

Meeting Notes (Prepared by Arden Strycker)

Light Sweet Crude Subcommittee, Methods Advisory Panel Meeting

Date: September 14, 2021

Time: 1:00p to 2:00 PM (CST)

Phillips 66 Host - Via Webex

Meeting Leader – Frank Hagardorn

Those attending (virtual meeting): Tyler Caughman, Aaron Dillard, Frank Hagardorn, Bill Lywood, Mike Mayers, Arden Strycker, Blake Vaughn, Nanette Yearley

Welcome – Opening Remarks (Aaron welcomed those present)

Review MAP next steps from LSC 6/9/2021 meeting

Frank briefly referenced the previous meeting of 06.09.2021. Action items from the June 9 meeting and items of interest were added to this meeting agenda.

Methods Summary Update - Summary, Additional Specs to Add

In addition to specification information already reviewed by this Advisory Panel, Frank briefly reviewed information obtained of other organizations and light sweet crude oil specifications, including ARGUS, HOU Futures, and Platts. Limited information was found.

Web search for ARGUS shows limited methods and specifications for API & sulfur only. Platts reveals more detail methods and specifications for properties as density, sulfur, vapor pressure, metals as vanadium and nickel, basic sediment, and mercaptan sulfur. These methods and specifications from both entities were added to the COQA-MAP preliminary recommendation list.

Additional information was found relating to new futures contract as an alliance of Magellan, Enterprise, and ICE (Intercontinental Exchange). No specific methods and/or specifications were found.

With respect to adding D7900 to D7169

Frank explained why D7900 is recommended in addition to D7169 as mentioned in the D7169 method. As per Paragraph 1.3 in ASTM D7169, a quenching factor is applied when integrating the lower portion of the curve, and this factor is needed to accurately subtract the attenuation of CS₂. However, in practice the quenching factor can vary with crude oil introducing an error where a fixed constant is used. A better approach is proposed merging data from ASTM D7900 for the C₂-C₈ GC region. Tyler indicated that this explanation needs to be added. Currently, most yield specifications do not include D7900.

Review potential next steps for H2S(v) method of crude oil (CCQTA work group status)

A previous recommendation was proposed by Tyler to review the inconsistencies that currently exist between laboratories modifying ASTM D5705 for testing H2S in crude oil. An action item was proposed by Frank Hagardorn in this meeting to follow up with the CCQTA to obtain access to existing data and reports with respect to this topic. Bill Lywood agreed to follow up with CCQTA.

Review D8252 / D5708B V & Ni data evaluations (if data is made available prior to this meeting), discuss recommendations / white paper

Frank presented some historical data obtained from one or more of several organizations comparing vanadium, nickel, and iron in crude oil between ASTM D5708B and D8252, looking for potential biases. Biases were clearly seen for all three metals. A question was asked as to the nature of the crude oils being tested, but this information was not known. The bias for iron was starkly different, and the subcommittee generally considered that testing iron was of somewhat lessor importance relative to the other 2 metals; however, all 3 metals are of notable interest.

A proposal was made to generate an initial white paper expressing the interest in this topic with some discussion and review of existing data (and additional data as can be made available). Many attending this meeting agreed to participate in the generation and review of this white paper. Frank agreed to move forward with this action item. Volunteering members are as follows:

Frank Hagardorn
Tyler Caughman
Arden Stricker
Mike Mayers
Bill Lywood

Arden (and Aaron) suggested that George Lywood look into adding a section to the COQA website making this white paper publicly available when completed.

Meeting Closeout

Frank indicated that he would not be able to attend the COQA meeting this October 27-28. Arden agreed to provide a meeting summary at the subcommittee meeting this October.

Aaron adjourned the meeting (1:55 PM, CST)