

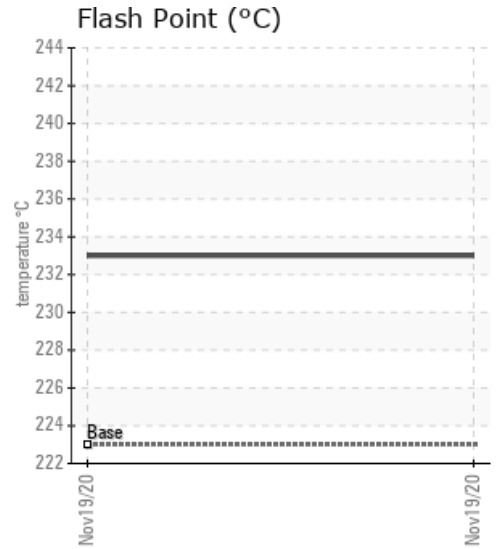
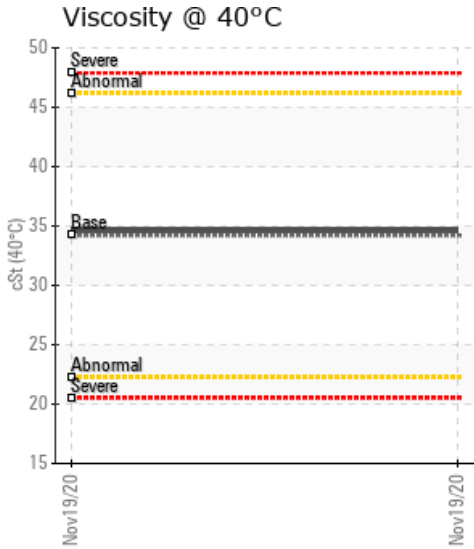
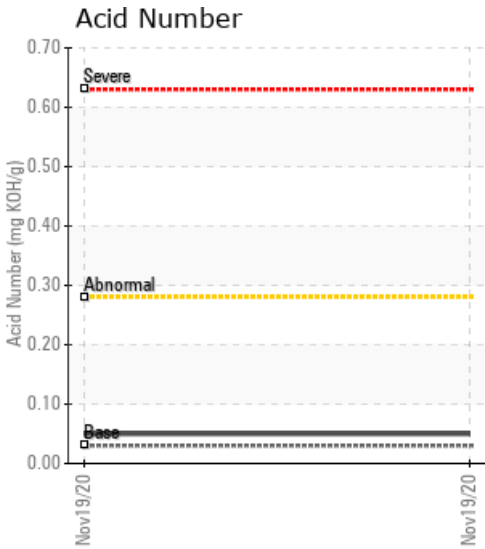
[Storm Resources / B-48-G/94-H-4] H802

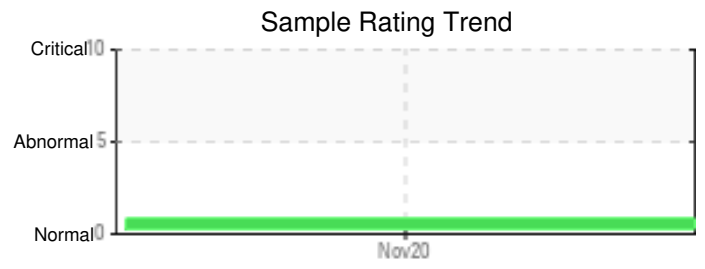
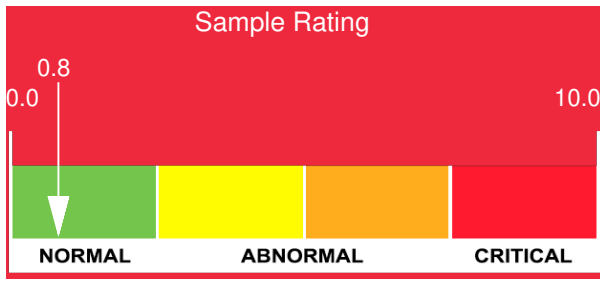
Customer: PTRHTF20174	System Information	Sample Information
Quadra Chemicals 700 4th Ave S.W Suite 470 Calgary, AB T2P 3J4 Canada Attn: Quadra Samples Tel: E-Mail: quadra_samples@quadra.ca	System Volume: 43000 ltr Bulk Operating Temp: 401F / 205C Heating Source: Blanket: Fluid: PETRO CANADA PETRO-THERM Make: HEATECH	Lab No: 02405476 Analyst: Clinton Buhler Sample Date: 11/19/20 Received Date: 02/23/21 Completed: 02/25/21 Clinton Buhler Clinton.Buhler@hollyfrontier.com

Recommendation: Sample results indicate that the fluid is in suitable condition for continued service. Both 10% and 90% distillation temperatures are elevated compared to new fluid, yet all other parameters remain healthy. Please re-sample in 3-6 months to build data trend.

Comments:

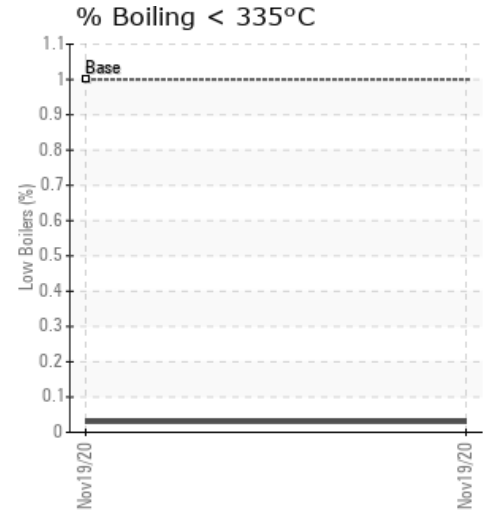
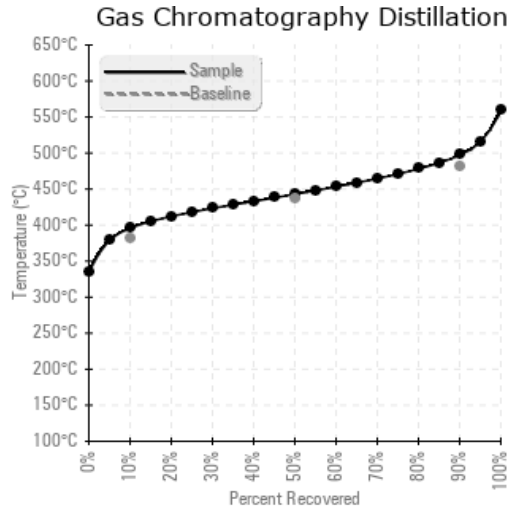
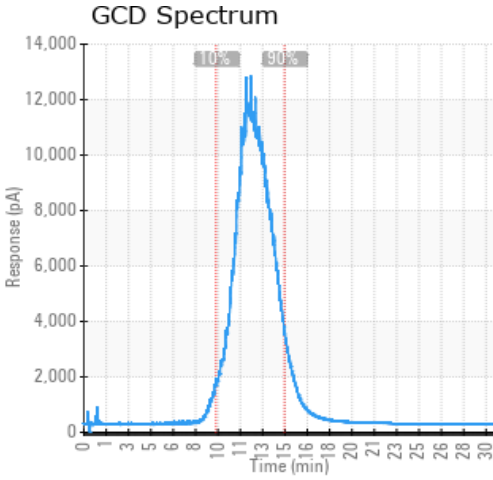
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
11/19/20	02/23/21	9.5m	Inlet to pump	451 / 233	1.7	34.6	0.05	0.126	744 / 396	829 / 443	927 / 497	0.03
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
11/19/20	1	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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