



[SUCTION PIPING] NO UNIT

Customer: PTRHTF20033	System Information	Sample Information
Moose Jaw Refinery 641 Manitoba St. E, Box 2000 Moose Jaw, SK S6H 6E3 Canada Attn: GILBERT GRIFFIN Tel: (603)691-7823 E-Mail: ggriffin@mjrefinery.com	System Volume: 1308 gal Bulk Operating Temp: 302F / 150C Heating Source: Blanket: Fluid: PETRO CANADA PETRO-THERM Make: CHILDERS AMERICAN	Lab No: 02220419 Analyst: Yutong Gao Sample Date: 05/30/18 Received Date: 06/05/18 Completed: 06/07/18 To discuss this report contact Yutong Gao at (403)873-1876

Recommendation: The current fluid has 4 years oil life, but not 4 months. The fluid has normal viscosity, flash point, acid number and distillation points. It is suitable for further operation. Please take one sample in one year to monitor the conditions. The elevated solid particle is mainly caused by the long term operation since 2003 without any system cleaning or flushing. The minor oil oxidation is also a contributor considering the open system. Please consider to use a certified kidney loop filtration system to reduce the solid particle content for the longevity of the fluid and system operation. If the kidney loop filtration system is not an option, please conduct the system cleaning/flushing during the major plant turnaround in Fall 2019. Otherwise, there is a higher chance for 1/2 inch coils to be plugged.

Comments: Solid level is abnormally 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	%
05/30/18	06/05/18	4m		432 / 222	18.8	37.2	0.17	0.593	730 / 388	787 / 419	885 / 474	0.00
10/14/14	10/21/14	5m		432 / 222	19.6	36.3	0.06	0.250	713 / 378	811 / 433	914 / 490	0.79
Baseline Data				433 / 223		34.2	0.03		720 / 382	817 / 436	900 / 482	1.00



