



TAQA NORTH DATA					
EQUIP NO.: 603VS008		RAMS ID TAG NO.: NEW		PRN: N/A	
PLANT/FIELD: CHINCHAGA GAS PLANT			LSD: C-032-H / 094-H-08		LOCATION: GAS PLANT
EQUIP. NAME : BC#2 INLET SEPARATOR			CLASS : VS		TYPE: SEPARATOR
SERVICE: <input checked="" type="checkbox"/> Sweet <input type="checkbox"/> Sour		H2S: N/A PPM		FLUID: GAS/H2O	
OPERATING PRESSURE: N/A <input type="checkbox"/> kPa <input type="checkbox"/> PSI		S/D REQT.: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Partial			
OPERATING STATUS: <input checked="" type="checkbox"/> IN SERVICE <input type="checkbox"/> Not In Service		OPERATING TEMPERATURE: 16 <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F		M/WAY(16"AND ABOVE): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
SIZE: 24"					

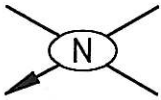
MANUFACTURING DATA					
MFG.: SURE WELD INT'L		DWG. NO.: N/A		SERIAL NO.: 2889A-97	
CRN: N9989.21		CODE/DIV.: ASME VIII DIV 1		YR. BUILT: N/A	
PARA.: UW11A5B		STAMP: U,W		SUPPORT: <input checked="" type="checkbox"/> Skirt <input type="checkbox"/> Saddles <input type="checkbox"/> Nozzles <input type="checkbox"/> N/A	
MAWP: 1965 <input checked="" type="checkbox"/> kPa <input type="checkbox"/> PSI		@ TEMP: 38 <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F		MDMT: -29 <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	
VOLUME: N/A <input type="checkbox"/> M ³ <input type="checkbox"/> FT ³		FLANGE RATING: 150# PWHT: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
RADIOGRAPHY: <input type="checkbox"/> RT1 <input checked="" type="checkbox"/> RT2 <input type="checkbox"/> RT3 <input type="checkbox"/> RT4 <input type="checkbox"/> Spot <input type="checkbox"/> Full <input type="checkbox"/> N/A					
SIZE : 1829 <input checked="" type="checkbox"/> mm. <input type="checkbox"/> inch. <input type="checkbox"/> ID <input checked="" type="checkbox"/> OD		LENGTH: 6096 <input checked="" type="checkbox"/> mm. <input type="checkbox"/> inch.		HEIGHT: N/A <input type="checkbox"/> mm. <input type="checkbox"/> inch.	
INSULATION TYPE: <input type="checkbox"/> Fiberglass <input type="checkbox"/> Wool <input type="checkbox"/> Low Temp <input type="checkbox"/> Asbestos Other: N/A				INSULATION THK: 25 <input checked="" type="checkbox"/> mm. <input type="checkbox"/> inch.	
SECTION	MATERIAL	NOMINAL mm	C.A. mm		
SHELL	N/A	N/A	1.6 MM		
HEAD	N/A	N/A	1.6 MM		
COMMENTS:					

TUBING DATA					
MAWP: N/A <input type="checkbox"/> kPa <input type="checkbox"/> PSI		@ TEMP: N/A <input type="checkbox"/> °C <input type="checkbox"/> °F		TEMA CLASS: N/A	
TYPE: N/A		NUMBER (QTY OF TUBES): N/A			
TUBE SIZE: N/A mm. <input type="checkbox"/> ID <input type="checkbox"/> OD		GAUGE (BWG): N/A		JOINT: <input type="checkbox"/> Welded <input type="checkbox"/> Rolled	
SECTION	MATERIAL	NOMINAL mm	C.A. mm		
N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A		

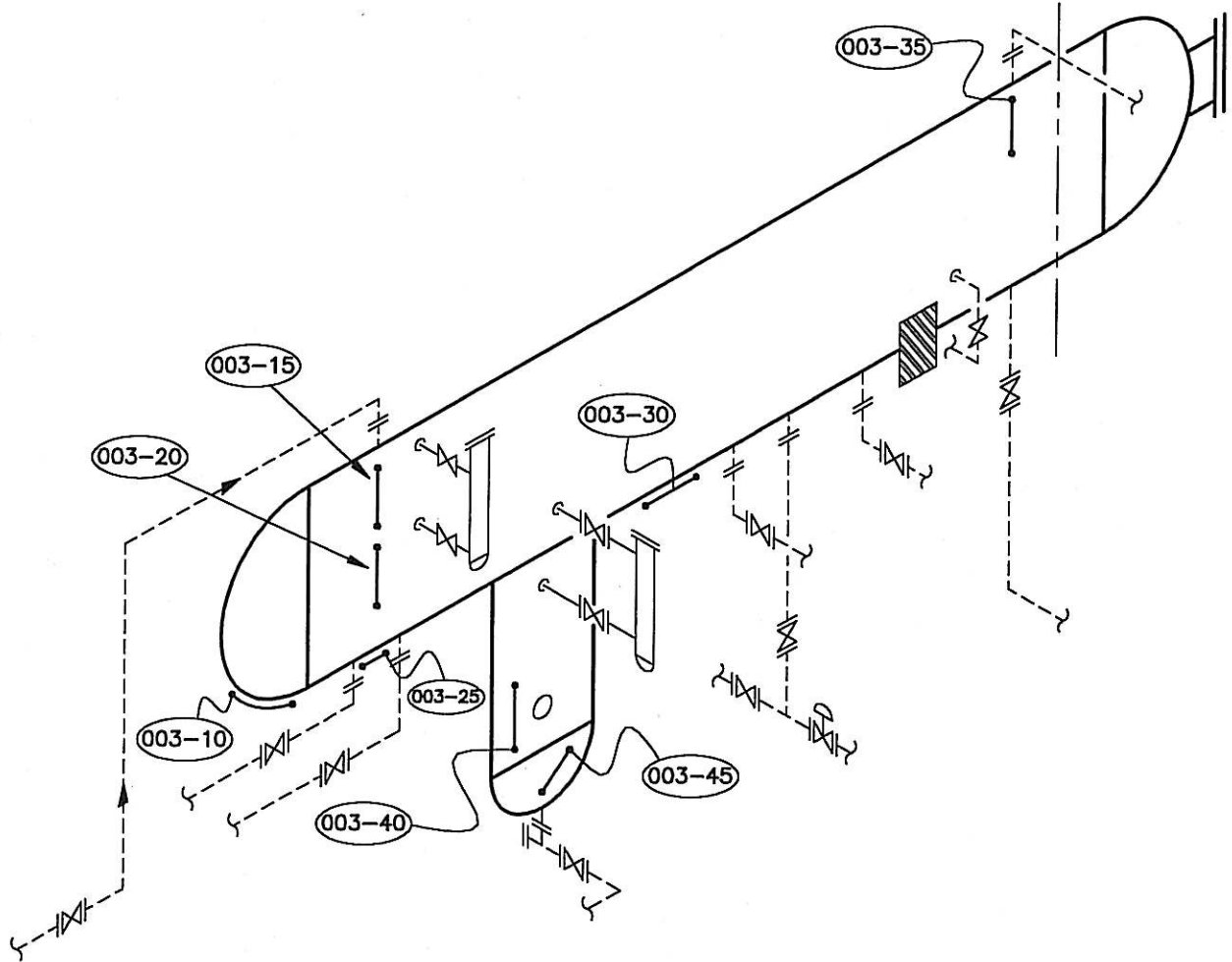
TRAY/PACKING DATA			
TRAY TYPE: N/A		NUMBER (# OF TRAYS): N/A	
PACKING TYPE: N/A		MATERIAL: N/A	
MANUFACTURER: N/A			

COATING/LINING/CLADDING DATA			
AREA	TYPE	MATERIAL	YR. APPLIED
EXTERNAL:	EPOXY	N/A	N/A
INTERNAL:	N/A	N/A	N/A
LINING:	N/A	N/A	N/A
CLADDING:	STAINLESS STEEL	N/A	N/A

PRESSURE RELIEF DEVICES DATA		<input type="checkbox"/> PSV not located		<input type="checkbox"/> No PSV	
EQUIP. NO.	TAG NO.	SET	CAPACITY	CAP UNITS/OTHER	
603SVVS008	N/A	1965 <input checked="" type="checkbox"/> kPa <input type="checkbox"/> PSI	37456	<input checked="" type="checkbox"/> SCFM <input type="checkbox"/> LB/hr. <input type="checkbox"/> GAL/min.	
N/A	N/A	N/A <input type="checkbox"/> kPa <input type="checkbox"/> PSI	N/A	<input type="checkbox"/> SCFM <input type="checkbox"/> LB/hr. <input type="checkbox"/> GAL/min.	
N/A	N/A	N/A <input type="checkbox"/> kPa <input type="checkbox"/> PSI	N/A	<input type="checkbox"/> SCFM <input type="checkbox"/> LB/hr. <input type="checkbox"/> GAL/min.	



P&ID. # _____
REF. # _____



VESSEL DATA

P.E. No. V-101 Serial No. 2889.97 Prov. Reg. No. _____ C.R.N. N 9989.21
MFR. SURE WELD Code/Div. _____ Para _____ Code Stamp U
Yr. Bilt. 1997 Yr. Inst. _____ Size 1867 x 6096mm Service _____ PWHT NO
RT _____ Insulated _____
Repairs _____
Reason _____
Reason _____

Nominal Thickness & Material

Head: _____ Mat'l: _____ C.A.: 1.6mm
Head: _____
Shell: _____
Shell: _____
Chan Hd: _____
Chan Sh: _____
Boot Hd: _____
Boot Sh: _____

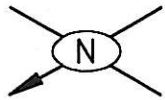
MAWP Shell Side 1965KPa @ Temp. 38°C
MAWP Tube Side _____ @ Temp. _____

COMMENTS: _____

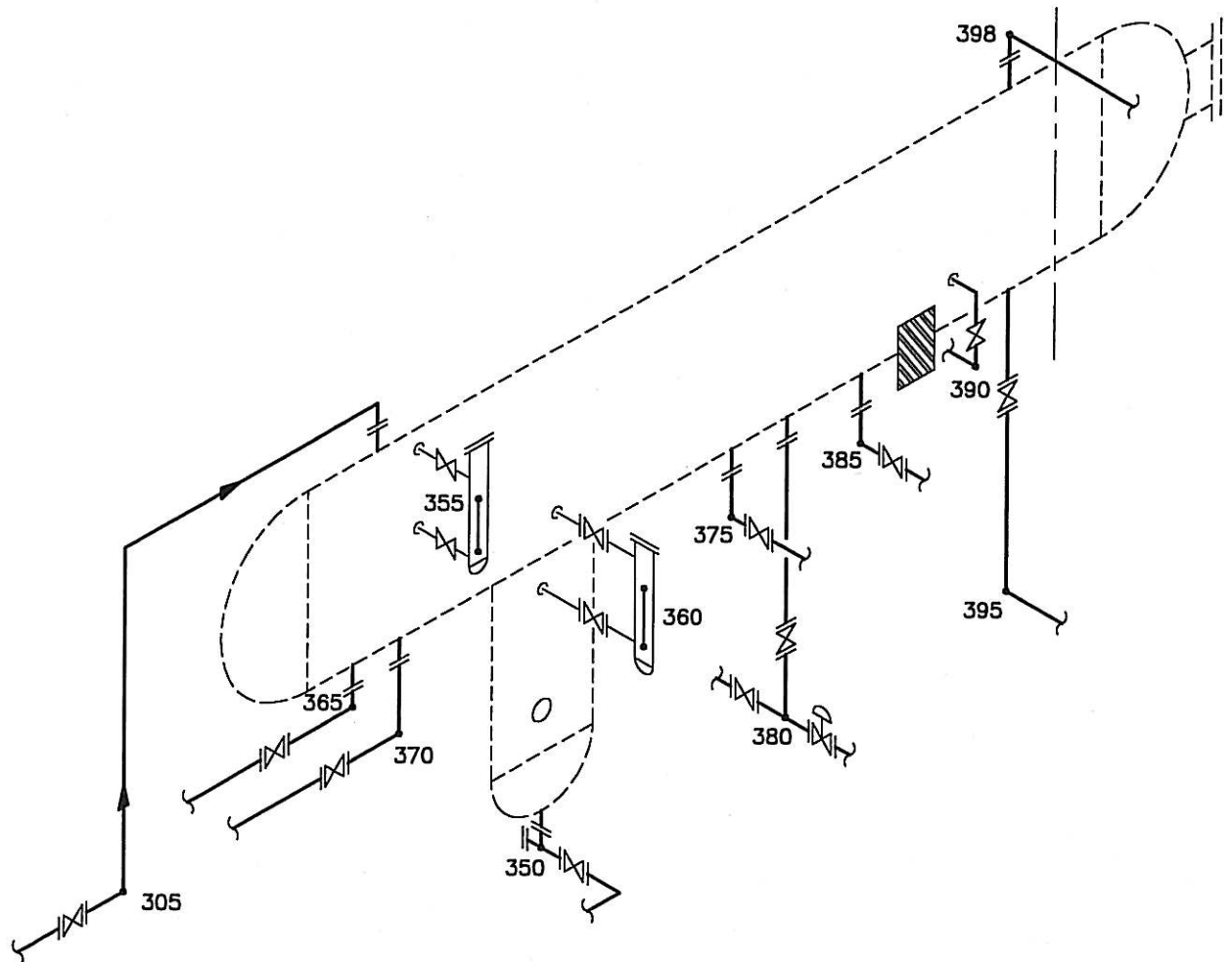
PIONEER NATURAL RESOURCES CANADA INC
CHINCHAGA GAS PLANT
LSD C-32-H \ 94-H-8

INLET SEPARATOR

TECH.: <u>JO</u>	REV. DATE: _____	DWG DATE: <u>99/12</u>
CAD: <u>DR</u>	REVISION: _____	DRAWING: <u>003</u>



P&ID # _____
REF. # _____



PIPING DATA

THICKNESS MEASUREMENT LOCATION:	SIZE	PROC.	LINE #	SPEC.	SCH.	NOM.THK.	API CORR. ALLW. * ** CALCULATED CORR.ALLW.	MIN.THK.	CAL.THK.	FLG. RATING
003-05/98	12"				STD	9.5mm	ASTM	8.3mm		
003-50/65/70/80/85/90	2"				40	3.9mm	ASTM	3.4mm		
003-55/60/95	4"				40	6.0mm	ASTM	5.3mm		
003-75	3"				40	5.5mm	ASTM	4.8mm		

COMMENTS: _____

PIONEER NATURAL RESOURCES CANADA INC.
CHINCHAGA GAS PLANT
LSD C-32-H \ 94-H-8

INLET SEPARATOR PIPING

TECH.: JO	REV.DATE:	DWG.DATE: 99/12
CAD: DR	REVISION:	DRAWING: 003A

**PIONEER NATURAL RESOURCES CANADA INC.
CHINCHAGA GAS PLANT**

RIVEST TESTING INC.

Item Desc.:	C-32-H/94-H-8 / INLET SEPARATOR		
Equip. No.:	V-101	Ser. No.:	2889.97
		Prov. Reg.:	N/A

Pt.Desc.: N.HEAD

Point No.: 003-10

Nominal:	22.200	Mths. Rem. To Min. Nom:	Good For Continued Service:	YES
Corr. Allowance:	1.600	Min. Cal. Wall Thk.:	Additional Assessment Of Data:	YES
Min. Nominal:	20.600		Suggested Max Insp. Interval In Mths.:	12

Survey Dates: 1999-12

Data Readings	1	22.200	____.____
	2	22.200	____.____
	3	22.200	____.____
	4	22.200	____.____
	5	22.500	____.____
	6	22.400	____.____

Data Evaluation

Lowest Reading	:	22.200
Average - Low 3	:	22.200
Thk.Remaining Above Min.	:	1.600
Indv. Short Term Rate (mm/yr)	:	
Short Term Rate (mm/yr)	:	
LongTerm Rate (mm/yr)	:	

Comments:
ASSUMED NOMINAL

Pt.Desc.: N.UPPER SHELL

Point No.: 003-15

Nominal:	19.100	Mths. Rem. To Min. Nom:	Good For Continued Service:	YES
Corr. Allowance:	1.600	Min. Cal. Wall Thk.:	Additional Assessment Of Data:	YES
Min. Nominal:	17.500		Suggested Max Insp. Interval In Mths.:	12

Survey Dates: 1999-12

Data Readings	1	19.500	____.____
	2	19.600	____.____
	3	19.600	____.____
	4	19.600	____.____
	5	19.600	____.____
	6	19.500	____.____

Data Evaluation

Lowest Reading	:	19.500
Average - Low 3	:	19.533
Thk.Remaining Above Min.	:	2.000
Indv. Short Term Rate (mm/yr)	:	
Short Term Rate (mm/yr)	:	
LongTerm Rate (mm/yr)	:	

Comments:
ASSUMED NOMINAL

**PIONEER NATURAL RESOURCES CANADA INC.
CHINCHAGA GAS PLANT**

RIVEST TESTING INC.

Item Desc.:	C-32-H/94-H-8 / INLET SEPARATOR		
Equip. No.:	V-101	Ser. No.:	2889.97
		Prov. Reg.:	N/A

Pt.Desc.: N.CTR.SIDE SHELL

Point No.: 003-20

Nominal:	19.100	Mths. Rem. To Min. Nom:	Good For Continued Service:	YES
Corr. Allowance:	1.600	Min. Cal. Wall Thk.:	Additional Assessment Of Data:	YES
Min. Nominal:	17.500		Suggested Max Insp. Interval In Mths.:	12

Survey Dates: 1999-12

Data Readings	1	19.500	____.____
	2	19.700	____.____
	3	19.700	____.____
	4	19.500	____.____
	5	19.500	____.____
	6	19.500	____.____

Data Evaluation

Lowest Reading	:	19.500
Average - Low 3	:	19.500
Thk.Remaining Above Min.	:	2.000
Indv. Short Term Rate (mm/yr)	:	
Short Term Rate (mm/yr)	:	
LongTerm Rate (mm/yr)	:	

Comments:

ASSUMED NOMINAL

Pt.Desc.: N.CTR.BTM.SHELL

Point No.: 003-25

Nominal:	19.100	Mths. Rem. To Min. Nom:	Good For Continued Service:	YES
Corr. Allowance:	1.600	Min. Cal. Wall Thk.:	Additional Assessment Of Data:	YES
Min. Nominal:	17.500		Suggested Max Insp. Interval In Mths.:	12

Survey Dates: 1999-12

Data Readings	1	19.600	____.____
	2	19.600	____.____
	3	19.600	____.____
	4	19.600	____.____
	5	19.600	____.____
	6	19.600	____.____

Data Evaluation

Lowest Reading	:	19.600
Average - Low 3	:	19.600
Thk.Remaining Above Min.	:	2.100
Indv. Short Term Rate (mm/yr)	:	
Short Term Rate (mm/yr)	:	
LongTerm Rate (mm/yr)	:	

Comments:

ASSUMED NOMINAL

**PIONEER NATURAL RESOURCES CANADA INC.
CHINCHAGA GAS PLANT**

RIVEST TESTING INC.

Item Desc.: C-32-H/94-H-8 / INLET SEPARATOR	Equip. No.: V-101	Ser. No.: 2889.97	Prov. Reg.: N/A
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Pt.Desc.: CTR.BTM.SHELL Point No.: **003-30**

Nominal:	19.100	Mths. Rem. To Min. Nom:	Good For Continued Service:	YES
Corr. Allowance:	1.600	Min. Cal. Wall Thk.:	Additional Assessment Of Data:	YES
Min. Nominal:	17.500		Suggested Max Insp. Interval In Mths.:	12

Survey Dates: 1999-12

Data Readings	1	19.500	____.____
	2	19.500	____.____
	3	19.600	____.____
	4	19.600	____.____
	5	19.600	____.____
	6	19.700	____.____

Data Evaluation

Lowest Reading	:	19.500
Average - Low 3	:	19.533
Thk.Remaining Above Min.	:	2.000
Indv. Short Term Rate (mm/yr)	:	
Short Term Rate (mm/yr)	:	
LongTerm Rate (mm/yr)	:	

Comments:
ASSUMED NOMINAL

Pt.Desc.: UPPER S.SHELL Point No.: **003-35**

Nominal:	19.100	Mths. Rem. To Min. Nom:	Good For Continued Service:	YES
Corr. Allowance:	1.600	Min. Cal. Wall Thk.:	Additional Assessment Of Data:	YES
Min. Nominal:	17.500		Suggested Max Insp. Interval In Mths.:	12

Survey Dates: 1999-12

Data Readings	1	19.700	____.____
	2	19.900	____.____
	3	19.800	____.____
	4	19.800	____.____
	5	19.900	____.____
	6	19.700	____.____

Data Evaluation

Lowest Reading	:	19.700
Average - Low 3	:	19.733
Thk.Remaining Above Min.	:	2.200
Indv. Short Term Rate (mm/yr)	:	
Short Term Rate (mm/yr)	:	
LongTerm Rate (mm/yr)	:	

Comments:
ASSUMED NOMINAL

**PIONEER NATURAL RESOURCES CANADA INC.
CHINCHAGA GAS PLANT**

RIVEST TESTING INC.

Item Desc.: C-32-H/94-H-8 / INLET SEPARATOR	Equip. No.: V-101	Ser. No.: 2889.97	Prov. Reg.: N/A
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Pt.Desc.: **BOOT SHELL** **Point No.: 003-40**

Nominal: 25.400	Mths. Rem. To Min. Nom:	Good For Continued Service: YES
Corr. Allowance: 1.600	Min. Cal. Wall Thk.:	Additional Assessment Of Data: YES
Min. Nominal: 23.800		Suggested Max Insp. Interval In Mths.: 12

Survey Dates: 1999-12

Data Readings	1	25.900	____.____
	2	25.900	____.____
	3	25.800	____.____
	4	25.800	____.____
	5	25.800	____.____
	6	25.600	____.____

Data Evaluation

Lowest Reading	:	25.600
Average - Low 3	:	25.733
Thk.Remaining Above Min.	:	1.800
Indv. Short Term Rate (mm/yr)	:	
Short Term Rate (mm/yr)	:	
LongTerm Rate (mm/yr)	:	

Comments:
ASSUMED NOMINAL

Pt.Desc.: **BOOT HEAD** **Point No.: 003-45**

Nominal: 25.400	Mths. Rem. To Min. Nom:	Good For Continued Service: YES
Corr. Allowance: 1.600	Min. Cal. Wall Thk.:	Additional Assessment Of Data: YES
Min. Nominal: 23.800		Suggested Max Insp. Interval In Mths.: 12

Survey Dates: 1999-12

Data Readings	1	25.200	____.____
	2	25.000	____.____
	3	25.000	____.____
	4	25.100	____.____
	5	25.100	____.____
	6	25.100	____.____

Data Evaluation

Lowest Reading	:	25.000
Average - Low 3	:	25.033
Thk.Remaining Above Min.	:	1.200
Indv. Short Term Rate (mm/yr)	:	
Short Term Rate (mm/yr)	:	
LongTerm Rate (mm/yr)	:	

Comments:
ASSUMED NOMINAL

**PIONEER NATURAL RESOURCES CANADA INC.
CHINCHAGA GAS PLANT**

RIVEST TESTING INC.

Item Desc.: C-32-H/94-H-8 / INLET SEPARATOR
 Equip. No.: V-101 Ser. No.: 2889.97 Prov. Reg.: N/A

Pt.Desc.: 2"TEE L-R **Point No.: 003-50**
 Line No.: N/A
 Nominal: 3.900 Mths. Rem. To Min. Nom: Good For Continued Service: YES
 Corr. Allowance: ASTM Min. Cal. Wall Thk.: Additional Assessment Of Data: YES
 Min. Nominal: 3.413 Suggested Max Insp. Interval In Mths.: 12

Survey Dates: 1999-12

Data Readings	1	5.800	____.____
	2	5.900	____.____
	3	6.100	____.____
	4	5.500	____.____
	5	5.300	____.____

Data Evaluation

Lowest Reading : 5.300
 Average - Low 3 : 5.533
 Thk.Remaining Above Min. : 1.887
 Indv. Short Term Rate (mm/yr) :
 Short Term Rate (mm/yr) :
 LongTerm Rate (mm/yr) :

Pt.Desc.: 4"DIA. FLOAT **Point No.: 003-55**
 Line No.: N/A
 Nominal: 6.000 Mths. Rem. To Min. Nom: Good For Continued Service: YES
 Corr. Allowance: ASTM Min. Cal. Wall Thk.: Additional Assessment Of Data: YES
 Min. Nominal: 5.250 Suggested Max Insp. Interval In Mths.: 12

Survey Dates: 1999-12

Data Readings	1	6.400	____.____
	2	6.400	____.____
	3	6.400	____.____
	4	6.400	____.____
	5	6.400	____.____
	6	6.400	____.____

Data Evaluation

Lowest Reading : 6.400
 Average - Low 3 : 6.400
 Thk.Remaining Above Min. : 1.150
 Indv. Short Term Rate (mm/yr) :
 Short Term Rate (mm/yr) :
 LongTerm Rate (mm/yr) :

**PIONEER NATURAL RESOURCES CANADA INC.
CHINCHAGA GAS PLANT**

RIVEST TESTING INC.

Item Desc.:	C-32-H/94-H-8 / INLET SEPARATOR		
Equip. No.:	V-101	Ser. No.:	2889.97
		Prov. Reg.:	N/A

Pt.Desc.: 2"90L T-B **Point No.: 003-70**
 Line No.: N/A
 Nominal: 3.900 Mths. Rem. To Min. Nom: Good For Continued Service: YES
 Corr. Allowance: ASTM Min. Cal. Wall Thk.: Additional Assessment Of Data: YES
 Min. Nominal: 3.413 Suggested Max Insp. Interval In Mths.: 12

Survey Dates: 1999-12

Data Readings	1	4.000	____.____
	2	4.100	____.____
	3	4.000	____.____
	4	4.200	____.____
	5	4.100	____.____

Data Evaluation

Lowest Reading : 4.000
 Average - Low 3 : 4.033
 Thk.Remaining Above Min. : 0.587
 Indv. Short Term Rate (mm/yr) :
 Short Term Rate (mm/yr) :
 LongTerm Rate (mm/yr) :

Pt.Desc.: 3"90L T-B **Point No.: 003-75**
 Line No.: N/A
 Nominal: 5.500 Mths. Rem. To Min. Nom: Good For Continued Service: YES
 Corr. Allowance: ASTM Min. Cal. Wall Thk.: Additional Assessment Of Data: YES
 Min. Nominal: 4.813 Suggested Max Insp. Interval In Mths.: 12

Survey Dates: 1999-12

Data Readings	1	5.800	____.____
	2	5.800	____.____
	3	5.700	____.____
	4	5.700	____.____
	5	5.800	____.____

Data Evaluation

Lowest Reading : 5.700
 Average - Low 3 : 5.733
 Thk.Remaining Above Min. : 0.887
 Indv. Short Term Rate (mm/yr) :
 Short Term Rate (mm/yr) :
 LongTerm Rate (mm/yr) :

**PIONEER NATURAL RESOURCES CANADA INC.
CHINCHAGA GAS PLANT**

RIVEST TESTING INC.

Item Desc.: C-32-H/94-H-8 / INLET SEPARATOR
 Equip. No.: V-101 Ser. No.: 2889.97 Prov. Reg.: N/A

Pt.Desc.: 2"90L T-B **Point No.: 003-90**
 Line No.: N/A
 Nominal: 3.900 Mths. Rem. To Min. Nom: Good For Continued Service: YES
 Corr. Allowance: ASTM Min. Cal. Wall Thk.: Additional Assessment Of Data: YES
 Min. Nominal: 3.413 Suggested Max Insp. Interval In Mths.: 12

Survey Dates: 1999-12

Data Readings	1	4.400	____.____
	2	4.500	____.____
	3	4.500	____.____
	4	4.300	____.____
	5	4.100	____.____

Data Evaluation

Lowest Reading : 4.100
 Average - Low 3 : 4.267
 Thk.Remaining Above Min. : 0.687
 Indv. Short Term Rate (mm/yr) :
 Short Term Rate (mm/yr) :
 LongTerm Rate (mm/yr) :

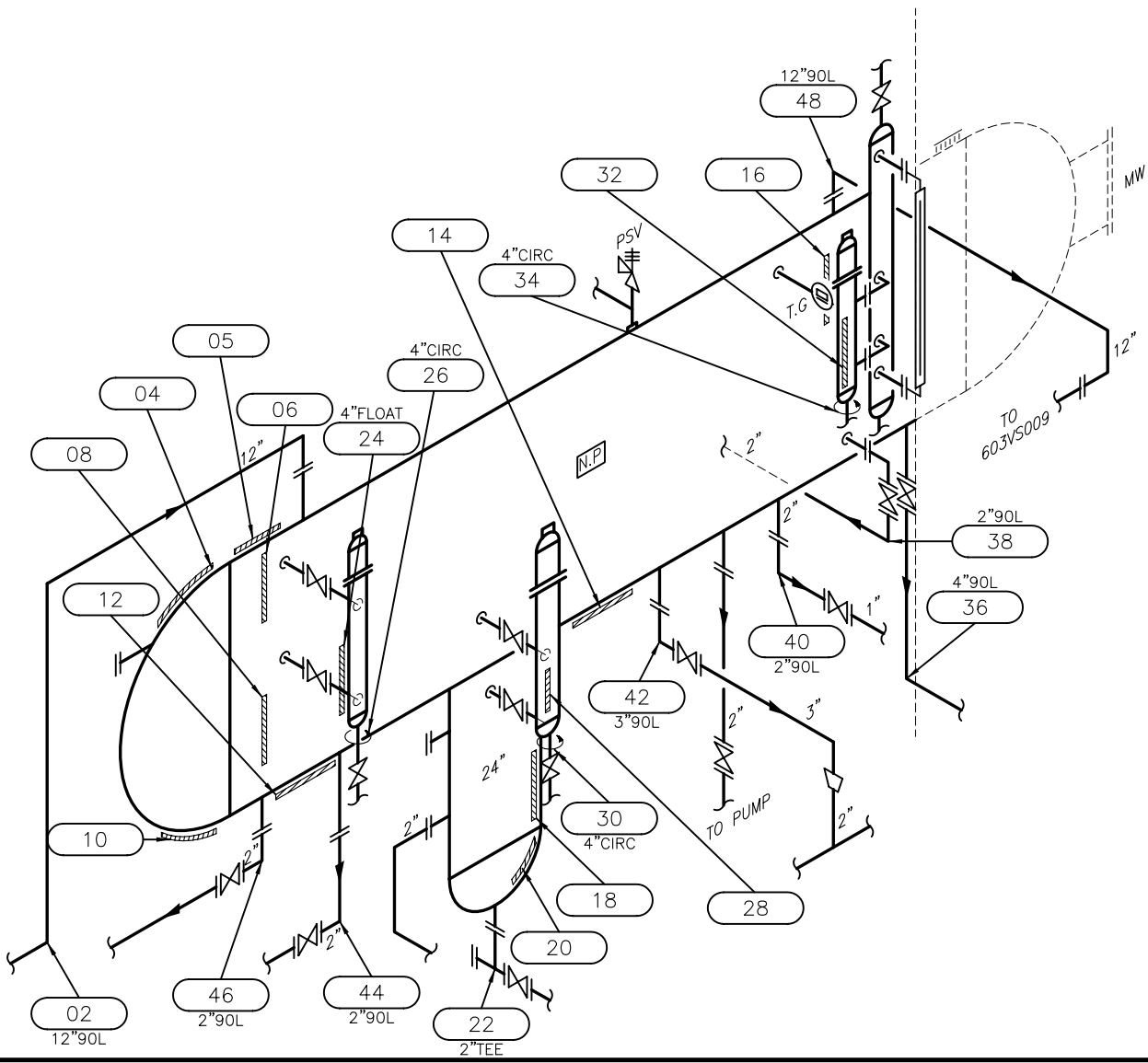
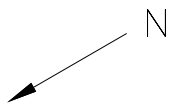
Pt.Desc.: 4"90L T-B **Point No.: 003-95**
 Line No.: N/A
 Nominal: 6.000 Mths. Rem. To Min. Nom: Good For Continued Service: YES
 Corr. Allowance: ASTM Min. Cal. Wall Thk.: Additional Assessment Of Data: YES
 Min. Nominal: 5.250 Suggested Max Insp. Interval In Mths.: 12

Survey Dates: 1999-12

Data Readings	1	6.700	____.____
	2	6.300	____.____
	3	5.800	____.____
	4	6.000	____.____
	5	6.000	____.____
	6	6.000	____.____

Data Evaluation

Lowest Reading : 5.800
 Average - Low 3 : 5.933
 Thk.Remaining Above Min. : 0.550
 Indv. Short Term Rate (mm/yr) :
 Short Term Rate (mm/yr) :
 LongTerm Rate (mm/yr) :



Comments: _____



P.E. No.: N/S Yr. Bilt.: 199?
 OIP# 603VS008 Manway: YES
 Serial No.: 2889A-97 Size: 1829mm x 6096mm
 P.R.N. (A) N/S Service: SWEET
 C.R.N.: N9989.21 PWHT: NO
 Code/Div.: ASME VIII DIV. 1 RT: 2
 Para: UW11A Insulated: SOUTH HEAD
 C. Stamp: U,W N.B. No: N/S
 Manufacturer: SURE WELD INTERNATIONAL

Design & Materials Data

HEAD	SHELL
Material: <u>N/S</u>	Material: <u>N/S</u>
Nom.: <u>N/S</u>	Nom.: <u>N/S</u>
C.A.: <u>1.6mm</u>	C.A.: <u>1.6mm</u>
BOOT HEAD	BOOT SHELL
Material: _____	Material: _____
Nom.: _____	Nom.: _____
C.A.: _____	C.A.: _____
CHANNEL HEAD	CHANNEL SHELL
Material: _____	Material: _____
Nom.: _____	Nom.: _____
C.A.: _____	C.A.: _____
MAWP Shell Side: <u>1965 KPA</u>	⊙ Temp.: <u>38°C</u>
MAWP Tube Side: _____	⊙ Temp.: _____

CLIENT
 TAQA NORTH

FACILITY
 CHINCHAGA GAS PLANT

LSO C-032-H/094-H-08

ITEM
 BC # 2 INLET SEPARATOR

BY: M.T. DATE: 2008/04 DWG.# 013

TAQA North

Unit: N-603

FACILITY:	CHINCHAGA GAS PLANT	MANUFACTURER:	SURE WELD INTERNATIONA
LSD:	C-032-H/094-H-08	DESIGN PRESSURE:	1965 kPa / 285 psi
ITEM DESC.:	BC-2 INLET SEPARATOR	DESIGN TEMP.:	38 C / 100 F
EQUIP / OIP#:	603VS008	RECOMMENDED NEXT INSP. DATE:	04/1983
PROV. REG. #:	N/S	RECOMMENDED RETIREMENT DATE:	01/2106
SERIAL #:	2889A-97	REM. LIFE (from last survey 04/2008):	97.80 yrs.
CRN.:	N9989.21	TOTAL CAUTION / ACTION TML:	12

Item # (013)

COMMENTS:

2008/04 - READING BETWEEN TML 14.02 AND 14.03 @ WELD.
 TML 36.06 READING @ H.A.Z.
 TML#46 READING IS BELOW MINIMUM THICKNESS.

TML No.: 2 12"90L B-T 150

DATE BUILT: AVERAGE THICKNESS MEASURED: 9.39 mm.
 MATERIAL: MINIMUM THICKNESS MEASURED: 9.20 mm.

Pts.	Nom. Thick.	Corr. Allow.	Min. Thick.	B/L Survey Date mm/yyyy	B/L Survey	Prev. Survey Date mm/yyyy	Prev. Survey	Last Survey Date mm/yyyy	Last Survey	Short Term Rate	Long Term Rate	TML Insp. Due	TML Retire. Date	Action/Caution Required Item
2.01	9.50	1.20	8.30	N/A	9.50	N/A	N/A	04/2008	9.40	0.000	0.000	04/2013	12/2374	NO
2.02	9.50	1.20	8.30	N/A	9.50	N/A	N/A	04/2008	9.40	0.000	0.000	04/2013	12/2374	NO
2.03	9.50	1.20	8.30	N/A	9.50	N/A	N/A	04/2008	9.40	0.000	0.000	04/2013	12/2374	NO
2.04	9.50	1.20	8.30	N/A	9.50	N/A	N/A	04/2008	9.30	0.000	0.000	04/2013	08/2341	NO
2.05	9.50	1.20	8.30	N/A	9.50	N/A	N/A	04/2008	9.20	0.000	0.000	04/2013	04/2308	NO
2.06	9.50	1.20	8.30	N/A	9.50	N/A	N/A	04/2008	9.20	0.000	0.000	04/2013	04/2308	NO
2.07	9.50	1.20	8.30	N/A	9.50	N/A	N/A	04/2008	9.20	0.000	0.000	04/2013	04/2308	NO
2.08	9.50	1.20	8.30	N/A	9.50	N/A	N/A	04/2008	9.50	0.000	0.000	04/2013	04/2408	NO
2.09	9.50	1.20	8.30	N/A	9.50	N/A	N/A	04/2008	9.60	0.000	0.000	04/2013	08/2441	NO
2.10	9.50	1.20	8.30	N/A	9.50	N/A	N/A	04/2008	9.50	0.000	0.000	04/2013	04/2408	NO
2.11	9.50	1.20	8.30	N/A	9.50	N/A	N/A	04/2008	9.50	0.000	0.000	04/2013	04/2408	NO
2.12	9.50	1.20	8.30	N/A	9.50	N/A	N/A	04/2008	9.50	0.000	0.000	04/2013	04/2408	NO

(*) and GREEN Represent 25% of the TMLs, which have the earliest retirement dates.
 BLUE (Caution TML) Corrosion Rate greater than 0.250mm/yr. or TML Remaining Life is less than 1.00 year.
 RED (Action TML) TML with negative life.

If Baseline Survey Thickness Measurement was not taken at the time of Manufacture, then Nominal Thickness is used as Baseline Thickness.

TAQA North

Unit: N-603

FACILITY:	CHINCHAGA GAS PLANT	MANUFACTURER:	SURE WELD INTERNATIONA
LSD:	C-032-H/094-H-08	DESIGN PRESSURE:	1965 kPa / 285 psi
ITEM DESC.:	BC-2 INLET SEPARATOR	DESIGN TEMP.:	38 C / 100 F
EQUIP / OIP#:	603VS008	RECOMMENDED NEXT INSP. DATE:	04/1983
PROV. REG. #:	N/S	RECOMMENDED RETIREMENT DATE:	01/2106
SERIAL #:	2889A-97	REM. LIFE (from last survey 04/2008):	97.80 yrs.
CRN.:	N9989.21	TOTAL CAUTION / ACTION TML:	12

Item # (013)

COMMENTS:

2008/04 - READING BETWEEN TML 14.02 AND 14.03 @ WELD.
 TML 36.06 READING @ H.A.Z.
 TML#46 READING IS BELOW MINIMUM THICKNESS.

TML No.: 4 TOP NORTH HD T-B

DATE BUILT: AVERAGE THICKNESS MEASURED: 21.67 mm.
 MATERIAL: MINIMUM THICKNESS MEASURED: 20.20 mm.

Pts.	Nom. Thick.	Corr. Allow.	Min. Thick.	B/L Survey Date	B/L Survey Date	Prev. Survey Date	Prev. Survey Date	Last Survey Date	Last Survey Date	Short Term Rate	Long Term Rate	TML Insp. Due	TML Retire. Date	Action/Caution Required Item
				mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy					
4.01	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	20.20	0.000	0.000	04/2013	04/4008	NO
4.02	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	21.10	0.000	0.000	04/2013	04/4008	NO
4.03	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	21.60	0.000	0.000	04/2013	04/4008	NO
4.04	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	22.00	0.000	0.000	04/2013	04/4008	NO
4.05	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	22.60	0.000	0.000	04/2013	04/4008	NO
4.06	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	22.50	0.000	0.000	04/2013	04/4008	NO

TML No.: 5 TOP SH N-S

DATE BUILT: AVERAGE THICKNESS MEASURED: 19.85 mm.
 MATERIAL: MINIMUM THICKNESS MEASURED: 19.80 mm.

Pts.	Nom. Thick.	Corr. Allow.	Min. Thick.	B/L Survey Date	B/L Survey Date	Prev. Survey Date	Prev. Survey Date	Last Survey Date	Last Survey Date	Short Term Rate	Long Term Rate	TML Insp. Due	TML Retire. Date	Action/Caution Required Item
				mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy					
5.01	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	19.90	0.000	0.000	04/2013	04/4008	NO
5.02	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	19.90	0.000	0.000	04/2013	04/4008	NO
5.03	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	19.80	0.000	0.000	04/2013	04/4008	NO
5.04	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	19.80	0.000	0.000	04/2013	04/4008	NO
5.05	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	19.80	0.000	0.000	04/2013	04/4008	NO
5.06	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	19.90	0.000	0.000	04/2013	04/4008	NO

(*) and GREEN Represent 25% of the TMLs, which have the earliest retirement dates.
 BLUE (Caution TML) Corrosion Rate greater than 0.250mm/yr. or TML Remaining Life is less than 1.00 year.
 RED (Action TML) TML with negative life.

If Baseline Survey Thickness Measurement was not taken at the time of Manufacture, then Nominal Thickness is used as Baseline Thickness.

TAQA North

Unit: N-603

FACILITY:	CHINCHAGA GAS PLANT	MANUFACTURER:	SURE WELD INTERNATIONA
LSD:	C-032-H/094-H-08	DESIGN PRESSURE:	1965 kPa / 285 psi
ITEM DESC.:	BC-2 INLET SEPARATOR	DESIGN TEMP.:	38 C / 100 F
EQUIP / OIP#:	603VS008	RECOMMENDED NEXT INSP. DATE:	04/1983
PROV. REG. #:	N/S	RECOMMENDED RETIREMENT DATE:	01/2106
SERIAL #:	2889A-97	REM. LIFE (from last survey 04/2008):	97.80 yrs.
CRN.:	N9989.21	TOTAL CAUTION / ACTION TML:	12

Item # (013)

COMMENTS:

2008/04 - READING BETWEEN TML 14.02 AND 14.03 @ WELD.
 TML 36.06 READING @ H.A.Z.
 TML#46 READING IS BELOW MINIMUM THICKNESS.

TML No.: 6 UPPER SIDE SH

DATE BUILT: AVERAGE THICKNESS MEASURED: 19.95 mm.
 MATERIAL: MINIMUM THICKNESS MEASURED: 19.40 mm.

Pts.	Nom. Thick.	Corr. Allow.	Min. Thick.	B/L Survey Date	B/L Survey Date	Prev. Survey Date	Prev. Survey Date	Last Survey Date	Last Survey Date	Short Term Rate	Long Term Rate	TML Insp. Due	TML Retire. Date	Action/Caution Required Item
				mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy					
6.01	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	20.10	0.000	0.000	04/2013	04/4008	NO
6.02	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	20.10	0.000	0.000	04/2013	04/4008	NO
6.03	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	20.10	0.000	0.000	04/2013	04/4008	NO
6.04	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	20.10	0.000	0.000	04/2013	04/4008	NO
6.05	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	19.90	0.000	0.000	04/2013	04/4008	NO
6.06	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	19.40	0.000	0.000	04/2013	04/4008	NO

TML No.: 8 LOWER SIDE SH

DATE BUILT: AVERAGE THICKNESS MEASURED: 20.17 mm.
 MATERIAL: MINIMUM THICKNESS MEASURED: 20.10 mm.

Pts.	Nom. Thick.	Corr. Allow.	Min. Thick.	B/L Survey Date	B/L Survey Date	Prev. Survey Date	Prev. Survey Date	Last Survey Date	Last Survey Date	Short Term Rate	Long Term Rate	TML Insp. Due	TML Retire. Date	Action/Caution Required Item
				mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy					
8.01	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	20.10	0.000	0.000	04/2013	04/4008	NO
8.02	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	20.20	0.000	0.000	04/2013	04/4008	NO
8.03	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	20.20	0.000	0.000	04/2013	04/4008	NO
8.04	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	20.20	0.000	0.000	04/2013	04/4008	NO
8.05	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	20.20	0.000	0.000	04/2013	04/4008	NO
8.06	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	20.10	0.000	0.000	04/2013	04/4008	NO

(*) and GREEN Represent 25% of the TMLs, which have the earliest retirement dates.
 BLUE (Caution TML) Corrosion Rate greater than 0.250mm/yr. or TML Remaining Life is less than 1.00 year.
 RED (Action TML) TML with negative life.

If Baseline Survey Thickness Measurement was not taken at the time of Manufacture, then Nominal Thickness is used as Baseline Thickness.

TAQA North

Unit: N-603

FACILITY:	CHINCHAGA GAS PLANT	MANUFACTURER:	SURE WELD INTERNATIONA
LSD:	C-032-H/094-H-08	DESIGN PRESSURE:	1965 kPa / 285 psi
ITEM DESC.:	BC-2 INLET SEPARATOR	DESIGN TEMP.:	38 C / 100 F
EQUIP / OIP#:	603VS008	RECOMMENDED NEXT INSP. DATE:	04/1983
PROV. REG. #:	N/S	RECOMMENDED RETIREMENT DATE:	01/2106
SERIAL #:	2889A-97	REM. LIFE (from last survey 04/2008):	97.80 yrs.
CRN.:	N9989.21	TOTAL CAUTION / ACTION TML:	12

Item # (013)

COMMENTS:

2008/04 - READING BETWEEN TML 14.02 AND 14.03 @ WELD.
 TML 36.06 READING @ H.A.Z.
 TML#46 READING IS BELOW MINIMUM THICKNESS.

TML No.: 10 BTM NORTH HD T-B

DATE BUILT: AVERAGE THICKNESS MEASURED: 22.20 mm.
 MATERIAL: MINIMUM THICKNESS MEASURED: 22.00 mm.

Pts.	Nom. Thick.	Corr. Allow.	Min. Thick.	B/L Survey Date	B/L Survey Date	Prev. Survey Date	Prev. Survey Date	Last Survey Date	Last Survey Date	Short Term Rate	Long Term Rate	TML Insp. Due	TML Retire. Date	Action/Caution Required Item
				mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy					
10.01	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	22.20	0.000	0.000	04/2013	04/4008	NO
10.02	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	22.20	0.000	0.000	04/2013	04/4008	NO
10.03	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	22.00	0.000	0.000	04/2013	04/4008	NO
10.04	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	22.40	0.000	0.000	04/2013	04/4008	NO
10.05	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	22.20	0.000	0.000	04/2013	04/4008	NO
10.06	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	22.20	0.000	0.000	04/2013	04/4008	NO

TML No.: 12 BTM SH T-B

DATE BUILT: AVERAGE THICKNESS MEASURED: 19.45 mm.
 MATERIAL: MINIMUM THICKNESS MEASURED: 19.40 mm.

Pts.	Nom. Thick.	Corr. Allow.	Min. Thick.	B/L Survey Date	B/L Survey Date	Prev. Survey Date	Prev. Survey Date	Last Survey Date	Last Survey Date	Short Term Rate	Long Term Rate	TML Insp. Due	TML Retire. Date	Action/Caution Required Item
				mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy					
12.01	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	19.50	0.000	0.000	04/2013	04/4008	NO
12.02	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	19.50	0.000	0.000	04/2013	04/4008	NO
12.03	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	19.40	0.000	0.000	04/2013	04/4008	NO
12.04	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	19.40	0.000	0.000	04/2013	04/4008	NO
12.05	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	19.50	0.000	0.000	04/2013	04/4008	NO
12.06	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	19.40	0.000	0.000	04/2013	04/4008	NO

(*) and GREEN Represent 25% of the TMLs, which have the earliest retirement dates.
 BLUE (Caution TML) Corrosion Rate greater than 0.250mm/yr. or TML Remaining Life is less than 1.00 year.
 RED (Action TML) TML with negative life.

If Baseline Survey Thickness Measurement was not taken at the time of Manufacture, then Nominal Thickness is used as Baseline Thickness.

TAQA North

Unit: N-603

FACILITY:	CHINCHAGA GAS PLANT	MANUFACTURER:	SURE WELD INTERNATIONA
LSD:	C-032-H/094-H-08	DESIGN PRESSURE:	1965 kPa / 285 psi
ITEM DESC.:	BC-2 INLET SEPARATOR	DESIGN TEMP.:	38 C / 100 F
EQUIP / OIP#:	603VS008	RECOMMENDED NEXT INSP. DATE:	04/1983
PROV. REG. #:	N/S	RECOMMENDED RETIREMENT DATE:	01/2106
SERIAL #:	2889A-97	REM. LIFE (from last survey 04/2008):	97.80 yrs.
CRN.:	N9989.21	TOTAL CAUTION / ACTION TML:	12

Item # (013)

COMMENTS:

2008/04 - READING BETWEEN TML 14.02 AND 14.03 @ WELD.
 TML 36.06 READING @ H.A.Z.
 TML#46 READING IS BELOW MINIMUM THICKNESS.

TML No.: 14 MID BTM SH N-S

DATE BUILT: AVERAGE THICKNESS MEASURED: 20.15 mm.
 MATERIAL: MINIMUM THICKNESS MEASURED: 19.60 mm.

Pts.	Nom. Thick.	Corr. Allow.	Min. Thick.	B/L Survey Date	B/L Survey Date	Prev. Survey Date	Prev. Survey Date	Last Survey Date	Last Survey Date	Short Term Rate	Long Term Rate	TML Insp. Due	TML Retire. Date	Action/Caution Required Item
				mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy					
14.01	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	19.60	0.000	0.000	04/2013	04/4008	NO
14.02	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	19.60	0.000	0.000	04/2013	04/4008	NO
14.03	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	19.60	0.000	0.000	04/2013	04/4008	NO
14.04	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	19.70	0.000	0.000	04/2013	04/4008	NO
14.05	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	21.70	0.000	0.000	04/2013	04/4008	NO
14.06	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	20.70	0.000	0.000	04/2013	04/4008	NO

TML No.: 16 UPPER SIDE SH

DATE BUILT: AVERAGE THICKNESS MEASURED: 19.88 mm.
 MATERIAL: MINIMUM THICKNESS MEASURED: 19.80 mm.

Pts.	Nom. Thick.	Corr. Allow.	Min. Thick.	B/L Survey Date	B/L Survey Date	Prev. Survey Date	Prev. Survey Date	Last Survey Date	Last Survey Date	Short Term Rate	Long Term Rate	TML Insp. Due	TML Retire. Date	Action/Caution Required Item
				mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy					
16.01	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	19.90	0.000	0.000	04/2013	04/4008	NO
16.02	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	19.90	0.000	0.000	04/2013	04/4008	NO
16.03	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	19.90	0.000	0.000	04/2013	04/4008	NO
16.04	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	19.90	0.000	0.000	04/2013	04/4008	NO
16.05	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	19.90	0.000	0.000	04/2013	04/4008	NO
16.06	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	19.80	0.000	0.000	04/2013	04/4008	NO

(*) and GREEN Represent 25% of the TMLs, which have the earliest retirement dates.
 BLUE (Caution TML) Corrosion Rate greater than 0.250mm/yr. or TML Remaining Life is less than 1.00 year.
 RED (Action TML) TML with negative life.

If Baseline Survey Thickness Measurement was not taken at the time of Manufacture, then Nominal Thickness is used as Baseline Thickness.

TAQA North

Unit: N-603

FACILITY:	CHINCHAGA GAS PLANT	MANUFACTURER:	SURE WELD INTERNATIONA
LSD:	C-032-H/094-H-08	DESIGN PRESSURE:	1965 kPa / 285 psi
ITEM DESC.:	BC-2 INLET SEPARATOR	DESIGN TEMP.:	38 C / 100 F
EQUIP / OIP#:	603VS008	RECOMMENDED NEXT INSP. DATE:	04/1983
PROV. REG. #:	N/S	RECOMMENDED RETIREMENT DATE:	01/2106
SERIAL #:	2889A-97	REM. LIFE (from last survey 04/2008):	97.80 yrs.
CRN.:	N9989.21	TOTAL CAUTION / ACTION TML:	12

Item # (013)

COMMENTS:

2008/04 - READING BETWEEN TML 14.02 AND 14.03 @ WELD.
 TML 36.06 READING @ H.A.Z.
 TML#46 READING IS BELOW MINIMUM THICKNESS.

TML No.: 18 BOOT BTM SH T-B

DATE BUILT: AVERAGE THICKNESS MEASURED: 25.88 mm.
 MATERIAL: MINIMUM THICKNESS MEASURED: 25.80 mm.

Pts.	Nom. Thick.	Corr. Allow.	Min. Thick.	B/L Survey Date	B/L Survey Date	Prev. Survey Date	Prev. Survey Date	Last Survey Date	Last Survey Date	Short Term Rate	Long Term Rate	TML Insp. Due	TML Retire. Date	Action/Caution Required Item
				mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy					
18.01	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	25.90	0.000	0.000	04/2013	04/4008	NO
18.02	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	25.90	0.000	0.000	04/2013	04/4008	NO
18.03	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	25.90	0.000	0.000	04/2013	04/4008	NO
18.04	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	25.90	0.000	0.000	04/2013	04/4008	NO
18.05	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	25.80	0.000	0.000	04/2013	04/4008	NO
18.06	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	25.90	0.000	0.000	04/2013	04/4008	NO

TML No.: 20 BOOT BTM HD T-B

DATE BUILT: AVERAGE THICKNESS MEASURED: 25.07 mm.
 MATERIAL: MINIMUM THICKNESS MEASURED: 25.00 mm.

Pts.	Nom. Thick.	Corr. Allow.	Min. Thick.	B/L Survey Date	B/L Survey Date	Prev. Survey Date	Prev. Survey Date	Last Survey Date	Last Survey Date	Short Term Rate	Long Term Rate	TML Insp. Due	TML Retire. Date	Action/Caution Required Item
				mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy					
20.01	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	25.20	0.000	0.000	04/2013	04/4008	NO
20.02	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	25.10	0.000	0.000	04/2013	04/4008	NO
20.03	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	25.00	0.000	0.000	04/2013	04/4008	NO
20.04	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	25.00	0.000	0.000	04/2013	04/4008	NO
20.05	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	25.00	0.000	0.000	04/2013	04/4008	NO
20.06	0.00	0.00	0.00	N/A	N/A	N/A	N/A	04/2008	25.10	0.000	0.000	04/2013	04/4008	NO

(*) and GREEN Represent 25% of the TMLs, which have the earliest retirement dates.
 BLUE (Caution TML) Corrosion Rate greater than 0.250mm/yr. or TML Remaining Life is less than 1.00 year.
 RED (Action TML) TML with negative life.

If Baseline Survey Thickness Measurement was not taken at the time of Manufacture, then Nominal Thickness is used as Baseline Thickness.

CALCULATE PRESSURE VESSEL TMIN or DESIGN PRESSURE

FACILITY: Chinchaga Gas Plant--C-32-H/94-H-8
DESCRIPTION: BC # 2 Inlet Separator
ITEM NO.: #013
TML: #22--#46
MATERIAL: SA234WPB
PRN #: SN-2889A-97
RT: 2
TYPE: Fitting

PRESSURE VESSEL TMIN CALCS (Cylindrical shells INSIDE RADIUS)

$t = PR/SE - 0.6P$ Minimum Required Thickness, inches

P=	285	Design Pressure, psi
R=	0.997	INSIDE Radius of shell, inches
S=	17100	Maximum Allowable Stress, psi
E=	1.00	Joint Efficiency
T=	100°F	
t=	0.017	inches, per ASME Sect 8 UG-27(c)1
t=	0.43	mm

$$t = 0.017" + C/A 0.0625" = 0.0795"$$

TAQA North

Unit: N-603

FACILITY:	CHINCHAGA GAS PLANT	MANUFACTURER:	SURE WELD INTERNATIONA
LSD:	C-032-H/094-H-08	DESIGN PRESSURE:	1965 kPa / 285 psi
ITEM DESC.:	BC-2 INLET SEPARATOR	DESIGN TEMP.:	38 C / 100 F
EQUIP / OIP#:	603VS008	RECOMMENDED NEXT INSP. DATE:	04/1983
PROV. REG. #:	N/S	RECOMMENDED RETIREMENT DATE:	01/2106
SERIAL #:	2889A-97	REM. LIFE (from last survey 04/2008):	97.80 yrs.
CRN.:	N9989.21	TOTAL CAUTION / ACTION TML:	12

Item # (013)

COMMENTS:

2008/04 - READING BETWEEN TML 14.02 AND 14.03 @ WELD.
 TML 36.06 READING @ H.A.Z.
 TML#46 READING IS BELOW MINIMUM THICKNESS.

TML No.: 22 2"TEE E-W 150

DATE BUILT: AVERAGE THICKNESS MEASURED: 5.54 mm.
 MATERIAL: MINIMUM THICKNESS MEASURED: 4.70 mm.

Pts.	Nom. Thick.	Corr. Allow.	Min. Thick.	B/L Survey Date	B/L Survey Date	Prev. Survey Date	Prev. Survey Date	Last Survey Date	Last Survey Date	Short Term Rate	Long Term Rate	TML Insp. Due	TML Retire. Date	Action/Caution Required Item
				mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy					
22.01	5.50	0.70	4.80	N/A	5.50	N/A	N/A	04/2008	5.60	0.000	0.000	04/2013	12/2274	NO
22.02	5.50	0.70	4.80	N/A	5.50	N/A	N/A	04/2008	6.00	0.000	0.000	04/2013	04/2408	NO
22.03	5.50	0.70	4.80	N/A	5.50	N/A	N/A	04/2008	5.90	0.000	0.000	04/2013	12/2374	NO
22.04	5.50	0.70	4.80	N/A	5.50	N/A	N/A	04/2008	5.50	0.000	0.000	04/2013	08/2241	NO *
22.05	5.50	0.70	4.80	N/A	5.50	N/A	N/A	04/2008	4.70	0.000	0.000	04/1983	04/1983	ACTION *

TML No.: 24 4"FLOAT B/S 150#

DATE BUILT: AVERAGE THICKNESS MEASURED: 6.70 mm.
 MATERIAL: MINIMUM THICKNESS MEASURED: 6.60 mm.

Pts.	Nom. Thick.	Corr. Allow.	Min. Thick.	B/L Survey Date	B/L Survey Date	Prev. Survey Date	Prev. Survey Date	Last Survey Date	Last Survey Date	Short Term Rate	Long Term Rate	TML Insp. Due	TML Retire. Date	Action/Caution Required Item
				mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy					
24.01	6.00	0.70	5.30	N/A	6.00	N/A	N/A	04/2008	6.70	0.000	0.000	04/2013	12/2474	NO
24.02	6.00	0.70	5.30	N/A	6.00	N/A	N/A	04/2008	6.70	0.000	0.000	04/2013	12/2474	NO
24.03	6.00	0.70	5.30	N/A	6.00	N/A	N/A	04/2008	6.70	0.000	0.000	04/2013	12/2474	NO
24.04	6.00	0.70	5.30	N/A	6.00	N/A	N/A	04/2008	6.70	0.000	0.000	04/2013	12/2474	NO
24.05	6.00	0.70	5.30	N/A	6.00	N/A	N/A	04/2008	6.80	0.000	0.000	04/2013	04/2508	NO
24.06	6.00	0.70	5.30	N/A	6.00	N/A	N/A	04/2008	6.60	0.000	0.000	04/2013	08/2441	NO

(*) and GREEN Represent 25% of the TMLs, which have the earliest retirement dates.
 BLUE (Caution TML) Corrosion Rate greater than 0.250mm/yr. or TML Remaining Life is less than 1.00 year.
 RED (Action TML) TML with negative life.

If Baseline Survey Thickness Measurement was not taken at the time of Manufacture, then Nominal Thickness is used as Baseline Thickness.

TAQA North

Unit: N-603

FACILITY:	CHINCHAGA GAS PLANT	MANUFACTURER:	SURE WELD INTERNATIONA
LSD:	C-032-H/094-H-08	DESIGN PRESSURE:	1965 kPa / 285 psi
ITEM DESC.:	BC-2 INLET SEPARATOR	DESIGN TEMP.:	38 C / 100 F
EQUIP / OIP#:	603VS008	RECOMMENDED NEXT INSP. DATE:	04/1983
PROV. REG. #:	N/S	RECOMMENDED RETIREMENT DATE:	01/2106
SERIAL #:	2889A-97	REM. LIFE (from last survey 04/2008):	97.80 yrs.
CRN.:	N9989.21	TOTAL CAUTION / ACTION TML:	12

Item # (013)

COMMENTS:

2008/04 - READING BETWEEN TML 14.02 AND 14.03 @ WELD.
 TML 36.06 READING @ H.A.Z.
 TML#46 READING IS BELOW MINIMUM THICKNESS.

TML No.: 26 4"FLOAT B/H 150#

DATE BUILT: AVERAGE THICKNESS MEASURED: 5.50 mm.
 MATERIAL: MINIMUM THICKNESS MEASURED: 5.30 mm.

Pts.	Nom. Thick.	Corr. Allow.	Min. Thick.	B/L Survey Date	B/L Survey Date	Prev. Survey Date	Prev. Survey Date	Last Survey Date	Last Survey Date	Short Term Rate	Long Term Rate	TML Insp. Due	TML Retire. Date	Action/Caution Required Item
				mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy					
26.01	6.00	0.70	5.30	N/A	6.00	N/A	N/A	04/2008	5.30	0.000	0.000	04/2008	04/2008	CAUTION *
26.02	6.00	0.70	5.30	N/A	6.00	N/A	N/A	04/2008	5.70	0.000	0.000	04/2013	08/2141	NO *
26.03	6.00	0.70	5.30	N/A	6.00	N/A	N/A	04/2008	5.50	0.000	0.000	04/2013	12/2074	NO *
26.04	6.00	0.70	5.30	N/A	6.00	N/A	N/A	04/2008	5.50	0.000	0.000	04/2013	12/2074	NO *

TML No.: 28 4"FLOAT B/S 150#

DATE BUILT: AVERAGE THICKNESS MEASURED: 6.33 mm.
 MATERIAL: MINIMUM THICKNESS MEASURED: 6.20 mm.

Pts.	Nom. Thick.	Corr. Allow.	Min. Thick.	B/L Survey Date	B/L Survey Date	Prev. Survey Date	Prev. Survey Date	Last Survey Date	Last Survey Date	Short Term Rate	Long Term Rate	TML Insp. Due	TML Retire. Date	Action/Caution Required Item
				mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy					
28.01	6.00	0.70	5.30	N/A	6.00	N/A	N/A	04/2008	6.20	0.000	0.000	04/2013	04/2308	NO
28.02	6.00	0.70	5.30	N/A	6.00	N/A	N/A	04/2008	6.40	0.000	0.000	04/2013	12/2374	NO
28.03	6.00	0.70	5.30	N/A	6.00	N/A	N/A	04/2008	6.40	0.000	0.000	04/2013	12/2374	NO
28.04	6.00	0.70	5.30	N/A	6.00	N/A	N/A	04/2008	6.20	0.000	0.000	04/2013	04/2308	NO
28.05	6.00	0.70	5.30	N/A	6.00	N/A	N/A	04/2008	6.40	0.000	0.000	04/2013	12/2374	NO
28.06	6.00	0.70	5.30	N/A	6.00	N/A	N/A	04/2008	6.40	0.000	0.000	04/2013	12/2374	NO

(*) and GREEN Represent 25% of the TMLs, which have the earliest retirement dates.
 BLUE (Caution TML) Corrosion Rate greater than 0.250mm/yr. or TML Remaining Life is less than 1.00 year.
 RED (Action TML) TML with negative life.

If Baseline Survey Thickness Measurement was not taken at the time of Manufacture, then Nominal Thickness is used as Baseline Thickness.

TAQA North

Unit: N-603

FACILITY:	CHINCHAGA GAS PLANT	MANUFACTURER:	SURE WELD INTERNATIONA
LSD:	C-032-H/094-H-08	DESIGN PRESSURE:	1965 kPa / 285 psi
ITEM DESC.:	BC-2 INLET SEPARATOR	DESIGN TEMP.:	38 C / 100 F
EQUIP / OIP#:	603VS008	RECOMMENDED NEXT INSP. DATE:	04/1983
PROV. REG. #:	N/S	RECOMMENDED RETIREMENT DATE:	01/2106
SERIAL #:	2889A-97	REM. LIFE (from last survey 04/2008):	97.80 yrs.
CRN.:	N9989.21	TOTAL CAUTION / ACTION TML:	12

Item # (013)

COMMENTS:

2008/04 - READING BETWEEN TML 14.02 AND 14.03 @ WELD.
 TML 36.06 READING @ H.A.Z.
 TML#46 READING IS BELOW MINIMUM THICKNESS.

TML No.: 30 4"FLOAT B/H 150#

DATE BUILT: AVERAGE THICKNESS MEASURED: 5.45 mm.
 MATERIAL: MINIMUM THICKNESS MEASURED: 5.30 mm.

Pts.	Nom. Thick.	Corr. Allow.	Min. Thick.	B/L Survey Date	B/L Survey Date	Prev. Survey Date	Prev. Survey Date	Last Survey Date	Last Survey Date	Short Term Rate	Long Term Rate	TML Insp. Due	TML Retire. Date	Action/CAUTION Required Item
				mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy					
30.01	6.00	0.70	5.30	N/A	6.00	N/A	N/A	04/2008	5.30	0.000	0.000	04/2008	04/2008	CAUTION *
30.02	6.00	0.70	5.30	N/A	6.00	N/A	N/A	04/2008	5.50	0.000	0.000	04/2013	12/2074	NO *
30.03	6.00	0.70	5.30	N/A	6.00	N/A	N/A	04/2008	5.50	0.000	0.000	04/2013	12/2074	NO *
30.04	6.00	0.70	5.30	N/A	6.00	N/A	N/A	04/2008	5.50	0.000	0.000	04/2013	12/2074	NO *

TML No.: 32 4"FLOAT B/S 150#

DATE BUILT: AVERAGE THICKNESS MEASURED: 6.50 mm.
 MATERIAL: MINIMUM THICKNESS MEASURED: 6.30 mm.

Pts.	Nom. Thick.	Corr. Allow.	Min. Thick.	B/L Survey Date	B/L Survey Date	Prev. Survey Date	Prev. Survey Date	Last Survey Date	Last Survey Date	Short Term Rate	Long Term Rate	TML Insp. Due	TML Retire. Date	Action/CAUTION Required Item
				mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy					
32.01	6.00	0.70	5.30	N/A	6.00	N/A	N/A	04/2008	6.30	0.000	0.000	04/2013	08/2341	NO
32.02	6.00	0.70	5.30	N/A	6.00	N/A	N/A	04/2008	6.50	0.000	0.000	04/2013	04/2408	NO
32.03	6.00	0.70	5.30	N/A	6.00	N/A	N/A	04/2008	6.70	0.000	0.000	04/2013	12/2474	NO
32.04	6.00	0.70	5.30	N/A	6.00	N/A	N/A	04/2008	6.50	0.000	0.000	04/2013	04/2408	NO
32.05	6.00	0.70	5.30	N/A	6.00	N/A	N/A	04/2008	6.50	0.000	0.000	04/2013	04/2408	NO
32.06	6.00	0.70	5.30	N/A	6.00	N/A	N/A	04/2008	6.50	0.000	0.000	04/2013	04/2408	NO

(*) and GREEN Represent 25% of the TMLs, which have the earliest retirement dates.
 BLUE (Caution TML) Corrosion Rate greater than 0.250mm/yr. or TML Remaining Life is less than 1.00 year.
 RED (Action TML) TML with negative life.

If Baseline Survey Thickness Measurement was not taken at the time of Manufacture, then Nominal Thickness is used as Baseline Thickness.

TAQA North

Unit: N-603

FACILITY:	CHINCHAGA GAS PLANT	MANUFACTURER:	SURE WELD INTERNATIONA
LSD:	C-032-H/094-H-08	DESIGN PRESSURE:	1965 kPa / 285 psi
ITEM DESC.:	BC-2 INLET SEPARATOR	DESIGN TEMP.:	38 C / 100 F
EQUIP / OIP#:	603VS008	RECOMMENDED NEXT INSP. DATE:	04/1983
PROV. REG. #:	N/S	RECOMMENDED RETIREMENT DATE:	01/2106
SERIAL #:	2889A-97	REM. LIFE (from last survey 04/2008):	97.80 yrs.
CRN.:	N9989.21	TOTAL CAUTION / ACTION TML:	12

Item # (013)

COMMENTS:

2008/04 - READING BETWEEN TML 14.02 AND 14.03 @ WELD.
 TML 36.06 READING @ H.A.Z.
 TML#46 READING IS BELOW MINIMUM THICKNESS.

TML No.: 34 4"FLOAT B/H 150#

DATE BUILT: AVERAGE THICKNESS MEASURED: 5.30 mm.
 MATERIAL: MINIMUM THICKNESS MEASURED: 5.30 mm.

Pts.	Nom. Thick.	Corr. Allow.	Min. Thick.	B/L Survey Date	B/L Survey Date	Prev. Survey Date	Prev. Survey Date	Last Survey Date	Last Survey Date	Short Term Rate	Long Term Rate	TML Insp. Due	TML Retire. Date	Action/ Caution Required Item
				mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy					
34.01	6.00	0.70	5.30	N/A	6.00	N/A	N/A	04/2008	5.30	0.000	0.000	04/2008	04/2008	CAUTION *
34.02	6.00	0.70	5.30	N/A	6.00	N/A	N/A	04/2008	5.30	0.000	0.000	04/2008	04/2008	CAUTION *
34.03	6.00	0.70	5.30	N/A	6.00	N/A	N/A	04/2008	5.30	0.000	0.000	04/2008	04/2008	CAUTION *
34.04	6.00	0.70	5.30	N/A	6.00	N/A	N/A	04/2008	5.30	0.000	0.000	04/2008	04/2008	CAUTION *

TML No.: 36 4"90L T-B 150

DATE BUILT: AVERAGE THICKNESS MEASURED: 5.83 mm.
 MATERIAL: MINIMUM THICKNESS MEASURED: 5.60 mm.

Pts.	Nom. Thick.	Corr. Allow.	Min. Thick.	B/L Survey Date	B/L Survey Date	Prev. Survey Date	Prev. Survey Date	Last Survey Date	Last Survey Date	Short Term Rate	Long Term Rate	TML Insp. Due	TML Retire. Date	Action/ Caution Required Item
				mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy					
36.01	6.00	0.70	5.30	N/A	6.00	N/A	N/A	04/2008	6.00	0.000	0.000	04/2013	08/2241	NO *
36.02	6.00	0.70	5.30	N/A	6.00	N/A	N/A	04/2008	5.70	0.000	0.000	04/2013	08/2141	NO *
36.03	6.00	0.70	5.30	N/A	6.00	N/A	N/A	04/2008	5.60	0.000	0.000	04/2013	04/2108	NO *
36.04	6.00	0.70	5.30	N/A	6.00	N/A	N/A	04/2008	5.60	0.000	0.000	04/2013	04/2108	NO *
36.05	6.00	0.70	5.30	N/A	6.00	N/A	N/A	04/2008	5.60	0.000	0.000	04/2013	04/2108	NO *
36.06	6.00	0.70	5.30	N/A	6.00	N/A	N/A	04/2008	6.50	0.000	0.000	04/2013	04/2408	NO

(*) and GREEN Represent 25% of the TMLs, which have the earliest retirement dates.
 BLUE (Caution TML) Corrosion Rate greater than 0.250mm/yr. or TML Remaining Life is less than 1.00 year.
 RED (Action TML) TML with negative life.

If Baseline Survey Thickness Measurement was not taken at the time of Manufacture, then Nominal Thickness is used as Baseline Thickness.

TAQA North

Unit: N-603

FACILITY:	CHINCHAGA GAS PLANT	MANUFACTURER:	SURE WELD INTERNATIONA
LSD:	C-032-H/094-H-08	DESIGN PRESSURE:	1965 kPa / 285 psi
ITEM DESC.:	BC-2 INLET SEPARATOR	DESIGN TEMP.:	38 C / 100 F
EQUIP / OIP#:	603VS008	RECOMMENDED NEXT INSP. DATE:	04/1983
PROV. REG. #:	N/S	RECOMMENDED RETIREMENT DATE:	01/2106
SERIAL #:	2889A-97	REM. LIFE (from last survey 04/2008):	97.80 yrs.
CRN.:	N9989.21	TOTAL CAUTION / ACTION TML:	12

Item # (013)

COMMENTS:

2008/04 - READING BETWEEN TML 14.02 AND 14.03 @ WELD.
 TML 36.06 READING @ H.A.Z.
 TML#46 READING IS BELOW MINIMUM THICKNESS.

TML No.: 38 2"90L T-B 150

DATE BUILT: AVERAGE THICKNESS MEASURED: 4.34 mm.
 MATERIAL: MINIMUM THICKNESS MEASURED: 4.10 mm.

Pts.	Nom. Thick.	Corr. Allow.	Min. Thick.	B/L Survey Date	B/L Survey Date	Prev. Survey Date	Prev. Survey Date	Last Survey Date	Last Survey Date	Short Term Rate	Long Term Rate	TML Insp. Due	TML Retire. Date	Action/Caution Required Item
				mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy					
38.01	3.90	0.50	3.40	N/A	3.90	N/A	N/A	04/2008	4.30	0.000	0.000	04/2013	04/2308	NO
38.02	3.90	0.50	3.40	N/A	3.90	N/A	N/A	04/2008	4.10	0.000	0.000	04/2013	08/2241	NO *
38.03	3.90	0.50	3.40	N/A	3.90	N/A	N/A	04/2008	4.10	0.000	0.000	04/2013	08/2241	NO *
38.04	3.90	0.50	3.40	N/A	3.90	N/A	N/A	04/2008	4.10	0.000	0.000	04/2013	08/2241	NO *
38.05	3.90	0.50	3.40	N/A	3.90	N/A	N/A	04/2008	5.10	0.000	0.000	04/2013	12/2574	NO

TML No.: 40 2"90L T-B 150

DATE BUILT: AVERAGE THICKNESS MEASURED: 3.98 mm.
 MATERIAL: MINIMUM THICKNESS MEASURED: 3.80 mm.

Pts.	Nom. Thick.	Corr. Allow.	Min. Thick.	B/L Survey Date	B/L Survey Date	Prev. Survey Date	Prev. Survey Date	Last Survey Date	Last Survey Date	Short Term Rate	Long Term Rate	TML Insp. Due	TML Retire. Date	Action/Caution Required Item
				mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy					
40.01	3.90	0.50	3.40	N/A	3.90	N/A	N/A	04/2008	3.80	0.000	0.000	04/2013	08/2141	NO *
40.02	3.90	0.50	3.40	N/A	3.90	N/A	N/A	04/2008	4.10	0.000	0.000	04/2013	08/2241	NO *
40.03	3.90	0.50	3.40	N/A	3.90	N/A	N/A	04/2008	4.00	0.000	0.000	04/2013	04/2208	NO *
40.04	3.90	0.50	3.40	N/A	3.90	N/A	N/A	04/2008	4.00	0.000	0.000	04/2013	04/2208	NO *
40.05	3.90	0.50	3.40	N/A	3.90	N/A	N/A	04/2008	4.00	0.000	0.000	04/2013	04/2208	NO *

(*) and GREEN Represent 25% of the TMLs, which have the earliest retirement dates.
 BLUE (Caution TML) Corrosion Rate greater than 0.250mm/yr. or TML Remaining Life is less than 1.00 year.
 RED (Action TML) TML with negative life.

If Baseline Survey Thickness Measurement was not taken at the time of Manufacture, then Nominal Thickness is used as Baseline Thickness.

TAQA North

Unit: N-603

FACILITY:	CHINCHAGA GAS PLANT	MANUFACTURER:	SURE WELD INTERNATIONA
LSD:	C-032-H/094-H-08	DESIGN PRESSURE:	1965 kPa / 285 psi
ITEM DESC.:	BC-2 INLET SEPARATOR	DESIGN TEMP.:	38 C / 100 F
EQUIP / OIP#:	603VS008	RECOMMENDED NEXT INSP. DATE:	04/1983
PROV. REG. #:	N/S	RECOMMENDED RETIREMENT DATE:	01/2106
SERIAL #:	2889A-97	REM. LIFE (from last survey 04/2008):	97.80 yrs.
CRN.:	N9989.21	TOTAL CAUTION / ACTION TML:	12

Item # (013)

COMMENTS:

2008/04 - READING BETWEEN TML 14.02 AND 14.03 @ WELD.
 TML 36.06 READING @ H.A.Z.
 TML#46 READING IS BELOW MINIMUM THICKNESS.

TML No.: 42 3"90L T-B 150

DATE BUILT: AVERAGE THICKNESS MEASURED: 5.72 mm.
 MATERIAL: MINIMUM THICKNESS MEASURED: 5.40 mm.

Pts.	Nom. Thick.	Corr. Allow.	Min. Thick.	B/L Survey Date	B/L Survey Date	Prev. Survey Date	Prev. Survey Date	Last Survey Date	Last Survey Date	Short Term Rate	Long Term Rate	TML Insp. Due	TML Retire. Date	Action/Caution Required Item
				mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy					
42.01	5.50	0.70	4.80	N/A	5.50	N/A	N/A	04/2008	6.30	0.000	0.000	04/2013	04/2508	NO
42.02	5.50	0.70	4.80	N/A	5.50	N/A	N/A	04/2008	5.60	0.000	0.000	04/2013	12/2274	NO
42.03	5.50	0.70	4.80	N/A	5.50	N/A	N/A	04/2008	5.60	0.000	0.000	04/2013	12/2274	NO
42.04	5.50	0.70	4.80	N/A	5.50	N/A	N/A	04/2008	5.40	0.000	0.000	04/2013	04/2208	NO *
42.05	5.50	0.70	4.80	N/A	5.50	N/A	N/A	04/2008	5.70	0.000	0.000	04/2013	04/2308	NO

TML No.: 44 2"90L T-B 150

DATE BUILT: AVERAGE THICKNESS MEASURED: 3.88 mm.
 MATERIAL: MINIMUM THICKNESS MEASURED: 3.70 mm.

Pts.	Nom. Thick.	Corr. Allow.	Min. Thick.	B/L Survey Date	B/L Survey Date	Prev. Survey Date	Prev. Survey Date	Last Survey Date	Last Survey Date	Short Term Rate	Long Term Rate	TML Insp. Due	TML Retire. Date	Action/Caution Required Item
				mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy					
44.01	3.90	0.50	3.40	N/A	3.90	N/A	N/A	04/2008	3.90	0.000	0.000	04/2013	12/2174	NO *
44.02	3.90	0.50	3.40	N/A	3.90	N/A	N/A	04/2008	4.00	0.000	0.000	04/2013	04/2208	NO *
44.03	3.90	0.50	3.40	N/A	3.90	N/A	N/A	04/2008	3.90	0.000	0.000	04/2013	12/2174	NO *
44.04	3.90	0.50	3.40	N/A	3.90	N/A	N/A	04/2008	3.70	0.000	0.000	04/2013	04/2108	NO *
44.05	3.90	0.50	3.40	N/A	3.90	N/A	N/A	04/2008	3.90	0.000	0.000	04/2013	12/2174	NO *

(*) and GREEN Represent 25% of the TMLs, which have the earliest retirement dates.
 BLUE (Caution TML) Corrosion Rate greater than 0.250mm/yr. or TML Remaining Life is less than 1.00 year.
 RED (Action TML) TML with negative life.

If Baseline Survey Thickness Measurement was not taken at the time of Manufacture, then Nominal Thickness is used as Baseline Thickness.

TAQA North

Unit: N-603

FACILITY:	CHINCHAGA GAS PLANT	MANUFACTURER:	SURE WELD INTERNATIONA
LSD:	C-032-H/094-H-08	DESIGN PRESSURE:	1965 kPa / 285 psi
ITEM DESC.:	BC-2 INLET SEPARATOR	DESIGN TEMP.:	38 C / 100 F
EQUIP / OIP#:	603VS008	RECOMMENDED NEXT INSP. DATE:	04/1983
PROV. REG. #:	N/S	RECOMMENDED RETIREMENT DATE:	01/2106
SERIAL #:	2889A-97	REM. LIFE (from last survey 04/2008):	97.80 yrs.
CRN.:	N9989.21	TOTAL CAUTION / ACTION TML:	12

Item # (013)

COMMENTS:

2008/04 - READING BETWEEN TML 14.02 AND 14.03 @ WELD.
 TML 36.06 READING @ H.A.Z.
 TML#46 READING IS BELOW MINIMUM THICKNESS.

TML No.: 46 2"90L T-B 150

DATE BUILT: AVERAGE THICKNESS MEASURED: 4.36 mm.
 MATERIAL: MINIMUM THICKNESS MEASURED: 4.20 mm.

Pts.	Nom. Thick.	Corr. Allow.	Min. Thick.	B/L Survey Date	B/L Survey Date	Prev. Survey Date	Prev. Survey Date	Last Survey Date	Last Survey Date	Short Term Rate	Long Term Rate	TML Insp. Due	TML Retire. Date	Action/Caution Required Item
				mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy					
46.01	5.50	0.70	4.80	N/A	5.50	N/A	N/A	04/2008	4.50	0.000	0.000	04/1983	04/1983	ACTION *
46.02	5.50	0.70	4.80	N/A	5.50	N/A	N/A	04/2008	4.20	0.000	0.000	04/1983	04/1983	ACTION *
46.03	5.50	0.70	4.80	N/A	5.50	N/A	N/A	04/2008	4.20	0.000	0.000	04/1983	04/1983	ACTION *
46.04	5.50	0.70	4.80	N/A	5.50	N/A	N/A	04/2008	4.40	0.000	0.000	04/1983	04/1983	ACTION *
46.05	5.50	0.70	4.80	N/A	5.50	N/A	N/A	04/2008	4.50	0.000	0.000	04/1983	04/1983	ACTION *

TML No.: 48 12"90L B-T 150

DATE BUILT: AVERAGE THICKNESS MEASURED: 9.12 mm.
 MATERIAL: MINIMUM THICKNESS MEASURED: 8.80 mm.

Pts.	Nom. Thick.	Corr. Allow.	Min. Thick.	B/L Survey Date	B/L Survey Date	Prev. Survey Date	Prev. Survey Date	Last Survey Date	Last Survey Date	Short Term Rate	Long Term Rate	TML Insp. Due	TML Retire. Date	Action/Caution Required Item
				mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy	mm/yyyy					
48.01	9.50	1.20	8.30	N/A	9.50	N/A	N/A	04/2008	9.40	0.000	0.000	04/2013	12/2374	NO
48.02	9.50	1.20	8.30	N/A	9.50	N/A	N/A	04/2008	9.40	0.000	0.000	04/2013	12/2374	NO
48.03	9.50	1.20	8.30	N/A	9.50	N/A	N/A	04/2008	9.20	0.000	0.000	04/2013	04/2308	NO
48.04	9.50	1.20	8.30	N/A	9.50	N/A	N/A	04/2008	9.30	0.000	0.000	04/2013	08/2341	NO
48.05	9.50	1.20	8.30	N/A	9.50	N/A	N/A	04/2008	9.10	0.000	0.000	04/2013	12/2274	NO
48.06	9.50	1.20	8.30	N/A	9.50	N/A	N/A	04/2008	8.90	0.000	0.000	04/2013	04/2208	NO *
48.07	9.50	1.20	8.30	N/A	9.50	N/A	N/A	04/2008	8.80	0.000	0.000	04/2013	12/2174	NO *
48.08	9.50	1.20	8.30	N/A	9.50	N/A	N/A	04/2008	8.90	0.000	0.000	04/2013	04/2208	NO *
48.09	9.50	1.20	8.30	N/A	9.50	N/A	N/A	04/2008	8.90	0.000	0.000	04/2013	04/2208	NO *
48.10	9.50	1.20	8.30	N/A	9.50	N/A	N/A	04/2008	9.20	0.000	0.000	04/2013	04/2308	NO
48.11	9.50	1.20	8.30	N/A	9.50	N/A	N/A	04/2008	9.20	0.000	0.000	04/2013	04/2308	NO
48.12	9.50	1.20	8.30	N/A	9.50	N/A	N/A	04/2008	9.10	0.000	0.000	04/2013	12/2274	NO

(*) and GREEN Represent 25% of the TMLs, which have the earliest retirement dates.
 BLUE (Caution TML) Corrosion Rate greater than 0.250mm/yr. or TML Remaining Life is less than 1.00 year.
 RED (Action TML) TML with negative life.

If Baseline Survey Thickness Measurement was not taken at the time of Manufacture, then Nominal Thickness is used as Baseline Thickness.

DETAIL VESSEL AND PIPING INSPECTION REPORT

(Imperial)

780 535-4119 7804 COMMUNDEUR
780 518 6806

GENERAL PRESSURE VESSEL INFORMATION

Company:	Pioneer Natural Resources Canada Inc.	LSD:	BC	C-32-H/94-H-8
Area/Facility:	Chinchaga Gas Plant C-32-H/94-H-08	Inspection Date:	13-Dec-99	Interval: 2 yrs
Vessel Name:	Inlet Separator	A No:	BC	MTL No: VSL217
Internal Coating Type:		Next External:	Dec, 2000	Next Internal: Dec, 2001
Vessel Orientation:	Horizontal	Internal Coating Lining:	0	
Vessel Type:	Horizontal Vessel	Fluid Type:		
Tag No:	V-101	Serial Number:	2889A-97	
Separator Type:		Business Unit:		
Direct Fired Vessel:	N/A	Fired Tube:		
Current Status:	In Service	Flame Arrester Date Required:	Date:	
Thermal Insulation:	No	Asbestos:	No	

PRESSURE VESSEL NAMEPLATE INFORMATION

MTL Number:	VSL217	Volume:	CRN Number:	N-9989-21	Registered:	No
Serial Number:	2889A-97		Size:	73.504 in O.D.	x	20 ft 0 in Overall
Drawing Number:			P & ID Number:			
Shell Material:			Shell Thickness:	In		
			Shell Thickness:	In		
Head Material:			Head Thickness:	In		
			Head Thickness:	In		
Tube Material:		Tube Size(OD):	In	Tube Thickness:	In	
Tubesheet Material:				Tubesheet Thickness:	In	
Channel Material:		Channel Type:		Channel Thickness:	In	
Design Pressure:	Shell:	285 psi	Operating Pressure:	Shell:	psi	
	Tube:	psi		Tube:	psi	
Design Temperature:	Shell:	100 F	Operating Temperature:	Shell:	F	
	Tube:	F		Tube:	F	
RT (XRay):	RT2		Heat Treatment:	No		
Code Parameters:			Joint Efficiency:			
Manufacturer:	Sure Weld Industries Ltd.		Year Built:	1997		
Corrosion Allowance:	0.063		Manway:	Yes		

DETAIL VESSEL AND PIPING INSPECTION REPORT

(Imperial)

GENERAL PRESSURE VESSEL INFORMATION

Company:	Pioneer Natural Resources Canada Inc.	LSD:	BC	C-32-H/94-H-8
Area/Facility:	Chinchaga Gas Plant C-32-H/94-H-08	Inspection Date:	13-Dec-99	Interval: 2 yrs
Vessel Name:	Inlet Separator	A No:	BC	MTL No: VSL217

VESSEL SHELL / HEADS / PIPING

External / Instrumentation Condition

The external surface of this vessel was noted in good condition. The paint was also in good condition with no evidence of corrosion. The pressure retaining welds were intact and revealed no signs of deterioration or visible cracking. The associated instrumentation appeared to be in good working order.

Internal Condition

No internal access

Nozzle Condition

The external surface of the nozzle assemblies and associated welds were noted in good condition. No visible evidence of external corrosion was noted during this inspection.

Flange Condition

The flanges are bolted properly and there was no visible evidence of leakage.

Internal Piping

Not Applicable

External Piping

The external piping was painted with no evidence of corrosion. The associated pressure welds were intact and revealed no signs of deterioration or visible cracking.

Pipe Support Condition

All of the supports are in place, secure and functioning properly.

Bolting Condition

The associated bolting and gaskets were in place and appeared to be tight.

Firetube Condition

Not Applicable

Demister Pad Condition

Not Applicable

Anode Condition

Not Applicable

Vessel Support

The skid, support pedestals and bolts were all noted in good condition.

DETAIL VESSEL AND PIPING INSPECTION REPORT

(Imperial)

GENERAL PRESSURE VESSEL INFORMATION

Company:	Pioneer Natural Resources Canada Inc.	LSD:	BC	C-32-H/94-H-8
Area/Facility:	Chinchaga Gas Plant C-32-H/94-H-08	Inspection Date:	13-Dec-99	Interval: 2 yrs
Vessel Name:	Inlet Separator	A No:	BC	MTL No: VSL217

VESSEL COATING INSPECTION

Type of Coating

Coating Manufacturer and Type

Location

Coating Condition

VESSEL NONDESTRUCTIVE TESTING

NDE Type	UT Survey			
Location of Test				
Contractors Name	Rivest	Qualifications		
Last UT Survey Date	Dec 1, 1999	Interval	2 yrs	Next UT Date: Dec 1, 2001
Survey By	Rivest Testing Inc.			
Test Results				

VESSEL STATUS

Suitable for Further Service?	Yes	Repairs Required?	No
Owners Representative		Repairs Completed?	
Owners Date		Repairs Completed By	
		Repair Date	

Recommendations

Schedule internal inspection next turnaround or in 3 years
 Service PSV in 3 years
 Repeat UT Survey in 3 years
 Evaluate heat medium coil
 Clean demister or evaluate - replace as required.

Details of Repairs

DETAIL VESSEL AND PIPING INSPECTION REPORT (Imperial)

GENERAL PRESSURE VESSEL INFORMATION

Company:	Pioneer Natural Resources Canada Inc.	LSD:	BC	C-32-H/94-H-8
Area/Facility:	Chinchaga Gas Plant C-32-H/94-H-08	Inspection Date:	13-Dec-99	Interval: 2 yrs
Vessel Name:	Inlet Separator	A No:	BC	MTL No: VSL217

PSV DATA

Side	Set Pressure psi	CRN Number	Manufacturer PSV Number	Model Serial Number	Capacity	Size Inches	Set Date
Shellside	285		Crosby PNR1010	JOS-15/A SE-17068-1	37456 SCFM	4 x 6	Dec/1999

CURRENT VESSEL PROCESS CONDITIONS

Water Producer	Sweet Gas	Sweet Condensate
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Name (Printed)	Signature	Date
Visual Inspector L. G. (Les) Martel API510		December 13, 1999
QA Supervisor: (Chief Inspector)		
QA Administrator:		
ABSA Inspector:		

DETAIL VESSEL AND PIPING INSPECTION REPORT

(Imperial)

GENERAL PRESSURE VESSEL INFORMATION

Company:	Pioneer Natural Resources Canada Inc.	LSD:	BC	C-32-H/94-H-8
Area/Facility:	Chinchaga Gas Plant	Inspection Date	06-Feb-02	Interval: 2 yrs
Vessel Name:	Inlet Separator	A No:	BC	MTL No: VSL217
Internal Coating Type:		Next External:	2/6/2003	Next Internal: Feb, 2004
Vessel Orientation:	Horizontal	Internal Coating Lining:	0	
Vessel Type:	Horizontal Vessel	Fluid Type:		
Tag No:	V-101	Serial Number:	2889A-97	
Separator Type:		Business Unit:		
Direct Fired Vessel:	N/A	Fired Tube:		
Current Status:	In Service	Flame Arrester Date Required:	Date	
Thermal Insulation:	No	Asbestos:	No	

PRESSURE VESSEL NAMEPLATE INFORMATION

MTL Number:	VSL217	Volume:	CRN Number:	N-9989-21	Registered:	No
Serial Number:	2889A-97		Size:	73.504 in O.D.	x	20 ft 0 in Overall
Drawing Number:			P & ID Number:			
Shell Material:			Shell Thickness:	In		
			Shell Thickness:	In		
Head Material:			Head Thickness:	In		
			Head Thickness:	In		
Tube Material:		Tube Size(OD):	In	Tube Thickness:	In	
Tubesheet Material:			Tubesheet Thickness:	In		
Channel Material:		Channel Type:		Channel Thickness:	In	
Design Pressure:	Shell:	285 psi	Operating Pressure:	Shell:	psi	
	Tube:	psi		Tube:	psi	
Design Temperature:	Shell:	100 F	Operating Temperature:	Shell:	F	
	Tube:	F		Tube:	F	
RT (XRay):	RT2		Heat Treatment:	No		
Code Parameters:			Joint Efficiency:			
Manufacturer:	Sure Weld Industries Ltd.		Year Built:	1997		
Corrosion Allowance:	0.063		Manway:	Yes		

DETAIL VESSEL AND PIPING INSPECTION REPORT

(Imperial)

GENERAL PRESSURE VESSEL INFORMATION

Company:	Pioneer Natural Resources Canada Inc.	LSD:	BC	C-32-H/94-H-8
Area/Facility:	Chinchaga Gas Plant	Inspection Date	06-Feb-02	Interval: 2 yrs
Vessel Name:	Inlet Separator	A No:	BC	MTL No: VSL217

VESSEL SHELL / HEADS / PIPING

External / Instrumentation Condition

The external surface of this vessel was noted in good condition. The paint was also in good condition with no evidence of corrosion. The pressure retaining welds were intact and revealed no signs of deterioration or visible cracking. The associated instrumentation appeared to be in good working order.

Internal Condition

- No internal access
- * There was sand 8" deep on both sides of wire
- * The heads are in good condition. The fabrication marking are still visible. There is mil scale on the heads no corrosion visible.
- * The shell is in good condition. Pressure retaining welds are intact no evidence of deterioration or corrosion visible lower liquid is at 1/3 level.
- * There is a 24" high weir, attachment weld are secure and intact.
- * There plate is secure and in good condition, attachment welds were intact.
- * The vortex breaker is secure and intact.
- * Nozzles are in good condition, bottom 2" nozzles are plugged with sand.
- * Glycol heater coiler is intact, no evidence leaks.
- * water boot is in good condition. Bottom head was covered in Liquid.

Nozzle Condition

The external surface of the nozzle assemblies and associated welds were noted in good condition. No visible evidence of external corrosion was noted during this inspection.

Flange Condition

The flanges are bolted properly and there was no visible evidence of leakage.

Internal Piping

Not Applicable

External Piping

The external piping was painted with no evidence of corrosion. The associated pressure welds were intact and revealed no signs of deterioration or visible cracking.

Pipe Support Condition

All of the supports are in place, secure and functioning properly.

Bolting Condition

The associated bolting and gaskets were in place and appeared to be tight.

Firetube Condition

Not Applicable

Demister Pad Condition

Not Applicable

Anode Condition

Not Applicable

Vessel Support

The skid, support pedestals and bolts were all noted in good condition.

DETAIL VESSEL AND PIPING INSPECTION REPORT

(Imperial)

GENERAL PRESSURE VESSEL INFORMATION

Company:	Pioneer Natural Resources Canada Inc.	LSD:	BC	C-32-H/94-H-8
Area/Facility:	Chinchaga Gas Plant	Inspection Date	06-Feb-02	Interval: 2 yrs
Vessel Name:	Inlet Separator	A No:	BC	MTL No: VSL217

VESSEL COATING INSPECTION

Type of Coating

Coating Manufacturer and Type

Location

Coating Condition

VESSEL NONDESTRUCTIVE TESTING

NDE Type	UT Survey			
Location of Test				
Contractors Name	Rivest	Qualifications		
Last UT Survey Date	Feb 3, 2002	Interval	2 yrs	Next UT Date: Feb 3, 2004
Survey By	MTL Testing Inc.			
Test Results				

VESSEL STATUS

Suitable for Further Service?	Yes	Repairs Required?	No
Owners Representative		Repairs Completed?	
Owners Date		Repairs Completed By	
		Repair Date	

Recommendations	Schedule internal inspection next trunaround or in 3 years Service PSV in 3 years Repeat UT Survey in 3 years Evaluate heat medium coil Clean demister or evaluate - replace as required.
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Details of Repairs	
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DETAIL VESSEL AND PIPING INSPECTION REPORT

(Imperial)

GENERAL PRESSURE VESSEL INFORMATION

Company:	Pioneer Natural Resources Canada Inc.	LSD:	BC	C-32-H/94-H-8
Area/Facility:	Chinchaga Gas Plant	Inspection Date	06-Feb-02	Interval: 2 yrs
Vessel Name:	Inlet Separator	A No:	BC	MTL No: VSL217

PSV DATA

Side	Set Pressure psi	CRN Number	Manufacturer PSV Number	Model Serial Number	Capacity	Size Inches	Set Date
Shellside	285		Crosby PNR1010	JOS-15/A SE-17068-1	#Error	4 x 6	Dec/1999

CURRENT VESSEL PROCESS CONDITIONS

Water Producer	Sweet Gas	Sweet Condensate
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Name (Printed)	Signature	Date
Visual Inspector Paul Gorman API510	<i>Signature for Paul Gorman</i>	February 06, 2002
QA Supervisor: (Chief Inspector)		
QA Administrator:		
ABSA Inspector:		

EQUIPMENT NO: 603VS008

Page of

FACILITY: Chinchaga Gas Plant	PROV. REG. NO:
EQUIPMENT NAME: BC # 2 Inlet Separator	TAG NO:
SIZE: 1829mm OD x 6096mm L/H	MAWP: 1965 kPa @ 38/-29 °C
LSD : C-032-H / 094-H-08	MANWAY <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO

SERVICE: FLUID: Gas / Water

<input type="checkbox"/> SOUR	<input checked="" type="checkbox"/> SWEET	<input type="checkbox"/> CRYOGENIC		
SCOPE OF INSPECTION		TYPE OF INSPECTION:		CLEANING:
<input type="checkbox"/> PRECOMMISSIONING	<input type="checkbox"/> AE	<input type="checkbox"/> MT	<input type="checkbox"/> RT	<input checked="" type="checkbox"/> GOOD
<input checked="" type="checkbox"/> INITIAL	<input type="checkbox"/> ET	<input type="checkbox"/> MFL	<input checked="" type="checkbox"/> UT	<input type="checkbox"/> FAIR
<input type="checkbox"/> REINSPECTION	<input type="checkbox"/> LT	<input type="checkbox"/> PT	<input checked="" type="checkbox"/> VT	<input type="checkbox"/> INADEQUATE
	<input type="checkbox"/> OTHER			
				ACCESS:
				<input type="checkbox"/> FULL
				<input type="checkbox"/> PARTIAL
				<input checked="" type="checkbox"/> EXTERNAL

PLEASE ADD PAGES AND SKETCHES AS NEEDED (TURN OVER FOR SKETCH)

OBSERVATIONS: EXTERNAL

1. LADDERS, STAIRWAYS, PLATFORMS AND WALKWAYS
2. FOUNDATIONS AND SUPPORTS
3. NOZZLES
4. GROUNDING CONNECTIONS Skid has a ground cable attached
5. PROTECTIVE COATINGS AND INSULATION
6. EXTERNAL METAL SURFACES N/A
7. FANS AND OTHER ANCILLARY EQUIPMENT N/A
8. PRESSURE RELIEF DEVICES
9. NAME PLATE
10. ULTRASONIC INSPECTION SURVEY
11. INSPECTION REPORT COMPLETED
12. NON CONFORMANCE COMPLETED N/A
13. OIP LABEL APPLIED
14. PICTURE ON FILE

COMMENTS

CHECKED BOX INDICATES ACCEPTANCE

RECOMMENDATIONS:

SUITABLE FOR

REMEDIAL ACTION

FURTHER SERVICE: YES NO

PRIORITY: HIGH MEDIUM LOW

INSPECTION PERFORMED BY: Mark Tomko

DATE OF INSPECTION 05 04 2008
(DD MONTH YYYY)

FOLLOW-UP INSPECTION REQ'D:

YES NO BY DATE:

(DD MONTH YYYY)

BLACK GOLD VALVE LTD.

P.R.V. - INSPECTION AND TEST REPORT

BRANCH / LOCATION GRANDE PRAIRIE

P.R.V.

DATE: February 7, 2002

W.O.#: G19863

I.D.#: W15659

CUSTOMER: PIONEER NATURAL RES.

LOCATION CHINCHAGA

CRN: OGO201.2C

MAKE: CROSBY

TYPE/MODEL: JOS-15/A (4 P 6)

S/N: SE-17068-1

CONNECTION TYPE: Raised Face

INLET SIZE: 4"

TAG / PSV: PSV-1010

SET PRESSURE: 285 1965 PSIG & KPAG

BACK PRESS: 0 0

CAPACITY 37456 SCFM

COLD/DIFF. SET PRESS 285 1965

TEMP:

LSD: N/A

CAP ASSEMBLY: CLOSED CAP

CODE SYMBOL: UV

RESET REQ. NO

NEW SET PRESS: PSIG & KPAG

NEW CAPACITY:

(NOTE: DOCUMENTATION REQUIRED)

SEAL CONDITION: INTACT

INSIGNIA BGV

DATE OF LAST SERVICE: 12/99

DATA PLATE CONDITION: ACC

PRE-TEST:

POP PRESSURE: 290 1999 PSIG & KPAG

RESULTS: 36 BPM @ 90%

COMPONENT INSPECTION	CHECK	AS FOUND CONDITION		REPAIR ACTIONS
DISC MIN .692	DIM	SCORED	ACT. .793	Lap / Polish
NOZZLE MIN 5.834	DIM	SCORED	ACT. 5.869	Lap / Polish
DISC HOLDER MIN	DIM	LIQUID	ACT.	Cleaned / Acceptable
GUIDE MAX	DIM	LIQUID	ACT.	Cleaned / Acceptable
SPINDLE/STEM	VIS	LIQUID		Cleaned / Acceptable
SPRING # / BUTTONS	VIS	LIQUID	XO6275	Cleaned / Acceptable
LOWER RING	VIS	LIQUID		Cleaned / Acceptable
SEALS	PER	N/A		N/A
GASKETS / O-RINGS	VIS	WORN		Replaced
RF INLET / RF OUTLET	VIS	LIQUID		Cleaned / Acceptable
BODY	VIS	LIQUID		Cleaned / Acceptable
OTHER	VIS			
Set Pressure Definition (NB18)	VIS			

DISASSEMBLY: Jonathan C

INSPECTION: Sheldon H

REASSEMBLY: Sheldon H

MEDIUM: AIR

SET PRESS. 285 1965 PSIG & KPAG

COLD SET

PSIG & KPAG

FINAL TEST:

SIMMER: 280 1931 PSIG & KPAG SET POINT 285 1965 PSIG & KPAG

BACK PRESS. TEST: 60 414 PSIG & KPAG LEAKAGE: 4@90% B.P.M. TEST GAUGE PC 053 / 50C

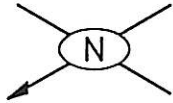
ADJ. RING SETTING : UPPER LOWER 15 TESTED BY: Barry H

PARTS REQ. NEXT:

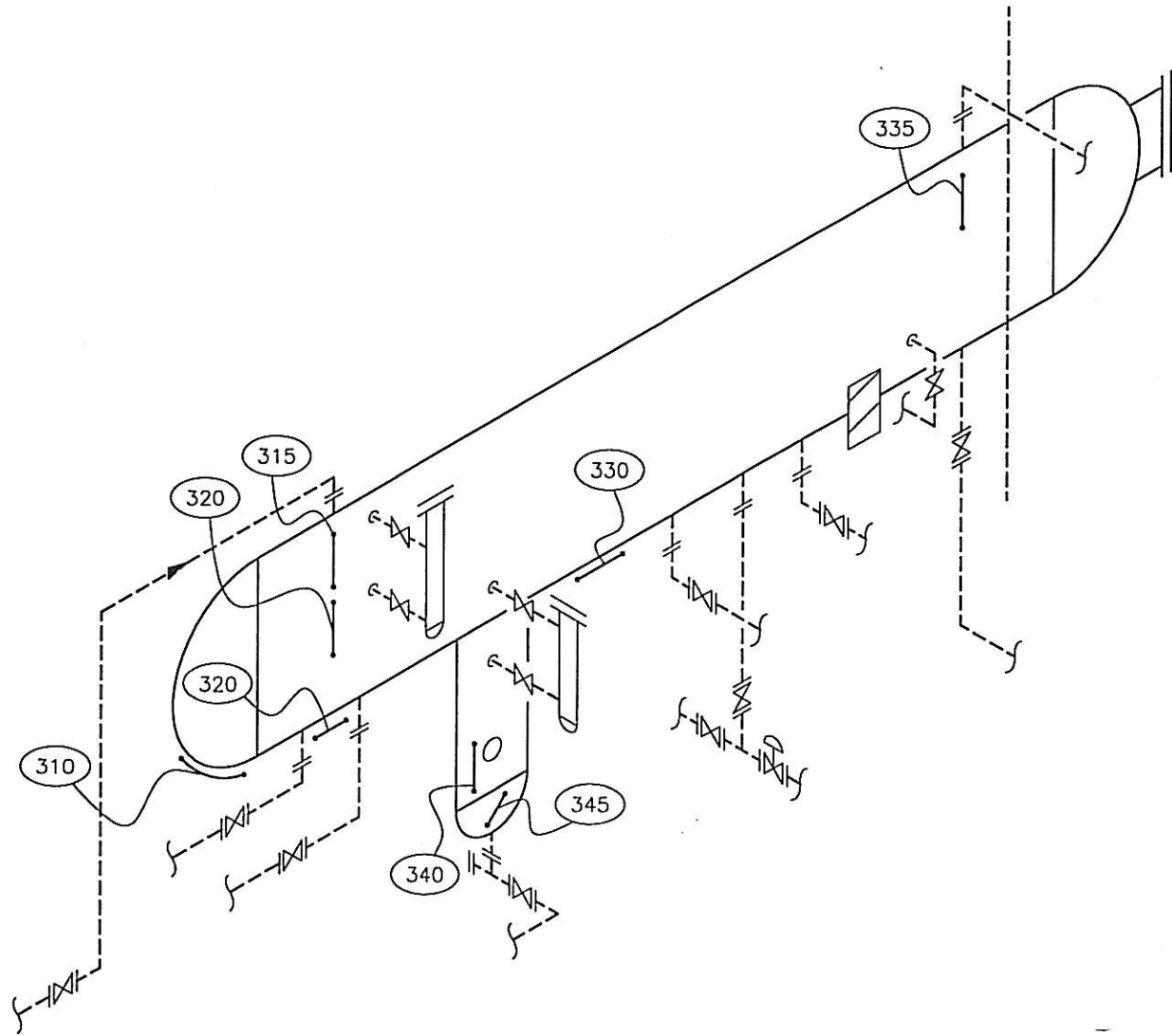
COMMENTS:

FINAL INSPECTION: Barry H

CUSTOMER / INSPECTOR:



P&ID. # _____
REF. # _____



VESSEL DATA

Prov. Reg. No. _____ C.R.N. N 9989.21 P.E. No. V-101 Serial No. 2889.97
MFR. SURE WELD Code/Div. _____ Para _____ Code Stamp U
Yr. Bld. 1997 Yr. Inst. _____ Size 1867 X 6096mm Vol.: _____ Service _____ PWHT NO

Nominal Thickness & Material

Head: _____ Mat'l: _____ C.A.: 1.6mm
Head: _____
Shell: _____ C.A.: _____
Shell: _____
Chan Hd: _____ C.A.: _____
Chan Sh: _____
Gas Boot Hd: _____ C.A.: _____
Gas Boot Sh.: _____
Liq. Boot Hd.: _____ C.A.: _____
Liq Boot Sh.: _____

Insulated _____ R.T. _____
Repairs _____
COMMENTS _____

PIONEER NATURAL RESOURCES CANADA INC.
CHINCHAGA GAS PLANT
LSD C-32-H \ 94-H-8

INLET SEPARATOR

MAWP Shell Side 1965KPa @ Temp. 38°C
MAWP Tube Side _____ @ Temp. _____

TECH.: J.OLIVER	REV.DATE:	DWG DATE: 02/2002
CAD: MKM	REVISION:	DRAWING: 003

Equip No V-101	Serial No 2889.97	Prov Reg No N/A
Description INLET SEPARATOR		

003 - 010

TML Description: N. HEAD T Nominal: 22.2 Min Nominal: 20.6 Corr Allowance: 1.6																																																		
<i>Data Readings</i>																																																		
<i>Data Evaluations</i>		<table border="1"> <thead> <tr> <th></th> <th>Dec-99</th> <th>Feb-02</th> </tr> </thead> <tbody> <tr><td>Point 1</td><td>22.2</td><td>22.1</td></tr> <tr><td>Point 2</td><td>22.2</td><td>22.2</td></tr> <tr><td>Point 3</td><td>22.2</td><td>22.2</td></tr> <tr><td>Point 4</td><td>22.2</td><td>22.1</td></tr> <tr><td>Point 5</td><td>22.5</td><td>22.3</td></tr> <tr><td>Point 6</td><td>22.4</td><td>22.3</td></tr> <tr><td>Point 7</td><td></td><td></td></tr> <tr><td>Point 8</td><td></td><td></td></tr> <tr><td>Point 9</td><td></td><td></td></tr> <tr><td>Point 10</td><td></td><td></td></tr> <tr><td>Point 11</td><td></td><td></td></tr> <tr><td>Point 12</td><td></td><td></td></tr> <tr><td>Average</td><td>22.3</td><td>22.2</td></tr> <tr><td>Avg Low 3</td><td>22.2</td><td>22.1</td></tr> <tr><td>Lowest</td><td>22.2</td><td>22.1</td></tr> </tbody> </table>		Dec-99	Feb-02	Point 1	22.2	22.1	Point 2	22.2	22.2	Point 3	22.2	22.2	Point 4	22.2	22.1	Point 5	22.5	22.3	Point 6	22.4	22.3	Point 7			Point 8			Point 9			Point 10			Point 11			Point 12			Average	22.3	22.2	Avg Low 3	22.2	22.1	Lowest	22.2	22.1
	Dec-99	Feb-02																																																
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Point 5	22.5	22.3																																																
Point 6	22.4	22.3																																																
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Point 10																																																		
Point 11																																																		
Point 12																																																		
Average	22.3	22.2																																																
Avg Low 3	22.2	22.1																																																
Lowest	22.2	22.1																																																
Months Remaining to T Min: 390 Min Calc'd Wall Thickness: N/A Thick Remain Above T Min: 1.5 Short Term Corr Rate: N/A Long Term Corr Rate: N/A Months Remain to LFL: N/A Lowest Value - Last Reading: 22.1																																																		
Comment:																																																		

003 - 015

TML Description: N. UPPER SHELL T Nominal: 19.1 Min Nominal: 17.5 Corr Allowance: 1.6																																																		
<i>Data Readings</i>																																																		
<i>Data Evaluations</i>		<table border="1"> <thead> <tr> <th></th> <th>Dec-99</th> <th>Feb-02</th> </tr> </thead> <tbody> <tr><td>Point 1</td><td>19.5</td><td>19.6</td></tr> <tr><td>Point 2</td><td>19.6</td><td>19.7</td></tr> <tr><td>Point 3</td><td>19.6</td><td>19.6</td></tr> <tr><td>Point 4</td><td>19.6</td><td>19.7</td></tr> <tr><td>Point 5</td><td>19.6</td><td>19.7</td></tr> <tr><td>Point 6</td><td>19.5</td><td>19.5</td></tr> <tr><td>Point 7</td><td></td><td></td></tr> <tr><td>Point 8</td><td></td><td></td></tr> <tr><td>Point 9</td><td></td><td></td></tr> <tr><td>Point 10</td><td></td><td></td></tr> <tr><td>Point 11</td><td></td><td></td></tr> <tr><td>Point 12</td><td></td><td></td></tr> <tr><td>Average</td><td>19.6</td><td>19.6</td></tr> <tr><td>Avg Low 3</td><td>19.5</td><td>19.6</td></tr> <tr><td>Lowest</td><td>19.5</td><td>19.5</td></tr> </tbody> </table>		Dec-99	Feb-02	Point 1	19.5	19.6	Point 2	19.6	19.7	Point 3	19.6	19.6	Point 4	19.6	19.7	Point 5	19.6	19.7	Point 6	19.5	19.5	Point 7			Point 8			Point 9			Point 10			Point 11			Point 12			Average	19.6	19.6	Avg Low 3	19.5	19.6	Lowest	19.5	19.5
	Dec-99	Feb-02																																																
Point 1	19.5	19.6																																																
Point 2	19.6	19.7																																																
Point 3	19.6	19.6																																																
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Point 5	19.6	19.7																																																
Point 6	19.5	19.5																																																
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Average	19.6	19.6																																																
Avg Low 3	19.5	19.6																																																
Lowest	19.5	19.5																																																
Months Remaining to T Min: 999 Min Calc'd Wall Thickness: N/A Thick Remain Above T Min: 2.0 Short Term Corr Rate: N/A Long Term Corr Rate: N/A Months Remain to LFL: N/A Lowest Value - Last Reading: 19.5																																																		
Comment:																																																		

* Unless otherwise displayed, all measurements displayed in millimeters

TML Description: N. CTR. SIDE SHELL T Nominal: 19.1 Min Nominal: 17.5 Corr Allowance: 1.6		
<i>Data Readings</i>		
<i>Data Evaluations</i>		Dec-99 Feb-02
	Point 1	19.5 19.6
	Point 2	19.7 19.7
	Point 3	19.7 19.6
	Point 4	19.5 19.6
	Point 5	19.5 19.6
	Point 6	19.5 19.5
	Point 7	
	Point 8	
	Point 9	
	Point 10	
	Point 11	
Point 12		
	Average	19.6 19.6
	Avg Low 3	19.5 19.6
	Lowest	19.5 19.5
Months Remaining to T Min:	999	
Min Calc'd Wall Thickness:	N/A	
Thick Remain Above T Min:	2.0	
Short Term Corr Rate:	N/A	
Long Term Corr Rate:	N/A	
Months Remain to LFL:	N/A	
Lowest Value - Last Reading:	19.5	
Comment:		

TML Description: N. CTR. BTM. SHELL T Nominal: 19.1 Min Nominal: 17.5 Corr Allowance: 1.6		
<i>Data Readings</i>		
<i>Data Evaluations</i>		Dec-99 Feb-02
	Point 1	19.6 19.6
	Point 2	19.6 19.6
	Point 3	19.6 19.5
	Point 4	19.6 19.6
	Point 5	19.6 19.6
	Point 6	19.6 19.5
	Point 7	
	Point 8	
	Point 9	
	Point 10	
	Point 11	
Point 12		
	Average	19.6 19.6
	Avg Low 3	19.6 19.5
	Lowest	19.6 19.5
Months Remaining to T Min:	520	
Min Calc'd Wall Thickness:	N/A	
Thick Remain Above T Min:	2.0	
Short Term Corr Rate:	N/A	
Long Term Corr Rate:	N/A	
Months Remain to LFL:	104	
Lowest Value - Last Reading:	19.5	
Comment:		

TML Description: CTR. BTM. SHELL T Nominal: 19.1 Min Nominal: 17.5 Corr Allowance: 1.6																																																		
<i>Data Readings</i>																																																		
<i>Data Evaluations</i> Months Remaining to T Min: 494 Min Calc'd Wall Thickness: N/A Thick Remain Above T Min: 1.9 Short Term Corr Rate: N/A Long Term Corr Rate: N/A Months Remain to LFL: 78 Lowest Value - Last Reading: 19.4		<table border="1"> <thead> <tr> <th></th> <th>Dec-99</th> <th>Feb-02</th> </tr> </thead> <tbody> <tr><td>Point 1</td><td>19.5</td><td>19.5</td></tr> <tr><td>Point 2</td><td>19.5</td><td>19.4</td></tr> <tr><td>Point 3</td><td>19.6</td><td>19.6</td></tr> <tr><td>Point 4</td><td>19.6</td><td>19.6</td></tr> <tr><td>Point 5</td><td>19.6</td><td>19.6</td></tr> <tr><td>Point 6</td><td>19.7</td><td>19.6</td></tr> <tr><td>Point 7</td><td></td><td></td></tr> <tr><td>Point 8</td><td></td><td></td></tr> <tr><td>Point 9</td><td></td><td></td></tr> <tr><td>Point 10</td><td></td><td></td></tr> <tr><td>Point 11</td><td></td><td></td></tr> <tr><td>Point 12</td><td></td><td></td></tr> <tr><td>Average</td><td>19.6</td><td>19.6</td></tr> <tr><td>Avg Low 3</td><td>19.5</td><td>19.5</td></tr> <tr><td>Lowest</td><td>19.5</td><td>19.4</td></tr> </tbody> </table>		Dec-99	Feb-02	Point 1	19.5	19.5	Point 2	19.5	19.4	Point 3	19.6	19.6	Point 4	19.6	19.6	Point 5	19.6	19.6	Point 6	19.7	19.6	Point 7			Point 8			Point 9			Point 10			Point 11			Point 12			Average	19.6	19.6	Avg Low 3	19.5	19.5	Lowest	19.5	19.4
		Dec-99	Feb-02																																															
	Point 1	19.5	19.5																																															
	Point 2	19.5	19.4																																															
	Point 3	19.6	19.6																																															
	Point 4	19.6	19.6																																															
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Average	19.6	19.6																																																
Avg Low 3	19.5	19.5																																																
Lowest	19.5	19.4																																																
Comment:																																																		

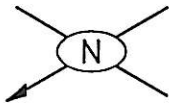
TML Description: UPPER S. SHELL T Nominal: 19.1 Min Nominal: 17.5 Corr Allowance: 1.6																																																		
<i>Data Readings</i>																																																		
<i>Data Evaluations</i> Months Remaining to T Min: 999 Min Calc'd Wall Thickness: N/A Thick Remain Above T Min: 2.3 Short Term Corr Rate: N/A Long Term Corr Rate: N/A Months Remain to LFL: 182 Lowest Value - Last Reading: 19.8		<table border="1"> <thead> <tr> <th></th> <th>Dec-99</th> <th>Feb-02</th> </tr> </thead> <tbody> <tr><td>Point 1</td><td>19.7</td><td>20.0</td></tr> <tr><td>Point 2</td><td>19.9</td><td>19.9</td></tr> <tr><td>Point 3</td><td>19.8</td><td>19.8</td></tr> <tr><td>Point 4</td><td>19.8</td><td>19.8</td></tr> <tr><td>Point 5</td><td>19.9</td><td>19.9</td></tr> <tr><td>Point 6</td><td>19.7</td><td>20.0</td></tr> <tr><td>Point 7</td><td></td><td></td></tr> <tr><td>Point 8</td><td></td><td></td></tr> <tr><td>Point 9</td><td></td><td></td></tr> <tr><td>Point 10</td><td></td><td></td></tr> <tr><td>Point 11</td><td></td><td></td></tr> <tr><td>Point 12</td><td></td><td></td></tr> <tr><td>Average</td><td>19.8</td><td>19.9</td></tr> <tr><td>Avg Low 3</td><td>19.7</td><td>19.8</td></tr> <tr><td>Lowest</td><td>19.7</td><td>19.8</td></tr> </tbody> </table>		Dec-99	Feb-02	Point 1	19.7	20.0	Point 2	19.9	19.9	Point 3	19.8	19.8	Point 4	19.8	19.8	Point 5	19.9	19.9	Point 6	19.7	20.0	Point 7			Point 8			Point 9			Point 10			Point 11			Point 12			Average	19.8	19.9	Avg Low 3	19.7	19.8	Lowest	19.7	19.8
		Dec-99	Feb-02																																															
	Point 1	19.7	20.0																																															
	Point 2	19.9	19.9																																															
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	Point 5	19.9	19.9																																															
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	Point 7																																																	
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Lowest	19.7	19.8																																																
Comment:																																																		

* Unless otherwise displayed, all measurements displayed in millimeters

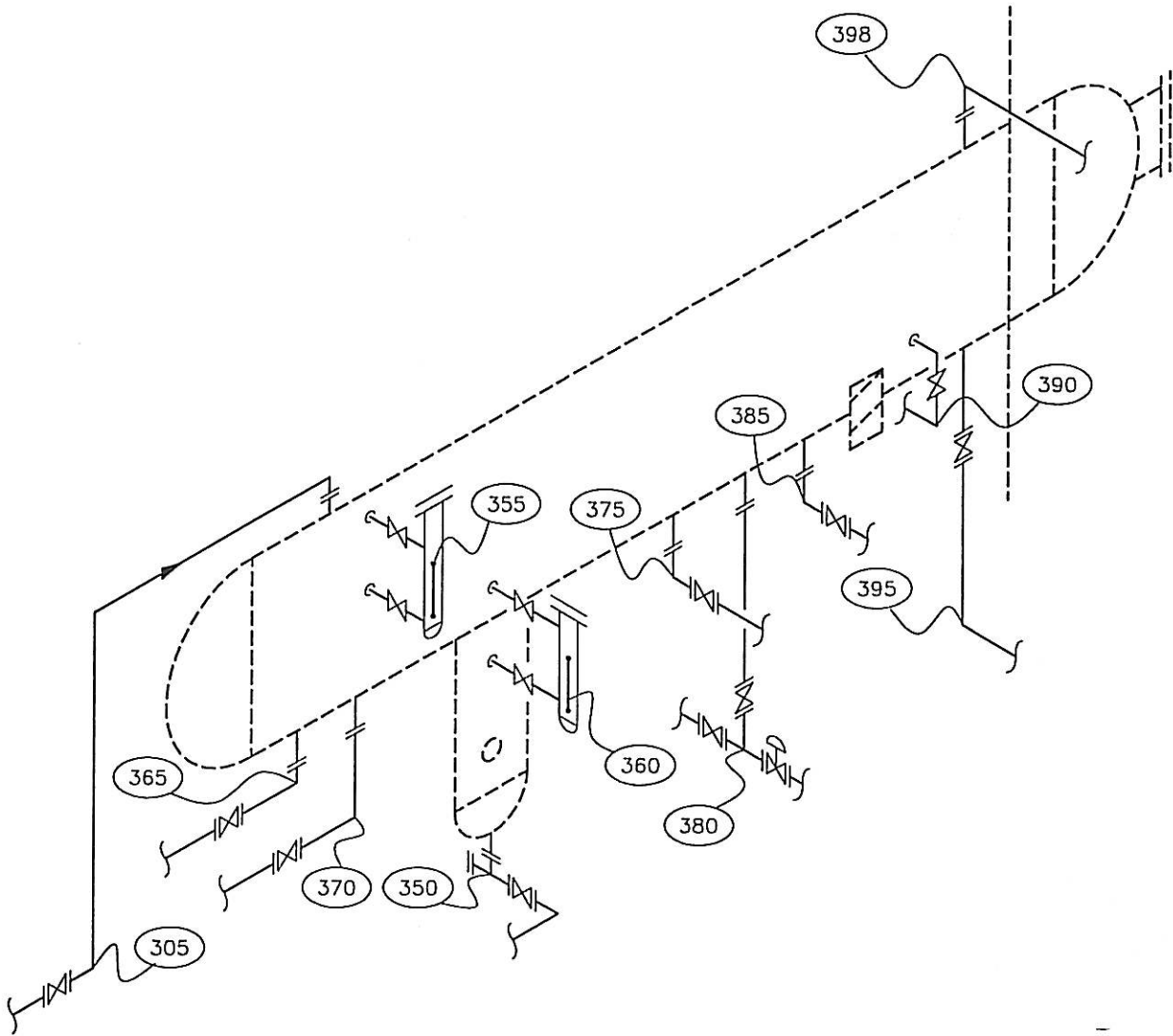
TML Description: BOOT SHELL T Nominal: 25.4 Min Nominal: 23.8 Corr Allowance: 1.6			
<i>Data Readings</i>			
<i>Data Evaluations</i>		Dec-99	Feb-02
Months Remaining to T Min:	999	Point 1	25.9 25.9
Min Calc'd Wall Thickness:	N/A	Point 2	25.9 25.9
Thick Remain Above T Min:	2.0	Point 3	25.8 25.8
Short Term Corr Rate:	N/A	Point 4	25.8 25.9
Long Term Corr Rate:	N/A	Point 5	25.8 25.9
Months Remain to LFL:	52	Point 6	25.6 25.8
Lowest Value - Last Reading:	25.8	Point 7	
Comment:		Point 8	
		Point 9	
		Point 10	
		Point 11	
		Point 12	
		Average	25.8 25.9
		Avg Low 3	25.7 25.8
		Lowest	25.6 25.8

TML Description: BOOT HEAD T Nominal: 25.4 Min Nominal: 23.8 Corr Allowance: 1.6			
<i>Data Readings</i>			
<i>Data Evaluations</i>		Dec-99	Feb-02
Months Remaining to T Min:	999	Point 1	25.2 25.4
Min Calc'd Wall Thickness:	N/A	Point 2	25.0 25.2
Thick Remain Above T Min:	1.3	Point 3	25.0 25.1
Short Term Corr Rate:	N/A	Point 4	25.1 25.1
Long Term Corr Rate:	N/A	Point 5	25.1 25.1
Months Remain to LFL:	N/A	Point 6	25.1 25.2
Lowest Value - Last Reading:	25.1	Point 7	
Comment:		Point 8	
		Point 9	
		Point 10	
		Point 11	
		Point 12	
		Average	25.1 25.2
		Avg Low 3	25.0 25.1
		Lowest	25.0 25.1

* Unless otherwise displayed, all measurements displayed in millimeters



P&ID. # _____
REF. # _____



PIPING DATA

CORR.ALL

* ASTM

** DESIGN

*** CALC.

MIN.

THK.

CAL.

THK.

CODE

TML	SIZE	MAT'L	FLG. RATING	PROC.	LINE #	SPEC.	SCH.	NOM. THK.	** CALC.	MIN. THK.	CAL. THK.	CODE
305/98	12"						STD	9.5mm	ASTM	8.3mm		
350/65	2"						40	3.9mm	ASTM	3.4mm		
370/80	2"						40	3.9mm	ASTM	3.4mm		
385/90	2"						40	3.9mm	ASTM	3.4mm		
355/60	4"						40	6.0mm	ASTM	5.3mm		
395	4"						40	6.0mm	ASTM	5.3mm		
375	3"						40	5.5mm	ASTM	4.8mm		

COMMENTS: _____

PIONEER NATURAL RESOURCES CANADA INC.
CHINCHAGA GAS PLANT
LSD C-32-H \ 94-H-8

INLET SEPARATOR PIPING

TECH.: J.OLIVER REV.DATE: _____ DWG DATE: 02/2002
CAD: MKM REVISION: _____ DRAWING: 003A

Equip No N/A	Serial No N/A	Prov Reg No N/A
Description		

003 - 005

<p>TML Description: 12" 90' L B-T</p> <p>T Nominal: 9.5</p> <p>Min Nominal: 8.3</p> <p>Corr Allowance: ASTM</p>			<i>Data Readings</i>	
<i>Data Evaluations</i>			Dec-99	Feb-02
Months Remaining to T Min:	999	Point 1	9.5	9.5
Min Calc'd Wall Thickness:	N/A	Point 2	9.5	9.5
Thick Remain Above T Min:	1.2	Point 3	9.5	9.5
Short Term Corr Rate:	N/A	Point 4	9.5	9.5
Long Term Corr Rate:	N/A	Point 5	9.8	9.7
Months Remain to LFL:	N/A	Point 6	9.8	9.6
Lowest Value - Last Reading:	9.5	Point 7	9.8	9.7
Comment:		Point 8	10.0	10.0
		Point 9	9.9	9.9
		Point 10	9.8	9.8
		Point 11	9.7	9.7
		Point 12	9.7	9.7
		Average	9.7	9.7
		Avg Low 3	9.5	9.5
		Lowest	9.5	9.5

003 - 050

<p>TML Description: 2" TEE L-R</p> <p>T Nominal: 3.9</p> <p>Min Nominal: 3.4</p> <p>Corr Allowance: ASTM</p>			<i>Data Readings</i>	
<i>Data Evaluations</i>			Dec-99	Feb-02
Months Remaining to T Min:	999	Point 1	5.8	5.5
Min Calc'd Wall Thickness:	N/A	Point 2	5.9	6.2
Thick Remain Above T Min:	2.1	Point 3	6.1	6.2
Short Term Corr Rate:	N/A	Point 4	5.5	6.0
Long Term Corr Rate:	N/A	Point 5	5.3	6.1
Months Remain to LFL:	208	Point 6		
Lowest Value - Last Reading:	5.5	Point 7		
Comment:		Point 8		
		Point 9		
		Point 10		
		Point 11		
		Point 12		
		Average	5.7	6.0
		Avg Low 3	5.5	5.9
		Lowest	5.3	5.5

* Unless otherwise displayed, all measurements displayed in millimeters

TML Description: 4" DIA. FLOAT T Nominal: 6.0 Min Nominal: 5.2 Corr Allowance: ASTM			<i>Data Readings</i>	
<i>Data Evaluations</i> Months Remaining to T Min: 78 Min Calc'd Wall Thickness: N/A Thick Remain Above T Min: 0.9 Short Term Corr Rate: N/A Long Term Corr Rate: N/A Months Remain to LFL: 9 Lowest Value - Last Reading: 6.1			Dec-99	Feb-02
	Point 1		6.4	6.2
	Point 2		6.4	6.2
	Point 3		6.4	6.1
	Point 4		6.4	6.1
	Point 5		6.4	6.1
	Point 6		6.4	6.1
	Point 7			
	Point 8			
	Point 9			
	Point 10			
	Point 11			
Comment:	Point 12			
	Average		6.4	6.1
	Avg Low 3		6.4	6.1
	Lowest		6.4	6.1

TML Description: 4" DIA. FLOAT T Nominal: 6.0 Min Nominal: 5.2 Corr Allowance: ASTM			<i>Data Readings</i>	
<i>Data Evaluations</i> Months Remaining to T Min: 91 Min Calc'd Wall Thickness: N/A Thick Remain Above T Min: 0.7 Short Term Corr Rate: N/A Long Term Corr Rate: N/A Months Remain to LFL: N/A Lowest Value - Last Reading: 5.9			Dec-99	Feb-02
	Point 1		6.1	5.9
	Point 2		6.2	5.9
	Point 3		6.2	5.9
	Point 4		6.2	5.9
	Point 5		6.1	5.9
	Point 6		6.2	5.9
	Point 7			
	Point 8			
	Point 9			
	Point 10			
	Point 11			
Comment:	Point 12			
	Average		6.2	5.9
	Avg Low 3		6.1	5.9
	Lowest		6.1	5.9

TML Description: 2" 90' L T-B T Nominal: 3.9 Min Nominal: 3.4 Corr Allowance: ASTM		<i>Data Readings</i>		
<i>Data Evaluations</i> Months Remaining to T Min: 999 Min Calc'd Wall Thickness: N/A Thick Remain Above T Min: 0.9 Short Term Corr Rate: N/A Long Term Corr Rate: N/A Months Remain to LFL: 104 Lowest Value - Last Reading: 4.3			Dec-99	Feb-02
		Point 1	4.2	4.5
		Point 2	4.7	4.4
		Point 3	4.5	4.4
		Point 4	4.6	4.4
		Point 5	4.5	4.3
		Point 6		
		Point 7		
		Point 8		
		Point 9		
		Point 10		
		Point 11		
		Point 12		
Comment:		Average	4.5	4.4
		Avg Low 3	4.4	4.4
		Lowest	4.2	4.3

TML Description: 2" 90' L T-B T Nominal: 3.9 Min Nominal: 3.4 Corr Allowance: ASTM		<i>Data Readings</i>		
<i>Data Evaluations</i> Months Remaining to T Min: 999 Min Calc'd Wall Thickness: N/A Thick Remain Above T Min: 0.6 Short Term Corr Rate: N/A Long Term Corr Rate: N/A Months Remain to LFL: N/A Lowest Value - Last Reading: 4.0			Dec-99	Feb-02
		Point 1	4.0	4.0
		Point 2	4.1	4.1
		Point 3	4.0	4.1
		Point 4	4.2	4.1
		Point 5	4.1	4.1
		Point 6		
		Point 7		
		Point 8		
		Point 9		
		Point 10		
		Point 11		
		Point 12		
Comment:		Average	4.1	4.1
		Avg Low 3	4.0	4.1
		Lowest	4.0	4.0

* Unless otherwise displayed, all measurements displayed in millimeters

TML Description: 3" 90' L T-B T Nominal: 5.5 Min Nominal: 4.8 Corr Allowance: ASTM			<i>Data Readings</i>	
<i>Data Evaluations</i> Months Remaining to T Min: 91 Min Calc'd Wall Thickness: N/A Thick Remain Above T Min: 0.7 Short Term Corr Rate: N/A Long Term Corr Rate: N/A Months Remain to LFL: N/A Lowest Value - Last Reading: 5.5			Dec-99	Feb-02
	Point 1		5.8	5.5
	Point 2		5.8	5.5
	Point 3		5.7	5.6
	Point 4		5.7	5.7
	Point 5		5.8	5.8
	Point 6			
	Point 7			
	Point 8			
	Point 9			
	Point 10			
	Point 11			
Point 12				
	Average	5.8	5.6	
	Avg Low 3	5.7	5.5	
	Lowest	5.7	5.5	
Comment:				

TML Description: 2" TEE L-R T Nominal: 3.9 Min Nominal: 3.4 Corr Allowance: ASTM			<i>Data Readings</i>	
<i>Data Evaluations</i> Months Remaining to T Min: 999 Min Calc'd Wall Thickness: N/A Thick Remain Above T Min: 2.1 Short Term Corr Rate: N/A Long Term Corr Rate: N/A Months Remain to LFL: N/A Lowest Value - Last Reading: 5.5			Dec-99	Feb-02
	Point 1		5.5	5.5
	Point 2		5.6	5.7
	Point 3		6.0	6.0
	Point 4		6.3	6.2
	Point 5		6.0	6.0
	Point 6			
	Point 7			
	Point 8			
	Point 9			
	Point 10			
	Point 11			
Point 12				
	Average	5.9	5.9	
	Avg Low 3	5.7	5.7	
	Lowest	5.5	5.5	
Comment:				

TML Description: 2" 90' L T-B T Nominal: 3.9 Min Nominal: 3.4 Corr Allowance: ASTM			<i>Data Readings</i>	
<i>Data Evaluations</i> Months Remaining to T Min: 999 Min Calc'd Wall Thickness: N/A Thick Remain Above T Min: 0.9 Short Term Corr Rate: N/A Long Term Corr Rate: N/A Months Remain to LFL: 104 Lowest Value - Last Reading: 4.3			Dec-99	Feb-02
	Point 1		4.3	4.4
	Point 2		4.3	4.4
	Point 3		4.5	4.5
	Point 4		4.5	4.5
	Point 5		4.2	4.3
	Point 6			
	Point 7			
	Point 8			
	Point 9			
	Point 10			
	Point 11			
Point 12				
	Average		4.4	4.4
	Avg Low 3		4.3	4.4
	Lowest		4.2	4.3
Comment:				

TML Description: 2" 90' L T-B T Nominal: 3.9 Min Nominal: 3.4 Corr Allowance: ASTM			<i>Data Readings</i>	
<i>Data Evaluations</i> Months Remaining to T Min: 999 Min Calc'd Wall Thickness: N/A Thick Remain Above T Min: 0.9 Short Term Corr Rate: N/A Long Term Corr Rate: N/A Months Remain to LFL: 52 Lowest Value - Last Reading: 4.3			Dec-99	Feb-02
	Point 1		4.4	4.5
	Point 2		4.5	4.5
	Point 3		4.5	4.6
	Point 4		4.3	4.5
	Point 5		4.1	4.3
	Point 6			
	Point 7			
	Point 8			
	Point 9			
	Point 10			
	Point 11			
Point 12				
	Average		4.4	4.5
	Avg Low 3		4.3	4.4
	Lowest		4.1	4.3
Comment:				

TML Description: 4" 90' L T-B T Nominal: 6.0 Min Nominal: 5.2 Corr Allowance: ASTM			<i>Data Readings</i>	
<i>Data Evaluations</i> Months Remaining to T Min: 999 Min Calc'd Wall Thickness: N/A Thick Remain Above T Min: 0.7 Short Term Corr Rate: N/A Long Term Corr Rate: N/A Months Remain to LFL: N/A Lowest Value - Last Reading: 5.9			Dec-99	Feb-02
	Point 1		6.7	6.4
	Point 2		6.3	6.2
	Point 3		5.8	5.9
	Point 4		6.0	6.0
	Point 5		6.0	5.9
	Point 6		6.0	6.0
	Point 7			
	Point 8			
	Point 9			
	Point 10			
	Point 11			
Point 12				
	Average	6.1	6.1	
	Avg Low 3	5.9	5.9	
	Lowest	5.8	5.9	
Comment:				

TML Description: 12" 90' L B-T T Nominal: 9.5 Min Nominal: 8.3 Corr Allowance: ASTM			<i>Data Readings</i>	
<i>Data Evaluations</i> Months Remaining to T Min: 999 Min Calc'd Wall Thickness: N/A Thick Remain Above T Min: 0.8 Short Term Corr Rate: N/A Long Term Corr Rate: N/A Months Remain to LFL: N/A Lowest Value - Last Reading: 9.1			Dec-99	Feb-02
	Point 1		9.6	9.6
	Point 2		9.6	9.5
	Point 3		9.2	9.2
	Point 4		9.4	9.4
	Point 5		9.2	9.2
	Point 6		9.3	9.3
	Point 7		9.1	9.1
	Point 8		9.2	9.1
	Point 9		9.1	9.2
	Point 10		9.2	9.2
	Point 11		9.6	9.6
Point 12		9.6	9.6	
	Average	9.3	9.3	
	Avg Low 3	9.1	9.1	
	Lowest	9.1	9.1	
Comment:				

ULTRASONIC EXAMINATION REPORT

REPORT No.: **UT - 1828 - 016 - MAJ**

Page: **1** of **3**

Client: **Taq North**
 District: **Northern** LSD: **C-32-H / 94-H-08**
 Facility: **Chinchaga Gas Plant**
 Item(s) Examined: **603VS008 Internal Coil**
 Acceptance Criteria: **Client Review** Rev. / Date: **N/S**
 Procedure No.: **ITS-UT02** Rev. / Date: **Rev.1 / Oct-11**
 Technique No.: **Technique 01 Thickness Measurements** Rev. / Date: **Rev.1 / Oct-11**

ITS Job No.: **1828**
 Date: **July 15, 2012**
 Time: **1:00 PM**
 W.O. No.: **N/A**
 P.O. No.: **N/A**
 Cost Code: **N/A**
 AFE: **11200624**
 Other: **N/A**

Equipment Data:

PRN: (A) **N/S** Serial No.: **2889A.97** Equip. No.: **603VS008** CRN: **N-9989.21**
 Material: **N/S** Thickness: **N/S** Other: **N/S**

Surface Condition:

Base Metal Machined Shot Blasted Wire Wheeled As Ground As Welded Painted Coated Other: **N/A**
 < 0°C (32°F) 0°C (32°F) to 54°C (130°F) 55°C (131°F) to 100°C (212°F) > 100°C (212°F)

Ultrasonic Equipment:

Instrument: **Krautkramer** Model: **USN 58L** Serial No.: **O1P514** Cal. Due Date: **9-Jan-13**
 Cal. Block: **2.5-12.5mm Step Wedge** Serial No.: **Nov-19** Couplant: **UTX**
 Cal. Block: **N/A** Serial No.: **N/A**
 Transducer Cable(s): Type: **BNC - Micro Dot** Length: **6'**

Transducer:

Serial No.:	Angle (X°):	Frequency (MHz):	Size (mm):	Type		Primary Reference (db) (%FSH):	Scanning Sensitivity (db):	Transfer Value (db):	Range (mm):
				Single	Dual				
705183	0	10	6.375	<input type="checkbox"/>	<input checked="" type="checkbox"/>	58dB @ 80% FSH	6dB to maintain 80% FSH	N/A	0-25
				<input type="checkbox"/>	<input type="checkbox"/>				
				<input type="checkbox"/>	<input type="checkbox"/>				
				<input type="checkbox"/>	<input type="checkbox"/>				

Examination Details:


SCOPE: To perform Ultrasonic Thickness measurements in the specified location to determine if the examined areas are fit for continued service. All locations were cleaned to an acceptable level for the examination performed.

RESULTS: All scanned locations are within the specified thickness or greater. 2" Schedule 160 Nominal of 8.7mm and a corrosion allowance of 1.6mm. The other section is 3/4" Stainless Steel. Lowest readings are recorded below.

CONCLUSION: Client to review information. The Coil is fit for continued service.

Client Representative: _____ Sign: _____ Date: _____

Technician(s):

Sign: 
 Print: **Mike Johnston**
 Technician
 Level: **2**
 Certification No.: **12240**

Sign: 
 Print: **Rob Kassian**
 2nd Technician / Assistant
 Level: _____
 Certification No.: **15532**

Report Review: 
 Initial

Scope of Services: The agreement of Integrity Testing Services Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested inspection of specific equipment provided for in writing and the preparation of reports or similar documents reflecting the inspection data obtained or the opinion formulated on the basis of such inspection. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinion or observations of the examiner and are not intended nor can they be construed as representations or warranties as to the actual circumstances. ITS is not assuming any responsibilities of the owner/operator, and the owner/operator retains complete responsibility for the engineering, repair and use decisions as a result of the inspection data or other information provided by ITS. In no event shall ITS's liability in respect of the services referred to herein exceed the amount paid for such services.
 Standard of Care: In performing the services provided, Integrity Testing Services Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by ITS.

CONTINUATION EXAMINATION REPORT

REPORT No.: **UT - 1828 - 016 - MAJ**

Page: **2** of **3**

Client: Taqa North
Item(s) Examined: 603VS008 Internal Coil

ITS Job No.: 1828
Date: July 15, 2012



1st Technician:

Print: Mike Johnston

Sign: *[Signature]*

CONTINUATION EXAMINATION REPORT

REPORT No.: **UT - 1828 - 016 - MAJ**

Page: **3** of **3**

Client: Taqa North
Item(s) Examined: 603VS008 Internal Coil

ITS Job No.: 1828
Date: July 15, 2012

2" Inlet/Outlet Elbows (Carbon Steel) Schedule 160 Internal
Min UT Thickness Found in mm



1" Circs (Stainless steel) Threaded Fittings
Min UT Thickness Found



1st Technician:

Print: Mike Johnston

Sign: 

EQUIPMENT INTERNAL INSPECTION REPORT

Customer:	TAQA North	ITS Job No.:	1828
District:	Northern	Date:	12-Jul-2012
Facility:	Chinchaga Gas Plant	LSD:	C-32-H/94-H-8
Equip. Description:	BC #2 Inlet Separator	Serial No.:	2889A.97
Equip./OIP No.:	603VS008	PRN:	Not Applicable
Equip. Type: <input type="checkbox"/> Column <input type="checkbox"/> Cooler <input type="checkbox"/> Exchanger <input type="checkbox"/> Furnace <input type="checkbox"/> Heater <input type="checkbox"/> Plate Exchanger <input type="checkbox"/> Reboiler <input checked="" type="checkbox"/> Vessel <input type="checkbox"/> Other:			

Head (1)	Head (2)	Shell	Boot Shell/Head
<input type="checkbox"/> Top <input checked="" type="checkbox"/> North <input type="checkbox"/> West	<input type="checkbox"/> Bottom <input checked="" type="checkbox"/> South <input type="checkbox"/> East	<input checked="" type="checkbox"/> Top <input checked="" type="checkbox"/> Bottom	<input type="checkbox"/> Not Applicable
<input type="checkbox"/> Flat <input type="checkbox"/> FLG <input checked="" type="checkbox"/> ELL <input type="checkbox"/> ECC <input type="checkbox"/> HEMI	<input type="checkbox"/> Flat <input type="checkbox"/> FLG <input checked="" type="checkbox"/> ELL <input type="checkbox"/> ECC <input type="checkbox"/> HEMI	<input checked="" type="checkbox"/> Good Condition	<input checked="" type="checkbox"/> Good Condition
<input checked="" type="checkbox"/> Good Condition	<input checked="" type="checkbox"/> Good Condition	<input type="checkbox"/> Internal Corrosion	<input type="checkbox"/> Internal Corrosion
<input type="checkbox"/> Internal Corrosion	<input type="checkbox"/> Internal Corrosion	<input type="checkbox"/> Pitting: <small>(max depth)</small>	<input type="checkbox"/> Pitting: <small>(max depth)</small>
<input type="checkbox"/> Pitting: <small>(max depth)</small>	<input type="checkbox"/> Pitting: <small>(max depth)</small>	<input type="checkbox"/> Wear/Erosion	<input type="checkbox"/> Wear/Erosion
<input type="checkbox"/> Wear/Erosion	<input type="checkbox"/> Wear/Erosion	<input type="checkbox"/> Cracked	<input type="checkbox"/> Cracked
<input type="checkbox"/> Cracked	<input type="checkbox"/> Cracked	<input type="checkbox"/> Blistered	<input type="checkbox"/> Blistered
<input type="checkbox"/> Blistered	<input type="checkbox"/> Blistered	<input type="checkbox"/> Scale	<input type="checkbox"/> Scale
<input type="checkbox"/> Scale	<input type="checkbox"/> Scale	<input type="checkbox"/> Coated	<input type="checkbox"/> Coated
<input type="checkbox"/> Coated	<input type="checkbox"/> Coated	<input type="checkbox"/> Mechanical Damage	<input type="checkbox"/> Mechanical Damage
<input type="checkbox"/> Mechanical Damage	<input type="checkbox"/> Mechanical Damage	<input type="checkbox"/> Bulged/ Distorted/ Deformation	<input type="checkbox"/> Bulged/ Distorted/ Deformation
<input type="checkbox"/> Bulged/ Distorted/ Deformation	<input type="checkbox"/> Bulged/ Distorted/ Deformation	<input type="checkbox"/> See Comments	<input type="checkbox"/> See Comments
<input type="checkbox"/> See Comments	<input type="checkbox"/> See Comments		

Channel Head	Internal Welds	Internal Nozzles	Drum
<input checked="" type="checkbox"/> Not Applicable	<input checked="" type="checkbox"/> Good Condition	<input type="checkbox"/> Good Condition	<input type="checkbox"/> Mud <input type="checkbox"/> Steam
<input type="checkbox"/> Good Condition	<input type="checkbox"/> Poor Quality	<input type="checkbox"/> Internal Corrosion	<input checked="" type="checkbox"/> Not Applicable
<input type="checkbox"/> Internal Corrosion	<input type="checkbox"/> Internal Corrosion	<input type="checkbox"/> Pitting: <small>(max depth)</small>	<input type="checkbox"/> Good Condition
<input type="checkbox"/> Pitting: <small>(max depth)</small>	<input type="checkbox"/> Pitting: <small>(max depth)</small>	<input type="checkbox"/> Wear/Erosion	<input type="checkbox"/> Internal Corrosion
<input type="checkbox"/> Wear/Erosion	<input type="checkbox"/> Wear/Erosion	<input type="checkbox"/> Cracked	<input type="checkbox"/> Pitting: <small>(max depth)</small>
<input type="checkbox"/> Cracked	<input type="checkbox"/> Cracked	<input type="checkbox"/> Scale	<input type="checkbox"/> Wear/Erosion
<input type="checkbox"/> Blistered	<input type="checkbox"/> Scale	<input type="checkbox"/> Coated	<input type="checkbox"/> Cracked
<input type="checkbox"/> Scale	<input type="checkbox"/> Coated	<input checked="" type="checkbox"/> Plugged	<input type="checkbox"/> Blistered
<input type="checkbox"/> Coated	<input type="checkbox"/> Mechanical Damage	<input type="checkbox"/> Poor Welding	<input type="checkbox"/> Scale
<input type="checkbox"/> Mechanical Damage	<input type="checkbox"/> See Comments	<input type="checkbox"/> Leaking	<input type="checkbox"/> Coated
<input type="checkbox"/> Bulged/ Distorted/ Deformation		<input type="checkbox"/> Mechanical Damage	<input type="checkbox"/> Mechanical Damage
<input type="checkbox"/> See Comments		<input type="checkbox"/> See Comments	<input type="checkbox"/> Bulged/ Distorted/ Deformation
			<input type="checkbox"/> See Comments

Internal Protection	Vessel Internals	Heating Coil (A)	Heating Coil (B)
<input checked="" type="checkbox"/> Not Applicable	<input checked="" type="checkbox"/> Adequate Cleaning	<input type="checkbox"/> Not Applicable	<input checked="" type="checkbox"/> Not Applicable
<input type="checkbox"/> Coating <input type="checkbox"/> Lining	<input type="checkbox"/> Vortex Breaker(s)/Deflection Plate(s) Damage	<input checked="" type="checkbox"/> Good Condition	<input type="checkbox"/> Good Condition
<input type="checkbox"/> Good Condition		<input type="checkbox"/> Corrosion	<input type="checkbox"/> Corrosion
<input type="checkbox"/> Blister(s)	<input type="checkbox"/> Weir(s)/ Baffle(s)/ Divider(s) Damage	<input type="checkbox"/> Pitting: <small>(max depth)</small>	<input type="checkbox"/> Pitting: <small>(max depth)</small>
<input type="checkbox"/> Dis-bonded		<input type="checkbox"/> Cracked	<input type="checkbox"/> Cracked
<input type="checkbox"/> Chipped	<input type="checkbox"/> Spray Nozzles Damaged/ Missing	<input type="checkbox"/> Scaled	<input type="checkbox"/> Scaled
<input type="checkbox"/> Holidays/Cracked		<input type="checkbox"/> Worn	<input type="checkbox"/> Worn
<input type="checkbox"/> Mechanical Damage	<input type="checkbox"/> Down-comer Corrosion	<input type="checkbox"/> Loose	<input type="checkbox"/> Loose
<input type="checkbox"/> Missing		<input type="checkbox"/> Poor Installation	<input type="checkbox"/> Poor Installation
<input type="checkbox"/> See Comments	<input type="checkbox"/> See Comments	<input type="checkbox"/> See Comments	<input type="checkbox"/> See Comments
	<input type="checkbox"/> See Comments		

Demister Screen	Refractory	Manway	Trays
<input checked="" type="checkbox"/> Not Applicable	<input checked="" type="checkbox"/> Not Applicable	<input type="checkbox"/> Not Applicable	<input checked="" type="checkbox"/> Not Applicable
<input type="checkbox"/> Good Condition	<input type="checkbox"/> Good Condition	<input checked="" type="checkbox"/> Good Condition	<input type="checkbox"/> Good Condition
<input type="checkbox"/> Dislodged	<input type="checkbox"/> Cracked (minor)	<input type="checkbox"/> Coating Damage	<input type="checkbox"/> Collapsed
<input type="checkbox"/> Broken	<input type="checkbox"/> Spalling	<input type="checkbox"/> Internal Corrosion	<input type="checkbox"/> Distorted
<input type="checkbox"/> Missing	<input type="checkbox"/> Missing	<input type="checkbox"/> Mechanical Damage	<input type="checkbox"/> Loose
<input type="checkbox"/> Tie-downs Missing	<input type="checkbox"/> Damaged	<input type="checkbox"/> Seal Face Corrosion	<input type="checkbox"/> Missing
<input type="checkbox"/> Fouling	<input type="checkbox"/> Cracked (severe)	<input type="checkbox"/> Pitting: <small>(max depth)</small>	<input type="checkbox"/> Wear
<input type="checkbox"/> Corrosion	<input type="checkbox"/> See Comments	<input type="checkbox"/> See Comments	<input type="checkbox"/> Corrosion
<input type="checkbox"/> See Comments			<input type="checkbox"/> Poor
			<input type="checkbox"/> Valve Caps Missing
			<input type="checkbox"/> See Comments

Tube Sheet	Firetube(s)	Tube Bundle	Tubes
<input checked="" type="checkbox"/> Not Applicable	<input checked="" type="checkbox"/> Not Applicable	<input checked="" type="checkbox"/> Not Applicable	<input checked="" type="checkbox"/> Not Applicable
<input type="checkbox"/> Good Condition	<input type="checkbox"/> Good Condition	<input type="checkbox"/> Good Condition	<input type="checkbox"/> Good Condition
<input type="checkbox"/> Corrosion	<input type="checkbox"/> Corrosion	<input type="checkbox"/> Corrosion	<input type="checkbox"/> External Corrosion
<input type="checkbox"/> Pitting: <small>(max depth)</small>	<input type="checkbox"/> Pitting: <small>(max depth)</small>	<input type="checkbox"/> Pitting: <small>(max depth)</small>	<input type="checkbox"/> Internal Corrosion
<input type="checkbox"/> Wear/Erosion	<input type="checkbox"/> Wear/Erosion	<input type="checkbox"/> Wear/Erosion	<input type="checkbox"/> Pitting: <small>(max depth)</small>
<input type="checkbox"/> Cracked	<input type="checkbox"/> Cracked	<input type="checkbox"/> Cracked	<input type="checkbox"/> Wear/Erosion
<input type="checkbox"/> Damaged	<input type="checkbox"/> Scaled	<input type="checkbox"/> Damaged	<input type="checkbox"/> Cracked
<input type="checkbox"/> See Comments	<input type="checkbox"/> Coated	<input type="checkbox"/> Plugged	<input type="checkbox"/> Thinning
	<input type="checkbox"/> Heat Impinged	<input type="checkbox"/> Scaled	<input type="checkbox"/> Heat Impinged
	<input type="checkbox"/> Burner Misalignment	<input type="checkbox"/> See Comments	<input type="checkbox"/> Bulged/Distorted
	<input type="checkbox"/> Damaged Supports		<input type="checkbox"/> Leaking
	<input type="checkbox"/> Damaged Guides/ Tracks		<input type="checkbox"/> See Comments
	<input type="checkbox"/> See Comments		

Observations:

Vessel in Good Condition

Based on API 510 Visual Internal Inspection this vessel is fit for service

Vessel Cleaned By High Pressure Steam And Chemical Wash, Multiple Attempts Were Made To Make Clean Enough For Inspection
No Demister Is Present Inside
No Internal Coating

Summary of Deficiencies:
- No concerns were identified during this inspection.

Detailed Observations:

The shell and heads were found in good condition. No corrosion pitting damage or deformation was visible. Minor millscaling and flash corrosion was visible. The welds are in good condition and appear of good quality. A thick asphaltine/oil layer remained on some areas of the shell.

The nozzle internals are in good condition. No damage or deflection is visible. Some product buildup/plugging of the instrument nozzles were visible. The vortex breakers over the drain are intact and free of damage. There is no demister installed over the outlet nozzle. The inlet diverter is in good condition and free of wear or damage. The manway seal face is in good condition and sealing issues are not anticipated.

The boot shell and head are in good condition. No corrosion, pitting, damage or deformation are visible.

The weir plate is in good condition. Its connection to the shell is in good condition and has no damage or distortion.

The 1" socket welded coil is in good condition. The support clamps are secure. The coil flanged hardware fasteners are secure. No damage is visible to the coil. UT scans show no internal wall loss.

Recommendations:

- None

Pictures:



Photo 1: Nameplate



Photo 2: External

Pictures:



Photo 3: Internal



Photo 4: Internal (2)



Photo 5: North Head Millscale



Photo 6: South Head Millscale



Photo 7: Inlet Diverter



Photo 8: Gas Boot Outlet

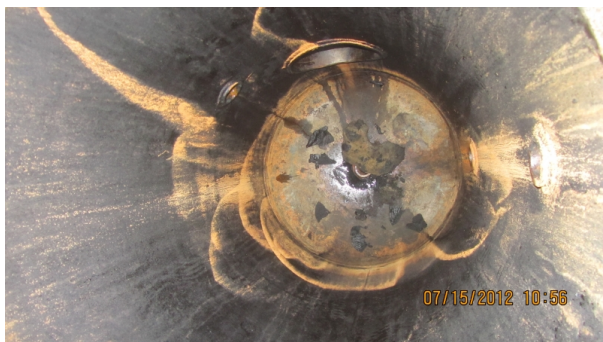


Photo 9: Liquid Boot



Photo 10: Vortex Breaker on Drain

Pictures:



Photo 11: Coil



Photo 12: Nozzles



Photo 13: Buildup Inside Nozzles



Photo 14: Manway Throat

Additional Comments:


None

Internal Inspection Performed By:

Print Name: Mike Johnston

Signature: 

Certification No.: API 510: 37244
IPV: 000556

Report Reviewed: 
Initial

ULTRASONIC EXAMINATION REPORT (Vessel / Piping)

REPORT No.: **UT - 1-3634 - 01 - MAS**

Page: 1 of 4

Client: **TAQA North Ltd**
 District: **Northern** LSD: **C-032-H / 094-H-08**
 Facility: **Chinchaga Gas Plant**
 Item(s) Examined: **603VS008 BC-2 Inlet Separator and Associated Piping**
Includes Leak Area on Condensate Outlet Piping
 Acceptance Criteria: **Client Information** Rev. / Date: **N/A**
 Procedure No.: **ITS-UT01 Ultrasonic Thickness Measurement** Rev. / Date: **Rev 3 / Aug 2014**
 Technique No.: **N/A** Rev. / Date: **N/A**

ITS Job No.: **1-3634**
 Date: **November 15, 2016**
 Time: **12:00**
 W.O. No.: **N/A**
 P.O. No.: **N/A**
 Cost Code: **N/A**
 AFE: **N/A**
 Other: **N/A**

Equipment Data:

PRN: (A) **N/S** Serial No.: **2889A97** Equip. No.: **603VS008** CRN: **N9989.21**
 Material: **Carbon Steel** Thickness: **3.9mm to 30mm** Other: **NA**

Surface Condition:

Base Metal Machined Shot Blasted Wire Wheeled As Ground As Welded Painted Coated Other: _____
 < 0°C (32°F) 0°C (32°F) to 54°C (130°F) 55°C (131°F) to 100°C (212°F) > 100°C (212°F)

Ultrasonic Equipment:

Instrument: **Olympus** Model: **Epoch 600** Serial No.: **140615702** Cal. Due Date: **22-Jan-17**
 Cal. Block: **Carbon Steel Step Wedge: 0.100" - 0.500"** Serial No.: **13-2277** Couplant: **UTX Gel**
 Cal. Block: **Carbon Steel Step Wedge: 6.25mm - 25.0mm** Serial No.: **12-2374**
 Transducer Cable(s): Type: **BNC / Microdot (Dual)** Length: **4'**

Transducer:

Serial No.:	Angle (X°):	Frequency (MHz):	Size (mm):	Type		Primary Reference (db) (%FSH):	Scanning Sensitivity (db):	Transfer Value (db):	Range (mm):
				Single	Dual				
131023KM	0	5.0	6	<input type="checkbox"/>	<input checked="" type="checkbox"/>	64dB @ 80% FSH	+6dB	N/A	0 - 100
				<input type="checkbox"/>	<input type="checkbox"/>	<i>Back-wall amplitude adjusted for thickness.</i>			
				<input type="checkbox"/>	<input type="checkbox"/>				
				<input type="checkbox"/>	<input type="checkbox"/>				

Examination Details:



Scope: Perform ultrasonic thickness measurements on all vessel and piping TML's as listed.
 Perform UT volumetric examination of the Tee fitting where the leak occurred and report all findings.

Results: Recorded all data on applicable UT data sheets for the equipment examined. No significant internal corrosion was found. Some readings were below ASTM minimum which will be reported.
 UT examination of 2" Std. Tee fitting found evidence of internal corrosion or erosion adjacent to the leak area with thicknesses near 0.130" (3.3mm) found. Nominal wall for this fitting is 0.154" (3.9mm) but due to the fitting geometry the thickness in other similar zones around the circumference of the weld was 0.170" (4.3mm). Scanning of piping immediately upstream and downstream of leak area found no areas of concern.

Conclusion: Client to review all UT data results and recommend any further examination as necessary.

Client Representative: _____ Sign: _____ Date: _____

Technician(s):

Sign: 
 Print: **Mark Sych** **Ellen Flight** Report Review: 
 1st Technician 2nd Technician / Assistant
 Level: CGSB ITS-WP01 ACCP/ASNT CGSB ITS-WP01 ACCP/ASNT
 Certification No.: **575** Certification No.: _____

Scope of Services
 The agreement of Integrity Testing Services Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested inspection of specific equipment provided for in writing and the preparation of reports or similar documents reflecting the inspection data obtained or the opinion formulated on the basis of such inspection. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinion or observations of the examiner and are not intended nor can they be construed as representations or warranties as to the actual circumstances. ITS is not assuming any responsibilities of the owner/operator, and the owner/operator retains complete responsibility for the engineering, repair and use decisions as a result of the inspection data or other information provided by ITS. In no event shall ITS's liability in respect of the services referred to herein exceed the amount paid for such services.
 Standard of Care
 In performing the services provided, Integrity Testing Services Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by ITS.

ULTRASONIC EXAMINATION REPORT (Vessel / Piping)

REPORT No.: **UT - 1-3634 - 01 - MAS**

Page: 2 of 4

Client: TAQA North Ltd

ITS Job No.: 1-3634

Item(s) Examined: **603VS008 BC-2 Inlet Separator and Associated Piping**

Date: November 15, 2016

Includes Leak Area on Condensate Outlet Piping

PHOTOS



NAME PLATE



OVERALL VIEW

ULTRASONIC EXAMINATION REPORT (Vessel / Piping)

REPORT No.: **UT - 1-3634 - 01 - MAS**

Page: **3** of **4**

Client: **TAQA North Ltd**

ITS Job No.: **1-3634**

Item(s) Examined: **603VS008 BC-2 Inlet Separator and Associated Piping**
Includes Leak Area on Condensate Outlet Piping

Date: **November 15, 2016**



Tee Close-up view



Leak Area Overview

ULTRASONIC EXAMINATION REPORT (Vessel / Piping)

REPORT No.: **UT - 1-3634 - 01 - MAS**

Page: 4 of 4

Client: TAQA North Ltd

ITS Job No.: 1-3634

Item(s) Examined: **603VS008 BC-2 Inlet Separator and Associated Piping**

Date: November 15, 2016

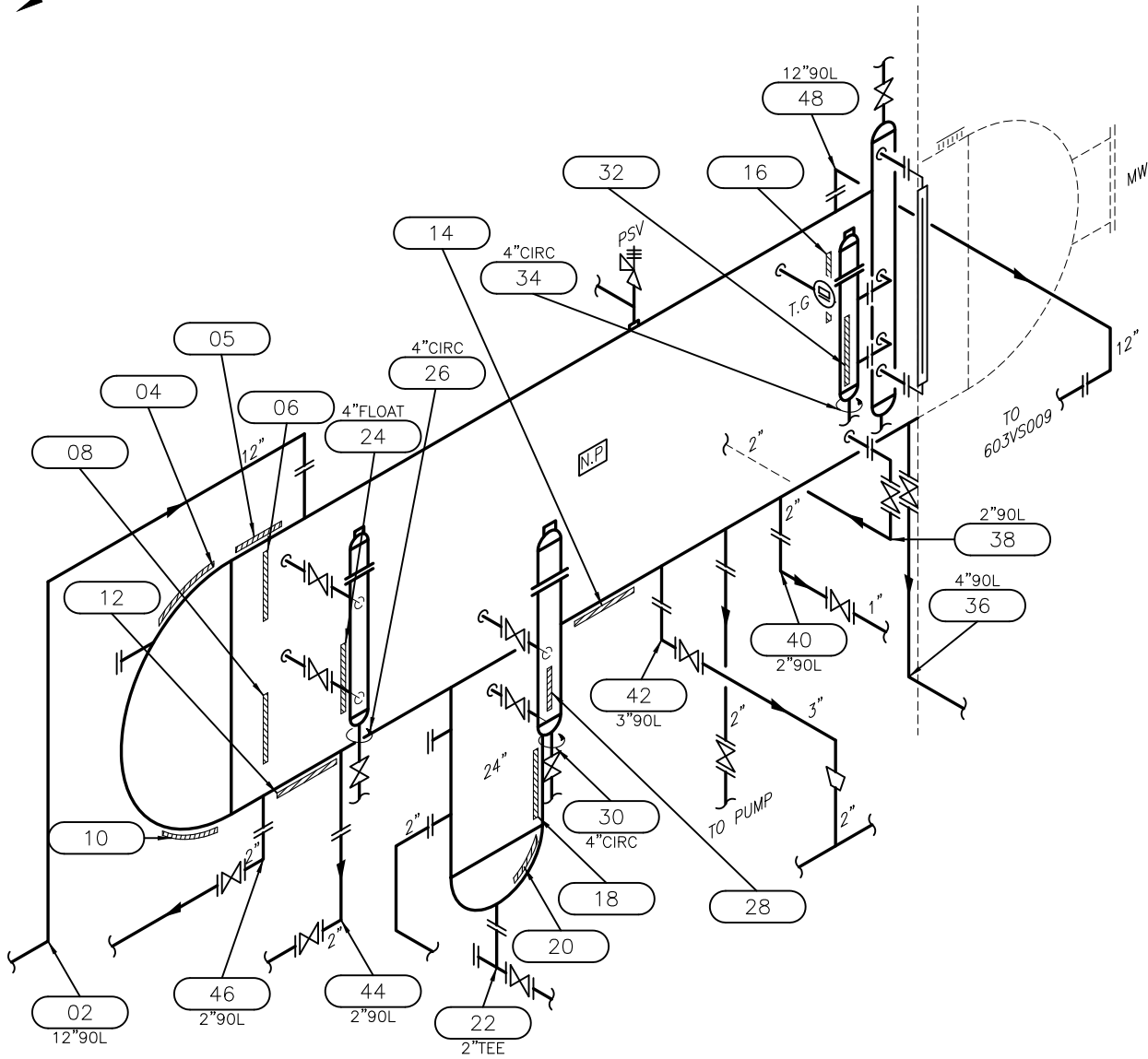
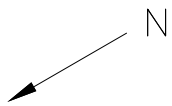
Includes Leak Area on Condensate Outlet Piping



Leak Area: Weld Hole Thru



Leak Area: Weld Hole Thru (Macro)



Comments: _____



P.E. No.: N/S Yr. Bit.: N/S
 OIP# 603VS008 Manway: YES
 Serial No.: 2889A97 Size: 1829mm x 6096mm
 P.R.N. (A) N/S Service: SWEET
 C.R.N.: N9989.21 PWHT: NO
 Code/Div.: ASME VIII DIV. 1 RT: 2
 Para: UW11A Insulated: SOUTH HEAD
 C. Stamp: U N.B. No: N/S
 Manufacturer: SURE WELD INTERNATIONAL

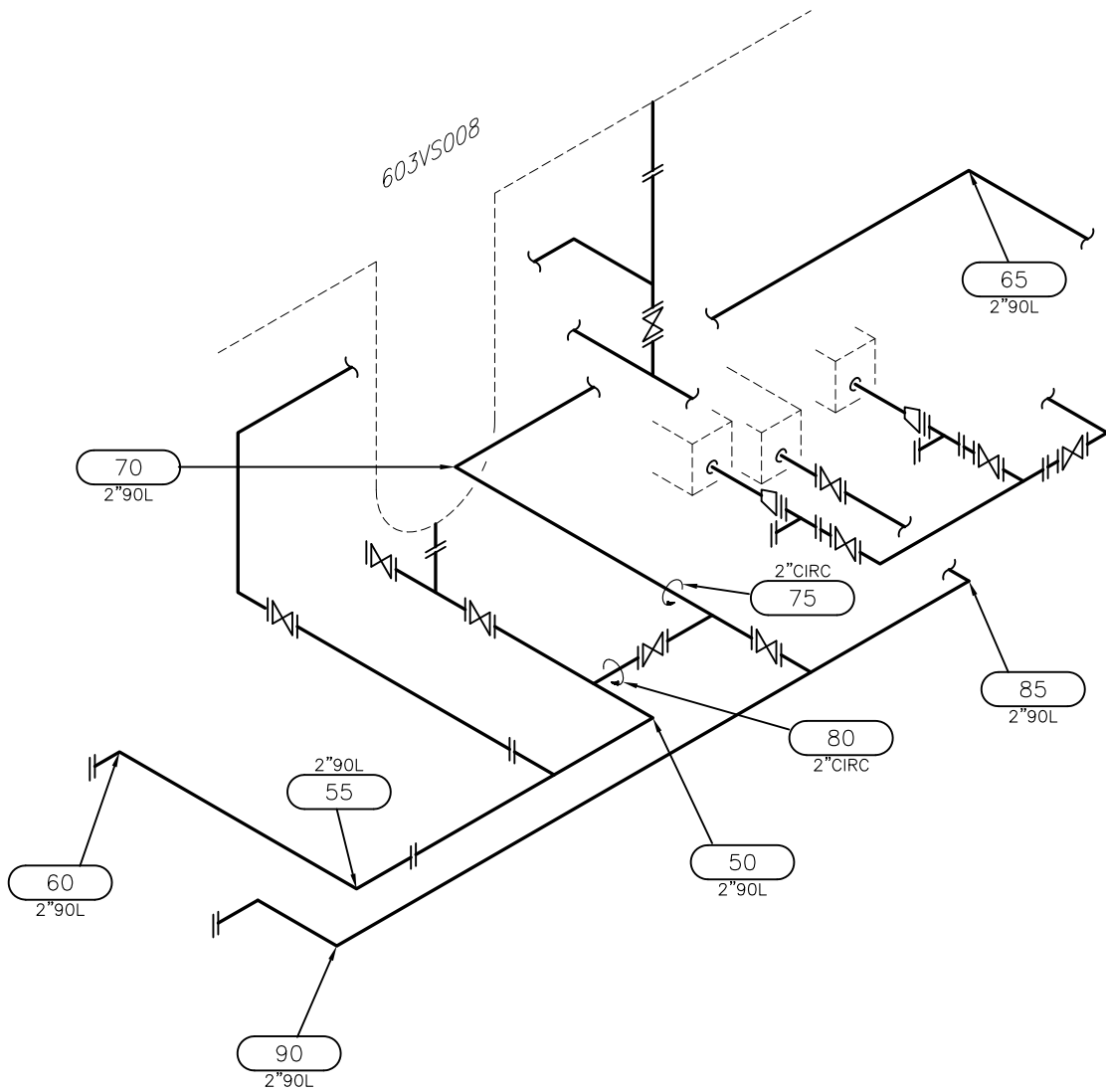
Design & Materials Data

HEAD	SHELL
Material: <u>N/S</u>	Material: <u>N/S</u>
Nom.: <u>N/S</u>	Nom.: <u>N/S</u>
C.A.: <u>1.6mm</u>	C.A.: <u>1.6mm</u>
BOOT HEAD	BOOT SHELL
Material: _____	Material: _____
Nom.: _____	Nom.: _____
C.A.: _____	C.A.: _____
CHANNEL HEAD	CHANNEL SHELL
Material: _____	Material: _____
Nom.: _____	Nom.: _____
C.A.: _____	C.A.: _____
MAWP Shell Side: <u>1965 KPA</u>	@ Temp.: <u>38°C</u>
MAWP Tube Side: _____	@ Temp.: _____

CLIENT	TAQA NORTH
FACILITY	CHINCHAGA GAS PLANT
	LSD C-032-H/094-H-08
ITEM	BC # 2 INLET SEPARATOR
BY: M.A.S.	DATE: 2016/11
	DWG.# 013

P&ID NO.: N/A

REF. NO.: N/A



TML	Size:	SCH:	Nom. Thk.:	ASTM DESIGN CAL. C/A	Min. Thk.:	FLG. Rating:
50 TO 90	2"	STD	3.9mm	ASTM	3.4mm	150#

Comments: _____

CLIENT	TAQA NORTH	
FACILITY	CHINCHAGA GAS PLANT LSD C-032-H/094-H-08	
ITEM	BC #2 INLET SEPARATOR PIPING	
TECH/CAD:	M.A.S./J.P.C.	DATE: 11/15/2016
DWG. NO.:	013A	

CLIENT:	TAQA North	PROV. REG. #:	Not Stated
FACILITY:	Chinchaga Gas Plant	SERIAL #:	2889A97
UNIT/AREA:	Gas Plant	OIP NO.:	603VS008
LSD:	C-032-H/094-H-08		
DESCRIPTION:	BC #2 Inlet Separator		

Description: 12" 90L B-T 150#
CML: 013-02

 NOM. THICK.: 9.50 mm
 ASTM (-12.5%): 1.20 mm
 MIN. NOM.: 8.30 mm

 MATERIAL:
 MINIMUM THICKNESS MEASURED: **8.00 mm**
 AVERAGE THICKNESS MEASURED: 9.20 mm

Rdg.	B/L Thick. MM/YYYY		Short Term mm/yr	Long Term mm/yr	Rem. Half Life
	04/2008	11/2016			
1	9.40	9.90	0.0000	0.0000	100.00
2	9.40	9.30	0.0116	0.0000	43.10
3	9.40	9.10	0.0348	0.0000	11.49
4	9.30	9.10	0.0232	0.0000	17.24
5	9.20	8.30	0.1044	0.0000	0.00
6	9.20	8.00	0.1392	0.0000	0.00
7	9.20	8.50	0.0812	0.0000	1.23
8	9.50	9.50	0.0000	0.0000	100.00
9	9.60	9.80	0.0000	0.0000	100.00
10	9.50	9.60	0.0000	0.0000	100.00
11	9.50	9.70	0.0000	0.0000	100.00
12	9.50	9.60	0.0000	0.0000	100.00

 COMMENTS:
 2016/11 - RDG. # 6 CONFIRMED

Description: TOP NORTH HEAD T-B
CML: 013-04

 NOM. THICK.: Not Stated
 CA: 1.60 mm
 MIN. NOM.: Not Stated

 MATERIAL:
 MINIMUM THICKNESS MEASURED: **20.30 mm**
 AVERAGE THICKNESS MEASURED: 21.75 mm

Rdg.	B/L Thick. MM/YYYY		Short Term mm/yr	Long Term mm/yr	Rem. Half Life
	04/2008	11/2016			
1	20.20	20.30	0.0000	0.0000	100.00
2	21.10	21.20	0.0000	0.0000	100.00
3	21.60	21.70	0.0000	0.0000	100.00
4	22.00	22.50	0.0000	0.0000	100.00
5	22.60	22.40	0.0232	0.0000	100.00
6	22.50	22.40	0.0116	0.0000	100.00

CLIENT:	TAQA North	PROV. REG. #:	Not Stated
FACILITY:	Chinchaga Gas Plant	SERIAL #:	2889A97
UNIT/AREA:	Gas Plant	OIP NO.:	603VS008
LSD:	C-032-H/094-H-08		
DESCRIPTION:	BC #2 Inlet Separator		

Description: TOP SHELL N-S

CML: 013-05

NOM. THICK.: Not Stated
 CA: 1.60 mm
 MIN. NOM.: Not Stated

MATERIAL:
 MINIMUM THICKNESS MEASURED: **19.90 mm**
 AVERAGE THICKNESS MEASURED: 19.92 mm

Rdg.	B/L Thick. MM/YYYY		Short Term mm/yr	Long Term mm/yr	Rem. Half Life
	04/2008	11/2016			
1	19.90	19.90	0.0000	0.0000	100.00
2	19.90	20.00	0.0000	0.0000	100.00
3	19.80	19.90	0.0000	0.0000	100.00
4	19.80	19.90	0.0000	0.0000	100.00
5	19.80	19.90	0.0000	0.0000	100.00
6	19.90	19.90	0.0000	0.0000	100.00

Description: UPPER SIDE SHELL T-B

CML: 013-06

NOM. THICK.: Not Stated
 CA: 1.60 mm
 MIN. NOM.: Not Stated

MATERIAL:
 MINIMUM THICKNESS MEASURED: **19.60 mm**
 AVERAGE THICKNESS MEASURED: 19.65 mm

Rdg.	B/L Thick. MM/YYYY		Short Term mm/yr	Long Term mm/yr	Rem. Half Life
	04/2008	11/2016			
1	20.10	19.70	0.0464	0.0000	100.00
2	20.10	19.60	0.0580	0.0000	100.00
3	20.10	19.70	0.0464	0.0000	100.00
4	20.10	19.70	0.0464	0.0000	100.00
5	19.90	19.60	0.0348	0.0000	100.00
6	19.40	19.60	0.0000	0.0000	100.00

CLIENT:	TAQA North	PROV. REG. #:	Not Stated
FACILITY:	Chinchaga Gas Plant	SERIAL #:	2889A97
UNIT/AREA:	Gas Plant	OIP NO.:	603VS008
LSD:	C-032-H/094-H-08		
DESCRIPTION:	BC #2 Inlet Separator		

Description: LOWER SIDE SHELL T-B

CML: 013-08

NOM. THICK.: Not Stated
 CA: 1.60 mm
 MIN. NOM.: Not Stated

MATERIAL:
 MINIMUM THICKNESS MEASURED: **19.50 mm**
 AVERAGE THICKNESS MEASURED: 19.57 mm

Rdg.	B/L Thick. MM/YYYY		Short Term mm/yr	Long Term mm/yr	Rem. Half Life
	04/2008	11/2016			
1	20.10	19.60	0.0580	0.0000	100.00
2	20.20	19.60	0.0696	0.0000	100.00
3	20.20	19.50	0.0812	0.0000	100.00
4	20.20	19.50	0.0812	0.0000	100.00
5	20.20	19.60	0.0696	0.0000	100.00
6	20.10	19.60	0.0580	0.0000	100.00

Description: BOTTOM NORTH HEAD T-B

CML: 013-10

NOM. THICK.: Not Stated
 CA: 1.60 mm
 MIN. NOM.: Not Stated

MATERIAL:
 MINIMUM THICKNESS MEASURED: **22.20 mm**
 AVERAGE THICKNESS MEASURED: 22.32 mm

Rdg.	B/L Thick. MM/YYYY		Short Term mm/yr	Long Term mm/yr	Rem. Half Life
	04/2008	11/2016			
1	22.20	22.20	0.0000	0.0000	100.00
2	22.20	22.20	0.0000	0.0000	100.00
3	22.00	22.30	0.0000	0.0000	100.00
4	22.40	22.40	0.0000	0.0000	100.00
5	22.20	22.40	0.0000	0.0000	100.00
6	22.20	22.40	0.0000	0.0000	100.00

CLIENT:	TAQA North	PROV. REG. #:	Not Stated
FACILITY:	Chinchaga Gas Plant	SERIAL #:	2889A97
UNIT/AREA:	Gas Plant	OIP NO.:	603VS008
LSD:	C-032-H/094-H-08		
DESCRIPTION:	BC #2 Inlet Separator		

Description: BOTTOM SHELL N-S

CML: 013-12

NOM. THICK.: Not Stated
 CA: 1.60 mm
 MIN. NOM.: Not Stated

MATERIAL:
 MINIMUM THICKNESS MEASURED: **19.50 mm**
 AVERAGE THICKNESS MEASURED: 19.62 mm

Rdg.	B/L Thick. MM/YYYY		Short Term mm/yr	Long Term mm/yr	Rem. Half Life
	04/2008	11/2016			
1	19.50	19.60	0.0000	0.0000	100.00
2	19.50	19.70	0.0000	0.0000	100.00
3	19.40	19.60	0.0000	0.0000	100.00
4	19.40	19.70	0.0000	0.0000	100.00
5	19.50	19.50	0.0000	0.0000	100.00
6	19.40	19.60	0.0000	0.0000	100.00

Description: MID BOTTOM SHELL N-S

CML: 013-14

NOM. THICK.: Not Stated
 CA: 1.60 mm
 MIN. NOM.: Not Stated

MATERIAL:
 MINIMUM THICKNESS MEASURED: **19.50 mm**
 AVERAGE THICKNESS MEASURED: 19.63 mm

Rdg.	B/L Thick. MM/YYYY		Short Term mm/yr	Long Term mm/yr	Rem. Half Life
	04/2008	11/2016			
1	19.60	19.50	0.0116	0.0000	100.00
2	19.60	19.60	0.0000	0.0000	100.00
3	WELD	WELD	0.0000	0.0000	
4	19.60	19.60	0.0000	0.0000	100.00
5	19.70	19.70	0.0000	0.0000	100.00
6	21.70	19.70	0.2320	0.0000	100.00
7	20.70	19.70	0.1160	0.0000	100.00

CLIENT:	TAQA North	PROV. REG. #:	Not Stated
FACILITY:	Chinchaga Gas Plant	SERIAL #:	2889A97
UNIT/AREA:	Gas Plant	OIP NO.:	603VS008
LSD:	C-032-H/094-H-08		
DESCRIPTION:	BC #2 Inlet Separator		

Description: UPPER SIDE SHELL T-B

CML: 013-16

NOM. THICK.: Not Stated
 CA: 1.60 mm
 MIN. NOM.: Not Stated

MATERIAL:
 MINIMUM THICKNESS MEASURED: **19.80 mm**
 AVERAGE THICKNESS MEASURED: 19.80 mm

Rdg.	B/L Thick. MM/YYYY		Short Term mm/yr	Long Term mm/yr	Rem. Half Life
	04/2008	11/2016			
1	19.90	19.80	0.0116	0.0000	100.00
2	19.90	19.80	0.0116	0.0000	100.00
3	19.90	19.80	0.0116	0.0000	100.00
4	19.90	19.80	0.0116	0.0000	100.00
5	19.90	19.80	0.0116	0.0000	100.00
6	19.80	19.80	0.0000	0.0000	100.00

Description: 24" BOOT BOTTOM SHELL T-B

CML: 013-18

NOM. THICK.: Not Stated
 CA: 1.60 mm
 MIN. NOM.: Not Stated

MATERIAL:
 MINIMUM THICKNESS MEASURED: **25.70 mm**
 AVERAGE THICKNESS MEASURED: 25.77 mm

Rdg.	B/L Thick. MM/YYYY		Short Term mm/yr	Long Term mm/yr	Rem. Half Life
	04/2008	11/2016			
1	25.90	25.80	0.0116	0.0000	100.00
2	25.90	25.70	0.0232	0.0000	100.00
3	25.90	25.80	0.0116	0.0000	100.00
4	25.90	25.80	0.0116	0.0000	100.00
5	25.80	25.80	0.0000	0.0000	100.00
6	25.90	25.70	0.0232	0.0000	100.00

CLIENT:	TAQA North	PROV. REG. #:	Not Stated
FACILITY:	Chinchaga Gas Plant	SERIAL #:	2889A97
UNIT/AREA:	Gas Plant	OIP NO.:	603VS008
LSD:	C-032-H/094-H-08		
DESCRIPTION:	BC #2 Inlet Separator		

Description: 24" BOOT BOTTOM HEAD T-B

CML: 013-20

NOM. THICK.: Not Stated
 CA: 1.60 mm
 MIN. NOM.: Not Stated

MATERIAL:
 MINIMUM THICKNESS MEASURED: **24.90 mm**
 AVERAGE THICKNESS MEASURED: 25.03 mm

Rdg.	B/L Thick. MM/YYYY		Short Term mm/yr	Long Term mm/yr	Rem. Half Life
	04/2008	11/2016			
1	25.20	25.20	0.0000	0.0000	100.00
2	25.10	25.10	0.0000	0.0000	100.00
3	25.00	25.00	0.0000	0.0000	100.00
4	25.00	24.90	0.0116	0.0000	100.00
5	25.00	25.10	0.0000	0.0000	100.00
6	25.10	24.90	0.0232	0.0000	100.00

Description: 2" BOOT TEE E-W 150#

CML: 013-22

NOM. THICK.: 5.50 mm
 ASTM (-12.5%): 0.70 mm
 MIN. NOM.: 4.80 mm

MATERIAL:
 MINIMUM THICKNESS MEASURED: **4.30 mm**
 AVERAGE THICKNESS MEASURED: 5.50 mm

Rdg.	B/L Thick. MM/YYYY		Short Term mm/yr	Long Term mm/yr	Rem. Half Life
	04/2008	11/2016			
1	5.60	5.80	0.0000	0.0000	100.00
2	6.00	5.90	0.0116	0.0000	47.41
3	5.90	6.00	0.0000	0.0000	100.00
4	5.50	5.50	0.0000	0.0000	100.00
5	4.70	4.30	0.0464	0.0000	0.00

COMMENTS:
 2016/11 - RDG. # 5 CONFIRMED

CLIENT:	TAQA North	PROV. REG. #:	Not Stated
FACILITY:	Chinchaga Gas Plant	SERIAL #:	2889A97
UNIT/AREA:	Gas Plant	OIP NO.:	603VS008
LSD:	C-032-H/094-H-08		
DESCRIPTION:	BC #2 Inlet Separator		

Description: 4" FLOAT B/S 150#
CML: 013-24

 NOM. THICK.: 6.00 mm
 ASTM (-12.5%): 0.70 mm
 MIN. NOM.: 5.30 mm

 MATERIAL:
 MINIMUM THICKNESS MEASURED: **6.30 mm**
 AVERAGE THICKNESS MEASURED: 6.47 mm

Rdg.	B/L Thick. MM/YYYY		Short Term mm/yr	Long Term mm/yr	Rem. Half Life
	04/2008	11/2016			
1	6.70	6.30	0.0464	0.0000	10.78
2	6.70	6.40	0.0348	0.0000	15.80
3	6.70	6.50	0.0232	0.0000	25.86
4	6.70	6.40	0.0348	0.0000	15.80
5	6.80	6.60	0.0232	0.0000	28.02
6	6.60	6.60	0.0000	0.0000	100.00

Description: 4" FLOAT B/H N-E-S-W 150#
CML: 013-26

 NOM. THICK.: 6.00 mm
 ASTM (-12.5%): 0.70 mm
 MIN. NOM.: 5.30 mm

 MATERIAL:
 MINIMUM THICKNESS MEASURED: **5.20 mm**
 AVERAGE THICKNESS MEASURED: 5.23 mm

Rdg.	B/L Thick. MM/YYYY		Short Term mm/yr	Long Term mm/yr	Rem. Half Life
	04/2008	11/2016			
1	5.30	5.20	0.0116	0.0000	0.00
2	5.70	5.30	0.0464	0.0000	0.00
3	5.50	5.20	0.0348	0.0000	0.00
4	5.50	5.20	0.0348	0.0000	0.00

Description: 4" FLOAT B/S T-B 150#
CML: 013-28

 NOM. THICK.: 6.00 mm
 ASTM (-12.5%): 0.70 mm
 MIN. NOM.: 5.30 mm

 MATERIAL:
 MINIMUM THICKNESS MEASURED: **6.40 mm**
 AVERAGE THICKNESS MEASURED: 6.48 mm

Rdg.	B/L Thick. MM/YYYY		Short Term mm/yr	Long Term mm/yr	Rem. Half Life
	04/2008	11/2016			
1	6.20	6.40	0.0000	0.0000	100.00
2	6.40	6.50	0.0000	0.0000	100.00
3	6.40	6.60	0.0000	0.0000	100.00
4	6.20	6.50	0.0000	0.0000	100.00
5	6.40	6.50	0.0000	0.0000	100.00
6	6.40	6.40	0.0000	0.0000	100.00

CLIENT:	TAQA North	PROV. REG. #:	Not Stated
FACILITY:	Chinchaga Gas Plant	SERIAL #:	2889A97
UNIT/AREA:	Gas Plant	OIP NO.:	603VS008
LSD:	C-032-H/094-H-08		
DESCRIPTION:	BC #2 Inlet Separator		

Description: 4" FLOAT B/H N-E-S-W 150#
CML: 013-30

 NOM. THICK.: 6.00 mm
 ASTM (-12.5%): 0.70 mm
 MIN. NOM.: 5.30 mm

 MATERIAL:
 MINIMUM THICKNESS MEASURED: **5.20 mm**
 AVERAGE THICKNESS MEASURED: 5.25 mm

Rdg.	B/L Thick. MM/YYYY		Short Term mm/yr	Long Term mm/yr	Rem. Half Life
	04/2008	11/2016			
1	5.30	5.20	0.0116	0.0000	0.00
2	5.50	5.30	0.0232	0.0000	0.00
3	5.50	5.20	0.0348	0.0000	0.00
4	5.50	5.30	0.0232	0.0000	0.00

Description: 4" FLOAT B/S 150#
CML: 013-32

 NOM. THICK.: 6.00 mm
 ASTM (-12.5%): 0.70 mm
 MIN. NOM.: 5.30 mm

 MATERIAL:
 MINIMUM THICKNESS MEASURED: **6.30 mm**
 AVERAGE THICKNESS MEASURED: 6.30 mm

Rdg.	B/L Thick. MM/YYYY		Short Term mm/yr	Long Term mm/yr	Rem. Half Life
	04/2008	11/2016			
1	6.30	6.30	0.0000	0.0000	100.00
2	6.50	6.30	0.0232	0.0000	21.55
3	6.70	6.30	0.0464	0.0000	10.78
4	6.50	6.30	0.0232	0.0000	21.55
5	6.50	6.30	0.0232	0.0000	21.55
6	6.50	6.30	0.0232	0.0000	21.55

Description: 4" FLOAT B/H N-E-S-W 150#
CML: 013-34

 NOM. THICK.: 6.00 mm
 ASTM (-12.5%): 0.70 mm
 MIN. NOM.: 5.30 mm

 MATERIAL:
 MINIMUM THICKNESS MEASURED: **5.20 mm**
 AVERAGE THICKNESS MEASURED: 5.28 mm

Rdg.	B/L Thick. MM/YYYY		Short Term mm/yr	Long Term mm/yr	Rem. Half Life
	04/2008	11/2016			
1	5.30	5.30	0.0000	0.0000	0.00
2	5.30	5.30	0.0000	0.0000	0.00
3	5.30	5.30	0.0000	0.0000	0.00
4	5.30	5.20	0.0116	0.0000	0.00

CLIENT:	TAQA North	PROV. REG. #:	Not Stated
FACILITY:	Chinchaga Gas Plant	SERIAL #:	2889A97
UNIT/AREA:	Gas Plant	OIP NO.:	603VS008
LSD:	C-032-H/094-H-08		
DESCRIPTION:	BC #2 Inlet Separator		

Description: 4" 90L T-B 150#

CML: 013-36

NOM. THICK.: 6.00 mm
 ASTM (-12.5%): 0.70 mm
 MIN. NOM.: 5.30 mm

MATERIAL:
 MINIMUM THICKNESS MEASURED: **5.80 mm**
 AVERAGE THICKNESS MEASURED: 5.98 mm

Rdg.	B/L Thick. MM/YYYY		Short Term mm/yr	Long Term mm/yr	Rem. Half Life
	04/2008	11/2016			
1	6.00	6.20	0.0000	0.0000	100.00
2	5.70	6.10	0.0000	0.0000	100.00
3	5.60	5.90	0.0000	0.0000	100.00
4	5.60	5.90	0.0000	0.0000	100.00
5	5.60	5.80	0.0000	0.0000	100.00
6	6.50	6.00	0.0580	0.0000	6.03

COMMENTS:
 2008/04 - READING #6 @ H.A.Z.

Description: 2" 90L T-B 150#

CML: 013-38

NOM. THICK.: 3.90 mm
 ASTM (-12.5%): 0.50 mm
 MIN. NOM.: 3.40 mm

MATERIAL:
 MINIMUM THICKNESS MEASURED: **4.00 mm**
 AVERAGE THICKNESS MEASURED: 4.06 mm

Rdg.	B/L Thick. MM/YYYY		Short Term mm/yr	Long Term mm/yr	Rem. Half Life
	04/2008	11/2016			
1	4.30	4.00	0.0348	0.0000	8.62
2	4.10	4.10	0.0000	0.0000	100.00
3	4.10	4.10	0.0000	0.0000	100.00
4	4.10	4.10	0.0000	0.0000	100.00
5	5.10	4.00	0.1276	0.0000	2.35

CLIENT:	TAQA North	PROV. REG. #:	Not Stated
FACILITY:	Chinchaga Gas Plant	SERIAL #:	2889A97
UNIT/AREA:	Gas Plant	OIP NO.:	603VS008
LSD:	C-032-H/094-H-08		
DESCRIPTION:	BC #2 Inlet Separator		

Description: 2" 90L T-B 150#
CML: 013-40

 NOM. THICK.: 3.90 mm
 ASTM (-12.5%): 0.50 mm
 MIN. NOM.: 3.40 mm

 MATERIAL:
 MINIMUM THICKNESS MEASURED: **3.70 mm**
 AVERAGE THICKNESS MEASURED: 3.86 mm

Rdg.	B/L Thick. MM/YYYY		Short Term mm/yr	Long Term mm/yr	Rem. Half Life
	04/2008	11/2016			
1	3.80	3.70	0.0116	0.0000	12.93
2	4.10	3.90	0.0232	0.0000	10.78
3	4.00	3.90	0.0116	0.0000	21.55
4	4.00	3.90	0.0116	0.0000	21.55
5	4.00	3.90	0.0116	0.0000	21.55

Description: 3" 90L T-B 150#
CML: 013-42

 NOM. THICK.: 5.50 mm
 ASTM (-12.5%): 0.70 mm
 MIN. NOM.: 4.80 mm

 MATERIAL:
 MINIMUM THICKNESS MEASURED: **5.30 mm**
 AVERAGE THICKNESS MEASURED: 5.46 mm

Rdg.	B/L Thick. MM/YYYY		Short Term mm/yr	Long Term mm/yr	Rem. Half Life
	04/2008	11/2016			
1	6.30	5.30	0.1160	0.0000	2.16
2	5.60	5.40	0.0232	0.0000	12.93
3	5.60	5.30	0.0348	0.0000	7.18
4	5.40	5.60	0.0000	0.0000	100.00
5	5.70	5.70	0.0000	0.0000	100.00

Description: 2" 90L T-B 150#
CML: 013-44

 NOM. THICK.: 3.90 mm
 ASTM (-12.5%): 0.50 mm
 MIN. NOM.: 3.40 mm

 MATERIAL:
 MINIMUM THICKNESS MEASURED: **3.80 mm**
 AVERAGE THICKNESS MEASURED: 3.86 mm

Rdg.	B/L Thick. MM/YYYY		Short Term mm/yr	Long Term mm/yr	Rem. Half Life
	04/2008	11/2016			
1	3.90	3.80	0.0116	0.0000	17.24
2	4.00	3.90	0.0116	0.0000	21.55
3	3.90	3.90	0.0000	0.0000	100.00
4	3.70	3.80	0.0000	0.0000	100.00
5	3.90	3.90	0.0000	0.0000	100.00

CLIENT:	TAQA North	PROV. REG. #:	Not Stated
FACILITY:	Chinchaga Gas Plant	SERIAL #:	2889A97
UNIT/AREA:	Gas Plant	OIP NO.:	603VS008
LSD:	C-032-H/094-H-08		
DESCRIPTION:	BC #2 Inlet Separator		

Description: 2" 90L T-B 150#

CML: 013-46

NOM. THICK.: 5.50 mm
 ASTM (-12.5%): 0.70 mm
 MIN. NOM.: 4.80 mm

MATERIAL:
 MINIMUM THICKNESS MEASURED: **4.10 mm**
 AVERAGE THICKNESS MEASURED: 4.38 mm

Rdg.	B/L Thick. MM/YYYY		Short Term mm/yr	Long Term mm/yr	Rem. Half Life
	04/2008	11/2016			
1	4.50	4.40	0.0116	0.0000	0.00
2	4.20	4.50	0.0000	0.0000	0.00
3	4.20	4.10	0.0116	0.0000	0.00
4	4.40	4.60	0.0000	0.0000	0.00
5	4.50	4.30	0.0232	0.0000	0.00

COMMENTS:
 2008/04 - READING BELOW MINIMUM THICKNESS.
 2016/11 - LOW READINGS CONFIRMED

Description: 12" 90L B-T 150#

CML: 013-48

NOM. THICK.: 9.50 mm
 ASTM (-12.5%): 1.20 mm
 MIN. NOM.: 8.30 mm

MATERIAL:
 MINIMUM THICKNESS MEASURED: **9.00 mm**
 AVERAGE THICKNESS MEASURED: 9.38 mm

Rdg.	B/L Thick. MM/YYYY		Short Term mm/yr	Long Term mm/yr	Rem. Half Life
	04/2008	11/2016			
1	9.40	9.50	0.0000	0.0000	100.00
2	9.40	9.50	0.0000	0.0000	100.00
3	9.20	9.50	0.0000	0.0000	100.00
4	9.30	9.50	0.0000	0.0000	100.00
5	9.10	9.20	0.0000	0.0000	100.00
6	8.90	9.10	0.0000	0.0000	100.00
7	8.80	9.00	0.0000	0.0000	100.00
8	8.90	9.20	0.0000	0.0000	100.00
9	8.90	9.20	0.0000	0.0000	100.00
10	9.20	9.50	0.0000	0.0000	100.00
11	9.20	9.70	0.0000	0.0000	100.00
12	9.10	9.60	0.0000	0.0000	100.00

CLIENT:	TAQA North	PROV. REG. #:	Not Stated
FACILITY:	Chinchaga Gas Plant	SERIAL #:	2889A97
UNIT/AREA:	Gas Plant	OIP NO.:	603VS008
LSD:	C-032-H/094-H-08		
DESCRIPTION:	BC #2 Inlet Separator		

Description: 2" 90L E-N 150#
CML: 013-50

 NOM. THICK.: 3.90 mm
 ASTM (-12.5%): 0.50 mm
 MIN. NOM.: 3.40 mm

 MATERIAL:
 MINIMUM THICKNESS MEASURED: **3.70 mm**
 AVERAGE THICKNESS MEASURED: 3.76 mm

Rdg.	B/L Thick. MM/YYYY		Short Term mm/yr	Long Term mm/yr	Rem. Half Life
	11/2016				
1	3.70		0.0000	0.0000	
2	3.70		0.0000	0.0000	
3	3.80		0.0000	0.0000	
4	3.80		0.0000	0.0000	
5	3.80		0.0000	0.0000	

Description: 2" INNER 90° ELBOW W-E 150#
CML: 013-55

 NOM. THICK.: 3.90 mm
 ASTM (-12.5%): 0.50 mm
 MIN. NOM.: 3.41 mm

 MATERIAL:
 MINIMUM THICKNESS MEASURED: **3.80 mm**
 AVERAGE THICKNESS MEASURED: 3.80 mm

Rdg.	B/L Thick. MM/YYYY		Short Term mm/yr	Long Term mm/yr	Rem. Half Life
	11/2016				
1	3.80		0.0000	0.0000	
2	3.80		0.0000	0.0000	
3	3.80		0.0000	0.0000	
4	3.80		0.0000	0.0000	
5	3.80		0.0000	0.0000	

Description: 2" 90L EAST W-N 150#
CML: 013-60

 NOM. THICK.: 3.90 mm
 ASTM (-12.5%): 0.50 mm
 MIN. NOM.: 3.40 mm

 MATERIAL:
 MINIMUM THICKNESS MEASURED: **3.80 mm**
 AVERAGE THICKNESS MEASURED: 3.88 mm

Rdg.	B/L Thick. MM/YYYY		Short Term mm/yr	Long Term mm/yr	Rem. Half Life
	11/2016				
1	3.80		0.0000	0.0000	
2	3.90		0.0000	0.0000	
3	3.90		0.0000	0.0000	
4	3.90		0.0000	0.0000	
5	3.90		0.0000	0.0000	

CLIENT:	TAQA North	PROV. REG. #:	Not Stated
FACILITY:	Chinchaga Gas Plant	SERIAL #:	2889A97
UNIT/AREA:	Gas Plant	OIP NO.:	603VS008
LSD:	C-032-H/094-H-08		
DESCRIPTION:	BC #2 Inlet Separator		

Description: 2" 90L W-N 150#
CML: 013-65

 NOM. THICK.: 3.90 mm
 ASTM (-12.5%): 0.50 mm
 MIN. NOM.: 3.40 mm

 MATERIAL:
 MINIMUM THICKNESS MEASURED: **3.60 mm**
 AVERAGE THICKNESS MEASURED: 3.76 mm

Rdg.	B/L Thick. MM/YYYY	Short Term mm/yr	Long Term mm/yr	Rem. Half Life
	11/2016			
1	3.70	0.0000	0.0000	
2	4.10	0.0000	0.0000	
3	3.70	0.0000	0.0000	
4	3.70	0.0000	0.0000	
5	3.60	0.0000	0.0000	

Description: 2" 90L S-W 150#
CML: 013-70

 NOM. THICK.: 3.90 mm
 ASTM (-12.5%): 0.50 mm
 MIN. NOM.: 3.40 mm

 MATERIAL:
 MINIMUM THICKNESS MEASURED: **3.50 mm**
 AVERAGE THICKNESS MEASURED: 3.56 mm

Rdg.	B/L Thick. MM/YYYY	Short Term mm/yr	Long Term mm/yr	Rem. Half Life
	11/2016			
1	3.50	0.0000	0.0000	
2	3.50	0.0000	0.0000	
3	3.60	0.0000	0.0000	
4	3.70	0.0000	0.0000	
5	3.50	0.0000	0.0000	

Description: 2" CIRC PIPE T-N-B-S 150#
CML: 013-75

 NOM. THICK.: 3.90 mm
 ASTM (-12.5%): 0.50 mm
 MIN. NOM.: 3.40 mm

 MATERIAL:
 MINIMUM THICKNESS MEASURED: **3.90 mm**
 AVERAGE THICKNESS MEASURED: 4.08 mm

Rdg.	B/L Thick. MM/YYYY	Short Term mm/yr	Long Term mm/yr	Rem. Half Life
	11/2016			
1	4.40	0.0000	0.0000	
2	3.90	0.0000	0.0000	
3	3.90	0.0000	0.0000	
4	4.10	0.0000	0.0000	

CLIENT:	TAQA North	PROV. REG. #:	Not Stated
FACILITY:	Chinchaga Gas Plant	SERIAL #:	2889A97
UNIT/AREA:	Gas Plant	OIP NO.:	603VS008
LSD:	C-032-H/094-H-08		
DESCRIPTION:	BC #2 Inlet Separator		

Description: 2" CIRC PIPE T-E-B-W 150#
CML: 013-80

 NOM. THICK.: 3.90 mm
 ASTM (-12.5%): 0.50 mm
 MIN. NOM.: 3.40 mm

 MATERIAL:
 MINIMUM THICKNESS MEASURED: **3.90 mm**
 AVERAGE THICKNESS MEASURED: 3.93 mm

Rdg.	B/L Thick. MM/YYYY	Short Term mm/yr	Long Term mm/yr	Rem. Half Life
	11/2016			
1	3.90	0.0000	0.0000	
2	3.90	0.0000	0.0000	
3	3.90	0.0000	0.0000	
4	4.00	0.0000	0.0000	

Description: 2" 90L E-N 150#
CML: 013-85

 NOM. THICK.: 3.90 mm
 ASTM (-12.5%): 0.50 mm
 MIN. NOM.: 3.40 mm

 MATERIAL:
 MINIMUM THICKNESS MEASURED: **3.70 mm**
 AVERAGE THICKNESS MEASURED: 3.75 mm

Rdg.	B/L Thick. MM/YYYY	Short Term mm/yr	Long Term mm/yr	Rem. Half Life
	11/2016			
1	3.80	0.0000	0.0000	
2	3.70	0.0000	0.0000	
3	3.80	0.0000	0.0000	
4	3.70	0.0000	0.0000	

Description: 2" 90L S-E 150#
CML: 013-90

 NOM. THICK.: 3.90 mm
 ASTM (-12.5%): 0.50 mm
 MIN. NOM.: 3.40 mm

 MATERIAL:
 MINIMUM THICKNESS MEASURED: **3.60 mm**
 AVERAGE THICKNESS MEASURED: 3.62 mm

Rdg.	B/L Thick. MM/YYYY	Short Term mm/yr	Long Term mm/yr	Rem. Half Life
	11/2016			
1	3.60	0.0000	0.0000	
2	3.60	0.0000	0.0000	
3	3.60	0.0000	0.0000	
4	3.60	0.0000	0.0000	
5	3.70	0.0000	0.0000	



Facility:	Chinchaga C-32-H/94-H-8	PRN:	PV69P8797 (BC)	Date of Inspection:	8-Jun-2017	
Equipment Type:	Separator (BC #1)		Field Tag #:	603VS008		
Service:	<input type="checkbox"/> Sour <input checked="" type="checkbox"/> Sweet <input type="checkbox"/> Cryogenic <input type="checkbox"/> Air <input type="checkbox"/> Steam		MAWP:	275 PSI @120F		
Fluid:	Emulsion		Manway	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Size of Manway	
Scope of Inspection:		Type of Inspection:		Cleaning:	Access:	
<input type="checkbox"/> Pre-commissioning		<input type="checkbox"/> AE	<input type="checkbox"/> MT	<input type="checkbox"/> RT	<input checked="" type="checkbox"/> Good	<input checked="" type="checkbox"/> Full
<input type="checkbox"/> Initial		<input type="checkbox"/> ET	<input type="checkbox"/> MFL	<input type="checkbox"/> UT	<input type="checkbox"/> Fair	<input type="checkbox"/> Partial
<input checked="" type="checkbox"/> Re-inspection		<input type="checkbox"/> LT	<input type="checkbox"/> PT	<input checked="" type="checkbox"/> VT	<input type="checkbox"/> Inadequate	<input type="checkbox"/> External
		<input type="checkbox"/> HT	<input type="checkbox"/> Other			
Note: Add pages and sketches as needed						
Observations:		<input type="checkbox"/> External		<input checked="" type="checkbox"/> Internal		
Internal:						
<ul style="list-style-type: none"> • Manway free of pits • Vessel is uncoated • Manway shell is in excellent condition. No pitting observed. • 1st stage of shell is in excellent condition circumferentially. Some general erosion corrosion on splash impact area from inlet diverter. • 2nd stage (past weir) nozzles in good condition, no visible cracking or pitting. • Weir in good condition • Drain nozzle in good condition. • No general corrosion observed, oily residue persistent throughout vessel surfaces. • Glycol heat lines have stainless fittings and are in like new condition. • Glycol heat trace lines are in fouled externally and unable to inspect. Small portion scraped and inspected has no pitting corrosion observed. • Bottom end of shell is in good condition with no pitting observed. Nozzles in good condition, no pits or cracks. 						
External:						

Recommendations: Perform UT to determine remaining wall on vessel, particularly on splash area from inlet diverter.						
Suitable for further service:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Remedial Action Priority Level:	<input type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Inspection Performed By:	Darren Isaac		Click here to enter text.	Date of Report:	12-Jun-2017	
Signature:						
Follow Up Inspection Required:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	By Date:	DD-Mon-YYYY		



Pictures:



Figure 1 Manway

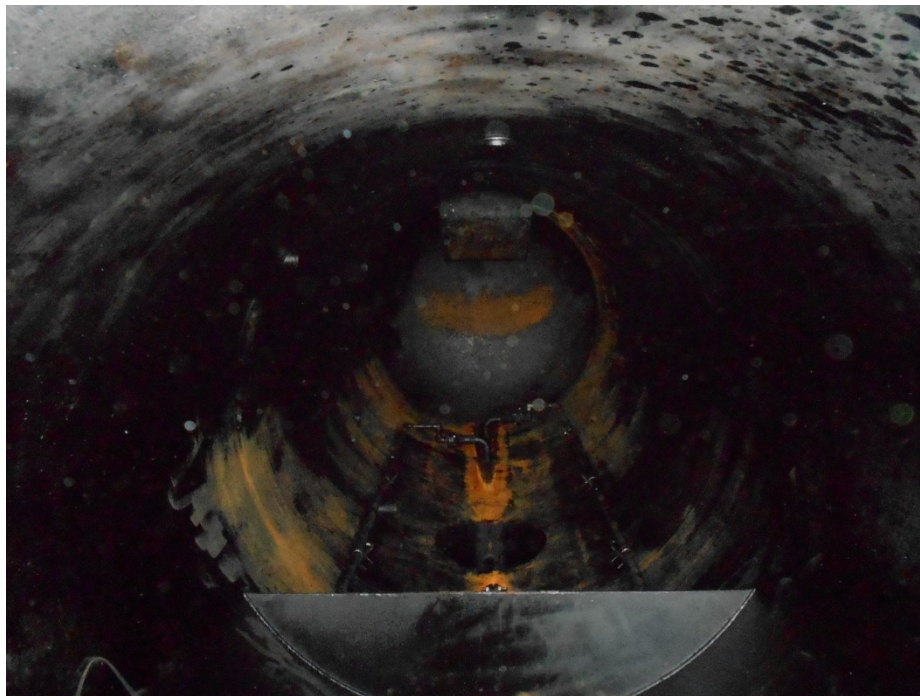


Figure 2 Internal Overview



Figure 3 Weir



Figure 4 Nozzles



Figure 5 PSV Nozzle



Figure 6 Upper Shell Nozzle



Figure 7 Lower Shell Drain Nozzle



Figure 8 Glycol Heat Trace Lines and Boot



Figure 9 South Floor Drain Nozzle



Figure 10 Looking Down Into The Boot

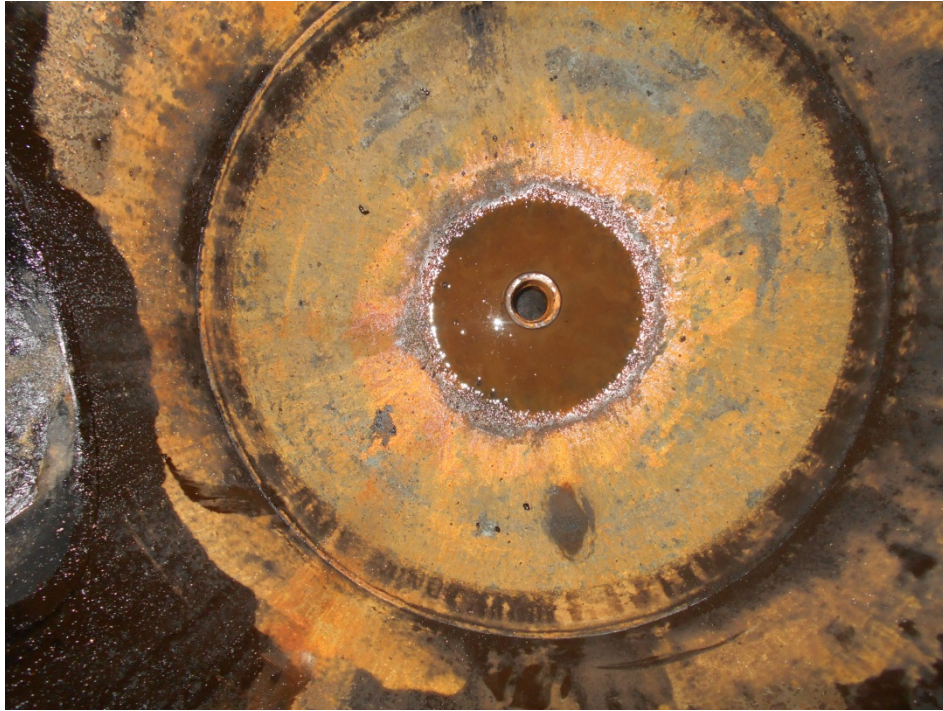


Figure 11 Lower Shell on Boot



Figure 12 Glycol Heat Trace Nozzle and Piping



Figure 13 Glycol Heat Trace Nozzle and Piping Top View



Figure 14 Inlet and Diverter Plate



Figure 15 Nozzle Top Down view