



Client	Midstream Equipment	Inspection Date	Jun 6, 2025		
Prov. Reg. #	AB RAE46443	Inspection Type	VE / UT / PSV		
Equipment Type	Fuel Gas Scrubber	Location			
Tag/Equip.		LSD	AB		
Status	In Service	Downhole LSD			
Manufacturer	Aquila Fabrication & Equipment Ltd.	Area			
Serial Number	S-3120	Year Built	2014		
CRN #	0H5837.231	Service	Sour		
Comp/Unit Id	UNIT 1063	Manway	None		
Nat.Board #		Coating			
Interim Insp'n		Interim Type			
Next Thorough Insp	2030	Next Insp Type	VE / UT / PSV		
Length		Height			
Volume	Capacity	Client Reference			
Owner	Midstream Equipment	RT	2	HT	NO
Foreman		RAE Job No.	PR0004445		
ABSA	Plant: H	Vessel: K	Process: W	Special: R	ASME Sec. VIII div. 1
History Log	Inspection Report Complete - Inspection Date: 2025-June-06 Inspection Type: VE/UT/PSV				

Component	Shell			
MAWP	150.0 PSI @ 100 °F		MDMT	-20 °F @ 150.0 PSI
Material		Material Thickness		
Diameter		Length		
Corrosion Allowance				



Valve Tag No	1063 - FGS PSV	Relief Type	Pressure Safety Valve
Manufacturer	Taylor	Set Pressure	150.000 PSI
Serial Number	036438-228	Capacity	582 SCFM
Model	82E4351311	Last Service	Feb 26, 2024
CRN	0OG01316.2C	Next Service	2028
Service Co.	Unified	Service Interval	48 Months
Service Co. Tag	100544G	Inlet Size	1 in
ASME Stamp	UV	Outlet Size	1 in
NB Stamp	YES	Connection	Threaded
Relief Dest.	To Atmosphere	Valve Loc.	On Piping
Comments		Client Reference	

Comments

The following RAE Procedure(s) was/were used in inspecting this vessel:

INS-624B Unfired Pressure Vessels Procedure

NDE Technical Manual

The unit was located at the Midstream Equipment yard located just east of Chestermere, AB.

The unit was not in-service at the time of inspection.

Building Observations

Number of Access Doors:1 Building Supported by: Skid

Gas test port: No Gas Detection: Yes

Fire eye: No Catalytic Heater: Yes

Lighting: Good Floors : Checker plate steel

Drainage/Condition: Acceptable

Equipment placed ergonomically: Yes

The building was in good condition and there were no signs of damage.

The building was level and there were no structural concerns.

All points of access were complete with platforms.

The building ground wire was installed as well.

There were no concerns with the building itself.

2025 Observation

No additional observations since last inspection.



Figure: 1



BUILDING

Figure: 2



UNIT NUMBER

Figure: 3



FLOOR

Piping Observations

General condition: Acceptable

Mechanical connections acceptable for service?: Acceptable

Clad: No Painted: Yes Insulated: No

Are there any dead legs: No

Support type: U-Bolt

Supported adequately: Yes

The inlet and outlet piping as well as the piping associated with the vessel were in place and properly bolted and supported.

The piping was coated and in serviceable condition.

There was no evidence of pipe strain due to poor fit up. There were no concerns with the piping.

2025 Observation

No additional observations since last inspection.



Figure: 4



PIPING

PSV Observations

Drainage : Acceptable	Supports : Acceptable
Bolting : Acceptable	Seal wire : Acceptable
Gasket : Acceptable	Service tag : Acceptable
CRN : Acceptable	Set pressure : Acceptable
Installation vertical : Yes	Required Capacity : Not verified
PSV block valves : No	
PSV service report available : No	

The PSV was located on the associated piping.
The PSV was in serviceable condition, securely mounted in the vertical position.
The nameplate was securely attached and legible.
The service tag was securely attached and legible.
The set pressure was acceptable for the vessel MAWP.
The seal wire was attached and intact.
There were no reductions in vent line size, or visible restrictions in flow.

The PSV outlet pipe needs a 90 fitting put on the end to keep rain and snow out.

2025 Observation

No additional observations since last inspection.



Figure: 5



PSV

Figure: 6



NAMEPLATE

Figure: 7



SERVICE TAG



External Observations

Installation : In Building	Support Structure : Structural
Grounded : Yes	Securement Type : Welded
Drains :Automatic	Securement Condition : Acceptable
Attachments : Yes	Ladders/Platforms : N/A
CUI checked : Yes	External Covering :
Vessel Orientation : Vertical	
Manway : No	
Certificate of inspection permit : No	
Nameplate attached and legible : Yes	

The vessel was located inside a building.
The nameplate was legible and securely attached.
The exterior was fully painted, and the paint was in serviceable condition.
The heads and shell appeared to be in serviceable condition.
There was no damage, distortion, or stress evident on piping connections.
The vessel was adequately supported, with no makeshift structural attachments on any of the pressure containing components.

2025 Observation

No additional observations since last inspection.

Figure: 8



VESSEL

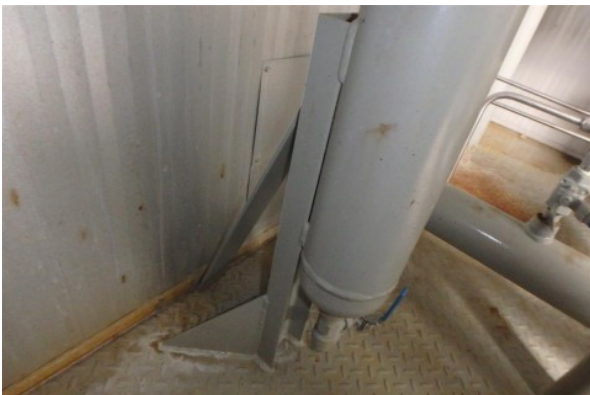
Figure: 9



NAMEPLATE



Figure: 10



SUPPORT

Internal Observations

There was no internal inspection performed at the time of inspection.

UT1 Observations

See attached UT Report. UT results were reviewed and found to be acceptable.

Recommendations

1. The vessel is fit-for-service.
2. The PSV outlet pipe needs a 90 fitting put on the end to keep rain and snow out.
3. There should be an installation inspection of the unit after being installed on site to ensure no damage occurred during shipping and to verify proper installation.


Irwin Garcia, P.Eng.
Alberta IPV #A-92199

ABSA ISI-PVPP# A-99351
API 510# 68250
CWB Level II# 12352
SNT UT1 MT2

Inspector: Bryce Motley

Inspector : Irwin Garcia

Reviewed By: Bryce Motley

	RAE Engineering and Inspection Ltd. www.raeengineering.ca Phone: (780) 469-2401 Fax: (780)-469-2401		Inspection Date:		June 06, 2025		<h1 style="text-align: center;">UT Report</h1>								
			Report Number:		IG000069										
			Page:		1 of 4										
Client:		Midstream Equipment		Job Number:		PR0004445									
Facility:		Midstream Yard		Location/LSD:		Midstream Yard									
Equipment Number:		RAE46443		Client Representative:		Joe Davis									
Equipment Description:		Fuel Gas Scrubber		Client Contact:		joe.davis@midstreamequipment.com									
Equipment Type:		Vessel		Measurment Unit:		Inch									
JOB DESCRIPTION															
Procedure:		NDE Tech Manual Rev. 2025 (NDE - 701B)													
Acceptance Code:		ASME Sec. VIII Div. 1			Surface Condition:		Painted								
Material:		Carbon Steel			Surface Temp:		0 - 120 °C								
EQUIPMENT, TECHNIQUE & CALIBRATION															
Instrument Mfr:		GE		Model:		DMS2		S/N:		01X121		Cal. Due:		2026-05-02	
Probe Model	Freq MHz	Angle	Dia. (In)	Probe Type	Manufacturer	Serial #	Cable Length	Vel. (m/sec)	Ref dB	Scan dB	Range (in)				
FH2E	7.5	0	0.250	Single	Stresstel	24E00NGM	6'	2369	60	As Needed	1				
Cal Block S/N			1 or 2 Point Cal		Calibration Range		Couplant			Block Material					
11-1200			2		0.100-1.500"		UTX			Carbon Steel					

Scope:

Conduct 0° straight beam ultrasonic testing on the fuel gas scrubber looking for any signs of wall thinning due to corrosion, erosion, laminations or inclusions.

Result:

The measurements obtained from the inspection locations show the thickness of all of the components inspected to be consistent. However, there was no nominal thickness at the time of inspection.

Please see the following pages for the pictures of nameplate, the overall view, the isometric drawings, and the thickness measurements.

Conclusion:

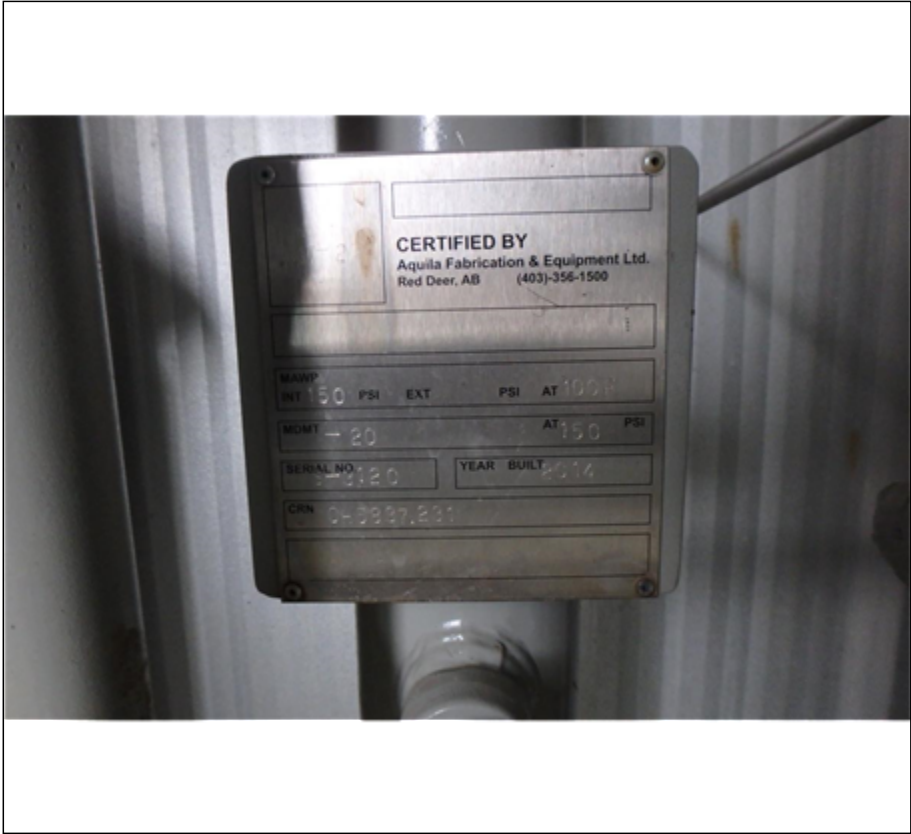
No concerns noted at the time of inspection.



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Overall View

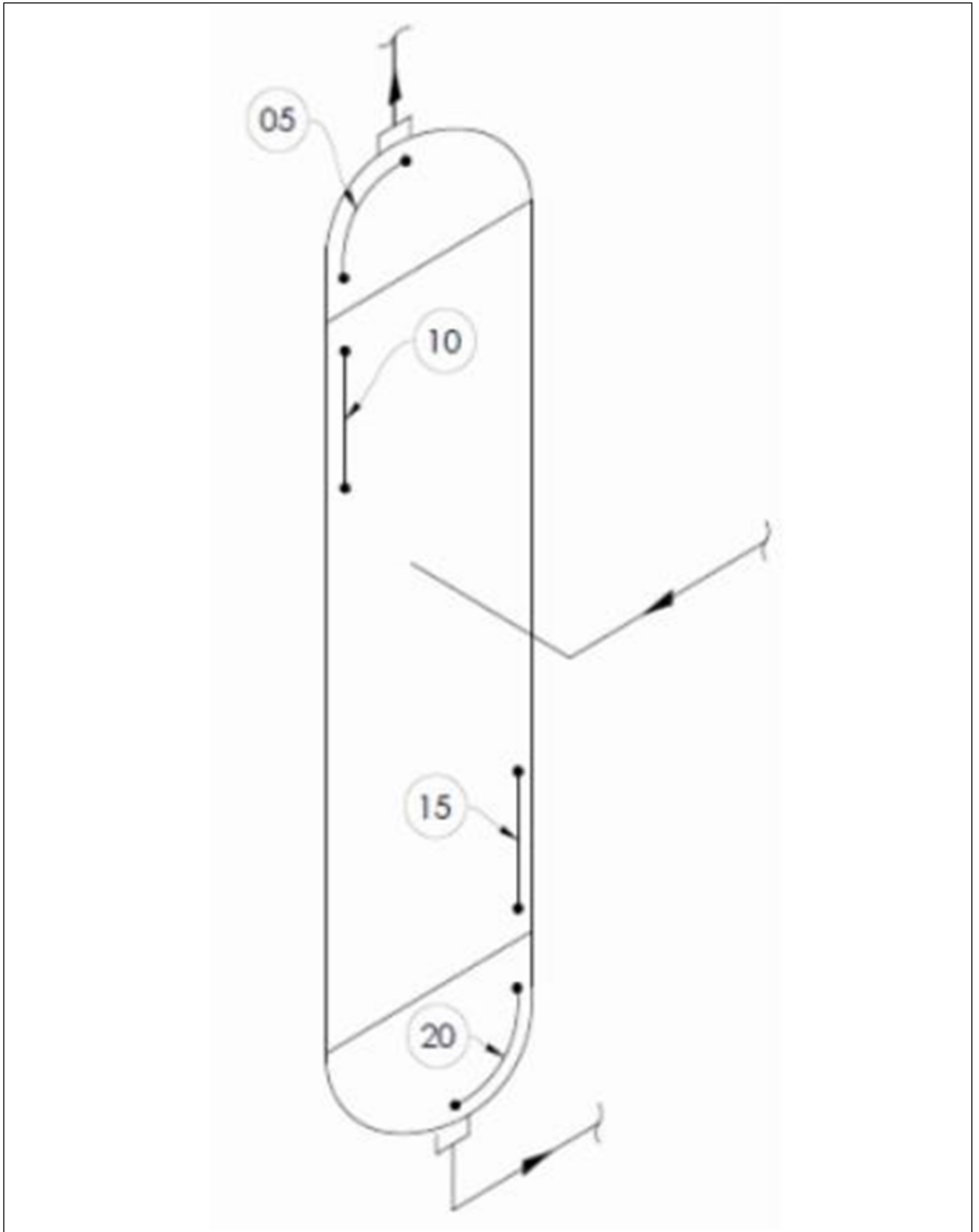


Nameplate




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ISO Drawing



ISO

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								Report Number:		IG000069				
								Page:		4 of 4				
UT Data														
#	01	02	03	04	05	06	07	08	09	10	11	12	Min & Avg	
4							Nom	N/S	Mil	N/S	CA	N/S	Min:	0.238
	0.238	0.245	0.261	0.280									Avg:	0.256
8							Nom	N/S	Mil	N/S	CA	N/S	Min:	0.249
	0.249	0.250	0.252	0.249	0.263	0.259	0.260	0.257	0.250	0.249			Avg:	0.254
12							Nom	N/S	Mil	N/S	CA	N/S	Min:	0.235
	0.249	0.247	0.242	0.239	0.238	0.245	0.239	0.235	0.239	0.239			Avg:	0.241
16							Nom	N/S	Mil	N/S	CA	N/S	Min:	0.220
	0.295	0.250	0.242	0.221	0.220								Avg:	0.246
5	Top Head						Nom	N/S	Mil	N/S	CA	N/S	Min:	0.238
	0.238	0.245	0.261	0.280									Avg:	0.256
10	Top Shell						Nom	N/S	Mil	N/S	CA	N/S	Min:	0.249
	0.249	0.250	0.252	0.249	0.263	0.259	0.260	0.257	0.250	0.249			Avg:	0.254
15	Bottom Shell						Nom	N/S	Mil	N/S	CA	N/S	Min:	0.235
	0.249	0.247	0.242	0.239	0.238	0.245	0.239	0.235	0.239	0.239			Avg:	0.241
20	Bottom Head						Nom	N/S	Mil	N/S	CA	N/S	Min:	0.220
	0.295	0.250	0.242	0.221	0.220								Avg:	0.246





Irwin Garcia, P.Eng.
Alberta IPV #A-92199

Technician 1: Irwin Garcia

SNT RAE-710B-037 UT Level 1 (Expires Sep 30, 2029)

SNT RAE-710B-037 MT Level 2 (Expires Sep 30, 2029)

Method	Level	Expiry Date
UT	1	30-Sep-29
MT	2	30-Sep-29
Corrective Lenses Required: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
By:	Zong Jun Wang	
Title:	NDE Level 3	
Signature:		
Date:	30-Sep-24	


RAE Engineering and Inspection Ltd.

Certification Record
 This is to certify that:
Irwin Garcia
 The above named employee has satisfactorily met the qualification requirements of the RAE Engineering and Inspection Ltd. written practice that meets the requirements of ASNT recommended practice SNT-TC-1A 2020 edition
 Certification No.: RAE-710B-037



MetTech

Material Testing Equipment and Supplies

A division of 1067113 Alberta Ltd.

1, 3610 - 29 St. N.E. Calgary, Alberta T1Y 5Z7

Measurement Readings for Calibration of Thickness Gauges

Company: RAE Engineering & Inspection Ltd. - Calgary

Instrument: GE DMS2 UTG

Serial Number: 01X121

Date: 5/2/2025

Range Check against stated reference listed:

Nominal measure	Measured reading	
	Block # 1	Block # 2
1.000"	1.002 "	1.000 "
0.750"	0.752 "	0.751 "
0.500"	0.500 "	0.500 "
0.250"	0.250 "	0.250 "

Allowable tolerance +/- 0.004"

These readings were produced against stated reference block in house and are within the allowable tolerances.

Reference Standards

4 Step 4340 Imperial Steel

Serial # 07-5839

Heat/Lot # G10975K06

ASTM specification E-797

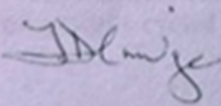
4 Step Imperial Steel

Serial # 11-3909

Heat/Lot # 227L511

ASTM specification E-797

These reference standards have been manufactured in accordance with applicable specifications, and were inspected with instruments calibrated in accordance with ANSI/NCSL Z540-1-94 and traceable to NIST.

Signed by: 

Temperature: 21.2 °C

On this date: 5/2/2025

Rel. Hum. : 28%

Calibration report MET-STEP01 Revision 3 Apr 11/22

Calgary Edmonton
Phone: 270-7778 Fax: 283-3552 Toll free: 1-888-283-3552



MetTech

Material Testing Equipment and Supplies

A division of 1067113 Alberta Ltd.

1, 3610 - 29 St. N.E. Calgary, Alberta T1Y 5Z7

Certificate of Calibration of Thickness Gauges

Company: Rae Engineering - Calgary

Instrument: GE DMS2 UTG

Serial Number 01X121 :

Date: 5/2/2025

This is to certify that the above instrument meets or exceeds manufacturer's specifications for THICKNESS RESOLUTION, and has been calibrated to reference standards manufactured and inspected in accordance with ISO 902 with instruments calibrated to ANSI/NCSL Z540 and traceable to National Institute of Standards and Technology (NIST).

Reference Standard: 4 Step Imperial Steel

Serial # 07 - 5839

Block #1

Serial # 11 - 3909

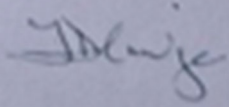
Block #2

These blocks have been manufactured in accordance with applicable specifications, and was inspected with instruments calibrated in accordance with ANSI/NCSL Z540 and traceable to NIST.

NIST certification reference # 11-83834 A & B

10-78221 A & B

Certificate of calibration is current for a period of 12 from date listed. Reference Standard Blocks are periodically cycled out of stock without notice.

Signed by: 

On this date: 5/2/2025