



Pressure Equipment Integrity Management System

External Inspection Form

Owner: EOG Canada Oil and Gas District / Facility: Northeast BC / Maxhamish
 Location (LSD) ♦: D-36-I/94-O-14 Surface Location: _____

Vessel Data

A Number ♦: SN-04-4616-25 (PV124749) Serial Number ♦: 04-4616-25
 CRN ♦: T8075.213 Vessel Type: Separator
 Description ♦: Dehy 2 Fuel Gas Scrubber Skid / Process: Dehy 2
 Tag No: V-200, 6759EOG, BF5842 Current Status: In Service

Course #1 (Main)

Orientation: <u>Vertical</u>	Coated?	<u>No</u>	Type:	
Fluids: _____	Anodes?	<u>No</u>	Type:	Quantity:
Sour ♦? <u>No</u>	Hand Holes?	<u>No</u>		
Manufacturer ♦: <u>Opso Industries Ltd.</u>	Manway?	<u>No</u>	Size:	
MAWP ♦: <u>270 psi</u>	MAWP Temp:	<u>150 °F</u>	MDMT: <u>-20 °F</u>	
Shell Material: _____	Nom. Shell Thick:	<u>0.28 in</u>		
Head Material: _____	Min. Head Thick:	<u>0.28 in</u>		
Diameter: <u>6.625 in OD</u>	Length:	<u>28 in</u>		
Year Built ♦: <u>2008</u>	Installation Date ♦:		Corrosion Allow:	<u>0.0625 in</u>
Volume: _____			Stress Relieved?	<u>Yes</u>
Radiography: <u>RT1</u>	ABSA Grade:	<u>2</u>		

Course #2

Description: _____	Course Type: _____
Fluids: _____	Sour? _____
MAWP: _____	MAWP Temp: _____
Tube/Shell Material: _____	Nom. T/S Thick: _____
Head Material: _____	Min. Head Thick: _____
Diameter: _____	Length: _____

PRV #1 Course # 1 PRV Location or Position: Dehy 2 Fuel Gas Scrubber inlet line
 Serial No ♦: 586816 Model No: 81-17151V09G11
 Set Pressure ♦: 125 psi Ports: 1" x 1"
 Capacity: 472 scfm Manufacturer: Mercer
 Service date ♦: _____ By: _____ Car Seal #: _____
 Block Valve? No **Install Date:** Jul 10, 2013 Tag no: 6759

PRV #2 Course # _____ PRV Location or Position: _____
 Serial No: _____ Model No: _____
 Set Pressure: _____ Ports: _____
 Capacity: _____ Manufacturer: _____
 Service date: _____ By: _____ Car Seal #: _____
 Block Valve? _____ **Install Date:** _____ Tag no: _____

Comments: PIC: 0001, 0002, 0003_x000D_ ENSIGN OPSCO



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External Visual Inspection - Vessel

	<u>Okay</u>	<u>Comment</u>		<u>Okay</u>	<u>Comment</u>
Name Plate Accessible:	<input checked="" type="checkbox"/>	_____	Paint/Coating Condition:	<input checked="" type="checkbox"/>	_____
Piping Connections Made:	<input checked="" type="checkbox"/>	_____	Insulation Condition:	<input type="checkbox"/>	N/A
Inspection Access (i.e. skirt):	<input checked="" type="checkbox"/>	_____	External Surface Condition:	<input checked="" type="checkbox"/>	_____
Bolting Check:	<input checked="" type="checkbox"/>	Threaded	Foundation:	<input checked="" type="checkbox"/>	_____
Leaks/Drips/Seeping:	<input checked="" type="checkbox"/>	_____	Bending/Warping/Distortion:	<input checked="" type="checkbox"/>	_____
Dents:	<input checked="" type="checkbox"/>	_____	Cuts/Gouges:	<input checked="" type="checkbox"/>	_____
Ladders/Walkways:	<input checked="" type="checkbox"/>	_____	Ground Wire Connection:	<input checked="" type="checkbox"/>	_____
Condition of Gauges:	<input checked="" type="checkbox"/>	_____	Other Equipment:	<input checked="" type="checkbox"/>	_____
Observed operating pressure (shell):	0	<input checked="" type="checkbox"/> psi <input type="checkbox"/> kPa	Gauge Range (shell):	0 to 100	<input checked="" type="checkbox"/> psi <input type="checkbox"/> kPa
Observed operating pressure (tube):		<input type="checkbox"/> psi <input type="checkbox"/> kPa	Gauge Range (tube):		<input type="checkbox"/> psi <input type="checkbox"/> kPa
Observed operating temperature (shell):		<input type="checkbox"/> °F <input type="checkbox"/> °C	Gauge Range (shell):		<input type="checkbox"/> °F <input type="checkbox"/> °C
Observed operating temperature (tube):		<input type="checkbox"/> °F <input type="checkbox"/> °C	Gauge Range (tube):		<input type="checkbox"/> °F <input type="checkbox"/> °C

Detailed Observations/Notes/Comments:

O/S at time of inspection

External Visual Inspection - Piping

	<u>Okay</u>	<u>Comment</u>		<u>Okay</u>	<u>Comment</u>
Bolting Check:	<input checked="" type="checkbox"/>	_____	Insulation Condition:	<input type="checkbox"/>	N/A
Paint/Coating Condition:	<input checked="" type="checkbox"/>	_____	Check for dead legs:	<input checked="" type="checkbox"/>	_____
Leaks/Drips/Seeping:	<input checked="" type="checkbox"/>	_____	Bending/Warping/Distortion:	<input checked="" type="checkbox"/>	_____
Dents:	<input checked="" type="checkbox"/>	_____	Cuts/Gouges:	<input checked="" type="checkbox"/>	_____
Supports:	<input checked="" type="checkbox"/>	_____	Misalignment:	<input checked="" type="checkbox"/>	_____

External Visual Inspection – PRV(s)

	<u>Okay</u>	<u>Comment</u>		<u>Okay</u>	<u>Comment</u>
PRV Piping Check:	<input type="checkbox"/>	_____	Flare Line Slope Check:	<input checked="" type="checkbox"/>	_____
Damage/Leaks:	<input type="checkbox"/>	_____	Seals Intact:	<input type="checkbox"/>	_____
Weather Protection:	<input type="checkbox"/>	_____	Lifting Lever Acceptable:	<input type="checkbox"/>	_____

	Vessel MAWP		PRV Set Pressure	PRV Capacity	PRV Size	Last Service Date	Serviced By	Block Valve Present?	Locked Open?	Reportable?
Shell	270 psi	#1	125 psi	472 scfm	1" x 1"			No	No	Yes
Tube		#2								

PRV Check: OK - PRV Set pressure is not greater than vessel MAWP PRV is set too high. Reset PRV to vessel MAWP.

Detailed Observations/Notes/Comments:

PRV being serviced at time of inspection



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SN: 04-4616-25 Vessel Description: Dehy 2 Fuel Gas Scrubber Location (LSD): D-36-I/94-O-14

Action Item(s) Identified? Yes No If yes, indicate required work and RA #: _____ Field Tag #: _____

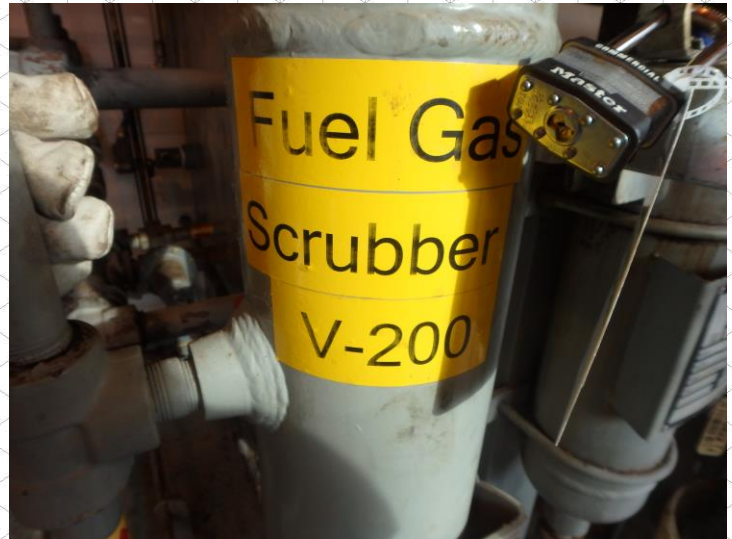
The scope of this external inspection is restricted to the items detailed above and forms part of a thorough integrity assessment for this equipment. Results of this inspection have determined the external condition of this equipment to be:

- Acceptable
- Acceptable with the identified action items resolved before the associated action item's "Required By Date".
- Not Acceptable until the identified action items are resolved.

Inspector Name: Joey Poapst Inspector Company: Northern Materials Engineering

Inspector Signature:  Inspection Date: Oct 12, 2017

Sketch / Image Area



TITLE	DRAWN BY	DATE
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Documentation

- Documents Acquired: Manufacturer's Data Report (U-1A) Jurisdictional Operating Permit / Licence
- Name Plate Information is correct? Yes No To be completed through routine ABSA reporting process
- Design is registered in province (CRN)? Yes No, Generate an Action Item and arrange for design registration



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Service Conditions

Process Fluids Description:

<input type="checkbox"/> Sour	<input type="checkbox"/> Produced Water	<input type="checkbox"/> OWE	<input type="checkbox"/> Solids
<input checked="" type="checkbox"/> Condensed Water	<input type="checkbox"/> Propane	<input type="checkbox"/> Air	<input type="checkbox"/> Frac. Sand
<input type="checkbox"/> Liquid Hydrocarbon	<input type="checkbox"/> Glycol	<input checked="" type="checkbox"/> NG	<input type="checkbox"/> _____

Potential Mode(s) of Deterioration:

<input checked="" type="checkbox"/> Pitting	<input type="checkbox"/> Crevice	<input type="checkbox"/> High Temp	<input type="checkbox"/> Sulphidation
<input checked="" type="checkbox"/> General Corrosion	<input type="checkbox"/> Erosion	<input type="checkbox"/> Cavitation	<input type="checkbox"/> Under Deposit Corr.
<input type="checkbox"/> External Atm. Corrosion	<input type="checkbox"/> Under Insulation	<input type="checkbox"/> Mechanical Damage	

Cracking SCC Hydrogen Fatigue Other

Area(s) Most Likely to Deteriorate:

<input type="checkbox"/> Top Head	<input checked="" type="checkbox"/> Bottom Head	<input type="checkbox"/> Nozzles	<input type="checkbox"/> Welds
<input type="checkbox"/> Attachments	<input checked="" type="checkbox"/> Shell (lower)	<input type="checkbox"/> Shell (Upper)	<input type="checkbox"/> Shell (other)
<input type="checkbox"/> Tubes	<input type="checkbox"/> Piping (inlet)	<input type="checkbox"/> Piping (outlet)	<input checked="" type="checkbox"/> Piping (drain)

Current Mitigation Program? Yes No
(if yes, describe) _____

Other Considerations? Yes No
(if yes, describe) _____

Additional Process Monitoring Yes No (if yes, describe in area below or attach details)

Fluids Sample (Type / Frequency / Analysis Req'd) _____

Corrosion Monitoring (Coupons / Probes) _____

Other (describe) _____

Inspection History

(Complete this section if the vessel is new and a baseline inspection was completed or if the vessel is used)

Inspection Company: _____ Last Inspection Date: _____

Inspection – Plan Assigned Grade 2 Previous Grade 1 (if Assigned Grade differs from Previous Grade explain in **Notes** section below)

Activity Required	Yes	No	Interval (years)	Due Date (dd / mmm / yy)	Comments / Justification
Offline Internal Visual	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____	/ /	_____
UT Inspection	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5	12 / Jun / 18	_____
Crack Inspection	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____	/ /	_____
Additional Inspection(s)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____	/ /	_____
External Visual			5	12 / Oct / 22	_____
PRV service interval			5	10 / Jul / 18	_____

Notes

Complete if Assessor is different than Inspector

Assessor Name: _____ Company: _____

Assessor Signature: _____ Assessment Date: _____

Report Certification

Report Certified By (signature):  Certificate No: 64230 API