



**PSV DATA**  
 MFG: FARRIS  
 MODEL: 27FA45-M20/S7  
 SERIAL: CE-403771-3-KE  
 SET PRES: 9274 kPa  
 CAPACITY: 8410 scfm  
 SERVICED BY: UNIFIED  
 SERVICE DATE: 06/24/2005  
 SIZE: 1.5inx 2in  
 CODE STAMP: UV/NB  
 BLOCK VALVE: NO  
 CRN: OG0386.9C  
 LOCATION: TOP OF SHELL  
 TAG: 8242F

Equip. No. V-110 Prov. Reg. No. Ⓐ 439359 C.R.N. L-2812.213 Serial No. 012941-1 Yr. Inst. \_\_\_\_\_  
 Code/Div. ASME VIII, DIV 1 Size: 46in x 175in Manufacturer: OPSCO Yr. Bld. 1998  
 C. Stamp: YES Service: SOUR PWHT: YES Radiography: RT-1 Insulated: NO

**Design & Materials Data**

**HEAD:**  
 Top Mat'l. SA 516 70N Top Nom. 50.4mm Top C.A. 3.2mm  
 Btm. Mat'l. \_\_\_\_\_ Btm. Nom. \_\_\_\_\_ Btm. C.A. \_\_\_\_\_  
**CHANNEL:**  
 Material: \_\_\_\_\_ Nominal: \_\_\_\_\_ C.A. \_\_\_\_\_  
**BOOT**  
 Head Mat'l. \_\_\_\_\_ Head Nom. \_\_\_\_\_ Head C.A. \_\_\_\_\_  
 Shell Mat'l. \_\_\_\_\_ Shell Nom. \_\_\_\_\_ Shell C.A. \_\_\_\_\_  
**SHELL**  
 Material: SA 516 70N Nominal: 50.8mm C.A. 3.2mm  
 MAWP Shell Side: 9274 kPa @ Temp. 93°C  
 MAWP Tube Side: \_\_\_\_\_ @ Temp. \_\_\_\_\_

CLIENT	CANADIAN NATURAL RESOURCES	
FACILITY	HALFWAY BATTERY LSD 05-12-87-25 W6M	
ITEM	GROUP SEPARATOR	
BY: LR	DATE: 07/2005	DWG.# 3

## UTS DATA

**CLIENT:** CANADIAN NATURAL RESOURCES  
**EQUIPMENT:** GROUP SEPARATOR  
**CRN#:** L-2812.213  
**PROV REG:** A 439359  
**TESTED ON STREAM**

**FACILITY:** HALFWAY BATTERY  
**SERVICE:** SOUR  
**LOCATION:** 05-12-87-25 W6M  
**RTD JOB #:** 05.001616  
**REFER TO DRAWING:** 3

Test Point	THICKNESS DATA			Flag	Crit	C.A.	Nom.	Short Term	Long Term	Ave. mm/py	Flag Date
<b>315</b>											
Description: UPPER SHELL											
	2005	6	2008	3							
Min. Thick.	51.1		51.1		47.6	3.2	50.8	0	0	L	
Average:	51.2		51.2					0	0	L	
Analysis:											
<b>320</b>											
Description: LOWER HEAD											
	2005	6	2008	3							
Min. Thick.	50		49		47.2	3.2	50.4	.36	.36	L	2013
Average:	50.6		50					.22	.22	L	2021
Analysis:											
<b>325</b>											
Description: BOTTOM SHELL											
	2005	6	2008	3							
Min. Thick.	50.3		50.3		47.6	3.2	50.8	0	0	L	
Average:	50.7		50.7					0	0	L	
Analysis: 03/2008 MIN SCAN @ NOZZLE											
<b>330</b>											
Description: LOWER SHELL											
	2005	6	2008	3							
Min. Thick.	51.2		51.2		47.6	3.2	50.8	0	0	L	
Average:	51.3		51.3					0	0	L	
Analysis:											
<b>335</b>											
Description: LOWER HEAD											
	2005	6	2008	3							
Min. Thick.	50		50		47.2	3.2	50.4	0	0	L	
Average:	50.9		50.9					0	0	L	
Analysis: 03/2008 MIN SCAN @ KNUCKLE											
<b>340</b>											
Description: FLOAT COLUMN-LOWER SHELL											
	2005	6	2008	3							
Min. Thick.	9.4		6.4		0			1.09	1.09	L	2014
Average:	10.5		8.9					.58	.58	L	2023
Analysis: 03/2008 CORROSION BETWEEN 5-10cm FROM BOTTOM HEAD WELD AT LIQUID LEVEL SIDE OF SHELL TO FRONT FACE OF SHELL (90° OF CIRC)											

# UTS DATA

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**PROV REG:** A 439359  
**TESTED ON STREAM**

**FACILITY:** HALFWAY BATTERY  
**SERVICE:** SOUR  
**LOCATION:** 05-12-87-25 W6M  
**RTD JOB #:** 05.001616  
**REFER TO DRAWING:** 3

Test Point	THICKNESS DATA				Flag	Crit	C.A.	Nom.	Short Term	Long Term	Ava. mm/yr	Flag Date
345												
Description:	BOTTOM HEAD											
	2005	6	2008	3								
Min. Thick.	9.4		9.4		0				0	0		L
Average:	10.6		10.6						0	0		L
Analysis:	06/2005-MIN SCAN AT KNUCKLE											

## UTS DATA

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**EQUIPMENT:** GROUP SEPARATOR PIPING  
**CRN#:**  
**PROV REG:**  
**TESTED ON STREAM**

**FACILITY:** HALFWAY BATTERY  
**SERVICE:** SOUR  
**LOCATION:** 05-12-87-25 W6M  
**RTD JOB #:** 05.001616  
**REFER TO DRAWING:** 3

Test Point	THICKNESS DATA				Flag	Crit	C.A.	Nom.	Short Term	Long Term	Ave. mm/py	Flag Date
<b>310</b>												
Description: 6" 90° ELBOW												
	2005	6	2008	3								
Min. Thick.	9.5		9.5		9.63	7.8	1.4	11	0	0		L 2008
Average:	10		10						0	0		L
Analysis: 06/2005-MIN SCAN AT MID APEX												
<b>350</b>												
Description: 2" 90° ELBOW												
	2005	6	2008	3								
Min. Thick.	4.8		4.8		4.81	2.6	.7	5.5	0	0		L 2008
Average:	5		5						0	0		L
Analysis:												
<b>355</b>												
Description: 2" 90° ELBOW												
	2005	6	2008	3								
Min. Thick.	3.8		3.8		4.81	2.6	.7	5.5	0	0		L 2008
Average:	4.8		4.8						0	0		L 2008
Analysis: 03/2008 GENERAL CORROSION THROUGHOUT												
<b>360</b>												
Description: 2" 90° ELBOW												
	2005	6	2008	3								
Min. Thick.	5		5		4.81		.7	5.5	0	0		L
Average:	5.3		5.3						0	0		L
Analysis:												
<b>365</b>												
Description: 3" 90° ELBOW												
	2005	6	2008	3								
Min. Thick.	7.2		7.1		6.65		.9	7.6	.04	.04		L 2020
Average:	7.5		7.3						.07	.07		L 2017
Analysis:												
<b>370</b>												
Description: 2" 90° ELBOW												
	2005	6	2008	3								
Min. Thick.	4.4		4.4		4.81	2.6	.7	5.5	0	0		L 2008
Average:	4.8		4.8						0	0		L 2008
Analysis: 03/2008 MIN SCAN @ MID APEX												

## UTS DATA

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**EQUIPMENT:** GROUP SEPARATOR PIPING  
**CRN#:**  
**PROV REG:**  
**TESTED ON STREAM**

**FACILITY:** HALFWAY BATTERY  
**SERVICE:** SOUR  
**LOCATION:** 05-12-87-25 W6M  
**RTD JOB #:** 05.001616  
**REFER TO DRAWING:** 3

Test Point	THICKNESS DATA			Flag	Crit	C.A.	Nom.	Short Term	Long Term	Ave. mm/yr	Flag Date
<b>375</b>											
Description:	2" 90° ELBOW										
	2005	6	2008	3							
Min. Thick.	5.4		5		4.81	2.6	.7	5.5	.15	.15	L 2009
Average:	5.7		5.3						.15	.15	L 2011
Analysis:											
<b>380</b>											
Description:	3" 90° ELBOW										
	2005	6	2008	3							
Min. Thick.	6.6		6.6		6.65	3.9	.9	7.6	0	0	L 2008
Average:	7.4		6.9						.18	.18	L 2009
Analysis:											
<b>382</b>											
Description:	2" 90° ELBOW										
	2005	6	2008	3							
Min. Thick.	4.5		4.5		4.81	2.6	.7	5.5	0	0	L 2008
Average:	5.3		4.8						.18	.18	L 2008
Analysis:	06/2005-MIN SCAN AT DSW										
<b>384</b>											
Description:	4" 90° ELBOW										
	2005	6	2008	3							
Min. Thick.	8.4		8.2		7.53		1.1	8.6	.07	.07	L 2017
Average:	8.7		8.5						.07	.07	L 2021
Analysis:											
<b>386</b>											
Description:	3" x 4" TEE										
	2005	6	2008	3							
Min. Thick.	8.9		8.7		7.53		1.1	8.6	.07	.07	L 2024
Average:	9.2		9						.07	.07	L 2028
Analysis:											
<b>388</b>											
Description:	2" 90° ELBOW										
	2005	6	2008	3							
Min. Thick.	4.8		4.7		4.81	2.6	.7	5.5	.04	.04	L 2008
Average:	5.1		5						.04	.04	L 2013
Analysis:											

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**CRN#:**  
**PROV REG:**  
**TESTED ON STREAM**

**FACILITY:** HALFWAY BATTERY  
**SERVICE:** SOUR  
**LOCATION:** 05-12-87-25 W6M  
**RTD JOB #:** 05.001616  
**REFER TO DRAWING:** 3

Test Point	THICKNESS DATA				Flag	Crit	C.A.	Nom.	Short Term	Long Term	Ave. mm/py	Flag Date
<b>390</b>												
Description:	2" 90° NOZZLE											
	2005	6	2008	3								
Min. Thick.	8.8		8.8		7.61		3.2	8.7	0	0		L
Average:	9.3		9.3						0	0		L
Analysis:	06/2005-MIN SCAN BELOW MID ELBOW											
<b>392</b>												
Description:	2" 90° ELBOW											
	2005	6	2008	3								
Min. Thick.	4.9		4.9		4.81		.7	5.5	0	0		L
Average:	5.3		5.1						.07	.07		L 2012
Analysis:	06/2005-MIN SCAN AT MID APEX											
<b>394</b>												
Description:	4" 90° ELBOW											
	2005	6	2008	3								
Min. Thick.	8.5		8.5		7.53		1.1	8.6	0	0		L
Average:	8.8		8.8						0	0		L
Analysis:												
<b>396</b>												
Description:	4" 90° ELBOW											
	2005	6	2008	3								
Min. Thick.	8.8		8.7		7.53		1.1	8.6	.04	.04		L 2040
Average:	9.3		9						.11	.11		L 2021
Analysis:	06/2005-MIN SCAN AT ME APEX											
<b>399</b>												
Description:	4" 90° ELBOW											
	2005	6	2008	3								
Min. Thick.	8		8		7.53		1.1	8.6	0	0		L
Average:	8.3		8.3						0	0		L
Analysis:												