

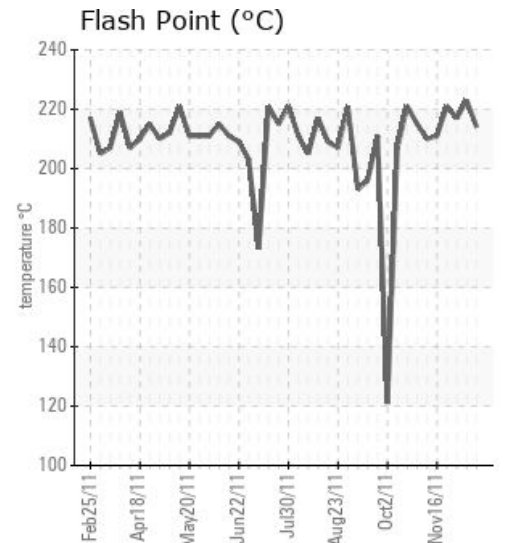
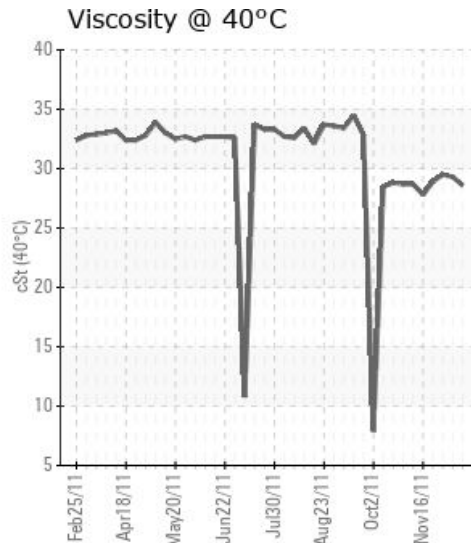
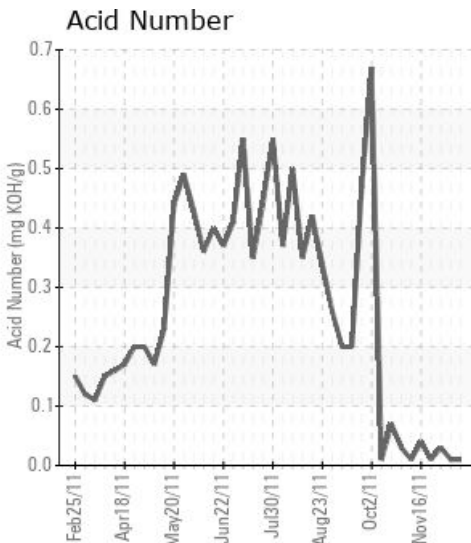
## [Disto Oil Loop] SILANE 4.0 DISTILLATION

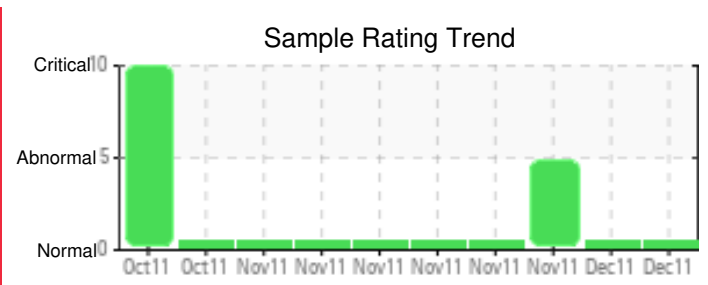
| Customer: PTRHTF10093   | System Information  | Sample Information  |
|---|---|---|
| <b>REC GROUP</b><br>3322 ROAD N N.E.<br>MOSES LAKE, WA 98837 USA<br>Attn: Sam Bright<br>Tel: (509)766-8902<br>E-Mail: sam.bright@recsilicon.com | System Volume: 50000 gal<br>Bulk Operating Temp: 420F / 216C<br>Heating Source:<br>Blanket:<br>Fluid:<br>Make: COEN | Lab No: I-508711<br>Analyst: Gaston Arseneault<br>Sample Date: 12/27/11<br>Received Date: 01/03/12<br>Completed: 01/10/12<br>To discuss this report contact Gaston Arseneault at 973-986-6503 |

Recommendation: This sample show normal results and no sudden change in Silicon, TAN or solids. Let's keep monitoring the oil in this plant.

Comments: Data indicates no abnormal findings. Resample at normal interval.

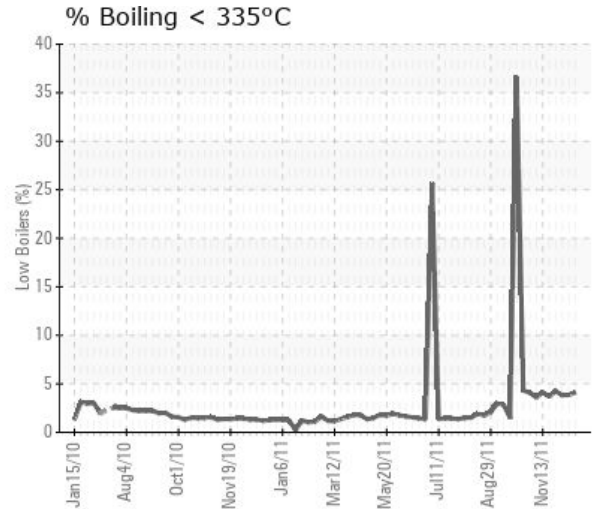
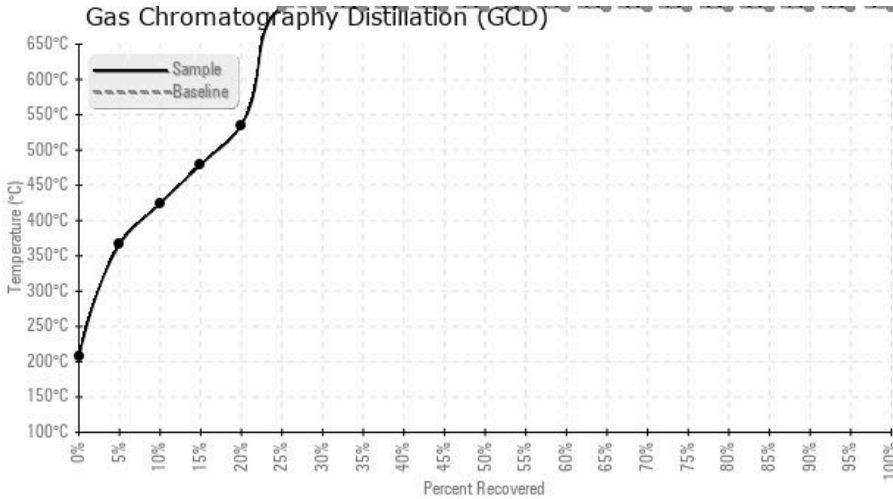
| Sample Date   | Received Date | Fluid Age | Sample Location      | Flash Point (COC) | Water (KF) | Viscosity (40°C) | Acid Number | Solids | GCD 10%   | GCD 50%   | GCD 90%   | GCD % < 335°C |
|---------------|---------------|-----------|----------------------|-------------------|------------|------------------|-------------|--------|-----------|-----------|-----------|---------------|
|               | mm/dd/yy      |           |                      | °F/°C             | ppm        | cSt              | mg/KOH/g    | %wt    | °F/°C     | °F/°C     | °F/°C     | %             |
| 12/27/11      | 01/03/12      |           | 4.0 TCS VAPORIZEN    | 417 / 214         | 10         | 28.6             | 0.01        | 0.015  | 691 / 366 | 795 / 424 | 894 / 479 | 4.113         |
| 12/13/11      | 12/15/11      |           | TCS COLUMBIA REBOILE | 433 / 223         | 15         | 29.3             | 0.01        | 0.032  | 691 / 366 | 793 / 423 | 893 / 478 | 3.857         |
| 11/29/11      | 12/01/11      |           | REBOILER             | 423 / 217         | 6          | 29.5             | 0.03        | 0.063  | 693 / 367 | 795 / 424 | 894 / 479 | 3.828         |
| 11/22/11      | 12/01/11      |           | REBOILER NORTH       | 430 / 221         | 9          | 28.9             | 0.01        | 0.019  | 690 / 366 | 796 / 424 | 895 / 479 | 4.233         |
| 11/16/11      | 11/17/11      |           | 4.0 EXPANSION TANK   | 412 / 211         | 10         | 27.8             | 0.04        | 0.018  | 693 / 367 | 794 / 424 | 894 / 479 | 3.678         |
| 11/13/11      | 01/03/12      |           | 4.0 TCS VAPORIZEN    | 410 / 210         | 11         | 28.7             | 0.01        | 0.010  | 690 / 366 | 795 / 424 | 894 / 479 | 4.101         |
| 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 |
|----------------------|------|----------|--------|----------|--------|------|-----|---------|--------|----------|---------|--------|-----------|----------|------------|----------|-----------|---------|-------|-----------|---------|--------|------------|------|
| 12/27/11             | 7    | 0        | 0      | 0        | 0      | 0    | 0   | 0       | 0      | 0        | 5       | 0      | 0         | 0        | 0          | 0        | 0         | 0       | 0     | 0         | 0       | 1      | 169        | 0    |
| 12/13/11             | 7    | 0        | 0      | 0        | 0      | 0    | 0   | 0       | 0      | 0        | 6       | 0      | 0         | 0        | 0          | 0        | 0         | 0       | 2     | 0         | 0       | 0      | 169        | 0    |
| 11/29/11             | 9    | 0        | 0      | 0        | 0      | 0    | 1   | 0       | 0      | 0        | 42      | 0      | 1         | 0        | 0          | 0        | 0         | 0       | 0     | 0         | 0       | 0      | 170        | 0    |
| 11/22/11             | 7    | 0        | 0      | 0        | 0      | 0    | 1   | 6       | 0      | 0        | 6       | 0      | 0         | 0        | 0          | 1        | 0         | 0       | 0     | 0         | 6       | 0      | 204        | 1    |
| 11/16/11             | 7    | 0        | 0      | 0        | 0      | 0    | 1   | 0       | 0      | 0        | 6       | 0      | 0         | 0        | 0          | 0        | 0         | 0       | 0     | 0         | 0       | 1      | 189        | 1    |
| 11/13/11             | 7    | 0        | 0      | 0        | 0      | 0    | 0   | 0       | 0      | 0        | 5       | 0      | 0         | 0        | 0          | 0        | 0         | 0       | 0     | 0         | 0       | 2      | 172        | 0    |
| <b>Baseline Data</b> |      |          |        |          |        |      |     |         |        |          |         |        |           |          |            |          |           |         |       |           |         |        |            |      |

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



**Historical Comments**

|          |   |
|----------|---|
| 12/13/11 | The previous sample had Silicon jump from 6 ppm to 42 ppm, taken from a location described as "Reboiler". This sample was taken from "TCH Columbia Reboiler RRV" is now back down to 6 ppm Silicon. Please verify with operating parameters to see if indeed a leak occurred or not.          |
| 11/29/11 | It's unclear if this sample was taken from the same reboiler as the last sample but the Silicon jumped from 6 to 42 ppm, which is very significant in just 1 week. Please analyze the data gathered from your process and vent detection to assist in the diagnosis of a possible major leak. |
| 11/22/11 | Results look slightly different (better) in this Reboiler North vs the traditional expansion tank or vaporizer samples. Silicon remains at 6 ppm and consistent with recent samples.  |
| 11/16/11 | Silicon remains very low (~6ppm) which is a good thing. All other properties remain constant from the last samples after the cleaning and flushing.   |
| 11/13/11 | This sample show normal results and no sudden change in Silicon, TAN or solids. Let's keep monitoring the oil in this plant.  |

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