



Client	Midstream Equipment	Inspection Date	Jun 6, 2025		
Prov. Reg. #	AB 0508330	Inspection Type	VE / UT / PSV		
Equipment Type	Inlet Separator	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	007440-200	Year Built	2004		
CRN #	R5691.2	Service	Sour		
Comp/Unit Id	UNIT 1084	Manway	Yes		
Nat.Board #		Coating	Painted		
Interim Insp'n		Interim Type			
Next Thorough Insp	2030	Next Insp Type	VI / VE / UT / PSV		
Length		Height			
Volume	Capacity	Client Reference			
Owner	Midstream Equipment	RT	1	HT	YES
Foreman		RAE Job No.	PR0004440		
ABSA	Plant: R Vessel: K Process: G Special: Z	ASME	Sec. VIII div. 1		
History Log	U1A - 0508330 - entered 2018-08-22 AB-10 - In Service. Internal entry August 22, 2018 AB-10 - Vessel Relocated and Returned to Service. Internal entry 2019-01-10 AB-10 - Vessel Relocated. Internal entry 2019-06-11 AB-10 - Relocated - 2021-10-14 AB-10 - Not in Service and Relocated - internal entry May 2025 Inspection Report Complete - Inspection Date: 2025-June-06 Inspection Type: VE/UT/PSV				

Component	Shell
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MAWP	400.0 PSI @ 300 °F	MDMT	-20 °F @ 400.0 PSI
Material	SA-516-70N	Material Thickness	0.625 in
Diameter		Length	
Corrosion Allowance	0.125 in		

Valve Tag No	1084 - SEP PSV	Relief Type	Pressure Relief Valve
Manufacturer	Crosby	Set Pressure	400.000 PSI
Serial Number	C05-47175	Capacity	6384 SCFM
Model	J0S-E-35-J	Last Service	Mar 12, 2024
CRN	0G0703.92	Next Service	2029
Service Co.	Unified Valve	Service Interval	60 Months
Service Co. Tag	100608G	Inlet Size	2 in
ASME Stamp	UV	Outlet Size	3 in
NB Stamp	YES	Connection	Flanged
Relief Dest.	Piping	Valve Loc.	On Vessel
Comments		Client Reference	

Component	Head		
Material	SA-516-70N	Material Thickness	0.688 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: 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



GAS OUTLET PIPING

Figure: 6



WATER OUTLET PIPING

Figure: 7



PIPING TO BLOWCASE



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 securely attached to the vessel piping, mounted in the vertical position and in good condition. The nameplate and service tag were securely attached, legible and the set pressure was acceptable for the vessel. The PSV seal wire was attached and intact. The vent size was adequate and vent lines were positioned safely providing positive drainage for the PSV. There were no valves on the PSV piping.

2025 Observation

No additional comments since previous inspection

Figure: 8



PSV

Figure: 9



NAMEPLATE

Figure: 10



SERVICE TAG



External Observations

Installation : Partial
Grounded : Yes
Drains :Manual
Attachments : Yes
CUI checked : Yes
Vessel Orientation : Horizontal
Manway : Yes
Manway davit arms:
 Free to move : Yes
 Lubricated : Yes
Carry bolt with washer and double Nutted : No
Certificate of inspection permit : Yes
Nameplate attached and legible : Yes

Support Structure : Saddles
Securement Type : Bolted
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.
The manway carrying bolt is not double nutted. Ensure carrying bolt is double nutted.

Figure: 11



VESSEL

Figure: 12



NAMEPLATE



Figure: 13



SUPPORT

Internal Observations

2025 Observations

There was no internal inspection performed at the time of inspection as the internals were not cleaned. It was noted that the unit may be sold and internal inspection is not to be performed at this time. Internal inspection shall be completed prior to placing the unit back into service.

UT1 Observations

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

Recommendations

1. The vessel is fit-for-service provided that an internal inspection shall be completed prior to placing the unit back into service.
2. The manway carrying bolt is not double nutted. Ensure carrying bolt is double nutted.
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 25, 2025		<h1>UT Report</h1>								
			Report Number:		IG000074										
			Page:		1 of 5										
Client:		Midstream Equipment		Job Number:		PR0004440									
Facility:		Midstream Yard		Location/LSD:		Midstream Yard									
Equipment Number:		0508330		Client Representative:		Joe Davis									
Equipment Description:		Inlet Separator		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 inlet separator 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:

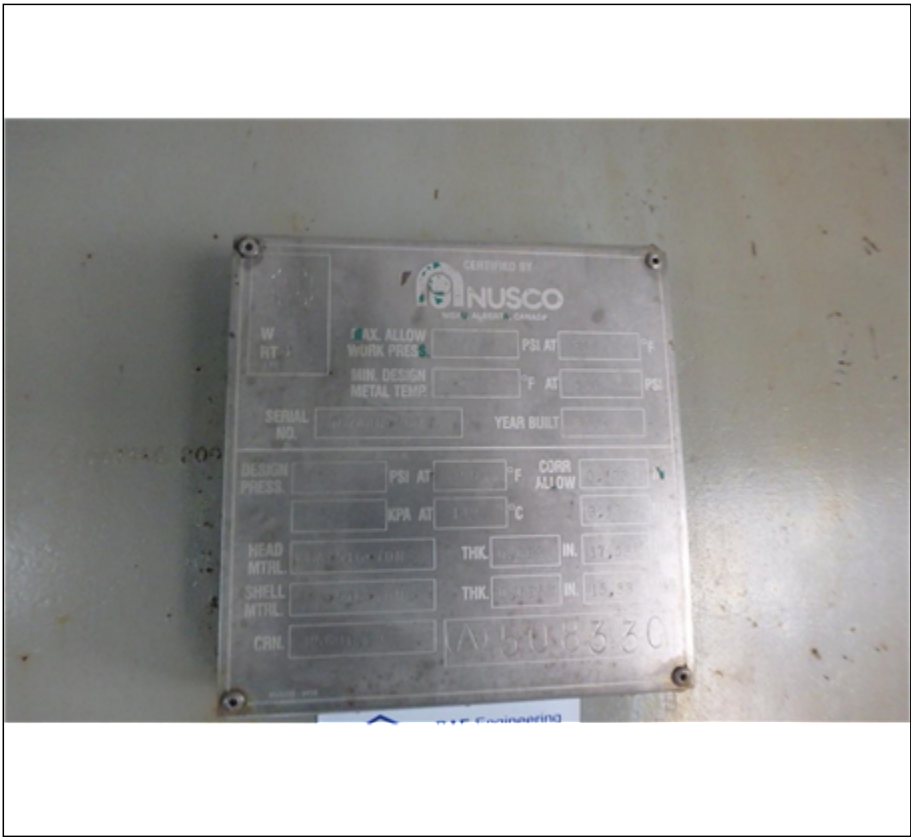
No concerns noted at the time of inspection.



RAE Engineering and Inspection Ltd. www.raeengineering.ca Phone: (780) 469-2401 Fax: (780)-469-2401	Inspection Date:	June 25, 2025	UT Report
	Report Number:	IG000074	
	Page:	2 of 5	



Vessel Overview



Nameplate



RAE Engineering and Inspection Ltd.
www.raeengineering.ca
Phone: (780) 469-2401 Fax: (780)-469-2401

Inspection Date:

June 25, 2025

Report Number:

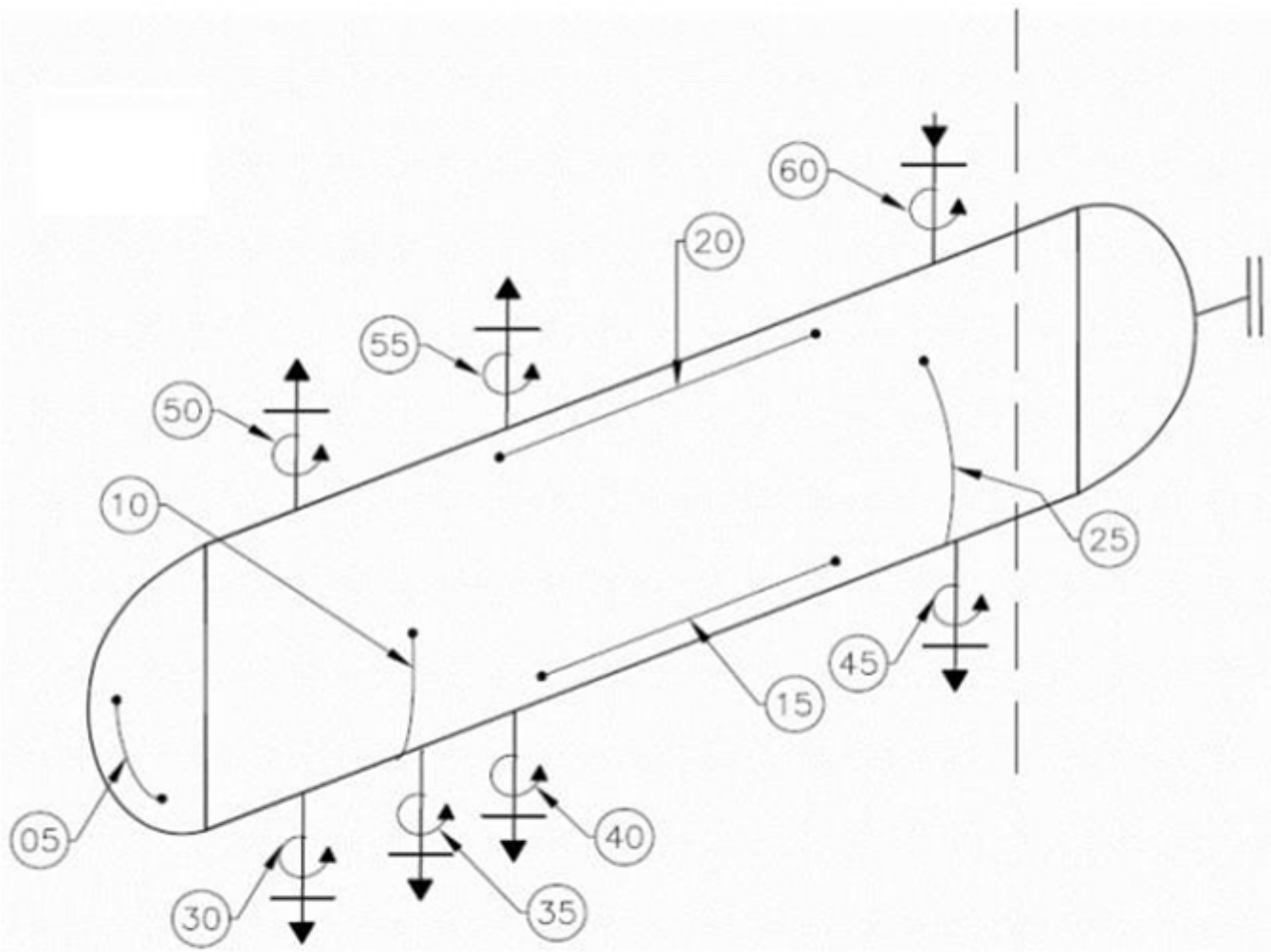
IG000074

Page:


3 of 5

UT Report

ISO Drawing



ISO

		RAE Engineering and Inspection Ltd. www.raeengineering.ca Phone: (780) 469-2401 Fax: (780)-469-2401						Inspection Date:		June 25, 2025		UT Report		
								Report Number:		IG000074				
								Page:		4 of 5				
UT Data														
#	01	02	03	04	05	06	07	08	09	10	11	12	Min & Avg	
5	Head						Nom	0.688	Mil	0.010	CA	0.125	Min:	0.744
	0.744	0.744	0.752	0.755	0.753	0.760	0.764	0.760	0.764	0.770			Avg:	0.757
10	Bottom Shell						Nom	0.625	Mil	0.010	CA	0.125	Min:	0.657
	0.660	0.661	0.659	0.658	0.657	0.657	0.658	0.660	0.661	0.674			Avg:	0.661
15	Bottom Shell						Nom	0.625	Mil	0.010	CA	0.125	Min:	0.658
	0.664	0.661	0.679	0.669	0.664	0.662	0.658	0.659	0.661	0.660			Avg:	0.664
20	Top Shell						Nom	0.625	Mil	0.010	CA	0.125	Min:	0.672
	0.681	0.675	0.672	0.673	0.675	0.672	0.675	0.673	0.675	0.672			Avg:	0.674
25	Bottom Shell						Nom	0.625	Mil	0.010	CA	0.125	Min:	0.660
	0.662	0.662	0.663	0.663	0.663	0.662	0.662	0.661	0.660	0.661			Avg:	0.662
30	2 160 Nozzle						Nom	0.344	Mil	0.043	CA	N/S	Min:	0.369
	0.376	0.369	0.377	0.373									Avg:	0.374
35	3 160 Nozzle						Nom	0.438	Mil	0.055	CA	N/S	Min:	0.455
	0.470	0.462	0.464	0.455									Avg:	0.463
40	2 160 Nozzle						Nom	0.344	Mil	0.043	CA	N/S	Min:	0.355
	0.366	0.357	0.358	0.355									Avg:	0.359
45	2 160 Nozzle						Nom	0.344	Mil	0.043	CA	N/S	Min:	0.349
	0.357	0.353	0.349	0.362									Avg:	0.355
50	2 160 Nozzle						Nom	0.344	Mil	0.043	CA	N/S	Min:	0.365
	0.368	0.365	0.368	0.373									Avg:	0.369
55	8 XH Nozzle						Nom	0.500	Mil	0.062	CA	N/S	Min:	0.530
	0.534	0.556	0.535	0.530									Avg:	0.539
60	8 XH Nozzle						Nom	0.500	Mil	0.062	CA	N/S	Min:	0.516
	0.516	0.529	0.550	0.525									Avg:	0.530





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

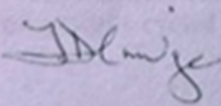
4 Step Imperial Steel

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

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

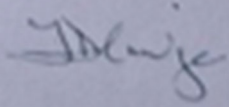
Block #2

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