CCQTA Introduction

CCQTA-COQA Joint Meeting
May 22-24, 2018
Denver, CO
What is the CCQTA?

The Canadian Crude Quality Technical Association membership consists of companies from multiple segments of the Canadian oil industry. The Association was established in 1997 with the following educational and scientific objectives:

— To facilitate the resolution of common crude oil quality issues by establishing direct lines of communications among crude oil stakeholders.

— To provide a forum for the presentation and consideration of proposals for industry projects related to any aspect of crude oil quality.

— To improve industry knowledge and awareness of crude oil quality through the cooperative exchange of technical information among industry sectors.

The CCQTA does not discuss issues of a commercial nature nor does it endorse specific suppliers. The Association focus is on the technical aspects of the industry alone.

The strength of the CCQTA lies in its ability to pool resources from multiple sectors of the oil industry in response to an issue or concern. Pooled resources allow more productive research than work in isolation.
Membership

• Currently 76 Members Representing the following industry sectors:
  – Producers
  – Refining
  – Pipeline
  – Midstream
  – Additive Suppliers
  – Government Agencies
  – Other
    • Technical Consultants
    • Laboratories
    • Service companies
    • Instrument Manufacturers
CCQTA Operation

• Board - 14 members
  – 5 Executive – 9 Directors representing various industry sectors

• Annual Budget
  Revenue ~ $325K - membership dues
  Expenses ~ $100K - operations
  ~ $225K - funded projects
# CCQTA Board of Directors

<table>
<thead>
<tr>
<th>Name</th>
<th>Company</th>
<th>Sector Represented</th>
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<tbody>
<tr>
<td>Randy Segato</td>
<td>Suncor Energy</td>
<td>President</td>
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<tr>
<td>Scott Smith</td>
<td>Cenovus</td>
<td>Vice President</td>
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<tr>
<td>Gerald Bruce</td>
<td>GWB Consulting</td>
<td>Treasurer</td>
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<tr>
<td>Dave Murray</td>
<td>Omnicon Consultants Inc.</td>
<td>Secretary</td>
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<tr>
<td>Andre Lemieux</td>
<td>Omnicon Consultants Inc.</td>
<td>Technical Director</td>
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<td>VACANT</td>
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<td>Director of Pipelines</td>
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<td>Scott Blumenshine</td>
<td>Flint Hills Resources</td>
<td>Director of International Members</td>
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<tr>
<td>Chris Ryan</td>
<td>Tundra Energy Marketing Ltd (TEML)</td>
<td>Director of Midstream</td>
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<td>Ron Parise</td>
<td>Nalco Canada</td>
<td>Director of Additives</td>
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<td>Derek Fraser</td>
<td>Maxxam Analytics</td>
<td>Director of Industry Services</td>
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<td>James Johnson</td>
<td>Marathon Petroleum</td>
<td>Director of Refining</td>
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<tr>
<td>Charles Ward</td>
<td>Alberta Department of Energy</td>
<td>Director of Government Agencies</td>
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<tr>
<td>Dennis Sutton</td>
<td>COQA</td>
<td>Director - Crude Oil Quality Association</td>
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<tr>
<td>Scott McNally</td>
<td>Crescent Point Energy</td>
<td>Director of Production</td>
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Canadian Crude Quality Technical Association

- www.ccqta.com/index.php
# CCQTA PROJECTS

## Participant Funded

1. Condensate Quality (closed)
2. Organic Chlorides (suspended)
3. Phosphorus (suspended)
4. TAN (closed)
5. Emulsion Characterization (active)

## CCQTA Sponsored

1. Water in Crude
2. Amines in Crude
3. TVP/RVP
4. H₂S PVT
5. Crude Oil Flammability
6. Crude Compatibility Method
7. VLE Method Development
8. TIOM
9. Properties of Thermally Processed Material
10. Organic Chlorides in Distillate (not active)
11. Pipeline Corrosion
12. Pipeline Sour Service

## Sub-Committees

1. Condensate Quality
2. Education (pending)
OPEN FORUM
Open Forum

1. First meeting held in December 2016.
2. Meetings well attended and held quarterly
3. Opportunity for members to discuss quality issues/proposal projects.
   – Previously held at AGM/GM meetings
4. Recurring items or items with multiple member support presented to the Board for approval/funding.
5. Two recent projects originate from open forum meetings
AMINE IN CRUDE
Amine in Crude

- Project established in December 2017.
- Objective is to develop a “Best Practice” designed to educate industry on additive use, selection and the upstream and downstream impacts of additive use.
- Document to be published on public side of the CCQTA website.
Amine in Crude

Best Practice Key Sections
1. Problem definition & resulting impact
2. Source and entry point flowchart/schematics
3. Test method discussion/recommendations
4. Guidelines for scavenger selection/qualification
5. Guidelines of effective scavenger use and application
Amine in Crude - Best Practice

Member requested items to be included

1. Potential damage to EOR & injection/disposal well plugging.
2. Scavenger impact on WWTP “bug plant”.
3. Impact of other amines on plant issues.
4. Why is scavenger used – EHS, transportation/public safety
5. Scavenger use/misuse
6. Highlight plant corrosion & product quality concerns
Amine in Crude – Project Activities

- Collecting plant data from refiners
  - MEA testing in tower overheads & desalter brine
  - Corrosion failure data
- Enlisting input form Additive Suppliers on additive selection and use.
- Collecting information on available test methods
  - Lab methods
  - Field methods
  - \( \text{H}_2\text{S} \) vapor phase testing (CCQTA equipment)
WATER CONTENT TEST METHODS
Water Content Test Methods

- Project established in December 2017.
- Objective is to prepare a White Paper outlining the capabilities of existing test methods and factors to consider during method selection – fit for purpose.
- Document to be published on public side off the CCQTA website.
Water Content – White Paper Key Sections

1. Important variables to consider during a “fit for purpose” determination
2. Provide guidelines on test method capabilities and reliabilities based on published repeatability/reproducibility.
   - Provide advice on data significance
   - Develop sample/example cases
3. Collect data on the effects of sub sampling variability
   - Centrifuge method(s)
   - Karl Fisher method(s)
4. Explore options for referee method(s)
Water Content
- Project Activities

• Gathering available method comparison test data from members.
• Reviewing previous publications/work on the S&W measurement issue.
CCQTA Contact Information

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