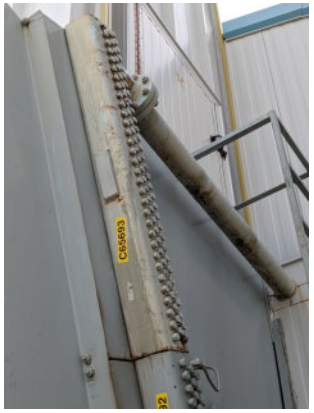
01-18-017-18W4M
GLYCOL COOLER
808006.1BC65693

DATE	3/31/2022
CLIENT	CNRL

Phone:403-793-7697
8 Sarah King Crt E Brooks, Alberta, T1R 0J8
grady.rustebakke@gmail.com

GRADY INSPECTION LTD

REPORT # 808006.1B_GRADY INSPECTION LTD VE UT INSP_31MAR2022



PRESSURE EQUIPMENT

DISTRICT				**SHELL**	**TUBE**	
FACILITY	ARMADA		**MAWT**	300		F
A#		**YR** 1980	**MAWP**	15		psi
SERIAL #	808006.1B		**PSV**			psi
CRN			**PSV CRN**			
EQUIP#			**SERVICED**			
STATUS	IN SERVICE		**UNIT**	K301		
MANUFACTURER	AIR-X-CHANGER LTD.					
DH LSD			**L**	Ft	**OD** .33	Ft
REPAD		**UNIQUE ID**	**C65693**			

AB-506 INTERVAL

Air cooled heat exchangers

GRADE	YEARS			REG
	Equip	PSV	UT	
3	10	6	10	X

INSPECTION TYPE

VE	VI	MT	PT	ET	UT
X					X

INSPECTION RESULT:

NCR-OPERATIONS	
NCR-REGULATORY/ADMIN	
ACTION ITEM RAISED	
REPAIR REQUIRED	
SUITABLE FOR SERVICE	X

RESULTS OF INSPECTION:

VE Inspection:
Fit For Service. Vessel is in good visual condition.
UT Inspection:
No corrosion was found with the ultrasonic inspection.

RECOMMENDATIONS:

VE Inspection:
No Recommendations from the External Inspection.

SIGN OFF		API 510	EXP.	IPV	EXP.	INSPECTOR - PRIMARY	INSPECTOR - REVIEW	CLIENT SIGN OFF
INSPECTED BY	ToddM Mckenzie	97445	12/31/202	00133	7/13/2026			
REVIEWED BY	Ashley Rustebakke	60285	7/31/2024	966	6/16/2026			

Ultrasonic Report

LSD	01-18-017-18W4M	**Date**	4/1/2022
DH-LSD		**Facility**	Armada Gas Plant
Juristiction #		**Field**	Red Deer District
Serial #	808006.1B		

Ultrasonic Report #: 808006.1B_GRADY INSPECTION LTD VE UT INSP_31MAR2022

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ULTRASONIC SET			COMPONENT DETAILS				CODE	
EQUIPMENT	**CALIBRATION DUE**	**SERIAL NUMBER**	**MATERIAL GRADE**	**SURFACE PREP**	**TEMP**	**THICKNESS**	**CALIBRATION**	**EVALUATION**
EPOCH 600	2/25/2023	120388107	Carbon Steel	Painted	0C		ASME V	ASME VIII Div 1

CALIBRATION BLOCK		PROBE							COUPLING		METHOD	
TYPE	**SERIAL#**	**REF dB**	**SCAN dB**	**FREQ.**	**SIZE.**	**ANGLE**	**SERIAL #**	**TYPE**	**COUPLANT**	**CABLE**	**TECHNIQUE**	**PROCEDURE**
10 Step Metric	14-2065	60	66	5 Mhz	0.25 "	0	15B00DU3	Dual	UT-X	6' BNC to Micro	LW Dual	UT01T1R4

SCOPE	As requested by Dustin Rumohr an ultrasonic inspection was completed on the GLYCOL COOLER
LIMITATIONS	None.
RESULTS	No corrosion was found with the ultrasonic inspection.

Technician Name	Certification Body	Certification #	Expiry	Technician Signature
3 ToddM	CGSB	9234		

Client Name	Dustin Rumohr	Company Name	CNRL
Client Signature			

External Inspection - (Vessel)

LSD	01-18-017-18W4M	**Date**	4/1/2022
DH-LSD		**Facility**	Armada Gas Plant
Juristiction #		**Field**	Red Deer District

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Fit For Service:	Fit For Service.
Inspection Summary:	Vessel is in good visual condition.
Recommendations:	No Recommendations from the External Inspection.

External Inspection Items	G/F/P	Comments
General Condition:	Good	No notable mechanical damage, areas of wear/fretting, distortion, misalignment, or visible weld defects.
External Coating:	Good	Vessel is in good visual condition.
Insulation / Cladding:	N/A	Non insulated vessel
Nozzles, Piping and Connections:	Good	Nozzles and piping in good visual condition
Buried Vessels:	N/A	Above Ground
Ladders, Platforms and Walkways:	Good	Building secure
Foundations and Supports:	Good	Anchor bolts fully engaged
Shell:.	Good	No notable mechanical damage, areas of wear/fretting, distortion, misalignment or visible weld defects.
Saddles / Skirts:	Good	Saddle is in good visual condition
Grounding:	Good	Ground Wire is secure
Gauges and Instrumentation:	N/A	**Shell Gauge** (- @) **Temp Gauge** (- @)
Pressure Protection:	N/A	Non code vessel
NDE Summary:	Good	No corrosion was found with the ultrasonic inspection.
Manway Davits/Quick Closure:	N/A	No Manway
Nameplate:	Good	Nameplate is legible and readily accessible and securely affixed. Non code vessel
Code Variance:		

Overview Photo

LSD	01-18-017-18W4M	**Date**	3/31/2022
Jur #		**FACILITY**	Armada Gas Plant
Serial #	808006.1B	**FIELD**	Red Deer District

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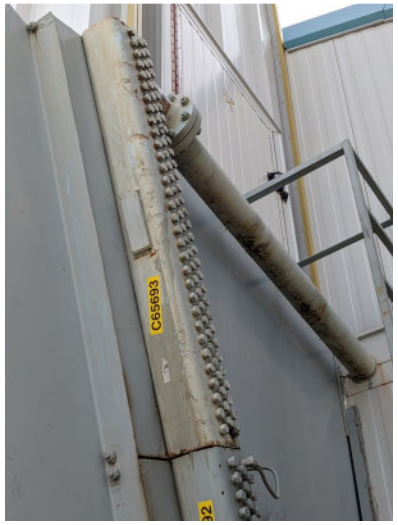
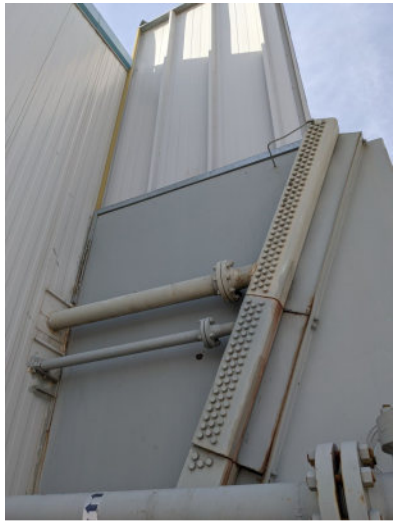
Nameplate



Overview



Alternate Overview

CNRL C Number

REPORT #	**808006.1B_GRADY INSPECTION LTD VE UT INSP_31MAR2022**				
LSD	01-18-017-18W4M	**FACILITY**	Armada Gas Plant		
DH-LSD		**FIELD**	Red Deer District		
Jur #		**DWG**	1	**Location:**	
Ser #	808006.1B				

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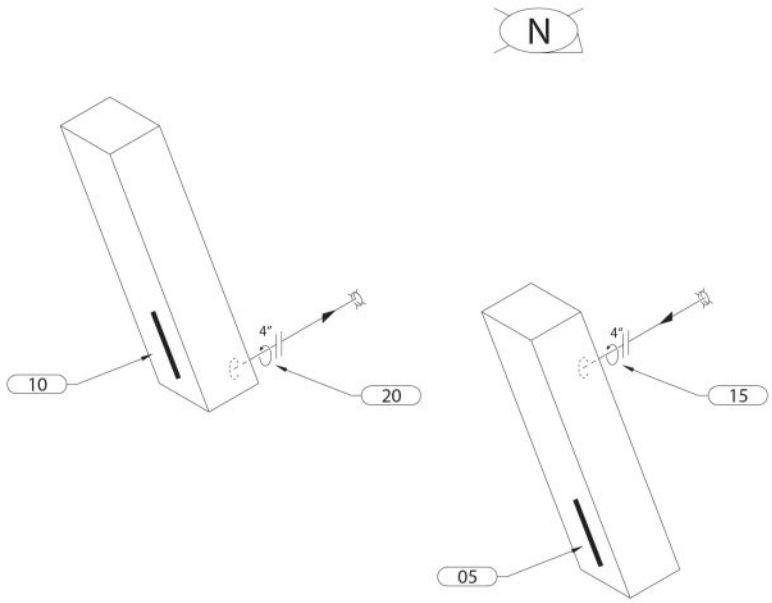
GRADY INSPECTION LTD

CML#	Nom	CA/Tol	SFlag	STmin	PTmin	> Tmin	Comp Type	Pipe Size	Code	MOP	Inspection Dates and Thickness Values (mm) Baseline Date	Baseline Min Ave	3rd Last Date	3rd Last Min Ave	2nd Last Date	2nd Last Min Ave	Last Date	Last Min Ave	# of Insp	% Nom Wall Loss	Corrosion Rates ST	Corrosion Rates LTn	Corrosion Rates LTi	Rem Life Date	Rem Life (yrs)	Next Insp Date	Insp Int (yrs)	Inspection Comments

CML	Min	Yrs	Date



Date of Print
4/26/2022

Nominal (mm)			
	Pipe Tolerance 12% (mm)	API 574 Table 7	Pressure Tmin
	Corrosion Allowance (mm)	Flag Tmin	Structural Tmin

%Nom -UT		
	10-20	20-30
	30-50	>50

Cor. Rates (mm/yr)		
	0.025 - 0.25	0.26 - 0.5
	0.501 - 1	>1.0

Calculated Failure (years)		
	3-5	2-3
	1-2	< 1

REPORT # **808006.1B_GRADY INSPECTION LTD VE UT INSP_31MAR2022**

LSD 01-18-017-18W4M **FACILITY** Armada Gas Plant

DH-LSD **FIELD** Red Deer District

Jur # **DWG** 1 **Location:**

Ser # 808006.1B

Phone:403-793-7697

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GRADY INSPECTION LTD

Inspection Dates and Thickness Values (mm)

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05	0.0	0.0	-167.6				Shell		UG27ShellInt	15	3/31/22	12.3	12.5										1							3/28/2032	10.0	
10	0.0	0.0	-167.6				Shell		UG27ShellInt	15	3/31/22	12.2	12.4										1							3/28/2032	10.0	
15	8.6			5.3		5.3	Nozzle	4'' XS 80--(8.6mm)	UG45Nozzle	15	3/31/22	8.7	9.2										1	-1%						3/28/2032	10.0	
20	8.6			5.3		5.3	Nozzle	4'' XS 80--(8.6mm)	UG45Nozzle	15	3/31/22	8.8	9.2										1	-2%						3/28/2032	10.0	

Date of Print
4/26/2022

Nominal (mm)			
	Pipe Tolerance 12% (mm)	API 574 Table 7	Pressure Tmin
	Corrosion Allowance (mm)	Flag Tmin	Structural Tmin

%Nom -UT		
	10-20	20-30
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Cor. Rates (mm/yr)		
	0.025 - 0.25	0.26 - 0.5
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	3-5	2-3
	1-2	< 1