MEETING MINUTES
API COMQ / ASTM D02.02 STATIC MEASUREMENT

Wednesday, October 16, 2013
San Francisco, Ca

1:00pm to 5:00pm

Bill Schmidt, COMQ Chairman
David Fish, Vice Chairman
Hap Thompson, Vice Chairman – ASTM Liaison

1. OPENING

Bill Schmidt opened the meeting and welcomed the attendees. The attendees introduced themselves. See the sign in sheet for a list of attendees. Bill Schmidt gave a small review on API Anti-Trust Guidelines.

2. MEMBERSHIP AND ROLL CALL

a. Sally Goodson reported the following proxies had been received:
   i. William Schmidt for Harry Giles (PetroStor Tech LLC)
   ii. David Fish for Hap Thompson (Global PPL Standards Associates)
   iii. Scott Tanner for Mary Abens (Emerson)
   iv. Mohammed Altorairi for Khalid A Al-Fadhl (Saudi Aramco)
   v. Anne Walker Brackett for Stewart Ash (Consultant)
   vi. Jerry Difede for David Magouirk (Intertek)
   vii. Greg Sheldon for Calvin Morgan (Valero)
   viii. Paul Harrison for Toni Needham (Energy Institute)

b. Membership Changes:

Sally Goodson reported the following list of new member and their voting status.

<table>
<thead>
<tr>
<th>Pending Member</th>
<th>Company</th>
<th>Voting Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robin Chew</td>
<td>ChemoseresarchSDN. Bhd (Malaysia)</td>
<td>No</td>
</tr>
<tr>
<td>Michael Singletary</td>
<td>Chevron Energy Technology Co.</td>
<td>No</td>
</tr>
<tr>
<td>Athalia Soon</td>
<td>Chemoscience SDN. Bhd. (Singapore)</td>
<td>No</td>
</tr>
<tr>
<td>Eva Yeong</td>
<td>Chemopharm (Malaysia)</td>
<td>No</td>
</tr>
</tbody>
</table>
Sally Goodson reported the following members had reported to ASTM a change in employment:

### COMQ/D02.02 Members Change of Employment – October 2013

<table>
<thead>
<tr>
<th>Member</th>
<th>New Employment</th>
<th>Voting Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peter Kosewicz</td>
<td>Consultant</td>
<td>Yes</td>
</tr>
<tr>
<td>Richard Guilbeau</td>
<td>Chevron Energy Technology Co.</td>
<td>Yes</td>
</tr>
</tbody>
</table>

3. REVIEW AND APPROVAL OF THE AGENDA

Bill Schmidt displayed the meeting agenda. A motion was made to approve the agenda. Motion was seconded. Motion passed.

4. REVIEW AND APPROVAL OF MARCH 2013 MINUTES

Bill Schmidt announced the minutes from the June 2013 meeting held at ASTM had been displayed on the API SharePoint site for review by the subcommittee. A motion was made to approve the June 2013 meeting minutes. Motion was seconded. Motion passed.

5. INFORMATION ITEMS

Sally Goodson reported on the following informational items:

a. Status of Standards

#### STATUS OF STANDARDS - OCTOBER 2013

**STANDARDS PUBLISHED - 2013**


- *API MPMS* Chapter 10.4 – Determination of Sediment and Water in Crude Oil by the Centrifuge Method (Field Procedure) – 4th edition


API MPMS Chapter 11.3.2.1 – Ethylene Density – 2nd edition

STATUS OF OVERDUE STANDARDS


Status – ASTM D02 (13-04) ballot – status will be discussed in Chapter 10 report

STATUS OF STANDARDS DUE – 2013


Status – Ballot passed one negative which was withdrawn. Standard Reaffirmed.


Status – ASTM D 1250-08 was reapproved by D02.

STATUS OF STANDARDS DUE - 2014

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>11.5.1</td>
<td>Density/Weight/Volume Intraconversion Tables, Entry With API Gravity at 60°F</td>
<td>1st Ed 3/09 Errata 9/11</td>
</tr>
<tr>
<td>11.5.2</td>
<td>Density/Weight/Volume Intraconversion Tables, Entry With Relative Density at 60°F</td>
<td>1st Ed 3/09</td>
</tr>
<tr>
<td>11.5.3</td>
<td>Density/Weight/Volume Intraconversion Tables, Entry With Absolute Density at 15°C</td>
<td>1st Ed 3/09</td>
</tr>
<tr>
<td>15</td>
<td>Guideline for the use of the International System of Units (SI) in the Petroleum and Allied Industries</td>
<td>3rd Ed 12/01 Rfmd 5/07</td>
</tr>
</tbody>
</table>
b. Status of Ballots

**STATUS OF BALLOTS - 2013**


   Status – API ballot to COMQ, ballot closes November 18, 2013.

2. Revision of API MPMS Chapter 8.4/ASTM D5843 – Standard Practice for Sampling and handling of Furls for Volatility Measurement, 2nd edition. (This is a concurrent ballot with D02.02 and D02.)

   Status – ASTM Concurrent D02, D02.02 Ballot D02 (13-01) – Ballot closed March 28, 2013.


   Status – ASTM D02 (13-04) ballot – status will be discussed in Chapter 10 report


   Status – ASTM D02 (13-04) ballot – status will be discussed in Chapter 10 report.


   Status – ASTM D02 (13-04) ballot – status will be discussed in Chapter 10 report


c. Officer Changes

Sally Goodson reported there were no officer changes since the last meeting.

6. WORKING GROUP REPORTS

   a. MIGT

   Thomas Patrick reported for William Schmidt. Mr. Patrick reported the Phase I study for MIGT had been completed. The data for the study had been gathered on excel spreadsheets. This data was presented at the work group meeting, held on Monday. 6 geographical regions were studied and it was decided at the meeting to combine all the regional data into one spreadsheet. Mr. Patrick stated it will take 2 months to collate all data into one spreadsheet. It was recommended that the data then be reviewed by a statistician.
Phase II for MIGT will be meeting to write a protocol. Funding for Phase II is being moved to 2014. See Annex A for the MIGT meeting minutes.

b. Chapter 7 – Temperature Determination

Anne Brackett reported for the Chapter 7 work group. Ms. Brackett stated that Chapters 7.1 and 7.2 work groups are asking for volunteers. Since the Phase I of the MIGT study is complete, she stated that 7.1 is starting to look at the draft of Chapter 7.1. The continued development of Chapter 7.2 is waiting for MIGT Phase II results. Chapter 7.3 has ballot comments that are being reviewed. Chapter 7.5 is out for ballot to adopt ISO 8310. Anne reported that Christian Skaug made a presentation on testing performed by the German government on temperature measurements of water in a 14ft. tank. The information is useful to determine stratification. It was pointed out that the testing was performed on water and not oil or petroleum products. Ms. Brackett stated she will work with Christian to see if tests can be performed on hydrocarbons. See Annex B for the Chapter 7 meeting minutes.

c. Chapter 8 – Sampling

Bobby Moore reported for the Chapter 8 work group. Chapter 8.1/ASTM D4057 had been recently published. Mr. Moore reported the following on the development of Chapter 8.2: The general section is complete and the crude section is being worked on. The work group plans to have a working grouping group ballot by the middle of February, 2014. The Chapter 8.4 negative vote has been resolved and document is proceeding. See Annex C for the Chapter 8 meeting minutes.

d. Chapter 9 – Density Determination

Peter Kosewicz reported for Chapter 9. Mr. Kosewicz reported that the Chapter 9.4 work group has resolved most of the comments. An action item is for individuals to work on the language in document. The research project for testing density meters has a contract in place and the lab has begun work. The field work is to start early December. There was a discussion of the use of mercury thermometers in thermohydrometers. Mr. Kosewicz mentioned that ASTM has a document going through ballot for non-mercury thermohydrometers in ASTM Committee E20. Peter Kosewicz is on E20 and will keep up with actions ASTM is doing on non-mercury thermohydrometers. See Annex D for the Chapter 9 meeting minutes.

e. Chapter 10 – Sediment and Water

Kristen Nelson reported on the Chapter 10 work group. She reported on the standards that had been published in 2013. (See list in Section 5.a of the minutes) Ms. Kristen reported that 3 working groups had been formed to address recent ballot items: ASTM D1744 was voted for re-instatement and is going to be re-written and a work group exists to work on this. API MPMS Chapter 10.7/ASTM D4377 – was voted not to withdraw and a work group was formed to revise the standard. Roy Meyer of ExxonMobil addressed the group regarding the background on Ch. 10.7/D4377. Mr. Meyer stated they would have a revision of Ch. 10.7/D4377 to bring to the spring 2014 API meeting. ASTM D6304 was balloted for re-approval. One negative was found persuasive and the Chapter 10 work group is looking for working group participants. There are some items that were passed in the Chapter 10 work group regarding recent ASTM ballot (13-04).
that require approval by COMQ and these will be held until new business on the agenda. See Annex E for the Chapter 10 meeting minutes.

f. Chapter 11 – Physical Properties Data

Dale Embry reported on the Chapter 11 work group. The Chapter 11.1 task group found editorial changes and are working on them. Mr. Embry mentioned that the Chapter 11.1 Applet is not running for certain applications. Sally Goodson will follow up with API publishing and Flowcal Inc. regarding updating the Applet. API MPMS Chapter 11.2.4/GPA TP-27 has revisions that API will precede — GPA has delegated responsibility for maintenance of the standard to API, after other work in Chapter 11.1 is completed. Chapter 11.3.2.1 needs to develop a Technical Report as per the ballot results. Chapter 11.3.3 is out for ballot to address concerns raised by RFA and US Customs. The Chapter 11.5 standards are being reviewed and will be balloted next year for reaffirmation. See Annex F for Chapter 11 meeting notes.

Mr. Embry mentioned he has a new SRRR for a Technical Report for Chapter 11.3.4. He will bring this up in new business section of the meeting.

Mr. Embry also mentioned that COMQ/D02.02 wants to pursue with ASTM to bring the following standards under the jurisdiction of COMQ/D02.02: ASTM D4311 and D1555.

Since Chapter 15 was not on the agenda, Bill Schmidt brought up the status of this standard at this point in the meeting. Mr. Schmidt reported that he has been reviewing and revising this standard. Scott Tanner and Jim Dawson volunteered to review Mr. Schmidt’s work on Chapter 15.

g. Chapter 18 – Crude Oil Gathering from Small Tanks

David Weidig reported for the Chapter 18 work group. Mr. Weidig reported the document has been revised. He stated there is still an issue what is the definition of the size of a small tank. A small group was assigned to come up with a definition of a small tank, looking at harmonizing with other COPM Standards. The Chapter 18.1 work group plans to ballot the standard in early spring of 2014. See Annex G for the meeting minutes.

h. ASTM D6304 – Standard Test Method for Determination

Of Water in Petroleum Products Lubricating Oils, and Additives

by Coulometric Karl Fischer Titration

Bill Schmidt mentioned that the status of this standard was already given in the Chapter 10 report. He asked this not be listed as a separate item on future meeting agendas.

i. Ad-Hoc group on new standards

Bill Schmidt reported on the first meeting of the ad-hoc group on new standards. Mr. Schmidt stated the purpose of group is to determine what is needed regarding new standards within COMQ in today’s environment. Mr. Schmidt stated he will put his notes on the meeting together and send out to the attendees. Mr. Schmidt asked group to review the notes and send him an e-mail, if anyone sees anything they are interested in pursuing to work on. See Annex H for the meeting minutes.
7. Chapter 1 Terms and Definitions

Dan Comstock reported that the database has been “launched” with the current spreadsheet of terms and definitions. It is on the COMET SharePoint site. Mr. Comstock asked the liaisons and chairs to review owner officer definitions as submitted and notify Dan Comstock and Sally Goodson of any changes.

8. Old Business

There was no old business

9. New Business

The following items were brought up in New Business:

Chapter 10: 4 items:

1. A motion was made to rescind the ASTM Ballot (13-04, Item 32), for the withdrawal of ASTM D4377/API Chapter 10.7. Motion was seconded. Motion passed.

2. A motion was made to disjoint ASTM D4377/API Chapter 10.7 from the EI. Motion was seconded. Motion passed.

3. A motion was made to ballot an errata to remove the footnote in ASTM D4006/API Chapter 10.2 which refers to “Special Glass Company”. Motion was seconded. Motion passed.

4. A motion was made to find the negative comment for ASTM D6304, ASTM Ballot (13-04, Item 33) technically persuasive. Motion was seconded. Motion passed. The scope will be changed and balloted through ASTM.

Chapter 11: Dale Embry brought up the following discussions:

-Pursue jointing Chapter 11.3.3 with ASTM. The question was presented to the subcommittee whether API should pursue jointing Chapter 11.3.3 (already published) and 11.3.4 (under development) with ASTM. The SC voted unanimously for pursuing jointing these standards with ASTM in some manner. Sally Goodson will then explore how this will happen and report back to the Subcommittee.

-Regarding the Chapter 11.3.4 standard, Dale Embry presented ethanol/gasoline blend measurement scenarios, which are used in field applications. He showed that the current equations developed in Chapter 11.3.4 for VCF for ethanol/gasoline blend do not address using the density of gasoline or density of blend. He then stated that more work was required to develop equations that could be used for all the measurement and sampling scenarios used in the field. The COMQ subcommittee was polled on this issue. 7 were in favor of publication without addressing all the field measurement scenarios, 9 were in favor of waiting until algorithms could be developed that could be used to cover all the field measurement scenarios.

-Dale Embry presented a plot of API MPMS Chapter 11.1 fit for gasolines, showing a comparison between Chapter 11.1 gasoline data, 11.3.4 gasoline feedstocks data
and 1994 API gasoline data. There was consensus by COMQ for the need to obtain gasoline compositions and density over temperature range from member companies to see what gasoline compositions exist in the market today. The SC voted by 22 votes in favor of bringing this issue to COPM for further advice.

Dale Embry presented an SRRR for the funding and writing of a Technical Report for Chapters 11.3.3 and 11.3.4. He pointed out the documentation report is needed to support the technical review and analysis work performed to develop both standards. The SRRR is for a Special Solicitation which will be asked of the existing project group members. A motion was made to approve the SRRR. Motion was seconded. 20 voters in favor, no nays or abstentions. Motion passed

10. Next meeting

Bill Schmidt stated that the next COMQ/ASTM D02.02 meeting is scheduled to take place the week of March 17, 2014 in Dallas, Texas

11. A motion was made to adjourn the meeting at 4:10pm.
ANNEX A

MINUTES
Mercury-In-Glass Task Force
San Francisco, California
OCTOBER 14, 2013

Bill Schmidt, Chairman

1. OPENING & INTRODUCTIONS
   The meeting was called. Members and visitors made self-introductions.

2. REVIEW AND APPROVAL OF THE AGENDA
   The agenda was reviewed and approved as written.

3. REVIEW & APPROVAL OF CHAPTER 7 MINUTES
   The minutes from the spring 2013 meeting were reviewed and approved as written.

4. REVIEW OF PHASE I DATA AND ANALYSIS
   Thomas Patrick provided information on the Phase I testing for the MIGT project. Sally Goodson suggested that the results of the data may possible be in a Technical Report to Chapter 7.

   The Phase I data was presented in six different graphs, according to geographic location. Discussion took place about each set and questions were asked about the procedures used. Questions about the interpretation were also asked. It was recommended that the six spread sheets be merged into one sheet and the data sent to the statistician for further analysis.

5. STATUS OF PHASE II
   Phase II testing is ready to proceed. An explanation was made that Phase II testing was originally Phase III, but the two have been rotated. There is a need for testing of master thermometers for verification and certification. Meter proving instruments will be tested in Phase III. There will be conference calls in order to structure the Phase II procedures. The money for Phase II is available for the 2014 year.

6. NEW BUSINESS
   There was no new business.

7. DECISION ON NEXT WORKING GROUP MEETINGS
   The next meeting will be in Dallas, Texas in March, 2014.

8. ADJOURNMENT
   A motion was made and approved to adjourn.
1. OPENING & INTRODUCTIONS

The meeting was called to order at 1:05 P.M. by Anne Brackett. Members and visitors made self-introductions.

2. REVIEW AND APPROVAL OF THE AGENDA

The agenda was amended to include the meeting of Chapters 7.1 and 7.2 in order to make the meeting shorter and allow participants to attend another meeting at 3:00. The agenda was approved as amended.

3. REVIEW & APPROVAL OF CHAPTER 7 MINUTES

The minutes were approved as written.

4. Testing of alternative thermometers is a project with EPA.

Sally Goodson and Thomas Patrick provided information on the Phase 1 testing and future Phase 2 testing.

Phase 1 data has been collected and a meeting on Monday was held to present the data and ways to move forward. It was recommended that the six spread sheets be merged into one sheet and the data sent to the statistician for further analysis.

5. DISCUSSION ITEMS

1. 7.1

Tom Patrick indicated the writing of 7.1 may start soon and asked for volunteers to help.

2. 7.2

This document is on hold pending information on thermometer options but we are still seeking volunteers to work in the near future.

3. 7.4

Todd is waiting for information on who will resolve the last comments from a member company who had a change of personnel.

4. 7.5

The standard is out for ballot through COMQ. It is being fast tracked for identical adoption from ISO (8810).
6. New Business

Christian Skaug presented information on testing carried out by the German government on a 14 foot tank that had 123 temperature probes installed on the tank and data was collected for one year. Results showed little horizontal stratification of temperature, but they are continuing the study. Frank Van Bekkum cautioned that this was done with water and that there are many more issues with oil and products.

7. DECISION ON NEXT WORKING GROUP MEETINGS Anne Brackett

The next meeting will be in Dallas, Texas in March, 2014.

8. ADJOURNMENT

A motion was made and approved to adjourn at 2:00 P.M.
ANNEX C
Meeting Minutes
Committee of Petroleum Measurement (COPM)
COMQ/Chapter 8
October 15, 2013

Location: San Francisco Hyatt
Attendees: See Roster
Members: See Roster
Guests: See Roster

Minutes:

<table>
<thead>
<tr>
<th>Agenda Topic</th>
<th>Discussion</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roll call</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Decide who will write the minutes (if the group does not have a permanent secretary)</td>
<td>David Fish Graciously volunteered to write the minutes</td>
<td></td>
</tr>
<tr>
<td>Review of agenda</td>
<td>Thomas Patrick moved to approve second by Jim Strawn</td>
<td></td>
</tr>
<tr>
<td>Review of minutes from last meeting</td>
<td>David Fish moved to approve second by Jim Strawn</td>
<td></td>
</tr>
<tr>
<td>Chapter 8.1 Document is published</td>
<td></td>
<td>Joe Keenen</td>
</tr>
<tr>
<td>Chapter 8.2 Almost ready but uncertainty statement is still uncertain.</td>
<td>Seek guidance from ASTM and/or reference 8.3 as applicable</td>
<td></td>
</tr>
<tr>
<td>Chapter 8.3 Original c1/c2 calcs from the existing document will appear in the Appendix. However, a simplified version will be in the body of the document to be used as a reference</td>
<td>Patrick Ross</td>
<td></td>
</tr>
<tr>
<td>Chapter 8.4 8.2 plans to be out for WG ballot by February</td>
<td>Patrick Ross</td>
<td></td>
</tr>
<tr>
<td>Chapter 8.3 Nothing new. Re-affirm</td>
<td></td>
<td>Bobby Moore/Keenen</td>
</tr>
<tr>
<td>Chapter 8.4 Resolution to negative vote has been achieved</td>
<td></td>
<td>Bobby Moore/Keenen</td>
</tr>
<tr>
<td>…</td>
<td></td>
<td></td>
</tr>
<tr>
<td>…</td>
<td>Jim Strawn moved to adjourn meeting, group seconded by departure</td>
<td></td>
</tr>
<tr>
<td>Old business</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New business</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date of next meeting</td>
<td>COPM Spring meeting Dallas March 2014</td>
<td></td>
</tr>
</tbody>
</table>
**ANNEX D**

**Meeting Minutes**  
**Committee of Petroleum Measurement (COPM)**  
**COMQ/COGFM**  
**Chapter 9.4 Continuous Density**  
**10/16/2013**

**Location:** Hyatt Regency, San Francisco, CA

**Attendees:**
- Peter Kosewicz – Hydrocarbon Measurement Consultants  
- Don Sextro – Targa Resources  
- Carlos Armendariz – Enterprise Products  
- Dean Minehart – Micro Motion  
- Michael Keilty – Endress & Hauser  
- David Bell – Bell Technologies  
- Morg Bruck – HMI Consulting  
- Scott Tanner – Flow-Cal  
- Gregor Sterbenz – Anton Paar  
- Michael Tindall – Anton Paar  
- Henry James – BP Pipeline  
- Geroje Barnes – Flow-Cal  
- Frank van Bekkum – Honeywell  
- Jeff Kelly – ICL Calibration Labs  
- Richard Britton – Chevron Pipe Line  
- Kurt Gross – Phillips 66  
- Steve Masters – XTO Energy  
- Darcy Strohschein – Inter Pipeline  
- Derek Turner – Anton-Paar  
- Josef Bloder – Anton-Paar  
- Peter Espina – GE  
- Joe Landes – SPL  
- Jim Gallagher – Savant Measurement  
- Russ Coffey – Huskey Energy  
- Matthew Hooper – Trindent Consulting  
- Mark Jiskoot – Cameron  
- Mark Quinn – ExxonMobil  
- Ken Lamle – Oneok  
- Dee Orr – SPL  
- Jane Williams – Oil and Gas Training  
- Bill Schmidt – ConocoPhillips  
- Richard Guilbeau – Chevron  
- Lazare Kassi – Saudi Aramco  
- Galen Cotton – Applied Metrology Services

**Minutes:**

<table>
<thead>
<tr>
<th><strong>Agenda Topic</strong></th>
<th><strong>Discussion</strong></th>
<th><strong>Action</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Opening</td>
<td></td>
<td>Complete</td>
</tr>
<tr>
<td>Appointment of Minutes Writer</td>
<td></td>
<td>Complete</td>
</tr>
<tr>
<td>Review and Approval of Agenda</td>
<td>Scott Tanner moved to accept, seconded by Henry James.</td>
<td>Passed</td>
</tr>
<tr>
<td>Review and Approval of minutes from last meeting</td>
<td>Henry James moved to accept, seconded by Michael Keilty.</td>
<td>Passed</td>
</tr>
<tr>
<td><strong>Report on Status of Document</strong></td>
<td>Peter Kosewicz reported that the draft document is complete and was sent out for a straw poll on March 5, 201. Worked through about 127 of the 154 comments so far and work will continue on the remainder. It will be a joint document with GPA and probably with ASTM subject to publishing agreements being finalized. The comment resolution spreadsheet will be available to the committee.</td>
<td>Complete</td>
</tr>
<tr>
<td><strong>Review of Comments from CD Document</strong></td>
<td>Discussed frequency, digital and analog signal types, number of proving runs.</td>
<td>Complete</td>
</tr>
<tr>
<td><strong>Laboratory and Testing Program</strong></td>
<td>Contractor has been selected and contract in place. Sites and fluids for the testing have also been selected. Waiting on the flow computer panel. Testing protocol has been written. Expect to have the equipment in the field by early December and should have data to report by the spring meeting. The laboratory program includes a narrow-range calibration to develop the coefficients. A master meter approach for density proving will be evaluated in the field portion. Discussed the practice of using a single offset for an analog output from a densitometer in refined products service and its affect on this standard.</td>
<td>Complete</td>
</tr>
<tr>
<td><strong>Status of Budget for Research Program</strong></td>
<td>On budget.</td>
<td>Complete</td>
</tr>
<tr>
<td><strong>Other: Review of Status of Work Assignments</strong></td>
<td>Dean Minehart and Scott Tanner are going to develop the supplemental figures in addition to Fig 15 to reflect analog and digital signals and will review language in 9.8.1 and 9.8.2. The focus is on resolving comments with the intent of having the document out for ballot before the end of 2013.</td>
<td>Pending</td>
</tr>
<tr>
<td><strong>Other: Wrap up / ongoing issues</strong></td>
<td>Discussed minimum number of pycnometer provings at 2 or at 3; the working group was asked to consider how to address.</td>
<td>Respond to Peter and Don by November 6.</td>
</tr>
<tr>
<td><strong>Old business</strong></td>
<td>None</td>
<td></td>
</tr>
<tr>
<td><strong>New business</strong></td>
<td>Discussed the additional uncertainty in temperature measurement using non-mercury thermohydrometers. The appropriate ASTM E-20 subcommittee is having another ballot to address the negatives and the technical issues.</td>
<td>Complete</td>
</tr>
<tr>
<td><strong>Date of next meeting</strong></td>
<td>TBD</td>
<td></td>
</tr>
<tr>
<td><strong>Adjournment</strong></td>
<td>Noon</td>
<td></td>
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</tbody>
</table>
ANNEX E

Meeting Minutes
Committee of Petroleum Measurement (COPM)
Sediment & Water Working Group Chapter 10
15-October-2013

Location: Hyatt Regency –San Francisco, CA

Attendees:
Members:
See attendance sheets

Guests:
See attendance sheets

Minutes:

<table>
<thead>
<tr>
<th>Agenda Topic</th>
<th>D</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roll call</td>
<td>Introductions</td>
<td>All</td>
</tr>
<tr>
<td>Decide who will write the minutes (if the group does not have a permanent secretary)</td>
<td>K. Nelson offered to write minutes</td>
<td></td>
</tr>
<tr>
<td>Review of agenda</td>
<td>No changes or corrections</td>
<td>Unanimous approval.</td>
</tr>
<tr>
<td>Review of minutes from last meeting</td>
<td>No changes or corrections</td>
<td>Unanimous approval.</td>
</tr>
<tr>
<td>Ballot Status</td>
<td>D6304, Water by Coulometric Karl Fischer Titration in Petroleum Products and Lubricating Oils is Overdue for reaffirmation. The ballot to reaffirm received one negative vote. The voter's comment pertains to the scope of the standard and was technically persuasive. Consequently the ballot for reaffirmation was withdrawn by the committee. A new ballot with a revised scope to reflect the change from &quot;entrained water&quot; to &quot;dissolved water&quot; will be created.</td>
<td>Unanimous approval.</td>
</tr>
<tr>
<td>Agenda Topic</td>
<td>D</td>
<td>A</td>
</tr>
<tr>
<td>--------------</td>
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</tr>
<tr>
<td>D1744, Water by Coulometric Karl Fischer Titration in Greases was balloted for reinstitution. There was one negative vote. The voter was concerned about the difficulty in conducting the method, stability and the use of pyridine reagents allowed by the method. When the user was contacted, it was explained that the method has an active working group and will be revised section by section. A priority will given to updating the reagents. Due to concerns about pyridine use, ASTM legal reviewed the matter and under the circumstances of a committed working group allowed the standard to be balloted for reinstitution. The voter withdrew his negative.</td>
<td></td>
<td>No action</td>
</tr>
<tr>
<td>MPMS 10.7, D4377, Water in Crude Oil by Potentiometric Karl Fischer Titration was balloted for withdrawal. There were six negative votes. Because several participants in the intra laboratory cross check program indicated that they use this standard; participants were contacted regarding the ballot to withdraw the standard. They were made aware to the situation and volunteers to edit the document were requested. There was sufficient number of people willing to work on the document to warrant continuation of the working group.</td>
<td></td>
<td>A working group chaired by Mark Quinn will begin to edit the document.</td>
</tr>
<tr>
<td>Colin Matthews, Energy Institute, contacted the Chapter 10 chair about disjointing MPMS 10.7 D4377 from the EI standard. There was a motion made to disjoint the standard.</td>
<td></td>
<td>Motion to disjoint passed with no objections.</td>
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<tr>
<td>The API technical report TR 2573/ASTM D7829 with the overview of the Chapter 10 methods has been published and is available for use.</td>
<td></td>
<td>No Action</td>
</tr>
<tr>
<td>A revised Chapter 10.4, Sediment and Water Determination in Crude Oil by Centrifuge, Field Method has been published. Working group chair Mark Osicki did an outstanding job and the committee is grateful for his efforts.</td>
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<tr>
<td>New business</td>
<td></td>
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<tr>
<td>A ballot to remove the footnote referring users to a specific manufacturer for distillation glassware was presented for MPMS 10.2 D4006, Determination of Water in Crude Oil by Distillation. A user expressed concern that the footnotes throughout the document be corrected once</td>
<td></td>
<td>Motion to ballot passed with no objections.</td>
</tr>
<tr>
<td>Agenda Topic</td>
<td>D</td>
<td>A</td>
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<td>A ballot to revise the reporting resolution for MPMS 10.9, D4928, Water Determination by Karl Fischer Coulometric Titrations was present.</td>
<td>The ballot cannot go forward without a new round robin. At this time, there does not appear to be sufficient interest in a new round robin for this method.</td>
<td>No action</td>
</tr>
<tr>
<td>Due to the challenge in determining water in bituminous materials, Dhane Merriman asked if other users wished to evaluate methods that and/or method modification that would facilitate analysis of the material. There was not much interest among those present. Dhane was invited to attend the Ad Hoc new standards committee meeting 15-October at 3 pm to discuss the topic further.</td>
<td></td>
<td>No action.</td>
</tr>
<tr>
<td>Date of next meeting</td>
<td>18 - March - 2014, Dallas Texas</td>
<td></td>
</tr>
<tr>
<td>Adjourn</td>
<td></td>
<td>All</td>
</tr>
</tbody>
</table>
ANNEX F

COMQ Chapter 11 Task Group
Physical Properties
Fall 2013 Minutes
API/ASTM D02 Joint Meeting
Hyatt, Bayview A, San Francisco, CA
3:00pm-5:00pm Monday, October 14, 2013

1. Welcome & Introductions by Chair
   The meeting was called to order by Dale Embry at 3:08

2. Membership List & Sign Up Sheet Circulation
   The membership list was circulated and is attached.

3. Review and Approval of Agenda
   Motion to approve the agenda was made and passed.

4. Approval of Previous Minutes
   The minutes of the March 11, 2013 meeting in Dallas were reviewed with the following changes.
   The motion to approve the minutes as amended passed.

5. Physical Properties Standards

   A. Chapt. 11.1 – Crude Oils, Refined Prod., and Lube Oils
      Chapt. 11.1–2004 (Temp. & Press. VCFs for General Crude Oils, Refined Prod., and Lube Oils)
      Status of editorial revisions – The editorial team met on September 19, 2013 to discuss items in the “red file” that could be addressed though editorial corrections. Several issues in metric examples require calculation checks that are being done by John Park. Scott Tanner will collect the revisions and prepare complete errata for the team to review. There was discussion about how to handle section 11.1.8 regarding the equivalence of the procedures to the 1980 tables. It was decided that the group will consider adding editorial amplification of the fact the table will not be exact duplicates of the 1980 tables, but will only provide equivalent functionality. A similar discussion regarding 11.1.5.4 was held with a similar outcome. The team members will reconvene in December or January. It was agreed that the revisions will be balloted on an individual basis rather than a single ballot on Chapter 11.1.

   B. Chapt. 11.2 – Light Hydrocarbons
      Chapt 11.2.2 – 1984(03) (Compress. Factors for Hydrocarbons: 0.350-0.637 Rel Den. & -50ºF to 140ºF)
      Chapt 11.2.2M – 1986(02) (Compress. Factors for Hydrocarbons: 350-637 kg/m³ (15ºC) & -46ºC to 60ºC)
      Chapt 11.2.2A – 1984 (Addendum to Correlation of Vapor Pressure Correction for NGL)
      No activity on these standards.

      Chapt 11.2.4 – 2006 / GPA TP-27 (Temperature Correction for the Volume of NGL and LPG - Tables 23E, 24E, 53E, 54E, 59E, 60E)
      Scott Tanner indicated that there are errors in the example calculations in this document at some limits. A task group of Scott Tanner, Bill Schmidt and Jim Dawson have worked through several of these examples. A discussion will follow between API and GPA on how to resource the revisions under the API umbrella. Guidance from COMQ regarding prioritization is desired.

      Chapt 11.2.5 – 2006 / GPA TP-15 (A Simplified Vapor Pressure Correlation for Commercial NGLs)
      No activity on these standards

   C. Chapt 11.3 – Misc. Hydrocarbon Products
      Chapt 11.3.2.1 – 1974(02) (Ethylene Density)
      Status of implementation procedure draft – work on this activity has been delayed due to job changes by two members of the core working group. Lou Yandoli has been replaced by Yun Yang of ExxonMobil. Currently there are no other volunteers to work on this task.
Chapt 11.3.3.2 – 1974 (Propylene Compressibility)
Activity on this standard has been deferred until the revisions of 11.3.2.1 are completed.

Chapt 11.3.3 – Ethanol VCF Tables (in progress)
Status of revisions and RFA participation – Jim Dawson has drafted a revision that explicitly refers to all ethanol used in this standard as “fuel ethanol” or “denatured fuel ethanol” to address concerns raised by the RFA. The revised draft is currently being balloted.

Chapt 11.3.4 – Gasohol VCF Tables (in progress)
Status of development - Jeff Savidge reported on the status of 11.3.4 standards development at the 11.3.4 TAG meeting earlier in the day. The standard is making significant progress and an initial draft has been developed. The TAG pointed to a deficiency in the current usage scenario coverage that will have to be developed as a separate effort. A project to develop a gasoline growth model is needed to meet that need. Work on that issue will be deferred until the current project is completed. Further work to complete writing the standard and the associated documentation report will require additional funding. A SRRR was developed to request funding for consultants to facilitate this work. The task group approved sending the SRRR on to COMQ.

Dale Embry discussed a report showing how several of the gasoline blend stocks used in this study are not well represented by the current API tables and the effect that this discrepancy might have on measurement systems. There is more data and information needed to evaluate the extent of the issue. He will make a presentation to COSM to get guidance.

ASTM D1550 (Butadiene) – no work on this standard, for information only
ASTM D2962-97 (Coal –Tar Pitches) – no work on this standard, for information only

D. Chapt 11.4 – Reference Materials
Chapt 11.4.1 – 2004 (Density of Water & Water VCFs for Volumetric Meter Proving)
One negative vote was received on the reaffirmation of Chapter 11.4.1. That negative has been withdrawn with the understanding that the errata are incorporated into the standard before being re-issued.

E. Chapt. 11.5 – Density/Weight/Volume Intraconversion Tables
Chapt 11.5.1 – 2006 (Entry With API Gravity at 60°F)
Chapt 11.5.2 – 2006 (Entry With Relative Density at 60°F)
Chapt 11.5.3 – 2006 (Entry With Absolute Density at 15°C)
These standards are up for renewal in 2014. Ballot should reflect revisions and include errata.
Jim Dawson, Dale Embry, Keith Fry and Scott Tanner will work on “red file” issues before developing a ballot item for next year.

F. ASTM D4311/D4311M - 09 (Asphalts) – not a joint standard, information only.
It was agreed that API should ask ASTM to allow API ownership and maintenance of this standard.

G. ASTM D1555/D1555M - 09 (Aromatics and Cyclohexane) – not a joint standard, information only.
It was agreed that API should ask ASTM to allow API ownership and maintenance of this standard.

8. Other Old Business
No other old business was raised.

9. New Business
No new business was raised.

10. Next Meeting
2014 Spring Committee on Petroleum Measurement Standards Meeting
March 17, 2014 - March 21, 2014 in Dallas

11. Adjournment
The meeting was adjourned at 4:55pm.
Minutes of COMQ Ch. 18.1,
Working Group on Measurement Procedures for Crude Oil Gathered from Small Tanks by Truck, API
Spring Committee on Petroleum Measurement Standards, Fall Meeting 2013

- Meeting called to order by Chairman Weidig at 1:00 PM, Oct 10, 2013
- Agenda for meeting reviewed and approved
- Minutes from previous meeting reviewed and approved
- Old business – review of previous meeting
- New business
  - Discussed meeting that took place in April and the changes that was made in Chapter 18.1 and that the document had been completely gone thru by the working group.
  - Discussion
    - It was discussed around the definition of a small tank. The discussion was around whether to leave the definition saying a small tank is 1000 barrels or less or change the definition to just saying a small tank is a lease tank.
    - It was discussed to form a small group to discuss and harmonize the definition of a small tank. We also looked the definition up in Chapter 3.1 where the definition used to be and the definition has been taken out. That then should leave the definition of a small tank to the Chapter 18.1 Chairman.
  - Action item for the Chairman was to send Sally Goodson the document that is being worked on so that it can be posted on the Share Point.
- Date of next meeting was discussed to be held sometime in November.
- Adjournment
Bill Schmidt opened the meeting at 3:05 and introduced the purpose of the meeting: Many standards are being completed and this is a brainstorming session for any new ideas for standards.

The status of current standards is:
7 on hold
8.1 publishing
9 Density standards updated
10 most have been reaffirmed or updated
11 ongoing work

Bill Schmidt then opened the floor to brainstorming, asking where were the gaps and what should COMQ be working on.

The following items were discussed:
_Tommy Watson - Static gauging manual gaging. Boom and demand. Not enough lease tanks. Having to buy from frac tanks. Can’t get a lact unit. We need guidance. Frac tanks get drilling mud etc and due to extra inventory they have to put it into them. Give drawings of frac tanks for information. Nominal capacity is given. It’s all kinds of operators little to major. H2S and no lact units. Want auto gauging, but want samples.

Bill Schmidt auto sampler—why not put on truck, then shake out after loading. Have tried with sample spoons. Lact units. Safety won’t let you on top of tank. Determining the bottom is the problem.

Trying to use trailer gauges on their trucks for custody transfer. Guided wave radar on trucks. Designed for overflow protection. Trailers aren’t level. Causes errors, trucks aren’t level to adjust.

All new people coming into business need guidance to get them off to a start. Truckers manual should be made by API

_David Merriman and Dale Embry: Bitumen from oil sand. Steam assistance gravel drainage. SAGD Push two pipelines in horizontal pattern pump steam through top to lower viscosity and falls down into lower pipe to bring to surface. Northern Alberta= Bitumen emulsion at 200 C. Very hot and lots of water 30-90% water. Used to having a standard for samples and analysis for water. Cut at 200 it looks like chocolate milk, but below 70 celsius it turns rock hard. lSample for analysis Cut with toluene and divvy out to tubes. Accuracy not good 30 to 65 percent so they take average. Opportunity for API to help. Tier 1 producers, but no standards on how to get sample and how to get water cut. Everyone tries different methods.

Bill- question Anyone attempted simple solution?

1. Atmospheric grab sample
2. Fixed ground sample

Centrifuge doesn’t work—distillation works and is simple. Common industry voice to guide people that are using conventional crude methods.

Idea of a performance standard. If you already have something – performance standard for entry into Chapter 10. Don’t eliminate anything that we have on the books.

-blended crudes on how to get water cuts. RCFs not enough on basic. Need to gather data. 5 minutes is not enough—10 needed.

Jim Strawn – need a field method for Karl Fisher.

Sediment by centrifuge and water by KF. Put together a group. Form ad hoc group to study. Take to Kristen.

_David Weidig – Chapter 18.1 – Discussed the need for a standard for meters on truck and rail cars
Finish 18.1 and then develop 18.2, 18.3 for loading and unloading railcars.


_Todd Canty Canty Inc Comparing online device compared to sampling devices—have we looked into water slugs in sampling? Online water analyzer could tell you if you are getting. Have tests made on samplers to see if it representational. Bill Schmidt: can be some degree of error in grabs. It should average out.

Would like to work on performance standards for online water sampling Todd, David Merriman, Jim Strawn and Greg Johnson(Kam), Shell Jason Charbonneau.
Bobby Moore Fiberglass lease tanks as a battery. Use a salt water tank to lease tank.
Upstream API? Hydrocarbon in a fiberglass tank needs to be addressed.
What is railroad commissions position on that.

Dhane Merriman Performance standards? Yes there are
New Tech- Bill Schmidt portable devices
Determining density no standards for those Performance based.
Jerry Rainsdon P 66 Ditto on handheld density devices.
Kristen Nelson need user guide to reflect that there is a range of uncertainty levels. Help user figure out how much verification they need to do for their results. Know temperature of density etc,
To get people to use things

Anne Brackett Can’t we do a performance based standard for Pets? It would be directive, not informative.

Scott Tanner. Electronic Field DATA Capture Manually capturing data vs electronically capturing data. Hand helds , labtops, etc.
How to govern. Audits they want the handwritten. Might enter, but need handwritten. Tickets from gaging printed and left , but data went in.

Standard for electronic tickets. Bill Schmidt—hand tickets are required otherwise they wouldn’t do it.

Tommy Watson buys tally book and they enter for a log. Also put it into their handhelds.

Standard Format for Data Exchange Keith Fry.

Bill Schmidt. If there is no water can you turn tube upside down to see if there is sediment. Add a known amount of water and respin.
Kristen Nelson 10.9 performance criteria for mixing in back. Could be used for continuous mixing. Insertion mixer and leave it on and draw samples as it goes. But it is not heated.

Jason Sharbonno 12, 13 14 RVP crude flash issues. (May be in Chapter 8.4?) More work on high vapor crudes. Sealy is addressing it and 8.4 How does the industry handle this? Crude that doesn’t get to atmosphere can flash off. Alaska 46-47

Tommy Watson. Are there states that won’t accept small volume provers vs. cans Has API tried to work with some of these states? State by state. API has standard for small volume prover to show the state. Texas Railroad Commission documents are out of date, but takes legislation to change it.
Scott Tanner Could we provide 12.2.3 equation to provide the percent error to state. State inspectors want to know what the % difference is between the can and the preset loaded into the truck. Scott could add to the standard that might satisfy the state weights and measures.
Eric Ward Dictating they use the can to do their calibration. Alaska does seraphin can to do test. Eric calibrates with a master prover, but state uses cans.

2554 go away Jim Dawson and Scott Tanner
Harmonizing Chapter 11?
D 633 Bitumens D 4311 Asphalt D 1555 Aromatics and cyclohexene. Approach ASTM and see if they would turn those over to them.

Haul water away. Haul in gross. ?? nevermind

95% water and above is going to an ASTM work item Todd Canty

If you want to work on something—VOLUNTEER!!!!

Tommy Watson Flint Hills Interested in Frac tanks and issues with hauling.

The meeting adjourned at 5pm.