

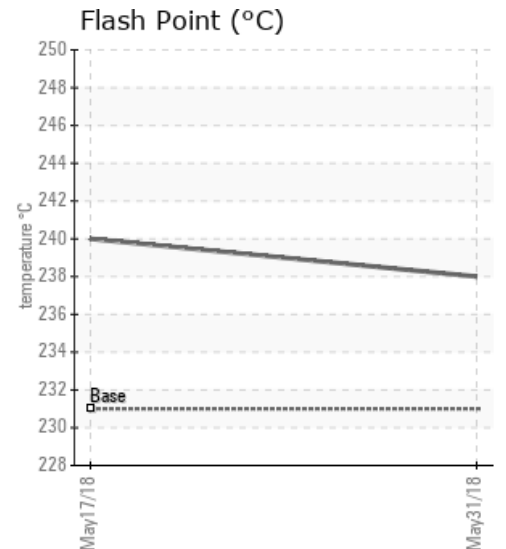
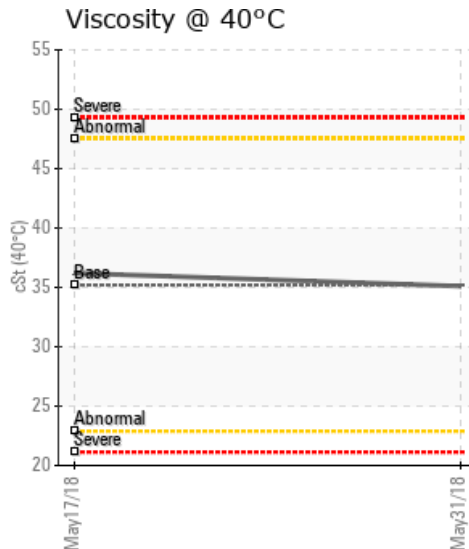
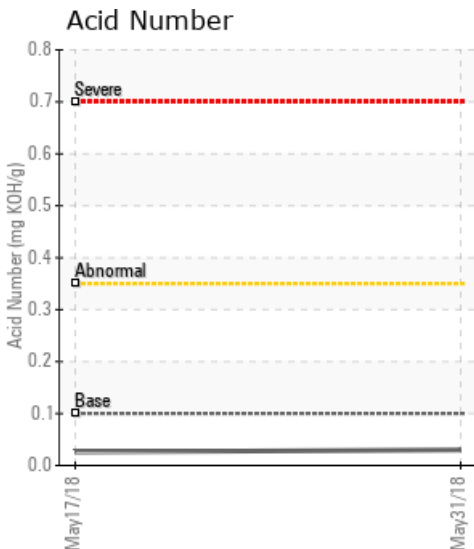
## [SUNCOR MARKEY RIVER] TANK 750

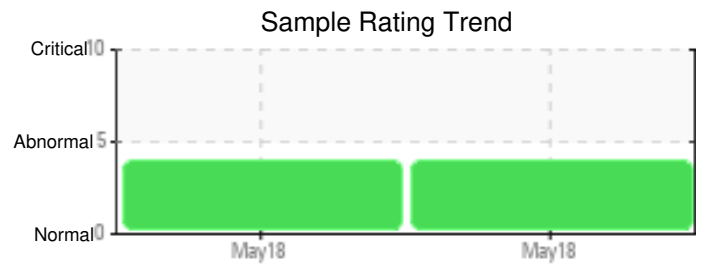
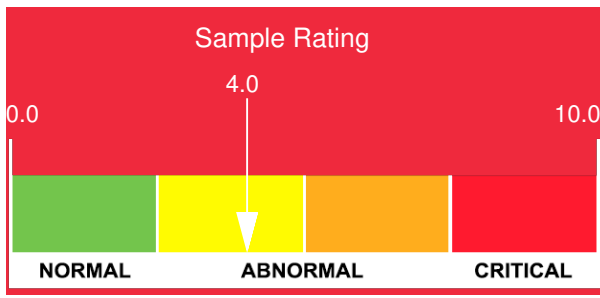
Customer: PTRHTF20196	System Information	Sample Information
SUNCOR ENERGY MACKAY RIVER PROJECT DOCK M FORT MCMURRAY, AB T9H 4W1 Canada Attn: Patrick Spargo Tel: (780)792-2977	System Volume: 13000 ltr Bulk Operating Temp: 518F / 270C Heating Source: Blanket: Fluid: PETRO CANADA CALFLO HTF Make:	Lab No: 02221712 Analyst: Bill Quesnel CLS, OMA II, MLA-III, LLA-I Sample Date: 05/31/18 Received Date: 06/12/18 Completed: 06/13/18 To discuss this report contact Bill

### Recommendation:

Comments: Water contamination levels are severely high. Water contamination levels are severely high.. ppm Water contamination levels are severely high. (GCD) 90% Distillation Point is marginally low.

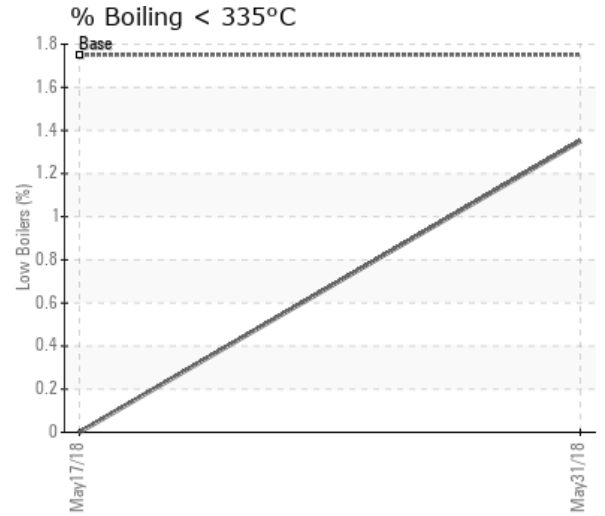
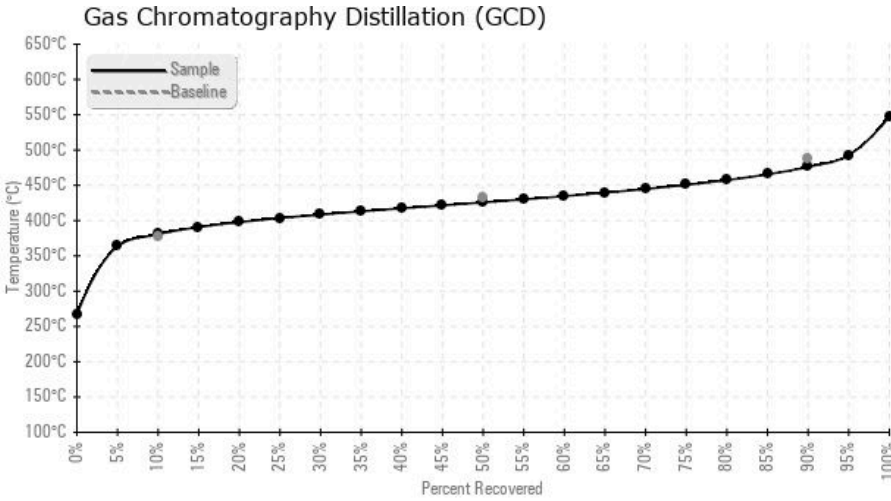
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
05/31/18	06/12/18	0d	HOT OIL TANK #1	460 / 238	1887.2	35.1	0.03	0.072	717 / 381	798 / 426	889 / 476	1.35
05/17/18	05/28/18	2d	HOT TANK OIL #1	464 / 240	4968.5	36.2	0.026	0.034	729 / 387	813 / 434	906 / 486	0.00
Baseline Data				448 / 231		35.20	.1		712 / 378	810 / 432	910 / 488	1.75





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
05/31/18	5	0	0	0	0	0	0	1	0	0	7	0	0	0	0	0	0	0	1	0	1	0	84	0
05/17/18	5	0	0	0	0	0	0	6	0	0	7	1	1	0	1	0	0	0	3	0	6	0	292	1
Baseline Data			0	0						0			0	0					0				280	

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



Historical Comments	
05/17/18	Water contamination levels are severely high. Water contamination levels are severely high.. ppm Water contamination levels are severely high.

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