

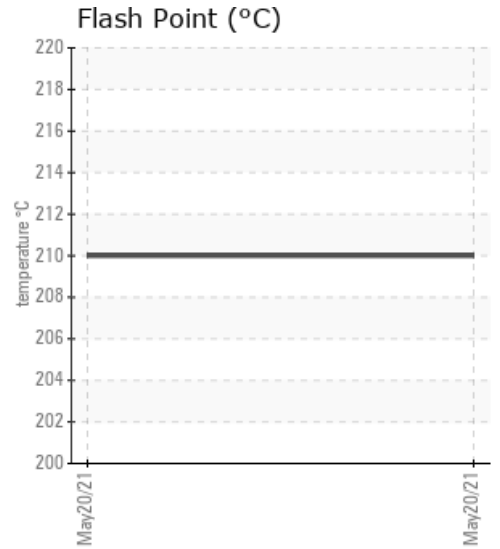
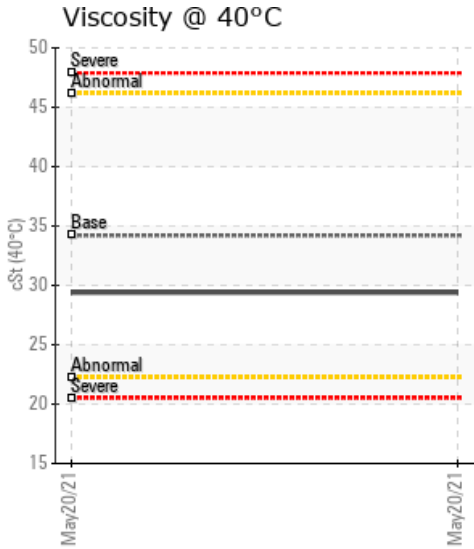
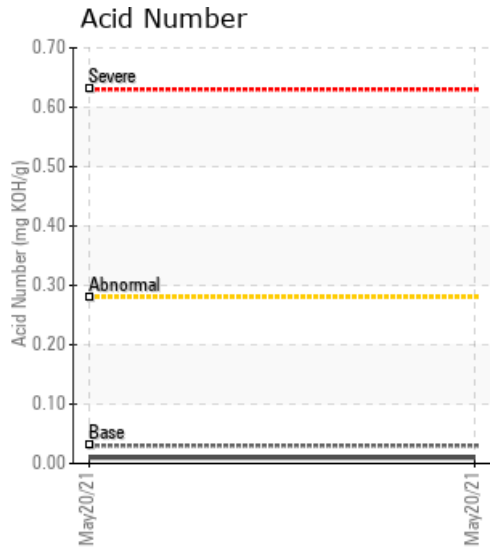
## [BRAZEAU LOAD 3 / LSD: 9-6-63-25-W5] TANK TRUCK 3 - OFFLOAD INTO RE3 TANK

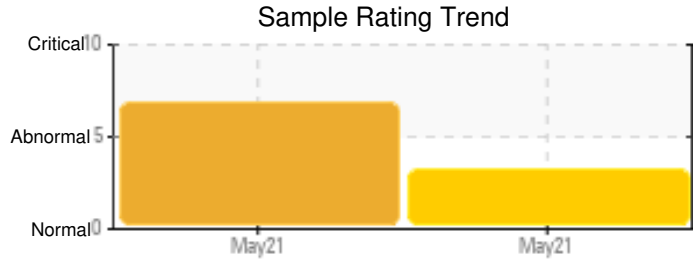
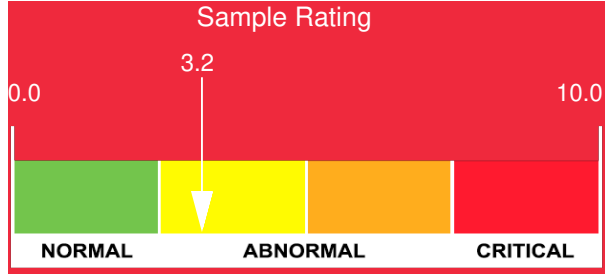
| Customer: PTRHTF20187   | System Information  | Sample Information   |
|---|---|--|
| KEYERA ENERGY- SIMONETTE GAS PLANT<br>PO BOX 58<br>VALLEYVIEW, AB T0H 3N0 Canada<br>Attn: Iain Hamilton<br>Tel: (403)651-2408<br>E-Mail: Iain_Hamilton@keyera.com | System Volume: 23000 ltr<br>Bulk Operating Temp: Not Specified<br>Heating Source:<br>Blanket:<br>Fluid: PETRO CANADA PETRO-THERM<br>Make: | Lab No: 02425929<br>Analyst: Clinton Buhler<br>Sample Date: 05/20/21<br>Received Date: 06/08/21<br>Completed: 06/14/21<br>Clinton Buhler<br>Clinton.Buhler@hollyfrontier.com |

Recommendation: The fluid is contaminated with excess water (3917 ppm and 1% emulsified water). If this sample is representative, there is risk of boil-over once put into service. High water content also is a catalyst for fluid oxidation and additive hydrolysis. It is advised to remove water from the fluid before use and before long-term storage. 5.15% low boiling vapor content, reduce flashpoint and fluid viscosity likely indicate mixing with process hydrocarbon if not from thermal degradation. This fluid would need to be vented once in service to remove low boiling vapors.

Comments: Water contamination levels are severely high. Water contamination levels are severely high.. ppm Water contamination levels are severely high.

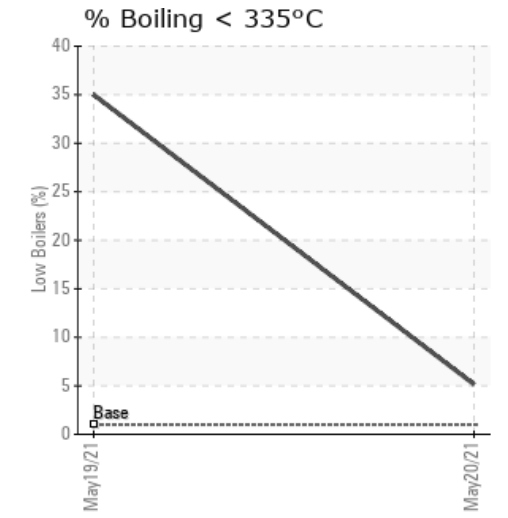
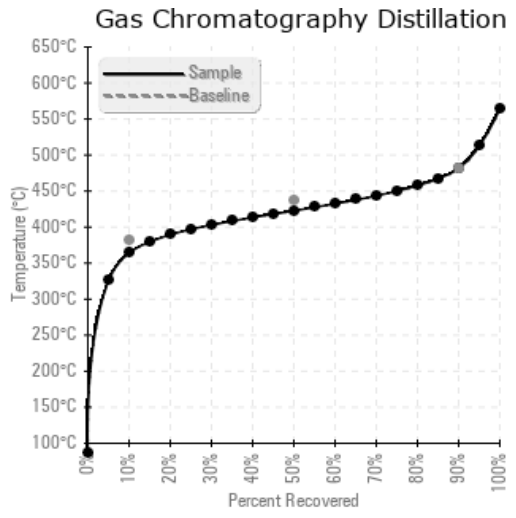
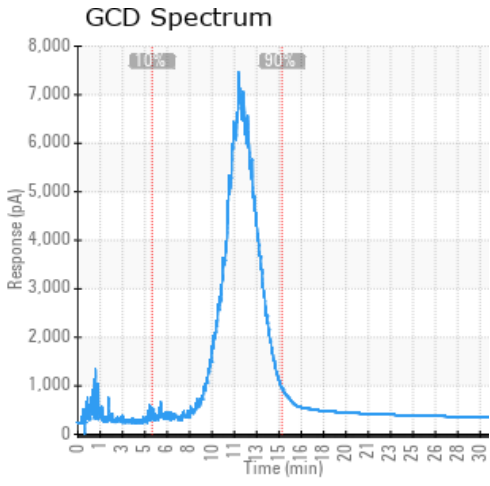
| Sample Date   | Received Date | Fluid Age | Sample Location      | Flash Point (COC) | Water (KF) | Viscosity (40°C) | Acid Number | Solids | GCD 10%   | GCD 50%   | GCD 90%    | GCD % < 335°C |
|---------------|---------------|-----------|----------------------|-------------------|------------|------------------|-------------|--------|-----------|-----------|------------|---------------|
|               | mm/dd/yy      |           |                      | °F/°C             | ppm        | cSt              | mg/KOH/g    | %wt    | °F/°C     | °F/°C     | °F/°C      | %             |
| 05/20/21      | 06/08/21      | 0.0h      | Load 3               | 410 / 210         | 3917.9     | 29.4             | 0.01        | 0.031  | 688 / 364 | 793 / 423 | 899 / 481  | 5.15          |
| 05/19/21      | 06/08/21      | 0.0h      | Tank truck 2 - deliv |                   | 8144.5     |                  |             |        | 78 / 25   | 991 / 533 | 1033 / 556 | 35.00         |
| Baseline Data |               |           |                      | 433 / 223         |            | 34.2             | 0.03        |        | 720 / 382 | 817 / 436 | 900 / 482  | 1.00          |





| 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 |
|---------------|------|----------|--------|----------|--------|------|-----|---------|--------|----------|---------|--------|-----------|----------|------------|----------|-----------|---------|-------|-----------|---------|--------|------------|------|
| 05/20/21      | 0    | 0        | 0      | 0        | 0      | 0    | 0   | 0       | 0      | 0        | 0       | 0      | 5         | 0        | 0          | 0        | 0         | 0       | 4     | 0         | 0       | 0      | 1          | 0    |
| 05/19/21      | 1    | 0        | 0      | 0        | 0      | 0    | 0   | 0       | 0      | 0        | 1       | 1      | 37        | 0        | 0          | 0        | 0         | 0       | 10    | 0         | 0       | 0      | 10         | 0    |
| Baseline Data |      |          | 0      | 0        |        |      |     |         |        | 0        |         |        | 0         | 0        |            |          |           |         | 0     |           |         |        | 0          |      |

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



| Historical Comments |   |
|---------------------|---|
| 05/19/21            | *** NOTE: This sample was 90% free water...not enough oil for complete testing ***If this sample is representative of the fluid in the tank, it is not suitable for service. Remove all water from tank and thermal fluid and re-sample. Water contamination levels are severely high. Water contamination levels are severely high.. ppm Water contamination levels are severely high. Potassium ppm levels are abnormally high. (GCD) % < 335°C is severely high. (GCD) 50% Distillation Point is severely high. (GCD) 90% Distillation Point is severely high. (GCD) 10% Distillation Point is severely low. |

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