#### Pressure Vessel External Visual Inspection Report



Organiz	ation. Husky									
	Plant: Foothills		Equi	Equipment ID: 66068141						
			/	Asset No: 6606814	1					
			.75	<b>System:</b> 00001 G	alloway Gas Plar	nt 12-05-054-2	20W5	_		
			Opera	ting Unit: FH-FW-0	)14 Galloway			_		
			ALC	0 Gas \$0;	1 SN 2	001-69	549-01	P		
ackgroun	d		1100	0 0(000 401	1 311		(, 0	· ·		
escription:	Scrubber, Fuel	l Gas								
		. 000								
sset Type:										
spection	Bob Marchak		Company:	Husky Energy	1		Insulated:	N		
spection			Company:	Husky Energy	1		Insulated:	N		
spection			Company:	Husky Energy	1		Insulate	ed:		

#### Inspection Summary

Description

ID

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:

Condition

Location

NCR

Comments

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 frade 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: Date of last Inspection:	Date of Next Inspection: OS/2015
The signature below certify that the above is a true report of the iconsider fit for service until the date of next inspection.	nspection / test of the equipment specified and
Competent Inspector:	Report Generation Date: May 21, 2010
Reviewed and Accepted by:	
Next Inspection Date: 05/2015	
Approved by:	
Signature:	Date: May 21, 200
Signature:	Date:

Print date/time: 05/21/2010 6:17:51AM Equipm

EquipmentID: 66068141

Page 2 of 2

#### NDE Report Pressure Vessel



Organization: Husky	EquipmentII	uipmentID: 66068141		
Plant: Foothills	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	Short Term Avg.	Long Term Avg.	Remaining
Type	Corrosion Rate	Corrosion Rate	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	317:46	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	Věssel	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:  O5/2015
The signature below certify that the above is a true report of the inspection / test of the consider fit for service until the date of next inspection.	he equipment specified and
Competent Inspector:	Report Generation Date:  May 21, 2010
Reviewed and Accepted by:	
Next Inspection Date: 05/2015	
Approved by:	
Signature:	Date: Way 21, 2010
Signature:	Date:

## Condensate Building Fuel Gas Scrubber SAP# 66068141 Serial# 2001 6549 01P

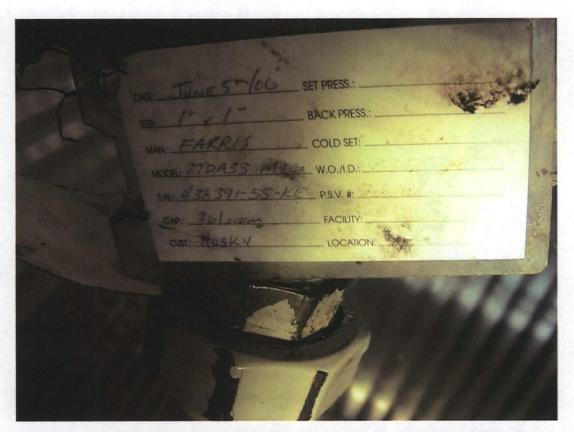
12-05-054-20W5M Galloway Gas Plant

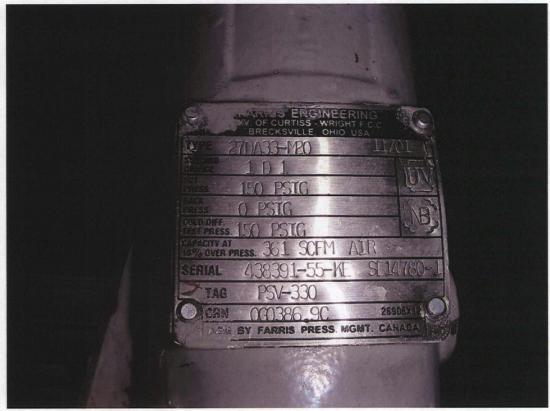




## Condensate Building Fuel Gas Scrubber SAP# 66068141 Serial# 2001 6549 01P

12-05-054-20W5M Galloway Gas Plant





# Husky Energy 14 60814 PRESSURE VESSEL INSPECTION REPORT

N# 6044021

PAGE: Lof

FACILITY Gallaway Gas Plant DATE May 12, 2005 **REPORT#** IR050512MCSi VESSEL STATIC DATA -52141 Prov. Insp. # C-4262.213 CRN Equip Tag # Equipment Location (LSD) 12-05-54-04 W5M 2001-6549-01P Serial # **Equipment Description Fuel Gas Scrubber** Vessel Class Manufacturer **ALCO Gas & Oil Production Equipment** Year Built 2001 MAWP 1034 **KPag** @ 65 C **MDMT** -29 OC. CODE: UM RT: 1 2 3 4 4 UП U2 🗆 PWHT: YES □ NO ☒ 10.75 in Diameter Length (T/T) 30in OAL Vertical X Horizontal Mm/in Shell Mat'l Thickness 0.250 Mm/in Corr Allowance Mm/in Head Mat'l Thickness 0.750 Mm/in Corr Allowance Mm/in Mm/in Corr Allowance Mm/in Thickness Nozzle Mat'l Internal Coating: Internal Clad: YES □ NO ☒ YES 🗌 NO 🔯 Capacity m3 YES 🗆 NO 🖂 Skirt 🗌 Inspection Port: YES NO Manway: Legs 🛛 Saddle Nozzle Rating Ib ANSI Painted: YES ⊠ NO □ Insulated YES ☐ NO ☒ PROCESS DATA Sweet ⊠ Sour □ **Product Description** Fuel Gas **Operating Pressure** 375 **KPaq** Operating Temperature °C / °F **PSV STATIC DATA** Tag / Manufacturer Location Size Set Capacity Model Service Serial No. Outlet Inlet Pressure Date / Type **PSV 330 Outlet Piping** 1034kPa 361 Farris Eng 27DA33-M20 11/01 **INSPECTION HISTORY RBI** Category A B C D Last Inspection Date W.O. # Inspection Task List # Inspection Type Inspection Reason VE / UT Planned Inspection Inspection Techniques Required **Next Inspection Type** VE / UT **Due Date** 2010 **Outstanding Repairs** INSPECTION SUMMARY Complete Visual External Inspection as per API 510 UT Corrosion Survey as per Husky Energy Asset Integrity Program, Section IBP-007 RECOMMENDATIONS There are no recommendations at this time REPAIRS COMPLETED **Object Name** Cause Damage Repair Activity No repairs were performed at this time **VESSEL STATUS Integrity Status**  Suitable for Continued Service Immediate Repairs Required Replace Future Repairs Required П Idle ☐ Surplus **Inventory Status** ☐ Scrap This IR completes a thorough inspection. Reschedule as indicated Partial IR only. Do not reschedule X

# Husky Energy PRESSURE VESSEL INSPECTION REPORT

PAGE: 2 of 2

FACILITY Gallaway Gas Plant DATE	May 12, 20	)05	REPORT#	IR050512MCSj				
INSI	PECTION OBSER	VATIONS						
NONCOMPLIANCES	OR INSPECTION	DEFICIENC	IES ISSUED					
No NCR was issued at this time								
FXTF	RNAL VISUAL INS	SPECTION		ALL SUPPLIES OF THE STATE OF				
		2011011						
<ul> <li>The Name Plate was present and read</li> <li>The Scrubber was welded on legs, welded</li> <li>The vessel is painted; the paint appear</li> <li>The top and bottom heads and the shead</li> <li>The threaded joints appear to be in good</li> <li>The Pressure Indicator was present ar</li> <li>The PSV appears to be in good conditioned at the was posted and the seal was intained.</li> </ul>	ded on skid. The sto be in good county The sto be in good county The sto be in good county The sto be in good to be in good to be in the store of th	n good condit aks were dete e in good cond	ected at the time dition.	e of inspection.				
	ERNAL NDE EXAM							
<ul> <li>UT Inspection was performed by SUMN</li> <li>UT corrosion survey performed on the</li> </ul>								
INTE	RNAL VISUAL INS	SPECTION						
No Internal Visual Inspection was performant visual	ormed at this time.			,				
INTE	RNAL NDE EXAM	MINATION						
No Internal NDE was performed at this	time.							
	PRESSURE TE							
		☐ No	Test Repor	rt#				
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	gland		Date July 30/05				
Vessel Inspection Interval 54/5.	Leave "as-is" □		Change to					
PSV Inspection Interval	Leave "as-is" □		Change to					

Report Entered to SEQA Database by Office Use Only

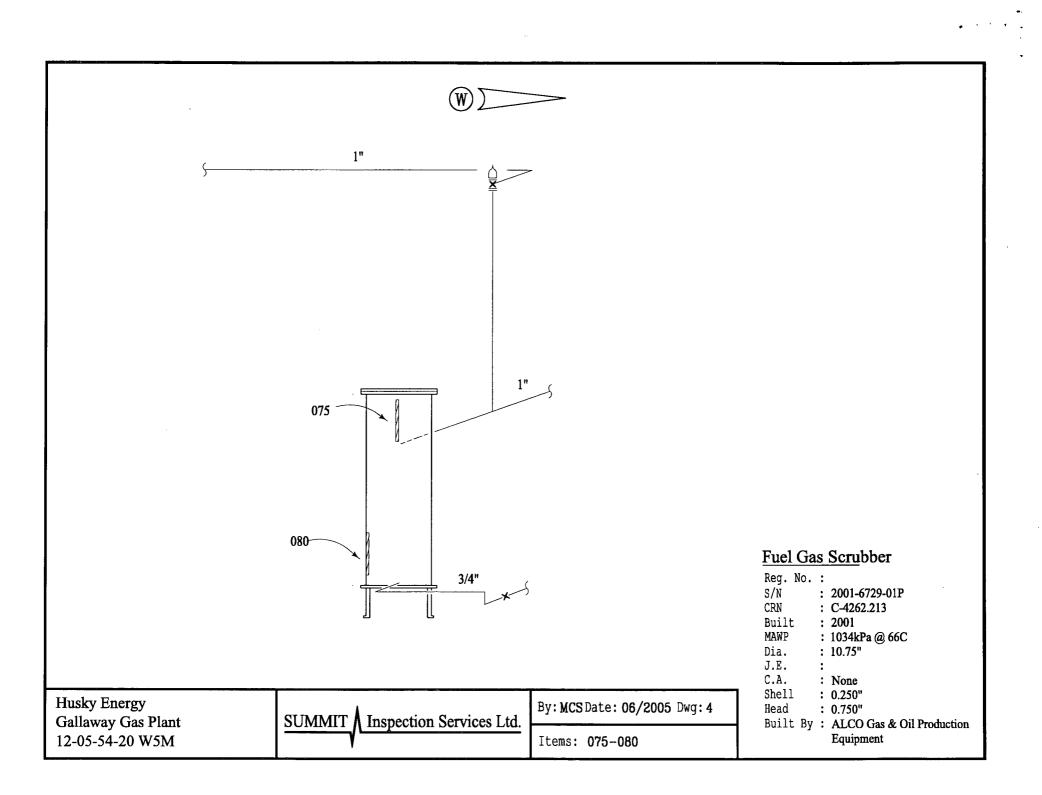
Date Date The Peak in Integrity and Quality Inspection

11 Douglasglen Common S.E. Calgary, AB T2Z 3M7 ph (403) 279-9050 fax (403) 279-9051

## **Husky Energy - UT Inspection Data**

Location: Gallaway	Gas Plant	LSD: 12-05-54-20 W5M			
Vessel Description: Fuel Gas	Scrubber	Inspection Date: 12-May-05			
A#	S/N 2001-6549-01P	CRN# C-4262.213			

Band #	Band Description	Band Type	S.O.B.	<u>E.O.B</u>	Scan min	Location of scan min	Nominal
075	Top North West Shell, across the inlet	vertical	0.285	0.279	0.279	End of band	0.25
080	Bottom East Shell	vertical	0.275	0.285	0.274	1" below start of band	0.25
						11	,



#66068141

# Husky Energy PRESSURE VESSEL INSPECTION REPORT

PAGE: 1 of 2

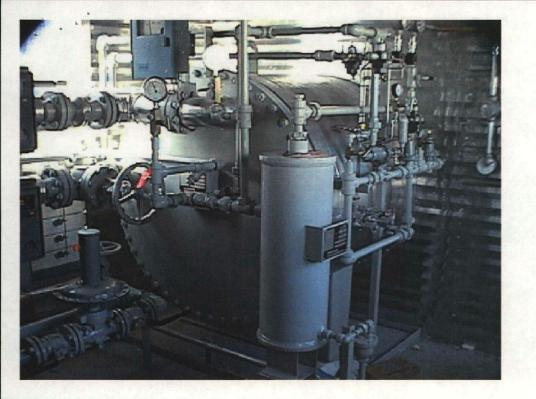
VESSEL STATIC DATA	FACILITY	GALLOW	/AY Plant	DAT	E Feb 1	15/16, 2002	REPORT #	ŧ				
Prov. Insp. #	VESSEL STATIC DATA											
Repair   Reboiler Gas   Vessel Class   Vear Built   2001												
Manufacturer	Equipment	Location (LSI	D) 12-05-5	4-20W	5M		Serial #	2001-6549-	01P			
Manufacturer				er Gas	Scrubber		Vessel Clas	S				
CODE : UM			Oil & Gas				Year Built	2001				
Noze	MAWP	1034	KPag		@ 65	°C	MDMT	-29	°C			
Head Mat1	CODE : U	M U U		RT:	1 2 3	4 🗆	PWHT: Y	/ES NO D				
Nozzle Matt	Shell I	Mat'l		Thick	ness	6.35 Mm	Corr Allowan	се	Mm			
Internal Coating : YES   NO X   Internal Clad : YES   NO X   Capacity   m³	Head I	Mat'l		Thick	ness	19.05 Mm	Corr Allowan	ce	Mm			
Manway: YES   NO X   Inspection Port: YES X NO   Skirt X   Legs   Saddle   Nozzle Rating   NPT   Ib ANS    Painted: YES X NO   Insulated: YES   NO X	Nozzle I	Mat'l		Thick	ness	Mm	Corr Allowan	ce	Mm			
Nozzle Rating NPT	Internal Co	oating : YES	□ NO X	Intern	al Clad : YI	ES NO X	Capacity		m <sup>3</sup>			
Product Description Natural Gas	Manway:	YES	□ NO X	Inspe	ction Port: Y	ES X NO	Skirt X	Legs Sad	dle 🗌			
Product Description   Natural Gas   Sweet X	Nozzle Ra	ting NPT	Ib ANSI	Painte	ed: Y	ES X NO	Insulated	: YES 🔲 I	X OV			
Operating Pressure   KPag   Operating Temperature   UC					PROCESS	DATA						
PSV ID # Location   Size   Set   Capacity   Manufacturer   Model   Last   Service   Set   Capacity   Service   Capacity   Capac			Natural Gas	V	Pag	Operating Temp						
PSV ID #   Location   Size   Set   Capacity   Manufacturer   Model   Last   Service   330   CP   1 in   1 in   1034 kpa   361 SCFM   Farris   27DA33-M20   01/02	Operating	riessuie		,			erature					
Section   Sect	PSV ID#	Location			Set	Capacity	Manufacturer	Model				
RBI Category   A B B C B B C B B   Last Inspection Date   Inspection Task List #   Inspection Type   Ve, u	330	СР	Management of the second			361 SCFM	Farris	27DA33-M20				
RBI Category A B B C D D Last Inspection Date Inspection Task List # Inspection Type Ve, u T Inspection Reason 1002 Inspection Techniques Required Next Inspection Type Ve, u T Due Date 2007    Inspection Techniques Required Next Inspection Type Ve, u T Due Date 2007	1											
RBI Category A B B C D D Last Inspection Date Inspection Task List # Inspection Type Ve, u T Inspection Reason 1002 Inspection Techniques Required Next Inspection Type Ve, u T Due Date 2007    Inspection Techniques Required Next Inspection Type Ve, u T Due Date 2007				Application against a	INSPECTION	HISTORY						
Inspection Task List # Inspection Type Ve, u7 Inspection Reason 1002 Inspection Techniques Required Next Inspection Type Ve, u7 Due Date 2007    Inspection Techniques Required Next Inspection Type Ve, u7 Due Date 2007   Inspection Techniques Required Next Inspection Type Ve, u7 Due Date 2007   Inspection Task List # Inspection Type Ve, u7 Due Date 2007   Inspection Reason 1002   Inspection Rea	RBI Catego	orv AD BD	CD DD	Last I			W.O. #					
Inspection Techniques Required   Next Inspection Type   VC, UT   Due Date   2007								eason 1002				
Vessel Size: 273 mm X 737 mm New – excellent condition, no deficiencies noted  RECOMMENDATIONS  RECOMMENDATIONS  REPAIRS COMPLETED Object Name  Cause  Damage  Repair Activity  VESSEL STATUS  Integrity Status  X- Suitable for Continued Service  Integrity Status  Repairs Required  Future Repairs Required  Future Repairs Required  Replace	Inspection	Techniques R	equired	Next II			Due Date					
Vessel Size: 273 mm X 737 mm New – excellent condition, no deficiencies noted  RECOMMENDATIONS  REPAIRS COMPLETED Object Name Cause Damage Repair Activity  VESSEL STATUS Integrity Status  X- Suitable for Continued Service   Immediate Repairs Required   Replace Future Repairs Required   Replace	VE VI R	T UT MT P	T PT TT									
RECOMMENDATIONS  REPAIRS COMPLETED Object Name Cause Damage Repair Activity  VESSEL STATUS Integrity Status X- Suitable for Continued Service   Immediate Repairs Required   Replace   Future Repairs Required   Replace   Replace   Repairs Required   Replace   Replace   Repairs Required   Replace   Replace   Repairs Required   Replace					INSPECTION	SUMMARY						
Cause   Damage   Repair Activity		New – excellent condition, no deficiencies noted FACILITY										
Object Name  Cause  Damage  Repair Activity  VESSEL STATUS  Integrity Status  X- Suitable for Continued Service    Immediate Repairs Required   Replace   Future Repairs Required   Replace	E SOUTH THE				RECOMMEN	DATIONS			A STREET OF			
Object Name  Cause  Damage  Repair Activity  VESSEL STATUS  Integrity Status  X- Suitable for Continued Service    Immediate Repairs Required   Replace   Future Repairs Required   Replace												
Object Name  Cause  Damage  Repair Activity  VESSEL STATUS  Integrity Status  X- Suitable for Continued Service    Immediate Repairs Required   Replace   Future Repairs Required   Replace												
Object Name  Cause  Damage  Repair Activity  VESSEL STATUS  Integrity Status  X- Suitable for Continued Service    Immediate Repairs Required   Replace   Future Repairs Required   Replace												
Object Name  Cause  Damage  Repair Activity  VESSEL STATUS  Integrity Status  X- Suitable for Continued Service    Immediate Repairs Required   Replace   Future Repairs Required   Replace												
VESSEL STATUS  Integrity Status X- Suitable for Continued Service   Immediate Repairs Required   Replace   Future Repairs Required	Object Nam		Course		REPAIRS CO		Pon	oir Activity	Control of the Contro			
Integrity Status X- Suitable for Continued Service   Immediate Repairs Required   Replace   Future Repairs Required	Object Nam	Object Name   Cause   Damage   Repair Activity										
Integrity Status X- Suitable for Continued Service   Immediate Repairs Required   Replace   Future Repairs Required												
☐ Future Repairs Required					VESSEL S	TATUS	San Special Control of Control					
	Integrity S	tatus	X- Suitable fo	or Cont	inued Service				Replace			
	Inventory	Status 2	K- Inservice F	ully Utili	zed	☐ Idle	Surpl	us 🗆	Scrap			

# Husky Energy PRESSURE VESSEL INSPECTION REPORT

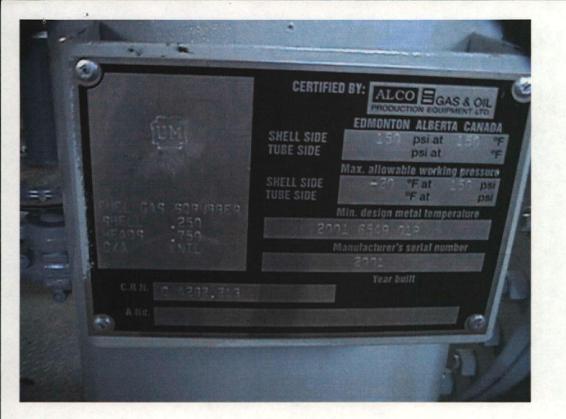
PAGE: 2 of 2

FACILITY	GALLOW	AY Plant	DATE	Fel	15/16, 2002	REPORT #	
			INSF	PECTION O	DESERVATIONS		
		NONCOMP			ECTION DEFICIE		
September 18 April 2015			EVTE	DNIAL VIIC	HAL INCRECTION	VI TO THE RESERVE OF	
	Street, Street, Street, St.		EXIE	RNAL VIS	UAL INSPECTION		
No deficience relief devices		oundations/s	supports,	nozzles, g	rounding connecti	ions, external meta	I surfaces, or pressure
				EWALDE			
			EXIE	RNAL ND	E EXAMINATION		
Ultrasonic m Shell: 7.24		: (minimums	s noted)				
Bottom Head							
Top Head: 2	20.32 mm						
			INTE	RNAL VISU	JAL INSPECTION	4	
			INTE	RNAL ND	E EXAMINATION		
The State of							
Test Comple	ted D Ves	X No	Test Acc		JRE TEST  ☐ Yes ☐ No	Test Repor	+ #
rest comple	ited   Tes	X NO			CERTIFICATION	restrepor	
I, the unders	ianed certify	that the abo	The second secon			accordance with the	e assigned task list and
						ent inspection find	
Inspectors N		n Bielech			Inspector's Sign		
Inspection C					Date	Feb 15,2	CONTRACTOR AND
		AD INSPEC	TOR'S A			E CONFIRMATION	
Lead Inspect	a lucy	MURRA	5	Signature	1 100		Date June 16,2002
Vessel Inspe		5		Leave "as		Change to	0
PSV Inspect		5		Leave "as	s-is" D	Change to	
Office Use O		Entered to SEC Data Verified		э ру			Date Date

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REBONER GAS SCRUBBER



NAMERIATE: REBOILER GAS SCRUBBER