

COQG – DTC

Domestic Trading Center
Subcommittee

October 23, 2008
San Antonio, Texas

Meeting Agenda

- *Mission Statement*
- *NYMEX Spec for Domestic Sweet*
- *Data Review*
- *Open Discussion - Specification Selections*
- *NYMEX* Invitation to COQG.
- *Action Items*

www.nymex.com/CL_spec.aspx

Deliverable Grades Specific domestic crudes with 0.42% sulfur by weight or less, not less than 37° API gravity nor more than 42° API gravity. The following domestic crude streams are deliverable:

West Texas Intermediate, Low Sweet Mix, New Mexican Sweet, North Texas Sweet, Oklahoma Sweet, South Texas Sweet.

www.nymex.com/CL_spec.aspx

Specific foreign crudes of not less than 34° API nor more than 42° API. The following foreign streams are deliverable: U.K. Brent, for which the seller shall receive a 30 cent per barrel discount below the final settlement price; Norwegian Oseberg Blend is delivered at a 55¢-per-barrel discount; Nigerian Bonny Light, Qua Iboe, and Colombian Cusiana are delivered at 15¢ premiums.

Mission Statement

We believe that crude oil designated as Domestic Sweet needs a few basic parameters in addition to gravity and sulfur in order for crude to fall within this designation. These additional parameters are necessary to better define Domestic Sweet, while at the same time reducing its variability. This will allow refiners to better determine the actual value of Domestic Sweet to them as they can with other, well defined crude types.

Additional Parameters:

**HTSD Recovery at 380°F and 1050°F,
Nickel, Vanadium, Tan, MCRT**

Data Review

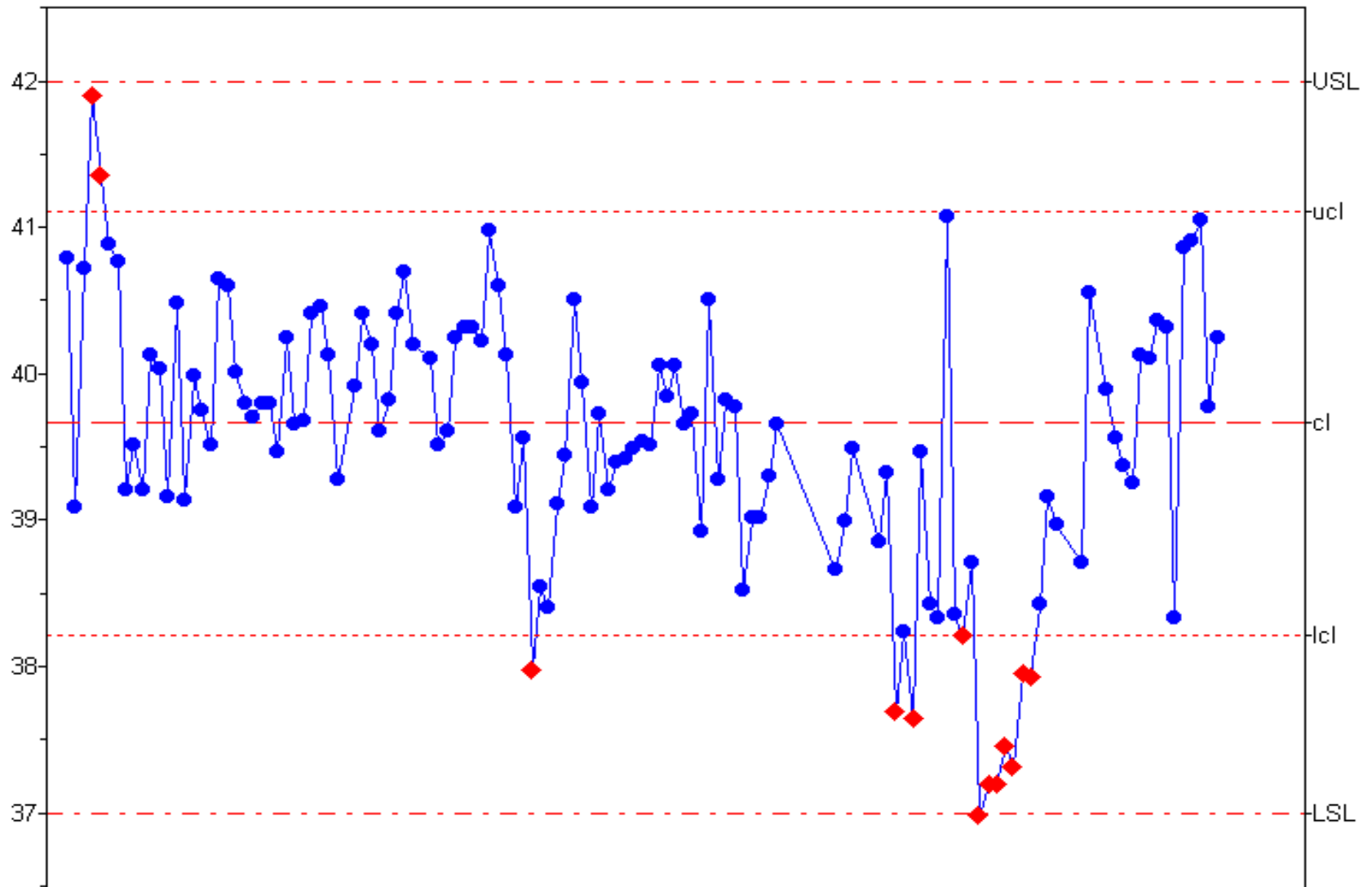
Clifford Mills and David Smart



API Gravity

[API GRAVITY]

Individ.



SAMPLE_DT: 1/1/07 2/13/07 3/28/07 4/27/07 5/19/07 7/16/07 8/16/07 9/13/07 10/10/07 11/9/07 12/5/07 1/3/08 7/16/08

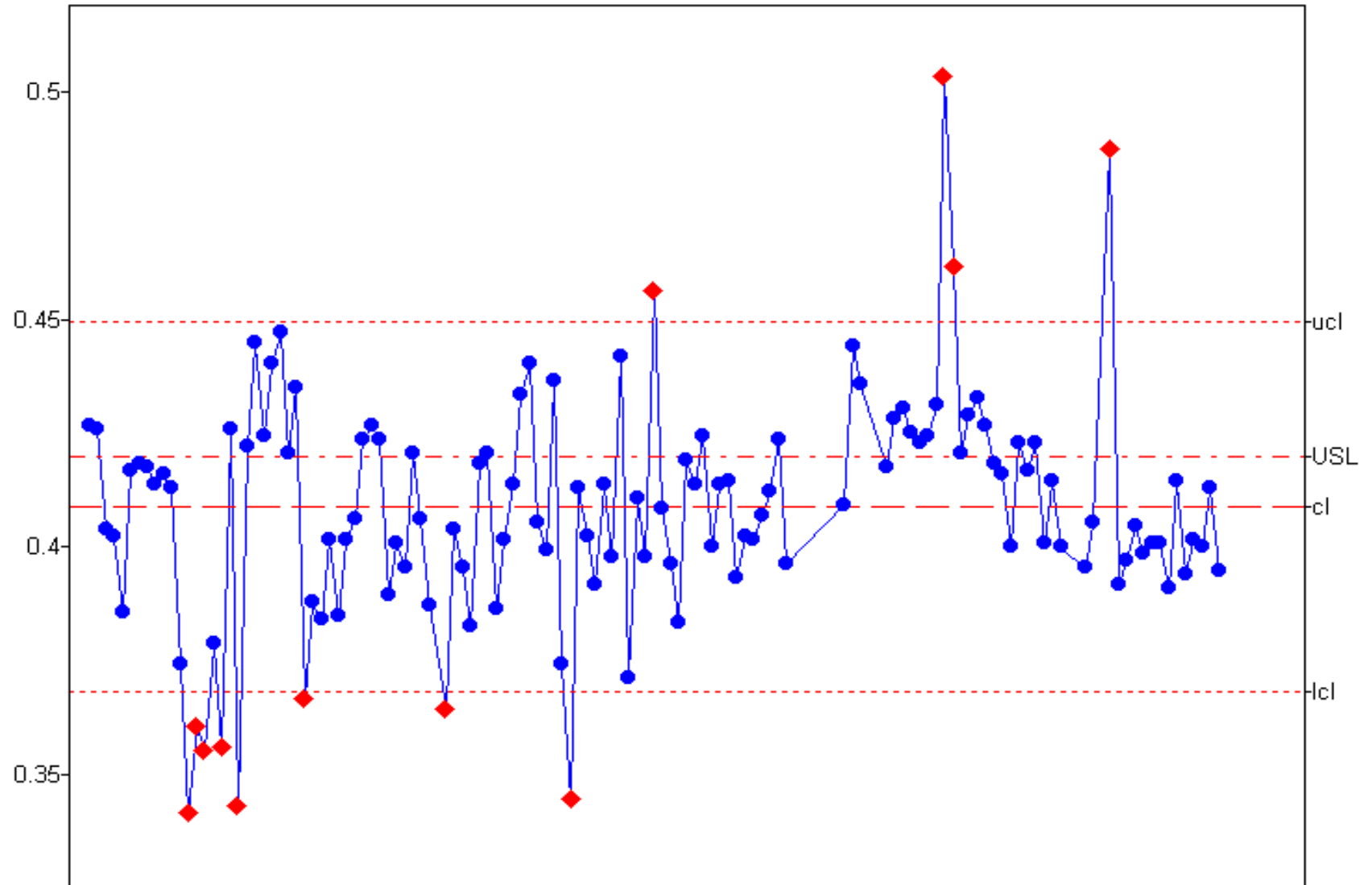
Individ.: cl: 39.6658 ucl: 41.1128 lcl: 38.2188
USL: 42 LSL: 37

Subgrp Size 1

Sulfur

[SULFUR]

Individ.

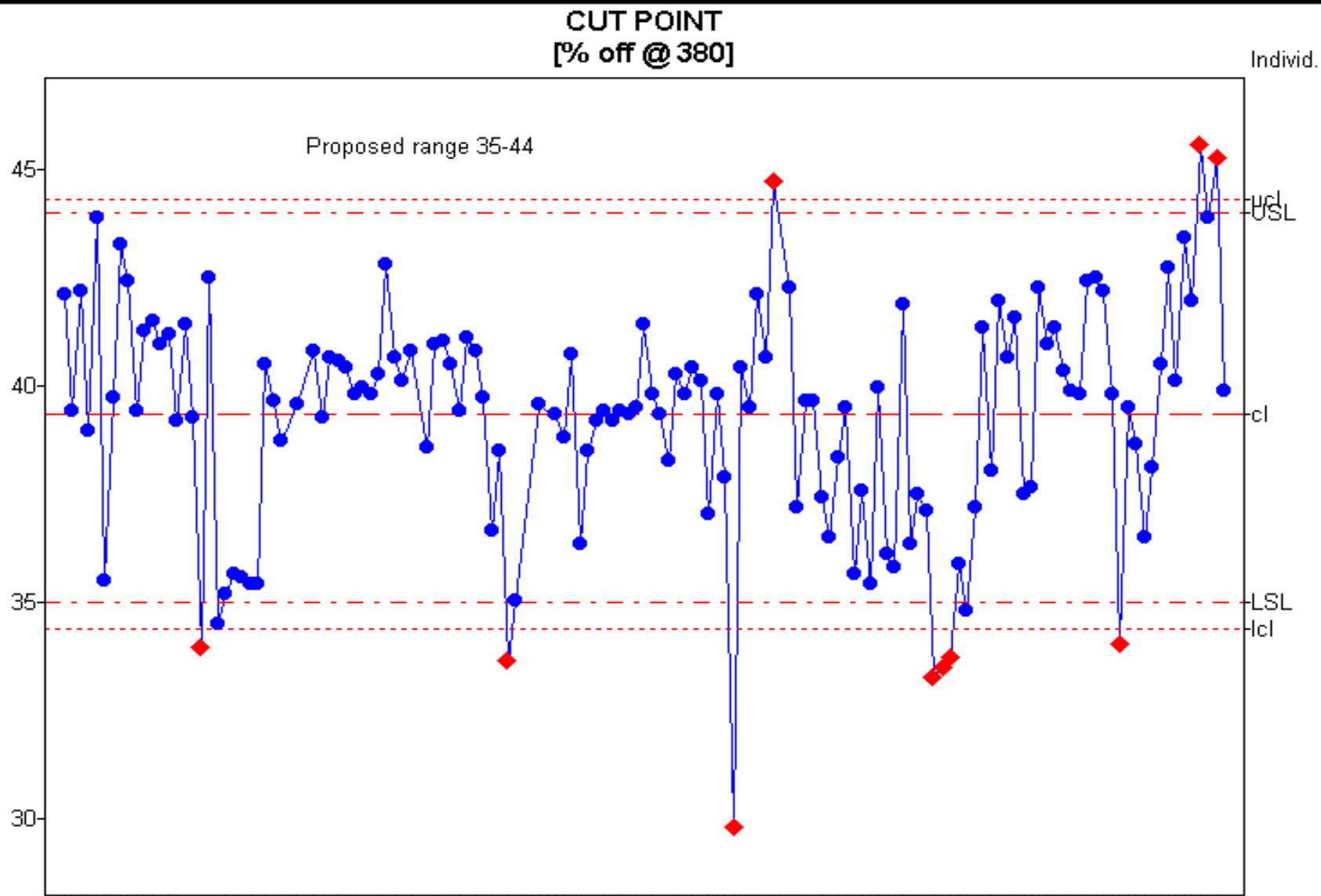


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Individ.: cl: 0.408784 ucl: 0.449459 lcl: 0.368109
USL: .42 LSL: None

Subgrp Size 1

High Temp SimDis

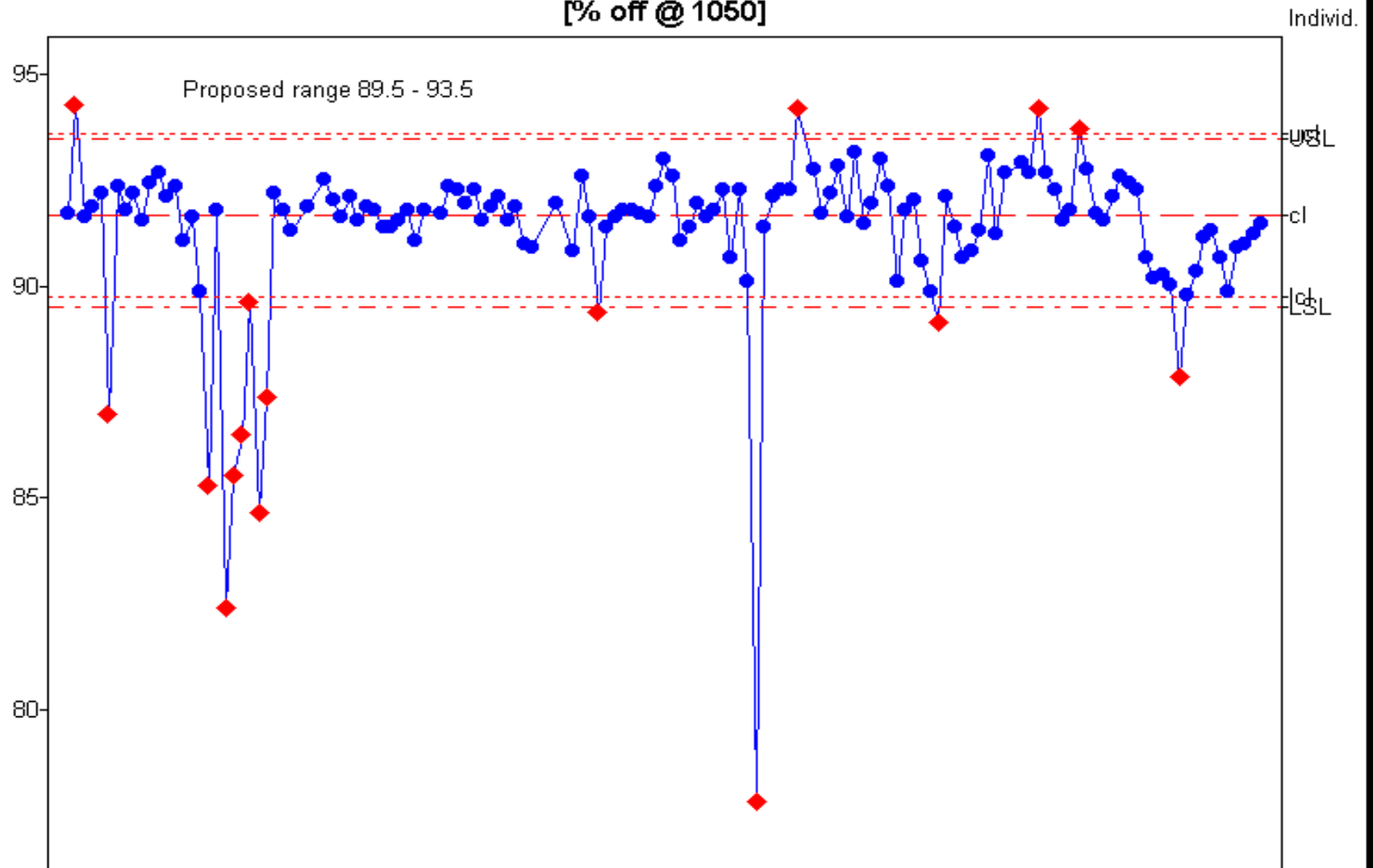


SAMPLE_DT: 1/1/07 2/13/07 3/28/07 4/27/07 5/19/07 7/6/07 8/16/07 9/13/07 10/10/07 11/9/07 12/5/07 1/3/08 7/16/08

Individ.: cl: 39.3562 ucl: 44.3082 lcl: 34.4042 Subgrp Size 1
USL: 44 LSL: 35

High Temp SimDis

CUT POINT
[% off @ 1050]



SAMPLE_DT: 1/1/07 2/13/07 3/28/07 4/27/07 5/19/07 7/6/07 8/16/07 9/13/07 10/10/07 11/9/07 12/5/07 1/3/08 7/16/08

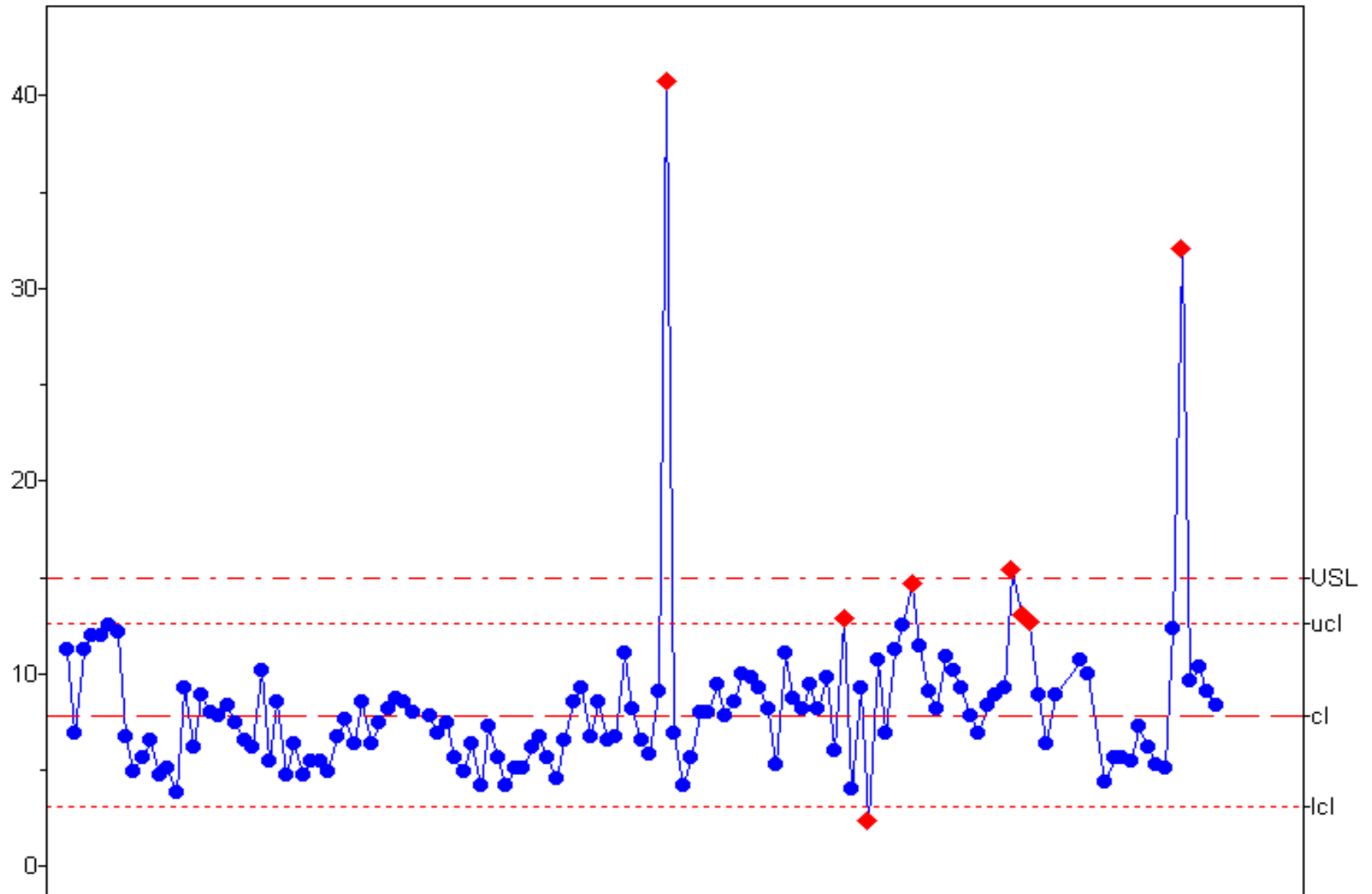
Individ.: cl: 91.6735 ucl: 93.5903 lcl: 89.7567
USL: 93.5 LSL: 89.5

Subgrp Size 1

Nickel

[NICKEL]

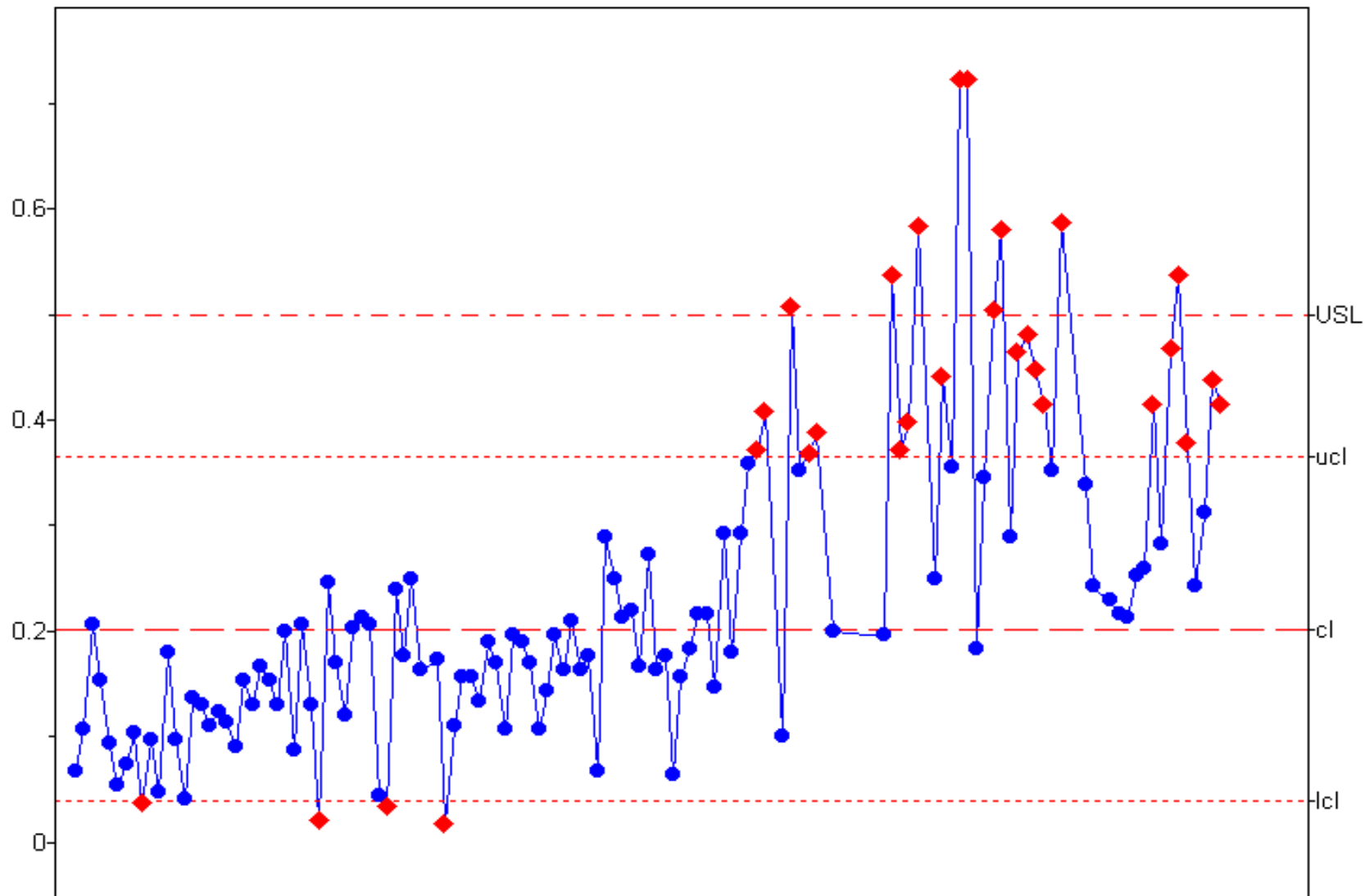
Individ.



Acid Number

[TAN]

Individ.



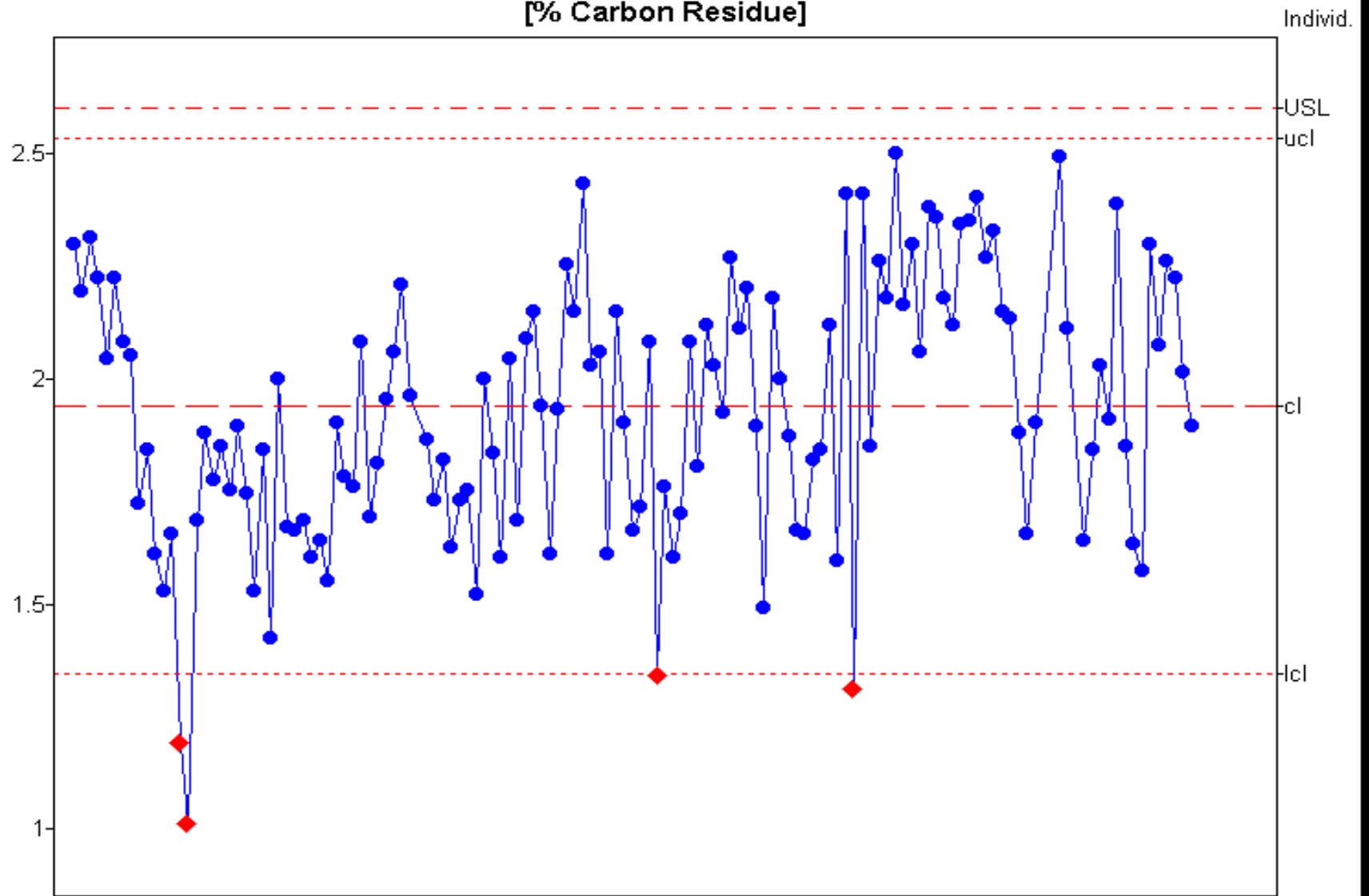
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Individ.: cl: 0.201575 ucl: 0.364465 lcl: 0.038685
USL: .5 LSL: None

Subgrp Size 1

MCRT

[% Carbon Residue]



SAMPLE_DT: 1/1/07 2/13/07 3/28/07 4/27/07 5/19/07 7/6/07 8/16/07 9/13/07 10/10/07 11/9/07 12/5/07 1/3/08 7/16/08

Individ.: cl: 1.94025 ucl: 2.53525 lcl: 1.34525
USL: 2.6 LSL: None

Subgrp Size 1

ASTM Cross Check Data

Summary for Ardmore Lab

Parameter >>>>	30%	40%	50%	70%	80%	90%	95%	API	Sulfur	Ni	V	TAN	MCRT
ASTM ILCC Data	D7169	D7169	D7169	D7169	D7169	D7169	D7169	D1298	D4294	D5708A	D5708A	D664A	D4530
Ardmore Lab value	255.1	294.8	327.8	391.9	422.2	458.9	488.9	30.70 ¹	0.2000	0.0000	0.3500	.1100 ²	0.04
group mean	263.34	301.29	333.55	396.76	429.01	468.03	496.90	30.72	0.2025	0.0556	0.0968	0.0169	0.050
std deviation	5.50	3.51	3.56	3.36	3.29	6.83	5.69	0.13	0.0065	0.0595	0.0846	0.0147	0.035
high valid value reported	273.3	308.3	340.0	406.7	441.1	485.4	521.1	31.00	0.2220	<0.5	0.3500	0.0600	0.14
low valid value reported	247.1	292.2	322.2	391.4	422.2	446.0	482.2	30.30	0.1830	0.0000	0.0000	0.0000	0.00
Delta Adrmore/Mean	-8.2	-6.5	-5.8	-4.9	-6.8	-9.1	-8.0	-0.02	-0.0025	-0.0556	0.2532	0.0931	-0.010
No. of valid data points	23	21	21	21	21	23	20	54	76	13	15	41	45
ASTM Reproducibility	NA	NA	NA	NA	NA	NA	NA	0.50	0.0266	NA	NA	0.1434	0.143
ILCP Reproducibility	15.24	9.72	9.86	9.31	9.11	18.92	15.76	0.42	0.0180	0.1648	0.2343	0.0407	0.097

Cut Points Wt% Recovery	Ardmore Lab Value	ILCP mean	ILCP Reproducibility
180	4.2	4.62	3.68
380	15.1	15.80	3.21
480	25.7	26.61	3.57
650	52.8	52.89	3.55
800	79.8	79.12	2.83
1050	99.6	99.22	1.61
1105	99.9	99.66	1.41
1328	100.0	99.76	1.11

Notes:

¹ D4052, reason we did not report.
Used the statistical values from D1298

² Re-ran same sample with freshly made dilution solution. and the result equaled .007

Open Discussion

The Crude Oil Quality Group analyzed laboratory test data on Domestic Sweet Crude from representative samples obtained from Cushing, Oklahoma. After applying a statistical analysis of the data, the group recommends the following data parameters be incorporated for crude oil designated as Domestic Sweet.

Parameter	Referee Method	UOM	Min	Max
● Gravity	D5002	°API	42	37
● Sulfur	D4294	%wt	--	0.42
● Cut Point @ 380°F	D7169	%off	35	44
● Cut Point @ 1050°F	D7169	%off	89.5	93.5
● Vanadium	D5708b	ppm	--	32
● Nickel	D5708b	ppm	--	15
● TAN	D664	mg/l	--	0.5
● MCRT	D4530	%wt	--	2.6

Path Forward

- Develop plans
 - Collect on-going data
 - Which Lab(s) participate
 - ASTM ILCC Data inclusion
 - Frequency of data reviews
 - Frequency of spec range changes
 - What prompts the change
 - Who triggers notification
 - Determine next Domestic Crude designation to address
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