

PRESSURE VESSEL & COLUMN INSPECTION REPORT

LSD: 08-02-050-07W4 **Date:** 2017-01-30 **SAP Equipment ID** 62068385

VESSEL STATIC DATA										
Plant: Mannville/Swimming				OP Unit:			System:			
Prov. Insp . #: 0244337		NB#: N/S		CRN: H-0415.2			Equip Tag#:			
Equipment Description: GLYCOL CONTACTOR							Serial #: LS-3771			
Manufacturer: Natco Canada Inc.							Vessel Class: vessel			
Internal Access: No			Description:				Year Built: 1988			
MAWP: 9860 kpa			At Temp 54 C				MDMT: C			
Code: N/S			RT: RT4				PWHT: No			
Diameter: 356 mm		Length: 9144 mm		(T/T): mm		OAL: mm		Orientation: Vertical		
SHELL		Mat'l: SA-106 B		Thickness: 21.41 mm		Corr Allowance: 0.00 mm				
HEAD		Mat'l: Unknown SA 516-70		Thickness: 25.40 23.8 mm		Corr Allowance: 0.00 mm				
Nozzle		Mat'l:		Thickness:		Corr Allowance:				
Internal Coating:				Internal Clad:				Capacity: m3		
Manway: No				Inspection Port: No				Skirt X Legs Saddle		
Nozzle Rating: 600 lb ANSI				Painted: Yes				Insulated: No		
PROCESS DATA										
Production Description:				Sweet Sour:						
Operating Pressure kpa				Operating Temp: C			Status: Operating			
PSV STATIC DATA 66193429										
Tag #	Serial No.	Location	Size(mm)		Set Press (kPa)	Capacity Imperial (SCFM)	Manufacturer	Model	Last Service	Service Company
			Inlet	Outlet						
215631	C14141	Head	25.40	25.40	5102	3789	HYDRO SEAL	14E3M0V0 0/RO	2016/10/05	POWELL
PSV DETAILS										
		Type(Thread/Flange)		ANSI Rating		Size(In/mm)				
PRD Inlet		Threaded		N/A		25.40				
PRD Outlet		Threaded		N/A		25.40				
NDE Equipment Records										
Procedure #	Description	Manufacturer	Model#	Serial#	Due Date					
**** See Associated NDE Report										

INSPECTION SUMMARY

PSV DOES NOT HAVE OUTLET PIPING ATTACHED. IDR ATTACHED
 PSV IS NOT POSITIONED VERTICALLY APPROX-45 DEGREE ANGLE.

RECOMMENDATIONS

INSTALL OUTLET PIPING ON PSV TO DISCHARGE IN A SAFE LOCATION. RE-INSTALL PSV IN THE VERTICAL POSITION OR OBTAIN PERMISSION TO OPERATE PSV IN NON-VERTICAL POSITION FROM MANUFACTURER.

NONCONFORMANCES/INSPECTION DEFICIENCIES

Site visit on 2017-10-18 confirmed that the whole site is shut in. Deficiencies to be resolved prior to re-commissioning the vessel.



PRESSURE VESSEL & COLUMN INSPECTION REPORT

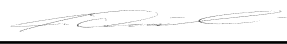
LSD: 08-02-050-07W4**Date:** 2017-01-30**SAP Equipment ID**

INSPECTION PLANNING

Inspection Strategy	_____	Availability	_____	Inspection Interval	5 year
Inspection Date	2017/01/30	Date of Last Inspect	_____	Date of Next Insp	_____

REPORT CERTIFICATION

The SignatureS below certify that inspections/tests have been completed in accordance with the identified inspection strategy and that the specified equipment is considered fit for service until the date of next inspection.

Inspected by	Justin Orichowski		AB Cert #	758	SK PEI #	214	Date	2017/01/30
Reviewed and Approved by	_____	_____					Date	_____
Criticality Assessment Rerun	_____		Inspection Planning Rerun					
Assessed Next Inspection Date	2022	_____						

PRESSURE VESSEL & COLUMN INSPECTION REPORT

LSD: 08-02-050-07W4

Date: 2017-01-30

SAP Equipment ID

DETAILED INSPECTION VISUAL EXTERNAL

ID	Description	Condition	Location	NCR	Comments
V1	General Other (Please Explain)	Accept		No	NO ISSUES OBSERVED.
V2	General Corrosion	Accept		No	NO CORROSION OBSERVED.
V3	General Leaks	Accept		No	NO LEAKAGE OBSERVED.
V4	Vibration	Accept		No	NO VIBRATION OBSERVED.
V5	Dissimilar Flange Rating	N/A		No	
V6	Ladder/Stairway	N/A		No	
V7	Heads	Accept		No	HEAD IN GOOD CONDITION.
V8	Guy Wires	N/A		No	
V9	Electrical Ground	Accept		No	BUILDING IS GROUNDED.
V10	Painted Inactive Corrosion	N/A		No	
V11	Coating/Painting	Accept		No	PAINT IS IN GOOD CONDITION.
V12	Expansion Joint or Bellows	N/A		No	
V13	Gauge/Site Glass	Accept		No	PSI,TEMP GAUGE AND LIQUID LEVEL ARE IN GOOD CONDITION.
V14	Shell	Accept		No	SHELL IS IN GOOD CONDITION.
V15	Jacket	N/A		No	
V21	Support Other (Please explain)	N/A		No	
V22	Foundation	Accept		No	METAL-GOOD CONDITION OBSERVED.
V23	Anchor Bolts	Accept		No	METAL-GOOD CONDITION OBSERVED.
V24	Saddle/Skirt	Accept		No	SKIRT - GOOD CONDITION OBSERVED.
V25	Davit	N/A		No	
V26	Fireproofing	N/A		No	
V31	Connections Other (Please explain)	N/A		No	
V32	Small Branches	Accept		No	SMALL BRANCHES ARE IN GOOD CONDITION.
V33	Nozzles	Accept		No	NO ISSUES OBSERVED.
V34	Manways	N/A		No	
V35	Reinforcing Pads	N/A		No	
V36	Inadequate Thread Engagement	N/A		No	
V37	Bolting	Accept		No	THREADS FULLY ENGAGED.
V38	Flanges	Accept		No	NO ISSUES OBSERVED.
V39	Leak Clamps	N/A		No	
V41	Insulation Other (Please explain)	N/A		No	
V42	Damage	N/A		No	
V43	Penetrations	N/A		No	
V44	Insulation Jacket	N/A		No	
V45	Banding	N/A		No	
V46	Seals/Joints	N/A		No	
V51	Relief Devices Other (Please explain)	Concern		No	NO OUTLET PIPING PRESENT ON PSV. PSV IS NOT POSITIONED VERTICALLY APPROX-45 DEGREE ANGLE.
V52	Corrosion	Accept		No	NO CORROSION OBSERVED.
V53	Leaks	Accept		No	NO LEAKAGE OBSERVED.
V54	Restricted Inlet/Outlet	Accept		No	NO ISSUES OBSERVED.

PRESSURE VESSEL & COLUMN INSPECTION REPORT

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V55	Manual Operation Lever	N/A		No	
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DETAILED INSPECTION OTHER TECHNIQUES

ID	Location	Observation/Measurement	Acceptance Criteria	NCR	Comments

DETAILED INSPECTION UT THICKNESS

CML	Nom. Thickness (mm)	CURRENT READINGS (mm)	short term corr rate (mm/y)	long term corr rate (mm/y)	remaining life (year)	Survey Date	Comments
05 (HEAD) 23.8 mm	25.40	24.18	0.0418	0.0418	202.1	2017/01/30	NO COMMENTS As per MDR
10 (SHELL)	21.41	21.51	0.0000	0.0000	198.0	2017/01/30	NO COMMENTS
15 (SHELL)	21.41	21.64	0.0000	0.0000	198.0	2017/01/30	NO COMMENTS
20 (SHELL)	21.41	21.26	0.0052	0.0052	943.9	2017/01/30	NO COMMENTS
25 (BAND 2 XS)	5.54	5.51	0.0009	0.0009	3,852.7	2017/01/30	NO COMMENTS
30 (90L 2 XS)	5.54	4.78	0.0261	0.0261	100.2	2017/01/30	NO COMMENTS

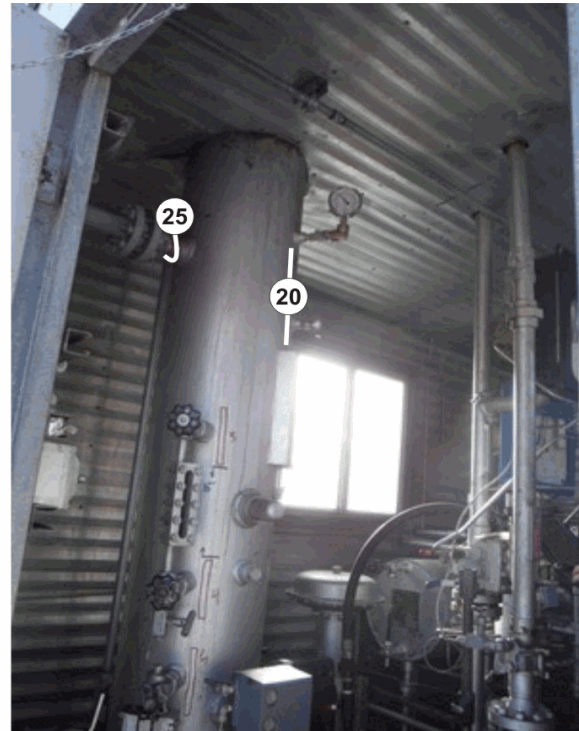
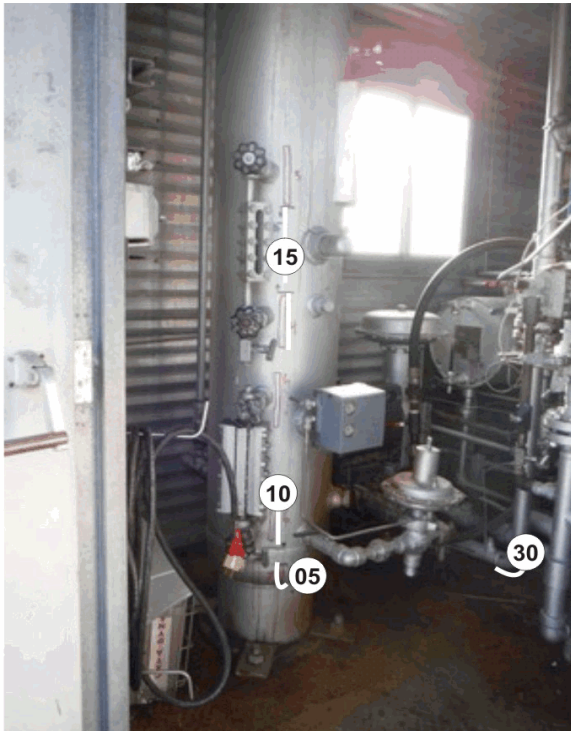
Inspected By	Signature	CGSB Level	CGSB No.	Survey Date	UT Equip	Due Date OF Calibration	NDE Procedure No.
Justin Orichowski		SNT LV 2	16325	01/30/2017	104_91638503_EPOCH4	06/27/2017	WQS UT-001



Client:
HUSKY ENERGY

EXAMINATION ILLUSTRATION

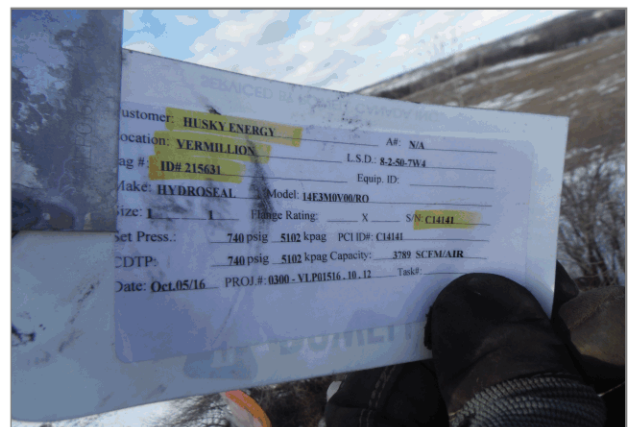
DISTRICT:	ALBERTA NORTH	FACILITY:	MANNVILLE/ SWIMMING	LOCATION/LSD:	08-02-050-07W4
EQUIP NAME:	GLYCOL CONTACTOR			PROV REG No.:	0244337
SERIAL No.:	LS-3771	Equip No.:		National Board No.:	



NOTES:

PHOTOGRAPHS

EQUIP NAME: GLYCOL CONTACTOR		PROV REG No.: 0244337	
SERIAL No.: LS-3771	Equip No.: N/S	National Board No.:	



NOTES:

IDR TRACKING #:

INSPECTION DEFICIENCY REPORT

PRIORITY	0	- Immediate Action Required – Remove Equipment from Service
	1	- Action Required within 14 days
	2	- Action Required within 30 days
	3	- Action Required at next available maintenance opportunity

FACILITY: MANNVILLE/SWIMMING DATE: JAN 30 2017 REPORT #: IDR

STATIC DATA

Prov. Reg. #	<u>0244337</u>	CRN:	<u>H-0415.2</u>	Serial #	<u>LS-3771</u>
Equipment Location(LSD):	<u>08-02-050-07W4</u>	Equip. ID# (SAP):	N/S		
Equip. Description:	<u>GLYCOL CONTACTOR</u>	Service:	<u>N/S</u>	Sweet / Sour	
Manufacturer:	<u>NATCO CANADA INC</u>	Year Built:	<u>1988</u>		
MAWP	<u>1430</u>	psi	@	<u>129</u>	F
MDMT:	<u>-</u>	°C / F	Capacity	<u></u>	m3

IDENTIFIED DEFICIENCY

1.

PSV HAS NO OUTLET PIPING PRESENT. PSV IS NOT IN THE VERTICAL POSITION (APPROX 45 DEGREES).

RECOMMENDED ACTION


<input type="checkbox"/> LEAVE "AS-IS"	<input type="checkbox"/> PERFORM REPAIR	<input type="checkbox"/> PERFORM ALTERATION	<input type="checkbox"/> REPLACE UNIT
<input type="checkbox"/> INTEGRITY ASSESSMENT REQUIRED			

Comments:

1.

INSTALL OUTLET PIPING ON PSV TO DISCHARGE IN A SAFE LOCATION. RE-INSTALL PSV IN THE VERTICAL POSITION OR OBTAIN PERMISSION TO OPERATE PSV IN NON-VERTICAL POSITION FROM MANUFACTURER

INSPECTION PERFORMED BY

<input type="checkbox"/> QUALITY INSPECTOR	<input type="checkbox"/> LEAD INSPECTOR	<input type="checkbox"/> CONTRACTED INSPECTOR
JUSTIN ORICHOWSKI		JAN 30- 2017
Print Name	Signature	Date

DEFICIENCY REPORT ISSUED TO

Name	Position	Date

RECOMMENDED ACTION COMPLETED

Job File #	<u></u>	Comments :
Site visit on 2017-10-18 confirmed that the whole site is shut in. Deficiencies to be resolved prior to re-commissioning the vessel.		
Print Name	Signature	Date



Form : QR-19.2
Rev. : 1 , Date : 06/08

IDR TRACKING #: