



K. C. H.

Tech. Ser. Lab.

JUL 28 1982

Interoffice Communication

To P. W. Lashbrooke, Lake Charles, Louisiana

From S. D. Grimes, Ponca City, Oklahoma

Date July 19, 1982

Subject PROPOSED TEST RUN - FALL 1982 - NO. 3 CTU, NO. 3 VACUUM UNIT, NO. 4 HDS (DHDS) UNIT, AND NO. 5 HDS (GOHDS) UNIT

OFF _____
JHR _____
PJR _____
TEC _____
DDO _____
NSJ _____
FILE 17.0.1.1

The attached outlines plans for a proposed test run in the fall on the No. 3 CTU, No. 3 vacuum unit, No. 4 HDS unit (DHDS), and No. 5 HDS unit (GOHDS). The purpose of this test run is to verify equipment performance near the units' design capacities and to obtain accurate yield data. The test run will serve as a basis for future modifications and may lead to recommendations for improving unit operations and efficiency. Comments from the refinery on these plans are hereby solicited.

The actual dates of the test would coincide with dates the No. 3 CTU can be scheduled for 105,000 BPSD throughput. Following 4 days of operations at this throughput for unit stabilization and preliminary material balances, three sets of operating data will be taken in 24 hours.

The refinery will be asked to provide some personnel and equipment for data collection. Three refinery engineers will be requested to assist in data collection. An extra operator is required for three shifts to collect samples shown in Table 1-A and 1-B. Also, faster gas analyses requires sending Ponca City TSL's "loaner" GLC to Lake Charles. Table 2 is a list of 75 flowmeters which should be zero checked. Pressure Instruments for the test run are included in Table 3. We propose zero checks for the 12 electronic pressure instruments and replacement of 130 pressure gauges. An instrument technician is required for one shift for "single-gauge" pressure surveys. Table 4 is a list of 60 electric motors scheduled for amperage checks during the test run. Two shifts of an electrician and helper are required. Table 5 is a list of 30 air cooler fans to be speed checked. An outside mechanic should require one shift to measure fan speeds. Table 6 lists miscellaneous mechanical assistance requested of the refinery.

Additionally, the refinery should provide approximately 140 temporary thermocouples (J-type). Feed and product tankage should be arranged to provide dead tanks during the 24 hours of the test.

Timing and other details of the test run will be coordinated in a meeting at the refinery about a month before the test date.

Steve D. Grimes

S. D. Grimes
Process Engineer
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Process Engineering Department

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CC: ON:JTZ:DFC:IFW:DFM:RH:JWL:
TCB:PLN:RBW:RHC:WJW:SGC:
ARM:PAM:JDC:MEO:JJM:RGG:LES:
HRJ:SHDP:DRK:LWK:TLH:WDH:KCH

sk
Enc.

File No. LC-20.03, 31.10, 31.20

Approved

SADP



TABLE I-A (1)
LIQUID SAMPLES

No. of Samples	Sample Container	Gravity, API	ASTM Distillation	Light Gases by GLC	Viscosity @ 100, 122°F	Viscosity @ 122, 210°F	Flash Point, °F	Color	Aniline Point, °F	Pour Point, °F	Cloud Point, °F	Salt Content, Wt%	Asphaltenes, Wt%	Conrad., Rams., Wt%	Metals, (V, Ni, Fe), ppm	Bromine No.	Total Nitrogen, Wt%	Refractive Index	Freeze Point, °F	Soluble Oil	Undissolved Oil	RVP
1/2 B/E	Raw Crude	X	TBP	X	X	X	X	-	-	X	X	-	-	-	-	-	-	-	-	-	-	X
2 B	Desalted Crude	-	D-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2 B	Preflashed Crude	X	D-1160	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
2 B	Topped Crude	X	D-1160	-	X	X	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-
2 B	Atmos. Gas Oil	X	D-1160	-	X	X	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-
1 B	Diesel	X	D-86	-	X	X	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-
2 B	Kerosene	X	D-86	-	X	X	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-
2 B	Naphtha	X	D-86	-	X	X	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-
2 B	Unstable LSR Gaso.	X	D-86	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 C	Desalter Water Make-up	X	D-86	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 C	Desalter Water Out	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	X	-	-
1 C	Sour Water (D-1101)	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-
1 C	Sour Water (D-1150)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 C	Sour Water (D-1104)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 C	Top Pumparound (W-1102)	-	D-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 B	Bottom PA (W-1102)	X	D-86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 B	Vacuum Resid (cut)	X	D-1160	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2 B	Cutter Stock	X	D-1160	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2 B		X	D-86	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

1. Sample frequency is once per shift during test run.

2. Container types A, Cold Bomb B, 1 Qt. Metal Can C, Glass Bottle D, Hot Bomb E, Gal. Metal Can

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TABLE 1-A - CONTINUED
LIQUID SAMPLES

No. 3 CTU and Vacuum Units, Cont	No. of Samples	Gravity, API	ASTM Distillation	Light Gases by GLC	Viscosity @ 100, 122°F	Viscosity @ 122, 210°F	Hydrogen Sulfide, Wt%	Flash Point, °F	Color	Aniline Point, °F	Pour Point, °F	Cloud Point, °F	Salt Content, %	Asphaltenes, Wt%	Metals, Rams. Carbon, Wt%	Bromine No.	Total Nitrogen, Wt%	Refractive Index	Freeze Point, °F	Soluble Oil	Undissolved Oil	RVP
HVCC	2	B	X	D-160	-	X	-	-	-	X	-	-	-	X	X	X	-	-	-	-	-	X
LVCC	2	B	X	D-160	-	X	-	-	-	X	-	-	-	X	X	X	-	-	-	-	-	X
Vacuum Slop Oil	1	B	X	D-86	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LCG to Cutter	2	B	X	D-160	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Molox Raff to Cutter	2	B	X	D-160	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stabilized LSR	1	C	X	D-86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P-B Product	1	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
3. Octanes: RONC, RON + 3CC, MONC, MON + 3CC

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TABLE 1-A - CONTINUED
LIQUID SAMPLES

No. of Samples	Sample Container	ASTM Distillation, °F	Light Gases by GLC	Elemental Sulfur	Hydrogen Sulfide	Mercaptans Sulfide	Disulfides Sulfur (4)	Thiophene Sulfur (4)	Total Nitrogen, Wt%	Basic Nitrogen, Wt%	Bromine Number	Conradson Carbon Res., Wt%	Metals (V, Ni, Fe, As) ppm	Refractive Index @ 100, 122°F	Carbon, Wt%	Hydrogen, Wt%	Cetane	Cloud Point, °F	Pour Point, °F	Olefins	Aromatics	Saturates
1/1	B/E	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
1/1	B/E	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2	A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2	A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2	A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2	A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2	A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
1	C	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
1	C	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
1/5	B/E	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
1/5	B/E	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2	A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
1	C	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Notes:
(4) To be done by Ponca City TSL. (5) All Tests except GLC to be done after deparanizing samples.

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