



Client	Midstream Equipment	Inspection Date	Jun 6, 2025		
Prov. Reg. #	AB RAE46617	Inspection Type	VE / UT / PSV		
Equipment Type	Fuel Gas Scrubber	Location	27 DURUM DRIVE, AB (MIDSTREAM YARD)		
Tag/Equip.		LSD	AB		
Status	In Service	Downhole LSD			
Manufacturer	Black, Sivalls & Bryson (Canada) Ltd.	Area			
Serial Number	F0 51004-V22	Year Built	2005		
CRN #	T0712.213	Service	Sweet		
Comp/Unit Id	UNIT 1057	Manway	None		
Nat.Board #		Coating	Painted		
Interim Insp'n		Interim Type			
Next Thorough Insp	2030	Next Insp Type	VE / UT / PSV		
Length		Height			
Volume	1 ft ³	Client Reference			
Owner	Midstream Equipment	RT		HT	
Foreman		RAE Job No.	PR0004439		
ABSA	Plant: R Vessel: Y Process: G Special: Z	ASME	Sec. VIII div. 1		
History Log	AB-10 - vessel purchased - dated April 10, 2017 - entered May 12, 2017. AB-83 - entered May 12, 2017 Inspection Report Complete - Inspection Date: 2025-June-06 Inspection Type: VE/UT/PSV				

Component	Shell			
MAWP	300.0 PSI @ 300 °F		MDMT	-20 °F @ 300.0 PSI
Material	SA-106-B	Material Thickness	0.322 in	
Diameter		Length		
Corrosion Allowance	0.062 in			



Valve Tag No	1057 - FGS PSV	Relief Type	Pressure Safety Valve
Manufacturer	Taylor	Set Pressure	150.000 PSI
Serial Number	45887-44	Capacity	582 SCFM
Model	82E4351311	Last Service	Aug 2, 2023
CRN	0G01316.2	Next Service	2027
Service Co.	Unified Valve	Service Interval	48 Months
Service Co. Tag	99169G	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	Head1		
Material	SA-234-WPB	Material Thickness	0.322 in
Corrosion Allowance	0.062 in		

Component	Head2		
Material	SA-516-70N	Material Thickness	0.75 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.



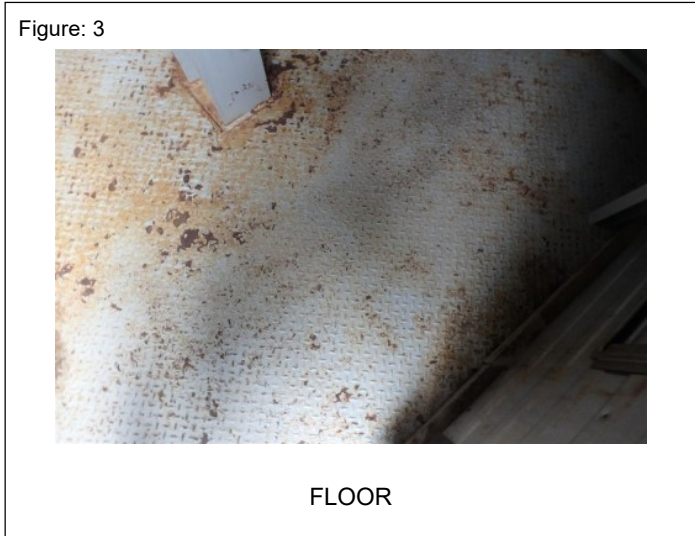
Building Observations

Number of Access Doors: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 Observations

Th building was identified by the Midstream unit number written on the door.
No additional comments since previous inspection.





Piping Observations

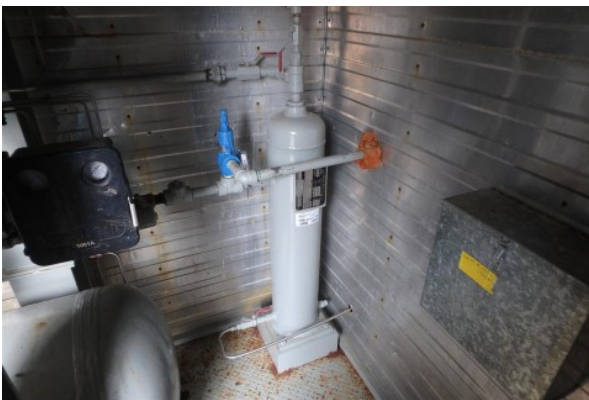
General condition: Acceptable
Mechanical connections acceptable for service?: Acceptable
Clad: No Painted: Yes Insulated: No
Are there any dead legs: No
Support type: U-Bolt
Supported adequately: Yes

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 Observations

No additional comments since previous inspection.

Figure: 4



INLET AND OUTLET PIPING

Figure: 5



DRAIN 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.

2025 Observations

No additional comments since previous inspection.

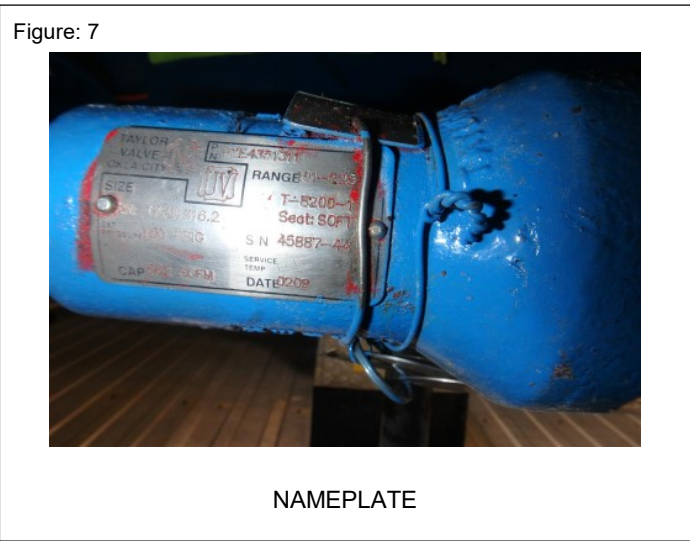
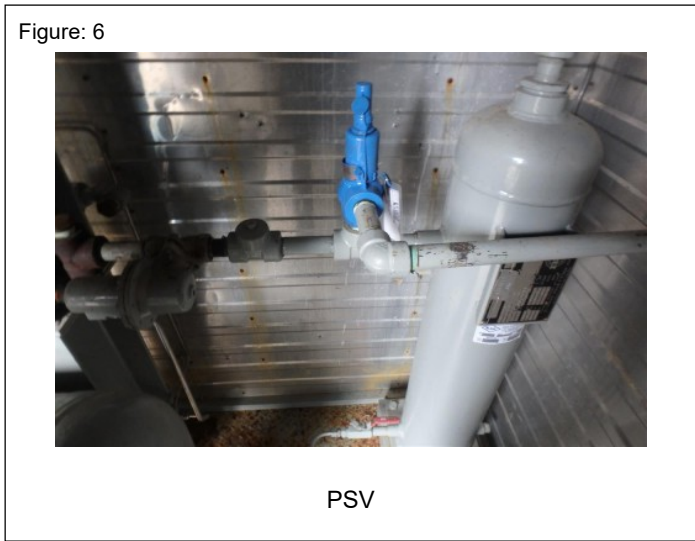




Figure: 8



SERVICE TAG

External Observations

Installation : In Building	Support Structure : Direct to Building
Grounded : Yes	Securement Type : Bolted
Drains :Manual	Securement Condition : Acceptable
Attachments : Yes	Ladders/Platforms : N/A
CUI checked : Yes	External Covering : Coated
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.



Figure: 9



VESSEL

Figure: 10



NAMEPLATE

Figure: 11



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. 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 style="margin: 0;">UT Report</h1>							
			Report Number: IG000067								
			Page: 1 of 4								
Client:	Midstream Equipment	Job Number:	PR0004439								
Facility:	Midstream Yard	Location/LSD:	Midstream Yard								
Equipment Number:	RAE46617	Client Representative:	Joe Davis								
Equipment Description:	Fuel Gas Scrubber	Client Contact:	joe.davis@midstreamequipment.com								
Equipment Type:	Vessel	Measurement 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.

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.

Black - Within ASME Tolerance
Blue - Nominal minus ASME Tolerance
Red - Nominal minus ASME Tolerance minus CA or Nominal minus ASME Tolerance (if CA = N/S)
Orange - Nominal Not Specified (N/S)



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UT Report



Overall View



Nameplate



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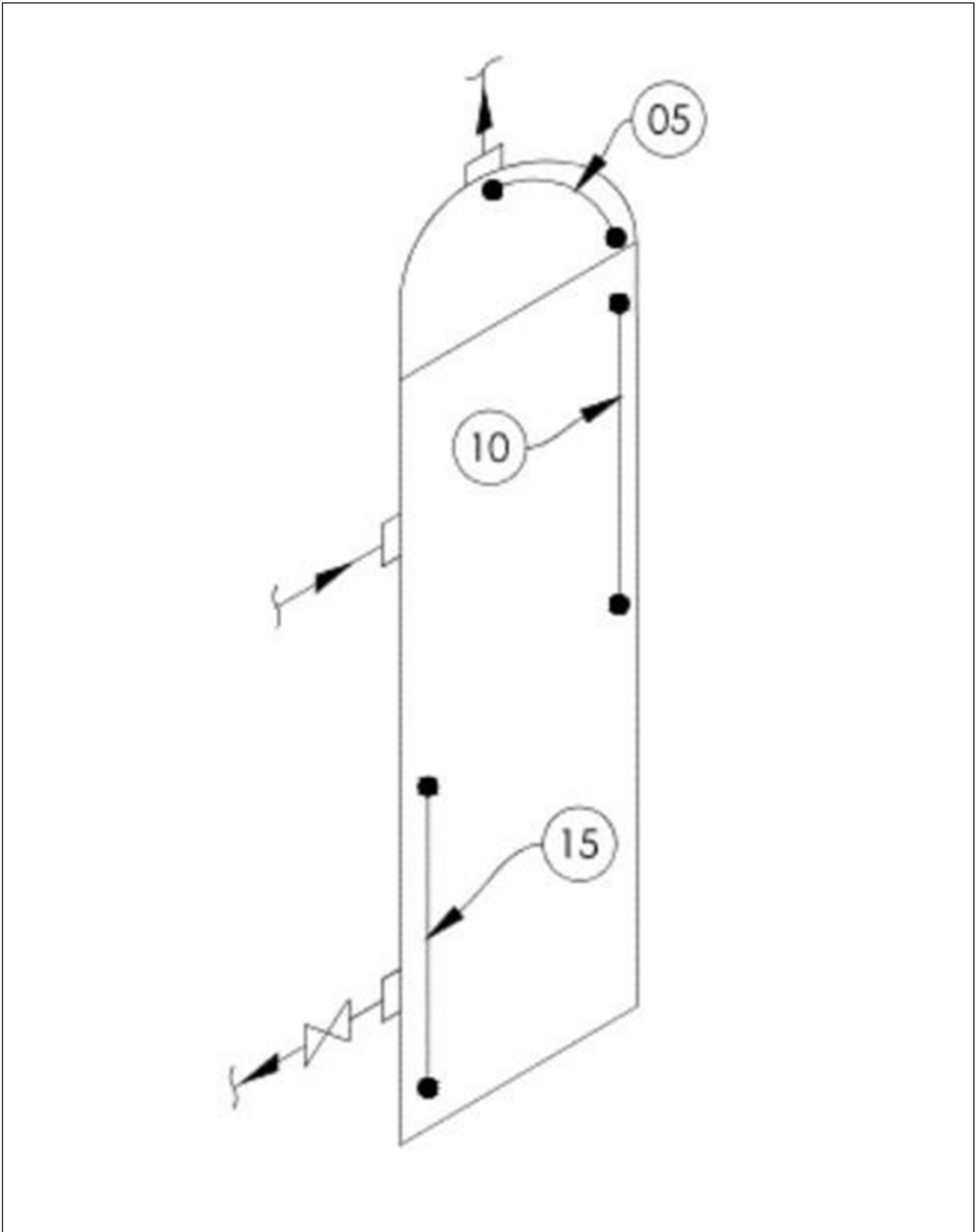
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**UT
Report**

ISO Drawing




ISO


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	0.062	Min:	0.365
	0.374	0.379	0.379	0.370	0.369	0.365							Avg:	0.373
10	Top Shell						Nom	0.322	Mil	0.010	CA	0.062	Min:	0.331
	0.333	0.334	0.335	0.332	0.335	0.331	0.336	0.334	0.333	0.333			Avg:	0.334
15	Bottom Shell						Nom	0.322	Mil	0.010	CA	0.062	Min:	0.346
	0.351	0.350	0.348	0.355	0.350	0.349	0.346	0.348	0.348	0.349			Avg:	0.349


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

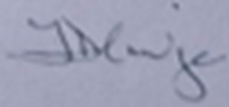
Serial # 11 - 3909 Block #2

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