

EQUIPMENT DEFICIENCY SUMMARY

District:	Red Deer	Facility	Wardlow	Location/LSD	02-31-022-11W4
Equipment Name	SEPARATOR			Prov Reg No.:	2619721
Serial No.:	2015.90	Equip No.:	V-100	National Board No.:	

UT SURVEY LATEST UT DATE USED IN SUMMARY September 21, 2016

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 September 21, 2016

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

VISUAL EXTERNAL INSPECTION LATEST VTE DATE USED IN SUMMARY September 21, 2016

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

PRESSURE EQUIPMENT DATA REPORT

EQUIPMENT GENERAL INFORMATION

District:	Red Deer		
Facility:	Wardlow		
Location /LSD:	02-31-022-11W4	Operating Province:	Alberta
Equipment Name:	SEPARATOR		
Equipment Status:	Operating	Orientation:	Vertical
Skid No.:	Unit:		

EQUIPMENT STATIC DATA

AB Registration No.:	2619721		Serial No.:	2015.90	
Registration No./Other:			Equipment No.:	V-100	
CRN NO.:	K0237.2		Unique ID No.:		
National Board No.:			Oncor ID No.:	153755	
Manufacturer:	Sure Weld Industries		Year Built:	1990	
MAWP:	1421.00 (psi)	9797.51 (Kpa)	Temperature:	100.00 (F)	37.78 (C)
Diameter.:	42.000 (In)	1066.80 (mm)	Length:	168.00 (In)	4267.20 (mm)
Radiography:	RT1		Heat Treatment:	No	
Corrosion allowance:	0.063 (In)	1.588 (mm)	MDMT:	32.00	
Lining Or Coated:			Painted:	Yes	
Insulated:	No		Internally Clad:		
Hand Hole:	Yes		Support Type:	Skirt	
Manway:	Yes		Manway Size(In):	18.00	
Capacity/Volume(m3):			Nozzle Rating:	600.00	

MATERIALS/COMPONENTS

Name	Joint Efficiency	Outside Diameter(In.)	Head Type	Material Type	Stress Value (PSI)	Nominal Thickness(In.)
SHELL	1.00	42.000		SA-516 70	17500	
HEAD	1.00	42.000	Ellipsoidal	SA-516 70	17500	

PIPING STATIC DATA

Primary Flange Rating:	600	ASME B16.5 - Table 2-1.1 @ 150F:	1480 (psi)
Pressure Use For TMin:	Vess Design Press	Piping Operating Press:	1421 (psi)
Stress Value:	20000 (psi)	E Value:	1.00 Joint: SMLS

SERVICE CONDITIONS

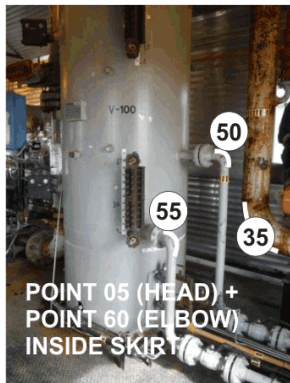
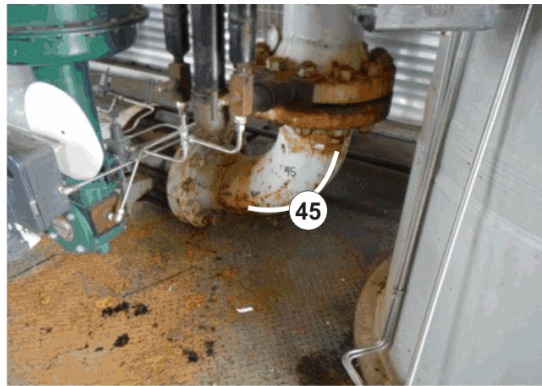
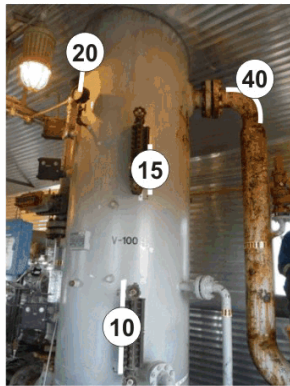
Sweet ✓	Sour	Oil	Gas	Water
Amine	LPG	Condensate	Air	Glycol

COMMENTS

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EXAMINATION ILLUSTRATION

DISTRICT:	Red Deer	FACILITY:	Wardlow	LOCATION/LSD:	02-31-022-11W4
EQUIP NAME:	SEPARATOR			PROV REG No.:	2619721
SERIAL No.:	2015.90	Equip No.:	V-100	National Board No.:	



POINT 05 (HEAD) +
 POINT 60 (ELBOW)
 INSIDE SKIRT



NOTES:

2619721

ULTRASONIC CORROSION SURVEY REPORT

DISTRICT:	Red Deer	FACILITY:	Wardlow	LOCATION/LSD:	02-31-022-11W4
EQUIP NAME:	SEPARATOR			PROV REG No.:	2619721
SERIAL No.:	2015.90	Equip No.:	V-100	National Board No.:	

SUMMARY

TYPE	LAST INSPECTIONS	INSPECTION INTERVAL (YEARS)	CORROSION RATE (IN/YR)		REMAINING LIFE (YEARS)	NEXT INSPECTION DATE
			SHORT TERM	LONG TERM		
VESSEL	Sep 21, 2016	5.0	0.0335	0.0335	3.4	Feb 21, 2020
PIPING	Sep 21, 2016	5.0	0.0070	0.0070	15.7	


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	
05	HEAD	0.0000	0.0625	-0.0625	Sep 21/16	1.704	1.720	1.589	0.0335	0.0335	3.4	NO COMMENTS
					Apr 26/14	1.785	1.810	1.589				
10	SHELL	0.0000	0.0625	-0.0625	Sep 21/16	1.787	1.790	1.652	0.0103	0.0103	13.1	NO COMMENTS
					Apr 26/14	1.812	1.830	1.652				
15	SHELL	0.0000	0.0625	-0.0625	Sep 21/16	1.783	1.790	1.652	0.0124	0.0124	10.6	NO COMMENTS
					Apr 26/14	1.813	1.830	1.652				
20	SHELL	0.0000	0.0625	-0.0625	Sep 21/16	1.773	1.780	1.652	0.0166	0.0166	7.3	NO COMMENTS
					Apr 26/14	1.813	1.830	1.652				
25	SHELL	0.0000	0.0625	-0.0625	Sep 21/16	1.768	1.775	1.652	0.0000	0.0000	198.0	NO COMMENTS
30	HEAD	0.0000	0.0625	-0.0625	Sep 21/16	1.738	1.755	1.589	0.0000	0.0000	198.0	NO COMMENTS

PIPING SURVEY READINGS

POINT NUMBER	TYPE	POINT DATA (INCH)			DATE	SURVEY READINGS			CALCULATIONS			Flag		
		SIZE	SCH	NOM.		Mill Tol./CA	NOM-CA	LOW	AVG	T Req (inch)	short term corr		long term corr rate	remaining life
35	90L 8 80	8.00	80	0.5000	0.0625	0.4375	Sep 21/16	0.485	0.500	0.306	0.0000	0.0000	198.0	NO COMMENTS
							Apr 26/14	0.483	0.500	0.306				
40	90L 6 XS	6.00	XS	0.4320	0.0540	0.3780	Sep 21/16	0.462	0.480	0.235	0.0000	0.0000	198.0	NO COMMENTS
45	90L 8 80	8.00	80	0.5000	0.0625	0.4375	Sep 21/16	0.477	0.490	0.306	0.0058	0.0058	29.4	NO COMMENTS
							Apr 26/14	0.491	0.505	0.306				
50	90L 2 XS	2.00	XS	0.2180	0.0273	0.1907	Sep 21/16	0.187	0.200	0.084	0.0058	0.0058	17.7	NO COMMENTS
							Apr 26/14	0.201	0.215	0.084				
55	90L 2 XS	2.00	XS	0.2180	0.0273	0.1907	Sep 21/16	0.195	0.200	0.084	0.0070	0.0070	15.7	NO COMMENTS
							Apr 26/14	0.212	0.230	0.084				
60	90L 1 XXS	1.00	XXS	0.3580	0.0447	0.3132	Sep 21/16	0.315	0.320	0.036	0.0016	0.0016	174.4	NO COMMENTS

INSPECTOR-EQUIPMENT DATA

Inspected By	Signature	CGSB Level	CGSB No.	Survey Dat	UT Equipment	Due Date OF Calibration	NDE Procedure #
Justin Orichowski		SNT LV 2	16325	09/21/2016	104_91638503_EPOCH4	06/27/2017	WQS UT-001

District	Red Deer	Facility	Wardlow	Location/LSD	02-31-022-11W4
Equipment Name:	SEPARATOR			Prov Reg No.:	2619721
Serial No.:	2015.90	Equip No.:	V-100	National Board No.:	

External Inspection

Inspector:	Justin Orichowski	ABSA PESL #:	758	Signature:		Date:	09/21/2016
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External Corrosion

General Minor :<0.020 external corrosion was found on South Piping
MINOR CORROSION ON INLET 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 Skirt 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	Painted	Accept	Accept
Inlet Piping	Painted	Peeling	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, Vibration is acceptable, Davit is acceptable,

Accept

Comment

PRESSURE RELIEF VALVE SUMMARY

District:	Red Deer	Facility:	Wardlow	Location/LSD:	02-31-022-11W4
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PSV STATIC DATA

Tag/Equip No.:	66048845	Serial No.:	89C3431
Manufacturer:	CONSOLIDATED	CRN No.:	01832.52
Model No.:	1912GC1-1-1-1-1-1	Code Stamp:	
Side (Shell or Tube):	Shell	Outlet Size:	2.5
Inlet Size:	1.5	Outlet Type / ANSI Rating:	Flanged / 150
Inlet Type / ANSI Rating:	Flanged / 600		

PSV SERVICE DATA

Set Date:	19 Sep, 2016	Service Interval:	60
Set Pressure (psig)	1421	Capacity (scfm):	14415
Service Company:	UNIFIED VALVE LTD	Next Service Date:	19 Sep, 2021

PSV FIELD INSPECTION

Inspector Justin Orichowski **Company** Western Quality Services **Signature:**  **Inspection Date:** 21-Sep-2016

Inspection Type:

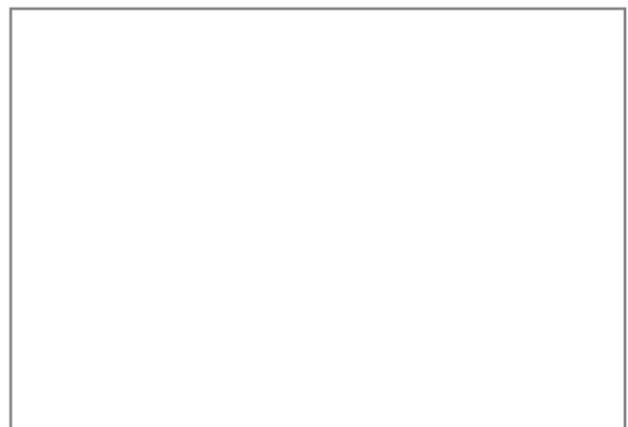
RESTRICTIONS	BLINDS	INLET: No Blinds found btwn vessels and psv inlet	Accept
		OUTLET: No blinds found btwn PSV and discharge point	Accept
	REDUCERS	INLET: No reducers found btwn Vessel(s) and PSV Inlet	Accept
		OUTLET: No reducers found btwn PSV and Discharge Point	Accept
	BLOCK VALVES	INLET: No block 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 position	Accept

EQUIPMENT PROTECTED

Prov Reg No.	Equipment No.	Serial No.	Equipment Name	Status	MAWP
2619721	V-100	2015.90	SEPARATOR	Operating	1421.00

PHOTOGRAPHS

EQUIP NAME:	INLET SEPARATOR	PROV REG No.:	2619721
SERIAL No.:	2015.90	Equip No.:	V-100
		National Board No.:	



NOTES: