

# FACILITY INSTALLATION / READINESS CHECKLIST

☐ Installation Inspection
 ☒ Start-up Readiness
 ☐ Relocation
 ☐ Return from Idle

**REPORT #** 111117CWa  
**Shop Inspector** n/a  
**Date** n/a  
**Field Inspector** Christy Walsh  
**Date** November 21, 2011

## FACILITY INFORMATION

**FACILITY:** FH-BC-007 **LSD :** 07-05-063-06W6M

**Facility Description**
☐ Gas Plant
 ☐ Oil Battery
 ☐ Compressor Station
 ☒ Satellite
 ☒ Sweet
 ☐ Wellhead Compressor
 ☐ Single Well Battery
 ☐ Booster Compressor
 ☐ Sour

**Business Unit** FH-BC **Superintendent** Bert St Martin **Foreman** Dave McAmmond

**Facility Status**
☒ New
 ☐ In-Service
 ☐ Acquired - Previous Owner
 ☐ Moved From Other Site - Name & LSD

**General Age of Facility / Equipment** \_\_\_\_\_ yrs **Winter Access Only** ☐ Yes ☒ No

**Facility Flow Rate** Design 0 - 280 deks Normal Operating 50 deks - estimated  
**Facility Max Pressure** Design 9930 kpa Normal Operating 2500 kpa - estimated  
**Facility Max Temp** Design 93 C Normal Operating 25 C - estimated  
**Facility Min Temp** Design -29 C Normal Operating -5 to -10 C (during start-up) - estimated

## EQUIPMENT INFORMATION (Identify number at facility)

Separator	1	Glycol Contactor		Fired Heater		Air Receiver	
Pulsation Dampner		Scrubber	1	Boiler		Pop Tank	
Treater		S & T Heat Exchanger		Storage Tank	1	Glycol Flash Drum	
Free Water Knockout		Air Cooled Exchanger		Safety Valves	2	Flare Knockout	1

## INSPECTION CHECK LIST (To be completed for all new installations, Start-up, Relocation & idle equip returned to service)

Task	Sub Task	Shop Accept		Field Accept		
		Yes	No	Yes	No	
<b>Readiness Checklist</b> (Not req'd for relocation in same operating area)	Punch-out checklist complete			✓		
	Category A items resolved			✓		
	Category B items action planned			✓		
<b>Design Check</b> (location and type verification) For relocation verify no changes have been made	Relocation - no changes made			✓		
	Equipment Layout matches Plot Plan			✓		
	Pressure Equipment matches P & ID			✓		
	Pressure Relief Devices match P & ID			✗		The FGS PSV is set at 285psi the P&ID calls for 150 psi - See NCR#111117CWb
	Piping & Valves match P & ID			✓		
<b>Inventory Check</b> (equipment is entered in SEIM - identify any corrections or missing items on page 3 & 4 For relocation or idle return to service check SEIM against equipment)	Instrumentation matches P & ID			✓		
	Relocation - no changes made, all items in SEIM					n/a
	Pressure Equipment			✗		To be done after start up
	Safety Relief Devices			✗		To be done after start up
	Storage Tanks			✗		To be done after start up
	Press Equip reconciled to Jurisdiction list			✗		To be done after start up
	Inspection intervals reviewed and accepted			✓		
<b>Documentation</b> For relocation verify all docs are transferred to new site	Jurisdiction notified of new equipment			✗		To be done after start up
	Relocation - all docs transferred to new site			✗		To be uploaded into HDMS within 6 months of startup
	Shop Vendor QC Data available on site			✗		
	Field Construction QC Data complete			✗		
	P & ID , Piping Line List on site			✓		Not a common practice - HDMS
	Equipment & PSV Data Sheets on site			✗		Not a common practice
	Regulatory Inspection Certificate received			✗		Not a common practice
	Operating Procedures on site			✓		Not a common practice - on HDMS
<b>Commissioning</b> For relocations address items with * only	PSV isolation valve log established					
	Blinds and blanks removed			✓		
	Operating gaskets in place			✓		
	Start-up strainers and screens in place					n/a
	* Flushing , draining & purging complete			✓		
	Instrumentation calibration complete			✓		
	* PSVs serviced per Interval & set press correct					The FGS PSV is set at 285psi the P&ID calls for 150 psi - See NCR#111117CWb
	* PSV & other CSO valves verified					Six valves identified for car seals had no car seal tags on them - see NCR#111117CWa
<b>Integrity Readiness</b> (See page 2 for details)	* Shutdowns & Control Logic tested & OK			✓		To be verified
	* Safety Equipment in place			✓		
	Inspections per page 2 complete & accepted			✓		
	Inspection history reviewed & RBMI intervals set					✗ To be done after entry into SEIM
	PSV isolation valve procedure in place					n/a
	Corrosion Inhibitors installed			✓		
	Cathodic Protection system installed			✓		
<b>Training &amp; Awareness</b> (Not req'd for relocation in same operating area)	Low temp start-up procedure in place			✓		To be verified
	PEIM program orientation complete					✗ Never has been formally done
	NCR process training complete			✓		Foreman only - not a formal process
	PSV isolation valve procedure training complete					
	Low temp start-up training complete			✓		To be verified

Completed Reports to be faxed or e-mailed to Facility Lead Inspector

# FACILITY INSTALLATION / READINESS CHECKLIST

REPORT # 111117CWa

## DETAILED INSPECTION CHECK LIST (Not required for relocation in same operating area)

Task	Sub Task	Field Accept		Comments
		YES	NO	
<b>Equipment Nameplate</b> (verify in place and clearly legible) Identify any missing or incorrect SEIM data on page 3 or 4	Verified to Data Sheet		X	No Data sheets available
	Prov. Reg Number assigned	✓		
	Correct CRN for Prov. of install	✓		
	Serial Number	✓		
	Design Pressure	✓		
	Max & Min Design Temp	✓		
	Manufacturer's Name	✓		
<b>Concrete Foundation</b>	Year Built	✓		
	Deterioration Condition			n/a
<b>Steel Supports</b>	Anchor Bolts Sound			n/a
	Mechanical / Weld Condition	✓		
	Paint Condition	✓		
	Fireproofing condition			
<b>Grounding Connections</b>	Skirt Opening for Inspection	✓		
	In Place , Secure & Condition	✓		
<b>Vessel &amp; Nozzles Internal &amp; External Surface</b>	UT Thickness Survey complete			Not done until first inspection after startup
	Pitting / Corrosion	✓		
	Scaling	✓		
	Blisters & Bulges	✓		
	Hot Spots	✓		
	Mechanical Damage	✓		
	Paint	✓		
<b>Piping</b>	Insulation	✓		
	UT Thickness Survey complete			Not done until first inspection after startup
	Internal / External Corrosion	✓		
	Supports	✓		
	Insulation		X	Was 80% complete at the T.O.I.
	Gaskets (Type, Rating)		X	One bent gasket see IDR#111117CWc
	Bolting (Short, grade, Size)	✓		
<b>Ladders &amp; Platforms</b>	Leaks Present		X	One process leak - see IDR#111117CWa
	Mechanical Condition	✓		
	Paint / Corrosion Condition	✓		
	Attachments	✓		
<b>Pressure Relief Devices</b>	Seals in Place	✓		
	Installed in Correct Location	✓		
	Installed in Upright Position	✓		
	PSVs serviced per Interval & set press correct		X	The FGS PSV is set at 285psi the P&ID calls for 150 psi – See NCR#111117CWb
	Isolation Valves Carsealed Open			n/a
	No pipe stresses on inlet or outlet	✓		
<b>Instrumentation</b>	No evidence of leakage	✓		
	Installed in Correct Location	✓		
	Calibration Verified	✓		
	No evidence of leakage	✓		

## FACILITY INSTALLATION / READINESS CHECKLIST

REPORT # 111117CWa

## INSPECTION SUMMARY:

The scope of inspection included a walk through of the facility with a special focus on two inspection tasks. One function being a check for all mechanical components of the facility; ensuring that all items were installed and installed correctly.

The pipe run between the wellhead and the separator building, and the separator building and the water tank, flare knockout, and pipeline was checked for adequate and secure support, bolting assemblies, gaskets, paint, and any and all piping attachments such as pressure indicators, valves, and plugs. The lines were also visually assessed for slope (when required). I also indicated where the cathodic protection insulating kits were installed and if they were installed in the correct location. No issues were found. At the time of inspection I found one process leak (IDR#111117CWa), an incorrectly installed flex hose on the inlet to the water tank (IDR#111117BCWb), and one bent gasket at the pig receiver (IDR#111117CWc).

I visually assessed the mechanical condition of all the pressure equipment, pressure safety valves, tanks, and pig receiver. All equipment met regulatory inspection requirements in that they had provincial inspection numbers assigned, had correct Canadian registration numbers for the province of install, and were built to the required codes. All equipment was electrically grounded, bolted down securely, and showed no signs of any damage. The pressure equipment was adequately protected with pressure safety valves set at the MAWP of the vessels. Their service date was in 2011, their tamper seals were intact, they showed adequate CRN registration for the province of install, showed appropriate code markings, they were installed correctly with no intervening valves between the pressure equipment and the PSV or the PSV and its discharge location. The water storage tank has been in service before as it was moved from the Sinclair field. I did not do a visual internal inspection as the site was in service at the time of inspection. The insulation was in fair to poor condition, and the tank was set on wooden planks and appeared to be level. The secondary containment walls were visually checked for holes or installation problems with no items of concern to highlight. The floor of the secondary containment was filled with two inches of sand; therefore an assessment of the liner at the bottom of the containment was impossible. I recommend that the containment be filled with water to check for its integrity.

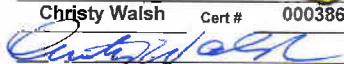
The second inspection task included a walk down of the facility comparing it to the P&ID's. Please note that at the time of inspection there was no P&ID's made available for this site so I used the P&ID's (IFC 10.12.10) for the 9-32-62-6W6M site as this 7-5 site was a copy of the 9-32 site. Any discrepancies between the P&ID's and the equipment on site were noted on its respective P&ID with only two items of note.

- There were six valves identified on the P&ID's as requiring car seals. At the time of inspection there were no car seal valves installed. To highlight this concern I wrote NCR#111117CWa.
- PSV 151 off of the FGS is set to 1965 Kpa (285 psi) and on the P&ID it indicates that this should be set at 1024 Kpa (150 psi). Being that the MAWP of the fuel gas scrubber is 285 the pressure equipment the PSV is protecting is protected. It was determined that PRV 151, 152, 153, 154, 155, and 156 has a MAWP of 250 psi. This PSV is not set low enough to protect these PRV's and therefore poses a safety risk. To highlight this concern I wrote NCR#111117CWb. Another item of note is that the P&ID's that were provided to the business unit specifically for this site noted that the PSV should be set at 1965 kPa (285 psi). The P&ID needs to be changed to capture the lower needed PSV set pressure.

With the exception of the Level 0 NCR identified regarding the set pressure of the fuel gas scrubber PSV, the IDR's identified and the Level 1 NCR's identified are relatively simple to address. I recommend that the Level 0 NCR be addressed immediately and the other NCR and IDR's identified be addressed as per the NCR / IDR program.

DEFICIENCIES IDENTIFIED	
DEFICIENCY	Ref. IDR/NCR
1. Level 1 - regarding the six missing car seal valve's	NCR#111117CWa
2. <b>Level 0</b> - regarding the fuel gas scrubber PSV's set pressure being too high to protect the PRV's on the line	NCR#111117CWb
3. Level 3 - regarding a process leak	IDR#111117CWa
4. Level 3 - regarding the compromised flex hose found at the water tank	IDR#111117CWb
5. Level 3 - regarding the bent gasket found at the pig receiver	IDR#111117CWc

## SIGN-OFF

Inspector/Construction Rep	n/a	Operations Rep	Dave McAmmond
Signature	n/a	Signature	
Agency	n/a	Date	
Date	n/a	Lead Inspector	Christy Walsh Cert # 000386
		Signature	
		Date	November 21, 2011



## FACILITY INSTALLATION / READINESS CHECKLIST

### Pressure Equipment Data To be completed only if equipment not identified in SEIM or if SEIM data is incorrect

	Item # 1	Item # 2	Item # 3	Item # 4	Item # 5	Item # 6	Item # 7	Item # 8	Item # 9
Tag #									
Description	Separator	Fuel Gas Scrubber	Flare Knockout						
<u>SAP #</u>									
Provincial Reg #	602338	602337	605861						
Serial #	5B1009-20	5B1009-21	15748						
CRN	V3914.213	V3913.213	R6405.21						
Manufacturer	5 Blue Process Eq	5 Blue Process Eq	Bilton						
Year Built	2011	2011	2011						
Shell MAWP	1440 Psi	285 psi	50 psi						
Shell Max Temp	100 F	100 F	38 C						
Shell Min Temp	-20F	-20F	-29 C						
Tube MAWP									
Tube Max Temp									
Tube Min Temp									
Shell Sweet or Sour									
Tube Sweet or Sour									
<u>Date of Last Inspect</u>									
<u>Req'd Interval</u>	5 years	5 Years	5 Years						

### Storage Tank Data

	Tank # 1	Tank # 2	Tank # 3	Tank # 4	Tank # 5	Tank # 6	Tank # 7	Tank # 8	Tank # 9
Tag #									
<u>SAP #</u>	66004343								
Manufacturer	GLM Tanks								
Serial #	D-96-222-10								
Volume	400 BBL								
Internal coating	Yes								
Insulation	Yes								
Firetube	No								
<u>Date of Last Service</u>	Nov 25, 2010								
<u>Req'd Interval</u>	5 yrs								

NOTE : items in italics to be completed by Lead Inspector



Form : QR-17.11

Rev. : 2 , Date : 10/06

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**FACILITY INSTALLATION / READINESS &  
REGULATORY ASSESSMENT INSPECTION CHECKLIST****REPORT #  
INSPECTOR  
DATE****111117CWa  
Christy Walsh  
Nov 21, 2011****Safety Valve Data**

	PSV # 1	PSV # 2	PSV # 3	PSV # 4	PSV # 5	PSV # 6	PSV # 7	PSV # 8	PSV # 9
Tag #	PSV 100	PSV 150							
<u>SAP #</u>									
Manufacturer	Farris	Farris							
Serial #	58426-3-KE	581029-2-KE							
Model #	27EA45-M20	27EA34-M20							
CRN	OG11969.5C	OGxxxx.5C							
Set Pressure	9930 Kpag	285 Psi							
Capacity	255 M3/MIN	1177 SCFM							
Orifice Size	1.5 X 2	1 x 1.5							
Sweet or Sour	Sweet	Sweet							
Installed On	Feb 2011	March 2011							
<u>Date of Last Service</u>	new	new							
<u>Req'd Interval</u>	5 yrs	5 yrs							

**Equipment Protected** ( Identify equipment protected by Tag # , Provincial # or Serial # )

	Item # 1	Item # 2	Item # 3	Item # 4	Item # 5	Item # 6	Item # 7	Item # 8	Item # 9
PSV # 1	602338								
PSV # 2	602337								
PSV # 3									
PSV # 4									
PSV # 5									
PSV # 6									
PSV # 7									
PSV # 8									

NOTE : items in italics to be completed by Lead Inspector



Form : QR-22.1  
Rev. : 3 , Date : 01/07

## NONCONFORMANCE REPORT

NCR # 111117CWb

Refer to Inspection Report # FA - 111117CWa

**PRIORITY** ☒ **Level 0 - Serious/Code Resolve Immediately**  
☐ **Level 1 - Major Resolve within 14 days**  
☐ **Level 2 - Minor Resolve within 30 days**  
☐ **Level 3 (Shutdown) Resolve at next shutdown**

☒ **Internal (Husky)** ☐ **External (Contractor)**  
NCR Identified By Christy Walsh  
NCR to be Actioned By Dave McAmmond  
NCR to be Resolved By Dave McAmmond

### LOCATION & EQUIPMENT / PROCEDURE IDENTIFICATION

Production District	<u>FH-BC-007</u>	Facility	<u>Kakwa Field</u>	LSD	<u>07-05-063-06W6M</u>
Equipment Description	<u>Fuel Gas Scrubber PSV</u>	Manufacturer	<u>Farris</u>	Husky ID #	<u>Tag:PSV-150</u>
Prov. Registration #	<u>n/a</u>	CRN		Serial #	<u>581029-2-KE</u>

### DESCRIPTION OF NONCONFORMANCE (To be completed by person identifying the NCR) Please attach photos when applicable

The set pressure of this PSV is set to high at 285 psi (1965 kPa) to adequately protect PRV151, PRV152, PRV153, PRV154, PRV155, & PRV156 as they have a MAWP of 250 psi. The P&ID requires that this PSV to be set to 150psi (1034 kPa). These PRV's are located downstream of F-150 & F-151. See attached P&ID.

### CAUSE OF NONCONFORMANCE (To be completed by person identifying the NCR or person issuing the NCR)

<input checked="" type="checkbox"/> Noncompliance with Husky Integrity Program/Procedure	<input checked="" type="checkbox"/> Noncompliance with Code, Act or Regulation
<input type="checkbox"/> Noncompliance with Husky Eng. Specs	<input type="checkbox"/> B31.1 <input checked="" type="checkbox"/> B31.3 <input type="checkbox"/> Sect VIII <input type="checkbox"/> Sect I
<input type="checkbox"/> Other	<input type="checkbox"/> Sect V <input type="checkbox"/> CSA B51 <input type="checkbox"/> Z662 <input type="checkbox"/> Other

### PRELIMINARY REVIEW (To be completed by Chief or Facility Inspector)

Prior To Issuing, Nonconformity Has Been Discussed With

☒ Operations ☐ Engineering ☐ Maintenance ☐ Contractor ☐ Authorized Inspector  
NCR Issued By: Dale Martin [Signature] November 17, 2011  
Chief Inspector - Level 0 & 3 Print Signature Date  
Facility Lead Inspector - Level 1 & 2

### RECOMMENDED ACTION (To be completed by person assigned to action the NCR)

☐ Scrap ☐ Use "As-Is" ☐ Repair ☒ Alteration ☐ Replace ☐ Return to Supplier  
Describe actions required to resolve the NCR :  
Remove the pressure safety valve and get it reset to 150 psi (1034 kPa) at an authorized maintenance facility.

Christy Walsh [Signature] November 17, 2011  
Prepared by (Please Print) Signature Date

### APPROVAL OF RECOMMENDED ACTION

Required	Yes	No
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Dale Martin		
Chief or Facility Lead Inspector (Please Print)		
Tech Leader / Project Lead (Please Print)		
Dave McAmmond or Bert St. Martin		
Operations or Contractor (Please Print)		
Authorized Inspector (Please Print)		

### DESCRIPTION OF RESOLUTION (To be completed by person assigned to resolve the NCR)

Describe actions taken to resolve the NCR :

Completed forms are to be e-mailed or faxed to : Christy Walsh e-mail christy.walsh@huskyenergy.com Fax # 780-513-5612  
Issued NCRs have been provided to : Bert St. Martin; Dave McAmmond; Beverly Wohlberg; Dale Martin; Henry Hollman; Jane Yan  
NCR has been entered into database by : \_\_\_\_\_ Date : \_\_\_\_\_

# Husky Energy

## NONCONFORMANCE REPORT

Form : QR-22.1  
Rev. : 3 , Date : 01/07

NCR # 111117CWb

Refer to Inspection Report # FA-110823CWa

### RESOLUTION & ACTION FOLLOW-UP

Resolution Completed

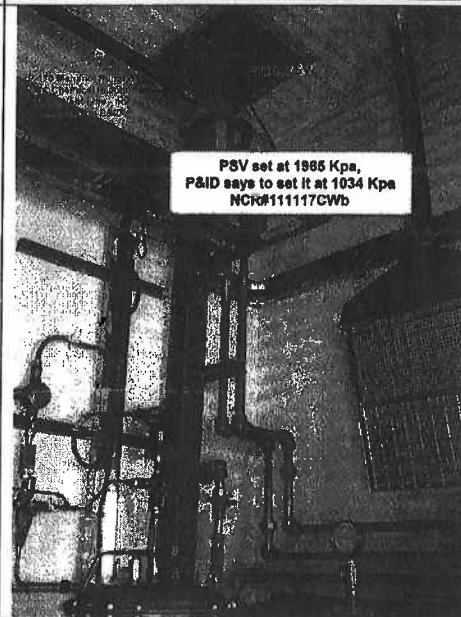
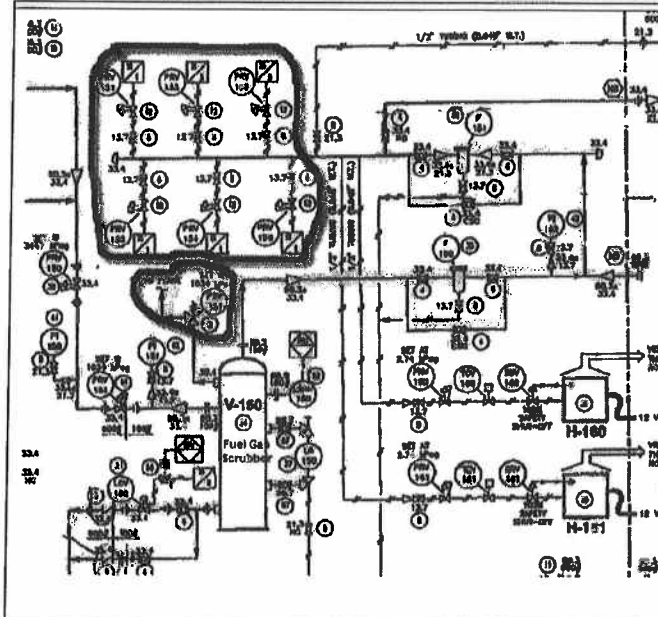
☐ Acceptable ☐ Unacceptable ☐ Corrective Action Required

Identify if actions were acceptable or if additional actions are required :

Follow-up completed by (Please Print)

Signature

Date



Completed forms are to be e-mailed or faxed to : Christy Walsh e-mail christy.walsh@huskyenergy.com Fax # 780-513-5612

Issued NCRs have been provided to : Bert St Martin; Dave McAmmond; Beverly Wohlberg; Dale Martin; Henry Hoffman; Jane Yan

NCR has been entered into database by : \_\_\_\_\_ Date : \_\_\_\_\_





Form : QR-22.1  
Rev. : 3 , Date : 01/07

## NONCONFORMANCE REPORT

NCR # **111117CWa**

Refer to Inspection Report # **FA - 111117CWa**

**PRIORITY** ☐ Level 0 - Serious/Code Resolve Immediately  
☒ Level 1 - Major Resolve within 14 days  
☐ Level 2 - Minor Resolve within 30 days  
☐ Level 3 (Shutdown) Resolve at next shutdown

☒ Internal (Husky) ☐ External (Contractor)  
NCR Identified By **Christy Walsh**  
NCR to be Actioned By **Dave McAmmond**  
NCR to be Resolved By **Dave McAmmond**

### LOCATION & EQUIPMENT / PROCEDURE IDENTIFICATION

Production District **FH-BC-007** Facility **Kakwa Field** LSD **07-05-063-06W6M**  
Equipment Description **Piping - Various** Manufacturer \_\_\_\_\_ Husky ID # \_\_\_\_\_  
Prov. Registration # \_\_\_\_\_ CRN \_\_\_\_\_ Serial # \_\_\_\_\_

### DESCRIPTION OF NONCONFORMANCE (To be completed by person identifying the NCR) Please attach photos when applicable


Six valves have been identified on P&ID as needing car seal tags to be installed in either the open or closed position. No car seal tags have been installed.

### CAUSE OF NONCONFORMANCE (To be completed by person identifying the NCR or person issuing the NCR)

☒ Noncompliance with Husky Integrity Program/Procedure ☐ Noncompliance with Code, Act or Regulation  
☐ Noncompliance with Husky Eng. Specs ☐ B31.1 ☐ B31.3 ☐ Sect VIII ☐ Sect I  
☐ Other ☐ Sect V ☐ CSA B51 ☐ Z662 ☐ Other

### PRELIMINARY REVIEW (To be completed by Chief or Facility Inspector)

#### Prior To Issuing, Nonconformity Has Been Discussed With

☒ Operations ☐ Engineering ☐ Maintenance ☐ Contractor ☐ Authorized Inspector  
NCR Issued By: **Christy Walsh**  **November 17, 2011**  
Chief Inspector - Level 0 & 3 \_\_\_\_\_ Print \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_  
Facility Lead Inspector - Level 1 & 2 \_\_\_\_\_

### RECOMMENDED ACTION (To be completed by person assigned to action the NCR)

☐ Scrap ☒ Use "As-Is" ☐ Repair ☐ Alteration ☐ Replace ☐ Return to Supplier



Describe actions required to resolve the NCR:

One of the two following recommended actions are suggested for resolution

- Install the car seals tags as outlined in the P&ID or
- perform a multidisciplinary hazard assessment to assess the need for car sealed valves, document its findings and forward to the area inspector if the HAZOP should determine that car sealed valves are not necessary.

Christy Walsh  **November 17, 2011**  
Prepared by (Please Print) \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

### APPROVAL OF RECOMMENDED ACTION

Required	Yes	No			
<input checked="" type="checkbox"/>			<b>Christy Walsh</b>		<b>November 17, 2011</b>
			Chief or Facility Lead Inspector (Please Print)	Signature	Date
			Tech Leader / Project Lead (Please Print)	Signature	Date
<input checked="" type="checkbox"/>			<b>Dave McAmmond or Bert St. Martin</b>		<b>November 17, 2011</b>
			Operations or Contractor (Please Print)	Signature	Date
			Authorized Inspector (Please Print)	Signature	Date

### DESCRIPTION OF RESOLUTION (To be completed by person assigned to resolve the NCR)

Describe actions taken to resolve the NCR:





# NONCONFORMANCE REPORT

Form : QR-22.1

Rev. : 3 , Date : 01/07

NCR # 110901CWb

Refer to Inspection Report # FA - 110823CWa

## RESOLUTION & ACTION FOLLOW-UP

Resolution Completed

☐ Acceptable

☐ Unacceptable

☐ Corrective Action Required

Identify if actions were acceptable or if additional actions are required :

Follow-up completed by (Please Print)

Signature

Date



Completed forms are to be e-mailed or faxed to : Christy Walsh e-mail christy.walsh@huskyenergy.com Fax # 780-513-5612

Issued NCRs have been provided to : Bert St.Martin; Dave McAmmond; Beverly Wohlberg; Dale Martin; Henry Hollman; Jane Yan

NCR has been entered into database by :

Date :

# INSPECTION DEFICIENCY REPORT

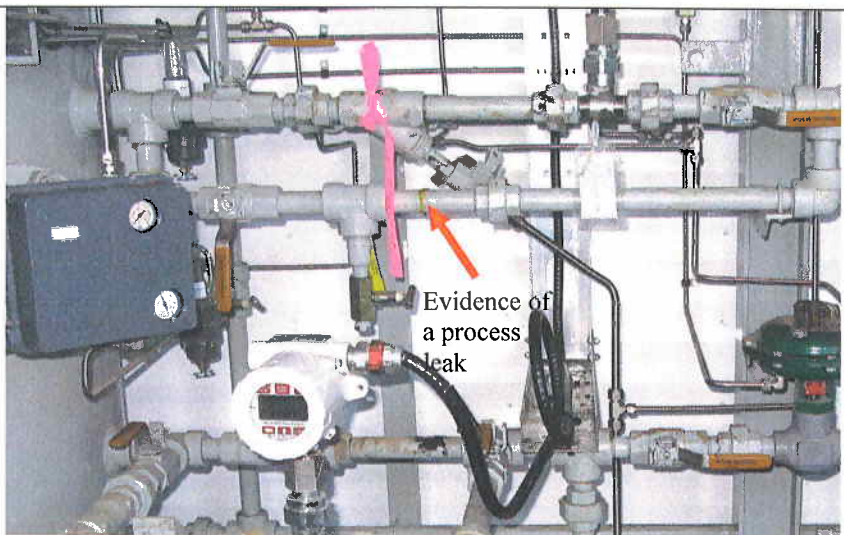
**FACILITY:** FH-BC-007 Kakwa      **DATE:** November 17, 2011      **REPORT #:** IDR 111117CWa

## STATIC DATA

Prov. Reg. # 602337 CRN: V3914.213 Serial # 5B1009-20  
 Equipment Location(LSD): 07-05-063-06W6M Equipment ID #: n/a  
 Equipment Description: Fitting off of Separator Service: Emulsion ☒ Sweet  
 Manufacturer: 5Blue Process Equipment Year Built: 2011 ☐ Sour  
 MAWP 1440 kPag / psi @ \_\_\_\_\_ °C / F MDMT: - °C / F Capacity: \_\_\_\_\_ m3

### IDENTIFIED DEFICIENCIES

Level 3 IDR: Faulty welding, piping joint make-up or flange connection (no immediate safety hazard – repair or replace at next outage)



### RECOMMENDED ACTION

☐ LEAVE "AS-IS"   
 ☒ PERFORM REPAIR   
 ☐ PERFORM ALTERATION   
 ☐ REPLACE UNIT  
☐ INTEGRITY ASSESSMENT REQUIRED  
**Comments:**  
 Repair and replace as necessary to eliminate the process hazard of leaking components / flange connections

## INSPECTION PERFORMED BY

☐ QUALITY INSPECTOR      ☒ LEAD INSPECTOR      ☐ CONTRACTED INSPECTOR

Christy Walsh      November 17, 2011

Print Name      Signature      Date

## DEFICIENCY REPORT ISSUED TO

Name	Position	Date
Dave McAmmond	Area Foreman	November 18, 2011
Gordon Frith	Maintenance Planner	November 18, 2011
Henry Hollman	WC Upstream Lead Inspector	November 18, 2011
Jane Yan	Data Integrity Administrator	November 18, 2011

**RECOMMENDED ACTION COMPLETED**

<b>Job File #</b>	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>	<b>Comments :</b>
Print Name	Signature	Date



Form : QR-19.2  
Rev. : 0 , Date : 03/03

## INSPECTION DEFICIENCY REPORT

FACILITY: FH-BC-007 Kakwa DATE: November 18, 2011 REPORT #: IDR 111117CWb

### STATIC DATA

Prov. Reg. # n/a CRN: n/a Serial # D-96-222-10  
Equipment Location(LSD): 07-05-063-06W6M Equipment ID #: 66004343  
Equipment Description: Water Storage Tank Service: Produced Water ☒ Sweet ☐ Sour  
Manufacturer: n/a Year Built: 1996  
MAWP \_\_\_\_\_ kPag / psi @ \_\_\_\_\_ °C / F MDMT: - °C / F Capacity: \_\_\_\_\_ m3

### IDENTIFIED DEFICIENCIES

Level 3 IDR: Faulty welding, piping joint make-up or flange connection (no immediate safety hazard repair or replace at next outage)

Flex hose is not installed correctly. According to DS-PF-05 Metallic Flex Hose specification...

8.1 Care must be taken to ensure that the flex hose is not subjected to excessive stresses or other mechanical forces during the installation process.



### RECOMMENDED ACTION

☐ LEAVE "AS-IS" ☒ PERFORM REPAIR ☐ PERFORM ALTERATION ☐ REPLACE UNIT  
☐ INTEGRITY ASSESSMENT REQUIRED

#### Comments:

Replace gasket

### INSPECTION PERFORMED BY

☐ QUALITY INSPECTOR ☒ LEAD INSPECTOR ☐ CONTRACTED INSPECTOR  
Christy Walsh Christy Walsh November 18, 2011  
Print Name Signature Date

### DEFICIENCY REPORT ISSUED TO

Name	Position	Date
<u>Dave McAmmond</u>	<u>Area Foreman</u>	<u>November 18, 2011</u>
<u>Gordon Frith</u>	<u>Maintenance Planner</u>	<u>November 18, 2011</u>
<u>Henry Hollman</u>	<u>WC Upstream Lead Inspector</u>	<u>November 18, 2011</u>
<u>Jane Yan</u>	<u>Data Integrity Administrator</u>	<u>November 18, 2011</u>

### RECOMMENDED ACTION COMPLETED

Job File #                      Comments : \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Print Name Signature Date





Form : QR-19.2  
Rev. : 0 , Date : 03/03

## INSPECTION DEFICIENCY REPORT

FACILITY: FH-BC-007 Kakwa DATE: November 18, 2011 REPORT #: IDR 11117CWc

### STATIC DATA

Prov. Reg. #	<u>n/a</u>	CRN:	<u>n/a</u>	Serial #	<u>n/a</u>
Equipment Location(LSD):	<u>07-05-063-06W6M</u>	Equipment ID #:	<u>n/a</u>		
Equipment Description:	<u>Pig Receiver</u>	Service:	<u>Emulsion</u>	<input checked="" type="checkbox"/> Sweet	<input type="checkbox"/> Sour
Manufacturer:	<u>n/a</u>	Year Built:	<u>2011</u>		
MAWP		kPag / psi @		°C / F	MDMT: <u>-</u> °C / F Capacity: <u></u> m3

### IDENTIFIED DEFICIENCIES

Level 3 IDR: Faulty welding, piping joint make-up or flange connection (no immediate safety hazard repair or replace at next outage)

6" gasket is found to be installed incorrectly and bent over significantly within the flange.



### RECOMMENDED ACTION

☐ LEAVE "AS-IS" ☒ PERFORM REPAIR ☐ PERFORM ALTERATION ☐ REPLACE UNIT  
☐ INTEGRITY ASSESSMENT REQUIRED

#### Comments:

Replace gasket

### INSPECTION PERFORMED BY

☐ QUALITY INSPECTOR ☒ LEAD INSPECTOR ☐ CONTRACTED INSPECTOR  
Christy Walsh *Christy Walsh* November 18, 2011  
Print Name Signature Date

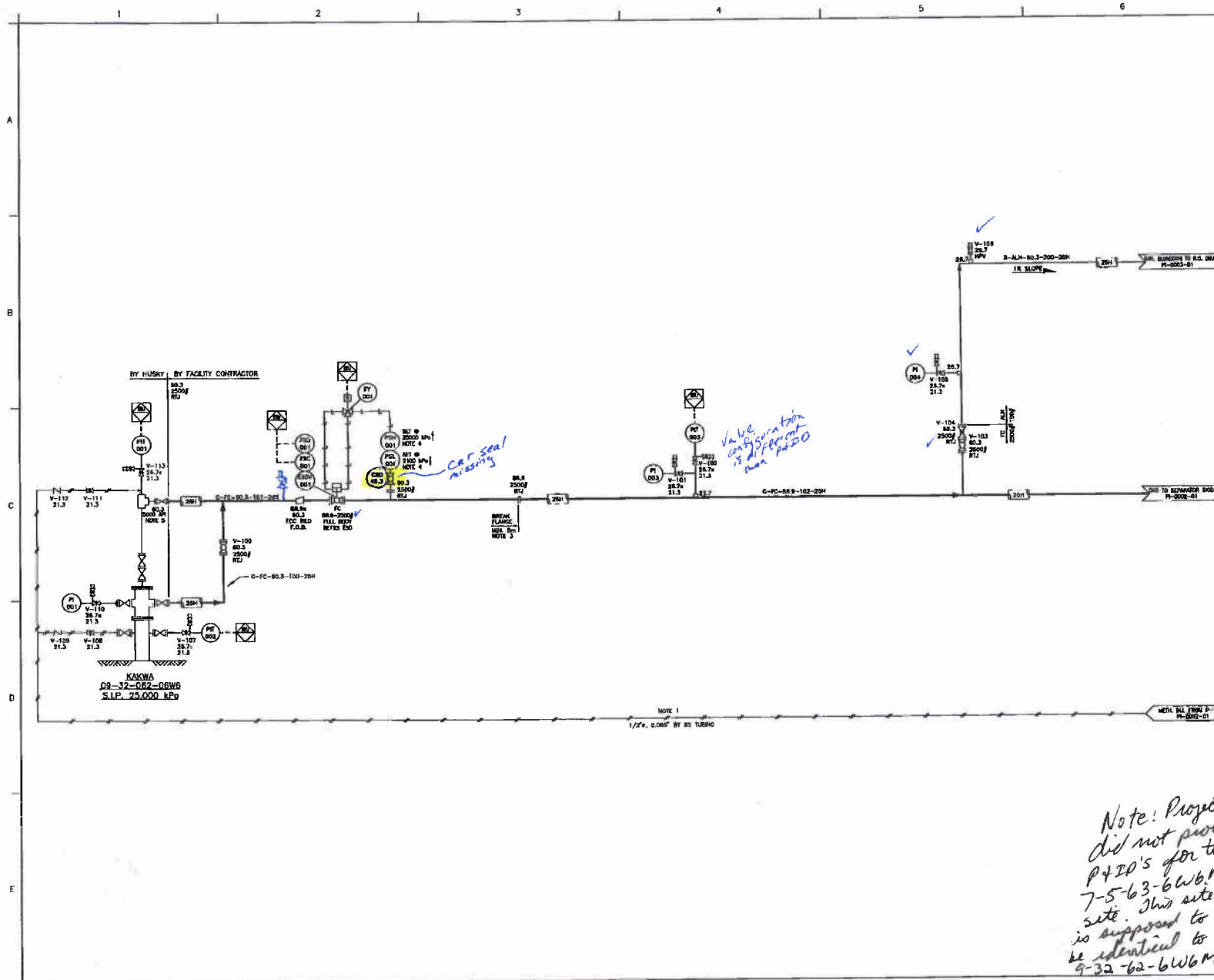
### DEFICIENCY REPORT ISSUED TO

Name	Position	Date
Dave McAmmond	Area Foreman	November 18, 2011
Gordon Frith	Maintenance Planner	November 18, 2011
Henry Hollman	WC Upstream Lead Inspector	November 18, 2011
Jane Yan	Data Integrity Administrator	November 18, 2011

### RECOMMENDED ACTION COMPLETED

Job File #	<u></u>	Comments :	<u></u>
<u></u>			
<u></u>			
<u></u>			
Print Name	Signature	Date	





### NOTES

- INSTRUMENT TUBING:  
3/8" 0.035" WT 316SS C/W 316SS SWAGelok FITTINGS & SS FERRULES.  
PROCESS & DRAIN TUBING:  
1/2" 0.035" WT 316SS C/W 316SS SWAGelok FITTINGS & SS FERRULES.  
1/2" 0.035" WT 316SS C/W 316SS SWAGelok FITTINGS & SS FERRULES.  
METHANOL/CHEMICAL INJECTION TUBING:  
1/2" 0.035" WT 316SS C/W 316SS SWAGelok FITTINGS & SS FERRULES.
- ALL HPV AND UPD TO BE 3/4" TOL C/W HEX PLUG.
- REMOVABLE SPOOL FOR WELL SERVICE (ON MANUAL).
- HUSKY OPERATIONS TO CONFIRM DET POINTS.
- HUSKY OPERATIONS TO CONFIRM WELLHEAD RATING.

ENGINEERING COMPANY PERMIT STAMP		REGISTERED PROFESSIONAL ENGINEER STAMP	

REF	DRAWING NUMBER	DRAWING TITLE

REV	DATE	DESCRIPTION	BY	CHK	ENG	AP
A	10.12.10	ISSUED FOR APPROVAL (EIR 14510, QLE 10179)	DJ	AK	KK	

### Revision History

Husky Oil Operations Limited		
100/09-32-062-06W6/00		
TITLE	KAKWA WELLSITE TIE-IN PIPING & INSTRUMENTATION DIAGRAM WELLHEAD	
SURFACE LOCATION	09-32-062-06W6	
ALTERNATE DWG NUMBER		REV #
HUSKY DWG NUMBER	09-32-062-06W6-PI-0001-01	A
VENDOR DWG NUMBER		SCALE
AMU/FLOC NUMBER	1	NTS
DCH NO	PROJECT NO	EWR 14510

07-05-063-06W6M / 1-5 DownHole

November 16, 2011  
Facility Installation Inspection







