



Head Office: 4810 - 93 Street NW, Edmonton, Alberta, Canada T6E 5M4
Tel: 780-469-2401 Fax: 780-468-2422 www.raeengineering.ca

Report No: IG001263

Client	Midstream Equipment	Inspection Date	Jun 6, 2025		
Prov. Reg. #	AB RAE49501	Inspection Type	VE / UT / PSV		
Equipment Type	Fuel Gas Scrubber	Location	27 DURUM DRIVE, AB (MIDSTREAM YARD)		
Tag/Equip.		LSD			
Status	Not in Service	Downhole LSD			
Manufacturer	Industrial Fabrication Corporation	Area			
Serial Number	17013-01	Year Built	2005		
CRN #	P2308.231	Service	Sweet		
Comp/Unit Id	UNIT 1029	Manway	None		
Nat.Board #		Coating	Painted		
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.	PR0004444		
ABSA	Plant: R Vessel: Y Process: G Special: Z		ASME	Sec. VIII div. 1	
History Log	Inspection Report Complete - Inspection Date: 2025-June-06 Inspection Type: VE/UT/PSV				

Component	Shell				
MAWP	250.0 PSI @ 150 °F			MDMT	-20 °F @ 250.0 PSI
Material	SA-516-70N		Material Thickness		0.322 in
Diameter			Length		
Corrosion Allowance		0.062 in			



Valve Tag No	P95786	Relief Type	Pressure Safety Valve
Manufacturer	Farris	Set Pressure	150.000 PSI
Serial Number	488945-22-KE	Capacity	361 SCFM
Model	27DA33-M20	Last Service	Jun 14, 2013
CRN	OG0386.9C	Next Service	2017
Service Co.	Unified Valve	Service Interval	48 Months
Service Co. Tag	285351C	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	

Valve Tag No	1029 - FGS PSV	Relief Type	Pressure Safety Valve
Manufacturer	MERCER	Set Pressure	150 PSI
Serial Number	911602	Capacity	329 SCFM
Model	91-17D51V07E1	Last Service	Oct 12, 2022
CRN	0G8841.5C	Next Service	2026
Service Co.	PIMM'S PRODUCTION EQUIPMENT	Service Interval	48 Months
Service Co. Tag	G850055	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	



Component	Heads		
Material	SA-516-70N	Material Thickness	0.322 in
Corrosion Allowance	0.125 in		

Comments

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

INS-624B Unfired Pressure Vessels Procedure

INS-645B PRV Inspection 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 vessel was located in a building identified with a place card "Rental Unit #8000353" attached to the building exterior.

The building was generally in good condition and well supported.

The building has one entry and a window to provide lighting. Both the door and window were functioning well and were in good condition

The building has adequate light which is a combination of natural light and lighting.

The building floor was a checkered steel plate that had paint damage and corrosion and was in overall good condition.

All items are placed economically, and operations can be performed safely.

The building structure was level and situated on a transportation skid.

The cladding was in good condition.

Overall, the building was in acceptable condition.

2025 Observations

Midstream unit number was written on the building door.

No additional comments since last inspection.



Figure: 1



BUILDING

Figure: 2



UNIT NUMBER

Figure: 3



FLOOR

Piping Observations

The piping was well supported.

The attached piping was sufficiently support and was in good condition.

The piping was painted and there was no damage, distortion or stress evident on the piping.

There was no signs of external corrosion on the piping surfaces.

The piping had threaded connections that showed no signs of leakage.

The threaded connections appeared to be in good condition.

Overall the piping appeared to be in good condition.

2025 Observations

No additional comments since last inspection.



Figure: 4



INLET PIPING

Figure: 5



OUTLET 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 : Yes

The PSV was identified by the identification tag and nameplate.

There was a service tag attached to the PSV and a metal service company identification tag.

The nameplate was securely attached and legible.

The PSV was installed on the piping and relieves outside the building.

The PSV had all the required seals and they were intact.

The was installed in a vertical position with the discharge line grading away from the valve complying with regulatory standards.

There were no valves on the PSV piping.

The PSV was last service on June 14, 2013 and the PSV shall be serviced prior to June 14, 2017.

The PSV service report shall be forwarded to the Chief Inspector for review.

2025 Observations

PSV was serviced in 2022.

No additional comments since last inspection.



Figure: 6



PSV

Figure: 7



NAMEPLATE

Figure: 8



SERVICE TAG



External Observations

Installation : In Building
Grounded : Yes
Drains : Automatic
Attachments : Yes
CUI checked : N/A
Vessel Orientation : Vertical
Manway : No
Certificate of inspection permit : No
Nameplate attached and legible : Yes

Support Structure : Direct to Building
Securement Type : Welded
Securement Condition : Acceptable
Ladders/Platforms : N/A
External Covering : Coated

The vessel was identified by the serial number stamped on the nameplate.
The nameplate was legible and securely mounted to the vessel.
The vessel was fully located inside the building was ergonomically placed.
The vessel was adequately supported on vessel sized skirt and was welded to the skid floor.
The heads, shell, nozzles and threading appeared to be in good condition.
There was no stress evident on piping or nozzle connections and there was no damage or distortion evident on the vessel surface.
The vessel was painted grey and is in acceptable condition.
The gauges were in good condition.

2025 Observations

There was minor paint chips and minor external corrosion noted on the vessel surfaces.

Figure: 9



VESSEL

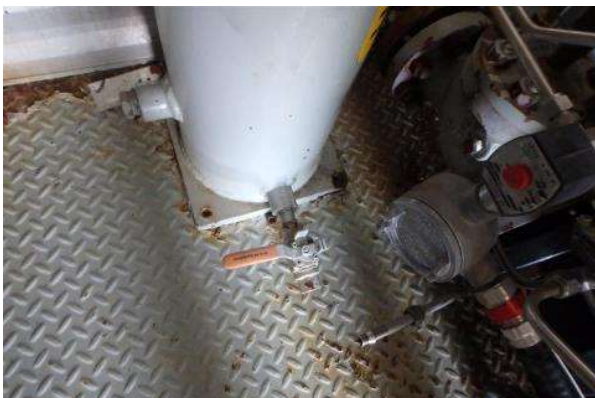
Figure: 10



NAMEPLATE



Figure: 11



SUPPORT

Internal Observations

No internal inspection was performed during 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. A permanent Midstream unit label should be affixed to the building door.
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>UT Report</h1>								
			Report Number:		IG000071										
			Page:		1 of 4										
Client:		Midstream Equipment		Job Number:		PR0004439									
Facility:		Midstream Yard		Location/LSD:		Midstream Yard									
Equipment Number:		RAE49501		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 showed the thicknesses of all the components inspected to be at or around nominal. There were no signs of wall thinning, internal corrosion, erosion, laminations or inclusions 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.



RAE Engineering and Inspection Ltd. www.raeengineering.ca Phone: (780) 469-2401 Fax: (780)-469-2401	Inspection Date:	June 06, 2025	UT Report
	Report Number:	IG000071	
	Page:	2 of 4	

Photo Graphics



Overall View

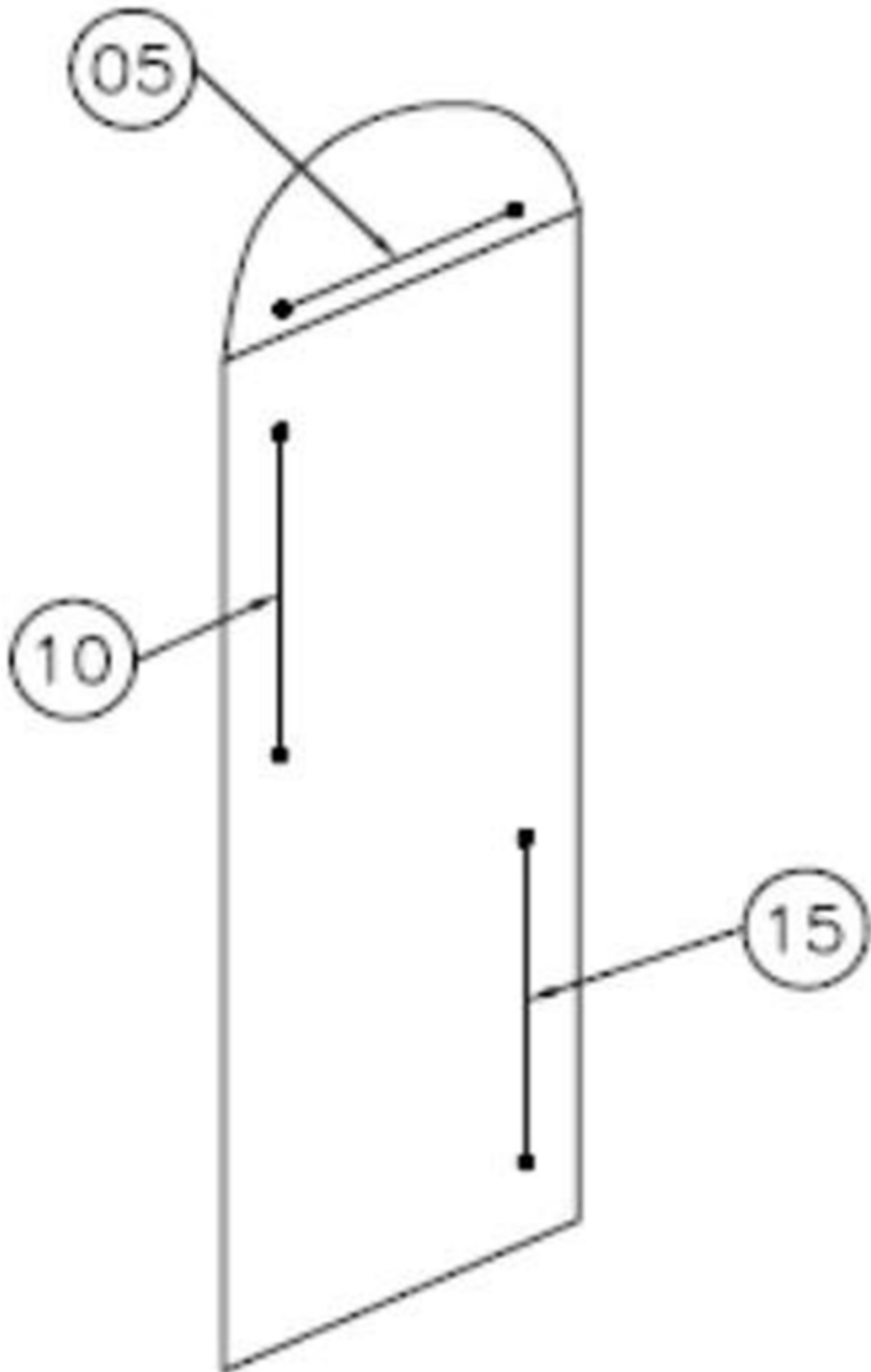


Nameplate




RAE Engineering and Inspection Ltd. www.raeengineering.ca Phone: (780) 469-2401 Fax: (780)-469-2401	Inspection Date:	June 06, 2025	UT Report
	Report Number:	IG000071	
	Page:	3 of 4	

ISO Drawing



ISO



	RAE Engineering and Inspection Ltd. www.raeengineering.ca Phone: (780) 469-2401 Fax: (780)-469-2401							Inspection Date:		June 06, 2025		UT Report		
								Report Number:		IG000071				
								Page:		4 of 4				
UT Data														
#	01	02	03	04	05	06	07	08	09	10	11	12	Min & Avg	
5	Head						Nom	0.322	Mil	0.010	CA	0.125	Min:	0.392
	0.422	0.411	0.399	0.415	0.409	0.408	0.392	0.411	0.428	0.456			Avg:	0.415
10	Top Shell						Nom	0.322	Mil	0.010	CA	0.062	Min:	0.327
	0.327	0.332	0.329	0.329	0.327	0.330	0.331	0.337	0.328	0.330			Avg:	0.330
15	Bottom Shell						Nom	0.322	Mil	0.010	CA	0.062	Min:	0.336
	0.349	0.348	0.349	0.348	0.350	0.348	0.349	0.350	0.346	0.336			Avg:	0.347



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	<div>RAE Engineering and Inspection Ltd.</div> <div>Certification Record</div> <div>This is to certify that:</div> <div>Irwin Garcia</div> <div>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</div> <div>Certification No.: RAE-710B-037</div>
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		



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

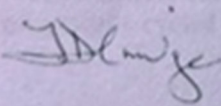
4 Step Imperial Steel

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

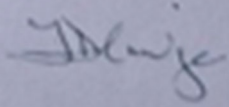
Block #2

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