



Client:
CNRL

UT SURVEY	Accept
PSV INSP	Accept
VTE INSP	Accept
VTI INSP	N/A

EQUIPMENT DEFICIENCY SUMMARY

District:	Medicine Hat	Facility	Grand Forks Central	Location/LSD	07-32-012-13W4
Equipment Name	GROUP TREATER			Prov Reg No.:	0164522
Serial No.:	80-12-44	Equip No.:	N/S	National Board No.:	N/S

UT SURVEY LATEST UT DATE USED IN SUMMARY February 20, 2019

LOCATION	Nom - CA	Low RDG	Avg RD	TMin	UT Flag	RECOMMENDATION	QUALITY ACTION	RESULT
N/A					No TMLs Flagged for This	N/A	N/A	Accept

PSV INSPECTION LATEST PSV INSP DATE USED IN SUMMARY February 20, 2019

DEFICIENCY	RECOMMENDATION	QUALITY ACTION	RESULT
No Deficiencies Found	N/A	N/A	Accept

VISUAL EXTERNAL INSPECTION LATEST VTE DATE USED IN SUMMARY February 20, 2019

DEFICIENCY	RECOMMENDATION	QUALITY ACTION	RESULT
No Deficiencies Found	N/A	N/A	Accept

VISUAL INTERNAL INSPECTION LATEST VTI DATE USED IN SUMMARY

DEFICIENCY	RECOMMENDATION	QUALITY ACTION	RESULT
N/A	N/A	N/A	N/A



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PRESSURE EQUIPMENT DATA REPORT

EQUIPMENT GENERAL INFORMATION

District:	Medicine Hat		
Facility:	Grand Forks Central		
Location /LSD:	07-32-012-13W4	Operating Province:	Alberta
Equipment Name:	GROUP TREATER		
Equipment Status:	Operating	Orientation:	Horizontal
Skid No.:	GROUP TREATER	Unit:	

EQUIPMENT STATIC DATA

AB Registration No.:	0164522		Serial No.:	80-12-44	
Registration No./Other:			Equipment No.:	N/S	
CRN NO.:	D-9230.2		Unique ID No.:		
National Board No.:	N/S		Oncor ID No.:	159601	
Manufacturer:	PROCESS INDUSTRIES		Year Built:	1990	
MAWP:	75.00 (psi)	517.11 (Kpa)	Temperature:	350.00 (F)	176.67 (C)
Diameter.:	96.000 (In)	2438.40 (mm)	Length:	420.00 (In)	10668.00 (mm)
Radiography:	Spot		Heat Treatment:	No	
Corrosion allowance:	0.125 (In)	3.175 (mm)	MDMT:	-20.00	
Lining Or Coated:			Painted:	Yes	
Insulated:	Yes		Internally Clad:		
Hand Hole:	No		Support Type:	Saddle	
Manway:	Yes		Manway Size(In):	24.00	
Capacity/Volume(m3):	52.00		Nozzle Rating:	150.00	

MATERIALS/COMPONENTS

Name	Joint Efficiency	Outside Diameter(in.)	Head Type	Material Type	Stress Value (PSI)	Nominal Thickness(In.)
SHELL	1.00	96.000		SA-516 70	17500	0.38
HEAD	1.00	96.000	Ellipsoidal	SA-516 70	17500	0.38
BOOT SHELL	1.00	24.000		SA-516 70	17500	0.38
BOOT HEAD	1.00	24.000	Ellipsoidal	Unknown	17500	
HEAD (FT)	1.00	96.000	Ellipsoidal	SA-516 70	17500	0.63

PIPING STATIC DATA

Primary Flange Rating:	150	ASME B16.5 - Table 2-1.1 @ 150F:	285 (psi)
Pressure Use For TMin:	Vess Design Press	Piping Operating Press:	75 (psi)
Stress Value:	20000 (psi)	E Value:	1.00 Joint: SMLS

SERVICE CONDITIONS

Sweet	Sour ✓	Oil ✓	Gas ✓	Water ✓
Amine	LPG	Condensate	Air	Glycol

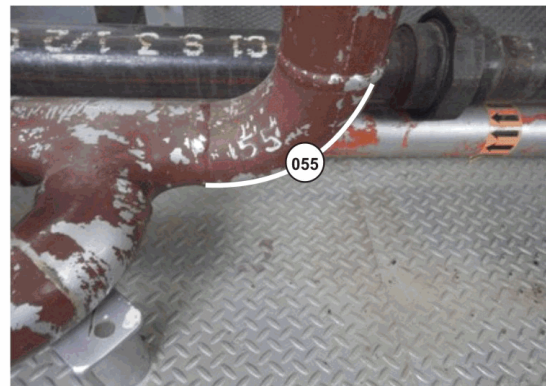
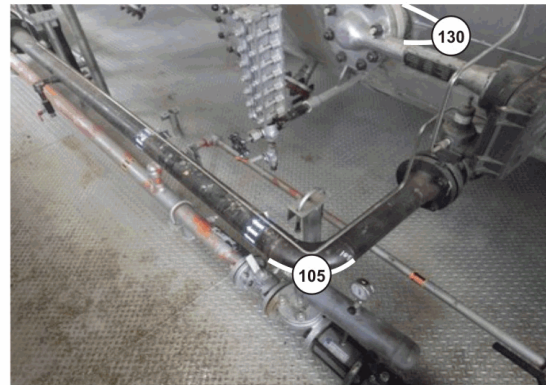
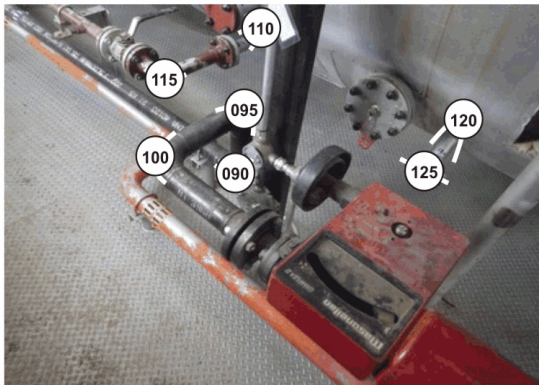
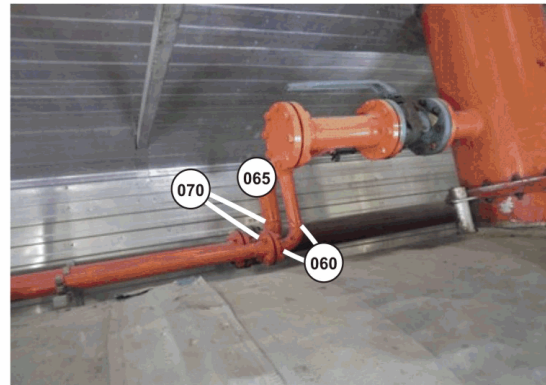
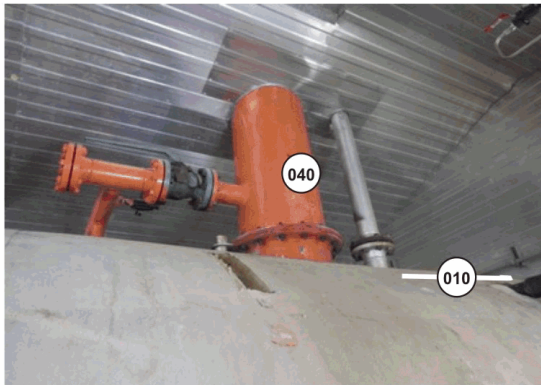
COMMENTS

MODIFICATIONS BY PROCESS INDUSTRIES INC AUG 1990

NO SAFE ACCESS TO P.S.V

EXAMINATION ILLUSTRATION

DISTRICT:	Medicine Hat	FACILITY:	Grand Forks Central	LOCATION/LSD:	07-32-012-13W4
EQUIP NAME:	GROUP TREATER			PROV REG No.:	0164522
SERIAL No.:	80-12-44	Equip No.:	N/S	National Board No.:	N/S



NOTES:



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ULTRASONIC CORROSION SURVEY REPORT

DISTRICT:	Medicine Hat	FACILITY:	Grand Forks Central	LOCATION/LSD:	07-32-012-13W4
EQUIP NAME:	GROUP TREATER			PROV REG No.:	0164522
SERIAL No.:	80-12-44	Equip No.:	N/S	National Board No.:	N/S

SUMMARY

TYPE	LAST INSPECTIONS	INSPECTION INTERVAL (YEARS)	CORROSION RATE (IN/YR)		REMAINING LIFE (YEARS)	NEXT INSPECTION DATE
			SHORT TERM	LONG TERM		
VESSEL	Feb 20, 2019	5.0	0.0015	0.0015	198.0	Feb 20, 2024
PIPING	Feb 20, 2019	5.0	0.0077	0.0077	30.4	

VESSEL SURVEY READINGS

POINT NUMBER	TYPE	POINT DATA (INCH)			DATE	SURVEY READINGS			CALCULATIONS				Flag
		NOM.	C.A.	NOM-CA		LOW	AVG	T Req (inch)	short term corr	long term	remaining life		
005	HEAD	0.3750	0.1250	0.2500	Feb 20/19	0.684	0.693	0.205	0.0000	0.0000	198.0	NO COMMENTS	
					Jun 1/16	0.684	0.695	0.205					
010	SHELL	0.3750	0.1250	0.2500	Feb 20/19	0.366	0.373	0.205	0.0000	0.0000	198.0	NO COMMENTS	
					Jun 1/16	0.366	0.370	0.205					
015	SHELL	0.3750	0.1250	0.2500	Feb 20/19	0.366	0.375	0.205	0.0000	0.0000	198.0	NO COMMENTS	
					Jun 1/16	0.363	0.370	0.205					
020	SHELL	0.3750	0.1250	0.2500	Feb 20/19	0.373	0.383	0.205	0.0000	0.0000	198.0	NO COMMENTS	
					Jun 1/16	0.372	0.375	0.205					
025	SHELL	0.3750	0.1250	0.2500	Feb 20/19	0.381	0.395	0.205	0.0000	0.0000	198.0	NO COMMENTS	
					Jun 1/16	0.381	0.390	0.205					
030	HEAD	0.3750	0.1250	0.2500	Feb 20/19	0.454	0.462	0.205	0.0000	0.0000	198.0	NO COMMENTS	
					Jun 1/16	0.454	0.465	0.205					
035	HEAD	0.3750	0.1250	0.2500	Feb 20/19	0.457	0.466	0.205	0.0000	0.0000	198.0	NO COMMENTS	
					Jun 1/16	0.455	0.470	0.205					
040	BOOT SHELL	0.3750	0.1250	0.2500	Feb 20/19	0.371	0.380	0.051	0.0015	0.0015	217.6	NO COMMENTS	
					Jun 1/16	0.375	0.385	0.051					

PIPING SURVEY READINGS

POINT NUMBER	TYPE	SIZE	SCH	POINT DATA (INCH)			DATE	SURVEY READINGS			CALCULATIONS				Flag
				NOM.	Mill Tol./CA	NOM-CA		LOW	AVG	T Req (inch)	short term corr	long term corr rate	remaining life		
045	90L 3 160	3.00	160	0.4380	0.0548	0.3833	Feb 20/19	0.430	0.443	0.007	0.0011	0.0011	384.4	NO COMMENTS	
							Jun 1/16	0.433	0.450	0.007					
050	90L 3 STD	3.00	STD	0.2160	0.0270	0.1890	Feb 20/19	0.177	0.185	0.007	0.0000	0.0000	198.0	NO COMMENTS	
							Jun 1/16	0.177	0.190	0.007					
055	90L 3 STD	3.00	STD	0.2160	0.0270	0.1890	Feb 20/19	0.198	0.207	0.007	0.0000	0.0000	198.0	NO COMMENTS	
							Jun 1/16	0.194	0.205	0.007					
060	90L 2 XS	2.00	XS	0.2180	0.0273	0.1908	Feb 20/19	0.196	0.200	0.004	0.0000	0.0000	198.0	NO COMMENTS	
							Jun 1/16	0.191	0.200	0.004					
065	90L 3 80	3.00	80	0.3000	0.0375	0.2625	Feb 20/19	0.290	0.300	0.007	0.0000	0.0000	198.0	NO COMMENTS	
							Jun 1/16	0.290	0.300	0.007					



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POINT NUMBER	TYPE	SIZE	SCH	POINT DATA (INCH)			DATE	SURVEY READINGS			CALCULATIONS			Flag
				NOM.	Mill Tol./CA	NOM-CA		LOW	AVG	T Req (inch)	short term corr	long term corr rate	remaining life	
070	90L 3 80	3.00	80	0.3000	0.0375	0.2625	Feb 20/19	0.291	0.300	0.007	0.0000	0.0000	198.0	NO COMMENTS
		3.00	80				Jun 1/16	0.289	0.295	0.007				
075	BAND 3 160	3.00	160	0.4380	0.0548	0.3833	Feb 20/19	0.414	0.423	0.007	0.0011	0.0011	369.9	NO COMMENTS
		3.00	160				Jun 1/16	0.417	0.430	0.007				
080	90L 3 40	3.00	40	0.2160	0.0270	0.1890	Feb 20/19	0.197	0.215	0.007	0.0000	0.0000	198.0	NO COMMENTS
		3.00	40				Jun 1/16	0.197	0.215	0.007				
085	90L 3 80	3.00	80	0.3000	0.0375	0.2625	Feb 20/19	0.262	0.275	0.007	0.0000	0.0000	198.0	NO COMMENTS
		3.00	80				Jun 1/16	0.259	0.275	0.007				
090	90L 3 80	3.00	80	0.3000	0.0375	0.2625	Feb 20/19	0.256	0.273	0.007	0.0000	0.0000	198.0	NO COMMENTS
		3.00	80				Jun 1/16	0.253	0.270	0.007				
095	90L 3 80	3.00	80	0.3000	0.0375	0.2625	Feb 20/19	0.266	0.280	0.007	0.0000	0.0000	198.0	NO COMMENTS
		3.00	80				Jun 1/16	0.264	0.280	0.007				
100	90L 3 80	3.00	80	0.3000	0.0375	0.2625	Feb 20/19	0.283	0.290	0.007	0.0000	0.0000	198.0	NO COMMENTS
		3.00	80				Jun 1/16	0.277	0.290	0.007				
105	90L 3 40	3.00	40	0.2160	0.0270	0.1890	Feb 20/19	0.174	0.193	0.007	0.0055	0.0055	30.4	NO COMMENTS
		3.00	40				Jun 1/16	0.189	0.200	0.007				
Comments: CORROSION NOTED		3.00	40				Jun 1/16	0.189	0.200	0.007				
110	BAND 2 160	2.00	160	0.3440	0.0430	0.3010	Feb 20/19	0.336	0.343	0.004	0.0000	0.0000	198.0	NO COMMENTS
		2.00	160				Jun 1/16	0.333	0.345	0.004				
115	90L 2 XS	2.00	XS	0.2180	0.0273	0.1908	Feb 20/19	0.193	0.200	0.004	0.0000	0.0000	198.0	NO COMMENTS
		2.00	XS				Jun 1/16	0.189	0.200	0.004				
120	BAND 2 160	2.00	160	0.3440	0.0430	0.3010	Feb 20/19	0.329	0.333	0.004	0.0000	0.0000	198.0	NO COMMENTS
		2.00	160				Jun 1/16	0.326	0.335	0.004				
125	90L 2 XS	2.00	XS	0.2180	0.0273	0.1908	Feb 20/19			0.004	0.0000	0.0000	198.0	
		2.00	XS				Jun 1/16	0.182	0.200	0.004				
130	BAND 2 160	2.00	160	0.3440	0.0430	0.3010	Feb 20/19	0.318	0.323	0.004	0.0000	0.0000	198.0	NO COMMENTS
		2.00	160				Jun 1/16	0.317	0.330	0.004				
135	BAND 2 160	2.00	160	0.3440	0.0430	0.3010	Feb 20/19	0.320	0.330	0.004	0.0077	0.0077	40.9	NO COMMENTS
		2.00	160				Jun 1/16	0.341	0.350	0.004				
140	90L 3 STD	3.00	STD	0.2160	0.0270	0.1890	Feb 20/19	0.207	0.213	0.007	0.0051	0.0051	39.0	NO COMMENTS
		3.00	STD				Jun 1/16	0.221	0.230	0.007				
145	90L 3 160	3.00	160	0.4380	0.0548	0.3833	Feb 20/19			0.007	0.0000	0.0000	198.0	
		3.00	160				Jun 1/16	0.431	0.455	0.007				

INSPECTOR-EQUIPMENT DATA

Inspected By	Signature	CGSB Level	CGSB No.	Survey Dat	UT Equipment	Due Date OF Calibration	NDE Procedure #
Randal Longhe		1/SNT LV 2	19518	02/20/2019	DanaTr 1_05063860_Echo 9	08/02/2019	WQS UT-001



Client:
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District	Medicine Hat	Facility	Grand Forks Central	Location/LSD	07-32-012-13W4
Equipment Name:	GROUP TREATER			Prov Reg No.:	0164522
Serial No.:	80-12-44	Equip No.:	N/S	National Board No.:	N/S

External Inspection

Inspector:	Randal Longhe	ABSA PESL #93325	Signature:		Date:	02/20/2019
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External Corrosion

There was no significant external corrosion found on the vessel/piping

Accept

External Damage

There was no external corrosion found on the vessel/piping

Accept

Leakage

No Leaks were found on the vessel or piping connections

Accept

Vessel and Piping Supports

Vessel support is Saddle and is acceptable

Accept

Vessel support anchor bolts are in place and acceptable

Accept

Vessel Foundation is Metal and is acceptable

Accept

Piping is supported by clamp and is acceptable

Accept

Insulation/Paint

	Type	Findings	
Vessel	Insulated	Minor Tearing, Minor Denting, N/A Banding, Accept Seals/Joints	Accept
Inlet Piping	Painted	Accept	Accept
Outlet Piping	Painted	Accept	Accept

Pressure Envelope Flanging

	Bolting	Thread engagement	Gaskets	Flange Rating	
Manway	Accept	Accept	Accept	Accept	Accept
Vessel	NA				Accept
Inlet Piping	Accept	Accept	Accept	Accept	Accept
Outlet Piping	Accept	Accept	Accept	Accept	Accept
Other Piping	Accept	Accept	Accept	Accept	Accept

General

Pressure Gauge is acceptable, Temp Gauge is acceptable, Level Gauge is acceptable, Grounding is acceptable,

Accept

Comment



Client:
CNRL

PRESSURE RELIEF VALVE SUMMARY

District: Medicine Hat	Facility: Grand Forks Central	Location/LSD: 07-32-012-13W4
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PSV STATIC DATA

Tag/Equip No.:	164522	Serial No.:	CE-33880-A10
Manufacturer:	FARRIS	CRN No.:	N/S
Model No.:	26MA10-120/S6	Code Stamp:	
Side (Shell or Tube):	Shell	Outlet Size:	6
Inlet Size:	4	Outlet Type / ANSI Rating:	Flanged / 150
Inlet Type / ANSI Rating	Flanged / 150		

PSV SERVICE DATA

Set Date:	7 Jun, 2016	Service Interval:	60
Set Pressure (psig)	75	Capacity (scfm):	6104
Service Company:	TARPON	Next Service Date:	7 Jun, 2021

PSV FIELD INSPECTION

Inspector Randal Longhe **Company** Western Quality Services **Signature:**  **Inspection Date:** 20-Feb-2019

Inspection Type:

RESTRICTIONS	BLINDS	INLET: No Blinds found btwn vessels and psv inlet	Accept
		OUTLET: No blinds found btwn PSV and discharge point	Accept
	REDUCERS	INLET: No reducers found btwn Vessel(s) and PSV Inlet	Accept
		OUTLET: No reducers found btwn PSV and Discharge Point	Accept
	BLOCK VALVES	INLET: No block valve	Accept
		OUTLET: No block valve	Accept
SERVICING	SET PRESSURE	PSV set pressure is at or less than MAWP of all linked vessels in the system.	Accept
	SERVICE DATE	PSV set date is current at time of inspection	Accept
	SERVICE SEAL	Service seal is intact	Accept
OPERATION	TAGGING	Service tag is properly attached to the psv	Accept
	VIBRATION	None	Accept
	DISCHARGE	PSV Discharge point is in a safe location and is acceptable	Accept
	LEAKS	INLET: No visible leaks found at psv inlet connection	Accept
OUTLET: No visible leaks found at psv outlet connection		Accept	
INSTALLATION	PSV SUPPORTS	PSV supported	Accept
	ANGLE	PSV is installed in the proper upright positon	Accept

EQUIPMENT PROTECTED

Prov Reg No.	Equipment No.	Serial No.	Equipment Name	Status	MAWP
0164522	N/S	80-12-44	GROUP TREATER	Operating	75.00

PHOTOGRAPHS



NAMEPLATE



NAMEPLATE

PHOTOGRAPHS



OVERALL



PSV