



[01-34-51-18W5] TOURMALINE ANSELL PLANT HM-2

Customer: PTRHTF20046	System Information	Sample Information
QUADRA CHEMICALS 12925 146TH STREET EDMONTON, AB T5L 2H6 CANADA Attn: Quadra Samples Tel: E-Mail: quadra_samples@quadra.ca	System Volume: 15000 ltr Bulk Operating Temp: 401F / 205C Heating Source: Blanket: Fluid: PETRO CANADA PETRO-THERM Make:	Lab No: 02412292 Analyst: Kevin McDermott Sample Date: 03/15/21 Received Date: 03/30/21 Completed: 04/08/21 Kevin McDermott kevin.mcdermott@hollyfrontier.com

Recommendation: Acid number, solids content are both severely high. This combined with viscosity increase indicates fluid degradation due to oxidation. Oxidation happens when hot fluid gets exposed to air. Recommend ensuring there is a functioning blanket gas in place at all times. Filtration can help bring the solids content down but the AN can only be improved by full or partial fluid changeout.

Comments: Pentane Insolubles levels are severely high. Acid Number (AN) is severely high. (GCD) 90% Distillation Point is marginally high.

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	%
03/15/21	03/30/21	10.0y	Pump suction	414 / 212	53.6	37.4	2.59	1.05	712 / 378	814 / 434	923 / 495	2.44
Baseline Data				433 / 223		34.2	0.03		720 / 382	817 / 436	900 / 482	1.00



