

# DOMESTIC SWEET / WTI SPECIFICATIONS

For COQA- October 2010 in Houston, TX  
Dennis Sutton- Marathon Petroleum Company



# Domestic Sweet Specifications- The Time is Now

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- Historically, Domestic Sweet was a blend of various sweet crude oil streams from Western Texas, Oklahoma, and surrounding areas.
- Today, with minimal specifications and greater logistical optionality, Domestic Sweet might include high TAN African crudes, condensate from Colorado, Canadian blends, and heavy Brazilian crude.
- The demands of today's refineries for safe, efficient operation combined with the fact that Domestic Sweet is now a blended grade means the time for more comprehensive specifications is now!

# Pre-2010

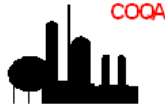
- For over 15 years, the concept of more comprehensive specifications on WTI/Domestic Sweet has been discussed.
- In 2005, COQG began working on developing specifications for WTI/Domestic Sweet at Cushing, OK.
- Well defined sampling and analytical procedures were used in 2009 to analyze 61 Domestic Sweet samples from Cushing.
- In consideration of the above samples, analytical precision, and the need for market liquidity, we developed proposed specifications.

# 2010



- Consultant Clifford Mills gave a detailed presentation of the Domestic Sweet data at the February 2010 COQA meeting in New Orleans.
- A written ballot was sent on April 1 to all parties involved.
- The results were discussed at the June 2010 COQA meeting in Denver and the association agreed Harry Giles should send a letter communicating the specifications and recommending their adoption.

# The Letter- dated August 10, 2010



*Crude Oil Quality Association*

10 August 2010

To: See Distribution List

RE: Recommended Additional Specifications for Domestic Sweet at Cushing, OK

Dear:

The Crude Oil Quality Association (COQA) [www.coqa-inc.org](http://www.coqa-inc.org) is a petroleum industry technical organization comprised of members representing refiners, pipeline companies, terminal operators, chemical and service companies, and commercial laboratories. The association is dedicated to the belief that maintaining the quality and integrity of the refining characteristics of crude oil streams is of importance to all parties from production to the refinery. As such, we have been addressing crude oil specifications for more than a decade. The Refiners Crude Oil Quality Group, predecessor of the COQA, was responsible for the successful adoption of the LLS specifications over 10 years ago.

Consistent with our mission and in studies spanning more than five years, COQA has identified key parameters that more comprehensively describe Domestic Sweet crude oil delivered at Cushing, OK (NYMEX: Light Sweet Crude Oil Futures), has defined the analytical test procedures to be used in measuring these parameters, has reviewed historical and current quality data for these, and recently reached consensus on the additional specifications shown in the following table.

These additional specifications will provide greater confidence in the quality of Domestic Sweet for all who physically process this grade, as well as those who transact futures and delivery contracts. With this more comprehensive definition of the quality of Domestic Sweet, there will be a higher level of reliability and fungibility of this very important benchmark crude oil.

As part of the detailed statistical review of the data supporting these recommended additional specifications, the COQA, to the best of its knowledge and consistent with its Antitrust Guidelines, anticipates that adoption of these additional specifications will not restrict trade nor be a barrier to free and open competition in the markets.

The COQA recommends the immediate adoption of these specifications as part of the NYMEX Light Sweet Crude Oil Futures Grade and Quality Specifications (Section 200.12 (A)), and in the operating procedures of the pipeline and terminal facilities at Cushing. The existing quality specifications for sulfur, gravity, viscosity, Reid vapor pressure (RVP), basic sediment and water (BS&W, S&W), and pour point as detailed in section 200.12 (A) (2-7) of the NYMEX Rulebook are to be retained.

# The Letter- page 2

With our broad industry representation, experience, and expertise, the COQA is able and willing to provide support to you in the adoption of these recommended expanded specifications. The COQA remains committed to positive actions that promote and maintain the integrity of crude oil streams.

I thank you for your consideration of these recommendations, and **look forward to your response regarding when and how you plan to adopt and implement them.**

Sincerely,

/s/

Harry N. Giles  
Executive Director

Enclosure: Distribution List

## **Recommended Additional Specification for Domestic Sweet Crude Oil at Cushing, OK**

- 1) Micro Method Carbon Residue: 2.40% or less by mass; as determined by ASTM Standard D4530-07, or its latest revision;
- 2) Total Acid Number (TAN): 0.28 mg KOH/g or less as determined by the first inflection point; using ASTM Standard D664-09a, or its latest revision;
- 3) Nickel: 8 parts per million (ppm) or less by mass; as determined by ASTM Standard D5708-05, Test Method B, or its latest revision;
- 4) Vanadium: 15 ppm or less by mass; as determined by ASTM Standard D5708-05, Test Method B, or its latest revision;
- 5) Light Ends <220°F by HTSD: Not more than 19 % by mass; as determined by ASTM Standard D7169-05, or its latest revision;
- 6) 50 % Point by HTSD: 470°F- 570°F; as determined by ASTM Standard D7169-05, or its latest revision;
- 7) Vacuum Residuum >1020°F by HTSD: Not more than 16 % by mass; as determined by ASTM Standard D7169-05, or its latest revision.

# Response



- Many companies have replied strongly in favor of the more comprehensive specs.
- Others have responded with a “wait and see” approach, looking to NYMEX.
- NYMEX and some others have not replied.

# Implementation



- The incorporation of more comprehensive specifications that better define Domestic Sweet is built on proven, established practices.
  - LLS Specifications
  - Existing NYMEX specifications for gravity, sulfur, pour point, viscosity, RVP
  - Current testing



# Drive to Resolution



- Need for Implementation Task Force?
  - NYMEX? What is necessary for them to adopt the additional specs?
  - Incorporation by Cushing Operators?

