



<input type="checkbox"/> Installation <input checked="" type="checkbox"/> External <input type="checkbox"/> Piping																
Date:	February 7, 2018				Description:	<input checked="" type="checkbox"/> Vessel <input type="checkbox"/> Exchanger <input type="checkbox"/> Furnace Boiler										
Inspector:	Ryan Hogg				Unit #:									Equip #:	848871	
Agent Co:	101292687 Saskatchewan Ltd				Equip. Name:	Filter								CRN #:	T4605.4	
Province:	Manitoba				Manufacturer:	ESS Corp										
Area:	Run 009 – Ingoldsby/Pierson				Year Built:	2014				S/N:	4551 B					
Subarea:	Battery 09-32-001-28W1				Location/LSD:	BAT/09-32-001-28W1										
Service	<input type="checkbox"/> Sweet <input checked="" type="checkbox"/> Sour <input type="checkbox"/> Other:				PSV Location	Choose an item.				MDMT	-20F					
Zones:	MAWP	Design T	Set P	CPE#	Manufacturer	S/N	In. Sz	Out. Sz	Serv. Co.	Serv. Date	IV	CSO	Capacity			
Shell Side	150 PSI	100 F														
Tube Side											Y/N	Y/N				
Other											Y/N	Y/N				
Components	Material	Nominal t	CA	Retire t	Lowest t	t OK?	Calc. t-min	Comment								
	Shell				.485	<input type="checkbox"/> Y <input type="checkbox"/> N										
	Head	0.500"			0.295"	<input type="checkbox"/> Y <input type="checkbox"/> N										
	Channel					<input type="checkbox"/> Y <input type="checkbox"/> N										
	Tube					<input type="checkbox"/> Y <input type="checkbox"/> N										
Other					<input type="checkbox"/> Y <input type="checkbox"/> N		Specify:									
Orientation	<input type="checkbox"/> Hor. <input checked="" type="checkbox"/> Ver.		Foundation	<input type="checkbox"/> Concrete <input type="checkbox"/> Gravel <input type="checkbox"/> Timbers <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other:			Condition Welded in place									
Support	<input type="checkbox"/> Saddle		<input type="checkbox"/> Seal-welded		<input type="checkbox"/> Free to Move		Condition:									
	<input type="checkbox"/> Skirt		<input type="checkbox"/> Free of debris Comment:				Condition:									
	<input type="checkbox"/> Hangers		<input type="checkbox"/> Secure Comment:				Condition:									
	<input checked="" type="checkbox"/> Other		Specify: Stand inside building				Condition: Painted inside building									
Overall	General Condition:						Electrical grounding <input type="checkbox"/> Direct <input checked="" type="checkbox"/> Indirect <input type="checkbox"/> None									
Ext. Surface	<input checked="" type="checkbox"/> Painted <input type="checkbox"/> Insulated <input type="checkbox"/> Fire-proofed <input type="checkbox"/> Cladded <input type="checkbox"/> Other:						Condition:									
Ext. Fixtures	<input type="checkbox"/> Ladder <input type="checkbox"/> Platform(s) <input type="checkbox"/> Other:				Condition:											
	<input type="checkbox"/> Manway <input checked="" type="checkbox"/> Port		Size: Removable top head			<input type="checkbox"/> Reinforcement Pads used		<input type="checkbox"/> Weep Holes Present								
	Comment															
Davit Arm	<input type="checkbox"/> Present <input type="checkbox"/> Greased		<input type="checkbox"/> Double nutted		Condition											
Piping	<input type="checkbox"/> PSV		<input type="checkbox"/> Supported		<input type="checkbox"/> Joined per code		<input type="checkbox"/> Drains Properly		<input type="checkbox"/> Well Coated		Comment:					
	<input checked="" type="checkbox"/> Inlet		<input checked="" type="checkbox"/> Supported		<input checked="" type="checkbox"/> Joined per code		<input checked="" type="checkbox"/> Free from leaks		<input type="checkbox"/> Well Coated		Comment:					
	<input checked="" type="checkbox"/> Outlet		<input checked="" type="checkbox"/> Supported		<input checked="" type="checkbox"/> Joined per code		<input checked="" type="checkbox"/> Free from leaks		<input type="checkbox"/> Well Coated		Comment:					
	<input checked="" type="checkbox"/> Drain		<input checked="" type="checkbox"/> Supported		<input checked="" type="checkbox"/> Joined per code		<input checked="" type="checkbox"/> Free from leaks		<input type="checkbox"/> Well Coated		Comment:					
	<input checked="" type="checkbox"/> Instrumentation		<input checked="" type="checkbox"/> Supported		<input checked="" type="checkbox"/> Joined per code		<input checked="" type="checkbox"/> Free from leaks/kinks									
<input type="checkbox"/> Process Fluid Identified		<input type="checkbox"/> Flow direction marked		Comment:												
Valves	<input checked="" type="checkbox"/> Manual Isolation Valve			<input checked="" type="checkbox"/> Free from leaks			Comment:									
	<input type="checkbox"/> Automated Control Valve			<input type="checkbox"/> Free from leaks			Comment:									
	<input type="checkbox"/> Vents and Drain plugged						Comment									
Gauges	<input checked="" type="checkbox"/> Pressure		Reading: 60 PSI		Condition: clean and readable											
	<input type="checkbox"/> Temperature		Reading:		Condition:											
Sight Glass	<input type="checkbox"/> Fluid Level		Reading:		Condition:											
Inspection Summary	Inspection Practices: 2.0 Non-Fired Pressure Vessels  Filter is showing internal pitting and corrosion at the time of inspection. Bottom head was UT'd readings throughout were:  Head nominal 0.500" with areas in the radius area down to 0.405" in pitts, the center between the nozzles in the bottom head was an 8" circular area with readings from 0.350" to 0.295" remaining – design is the same as 4551 - A was open at the time of inspection and had severe corrosion in bottom head and on the filter cartridge plate.  Filters are at end of life prepare for future replacement.															
	<b>Recommended Actions:</b> Visually inspect once opened.											<b>NCR/IDR</b>				
<b>VESSEL STATUS</b>																
Integrity Status	Suitable for Continued Service <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Future Repairs Required															
Inventory Status	<input checked="" type="checkbox"/> In Service <input type="checkbox"/> Out of Service <input type="checkbox"/> Surplus <input type="checkbox"/> Rental <input type="checkbox"/> Scrap															



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Date:	February 7, 2018	Description:	<input checked="" type="checkbox"/> Vessel <input type="checkbox"/> Exchanger <input type="checkbox"/> Furnace Boiler
Inspector:	Ryan Hogg	Unit #:	Equip #: 848874
Agent Co:	101292687 Saskatchewan Ltd	Equip. Name:	Filter
		Jurisdiction	CRN #: T4805.4
Province:	Manitoba	Manufacturer:	ESS Corp
Area:	Run 009 – Ingoldsby/Pierson	Year Built:	2014 S/N: 4550 B
Subarea:	Battery 09-32-001-28W1	Location/LSD	BAT/09-32-001-28W1



Inspection Interval: 1 yrs OR Changed to: \_\_\_\_ yrs.

PSV Interval: OR Changed to: \_\_\_\_ yrs.

Ultrasonic Inspection Interval: 6 months OR Changed to: \_\_\_\_ yrs.

Class 1  Class 2 PEI Certificate #: PEI 128

IPV/IBPV Certificate #: \_\_\_\_

Inspectors Name: Ryan Hogg

Signature:

Chief Inspector: I certify that the information on this report is true and all inspections as required by our Owner/User Quality Assurance Program # QMS-0036 which expires September 6, 2018 have been done.

Recommendations:

- Internally inspect at next filter change – internal corrosion is expected to be similar to 4550-A.
- UT after 6 month of service due to corrosion issues in the adjacent filters.
- Filters should be cleaned out on a regular basis when switching to opposite bank of filters.
- Filter is at end of life – prepare for future replacement.