

# OPIS International Feedstocks Intelligence Report

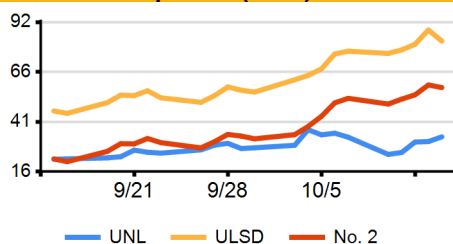
OPIS A DOW JONES COMPANY

A Daily Report on U.S. Refinery Feedstocks Prices plus News and Commentary

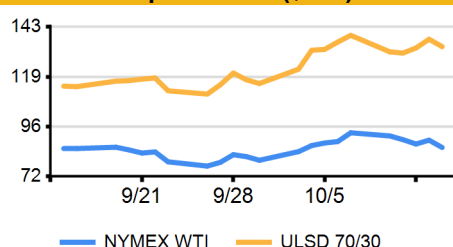
October 14, 2022

## 30-Day Snapshot

### USGC Crack Spreads (\$/bbl)



### USGC 70/30 Split vs. WTI (\$/bbl)



## MARKET OVERVIEW:

10/14/2022 - NYMEX petroleum futures came under strong selling pressure Friday in lockstep with U.S. equity markets that backed off gains seen Thursday.

Friday's NYMEX decline left both West Texas Intermediate and Brent futures down about 7% week to week, with refined product contracts seeing less severe weekly percentage declines.

The diesel market, which appears to be on edge as stocks remain low with winter drawing closer, saw the front-month ULSD contract give back a large chunk of Thursday's gains.

The November ULSD contract, which added more than 16cts on Thursday, fell by 11.46cts Friday to settle at \$3.9802/gal, leaving it down less than 1% week to week.

But what arguably is a bigger issue for the ULSD market and the downstream supply chain is yawning backwardation of about 40cts/gal.

While most cash markets were seeing stronger diesel markets, prices in California are in something of a free fall. After a sharp drop on Thursday, Los Angeles CARB diesel fell by 26.5cts on Friday, while San Francisco values were down nearly 60cts.

The RBOB contract also gave back most of Thursday's gains. November RBOB fell 7.25cts to settle at \$2.6309/gal. While the contract slipped below \$2.60/gal in intraday trading, it managed to stay a few cents above Thursday's \$2.57/gal low.

RBOB is starting to contend with some fairly steep backwardation of its own with nearly 18cts separating the November and December contracts.

November WTI futures fell by \$3.50 to settle at \$85.61/bbl, the lowest NYMEX close since Oct. 3.

Dollar strength continues to make it difficult for the oil market to maintain upward momentum and a weaker equities also serve as a headwind as recession fears

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### USGC Prompt Crack Spreads to WTI Crude

Crack Spread	Cash (cts/gal)	Crack (\$/bbl)
70/30 UNL/ULSD	318.7440	48.26
UNL	284.340	33.81
ULSD	399.020	81.98

## CME Globex and ICE Settlements

WTI Crude Oil (\$/bbl)		
Month	Price	Change
NOV '22	85.61	-3.50
DEC '22	84.65	-3.30

RBOB Unleaded (cts/gal)		
Month	Price	Change
NOV '22	263.09	-7.25
DEC '22	245.40	-7.81

ULSD (cts/gal)		
Month	Price	Change
NOV '22	398.02	-11.46
DEC '22	360.26	-10.50

ICE Brent (\$/bbl)		
Month	Price	Change
DEC '22	91.63	-2.94
JAN '23	90.15	-2.77

## OPIS U.S. Gulf Coast VGO Values (cts/gal)\*

Product	Cargo Prompt			Cargo Forward			Barge Prompt			Barge Forward		
	Low	High	Avg	Low	High	Avg	Low	High	Avg	Low	High	Avg
VGO (Low Sulfur)	243.10	245.50	244.300	239.65	242.00	240.825	243.10	245.50	244.300	239.65	242.00	240.825
Low Sulfur Diff to Split (ULSD)	-75.65	-73.25	-74.450	-70.50	-68.15	-69.325	-75.65	-73.25	-74.450	-70.50	-68.15	-69.325
Low Sulfur Diff to Split (HS)	-58.95	-56.55	-57.750	-56.80	-54.45	-55.625	-58.95	-56.55	-57.750	-56.80	-54.45	-55.625
Low Sulfur Diff to WTI	16.50	17.50	17.000	16.00	17.00	16.500	16.50	17.50	17.000	16.00	17.00	16.500
Low Sulfur Diff to Brent	10.50	11.50	11.000	10.50	11.50	11.000	10.50	11.50	11.000	10.50	11.50	11.000
VGO (Med Sulfur)	243.10	245.50	244.300	239.65	242.00	240.825	243.10	245.50	244.300	239.65	242.00	240.825
Med Sulfur Diff to Split (ULSD)	-75.65	-73.25	-74.450	-70.50	-68.15	-69.325	-75.65	-73.25	-74.450	-70.50	-68.15	-69.325
Med Sulfur Diff to Split (HS)	-58.95	-56.55	-57.750	-56.80	-54.45	-55.625	-58.95	-56.55	-57.750	-56.80	-54.45	-55.625
Med Sulfur Diff to WTI	16.50	17.50	17.000	16.00	17.00	16.500	16.50	17.50	17.000	16.00	17.00	16.500
Med Sulfur Diff to Brent	10.50	11.50	11.000	10.50	11.50	11.000	10.50	11.50	11.000	10.50	11.50	11.000
VGO (High Sulfur)	243.10	245.50	244.300	239.65	242.00	240.825	243.10	245.50	244.300	239.65	242.00	240.825
High Sulfur Diff to Split (ULSD)	-75.65	-73.25	-74.450	-70.50	-68.15	-69.325	-75.65	-73.25	-74.450	-70.50	-68.15	-69.325
High Sulfur Diff to Split (HS)	-58.95	-56.55	-57.750	-56.80	-54.45	-55.625	-58.95	-56.55	-57.750	-56.80	-54.45	-55.625
High Sulfur Diff to WTI	16.50	17.50	17.000	16.00	17.00	16.500	16.50	17.50	17.000	16.00	17.00	16.500
High Sulfur Diff to Brent	10.50	11.50	11.000	10.50	11.50	11.000	10.50	11.50	11.000	10.50	11.50	11.000

\* Differentials to WTI and Brent are in \$/bbl

## OPIS Current Year D6 Ethanol RIN Credits (\$/RIN)

Date	Low	High	Avg	MTD
10/14/2022	1.6000	1.6150	1.6075	1.5895

## OPIS Other Gulf Coast Feedstock and NGL Assessments (cts/gal)

Product	Low	High	Avg
Naphtha (Domestic Full-Range)	184.10	194.10	189.100
Diff to W-Borne Unl	-100.25	-90.25	-95.250
Naphtha (Domestic 40N+A)	189.10	199.10	194.100
Diff to W-Borne Unl	-95.25	-85.25	-90.250
Naphtha (Offshore 40N+A)	188.60	198.60	193.600
Diff to W-Borne Unl	-95.75	-85.75	-90.750
Paraffinic Naphtha (\$/mt)	654.70	662.65	658.675
Mt. Belvieu N. Gasoline (\$/mt)	634.80	652.70	643.750

Product	Low	High	Avg
LT. Cycle Oil	360.40	363.40	361.900
LT. Cycle Diff to No. 2	17.05	20.05	18.550
LS LT. Cycle Oil	360.40	364.40	362.400
LS LT. Cycle Diff to No. 2	17.05	21.05	19.050

## OPIS U.S. Gulf Coast Refined Product Values (cts/gal)

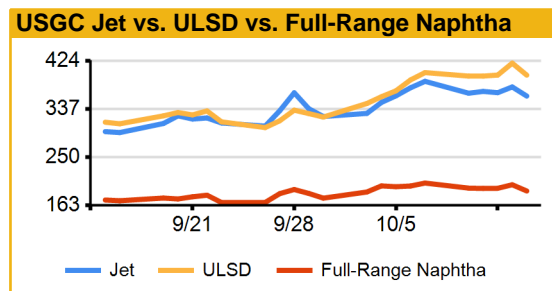
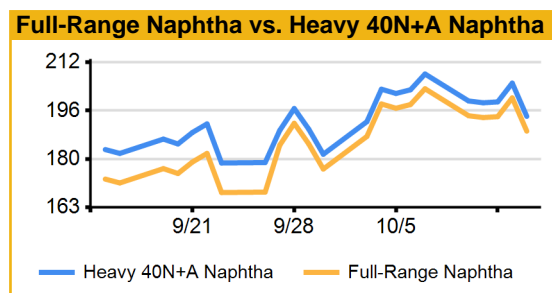
Product	Waterborne Prompt			Waterborne Forward			Colonial Pipe Prompt			Colonial Pipe Forward		
	Low	High	Avg	Low	High	Avg	Low	High	Avg	Low	High	Avg
Unleaded Regular	283.84	284.84	284.340	275.84	276.84	276.340	282.59	283.59	283.090	271.35	272.35	271.850
CBOB	---	---	---	---	---	---	257.59	258.79	258.190	245.60	245.85	245.725
No. 2 Oil	342.87	343.87	343.370	342.87	343.87	343.370	341.62	342.62	342.120	341.61	342.61	342.110
Jet 54	361.52	362.02	361.770	---	---	---	360.02	360.52	360.270	353.51	354.01	353.760
ULSD	398.52	399.52	399.020	388.52	389.52	389.020	397.52	398.52	398.020	377.51	378.51	378.010

## OPIS USGC Crack Spreads

USGC Prompt Crack Spreads to WTI Crude		
Crack Spread	Cash (cts/gal)	Crack (\$/bbl)
HS 70/30	302.0490	41.25
UNL	284.340	33.81
No. 2	343.370	58.61
70/30 CBOB/No. 2	283.7440	33.56
CBOB	258.190	22.83
No. 2	343.370	58.61

USGC Forward Crack Spreads to WTI Crude		
Crack Spread	Cash (cts/gal)	Crack (\$/bbl)
70/30 UNL/ULSD	310.1440	45.61
UNL	276.340	31.41
ULSD	389.020	78.74

## 30-Day Trends (cts/gal)



Product	Low	High	Avg
Alkylate (cts/gal)	344.59	345.59	345.090
St. Run Resid (Lo Sul) (\$/bbl)	97.10	98.10	97.600
Low Sul. Diff to WTI (\$/bbl)	11.50	12.50	12.000
St. Run Resid (Hi Sul) (\$/bbl)	79.60	80.60	80.100
High Sul. Diff to WTI (\$/bbl)	-6.00	-5.00	-5.500
3% HSFO (\$/bbl)	53.95	54.05	54.000

## OPIS NGL Assessments

Product	Low	High	Avg
Propane TET	80.000	82.375	81.1875
Normal Butane TET	91.250	92.000	91.6250
Isobutane TET	95.000	104.000	99.5000

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grow.

The December Brent contract fell by \$2.94 to settle at \$91.63/bbl, also the lowest settlement since Oct. 3.

## FEEDSTOCKS:

USGC 70/30 cracks versus WTI were mixed Friday despite negative movements to underlying crude oil, gasoline, and distillate products.

The USGC waterborne unleaded crack (11.5-lb. RVP, or M3 unleaded) versus November WTI rose \$2.34/bbl on Friday to \$33.81/bbl.

The USGC waterborne high sulfur No. 2 (HS) crack and the USGC ULSD crack each decreased \$1.31/bbl and \$5.56/bbl to \$58.61/bbl and \$81.98/bbl.

As a result, the USGC HS 70/30 crack strengthened \$1.25/bbl while the USGC ULSD 70/30 crack weakened 3cts/bbl to \$41.25/bbl and \$48.26/bbl, respectively.

VGO markets remained dormant Friday and were held flat on the day following absent confirmed market activity. LSVGGO, MSVGO, and HSVGGO were each assessed at \$11.00/bbl over Brent, or \$17.00/bbl over WTI, with barge and cargo values continuing to price at parity alongside one another.

In naphtha news, sour paraffinic naphtha was adjusted to 3.75cts/gal over Mont Belvieu Non-TET natural gasoline, which translates to an absolute price of \$658.70/mt. Heavy naphtha was reported to have traded at RBOB November minus 69cts/gal delivered, and assessments were adjusted to match the reported traded value. Full-range naphtha was indicated at a 5cts/gallon spread to heavy naphtha, and assessments were adjusted to RBOB November minus 74cts/gal during the day.

## IN GASOLINE:

U.S. GULF COAST gasoline spot prices decreased across the region on Friday, although cash values did pare back some of this morning's earlier, more sizable declines.

Cycle 59 11.5-lb. RVP CBOB (A3) most recently transacted at 4.30cts/gal beneath the NYMEX November RBOB futures contract, narrowing the discount

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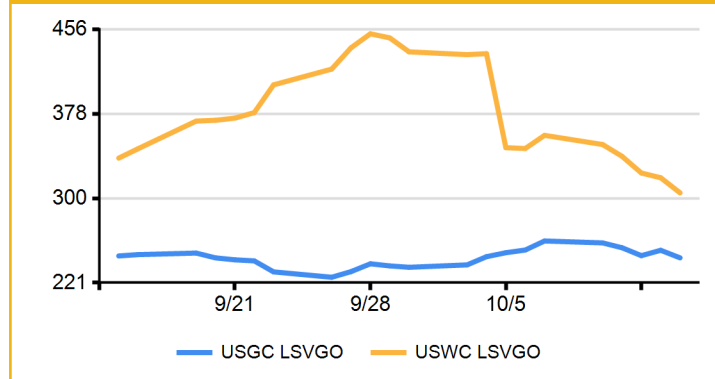
## OPIS West Coast Spot Feedstocks Values

Product	Range (cts/gal)			Diff to 70/30 (cts/gal)			Diff to WTI (\$/bbl)			Diff to ANS (\$/bbl)		
	Low	High	Avg	Low	High	Avg	Low	High	Avg	Low	High	Avg
Low Sulfur VGO	303.55	305.55	304.550	-5.00	-3.00	-4.000	41.90	42.70	42.300	31.75	32.60	32.175
High Sulfur VGO	299.55	301.55	300.550	-9.00	-7.00	-8.000	40.20	41.05	40.625	30.05	30.90	30.475
Light Cycle Oil*	292.15	294.15	293.150	-65.35	-63.35	-64.350	-- --	-- --	-- --	ANS Crude		95.75

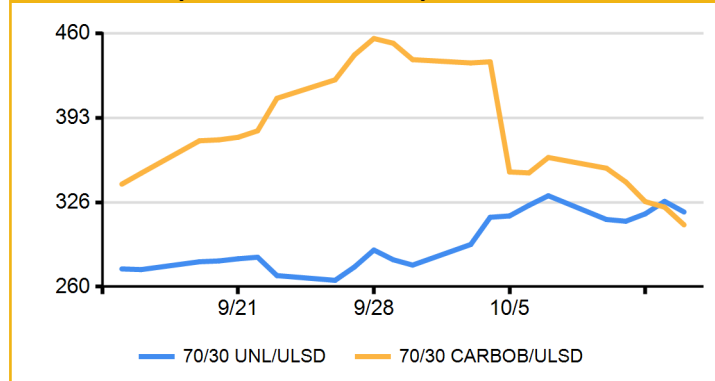
\* Diff to L.A. ULSD

## USGC-to-USWC Arbitrage (cts/gal)

### U.S. West Coast LSVGO vs. USGC LSVGO



### USWC 70/30 Split vs. USGC 70/30 Split



## OPIS USWC Crack Spreads (\$/bbl)

USWC Prompt Crack Spreads to WTI Crude		
Crack Spread	Cash (cts/gal)	Crack (\$/bbl)
70/30 CARBOB/ULSD	308.5690	43.99
CARBOB	287.590	35.18
ULSD	357.520	64.55

## OPIS USWC Refined Products (cts/gal)

Product	Prompt			Forward		
	Low	High	Avg	Low	High	Avg
CARBOB	287.09	288.09	287.590	264.90	265.90	265.400
ULSD	357.02	358.02	357.520	359.26	360.26	359.760

## OPIS East Coast (NYH Barge) Refined Products (cts/gal)

Product	Prompt			Forward		
	Low	High	Avg	Low	High	Avg
Unleaded Reg	-- --	-- --	-- --	-- --	-- --	-- --
No. 2 Oil	346.52	347.52	347.020	324.02	325.02	324.520
Jet 54	415.02	416.02	415.520	397.52	398.52	398.020

## OPIS East Coast Heavy Fuels Products (\$/bbl)

Product	Low	High	Avg
0.3% ULSCO	121.62	121.72	121.670
1% SFO	82.80	82.90	82.850
3% HSFO	60.20	60.30	60.250

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by 0.58cts/gal compared to Thursday's mean differential. Deals were also executed earlier on Friday between 4.30-5.50ct/gal discounts. Outright mean prices shed 7.275cts, at \$2.5819/gal at week's end.

Prompt 13.5-lb. RVP CBOB (A4) was heard trading between 10-10.25ct/gal discounts, ending at the low end of that range. Those activities squashed basis levels by 0.75ct/gal from Thursday's mean. Outright mean prices plunged by 7.875cts, at \$2.52965/gal at closing.

Cycle 59 11.5-lb. RVP premium CBOB reportedly changed hands at 34cts/gal above the screen, 0.13ct/gal loftier than Thursday's mean differential. Outright mean prices melted 7.125cts, at \$2.9709/gal at day's end.

Prompt 13.5-lb. RVP premium CBOB traded at 31cts/gal above futures, widening the premium by 1.75cts/gal versus Thursday's mean. Outright mean prices sank to \$2.9409/gal, a drop of 5.50cts at the close of the session.

Cycle 59 11.5-lb. RVP unleaded fuel transacted at 20cts/gal above the screen, 4.50cts/gal stronger than Thursday's ending mean differential. Outright mean prices eased by 2.75cts, at \$2.8309/gal at day's end.

RBOB for Cycle 59 delivery remained at a 2.25ct/gal discount to A3 supplies, and outright mean prices brushed aside 7.275cts, at \$2.5594/gal at closing.

Line space on Colonial Pipeline's Line 1 - the main gasoline line - traded at a 3.50ct premium to pipeline tariffs, elevating levels by a cent from Thursday's finish.

NEW YORK HARBOR gasoline spot prices pulled back from Thursday's gains as they fell with futures Friday. Softer cash differentials pressured prices further for a number of products.

Prompt barge and Buckeye RBOB and CBOB 13.5-lb. RVP gasoline slipped 7.75cts, to a mean cash price of \$2.7409/gal. Most of those losses were futures-based, but cash differentials also weakened by 0.5ct to 11cts/gal above November NYMEX RBOB futures.

October end-month barge RBOB and CBOB continued to run weaker than that, with supplies last gauged at a 4.5ct/gal NYMEX premium.

High-octane premium RBOB and premium CBOB 13.5-lb. RVP gasoline for prompt barge and Buckeye loading was valued at 54.25cts/gal above RBOB futures, as cash differentials followed their regular-grade counterparts lower. With that, mean prices

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## OPIS Feedstocks Pricing

While vacuum gasoil (VGO) volumes transacted in the U.S. Gulf Coast spot market are not expected to exactly match the VGO specifications outlined in OPIS's feedstocks methodology, the OPIS specifications serve as a benchmark for making spot assessments. VGO with materially above-average qualities (relative to OPIS specifications) would be expected to command a stronger price, and VGO with materially sub-par specifications would be expected to be discounted for quality.

Depending on the extent of the quality discrepancy from OPIS' specifications, OPIS may decide to reflect VGO deals somewhere within price ranges (near one end of the range rather than the mean), or OPIS may decide that the qualities of the VGO in question are too far removed from the outlined specifications to be considered representative of spot VGO values.

The full methodology for OPIS' assessment of U.S. Gulf Coast and U.S. West Coast VGO, naphtha and other intermediate refinery feedstocks can be found online at <http://www.opisnet.com/about/methodology.aspx>

To view OPIS customer notices and corrections, navigate here: <https://notices.opisnet.com/>, click on the second link, enter your subscription email address then you will then be sent a link to access.

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shed 7.75cts to \$3.1734/gal.

Offline Colonial Pipeline CBOB 13.5-lb. RVP (A4) gasoline transitioned to Cycle 56 as prompt Friday morning, and with that shift, trade premiums narrowed by 2.25cts to 9.5cts/gal above RBOB futures. Mean cash prices tumbled 9.5cts to \$2.7259/gal.

Prompt Cycle 55 RBOB 13.5-lb. RVP (F4) gasoline continued to be valued at 11.75cts/gal above RBOB futures, leaving prices to fall 7.25cts in tandem with paper losses, to \$2.7484/gal.

Further ahead, non-prompt Cycle 56 F4 was running weaker than that, with supplies heard trading at 9.5cts/gal above RBOB futures.

### IN DISTILLATES:

U.S. GULF COAST distillate prices were heading sharply lower to finish the week Friday, with differential weakness compounding tumbling futures contracts - especially for ULSD.

Prompt ULSD transitioned to Cycle 59 starting Friday, with differentials seeing a huge drop thanks to the steep downward slope of the forward curve. A deal was heard Friday at flat to November ULSD NYMEX contracts, off more than 10cts from where the market was on Thursday. That added to the already 10ct-plus losses from the NYMEX, sending cash values down 21.585cts to just over \$3.98/gal - slipping back under the \$4/gal mark after moving over that mark Thursday.

Ultra-low-sulfur heating oil was moving in tandem with ULSD, with material gauged at a 19.40ct relational discount to ULSD. That put differentials at a 19.40ct discount to the November NYMEX, off 10.18cts from Thursday. Outright values slumped 21.635cts to \$3.7862/gal.

High-sulfur diesel also moved to Cycle 59 starting Friday but didn't budge from the 55.90ct discount to November futures seen over the last several sessions. Outright valued moved with futures, sliding 11.46cts to \$3.4212/gal.

Jet fuel for Cycle 59 was heard done at 38cts beneath the November NYMEX before a trade was confirmed at 37.50cts beneath futures. That was off almost 5cts on the day, adding to the strong futures pull. Outright values gave up 16.46cts to \$3.6027/gal, slipping into the low-\$3.60s for the first time since Oct. 5.

Trading overall Friday was muted but volatile, without any scheduling deadlines to book distillate material to Colonial Pipeline. Cycle 59 jet fuel schedules next Monday, while ultra-low-sulfur diesel, ultra-low-sulfur heating oil and high-sulfur diesel will schedule Tuesday.

Colonial Pipeline line space for Line 2, the main distillate line, remained at a 1.75ct discount to tariffs.

NEW YORK HARBOR distillate spot prices slid lower with futures losses Friday, leaving behind the multimonth highs seen for ULSD and ULSHO on Thursday.

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Prompt barge and Buckeye ULSD fell 11.46cts alongside futures, to a mean cash price of \$4.7302/gal. Trade premiums remained strong at 75cts/gal above November NYMEX ULSD futures, amid hushed physical trade for distillates in the region.

Offline Colonial Pipeline prompt Cycle 55 ULSD continued to be valued at a sizable discount to barge and Buckeye ULSD, with trade premiums holding steady at 54.5cts/gal above ULSD futures.

Cash differentials for prompt offline, barge and Buckeye ULSHO held steady at 41.5cts/gal above RBOB futures, while prices fell 11.46cts with paper losses to \$4.3952/gal.

Jet fuel for prompt barge and Buckeye loading shed 13.46cts to a mean cash price of \$4.1552/gal, as weaker differentials combined with paper declines. Trade premiums narrowed by 2cts to 17.5cts/gal above ULSD futures, even with where supplies were last heard trading Thursday but 2cts weaker than that day's mean differential.

Prompt Cycle 55 jet fuel continued to run even to Buckeye supplies, at 17.5cts/gal above ULSD futures.

## GAS LIQUIDS:

Mont Belvieu NGLs were down across the board for Friday's entire trading session, as crude, RBOB and natural gas futures started low and ended lower. NGL losses ranged from 1.1%-5%, with isobutane seeing the largest price slide and ethane the most confirmed volumes traded.

TET (Energy Transfer) propane anys traded 80-82.375cts/gal, down 1.74% on volumes of at least 80,000 bbl. Non-TET (Enterprise) propane anys got done at 79.375-81.5cts/gal, down 1.76% on volumes of at least 125,000 bbl. Other non-TET (Targa) propane anys were done at 81-81.5cts/gal for a total of at least 40,000 bbl.

Hattiesburg inline propane anys traded at 87cts/gal.

Non-TET ethane anys traded at 42.375-43.375cts/gal, down 1.15% on volumes of at least 150,000 bbl. Targa ethane anys got done at flat to non-TET and at 42.625cts/gal.

Non-TET normal butane anys were done at 91.75-92.5cts/gal, down 4.04% on volumes of at least 50,000 bbl. Non-TET isobutane anys traded 95cts-\$1.04/gal, down 5.01% on volumes of at least 60,000 bbl.

Non-TET natural gasoline anys were done at \$1.595-\$1.64/gal, down 1.07% on volumes of at least 100,000 bbl. Targa natural gasoline anys got done at \$1.625/gal and were assessed at flat to non-TET.

**RESIDUAL FUEL:**In the bulk fuel oil market Friday, 20 API VLSFO talked at \$3.50-4.00/bbl over December ICE Brent in Houston, which was steady from Thursday.

"In the volatile market we have been in and on a Friday, I don't think anyone is trying to figure an angle on the market," one fuel oil broker said.

VLSFO was assessed at \$644.25/mt fob Houston, lower by \$19.75/mt. Using a 19 API, the level equates to December ICE Brent plus \$4.50/bbl, or \$96.13/bbl. HSFO was assessed \$2.25/bbl lower on swaps to \$54/bbl.

On the U.S. East Coast, the 20 API differential to Brent was heard at \$9.00-9.50/bbl over December ICE Brent. VLSFO was assessed at \$681.25/mt delivered New York Harbor, lower by \$19.75/mt. Using a 19 API, the level equates to December ICE Brent plus \$10.02/bbl, or \$101.65/bbl. Based on paper movement, HSFO was assessed \$2.25/bbl lower to \$60.25/bbl, and 1%S lost \$3/bbl to \$82.85/bbl.

## NEWS:

\*\*\*Shell Shuts Unit at 404,000-b/d Pernis Refinery Due to Malfunction

Oil major Shell confirmed on Thursday evening that it has shut down a unit at its 404,000-b/d Pernis refinery near Rotterdam in the Netherlands, with barge broker Riverlake Barging reporting that a problem has developed at the refinery's fluid catalytic cracker.

A malfunctioning unit was taken offline to conduct repairs, a statement by Shell said, forcing the U.K.-based company to engage in flaring until Thursday evening.

A Shell spokesperson said the company expects to undertake more flaring when the installation is restarted. The company did not specify which unit has been affected or the estimated impact on Pernis' production capacity.

Pernis' processing capacity of 404,000 b/d makes it Europe's largest refinery, ahead of BP's Rotterdam refinery, which has a 400,000-b/d capacity.

The incident at Pernis comes as refineries in France remain offline due to strikes. Europe's autumn refinery maintenance season is also in full swing, with several refineries in Spain, Portugal and Italy currently undertaking planned maintenance.

Front-month Low Sulfur Gasoil (LSG) futures strengthened Thursday relative to contracts further along the curve, widening backwardation in the market and boosting the spread between the November and December LSG contracts by \$7 a metric ton to \$70/mt.

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