

Pressure Vessel External Visual Inspection Report



Organization: Husky

Inspection Date: 06/05/2010 12:00:00AM

Plant: Foothills

Equipment ID: 66068141

Asset No: 66068141

System: 00001 Galloway Gas Plant 12-05-054-20W5

Operating Unit: FH-FW-014 Galloway

ALCO Gas #011 SN 2001-6549-01P

Background

Description:	Scrubber, Fuel Gas
Asset Type:	

Inspection

Inspector:	Bob Marchak	Company:	Husky Energy	Insulated:	N
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External Location Categories

Barrier Penetrations:		Damaged Insulation:		Vessel Supports:		Insulation Rings:	
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Inspection Comments

ID	Description	Condition	Location	NCR	Comments

Inspection Summary

The nameplate is attached and legible, with Serial# 2001 6549 01P stamped on it. There is no A# on the FGS, nor is one required as per AR/2006, UM pressure volume limits. The approximate volume is 1.41 cubic feet. The fuel gas scrubber is painted and the paint is in good condition with no chips or corrosion noted. The piping, bolting and external attachments are in good condition. The scrubber is securely attached to the skid. No leaks noted. The scrubber is protected by a PSV Serial#: 438391-55-KE located on the piping that was last serviced 06/2006. PSV data:

Size 25.4 mm x 25.4 mm, Set Pressure: 1034 kpa, Capacity: 10.22 cubic meters per minute, Manufacturer: Farris.

The overall condition of the scrubber is good and it is suitable for continued service.

The external inspection interval is to be set at 5 years as per ABSA AB-506 grade 2.


The PSV service interval is to be set at 5 years as per ABSA AB-506 grade 2.

Pressure Vessel External Visual Inspection Report

Inspection Planning

Date of Inspection: May 6, 2010 Date of last Inspection: _____ Date of Next Inspection: 05/2015

The signature below certify that the above is a true report of the inspection / test of the equipment specified and consider fit for service until the date of next inspection.

Competent Inspector:  Report Generation Date: May 21, 2010

Reviewed and Accepted by:

Next Inspection Date: 05/2015

Approved by:

Signature:  Date: May 21, 2010

Signature: _____ Date: _____

NDE Report Pressure Vessel



Organization: Husky

Plant: Foothills

EquipmentID: 66068141

System ID: 00001 Galloway Gas Plant 12-05-054-20W5

Unit Name: FH-FW-014 Galloway

Background

Description:	Scrubber, Fuel Gas
Asset Type:	Pressure Vessel

Summary

Component Type	Short Term Avg. Corrosion Rate	Long Term Avg. Corrosion Rate	Remaining Life

NDE

Inspection Location	Location Description	Component Type	Status	Nominal Thickness	Minimum Thicknes	Initial Reading	Initial Date	Previous Rdg	Previous Date	Current Reading	Current Date	ST CR	LT CR	Remain Life
005	Head Top	Vessel	Active	19.05	17.46	19.05	01/01/2001	19.05	01/01/2001	20.6	06/05/2010	-0.1658	-0.1658	
010	Shell Top East	Vessel	Active	6.35	3.20	6.35	01/01/2001	6.35	01/01/2001	7.29	06/05/2010	-0.1006	-0.1006	
015	Shell Btm West	Vessel	Active	6.35	3.20	6.35	01/01/2001	6.35	01/01/2001	7.67	06/05/2010	-0.1412	-0.1412	

NDE Report Pressure Vessel

Inspection Planning

Date of Inspection: May 6, 2010 Date of last Inspection: _____ Date of Next Inspection: 05/2015


The signature below certify that the above is a true report of the inspection / test of the equipment specified and consider fit for service until the date of next inspection.

Competent Inspector:  Report Generation Date: May 21, 2010

Reviewed and Accepted by:

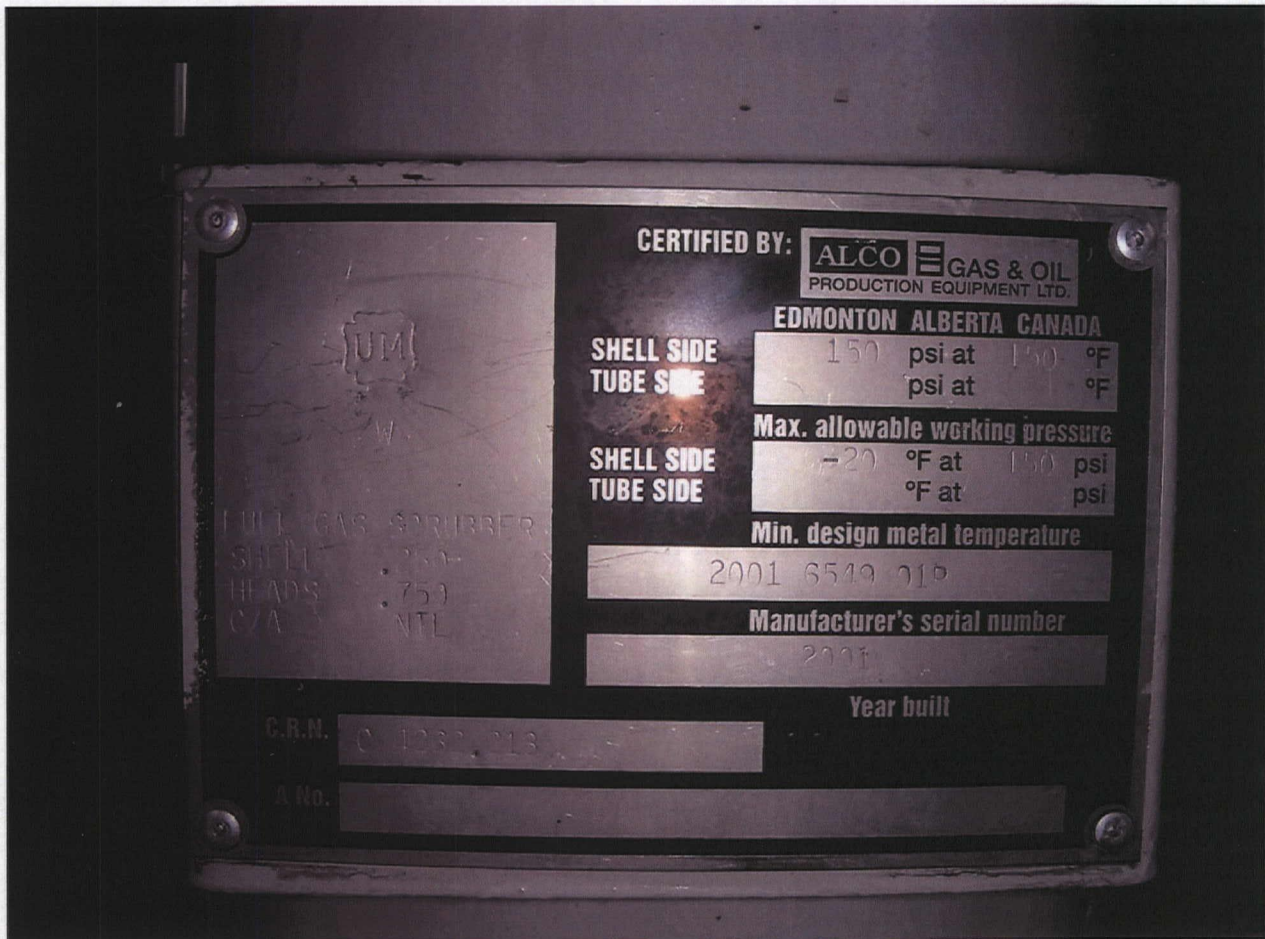
Next Inspection Date: 05/2015 _____

Approved by:

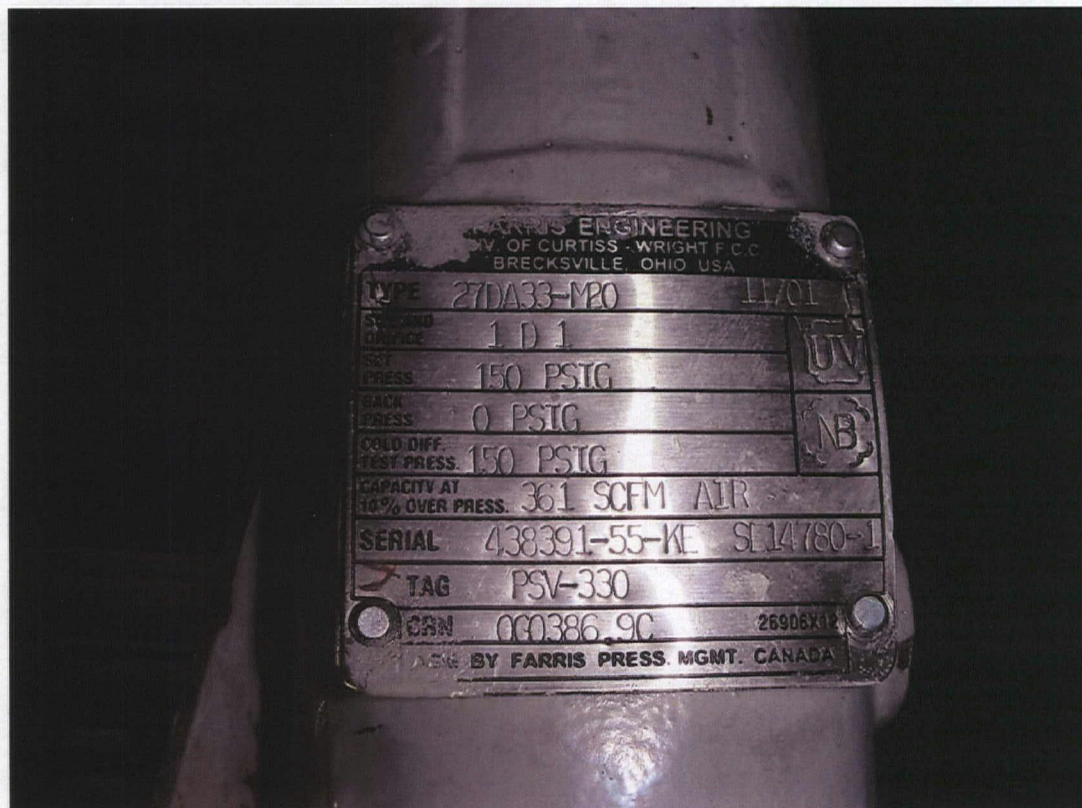
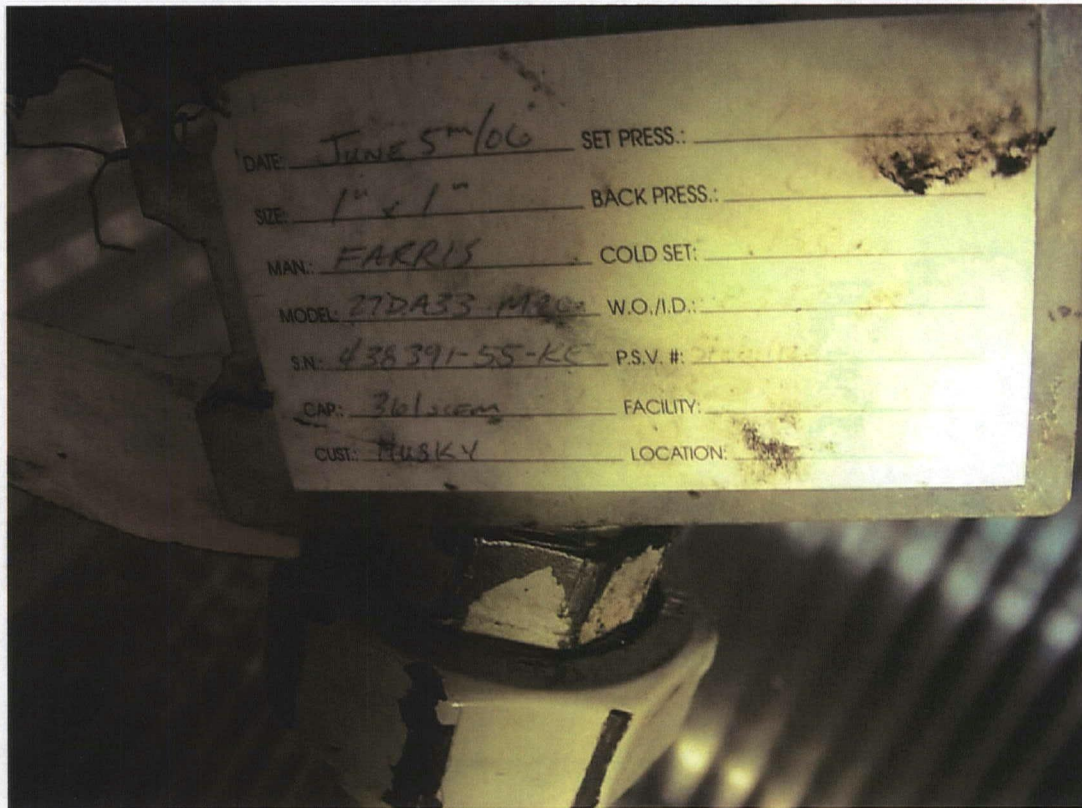
Signature:  Date: May 21, 2010

Signature: _____ Date: _____

Condensate Building Fuel Gas Scrubber SAP# 66068141
Serial# 2001 6549 01P
12-05-054-20W5M Galloway Gas Plant



Condensate Building Fuel Gas Scrubber SAP# 66068141
Serial# 2001 6549 01P
12-05-054-20W5M Galloway Gas Plant



PRESSURE VESSEL INSPECTION REPORT

FACILITY	Gallaway Gas Plant	DATE	May 12, 2005	REPORT #	IR050512MCSj
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VESSEL STATIC DATA							
Prov. Insp. #	-	CRN	C-4262.213	Equip Tag #	52141		
Equipment Location (LSD)	12-05-54-04 W5M			Serial #	2001-6549-01P		
Equipment Description	Fuel Gas Scrubber			Vessel Class			
Manufacturer	ALCO Gas & Oil Production Equipment			Year Built	2001		
MAWP	1034	KPag	@ 65	°C	MDMT -29 °C		
CODE : UM	<input checked="" type="checkbox"/>	U	<input type="checkbox"/>	U2	<input type="checkbox"/>		
RT : 1	<input type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>		
4	<input type="checkbox"/>	PWHT :	YES	<input type="checkbox"/>	NO	<input checked="" type="checkbox"/>	
Diameter	10.75 in	Length	(T/T) 30in	OAL	Mm/in		
Shell	Mat'l	Thickness	0.250	Mm/in	Corr Allowance		
Head	Mat'l	Thickness	0.750	Mm/in	Corr Allowance		
Nozzle	Mat'l	Thickness		Mm/in	Corr Allowance		
Internal Coating :	YES	<input type="checkbox"/>	NO	<input checked="" type="checkbox"/>	Capacity	m ³	
Manway :	YES	<input type="checkbox"/>	NO	<input checked="" type="checkbox"/>	Inspection Port :	YES	<input type="checkbox"/>
Nozzle Rating		lb ANSI	Painted :	YES	<input checked="" type="checkbox"/>	NO	<input type="checkbox"/>
Insulated :	YES	<input type="checkbox"/>	NO	<input checked="" type="checkbox"/>			

PROCESS DATA		
Product Description	Fuel Gas	Sweet <input checked="" type="checkbox"/> Sour <input type="checkbox"/> PPM:
Operating Pressure	375	KPag
Operating Temperature		°C / °F

PSV STATIC DATA							
Tag / Serial No.	Location	Size Inlet	Size Outlet	Set Pressure	Capacity SCFM	Manufacturer	Model / Type
PSV 330	Outlet Piping	1	1	1034kPa	361	Farris Eng	27DA33-M20

INSPECTION HISTORY							
RBI Category	A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/>	Last Inspection Date	W.O. #	6045721			
Inspection Task List #		Inspection Type	VE / UT	Inspection Reason	Planned Inspection		
Inspection Techniques Required		Next Inspection Type	VE / UT	Due Date	2010		
VE	VI	RT	UT	MT	PT	PT	TT
Outstanding Repairs							

INSPECTION SUMMARY
<ul style="list-style-type: none"> Complete Visual External Inspection as per API 510 UT Corrosion Survey as per Husky Energy Asset Integrity Program, Section IBP-007

RECOMMENDATIONS
<ul style="list-style-type: none"> There are no recommendations at this time

REPAIRS COMPLETED			
Object Name	Cause	Damage	Repair Activity
<ul style="list-style-type: none"> No repairs were performed at this time 			

VESSEL STATUS			
Integrity Status	<input checked="" type="checkbox"/> Suitable for Continued Service	<input type="checkbox"/> Immediate Repairs Required	<input type="checkbox"/> Replace
		<input type="checkbox"/> Future Repairs Required	
Inventory Status	<input checked="" type="checkbox"/> In service Fully Utilized	<input type="checkbox"/> Idle	<input type="checkbox"/> Surplus
			<input type="checkbox"/> Scrap
This IR completes a thorough inspection. Reschedule as indicated		<input checked="" type="checkbox"/>	Partial IR only. Do not reschedule <input type="checkbox"/>

PRESSURE VESSEL INSPECTION REPORT

PAGE : 2 of 2

FACILITY	Gallaway Gas Plant	DATE	May 12, 2005	REPORT #	IR050512MCSj
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INSPECTION OBSERVATIONS**NONCOMPLIANCES OR INSPECTION DEFICIENCIES ISSUED**

- No NCR was issued at this time

EXTERNAL VISUAL INSPECTION

- The Name Plate was present and readable.
- The Scrubber was welded on legs, welded on skid.
- The vessel is painted; the paint appears to be in good condition.
- The top and bottom heads and the shell appeared to be in good condition with welds of good quality.
- The threaded joints appear to be in good condition. No leaks were detected at the time of inspection.
- The Pressure Indicator was present and it appeared to be in good condition.
- The PSV appears to be in good condition, the Name Plate was present and readable, the last inspection date was posted and the seal was intact.

EXTERNAL NDE EXAMINATION**UT Inspection was performed by SUMMIT Inspection Services Ltd.**

- UT corrosion survey performed on the shell found no signs of internal corrosion.

INTERNAL VISUAL INSPECTION

- No Internal Visual Inspection was performed at this time.

INTERNAL NDE EXAMINATION

- No Internal NDE was performed at this time.

PRESSURE TEST

Test Completed	<input type="checkbox"/> Yes <input type="checkbox"/> No	Test Acceptable	<input type="checkbox"/> Yes <input type="checkbox"/> No	Test Report #
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INSPECTOR CERTIFICATION

I, the undersigned certify that the above equipment has been inspected in accordance with the assigned task list and that statements within this report are correct and represent inspection findings

Inspectors Name **Maria C. Savulescu**

Inspector's Signature

Inspection Company **SUMMIT Inspection Services Ltd.**Date **May 12, 2005****LEAD INSPECTOR'S ACCEPTANCE & SCHEDULE CONFIRMATION**Lead Inspector **Mike Williams**Signature Date **July 20/05**Vessel Inspection Interval **5yrs.**Leave "as-is" ☐

Change to

PSV Inspection Interval

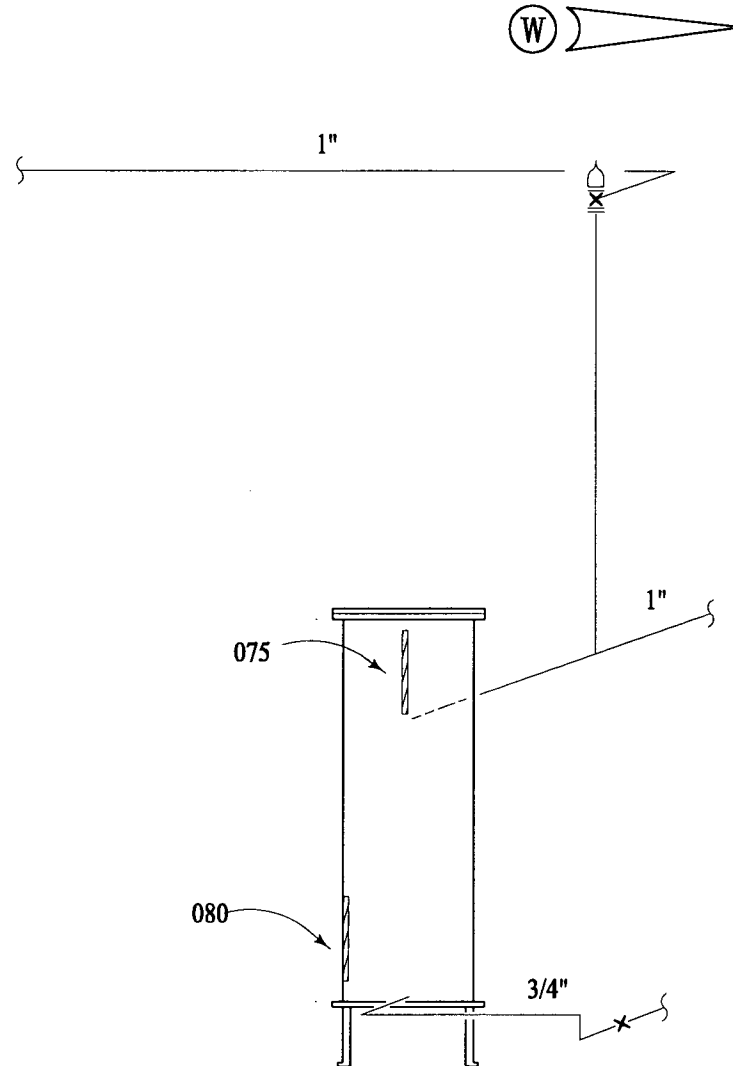
Leave "as-is" ☐

Change to

Office Use Only Report Entered to SEQA Database by
Static Data Verified by

Date
Date

[illegible]



Fuel Gas Scrubber

Reg. No. :
 S/N : 2001-6729-01P
 CRN : C-4262.213
 Built : 2001
 MAWP : 1034kPa @ 66C
 Dia. : 10.75"
 J.E. :
 C.A. : None
 Shell : 0.250"
 Head : 0.750"
 Built By : ALCO Gas & Oil Production
 Equipment

Husky Energy
 Gallaway Gas Plant
 12-05-54-20 W5M

SUMMIT Inspection Services Ltd.

By: MCS Date: 06/2005 Dwg: 4

Items: 075-080

#66068141

Husky Energy

PRESSURE VESSEL INSPECTION REPORT

PAGE : 1 of 2

FACILITY	GALLOWAY Plant	DATE	Feb 15/16, 2002	REPORT #	
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VESSEL STATIC DATA					
Prov. Insp. #		CRN C4262.213		Equip Tag # V-330	
Equipment Location (LSD)		12-05-54-20W5M		Serial # 2001-6549-01P	
Equipment Description		Reboiler Gas Scrubber		Vessel Class	
Manufacturer		Alco Oil & Gas		Year Built 2001	
MAWP 1034		KPag @ 65 °C		MDMT -29 °C	
CODE : UM <input type="checkbox"/> U <input type="checkbox"/> U2 <input type="checkbox"/>		RT : 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/>		PWHT : YES <input type="checkbox"/> NO <input type="checkbox"/>	
Shell	Mat'l	Thickness	6.35 Mm	Corr Allowance	Mm
Head	Mat'l	Thickness	19.05 Mm	Corr Allowance	Mm
Nozzle	Mat'l	Thickness	Mm	Corr Allowance	Mm
Internal Coating : YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>		Internal Clad : YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>		Capacity m ³	
Manway : YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>		Inspection Port : YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		Skirt <input checked="" type="checkbox"/> Legs <input type="checkbox"/> Saddle <input type="checkbox"/>	
Nozzle Rating	NPT	lb ANSI	Painted : YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	Insulated : YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	

PROCESS DATA		
Product Description	Natural Gas	Sweet <input checked="" type="checkbox"/>
Operating Pressure	KPag	Operating Temperature °C

PSV STATIC DATA								
PSV ID #	Location	Size		Set Pressure	Capacity SCFM / Lbs/Hr / GPM	Manufacturer	Model	Last Service
		Inlet	Outlet					
330	CP	1 in	1 in	1034 kpa	361 SCFM	Farris	27DA33-M20	01/02

INSPECTION HISTORY									
RBI Category A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/>				Last Inspection Date			W.O. #		
Inspection Task List #				Inspection Type <i>VE, UT</i>			Inspection Reason <i>1002</i>		
Inspection Techniques Required				Next Inspection Type <i>VE, UT</i>			Due Date <i>2007</i>		
VE <input checked="" type="checkbox"/>	VI <input type="checkbox"/>	RT <input type="checkbox"/>	UT <input checked="" type="checkbox"/>	MT <input type="checkbox"/>	PT <input type="checkbox"/>	PT <input type="checkbox"/>	TT <input type="checkbox"/>	Outstanding Repairs	

INSPECTION SUMMARY	
Vessel Size: 273 mm X 737 mm New – excellent condition, no deficiencies noted	
FACILITY FILE	

RECOMMENDATIONS	

REPAIRS COMPLETED			
Object Name	Cause	Damage	Repair Activity

VESSEL STATUS			
Integrity Status	X- Suitable for Continued Service	<input type="checkbox"/> Immediate Repairs Required	<input type="checkbox"/> Replace
		<input type="checkbox"/> Future Repairs Required	
Inventory Status	X- Inservice Fully Utilized	<input type="checkbox"/> Idle	<input type="checkbox"/> Surplus
			<input type="checkbox"/> Scrap

**PRESSURE VESSEL INSPECTION REPORT**

FACILITY	GALLOWAY Plant	DATE	Feb 15/16, 2002	REPORT #
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INSPECTION OBSERVATIONS**NONCOMPLIANCES OR INSPECTION DEFICIENCIES ISSUED****EXTERNAL VISUAL INSPECTION**

No deficiencies noted in foundations/supports, nozzles, grounding connections, external metal surfaces, or pressure relief devices.

EXTERNAL NDE EXAMINATION

Ultrasonic measurements: (minimums noted)

Shell : 7.24 mm

Bottom Head: 21.08 mm

Top Head: 20.32 mm

INTERNAL VISUAL INSPECTION**INTERNAL NDE EXAMINATION****PRESSURE TEST**

Test Completed ☐ Yes ☒ No

Test Acceptable ☐ Yes ☐ No

Test Report #

INSPECTOR CERTIFICATION

I, the undersigned certify that the above equipment has been inspected in accordance with the assigned task list and that statements within this report are correct and represent inspection findings

Inspectors Name Glenn Bielech

Inspector's Signature

Inspection Company

Date

Feb 15,2002

LEAD INSPECTOR'S ACCEPTANCE & SCHEDULE CONFIRMATION

Lead Inspector Greg MURRAS

Signature [Signature]

Date June 18, 2002

Vessel Inspection Interval 5

Leave "as-is" ☒

Change to

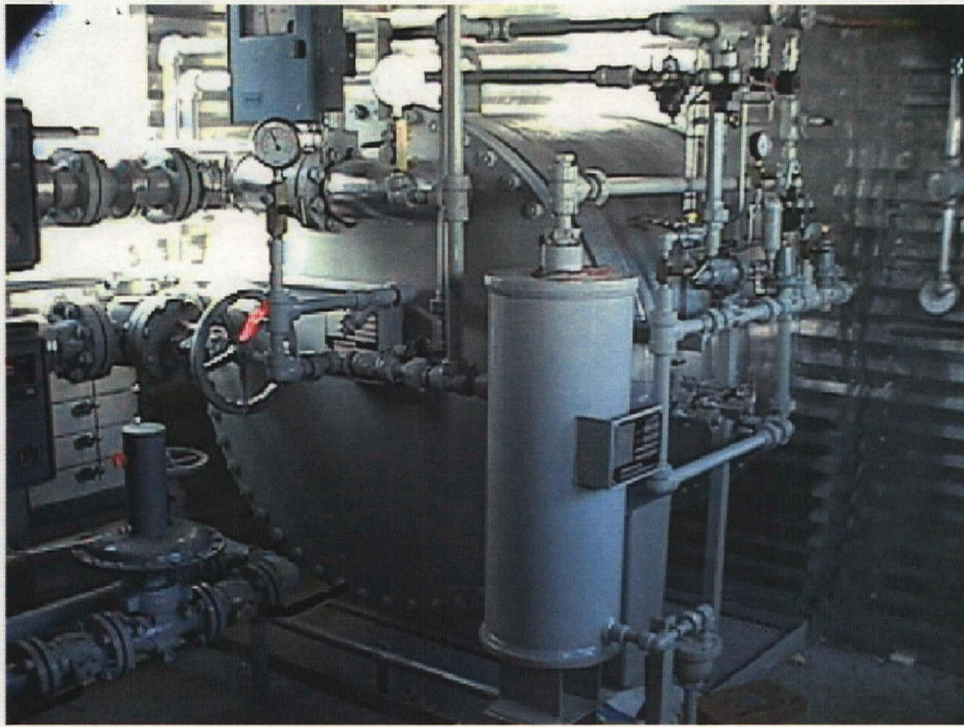
PSV Inspection Interval 5

Leave "as-is" ☒

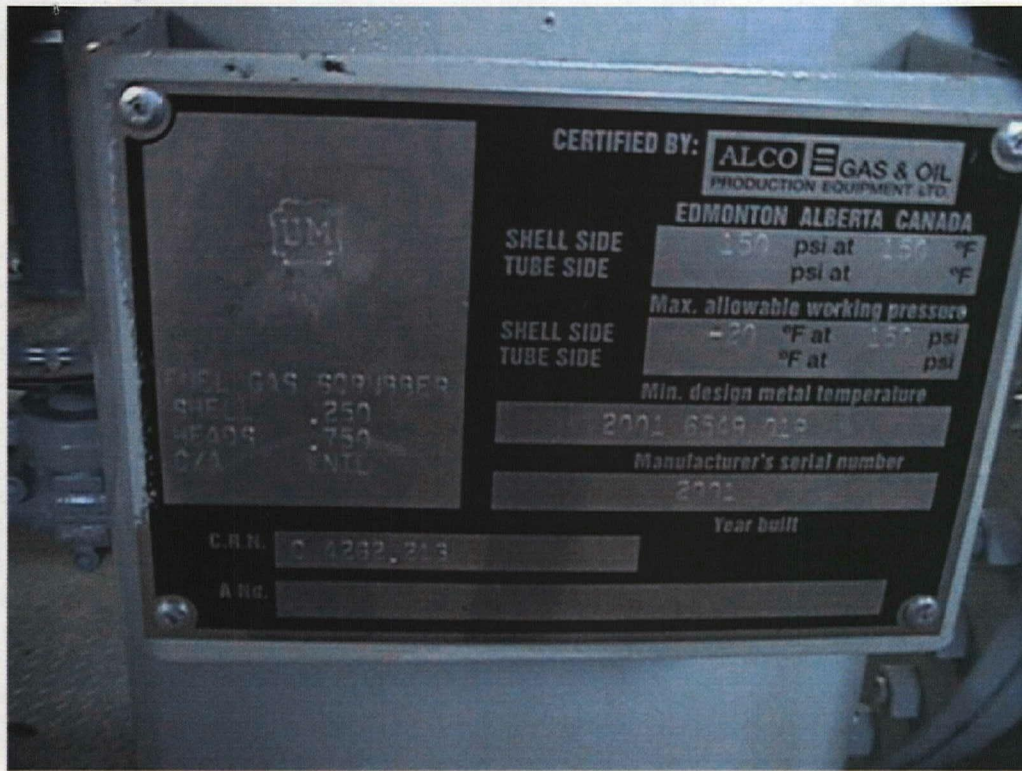
Change to

Office Use Only Report Entered to SEQA Database by
Static Data Verified by

Date
Date



REBOILER GAS SCRUBBER



NAMEPLATE :
REBOILER GAS
SCRUBBER