



Client:
CNRL

UT SURVEY	Concern
PSV INSP	Reject
VTE INSP	Concern
VTI INSP	N/A

EQUIPMENT DEFICIENCY SUMMARY

District:	Fort St John	Facility	Beavertail/Rigel	Location/LSD	A-028-A/094-A-15
Equipment Name	SEPARATOR			Prov Reg No.:	3163496
Serial No.:	3675	Equip No.:	N/S	National Board No.:	N/S

UT SURVEY LATEST UT DATE USED IN SUMMARY November 03, 2018

LOCATION	Nom - CA	Low RDG	Avg RD	TMin	UT Flag	RECOMMENDATION	QUALITY ACTION	RESULT
40 90L 2 XS	0.19	0.16	0.19	0.04	LOW RDG IS > 10% BELOW NOM-CA BUT > Tmin	CONSIDER REDUCING THE INSPECTION INTERVAL.	OWNER TO DETERMINE	Concern

PSV INSPECTION LATEST PSV INSP DATE USED IN SUMMARY November 02, 2018

DEFICIENCY	RECOMMENDATION	QUALITY ACTION	RESULT
Leakage found at psv inlet connection	REMOVE EQUIPMENT FROM SERVICE AND TIGHTEN PSV INLET TO STOP THE LEAKAGE	NCR	Concern
PSV service is past due.	SERVICE PSV	NCR	Reject

VISUAL EXTERNAL INSPECTION LATEST VTE DATE USED IN SUMMARY November 02, 2018

DEFICIENCY	RECOMMENDATION	QUALITY ACTION	RESULT
Grounding: No Grounding is Concern,	NCR	CAR	Concern

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:	Fort St John		
Facility:	Beavertail/Rigel		
Location /LSD:	A-028-A/094-A-15	Operating Province:	British Columbia
Equipment Name:	SEPARATOR		
Equipment Status:	Operating	Orientation:	Vertical
Skid No.:	Unit:		

EQUIPMENT STATIC DATA

AB Registration No.:	3163496	Serial No.:	3675	
Registration No./Other:		Equipment No.:	N/S	
CRN NO.:	M9312.2	Unique ID No.:		
National Board No.:	N/S	Oncor ID No.:	170403	
Manufacturer:	RJV Gas Field Services		Year Built:	1996
MAWP:	720.00 (psi)	4964.26 (Kpa)	Temperature:	100.00 (F) 37.78 (C)
Diameter.:	24.000 (In)	609.600 (mm)	Length:	96.00 (In) 2438.40 (mm)
Radiography:	RT1		Heat Treatment:	Yes
Corrosion allowance:	0.125 (In)	3.175 (mm)	MDMT:	-20.00
Lining Or Coated:			Painted:	Yes
Insulated:	No		Internally Clad:	
Hand Hole:	Yes		Support Type:	Skirt
Manway:	No		Manway Size(In):	
Capacity/Volume(m3):			Nozzle Rating:	

MATERIALS/COMPONENTS

Name	Joint Efficiency	Outside Diameter(in.)	Head Type	Material Type	Stress Value (PSI)	Nominal Thickness(In.)
SHELL	1.00	24.000		SA-516 70	17500	0.63
HEAD	1.00	24.000	Ellipsoidal	SA-516 70	17500	0.69

PIPING STATIC DATA

Primary Flange Rating:	300	ASME B16.5 - Table 2-1.1 @ 150F:	740 (psi)	
Pressure Use For TMin:	Vess Design Press	Piping Operating Press:	720 (psi)	
Stress Value:	20000 (psi)	E Value:	1.00	Joint: SMLS

SERVICE CONDITIONS

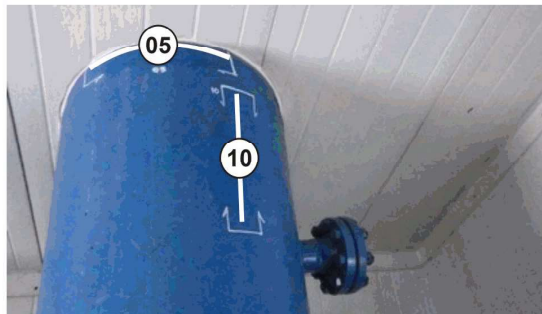
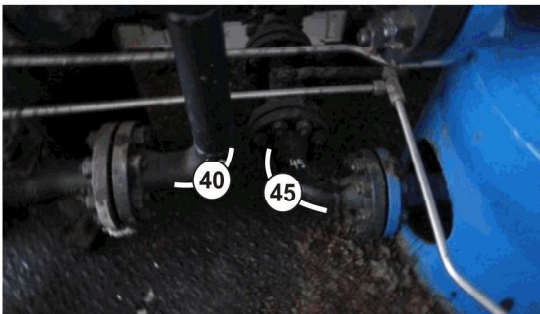
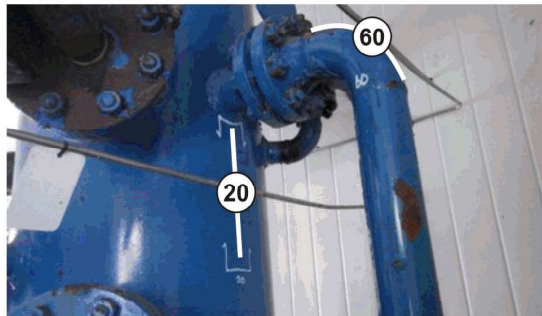
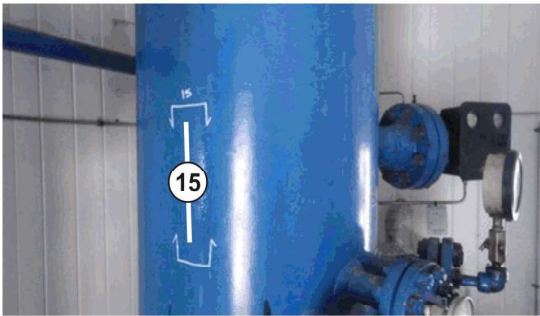
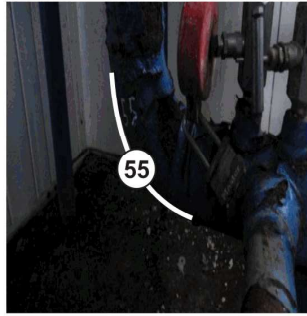
Sweet	Sour	Oil	Gas	Water
Amine	LPG	Condensate	Air	Glycol

COMMENTS

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EXAMINATION ILLUSTRATION

DISTRICT:	Fort St John	FACILITY:	Beavertail/Rigel	LOCATION/LSD:	A-028-A/094-A-15
EQUIP NAME:	SEPARATOR			PROV REG No.:	3163496
SERIAL No.:	3675	Equip No.:	N/S	National Board No.:	N/S



NOTES:

3163496



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ULTRASONIC CORROSION SURVEY REPORT

DISTRICT:	Fort St John	FACILITY:	Beavertail/Rigel	LOCATION/LSD:	A-028-A/094-A-15
EQUIP NAME:	SEPARATOR			PROV REG No.:	3163496
SERIAL No.:	3675	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	Nov 3, 2018	5.0	0.0000	0.0000	198.0	Nov 3, 2023
PIPING	Nov 3, 2018	5.0	0.0025	0.0025	47.5	

VESSEL SURVEY READINGS

POINT DATA (INCH)					SURVEY READINGS				CALCULATIONS			
POINT NUMBER	TYPE	NOM.	C.A.	NOM-CA	DATE	LOW	AVG	T Req (inch)	short term corr	long term	remaining life	Flag
05	HEAD	0.6860	0.1250	0.5610	Nov 3/18	0.749	0.757	0.476	0.0000	0.0000	198.0	NO COMMENTS
10	SHELL	0.6250	0.1250	0.5000	Nov 3/18	0.646	0.648	0.486	0.0000	0.0000	198.0	NO COMMENTS
15	SHELL	0.6250	0.1250	0.5000	Nov 3/18	0.652	0.654	0.486	0.0000	0.0000	198.0	NO COMMENTS
20	SHELL	0.6250	0.1250	0.5000	Nov 3/18	0.643	0.650	0.486	0.0000	0.0000	198.0	NO COMMENTS
25	SHELL	0.6250	0.1250	0.5000	Nov 3/18	0.640	0.646	0.486	0.0000	0.0000	198.0	NO COMMENTS
30	HEAD	0.6860	0.1250	0.5610	Nov 3/18	0.735	0.758	0.476	0.0000	0.0000	198.0	NO COMMENTS

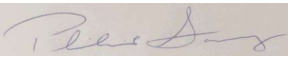
PIPING SURVEY READINGS

POINT DATA (INCH)							SURVEY READINGS				CALCULATIONS			
POINT NUMBER	TYPE	SIZE	SCH	NOM.	Mill Tol./CA	NOM-CA	DATE	LOW	AVG	T Req (inch)	short term corr	long term corr rate	remaining life	Flag
35	90L 2 XXS	2.00	XXS	0.4360	0.0545	0.3815	Nov 3/18	0.403	0.412	0.043	0.0014	0.0014	250.2	NO COMMENTS
Comments: CORROSION NOTED														
40	90L 2 XS	2.00	XS	0.2180	0.0273	0.1908	Nov 3/18	0.161	0.192	0.043	0.0025	0.0025	47.5	LOW RDG IS > 10% BELOW NOM-CA BUT > Tmin
Comments: CORROSION NOTED AT BOTTOM OF ELBOW														
45	90L 2 XS	2.00	XS	0.2180	0.0273	0.1908	Nov 3/18	0.198	0.213	0.043	0.0009	0.0009	177.9	NO COMMENTS
50	90L 1.5 XS	1.50	XS	0.2000	0.0250	0.1750	Nov 3/18	0.172	0.176	0.034	0.0012	0.0012	112.8	NO COMMENTS
55	90L 3 XS	3.00	XS	0.3000	0.0375	0.2625	Nov 3/18	0.292	0.298	0.063	0.0003	0.0003	656.0	NO COMMENTS
60	90L 3 XS	3.00	XS	0.3000	0.0375	0.2625	Nov 3/18	0.284	0.298	0.063	0.0007	0.0007	316.5	NO COMMENTS
65	90L 3 XS	3.00	XS	0.3000	0.0375	0.2625	Nov 3/18	0.276	0.296	0.063	0.0010	0.0010	203.4	NO COMMENTS
70	90L 3 XS	3.00	XS	0.3000	0.0375	0.2625	Nov 3/18	0.258	0.267	0.063	0.0018	0.0018	106.4	NO COMMENTS
75	90L 3 XS	3.00	XS	0.3000	0.0375	0.2625	Nov 3/18	0.284	0.293	0.063	0.0007	0.0007	316.5	NO COMMENTS



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INSPECTOR-EQUIPMENT DATA

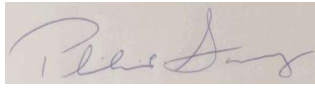
Inspected By	Signature	CGSB Level	CGSB No.	Survey Dat	UT Equipment	Due Date OF Calibration	NDE Procedure #
Philip Sacrey		2	17106	11/03/2018	104_91638503_EPOCH4	05/01/2019	WQS UT-001



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District	Fort St John	Facility	Beavertail/Rigel	Location/LSD	A-028-A/094-A-1
Equipment Name:	SEPARATOR			Prov Reg No.:	3163496
Serial No.:	3675	Equip No.:	N/S	National Board No.:	N/S

External Inspection

Inspector:	Philip Sacrey	API510#:79368	Signature:		Date:	11/02/2018
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External Corrosion

General Minor :<0.020 external corrosion was found on BTM Head
MINOR EXTERNAL CORROSION (OXIDATION) LOCATED ON BOTTOM HEAD.
General Minor :<0.020 external corrosion was found on BTM Piping
MINOR EXTERNAL CORROSION (OXIDATION) LOCATED ON INLET & DRAIN PIPING AND FLANGES.

Accept

External Damage

There was no external corrosion found on the vessel/piping

Accept

Leakage

Minor leak was found on Piping Bolted ,
details :Weeping from Connection

Accept

Vessel and Piping Supports

Vessel support is Skirt and is acceptable
Vessel was not designed with anchor bolts
Vessel Foundation is Metal and is acceptable
Piping is supported by clamp and is acceptable

Accept

Accept

Accept

Accept

Insulation/Paint

	Type	Findings	
Vessel	Painted	PeelingBubbling	Accept
Inlet Piping	Painted	PeelingBubbling	Accept
Outlet Piping	Painted	PeelingBubbling	Accept

Pressure Envelope Flanging

	Bolting	Thread engagement	Gaskets	Flange Rating	
Manway	NA				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: No Grounding is Concern,

Accept

Concern

Comment

NO VISIBLE GROUNDING.



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PRESSURE RELIEF VALVE SUMMARY

District:	Fort St John	Facility:	Beavertail/Rigel	Location/LSD:	A-028-A/094-A-15
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PSV STATIC DATA

















Tag/Equip No.:	1470F	Serial No.:	23656
Manufacturer:	Mercer	CRN No.:	0G2606.5C
Model No.:	8128821123	Code Stamp:	
Side (Shell or Tube):	Shell	Outlet Size:	2
Inlet Size:	2	Outlet Type / ANSI Rating:	Threaded / N/A
Inlet Type / ANSI Rating	Threaded / N/A		

PSV SERVICE DATA

Set Date:	1 Oct, 2008	Service Interval:	60
Set Pressure (psig)	720	Capacity (scfm):	5816
Service Company:	UNIFIED VALVE GROUP LIMITED	Next Service Date:	1 Oct, 2013

PSV FIELD INSPECTION

Inspector	Philip Sacrey	Company	Western Quality Services	Signature:		Inspection Date:	02-Nov-2018
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Inspection Type:							
RESTRICTIONS	BLINDS	INLET:	No Blinds found btwn vessels and psv inlet				
		OUTLET:	No blinds found btwn PSV and discharge point				
	REDUCERS	INLET:	No reducers found btwn Vessel(s) and PSV Inlet				
		OUTLET:	No reducers found btwn PSV and Discharge Point				
	BLOCK VALVES	INLET:	No block valve				
		OUTLET:	No block valve				
SERVICING	SET PRESSURE	PSV set pressure is at or less than MAWP of all linked vessels in the system.					
	SERVICE DATE	PSV service is past due.					
	SERVICE SEAL	Service seal is intact					
OPERATION	TAGGING	Service tag is properly attached to the psv					
	VIBRATION	None					
	DISCHARGE	PSV Discharge point is in a safe location and is acceptable					
	LEAKS	INLET:	Leakage found at psv inlet connection				
OUTLET:		No visible leaks found at psv outlet connection					
INSTALLATION	PSV SUPPORTS	PSV supported					
	ANGLE	PSV is installed in the proper upright positon					

EQUIPMENT PROTECTED

Prov Reg No.	Equipment No.	Serial No.	Equipment Name	Status	MAWP
3163496	N/S	3675	SEPARATOR	Operating	720.00

PHOTOGRAPHS



LSD



NAMEPLATE

PHOTOGRAPHS



OVERALL

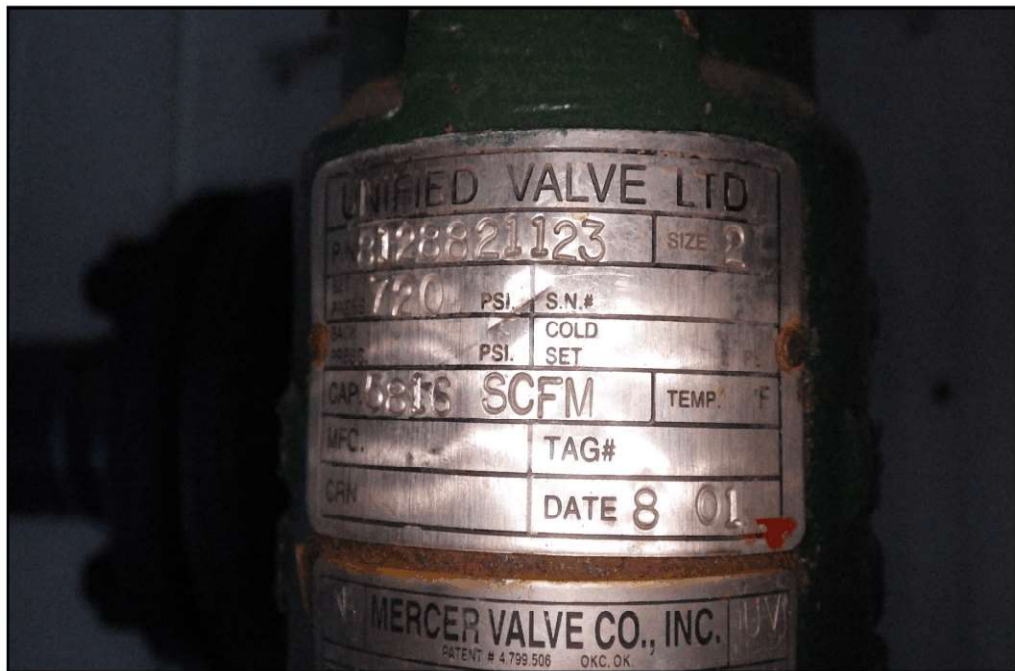


OVERALL

PHOTOGRAPHS



PSV



PSV NAMEPLATE

PHOTOGRAPHS



PSV TAG



WEEPING