



Client:
CNRL

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

EQUIPMENT DEFICIENCY SUMMARY

District:	Fort St John	Facility	Beavertail/Rigel	Location/LSD	C-084-A/094-A-15
Equipment Name	SEPARATOR			Prov Reg No.:	0487741
Serial No.:	VS-11687	Equip No.:		National Board No.:	N/A

UT SURVEY LATEST UT DATE USED IN SUMMARY November 02, 2018

LOCATION	Nom - CA	Low RDG	Avg RD	TMin	UT Flag	RECOMMENDATION	QUALITY ACTION	RESULT
35 90L 2 160	0.30	0.27	0.30	0.09	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
There is no service tag attached to the psv	OBTAIN THE LATEST PSV SERVICE REPORT AND ENSURE THE PSV IS ACCEPTABLE.	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
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:	Fort St John		
Facility:	Beavertail/Rigel		
Location /LSD:	C-084-A/094-A-15	Operating Province:	British Columbia
Equipment Name:	SEPARATOR		
Equipment Status:	Operating	Orientation:	Vertical
Skid No.:	N/A	Unit:	

EQUIPMENT STATIC DATA

AB Registration No.:	0487741		Serial No.:	VS-11687	
Registration No./Other:			Equipment No.:		
CRN NO.:	B3524.21		Unique ID No.:		
National Board No.:	N/A		Oncor ID No.:	170393	
Manufacturer:	Argo Sales		Year Built:	2003	
MAWP:	1440.00 (psi)	9928.51 (Kpa)	Temperature:	127.00 (F)	52.78 (C)
Diameter.:	24.000 (In)	609.600 (mm)	Length:	92.00 (In)	2336.80 (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		Unknown	20000	1.00
HEAD	1.00	24.000	Ellipsoidal	Unknown	20000	0.94

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:	1440 (psi)
Stress Value:	20000 (psi)	E Value:	1.00 Joint: SMLS

SERVICE CONDITIONS

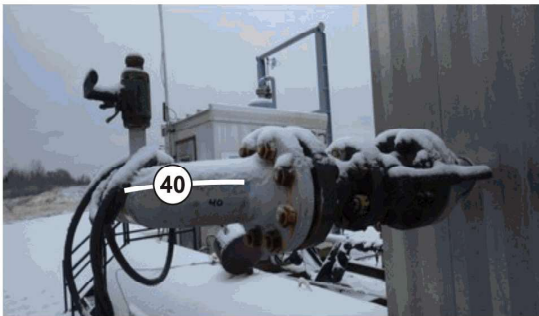
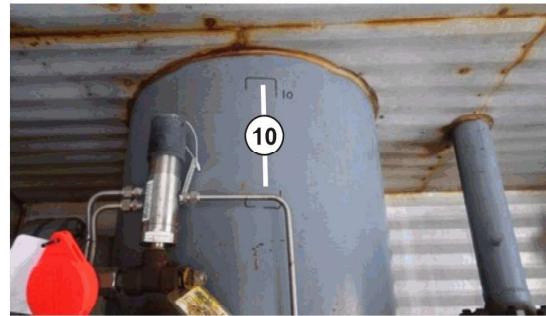
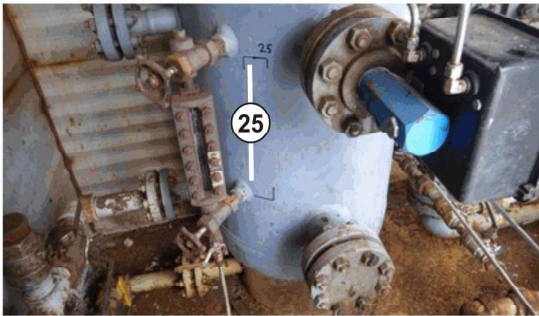
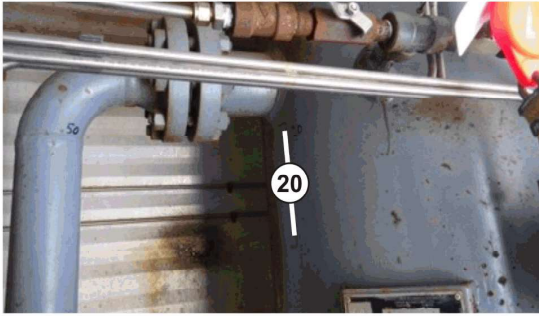
Sweet	Sour	Oil	Gas	Water
Amine	LPG	Condensate	Air	Glycol

COMMENTS

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EXAMINATION ILLUSTRATION

DISTRICT:	Fort St John	FACILITY:	Beavertail/Rigel	LOCATION/LSD:	C-084-A/094-A-15
EQUIP NAME:	SEPARATOR			PROV REG No.:	0487741
SERIAL No.:	VS-11687	Equip No.:		National Board No.:	N/A



NOTES:

EXAMINATION ILLUSTRATION

DISTRICT:	FORT SAINT JOHN	FACILITY:	BEAVERTAIL/RIGEL	LOCATION/LSD:	C-84-A/094-A-15
EQUIP NAME:	SEPARATOR			PROV REG No.:	0487741
SERIAL No.:	VS-11687	Equip No.:		National Board No.:	



NOTES:

0487741 PG 2 OF 2



Client:
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ULTRASONIC CORROSION SURVEY REPORT

DISTRICT:	Fort St John	FACILITY:	Beavertail/Rigel	LOCATION/LSD:	C-084-A/094-A-15
EQUIP NAME:	SEPARATOR			PROV REG No.:	0487741
SERIAL No.:	VS-11687	Equip No.:		National Board No.:	N/A

SUMMARY

TYPE	LAST INSPECTIONS	INSPECTION INTERVAL (YEARS)	CORROSION RATE (IN/YR)		REMAINING LIFE (YEARS)	NEXT INSPECTION DATE
			SHORT TERM	LONG TERM		
VESSEL	Nov 2, 2018	5.0	0.0022	0.0022	56.9	Nov 2, 2023
PIPING	Nov 2, 2018	5.0	0.0048	0.0048	30.3	

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	0.9375	0.1250	0.8125	Nov 2/18	0.958	1.000	0.811	0.0000	0.0000	198.0	NO COMMENTS	
10	SHELL	1.0000	0.1250	0.8750	Nov 2/18	1.030	1.036	0.840	0.0000	0.0000	198.0	NO COMMENTS	
15	SHELL	1.0000	0.1250	0.8750	Nov 2/18	0.965	1.022	0.840	0.0022	0.0022	56.9	NO COMMENTS	
Comments: MINOR CORROSION NOTED. CORROSION FOUND MEASURES LESS THAN STATED NAMEPLATE CA OF 0.125"													
20	SHELL	1.0000	0.1250	0.8750	Nov 2/18	1.046	1.050	0.840	0.0000	0.0000	198.0	NO COMMENTS	
25	SHELL	1.0000	0.1250	0.8750	Nov 2/18	1.023	1.030	0.840	0.0000	0.0000	198.0	NO COMMENTS	
30	HEAD	0.9375	0.1250	0.8125	Nov 2/18	0.945	0.981	0.811	0.0000	0.0000	198.0	NO COMMENTS	
Comments: LIMITED ACCESS DUE TO EXTERIOR CORROSION													

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	
35	90L 2 160	2.00	160	0.3440	0.0430	0.3010	Nov 2/18	0.267	0.300	0.086	0.0048	0.0048	37.5	LOW RDG IS > 10% BELOW NOM-CA BUT > Tmin
Comments: CORROSION NOTED														
40	90L 3 STD	3.00	STD	0.2160	0.0270	0.1890	Nov 2/18	0.186	0.200	0.126	0.0019	0.0019	31.8	NO COMMENTS
45	90L 3 XS	3.00	XS	0.3000	0.0375	0.2625	Nov 2/18	0.253	0.270	0.126	0.0030	0.0030	43.0	NO COMMENTS
50	90L 3 XS	3.00	XS	0.3000	0.0375	0.2625	Nov 2/18	0.267	0.280	0.126	0.0021	0.0021	68.0	NO COMMENTS
55	90L 3 XS	3.00	XS	0.3000	0.0375	0.2625	Nov 2/18	0.273	0.290	0.126	0.0017	0.0017	86.7	NO COMMENTS
60	90L 3 XS	3.00	XS	0.3000	0.0375	0.2625	Nov 2/18	0.267	0.280	0.126	0.0021	0.0021	68.0	NO COMMENTS
65	90L 3 STD	3.00	STD	0.2160	0.0270	0.1890	Nov 2/18	0.185	0.200	0.126	0.0019	0.0019	30.3	NO COMMENTS

INSPECTOR-EQUIPMENT DATA

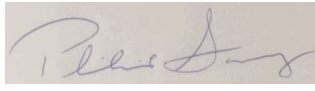
Inspected By	Signature	CGSB Level	CGSB No.	Survey Dat	UT Equipment	Due Date OF Calibration	NDE Procedure #
Philip Sacrey		2	17106	11/02/2018	104_91638503_EPOCH4	05/01/2019	WQS UT-001



Client:
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District	Fort St John	Facility	Beavertail/Rigel	Location/LSD	C-084-A/094-A-1
Equipment Name:	SEPARATOR			Prov Reg No.:	5 0487741
Serial No.:	VS-11687	Equip No.:		National Board No.:	N/A

External Inspection

Inspector:	Philip Sacrey	API510#:79368	Signature:		Date:	11/02/2018
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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 Skirt and is acceptable

Accept

Vessel was not designed with anchor bolts

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	Bubbling	Accept
Outlet Piping	Painted	Accept	Accept

Pressure Envelope Flanging

	Bolting	Thread engagement	Gaskets	Flange Rating	
Manway	NA				Accept
Vessel	Accept	Accept	Accept	Accept	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, Platform is acceptable, N/A

Accept

Comment

ASSOCIATED PSV HAS 2 SERVICE DATES. 05/01/2012 AND 08/01/2012



Client:
CNRL

PRESSURE RELIEF VALVE SUMMARY

District:	Fort St John	Facility:	Beavertail/Rigel	Location/LSD:	C-084-A/094-A-15
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PSV STATIC DATA

Tag/Equip No.:	21036F	Serial No.:	808598
Manufacturer:	Mercer	CRN No.:	0G8841.5C
Model No.:	91-43C51P27N1	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:	31 May, 2012	Service Interval:	60
Set Pressure (psig)	1440	Capacity (scfm):	11315
Service Company:	UNIFIED VALVE GROUP LIMITED	Next Service Date:	31 May, 2017

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				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 service is past due.				Reject	
	SERVICE SEAL		Service seal is intact				Accept	
OPERATION	TAGGING		There is no service tag attached to the psv				Concern	
	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
0487741		VS-11687	SEPARATOR	Operating	1440.00

PHOTOGRAPHS



NAMEPLATE



OVERALL

PHOTOGRAPHS



OVERALL



PSV

PHOTOGRAPHS



PSV NAMEPLATE



PSV TAG