

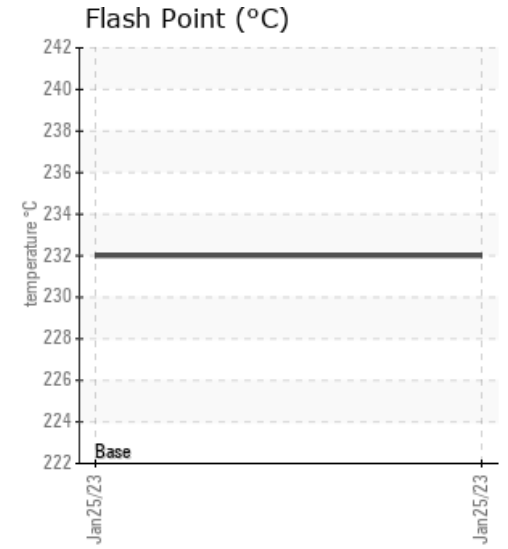
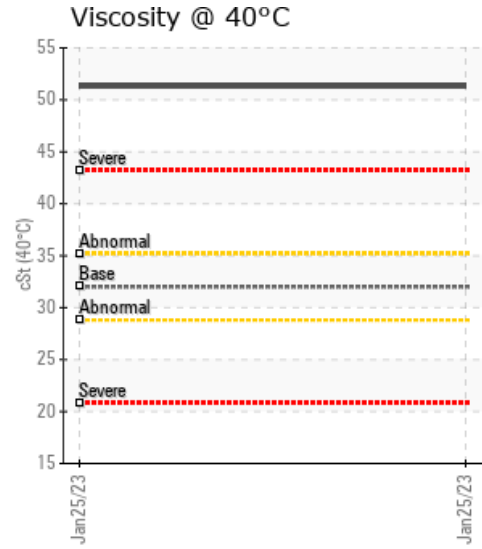
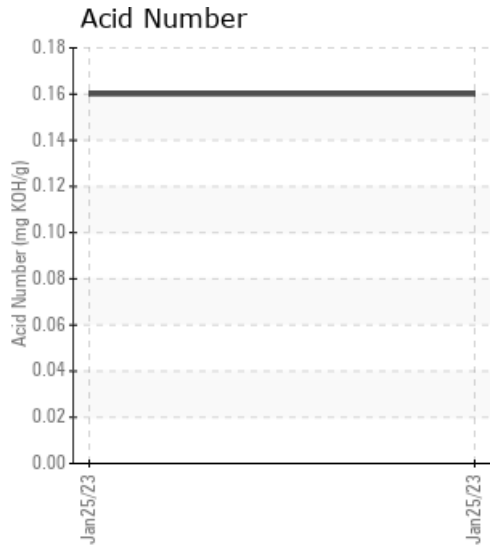
ASLPHALT PLANT 3

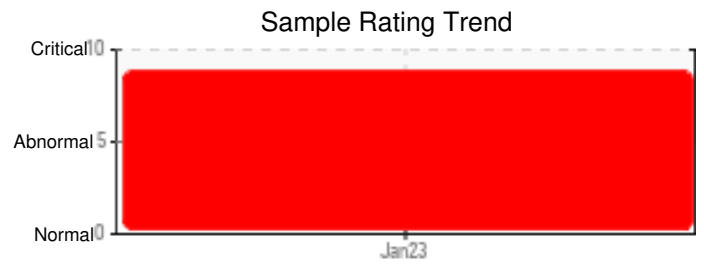
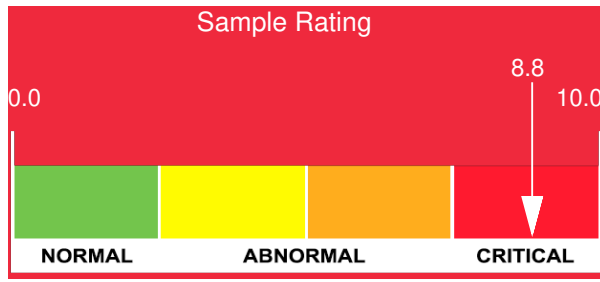
Customer: PTRHTF10265	System Information	Sample Information
PEARSON MATERIALS 3400 N WEST ST WICHITA, KS 67205 USA Attn: Josh Landers Tel: (316)300-4366 E-Mail: jlanders@pearsonconstructionllc.com	System Volume: 1200 gal Bulk Operating Temp: Not Specified Heating Source: Blanket: Fluid: DYNA-PLEX 21C ALCOR 628 ISO 32 Make: GENCOR	Lab No: 02544414 Analyst: Garrett Bapp Sample Date: 01/25/23 Received Date: 03/10/23 Completed: 04/04/23 Garrett Bapp Garrett.Bapp@HFSinclair.com

Recommendation: Viscosity is severely elevated that effects the fluids ability to transfer heat efficiently and indicates the fluid is thermally cracked. GCD 10, 50 and 90% are severely elevated indicating that the fluid thermally cracked and has the possibility of leaving carbonaceous deposits or fouling of the piping and system. Insolubles are still below the our 0.5% threshold, indicating that that fluid degradation hasn't started fouling the system yet. Contamination is moderate and doesn't indicated that a outside source has ingressed. No signs of Vandium that would indicate asphalt contamination. Based on the used oil sample, I am recommending to flush the system to remove as much of the old fluid as possible before refilling with a Petro Canada product to ensure that have a solid ground to start from. With current fluid conditions, I cannot recommend topping up or mixing of our Petro-Therm or Calflo products due to the condition of the current fluid. During the transition period, our technical staff is here to assist in making sure the proper flush occurs and help with fluid selection along with continued monitoring of the system to ensure we maximize the value of our fluids. My proposed fluids of choice would be Petro-Therm which is a economical solution and Calflo HTF that provides longer life that that of Petro-Therm. Most asphalt plants are on our Petro-Therm product due to cost and due to outside contamination sources.

Comments: Iron ppm levels are abnormal. (GCD) 50% Distillation Point is severely high. (GCD) 90% Distillation Point is severely high. Calcium ppm levels are severely high. Zinc ppm levels are severely high. Visc @ 40°C is severely high. (GCD) 10% Distillation Point is abnormally high.

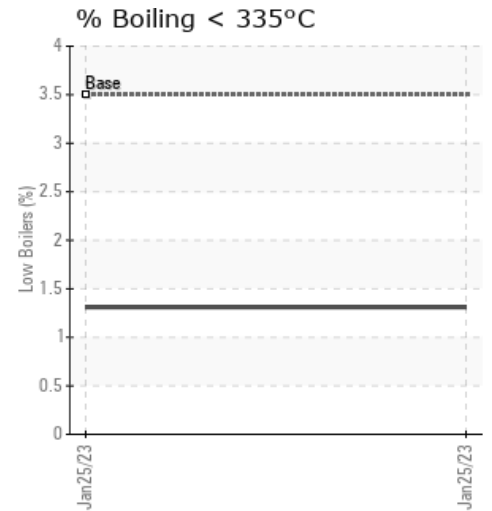
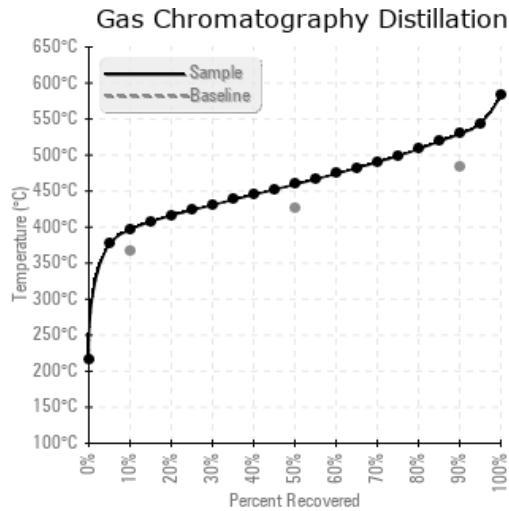
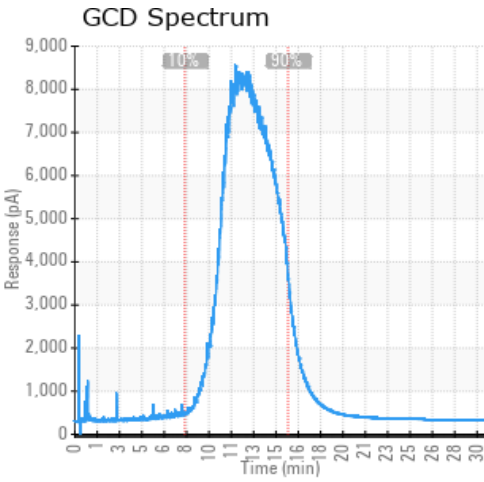
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
01/25/23	03/10/23	0.0m		450 / 232	49.1	51.3	0.16	0.083	746 / 397	858 / 459	985 / 529	1.31
Baseline Data				415 / 213		32			693 / 367	799 / 426	903 / 484	3.5





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
01/25/23	210	0	0	0	4	0	0	0	0	0	4	2	0	0	0	0	3	0	1	0	44	0	175	105
Baseline Data			0	0						0			0	0				0	0				0	

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



Historical Comments

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