Clay, Sean P.	Acres	Signature	
Examiner N/A	Level	N/A	Signature		Site Review Wren, Jerry P	Au	Signature	v-111 Date
Other N/A	Level	N/A	Signature	Date	ANII Review Clow, Ron	PO	Signature	Date 12/5/02

# ATTACHMENT 50

#### **Supplemental Report**

Report No.:

Page:

Summary No.: 301858

Examiner: Halling, David A.

Level. II

Reviewer: Clay, Sean P.

Date: 12-04-02

2002U099

Examiner: N/A

Site Review Wren, Jerry P.

Date: 12-5-02

Other: N/A

Level: N/A

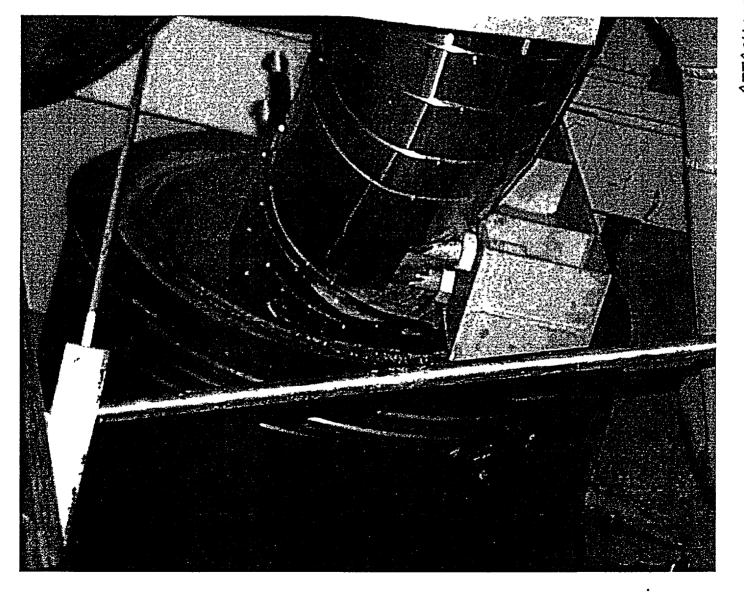
Level: N/A

ANII Review: Clow, Ron

Date: 12/5/02

Comments: None

Sketch or Photo: J\lddeal\_Photos\PI1RFO2002\UT Photos\2002U099-1.jpg



# TACHMENT SI PAGE 1 6



#### **Magnetic Particle Examination**

Site	/Unit: _	PNGP /	PI1		Proced	ure:	ISI-MT-1	Outage No.:	PIIR	RFO20	02
Summan	y No.: _	3	01584		Procedure R	ev.:	12	Report No :	200	2M04	0
Works	cope: _		ISI		Work Order I	No.:	0200860	Page:	1	of	4
Code:		1989		Code	Cat.: C-F-	2 Lo	ocation:	Cont 715			
Drawing No.:	:	ISI-	-68A		Description:	PIPE - PIPI	 E				
System ID:	MS						•				
Component I	D: <u>W-61</u>	LSUD						Size/Length:	1		
Limitations:	Enti	re exam aı			it guard pipe.						
Light Mete	r Mfg.:				Serial I	No.:		Illumination:		u	w/cm²
Temp. Too	l Mfg : _									_	۰F
Resolution	:		Not Us	ed				_			
Lift Block S	Serial No.	: <u></u>				Surface Co	ndition:				
Lo/Wo Loc	ation:					Field Orie	ntation:				
Magnetic I	Particle 1	Material									
Brand					Wet □	Mixed <sup>.</sup>	Yes 🗌	Applied By:	D	usting	
Type:	·	·····			Dry 🗌		No 🗌		Spi	raying	
Batch No.:				FI	uorescent 🗌	With:			Flo	oding	
Equipment	·							l No.:			
Head Shot				_ Ampere	s	Fixed Sp	acing	A	c 🗆	DC [	
Adj. Spacir	ng 🗆			_ inches		Encircling	g Coils	Tur	าร		
Prods. Spa	icing [			inches		Current (	machine settin	g) 🗆		Ampe	res
Indication	Loc	Loc	Diameter	Length	Туре			Remarks			
No.	L	w			R/L						1
										Pari	
		-			<u> </u>	-	· · · · · · · · · · · · · · · · · · ·				
		_	<u> </u>								
Comments	: 11- 10		datar	lada 2		_1	· ··· · · · · · · · · · · · · · · · ·		······		
	No hi	enous	autiu	પાયાજી	ut						
Results:	1	IAD 🗌	IND [	]	GEO 🗌						
Percent Of	Coverag	e Obtained	i > 90%:		No	Reviewed	d Previous Data	a: <b>N/A</b>			
Examiner	Level	[]]	<b>S</b> )gn	ature		Reviewer		Signature	ı		Date
Timm, Jere Examiner	my T. Level	81/6	Sign	ature	11/29/2002	Halling, Da Site Review		14. by lly	<u>_N</u>	6730	
N/A	FOAGI	IVA	Gigii	uiuit	Dale	Wren, Jerry	( )	Signature None	·	- 2-1-u	Date
Other	Level	N/A	Sign	ature	Date	ANII Review		Signature	-	-	Date
N/A		•				Clow, Ron	18	(L)	تزا	21.162	



#### **Limitation Record**

 Site/Unit:
 PNGP / PI1

 Summary No.:
 301584

 Workscope:
 ISI

 Procedure:
 ISI-MT-1

 Procedure Rev.:
 12

 Work Order No.:
 0200860

Outage No.: PI1RF02002

Report No.: 2002M040

Page: 2 of 4

Description of Limitation:

No access due to entire weld under permanent guard pipe.

Sketch of Limitation:

J.\lddeal\_Photos\PI1RFO2002\UT Photos\2002U094-1 jpg



Limitations removal requirements:

Guard pipe is permanent and cannot be removed.

Radiation field: N/A

Date Şignature Examiner Level III Reviewer Date 11/29/2002 Halling, David A Timm, Jeremy T. Signature Examiner Date Site Review Level N/A Signature N/A Wren, Jerry P. Signature Date Other Date **ANII Review** Level N/A Signature N/A Clow, Ron 12/1/02

## ATTACHMENT 51

## NMC

#### **Supplemental Report**

Report No: 2002M040

Page:

Summary No: 301584

Examiner: Timm, Jeremy T.

Level: III

Reviewer: Halling, David A.

Date: 12/1/02

Examiner: N/A

Level: N/A

Site Review: Wren, Jerry P.

Date: 12-1-02

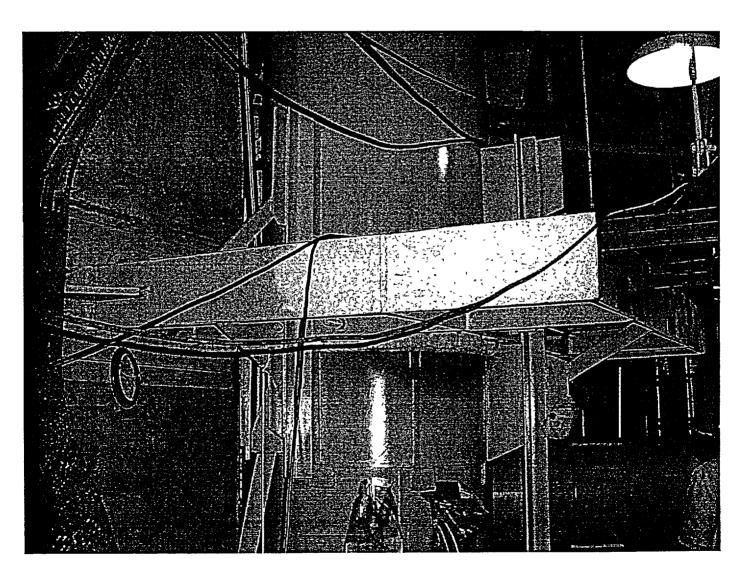
Other: N/A

Level: N/A ANII Review: Clow, Ron

Date: 12/1/02

Comments: None

Sketch or Photo: J\lddeal\_Photos\PI1RFO2002\UT Photos\2002U094-2.jpg





#### **Determination of Percent Coverage for Surface Examinations**

Site/Unit:	PNGP	/ P	<u> </u>	Procedure:	ISI-MT-1	Outage	No.: _	PI1	RFO2	002
Summary No.:	<del></del>	301584		Procedure Rev.:	12	Report	No.: _	20	02M0	40
Workscope:		ISI	<u></u>	Work Order No:	0200860	P	age _	4	of	4
<del></del>										
Area Requi	red (as s	hown in a	pplicable code re	ference drawing)						
		_		lu aaa						
	Length			dth						
;	= Total Ar	ea require	d 0.000	square inches						
<del></del>										
Coverage A	\chieved									
0010.1g07	101110101									
	Area exa	mined	0.000	sq. in. / Total area re	quired (100%)	0.000	sq in.			
=	Percent of	overage		_ % (area required - ar	rea of limitations =	area examined)				
· · · · · ·	<u>.</u> .									
To determi	ne lenath	of a circu	umferential weld	1						
	_				Zana Antila Bata N					
Note	e - Diame	ter refers	to actual externa	I diameter not pipe size	(see table below)					

Diameter 0.000 \* (Pi) 3.1416

= Length 0.000 inches

Pipe Size	Actual Diameter	(Length) Circumference	Pıpe Size	Actual Diameter	(Length) Circumference
2	2.375	7.46	12	12.75	40.06
2.5	2.875	9.03	14	14.0	43.98
3	3.5	11.0	16	16.0	50.27
3.5	4.0	12.57	18	18.0	56.55
4	4.5	14.14	20	20.0	62.83
5	5.563	17.48	22	22.0	69.12
6	6.625	20.81	24	24.0	75.40
8	8.625	27.10	30	30.0	94.25
10	10.75	33.77			

Date: 12-1-02

## ENT 52 PAGE 1 OF



#### **Magnetic Particle Examination**

Site/Un	nit: <u>P</u>	NGP /	PI1		Procedu	ıre:	ISI-MT-1		Outage No.:	PI1I	RFO20	)02
Summary No	o.:	30	1701		Procedure Re	ev.:	12		Report No.:	20	02M04	12
Workscop	e:		ISI		Work Order N	lo.:	0200860	) 	Page:	1_	of	3
Code:	1	989		Code	Cat.: <b>C-F-</b> :	2 Lo	ocation:		Cont 735	·		
Drawing No.:		ISI-	69	<del></del>	Description:	PIPE - PIPE	<u> </u>					
System ID:	FW		_									
Component ID:	<b>W-</b> 9								Size/Length:			
Limitations:	Exami	nation ar	ea is unde	r permai	nent guard pip	e.			<u> </u>	<del>- · · ·</del>		
Light Meter M	fg.:				Serial N	lo.:			Illumination:	<del></del>		uw/cm²
Temp. Tool M						lo.:			Surface Temp.: _			°F
Resolution:		·	Not Use	d					_			
Lift Block Seri	al No.:					Surface Co	ndition:					
Lo/Wo Location	on:		<del> </del>			Field Orie	ntation:					
Magnetic Par	ticle Ma	aterial										
Brand:			·	<del></del>	Wet □	Mixed:	Yes 🗌		Applied By:	נ	Dusting	g 🔲
Type:					Dry □		No 🗌			S	oraying	g 🔲
Batch No.: _				FI	uorescent 🗌	With:	·			FI	ooding	g 🔲
Equipment									·			
Head Shot				Ampere	s	Fixed Sp	acing		Α	c 🗆	DC	
Adj. Spacing				inches		Encirclin	g Coils		Tur	ns		
Prods Spacin	9 🗀			inches		Current (	machine s	etting)			Amp	eres
Indication	Loc	Loc	Diameter	Length	Туре			R	lemarks			
No.	L	w			R/L							
						1						
							- · · · -					
Comments:	in wa	CANDUS	data.	Caril	11-1-8	1						
1,	30 P.	OVI- 100	000,023	MM	UZUOS							
Results:	NA	.D 🔲	IND [		GEO 🗌	<del> </del>						
Percent Of Co	verage	Obtained	> 90%:	1	No	Reviewe	d Previous	Data:	N/A			
1	Level [	111	7 Sign	ature				۷ .	Signature		, -	Date
Timm, Jeremy Examiner	Level	\(\frac{1}{2}\)	ly LE	ature	11/29/2002 Date	Halling, Da		173	Signature		<u>101 2</u>	30,02 Date
N/A	revei	N/A /	- Sign	aiuie	Date	Wren, Jerr	(	Fun 6	2 U John Lui	- 1711-	- ユー -	7 7
	Level	N/A	Sıgn	ature	Date	ANII Revie	N C		Signature			Date
N/A						Clow, Ron		90	X	12	1/1/02	<u>.</u>



#### **Limitation Record**

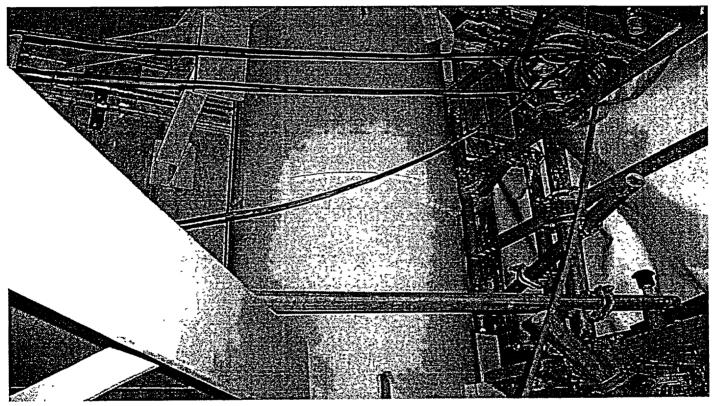
Site/Unit.	PNGP	1	PI1	Procedure:	Procedure: ISI-MT-1		PI1RF02002			
Summary No.:	301701		701	Procedure Rev.:	12	Report No.:	.: 2002M042		42	
Workscope:	: ISI		Work Order No.:	Order No.: 0200860		2	of	3		

Description of Limitation.

Examination area is under permanent guard pipe.

Sketch of Limitation:

J\lddeal\_Photos\PI1RFO2002\MT Photos\2002M042-1 jpg



Limitations removal requirements:

Permanent guard pipe cannot be removed.

Radiation field: N/A

Examiner	Level III	Signature	Date	Reviewer	<u> </u>	Signature	Date
Timm, Jere	my T.	Litte	11/29/2002	Halling, David A.	D.A.	Ulvi _	200 80 0X
Examiner N/A	Level N/A	Signature		Site Review Wren, Jerry P.	Then P.	Signature 2	い. <u>川</u> ´Date   1ユー  - 0 Z
Other N/A	Level N/A	Signature	Date	ANII Review Clow, Ron	PO	Signature	Date

3



### Determination of Percent Coverage for Surface Examinations

Site/Unit:					Procedure: ISI-MT			<del></del>	No.: _	PI1RFO2002		
Summary No.: 301701			_	Р	rocedure Rev.:	12	Report	No.: _	2002M042			
Workscope:		ISI			Work Order No.:		0200860	F	age: _	3	of	3
·	ired (as s Length = Total Al		0.000	de cod	Width	ence drawing)  0.000  square inches						
Coverage A	Achieved Area exa Percent			0.000		q. in. / Total area re 6 (area required - a	•	0.000 = area examined)	sq. in.			
To determi	_					ameter not pipe size	e (see table below	)				<u> </u>

Pipe Sıze	Actual Diameter	(Length) Circumference	Pipe Size	Actual Diameter	(Length) Circumference
2	2.375	7.46	12	12.75	40.06
2.5	2.875	9.03	14	14.0	43.98
3	3.5	11.0	16	16.0	50.27
3.5	4.0	12.57	18	18.0	56.55
4	4.5	14.14	20	20.0	62.83
5	5.563	17.48	22	22.0	69.12
6	6.625	20.81	24	24.0	75.40
8	8.625	27.10	30	30.0	94.25
10	10.75	33.77			

Site Field Supervisor:

Jun P. Wn WITT

Diameter \_\_\_\_\_ \* (Pi) 3.1416

= Length 50.266 inches

Date: 12-1-02

#### **Third Period Section XI VT-2 Examinations**

<b>NSVetoms</b>	Description	Class	#Dracoditra	Work Order #	Million Data March
	A CAST THE CAST	Class	Hiocedule		
RV	Reactor Vessel	1	SP 1070	0114211	12/5/2002
RC	Reactor Coolant	1	SP 1070	0114211	12/5/2002
RH	Residual Heat Removal	1	SP 1070	0114211	12/5/2002
FW	Feedwater	2	SP 1168.17	0200228	1/2/2003
MS	Main Steam	2	SP 1168.11	0200220	11/16/2002
SI	Safety Injection	2	SP 1168.13	0200223	Scheduled for 3/12/2003
				9909918	Last performed 11/17/1999
RH	Residual Heat Removal	2	SP 1168.10	0200219	1/14/2003

# ATTACHMENT 54 PAGE 1



#### **Magnetic Particle Examination**

Site/	Site/Unit: PNGP / PI1			Procedu	re: <u>ISI-MT-1</u>			Outage No.: _			PI1RFO2002			
Summary No.: 301095			Procedure Re	ev.: <u>12</u>			Report No.:			2002M027				
Worksc	Workscope: ISI			Work Order N	o.: <u>0200860</u>			Page:			of .	1		
Code:		1989 C			ode Cat.: B-A		ocation:		C	ont 715				
Drawing No.:		ISI-	49		Description:	HEAD - FL	ANGE							
System ID:	RV													
Component ID	D: W-6								Size/Le	ngth:	3.	2"/41	,	
Limitations:	None													
Light Meter	Mfg.:		N/A		Serial N	lo.:	N/A		Illuminati	on:	N/A		uw/cm²	
Temp. Tool	Mfg.:	-, , , ,	N/A		Serial N	lo.:	N/A		Surface T	emp.:				
Resolution:			1/32" Lir	ne							9	011-29	12	
Lift Block S		-		c ac		Surface Co	_			LENDE				
Lo/Wo Loca	ation:	Datu	m "0" / We	ld Cente	rline	Field Orie	ntation: _		Loi	ngitudir	ıal	-		
Magnetic P								_					_	
Brand:				<del></del>	Wet 🗌	Mixed:	Yes [		Appi	ied By:		Dustin	_	
Type:	[			_	Dry 🗹		No 🗹				S	Sprayın	g 🗌	
Batch No.:		84A04	7	_ FI	uorescent	With: _	· · · · · · · · · · · · · · · · · · ·			_	F	loodin	g 🗌	
Equipment:				Contour	Probe			Senal No	o.:		617		<del></del>	
Head Shot			N/A	Ampere	S	Fixed Sp	_			1	4C ☑	DC		
Adj. Spacin	g 🔽		4 - 6	inches		Encirclin	g Coils		N/A		rns			
Prods. Space	cing 🔲		N/A	inches		Current	(machine	setting)		N/A		Amp	eres	
Indication	Loc	Loc	Diameter	Length	Туре				Remarks					
No.	L	W			R/L									
											-			
						1		-						
		-	<del>  </del>											
		ļ		-				<del></del>						
Comments:		<u> </u>									,	<u> </u>	,	
None														
Results:	N	AD 🗹	IND [		GEO 🗌									
Percent Of	Coverage	Obtained	l > 90%:	Y	es	Reviewe	d Previou	s Data:	<u> </u>	res				
Examiner	Level	11,//	. Sign	ature		Reviewer			Sig	gnature			Date	
Knott, Brian		1)/4	2m 1/	Know	11/23/2002	1			John Brown	يلايم	^	<u>7</u> 019	18 <u>0</u> )	
Examiner Stevermer,	Level		Sign	ature	Date 11/23/2002	Site Review Wren, Jeru		£.	Pul	gnature	$\mathcal{U}.II$	11-2	Date	
Other	Level	NIN .	Sign.	ature	Date	+		/5/	Sign	gnature			Date	
N/A			•		_	Clow, Ron	· /	Y/	7			11/29	102	

# TACHMENT 55 PAGE 1



#### **Liquid Penetrant Examination**

Site	ary No.: 300900 kscope: ISI		Procedure: Procedure Rev.: Work Order No.:		: <u>ISI-</u>	<u> </u>		Outage No.: PI1RFO2002  Report No.: 2002P080				
Summan					:							
Works					0200860		Page: _	1 of	1			
Code:	1989			Code	Cat: B-J	Location	on:	Cont Prz Va	ult			
Drawing No.:		ISI-	29A		Description: S	AFE END - 45°	ELBOW					
System ID:	RC						•					
Component I	D: <b>W-2</b>							Size/Length:	6" / 19.0'			
Limitations:	None											
Temp. Tool	Mfg.:		Telatem	p	Serial No	.: <u>N</u> S	SP 178	Surface Tem	p.:90	۰F		
Comparato	r Block Ter	mp.: S	Side A: N	<u>//A</u> °F	Side B: N/A	_°F R	esolution:	Not Us	ed			
Lo/Wo Loca	ation:	Top De	ead Center	/ Weld C	Centerline	Surface Cond	dition:	Blended	<u>i</u>			
		Cleaner			Penetrant		Remover	D	Developer			
Brand	1	Magnaflu	x		Magnaflux	ı	Magnaflux		Magnaflux			
Туре	SKC-S				SKL-HF/S		SKC-S		SKD-S2			
Batch No.		95D01K			87C054		95D01K		00G06K			
Time	Evap.	5 1	Min	Dwell	15 Min	Evap.	2 Min	Develop	7 Min			
	Time Exa	am Starte	d	0830		Time Exan	n Completed:	0915				
Indication	Loc	Loc	Diameter	Length	Туре	Type Re						
No.	L	w			R/L							
Comments	<u> </u>	1			<u> </u>							
None												
Results:	N	AD 🗹	IND		GEO []	_						
Percent Of				<del>_</del>	/es	Reviewed Pre	vious Data:	Yes				
Examiner	Level	li .	Sign	nature	Date I F	Reviewer		Signature	1	Date		
Thomas, T			In Ch	n e	11/19/2002 F	lalling, David	a. O.A.V	tally_	Muza	300		
Examiner N/A	Level	N/A	Sigr	nature	li .	ite Review Vren, Jerry P.	OX P	Signature	, TIL	Date		
Other	Level	N/A	Sigr	nature		NII Review	they !	Signature	11-20	Date		
N/A	10/12				4	low. Ron	18/1/	•	11/21/0	ا ر		

# TACHMENT 56 PAGE 1 OF



Site	/Unit. P	NGP /	PI1		Procedure:	ISI-PT-1	Outage No.: _	PI1RFO2002
Summary	/ No.:	30	0656		Procedure Rev.:	14	Report No.:	2002P097
Works	cope:		ISI		Work Order No.:	0200860	Page: _	1 of 1
Code:	1	1989		Code	Cat.: B-J	Location:	Cont B Vau	lt
Drawing No.:	:	ISI	-24		Description: NO	ZLE TO PIPE		
System ID:	RC							
Component I	D: W-21						Size/Length:	6"/31"
Limitations:	None							
Temp. Tool	Mfg.:		Telatem	p	Serial No.:	NSP 178	Surface Temp	p.: <u>80</u> °F
Comparato	r Block Te	mp.: S	ide A: N	/A °F	Side B: N/A	°F Resolution:	Not Us	ed .
					-	Surface Condition:		1
		Cleaner			Penetrant	Remover	D	eveloper
Brand	1	Magnaflu	x		Magnaflux	Magnaflux	м	agnaflux
Туре	skc-s			SKL-HF/S		skc-s		SKD-S2
Batch No.	95D01K			87C054		95D01K	(	00G06K
Time	Evap.	5 N	/lin	Dwell	15 Min	Evap. 2 Mi	n Develop	7 Min
	Time Exa	am Starte	d.	1405		Time Exam Complete	ed: <b>1450</b>	
Indication	Loc	Loc	Diameter	Length	Туре	t and the second	Remarks	
No.	L.	w			R/L			
		<u> </u>						
				-				
Comments	s:		.1					
None								
Results <sup>*</sup>	N	AD 🗹	IND		GEO 🗆			
Percent Of	f Coverage	Obtained	d > 90%:		<mark>fes F</mark>	leviewed Previous Data	Yes Yes	
Examiner	Level	II .	Sign	ature	Date Rev		Signature	Date
VanRuler,			John Jalo			ling, David A.	+24.thallin	ン
Examiner Stevermer	Level . Aaron		Sign	ature		e Review en, Jerry P.	Signature :	正 11-22-02
Other	Level	NA /	Sigr	nature	Date AN		Signature	Date
N/A		/	•		l-cic	w, Ron	11/2	11/23/02

# TACHMENT 57 PA



Site	/Unit: P	NGP /	PI1		Procedure:	ISI-PT-1	Outage No.:	PI1RFO2002
Summary	/ No.:	30	0654		Procedure Rev.:	14	Report No.:	2002P099
Works	cope:		ISI		Work Order No.:	0200860	Page:	1 of 1
Code:		1989		Code (	Cat.: B-J	Location:	Cont B Va	ult
Drawing No.:		ISI-	-24		Description: VA	LVE - ELBOW		
System ID:	RC					•		
Component I	D: W-18						Size/Length:	6"/21"
Limitations:	None							
Temp. Tool	Mfg.:		Telatem	р	Serial No.	: NSP 178	Surface Ten	np.:80°F
						°F Resolution:		sed
						Surface Condition:		
LOTTO LOG				, , , , , ,		· · · · · · · · · · · · · · · · · · ·	<del></del>	
		Cleaner			Penetrant	Remover		Developer
Brand		Magnaflu	×		Magnaflux	Magnaflux	, n	/lagnaflux
Туре	Type SKC-S			-	SKL-HF/S	skc-s		SKD-S2
Batch No.		95D01K			87C054	95D01K		00G06K
Time	Evap.	5 N	Min	Dwell	15 Min	Evap. 2 Min	Develop	7 Min
	Time Ex	am Starte	d.	1405		Time Exam Completed	: 1450	
Indication	Loc	Loc	Diameter	Length	Туре		Remarks	
No.	L.	w			R/L			
· · · · · · · · · · · · · · · · · · ·								
		ļ						
			ļ		_			
Comments	s:							
None								
Results:	N	AD 🔽	IND		GEO []			
Percent O	f Coverage	e Obtained	d > 90%:		/es	Reviewed Previous Data:	Yes	
Examiner	Level	11	Sia	nature	Date R	eviewer	Signature	Date
VanRuler,		•••	الندلا		11/21/2002 H	alling, David A. (	<u>illad Ili</u>	Nov22,0
Examiner	Level	11 //	Sigi	nature	4	te Review	Signature	-, 111
Stevermer			Sign	nature		ren, Jerry P.  NII Review	Signature	11-22-82 Date
Other N/A	Level	N/A	Sigi	iature	•	low, Ron	// Signature	11/23/02

# ACHMENT 58 PAGE

NINC
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Site	/Unit: PI	NGP /	PI1		Procedure: _	ISI-PT-1	Outage No.:	PI1RFO2002
Summary	/ No.:	30	0159		Procedure Rev.:	14	Report No.:	2002P101
Works	cope:		ISI		Work Order No.:	0200860	Page:	
Code:	1	1989		Code	Cat.: B-J	Location:	Cont A Va	ult
Drawing No.:			-3A	-				
System ID:	RC							
Component I	D: <b>W-1</b>						Size/Length	: 2.2"/40"
Limitations:	None							
Temp. Tool	Mfg.:		Telatem	р	Serial No.:	NSP 134	Surface Te	mp.: <u>95</u> °F
Comparato	r Block Ter	mp.: S	ide A: N	<u>//A</u> °F	Side B: N/A	°F Resolution:	Not U	Jsed
Lo/Wo Loca	ation:	Top De	ead Center	r / Weld C	Centerline S	Surface Condition:	Blende	ed
		Cleaner			Penetrant	Remover		Developer
Brand	P	Magnaflux	x		Magnaflux	Magnaflux		Magnaflux
Туре	e SKC-S			SKL-HF/S	skc-s		SKD-S2	
Batch No.	95D01K				87C054	95D01K		00G06K
Time	Evap.	5 N	<i>l</i> in	Dwell	10 Min	Evap. 2 Mir	n Develop	7 Min
	Time Exa	am Started	d:	1000		Time Exam Complete	ed: <b>1105</b>	
Indication	Loc	Loc	Diameter	Length	Туре		Remarks	
No.	L	w			R/L			
<b> </b>								
<del> </del>								
<b>-</b>								
	<u> </u>	<u></u>			<u> </u>			
Comments None	,							
Results:	N/	AD 🗹	IND		GEO 🗌			
Percent Of	f Coverage	Obtained	i > 90%:		Yes R	Reviewed Previous Data	: Yes	
Examiner	Level	11	Sign	gature	Date Rev	viewer	Signature	Date
Blechinge	<del> </del>			\		lling, David A.	M. H. Den	NOV 22,02
Examiner N/A	Level	N/A	Sign	nature		e Review en, Jerry P.	Signatule	Date 11-24-02
Other	Level	N/A	Sign	nature	Date ANI		Signature	Date
N/A					. Icio	ow, Ron		11/24/02

# ATTACHMENT SY PAGE 1 OF 1



Site	Unit: Pr	VGP /	PIT		Procedure:	151-P1-	· l	Outage No.: _	PHE	11-02	002
Summary	No.:	30	0136		Procedure Rev.:	14		Report No.:	20	02P11	13
	cope:		ISI		Work Order No.:	020086	60	Page: _	1	of .	1
Code:	1	989		Code (	Cat.: B-J	Location:		Cont A Vau	lt		
Drawing No.:		IS	1-2		Description: N	OZZLE - PIPE					
System ID:	RC										
Component I								Size/Length:	1:	2" / 52	2.5"
Limitations:	None										
			Telatem	n	Serial No	· NSP 1	178	Surface Tem		80	°F
											`
					Side B. N/A		· · · · · · · · · · · · · · · · · · ·				
Lo/Wo Loca	ation:	Extrado	se of Elbo	w / Weld	Centerline	Surface Conditio	n:	Blende	<u>t</u> t		
		Cleaner			Penetrant	Re	mover	E	evelo	per	
Brand	N	Magnaflu	x		Magnaflux	Мас	gnaflux	M	lagnal	flux	
Туре	ype SKC-S				SKL-HF/S	s	SKC-S		SKD-S2		
Batch No.	. 95D01K				87C054	95	D01K	-	00G06	3K	
Time	Evap.	5 1	Min	Dwell	15 Min Evap. 2 Min			Develop		7 M	in
	Time Exa	ım Starte	d:	1500		Time Exam C	ompleted:	1545			
Indication	Loc	Loc	Diameter	Length	Туре		Ren	narks			
No.	L	w			R/L			-			
								<u>,</u>			
<del> </del>							_,,,,,,,,				
Comments	<u> </u>			L	<u> </u>						
None	<b>.</b>										
Results:	N/	AD 🔽	IND		GEO 🗌						
Percent O	f Coverage	Obtaine	d > 90%:	,	Yes	Reviewed Previo	us Data:	Yes			
Examiner	Level	F1	Sign	nature	Date I	Reviewer		,, Signature			Date
VanRuler,			Inilate	Ver	1	lalling, David A.	(VA	, Holin	<u> </u>	Vov.	23,02
Examiner	Level	<del></del>	0 - 1	nature	i	Site Review	7	Signature	11		Date
Thomas, 7			Trachor			Wren, Jerry P.	fly !	.00/C	1	1-2	4-02
Other	Level	N/A	Sig	nature		ANII Review Clow, Ron	12/1	Signature	,	1/24	Date
N/A					. 10	J. 117, 11011				<u>,,,,,,,</u>	• • ~ _

# TACHMENT 60 PAGE 1 OF

# NMC

Site	/Unit: Pi	NGP /	PI1		Procedure:	ISI-PT-1	Ou	tage No.:	PI1RFO20	02
Summan	y No.:	30	00148		Procedure Rev.:	14	Re	eport No.: _	2002P10	0
Works	cope:		ISI		Work Order No.:	0200860		Page: _	1 of _	1_
Code:	1	1989		Code (	Cat.: B-J	Location:	(	Cont A Vaul	t	
Drawing No.:	:	ISI-	-3A		Description: NO	OZZLE - PIPE				
System ID:	RC								_	
Component I	ID: W-2						Siz	ze/Length:	.9"/27	7"
Limitations:	None							<del>-</del>		
Temp. Tool	Mfg.:		Telatem	ıp	Serial No	.: NSP 134	S	urface Temp	o.: <u>95</u>	°F
Comparato	r Block Ter	_ mp.: S	- Side A:N	<b></b> VA_°F	Side B: N/A	_°F Resolution	n:	Not Us	ed	
						Surface Condition: _	•			
		Cleaner			Penetrant	Remove	er	De	eveloper	
Brand		Magnaflu	ı <b>x</b>		Magnaflux	Magnafi	ux	Ma	agnaflux	
Туре	skc-s				SKL-HF/S	SKC-S		S	KD-S2	
Batch No.		95D01K			87C054	95D011	ĸ	0	0G06K	
Time	Evap.	5 1	Min	Dwell	10 Min	Evap. 2	Min	Develop	7 Mir	n
	Time Exa	am Starte	d:	1000		Time Exam Compl	eted:	1105		
Indication	Loc	Loc	Diameter	Length	Туре		Remark	s		
No.	L	W			R/L					
Comments	.I S:	<u>.l</u>	.1		<u> </u>					
None										
Results:	N	AD 🗹	IND		GEO [					
Percent O	f Coverage	Obtaine	d > 90%:		Yes	Reviewed Previous Da	ata:	Yes		<u></u>
Examiner	Level	11	Şig	nature P PM		eviewer		Signature		Date
Blechinge			100			alling, David A.	DAM	Signature	<u>Nov 2:</u>	2,02 Date
Examiner N/A	Level	N/A	Sigi	nature	1	/ren, Jerry P.	mP.W		= 11-24-0	
Other	Level	N/A	Sign	nature		NII Review	201	Signature		Date
N/A					10	low, Ron / /	< 1.K		11/24/6	12

# HCHMENT 61 PAGE 1



Site	/Unit: P	NGP /	PI1	<del></del>	Procedure	: ISI-PT-1	Outage I	No.: Pi	1RFO20	)02
Summan	y No.:	30	0649		Procedure Rev.	: 14	Report 1	No.:2	002P11	.0
Works	cope:		ISI	<del></del>	Work Order No.	:0200860	Pa	age:1_	of _	1
Code:	1	1989		Çode	Cat.: <b>B-J</b>	Location:	Con	t 695		
Drawing No	:	ISI-	19A		Description: V	ALVE - PIPE				
System ID.	RC									
Component I							Sıze/Le	ngth:	8" / 27	 '.1
Limitations:	None						<del></del>			
Temp. Tool	Mfg:		Telatem	р	Serial No	o.: NSP 178	Surface	e Temp.:_	100	°F
						°F Resolution		lot Used		
					ine			d Smooth		
		Cleaner			Penetrant	Remove		Devel	loper	
Brand	ı	Magnaflu	x		Magnaflux	Magnaflu	x	Magn	aflux	
Туре	Type SKC-S				SKL-HF/S	SKC-S		SKD	-S2	
Batch No.	95D01K				87C054	95D01K		00G	06K	
Time	Evap.		5	Dwell	10	Evap. 2	. Deve	lop	7	
	Time Exa	am Starte	d	1015		Time Exam Comple	ted. 1100	!		
Indication	Loc	Loc	Diameter	Length	Туре		Remarks			
No.	L	W			R/L					
							-		·	
Comments	s:									
Nonc.	SMH	1/21/	63							
Results:	N	AD 🗹	IND		GEO 🗌					
Percent O	f Coverage	Obtained	d > 90%:		/es	Reviewed Previous Da	ta: Yes	;		
Examiner	Level	11	// ^	nature		Reviewer	Signa	iture		Date
Thomas, T			dras Ch	oz		Halling, David A.  Site Review	Allalling	Nico ()	<u>en 9</u>	10319 14'07
Examiner	Level		Sigr	nature		Wren, Jerry P	en P. Wr	Lv.III	11-25	
Other	Level		Sigr	nature	Date /	ANII Review Class Run	Signa	iture	11/26	Date loz

# THACHMENT 62 PAGE 1 OF 9



Site.	/Unit: P	NGP /	Pi1		Procedure:	ISI-PT-1	<u> </u>	utage No :	PI1RFO2002
Summary	/ No.:	30	0171		Procedure Rev.:	14	F	Report No ·	2002P112
Works	cope:		ISI	····	Work Order No.:	020086	0	Page1	of <u>4</u>
Code:	1	1989		Code	Cat.: B-J	Location:		Cont 695	
Drawing No.:		ISI-	-3B		Description: EL	BOW - PIPE			
System ID:	RH			<del></del>					
Component I	D: W-1							Size/Length:	8" / 27.1
Limitations:	Weld	Support I	Limits exa	mination	to 91.69% Covera				
Temp. Tool	Mfg:		Telatem	р	Serial No.	: NSP 1	78	Surface Temp.:	100°F
Comparato	r Block Tei	mp.: S	Side A: N	<u>/A</u> °F	Side B: N/A	°F Resolu	ution:	Not Used	i
Lo/Wo Loca	ation:		TDC Weld	Center L	ine	Surface Condition	:	Blended	
		Cleaner			Penetrant	Ren	nover	Dev	eloper
Brand	1	Magnaflu	x		Magnaflux	Magı	Magnaflux		naflux
Туре	SKC-S				SKL-HF/S	SK	SKC-S		D-S2
Batch No.		95D01K			87C054	950	001K	000	G06K
Time	Evap.		5	Dwell	10	Evap.	2	Develop	7
	Time Exa	am Starte	d:	1120		Time Exam Co	mpleted <sup>.</sup>	1150	
Indication	Loc	Loc	Diameter	Length	Туре		Remar	ks	
No.	L	w			R/L				
				-					
Comments	•	l	الم	ا	<u> </u>				· · · · · · · · · · · · · · · · · · ·
			6 Coverage		Weld Support inter	ference.			
Results:	N/	AD 🗹	IND		GEO 🗌				
Percent Of	Coverage	Obtained	d > 90%:		/es	Reviewed Previous	s Data:	Yes	
Examiner	Level	11	Sigr	atyre	Date Re	eviewer		Signature	Date
Thomas, T	ravis	-	Iran	Mor		Illing, David A.	<u> </u>	Halling	Nov23 oz
Examiner	Level		Sigr	ature		ren, Jerry P	In P.W.	Signature	11-24-02
Other	Level		Sıgr	ature		III Review	1/1	Signature	Date



### Determination of Percent Coverage for Surface Examinations

Site/Unit:	PNGP	1	PI1			Proced	dure:		ISI-PT-1		Outa	age No :	PI1	RFO2	002
Summary No.:		300171		Procedure Rev.: 14		14	Report No :		ort No:	20	2002P112				
Workscope:		ISI		Work Order No.: 0200860				<del></del>	Page			of .	4		
	red (as s Length = Total Ar		27.100	* Wid	dth _	ce drawin 2.00 square in	00	-							
Coverage A	Achieved														
_	Area exa		49.7	700 <del>17-</del>	- '	in. / Tota		-	(100%) imitations :		200 xamin	sq ır	ו		
=	i eleeni (	overay		1,7%	- `	died ledi	anou - c			- 4104 0	A THE	~ <i>~</i> ,			

### To determine length of a circumferential weld

Note - Diameter refers to actual external diameter not pipe size (see table below)

Diameter 8.625 \* (Pi) 3.1416

= Length \_\_\_\_\_ 27.096 \_\_\_\_ inches

Pipe Size	Actual Diameter	(Length) Circumference	Pipe Size	Actual Diameter	(Length) Circumference
2	2.375	7.46	12	12.75	40 06
2.5	2.875	9.03	14	14.0	43 98
3	3.5	11.0	16	16.0	50.27
3.5	4.0	12.57	18	18.0	56.55
4	4.5	14.14	20	20 0	62.83
5	5.563	17.48	22	22.0	69.12
6	6.625	20.81	24	24.0	75.40
8	8.625	27.10	30	30.0	94.25
10	10.75	33.77			

Site Field Supervisor: Jerry Wren

Sty P. Wn

Date: 11-24-02



### **Limitation Record**

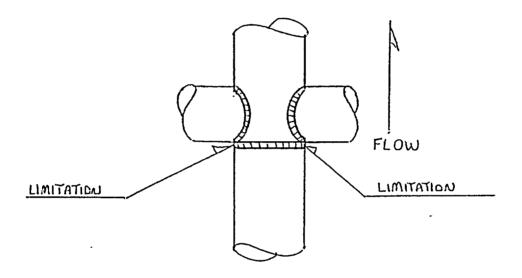
Site/Unit:	PNGP	1	PI1	Procedure.	ISI-PT-1	Outage No	PI1	RFO2	002
Summary No.:	· · · · · · · · · · · · · · · · · · ·	3001	71	Procedure Rev	14	Report No :	20	02P1	12
Workscope:		ISI		Work Order No :	0200860	Page	3	of	4

Description of Limitation:

Welded Support Limits Exam @ 90 degrees and 270 degrees for 4.5" at each location.

Sketch of Limitation:

J:\Iddeal\_Photos\PI1RFO2002\PT Photos\2002P112 bmp



Limitations removal requirements:

NONE

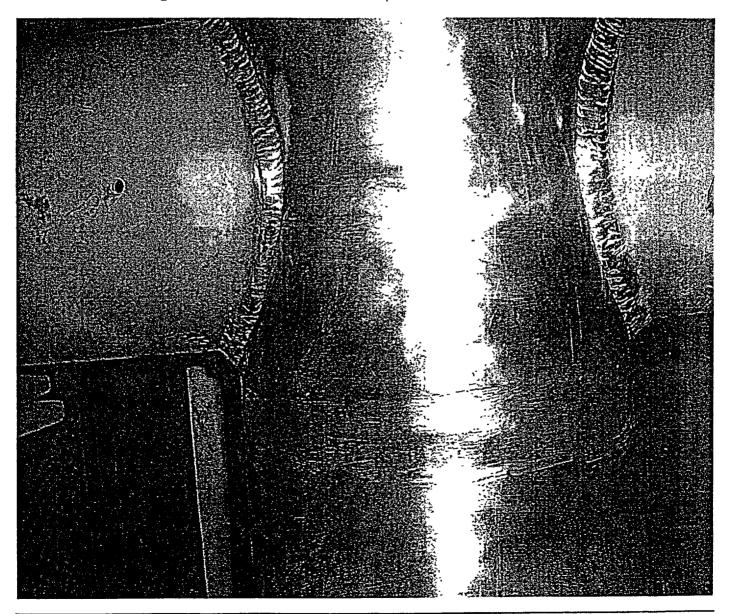
Radiation field: 20 mr/Hr General area.

Examiner	Level II	Signature	Date	Reviewer	Signature	Date
Thomas, T	ravis	2rank	11/21/2002	Halling, David A.	D.t. Bally	NOV 23,02
Examiner	Level	Signature		Site Review Wren, Jerry P	Lun P. Wignaturd	Date 11-24-02
Other	Level	Signature	Date	ANII Review Clow, Ron	hature	Date 11/24/02

NMC	Supplemental neport	Report No :	:2002P112
<i>-</i> -		Page	4 of 4
ummary No.: 300171	_		•
Examiner: Thomas, Travis	Level. II Reviewer: Halling, David A.		Date Novz3.02
Examiner:	Level Site Review: Wren, Jerry P		Date 11-24-02
Other:	Level ANII Review: Clou, Ron		Date 11/24/02
			,
Comments:	•		•
Comments:			

### **Supplemental Report**

Sketch or Photo: J.\lddeal\_Photos\PI1RFO2002\PT Photos\2002P112-1.bmp



# TACHMENT 63 PAGE 1 6



Site	'Unit. Pl	NGP /	PI1		Procedure:	ISI	-P1-7	Outage No.:	11RFO2002
Summary	Summary No : 300527			Procedure Rev.:	•	14	Report No :	2002P087	
Workso	Vorkscope: ISI Worl		Work Order No.:	020	00860	Page:1	of _1		
Code:	1	989		Code (	Cat.:B- <b>J</b>	Locati	on:	Cont A Vault	
Drawing No.:		ISI-	12B		Description: El	BOW - PUMI	•		
System ID:	RC						•		
Component I								Size/Length:	31"/95"
Limitations:	None								
Temp. Tool	Mfg.:		Telatem	p	Serial No	.: N	SP 178	Surface Temp.:	80°
							Resolution:		
•			·				dition.		
20/110 2000		·							
		Cleaner			Penetrant		Remover		eloper
Brand	· · · · · ·	Magnaflu	x		Magnaflux		Magnaflux	Mag	naflux
Туре		SKC-S			SKL-HF/S		SKC-S	SK	D-S2
Batch No.		95D01K			87C054		95D01K	000	G06K
Time	Evap	5 1	Min	Dwell	15 Min	Evap	2 Min	Develop	7 Min
	Time Exa	am Starte	d:	1005		Time Exa	m Completed:	1136	
Indication	Loc	Loc	Diameter	Length	Туре		Ren	narks	
No.	L	w			R/L				
								·····	
			-						
							<del></del>		
Comments	3:		•						
None									
Results:	N.	AD [✓]	IND		GEO 🗌				
Percent O	f Coverage	Obtaine	d > 90%:		res	Reviewed Pr	evious Data:	Yes	
Examiner	Level	11 /2	Siar	nature	Date F	Reviewer	<u> </u>	J Signature	Dat
Knott, Bria		Bria	· 1	Knott	11/20/2002 H	lalling, David	A. Ut	hellin_	1002500V
Examiner	Level	1		nature		ite Review	0	Signature (v.III	Dat
VanRuler, Other	Christoph Level	//-	171/g/	nature		Vren, Jerry P. NII Review	yant.	Signature	11-24-02 Dat
Stevermer		II /	Museen	iatule		Clow, Ron	00	<u> </u>	11/24/02
		~~···	1 LALASTER						

# TACHMENT 64 PR

# NINC

	Site	/Unit: P	NGP /	PI1		Procedure:	ISI-P	T-1	Outage No.: _	PI1RFO2002	_
Code   1989	Summary	ary No.: 300543			Procedure Rev.:	14		Report No.:	2002P127	_	
Drawing No.: ISI-13A Description: RED 50* ELBOW-NOZZLE  System ID: RC  Component ID: W-5  Limitations: None  Temp. Tool Mig.: Telatemp Serial No.: NSP 178 Surface Temp.: 90 °F  Comparator Block Temp.: Side A: N/A °F Side B: N/A °F Resolution: Not Used  Lo/Wo Location: Top Dead Center / Weld Centerline Surface Condition: FLAT TOPPED  Brand Magnaflux Magnaflux Magnaflux Magnaflux Magnaflux  Type SKC-S SKL-HF/S SKC-S SKC-S  Batch No. 95D01K 87C054 95D01K 00G06K  Time Evap. 5 Min Dwell 15 Min Evap. 2 Min Develop 7 Min  Time Exam Started: 0845 Time Exam Completed: 0930  Indication Loc Loc Diameter Length Type Remarks  No. L W Diameter Length Type Remarks  No. L W Signature Date Site Review Previous Data: Yes  Examiner Level    Signature Date Site Review Previous Data Signature Date Kimmen, Ronald Date Male Neview Signature Date Miner, Signature Date Date Miner, Signature Date Date Miner, Signature Date Date Miner, Signature Date Date Miner, Signature Date Date Miner, Signature Date Date Miner, Signature Date Miner, Signature Date Date Miner, Signature Date Date Miner, Signature Date Date Miner, Signature Date Date Miner, Signature Date Date Miner, Signature Date Date Miner, Signature Date Date Mi	Works	rkscope: ISI			Work Order No.:	02008	360	Page: _	1 of 1	_	
System ID: RC Component ID: W-5 Limitations: None  Temp. Tool Mig.: Telatemp Serial No.: NSP 178 Surface Temp.: 90 °F Comparator Block Temp.: Side A: N/A °F Side B: N/A °F Resolution: Not Used  Lo/Wo Location: Top Dead Center / Weld Centerline Surface Condition: FLAT TOPPED  Brand Magnaflux Magnaflux Magnaflux Magnaflux Magnaflux Magnaflux Type SKC-S SKL-HF/S SKC-S SKD-S2 Batch No. 95D01K 87C054 95D01K 00G06K  Time Evap. 5 Min Dwell 15 Min Evap. 2 Min Develop 7 Min  Time Exam Started: 0845 Time Exam Completed: 0930  Indication Loc Loc Diameter Length Type Remarks  No. L W R/L  Comments: None  Results: NAD W IND GEO CHARLES Reviewed Previous Data: Yes  Examiner Level II Signature Date Site Review Signature Date Site Reviewer Content of Cale	Code:	ode: 1989 Coo		Code	Cat.: B-J	Location	:	Cont B Vau	t		
Component ID: W-5   Size/Length: 29.0*/91.0*	Drawing No.:		ISI-1	ІЗА		Description: RI	D 50° ELBOW-	NOZZLE			
Component ID: W-5   Size/Length: 29.0*/91.0*	•					<del></del>			· · · · · · · · · · · · · · · · · · ·		_
Temp. Tool Mfg.: Telatemp Sorial No.: NSP 178 Surface Temp.: 90 °F Comparator Block Temp.: Side A: N/A °F Side B: N/A °F Resolution: Not Used  Lo/Wo Location: Top Dead Center / Weld Centerline Surface Condition: FLAT TOPPED    Cleaner	_						· · · · · · · · · · · · · · · · · · ·		Size/Length:	29.0" / 91.0'	
Comparator Block Temp.: Side A: _N/A	Limitations:								•		_
Cleaner	Temp. Tool	Mfg.:		Telatem	р	Serial No	.: NSP	178	Surface Temp	o.: <u>90</u>	۰F
Cleaner   Penetrant   Remover   Developer	Comparator	r Block Ter	np.: S	ide A: <u>N</u>	<u>/A</u> °F	Side B: N/A	_ °F Res	solution:	Not Us	ed	
Brand Magnaflux Magnaflux Magnaflux Magnaflux Magnaflux  Type SKC-S SKL-HF/S SKC-S SKD-S2  Batch No. 95D01K 87C054 95D01K 00G06K  Time Evap. 5 Min Dwell 15 Min Evap. 2 Min Develop 7 Min  Time Exam Started: 0845 Time Exam Completed: 0930  Indication Loc Loc Diameter Length Type Remarks  No. L W R/L  Comments:  None  Results: NAD V IND GEO Percent Of Coverage Obtained > 90%: Yes Reviewer Previous Data: Yes  Examiner Level II Signature Date Site Review Van Ruler, Christopher D. Magnaflux Magnaflux Magnaflux Magnaflux Magnaflux  Magnaflux Magnaflux Magnaflux Magnaflux  Magnaflux Magnaflux Magnaflux  Magnaflux Magnaflux  Magnaflux Magnaflux  Magnaflux Magnaflux  Magnaflux Magnaflux  Magnaflux Magnaflux  Magnafl	Lo/Wo Loca	ation:	Top De	ad Center	/ Weld C	Senterline	Surface Conditi	ion:	FLAT TOPF	'ED	_
Type SKC-S SKL-HF/S SKC-S SKD-S2  Batch No. 95D01K 87C054 95D01K 00G06K  Time Evap. 5 Min Dwell 15 Min Evap. 2 Min Develop 7 Min  Time Exam Started: 0845 Time Exam Completed: 0930  Indication Loc Loc Diameter Length Type Remarks  No. L W RVL  Comments:  None  Results: NAD IND GEO Percent Of Coverage Obtained > 90%: Yes Reviewed Previous Data: Yes  Examiner Level II Signature Date Reviewer Signature Date Site Review Pate Interest Pat			Cleaner		_	Penetrant	R	emover	D	eveloper	
Batch No. 95D01K 87C054 95D01K 00G06K  Time Evap. 5 Min Dwell 15 Min Evap. 2 Min Develop 7 Min  Time Exam Started: 0845 Time Exam Completed: 0930  Indication Loc Loc Diameter Length Type Remarks  No. L W R/L  Comments:  None  Results: NAD  IND GEO GEO GEO GEO GEO GEO GEO GEO GEO GEO	Brand	1	Magnaflu	x		Magnaflux	Ma	agnaflux	M	agnaflux	
Time Evap. 5 Min Dwell 15 Min Evap. 2 Min Develop 7 Min  Time Exam Started: 0845  Time Exam Completed: 0930  Indication Loc Loc Diameter Length Type Remarks  No. L W PVL  Comments:  None  Results: NAD IND GEO GEO GEO GEO GEO GEO GEO GEO GEO GEO	Туре		SKC-S			SKL-HF/S		skc-s		KD-S2	
Time Exam Started: 0845 Time Exam Completed: 0930  Indication Loc Loc Diameter Length Type Remarks  No. L W R/L  Comments:  None  Results: NAD ☑ IND ☐ GEO ☐  Percent Of Coverage Obtained > 90%: Yes Reviewed Previous Data: Yes  Examiner Level    Signature Date VanRuler, Christopher D.	Batch No.		95D01K	-		87C054	9	5D01K	C	0G06K	
Indication Loc Loc Diameter Length Type Remarks  No. L W R/L  Comments:  None  Results: NAD ☑ IND ☐ GEO ☐  Percent Of Coverage Obtained > 90%: Yes Reviewed Previous Data: Yes  Examiner Level II Signature Date VanRuler, Christopher D. Malling, David A. Signature Date Rimmen, Ronald Family Signature Date Site Review Wren, Jerry P. Malling, David A. Signature Date Other Level N/A Signature Date ANII Review Signature Date Other Level N/A Signature Date ANII Review Signature Date Signature Date Site Review Wren, Jerry P. Malling, David A. Signature Date Site Review Wren, Jerry P. Malling, David A. Signature Date Site Review Wren, Jerry P. Malling, David A. Signature Date Site Review Wren, Jerry P. Malling, David A. Signature Date Other Level N/A Signature Date ANII Review Signature Date	Time	Evap.	5 N	lin	Dwell	15 Min	Evap.	2 Min	Develop	7 Min	
No. L W R/L  Comments:  None  Results: NAD ☑ IND ☐ GEO ☐  Percent Of Coverage Obtained > 90%: Yes Reviewed Previous Data: Yes  Examiner Level    Signature Date VanRuler, Christopher D. 11/26/2002 Halling, David A. Signature Date Kimmen, Ronald Final Final Date Mile Reviewer Signature Date Halling, David A. Signature Date Kimmen, Ronald Site Review Wren, Jerry P. Signature Date Other Level N/A Signature Date ANII Review Signature Date Si		Time Exa	am Starte	d:	0845		Time Exam (	Completed:	0930		
Comments:  None  Results: NAD V IND GEO Percent Of Coverage Obtained > 90%: Yes Reviewed Previous Data: Yes  Examiner Level II Signature Date Halling, David A. Signature Date Kimmen, Ronald Provious Date Site Reviewer Halling, David A. Signature Date Kimmen, Ronald Signature Date Kimmen, Bonald Signature Date ANII Review Wren, Jerry P. J. J. Signature Date Signature Date Kimmen, Bonald Signature Date ANII Review Signature Date Signature Date Signature Date Signature Date Signature Date Signature Date Signature Date Signature Date Signature Date Signature Date NII Review Signature Date Signature Date Signature Date ANII Review Signature Date Si	Indication	Loc	Loc	Diameter	Length	Туре		Re	marks		
Results: NAD V IND GEO Fercent Of Coverage Obtained > 90%: Yes Reviewed Previous Data: Yes  Examiner Level II Signature Date Reviewer Signature Date VanRuler, Christopher D. Halling, David A. Signature Date Kimmen, Ronald For Mark Signature Date ANII Review Signature Date Signature Date Signature Date ANII Review Signature Date Signature Date Other Level N/A Signature Date ANII Review Signature Date	No.	L	w			R/L					
Results: NAD V IND GEO Fercent Of Coverage Obtained > 90%: Yes Reviewed Previous Data: Yes  Examiner Level II Signature Date Reviewer Signature Date VanRuler, Christopher D. Halling, David A. Signature Date Kimmen, Ronald For Mark Signature Date ANII Review Signature Date Signature Date Signature Date ANII Review Signature Date Signature Date Other Level N/A Signature Date ANII Review Signature Date											
Results: NAD V IND GEO Fercent Of Coverage Obtained > 90%: Yes Reviewed Previous Data: Yes  Examiner Level II Signature Date Reviewer Signature Date VanRuler, Christopher D. Halling, David A. Signature Date Kimmen, Ronald For Mark Signature Date ANII Review Signature Date Signature Date Signature Date ANII Review Signature Date Signature Date Other Level N/A Signature Date ANII Review Signature Date											
Results: NAD V IND GEO Fercent Of Coverage Obtained > 90%: Yes Reviewed Previous Data: Yes  Examiner Level II Signature Date Reviewer Signature Date VanRuler, Christopher D. Halling, David A. Signature Date Kimmen, Ronald For Mark Signature Date ANII Review Signature Date Signature Date Signature Date ANII Review Signature Date Signature Date Other Level N/A Signature Date ANII Review Signature Date											
Results: NAD V IND GEO Fercent Of Coverage Obtained > 90%: Yes Reviewed Previous Data: Yes  Examiner Level II Signature Date Reviewer Signature Date VanRuler, Christopher D. Halling, David A. Signature Date Kimmen, Ronald For Mark Signature Date ANII Review Signature Date Signature Date Signature Date ANII Review Signature Date Signature Date Other Level N/A Signature Date ANII Review Signature Date											
Results: NAD V IND GEO Fercent Of Coverage Obtained > 90%: Yes Reviewed Previous Data: Yes  Examiner Level II Signature Date Reviewer Signature Date VanRuler, Christopher D. Halling, David A. Signature Date Kimmen, Ronald For Mark Signature Date ANII Review Signature Date Signature Date Signature Date ANII Review Signature Date Signature Date Other Level N/A Signature Date ANII Review Signature Date	Comments	: :	l	·I		l					
Examiner Level    Signature Date   Halling, David A.   Signature Date	None										
Examiner Level II Signature Date Reviewer Signature Date VanRuler, Christopher D. // 11/26/2002 Halling, David A. Signature Date Kimmen, Ronald Pond Signature Date ANII Review Signature Date Level N/A Signature Date ANII Review Signature Date Date Date Date Date Signature Date Date Date Date N/A Signature Date ANII Review Signature Date Date Date Date Date Date Date Dat	Results:	N	AD 🗹	IND		GEO [					
VanRuler, Christopher D. / hill 11/26/2002 Halling, David A.   Level II   Signature   Date   Site Review   Wren, Jerry P.   Signature   Date   Level N/A   Signature   Date   ANII Review   Signature   Date	Percent Of	Coverage	Obtained	i > 90%:		Yes	Reviewed Previ	ous Data:	Yes	-	
Examiner Level II Pondil Formal Signature Date Site Review Wren, Jerry P.  Other Level N/A Signature Date ANII Review Signature Date Date Date Date Date Date Date Dat	4		••	חו זי	nature	l l			Signature	Da	ate
Other Level N/A Signature Date ANII Review Signature Date	<u> </u>			<u> </u>	18-				Signature	ا <u>امريما</u> امريما	<u>기</u>
Totales Level N/A digitative Bate Frank Horien			" Par	$I/U^{-1}$				Dur P	<u>.w~_</u>	11-21-0	2
	1	Level	N/A	Sigr	nature			12/	Signature		ate

# TACHMENT 65



Site	Unit: P	NGP /	PI1		Procedure	e:	ISI-PT-1	Outage No.: _	PI1RFO2002
Summary	y No.: 300926		<del></del>	Procedure Rev	ر::	14	Report No.:	2002P139	
Workso	scope: ISI			Work Order No :		0200860	Page: _	1 of 1	
Code:	1989 Code Cat.: B-J					Location:	Cont Sand P	lug	
Drawing No.:		ISI-	30B		Description: E	BENT	PIPE - SAFE END		
System ID:	RC								
Component I	D: <b>W-</b> 6							Size/Length:	13.75"
Limitations:	None								
Temp. Tool	Mfg.:		Telatem	р	Serial N	lo.: _	NSP 178	Surface Tem	p.: <u>80</u> °F
Comparator	r Block Tei	mp.: S	ide A: N	/A °F	Side B: N/A	<u>.</u> °	F Resolution:	1/32" L	-ine
Lo/Wo Loca	ation:	Top D	ead Cente	r/Weld Co	enterline	Su	rface Condition:	Blende	d
		Cleaner			Penetrant		Remover		Developer
Brand	l	Magnafiu	x		Magnaflux		Magnaflux	M	lagnaflux
Туре	SKC-S SKL-HF/S				skc-s		SKD-\$2		
Batch No.	-	95D01K 87C054				95D01K 00G06K			
Time	Evap.	5 N	<i>l</i> lin	Dwell	15 Min		Evap 2 Min	Develop	7 Min
	Time Exa	am Starte	d:	1200			Time Exam Completed:	1245	
Indication	Loc	Loc	Diameter	Length	Туре		R	emarks	
No.	L	w			R/L				
	i								
		<del> </del>							
Comments		J	<u> </u>			l			
None	•								
Results:	N	AD 🗹	IND		GEO 🗌				
Percent Of	f Coverage	Obtained	d > 90%:		/es	Re	viewed Previous Data:	Yes	
Examiner	Level	11 0	/ Sign	nature	Date	Revi	ewer	Signature	Date
Jensen, A	rlen	<u> (h</u>	let	we-			ng, David A.	4 Holly	<u> </u>
Examiner N/A	Level	N/A	( <sup>S/gr</sup>	nature			Review n, Jerry P.	Signature	亚 /2-/-0 2
Other	Level	N/A	Sign	nature	Date	ANII	Review	2/ Signature	Date
N/A						Clov	, Ron	V	12/1/02

# ACHMENT 66

# NINC

Site	/Unit: Pi	NGP /	PI1		Procedure:	ISI-PT-1	Outage No.:	PI1RFO2002
Summary	No.:	30	5081		Procedure Rev.:	14	Report No.:	2002P072
Works	Workscope: ISI			Work Order No.:	0210380		1 of 1	
Code:	de: 1989 Code		Code	Cat.: C-F-1	Location:	Aux 895		
Drawing No.:		ISI-1	100A		Description: PI	PE - VALVE		
System ID:	SI				_			
Component I							Size/Length:	3" / 10.9"
Limitations:	None							
Temp. Tool	Mfg.:	····	Telatem	р	Serial No.	: NSP 134	Surface Ten	np.:90°F
Comparato	Block Ter	mp.: S	Side A: N	/A_ °F	Side B: N/A	_°F Resolution: _	Not U	sed
						Surface Condition:		d
		,						
[ <del></del>	·	Cleaner			Penetrant	Remover		Developer
Brand	ŀ	Magnaflu	x		Magnaflux	Magnaflux	N.	Magnaflux
Туре		SKC-S			SKL-HF/S	SKC-S		SKD-S2
Batch No		95D01K		87C054		95D01K		00B07K
Time	Evap.	5 1	Min	Dwell	15 Min	Evap. 5 Min	Develop	7 Min
	Time Exa	am Starte	q.	1235		Time Exam Completed	i. 1317	
Indication	Loc	Loc	Diameter	Length	Туре		Remarks	
No.	L	w			R/L			
-								
					,			
Comments	l		<u> </u>		<u> </u>			
-None No		to dot	a. 8MI	+ 112110	3			
Results:	N/	AD 🗹	IND		GEO 🗌		gpul,	7-5-0 <sup>2</sup>
Percent Of	Coverage	Obtaine	d > 90%:		Yes	Reviewed Previous Data:	No N	
Examiner	Level	11	Sigi	iature	Date R	eviewer	Signature	Date
Jensen, Aı	<del></del>		ull,	kn		alling, David A.	thalli-	11-18-02
Examiner N/A	Level	N/A	Sig	nature	1	ite Review Vren, Jerry P	Signature Lv-I	Date
Other	Level	N/A	Sigr	nature		NII Review	Signature	Date
N/A		•	J	•	c	low, Ron		11/20/02

# TACHMENT 67 PAGE 1 OF



Site	/Unit: P	NGP /	PI1		Procedure:	ISI-PT-1	0	utage No.: _	PI1RF020	)02
Summan	Summary No.: 301445			Procedure Rev.:	14	F	Report No.:	2002P08	14	
Works	Workscope: ISI		Work Order No.:		0200860		Page:	1 of _	1	
Code:			Code	Cat : <b>C-F-1</b>	Location:		Cont 715		·	
Drawing No.:	:	ISI-	89A		Description: PIF	E - VALVE				
System ID:	SI									
Component I								Size/Length:	6"/19	<del></del>
Limitations:	None							•	-	
Temp. Tool	Mfg:		Telatem	p	Serial No.	NSP 178	3	Surface Temp	o.:80	°F
Comparato	r Block Te	mp.: S	Side A: N	<u>VA</u> °F	Side B: N/A	°F Resolut	ion:	Not Us	ed	
					Centerline			Ground Smo	ooth	
		Cleaner			Penetrant	Remo	over	D	eveloper	
Brand	d Magnaflux Ma		Magnaflux	Magna	aflux	Ma	agnaflux			
Туре	SKC-S S		SKL-HF/S	SKC	:-s	SKD-S2				
Batch No.		95D01K 87C054		87C054	95D0	1K	o	0G06K		
Time	Evap.	5 N	/lin	Dwell	15 Min	Evap.	2 Min	Develop	7 Mir	n
	Time Exa	am Starte	đ:	1720		Time Exam Com	pleted.	1800		
Indication	Loc	Loc	Diameter	Length	Туре		Remar	ks	•	
No.	L	w			R/L					
									·	
		<del>                                     </del>						<del></del>		
Comments		l								
None	•									
Results:	N	AD 🗹	IND		GEO 🗌					
Percent Of	Coverage	Obtained	i > 90%:		Yes	Reviewed Previous	Data:	Yes	_	
Examiner	Level	lt .	Sign	ature	Date Re	viewer		Signature		Date
Thomas, T			Ina.	rom-		lling, David A.	DA Gr	Dly	1002	0,02
Examiner N/A	Level	N/A	Sigr	ature	1	e Review en, Jerry P.	( DI	Signature	ш-,, ,,	Date
Other	Level	N/A	Siar	ature		III Review	(1) (re	Signature	11-52	Date
N/A			3.			ow, Ron	1211	•	11/2	2/02

# TACHMENT 68



Site	/UnitP	NGP /	PI1		Procedure	e:	ISI-PT-1	Oı	utage No.: _	PIIRF	O2002
Summary	/ No.:	30	5015	<del></del>	Procedure Rev	/::	14	R	eport No.:	2002	P134
Works	cope:		ISI		Work Order No	o.:	0200860	_	Page: _	1 0	of 1
Code:	-	1989		Code	Cat.: C-F-1		Location:	С	ont outer A	nu	
Drawing No.:											
System ID:	SI				_						
Component I								S	ze/Length:	3" /	11.25"
Limitations:	None								•		
Temp. Tool	Mfg.:		Telatem	р	Serial N	lo.:	NSP 176	s	Surface Temp	p.:	65°F
Comparator	r Block Te	mp.: S	ide A:N	<u>/A</u> °F	Side B: N/A	<u>\</u> °F	Resolution:		Not Us	ed	
Lo/Wo Loca	ation:	Top D	ead Cente	r/Weld C	enterline	Surfa	ce Condition:		AS WELD	ED	
		Cleaner			Penetrant		Remover		D	evelope	r
Brand	1	Magnaflu	(		Magnaflux		Magnaflux		M	agnaflu	x
Туре		SKC-S			SKL-HF/S		SKC-S			SKD-S2	
Batch No.		95D01K			84M043		95D01K		C	00G06K	
Time	Evap.	5 N	lin	Dwell	15 Min	E	vap. 2 Min		Develop	7	Min
	Time Exa	am Started	j:	0945		Tin	ne Exam Completed:		1030		
Indication	Loc	Loc	Diameter	Length	Туре	-		Remark	s		
No.	L	w			R/L						
									- · · · · · · · · · · · · · · · · · · ·		
											1 AV-11 1-10
								·			
							1 4				
Comments	:	·			· · · · · · · · · · · · · · · · · · ·						
None No	previo	uo dat	a. Swi	#1/21/0	3						
Results:	N.	AD 🗹	IND		GEO 🗌						
Percent Of	Coverage	Obtained	> 90%:		/es	Revie	wed Previous Data:		N/A	_	
Examiner	Level	11 0	1 /9igr	nature	F	Reviewe	/ \		Signature		Date
Jensen, Ar		<u>U</u> h	le fr	<del></del>			David A.	<u> </u>	<u> Lilla</u>	6,	0029.02
Examiner VanRuler,	Level Christoph	**	Sign	nature		Site Rev Wren, J	( )	Pu	Signature	11-	Date 29-02
Other	Level		Sigr	nature		ANII Re	1,000	01	Signature		Date
N/A		•	_			Clow. R	on /X/	X		11/2	5/02

# IMENT 69 PAG

NMC	
_	

Site	Unit: Pl	IGP /	PI1		Procedure:	ISI-PT-1	_ Outage No.: _	PI1RFO2002
Summary	No.:	30	3060		Procedure Rev.:	14	_ Report No.: _	2002P132
Workso	Workscope: ISI		Work Order No.:		0200860	Page: _	1 of 1	
Code:	1989 Code Cat.: <u>C-F</u>			Dat.: <b>C-F-1</b>	Location:	Cont 715		
Drawing No.:		 ISI-9	7C		Description: Pl			
System ID:	SI							
Component I		-					Size/Length:	2" / 7.875"
Limitations:	None							
Temp. Tool	Mfg.:		Telatem	p	Serial No	.: NSP 178	Surface Tem	p.: <u>70</u> °F
Comparato	Block Ten	np.: Si	de A: <u>N</u>	<u>/A</u> °F	Side B: N/A	°F Resolution:	Not Us	sed
						Surface Condition:		
	-	Cleaner			Penetrant	Remover	D	eveloper
Brand	ħ	lagnaflu	•		Magnaflux	Magnaflux	M	agnaflux
Туре	·	SKC-S			SKL-HF/S	skc-s		SKD-S2
Batch No.		95D01K			84M043	95D01K		00G06K
Time	Evap.	5 N	lin	Dwell	15 Min	Evap. 2 Min	Develop	7 Min
<del> </del>	Time Exa	ım Started	d:	1430		Time Exam Completed:	1515	
Indication	Loc	Loc	Diameter	Length	Туре		Remarks	
No.	L	w			R/L			
							·····	· · · · · · · · · · · · · · · · · · ·
		<u> </u>						
Comments None No	Is: previou	no destr	a IIzili	03 <del>1</del>	<u> </u>			
Results:	N	AD 🗹	IND		GEO 🗌	-		
Percent O	f Coverage	Obtained	1 > 90%:		Yes	Reviewed Previous Data:	N/A	_
Examiner VanRuler, Examiner	Level Christoph Level	er D.	Chil	nature /_/// nature	11/27/2002   Date	Reviewer Halling, David A. Site Review	Signature Signature	Nov2802 W.TI Date
N/A Other N/A	Levei	N/A	Sıgı	nature	Date	Wren, Jerry P. ANII Review Clow, Ron	Signature	Date 11/25/02

Limitations to NDE TITLE:

ISI-LTS-1 NUMBER:

**Revision 2** 

PREPARED BY:

亚 REVIEWED BY:

APPROVED BY:

Superintendent M&MRN

**ANII REVIEW:** 

EFFECTIVE DATE: \_\_ 10-18-01

### 1.0 **PURPOSE**

This procedure provides instruction for identifying, quantifying and recording of limitations encountered while performing examinations under the ISI program.

### REFERENCES 2.0

This procedure complies with the applicable portions of the following referenced documents:

- American Society of Mechanical Engineers Boiler & Pressure Vessel Code: 2.1
  - Sections V and XI, 1986 edition, no addenda (Monticello Third Interval)
  - Sections V and XI, 1989 edition, no addenda (Prairie Island Third Interval)
- Nuclear Regulatory Commission Regulatory Guide 1.150 "Ultrasonic Testing of 2.2 Reactor Vessel Welds during Preservice and Inservice Examinations", (Rev. 1 dated Feb. 1983).
- Code case N-460 Alternative Examination Coverage for Class 1 and Class 2 2.3 Welds - Section XI, Division 1
- ISI NDE Manual procedure 2.4
  - ISI-NDE-0 "Equipment, Personnel and Material Reporting".
- Metals and Materials Resources Procedure 2.5
  - MMRN 2.3 "ISI Examination Program".
- ISI Administrative Manual procedures 2.6
  - ISIA-1.4 "Preparation of Relief Request from ASME Section XI Code Requirements"
  - ISIA-2.2 "ISI Field Activities Preparation and Control

Page 1 of 12

TITLE: Limitations to NDE

NUMBER: ISI-LTS-1 Revision 2

### 3.0 APPLICABILITY

3.1 This procedure is applicable to examinations performed at Xcel Energy's Nuclear Generating Plants.

- 3.2 This procedure is to be followed when it has been determined that there is a limitation which prevents obtaining full coverage of an area or volume as stated by the applicable examination procedure.
  - For ultrasonic examinations, this would mean less than all of the required scans and/or a reduction of required scan path for one or more scans.

### 4.0 **DEFINITIONS**

- 4.1 <u>Limitation</u> something that limits, restraint : An obstacle to the performance of an examination procedure.
- 4.2 <u>Evaluation</u> to determine the significance, worth, or condition of, usually by careful appraisal and study
- 4.3 <u>Practical</u> " of, relating to, or manifested in practice or action: not theoretical or ideal; concerned with voluntary action and ethical decisions. Useful." For this application this is interpreted to mean, for a specific case the benefits of a proposed action outweigh the negative aspects of that action.

### 5.0 PREREQUISITES

### 5.1 Personnel Requirements

- Examination personnel certification and eye examinations shall be documented in accordance with ISI-NDE-0.
- Nondestructive examination personnel shall be certified to a minimum of Level I in the appropriate method to operate equipment and Level II to interpret test results.

### 6.0 EQUIPMENT

This item is not applicable to this procedure. If alternate methods are required to augment coverage, that work shall be done under a separate procedure.

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### 7.0 INSTRUCTIONS

### 7.1 Initial Examination

Where the examiner is not able to complete a full examination as dictated by applicable procedure, the following steps shall be taken;

- · Complete original examination on accessible portions
- Make sketch which includes dimensions defining location and size of limitations using a report format similar to that shown in Fig 3.
- Describe the limitation including what it is and how it interferes with the exam.
   State what appears to be required to remove the limitation using a report format similar to that shown in Fig 3.
- For volumetric examinations, construct a surface profile using a surface contour gauge and perform a thickness profile (typically one reading each 1/2" in a line) of the area that encompasses the code required volume. For UT that would include the available scanning surface.
- Record radiation field information on the report (this may require assistance from the health physics group).
- Sign and date the data sheet then forward it to the Xcel Energy's Field Supervisor.

### 7.2 Evaluation

- The data gathered by the initial examiner shall be reviewed by the Xcel Energy's field supervisor / designee to determine if alternate methods may be used to achieve additional coverage.
- If alternate methods would provide additional coverage, a review of the benefit versus the required resources (radiation dose, time, cost etc.) to achieve that coverage shall be performed by the Xcel Energy's field supervisor to determine if that action is practical (see para 7.3).
- If it is determined that 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 in coverage for that weld is less than 10%. The
  applicable examination records shall identify both the cause and percentage of
  reduced examination coverage (see para 7.4).

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7.3 Alternate methods to achieve coverage

- For surface examinations, MT and PT may be interchanged / intermixed as appropriate to the material and the conditions.
- For volumetric examinations, RT may be substituted for or augment UT assuming the ability to drain the line, and that the wall thickness / diameter is within a practical range.
- For UT, use of other angles, full node or node and one half calibrations, skewed scans or approach from another surface to achieve additional coverage shall be considered.

### 7.4 Determining Coverage Achieved

When evaluation of initial and alternate examination methods results in examinations which do not provide full coverage, a determination of percent coverage shall be made. The required examination coverage is defined by applicable figures in ASME Sect XI.

- For surface examinations, a worksheet similar to that shown in Fig 4 shall be completed.
- For volumetric examinations, a worksheet similar to that shown in Fig 5 or 6 (ultrasonic examinations) shall be completed.
- 7.5 Should the evaluation show that 90% weld coverage has been achieved, attach all related information to the original NDE report and no further action is required.
- 7.6 Contractor procedures for performing examinations utilizing automated equipment (e.g. reactor vessel and nozzle safe-end exams) shall be reviewed by an Xcel Energy's level III in the appropriate method to ensure the requirements for identifying, quantifying and recording of limitations encountered are adequately addressed.
- 7.7 When it has been determined that the maximum examination coverage practically achievable for a code required item is less than required; a relief request is required to be submitted to the NRC (refer to ISIA 1.4).

### 8.0 ACCEPTANCE CRITERIA

This item is not applicable to this procedure.

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### 9.0 REPORTING

9.1 Information addressed in Fig's 3, 4, 5 and 6 (as applicable) shall be reported.

9.2 Information for examinations that are required to meet Reg. Guide 1.150 shall also include the following from Appendix A - Alternate Method;

7.c "The best estimate of the portion of the volume required to be examined by the ASME Code that has not been effectively examined such as volumes of material near each surface because of near-field or other effects, volumes near interfaces between cladding and parent metal, volumes shadowed by laminar material defects, volumes shadowed by part geometry, volumes inaccessible to the transducer, volumes affected by electronic gating, and volumes near the surface opposite the transducer. Sketches and/or descriptions of the tools, fixtures and component geometry which contribute to incomplete coverage should be included."

### 9.3 Reference System

Recording of limitations shall be based on the reference system shown in the original examination procedure.

### 9.4 Documentation

A picture of the limitation should be taken and added to the description, preferably in a digital format.

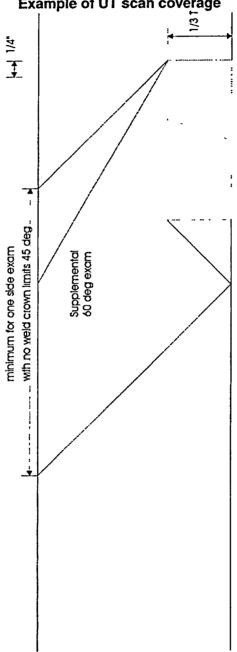
### 10.0 RECORDS

- 10.1 Inservice inspection examinations shall be incorporated in the ISI records. See Metals and Materials Resurces North Procedure 2.3 "ISI Examination Program".
- 10.2 Records of other examinations shall be the responsibility of the organization requesting the examination.

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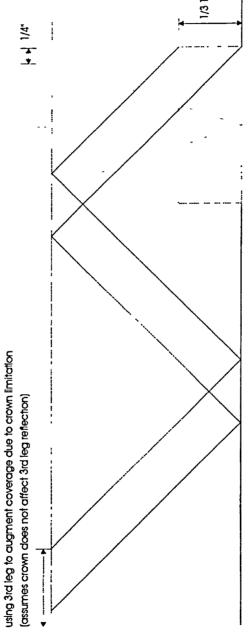
Figure 1
Example of UT scan coverage



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Figure 2
Example of UT, one sided exam, supplemental coverage



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# ATTACHMENT 70

# XCEL ENERGY METALS & MATERIALS RESOURCES NORTH INSERVICE INSPECTION - NONDESTRUCTIVE EXAMINATION PROCEDURE

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### Figure 3 Limitation Data Sheet

Initial exam report #	Procedure #	
ISO #	Item #	
Description of Limitation		
Sketch of Limitation		
		]
Limitation removal requirements		
Radiation field		
Examiner:	Date:	

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### Figure 4

# <u>Determination of Percent Coverage for Surface Examinations</u> This is a sample form only

Initial ex	am rpt #			Procedu	re #	
ISO #				Item#_		
Applicat	ole Code figu	re #		-		
Area Re	equired (as s	hown in applicabl	e code re	eference	drawing)	
Lenath		* Width		_		
_						
Coveraç	ge Achieved					
Area exa	amined	sa. in	. / Total a	area requ	ired (100%)	sq
= Perce	nt coverage	%	(area req	uirea - ai	rea of limitation	ons = area examin
Ta data		s of a circilmtora	ntial Wel	ra .		
<b>Note -</b> D Diamete	Diameter refe	n of a circumferents to actual extern _ *(Pi) <u>3.1416</u> _ inches		ter not pi		
Note - Diamete = Length	Diameter refe	rs to actual exterr _ *(Pi) <u>3.1416</u> _ inches (Length)		ter not pi	Actual	(Length)
Note - Diamete = Length Pipe Size	Diameter refe	rs to actual exterr _ *(Pi) <u>3.1416</u> _ inches _ (Length) _ Circumference		Pipe Size	Actual Diameter	(Length) Circumference
Note - Diamete Length Pipe Size	Actual Diameter 2.375	rs to actual exterr _ *(Pi) 3.1416 _ inches (Length) Circumference 7.46		Pipe Size	Actual Diameter 12.75	(Length) Circumference 40.06
Note - Diamete Length Pipe Size 2 2.5	Actual Diameter 2,375 2,875	rs to actual exterr _ *(Pi) 3.1416 _ inches  (Length) Circumference 7.46 9.03		Pipe Size	Actual Diameter 12.75 14.0	(Length) Circumference 40.06 43.98
Note - Diamete Length Pipe Size 2 2.5 3	Actual Diameter 2,375 2,875 3,5	rs to actual exterr _ *(Pi) 3.1416 _ inches  (Length) Circumference 7.46 9.03 11.0		Pipe Size 12 14 16	Actual Diameter 12.75 14.0 16.0	(Length) Circumference 40.06 43.98 50.27
Note - Diamete - Length Pipe Size 2 2.5 3 3.5	Actual Diameter 2,375 2,875 3,5 4,0	rs to actual exterr _ *(Pi) 3.1416 _ inches  (Length) Clrcumference 7.46 9.03 11.0 12.57		Pipe Size 12 14 16	Actual Diameter 12.75 14.0 16.0 18.0	(Length) Circumference 40.06 43.98
Pipe Size 2 2.5 3 3.5	Actual Diameter 2.375 2.875 3.5 4.0 4.5	rs to actual exterr _ *(Pi) 3.1416 _ inches  (Length) Circumference		Pipe Size 12 14 16	Actual Diameter 12.75 14.0 16.0	(Length) Circumference 40.06 43.98 50.27 56.55
Pipe Size 2 2.5 3 3.5 4 5	Actual Diameter 2.375 2.875 3.5 4.0 4.5 5.563	rs to actual exterr _ *(Pi) 3.1416 _ inches  (Length) Circumference		Pipe Size 12 14 16 18 20	Actual Diameter 12.75 14.0 16.0 18.0 20.0	(Length) Circumference 40.06 43.98 50.27 56.55 62.83
Note - Diamete = Length  Pipe Size 2 2.5 3 3.5 4	Actual Diameter 2.375 2.875 3.5 4.0 4.5	rs to actual exterr _ *(Pi) 3.1416 _ inches  (Length) Circumference		Pipe Size 12 14 16 18 20 22	Actual Diameter 12.75 14.0 16.0 18.0 20.0 22.0	(Length) Circumference 40.06 43.98 50.27 56.55 62.83 69.12

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### Figure 5

# <u>Determination of Percent Coverage for UT Examinations - Pipe</u> <u>This is a sample form only</u>

Initial exam rp	ot #	Pr	ocedure #	
ISO #		lte	em #	<del></del>
Applicable Co	ode figure #			
<u>45 deg</u>				
Scan 1	_ % length X	_ % volume of le	ngth / 100 =	_ % total for Scan 1
Scan 2	_ % length X	_ % volume of le	ngth / 100 =	_ % total for Scan 2
Scan 3	_ % length X	_% volume of le	ngth / 100 =	_ % total for Scan 3
Scan 4	_ % length X	_ % volume of le	ngth / 100 =	_ % total for Scan 4
Add totals ar	nd divide by # scar	ns = %	total for 45 deg	
Other deg -	(to be used	for supplemental	scans)	
				ith the 45 deg scans.
Scan 1	% length X	_ % volume of le	ngth / 100 =	_ % total for Scan 1
	_ % length X			
	_ % length X			
Scan 4	_ % length X	_ % volume of le	ngth / 100 =	_ % total for Scan 4
Percent com	plete coverage			
Add totals for	each scan required	and divide by #	of scans to deter	nine;
	% total for complet	te exam		
required scan	deg scan 1 = 63%   volume) for total of ins, add together ar	91% coverage f	or scan 1 volume.	= 28% (of remaining Repeat for the ly 4).
Xcel Energy's	Field Supervisor: _		Date:	

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### Figure 6

# <u>Determination of Percent Coverage for UT Examinations - Vessels</u> This is a sample form only

Initial exam rpt #	Procedure #	
ISO #	Item #	
Applicable Code figure #		
0 deg Planar		
Scan % length X	% volume of length / 100 =	% total for 0 deg
45 deg		
Scan 1 % length X	% volume of length / 100 =	% total for Scan 1
Scan 2 % length X	% volume of length / 100 =	% total for Scan 2
Scan 3 % length X	% volume of length / 100 =	% total for Scan 3
Scan 4 % length X	% volume of length / 100 =	% total for Scan 4
Add totals and divide by # scans = % total for 45 deg		
60 deg		
Scan 1 % length X	% volume of length / 100 =	% total for Scan 1
Scan 2 % length X	% volume of length / 100 =	% total for Scan 2
Scan 3 % length X	% volume of length / 100 =	% total for Scan 3
Scan 4 % length X	% volume of length / 100 =	% total for Scan 4
Add totals and divide by # scans = % total for 60 deg		
Percent complete coverage		
Add totals for each angle and scan required and divide by # angles to determine;		
% total for complete exam		
<b>Note:</b> Supplemental coverage may be achieved by use of other angles / methods. When used, the coverage for volume not obtained with angles as noted above shall be calculated and added to the total to provide the percent total for the complete examination.		
Xcel Energy's Field Supervisor:	Date	ə:

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### **SUMMARY OF SIGNIFICANT CHANGES**

Title block changed NSP to Xcel Energy and Materials & Special Processes to Metals & Materials Resources North.

2.1 Added no addenda to code years.

Changed O&MS to MMRN, two places.

Changed NSP to Xcel Energy's, seven places.