



Client	Midstream Equipment	Inspection Date	Jun 6, 2025		
Prov. Reg. #	AB RAE47442	Inspection Type	VE / UT		
Equipment Type	Fuel Gas Scrubber	Location	27 DURUM DRIVE, AB (MIDSTREAM YARD)		
Tag/Equip.		LSD	AB		
Status	Not in Service	Downhole LSD			
Manufacturer	Nusco Manufacturing & Supply Inc	Area			
Serial Number	007440-203	Year Built	2004		
CRN #	P6909.231	Service	Sweet		
Comp/Unit Id	UNIT 1084	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		HT	NO
Foreman		RAE Job No.	PR0004440		
ABSA	Plant: R Vessel: K Process: G Special: Z	ASME	Sec. VIII div. 1		
History Log	RAE48222 was replaced with RAE47442 by RAE Admin to avoid duplication in database (August 1, 2018) U1A - entered 2018-08-22 Inspection Report Complete - Inspection Date: 2025-June-06 Inspection Type: VE/UT				

Component	Shell				
MAWP	250.0 PSI @ 250 °F			MDMT	-20 °F @ 250.0 PSI
Material	SA-106-B		Material Thickness		0.322 in
Diameter			Length		
Corrosion Allowance		0.062 in			



Component	Head		
Material	SA-234-WPB	Material Thickness	0.282 in
Corrosion Allowance	0.062 in		

Component	Head		
Material	SA-516-70N	Material Thickness	0.625 in
Corrosion Allowance	0.062 in		

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:2 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 located on a portable skid unit.

All points of access were complete with fully operable access doors.

There were no concerns with the building itself.

2025 Observation

The unit was identified by the Midstream Unit label affixed to the building doors.

No additional comments since previous inspection



Figure: 1



BUILDING

Figure: 2



UNIT LABEL

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 attached piping was in good condition, sufficiently supported and no service related damage was identified. There was no distortion or undue stress evident. All of the joints appeared to be properly connected.

2025 Observation

It was noted that there was paint chips and scattered external corrosion on the piping surfaces.



Figure: 4



INLET PIPING

Figure: 5



OUTLET PIPING

PSV Observations

The existing PSV was removed, and vessel is being used to supply fuel gas for the instrument air system, without a PSV in place.

2025 Observation

A PSV will need to be installed on the inlet piping of the vessel prior to placing the unit back into service.

Figure: 6



MISSING PSV



External Observations

Installation : In Building
Grounded : Yes
Drains : Manual
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 is located inside a building.
The nameplate was legible and securely mounted to the vessel.
The head and shell appeared to be in serviceable condition.
The vessel is not insulated.
The vessel was fully painted and the paint was in serviceable condition.

2025 Observation

It was noted that there was paint chips and scattered external corrosion on the vessel surfaces.

Figure: 7



VESSEL

Figure: 8



NAMEPLATE



Figure: 9



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 provided a PSV is installed on the inlet piping of the vessel prior to placing the unit back into service.
2. 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 25, 2025		<h1>UT Report</h1>								
			Report Number:		IG000076										
			Page:		1 of 4										
Client:		Midstream Equipment		Job Number:		PR0004440									
Facility:		Midstream Yard		Location/LSD:		Midstream Yard									
Equipment Number:		RAE47442		Client Representative:		Joe Davis									
Equipment Description:		Fuel Gas Scrubber		Client Contact:		joe.davis@midstreamequipment.com									
Serial / Tag Number:		007440-200		Unit Number:		UNIT 1084									
Equipment Type:		Vessel+Pipe		Measurment Unit:		Inch									
JOB DESCRIPTION															
Procedure:		NDE Tech Manual Rev. 2025 (NDE - 701B)													
Acceptance Code:		ASME Sec. VIII Div. 1 / ASME B31.3		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. All piping measurements were within the 12.5% mill tolerance, as per ASTM specifications.

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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Vessel Overview

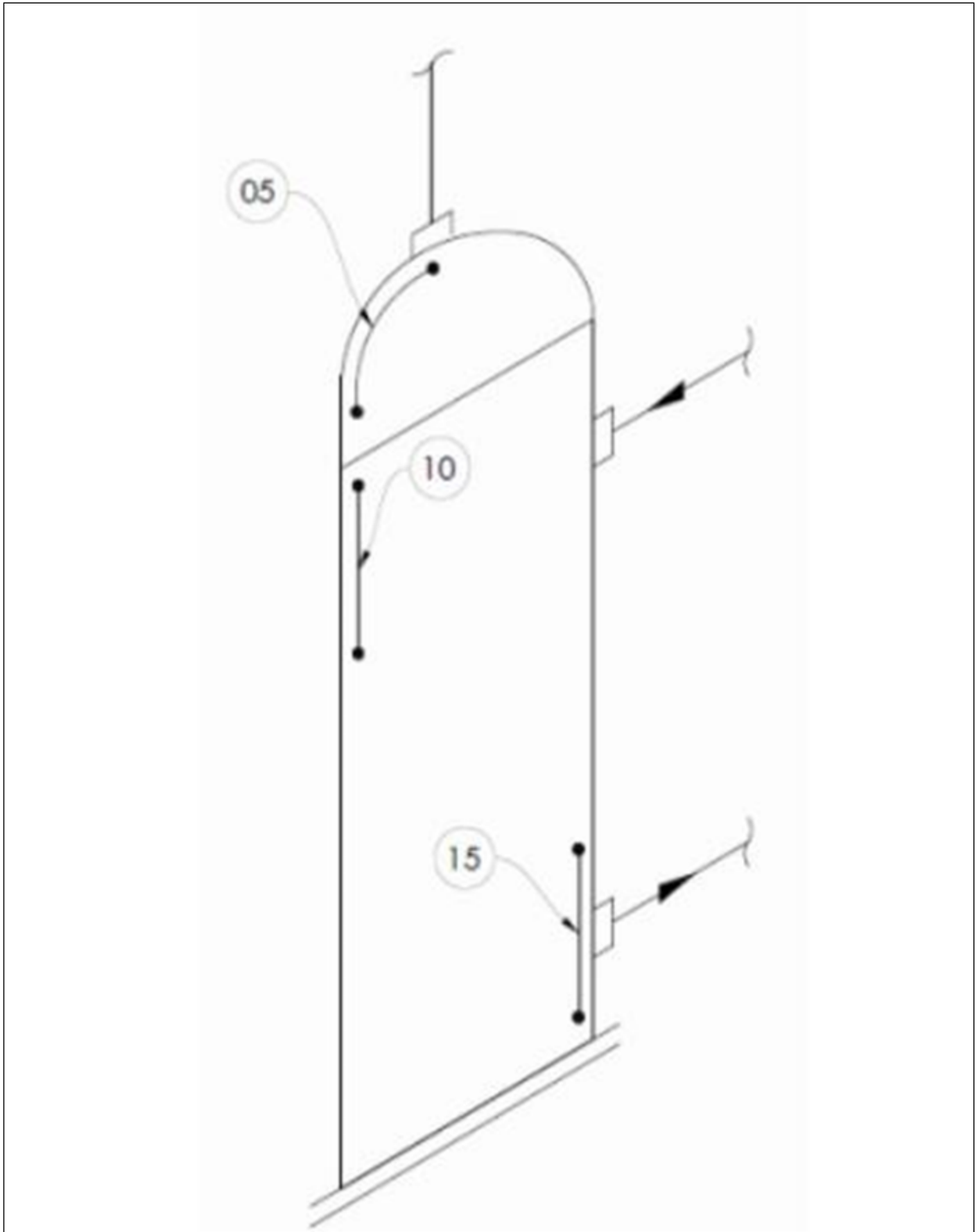


Nameplate




RAE Engineering and Inspection Ltd. www.raeengineering.ca Phone: (780) 469-2401 Fax: (780)-469-2401	Inspection Date:	June 25, 2025	UT Report
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ISO Drawing



ISO



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								Report Number:		IG000076				
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UT Data														
#	01	02	03	04	05	06	07	08	09	10	11	12	Min & Avg	
5	Top Head						Nom	0.282	Mil	0.010	CA	0.062	Min:	0.326
	0.363	0.341	0.334	0.328	0.330	0.333	0.326	0.327	0.339	0.374			Avg:	0.340
10	Top Shell						Nom	0.322	Mil	0.010	CA	0.062	Min:	0.342
	0.349	0.349	0.345	0.350	0.342	0.344	0.343	0.353					Avg:	0.347
15	Bottom Shell						Nom	0.322	Mil	0.010	CA	0.062	Min:	0.330
	0.342	0.342	0.350	0.345	0.344	0.340	0.330	0.332					Avg:	0.341



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

Phone: 270-7778

Calgary

Fax: 283-3552

Edmonton

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

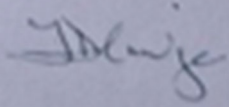
Block #2

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