

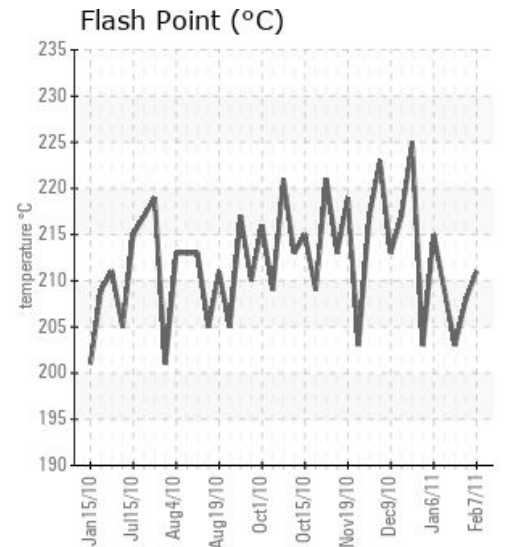
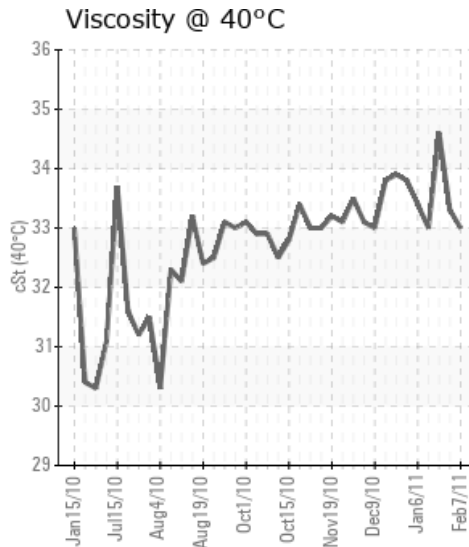
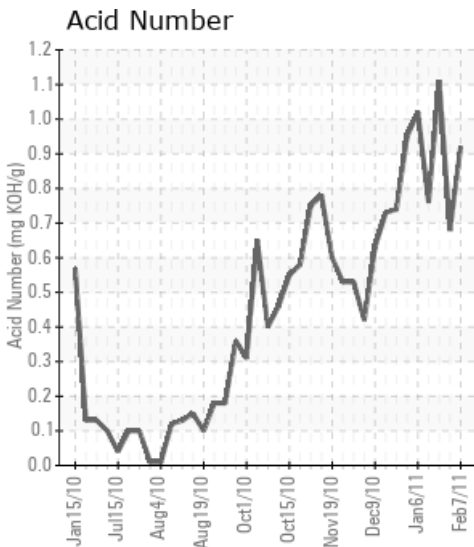
## [Disto Oil Loop] SILANE 4.0 DISTILLATION

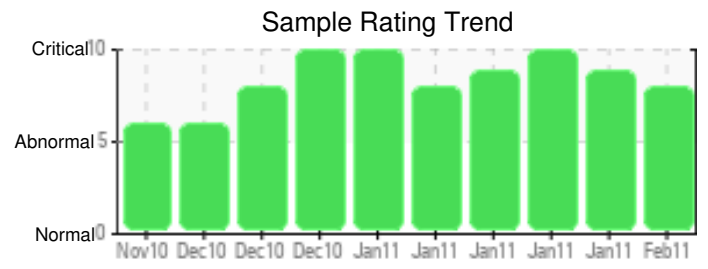
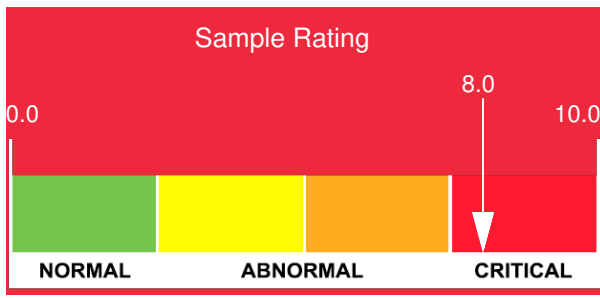
Customer: PTRHTF10093	System Information	Sample Information
<b>REC GROUP</b> 3322 ROAD N N.E. MOSES LAKE, WA 98837 USA Attn: Sam Bright Tel: (509)766-8902 E-Mail: sam.bright@recsilicon.com	System Volume: 50000 gal Bulk Operating Temp: 420F / 216C Heating Source: Blanket: Fluid: Make: COEN	Lab No: I-X96650 Analyst: Gaston Arseneault Sample Date: 02/07/11 Received Date: 02/10/11 Completed: 02/21/11 To discuss this report contact Gaston Arseneault at 973-986-6503

Recommendation: There is a decline in Silicon for the first time, let's see if it's sustainable, after teh reboilers have been cleaned with caustic.

Comments: Acid Number is SEVERELY HIGH. Silicon is at a SEVERE LEVEL;

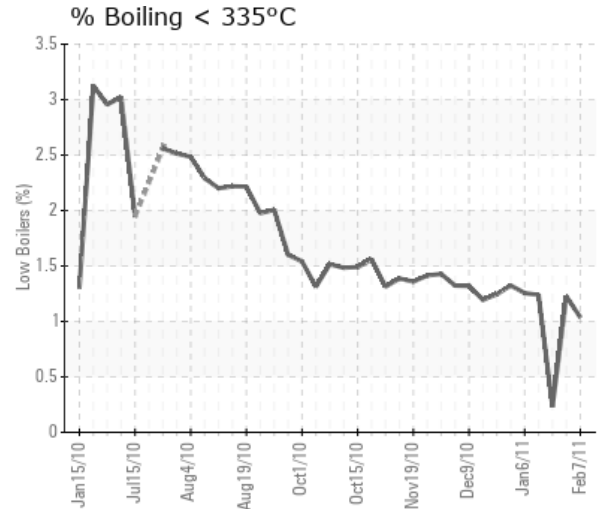
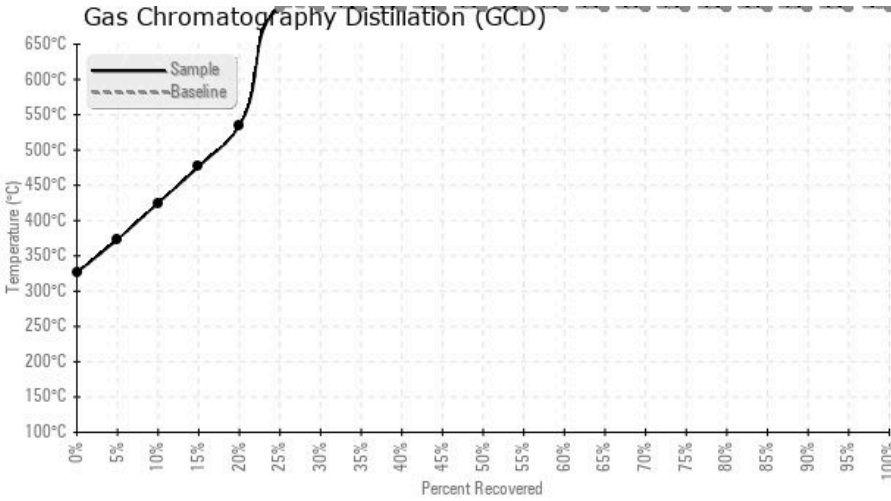
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
02/07/11	02/10/11		EXPANSION TANK	412 / 211	33		0.92	0.019	704 / 373	796 / 425	889 / 476	1.037
01/24/11	01/27/11		CALFLO AF EXPANSION	406 / 208	10	33.3	0.68	0.094	701 / 372	794 / 423	887 / 475	1.226
01/20/11	01/21/11	50000m	HOT OIL EXPANSION TA	397 / 203	6	34.6	1.11	0.122	710 / 377	797 / 425	888 / 476	0.232
01/14/11	01/17/11		HOT EXPANSION TANK	408 / 209	11	33	0.76	0.089	701 / 372	794 / 423	887 / 475	1.238
01/06/11	01/11/11		TANK	419 / 215	121	33.4	1.02	0.043	701 / 372	794 / 424	888 / 476	1.256
01/04/11	01/07/11		HOT OIL EXPANSION TA	397 / 203	17	33.8	0.95	0.218	701 / 372	795 / 424	887 / 475	1.324
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	
02/07/11	5	0	0	0	0	0	0	8	0	0	356	0	1	0	0	0	0	0	0	0	8	0	11	4	
01/24/11	8	0	0	0	0	0	35	7	0	0	398	0	0	0	0	0	0	0	0	0	7	0	17	1	
01/20/11	6	0	0	0	0	0	65	0	0	0	334	0	0	0	0	0	0	0	0	0	0	0	14	0	
01/14/11	6	0	0	0	0	0	24	0	0	0	332	0	0	0	0	0	0	0	0	0	0	0	11	0	
01/06/11	5	0	0	0	0	0	2	5	0	0	352	0	0	0	0	0	0	0	0	0	5	0	12	2	
01/04/11	21	0	0	0	0	0	81	5	0	0	366	0	0	0	0	1	0	0	0	2	5	0	20	5	
Baseline Data																									

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



## Historical Comments

01/24/11	
01/20/11	TAN is now above 1 and silicone at 334 ppm.
01/14/11	
01/06/11	TAN and silicone rising
01/04/11	Monitor Silicon and TAN levels

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