

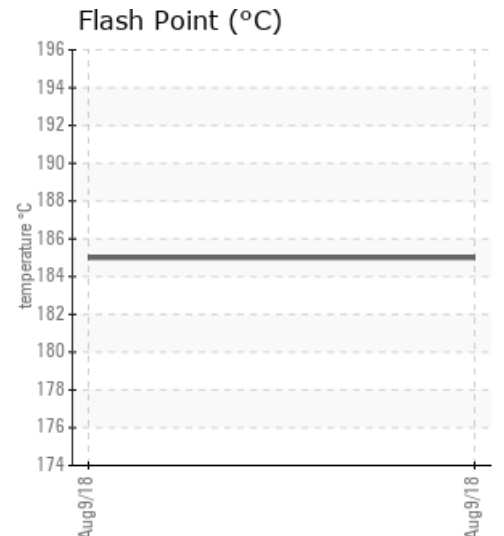
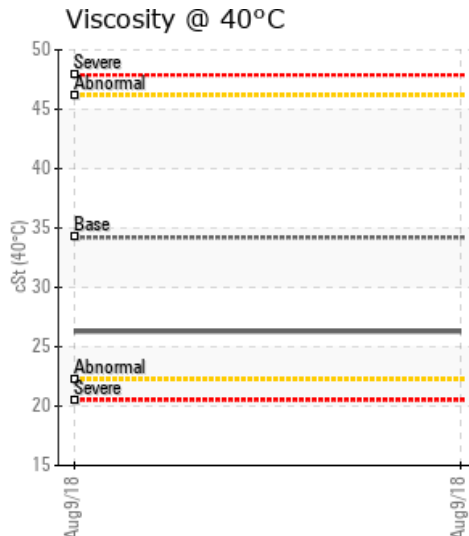
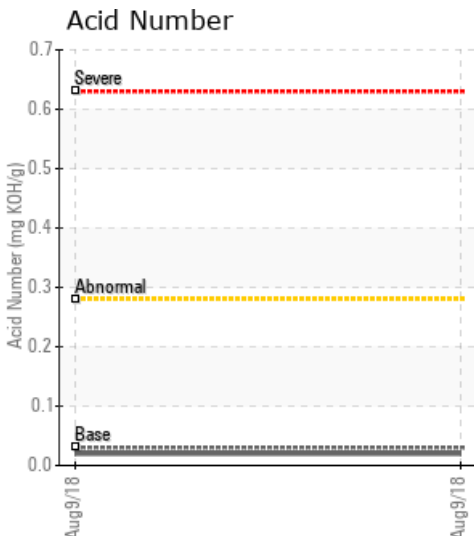
## [PMI STATE HOT OIL SYS] 30073

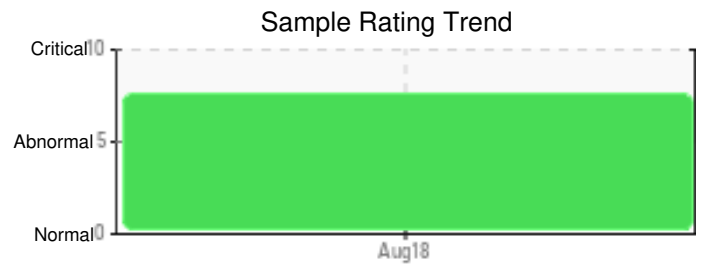
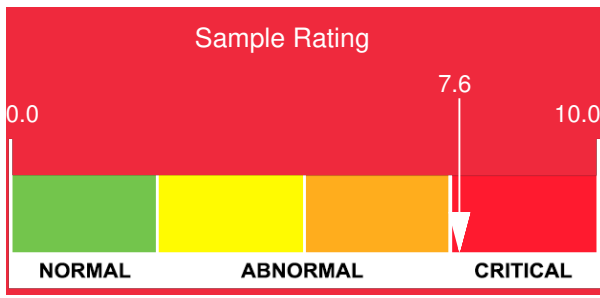
Customer: PTRHTF30073	System Information	Sample Information
IRVING PAPER LTD 435 BAYSIDE DRIVE SAINT JOHN, NB E2L 4K9 Canada Attn: Terry Tomney Tel: (506)650-8435 E-Mail: tomney.terry@irvingpaper.com	System Volume: 3500 ltr Bulk Operating Temp: 536F / 280C Heating Source: Blanket: Fluid: PETRO CANADA PETRO-THERM Make: METSO	Lab No: 02233913 Analyst: Claude Bureau Sample Date: 08/09/18 Received Date: 08/15/18 Completed: 08/22/18 To discuss this report contact Claude Bureau at (438)863-7577

Recommendation: The (GCD) values are marginally to severely low levels. The flash point and viscosity are marginally low. These results are clearly a sign of a strong presence of a large quantity of light ends in the oil. The oil must be vented as soon as possible in order to remove these light ends. In order to follow the venting process please submit another sample after the venting cycle to re-evaluate the condition of the oil.

Comments: No wear metals detected. No contamination detected. (GCD) 50% Distillation Point is severely low. (GCD) 90% Distillation Point is severely low. (GCD) 10% Distillation Point is abnormally low. (GCD) % < 335°C is marginally high. COC Flash Point is marginally low (185°C). The viscosity is marginally low (26.3 cSt).

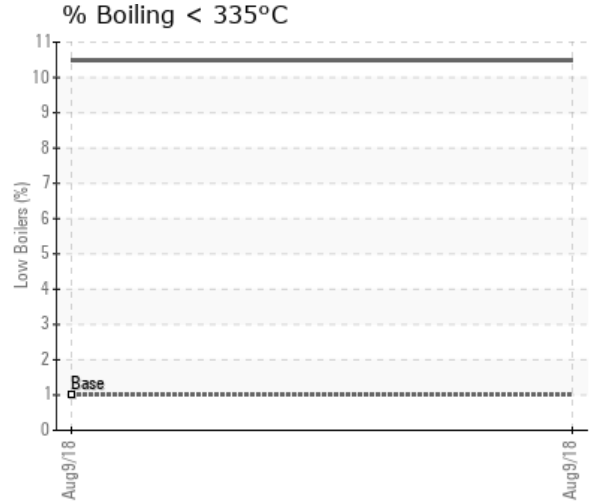
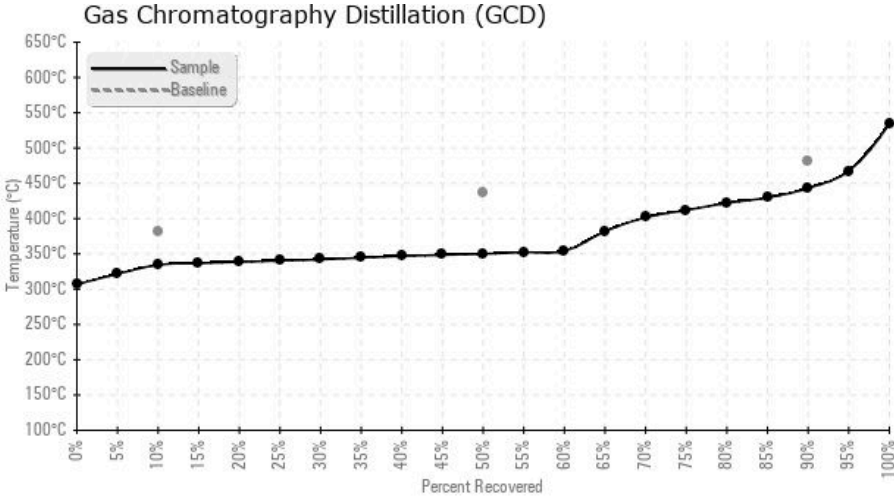
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
08/09/18	08/15/18	5y	MANIFOLD FROM SYS	365 / 185	49.7	26.3	0.020	0.009	634 / 334	662 / 350	830 / 443	10.49
Baseline Data				433 / 223		34.2	0.03		720 / 382	817 / 436	900 / 482	1.00





Sample Date	Iron	Chromium	Nickel	Aluminum	Copper	Lead	Tin	Cadmium	Silver	Vanadium	Silicon	Sodium	Potassium	Titanium	Molybdenum	Antimony	Manganese	Lithium	Boron	Magnesium	Calcium	Barium	Phosphorus	Zinc
08/09/18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Baseline Data			0	0						0			0	0					0				0	

Elemental analysis results (above) in parts per million (ppm). [10,000 ppm = 1.0%]



### Historical Comments


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