



## NORTH HOT OIL HEATER

Customer: PTRHTF10190	System Information	Sample Information
HOLLY FRONTIER ASPHALT 7110 W. NORTHERN AVENUE GLENDALE, AZ 85303 USA Attn: MARK NIELSON Tel: (602)617-7010 E-Mail: mark.nielson@hollyfrontier.com	System Volume: 10000 gal Bulk Operating Temp: 460F / 238C Heating Source: Blanket: Fluid: N/A Make: NAVAJO REFINING CO.	Lab No: 02155456 Analyst: Steven Slanker Sample Date: 06/08/17 Received Date: 07/04/17 Completed: 07/06/17 To discuss this report contact Steven Slanker at (951)225-2115

Recommendation: Pentane insoluble are severely high as is the viscosity. Water content is also high. Recommend filtration, water removal and partial fluid replacement.

Comments: Pentane Insolubles levels are severely high. Water contamination levels are marginally high. Water contamination levels are marginally high.. ppm Water contamination levels are marginally high. Visc @ 40°C 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	%
06/08/17	07/04/17	22y	AT MAIN CIRC. PUMP	421 / 216	518.0	46.2	0.02	2.19	711 / 377	817 / 436	955 / 513	1.13
Baseline Data				32 / 0								



