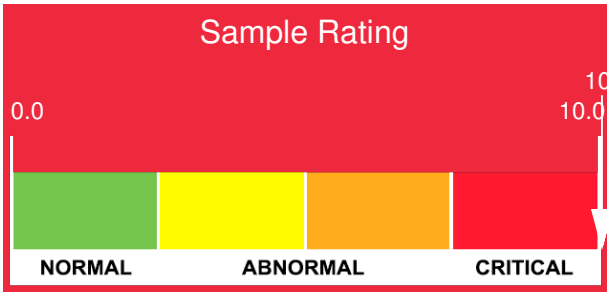
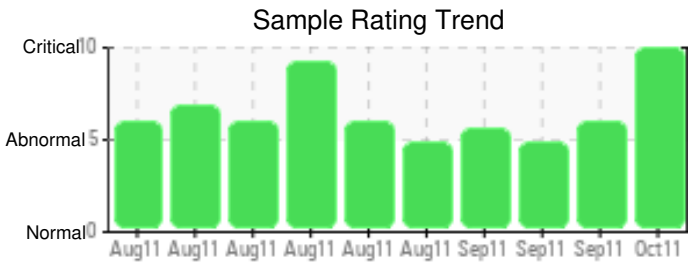




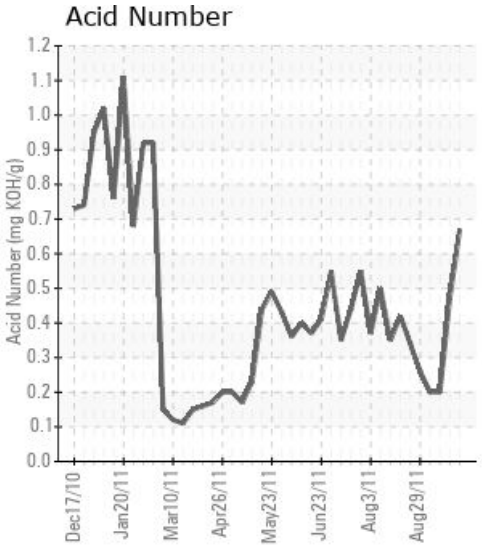
[Disto Oil Loop] SILANE 4.0 DISTILLATION

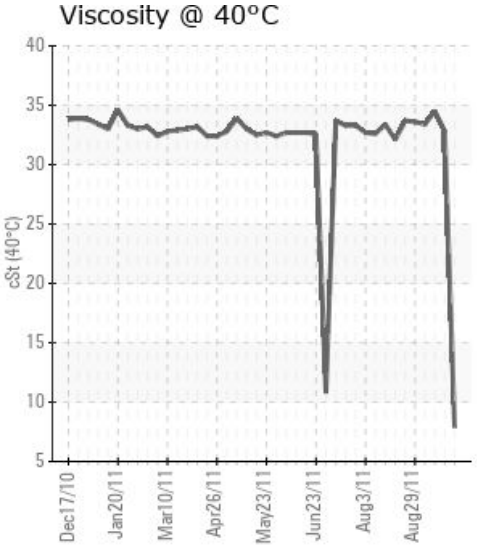
Customer: PTRHTF10093	System Information	Sample Information
REC GROUP 3322 ROAD N N.E. MOSES LAKE, WA 98837 USA Attn: Sam Bright Tel: (509)766-8902 E-Mail: sam.bright@recsilicon.com	System Volume: 50000 gal Bulk Operating Temp: 420F / 216C Heating Source: Blanket: Fluid: Make: COEN	Lab No: I-363832 Analyst: Gaston Arseneault Sample Date: 10/02/11 Received Date: 10/04/11 Completed: 10/13/11 To discuss this report contact Gaston Arseneault at 973-986-6503

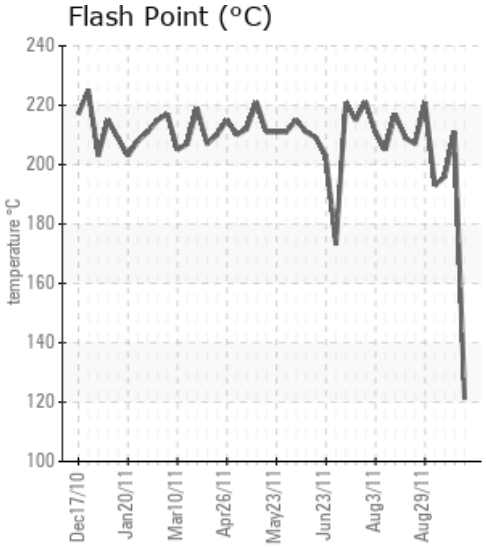
Recommendation:

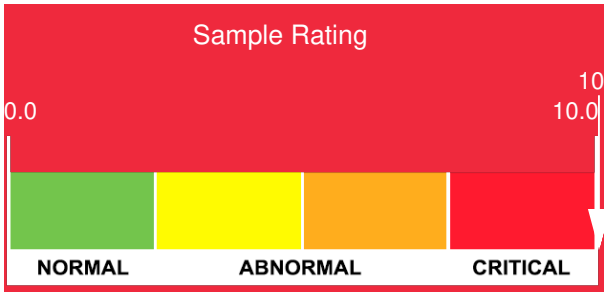
Comments: Silicon is at a SEVERE LEVEL; Viscosity is SEVERELY LOW; Flash point is SEVERELY LOW. Simulated distillation 10% boiling point is severely low. Simulated distillation 90% boiling point is severely low. The amount of low boilers is at a severe level, characterizing the level of thermal degradation or possible dilution with a lighter oil (if applicable). As expected, the material coming out of the expansion tank vent is low in viscosity and has a low flash point because it is comprised mostly of light hydrocarbons formed by thermal cracking of the fluid. As per the conference call with Petro-Canada, thermal stress has increased since heat transfer properties have diminished and heater set temperature was increased as a result in order to maintain production levels. The 0.67 mg KOH/g TAN indicate the presence of an acid, likely hydrochloric acid in the vent gas as monitored continuously by REC.

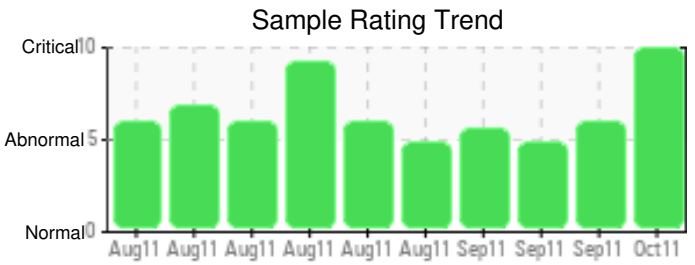
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
10/02/11	10/04/11		VENT	250 / 121	75	7.9	0.67	0.022	453 / 234	670 / 354	771 / 411	36.62
09/26/11	09/27/11		TES REBOILER FLOW ME	412 / 211	4	32.8	0.47	0.157	703 / 373	795 / 424	888 / 476	1.468
09/26/11	09/27/11		EXPANSION TANK	385 / 196	9	34.5	0.2	0.235	696 / 369	793 / 423	887 / 475	2.832
09/25/11	09/28/11		TCS REBOILER	379 / 193	18	33.4	0.2	0.207	695 / 369	793 / 423	887 / 475	2.962
08/29/11	09/07/11		HOT OIL EXPANSION DR	430 / 221	14	33.6	0.26	0.159	700 / 371	796 / 424	889 / 476	2.075
08/23/11	08/24/11		4.0 MCD PUMP #2	405 / 207	167	33.7	0.34	0.304	701 / 372	796 / 424	888 / 476	1.741
Baseline Data												





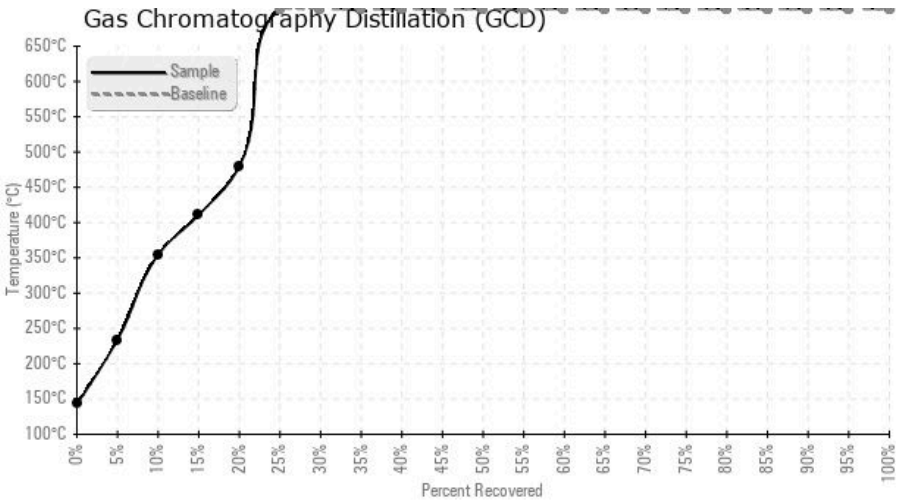


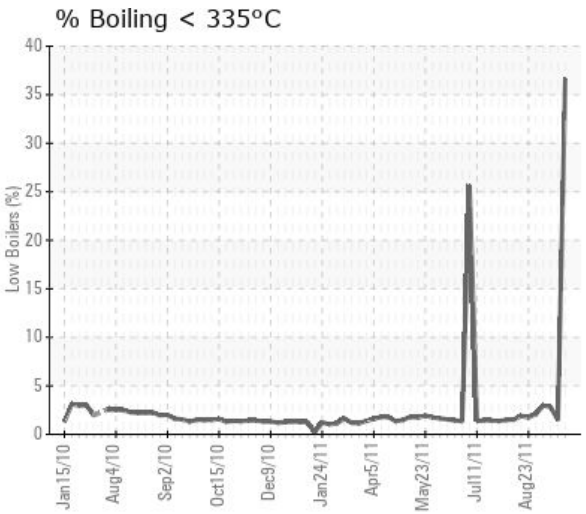




Sample Date	Iron	Chromium	Nickel	Aluminum	Copper	Lead	Tin	Cadmium	Silver	Vanadium	Silicon	Sodium	Potassium	Titanium	Molybdenum	Antimony	Manganese	Lithium	Boron	Magnesium	Calcium	Barium	Phosphorus	Zinc
10/02/11	17	0	0	0	0	0	1	1	0	0	145	0	0	0	0	0	0	0	5	0	1	0	4	5
09/26/11	8	0	0	0	0	0	1	0	0	0	408	0	0	0	0	0	0	0	0	1	0	0	15	0
09/26/11	7	0	0	0	0	0	1	0	0	0	245	0	0	0	0	0	0	0	0	0	0	0	17	0
09/25/11	8	0	0	0	0	0	0	0	0	0	200	2	0	0	0	0	0	0	1	0	0	0	8	0
08/29/11	6	0	0	0	0	0	1	0	0	0	298	0	0	0	0	0	0	0	0	0	0	0	11	2
08/23/11	11	0	0	0	0	0	1	15	0	0	363	0	0	0	0	0	0	0	4	2	15	0	18	8
Baseline Data																								

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





Historical Comments	
09/26/11	
09/26/11	
09/25/11	
08/29/11	
08/23/11	