



Client:
CNRL

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

EQUIPMENT DEFICIENCY SUMMARY

District:	Fort St John	Facility	Graham	Location/LSD	C-076-K/094-B-08
Equipment Name	3 PHASE GLYCOL CONTACTOR			Prov Reg No.:	2987167
Serial No.:	93C-5080-01	Equip No.:	N/S	National Board No.:	N/A

UT SURVEY LATEST UT DATE USED IN SUMMARY April 20, 2018

LOCATION	Nom - CA	Low RDG	Avg RD	TMin	UT Flag	RECOMMENDATION	QUALITY ACTION	RESULT
45 90L 2 80	0.19	0.17	0.19	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 April 20, 2018

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

VISUAL EXTERNAL INSPECTION LATEST VTE DATE USED IN SUMMARY April 20, 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:	Graham		
Location /LSD:	C-076-K/094-B-08	Operating Province:	British Columbia
Equipment Name:	3 PHASE GLYCOL CONTACTOR		
Equipment Status:	Operating	Orientation:	Vertical
Skid No.:	INLET SEP/SALES DEHY	Unit:	

EQUIPMENT STATIC DATA

AB Registration No.:	2987167		Serial No.:	93C-5080-01	
Registration No./Other:			Equipment No.:	N/S	
CRN NO.:	H5197.1		Unique ID No.:		
National Board No.:	N/A		Oncor ID No.:	166933	
Manufacturer:	Alco Gas & Oil		Year Built:	1994	
MAWP:	1440.00 (psi)	9928.51 (Kpa)	Temperature:	120.00 (F)	48.89 (C)
Diameter.:	42.000 (In)	1066.80 (mm)	Length:	438.00 (In)	11125.20 (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:	Yes		Manway Size(In):	24.00	
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	2.00
HEAD	1.00	42.000	Ellipsoidal	SA-516 70	17500	1.90

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

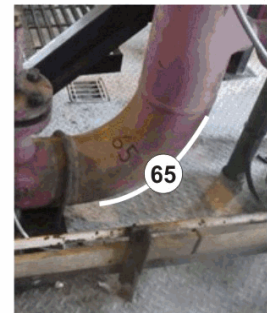
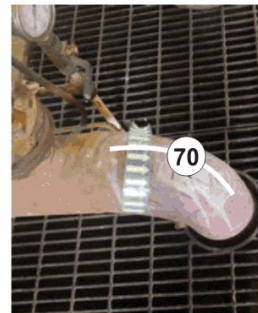
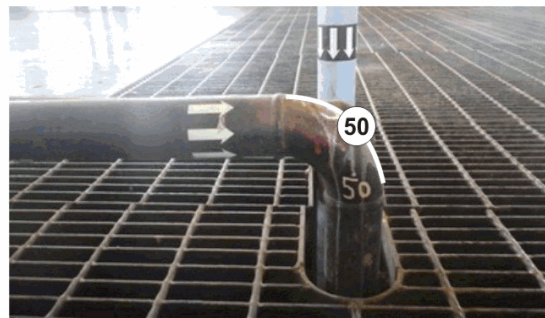
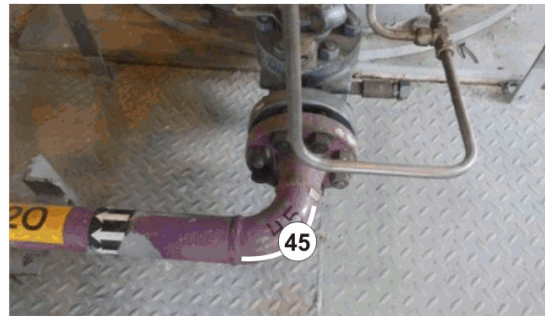
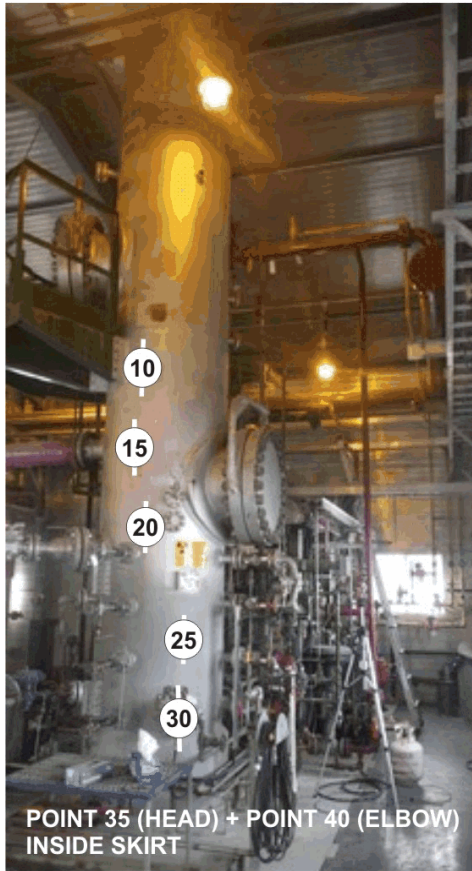
Sweet	Sour	Oil	Gas	Water
Amine	LPG	Condensate	Air	Glycol

COMMENTS

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EXAMINATION ILLUSTRATION

DISTRICT:	Fort St John	FACILITY:	Graham	LOCATION/LSD:	C-076-K/094-B-08
EQUIP NAME:	3 PHASE GLYCOL CONTACTOR			PROV REG No.:	2987167
SERIAL No.:	93C-5080-01	Equip No.:	N/S	National Board No.:	N/A



NOTES:

2987167



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ULTRASONIC CORROSION SURVEY REPORT

DISTRICT:	Fort St John	FACILITY:	Graham	LOCATION/LSD:	C-076-K/094-B-08
EQUIP NAME:	3 PHASE GLYCOL CONTACTOR			PROV REG No.:	2987167
SERIAL No.:	93C-5080-01	Equip No.:	N/S	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	Apr 20, 2018	5.0	0.0000	0.0000	198.0	Apr 20, 2023
PIPING	Apr 20, 2018	5.0	0.0020	0.0020	41.6	

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		
10	SHELL	2.0000	0.1250	1.8750	Apr 20/18	2.020	2.030	1.673	0.0000	0.0000	198.0	NO COMMENTS	
15	SHELL	2.0000	0.1250	1.8750	Apr 20/18	2.028	2.040	1.673	0.0000	0.0000	198.0	NO COMMENTS	
20	SHELL	2.0000	0.1250	1.8750	Apr 20/18	2.022	2.035	1.673	0.0000	0.0000	198.0	NO COMMENTS	
25	SHELL	2.0000	0.1250	1.8750	Apr 20/18	2.035	2.045	1.673	0.0000	0.0000	198.0	NO COMMENTS	
30	SHELL	2.0000	0.1250	1.8750	Apr 20/18	2.033	2.045	1.673	0.0000	0.0000	198.0	NO COMMENTS	
35	HEAD	1.9000	0.1250	1.7750	Apr 20/18	1.949	1.965	1.609	0.0000	0.0000	198.0	NO COMMENTS	

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		
05	90L 8 XS	8.00	XS	0.5000	0.0625	0.4375	Apr 20/18	0.481	0.500	0.311	0.0008	0.0008	219.1	NO COMMENTS	
40	90L 2 160	2.00	160	0.3440	0.0430	0.3010	Apr 20/18	0.335	0.350	0.086	0.0004	0.0004	676.9	NO COMMENTS	
45	90L 2 80	2.00	80	0.2180	0.0273	0.1908	Apr 20/18	0.169	0.190	0.086	0.0020	0.0020	41.6	LOW RDG IS > 10% BELOW NOM-CA BUT > Tmin	
Comments: PIPING STAMPED SCH 80. DOUBLE CHECKED CALIBRATION AND CONFIRMED READING.															
50	90L 2 40	2.00	40	0.1540	0.0193	0.1348	Apr 20/18	0.136	0.150	0.086	0.0007	0.0007	68.5	NO COMMENTS	
55	90L 2 40	2.00	40	0.1540	0.0193	0.1348	Apr 20/18	0.147	0.160	0.086	0.0003	0.0003	214.5	NO COMMENTS	
60	90L 2 40	2.00	40	0.1540	0.0193	0.1348	Apr 20/18	0.160	0.170	0.086	0.0000	0.0000	198.0	NO COMMENTS	
65	90L 6 80	6.00	80	0.4320	0.0540	0.3780	Apr 20/18	0.417	0.435	0.239	0.0006	0.0006	290.6	NO COMMENTS	
70	90L 6 80	6.00	80	0.4320	0.0540	0.3780	Apr 20/18	0.425	0.445	0.239	0.0003	0.0003	650.5	NO COMMENTS	

INSPECTOR-EQUIPMENT DATA

Inspected By	Signature	CGSB Level	CGSB No.	Survey Dat	UT Equipment	Due Date OF Calibration	NDE Procedure #
Jamey Tanasichuk		SNT LV 2	11444	04/20/2018	106_61457706_EPOCH 4	04/30/2018	WQS UT-001



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District	Fort St John	Facility	Graham	Location/LSD	C-076-K/094-B-08
Equipment Name:	3 PHASE GLYCOL CONTACTOR			Prov Reg No.:	2987167
Serial No.:	93C-5080-01	Equip No.:	N/S	National Board No.:	N/A

External Inspection

Inspector:	Jamey Tanasichuk	ABSA PESL #000411	Signature:		Date:	04/20/2018
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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 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	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, Platform is acceptable, Ladder/Stairway is acceptable, Davit is acceptable,

Accept

Comment



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PRESSURE RELIEF VALVE SUMMARY

District:	Fort St John	Facility:	Graham	Location/LSD:	C-076-K/094-B-08
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PSV STATIC DATA

Tag/Equip No.:	14855F	Serial No.:	93C4052
Manufacturer:	CONSOLIDATED	CRN No.:	0G0449.2
Model No.:	1912HC-SG	Code Stamp:	
Side (Shell or Tube):	Both	Outlet Size:	3
Inlet Size:	2	Outlet Type / ANSI Rating:	Flanged / 150
Inlet Type / ANSI Rating	Flanged / 600		

PSV SERVICE DATA

Set Date:	22 Aug, 2013	Service Interval:	60
Set Pressure (psig)	1440	Capacity (scfm):	22792
Service Company:	UNIFIED VALVE	Next Service Date:	22 Aug, 2018

PSV FIELD INSPECTION

Inspector Jamey Tanasichuk **Company** Western Quality Services **Signature:**  **Inspection Date:** 20-Apr-2018

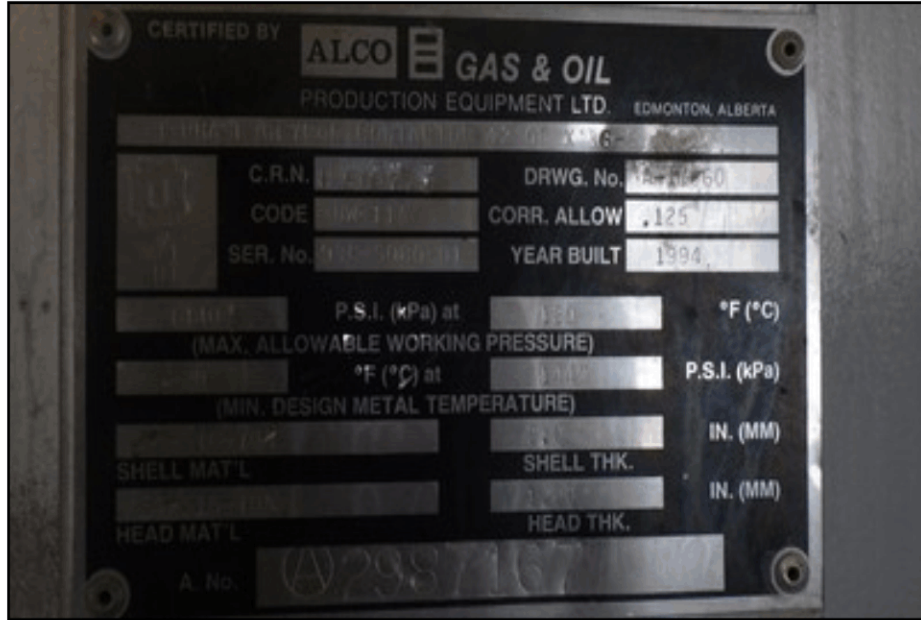
Inspection Type:

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:	Inlet Block valve is locked open	Accept
		OUTLET:	Outlet Block valve is locked open	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	
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
	E-410	93C-5080-02	GAS/GLYCOL EXCHANGER	Operating	1440.00
2987167	N/S	93C-5080-01	3 PHASE GLYCOL CONTACTOR	Operating	1440.00
2995272	E-410	93C-5080-02	GAS/GLYCOL EXCHANGER	Operating	1440.00

PHOTOGRAPHS



NAMEPLATE



LSD



OVERALL

NOTES:

PHOTOGRAPHS



PSV



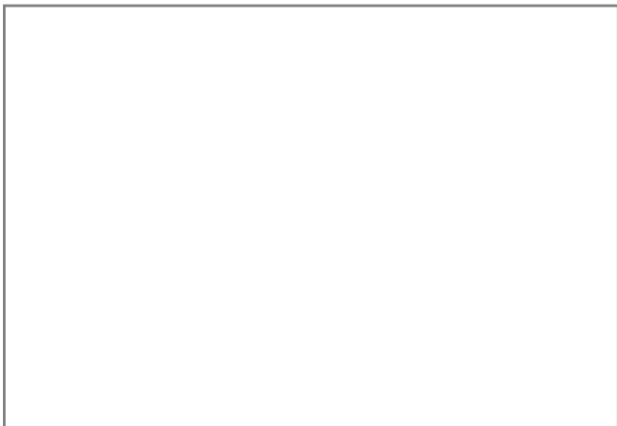
PSV TAG



PSV TAG



PSV



NOTES: